

October 15, 2015

Mr. Keith Nowell  
Alameda County Health Care Services Agency  
1131 Harbor Bay Parkway, Suite 250  
Alameda, CA 94502-6577

**RECEIVED**

By Alameda County Environmental Health 11:21 am, Oct 23, 2015

I, Dhruv Patel hereby authorize ERAS Environmental, Inc. to submit the Limited Phase II Subsurface Investigation report in Oakland, California, dated October 15, 2015 to the Alameda County Health Care Services Agency.

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.

Signature: 

Printed Name: Dhruv Patel

Mr. Dhruv Patel  
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**ERAS**

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**LIMITED PHASE II SUBSURFACE INVESTIGATION**

AT

**106-110 Hegenberger Road  
Oakland, California**

**ERAS PROJECT NUMBER: 14-003-05**

Prepared for

Mr. Dhruv Patel  
Balaji Hotels  
66 Airport Access Road  
Oakland, CA 94603

October 15, 2015

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## CERTIFICATION

This **Limited Phase II Subsurface Investigation** at 106-110 Hegenberger Road in Oakland, California, has been prepared by ERAS Environmental, Inc. (ERAS) under the supervision of the Registered Professional Geologist whose signature appears hereon.

This work plan was prepared in general accordance with the accepted standard of practice that exists in Northern California at the time the investigation was performed. Judgments leading to conclusions and recommendations are generally made with an incomplete knowledge of the conditions present. More extensive studies, including additional environmental investigations, can tend to reduce the inherent uncertainties associated with such studies.

Our firm has prepared this work plan for the Client's exclusive use for this particular project and in accordance with generally accepted professional practices within the area at the time of our investigation. No other representations, expressed or implied, and no warranty or guarantee is included or intended.

This work plan may be used only by the client and only for the purposes stated within a reasonable time from its issuance. Land use, site conditions (both on-site and off-site) or other factors may change over time, and additional work may be required with the passage of time. Any party other than the client who wishes to use this report shall notify ERAS of such intended use. Based on the intended use of report, ERAS may require that additional work be performed and that an updated report be issued. Non-compliance with any of these requirements by the client or anyone else will release ERAS from any liability resulting from the use of this report by any unauthorized party.

Sincerely,  
ERAS Environmental, Inc.



Andrew Savage  
Project Geologist



Curtis Payton  
California Registered Professional Geologist 5608



October 15, 2015

## **1.0 INTRODUCTION**

The following are the results of an investigation performed by ERAS which included the collection of soil, groundwater, and soil gas samples to characterize the lateral and vertical extent of contamination at a commercial site located at 106-110 Hegenberger Road in Oakland, California (the "Property"). The Property is an active site cleanup case under the jurisdiction of the Alameda County Health Care Services Agency (ACHCSA). The latest directive letter is included in **Appendix A**. The location of the Property is shown on **Figure 1**. The current layout of the Property is shown on **Figure 2**.

Subsurface investigations previously conducted on the Property have identified contamination including elevated concentrations of petroleum hydrocarbons quantified as gasoline, diesel and oil range organics (TPH-gro<sup>1</sup>, TPH-dro, and TPH-oro), benzene, toluene, ethylbenzene, and xylenes (BTEX).

A work plan was prepared by ERAS outlining the proposed scope of work dated October 30, 2014 along with an addendum dated July 29, 2015. The work plans were approved by the Alameda County Environmental Health Care Services Agency (ACHCSA) on April 16, 2015 and August 20, 2015.

The Property is located on the southeast side of Hegenberger Road near the intersection of Hegenberger Road and Airport Access Road in the southern portion of the City of Oakland. The Property consists of an approximately 1.17-acre rectangular shaped parcel of land that is improved with an approximately 1,300-square foot one story commercial building and associated paved areas.

The Property is currently used for a parking lot and is planned to be redeveloped with a hotel. A copy of the Sample Location Map, **Figure 2** shows the proposed hotel layout. Most of the ground level will be occupied by parking beneath the structure. A lobby entrance with an elevator and a pool will be on the ground floor as well and will penetrate approximately 5 feet below ground surface in those areas.

### **1.1 BACKGROUND**

#### *Previous Investigations*

The Property was once improved with a car wash building, USTs and associated pump islands/canopy, and a clarifier sump.

Subsurface investigations were conducted at the Property by West Coast Environmental in 1991, Dugan Associates in 1994 and BSK & Associates in 1997 and by Environmental Risk Assessors (ERA) in 2014. Soil borings were drilled on many areas of the Property including some near former USTs,

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<sup>1</sup> TPH-gro, TPH-dro, and TPH-oro are methods that compare analytical results to standards for gasoline, diesel and motor oil, respectively. Therefore analytical results are estimates of quantities based on what would be expected for the range of hydrocarbon results for the standard. Gasoline range organics (gro) are those hydrocarbon compounds that are in the range of C6 to C10, diesel range organics (dro) are those hydrocarbon compounds that are in the range of C10 to C23, and oil range organics (oro) are those hydrocarbon compounds that are in the range of C18 to C36. There can be overlap in reporting methods as well as identification of compounds that fall within the standard that may not necessarily be derived from gasoline, diesel, or oil.

pump islands, and piping and near the sump. Other borings appear to have been drilled randomly near the central portion of the Property. Four groundwater monitoring wells were eventually installed at widely spaced locations at the Property and monitored several times.

The results of investigations indicated elevated concentrations of petroleum hydrocarbons in soil and groundwater, mostly in the area of the former clarifier sump. After monitoring of the groundwater several times between 1994 and 2000, the Alameda County Health Care Services Agency (ACHCSA) closed the case in 2001. The case closure indicated that concentrations of petroleum hydrocarbons, BTEX, and metals (lead, zinc, cadmium, and chromium) remained in soil on the Property. Although the case was closed in 2001, because of the change in use, additional investigation was necessary to further assess the risk to future construction workers and occupants of the proposed hotel.

ERA drilled borings around the sump in 2014 to collect soil vapor samples, two of the samples contained petroleum hydrocarbons above the published concentrations that indicate a risk to indoor air.

ERAS drilled 7 soil borings in 2014 to the southeast and southwest of the former clarifier sump. Elevated concentrations of petroleum hydrocarbons in soil samples were reported in borings (SB-6 and SB-7) near the clarifier sump on the southeast side where these were reported from earlier investigations. Elevated concentrations of benzene were reported in soil gas samples collected in close proximity to the southwest side of the sump.

Locations of the soil borings and former monitoring wells at the Property are shown on the aerial photograph included as **Figure 2**. The analytical results for soil, groundwater and vapor samples analyzed are compiled on **Tables 1-3**.

## **2.0 REGIONAL GEOLOGY/HYDROLOGY**

The Property is in the southern part of the City of Oakland in the San Francisco Bay area. The San Francisco Bay area occupies a broad alluvial valley that slopes gently northward and is flanked by alluvial fans deposited at the foot of the Diablo Range to the east and the Santa Cruz Mountains to the west. Surface topography in the immediate vicinity of the Property is gently sloping down to the northwest towards Airport Channel.

The Property is at an elevation of approximately 10 feet above Mean Sea Level according to the United States Geological Survey (USGS) Oakland East Quadrangle California 7.5 Minute Series topographic map.

Materials underlying the site are unconsolidated deposits of near shore and beach sediments, deposited in Oakland Bay at higher sea level stands. At shallow depths beneath these sediments are chert, greywacke, serpentine and shale bedrock that are a part of the Cretaceous to Jurassic-aged Franciscan Formation. Bedrock is exposed to the east-northeast on the upland surfaces.

The subject site is located on the San Francisco Bay Plain in the northernmost part of the Santa Clara Valley Groundwater Basin, (DWR, 1967), the surface of which slopes gently down toward west.

The regional groundwater flow follows the topography, moving from areas of higher elevation to areas of lower elevation. The regional groundwater flow direction in the area of the Property is estimated to be toward the northwest toward the Oakland Outer Harbor.

Based on the groundwater monitoring conducted on the Property the groundwater flow direction has been determined to be to the southwest (BSK, 2000).

Based on lithologic logs prepared from borings on the Property the subsurface lithology consists of approximately 3 feet of fill underlain by 13 to 15 feet of silts and clays, which is underlain by silty sand and sands. In some borings on the Property a clayey sand unit was also observed between 10 and 12 feet below ground surface (bgs) which appeared to be moist to wet. The main groundwater zone was indicated by the previous consultants to be the silty sand and sand unit starting at a depth of approximately 18 feet bgs (BSK, 1998).

A shallower zone of groundwater has been reported by previous consultants. During this investigation, the shallower zone was only encountered in the borings located at the northwestern most side of the Property.

## **3.0 SITE CONCEPTUAL MODEL**

### **3.1 HYDROGEOLOGIC SETTING**

Shallow groundwater is located at roughly 18 feet bgs however a groundwater producing zone (“perched zone”) may be present between 10 and 12 feet bgs. Groundwater monitoring has been conducted on the Property and the groundwater flow direction was determined to be to the southwest at a very low gradient.

The shallow water-bearing zone appears to be located in thin clayey sand, sand, and silty sand units interbedded with clay. Groundwater is generally under water-table conditions, but may be locally confined by clay in the upper portion of the water-bearing zone. The base of the shallow water bearing zone has not been determined.

The distribution of contaminants in groundwater indicates low and potentially variable groundwater flow direction. Contamination under these circumstances tends to remain near its source and spreads out in a “bulls-eye” pattern.

A summary of the site conceptual model for the Property is included as **Table 4**.

### **3.2 PREVIOUSLY KNOWN EXTENT OF CONTAMINATION**

Petroleum hydrocarbons are present in elevated concentrations in soil and groundwater to the southeast and southwest of the former clarifier sump (ERAS, 2014). Elevated concentrations of petroleum hydrocarbons were also found to be present in soil gas in this area (ERA, 2014).

Prior to this current investigation, the extent of petroleum hydrocarbons in soil was not known on the north and northwest sides of the clarifier sump. In addition the complete impact to groundwater was not known. Petroleum hydrocarbons in shallow soil near the former clarifier sump have caused elevated concentrations of soil vapor near the sump area.

Based on the known extent of contamination, data gaps that were identified for the Property included the following.

- 1) the gap in characterization of the extent of petroleum hydrocarbons in soil and groundwater to the northeast of the former sump
- 2) the presence of soil, groundwater and vapor contamination in two areas where the proposed hotel improvements will be beneath the ground surface (a proposed pool and an elevator shaft).

## **4.0 FIELD WORK PERFORMED**

### **4.1 OBJECTIVES**

The objectives of this investigation were to characterize the extent of hydrocarbon contamination in soil and groundwater in the area of the former clarifier sump. Two locations that will extend below the proposed building slab were also investigated for the presence of contaminants.

The results of the investigation were to be used to assess the degree of risk that exists in the subsurface environment and, if the risk is acceptable, to recommend no further action at the Property.

### **4.2 FIELD WORK**

Five borings (B-1 through B-5) were advanced using a direct push sample rig by ESA from Aptos on May 5, 2015 and another four borings (B-6 through B-9) were drilled on May 6, 2015 to approximately 20 to 24 feet in the vicinity of the sump area in an attempt to vertically and horizontally characterize the extent of the contamination.

On September 3 and 4, 2015 nine additional borings were drilled that included 5 borings (B-10 through B-14) to the northeast of the former sump. Two borings (B-15 and SV-15) were drilled in the proposed elevator area and two borings (B-16 and SV-16) were drilled in the proposed pool area. The two borings drilled for collection of soil vapor samples were drilled to a depth of approximately 5 feet. When the vapor samples were collected, water was observed to have been introduced into the vapor sample containers and sampling equipment due to shallow groundwater which rendered the samples inadequate for analysis. On September 10, 2015, two soil gas samples were collected from a depth of approximately 3 feet to collect vapor samples. The samples were collected in Summa canisters supplied by K-Prime, a state certified laboratory in Santa Rosa, California.

Borings B-8, B-9, B-15, SV-15, B-16 and SV-16 were drilled near the north corner of the Property (see **Figure 3**). Borings B-1 through B-7 and B-10 through B-14 were drilled near the former sump near the middle of the Property (see **Figure 5**).

Soil was continuously cored for lithologic logging and monitored using an organic vapor meter (OVM) for indications of VOC contamination. The soil cores were logged by ERAS geologist Andrew Savage. The Standard Operating Procedures for soils and groundwater sampling with hydraulic push and soil vapor sampling are included in **Appendix C**. The soil and groundwater samples were kept chilled pending transport under chain-of-custody procedures to McCampbell Analytical, a California certified environmental analytical laboratory.

The subsurface vadose zone lithology encountered consisted of silty clay, clayey silt, and silty sand to the base of the boring. Groundwater was encountered in silt and silt stringers in borings B-1, B-2, and B-3, B-6 and B-7 between 13.0 and 14.5 feet bgs and at 17 to 20.0 feet bgs in borings B-4, B-5, B-8, B-9, B-10, B-11, B-12, B-13, B-14 and B-15. Details of subsurface conditions are provided on the soil boring logs in **Appendix D**.

The soil and groundwater samples were analyzed for the presence of TPH-gro, TPH-dro, TPH-oro, ERAS Environmental, Inc.

BTEX, MTBE, and LUFT 5 metals (cadmium, chromium, nickel, lead, zinc). Test were conducted using EPA methods TPH-gro, BTEX, and MTBE by EPA method 8260, TPH-dro, and TPH-oro by EPA method 8015, and LUFT 5 by EPA method 6020.

The soil vapor samples SV-15 and SV-16 were analyzed for the presence of BTEX, and the leak detection compound 1,1-difluoroethane using EPA method TO-15.

#### **4.3 ANALYTICAL RESULTS and EXTENT OF CONTAMINATION**

Groundwater and soil samples were collected from each boring B-1 through B-16, soil vapor samples were collected from SV-15 and SV-16.

##### *Soil*

All soil samples collected by ERAS were analyzed by McCampbell Analytical of Pittsburg. Soil samples were collected and submitted from multiple depths based on OVM readings, odor, and discoloration. The results of the soil sample analyses are presented in a **Table 1** and the analytical laboratory report is included in **Appendix E**.

The lateral and vertical distribution of TPH-gro and benzene in soil near the northwestern side of the Property is shown on **Figures 3 and 4**. These contaminants are restricted to a small area at a depth of approximately 3-5 feet very close to the northern corner of the Property and Hegenberger Road. An isoconcentration contour for benzene above the Regional Water Quality Control Board Environmental Screening Level (ESL) at 3-5 feet indicates the estimated distribution of benzene in soil is minor and restricted to that depth interval as the deeper interval did not contain detectable contamination.

The distribution of TPH-gro and benzene in soil at various depths are shown on Drawings **5, 6 and 7**. Isoconcentration contours for benzene indicate the benzene in soil above the ESL is restricted to the top 10 feet except in a small area around B-3. The recent investigation has defined the vertical and lateral extent of TPH-gro and benzene in soil.

##### *Groundwater*

All groundwater samples collected by ERAS were analyzed by McCampbell Analytical of Pittsburg, California. Groundwater samples were collected from each boring B-1 through B-16. The results of the groundwater analysis are summarized in **Table 2**.

The distribution of TPH-gro, TPH-dro, TPH-oro and benzene in groundwater near the northwestern side of the Property is shown on **Figure 8** and indicate contamination is present in shallow groundwater in B-8 but not in deeper groundwater and not in shallow or deep groundwater in the other borings drilled in this area by ERAS. The recent investigation has indicated the extent of TPH-gro and benzene in groundwater is limited in this area.

For the sump area, the distribution of TPH-gro, TPH-dro, TPH-oro and benzene in groundwater is illustrated on **Figures 9, 10, 11 and 12**, respectively. The extent of these contaminants has been defined at the Property.

*Soil Vapor*

The soil vapor samples collected from borings SV-15, and SV-16 by ERAS were analyzed by K Prime of Santa Rosa. The results of the soil vapor analysis are presented in Table 3.

No detectable concentrations of contaminants were found in the samples collected by ERAS near the northwestern side of the Property. Elevated concentrations of contaminants in soil gas are found near the former sump that are likely associated with the contaminants in soil and groundwater in that area. Some of the contamination will be removed during construction activities as described below in Future Proposed Work.

## **5.0 SENSITIVE RECEPTOR SURVEY**

ERAS requested the location of groundwater wells from the Alameda County Public Works and the California Department of Water Resources. A total of 3 groundwater production wells were identified and the locations of these wells are shown on **Figure 13**.

Two of the wells identified are located almost 2,000 feet away across San Leandro Creek. Another well is also about 2000 feet from the Property. All of these wells are located in a direction up-gradient from the Property. Based on the extent of contamination and groundwater gradient, there is not a threat to these wells by contamination from the Property.

## **6.0 LOW RISK CASE CLOSURE**

The following criteria should be met for a site to qualify for closure per RWQCB's *Interim Guidance on Required Cleanup at Low-Risk Sites*.

- The leak has been stopped and ongoing sources including free product, have been removed or remediated;
- The site has been adequately characterized;
- The dissolved plume is not migrating;
- No groundwater impact currently exists, no contaminant are found at levels above the established MCLs or other water quality objectives;
- No water wells, deeper drinking water aquifers, surface water, or other sensitive receptors are likely to be impacted; and
- The site presents no significant risk to human health or the environment.

### *Leak Has Been Stopped and Ongoing Sources Have Been Removed*

Investigations have identified soil, groundwater and soil vapor contamination mostly resulting from a former sump. Operations which were on the Property are closed and no new sources of petroleum hydrocarbons are present. During site redevelopment the majority of contaminated soil in the area to be developed that will result in excavation will be removed, further decreasing the source of contamination.

### *Site is Adequately Characterized*

As discussed above, VOC's remain in the soil, groundwater and soil vapor beneath the Property and are adequately characterized. The vertical and lateral extent of the contamination has been characterized to the extent necessary to reasonably draw conclusions regarding the risks to human and ecological receptors.

### *Dissolved Plume is Not Migrating*

The contaminants associated with the Property have been adequately characterized, and have been determined to be limited in extent and confined to the Property, even after 24 years since initial characterization of releases from the sources began.

### *No Water Wells or Other Sensitive Receptors Are Threatened*

The San Leandro Creek is located approximately 860 feet to the northeast of the Property. The area of the Property is one of the flatter topographic areas of the San Francisco Bay Area and there may not be a well-developed dominant flow direction. Contamination in groundwater under these conditions is not likely to flow long distances but rather remains near its source.

Alameda County Public Works (ACPW) performed a well survey as part of this investigation. ACPW identified three irrigation wells within 2,000 feet of the Property. However contamination associated with the Property is limited in extent, and does not pose a risk as the vertical and lateral extent of

the contamination has been determined. Based on this contamination beneath the Property is unlikely to affect any known sensitive receptors.

*Site Presents No Significant Risk*

The data for soil, groundwater, and soil gas at the Property is fairly comprehensive and was used to determine risk to commercial workers. The residual contamination will be properly handled, disposed and managed through the use of a Site Management Plan and Health and Safety Plan.

## **7.0 FUTURE PROPOSED WORK**

The following are future anticipated tasks for the Property.

- Prepare a Site Management Plan detailing the proper handling and disposal of residual contaminated soil and groundwater. The SMP will include instructions for excavation of contaminated soil at the time of the hotel construction
- Prepare a Health and Safety Plan for the soil removal during initial stages of Property redevelopment
- Prepare Case Closure Documentation in association with the ACHCSA
- Prepare Land Use Covenant (LUC) or Deed Restriction in association with the ACHCSA

## **8.0 CONCLUSIONS**

The Property consists of a rectangular vacant lot that is planned to be redeveloped with a three story hotel building. Except for a pool and elevator the ground floor will be constructed above ground and will be used for parking underneath the hotel building.

Subsurface investigation conducted by ERAS in 2015 have determined the vertical and lateral extent of petroleum hydrocarbons in soil, groundwater, and soil vapor in two areas at the Property. The vast majority of residual contamination is located in the immediate vicinity of a former sump near the middle of the Property. Residual contaminated soil to a depth of approximately 10 feet will be removed during the earliest stages of hotel construction following the instruction in a Site Management Plan and Health and Safety Plan.

The Property meets the criteria for Low Threat Case Closure based on RWQCB guidance. A Deed Restriction will be recorded to document the location and extent of residual contamination and to restrict the use to the proposed hotel use.

## **9.0 REFERENCES**

Alameda County Environmental Health Department, Remedial Action Completion Certification, Diablo Cellular, 106-110 Hegenberger Road, Oakland, California, February 8, 2001.

BSK, Soil Vapor Survey and Tier 3 Risk Assessment, Former Clarifier Sump, 106-110 Hegenberger Road, Oakland, California, December 3, 1998.

BSK, Groundwater Sampling and Analysis, 106-110 Hegenberger Road, Oakland, California, July 5, 2000.

California Department of Water Resources, Evaluation of Ground Water Resources South Bay, Appendix A: Geology, Bulletin 118-1, August 1967.

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California Regional Water Quality Control Board, Screening of Environmental Concerns at Sites with Contaminated Soil and Groundwater, December 2013.

ERA/Basics, Limited Phase II Environmental Site Assessment, 106-110 Hegenberger Road, Oakland, California, August 27, 2014.

ERAS Environmental, Inc., Work Plan for Limited Phase II Subsurface Investigation, 106-110 Hegenberger Road, Oakland, California, October 30, 2014.

ERAS Environmental Inc., Addendum to Work Plan for Additional Soil and Groundwater Investigation and Remediation Planning, 110 Hegenberger Road, Oakland, California. July 29, 2015.

Goldman, Harold B., Geology of San Francisco Bay prepared for San Francisco Bay Conservation and Development Commission, February 1967.

Helley, E.J., La Joie, K.R., Spangle, W.E., and Blair, M.L., Flatland Deposits of the San Francisco Bay Region, California - their geology and engineering properties and their importance to comprehensive planning, U.S. Geological Survey Professional Paper 943, 1974.

## **FIGURES**



**Legend**

— Site (boundaries approximate)

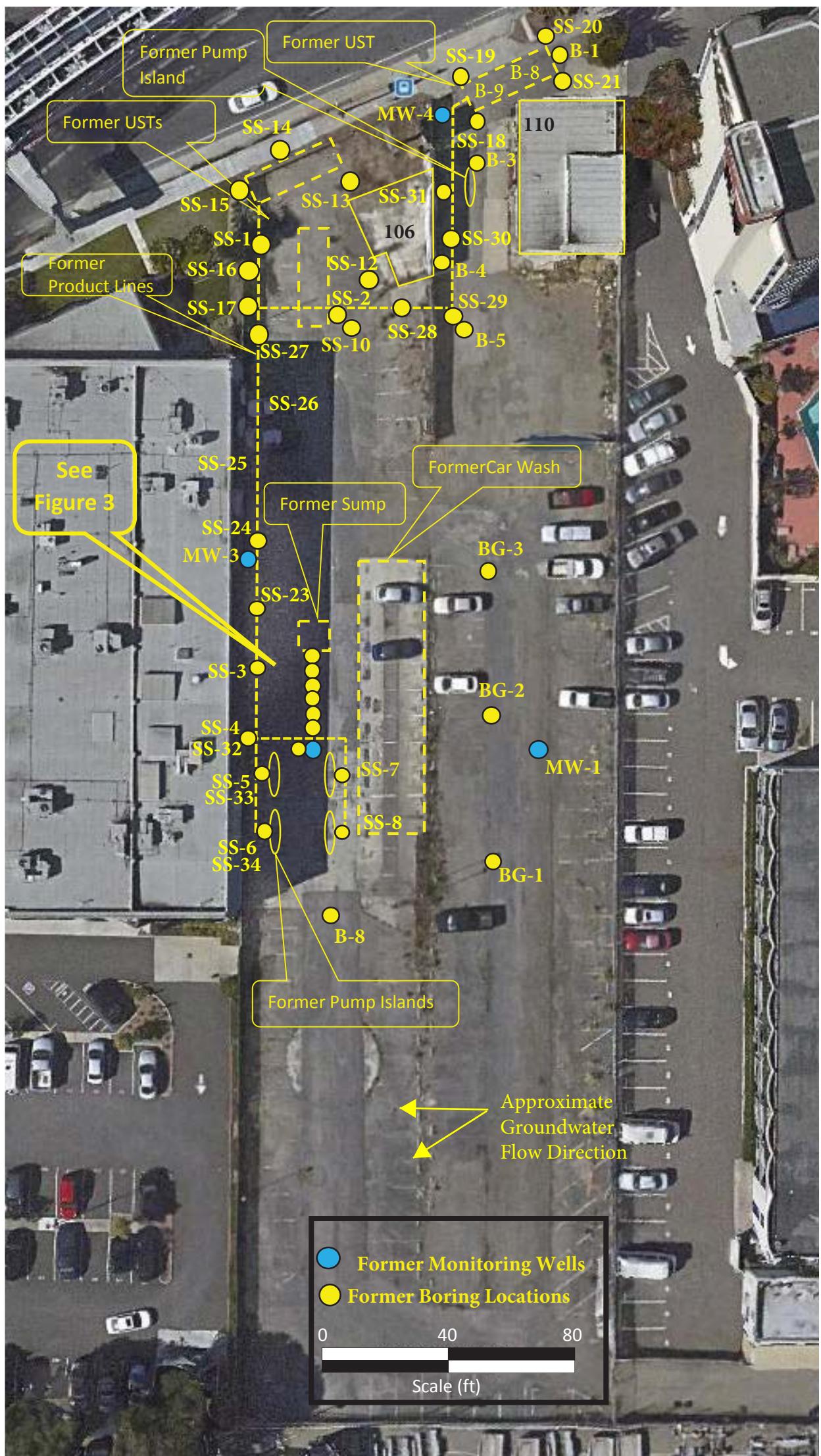


North

**Site Location Map**

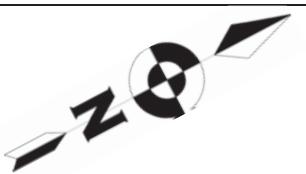
**LIMITED PHASE II ENVIRONMENTAL SITE ASSESSMENT**

106 - 110 Hegenberger Road, Oakland, California

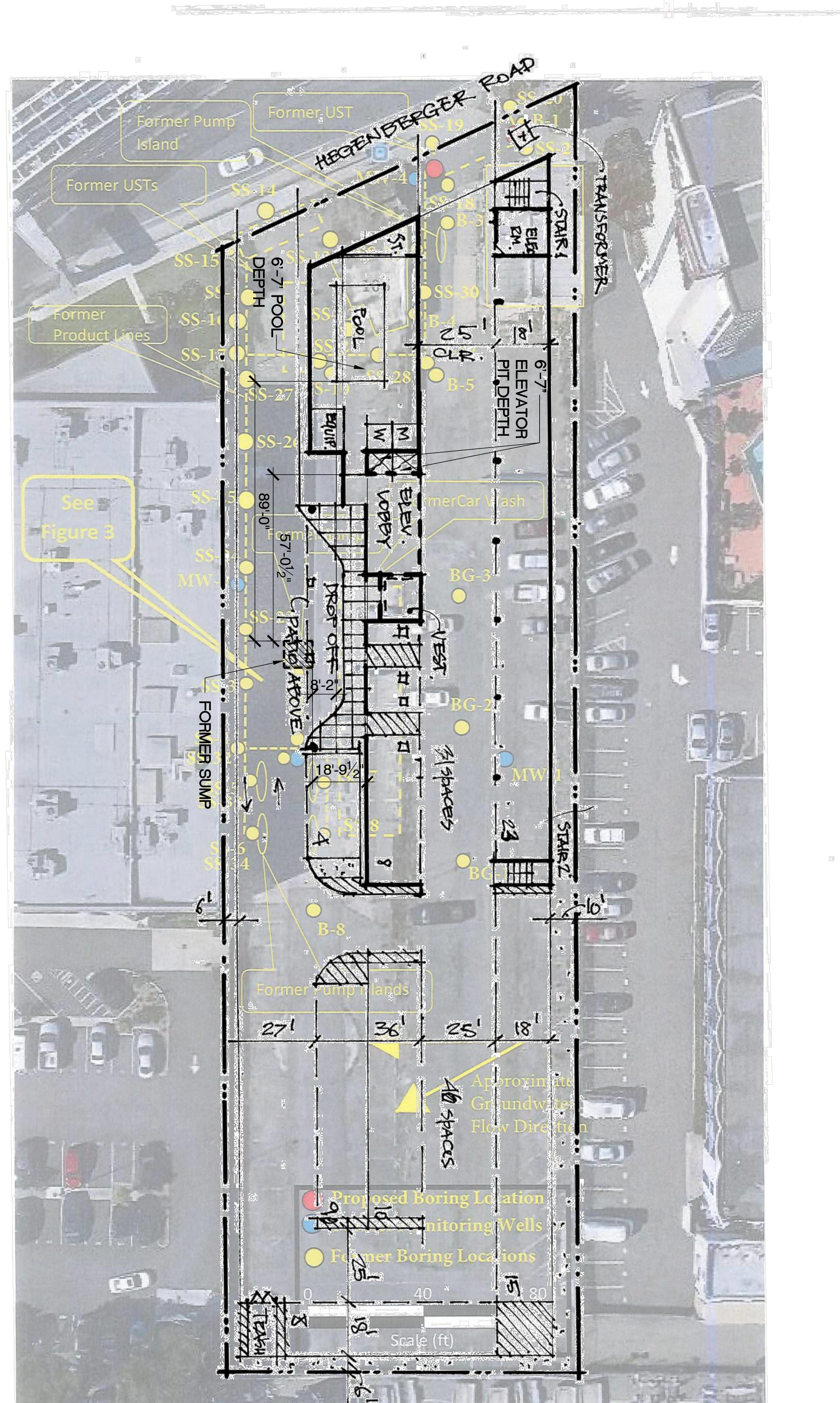


**FIGURE 2 – SAMPLE LOCATION MAP**

106-110 Hegenberger Road Oakland, CA  
ERAS Project Number 14-003-02

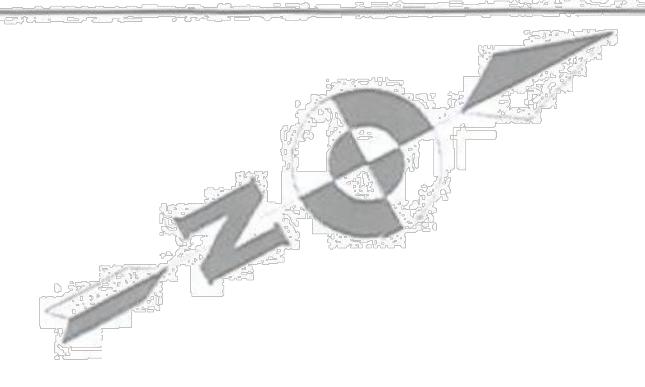


ARCHITECTURAL DIMENSIONS	300 Frank H. Ogawa Plaza Oakland, CA 94612 TEL. 510.463.8300 • FAX. 510.463.8395
PROJECT INFO.	Home 2 Suites by Hilton 110 Hegenberger Road, Oakland CA



**FIGURE 2—SAMPLE LOCATION MAP**

106-110 Hegenberger Road Oakland, CA  
ERAS Project Number 14-003-02

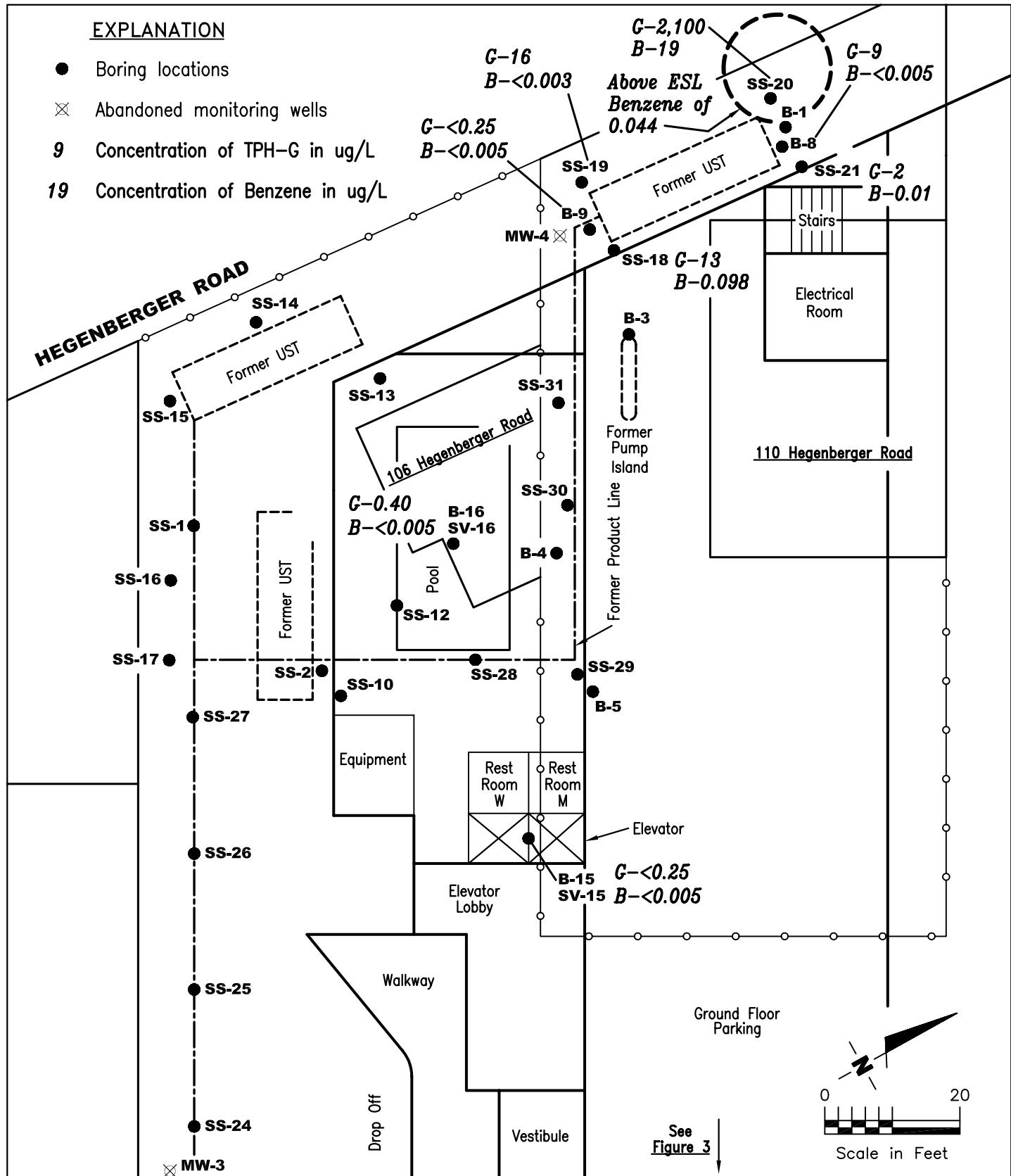


## EXPLANATION

- Boring locations
  - ✗ Abandoned monitoring wells

**9** Concentration of TPH-G in ug/L

**19** Concentration of Benzene in ug/L



## **DISTRIBUTION of TPHgro & BENZENE in SOIL 3'-5'**

DATE  
09-15  
REVIEWED BY  
AS

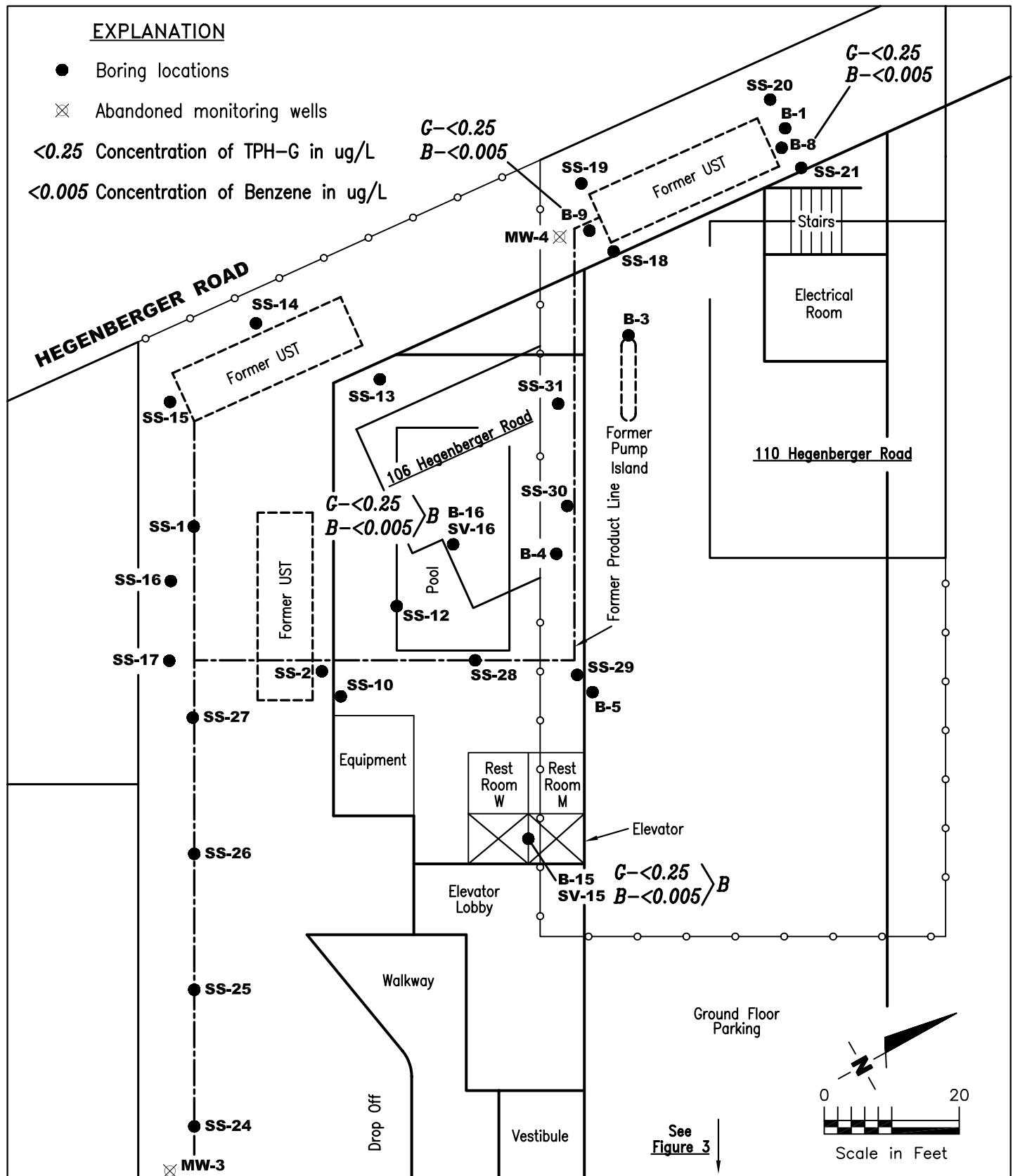
106-110 Hegenberger Road  
Oakland, California

JOB NUMBER  
14-003-05  
FIGURE  
3

**E**RAS **E**nvironmental Inc.

### EXPLANATION

- Boring locations
  - ☒ Abandoned monitoring wells
- $C < 0.25$  Concentration of TPH-G in ug/L       $B < 0.005$
- $C < 0.25$        $B < 0.005$
- $< 0.005$  Concentration of Benzene in ug/L



### DISTRIBUTION of TPHgro & BENZENE in SOIL 7'-12'

DATE  
09-15  
REVIEWED BY  
AS

106-110 Hegenberger Road  
Oakland, California

JOB NUMBER  
14-003-05  
FIGURE  
4

100  
Hegenberger Road  
Building

MW-3

EXPLANATION

- ⊗ Abandoned monitoring well
- △ Vapor samples
- Soil borings
- G Distribution of TPHgro &  
B Benzene in mg/kg  
in soil between 2-6 feet bgs

See  
Figure 4

Elevators/Lobby

Vestibule

Above ESL for  
Benzene 0.044

G-9.3  
B-<0.005  
B-4

HA-6-5

G-0.3  
B-<0.005  
B-5

V-4 △

SB-3 △

V-3 △

C-<0.25  
B-<0.005  
B-6

C-<0.25  
B-<0.005

SV-5 △

V-5 △

Former Sump

SS-22-4.5 △

G-87  
B-0.43  
B-7  
SB-6(B-101)  
SB-7

HA-4-5

SB-2 △

SB-1 △

V-1 △

B-102

G-120  
B-0.16  
B-2

SB-8

HA-7-5

B-1

SB-9

⊗ MW-2

G-310  
B-1.8  
B-3

D r o p  
off

G-54  
B-<0.005  
B-12

G-35  
B-<0.005  
B-11

Former  
Car Wash

G-21  
B-<0.005  
B-10

G-110  
B-<0.005  
B-14

G-7.6  
B-<0.005  
B-13

Planned Ground Floor Parking

Parking



Scale in Feet

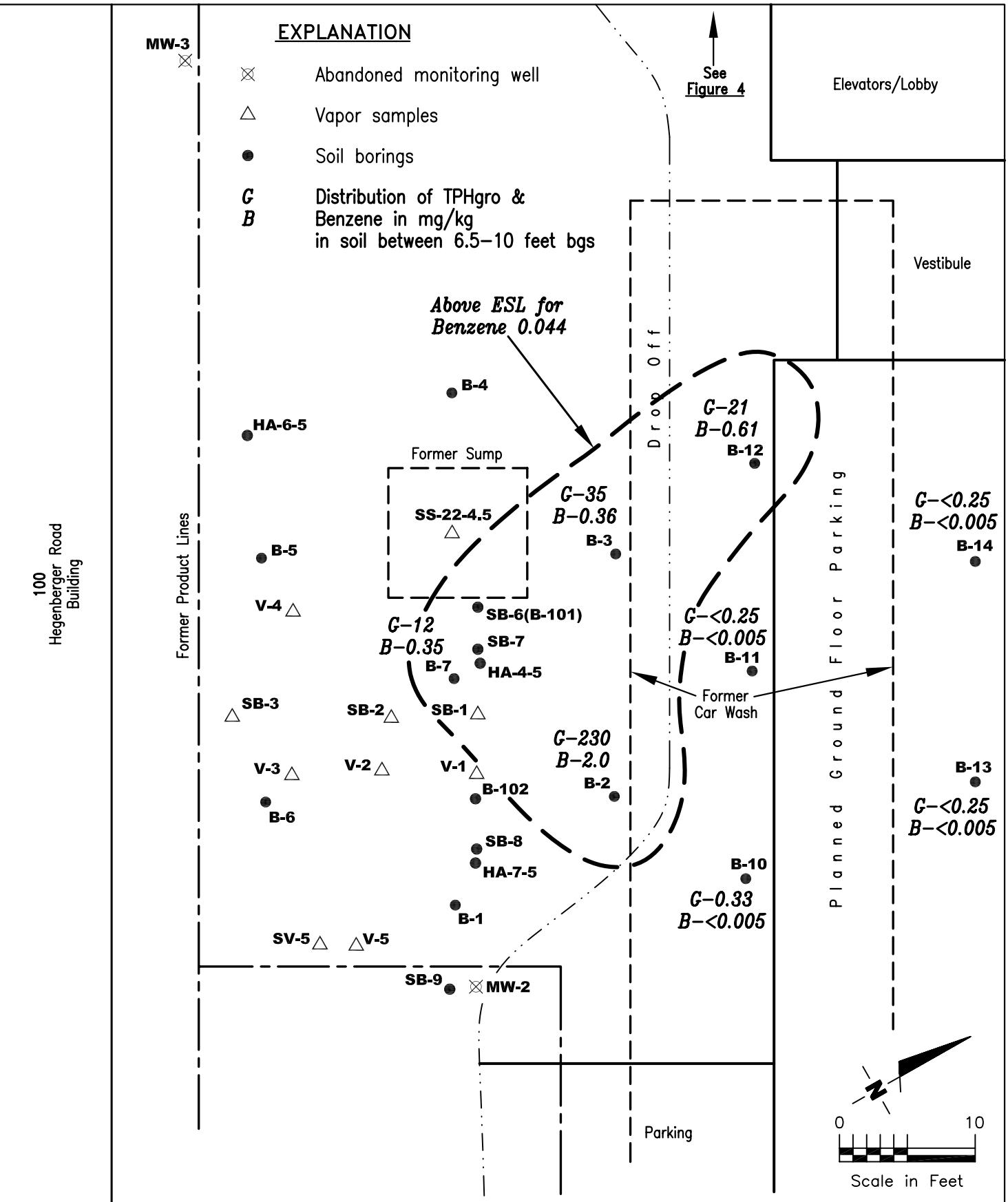
**DISTRIBUTION of TPHgro & BENZENE in SOIL - 2'-6' bgs**

DATE  
09-15  
REVIEWED BY  
AS

-  
106-110 Hegenberger Road  
Oakland, California

JOB NUMBER  
14-003-05  
FIGURE  
5

ERAS Environmental Inc.



DATE  
09-15  
REVIEWED BY  
AS

106-110 Hegenberger Road  
Oakland, California

JOB NUMBER  
14-003-05  
FIGURE  
6

100  
Hegenberger Road  
Building

MW-3

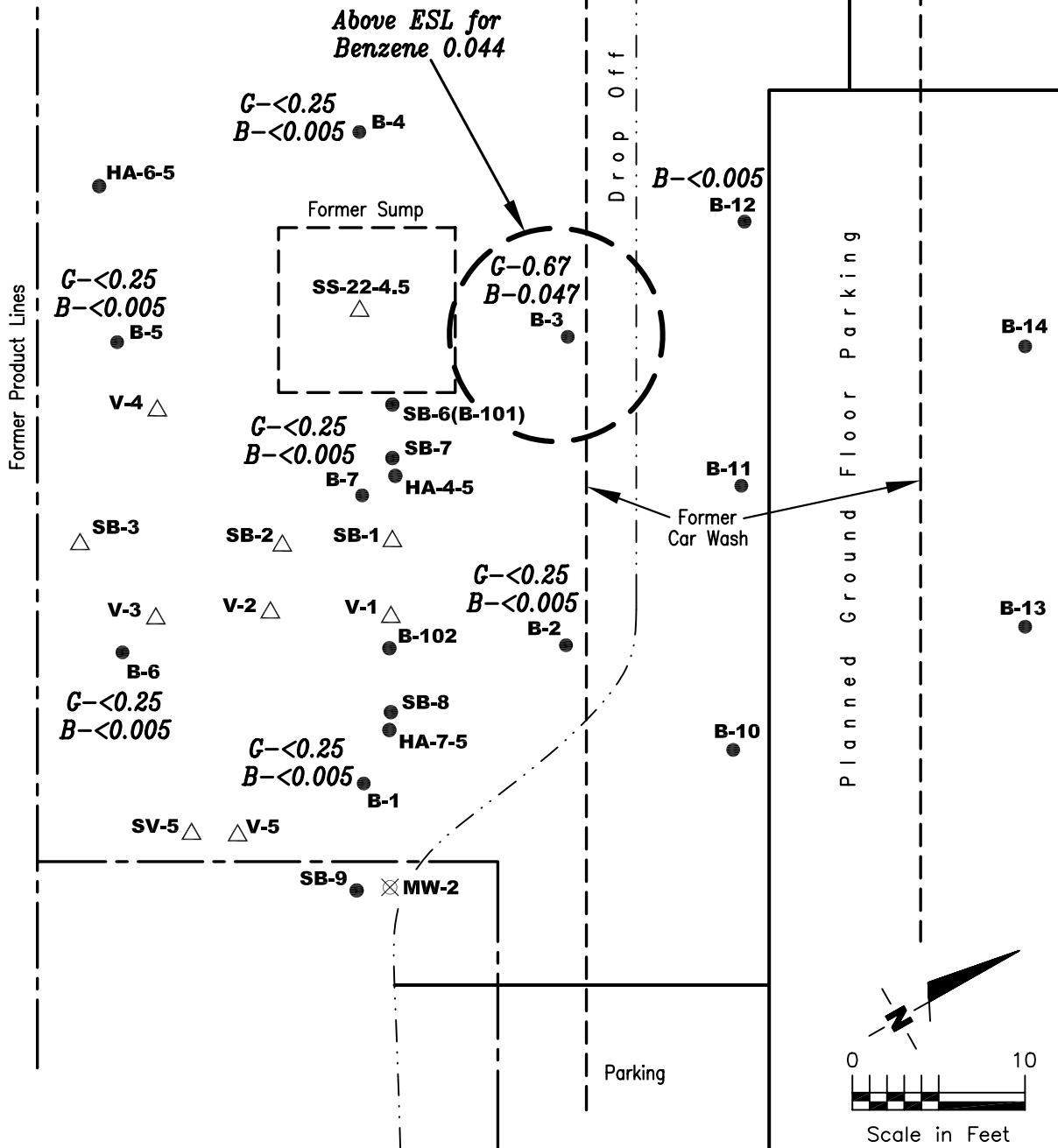
EXPLANATION

- ⊗ Abandoned monitoring well
- △ Vapor samples
- Soil borings
- G Distribution of TPHgro &
- B Benzene in mg/kg
- in soil between 10.5'-16' bgs

See  
Figure 4

Elevators/Lobby

Vestibule



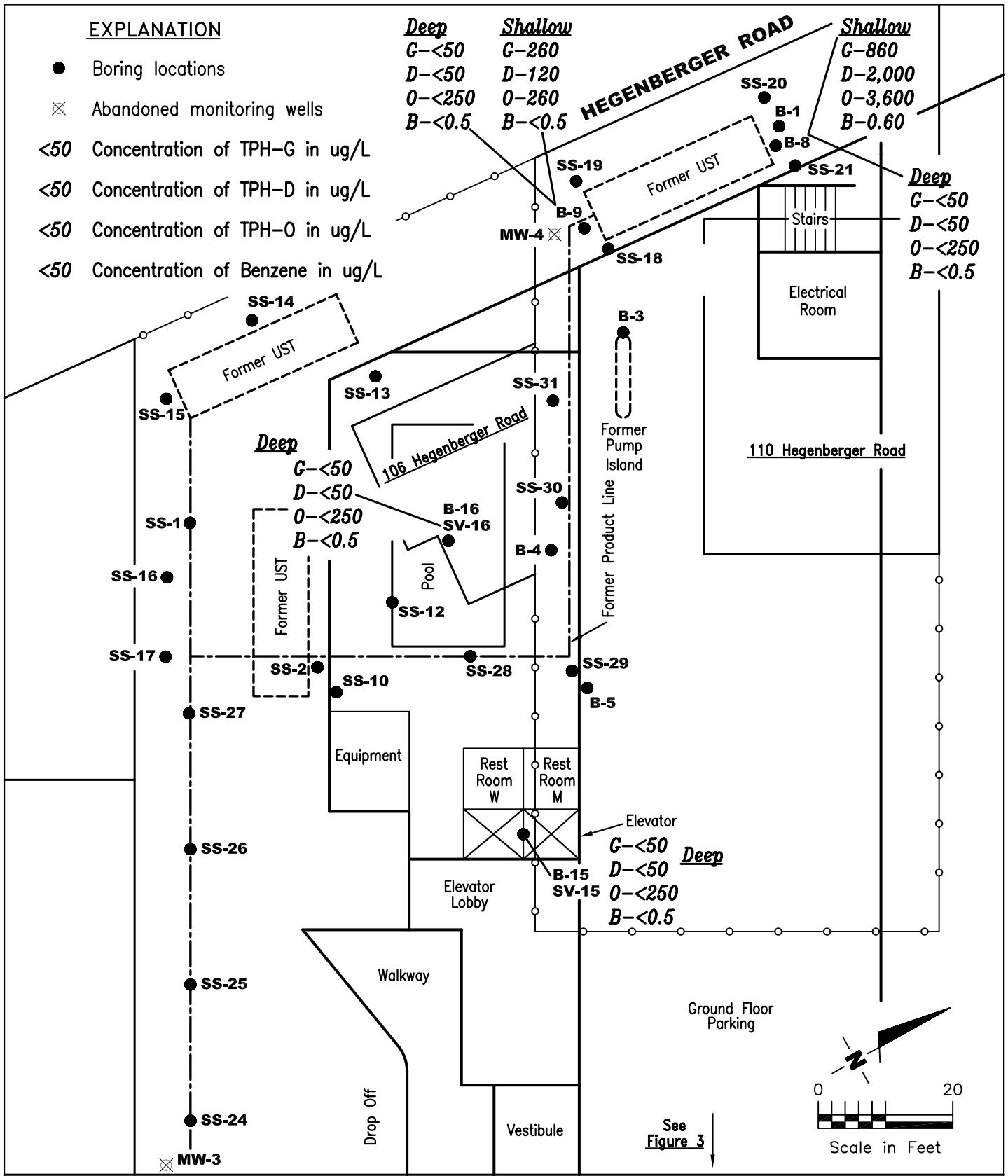
**DISTRIBUTION of TPHgro & BENZENE in SOIL - 10.5'-16' bgs**

DATE  
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106-110 Hegenberger Road  
Oakland, California

JOB NUMBER  
14-003-05  
FIGURE  
7

ERAS Environmental Inc.

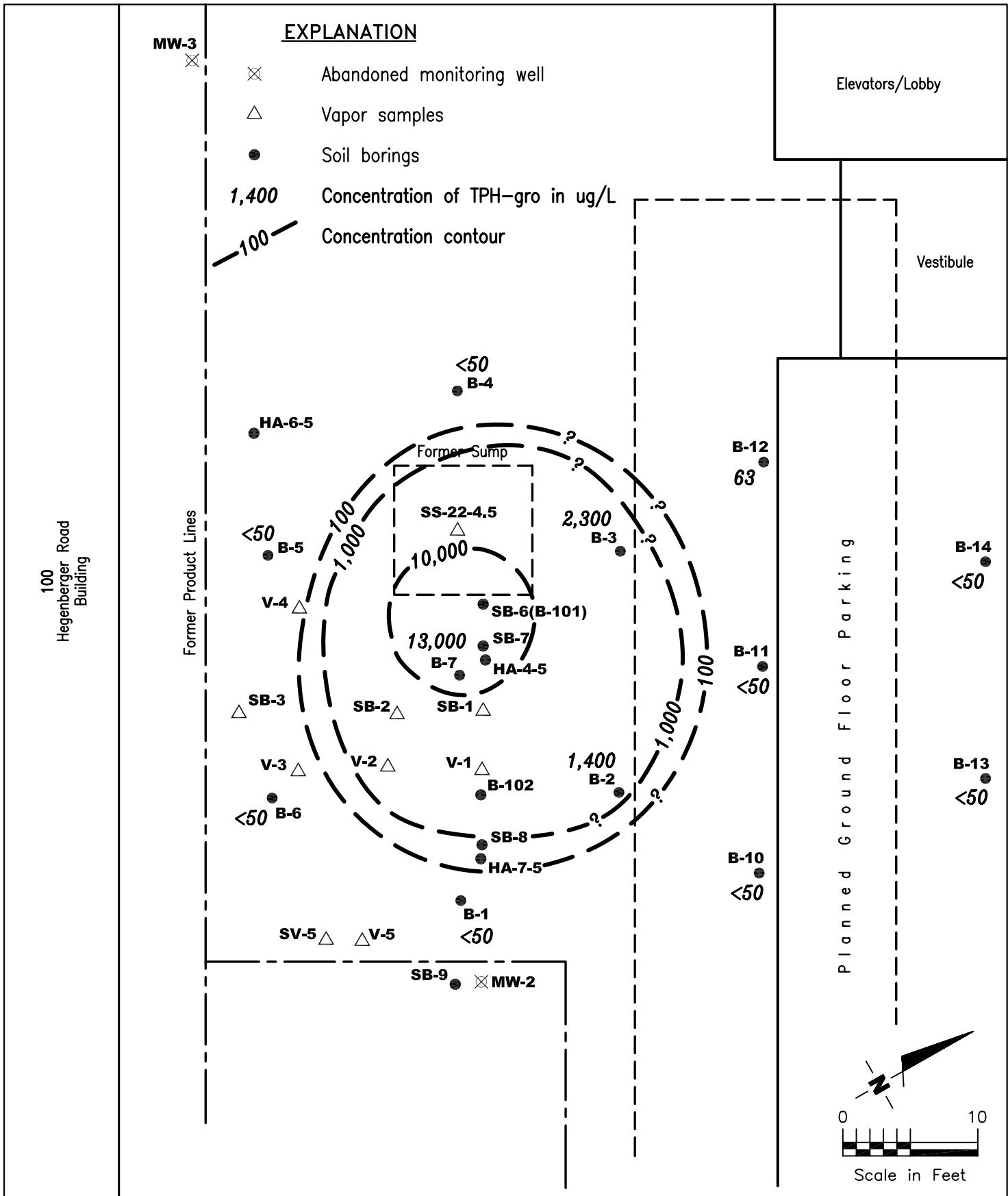


#### DISTRIBUTION of TPH-G, TPH-D, TPH-O & BENZENE in GROUNDWATER

DATE  
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Oakland, California

JOB NUMBER  
14-003-05  
FIGURE  
8



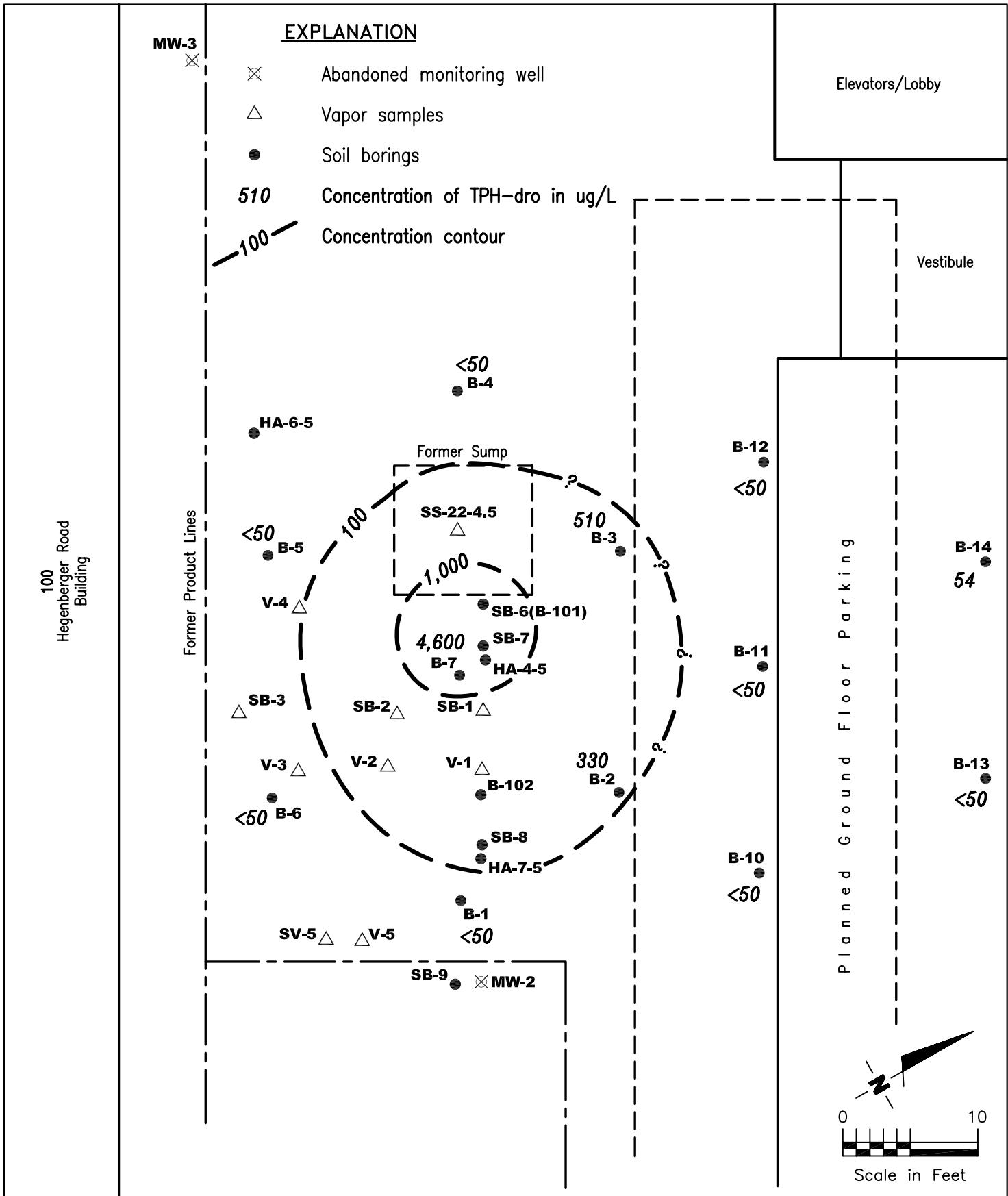
### DISTRIBUTION of TPH-gro in GROUNDWATER

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Oakland, California

JOB NUMBER  
14-003-05  
FIGURE  
9

ERAS Environmental Inc.



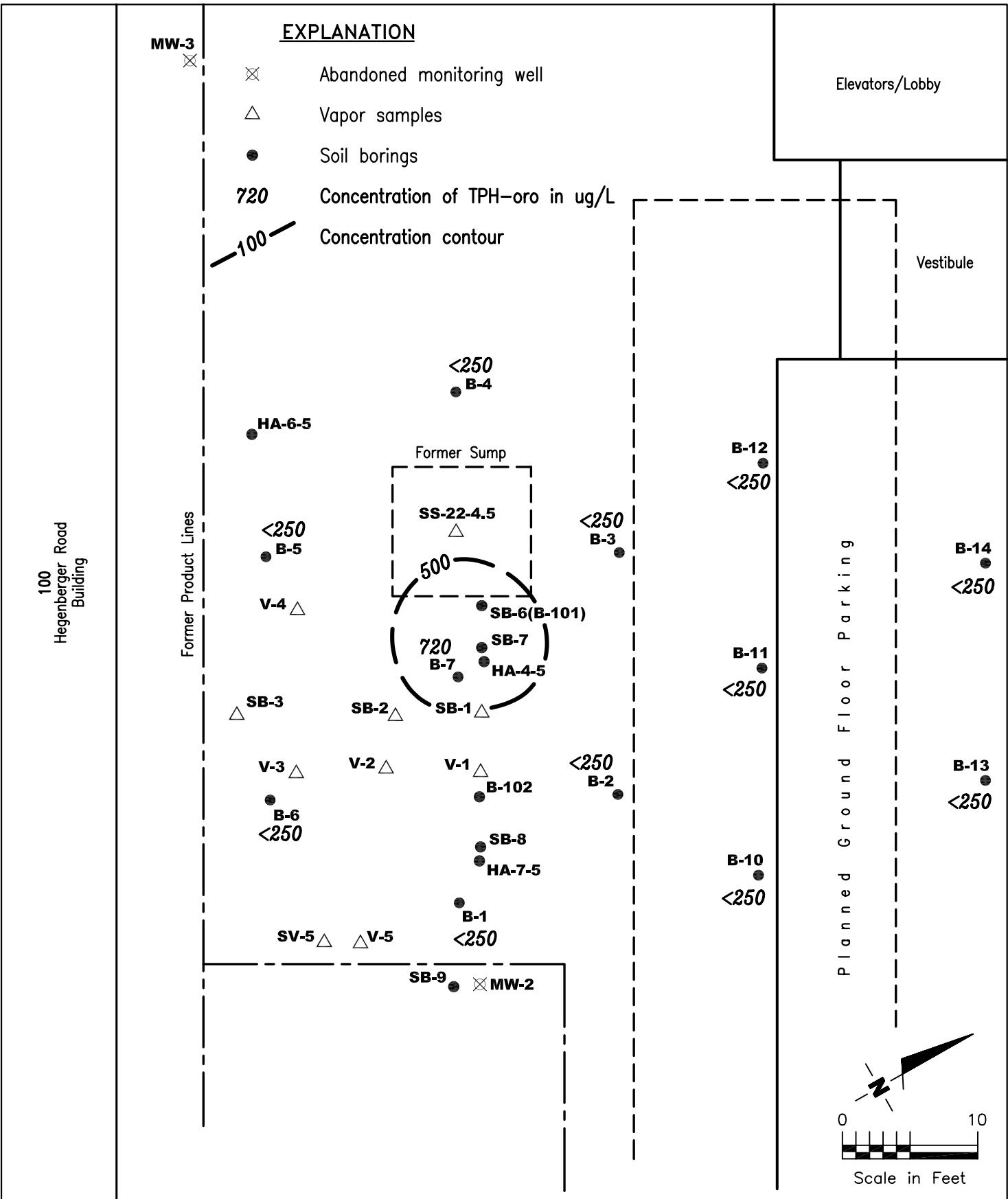
#### DISTRIBUTION of TPH-dro in GROUNDWATER

DATE  
09-15  
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AS

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Oakland, California

JOB NUMBER  
14-003-05  
FIGURE  
10

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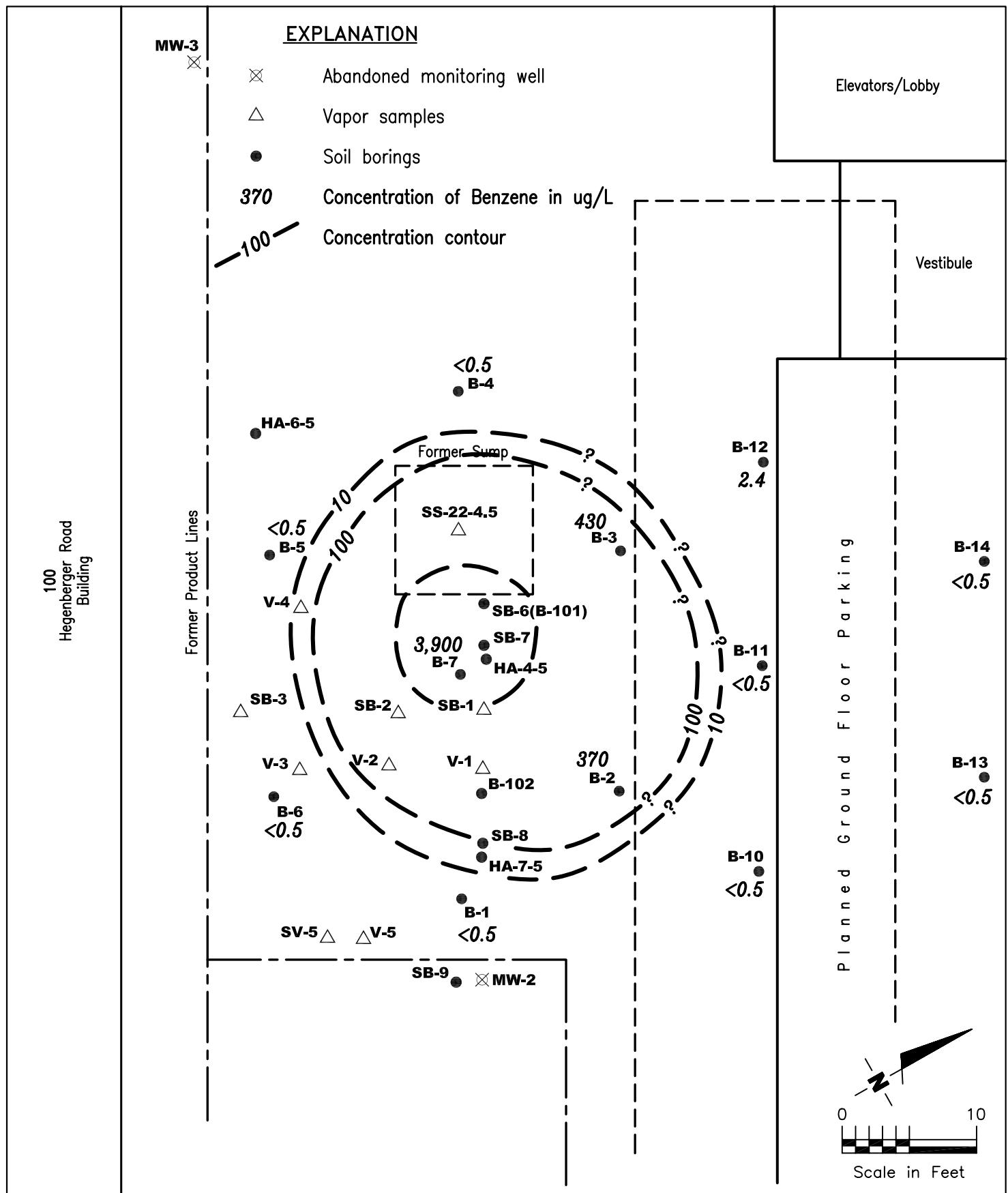
#### DISTRIBUTION of TPH-oro in GROUNDWATER

DATE  
09-15  
REVIEWED BY  
AS

106-110 Hegenberger Road  
Oakland, California

JOB NUMBER  
14-003-05  
FIGURE  
11

ERAS Environmental Inc.



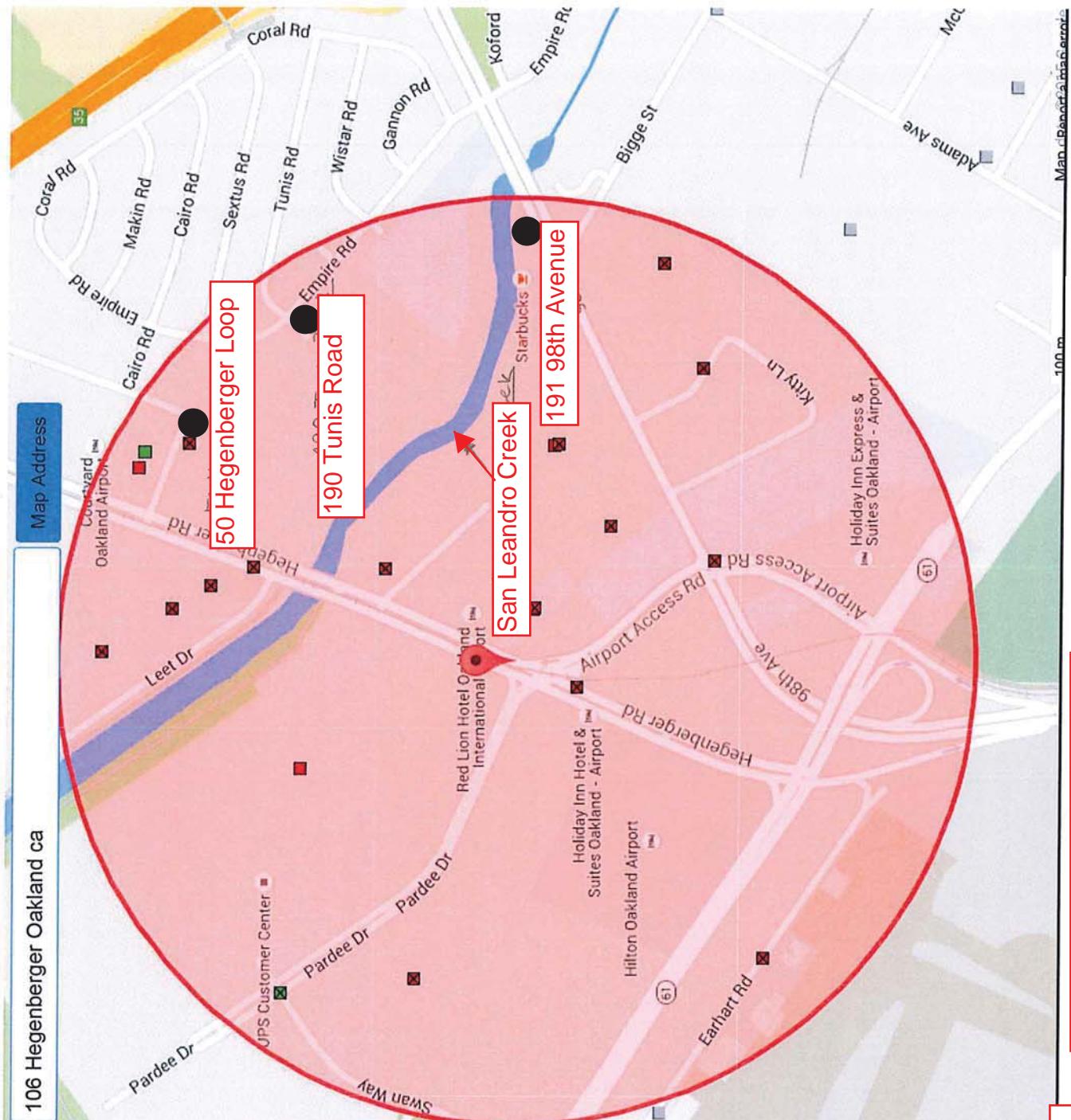
## **DISTRIBUTION of BENZENE in GROUNDWATER**

DATE  
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AS

106-110 Hegenberger Road  
Oakland, California

JOB NUMBER  
14-003-05  
FIGURE  
12

# ERAS Environmental Inc.



**PRODUCTION WELL LOCATIONS**

**FIGURE 13**  
2000 Foot Radius  
ERAS/14-003-05/9-24-15



## **TABLES**

**TABLE 1. ANALYTICAL RESULTS - SOIL**  
106-110 Hegenberger Road, Oakland, CA

Sample ID	Date	Depth	TPH-gro	TPH-dro	TPH-or0	TOG - 503A	TOG - 5520B(503D)	TRPH	Benzene	Toluene	Ethyl-Benzene	Xylenes	HVOC's	Naphthalene	MTBE	2-methyl-naphthalene	n-butyl-benzene	sec-butyl-benzene	isopropyl-benzene	n-propyl-benzene	Total Cadmium	Total Chromium	Total Lead	Nickel	Total Zinc
		ft-bgs																							
<i>UST/Pumps/Lines</i>																									
SS-1	22-Aug-90	5.0	7	NA	NA	NA	NA	NA	NA	0.081	0.013	0.7	0.18	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SS-2	22-Aug-90	5.0	2	NA	NA	NA	NA	NA	NA	0.024	0.025	0.062	0.25	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SS-3	22-Aug-90	2.5	<1	NA	NA	NA	NA	NA	NA	<3	<3	<3	<3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SS-4	22-Aug-90	2.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
SS-5	22-Aug-90	2.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
SS-6	22-Aug-90	2.5	<1	NA	NA	NA	NA	NA	NA	<3	<3	<3	<3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
SS-7	22-Aug-90	4.0	1	NA	NA	NA	NA	NA	NA	0.170	0.008	0.039	0.057	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
SS-8	22-Aug-90	4.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
SS-9	22-Aug-90	2.5	35	NA	NA	NA	NA	NA	NA	0.019	0.051	0.47	0.93	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
SS-10	27-Aug-90	5.0	190	NA	NA	NA	NA	NA	NA	2.10	0.530	2.7	4.4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
SS-11	27-Aug-90	5.0	1	NA	NA	NA	NA	NA	NA	0.18	0.008	0.003	0.046	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
SS-12	27-Aug-90	5.0	<1	NA	NA	NA	NA	NA	NA	0.044	<0.003	<0.003	<0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
SS-13	27-Aug-90	5.0	3	NA	NA	NA	NA	NA	NA	0.23	0.018	0.005	0.092	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
SS-14	27-Aug-90	3.0	3	NA	NA	NA	NA	NA	NA	<0.003	0.010	0.008	0.013	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
SS-15	27-Aug-90	5.0	1	NA	NA	NA	NA	NA	NA	<0.003	<0.003	0.005	0.011	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
SS-16	27-Aug-90	5.0	<1	NA	NA	NA	NA	NA	NA	<0.003	<0.003	<0.003	<0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
SS-17	27-Aug-90	5.0	<1	NA	NA	NA	NA	NA	NA	<0.003	<0.003	<0.003	<0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
SS-18	5-Sep-90	5.0	13	NA	NA	NA	NA	NA	NA	0.098	0.037	0.044	0.012	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
SS-19	5-Sep-90	8.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
SS-20	5-Sep-90	5.0	2,100	110	NA	NA	NA	13,000	NA	19	21	26	12	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
SS-21	5-Sep-90	5.0	1	NA	NA	NA	NA	NA	0.010	0.004	0.006	<0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
SS-22	7-Sep-90	4.5	570	420	NA	780	2,400	NA	0.15	0.062	1.7	13	<0.005	6	7.9	7.9	NA	NA	NA	NA	1	62	80	NA	69
SS-23	7-Sep-90	2.5	<1	NA	NA	NA	NA	NA	<0.003	<0.003	<0.003	<0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
SS-24	7-Sep-90	2.5	<1	NA	NA	NA	NA	NA	<0.003	<0.003	<0.003	<0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
SS-25	7-Sep-90	2.5	<1	NA	NA	NA	NA	NA	<0.003	0.004	<0.003	<0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
SS-26	7-Sep-90	1.5	<1	NA	NA	NA	NA	NA	0.041	<0.003	0.005	0.006	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
SS-27	7-Sep-90	2.5	<1	NA	NA	NA	NA	NA	<0.003	<0.003	<0.003	<0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
SS-28	7-Sep-90	2.5	<1	NA	NA	NA	NA	NA	<0.003	<0.003	<0.003	<0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
SS-29	7-Sep-90	2.5	980	NA	NA	NA	NA	NA	NA	<0.150	4.0	2.1	60	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
SS-30	7-Sep-90	3.0	65	NA	NA	NA	NA	NA	NA	<0.005	0.121	0.37	0.37	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
SS-31	7-Sep-90	3.0	790	NA	NA	NA	NA	NA	NA	<0.030	2.3	20	4.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
SS-32	7-Sep-90	2.5	4	NA	NA	NA	NA	NA	NA	<0.003	<0.003	0.016	0.007	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
SS-33	7-Sep-90	2.5	<1	NA	NA	NA	NA	NA	NA	<0.003	<0.003	<0.003	<0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
SS-34	7-Sep-90	2.5	<1	NA	NA	NA	NA	NA	NA	<0.003	<0.003	<0.003	<0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
<i>Sump</i>																									
HA-4-5	3-Apr-91	5.0	3,340	<10	NA	NA	NA	NA	4,000	39.9	177	93.3	281	NA	NA	NA	NA	NA	NA	10	41.1	59.3	NA	60.8	
HA-6-5	3-Apr-91	5.0	<1.0	<10	NA	NA	NA	NA	160	<0.05	<0.07	<0.07	<0.14	NA	NA	NA	NA	NA	NA	0.8	45.6	46.2	NA	52.3	
HA-7-5	3-Apr-91	5.0	1,160	<10	NA	NA	NA	NA	1,700	16.1	29.2	41	115	NA	NA	NA	NA	NA	NA	0.9	52.3	109	NA	38.1	
<i>Background</i>																									
BG-1-3	3-Apr-91	3.0	NA	NA	NA	NA	NA	NA	56	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.8	41.5	10	NA	19.9	
BG-2-3	3-Apr-91	3.0	NA	NA	NA	NA	NA	NA	114	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.9	47.9	47.8	NA	43	
BG-3-3	3-Apr-91	3.0	NA	NA	NA	NA	NA	NA	82	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.74	49.8	30.5	NA	39.4	

**TABLE 1. ANALYTICAL RESULTS - SOIL**  
106-110 Hegenberger Road, Oakland, CA

Sample ID	Date	Depth ft-bgs	TPH-gro	TPH-dro	TPH-or0	TOG - 503A	TOG - 5520B(503D)	TRPH	Benzene	Toluene	Ethyl-Benzene	Xylenes	HVOC's	Naphthalene	MTBE	2-methyl-naphthalene	n-butyl benzene	sec-butyl benzene	isopropyl benzene	n-propyl benzene	Total Cadmium	Total Chromium	Total Lead	Nickel	Total Zinc			
			mg/Kg																									
<i>UST/Pumps/Lines</i>																												
MW1	11-Feb-94	9.0	<1.0	NA	NA	NA	NA	<50	NA	<0.005	<0.005	<0.005	NA	NA	NA	NA	NA	NA	NA	NA	NA	<4.0	NA	NA				
MW1	11-Feb-94	16.5	<1.0	NA	NA	NA	NA	<50	NA	<0.005	<0.005	<0.005	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	4.1	NA	NA			
MW1	11-Feb-94	21	<1.0	NA	NA	NA	NA	<50	NA	<0.005	<0.005	<0.005	NA	NA	NA	NA	NA	NA	NA	NA	NA	<4.0	NA	NA				
MW2	11-Feb-94	10.5	<1.0	NA	NA	NA	NA	<50	NA	<0.005	<0.005	<0.005	<0.005	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA			
MW2	11-Feb-94	15.5	<1.0	NA	NA	NA	NA	<50	NA	<0.005	<0.005	<0.005	<0.005	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA			
MW2	11-Feb-94	17.0	<1.0	NA	NA	NA	NA	<50	NA	<0.005	<0.005	<0.005	<0.005	NA	NA	NA	NA	NA	NA	NA	NA	NA	5.3	NA	NA			
B8	11-Feb-94	10.5	<1.0	NA	NA	NA	NA	NA	NA	<0.005	<0.005	<0.005	<0.005	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA			
B8	11-Feb-94	15.5	<1.0	NA	NA	NA	NA	NA	NA	<0.005	<0.005	<0.005	<0.005	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA			
MW3	15-Feb-94	5.5	<1.0	<10	NA	NA	NA	<50	NA	<0.005	<0.005	<0.005	<0.005	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA			
MW3	15-Feb-94	10.5	<1.0	<10	NA	NA	NA	<50	NA	<0.005	<0.005	<0.005	<0.005	NA	<0.05	NA	<0.05	(<varies)	(<varies)	(<varies)	(<varies)	NA	<1.0	36	4.1	36	28	
MW3	15-Feb-94	15.5	<1.0	<10	NA	NA	NA	<50	NA	<0.005	<0.005	<0.005	<0.005	NA	<0.05	NA	<0.05	(<varies)	(<varies)	(<varies)	(<varies)	NA	<1.0	53	4.7	56	53	
B3	28-Feb-94	6.0	30	NA	NA	NA	NA	NA	NA	0.76	0.07	0.17	0.97	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA			
B3	28-Feb-94	10.0	<1.0	NA	NA	NA	NA	NA	NA	<0.005	<0.005	<0.005	<0.005	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA			
B3	28-Feb-94	11.0	<1.0	NA	NA	NA	NA	NA	NA	<0.005	<0.005	<0.005	<0.005	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA			
B3	28-Feb-94	16.0	<1.0	NA	NA	NA	NA	NA	NA	<0.005	<0.005	<0.005	<0.005	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA			
B3	28-Feb-94	18.5	<1.0	NA	NA	NA	NA	NA	NA	<0.005	<0.005	<0.005	<0.005	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA			
B4	28-Feb-94	5.5	<1.0	NA	NA	NA	NA	NA	NA	<0.005	<0.005	<0.005	<0.005	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA			
B4	28-Feb-94	10.5	<1.0	NA	NA	NA	NA	NA	NA	<0.005	<0.005	<0.005	<0.005	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA			
B4	28-Feb-94	15.5	<1.0	NA	NA	NA	NA	NA	NA	<0.005	<0.005	<0.005	<0.005	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA			
B4	28-Feb-94	18.0	<1.0	NA	NA	NA	NA	NA	NA	<0.005	<0.005	<0.005	<0.005	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA			
B5	28-Feb-94	5.5	<1.0	NA	NA	NA	NA	NA	NA	<0.005	<0.005	<0.005	<0.005	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA			
B5	28-Feb-94	10.5	<1.0	NA	NA	NA	NA	NA	NA	<0.005	<0.005	<0.005	<0.005	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA			
B5	28-Feb-94	15.5	<1.0	NA	NA	NA	NA	NA	NA	<0.005	<0.005	<0.005	<0.005	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA			
<i>Sump</i>																												
B-101	8-Sep-97	5.0	<b>900</b>	NA	NA	NA	NA	NA	NA	<b>1.1</b>	<b>5.6</b>	<b>19</b>	<b>39</b>	NA	NA	NA	NA	NA	NA	NA	NA	NA	41	NA	NA			
B-101	8-Sep-97	10.0	<1.0	NA	NA	NA	NA	NA	NA	<0.005	<0.005	<0.005	<0.005	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA			
B-102	8-Sep-97	5.0	<b>2,000</b>	NA	NA	NA	NA	NA	NA	<b>16</b>	<b>3.2</b>	<b>120</b>	<b>57</b>	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
B-102	8-Sep-97	10.0	<1.0	NA	NA	NA	NA	NA	NA	<0.005	<0.005	<0.005	<0.005	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA			
SB-6 (B-101)	11-Aug-14	5.0	<b>1,200</b>	<b>400</b>	NA	<b>910</b>	NA	NA	NA	<b>8.6</b>	<b>7.5</b>	1.2	NA	<b>19</b>	NA	6.8	2.5	8.0	26	<0.25	56	64	53	76				
SB-7 (HA-4-5)	11-Aug-14	5.0	<b>1,200</b>	<b>180</b>	NA	<b>530</b>	NA	NA	NA	<b>3.5</b>	2.6	<1.0	NA	<b>7.7</b>	NA	3.0	1.1	3.0	10	<0.25	110	120	84	95				
SB-8 (HA-7-5)	11-Aug-14	5.0	40	8.6	NA	160	NA	NA	NA	<0.05	<0.05	<0.05	NA	<0.05	NA	<0.05	<0.05	0.21	0.6	<0.25	88	190	88	100				
SB-9	11-Aug-14	5.0	1.5	6.2	NA	53	NA	NA	NA	<0.005	<0.005	<0.005	NA	<0.005	NA	<0.005	<0.005	<0.005	<0.005	<0.25	89	30	82	65				
B-1	5-May-15	2.0	<0.25	2.7	20	NA	NA	NA	NA	<0.005	<0.005	<0.005	<0.005	NA	<0.005	<0.005	NA	NA	NA	NA	NA	NA	0.39	49	19	49	69	
B-1	5-May-15	12.0	<0.25	1.3	<5	NA	NA	NA	NA	<0.005	<0.005	<0.005	<0.005	NA	<0.005	<0.005	NA	NA	NA	NA	NA	NA	<0.25	57	9.9	66	55	
B-2	5-May-15	4.0	120	40	78	NA	NA	NA	NA	<b>0.16</b>	<0.05	<0.05	<0.05	NA	<0.05	<0.05	NA	NA	NA	NA	NA	NA	<0.25	77	17	81	40	
B-2	5-May-15	6.5	230	44	13	NA	NA	NA	NA	<b>2.0</b>	<0.5	<b>9.4</b>	<0.5	NA	<b>2.1</b>	<0.5	NA	NA	NA	NA	NA	NA	<0.25	64	41	79	55	
B-2	5-May-15	10.5	<0.25	<1	<5	NA	NA	NA	NA	<0.005	<0.005	<0.005	<0.005	NA	<0.005	<0.005	NA	NA	NA	NA	NA	NA	<0.25	63	8.8	69	63	
B-3	5-May-15	4.0	310	<b>290</b>	<b>800</b>	NA	NA	NA	NA	<b>1.8</b>	<0.1	0.97	0.14	NA	<b>1.8</b>	<0.1	NA	NA	NA	NA	NA	NA	<0.25	74	240	75	130	
B-3	5-May-15	8.0	35	8.3	<5	NA	NA	NA	NA	<b>0.36</b>	<0.25	0.36	0.045	NA	0.61	<0.025	NA	NA	NA	NA	NA	NA	<0.25	43	6.8	47	41	
B-3	5-May-15	11.0	0.67	<1	<5	NA	NA	NA	NA	<b>0.047</b>	<0.005	0.032	0.064	NA	<0.005	<0.005	NA	NA	NA	NA	NA	NA	0.35	45	6.5	46	41	
B-4	5-May-15	6.0	9.3	2.5	<5	NA	NA	NA	NA	<0.005	<0.005	<0.005	<0.005	NA	<0.005	<0.005	NA	NA	NA	NA	NA	NA	<0.25	55	11	58	53	
B-4	5-May-15	12.0	<0.25	1.7	5.7	NA	NA	NA	NA	<0.005	<0.005	<0.005	<0.005	NA	<0.005	<0.005	NA	NA	NA	NA	NA	NA	<0.25	34	5.2	43	36	
B-5	5-May-15	3.5	0.30	12																								

**TABLE 1. ANALYTICAL RESULTS - SOIL**  
106-110 Hegenberger Road, Oakland, CA

Sample ID	Date	Depth	TPH-gro	TPH-dro	TPH-oro	TOG - 503A	TOG - 5520B(503D)	TRPH	Benzene	Toluene	Ethyl-Benzene	Xylenes	HVOC's	Naphthalene	MTBE	2-methyl-naphthalene	n-butylbenzene	sec-butylbenzene	isopropylbenzene	n-propylbenzene	Total Cadmium	Total Chromium	Total Lead	Nickel	Total Zinc
		ft-bgs	mg/Kg																						
B-6	5-May-15	4.0	<0.25	2.5	11	NA	NA	NA	<0.005	<0.005	<0.005	<0.005	NA	<0.005	<0.005	NA	NA	NA	NA	<0.25	62	6.4	68	34	
B-6	5-May-15	12.0	<0.25	<1	<5	NA	NA	NA	<0.005	<0.005	<0.005	<0.005	NA	<0.005	<0.005	NA	NA	NA	NA	<0.25	40	5.3	42	35	
B-7	6-May-15	4.0	87	5.5	21	NA	NA	NA	<b>0.43</b>	<0.05	0.30	<0.50	NA	0.76	<0.05	NA	NA	NA	NA	<0.25	74	25	66	38	
B-7	6-May-15	7.0	12	7.5	<5	NA	NA	NA	<b>0.35</b>	<0.033	0.63	0.42	NA	0.20	<0.033	NA	NA	NA	NA	<0.25	53	7.7	60	49	
B-7	6-May-15	11.5	<0.25	1.9	<5	NA	NA	NA	<0.005	<0.005	<0.005	<0.005	NA	<0.005	<0.005	NA	NA	NA	NA	<0.25	42	5.6	47	37	
B-10	3-Sep-15	4.0	21	2.3	12	NA	NA	NA	<0.005	<0.005	<0.005	<0.005	NA	<0.005	<0.005	NA	NA	NA	NA	NA	NA	NA	NA	NA	
B-10	3-Sep-15	6.5	0.33	<1	<5	NA	NA	NA	<0.005	<0.005	<0.005	<0.005	NA	<0.005	<0.005	NA	NA	NA	NA	NA	NA	NA	NA	NA	
B-11	3-Sep-15	6.0	35	29.0	7	NA	NA	NA	0.47	1.10	0.87	2.10	NA	0.33	<0.005	NA	NA	NA	NA	NA	NA	NA	NA	NA	
B-11	3-Sep-15	9.5	<0.25	<1	<5	NA	NA	NA	<0.005	<0.005	<0.005	<0.005	NA	<0.005	<0.005	NA	NA	NA	NA	NA	NA	NA	NA	NA	
B-12	3-Sep-15	4.0	54	4.4	21	NA	NA	NA	<0.005	0.0074	0.014	0.021	NA	0.012	<0.005	NA	NA	NA	NA	NA	NA	NA	NA	NA	
B-12	3-Sep-15	7.5	21	3.4	<5	NA	NA	NA	0.61	0.14	1.1	1.0	NA	0.38	<0.005	NA	NA	NA	NA	NA	NA	NA	NA	NA	
B-12	3-Sep-15	16.0	NA	NA	NA	NA	NA	NA	<0.005	<0.005	<0.005	<0.005	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
B-13	3-Sep-15	4.0	7.6	3.1	16	NA	NA	NA	<0.005	<0.005	<0.005	<0.005	NA	<0.005	<0.005	NA	NA	NA	NA	NA	NA	NA	NA	NA	
B-13	3-Sep-15	7.0	<0.25	<1	<5	NA	NA	NA	<0.005	<0.005	<0.005	<0.005	NA	<0.005	<0.005	NA	NA	NA	NA	NA	NA	NA	NA	NA	
B-14	3-Sep-15	4.0	110	32.0	24	NA	NA	NA	<0.005	<0.005	0.032	<0.005	NA	<0.005	<0.005	NA	NA	NA	NA	NA	NA	NA	NA	NA	
B-14	3-Sep-15	7.0	<0.25	<1	5	NA	NA	NA	<0.005	<0.005	<0.005	<0.005	NA	<0.005	<0.005	NA	NA	NA	NA	NA	NA	NA	NA	NA	
<i>Tank</i>																									
B-8	6-May-15	4.0	9.0	<b>110</b>	<b>1,500</b>	NA	NA	NA	<0.005	<0.005	0.061	0.18	NA	0.035	<0.005	NA	NA	NA	NA	0.33	36	53	58	84	
B-8	6-May-15	12.0	<0.25	<1	<5	NA	NA	NA	<0.005	<0.005	<0.005	<0.005	NA	<0.005	<0.005	NA	NA	NA	NA	<0.25	67	7.5	63	55	
B-9	6-May-15	3.0	<0.25	7.7	88	NA	NA	NA	<0.005	<0.005	<0.005	<0.005	NA	<0.005	<0.005	NA	NA	NA	NA	0.3	40	19	31	110	
B-9	6-May-15	12.0	<0.25	<1	<5	NA	NA	NA	<0.005	<0.005	<0.005	<0.005	NA	<0.005	<0.005	NA	NA	NA	NA	<0.25	60	7.4	56	49	
B-15	3-Sep-15	4.0	<0.25	1.3	12	NA	NA	NA	<0.005	<0.005	<0.005	<0.005	NA	<0.005	<0.005	NA	NA	NA	NA	NA	NA	NA	NA	NA	
B-15	3-Sep-15	7.5	<0.25	2.9	33	NA	NA	NA	<0.005	<0.005	<0.005	<0.005	NA	<0.005	<0.005	NA	NA	NA	NA	NA	NA	NA	NA	NA	
B-16	3-Sep-15	4.0	0.40	14	80	NA	NA	NA	<0.005	<0.005	<0.005	<0.005	NA	<0.005	<0.005	NA	NA	NA	NA	NA	NA	NA	NA	NA	
B-16	3-Sep-15	7	<0.25	1.4	21	NA	NA	NA	<0.005	<0.005	<0.005	<0.005	NA	<0.005	<0.005	NA	NA	NA	NA	NA	NA	NA	NA	NA	
ESL- Soil			500	110	500	500	500	500	0.044	2.9	3.3	2.3	-	1.2	0.023	0.25	-	-	-	-	12	2,500	320	150	600

NOTES

ESL = Environmental Screening Level (potential drinking water, SFRWQCB, December 2013)

Reported concentrations above the ESLs are in bold type

NA = Not Analyzed

ft-bgs = feet below ground surface

mg/kg = milligrams per kilogram

ND = concentration below detection limit presented in parentheses

TOG = total oil and grease

TPH-gro = total petroleum hydrocarbons as gasoline range organics

TPH-dro = total petroleum hydrocarbons as diesel range organics

TRPH = total recoverable petroleum hydrocarbons

VOCs = volatile organic compounds

HVOC = halogenated volatile organic compounds

not found on a map

**TABLE 2. ANALYTICAL RESULTS - GROUNDWATER**  
106-110 Hegenberger Road, Oakland CA

Sample ID	Date	TPH-gro	TPH-dro	TPH-oro	Benzene	Toluene	Ethylbenzene	Xylenes	Cadmium	Chromium	Lead	Nickel	Zinc	MTBE	Naphthalene	2-methyl-naphthalane	VOCs	TOG
		µg/L																
MW-1	21-Feb-94	<50	<50	NA	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	<5000
	24-Mar-94	<50	<50	NA	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	3-Jul-94	<50	<50	NA	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	15-Dec-94	<50	<50	NA	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	6-Mar-95	<50	<50	NA	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	29-Jun-95	<50	<50	NA	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	13-Jun-00	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<5	NA	NA	NA	NA	NA
MW-2	21-Feb-94	<50	<50	NA	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	<5000
	24-Mar-94	<50	<50	NA	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	3-Jul-94	<50	<50	NA	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	15-Dec-94	<50	<50	NA	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	6-Mar-95	<50	<50	NA	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	29-Jun-95	<50	<50	NA	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	24-Feb-00	NA	NA	NA	NA	NA	NA	<0.02	<0.1	<0.05	<0.1	<0.1	NA	NA	NA	NA	NA	NA
MW-3	21-Feb-94	<50	<50	NA	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	<5000
	24-Mar-94	<50	<50	NA	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	3-Jul-94	<50	<50	NA	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	15-Dec-94	<50	<50	NA	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	6-Mar-95	<50	<50	NA	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	29-Jun-95	<50	<50	NA	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	13-Jun-00	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<5	NA	NA	NA	NA	NA
MW-4	9-Mar-94	81	65	NA	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	ND (<varies)	NA
	21-Feb-94	<50	<0.5	NA	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA	NA	<2.0	<2.0	<2.0	NA	NA
	24-Mar-94	<50	<50	NA	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	3-Jul-94	<50	<50	NA	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	15-Dec-94	<50	<50	NA	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	6-Mar-95	<50	<50	NA	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	29-Jun-95	<50	<50	NA	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B-1	5-May-15	<50	<50	<250	<0.5	<0.5	<0.5	<0.5	<0.25	<0.5	<0.5	3.9	<15	0.5	<0.5	NA	NA	NA
	B-2	5-May-15	<b>1,400</b>	<b>330</b>	<250	<b>370</b>	<10	<b>73</b>	<b>22</b>	<0.25	<0.5	<0.50	5.2	<15	<10	<b>13</b>	NA	NA
	B-3	5-May-15	<b>2,300</b>	<b>510</b>	<250	<b>430</b>	<12	<b>210</b>	<b>150</b>	<0.25	0.70	0.53	<b>30</b>	<15	<12	<b>29</b>	NA	NA
	B-4 Shallow	5-May-15	<50	<b>200</b>	<b>1,200</b>	<0.5	<0.5	<0.5	<0.5	<0.25	0.83	1.5	1.3	<15	<0.5	<0.5	NA	NA
	B-4	5-May-15	<50	<250	<0.5	<0.5	<0.5	<0.5	<0.25	<0.5	2.3	<15	<0.5	<0.5	NA	NA	NA	NA
	B-5	5-May-15	<50	<250	<0.5	<0.5	<0.5	<0.5	<0.25	<0.5	1.8	<15	<0.5	<0.5	NA	NA	NA	NA
	B-6	5-May-15	<50	<250	<0.5	<0.5	<0.5	<0.5	<0.25	<0.5	5.3	<15	<0.5	<0.5	NA	NA	NA	NA
B-7	6-May-15	<b>13,000</b>	<b>4,600</b>	<b>720</b>	<b>3,900</b>	<b>69</b>	<b>2,000</b>	<50	<2.5	<5.0	<b>12</b>	<b>21</b>	<b>210</b>	<50	<b>240</b>	NA	NA	NA
	B-8 Shallow	6-May-15	<b>860</b>	<b>2,000</b>	<b>3,600</b>	0.60	<0.5	0.91	<0.25	<0.5	1.3	3.9	<15	<0.5	<0.5	NA	NA	NA
	B-8	6-May-15	<50	<250	<0.5	<0.5	<0.5	<0.5	<b>0.42</b>	<0.5	<0.5	<b>88</b>	<15	<0.5	<0.5	NA	NA	NA
	B-9 Shallow	6-May-15	<b>260</b>	<b>120</b>	<b>260</b>	0.5	<0.5	0.5	<0.25	<0.5	2.5	<15	<0.5	<0.5	NA	NA	NA	NA
	B-9	6-May-15	<50	<250	<0.5	<0.5	<0.5	<0.5	<b>0.32</b>	1.2	<0.50	<b>100</b>	<15	<0.5	<0.5	NA	NA	NA
	B-10	3-Sep-15	<50	<250	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA	<0.5	<0.5	NA	NA	NA	NA
	B-11	3-Sep-15	<50	<250	<0.5	<0.5	<0.5	<0.5	1.0	0.84	NA	NA	NA	<0.5	<0.5	NA	NA	NA
B-12	3-Sep-15	53	<50	<250	2.4	<0.5	5.7	1.7	NA	NA	NA	NA	<0.5	0.79	NA	NA	NA	NA
	B-13	3-Sep-15	<50	<250	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA	<0.5	<0.5	NA	NA	NA	NA
	B-14	3-Sep-15	<50	54	<250	<0.5	<0.5	<0.5	NA	NA	NA	NA	<0.5	<0.5	NA	NA	NA	NA
	B-15	3-Sep-15	<50	<50	<250	<0.5	<0.5	<0.5	NA	NA	NA	NA	<0.5	<0.5	NA	NA	NA	NA
	B-16	3-Sep-15	<50	<50	<250	<0.5	<0.5	<0.5	NA	NA	NA	NA	<0.5	<0.5	NA	NA	NA	NA
	ESL		100	100	100	1.0	40	30	20	0.25	50	2.5	8.2	81	5.0	6.1	2.1	100

NOTES

ESL = Environmental Screening Level (potential drinking water, SFRWOCB, December 2013)

Reported concentrations above the ESLs are in bold type

NA = Not Analyzed

ft-bgs = feet below ground surface

µg/L = micrograms per liter

ND = concentration below detection limit presented in parentheses

TOG = total oil and grease

TPH-gro = total petroleum hydrocarbons quantified as gasoline range organics

TPH-dro = total petroleum hydrocarbons quantified as diesel range organics

MTBE = methyl tert butyl ether

VOCs = volatile organic compounds

**TABLE 3. ANALYTICAL RESULTS - SOIL GAS**  
**106-110 Hegenberger Road, Oakland CA**

Sample ID	Date	Depth	Benzene	Toluene	Ethylbenzene	Xylenes	1,1-DFA (Leak Detection)	Acetone	1,3-Butadiene	Carbon Disulfide	Chloro-methane	Cyclo-hexane	Heptane	Hexane	2-Hexanone	MIBK	PCE	4-Ethyltoluene	1,2,4-TMB	1,3,5-TMB
		ft-bgs	μg/m³																	
V-1	26-Oct-98	3.0	<b>2010</b>	33.1	303	92.7	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
V-2	26-Oct-98	2.5	306	41.4	1260	104	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
V-3	26-Oct-98	2.0	4.46	13.5	<0.68	<0.68	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
V-4	26-Oct-98	2.0	28.1	18.8	299	41.6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
V-5	26-Oct-98	2.0	10.2	20.3	24.7	19.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SB-1	11-Aug-14	3.0	<b>50,000</b>	5,200	<3,300	<3,300	<b>28,000</b>	<6.7x10^4	NA	<3,300	<3,300	NA	NA	<3,300	<3,300	<3,300	NA	<3,300	<3,300	<3,300
SB-2	11-Aug-14	3.0	<b>3,200</b>	25	47	27	<b>38</b>	<60	<1.1	25	<1.0	6,900	140	1,300	<2.1	45	18	<2.5	<2.5	<2.5
SB-3	11-Aug-14	3.0	120	21	18	<26	<b>&lt;110</b>	330	42	29	<4.2	490	270	400	12	<8.4	<14	<10	<10	<10
SB-4	11-Aug-14	3.0	25	75	6.6	28	<b>430</b>	83	11	8.5	1.8	28	<21	62	<2.1	2.6	<3.4	2.6	8.8	2.8
SB-5	11-Aug-14	3.0	<10,000	<10,000	<10,000	NA	<10,000	<2.0 x10^5	NA	<10,000	<10,000	NA	NA	<10,000	<10,000	<10,000	NA	<10,000	<10,000	<10,000
SV-15	10-Sep-15	3.0	7.6	11	<8.68	19.1	49.5	NA	NA	NA	NA	NA	<17.6	NA	NA	NA	NA	NA	NA	NA
SV-16	10-Sep-15	3.0	3.8	7.61	<4.34	6.77	171	NA	NA	NA	NA	NA	<17.6	NA	NA	NA	NA	NA	NA	NA
ESL			420	1,300,000	4,900	440,000	-	1.4x10^8	-	-	-	-	-	-	-	2,100	-	-	-	-

NOTES

μg/m³ = micro grams per cubic meter

ft-bgs = feet below ground surface

NA = Not Analyzed

ESL = Environmental Screening Level (commercial property,SFRWQCB, December 2013)

Bold = Above the ESL

MIBK = 4-Methyl-2-Pentanone

PCE = tetrachloroethene

TCE = Trichloroethene

1,2,4-TMB = 1,2,4-Trimethylbenzene

1,3,5-TMB = 1,2,5-Trimethylbenzene

1,1-DFA = 1,1-Difluoroethane

failed leak detection

**TABLE 4. SITE CONCEPTUAL MODEL**  
**106-110 Hegenberger Road, Oakland**

CSM Element	CSM Sub-Element	Description	Potential Data Gap(s)
Geology and Hydrogeology	Regional	<p>The Property is in the southern part of the City of Oakland in the San Francisco Bay area. The San Francisco Bay area occupies a broad alluvial valley that slopes gently northward and is flanked by alluvial fans deposited at the foot of the Diablo Range to the east and the Santa Cruz Mountains to the west. Surface topography in the immediate vicinity of the Property is gently sloping down to the northwest towards Airport Channel. The Property is at an elevation of approximately 10 feet above Mean Sea Level according to the United States Geological Survey (USGS) Oakland East Quadrangle California 7.5 Minute Series topographic map. Materials underlying the site are unconsolidated deposits of near shore and beach sediments, deposited in Oakland Bay at higher sea level stands. At shallow depths beneath these sediments are chert, greywacke, serpentine and shale bedrock that are a part of the Cretaceous to Jurassic-aged Franciscan Formation. Bedrock is exposed to the east-northeast on the upland surfaces.</p> <p>The subject site is located on the San Francisco Bay Plain in the northernmost part of the Santa Clara Valley Groundwater Basin, (DWR, 1967), the surface of which slopes gently down toward west. The regional groundwater flow follows the topography, moving from areas of higher elevation to areas of lower elevation. The regional groundwater flow direction in the area of the Property is estimated to be toward the northwest toward the Oakland Outer Harbor.</p>	None
	Site	<p><b>Geology:</b> Based on lithologic logs prepared from borings on the Property the subsurface lithology consists of approximately 3-6 feet of fill underlain by 13 to 15 feet of silts and clays, which is underlain by silt, silty sand and sands. In some borings on the Property a clayey sand unit was also observed between 10 and 12 feet below ground surface (bgs) which appeared to be moist to wet (BSK, 1998) (ERAS 2015).</p>	None
		<p><b>Hydrogeology:</b> The main groundwater zone was indicated by the previous consultants to be the silty sand and sand unit starting at a depth of approximately 13-20 feet bgs (BSK, 1998)(ERAS, 2015). Based on the groundwater monitoring conducted on the Property the groundwater flow direction has been determined to be to the southwest (BSK, 2000). This is consistent with what is likely to be the regional groundwater gradient, based on topography.</p>	None
Surface Water Bodies	--	The closest surface water bodies are San Leandro Creek which was located approximately 1/4 of a mile to the northeast of the Property and the Airport Channel which was located approximately 1/2 of a mile to the west.	None
Nearby Wells	--	A well survey has been performed	None
CSM Element	CSM Sub-Element	Description	Potential Data Gap(s)
Constituents of Concern	--	<p>Constituents of concern have been identified by comparing analytical results to ESLs for commercial land use and for groundwater that is considered a current or potential drinking water source.<sup>3</sup></p> <p>Constituents of concern that have been identified include petroleum hydrocarbons quantified as gasoline, diesel and oil range organics (TPH-gro, TPH-dro, and TPH-oro), benzene, toluene, ethylbenzene, and xylenes (BTEX), along with lead, zinc, cadmium, and chromium.</p> <p>The results of investigations completed indicate elevated concentrations of petroleum hydrocarbons in soil and groundwater, mostly in the area of the former clarifier sump. After monitoring of the groundwater several times between 1994 and 2000 along with numerous subsurface investigations, the Alameda County Health Care Services Agency (ACHCSA) closed the case in 2001. The case closure indicated that concentrations of petroleum hydrocarbons, BTEX, and metals (lead, zinc, cadmium, and chromium) remained in soil on the Property.</p>	None
Potential Sources	On-site	The Property formerly contained three USTs and a pump island along the northwestern Property boundary, a sump and four pump islands along the southwestern Property boundary, a car wash centrally located on the Property, and product lines connecting the fuel USTs with the pump islands.	None
		In 1990 the USTs, pump islands, product lines, and sump were removed from the Property.	None
CSM Element	CSM Sub-Element	Description	Potential Data Gap(s)
Nature and Extent of Environmental Impacts	Extent in Soil, TPH-gro	Concentrations of TPH-gro above the commercial ESL for areas where groundwater is considered a potential source of drinking water have been detected in soil samples collected from borings SS-20 (5 feet bgs), SS-22 (4.5 feet bgs), SS-29 (2.5 feet bgs), SS-31 (3.0 feet bgs), HA-4-5 (5.0 feet bgs), HA-7-5 (5.0 feet bgs), B-101 (5.0 feet bgs), B-102 (5.0 feet bgs), SB-6 (5 feet bgs), and SB-7 (5 feet bgs). These concentrations ranged from 570 mg/Kg to 3,340 mg/Kg. These elevated concentrations were determined to be limited to a small area near the northernmost former UST and the former sump.	None
	Extent in Soil, TPH-dro	Concentrations of TPH-dro above the commercial ESL for areas where groundwater is considered a potential source of drinking water have been detected in soil samples collected from borings SS-20 (5 feet bgs), SS-22 (4.5 feet bgs), B-3 (4 feet bgs), B-8 (4 feet bgs), SB-6 (5 feet bgs), and SB-7 (5 feet bgs). These concentrations ranged from 110 mg/Kg to 420 mg/Kg. These elevated concentrations were determined to be limited to a small area near the northernmost former UST (closed case) and the former sump.	None
	Extent in Soil, TOG/TRPH	Concentrations of TPH-oro/TOG/TRPH above the commercial ESL for areas where groundwater is considered a potential source of drinking water have been detected in soil samples collected from borings SS-19 (4.0 feet bgs), SS-20 (5 feet bgs), SS-22 (4.5 feet bgs), B-3 (4.0 feet bgs), B-8 (4 feet bgs), HA-4-5 (5 feet bgs), HA-7-5 (5 feet bgs), SB-6 (5 feet bgs), and SB-7 (5 feet bgs). These concentrations ranged from 530 mg/Kg to 13,000 mg/Kg. These elevated concentrations were determined to be limited to small areas near the USTs and product lines on the northwestern portion of the Property (closed case) and the former sump.	None
	Extent in Soil, VOCs	VOCs detected on the Property have included benzene, toluene, ethylbenzene, xylenes, and naphthalene. Concentrations were determined to be limited to small areas near the USTs and product lines on the northwestern portion of the Property (closed case) and the former sump.	None
	Extent in Soil, SVOCs	Concentrations of naphthalene above the commercial ESL for areas where groundwater is considered a potential source of drinking water have been detected in soil samples collected from borings SS-22 (4.5 feet bgs), B-2 (6.5 feet bgs), B-3 (4.0 feet bgs), SB-6 (5feet bgs), and SB-7 (5 feet bgs). These concentrations ranged from 1.8 mg/Kg to 19 mg/Kg. These elevated concentrations were determined to be limited to the area of the former sump.	None

**TABLE 4. SITE CONCEPTUAL MODEL**  
**106-110 Hegenberger Road, Oakland**

	Extent in Soil, Metals	Metals detected to be present on the Property have included cadmium, chromium, lead, nickel, and zinc. None of the concentrations detected were found to be above the ESL for commercial areas where groundwater is considered a potential source of drinking water	None
Nature and Extent of Environmental Impacts	Extent in Groundwater, TPH-gro	Groundwater samples have been collected from four groundwater monitoring wells formerly located on the Property along with nine borings advanced by ERAS in 2015. No concentrations of TPH-gro were detected in the groundwater samples collected from the monitoring wells above the method detection limit with the exception of one sample collected from MW-4 in 1994. The detected concentration was below the ESL for a commercial site where groundwater is considered a potential source of drinking water. TPH-gro was detected in the groundwater above the ESL in borings B-2, B-3, B-7, B-8 Shallow, and B-9 Shallow at concentrations ranging from 260 to 13,000 µg/L. These concentrations appear to be limited to the area of the former sump and the northern most UST.	None
	Extent in Groundwater, TPH-dro	Groundwater samples have been collected from four groundwater monitoring wells formerly located on the Property along with nine borings advanced by ERAS in 2015. No concentrations of TPH-dro were detected in the groundwater samples collected from the monitoring wells above the method detection limit with the exception of one sample collected from MW-4 in 1994. The detected concentration was below the ESL for a commercial site where groundwater is considered a potential source of drinking water. TPH-dro was detected in the groundwater above the ESL in borings B-2, B-3, B-4 Shallow, B-7, B-8 Shallow, and B-9 Shallow at concentrations ranging from 120 to 4,600 µg/L. These concentrations appear to be limited to the area of the former sump and the northern most UST.	None
	Extent in Groundwater, TOG/TRPH	Groundwater samples have been collected from four groundwater monitoring wells formerly located on the Property along with nine borings advanced by ERAS in 2015. No concentrations of TOG/TRPH were detected in the groundwater samples above the method detection limit. Concentrations of TPH-oro were detected above the ESL in borings B-4 Shallow, B-7, B-8 Shallow, and B-9 Shallow. These concentrations ranged from 260 to 3,600 µg/L.	None
	Extent in Groundwater, VOCs	Groundwater samples have been collected from four groundwater monitoring wells formerly located on the Property along with nine borings advanced by ERAS in 2015. No concentrations of VOCs were detected in the groundwater samples above their method detection limit in the samples collected from the monitoring wells. VOCs detected in the borings included concentrations of benzene up to 3,900 µg/L, toluene up to 69 µg/L, ethylbenzene up to 2,000 µg/L, xylenes up to 150 µg/L, and naphthalene up to 240 µg/L. These VOCs were detected in borings B-2, B-3, B-7, and B-8.	None
	Extent in Groundwater, SVOCs	Groundwater samples have been collected from four groundwater monitoring wells formerly located on the Property. No concentrations of SVOCs were detected in the groundwater samples above their method detection limit.	None
	Extent in Groundwater, Metals	Groundwater samples have been collected from four groundwater monitoring wells formerly located on the Property along with nine borings advanced by ERAS in 2015. No concentrations of cadmium, chromium, lead, nickel, or zinc were detected in the groundwater samples above their method detection limits in the samples collected from the monitoring wells. Concentrations of nickel were detected above the ESL in boring B-3, B-7, B-8, and B-9 ranging from 21 to 100 µg/L. Boring B-7 also contained a concentration of Lead above the ESL at a concentration of 12 µg/L and zinc at 210 µg/L.	None
Nature and Extent of Environmental Impacts	Extent in Soil Vapor, VOCs	The only soil gas concentrations detected above the ESL for a commercial building was benzene which was detected in samples V-1, SB-1, and SB-2. The concentrations ranged from 2,010 to 50,000 µg/m³. The samples from SB-1 and SB-2 also contained the leak detection compound utilized to determine the integrity of the sampling system.	None
Migration Pathways	Potential Conduits	The locations of on-site utilities, including sanitary sewer laterals, water, gas, and electrical lines are unknown. All monitoring wells formerly located on the Property have been properly abandoned	None
Potential Receptors/Risk	On-site	Portable water at the site currently is provided via municipal supply and will continue to be in the foreseeable future. As such, direct contact to groundwater is not contemplated. Receptors at the site could include the following: <ul style="list-style-type: none"> <li>• Current worker via vapor intrusion to indoor air,</li> <li>• Future construction worker via soil, groundwater, and soil vapor,</li> <li>• Future resident via vapor intrusion to indoor air, and/or</li> <li>• Future maintenance worker via soil and soil vapor.</li> </ul>	Based on evaluation of the data relative to ESLs, it is likely that some risk for longer-term site occupants and construction workers exists.
Potential Receptors/Risk	Off-site	A well survey has been performed	

Notes

1. Harding Lawson Associates, Soil Sample Locations and Analytical Results, Remedial Activities, 106-110 Hegenberger Road, Oakland, California, October 9, 1990.
2. West Coast Environmental, Preliminary Assessment of a Former Sump Location, Larry David Property, 106/110 Hegenberger Road, Oakland, California, April 25, 1991.
3. Dugan Associates, Subsurface Assessment of Soil and Groundwater, 106 & 110 Hegenberger Road, Oakland, California, June 14, 1994.
4. Dugan Associates, Third Quarter 1994 Groundwater Monitoring and Sampling, 106 and 110 Hegenberger Road, Oakland, California, October 21, 1994.
5. Dugan Technical Well Services, Second Quarter 1995 Groundwater Monitoring and Sampling Report, 106-110 Hegenberger Road, Oakland, California, July 31, 1995.
6. BSK, Former Clarifier Sump Health Risk Assessment Report, 106-110 Hegenberger Road, Oakland, California, November 21, 1996.
7. BSK, Report Supplemental Investigation and Health Risk Assessment, Former Clarifier Sump, 106-110 Hegenberger Road, Oakland, California, October 30, 1997.
8. BSK, Report Soil Vapor Survey and Tier 3 Risk Assessment, Former Clarifier Sump, 106-110 Hegenberger Road, Oakland, California, December 3, 1998.
9. BSK & Associates, Report Groundwater Sampling and Analysis, 106-110 Hegenberger Road, Oakland, California, July 5, 2000.
10. BSK & Associates, Report Groundwater Monitoring Wells Abandonment, 106-110 Hegenberger Road, Oakland, California.
11. Alameda County Environmental Health Services, Remedial Action Completion Certification, 106-110 Hegenberger Road, Oakland, California, February 8, 2001.
12. Basics Environmental, Limited Phase II Environmental Sampling Report, 106-110 Hegenberger Road, Oakland, California, August 27, 2014.

Abbreviations

bgs = below ground surface

VOCs = volatile organic compounds

SVOCs = semi volatile organic compounds

TPH-gro = total petroleum hydrocarbons quantified as gasoline range organics

TPH-dro = total petroleum hydrocarbons quantified as diesel range organics

TPH-oro = total petroleum hydrocarbons quantified as oil range organics

TOG = total oil and grease

TRPH = total residual petroleum hydrocarbons

µg/kg = micrograms per kilogram

µg/L = micrograms per liter

µg/m³ = micrograms per cubic meter

**APPENDIX A**

**ACHCSA Letter**

ALAMEDA COUNTY  
**HEALTH CARE SERVICES**

AGENCY

ALEX BRISCOE, Agency Director



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

August 20, 2015

Dhruv Patel  
110 Hegenberger LLC  
66 Airport Access Road  
Oakland, CA 94603  
(Sent via E-mail to [dhruv.balaji@gmail.com](mailto:dhruv.balaji@gmail.com))

Subject: Conditional Work Plan Approval, Site Cleanup Program Case No. RO0003147 and  
GeoTracker Global ID T10000006308, 110 Hegenberger LLC, 106-110 Hegenberger  
Road, Oakland, CA 94621

Dear Mr. Patel:

Thank you for the recently submitted document entitled, *Addendum to Work Plan for Additional Soil and Groundwater Investigation and Remediation Planning*, (Addendum) dated July 29, 2015, which was prepared by ERAS Environmental, Inc. (Eras), consultants for the subject site. Alameda County Environmental Health (ACEH) staff has reviewed the case file including the above-mentioned work plan for the above-referenced site. The Addendum was prepared following a meeting held with ACEH on June 30, 2015 which discussed the findings of a preliminary assessment entitled *Site Conceptual Model Update*, dated June 4, 2015, prepared by Eras, and submitted to ACEH as an email attachment.

The Addendum proposes to:

- A. Drill a minimum of 3 and a maximum of 5 soil borings in the area of a former underground sump near the middle of the subject site for the collection of soil and groundwater samples.
- B. Drill soil borings in the location of the proposed pool and elevator for the collection of soil, groundwater and soil vapor samples.
- C. Conduct a Sensitive Receptor Survey that will identify the locations of groundwater production wells within 2,000 feet of the subject site; and
- D. Use the findings of the investigation to determine the extent of remediation of soil required near the former sump.
- E. Provide additional excavation near the former underground storage tanks near the north corner of the Property.

The proposed scope of work may be implemented provided that the modifications requested in the technical comments below are addressed and incorporated during the field implementation. Submittal of a revised Work Plan is not required unless an alternate scope of work outside that described in the Work Plan and technical comments below is proposed.

Mr. Patel  
RO0003147  
August 20, 2015, Page 2

#### **TECHNICAL COMMENTS**

1. **Additional Soil Excavation – Former Underground Storage Tank Area**– The Addendum states “Additional soil will be excavated near former underground storage tanks near the north corner of the Property as described below.” ACEH is unable to locate the description of the excavation activities for the former underground storage tank area in the Addendum report. Please provide a description of these activities, including a determination of the excavation limits, confirmation sampling, and disposal of the excavated material in the final report for this soil, groundwater, and soil gas investigation.
2. **Sensitive Receptor Survey** – The Addendum states that ERAS will request the locations of groundwater wells within 2,000 feet of the subject site from the Alameda County Department of Public Works. Also as part of the sensitive receptor survey, the location of surface water bodies, schools, hospitals and other sensitive use areas will be identified. ACEH requests, in addition to Alameda County Department of Public Works (ACPW), the Department of Water Resources (DWR) should be contacted for well data in their database.

#### **NOTIFICATION OF FIELDWORK ACTIVITIES**

Please schedule and complete the fieldwork activities by the date specified below and provide ACEH with at least three (3) business days notification prior to conducting the fieldwork.

#### **TECHNICAL REPORT REQUEST**

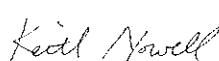
Please upload technical reports to the ACEH ftp site (Attention: Keith Nowell), and to the State Water Resources Control Board's Geotracker website, in accordance with the following specified file naming convention and schedule:

- **October 19, 2015** – Sensitive Receptor Survey (file name: RO0003147\_WELL\_COND\_R\_yyyy-mm-dd)
- **December 18, 2015** – Soil, Water, and Soil Gas Investigation Report (file name: RO0003147\_SWI\_R\_yyyy-mm-dd)

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

Thank you for your cooperation. ACEH looks forward to working with you and your consultants to advance the case toward closure. Should you have any questions regarding this correspondence or your case, please call me at (510) 567-6764 or send an electronic mail message at [keith.nowell@acgov.org](mailto:keith.nowell@acgov.org)

Sincerely,



Digitally signed by Keith Nowell  
DN: cn=Keith Nowell, o=Alameda  
County, ou=Department of  
Environmental Health,  
email=keith.nowell@acgov.org, c=US  
Date: 2015.08.20 14:41:46 -07'00'

Keith Nowell  
Hazardous Materials Specialist

## **APPENDIX B**

### **Permit**

# Alameda County Public Works Agency - Water Resources Well Permit



Public Works Agency  
Alameda County

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

Application Approved on: 08/27/2015 By jamesy

Permit Numbers: W2015-0812  
Permits Valid from 09/03/2015 to 09/04/2015

Application Id:	1440529554150	City of Project Site:	Oakland
Site Location:	106-110 Hegenberger Road, Oakland		
Project Start Date:	two borings to 5 feet and seven to 20 feet		
Assigned Inspector:	09/03/2015	Completion Date:	09/04/2015
	Contact Balance Hydrologics, Inc at (510) 473-5663 or acwells@balancehydro.com		
Applicant:	ERAS Environmental, Inc. - Andrew Savage	Phone:	510-247-9885 x302
	1533 B Street, Hayward, CA 94541		
Property Owner:	Dhruv Patel	Phone:	--
	66 Airport Access Road, Oakland, CA 94603		
Client:	Dhruv Patel	Phone:	--
	66 Airport Access Road, Oakland, CA 94603		
Contact:	Andrew Savage	Phone:	510-247-9885 x302
		Cell:	925-330-8926

Receipt Number: WR2015-0428	Total Due:	\$265.00
Payer Name : Andrew Savage	Total Amount Paid:	\$265.00
	Paid By: MC	

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## Works Requesting Permits:

Borehole(s) for Investigation-Environmental/Monitoring Study - 9 Boreholes

Driller: Environmental Control Associates (ECA) - Lic #: 695970 - Method: DP

Work Total: \$265.00

## Specifications

Permit Number	Issued Dt	Expire Dt	#	Hole Diam	Max Depth
W2015-0812	08/27/2015	12/02/2015	9	2.75 in.	20.00 ft

## Specific Work Permit Conditions

1. Backfill bore hole by tremie with cement grout or cement grout/sand mixture. Upper two-three feet replaced in kind or with compacted cuttings. All cuttings remaining or unused shall be containerized and hauled off site. The containers shall be clearly labeled to the ownership of the container and labeled hazardous or non-hazardous.
2. Boreholes shall not be left open for a period of more than 24 hours. All boreholes left open more than 24 hours will need approval from Alameda County Public Works Agency, Water Resources Section. All boreholes shall be backfilled according to permit destruction requirements and all concrete material and asphalt material shall be to Caltrans Spec or County/City Codes. No borehole(s) shall be left in a manner to act as a conduit at any time.
3. Permittee shall assume entire responsibility for all activities and uses under this permit and shall indemnify, defend and save the Alameda County Public Works Agency, its officers, agents, and employees free and harmless from any and all expense, cost, liability in connection with or resulting from the exercise of this Permit including, but not limited to, properly damage, personal injury and wrongful death.
4. Applicant shall contact assigned inspector listed on the top of the permit at least five (5) working days prior to starting, once the permit has been approved. Confirm the scheduled date(s) at least 24 hours prior to drilling.
5. Copy of approved drilling permit must be on site at all times. Failure to present or show proof of the approved permit application on site shall result in a fine of \$500.00.

## **Alameda County Public Works Agency - Water Resources Well Permit**

6. Electronic Reporting Regulations (Chapter 30, Division 3 of Title 23 & Division 3 of Title 27, CCR) require electronic submission of any report or data required by a regulatory agency from a cleanup site. Submission dates are set by a Regional Water Board or by a regulatory agency. Once a report/data is successfully uploaded, as required, you have met the reporting requirement (i.e. the compliance measure for electronic submittals is the actual upload itself). The upload date should be on or prior to the regulatory due date.

7. NOTE:

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

8. 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.

9. 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.

---

# Alameda County Public Works Agency - Water Resources Well Permit



Public Works Agency  
Alameda County

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

Application Approved on: 04/28/2015 By jamesy

Permit Numbers: W2015-0349  
Permits Valid from 05/05/2015 to 05/06/2015

Application Id:	1429549792661	City of Project Site:	Oakland
Site Location:	110 Hegenberger Road, Oakland		
Project Start Date:	Drill nine borings to 20 feet for the collection of soil and groundwater	Completion Date:	05/06/2015
Assigned Inspector:	05/05/2015		
Assigned Inspector:	Contact Steve Miller at (510) 670-5517 or stevem@acpwa.org		
Applicant:	ERAS Environmental, Inc. - Andrew Savage	Phone:	510-247-9885 x302
	1533 B Street, Hayward, CA 94541		
Property Owner:	Larry David	Phone:	--
	11400 West Olympics Blvd, Ste. 500, Los Angeles, CA 90064		
Client:	Larry David	Phone:	--
	11400 West Olympics Blvd, Ste. 500, Los Angeles, CA 90064		
Contact:	Andrew Savage	Phone:	510-247-9885 x302
		Cell:	925-330-8926

Receipt Number:	WR2015-0197	Total Due:	\$265.00
Payer Name :	Andrew Savage	Total Amount Paid:	\$265.00
		Paid By:	MC

**PAID IN FULL**

## Works Requesting Permits:

Borehole(s) for Investigation-Environmental/Monitoring Study - 9 Boreholes

Driller: Environmental Control Associates (ECA) - Lic #: 695970 - Method: DP

**Work Total: \$265.00**

## Specifications

Permit Number	Issued Dt	Expire Dt	#	Hole Diam	Max Depth
W2015-0349	04/28/2015	08/03/2015	9	2.75 in.	20.00 ft

## Specific Work Permit Conditions

1. Backfill bore hole by tremie with cement grout or cement grout/sand mixture. Upper two-three feet replaced in kind or with compacted cuttings. All cuttings remaining or unused shall be containerized and hauled off site. The containers shall be clearly labeled to the ownership of the container and labeled hazardous or non-hazardous.
2. Boreholes shall not be left open for a period of more than 24 hours. All boreholes left open more than 24 hours will need approval from Alameda County Public Works Agency, Water Resources Section. All boreholes shall be backfilled according to permit destruction requirements and all concrete material and asphalt material shall be to Caltrans Spec or County/City Codes. No borehole(s) shall be left in a manner to act as a conduit at any time.
3. Permittee shall assume entire responsibility for all activities and uses under this permit and shall indemnify, defend and save the Alameda County Public Works Agency, its officers, agents, and employees free and harmless from any and all expense, cost, liability in connection with or resulting from the exercise of this Permit including, but not limited to, properly damage, personal injury and wrongful death.
4. Applicant shall contact assigned inspector listed on the top of the permit at least five (5) working days prior to starting, once the permit has been approved. Confirm the scheduled date(s) at least 24 hours prior to drilling.
5. NOTE:  
Under California laws, the owner/operator are responsible for reporting the contamination to the governmental regulatory

## **Alameda County Public Works Agency - Water Resources Well Permit**

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

6. 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.
  7. 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**

**Standard Operating Procedure**

## **STANDARD OPERATING PROCEDURE – DIRECT PUSH BORINGS**

### **SOIL CORING AND SAMPLING PROCEDURES**

Prior to drilling, all boreholes will be hand dug to a depth of 4-5 feet below ground surface (bgs) to check for underground utilities.

Soil and groundwater samples are collected for lithologic and chemical analyses using a direct driven soil coring system. A hydraulic hammer drives sampling rods into the ground to collect continuous soil cores. As the rods are advanced, soil is driven into an approximately 2.5-inch-diameter sample barrel that is attached to the end of the rods. Soil samples are collected in sleeves inside the sample barrel as the rods are advanced. After being driven 4 to 5 feet into the ground, the rods are removed from the borehole. The sleeve containing the soil core is removed from the sample barrel, and can then be preserved for chemical analyses, or used for lithologic description. This process is repeated until the desired depth or instrument refusal is reached.

A soil core interval selected for analyses is cut from the sleeve using a pre-cleaned hacksaw. The ends of the tube are covered with aluminum foil or Teflon liner and sealed with plastic caps. The soil-filled liner is labeled with the bore number, sample depth, site location, date, and time. The samples are placed in bags and stored in a cooler containing ice. Soil from the core adjacent to the interval selected for analyses is placed in a plastic zip-top bag. The soil is allowed to volatilize for a period of time, depending on the ambient temperature. The soil is scanned with a flame-ionization detector (FID) or photo-ionization detector (PID).

All sample barrels, rods, and tools (e.g. hacksaw) are cleaned with Alconox or equivalent detergent and de-ionized water. All rinsate from the cleaning is contained in 55-gallon drums at the project site.

### **GROUNDWATER SAMPLING FROM DIRECT PUSH BORINGS**

After the targeted water-bearing zone has been penetrated, the soil-sample barrel is removed from the borehole. Small-diameter well casing with 0.010-inch slotted well screen may be installed in the borehole to facilitate the collection of groundwater samples. Threaded sections of PVC are lowered into the borehole. Groundwater samples may then be collected with a bailer, peristaltic pump, submersible or other appropriate pump until adequate sample volume is obtained. Peristaltic pumps are not used in applications requiring a lift of greater than 1 foot of net head.

Groundwater samples are preserved, stored in an ice-filled cooler, and are delivered, under chain-of-custody, to a laboratory certified by the California Department of Health Services (DHS) for hazardous materials analysis.

### **BOREHOLE GROUTING FOR DIRECT PUSH BORINGS**

Upon completion of soil and water sampling, boreholes will be abandoned with neat cement grout to the surface. If the borehole was advanced into groundwater, the grout is pumped through a grouting tube positioned at the bottom of the borehole.

## **STANDARD OPERATING PROCEDURE -SOIL-GAS SAMPLING**

The collection of soil gas samples will not be conducted in the event of precipitation or heavy irrigation. 5-days of dry weather and the lack of heavy irrigation is required prior to the collection of the vapor samples.

The installation of the sample probes and the sampling procedures follows the Department of Toxic Substances Control, California Environmental Protection Agency, Guidance for the Evaluation and Mitigation of Subsurface Vapor Intrusion to Indoor Air Vapor Intrusion Guidance document dated October 2011. Along with the California Environmental Protection Agency, Department of Toxic Substances Control, Los Angeles Regional Water Quality Control Board, San Francisco Regional Water Quality Control Board, Advisory for Active Soil Gas Investigations dated April 2012.

Sample rods are driven to the desired depth. A soil-gas sampling tubing system is inserted into the rods and connected to an expandable point. The rods are retracted a desired 6-inch interval and the expandable drive point on the bottom of the rods is opened. Hydrated bentonite is placed around where the drill rod exits the ground and where the tubing enters the rods to prevent surface air migrating down the inner and outer portion of the rods. The bentonite will be allowed to hydrate and expand for at least 30 minutes prior to purging the sample line.

The soil gas sample is collected into a Summa canister. A summa canister is a stainless steel vessel which has had the internal surfaces specially passivated using a "Summa" process. The Summa canister arrives pre-cleaned from the laboratory and with an internal vacuum between 25" Hg and 30" Hg. Prior to use, the pressure in the summa canister is checked with a pressure gauge to ensure a vacuum of at least 25" Hg for quality control purposes.

A sampling manifold is connected to the sample tubing which originated from the target depth for the sample collection. The sample manifold is connected to a purge Summa canister and a sample Summa canister. The sample manifold contains a gauge to display the vacuum remaining in the canister, valves to isolate the sample train, a particulate filter, and a flow controller to maintain a low purge rate.

A leak test is performed on the sampling manifold prior to sample collection. A vacuum is applied and required to stabilize and remain at the same pressure for a time period of 30 minutes. Once the leak test has been performed a vacuum is applied to the tubing to purge at least three volumes of air from the sample tubing at a purge rate from 100 to 200 ml/min.

The valve on the summa canister is opened, and the soil-gas sample is drawn into the canister. The sample tubing will be checked for water. If observed, the sample will be discarded. The sample collection will be stopped with about 5-inches Hg remaining in the Summa canister. The soil-gas samples will be transferred under chain-of-custody procedures to a state certified laboratory for analyses.

As a leak detector aerosol dust removal containing 1,1-Difluoroethane will be used in a shroud during sample collection. Analysis of the sample for 1,1-Difluoroethane will indicate if ambient air entered the sample.

## **Appendix D**

### **Lithologic Logs**

ERAS Environmental						Log of Boring B-1			
PROJECT: 14-003-01			ADDRESS: 106-110 Hegenberger Road						
JOB NUMBER: 14-003-01			LOCATION: Near MW-2						
DATE STARTED: 05-05-15			First Water (ft. bgs.): 13.5						
DATE FINISHED: 05-05-15			TOTAL DEPTH: 20 feet						
DRILLING METHOD: Hydraulic Push			GEOLOGIST: Andrew Savage						
DRILLING COMPANY: ECA			Reviewed By: ---						
DEPTH ft.	PID (ppm)	BLOWS/ 1/2'	SAMPLE NO.	RECOVERY	GRAPHIC LOG	WATER LEVEL	GEOLOGIC DESCRIPTION	WELL DIAGRAM	
2' 0							Asphalt + 3/4 inch base rock		
5									
8' 1.6							Silty Clay (CL), very dark gray (10YR 3/1), damp, medium stiff, medium plasticity, no hydrocarbons (HC) odor		
10							Same		
12' 1.4							Same		
15									
16' 1.4							Silt (ML), dark gray (10YR 4/1), wet, medium stiff, low plasticity, ~10% fine to coarse well graded sand, very slight HC odor		
20' 1.5							Silty Clay (CL), dark gray (10YR 4/1), damp, medium stiff, low plasticity, no HC odor		
Bottom of Boring 20 feet bgs 05-05-15									

ERAS Environmental						Log of Boring B-2			
PROJECT: 14-003-01			ADDRESS: 106-110 Hegenberger Road						
JOB NUMBER: 14-003-01			LOCATION: Eastern most Boring						
DATE STARTED: 05-05-15			First Water (ft. bgs.): 13 DATE: 05-05-15						
DATE FINISHED: 05-05-15			TOTAL DEPTH: 20 feet						
DRILLING METHOD: Hydraulic Push			GEOLOGIST: Andrew Savage						
DRILLING COMPANY: ECA			Reviewed By: ---						
DEPTH ft.	PID (ppm)	BLOWS/ 1/2'	SAMPLE NO.	RECOVERY	GRAPHIC LOG	WATER LEVEL	GEOLOGIC DESCRIPTION	WELL DIAGRAM	
4'	46						Asphalt + 3/4 inch base rock		
5									
6.5'	65.3						Silty Clay (CL), very dark gray (10YR 3/1), damp, medium stiff, medium plasticity, HC odor present		
7									
8									
9							Same		
10									
10.5'	13.9								
11									
12									
13									
14									
15									
16'	7.7								
17									
18									
19									
20'	9.9						Bottom of Boring 20 feet bgs 05-05-15		

ERAS Environmental						Log of Boring B-3			
PROJECT: 14-003-01			ADDRESS: 106-110 Hegenberger Road						
JOB NUMBER: 14-003-01			LOCATION: Northern most Boring						
DATE STARTED: 05-05-15			First Water (ft. bgs.): 14.5 DATE: 05-05-15						
DATE FINISHED: 05-05-15			TOTAL DEPTH: 20 feet						
DRILLING METHOD: Hydraulic Push			GEOLOGIST: Andrew Savage						
DRILLING COMPANY: ECA			Reviewed By: ---						
DEPTH ft.	PID (ppm)	BLOWS/ 1/2'	SAMPLE NO.	RECOVERY	GRAPHIC LOG	WATER LEVEL	GEOLOGIC DESCRIPTION	WELL DIAGRAM	
4' 172							Asphalt + 3/4 inch base rock		
5'							Silty Clay (CL), very dark gray (10YR 3/1), damp, medium stiff, medium plasticity, HC odor present		
8' 143							Same Silty Clay (CL) at 5 feet, very strong HC odor		
10'							Same		
11' 11.8							at 10 feet, color change to black (10YR 2.5/1), very strong HC odor		
15' 8.3				NR					
				NR					
						▽			
							Silty Sand (SM), dark gray (10YR 4/1), wet, medium dense, ~20% fines, ~80% fine to coarse well graded sand, HC odor present		
20' 7.2				NR					
				NR					
							Silty Clay (CL), dark gray (10YR 4/1), damp, medium stiff, medium plasticity, very slight HC odor		
							Bottom of Boring 20 feet bas 05-05-15		

ERAS Environmental						Log of Boring B-4			
PROJECT: 14-003-01			ADDRESS: 106-110 Hegenberger Road						
JOB NUMBER: 14-003-01			LOCATION: Western most Boring						
DATE STARTED: 05-05-15			First Water (ft. bgs.): 20 DATE: 05-05-15						
DATE FINISHED: 05-05-15			TOTAL DEPTH: 24 feet						
DRILLING METHOD: Hydraulic Push			GEOLOGIST: Andrew Savage						
DRILLING COMPANY: ECA			Reviewed By: ---						
DEPTH ft.	PID (ppm)	BLOWS/ 1/2'	SAMPLE NO.	RECOVERY	GRAPHIC LOG	WATER LEVEL	GEOLOGIC DESCRIPTION	WELL DIAGRAM	
3'	6.6						Asphalt + 3/4 inch base rock		
5'	6.6						Gravely Sand (SW), dark yellowish brown (10YR 4/6), wet, ~60% fine to coarse well graded sand, ~40% 1/8 to 1/2 inch gravel, no HC odor (perched water)		
6'	18.4			NR					
6'	18.4			NR					
6'	18.4			NR					
6'	18.4			NR					
6'	18.4			NR					
10'	6.3						Silty Clay (CL), black (10YR 2/1), damp, medium stiff, medium plasticity, strong HC odor		
12'	6.3								
16'	18.2						at 10 feet, Silty Clay (CL), color change to dark brown (10YR 3/3)		
16'	18.2								
20'	8.5						at 16 feet, Silty Clay (CL), gray (10YR 5/1), damp, stiff, medium plasticity, HC odor present		
20'	8.5								





ERAS Environmental						<b>Log of Boring B-5</b>		
PROJECT: 14-003-01						ADDRESS: 106-110 Hegenberger Road		
JOB NUMBER: 14-003-01						LOCATION: SW Boring		
DATE STARTED: 05-05-15						First Water (ft. bgs.): 20 DATE: 05-05-15		
DATE FINISHED: 05-05-15						TOTAL DEPTH: 24 feet		
DRILLING METHOD: Hydraulic Push						GEOLOGIST: Andrew Savage		
DRILLING COMPANY: ECA						Reviewed By: ---		
DEPTH ft.	PID (ppm)	BLOWS/ 1/2'	SAMPLE NO.	RECOVERY	GRAPHIC LOG	WATER LEVEL	GEOLOGIC DESCRIPTION	WELL DIAGRAM
24'	7.2						Silt (ML), gray (10YR 5/1), wet, medium stiff, low plasticity, no HC odor	
25							Bottom of Boring 24 feet bgs 05-05-15	
30								
35								
40								



ERAS Environmental						Log of Boring B-7			
PROJECT: 14-003-01			ADDRESS: 106-110 Hegenberger Road						
JOB NUMBER: 14-003-01			LOCATION: Center of Sump						
DATE STARTED: 05-06-15			First Water (ft. bgs.): 14						
DATE FINISHED: 05-06-15			TOTAL DEPTH: 20 feet						
DRILLING METHOD: Hydraulic Push			GEOLOGIST: Andrew Savage						
DRILLING COMPANY: ECA			Reviewed By: ---						
DEPTH ft.	PID (ppm)	BLOWS/ 1/2'	SAMPLE NO.	RECOVERY	GRAPHIC LOG	WATER LEVEL	GEOLOGIC DESCRIPTION	WELL DIAGRAM	
4'	51.2						Asphalt + 3/4 inch base rock		
5'							Silty Clay (CL), dark gray (10YR 4/1), damp, medium stiff, medium plasticity, slight HC odor		
7'	18.7						at 5 feet, strong HC odor		
10'									
11.5'	1.1						at 9.5 feet, slight HC odor		
15'									
16'	0.9						Silty Sand (SM), dark gray (10YR 4/1), wet, medium dense, ~40% fines, ~60% fine to coarse well graded sand, slight HC odor		
17'							Silty Clay (CL), dark gray (10YR 4/1), damp, medium stiff, medium plasticity, slight HC odor		
18'							Silt (ML), dark gray (10YR 4/1), wet, medium stiff, low plasticity, ~10% fine to coarse well graded sand, slight HC odor		
19'							Silty Clay (CL), dark gray (10YR 4/1), damp, medium stiff, medium plasticity, slight HC odor		
20'	1.4						Bottom of Boring 20 feet bgs 05-06-15		



ERAS Environmental					Log of Boring B-8			
PROJECT: 14-003-01			ADDRESS: 106-110 Hegenberger Road					
JOB NUMBER: 14-003-01			LOCATION: NE Boring by former UST					
DATE STARTED: 05-06-15			First Water (ft. bgs.): 18		DATE: 05-06-15			
DATE FINISHED: 05-06-15			TOTAL DEPTH: 24 feet					
DRILLING METHOD: Hydraulic Push			GEOLOGIST: Andrew Savage					
DRILLING COMPANY: ECA			Reviewed By: ---					
DEPTH ft.	PID (ppm)	BLOWS/ 1/2'	SAMPLE NO.	RECOVERY	GRAPHIC LOG	WATER LEVEL		
					GEOLOGIC DESCRIPTION			
24' 0.4					Silty Sand (SM), dark gray (10YR 4/1), wet, medium dense, ~30% fines, ~70% fine to coarse well graded sand, no HC odor			
25					Bottom of Boring 24 feet bgs 05-06-15			
30								
35								
40								

ERAS Environmental						Log of Boring B-9			
PROJECT: 14-003-01			ADDRESS: 106-110 Hegenberger Road						
JOB NUMBER: 14-003-01			LOCATION: SW end at former UST						
DATE STARTED: 05-06-15			First Water (ft. bgs.): 18 DATE: 05-06-15						
DATE FINISHED: 05-06-15			TOTAL DEPTH: 24 feet						
DRILLING METHOD: Hydraulic Push			GEOLOGIST: Andrew Savage						
DRILLING COMPANY: ECA			Reviewed By: ---						
DEPTH ft.	PID (ppm)	BLOWS/ 1/2'	SAMPLE NO.	RECOVERY	GRAPHIC LOG	WATER LEVEL	GEOLOGIC DESCRIPTION	WELL DIAGRAM	
3'	0.4			NR			Asphalt + 3/4 inch base rock		
6'	0.4			NR			Gravely Sand (SW), dark gray (10YR 4/1), damp, medium dense, ~60% fine to coarse well graded sand, ~40% 1/8 to 1/2 inch gravel, no HC odor at 4 feet, wet (perched water)		
10'				NR			Same		
12'	0.3			NR			Silty Clay (CL), dark gray (10YR 4/1), damp, medium stiff, medium plasticity, no HC odor		
16'	0.3			NR					
20'	0.4			NR			Silt (ML), dark gray (10YR 4/1), wet, medium stiff, low plasticity, HC odor		
							Silty Clay (CL), dark gray (10YR 4/1), damp, medium stiff, medium plasticity, HC odor present		
							Silty Sand (SM), dark gray (10YR 4/1), wet, medium dense, ~40% fines, ~60% fine to coarse well graded sand, no HC odor		

ERAS Environmental					Log of Boring B-9			
PROJECT: 14-003-01			ADDRESS: 106-110 Hegenberger Road					
JOB NUMBER: 14-003-01			LOCATION: SW end at former UST					
DATE STARTED: 05-06-15			First Water (ft. bgs.): 18		DATE: 05-06-15			
DATE FINISHED: 05-06-15			TOTAL DEPTH: 24 feet					
DRILLING METHOD: Hydraulic Push			GEOLOGIST: Andrew Savage					
DRILLING COMPANY: ECA			Reviewed By: ---					
DEPTH ft.	PID (ppm)	BLOWS/ 1/2'	SAMPLE NO.	RECOVERY	GRAPHIC LOG	WATER LEVEL		
					GEOLOGIC DESCRIPTION			
24' 0.3					Silty Sand (SM), dark gray (10YR 4/1), wet, medium dense, ~40% fines, ~60% fine to coarse well graded sand, no HC odor			
25					Bottom of Boring 24 feet bgs 05-06-15			
30								
35								
40								

ERAS Environmental						Log of Boring B-10			
PROJECT: 14-003-05			ADDRESS: 106-110 Hegenberger Road						
JOB NUMBER: 14-003-05			LOCATION: -						
DATE STARTED: 09-03-15			First Water (ft. bgs.): 18 DATE: 09-03-15						
DATE FINISHED: 09-03-15			TOTAL DEPTH: 24 feet						
DRILLING METHOD: Hydraulic Push			GEOLOGIST: Andrew Savage						
DRILLING COMPANY: ECA			Reviewed By: ---						
DEPTH ft.	PID (ppm)	BLOWS / 1/2'	SAMPLE NO.	RECOVERY	GRAPHIC LOG	WATER LEVEL	GEOLOGIC DESCRIPTION	WELL DIAGRAM	
4'	6.8						Concrete + 3/4 inch base rock		
5									
6.5' 1.3							Silty Sand (SM), dark yellowish brown (10YR 3/6), damp, medium dense, ~30% fines, ~70% fine to medium grain poorly graded sand, no HC odor		
10									
12' 1.6							Silty Clay (CL), very dark gray (10YR 3/1), damp, medium stiff, medium plasticity, HC odor present  at 6 feet, very slight HC odor		
15									
16' 0.9									
20' 0.4							at 12 feet, no HC odor  from 18'-21', 1/2" silt stringers with water		







ERAS Environmental						Log of Boring B-12			
PROJECT: 14-003-05			ADDRESS: 106-110 Hegenberger Road						
JOB NUMBER: 14-003-05			LOCATION: -						
DATE STARTED: 09-03-15			First Water (ft. bgs.): 18 DATE: 09-03-15						
DATE FINISHED: 09-03-15			TOTAL DEPTH: 24 feet						
DRILLING METHOD: Hydraulic Push			GEOLOGIST: Andrew Savage						
DRILLING COMPANY: ECA			Reviewed By: ---						
DEPTH ft.	PID (ppm)	BLOWS/ 1/2'	SAMPLE NO.	RECOVERY	GRAPHIC LOG	WATER LEVEL	GEOLOGIC DESCRIPTION	WELL DIAGRAM	
4' 21.6							Concrete + 3/4 inch base rock		
7.5' 9.2							Silty Clay (CL), very dark grayish brown (10YR 3/2), damp, medium stiff, medium plasticity, HC odor present		
10' 1.2							at 4 feet, very strong HC odor and color change to very dark gray (10YR 3/1),		
15'									
16' 1.6							at 8 feet, HC odor present		
20' 0.9							at 9 feet, slight HC odor		
							at 16 feet, no HC odor		
							from 18'-21', 1/2" silt stringers with water, no HC odor		

ERAS Environmental					Log of Boring B-12			
PROJECT: 14-003-05				ADDRESS: 106-110 Hegenberger Road				
JOB NUMBER: 14-003-05				LOCATION: -				
DATE STARTED: 09-03-15				First Water (ft. bgs.): 18		DATE: 09-03-15		
DATE FINISHED: 09-03-15				TOTAL DEPTH: 24 feet				
DRILLING METHOD: Hydraulic Push				GEOLOGIST: Andrew Savage				
DRILLING COMPANY: ECA				Reviewed By: ---				
DEPTH ft.	PID (ppm)	BLOWS/ 1/2'	SAMPLE NO.	RECOVERY	GRAPHIC LOG	WATER LEVEL	GEOLOGIC DESCRIPTION	WELL DIAGRAM
24'	0.8						Silty Clay (CL)	
25							Silt (ML), dark gray (10YR 4/1), wet, medium stiff, low plasticity, ~90% fines, ~10% fine to coarse well graded sand, no HC odor	
30							Bottom of Boring 24 feet bgs 09-03-15	
35								
40								

ERAS Environmental					Log of Boring B-13			
PROJECT: 14-003-05				ADDRESS: 106-110 Hegenberger Road				
JOB NUMBER: 14-003-05				LOCATION: -				
DATE STARTED: 09-03-15				First Water (ft. bgs.): 18		DATE: 09-03-15		
DATE FINISHED: 09-03-15				TOTAL DEPTH: 24 feet				
DRILLING METHOD: Hydraulic Push				GEOLOGIST: Andrew Savage				
DRILLING COMPANY: ECA				Reviewed By: ---				
DEPTH ft.	PID (ppm)	BLOWS/ 1/2'	SAMPLE NO.	RECOVERY	GRAPHIC LOG	WATER LEVEL		
						GEOLOGIC DESCRIPTION		
						WELL DIAGRAM		
4' 7.8								
5								
7' 0.8								
10								
12' 0.7								
15								
16' 1.1								
20' 0.9								

ERAS Environmental					Log of Boring B-13			
PROJECT: 14-003-05			ADDRESS: 106-110 Hegenberger Road					
JOB NUMBER: 14-003-05			LOCATION: -					
DATE STARTED: 09-03-15			First Water (ft. bgs.): 18		DATE: 09-03-15			
DATE FINISHED: 09-03-15			TOTAL DEPTH: 24 feet					
DRILLING METHOD: Hydraulic Push			GEOLOGIST: Andrew Savage					
DRILLING COMPANY: ECA			Reviewed By: ---					
DEPTH ft.	PID (ppm)	BLOWS/ 1/2'	SAMPLE NO.	RECOVERY	GRAPHIC LOG	WATER LEVEL	GEOLOGIC DESCRIPTION	WELL DIAGRAM
24'	0.7							
25								
30								
35								
40								





ERAS Environmental						Log of Boring B-15						
PROJECT: 14-003-05			ADDRESS: 106-110 Hegenberger Road									
JOB NUMBER: 14-003-05			LOCATION: -									
DATE STARTED: 09-04-15			First Water (ft. bgs.): 18		DATE: 09-04-15							
DATE FINISHED: 09-04-15			TOTAL DEPTH: 24 feet									
DRILLING METHOD: Hydraulic Push			GEOLOGIST: Andrew Savage									
DRILLING COMPANY: ECA			Reviewed By: ---									
DEPTH ft.	PID (ppm)	BLOWS/ 1/2'	SAMPLE NO.	RECOVERY	GRAPHIC LOG	WATER LEVEL	GEOLOGIC DESCRIPTION	WELL DIAGRAM				
4' 0.6							Asphalt + 3/4 inch base rock					
5							Silty Clay (CL), dark brown (10YR 3/3), damp, medium stiff, medium plasticity, no HC odor					
7.5' 0.5							at 4 feet, slight HC odor					
10							at 5 feet, color change to very dark grayish brown (10YR 3/2)					
12' 0.4							at 8 feet, no HC odor					
16' 0.3							at 10 feet, color change to dark gray (10YR 4/1)					
19.5' 0.3							Clayey Silt (ML), dark gray (10YR 4/1), damp, medium stiff, low plasticity, no HC odor					
20							Silty Clay (CL), dark gray (10YR 4/1), damp, medium stiff, medium plasticity, no HC odor					
							Clayey Silt (ML), dark gray (10YR 4/1), mottled with dark yellowish brown (10YR 3/4), wet, medium stiff, low plasticity, no HC odor					

ERAS Environmental						Log of Boring B-15			
PROJECT: 14-003-05				ADDRESS: 106-110 Hegenberger Road					
JOB NUMBER: 14-003-05				LOCATION: -					
DATE STARTED: 09-04-15				First Water (ft. bgs.): 18		DATE: 09-04-15			
DATE FINISHED: 09-04-15				TOTAL DEPTH: 24 feet					
DRILLING METHOD: <i>Hydraulic Push</i>				GEOLOGIST: Andrew Savage					
DRILLING COMPANY: ECA				Reviewed By: ---					
DEPTH ft.	PID (ppm)	BLOWS/ 1/2'	SAMPLE NO.	RECOVERY	GRAPHIC LOG	WATER LEVEL	GEOLOGIC DESCRIPTION	WELL DIAGRAM	
24' 0.3							Clayey Silt (ML)		
25							Silty Sand (SM), dark gray (10YR 4/1), wet, medium dense, ~40% fines, ~60% fine grained poorly graded sand, no HC odor		
30									
35									
40									
							Bottom of Boring 24 feet bgs 09-04-15		



ERAS Environmental						Log of Boring B-16		
PROJECT: 14-003-05			ADDRESS: 106-110 Hegenberger Road					
JOB NUMBER: 14-003-05			LOCATION: -					
DATE STARTED: 09-04-15			First Water (ft. bgs.): 17.5 DATE: 09-04-15					
DATE FINISHED: 09-04-15			TOTAL DEPTH: 24 feet					
DRILLING METHOD: Hydraulic Push			GEOLOGIST: Andrew Savage					
DRILLING COMPANY: ECA			Reviewed By: ---					
DEPTH ft.	PID (ppm)	BLOWS/ 1/2'	SAMPLE NO.	RECOVERY	GRAPHIC LOG	WATER LEVEL	GEOLOGIC DESCRIPTION	WELL DIAGRAM
							- Clayey Silt (ML)	
							- Silty Sand (SM), dark gray (10YR 4/1), wet, medium dense, ~40% fines, ~60% fine to medium grained poorly graded sand, no HC odor	
23.5' 0.1			NR				Bottom of Boring 24 feet bgs 09-04-15	
25								
30								
35								
40								

## **Appendix E**

### **Analytical Results – Soil**



# McCampbell Analytical, Inc.

"When Quality Counts"

## Analytical Report

**WorkOrder:** 1505259

**Report Created for:** ERAS Environmental, Inc.

1533 B Street  
Hayward, CA 94541

**Project Contact:** Andrew Savage

**Project P.O.:**

**Project Name:** #14-003-01; 106-110 Hegenberger

**Project Received:** 05/07/2015

Analytical Report reviewed & approved for release on 05/14/2015 by:

Angela Rydelius,  
Laboratory Manager

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





## Glossary of Terms & Qualifier Definitions

**Client:** ERAS Environmental, Inc.  
**Project:** #14-003-01; 106-110 Hegenberger  
**WorkOrder:** 1505259

### Glossary Abbreviation

95% Interval	95% Confident Interval
DF	Dilution Factor
DI WET	(DISTLC) Waste Extraction Test using DI water
DISS	Dissolved (direct analysis of 0.45 µm filtered and acidified water sample)
DUP	Duplicate
EDL	Estimated Detection Limit
ITEF	International Toxicity Equivalence Factor
LCS	Laboratory Control Sample
MB	Method Blank
MB % Rec	% Recovery of Surrogate in Method Blank, if applicable
MDL	Method Detection Limit
ML	Minimum Level of Quantitation
MS	Matrix Spike
MSD	Matrix Spike Duplicate
N/A	Not Applicable
ND	Not detected at or above the indicated MDL or RL
NR	Data Not Reported due to matrix interference or insufficient sample amount.
PF	Prep Factor
RD	Relative Difference
RL	Reporting Limit (The RL is the lowest calibration standard in a multipoint calibration.)
RPD	Relative Percent Deviation
RRT	Relative Retention Time
SPK Val	Spike Value
SPKRef Val	Spike Reference Value
SPLP	Synthetic Precipitation Leachate Procedure
TCLP	Toxicity Characteristic Leachate Procedure
TEQ	Toxicity Equivalents
WET (STLC)	Waste Extraction Test (Soluble Threshold Limit Concentration)

### Analytical Qualifiers

a1	sample diluted due to matrix interference
c9	Internal standard is out of acceptance criteria due to matrix interference therefore values are estimated
e2	diesel range compounds are significant; no recognizable pattern
e3	aged diesel is significant
e4	gasoline range compounds are significant.
e7	oil range compounds are significant



## Glossary of Terms & Qualifier Definitions

**Client:** ERAS Environmental, Inc.

**Project:** #14-003-01; 106-110 Hegenberger

**WorkOrder:** 1505259

### Quality Control Qualifiers

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



## Analytical Report

**Client:** ERAS Environmental, Inc.      **WorkOrder:** 1505259  
**Project:** #14-003-01; 106-110 Hegenberger      **Extraction Method:** SW5030B  
**Date Received:** 5/7/15 17:06      **Analytical Method:** SW8260B  
**Date Prepared:** 5/7/15      **Unit:** mg/kg

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

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-1, 1.5-2	1505259-006A	Soil	05/05/2015 09:16	GC10	104588
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH(g)	ND		0.25	1	05/08/2015 18:18
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Dibromofluoromethane	106		70-130		05/08/2015 18:18
<u>Analyst(s):</u>	GM				
Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-1, 11.5-12	1505259-007A	Soil	05/05/2015 09:24	GC10	104588
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH(g)	ND		0.25	1	05/08/2015 18:59
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Dibromofluoromethane	106		70-130		05/08/2015 18:59
<u>Analyst(s):</u>	GM				
Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-2, 3.5-4	1505259-008A	Soil	05/05/2015 10:33	GC10	104588
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH(g)	120		12	50	05/12/2015 15:43
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Dibromofluoromethane	108		70-130		05/12/2015 15:43
<u>Analyst(s):</u>	KF				
Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-2, 6-6.5	1505259-009A	Soil	05/05/2015 10:34	GC10	104588
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH(g)	230		10	40	05/11/2015 22:34
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Dibromofluoromethane	101		70-130		05/11/2015 22:34
<u>Analyst(s):</u>	KF				

(Cont.)



## Analytical Report

**Client:** ERAS Environmental, Inc.      **WorkOrder:** 1505259  
**Project:** #14-003-01; 106-110 Hegenberger      **Extraction Method:** SW5030B  
**Date Received:** 5/7/15 17:06      **Analytical Method:** SW8260B  
**Date Prepared:** 5/7/15      **Unit:** mg/kg

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

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-2, 10-10.5	1505259-010A	Soil	05/05/2015 10:37	GC10	104588

<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH(g)	ND	0.25	1	05/11/2015 23:15
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
Dibromofluoromethane	110	70-130		05/11/2015 23:15
<u>Analyst(s):</u>	KF			

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-3, 2.5-4	1505259-011A	Soil	05/05/2015 11:23	GC10	104588

<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH(g)	310	50	200	05/12/2015 17:05
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
Dibromofluoromethane	111	70-130		05/12/2015 17:05
<u>Analyst(s):</u>	KF			

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-3, 7.5-8	1505259-012A	Soil	05/05/2015 11:26	GC10	104588

<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH(g)	35	1.2	5	05/12/2015 00:37
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
Dibromofluoromethane	101	70-130		05/12/2015 00:37
<u>Analyst(s):</u>	KF			

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-3, 10.5-11	1505259-013A	Soil	05/05/2015 11:28	GC10	104588

<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH(g)	0.67	0.25	1	05/08/2015 21:43
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
Dibromofluoromethane	105	70-130		05/08/2015 21:43
<u>Analyst(s):</u>	GM			

(Cont.)



## Analytical Report

**Client:** ERAS Environmental, Inc.      **WorkOrder:** 1505259  
**Project:** #14-003-01; 106-110 Hegenberger      **Extraction Method:** SW5030B  
**Date Received:** 5/7/15 17:06      **Analytical Method:** SW8260B  
**Date Prepared:** 5/7/15      **Unit:** mg/kg

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

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-4, 5.5-6	1505259-014A	Soil	05/05/2015 11:52	GC10	104588

<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH(g)	9.3	0.25	1	05/12/2015 01:59
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
Dibromofluoromethane	108	70-130		05/12/2015 01:59
<u>Analyst(s):</u>	KF			

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-4, 11.5-12	1505259-015A	Soil	05/05/2015 13:01	GC10	104588

<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH(g)	ND	0.25	1	05/08/2015 23:05
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
Dibromofluoromethane	102	70-130		05/08/2015 23:05
<u>Analyst(s):</u>	GM			

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-5, 3-3.5	1505259-016A	Soil	05/05/2015 13:53	GC10	104588

<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH(g)	0.30	0.25	1	05/08/2015 23:46
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
Dibromofluoromethane	108	70-130		05/08/2015 23:46
<u>Analyst(s):</u>	GM			

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-5, 10.5-11	1505259-017A	Soil	05/05/2015 13:59	GC10	104588

<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH(g)	ND	0.25	1	05/12/2015 03:22
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
Dibromofluoromethane	110	70-130		05/12/2015 03:22
<u>Analyst(s):</u>	KF			

(Cont.)



## Analytical Report

**Client:** ERAS Environmental, Inc.      **WorkOrder:** 1505259  
**Project:** #14-003-01; 106-110 Hegenberger      **Extraction Method:** SW5030B  
**Date Received:** 5/7/15 17:06      **Analytical Method:** SW8260B  
**Date Prepared:** 5/7/15      **Unit:** mg/kg

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

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-6, 3.5-4	1505259-018A	Soil	05/05/2015 14:30	GC10	104588
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH(g)	ND		0.25	1	05/09/2015 00:27
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Dibromofluoromethane	107		70-130		05/09/2015 00:27
<u>Analyst(s):</u>	GM				
Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-6, 7.5-8	1505259-019A	Soil	05/05/2015 14:35	GC10	104588
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH(g)	ND		0.25	1	05/09/2015 01:08
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Dibromofluoromethane	109		70-130		05/09/2015 01:08
<u>Analyst(s):</u>	GM				
Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-7, 3.5-4	1505259-020A	Soil	05/06/2015 07:58	GC10	104588
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH(g)	87		2.5	10	05/12/2015 04:03
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Dibromofluoromethane	106		70-130		05/12/2015 04:03
<u>Analyst(s):</u>	KF				
Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-7, 6.5-7	1505259-021A	Soil	05/06/2015 07:59	GC10	104588
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH(g)	12		1.7	6.7	05/12/2015 17:46
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Dibromofluoromethane	107		70-130		05/12/2015 17:46
<u>Analyst(s):</u>	KF				

(Cont.)



## Analytical Report

**Client:** ERAS Environmental, Inc.      **WorkOrder:** 1505259  
**Project:** #14-003-01; 106-110 Hegenberger      **Extraction Method:** SW5030B  
**Date Received:** 5/7/15 17:06      **Analytical Method:** SW8260B  
**Date Prepared:** 5/7/15      **Unit:** mg/kg

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

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-7, 11-11.5	1505259-022A	Soil	05/06/2015 08:01	GC10	104588

<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH(g)	ND	0.25	1	05/09/2015 02:30
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
Dibromofluoromethane	107	70-130		05/09/2015 02:30
<u>Analyst(s):</u>	GM			

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-8, 3.5-4	1505259-023A	Soil	05/06/2015 09:14	GC16	104588

<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH(g)	9.0	0.25	1	05/12/2015 06:11
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
Dibromofluoromethane	96	70-130		05/12/2015 06:11
<u>Analyst(s):</u>	KF			

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-8, 11.5-12	1505259-024A	Soil	05/06/2015 09:25	GC10	104595

<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH(g)	ND	0.25	1	05/08/2015 14:09
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
Dibromofluoromethane	108	70-130		05/08/2015 14:09
<u>Analyst(s):</u>	GM			

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-9, 2.5-3	1505259-025A	Soil	05/06/2015 11:02	GC10	104595

<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH(g)	ND	0.25	1	05/12/2015 14:20
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
Dibromofluoromethane	105	70-130		05/12/2015 14:20
<u>Analyst(s):</u>	KF			

(Cont.)



## Analytical Report

**Client:** ERAS Environmental, Inc.      **WorkOrder:** 1505259  
**Project:** #14-003-01; 106-110 Hegenberger      **Extraction Method:** SW5030B  
**Date Received:** 5/7/15 17:06      **Analytical Method:** SW8260B  
**Date Prepared:** 5/7/15      **Unit:** mg/kg

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

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-9, 11.5-12	1505259-026A	Soil	05/06/2015 11:37	GC10	104595
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH(g)	ND		0.25	1	05/12/2015 15:02
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Dibromofluoromethane	104		70-130		05/12/2015 15:02
<u>Analyst(s):</u>	KF				



## Analytical Report

**Client:** ERAS Environmental, Inc.  
**Project:** #14-003-01; 106-110 Hegenberger  
**Date Received:** 5/7/15 17:06  
**Date Prepared:** 5/7/15

**WorkOrder:** 1505259  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** mg/Kg

### Volatile Organics by P&T and GC/MS

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-1, 1.5-2	1505259-006A	Soil	05/05/2015 09:16	GC10	104588

Analyses	Result	RL	DF	Date Analyzed
Benzene	ND	0.0050	1	05/08/2015 18:18
Ethylbenzene	ND	0.0050	1	05/08/2015 18:18
Methyl-t-butyl ether (MTBE)	ND	0.0050	1	05/08/2015 18:18
Naphthalene	ND	0.0050	1	05/08/2015 18:18
Toluene	ND	0.0050	1	05/08/2015 18:18
Xylenes, Total	ND	0.0050	1	05/08/2015 18:18
Surrogates	REC (%)	Limits		
Dibromofluoromethane	87	70-130		05/08/2015 18:18
Toluene-d8	97	70-130		05/08/2015 18:18
4-BFB	95	70-130		05/08/2015 18:18

Analyst(s): KF

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-1, 11.5-12	1505259-007A	Soil	05/05/2015 09:24	GC10	104588

Analyses	Result	RL	DF	Date Analyzed
Benzene	ND	0.0050	1	05/08/2015 18:59
Ethylbenzene	ND	0.0050	1	05/08/2015 18:59
Methyl-t-butyl ether (MTBE)	ND	0.0050	1	05/08/2015 18:59
Naphthalene	ND	0.0050	1	05/08/2015 18:59
Toluene	ND	0.0050	1	05/08/2015 18:59
Xylenes, Total	ND	0.0050	1	05/08/2015 18:59
Surrogates	REC (%)	Limits		
Dibromofluoromethane	87	70-130		05/08/2015 18:59
Toluene-d8	97	70-130		05/08/2015 18:59
4-BFB	91	70-130		05/08/2015 18:59

Analyst(s): KF

(Cont.)



## Analytical Report

**Client:** ERAS Environmental, Inc.  
**Project:** #14-003-01; 106-110 Hegenberger  
**Date Received:** 5/7/15 17:06  
**Date Prepared:** 5/7/15

**WorkOrder:** 1505259  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** mg/Kg

### Volatile Organics by P&T and GC/MS

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-2, 3.5-4	1505259-008A	Soil	05/05/2015 10:33	GC10	104588

Analyses	Result	RL	DF	Date Analyzed
Benzene	0.16	0.050	10	05/11/2015 21:53
Ethylbenzene	ND	0.050	10	05/11/2015 21:53
Methyl-t-butyl ether (MTBE)	ND	0.050	10	05/11/2015 21:53
Naphthalene	ND	0.050	10	05/11/2015 21:53
Toluene	ND	0.050	10	05/11/2015 21:53
Xylenes, Total	ND	0.050	10	05/11/2015 21:53
Surrogates	REC (%)	Limits		
Dibromofluoromethane	75	70-130		05/11/2015 21:53
Toluene-d8	99	70-130		05/11/2015 21:53
4-BFB	79	70-130		05/11/2015 21:53

Analyst(s): KF

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-2, 6-6.5	1505259-009A	Soil	05/05/2015 10:34	GC10	104588

Analyses	Result	RL	DF	Date Analyzed
Benzene	2.0	0.50	100	05/12/2015 16:24
Ethylbenzene	9.4	0.50	100	05/12/2015 16:24
Methyl-t-butyl ether (MTBE)	ND	0.50	100	05/12/2015 16:24
Naphthalene	2.1	0.50	100	05/12/2015 16:24
Toluene	ND	0.50	100	05/12/2015 16:24
Xylenes, Total	ND	0.50	100	05/12/2015 16:24
Surrogates	REC (%)	Limits		
Dibromofluoromethane	92	70-130		05/12/2015 16:24
Toluene-d8	89	70-130		05/12/2015 16:24
4-BFB	86	70-130		05/12/2015 16:24

Analyst(s): KF

(Cont.)



## Analytical Report

**Client:** ERAS Environmental, Inc.

**WorkOrder:** 1505259

**Project:** #14-003-01; 106-110 Hegenberger

**Extraction Method:** SW5030B

**Date Received:** 5/7/15 17:06

**Analytical Method:** SW8260B

**Date Prepared:** 5/7/15

**Unit:** mg/Kg

### Volatile Organics by P&T and GC/MS

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-2, 10-10.5	1505259-010A	Soil	05/05/2015 10:37	GC10	104588

Analyses	Result	RL	DF	Date Analyzed
Benzene	ND	0.0050	1	05/11/2015 23:15
Ethylbenzene	ND	0.0050	1	05/11/2015 23:15
Methyl-t-butyl ether (MTBE)	ND	0.0050	1	05/11/2015 23:15
Naphthalene	ND	0.0050	1	05/11/2015 23:15
Toluene	ND	0.0050	1	05/11/2015 23:15
Xylenes, Total	ND	0.0050	1	05/11/2015 23:15
Surrogates	REC (%)	Limits		
Dibromofluoromethane	91	70-130		05/11/2015 23:15
Toluene-d8	97	70-130		05/11/2015 23:15
4-BFB	95	70-130		05/11/2015 23:15

Analyst(s): KF

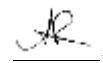
Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-3, 2.5-4	1505259-011A	Soil	05/05/2015 11:23	GC10	104588

Analyses	Result	RL	DF	Date Analyzed
Benzene	1.8	0.10	20	05/11/2015 23:56
Ethylbenzene	0.97	0.10	20	05/11/2015 23:56
Methyl-t-butyl ether (MTBE)	ND	0.10	20	05/11/2015 23:56
Naphthalene	1.8	0.10	20	05/11/2015 23:56
Toluene	ND	0.10	20	05/11/2015 23:56
Xylenes, Total	0.14	0.10	20	05/11/2015 23:56
Surrogates	REC (%)	Limits		
Dibromofluoromethane	78	70-130		05/11/2015 23:56
Toluene-d8	100	70-130		05/11/2015 23:56
4-BFB	76	70-130		05/11/2015 23:56

Analyst(s): KF

(Cont.)

CDPH ELAP 1644 ♦ NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



## Analytical Report

**Client:** ERAS Environmental, Inc.  
**Project:** #14-003-01; 106-110 Hegenberger  
**Date Received:** 5/7/15 17:06  
**Date Prepared:** 5/7/15

**WorkOrder:** 1505259  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** mg/Kg

### Volatile Organics by P&T and GC/MS

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-3, 7.5-8	1505259-012A	Soil	05/05/2015 11:26	GC10	104588

Analyses	Result	RL	DF	Date Analyzed
Benzene	0.36	0.025	5	05/12/2015 00:37
Ethylbenzene	0.36	0.025	5	05/12/2015 00:37
Methyl-t-butyl ether (MTBE)	ND	0.025	5	05/12/2015 00:37
Naphthalene	0.61	0.025	5	05/12/2015 00:37
Toluene	ND	0.025	5	05/12/2015 00:37
Xylenes, Total	0.045	0.025	5	05/12/2015 00:37
Surrogates	REC (%)	Limits		
Dibromofluoromethane	83	70-130		05/12/2015 00:37
Toluene-d8	94	70-130		05/12/2015 00:37
4-BFB	88	70-130		05/12/2015 00:37

Analyst(s): KF

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-3, 10.5-11	1505259-013A	Soil	05/05/2015 11:28	GC10	104588

Analyses	Result	RL	DF	Date Analyzed
Benzene	0.047	0.0050	1	05/08/2015 21:43
Ethylbenzene	0.032	0.0050	1	05/08/2015 21:43
Methyl-t-butyl ether (MTBE)	ND	0.0050	1	05/08/2015 21:43
Naphthalene	ND	0.0050	1	05/08/2015 21:43
Toluene	ND	0.0050	1	05/08/2015 21:43
Xylenes, Total	0.064	0.0050	1	05/08/2015 21:43
Surrogates	REC (%)	Limits		
Dibromofluoromethane	87	70-130		05/08/2015 21:43
Toluene-d8	98	70-130		05/08/2015 21:43
4-BFB	96	70-130		05/08/2015 21:43

Analyst(s): KF

(Cont.)



## Analytical Report

**Client:** ERAS Environmental, Inc.  
**Project:** #14-003-01; 106-110 Hegenberger  
**Date Received:** 5/7/15 17:06  
**Date Prepared:** 5/7/15

**WorkOrder:** 1505259  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** mg/Kg

### Volatile Organics by P&T and GC/MS

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-4, 5.5-6	1505259-014A	Soil	05/05/2015 11:52	GC10	104588

Analyses	Result	RL	DF	Date Analyzed
Benzene	ND	0.0050	1	05/08/2015 22:24
Ethylbenzene	ND	0.0050	1	05/08/2015 22:24
Methyl-t-butyl ether (MTBE)	ND	0.0050	1	05/08/2015 22:24
Naphthalene	ND	0.0050	1	05/08/2015 22:24
Toluene	ND	0.0050	1	05/08/2015 22:24
Xylenes, Total	ND	0.0050	1	05/08/2015 22:24
Surrogates	REC (%)	Limits		
Dibromofluoromethane	87	70-130		05/08/2015 22:24
Toluene-d8	105	70-130		05/08/2015 22:24
4-BFB	81	70-130		05/08/2015 22:24

Analyst(s): KF

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-4, 11.5-12	1505259-015A	Soil	05/05/2015 13:01	GC10	104588

Analyses	Result	RL	DF	Date Analyzed
Benzene	ND	0.0050	1	05/08/2015 23:05
Ethylbenzene	ND	0.0050	1	05/08/2015 23:05
Methyl-t-butyl ether (MTBE)	ND	0.0050	1	05/08/2015 23:05
Naphthalene	ND	0.0050	1	05/08/2015 23:05
Toluene	ND	0.0050	1	05/08/2015 23:05
Xylenes, Total	ND	0.0050	1	05/08/2015 23:05
Surrogates	REC (%)	Limits		
Dibromofluoromethane	84	70-130		05/08/2015 23:05
Toluene-d8	100	70-130		05/08/2015 23:05
4-BFB	89	70-130		05/08/2015 23:05

Analyst(s): KF

(Cont.)



## Analytical Report

**Client:** ERAS Environmental, Inc.

**WorkOrder:** 1505259

**Project:** #14-003-01; 106-110 Hegenberger

**Extraction Method:** SW5030B

**Date Received:** 5/7/15 17:06

**Analytical Method:** SW8260B

**Date Prepared:** 5/7/15

**Unit:** mg/Kg

### Volatile Organics by P&T and GC/MS

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-5, 3-3.5	1505259-016A	Soil	05/05/2015 13:53	GC10	104588

Analyses	Result	RL	DF	Date Analyzed
Benzene	ND	0.0050	1	05/08/2015 23:46
Ethylbenzene	ND	0.0050	1	05/08/2015 23:46
Methyl-t-butyl ether (MTBE)	ND	0.0050	1	05/08/2015 23:46
Naphthalene	ND	0.0050	1	05/08/2015 23:46
Toluene	ND	0.0050	1	05/08/2015 23:46
Xylenes, Total	ND	0.0050	1	05/08/2015 23:46
Surrogates	REC (%)	Limits		
Dibromofluoromethane	89	70-130		05/08/2015 23:46
Toluene-d8	98	70-130		05/08/2015 23:46
4-BFB	89	70-130		05/08/2015 23:46

Analyst(s): KF

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-5, 10.5-11	1505259-017A	Soil	05/05/2015 13:59	GC10	104588

Analyses	Result	RL	DF	Date Analyzed
Benzene	ND	0.0050	1	05/12/2015 03:22
Ethylbenzene	ND	0.0050	1	05/12/2015 03:22
Methyl-t-butyl ether (MTBE)	ND	0.0050	1	05/12/2015 03:22
Naphthalene	ND	0.0050	1	05/12/2015 03:22
Toluene	ND	0.0050	1	05/12/2015 03:22
Xylenes, Total	ND	0.0050	1	05/12/2015 03:22
Surrogates	REC (%)	Limits		
Dibromofluoromethane	91	70-130		05/12/2015 03:22
Toluene-d8	98	70-130		05/12/2015 03:22
4-BFB	88	70-130		05/12/2015 03:22

Analyst(s): KF

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CDPH ELAP 1644 ♦ NELAP 4033ORELAP

Angela Rydelius, Lab Manager



## Analytical Report

**Client:** ERAS Environmental, Inc.  
**Project:** #14-003-01; 106-110 Hegenberger  
**Date Received:** 5/7/15 17:06  
**Date Prepared:** 5/7/15

**WorkOrder:** 1505259  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** mg/Kg

### Volatile Organics by P&T and GC/MS

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-6, 3.5-4	1505259-018A	Soil	05/05/2015 14:30	GC10	104588

Analyses	Result	RL	DF	Date Analyzed
Benzene	ND	0.0050	1	05/09/2015 00:27
Ethylbenzene	ND	0.0050	1	05/09/2015 00:27
Methyl-t-butyl ether (MTBE)	ND	0.0050	1	05/09/2015 00:27
Naphthalene	ND	0.0050	1	05/09/2015 00:27
Toluene	ND	0.0050	1	05/09/2015 00:27
Xylenes, Total	ND	0.0050	1	05/09/2015 00:27
Surrogates	REC (%)	Limits		
Dibromofluoromethane	88	70-130		05/09/2015 00:27
Toluene-d8	99	70-130		05/09/2015 00:27
4-BFB	95	70-130		05/09/2015 00:27

Analyst(s): KF

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-6, 7.5-8	1505259-019A	Soil	05/05/2015 14:35	GC10	104588

Analyses	Result	RL	DF	Date Analyzed
Benzene	ND	0.0050	1	05/09/2015 01:08
Ethylbenzene	ND	0.0050	1	05/09/2015 01:08
Methyl-t-butyl ether (MTBE)	ND	0.0050	1	05/09/2015 01:08
Naphthalene	ND	0.0050	1	05/09/2015 01:08
Toluene	ND	0.0050	1	05/09/2015 01:08
Xylenes, Total	ND	0.0050	1	05/09/2015 01:08
Surrogates	REC (%)	Limits		
Dibromofluoromethane	90	70-130		05/09/2015 01:08
Toluene-d8	97	70-130		05/09/2015 01:08
4-BFB	94	70-130		05/09/2015 01:08

Analyst(s): KF

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## Analytical Report

**Client:** ERAS Environmental, Inc.  
**Project:** #14-003-01; 106-110 Hegenberger  
**Date Received:** 5/7/15 17:06  
**Date Prepared:** 5/7/15

**WorkOrder:** 1505259  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** mg/Kg

### Volatile Organics by P&T and GC/MS

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-7, 3.5-4	1505259-020A	Soil	05/06/2015 07:58	GC10	104588

Analyses	Result	RL	DF	Date Analyzed
Benzene	0.43	0.050	10	05/12/2015 04:03
Ethylbenzene	0.30	0.050	10	05/12/2015 04:03
Methyl-t-butyl ether (MTBE)	ND	0.050	10	05/12/2015 04:03
Naphthalene	0.76	0.050	10	05/12/2015 04:03
Toluene	ND	0.050	10	05/12/2015 04:03
Xylenes, Total	ND	0.050	10	05/12/2015 04:03
Surrogates	REC (%)	Limits		
Dibromofluoromethane	87	70-130		05/12/2015 04:03
Toluene-d8	93	70-130		05/12/2015 04:03
4-BFB	79	70-130		05/12/2015 04:03

Analyst(s): KF

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-7, 6.5-7	1505259-021A	Soil	05/06/2015 07:59	GC10	104588

Analyses	Result	RL	DF	Date Analyzed
Benzene	0.35	0.033	6.7	05/12/2015 17:46
Ethylbenzene	0.63	0.033	6.7	05/12/2015 17:46
Methyl-t-butyl ether (MTBE)	ND	0.033	6.7	05/12/2015 17:46
Naphthalene	0.20	0.033	6.7	05/12/2015 17:46
Toluene	ND	0.033	6.7	05/12/2015 17:46
Xylenes, Total	0.42	0.033	6.7	05/12/2015 17:46
Surrogates	REC (%)	Limits		
Dibromofluoromethane	88	70-130		05/12/2015 17:46
Toluene-d8	92	70-130		05/12/2015 17:46
4-BFB	79	70-130		05/12/2015 17:46

Analyst(s): KF

(Cont.)



## Analytical Report

**Client:** ERAS Environmental, Inc.  
**Project:** #14-003-01; 106-110 Hegenberger  
**Date Received:** 5/7/15 17:06  
**Date Prepared:** 5/7/15

**WorkOrder:** 1505259  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** mg/Kg

### Volatile Organics by P&T and GC/MS

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-7, 11-11.5	1505259-022A	Soil	05/06/2015 08:01	GC10	104588

Analyses	Result	RL	DF	Date Analyzed
Benzene	ND	0.0050	1	05/09/2015 02:30
Ethylbenzene	ND	0.0050	1	05/09/2015 02:30
Methyl-t-butyl ether (MTBE)	ND	0.0050	1	05/09/2015 02:30
Naphthalene	ND	0.0050	1	05/09/2015 02:30
Toluene	ND	0.0050	1	05/09/2015 02:30
Xylenes, Total	ND	0.0050	1	05/09/2015 02:30
Surrogates	REC (%)	Limits		
Dibromofluoromethane	89	70-130		05/09/2015 02:30
Toluene-d8	98	70-130		05/09/2015 02:30
4-BFB	96	70-130		05/09/2015 02:30

Analyst(s): KF

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-8, 3.5-4	1505259-023A	Soil	05/06/2015 09:14	GC16	104588

Analyses	Result	RL	DF	Date Analyzed
Benzene	ND	0.0050	1	05/12/2015 06:11
Ethylbenzene	<b>0.061</b>	0.0050	1	05/12/2015 06:11
Methyl-t-butyl ether (MTBE)	ND	0.0050	1	05/12/2015 06:11
Naphthalene	<b>0.035</b>	0.0050	1	05/12/2015 06:11
Toluene	ND	0.0050	1	05/12/2015 06:11
Xylenes, Total	<b>0.18</b>	0.0050	1	05/12/2015 06:11
Surrogates	REC (%)	Limits		
Dibromofluoromethane	85	70-130		05/12/2015 06:11
Toluene-d8	92	70-130		05/12/2015 06:11
4-BFB	113	70-130		05/12/2015 06:11

Analyst(s): KF

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## Analytical Report

**Client:** ERAS Environmental, Inc.

**WorkOrder:** 1505259

**Project:** #14-003-01; 106-110 Hegenberger

**Extraction Method:** SW5030B

**Date Received:** 5/7/15 17:06

**Analytical Method:** SW8260B

**Date Prepared:** 5/7/15

**Unit:** mg/Kg

### Volatile Organics by P&T and GC/MS

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-8, 11.5-12	1505259-024A	Soil	05/06/2015 09:25	GC10	104595

Analyses	Result	RL	DF	Date Analyzed
Benzene	ND	0.0050	1	05/08/2015 14:09
Ethylbenzene	ND	0.0050	1	05/08/2015 14:09
Methyl-t-butyl ether (MTBE)	ND	0.0050	1	05/08/2015 14:09
Naphthalene	ND	0.0050	1	05/08/2015 14:09
Toluene	ND	0.0050	1	05/08/2015 14:09
Xylenes, Total	ND	0.0050	1	05/08/2015 14:09
Surrogates	REC (%)	Limits		
Dibromofluoromethane	89	70-130		05/08/2015 14:09
Toluene-d8	95	70-130		05/08/2015 14:09
4-BFB	94	70-130		05/08/2015 14:09

Analyst(s): KF

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-9, 2.5-3	1505259-025A	Soil	05/06/2015 11:02	GC10	104595

Analyses	Result	RL	DF	Date Analyzed
Benzene	ND	0.0050	1	05/12/2015 14:20
Ethylbenzene	ND	0.0050	1	05/12/2015 14:20
Methyl-t-butyl ether (MTBE)	ND	0.0050	1	05/12/2015 14:20
Naphthalene	ND	0.0050	1	05/12/2015 14:20
Toluene	ND	0.0050	1	05/12/2015 14:20
Xylenes, Total	ND	0.0050	1	05/12/2015 14:20
Surrogates	REC (%)	Limits		
Dibromofluoromethane	87	70-130		05/12/2015 14:20
Toluene-d8	97	70-130		05/12/2015 14:20
4-BFB	108	70-130		05/12/2015 14:20

Analyst(s): KF

Analytical Comments: c9

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## Analytical Report

**Client:** ERAS Environmental, Inc.      **WorkOrder:** 1505259  
**Project:** #14-003-01; 106-110 Hegenberger      **Extraction Method:** SW5030B  
**Date Received:** 5/7/15 17:06      **Analytical Method:** SW8260B  
**Date Prepared:** 5/7/15      **Unit:** mg/Kg

### Volatile Organics by P&T and GC/MS

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-9, 11.5-12	1505259-026A	Soil	05/06/2015 11:37	GC10	104595
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Benzene	ND		0.0050	1	05/12/2015 15:02
Ethylbenzene	ND		0.0050	1	05/12/2015 15:02
Methyl-t-butyl ether (MTBE)	ND		0.0050	1	05/12/2015 15:02
Naphthalene	ND		0.0050	1	05/12/2015 15:02
Toluene	ND		0.0050	1	05/12/2015 15:02
Xylenes, Total	ND		0.0050	1	05/12/2015 15:02
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Dibromofluoromethane	86		70-130		05/12/2015 15:02
Toluene-d8	97		70-130		05/12/2015 15:02
4-BFB	93		70-130		05/12/2015 15:02

Analyst(s): KF



## Analytical Report

**Client:** ERAS Environmental, Inc.  
**Project:** #14-003-01; 106-110 Hegenberger  
**Date Received:** 5/7/15 17:06  
**Date Prepared:** 5/7/15

**WorkOrder:** 1505259  
**Extraction Method:** SW3050B  
**Analytical Method:** SW6020  
**Unit:** mg/Kg

### LUFT 5 Metals

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-1, 1.5-2	1505259-006A	Soil	05/05/2015 09:16	ICP-MS1	104541
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Cadmium	0.39		0.25	1	05/08/2015 15:58
Chromium	49		0.50	1	05/08/2015 15:58
Lead	19		0.50	1	05/08/2015 15:58
Nickel	49		0.50	1	05/08/2015 15:58
Zinc	69		5.0	1	05/08/2015 15:58
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Terbium	96		70-130		05/08/2015 15:58
<u>Analyst(s):</u>	DVH				

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-1, 11.5-12	1505259-007A	Soil	05/05/2015 09:24	ICP-MS1	104541
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Cadmium	ND		0.25	1	05/08/2015 20:15
Chromium	57		0.50	1	05/08/2015 20:15
Lead	9.9		0.50	1	05/08/2015 20:15
Nickel	66		0.50	1	05/08/2015 20:15
Zinc	55		5.0	1	05/08/2015 20:15
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Terbium	103		70-130		05/08/2015 20:15
<u>Analyst(s):</u>	BBO				

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-2, 3.5-4	1505259-008A	Soil	05/05/2015 10:33	ICP-MS1	104541
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Cadmium	ND		0.25	1	05/08/2015 16:10
Chromium	77		0.50	1	05/08/2015 16:10
Lead	17		0.50	1	05/08/2015 16:10
Nickel	81		0.50	1	05/08/2015 16:10
Zinc	40		5.0	1	05/08/2015 16:10
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Terbium	106		70-130		05/08/2015 16:10
<u>Analyst(s):</u>	DVH				

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CDPH ELAP 1644 ♦ NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



## Analytical Report

**Client:** ERAS Environmental, Inc.      **WorkOrder:** 1505259  
**Project:** #14-003-01; 106-110 Hegenberger      **Extraction Method:** SW3050B  
**Date Received:** 5/7/15 17:06      **Analytical Method:** SW6020  
**Date Prepared:** 5/7/15      **Unit:** mg/Kg

### LUFT 5 Metals

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-2, 6-6.5	1505259-009A	Soil	05/05/2015 10:34	ICP-MS2	104541
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Cadmium	ND		0.25	1	05/11/2015 21:08
Chromium	64		0.50	1	05/11/2015 21:08
Lead	41		0.50	1	05/11/2015 21:08
Nickel	79		0.50	1	05/11/2015 21:08
Zinc	55		5.0	1	05/11/2015 21:08
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Terbium	105		70-130		05/11/2015 21:08
<u>Analyst(s):</u>	BBO				

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-2, 10-10.5	1505259-010A	Soil	05/05/2015 10:37	ICP-MS1	104541
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Cadmium	ND		0.25	1	05/08/2015 16:41
Chromium	63		0.50	1	05/08/2015 16:41
Lead	8.8		0.50	1	05/08/2015 16:41
Nickel	69		0.50	1	05/08/2015 16:41
Zinc	63		5.0	1	05/08/2015 16:41
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Terbium	99		70-130		05/08/2015 16:41
<u>Analyst(s):</u>	DVH				

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-3, 2.5-4	1505259-011A	Soil	05/05/2015 11:23	ICP-MS1	104541
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Cadmium	ND		0.25	1	05/08/2015 16:47
Chromium	74		0.50	1	05/08/2015 16:47
Lead	240		0.50	1	05/08/2015 16:47
Nickel	75		0.50	1	05/08/2015 16:47
Zinc	130		5.0	1	05/08/2015 16:47
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Terbium	102		70-130		05/08/2015 16:47
<u>Analyst(s):</u>	DVH				

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## Analytical Report

**Client:** ERAS Environmental, Inc.      **WorkOrder:** 1505259  
**Project:** #14-003-01; 106-110 Hegenberger      **Extraction Method:** SW3050B  
**Date Received:** 5/7/15 17:06      **Analytical Method:** SW6020  
**Date Prepared:** 5/7/15      **Unit:** mg/Kg

### LUFT 5 Metals

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-3, 7.5-8	1505259-012A	Soil	05/05/2015 11:26	ICP-MS1	104541
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Cadmium	ND		0.25	1	05/08/2015 18:17
Chromium	43		0.50	1	05/08/2015 18:17
Lead	6.8		0.50	1	05/08/2015 18:17
Nickel	47		0.50	1	05/08/2015 18:17
Zinc	41		5.0	1	05/08/2015 18:17
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Terbium	104		70-130		05/08/2015 18:17
<u>Analyst(s):</u>	BB0				

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-3, 10.5-11	1505259-013A	Soil	05/05/2015 11:28	ICP-MS1	104541
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Cadmium	0.35		0.25	1	05/08/2015 18:23
Chromium	45		0.50	1	05/08/2015 18:23
Lead	6.5		0.50	1	05/08/2015 18:23
Nickel	46		0.50	1	05/08/2015 18:23
Zinc	41		5.0	1	05/08/2015 18:23
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Terbium	100		70-130		05/08/2015 18:23
<u>Analyst(s):</u>	BB0				

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-4, 5.5-6	1505259-014A	Soil	05/05/2015 11:52	ICP-MS1	104541
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Cadmium	ND		0.25	1	05/08/2015 18:29
Chromium	55		0.50	1	05/08/2015 18:29
Lead	11		0.50	1	05/08/2015 18:29
Nickel	58		0.50	1	05/08/2015 18:29
Zinc	53		5.0	1	05/08/2015 18:29
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Terbium	96		70-130		05/08/2015 18:29
<u>Analyst(s):</u>	BB0				

(Cont.)



## Analytical Report

**Client:** ERAS Environmental, Inc.      **WorkOrder:** 1505259  
**Project:** #14-003-01; 106-110 Hegenberger      **Extraction Method:** SW3050B  
**Date Received:** 5/7/15 17:06      **Analytical Method:** SW6020  
**Date Prepared:** 5/7/15      **Unit:** mg/Kg

### LUFT 5 Metals

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-4, 11.5-12	1505259-015A	Soil	05/05/2015 13:01	ICP-MS1	104594
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Cadmium	ND		0.25	1	05/08/2015 11:13
Chromium	34		0.50	1	05/08/2015 11:13
Lead	5.2		0.50	1	05/08/2015 11:13
Nickel	43		0.50	1	05/08/2015 11:13
Zinc	36		5.0	1	05/08/2015 11:13
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Terbium	103		70-130		05/08/2015 11:13
<u>Analyst(s):</u>	DVH				

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-5, 3-3.5	1505259-016A	Soil	05/05/2015 13:53	ICP-MS1	104594
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Cadmium	0.27		0.25	1	05/08/2015 18:35
Chromium	52		0.50	1	05/08/2015 18:35
Lead	130		0.50	1	05/08/2015 18:35
Nickel	49		0.50	1	05/08/2015 18:35
Zinc	83		5.0	1	05/08/2015 18:35
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Terbium	99		70-130		05/08/2015 18:35
<u>Analyst(s):</u>	BBO				

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-5, 10.5-11	1505259-017A	Soil	05/05/2015 13:59	ICP-MS1	104594
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Cadmium	ND		0.25	1	05/08/2015 18:42
Chromium	40		0.50	1	05/08/2015 18:42
Lead	5.4		0.50	1	05/08/2015 18:42
Nickel	44		0.50	1	05/08/2015 18:42
Zinc	37		5.0	1	05/08/2015 18:42
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Terbium	101		70-130		05/08/2015 18:42
<u>Analyst(s):</u>	BBO				

(Cont.)



## Analytical Report

**Client:** ERAS Environmental, Inc.      **WorkOrder:** 1505259  
**Project:** #14-003-01; 106-110 Hegenberger      **Extraction Method:** SW3050B  
**Date Received:** 5/7/15 17:06      **Analytical Method:** SW6020  
**Date Prepared:** 5/7/15      **Unit:** mg/Kg

### LUFT 5 Metals

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-6, 3.5-4	1505259-018A	Soil	05/05/2015 14:30	ICP-MS1	104594
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Cadmium	ND		0.25	1	05/08/2015 18:48
Chromium	62		0.50	1	05/08/2015 18:48
Lead	6.4		0.50	1	05/08/2015 18:48
Nickel	68		0.50	1	05/08/2015 18:48
Zinc	34		5.0	1	05/08/2015 18:48
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Terbium	96		70-130		05/08/2015 18:48
<u>Analyst(s):</u>	BB0				

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-6, 7.5-8	1505259-019A	Soil	05/05/2015 14:35	ICP-MS1	104594
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Cadmium	ND		0.25	1	05/08/2015 18:54
Chromium	40		0.50	1	05/08/2015 18:54
Lead	5.3		0.50	1	05/08/2015 18:54
Nickel	42		0.50	1	05/08/2015 18:54
Zinc	35		5.0	1	05/08/2015 18:54
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Terbium	99		70-130		05/08/2015 18:54
<u>Analyst(s):</u>	BB0				

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-7, 3.5-4	1505259-020A	Soil	05/06/2015 07:58	ICP-MS2	104594
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Cadmium	ND		0.25	1	05/11/2015 21:14
Chromium	74		0.50	1	05/11/2015 21:14
Lead	25		0.50	1	05/11/2015 21:14
Nickel	66		0.50	1	05/11/2015 21:14
Zinc	38		5.0	1	05/11/2015 21:14
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Terbium	104		70-130		05/11/2015 21:14
<u>Analyst(s):</u>	BB0				

(Cont.)



## Analytical Report

**Client:** ERAS Environmental, Inc.      **WorkOrder:** 1505259  
**Project:** #14-003-01; 106-110 Hegenberger      **Extraction Method:** SW3050B  
**Date Received:** 5/7/15 17:06      **Analytical Method:** SW6020  
**Date Prepared:** 5/7/15      **Unit:** mg/Kg

### LUFT 5 Metals

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-7, 6.5-7	1505259-021A	Soil	05/06/2015 07:59	ICP-MS1	104594
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Cadmium	ND		0.25	1	05/08/2015 19:00
Chromium	53		0.50	1	05/08/2015 19:00
Lead	7.7		0.50	1	05/08/2015 19:00
Nickel	60		0.50	1	05/08/2015 19:00
Zinc	49		5.0	1	05/08/2015 19:00
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Terbium	97		70-130		05/08/2015 19:00
<u>Analyst(s):</u>	BB0				

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-7, 11-11.5	1505259-022A	Soil	05/06/2015 08:01	ICP-MS1	104594
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Cadmium	ND		0.25	1	05/08/2015 19:06
Chromium	42		0.50	1	05/08/2015 19:06
Lead	5.6		0.50	1	05/08/2015 19:06
Nickel	47		0.50	1	05/08/2015 19:06
Zinc	37		5.0	1	05/08/2015 19:06
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Terbium	108		70-130		05/08/2015 19:06
<u>Analyst(s):</u>	BB0				

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-8, 3.5-4	1505259-023A	Soil	05/06/2015 09:14	ICP-MS1	104594
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Cadmium	0.33		0.25	1	05/08/2015 19:25
Chromium	36		0.50	1	05/08/2015 19:25
Lead	53		0.50	1	05/08/2015 19:25
Nickel	58		0.50	1	05/08/2015 19:25
Zinc	84		5.0	1	05/08/2015 19:25
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Terbium	106		70-130		05/08/2015 19:25
<u>Analyst(s):</u>	BB0				

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CDPH ELAP 1644 ♦ NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



## Analytical Report

**Client:** ERAS Environmental, Inc.      **WorkOrder:** 1505259  
**Project:** #14-003-01; 106-110 Hegenberger      **Extraction Method:** SW3050B  
**Date Received:** 5/7/15 17:06      **Analytical Method:** SW6020  
**Date Prepared:** 5/7/15      **Unit:** mg/Kg

### LUFT 5 Metals

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-8, 11.5-12	1505259-024A	Soil	05/06/2015 09:25	ICP-MS2	104594
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Cadmium	ND		0.25	1	05/11/2015 18:41
Chromium	67		0.50	1	05/11/2015 18:41
Lead	7.5		0.50	1	05/11/2015 18:41
Nickel	63		0.50	1	05/11/2015 18:41
Zinc	55		5.0	1	05/11/2015 18:41
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Terbium	113		70-130		05/11/2015 18:41
<u>Analyst(s):</u>	BB0				

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-9, 2.5-3	1505259-025A	Soil	05/06/2015 11:02	ICP-MS1	104594
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Cadmium	0.30		0.25	1	05/12/2015 15:01
Chromium	40		0.50	1	05/12/2015 15:01
Lead	19		0.50	1	05/12/2015 15:01
Nickel	31		0.50	1	05/12/2015 15:01
Zinc	110		5.0	1	05/12/2015 15:01
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Terbium	111		70-130		05/12/2015 15:01
<u>Analyst(s):</u>	DVH				

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-9, 11.5-12	1505259-026A	Soil	05/06/2015 11:37	ICP-MS1	104594
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Cadmium	ND		0.25	1	05/08/2015 19:44
Chromium	60		0.50	1	05/08/2015 19:44
Lead	7.4		0.50	1	05/08/2015 19:44
Nickel	56		0.50	1	05/08/2015 19:44
Zinc	49		5.0	1	05/08/2015 19:44
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Terbium	101		70-130		05/08/2015 19:44
<u>Analyst(s):</u>	BB0				



## Analytical Report

**Client:** ERAS Environmental, Inc.  
**Project:** #14-003-01; 106-110 Hegenberger  
**Date Received:** 5/7/15 17:06  
**Date Prepared:** 5/7/15

**WorkOrder:** 1505259  
**Extraction Method:** SW3550B/3630C  
**Analytical Method:** SW8015B  
**Unit:** mg/Kg

### Total Extractable Petroleum Hydrocarbons w/ SG Clean-Up

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-1, 1.5-2	1505259-006A	Soil	05/05/2015 09:16	GC2B	104563

<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	2.7	2.0	2	05/11/2015 19:25
TPH-Motor Oil (C18-C36)	20	10	2	05/11/2015 19:25

<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
C9	103	70-130		05/11/2015 19:25

Analyst(s): TK Analytical Comments: e7,e2

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-1, 11.5-12	1505259-007A	Soil	05/05/2015 09:24	GC2A	104563

<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	1.3	1.0	1	05/11/2015 14:23
TPH-Motor Oil (C18-C36)	ND	5.0	1	05/11/2015 14:23

<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
C9	112	70-130		05/11/2015 14:23

Analyst(s): TK Analytical Comments: e2

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-2, 3.5-4	1505259-008A	Soil	05/05/2015 10:33	GC2B	104563

<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	40	1.0	1	05/11/2015 14:23
TPH-Motor Oil (C18-C36)	78	5.0	1	05/11/2015 14:23

<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
C9	114	70-130		05/11/2015 14:23

Analyst(s): TK Analytical Comments: e7,e2,e4

(Cont.)



## Analytical Report

**Client:** ERAS Environmental, Inc.

**WorkOrder:** 1505259

**Project:** #14-003-01; 106-110 Hegenberger

**Extraction Method:** SW3550B/3630C

**Date Received:** 5/7/15 17:06

**Analytical Method:** SW8015B

**Date Prepared:** 5/7/15

**Unit:** mg/Kg

### Total Extractable Petroleum Hydrocarbons w/ SG Clean-Up

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-2, 6-6.5	1505259-009A	Soil	05/05/2015 10:34	GC9a	104563

<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	44	2.0	2	05/13/2015 05:28
TPH-Motor Oil (C18-C36)	13	10	2	05/13/2015 05:28

<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>	
C9	113	70-130	05/13/2015 05:28

Analyst(s): TK Analytical Comments: e4,e2,e7

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-2, 10-10.5	1505259-010A	Soil	05/05/2015 10:37	GC9a	104563

<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	ND	1.0	1	05/09/2015 14:34
TPH-Motor Oil (C18-C36)	ND	5.0	1	05/09/2015 14:34

<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>	
C9	112	70-130	05/09/2015 14:34

Analyst(s): TK

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-3, 2.5-4	1505259-011A	Soil	05/05/2015 11:23	GC9a	104563

<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	290	100	100	05/13/2015 00:42
TPH-Motor Oil (C18-C36)	800	500	100	05/13/2015 00:42

<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>	
C9	115	70-130	05/13/2015 00:42

Analyst(s): TK Analytical Comments: e7,e2,e4

(Cont.)



## Analytical Report

**Client:** ERAS Environmental, Inc.  
**Project:** #14-003-01; 106-110 Hegenberger  
**Date Received:** 5/7/15 17:06  
**Date Prepared:** 5/7/15

**WorkOrder:** 1505259  
**Extraction Method:** SW3550B/3630C  
**Analytical Method:** SW8015B  
**Unit:** mg/Kg

### Total Extractable Petroleum Hydrocarbons w/ SG Clean-Up

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-3, 7.5-8	1505259-012A	Soil	05/05/2015 11:26	GC2B	104563

<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	8.3	1.0	1	05/12/2015 05:25
TPH-Motor Oil (C18-C36)	ND	5.0	1	05/12/2015 05:25

<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>	
C9	117	70-130	05/12/2015 05:25

Analyst(s): TK      Analytical Comments: e4,e2

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-3, 10.5-11	1505259-013A	Soil	05/05/2015 11:28	GC2B	104563

<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	ND	1.0	1	05/12/2015 00:25
TPH-Motor Oil (C18-C36)	ND	5.0	1	05/12/2015 00:25

<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>	
C9	116	70-130	05/12/2015 00:25

Analyst(s): TK

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-4, 5.5-6	1505259-014A	Soil	05/05/2015 11:52	GC9a	104563

<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	2.5	1.0	1	05/09/2015 20:32
TPH-Motor Oil (C18-C36)	ND	5.0	1	05/09/2015 20:32

<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>	
C9	113	70-130	05/09/2015 20:32

Analyst(s): TK      Analytical Comments: e2,e4

(Cont.)



## Analytical Report

**Client:** ERAS Environmental, Inc.      **WorkOrder:** 1505259  
**Project:** #14-003-01; 106-110 Hegenberger      **Extraction Method:** SW3550B/3630C  
**Date Received:** 5/7/15 17:06      **Analytical Method:** SW8015B  
**Date Prepared:** 5/7/15      **Unit:** mg/Kg

### Total Extractable Petroleum Hydrocarbons w/ SG Clean-Up

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-4, 11.5-12	1505259-015A	Soil	05/05/2015 13:01	GC9a	104563

<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	1.7	1.0	1	05/09/2015 18:09
TPH-Motor Oil (C18-C36)	5.7	5.0	1	05/09/2015 18:09

<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>	
C9	114	70-130	05/09/2015 18:09

Analyst(s): TK      Analytical Comments: e7,e2

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-5, 3-3.5	1505259-016A	Soil	05/05/2015 13:53	GC9a	104563

<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	12	1.0	1	05/09/2015 15:46
TPH-Motor Oil (C18-C36)	47	5.0	1	05/09/2015 15:46

<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>	
C9	113	70-130	05/09/2015 15:46

Analyst(s): TK      Analytical Comments: e7,e2

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-5, 10.5-11	1505259-017A	Soil	05/05/2015 13:59	GC9a	104563

<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	ND	1.0	1	05/09/2015 13:22
TPH-Motor Oil (C18-C36)	ND	5.0	1	05/09/2015 13:22

<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>	
C9	112	70-130	05/09/2015 13:22

Analyst(s): TK

(Cont.)



## Analytical Report

**Client:** ERAS Environmental, Inc.

**WorkOrder:** 1505259

**Project:** #14-003-01; 106-110 Hegenberger

**Extraction Method:** SW3550B/3630C

**Date Received:** 5/7/15 17:06

**Analytical Method:** SW8015B

**Date Prepared:** 5/7/15

**Unit:** mg/Kg

### Total Extractable Petroleum Hydrocarbons w/ SG Clean-Up

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-6, 3.5-4	1505259-018A	Soil	05/05/2015 14:30	GC9a	104563

<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	2.5	2.0	2	05/13/2015 07:50
TPH-Motor Oil (C18-C36)	11	10	2	05/13/2015 07:50

<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>	
C9	113	70-130	05/13/2015 07:50

Analyst(s): TK Analytical Comments: e7,e2

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-6, 7.5-8	1505259-019A	Soil	05/05/2015 14:35	GC11B	104563

<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	ND	1.0	1	05/14/2015 10:14
TPH-Motor Oil (C18-C36)	ND	5.0	1	05/14/2015 10:14

<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>	
C9	107	70-130	05/14/2015 10:14

Analyst(s): TK

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-7, 3.5-4	1505259-020A	Soil	05/06/2015 07:58	GC6B	104593

<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	5.5	1.0	1	05/08/2015 14:01
TPH-Motor Oil (C18-C36)	21	5.0	1	05/08/2015 14:01

<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>	
C9	118	70-130	05/08/2015 14:01

Analyst(s): TK Analytical Comments: e7,e4

(Cont.)



## Analytical Report

**Client:** ERAS Environmental, Inc.  
**Project:** #14-003-01; 106-110 Hegenberger  
**Date Received:** 5/7/15 17:06  
**Date Prepared:** 5/7/15

**WorkOrder:** 1505259  
**Extraction Method:** SW3550B/3630C  
**Analytical Method:** SW8015B  
**Unit:** mg/Kg

### Total Extractable Petroleum Hydrocarbons w/ SG Clean-Up

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-7, 6.5-7	1505259-021A	Soil	05/06/2015 07:59	GC9a	104593

<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	7.5	1.0	1	05/11/2015 21:57
TPH-Motor Oil (C18-C36)	ND	5.0	1	05/11/2015 21:57

<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>	
C9	114	70-130	05/11/2015 21:57

Analyst(s): TK Analytical Comments: e4,e2

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-7, 11-11.5	1505259-022A	Soil	05/06/2015 08:01	GC6A	104593

<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	1.9	1.0	1	05/11/2015 21:12
TPH-Motor Oil (C18-C36)	ND	5.0	1	05/11/2015 21:12

<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>	
C9	95	70-130	05/11/2015 21:12

Analyst(s): TK Analytical Comments: e3

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-8, 3.5-4	1505259-023A	Soil	05/06/2015 09:14	GC6A	104593

<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	110	100	100	05/09/2015 23:03
TPH-Motor Oil (C18-C36)	1500	500	100	05/09/2015 23:03

<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>	
C9	89	70-130	05/09/2015 23:03

Analyst(s): TK Analytical Comments: e7,e2

(Cont.)



## Analytical Report

**Client:** ERAS Environmental, Inc.      **WorkOrder:** 1505259  
**Project:** #14-003-01; 106-110 Hegenberger      **Extraction Method:** SW3550B/3630C  
**Date Received:** 5/7/15 17:06      **Analytical Method:** SW8015B  
**Date Prepared:** 5/7/15      **Unit:** mg/Kg

### Total Extractable Petroleum Hydrocarbons w/ SG Clean-Up

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-8, 11.5-12	1505259-024A	Soil	05/06/2015 09:25	GC9a	104593

<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	ND	1.0	1	05/12/2015 02:43
TPH-Motor Oil (C18-C36)	ND	5.0	1	05/12/2015 02:43

<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>	
C9	116	70-130	05/12/2015 02:43

Analyst(s): TK

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-9, 2.5-3	1505259-025A	Soil	05/06/2015 11:02	GC9a	104593

<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	7.7	5.0	5	05/13/2015 03:05
TPH-Motor Oil (C18-C36)	88	25	5	05/13/2015 03:05

<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>	
C9	115	70-130	05/13/2015 03:05

Analyst(s): TK      Analytical Comments: e7,e2

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-9, 11.5-12	1505259-026A	Soil	05/06/2015 11:37	GC9a	104593

<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	ND	1.0	1	05/08/2015 19:35
TPH-Motor Oil (C18-C36)	ND	5.0	1	05/08/2015 19:35

<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>	
C9	112	70-130	05/08/2015 19:35

Analyst(s): TK



## Quality Control Report

**Client:** ERAS Environmental, Inc.      **WorkOrder:** 1505259  
**Date Prepared:** 5/12/15      **BatchID:** 104739  
**Date Analyzed:** 5/12/15      **Extraction Method:** SW5030B  
**Instrument:** GC16      **Analytical Method:** SW8260B  
**Matrix:** Water      **Unit:** µg/L  
**Project:** #14-003-01; 106-110 Hegenberger      **Sample ID:** MB/LCS-104739

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### QC Summary Report for TPH(g)

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Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
VOC (C6-C12)	ND	490	50	644	-	76	75-105
<b>Surrogate Recovery</b>							
Dibromofluoromethane	24.4	24.6		25	97	98	70-130

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## Quality Control Report

**Client:** ERAS Environmental, Inc.  
**Date Prepared:** 5/7/15  
**Date Analyzed:** 5/7/15  
**Instrument:** GC16  
**Matrix:** Soil  
**Project:** #14-003-01; 106-110 Hegenberger

**WorkOrder:** 1505259  
**BatchID:** 104588  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** mg/Kg  
**Sample ID:** MB/LCS-104588  
1505255-001AMS/MSD

### QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
VOC (C6-C12)	ND	2.91	0.25	3.2	-	91	74-142
Acetone	ND	-	0.10	-	-	-	-
tert-Amyl methyl ether (TAME)	ND	0.0406	0.0050	0.050	-	81	53-116
Benzene	ND	0.0454	0.0050	0.050	-	91	63-137
Bromobenzene	ND	-	0.0050	-	-	-	-
Bromochloromethane	ND	-	0.0050	-	-	-	-
Bromodichloromethane	ND	-	0.0050	-	-	-	-
Bromoform	ND	-	0.0050	-	-	-	-
Bromomethane	ND	-	0.0050	-	-	-	-
2-Butanone (MEK)	ND	-	0.020	-	-	-	-
t-Butyl alcohol (TBA)	ND	0.161	0.050	0.20	-	81	41-135
n-Butyl benzene	ND	-	0.0050	-	-	-	-
sec-Butyl benzene	ND	-	0.0050	-	-	-	-
tert-Butyl benzene	ND	-	0.0050	-	-	-	-
Carbon Disulfide	ND	-	0.0050	-	-	-	-
Carbon Tetrachloride	ND	-	0.0050	-	-	-	-
Chlorobenzene	ND	0.0488	0.0050	0.050	-	98	77-121
Chloroethane	ND	-	0.0050	-	-	-	-
Chloroform	ND	-	0.0050	-	-	-	-
Chloromethane	ND	-	0.0050	-	-	-	-
2-Chlorotoluene	ND	-	0.0050	-	-	-	-
4-Chlorotoluene	ND	-	0.0050	-	-	-	-
Dibromochloromethane	ND	-	0.0050	-	-	-	-
1,2-Dibromo-3-chloropropane	ND	-	0.0040	-	-	-	-
1,2-Dibromoethane (EDB)	ND	0.0433	0.0040	0.050	-	87	67-119
Dibromomethane	ND	-	0.0050	-	-	-	-
1,2-Dichlorobenzene	ND	-	0.0050	-	-	-	-
1,3-Dichlorobenzene	ND	-	0.0050	-	-	-	-
1,4-Dichlorobenzene	ND	-	0.0050	-	-	-	-
Dichlorodifluoromethane	ND	-	0.0050	-	-	-	-
1,1-Dichloroethane	ND	-	0.0050	-	-	-	-
1,2-Dichloroethane (1,2-DCA)	ND	0.0449	0.0040	0.050	-	90	58-135
1,1-Dichloroethene	ND	0.0434	0.0050	0.050	-	87	42-145
cis-1,2-Dichloroethene	ND	-	0.0050	-	-	-	-
trans-1,2-Dichloroethene	ND	-	0.0050	-	-	-	-
1,2-Dichloropropane	ND	-	0.0050	-	-	-	-
1,3-Dichloropropane	ND	-	0.0050	-	-	-	-
2,2-Dichloropropane	ND	-	0.0050	-	-	-	-
1,1-Dichloropropene	ND	-	0.0050	-	-	-	-
cis-1,3-Dichloropropene	ND	-	0.0050	-	-	-	-

(Cont.)



## Quality Control Report

**Client:** ERAS Environmental, Inc.  
**Date Prepared:** 5/7/15  
**Date Analyzed:** 5/7/15  
**Instrument:** GC16  
**Matrix:** Soil  
**Project:** #14-003-01; 106-110 Hegenberger

**WorkOrder:** 1505259  
**BatchID:** 104588  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** mg/Kg  
**Sample ID:** MB/LCS-104588  
1505255-001AMS/MSD

### QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
trans-1,3-Dichloropropene	ND	-	0.0050	-	-	-	-
Diisopropyl ether (DIPE)	ND	0.0438	0.0050	0.050	-	88	52-129
Ethylbenzene	ND	-	0.0050	-	-	-	-
Ethyl tert-butyl ether (ETBE)	ND	0.0431	0.0050	0.050	-	86	53-125
Freon 113	ND	-	0.0050	-	-	-	-
Hexachlorobutadiene	ND	-	0.0050	-	-	-	-
Hexachloroethane	ND	-	0.0050	-	-	-	-
2-Hexanone	ND	-	0.0050	-	-	-	-
Isopropylbenzene	ND	-	0.0050	-	-	-	-
4-Isopropyl toluene	ND	-	0.0050	-	-	-	-
Methyl-t-butyl ether (MTBE)	ND	0.0412	0.0050	0.050	-	82	58-122
Methylene chloride	ND	-	0.0050	-	-	-	-
4-Methyl-2-pentanone (MIBK)	ND	-	0.0050	-	-	-	-
Naphthalene	ND	-	0.0050	-	-	-	-
n-Propyl benzene	ND	-	0.0050	-	-	-	-
Styrene	ND	-	0.0050	-	-	-	-
1,1,1,2-Tetrachloroethane	ND	-	0.0050	-	-	-	-
1,1,2,2-Tetrachloroethane	ND	-	0.0050	-	-	-	-
Tetrachloroethene	ND	-	0.0050	-	-	-	-
Toluene	ND	0.0518	0.0050	0.050	-	104	76-130
1,2,3-Trichlorobenzene	ND	-	0.0050	-	-	-	-
1,2,4-Trichlorobenzene	ND	-	0.0050	-	-	-	-
1,1,1-Trichloroethane	ND	-	0.0050	-	-	-	-
1,1,2-Trichloroethane	ND	-	0.0050	-	-	-	-
Trichloroethene	ND	0.0467	0.0050	0.050	-	93	72-132
Trichlorofluoromethane	ND	-	0.0050	-	-	-	-
1,2,3-Trichloropropane	ND	-	0.0050	-	-	-	-
1,2,4-Trimethylbenzene	ND	-	0.0050	-	-	-	-
1,3,5-Trimethylbenzene	ND	-	0.0050	-	-	-	-
Vinyl Chloride	ND	-	0.0050	-	-	-	-
Xylenes, Total	ND	-	0.0050	-	-	-	-

#### Surrogate Recovery

Dibromofluoromethane	0.103	0.104	0.12	82	83	72-126
Toluene-d8	0.119	0.118	0.12	95	94	81-115
4-BFB	0.0126	0.0118	0.012	101	95	55-127

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## Quality Control Report

<b>Client:</b>	ERAS Environmental, Inc.	<b>WorkOrder:</b>	1505259
<b>Date Prepared:</b>	5/7/15	<b>BatchID:</b>	104588
<b>Date Analyzed:</b>	5/7/15	<b>Extraction Method:</b>	SW5030B
<b>Instrument:</b>	GC16	<b>Analytical Method:</b>	SW8260B
<b>Matrix:</b>	Soil	<b>Unit:</b>	mg/Kg
<b>Project:</b>	#14-003-01; 106-110 Hegenberger	<b>Sample ID:</b>	MB/LCS-104588 1505255-001AMS/MSD

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### QC Summary Report for SW8260B

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
tert-Amyl methyl ether (TAME)	0.0343	0.0324	0.050	ND	69,F1	65,F1	70-130	5.91	20
Benzene	0.0401	0.0382	0.050	ND	80	76	70-130	5.01	20
t-Butyl alcohol (TBA)	0.162	0.156	0.20	ND	81	78	70-130	3.45	20
Chlorobenzene	0.0389	0.0368	0.050	ND	78	74	70-130	5.36	20
1,2-Dibromoethane (EDB)	0.0343	0.0322	0.050	ND	69,F1	64,F1	70-130	6.25	20
1,2-Dichloroethane (1,2-DCA)	0.0376	0.0359	0.050	ND	75	72	70-130	4.47	20
1,1-Dichloroethene	0.0358	0.0342	0.050	ND	72	68,F1	70-130	4.57	20
Diisopropyl ether (DIPE)	0.0380	0.0364	0.050	ND	76	73	70-130	4.29	20
Ethyl tert-butyl ether (ETBE)	0.0373	0.0357	0.050	ND	75	71	70-130	4.17	20
Methyl-t-butyl ether (MTBE)	0.0370	0.0353	0.050	ND	74	71	70-130	4.76	20
Toluene	0.0401	0.0380	0.050	ND	80	76	70-130	5.56	20
Trichloroethylene	0.0385	0.0362	0.050	ND	77	72	70-130	6.19	20
<b>Surrogate Recovery</b>									
Dibromofluoromethane	0.114	0.115	0.12		91	92	70-130	1.24	20
Toluene-d8	0.120	0.119	0.12		96	95	70-130	0.388	20
4-BFB	0.0120	0.0116	0.012		96	93	70-130	3.16	20

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CDPH ELAP 1644 ♦ NELAP 4033ORELAP

*SJF* QA/QC Officer



## Quality Control Report

**Client:** ERAS Environmental, Inc.  
**Date Prepared:** 5/7/15  
**Date Analyzed:** 5/8/15  
**Instrument:** GC16  
**Matrix:** Soil  
**Project:** #14-003-01; 106-110 Hegenberger

**WorkOrder:** 1505259  
**BatchID:** 104595  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** mg/Kg  
**Sample ID:** MB/LCS-104595  
1505259-024AMS/MSD

### QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
VOC (C6-C12)	ND	2.84	0.25	3.2	-	89	74-142
Acetone	ND	-	0.10	-	-	-	-
tert-Amyl methyl ether (TAME)	ND	0.0393	0.0050	0.050	-	79	53-116
Benzene	ND	0.0444	0.0050	0.050	-	89	63-137
Bromobenzene	ND	-	0.0050	-	-	-	-
Bromochloromethane	ND	-	0.0050	-	-	-	-
Bromodichloromethane	ND	-	0.0050	-	-	-	-
Bromoform	ND	-	0.0050	-	-	-	-
Bromomethane	ND	-	0.0050	-	-	-	-
2-Butanone (MEK)	ND	-	0.020	-	-	-	-
t-Butyl alcohol (TBA)	ND	0.162	0.050	0.20	-	81	41-135
n-Butyl benzene	ND	-	0.0050	-	-	-	-
sec-Butyl benzene	ND	-	0.0050	-	-	-	-
tert-Butyl benzene	ND	-	0.0050	-	-	-	-
Carbon Disulfide	ND	-	0.0050	-	-	-	-
Carbon Tetrachloride	ND	-	0.0050	-	-	-	-
Chlorobenzene	ND	0.0468	0.0050	0.050	-	94	77-121
Chloroethane	ND	-	0.0050	-	-	-	-
Chloroform	ND	-	0.0050	-	-	-	-
Chloromethane	ND	-	0.0050	-	-	-	-
2-Chlorotoluene	ND	-	0.0050	-	-	-	-
4-Chlorotoluene	ND	-	0.0050	-	-	-	-
Dibromochloromethane	ND	-	0.0050	-	-	-	-
1,2-Dibromo-3-chloropropane	ND	-	0.0040	-	-	-	-
1,2-Dibromoethane (EDB)	ND	0.0426	0.0040	0.050	-	85	67-119
Dibromomethane	ND	-	0.0050	-	-	-	-
1,2-Dichlorobenzene	ND	-	0.0050	-	-	-	-
1,3-Dichlorobenzene	ND	-	0.0050	-	-	-	-
1,4-Dichlorobenzene	ND	-	0.0050	-	-	-	-
Dichlorodifluoromethane	ND	-	0.0050	-	-	-	-
1,1-Dichloroethane	ND	-	0.0050	-	-	-	-
1,2-Dichloroethane (1,2-DCA)	ND	0.0434	0.0040	0.050	-	87	58-135
1,1-Dichloroethene	ND	0.0426	0.0050	0.050	-	85	42-145
cis-1,2-Dichloroethene	ND	-	0.0050	-	-	-	-
trans-1,2-Dichloroethene	ND	-	0.0050	-	-	-	-
1,2-Dichloropropane	ND	-	0.0050	-	-	-	-
1,3-Dichloropropane	ND	-	0.0050	-	-	-	-
2,2-Dichloropropane	ND	-	0.0050	-	-	-	-
1,1-Dichloropropene	ND	-	0.0050	-	-	-	-
cis-1,3-Dichloropropene	ND	-	0.0050	-	-	-	-

(Cont.)



## Quality Control Report

**Client:** ERAS Environmental, Inc.  
**Date Prepared:** 5/7/15  
**Date Analyzed:** 5/8/15  
**Instrument:** GC16  
**Matrix:** Soil  
**Project:** #14-003-01; 106-110 Hegenberger

**WorkOrder:** 1505259  
**BatchID:** 104595  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** mg/Kg  
**Sample ID:** MB/LCS-104595  
1505259-024AMS/MSD

### QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
trans-1,3-Dichloropropene	ND	-	0.0050	-	-	-	-
Diisopropyl ether (DIPE)	ND	0.0424	0.0050	0.050	-	85	52-129
Ethylbenzene	ND	-	0.0050	-	-	-	-
Ethyl tert-butyl ether (ETBE)	ND	0.0423	0.0050	0.050	-	85	53-125
Freon 113	ND	-	0.0050	-	-	-	-
Hexachlorobutadiene	ND	-	0.0050	-	-	-	-
Hexachloroethane	ND	-	0.0050	-	-	-	-
2-Hexanone	ND	-	0.0050	-	-	-	-
Isopropylbenzene	ND	-	0.0050	-	-	-	-
4-Isopropyl toluene	ND	-	0.0050	-	-	-	-
Methyl-t-butyl ether (MTBE)	ND	0.0402	0.0050	0.050	-	80	58-122
Methylene chloride	ND	-	0.0050	-	-	-	-
4-Methyl-2-pentanone (MIBK)	ND	-	0.0050	-	-	-	-
Naphthalene	ND	-	0.0050	-	-	-	-
n-Propyl benzene	ND	-	0.0050	-	-	-	-
Styrene	ND	-	0.0050	-	-	-	-
1,1,1,2-Tetrachloroethane	ND	-	0.0050	-	-	-	-
1,1,2,2-Tetrachloroethane	ND	-	0.0050	-	-	-	-
Tetrachloroethene	ND	-	0.0050	-	-	-	-
Toluene	ND	0.0506	0.0050	0.050	-	101	76-130
1,2,3-Trichlorobenzene	ND	-	0.0050	-	-	-	-
1,2,4-Trichlorobenzene	ND	-	0.0050	-	-	-	-
1,1,1-Trichloroethane	ND	-	0.0050	-	-	-	-
1,1,2-Trichloroethane	ND	-	0.0050	-	-	-	-
Trichloroethene	ND	0.0468	0.0050	0.050	-	94	72-132
Trichlorofluoromethane	ND	-	0.0050	-	-	-	-
1,2,3-Trichloropropane	ND	-	0.0050	-	-	-	-
1,2,4-Trimethylbenzene	ND	-	0.0050	-	-	-	-
1,3,5-Trimethylbenzene	ND	-	0.0050	-	-	-	-
Vinyl Chloride	ND	-	0.0050	-	-	-	-
Xylenes, Total	ND	-	0.0050	-	-	-	-

#### Surrogate Recovery

Dibromofluoromethane	0.102	0.104	0.12	82	83	70-130
Toluene-d8	0.120	0.118	0.12	96	94	70-130
4-BFB	0.0122	0.0119	0.012	97	95	70-130

(Cont.)

CDPH ELAP 1644 ♦ NELAP 4033ORELAP

 QA/QC Officer



## Quality Control Report

<b>Client:</b>	ERAS Environmental, Inc.	<b>WorkOrder:</b>	1505259
<b>Date Prepared:</b>	5/7/15	<b>BatchID:</b>	104595
<b>Date Analyzed:</b>	5/8/15	<b>Extraction Method:</b>	SW5030B
<b>Instrument:</b>	GC16	<b>Analytical Method:</b>	SW8260B
<b>Matrix:</b>	Soil	<b>Unit:</b>	mg/Kg
<b>Project:</b>	#14-003-01; 106-110 Hegenberger	<b>Sample ID:</b>	MB/LCS-104595 1505259-024AMS/MSD

### QC Summary Report for SW8260B

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
tert-Amyl methyl ether (TAME)	0.0332	0.0324	0.050	ND	66,F1	65,F1	70-130	2.27	20
Benzene	0.0429	0.0413	0.050	ND	86	83	70-130	3.92	20
t-Butyl alcohol (TBA)	0.158	0.154	0.20	ND	79	77	70-130	2.07	20
Chlorobenzene	0.0409	0.0393	0.050	ND	82	79	70-130	3.99	20
1,2-Dibromoethane (EDB)	0.0338	0.0325	0.050	ND	68,F1	65,F1	70-130	3.85	20
1,2-Dichloroethane (1,2-DCA)	0.0383	0.0377	0.050	ND	77	75	70-130	1.62	20
1,1-Dichloroethene	0.0387	0.0376	0.050	ND	77	75	70-130	2.89	20
Diisopropyl ether (DIPE)	0.0407	0.0394	0.050	ND	81	79	70-130	3.10	20
Ethyl tert-butyl ether (ETBE)	0.0392	0.0380	0.050	ND	78	76	70-130	3.16	20
Methyl-t-butyl ether (MTBE)	0.0375	0.0364	0.050	ND	75	73	70-130	3.12	20
Toluene	0.0434	0.0407	0.050	ND	87	81	70-130	6.29	20
Trichloroethylene	0.0600	0.0572	0.050	ND	120	115	70-130	4.75	20
<b>Surrogate Recovery</b>									
Dibromofluoromethane	0.111	0.114	0.12		89	91	70-130	2.79	20
Toluene-d8	0.120	0.118	0.12		96	94	70-130	2.08	20
4-BFB	0.0107	0.0113	0.012		86	90	70-130	4.92	20



## Quality Control Report

**Client:** ERAS Environmental, Inc.

**WorkOrder:** 1505259

**Date Prepared:** 5/12/15

**BatchID:** 104739

**Date Analyzed:** 5/12/15

**Extraction Method:** SW5030B

**Instrument:** GC16

**Analytical Method:** SW8260B

**Matrix:** Water

**Unit:**  $\mu\text{g/L}$

**Project:** #14-003-01; 106-110 Hegenberger

**Sample ID:** MB/LCS-104739  
1505259-003CMS/MSD

### QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Acetone	ND	-	10	-	-	-	-
tert-Amyl methyl ether (TAME)	ND	8.72	0.50	10	-	87	54-140
Benzene	ND	8.76	0.50	10	-	88	47-158
Bromobenzene	ND	-	0.50	-	-	-	-
Bromochloromethane	ND	-	0.50	-	-	-	-
Bromodichloromethane	ND	-	0.50	-	-	-	-
Bromoform	ND	-	0.50	-	-	-	-
Bromomethane	ND	-	0.50	-	-	-	-
2-Butanone (MEK)	ND	-	2.0	-	-	-	-
t-Butyl alcohol (TBA)	ND	27.5	2.0	40	-	69	42-140
n-Butyl benzene	ND	-	0.50	-	-	-	-
sec-Butyl benzene	ND	-	0.50	-	-	-	-
tert-Butyl benzene	ND	-	0.50	-	-	-	-
Carbon Disulfide	ND	-	0.50	-	-	-	-
Carbon Tetrachloride	ND	-	0.50	-	-	-	-
Chlorobenzene	ND	9.48	0.50	10	-	95	43-157
Chloroethane	ND	-	0.50	-	-	-	-
Chloroform	ND	-	0.50	-	-	-	-
Chloromethane	ND	-	0.50	-	-	-	-
2-Chlorotoluene	ND	-	0.50	-	-	-	-
4-Chlorotoluene	ND	-	0.50	-	-	-	-
Dibromochloromethane	ND	-	0.50	-	-	-	-
1,2-Dibromo-3-chloropropane	ND	-	0.20	-	-	-	-
1,2-Dibromoethane (EDB)	ND	8.59	0.50	10	-	86	44-155
Dibromomethane	ND	-	0.50	-	-	-	-
1,2-Dichlorobenzene	ND	-	0.50	-	-	-	-
1,3-Dichlorobenzene	ND	-	0.50	-	-	-	-
1,4-Dichlorobenzene	ND	-	0.50	-	-	-	-
Dichlorodifluoromethane	ND	-	0.50	-	-	-	-
1,1-Dichloroethane	ND	-	0.50	-	-	-	-
1,2-Dichloroethane (1,2-DCA)	ND	8.44	0.50	10	-	84	66-125
1,1-Dichloroethene	ND	8.49	0.50	10	-	85	47-149
cis-1,2-Dichloroethene	ND	-	0.50	-	-	-	-
trans-1,2-Dichloroethene	ND	-	0.50	-	-	-	-
1,2-Dichloropropane	ND	-	0.50	-	-	-	-
1,3-Dichloropropane	ND	-	0.50	-	-	-	-
2,2-Dichloropropane	ND	-	0.50	-	-	-	-
1,1-Dichloropropene	ND	-	0.50	-	-	-	-
cis-1,3-Dichloropropene	ND	-	0.50	-	-	-	-
trans-1,3-Dichloropropene	ND	-	0.50	-	-	-	-

(Cont.)



## Quality Control Report

<b>Client:</b>	ERAS Environmental, Inc.	<b>WorkOrder:</b>	1505259
<b>Date Prepared:</b>	5/12/15	<b>BatchID:</b>	104739
<b>Date Analyzed:</b>	5/12/15	<b>Extraction Method:</b>	SW5030B
<b>Instrument:</b>	GC16	<b>Analytical Method:</b>	SW8260B
<b>Matrix:</b>	Water	<b>Unit:</b>	µg/L
<b>Project:</b>	#14-003-01; 106-110 Hegenberger	<b>Sample ID:</b>	MB/LCS-104739 1505259-003CMS/MSD

### QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Diisopropyl ether (DIPE)	ND	8.94	0.50	10	-	89	57-136
Ethylbenzene	ND	-	0.50	-	-	-	-
Ethyl tert-butyl ether (ETBE)	ND	8.92	0.50	10	-	89	55-137
Freon 113	ND	-	0.50	-	-	-	-
Hexachlorobutadiene	ND	-	0.50	-	-	-	-
Hexachloroethane	ND	-	0.50	-	-	-	-
2-Hexanone	ND	-	0.50	-	-	-	-
Isopropylbenzene	ND	-	0.50	-	-	-	-
4-Isopropyl toluene	ND	-	0.50	-	-	-	-
Methyl-t-butyl ether (MTBE)	ND	8.20	0.50	10	-	82	53-139
Methylene chloride	ND	-	0.50	-	-	-	-
4-Methyl-2-pentanone (MIBK)	ND	-	0.50	-	-	-	-
Naphthalene	ND	-	0.50	-	-	-	-
n-Propyl benzene	ND	-	0.50	-	-	-	-
Styrene	ND	-	0.50	-	-	-	-
1,1,1,2-Tetrachloroethane	ND	-	0.50	-	-	-	-
1,1,2,2-Tetrachloroethane	ND	-	0.50	-	-	-	-
Tetrachloroethene	ND	-	0.50	-	-	-	-
Toluene	ND	9.39	0.50	10	-	94	52-137
1,2,3-Trichlorobenzene	ND	-	0.50	-	-	-	-
1,2,4-Trichlorobenzene	ND	-	0.50	-	-	-	-
1,1,1-Trichloroethane	ND	-	0.50	-	-	-	-
1,1,2-Trichloroethane	ND	-	0.50	-	-	-	-
Trichloroethene	ND	8.90	0.50	10	-	89	43-157
Trichlorofluoromethane	ND	-	0.50	-	-	-	-
1,2,3-Trichloropropane	ND	-	0.50	-	-	-	-
1,2,4-Trimethylbenzene	ND	-	0.50	-	-	-	-
1,3,5-Trimethylbenzene	ND	-	0.50	-	-	-	-
Vinyl Chloride	ND	-	0.50	-	-	-	-
Xylenes, Total	ND	-	0.50	-	-	-	-

#### Surrogate Recovery

Dibromofluoromethane	21.5	21.5	25	86	86	65-135
Toluene-d8	21.5	21.7	25	86	87	64-127
4-BFB	2.12	2.15	2.5	85	86	59-139

(Cont.)



## Quality Control Report

**Client:** ERAS Environmental, Inc.      **WorkOrder:** 1505259  
**Date Prepared:** 5/12/15      **BatchID:** 104739  
**Date Analyzed:** 5/12/15      **Extraction Method:** SW5030B  
**Instrument:** GC16      **Analytical Method:** SW8260B  
**Matrix:** Water      **Unit:** µg/L  
**Project:** #14-003-01; 106-110 Hegenberger      **Sample ID:** MB/LCS-104739  
1505259-003CMS/MSD

### QC Summary Report for SW8260B

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
tert-Amyl methyl ether (TAME)	10.6	10.2	10	ND	106	102	69-139	4.32	20
Benzene	10.3	9.67	10	ND	103	96	69-141	6.45	20
t-Butyl alcohol (TBA)	35.4	34.4	40	2.5	82	80	41-152	3.10	20
Chlorobenzene	10.7	10.0	10	ND	107	100	77-120	7.08	20
1,2-Dibromoethane (EDB)	10.2	9.85	10	ND	102	98	76-135	3.40	20
1,2-Dichloroethane (1,2-DCA)	10.2	9.73	10	ND	102	97	73-139	4.20	20
1,1-Dichloroethene	9.86	9.10	10	ND	99	91	59-140	8.11	20
Diisopropyl ether (DIPE)	10.7	10.0	10	ND	107	101	72-140	6.14	20
Ethyl tert-butyl ether (ETBE)	10.7	10.2	10	ND	107	103	71-140	4.36	20
Methyl-t-butyl ether (MTBE)	9.96	9.69	10	ND	100	97	73-139	2.75	20
Toluene	10.6	9.88	10	ND	106	99	71-128	7.04	20
Trichloroethylene	10.6	9.77	10	ND	106	98	64-132	8.48	20
<b>Surrogate Recovery</b>									
Dibromofluoromethane	21.8	22.0	25		87	88	73-131	0.792	20
Toluene-d8	21.2	21.1	25		85	84	72-117	0.632	20
4-BFB	2.18	2.10	2.5		87	84	74-116	3.84	20



## Quality Control Report

<b>Client:</b>	ERAS Environmental, Inc.	<b>WorkOrder:</b>	1505259
<b>Date Prepared:</b>	5/6/15	<b>BatchID:</b>	104541
<b>Date Analyzed:</b>	5/8/15	<b>Extraction Method:</b>	SW3050B
<b>Instrument:</b>	ICP-MS2	<b>Analytical Method:</b>	SW6020
<b>Matrix:</b>	Soil	<b>Unit:</b>	mg/Kg
<b>Project:</b>	#14-003-01; 106-110 Hegenberger	<b>Sample ID:</b>	MB/LCS-104541 1505215-006AMS/MSD

### QC Summary Report for Metals

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Cadmium	ND	50.6	0.25	50	-	101	75-125
Chromium	ND	53.0	0.50	50	-	106	75-125
Lead	ND	52.1	0.50	50	-	104	75-125
Nickel	ND	54.1	0.50	50	-	108	75-125
Zinc	ND	539	5.0	500	-	108	75-125

**Surrogate Recovery**

Terbium	533	515	500	107	103	70-130
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Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Cadmium	47.8	48.0	50	0.88	94	94	75-125	0	20
Chromium	85.0	96.4	50	49	72,F1	95	75-125	12.7	20
Lead	NR	NR	50	113.0	NR	NR	75-125	NR	20
Nickel	NR	NR	50	71	NR	NR	75-125	NR	20
Zinc	NR	NR	500	550	NR	NR	75-125	NR	20

**Surrogate Recovery**

Terbium	497	503	500	99	101	70-130	1.30	20
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(Cont.)



## Quality Control Report

<b>Client:</b>	ERAS Environmental, Inc.	<b>WorkOrder:</b>	1505259
<b>Date Prepared:</b>	5/7/15	<b>BatchID:</b>	104564
<b>Date Analyzed:</b>	5/8/15	<b>Extraction Method:</b>	E200.8
<b>Instrument:</b>	ICP-MS2	<b>Analytical Method:</b>	E200.8
<b>Matrix:</b>	Water	<b>Unit:</b>	µg/L
<b>Project:</b>	#14-003-01; 106-110 Hegenberger	<b>Sample ID:</b>	MB/LCS-104564 1505230-007AMS/MSD

### QC Summary Report for Metals

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Cadmium	ND	48.6	0.25	50	-	97	85-115
Chromium	ND	50.2	0.50	50	-	100	85-115
Lead	ND	49.9	0.50	50	-	100	85-115
Nickel	ND	50.9	0.50	50	-	102	85-115
Zinc	ND	516	15	500	-	102	85-115

#### Surrogate Recovery

Terbium	748	710	750	100	95	70-130
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Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Cadmium	47.9	46.1	50	ND	96	92	70-130	3.89	20
Chromium	50.1	50.5	50	ND	100	101	70-130	0.835	20
Lead	49.7	47.0	50	ND	99	94	70-130	5.65	20
Nickel	48.6	49.4	50	ND	97	99	70-130	1.45	20
Zinc	497	504	500	ND	97	98	70-130	1.44	20

#### Surrogate Recovery

Terbium	749	729	750	100	97	70-130	2.64	20
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(Cont.)



## Quality Control Report

<b>Client:</b>	ERAS Environmental, Inc.	<b>WorkOrder:</b>	1505259
<b>Date Prepared:</b>	5/7/15	<b>BatchID:</b>	104594
<b>Date Analyzed:</b>	5/8/15	<b>Extraction Method:</b>	SW3050B
<b>Instrument:</b>	ICP-MS1	<b>Analytical Method:</b>	SW6020
<b>Matrix:</b>	Soil	<b>Unit:</b>	mg/Kg
<b>Project:</b>	#14-003-01; 106-110 Hegenberger	<b>Sample ID:</b>	MB/LCS-104594 1505259-015AMS/MSD

### QC Summary Report for Metals

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Cadmium	ND	49.3	0.25	50	-	99	75-125
Chromium	ND	49.4	0.50	50	-	99	75-125
Lead	ND	49.3	0.50	50	-	99	75-125
Nickel	ND	47.9	0.50	50	-	96	75-125
Zinc	ND	500	5.0	500	-	100	75-125

#### Surrogate Recovery

Terbium	496	506	500	99	101	70-130
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Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Cadmium	50.7	51.6	50	ND	101	103	75-125	1.82	20
Chromium	88.4	97.4	50	34.33	108	126,F1	75-125	9.78	20
Lead	55.0	56.5	50	5.155	100	103	75-125	2.78	20
Nickel	94.5	104	50	43.25	103	122	75-125	9.93	20
Zinc	542	562	500	36.18	101	105	75-125	3.57	20

#### Surrogate Recovery

Terbium	530	542	500	106	108	70-130	2.31	20
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## Quality Control Report

**Client:** ERAS Environmental, Inc.      **WorkOrder:** 1505259  
**Date Prepared:** 5/7/15      **BatchID:** 104563  
**Date Analyzed:** 5/7/15 - 5/8/15      **Extraction Method:** SW3550B/3630C  
**Instrument:** GC11B, GC2A      **Analytical Method:** SW8015B  
**Matrix:** Soil      **Unit:** mg/Kg  
**Project:** #14-003-01; 106-110 Hegenberger      **Sample ID:** MB/LCS-104563  
1505241-006AMS/MSD

### QC Report for SW8015B w/ SG Clean-Up

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
TPH-Diesel (C10-C23)	ND	38.7	1.0	40	-	97	70-130
TPH-Motor Oil (C18-C36)	ND	-	5.0	-	-	-	-

#### Surrogate Recovery

C9	27.9	28.0		25	112	112	70-130
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Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
TPH-Diesel (C10-C23)	54.6	55.7	40	7.999	116	119	70-130	2.14	30

#### Surrogate Recovery

C9	27.9	27.5	25		112	110	70-130	1.48	30
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(Cont.)



## Quality Control Report

**Client:** ERAS Environmental, Inc.      **WorkOrder:** 1505259  
**Date Prepared:** 5/7/15      **BatchID:** 104593  
**Date Analyzed:** 5/8/15      **Extraction Method:** SW3550B/3630C  
**Instrument:** GC2B, GC6A      **Analytical Method:** SW8015B  
**Matrix:** Soil      **Unit:** mg/Kg  
**Project:** #14-003-01; 106-110 Hegenberger      **Sample ID:** MB/LCS-104593  
1505259-020AMS/MSD

### QC Report for SW8015B w/ SG Clean-Up

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
TPH-Diesel (C10-C23)	ND	40.3	1.0	40	-	101	70-130
TPH-Motor Oil (C18-C36)	ND	-	5.0	-	-	-	-

#### Surrogate Recovery

C9	24.5	28.2		25	98	113	70-130
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Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
TPH-Diesel (C10-C23)	50.2	53.2	40	5.536	112	119	70-130	5.78	30

#### Surrogate Recovery

C9	26.6	30.6	25		107	122	70-130	13.9	30
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## Quality Control Report

**Client:** ERAS Environmental, Inc.      **WorkOrder:** 1505259  
**Date Prepared:** 5/7/15      **BatchID:** 104592  
**Date Analyzed:** 5/8/15      **Extraction Method:** SW3510C/3630C  
**Instrument:** GC11B, GC2A      **Analytical Method:** SW8015B  
**Matrix:** Water      **Unit:** µg/L  
**Project:** #14-003-01; 106-110 Hegenberger      **Sample ID:** MB/LCS-104592

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### QC Report for SW8015B w/ SG Clean-Up

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Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
TPH-Diesel (C10-C23)	ND	1040	50	1000	-	104	59-151
TPH-Motor Oil (C18-C36)	ND	-	250	-	-	-	-

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#### Surrogate Recovery

C9	694	706	625	111	113	77-130
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# CHAIN-OF-CUSTODY RECORD

WorkOrder: 1505259

ClientCode: ERAS

WaterTrax     WriteOn     EDF     Excel     EQuIS     Email     HardCopy     ThirdParty     J-flag

## Report to:

Andrew Savage  
ERAS Environmental, Inc.  
1533 B Street  
Hayward, CA 94541  
(510) 247-9885    FAX: (510) 886-5399

Email: info@eras.biz; andrew@eras.biz  
cc/3rd Party:  
PO:  
ProjectNo: #14-003-01; 106-110 Hegenberger

## Bill to:

Kasey Cordoza  
ERAS Environmental, Inc.  
1533 B Street  
Hayward, CA 94541

Requested TAT: 5 days  
  
*Date Received: 05/07/2015*  
*Date Printed: 05/11/2015*

Lab ID	Client ID	Matrix	Collection Date	Hold	Requested Tests (See legend below)												
					1	2	3	4	5	6	7	8	9	10	11	12	
1505259-001	B-7	Water	5/6/2015 9:00	<input type="checkbox"/>		C		C		B		A					
1505259-002	B-8-Shallow	Water	5/6/2015 9:54	<input type="checkbox"/>		C		C		B		A					
1505259-003	B-8	Water	5/6/2015 10:51	<input type="checkbox"/>		C		C		B		A					
1505259-004	B-9-Shallow	Water	5/6/2015 11:32	<input type="checkbox"/>		C		C		B		A					
1505259-005	B-9	Water	5/6/2015 12:08	<input type="checkbox"/>		C		C		B		A					
1505259-006	B-1, 1.5-2	Soil	5/5/2015 9:16	<input type="checkbox"/>	A		A		A		A						
1505259-007	B-1, 11.5-12	Soil	5/5/2015 9:24	<input type="checkbox"/>	A		A		A		A						
1505259-008	B-2, 3.5-4	Soil	5/5/2015 10:33	<input type="checkbox"/>	A		A		A		A						
1505259-009	B-2, 6-6.5	Soil	5/5/2015 10:34	<input type="checkbox"/>	A		A		A		A						
1505259-010	B-2, 10-10.5	Soil	5/5/2015 10:37	<input type="checkbox"/>	A		A		A		A						
1505259-011	B-3, 2.5-4	Soil	5/5/2015 11:23	<input type="checkbox"/>	A		A		A		A						
1505259-012	B-3, 7.5-8	Soil	5/5/2015 11:26	<input type="checkbox"/>	A		A		A		A						
1505259-013	B-3, 10.5-11	Soil	5/5/2015 11:28	<input type="checkbox"/>	A		A		A		A						
1505259-014	B-4, 5.5-6	Soil	5/5/2015 11:52	<input type="checkbox"/>	A		A		A		A						
1505259-015	B-4, 11.5-12	Soil	5/5/2015 13:01	<input type="checkbox"/>	A		A		A		A						

Test Legend:

1	8260GAS_S	2	8260GAS_W	3	8260VOC_S	4	8260VOC_W	5	LUFTMS_S
6	LUFTMS_W	7	TPH(DMO)WSG_S	8	TPH(DMO)WSG_W	9		10	
11		12							

The following SampIDs: 001C, 002C, 003C, 004C, 005C, 006A, 007A, 008A, 009A, 010A, 011A, 012A, 013A, 014A, 015A, 016A, 017A, 018A, 019A, 020A, 021A, 022A, 023A, 024A, 025A, 026A contain testgroup.

Prepared by: Jena Alfaro

## 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.



# CHAIN-OF-CUSTODY RECORD

WaterTrax     WriteOn     EDF     Excel     EQuIS     Email     HardCopy     ThirdParty     J-flag

## Report to:

Andrew Savage  
ERAS Environmental, Inc.  
1533 B Street  
Hayward, CA 94541  
(510) 247-9885    FAX: (510) 886-5399

Email: info@eras.biz; andrew@eras.biz  
cc/3rd Party:  
PO:  
ProjectNo: #14-003-01; 106-110 Hegenberger

## Bill to:

Kasey Cordoza  
ERAS Environmental, Inc.  
1533 B Street  
Hayward, CA 94541

Requested TAT: 5 days  
  
*Date Received: 05/07/2015*  
*Date Printed: 05/11/2015*

Lab ID	Client ID	Matrix	Collection Date	Hold	Requested Tests (See legend below)											
					1	2	3	4	5	6	7	8	9	10	11	12
1505259-016	B-5, 3-3.5	Soil	5/5/2015 13:53	<input type="checkbox"/>	A		A		A		A					
1505259-017	B-5, 10.5-11	Soil	5/5/2015 13:59	<input type="checkbox"/>	A		A		A		A					
1505259-018	B-6, 3.5-4	Soil	5/5/2015 14:30	<input type="checkbox"/>	A		A		A		A					
1505259-019	B-6, 7.5-8	Soil	5/5/2015 14:35	<input type="checkbox"/>	A		A		A		A					
1505259-020	B-7, 3.5-4	Soil	5/6/2015 7:58	<input type="checkbox"/>	A		A		A		A					
1505259-021	B-7, 6.5-7	Soil	5/6/2015 7:59	<input type="checkbox"/>	A		A		A		A					
1505259-022	B-7, 11-11.5	Soil	5/6/2015 8:01	<input type="checkbox"/>	A		A		A		A					
1505259-023	B-8, 3.5-4	Soil	5/6/2015 9:14	<input type="checkbox"/>	A		A		A		A					
1505259-024	B-8, 11.5-12	Soil	5/6/2015 9:25	<input type="checkbox"/>	A		A		A		A					
1505259-025	B-9, 2.5-3	Soil	5/6/2015 11:02	<input type="checkbox"/>	A		A		A		A					
1505259-026	B-9, 11.5-12	Soil	5/6/2015 11:37	<input type="checkbox"/>	A		A		A		A					

Test Legend:

1	8260GAS_S	2	8260GAS_W	3	8260VOC_S	4	8260VOC_W	5	LUFTMS_S
6	LUFTMS_W	7	TPH(DMO)WSG_S	8	TPH(DMO)WSG_W	9		10	
11		12							

The following SampIDs: 001C, 002C, 003C, 004C, 005C, 006A, 007A, 008A, 009A, 010A, 011A, 012A, 013A, 014A, 015A, 016A, 017A, 018A, 019A, 020A, 021A, 022A, 023A, 024A, 025A, 026A contain testgroup.

Prepared by: Jena Alfaro

## 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.



## WORK ORDER SUMMARY

**Client Name:** ERAS ENVIRONMENTAL, INC.

**QC Level:** LEVEL 2

**Work Order:** 1505259

**Project:** #14-003-01; 106-110 Hegenberger

**Client Contact:** Andrew Savage

**Date Received:** 5/7/2015

**Comments:**

**Contact's Email:** info@eras.biz; andrew@eras.biz

WaterTrax     WriteOn     EDF     Excel     Fax     Email     HardCopy     ThirdParty     J-flag

Lab ID	Client ID	Matrix	Test Name	Containers /Composites	Bottle & Preservative	De-chlorinated	Collection Date & Time	TAT	Sediment Content	Hold	SubOut
1505259-001A	B-7	Water	SW8015B (TPH-d,mo w/ S.G. Clean-Up)	2	1LA	<input type="checkbox"/>	5/6/2015 9:00	5 days	Present	<input type="checkbox"/>	
1505259-001B	B-7	Water	E200.8 (LUFT)	2	250mL HDPE w/ HNO3	<input type="checkbox"/>	5/6/2015 9:00	5 days	Present	<input type="checkbox"/>	
1505259-001C	B-7	Water	TPH(g) & 8260 (Basic List) by P&T GCMS	6	VOA w/ HCl	<input type="checkbox"/>	5/6/2015 9:00	5 days	Present	<input type="checkbox"/>	
1505259-002A	B-8-Shallow	Water	SW8015B (TPH-d,mo w/ S.G. Clean-Up)	1	1LA	<input type="checkbox"/>	5/6/2015 9:54	5 days	Present	<input type="checkbox"/>	
1505259-002B	B-8-Shallow	Water	E200.8 (LUFT)	1	250mL HDPE w/ HNO3	<input type="checkbox"/>	5/6/2015 9:54	5 days	Present	<input type="checkbox"/>	
1505259-002C	B-8-Shallow	Water	TPH(g) & 8260 (Basic List) by P&T GCMS	6	VOA w/ HCl	<input type="checkbox"/>	5/6/2015 9:54	5 days	Present	<input type="checkbox"/>	
1505259-003A	B-8	Water	SW8015B (TPH-d,mo w/ S.G. Clean-Up)	2	1LA	<input type="checkbox"/>	5/6/2015 10:51	5 days	Present	<input type="checkbox"/>	
1505259-003B	B-8	Water	E200.8 (LUFT)	2	250mL HDPE w/ HNO3	<input type="checkbox"/>	5/6/2015 10:51	5 days	Present	<input type="checkbox"/>	
1505259-003C	B-8	Water	TPH(g) & 8260 (Basic List) by P&T GCMS	6	VOA w/ HCl	<input type="checkbox"/>	5/6/2015 10:51	5 days	Present	<input type="checkbox"/>	
1505259-004A	B-9-Shallow	Water	SW8015B (TPH-d,mo w/ S.G. Clean-Up)	2	1LA	<input type="checkbox"/>	5/6/2015 11:32	5 days	Present	<input type="checkbox"/>	
1505259-004B	B-9-Shallow	Water	E200.8 (LUFT)	2	250mL HDPE w/ HNO3	<input type="checkbox"/>	5/6/2015 11:32	5 days	Present	<input type="checkbox"/>	
1505259-004C	B-9-Shallow	Water	TPH(g) & 8260 (Basic List) by P&T GCMS	6	VOA w/ HCl	<input type="checkbox"/>	5/6/2015 11:32	5 days	Present	<input type="checkbox"/>	
1505259-005A	B-9	Water	SW8015B (TPH-d,mo w/ S.G. Clean-Up)	2	1LA	<input type="checkbox"/>	5/6/2015 12:08	5 days	Present	<input type="checkbox"/>	
1505259-005B	B-9	Water	E200.8 (LUFT)	2	250mL HDPE w/ HNO3	<input type="checkbox"/>	5/6/2015 12:08	5 days	Present	<input type="checkbox"/>	
1505259-005C	B-9	Water	TPH(g) & 8260 (Basic List) by P&T GCMS	6	VOA w/ HCl	<input type="checkbox"/>	5/6/2015 12:08	5 days	Present	<input type="checkbox"/>	

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

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



## WORK ORDER SUMMARY

**Client Name:** ERAS ENVIRONMENTAL, INC.

**QC Level:** LEVEL 2

**Work Order:** 1505259

**Project:** #14-003-01; 106-110 Hegenberger

**Client Contact:** Andrew Savage

**Date Received:** 5/7/2015

**Comments:**

**Contact's Email:** info@eras.biz; andrew@eras.biz

WaterTrax     WriteOn     EDF     Excel     Fax     Email     HardCopy     ThirdParty     J-flag

Lab ID	Client ID	Matrix	Test Name	Containers /Composites	Bottle & Preservative	De-chlorinated	Collection Date & Time	TAT	Sediment Content	Hold	SubOut
1505259-006A	B-1, 1.5-2	Soil	SW8015B (TPH-d,mo w/ S.G. Clean-Up) SW6020 (LUFT) TPH(g) & 8260 (Basic List) by P&T GCMS	1	Acetate Liner	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	5/5/2015 9:16	5 days	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1505259-007A	B-1, 11.5-12	Soil	SW8015B (TPH-d,mo w/ S.G. Clean-Up) SW6020 (LUFT) TPH(g) & 8260 (Basic List) by P&T GCMS	1	Acetate Liner	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	5/5/2015 9:24	5 days	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1505259-008A	B-2, 3.5-4	Soil	SW8015B (TPH-d,mo w/ S.G. Clean-Up) SW6020 (LUFT) TPH(g) & 8260 (Basic List) by P&T GCMS	1	Acetate Liner	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	5/5/2015 10:33	5 days	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1505259-009A	B-2, 6-6.5	Soil	SW8015B (TPH-d,mo w/ S.G. Clean-Up) SW6020 (LUFT) TPH(g) & 8260 (Basic List) by P&T GCMS	1	Acetate Liner	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	5/5/2015 10:34	5 days	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1505259-010A	B-2, 10-10.5	Soil	SW8015B (TPH-d,mo w/ S.G. Clean-Up) SW6020 (LUFT) TPH(g) & 8260 (Basic List) by P&T GCMS	1	Acetate Liner	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	5/5/2015 10:37	5 days	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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

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## WORK ORDER SUMMARY

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**QC Level:** LEVEL 2

**Work Order:** 1505259

**Project:** #14-003-01; 106-110 Hegenberger

**Client Contact:** Andrew Savage

**Date Received:** 5/7/2015

**Comments:**

**Contact's Email:** info@eras.biz; andrew@eras.biz

WaterTrax     WriteOn     EDF     Excel     Fax     Email     HardCopy     ThirdParty     J-flag

Lab ID	Client ID	Matrix	Test Name	Containers /Composites	Bottle & Preservative	De-chlorinated	Collection Date & Time	TAT	Sediment Content	Hold	SubOut
1505259-011A	B-3, 2.5-4	Soil	SW8015B (TPH-d,mo w/ S.G. Clean-Up) SW6020 (LUFT) TPH(g) & 8260 (Basic List) by P&T GCMS	1	Acetate Liner	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	5/5/2015 11:23	5 days		<input type="checkbox"/>	
1505259-012A	B-3, 7.5-8	Soil	SW8015B (TPH-d,mo w/ S.G. Clean-Up) SW6020 (LUFT) TPH(g) & 8260 (Basic List) by P&T GCMS	1	Acetate Liner	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	5/5/2015 11:26	5 days		<input type="checkbox"/>	
1505259-013A	B-3, 10.5-11	Soil	SW8015B (TPH-d,mo w/ S.G. Clean-Up) SW6020 (LUFT) TPH(g) & 8260 (Basic List) by P&T GCMS	1	Acetate Liner	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	5/5/2015 11:28	5 days		<input type="checkbox"/>	
1505259-014A	B-4, 5.5-6	Soil	SW8015B (TPH-d,mo w/ S.G. Clean-Up) SW6020 (LUFT) TPH(g) & 8260 (Basic List) by P&T GCMS	1	Acetate Liner	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	5/5/2015 11:52	5 days		<input type="checkbox"/>	
1505259-015A	B-4, 11.5-12	Soil	SW8015B (TPH-d,mo w/ S.G. Clean-Up) SW6020 (LUFT) TPH(g) & 8260 (Basic List) by P&T GCMS	1	Acetate Liner	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	5/5/2015 13:01	5 days		<input type="checkbox"/>	

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**QC Level:** LEVEL 2

**Work Order:** 1505259

**Project:** #14-003-01; 106-110 Hegenberger

**Client Contact:** Andrew Savage

**Date Received:** 5/7/2015

**Comments:**

**Contact's Email:** info@eras.biz; andrew@eras.biz

WaterTrax     WriteOn     EDF     Excel     Fax     Email     HardCopy     ThirdParty     J-flag

Lab ID	Client ID	Matrix	Test Name	Containers /Composites	Bottle & Preservative	De-chlorinated	Collection Date & Time	TAT	Sediment Content	Hold	SubOut
1505259-016A	B-5, 3-3.5	Soil	SW8015B (TPH-d,mo w/ S.G. Clean-Up) SW6020 (LUFT) TPH(g) & 8260 (Basic List) by P&T GCMS	1	Acetate Liner	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	5/5/2015 13:53	5 days		<input type="checkbox"/>	
1505259-017A	B-5, 10.5-11	Soil	SW8015B (TPH-d,mo w/ S.G. Clean-Up) SW6020 (LUFT) TPH(g) & 8260 (Basic List) by P&T GCMS	1	Acetate Liner	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	5/5/2015 13:59	5 days		<input type="checkbox"/>	
1505259-018A	B-6, 3.5-4	Soil	SW8015B (TPH-d,mo w/ S.G. Clean-Up) SW6020 (LUFT) TPH(g) & 8260 (Basic List) by P&T GCMS	1	Acetate Liner	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	5/5/2015 14:30	5 days		<input type="checkbox"/>	
1505259-019A	B-6, 7.5-8	Soil	SW8015B (TPH-d,mo w/ S.G. Clean-Up) SW6020 (LUFT) TPH(g) & 8260 (Basic List) by P&T GCMS	1	Acetate Liner	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	5/5/2015 14:35	5 days		<input type="checkbox"/>	
1505259-020A	B-7, 3.5-4	Soil	SW8015B (TPH-d,mo w/ S.G. Clean-Up) SW6020 (LUFT) TPH(g) & 8260 (Basic List) by P&T GCMS	1	Acetate Liner	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	5/6/2015 7:58	5 days		<input type="checkbox"/>	

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## WORK ORDER SUMMARY

**Client Name:** ERAS ENVIRONMENTAL, INC.

**QC Level:** LEVEL 2

**Work Order:** 1505259

**Project:** #14-003-01; 106-110 Hegenberger

**Client Contact:** Andrew Savage

**Date Received:** 5/7/2015

**Comments:**

**Contact's Email:** info@eras.biz; andrew@eras.biz

WaterTrax     WriteOn     EDF     Excel     Fax     Email     HardCopy     ThirdParty     J-flag

Lab ID	Client ID	Matrix	Test Name	Containers /Composites	Bottle & Preservative	De-chlorinated	Collection Date & Time	TAT	Sediment Content	Hold	SubOut
1505259-021A	B-7, 6.5-7	Soil	SW8015B (TPH-d,mo w/ S.G. Clean-Up) SW6020 (LUFT) TPH(g) & 8260 (Basic List) by P&T GCMS	1	Acetate Liner	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	5/6/2015 7:59	5 days		<input type="checkbox"/>	
1505259-022A	B-7, 11-11.5	Soil	SW8015B (TPH-d,mo w/ S.G. Clean-Up) SW6020 (LUFT) TPH(g) & 8260 (Basic List) by P&T GCMS	1	Acetate Liner	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	5/6/2015 8:01	5 days		<input type="checkbox"/>	
1505259-023A	B-8, 3.5-4	Soil	SW8015B (TPH-d,mo w/ S.G. Clean-Up) SW6020 (LUFT) TPH(g) & 8260 (Basic List) by P&T GCMS	1	Acetate Liner	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	5/6/2015 9:14	5 days		<input type="checkbox"/>	
1505259-024A	B-8, 11.5-12	Soil	SW8015B (TPH-d,mo w/ S.G. Clean-Up) SW6020 (LUFT) TPH(g) & 8260 (Basic List) by P&T GCMS	1	Acetate Liner	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	5/6/2015 9:25	5 days		<input type="checkbox"/>	
1505259-025A	B-9, 2.5-3	Soil	SW8015B (TPH-d,mo w/ S.G. Clean-Up) SW6020 (LUFT) TPH(g) & 8260 (Basic List) by P&T GCMS	1	Acetate Liner	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	5/6/2015 11:02	5 days		<input type="checkbox"/>	

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## WORK ORDER SUMMARY

**Client Name:** ERAS ENVIRONMENTAL, INC.

**QC Level:** LEVEL 2

**Work Order:** 1505259

**Project:** #14-003-01; 106-110 Hegenberger

**Client Contact:** Andrew Savage

**Date Received:** 5/7/2015

**Comments:**

**Contact's Email:** info@eras.biz; andrew@eras.biz

WaterTrax     WriteOn     EDF     Excel     Fax     Email     HardCopy     ThirdParty     J-flag

Lab ID	Client ID	Matrix	Test Name	Containers /Composites	Bottle & Preservative	De-chlorinated	Collection Date & Time	TAT	Sediment Content	Hold	SubOut
1505259-026A	B-9, 11.5-12	Soil	SW8015B (TPH-d,mo w/ S.G. Clean-Up) SW6020 (LUFT) TPH(g) & 8260 (Basic List) by P&T GCMS	1	Acetate Liner	<input type="checkbox"/>	5/6/2015 11:37	5 days	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
						<input type="checkbox"/>		5 days	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
						<input type="checkbox"/>		5 days	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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

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Page 1 of 3

## **CHAIN OF CUSTODY FORM**

**McCampbell Analytical, Inc**  
1534 Willow Pass Rd.  
Pittsburg, CA 94565  
877.252.9262  
925.252.9269 - fax

**Report To:** ERAS      **Bill To:** ERAS  
**Company:** ERAS Environmental, Inc.

---

**Email:** [info@eras.biz](mailto:info@eras.biz)

**Telephone:** 510-247-9885    **Fax:** 510-886-5399

<b>Project #</b>	14-003-01		
<b>Project location</b>	106-110 Hegenberger	inners	
<b>Sampler:</b>	Andrew Savage	Type	

Sample ID	Location/Fiel d Point Name	Sampling		# of Col	Contain	Matrix			Preservative			
		Date	Time			Soil	Water	Waste	HCL	H2SO4	HNO3	ICE
B-7		5/6/2015	9:00	2	1L	X						X
B-7		5/6/2015	9:00	2	Poly	X					X	
B-7		5/6/2015	9:00	6	VOA	X			X			
B-8-Shallow		5/6/2015	9:54	1	1L	X						X
B-8-Shallow		5/6/2015	9:54	1	Poly	X					X	
B-8-Shallow		5/6/2015	9:54	6	VOA	X			X			
B-8		5/6/2015	10:51	2	1L	X						X
B-8		5/6/2015	10:51	1	Poly	X					X	
B-8		5/6/2015	10:51	6	VOA	X			X			
B-9-Shallow		5/6/2015	11:32	2	1L	X						X
B-9-Shallow		5/6/2015	11:32	2	Poly	X					X	
B-9-Shallow		5/6/2015	11:32	6	VOA	X			X			

RELINQUISHED BY:		RECEIVED BY:	
Relinquished by:	Date: 5/7/15	Time: 11:15	Received by: Bubba
Relinquished by:	Date: 5/7	Time: 1645	Received by: Bubba
Relinquished by:	Date:	Time:	Received by:

ICE/t° Condition	<u>3.2</u>	Comments: Please PDF
Head space absent		
Dechlorinated in lab		
Appropriate containers		
Preserved in Lab		
	VOA's    O&G    Metals    Other	
Preservation	pH<2	

## **CHAIN OF CUSTODY FORM**

Page 2 of 3

**McCampbell Analytical, Inc**  
**1534 Willow Pass Rd.**  
**Pittsburg, CA 94565**  
**877.252.9262**  
**925.252.9269 - fax**

**Report To:** ERAS      **Bill To:** ERAS  
**Company:** ERAS Environmental, Inc.

**Telephone:** 510-247-9885    **Email:** [info@eras.biz](mailto:info@eras.biz)    **Fax:** 510-886-5399

**Project #** 14-003-01  
**Project location** 106-110 Hegenberger  
**Sampler:** Andrew Savage

Sample ID	Location/Fiel d Point Name	Sampling		# of Contain	Matrix			Preservative		
		Date	Time		Soil	Water	Waste	HCL	H2SO4	HNO3
B-9		5/6/2015	12:08	2	1L	X				X
B-9		5/6/2015	12:08	2	Poly	X				X
B-9		5/6/2015	12:08	6	VOA	X		X		
B-1, 1.5-2		5/5/2015	9:16	1	Tube	X				X
B-1, 11.5-12		5/5/2015	9:24	1	Tube	X				X
B-2, 3.5-4		5/5/2015	10:33	1	Tube	X				X
B-2, 6-6.5		5/5/2015	10:34	1	Tube	X				X
B-2, 10-105		5/5/2015	10:37	1	Tube	X				X
B-3, 2.5-4 <del>(X)</del>		5/5/2015	11:23	1	Tube	X				X
B-3, 7.5-8		5/5/2015	11:26	1	Tube	X				X
B-3, 10.5-11		5/5/2015	11:28	1	Tube	X				X
B-4, 5.5-6		5/5/2015	11:52	1	Tube	X				X
B-4, 11.5-12		5/5/2015	13:01	1	Tube	X				X
B-6, 3-3.5		5/5/2015	13:53	1	Tube	X				X

Relinquished by:	Date:	Time:	Received by:
	5/7/15	1115	
Relinquished by:	Date:	Time:	Received by:
	5/7	1645	
Relinquished by:	Date:	Time:	Received by:

ICE/t° Condition	<u>3.2</u>	Comments: Please PDF
Head space absent		
Dechlorinated in lab		
Appropriate containers		
Preserved in Lab		
	VOA's    O&G    Metals    Other	
Preservation	pH<2	

## **CHAIN OF CUSTODY FORM**

**McCampbell Analytical, Inc**  
**1534 Willow Pass Rd.**  
**Pittsburg, CA 94565**  
**877.252.9262**  
**925.252.9269 - fax**

**Report To:** ERAS      **Bill To:** ERAS  
**Company:** ERAS Environmental, Inc.

**Telephone:** 510-247-9885    **Email:** [info@eras.biz](mailto:info@eras.biz)

<b>Project #</b>	14-003-01		
<b>Project location</b>	106-110 Hegenberger	liners	Type
<b>Sampler:</b>	Andrew Savage		

\* 11.5-12

RELINQUISHED BY:			RECEIVED BY:
Relinquished by: 	Date: 5/7/15	Time: 11:15	Received by: 
Relinquished by: 	Date: 5/7	Time: 1645	Received by: 
Relinquished by: 	Date:	Time:	Received by:

ICE/t°	<u>3.2</u>	Comments: Please PDF
Condition		
Head space absent		
Dechlorinated in lab		
Appropriate containers		
Preserved in Lab		
	VOA's    O&G    Metals    Other	
Preservation	pH<2	



## Sample Receipt Checklist

Client Name: **ERAS Environmental, Inc.** Date and Time Received: **5/7/2015 5:06:02 PM**  
Project Name: **#14-003-01; 106-110 Hegenberger** LogIn Reviewed by: **Jena Alfaro**  
WorkOrder No: **1505259** Matrix: **Soil/Water** Carrier: **Benjamin Yslas (MAI Courier)**

### Chain of Custody (COC) Information

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

### Sample Receipt Information

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

### Sample Preservation and Hold Time (HT) Information

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

### UCMR3 Samples:

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

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

-----

Comments: pH adjusted in Lab.



# McCampbell Analytical, Inc.

"When Quality Counts"

## Analytical Report

**WorkOrder:** 1509192

**Report Created for:** ERAS Environmental, Inc.

1533 B Street  
Hayward, CA 94541

**Project Contact:** Andrew Savage

**Project P.O.:**

**Project Name:** 14-003-05; 106-110 Hegenberger

**Project Received:** 09/04/2015

Analytical Report reviewed & approved for release on 09/14/2015 by:

Angela Rydelius,  
Laboratory Manager

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





## Glossary of Terms & Qualifier Definitions

**Client:** ERAS Environmental, Inc.  
**Project:** 14-003-05; 106-110 Hegenberger  
**WorkOrder:** 1509192

### Glossary Abbreviation

95% Interval	95% Confident Interval
DF	Dilution Factor
DI WET	(DISTLC) Waste Extraction Test using DI water
DISS	Dissolved (direct analysis of 0.45 µm filtered and acidified water sample)
DUP	Duplicate
EDL	Estimated Detection Limit
ITEF	International Toxicity Equivalence Factor
LCS	Laboratory Control Sample
MB	Method Blank
MB % Rec	% Recovery of Surrogate in Method Blank, if applicable
MDL	Method Detection Limit
ML	Minimum Level of Quantitation
MS	Matrix Spike
MSD	Matrix Spike Duplicate
N/A	Not Applicable
ND	Not detected at or above the indicated MDL or RL
NR	Data Not Reported due to matrix interference or insufficient sample amount.
PF	Prep Factor
RD	Relative Difference
RL	Reporting Limit (The RL is the lowest calibration standard in a multipoint calibration.)
RPD	Relative Percent Deviation
RRT	Relative Retention Time
SPK Val	Spike Value
SPKRef Val	Spike Reference Value
SPLP	Synthetic Precipitation Leachate Procedure
TCLP	Toxicity Characteristic Leachate Procedure
TEQ	Toxicity Equivalents
WET (STLC)	Waste Extraction Test (Soluble Threshold Limit Concentration)

### Analytical Qualifiers

S	spike recovery outside accepted recovery limits
c2	surrogate recovery outside of the control limits due to matrix interference.
e2	diesel range compounds are significant; no recognizable pattern
e4	gasoline range compounds are significant.
e7	oil range compounds are significant
e11/e8	stoddard solvent/mineral spirit (?); and/or kerosene/kerosene range/jet fuel range
e11	stoddard solvent/mineral spirit (?)



## Glossary of Terms & Qualifier Definitions

**Client:** ERAS Environmental, Inc.

**Project:** 14-003-05; 106-110 Hegenberger

**WorkOrder:** 1509192

### Quality Control Qualifiers

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



## Analytical Report

**Client:** ERAS Environmental, Inc.  
**Date Received:** 9/4/15 18:50  
**Date Prepared:** 9/8/15  
**Project:** 14-003-05; 106-110 Hegenberger

**WorkOrder:** 1509192  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** mg/kg

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B-10, 3.5-4	1509192-001A	Soil	09/03/2015 09:02	GC16	109935

Analyses	Result	RL	DF	Date Analyzed
TPH(g)	21	1.2	5	09/09/2015 20:44
Surrogates	REC (%)	Limits		
Benzene-d6	106	60-140		09/09/2015 20:44
Dibromofluoromethane	98	70-130		09/09/2015 20:44

Analyst(s): KF

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B-10, 6-6.5	1509192-002A	Soil	09/03/2015 09:25	GC16	109935

Analyses	Result	RL	DF	Date Analyzed
TPH(g)	0.33	0.25	1	09/09/2015 13:29
Surrogates	REC (%)	Limits		
Benzene-d6	89	60-140		09/09/2015 13:29
Dibromofluoromethane	91	70-130		09/09/2015 13:29

Analyst(s): KF

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B-11, 5.5-6	1509192-004A	Soil	09/03/2015 10:27	GC16	109935

Analyses	Result	RL	DF	Date Analyzed
TPH(g)	35	2.5	10	09/10/2015 05:16
Surrogates	REC (%)	Limits		
Benzene-d6	106	60-140		09/10/2015 05:16
Dibromofluoromethane	97	70-130		09/10/2015 05:16

Analyst(s): KF

(Cont.)



## Analytical Report

**Client:** ERAS Environmental, Inc.  
**Date Received:** 9/4/15 18:50  
**Date Prepared:** 9/8/15  
**Project:** 14-003-05; 106-110 Hegenberger

**WorkOrder:** 1509192  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** mg/kg

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B-11, 9-9.5	1509192-005A	Soil	09/03/2015 10:30	GC16	109935

Analyses	Result	RL	DF	Date Analyzed
TPH(g)	ND	0.25	1	09/09/2015 14:56
Surrogates	REC (%)	Limits		
Benzene-d6	91	60-140		09/09/2015 14:56
Dibromofluoromethane	91	70-130		09/09/2015 14:56

Analyst(s): KF

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B-12, 3.5-4	1509192-007A	Soil	09/03/2015 11:29	GC16	109935

Analyses	Result	RL	DF	Date Analyzed
TPH(g)	54	5.0	20	09/09/2015 23:35
Surrogates	REC (%)	Limits		
Benzene-d6	99	60-140		09/09/2015 23:35
Dibromofluoromethane	98	70-130		09/09/2015 23:35

Analyst(s): KF

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B-12, 7-7.5	1509192-008A	Soil	09/03/2015 11:32	GC16	109935

Analyses	Result	RL	DF	Date Analyzed
TPH(g)	21	1.7	6.7	09/10/2015 00:18
Surrogates	REC (%)	Limits		
Benzene-d6	101	60-140		09/10/2015 00:18
Dibromofluoromethane	97	70-130		09/10/2015 00:18

Analyst(s): KF

(Cont.)



## Analytical Report

**Client:** ERAS Environmental, Inc.  
**Date Received:** 9/4/15 18:50  
**Date Prepared:** 9/8/15  
**Project:** 14-003-05; 106-110 Hegenberger

**WorkOrder:** 1509192  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** mg/kg

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B-13, 3.5-4	1509192-010A	Soil	09/03/2015 13:56	GC16	109935

Analyses	Result	RL	DF	Date Analyzed
TPH(g)	7.6	0.25	1	09/09/2015 17:05
Surrogates	REC (%)	Limits		
Benzene-d6	99	60-140		09/09/2015 17:05
Dibromofluoromethane	99	70-130		09/09/2015 17:05

Analyst(s): KF

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B-13, 6.5-7	1509192-011A	Soil	09/03/2015 14:00	GC16	109935

Analyses	Result	RL	DF	Date Analyzed
TPH(g)	ND	0.25	1	09/09/2015 17:48
Surrogates	REC (%)	Limits		
Benzene-d6	87	60-140		09/09/2015 17:48
Dibromofluoromethane	92	70-130		09/09/2015 17:48

Analyst(s): KF

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B-14, 3.5-4	1509192-012A	Soil	09/03/2015 12:50	GC16	109935

Analyses	Result	RL	DF	Date Analyzed
TPH(g)	110	5.0	20	09/10/2015 22:35
Surrogates	REC (%)	Limits		
Benzene-d6	103	60-140		09/10/2015 22:35
Dibromofluoromethane	100	70-130		09/10/2015 22:35

Analyst(s): KF

(Cont.)



## Analytical Report

**Client:** ERAS Environmental, Inc.  
**Date Received:** 9/4/15 18:50  
**Date Prepared:** 9/8/15  
**Project:** 14-003-05; 106-110 Hegenberger

**WorkOrder:** 1509192  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** mg/kg

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B-14, 6.5-7	1509192-013A	Soil	09/03/2015 12:53	GC16	109935

Analyses	Result	RL	DF	Date Analyzed
TPH(g)	ND	0.25	1	09/10/2015 23:17
Surrogates	REC (%)	Limits		
Benzene-d6	74	60-140		09/10/2015 23:17
Dibromofluoromethane	94	70-130		09/10/2015 23:17

Analyst(s): KF

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B-15, 3.5-4	1509192-014A	Soil	09/04/2015 08:06	GC16	109935

Analyses	Result	RL	DF	Date Analyzed
TPH(g)	ND	0.25	1	09/11/2015 00:00
Surrogates	REC (%)	Limits		
Benzene-d6	93	60-140		09/11/2015 00:00
Dibromofluoromethane	94	70-130		09/11/2015 00:00

Analyst(s): KF

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B-15, 7-7.5	1509192-015A	Soil	09/04/2015 08:09	GC16	109935

Analyses	Result	RL	DF	Date Analyzed
TPH(g)	ND	0.25	1	09/10/2015 03:51
Surrogates	REC (%)	Limits		
Benzene-d6	93	60-140		09/10/2015 03:51
Dibromofluoromethane	91	70-130		09/10/2015 03:51

Analyst(s): KF

(Cont.)



## Analytical Report

**Client:** ERAS Environmental, Inc.  
**Date Received:** 9/4/15 18:50  
**Date Prepared:** 9/8/15  
**Project:** 14-003-05; 106-110 Hegenberger

**WorkOrder:** 1509192  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** mg/kg

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B-16, 3.5-4	1509192-016A	Soil	09/04/2015 09:05	GC16	109935

Analyses	Result	RL	DF	Date Analyzed
TPH(g)	0.40	0.25	1	09/10/2015 04:34

Surrogates	REC (%)	Limits	
Benzene-d6	99	60-140	09/10/2015 04:34
Dibromofluoromethane	91	70-130	09/10/2015 04:34

Analyst(s): KF

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B-16, 6.5-7	1509192-017A	Soil	09/04/2015 09:08	GC16	109935

Analyses	Result	RL	DF	Date Analyzed
TPH(g)	ND	0.25	1	09/09/2015 12:03

Surrogates	REC (%)	Limits	
Benzene-d6	82	60-140	09/09/2015 12:03
Dibromofluoromethane	93	70-130	09/09/2015 12:03

Analyst(s): KF



## Analytical Report

**Client:** ERAS Environmental, Inc.  
**Date Received:** 9/4/15 18:50  
**Date Prepared:** 9/8/15  
**Project:** 14-003-05; 106-110 Hegenberger

**WorkOrder:** 1509192  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** mg/Kg

### Volatile Organics by P&T and GC/MS

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B-10, 3.5-4	1509192-001A	Soil	09/03/2015 09:02	GC16	109935
<hr/>					
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Benzene	ND		0.0050	1	09/09/2015 12:46
Ethylbenzene	ND		0.0050	1	09/09/2015 12:46
Methyl-t-butyl ether (MTBE)	ND		0.0050	1	09/09/2015 12:46
Naphthalene	ND		0.0050	1	09/09/2015 12:46
Toluene	ND		0.0050	1	09/09/2015 12:46
Xylenes, Total	ND		0.0050	1	09/09/2015 12:46
<hr/>					
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Dibromofluoromethane	103		70-130		09/09/2015 12:46
Toluene-d8	111		70-130		09/09/2015 12:46
4-BFB	113		70-130		09/09/2015 12:46
Benzene-d6	92		60-140		09/09/2015 12:46
Ethylbenzene-d10	102		60-140		09/09/2015 12:46
1,2-DCB-d4	73		60-140		09/09/2015 12:46

Analyst(s): KF

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B-10, 6-6.5	1509192-002A	Soil	09/03/2015 09:25	GC16	109935
<hr/>					
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Benzene	ND		0.0050	1	09/09/2015 13:29
Ethylbenzene	ND		0.0050	1	09/09/2015 13:29
Methyl-t-butyl ether (MTBE)	ND		0.0050	1	09/09/2015 13:29
Naphthalene	ND		0.0050	1	09/09/2015 13:29
Toluene	ND		0.0050	1	09/09/2015 13:29
Xylenes, Total	ND		0.0050	1	09/09/2015 13:29
<hr/>					
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Dibromofluoromethane	98		70-130		09/09/2015 13:29
Toluene-d8	103		70-130		09/09/2015 13:29
4-BFB	91		70-130		09/09/2015 13:29
Benzene-d6	87		60-140		09/09/2015 13:29
Ethylbenzene-d10	94		60-140		09/09/2015 13:29
1,2-DCB-d4	71		60-140		09/09/2015 13:29

Analyst(s): KF

(Cont.)



## Analytical Report

**Client:** ERAS Environmental, Inc.  
**Date Received:** 9/4/15 18:50  
**Date Prepared:** 9/8/15  
**Project:** 14-003-05; 106-110 Hegenberger

**WorkOrder:** 1509192  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** mg/Kg

### Volatile Organics by P&T and GC/MS

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B-11, 5.5-6	1509192-004A	Soil	09/03/2015 10:27	GC16	109935
<u>Analyses</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Benzene	0.47		0.050	10	09/10/2015 05:16
Ethylbenzene	0.87		0.050	10	09/10/2015 05:16
Methyl-t-butyl ether (MTBE)	ND		0.050	10	09/10/2015 05:16
Naphthalene	0.33		0.050	10	09/10/2015 05:16
Toluene	1.1		0.050	10	09/10/2015 05:16
Xylenes, Total	2.1		0.050	10	09/10/2015 05:16
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Dibromofluoromethane	105		70-130		09/10/2015 05:16
Toluene-d8	95		70-130		09/10/2015 05:16
4-BFB	89		70-130		09/10/2015 05:16
Benzene-d6	104		60-140		09/10/2015 05:16
Ethylbenzene-d10	104		60-140		09/10/2015 05:16
1,2-DCB-d4	94		60-140		09/10/2015 05:16

Analyst(s): KF

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B-11, 9-9.5	1509192-005A	Soil	09/03/2015 10:30	GC16	109935
<u>Analyses</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Benzene	ND		0.0050	1	09/09/2015 22:52
Ethylbenzene	ND		0.0050	1	09/09/2015 22:52
Methyl-t-butyl ether (MTBE)	ND		0.0050	1	09/09/2015 22:52
Naphthalene	ND		0.0050	1	09/09/2015 22:52
Toluene	ND		0.0050	1	09/09/2015 22:52
Xylenes, Total	ND		0.0050	1	09/09/2015 22:52
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Dibromofluoromethane	101		70-130		09/09/2015 22:52
Toluene-d8	103		70-130		09/09/2015 22:52
4-BFB	90		70-130		09/09/2015 22:52
Benzene-d6	83		60-140		09/09/2015 22:52
Ethylbenzene-d10	83		60-140		09/09/2015 22:52
1,2-DCB-d4	71		60-140		09/09/2015 22:52

Analyst(s): KF

(Cont.)



## Analytical Report

**Client:** ERAS Environmental, Inc.  
**Date Received:** 9/4/15 18:50  
**Date Prepared:** 9/8/15  
**Project:** 14-003-05; 106-110 Hegenberger

**WorkOrder:** 1509192  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** mg/Kg

### Volatile Organics by P&T and GC/MS

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B-12, 3.5-4	1509192-007A	Soil	09/03/2015 11:29	GC16	109935
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Benzene	ND		0.0050	1	09/09/2015 15:39
Ethylbenzene	<b>0.014</b>		0.0050	1	09/09/2015 15:39
Methyl-t-butyl ether (MTBE)	ND		0.0050	1	09/09/2015 15:39
Naphthalene	<b>0.012</b>		0.0050	1	09/09/2015 15:39
Toluene	<b>0.0074</b>		0.0050	1	09/09/2015 15:39
Xylenes, Total	<b>0.021</b>		0.0050	1	09/09/2015 15:39
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Dibromofluoromethane	117		70-130		09/09/2015 15:39
Toluene-d8	110		70-130		09/09/2015 15:39
4-BFB	105		70-130		09/09/2015 15:39
Benzene-d6	87		60-140		09/09/2015 15:39
Ethylbenzene-d10	91		60-140		09/09/2015 15:39
1,2-DCB-d4	71		60-140		09/09/2015 15:39

Analyst(s): KF

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B-12, 7-7.5	1509192-008A	Soil	09/03/2015 11:32	GC16	109935
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Benzene	<b>0.61</b>		0.033	6.7	09/10/2015 00:18
Ethylbenzene	<b>1.1</b>		0.033	6.7	09/10/2015 00:18
Methyl-t-butyl ether (MTBE)	ND		0.033	6.7	09/10/2015 00:18
Naphthalene	<b>0.38</b>		0.033	6.7	09/10/2015 00:18
Toluene	<b>0.14</b>		0.033	6.7	09/10/2015 00:18
Xylenes, Total	<b>1.0</b>		0.033	6.7	09/10/2015 00:18
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Dibromofluoromethane	104		70-130		09/10/2015 00:18
Toluene-d8	95		70-130		09/10/2015 00:18
4-BFB	91		70-130		09/10/2015 00:18
Benzene-d6	98		60-140		09/10/2015 00:18
Ethylbenzene-d10	98		60-140		09/10/2015 00:18
1,2-DCB-d4	84		60-140		09/10/2015 00:18

Analyst(s): KF

(Cont.)



## Analytical Report

**Client:** ERAS Environmental, Inc.  
**Date Received:** 9/4/15 18:50  
**Date Prepared:** 9/8/15  
**Project:** 14-003-05; 106-110 Hegenberger

**WorkOrder:** 1509192  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** mg/Kg

### Volatile Organics by P&T and GC/MS

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B-13, 3.5-4	1509192-010A	Soil	09/03/2015 13:56	GC16	109935
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Benzene	ND		0.0050	1	09/10/2015 01:00
Ethylbenzene	ND		0.0050	1	09/10/2015 01:00
Methyl-t-butyl ether (MTBE)	ND		0.0050	1	09/10/2015 01:00
Naphthalene	ND		0.0050	1	09/10/2015 01:00
Toluene	ND		0.0050	1	09/10/2015 01:00
Xylenes, Total	ND		0.0050	1	09/10/2015 01:00
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Dibromofluoromethane	109		70-130		09/10/2015 01:00
Toluene-d8	101		70-130		09/10/2015 01:00
4-BFB	99		70-130		09/10/2015 01:00
Benzene-d6	93		60-140		09/10/2015 01:00
Ethylbenzene-d10	92		60-140		09/10/2015 01:00
1,2-DCB-d4	71		60-140		09/10/2015 01:00

Analyst(s): KF

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B-13, 6.5-7	1509192-011A	Soil	09/03/2015 14:00	GC16	109935
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Benzene	ND		0.0050	1	09/09/2015 17:48
Ethylbenzene	ND		0.0050	1	09/09/2015 17:48
Methyl-t-butyl ether (MTBE)	ND		0.0050	1	09/09/2015 17:48
Naphthalene	ND		0.0050	1	09/09/2015 17:48
Toluene	ND		0.0050	1	09/09/2015 17:48
Xylenes, Total	ND		0.0050	1	09/09/2015 17:48
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Dibromofluoromethane	100		70-130		09/09/2015 17:48
Toluene-d8	102		70-130		09/09/2015 17:48
4-BFB	90		70-130		09/09/2015 17:48
Benzene-d6	85		60-140		09/09/2015 17:48
Ethylbenzene-d10	90		60-140		09/09/2015 17:48
1,2-DCB-d4	72		60-140		09/09/2015 17:48

Analyst(s): KF

(Cont.)



## Analytical Report

**Client:** ERAS Environmental, Inc.  
**Date Received:** 9/4/15 18:50  
**Date Prepared:** 9/8/15  
**Project:** 14-003-05; 106-110 Hegenberger

**WorkOrder:** 1509192  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** mg/Kg

### Volatile Organics by P&T and GC/MS

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B-14, 3.5-4	1509192-012A	Soil	09/03/2015 12:50	GC16	109935
<hr/>					
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Benzene	ND		0.0050	1	09/10/2015 01:43
Ethylbenzene	<b>0.032</b>		0.0050	1	09/10/2015 01:43
Methyl-t-butyl ether (MTBE)	ND		0.0050	1	09/10/2015 01:43
Naphthalene	ND		0.0050	1	09/10/2015 01:43
Toluene	ND		0.0050	1	09/10/2015 01:43
Xylenes, Total	ND		0.0050	1	09/10/2015 01:43
<hr/>					
<u>Surrogates</u>	<u>REC (%)</u>	<u>Qualifiers</u>	<u>Limits</u>		
Dibromofluoromethane	117		70-130		09/10/2015 01:43
Toluene-d8	115		70-130		09/10/2015 01:43
4-BFB	190	S	70-130		09/10/2015 01:43
Benzene-d6	105		60-140		09/10/2015 01:43
Ethylbenzene-d10	112		60-140		09/10/2015 01:43
1,2-DCB-d4	76		60-140		09/10/2015 01:43

Analyst(s): KF

Analytical Comments: c2

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B-14, 6.5-7	1509192-013A	Soil	09/03/2015 12:53	GC16	109935
<hr/>					
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Benzene	ND		0.0050	1	09/10/2015 02:26
Ethylbenzene	ND		0.0050	1	09/10/2015 02:26
Methyl-t-butyl ether (MTBE)	ND		0.0050	1	09/10/2015 02:26
Naphthalene	ND		0.0050	1	09/10/2015 02:26
Toluene	ND		0.0050	1	09/10/2015 02:26
Xylenes, Total	ND		0.0050	1	09/10/2015 02:26
<hr/>					
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Dibromofluoromethane	98		70-130		09/10/2015 02:26
Toluene-d8	104		70-130		09/10/2015 02:26
4-BFB	96		70-130		09/10/2015 02:26
Benzene-d6	85		60-140		09/10/2015 02:26
Ethylbenzene-d10	93		60-140		09/10/2015 02:26
1,2-DCB-d4	71		60-140		09/10/2015 02:26

Analyst(s): KF

(Cont.)



## Analytical Report

**Client:** ERAS Environmental, Inc.  
**Date Received:** 9/4/15 18:50  
**Date Prepared:** 9/8/15  
**Project:** 14-003-05; 106-110 Hegenberger

**WorkOrder:** 1509192  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** mg/Kg

### Volatile Organics by P&T and GC/MS

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B-15, 3.5-4	1509192-014A	Soil	09/04/2015 08:06	GC16	109935
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Benzene	ND		0.0050	1	09/10/2015 03:08
Ethylbenzene	ND		0.0050	1	09/10/2015 03:08
Methyl-t-butyl ether (MTBE)	ND		0.0050	1	09/10/2015 03:08
Naphthalene	ND		0.0050	1	09/10/2015 03:08
Toluene	ND		0.0050	1	09/10/2015 03:08
Xylenes, Total	ND		0.0050	1	09/10/2015 03:08
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Dibromofluoromethane	99		70-130		09/10/2015 03:08
Toluene-d8	103		70-130		09/10/2015 03:08
4-BFB	97		70-130		09/10/2015 03:08
Benzene-d6	90		60-140		09/10/2015 03:08
Ethylbenzene-d10	95		60-140		09/10/2015 03:08
1,2-DCB-d4	73		60-140		09/10/2015 03:08

Analyst(s): KF

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B-15, 7-7.5	1509192-015A	Soil	09/04/2015 08:09	GC16	109935
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Benzene	ND		0.0050	1	09/10/2015 03:51
Ethylbenzene	ND		0.0050	1	09/10/2015 03:51
Methyl-t-butyl ether (MTBE)	ND		0.0050	1	09/10/2015 03:51
Naphthalene	ND		0.0050	1	09/10/2015 03:51
Toluene	ND		0.0050	1	09/10/2015 03:51
Xylenes, Total	ND		0.0050	1	09/10/2015 03:51
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Dibromofluoromethane	99		70-130		09/10/2015 03:51
Toluene-d8	102		70-130		09/10/2015 03:51
4-BFB	91		70-130		09/10/2015 03:51
Benzene-d6	90		60-140		09/10/2015 03:51
Ethylbenzene-d10	94		60-140		09/10/2015 03:51
1,2-DCB-d4	73		60-140		09/10/2015 03:51

Analyst(s): KF

(Cont.)



## Analytical Report

**Client:** ERAS Environmental, Inc.  
**Date Received:** 9/4/15 18:50  
**Date Prepared:** 9/8/15  
**Project:** 14-003-05; 106-110 Hegenberger

**WorkOrder:** 1509192  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** mg/Kg

### Volatile Organics by P&T and GC/MS

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B-16, 3.5-4	1509192-016A	Soil	09/04/2015 09:05	GC16	109935
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Benzene	ND		0.0050	1	09/10/2015 04:34
Ethylbenzene	ND		0.0050	1	09/10/2015 04:34
Methyl-t-butyl ether (MTBE)	ND		0.0050	1	09/10/2015 04:34
Naphthalene	ND		0.0050	1	09/10/2015 04:34
Toluene	ND		0.0050	1	09/10/2015 04:34
Xylenes, Total	ND		0.0050	1	09/10/2015 04:34
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Dibromofluoromethane	99		70-130		09/10/2015 04:34
Toluene-d8	105		70-130		09/10/2015 04:34
4-BFB	96		70-130		09/10/2015 04:34
Benzene-d6	96		60-140		09/10/2015 04:34
Ethylbenzene-d10	99		60-140		09/10/2015 04:34
1,2-DCB-d4	79		60-140		09/10/2015 04:34

Analyst(s): KF

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B-16, 6.5-7	1509192-017A	Soil	09/04/2015 09:08	GC16	109935
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Benzene	ND		0.0050	1	09/09/2015 12:03
Ethylbenzene	ND		0.0050	1	09/09/2015 12:03
Methyl-t-butyl ether (MTBE)	ND		0.0050	1	09/09/2015 12:03
Naphthalene	ND		0.0050	1	09/09/2015 12:03
Toluene	ND		0.0050	1	09/09/2015 12:03
Xylenes, Total	ND		0.0050	1	09/09/2015 12:03
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Dibromofluoromethane	100		70-130		09/09/2015 12:03
Toluene-d8	104		70-130		09/09/2015 12:03
4-BFB	88		70-130		09/09/2015 12:03
Benzene-d6	79		60-140		09/09/2015 12:03
Ethylbenzene-d10	84		60-140		09/09/2015 12:03
1,2-DCB-d4	63		60-140		09/09/2015 12:03

Analyst(s): KF



## Analytical Report

**Client:** ERAS Environmental, Inc.  
**Date Received:** 9/4/15 18:50  
**Date Prepared:** 9/8/15  
**Project:** 14-003-05; 106-110 Hegenberger

**WorkOrder:** 1509192  
**Extraction Method:** SW3550B/3630C  
**Analytical Method:** SW8015B  
**Unit:** mg/Kg

### Total Extractable Petroleum Hydrocarbons with Silica Gel Clean-Up

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B-10, 3.5-4	1509192-001A	Soil	09/03/2015 09:02	GC6B	109933

Analyses	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	2.3	1.0	1	09/09/2015 16:02
TPH-Motor Oil (C18-C36)	12	5.0	1	09/09/2015 16:02

Surrogates	REC (%)	Limits		
C9	98	70-130		09/09/2015 16:02
Analyst(s):	TK	Analytical Comments: e7,e2		

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B-10, 6-6.5	1509192-002A	Soil	09/03/2015 09:25	GC6A	109933

Analyses	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	ND	1.0	1	09/09/2015 16:02
TPH-Motor Oil (C18-C36)	ND	5.0	1	09/09/2015 16:02

Surrogates	REC (%)	Limits		
C9	92	70-130		09/09/2015 16:02
Analyst(s):	TK			

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B-11, 5.5-6	1509192-004A	Soil	09/03/2015 10:27	GC9b	109933

Analyses	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	29	1.0	1	09/09/2015 20:40
TPH-Motor Oil (C18-C36)	7.2	5.0	1	09/09/2015 20:40

Surrogates	REC (%)	Limits		
C9	108	70-130		09/09/2015 20:40
Analyst(s):	TK	Analytical Comments: e4,e7,e2		

(Cont.)



## Analytical Report

**Client:** ERAS Environmental, Inc.  
**Date Received:** 9/4/15 18:50  
**Date Prepared:** 9/8/15  
**Project:** 14-003-05; 106-110 Hegenberger

**WorkOrder:** 1509192  
**Extraction Method:** SW3550B/3630C  
**Analytical Method:** SW8015B  
**Unit:** mg/Kg

### Total Extractable Petroleum Hydrocarbons with Silica Gel Clean-Up

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B-11, 9-9.5	1509192-005A	Soil	09/03/2015 10:30	GC9b	109933

Analyses	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	ND	1.0	1	09/09/2015 18:14
TPH-Motor Oil (C18-C36)	ND	5.0	1	09/09/2015 18:14

Surrogates	REC (%)	Limits		
C9	106	70-130		09/09/2015 18:14

Analyst(s): TK

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B-12, 3.5-4	1509192-007A	Soil	09/03/2015 11:29	GC2B	109933

Analyses	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	4.4	1.0	1	09/10/2015 06:13
TPH-Motor Oil (C18-C36)	21	5.0	1	09/10/2015 06:13

Surrogates	REC (%)	Limits		
C9	116	70-130		09/10/2015 06:13

Analyst(s): TK

Analytical Comments: e7,e2

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B-12, 7-7.5	1509192-008A	Soil	09/03/2015 11:32	GC2B	109933

Analyses	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	3.4	1.0	1	09/10/2015 08:45
TPH-Motor Oil (C18-C36)	ND	5.0	1	09/10/2015 08:45

Surrogates	REC (%)	Limits		
C9	115	70-130		09/10/2015 08:45

Analyst(s): TK

Analytical Comments: e11/e8

(Cont.)



## Analytical Report

**Client:** ERAS Environmental, Inc.  
**Date Received:** 9/4/15 18:50  
**Date Prepared:** 9/8/15  
**Project:** 14-003-05; 106-110 Hegenberger

**WorkOrder:** 1509192  
**Extraction Method:** SW3550B/3630C  
**Analytical Method:** SW8015B  
**Unit:** mg/Kg

### Total Extractable Petroleum Hydrocarbons with Silica Gel Clean-Up

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B-13, 3.5-4	1509192-010A	Soil	09/03/2015 13:56	GC11A	109933

Analyses	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	3.1	2.0	2	09/10/2015 16:25
TPH-Motor Oil (C18-C36)	16	10	2	09/10/2015 16:25

Surrogates	REC (%)	Limits		
C9	113	70-130		09/10/2015 16:25

Analyst(s): TK      Analytical Comments: e7,e2

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B-13, 6.5-7	1509192-011A	Soil	09/03/2015 14:00	GC11A	109933

Analyses	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	ND	1.0	1	09/10/2015 05:28
TPH-Motor Oil (C18-C36)	ND	5.0	1	09/10/2015 05:28

Surrogates	REC (%)	Limits		
C9	117	70-130		09/10/2015 05:28

Analyst(s): TK

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B-14, 3.5-4	1509192-012A	Soil	09/03/2015 12:50	GC11A	109933

Analyses	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	32	1.0	1	09/10/2015 03:11
TPH-Motor Oil (C18-C36)	24	5.0	1	09/10/2015 03:11

Surrogates	REC (%)	Limits		
C9	116	70-130		09/10/2015 03:11

Analyst(s): TK      Analytical Comments: e7,e11,e2

(Cont.)



## Analytical Report

**Client:** ERAS Environmental, Inc.  
**Date Received:** 9/4/15 18:50  
**Date Prepared:** 9/8/15  
**Project:** 14-003-05; 106-110 Hegenberger

**WorkOrder:** 1509192  
**Extraction Method:** SW3550B/3630C  
**Analytical Method:** SW8015B  
**Unit:** mg/Kg

### Total Extractable Petroleum Hydrocarbons with Silica Gel Clean-Up

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B-14, 6.5-7	1509192-013A	Soil	09/03/2015 12:53	GC11B	109933

Analyses	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	ND	1.0	1	09/09/2015 03:57
TPH-Motor Oil (C18-C36)	5.3	5.0	1	09/09/2015 03:57

Surrogates	REC (%)	Limits		
C9	106	70-130		09/09/2015 03:57
Analyst(s):	TK		Analytical Comments:	e7

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B-15, 3.5-4	1509192-014A	Soil	09/04/2015 08:06	GC11A	109933

Analyses	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	1.3	1.0	1	09/09/2015 13:12
TPH-Motor Oil (C18-C36)	12	5.0	1	09/09/2015 13:12

Surrogates	REC (%)	Limits		
C9	116	70-130		09/09/2015 13:12
Analyst(s):	TK		Analytical Comments:	e7,e2

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B-15, 7-7.5	1509192-015A	Soil	09/04/2015 08:09	GC11B	109933

Analyses	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	2.9	1.0	1	09/10/2015 12:40
TPH-Motor Oil (C18-C36)	33	5.0	1	09/10/2015 12:40

Surrogates	REC (%)	Limits		
C9	112	70-130		09/10/2015 12:40
Analyst(s):	TK		Analytical Comments:	e7,e2

(Cont.)



## Analytical Report

**Client:** ERAS Environmental, Inc.  
**Date Received:** 9/4/15 18:50  
**Date Prepared:** 9/8/15  
**Project:** 14-003-05; 106-110 Hegenberger

**WorkOrder:** 1509192  
**Extraction Method:** SW3550B/3630C  
**Analytical Method:** SW8015B  
**Unit:** mg/Kg

### Total Extractable Petroleum Hydrocarbons with Silica Gel Clean-Up

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B-16, 3.5-4	1509192-016A	Soil	09/04/2015 09:05	GC11A	109933

Analyses	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	14	1.0	1	09/09/2015 02:49
TPH-Motor Oil (C18-C36)	80	5.0	1	09/09/2015 02:49

Surrogates	REC (%)	Limits		
C9	113	70-130		09/09/2015 02:49
Analyst(s):	TK		Analytical Comments:	e7,e2

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B-16, 6.5-7	1509192-017A	Soil	09/04/2015 09:08	GC11B	109933

Analyses	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	1.4	1.0	1	09/09/2015 01:40
TPH-Motor Oil (C18-C36)	21	5.0	1	09/09/2015 01:40

Surrogates	REC (%)	Limits		
C9	104	70-130		09/09/2015 01:40
Analyst(s):	TK		Analytical Comments:	e7,e2

CLIENT: ERAS Environmental, Inc.

Work Order: 1509192

Project: 14-003-05; 106-110 Hegenberger

**ANALYTICAL QC SUMMARY REPORT****BatchID: 109935**

SampleID	<b>MB-109935</b>	TestCode:	<b>8260GAS_S</b>	Units:	<b>mg/kg</b>	Prep Date:	<b>9/8/2015</b>
Batch ID:	<b>109935</b>	TestNo:	<b>SW8260B</b>	Run ID:	<b>GC16_150910B</b>	Analysis Date:	<b>9/8/2015</b>
Analyte		Result		PQL	SPKValue	SPKRefVal	%REC
TPH(g)		ND		0.25			-

**Surrogate Recovery**

Benzene-d6	0.0947	0.1	95	60 - 140
Dibromofluoromethane	0.112	0.125	90	70 - 130

**Qualifiers:**  
 ND - Not Detected at the Reporting Limit  
 J - Analyte detected below quantitation limits  
 B - Analyte detected in the associated Method Blank

S - Spike Recovery outside accepted recovery limits  
 R - RPD outside accepted recovery limits  
 E - Value above quantitation range

**CLIENT:** ERAS Environmental, Inc.  
**Work Order:** 1509192  
**Project:** 14-003-05; 106-110 Hegenberger

## ANALYTICAL QC SUMMARY REPORT

**BatchID:** 109935

SampleID	LCS-109935	TestCode:	8260GAS_S	Units:	mg/kg	Prep Date:	9/8/2015
Batch ID:	109935	TestNo:	SW8260B	Run ID:	GC16_150910B	Analysis Date:	9/8/2015
Analyte		Result	PQL	SPKValue	SPKRefVal	%REC	Limits
VOC (C6-C12)		2.28	0.25	3.2	0	71	71 - 142

### Surrogate Recovery

Benzene-d6	0.0935	0.1	94	60 - 140
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**Qualifiers:**  
ND - Not Detected at the Reporting Limit  
J - Analyte detected below quantitation limits  
B - Analyte detected in the associated Method Blank

S - Spike Recovery outside accepted recovery limits  
R - RPD outside accepted recovery limits  
E - Value above quantitation range



## Quality Control Report

<b>Client:</b>	ERAS Environmental, Inc.	<b>WorkOrder:</b>	1509192
<b>Date Prepared:</b>	9/8/15	<b>BatchID:</b>	109935
<b>Date Analyzed:</b>	9/8/15	<b>Extraction Method:</b>	SW5030B
<b>Instrument:</b>	GC16	<b>Analytical Method:</b>	SW8260B
<b>Matrix:</b>	Soil	<b>Unit:</b>	mg/Kg
<b>Project:</b>	14-003-05; 106-110 Hegenberger	<b>Sample ID:</b>	MB/LCS-109935 1509192-017AMS/MSD

### QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Acetone	ND	-	0.10	-	-	-	-
tert-Amyl methyl ether (TAME)	ND	0.0354	0.0050	0.050	-	71	53-116
Benzene	ND	0.0467	0.0050	0.050	-	93	63-137
Bromobenzene	ND	-	0.0050	-	-	-	-
Bromoform	ND	-	0.0050	-	-	-	-
Bromochloromethane	ND	-	0.0050	-	-	-	-
Bromodichloromethane	ND	-	0.0050	-	-	-	-
Bromomethane	ND	-	0.0050	-	-	-	-
2-Butanone (MEK)	ND	-	0.020	-	-	-	-
t-Butyl alcohol (TBA)	ND	0.129	0.050	0.20	-	65	41-135
n-Butyl benzene	ND	-	0.0050	-	-	-	-
sec-Butyl benzene	ND	-	0.0050	-	-	-	-
tert-Butyl benzene	ND	-	0.0050	-	-	-	-
Carbon Disulfide	ND	-	0.0050	-	-	-	-
Carbon Tetrachloride	ND	-	0.0050	-	-	-	-
Chlorobenzene	ND	0.0440	0.0050	0.050	-	88	77-121
Chloroethane	ND	-	0.0050	-	-	-	-
Chloroform	ND	-	0.0050	-	-	-	-
Chloromethane	ND	-	0.0050	-	-	-	-
2-Chlorotoluene	ND	-	0.0050	-	-	-	-
4-Chlorotoluene	ND	-	0.0050	-	-	-	-
Dibromochloromethane	ND	-	0.0050	-	-	-	-
1,2-Dibromo-3-chloropropane	ND	-	0.0040	-	-	-	-
1,2-Dibromoethane (EDB)	ND	0.0419	0.0040	0.050	-	84	67-119
Dibromomethane	ND	-	0.0050	-	-	-	-
1,2-Dichlorobenzene	ND	-	0.0050	-	-	-	-
1,3-Dichlorobenzene	ND	-	0.0050	-	-	-	-
1,4-Dichlorobenzene	ND	-	0.0050	-	-	-	-
Dichlorodifluoromethane	ND	-	0.0050	-	-	-	-
1,1-Dichloroethane	ND	-	0.0050	-	-	-	-
1,2-Dichloroethane (1,2-DCA)	ND	0.0443	0.0040	0.050	-	89	58-135
1,1-Dichloroethene	ND	0.0458	0.0050	0.050	-	92	42-145
cis-1,2-Dichloroethene	ND	-	0.0050	-	-	-	-
trans-1,2-Dichloroethene	ND	-	0.0050	-	-	-	-
1,2-Dichloropropane	ND	-	0.0050	-	-	-	-
1,3-Dichloropropane	ND	-	0.0050	-	-	-	-
2,2-Dichloropropane	ND	-	0.0050	-	-	-	-
1,1-Dichloropropene	ND	-	0.0050	-	-	-	-

(Cont.)

CDPH ELAP 1644 ♦ NELAP 4033ORELAP

*Sgt*  
QA/QC Officer



## Quality Control Report

<b>Client:</b>	ERAS Environmental, Inc.	<b>WorkOrder:</b>	1509192
<b>Date Prepared:</b>	9/8/15	<b>BatchID:</b>	109935
<b>Date Analyzed:</b>	9/8/15	<b>Extraction Method:</b>	SW5030B
<b>Instrument:</b>	GC16	<b>Analytical Method:</b>	SW8260B
<b>Matrix:</b>	Soil	<b>Unit:</b>	mg/Kg
<b>Project:</b>	14-003-05; 106-110 Hegenberger	<b>Sample ID:</b>	MB/LCS-109935 1509192-017AMS/MSD

### QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
cis-1,3-Dichloropropene	ND	-	0.0050	-	-	-	-
trans-1,3-Dichloropropene	ND	-	0.0050	-	-	-	-
Diisopropyl ether (DIPE)	ND	0.0424	0.0050	0.050	-	85	52-129
Ethylbenzene	ND	-	0.0050	-	-	-	-
Ethyl tert-butyl ether (ETBE)	ND	0.0393	0.0050	0.050	-	79	53-125
Freon 113	ND	-	0.0050	-	-	-	-
Hexachlorobutadiene	ND	-	0.0050	-	-	-	-
Hexachloroethane	ND	-	0.0050	-	-	-	-
2-Hexanone	ND	-	0.0050	-	-	-	-
Isopropylbenzene	ND	-	0.0050	-	-	-	-
4-Isopropyl toluene	ND	-	0.0050	-	-	-	-
Methyl-t-butyl ether (MTBE)	ND	0.0387	0.0050	0.050	-	77	58-122
Methylene chloride	ND	-	0.0050	-	-	-	-
4-Methyl-2-pentanone (MIBK)	ND	-	0.0050	-	-	-	-
Naphthalene	ND	-	0.0050	-	-	-	-
n-Propyl benzene	ND	-	0.0050	-	-	-	-
Styrene	ND	-	0.0050	-	-	-	-
1,1,1,2-Tetrachloroethane	ND	-	0.0050	-	-	-	-
1,1,2,2-Tetrachloroethane	ND	-	0.0050	-	-	-	-
Tetrachloroethene	ND	-	0.0050	-	-	-	-
Toluene	ND	0.0484	0.0050	0.050	-	97	76-130
1,2,3-Trichlorobenzene	ND	-	0.0050	-	-	-	-
1,2,4-Trichlorobenzene	ND	-	0.0050	-	-	-	-
1,1,1-Trichloroethane	ND	-	0.0050	-	-	-	-
1,1,2-Trichloroethane	ND	-	0.0050	-	-	-	-
Trichloroethene	ND	0.0444	0.0050	0.050	-	89	72-132
Trichlorofluoromethane	ND	-	0.0050	-	-	-	-
1,2,3-Trichloropropane	ND	-	0.0050	-	-	-	-
1,2,4-Trimethylbenzene	ND	-	0.0050	-	-	-	-
1,3,5-Trimethylbenzene	ND	-	0.0050	-	-	-	-
Vinyl Chloride	ND	-	0.0050	-	-	-	-
Xylenes, Total	ND	-	0.0050	-	-	-	-

(Cont.)

CDPH ELAP 1644 ♦ NELAP 4033ORELAP

QA/QC Officer



## Quality Control Report

<b>Client:</b>	ERAS Environmental, Inc.	<b>WorkOrder:</b>	1509192
<b>Date Prepared:</b>	9/8/15	<b>BatchID:</b>	109935
<b>Date Analyzed:</b>	9/8/15	<b>Extraction Method:</b>	SW5030B
<b>Instrument:</b>	GC16	<b>Analytical Method:</b>	SW8260B
<b>Matrix:</b>	Soil	<b>Unit:</b>	mg/Kg
<b>Project:</b>	14-003-05; 106-110 Hegenberger	<b>Sample ID:</b>	MB/LCS-109935 1509192-017AMS/MSD

### QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits		
<b>Surrogate Recovery</b>									
Dibromofluoromethane	0.121	0.126		0.12	97	101	70-130		
Toluene-d8	0.132	0.130		0.12	106	104	70-130		
4-BFB	0.0118	0.0120		0.012	94	96	70-130		
Benzene-d6	0.0918	0.0908		0.10	92	91	60-140		
Ethylbenzene-d10	0.0988	0.100		0.10	99	100	60-140		
1,2-DCB-d4	0.0742	0.0777		0.10	74	78	60-140		
Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
tert-Amyl methyl ether (TAME)	0.0298	0.0320	0.050	ND	60,F1	64,F1	70-130	7.00	20
Benzene	0.0409	0.0427	0.050	ND	82	85	70-130	4.34	20
t-Butyl alcohol (TBA)	0.102	0.112	0.20	ND	51,F1	56,F1	70-130	9.37	20
Chlorobenzene	0.0391	0.0412	0.050	ND	78	82	70-130	5.14	20
1,2-Dibromoethane (EDB)	0.0348	0.0379	0.050	ND	70	76	70-130	8.37	20
1,2-Dichloroethane (1,2-DCA)	0.0377	0.0397	0.050	ND	75	79	70-130	5.24	20
1,1-Dichloroethene	0.0400	0.0413	0.050	ND	80	83	70-130	3.23	20
Diisopropyl ether (DIPE)	0.0360	0.0378	0.050	ND	72	76	70-130	4.89	20
Ethyl tert-butyl ether (ETBE)	0.0331	0.0353	0.050	ND	66,F1	71	70-130	6.36	20
Methyl-t-butyl ether (MTBE)	0.0328	0.0345	0.050	ND	66,F1	69,F1	70-130	5.09	20
Toluene	0.0415	0.0440	0.050	ND	83	88	70-130	5.83	20
Trichloroethylene	0.0405	0.0427	0.050	ND	81	85	70-130	5.21	20
<b>Surrogate Recovery</b>									
Dibromofluoromethane	0.125	0.125	0.12		100	100	70-130	0	20
Toluene-d8	0.128	0.129	0.12		103	103	70-130	0	20
4-BFB	0.0114	0.0118	0.012		91	94	70-130	3.64	20
Benzene-d6	0.0833	0.0861	0.10		83	86	60-140	3.25	20
Ethylbenzene-d10	0.0916	0.0912	0.10		92	91	60-140	0.430	20
1,2-DCB-d4	0.0703	0.0715	0.10		70	72	60-140	1.67	20



## Quality Control Report

**Client:** ERAS Environmental, Inc.      **WorkOrder:** 1509192  
**Date Prepared:** 9/8/15      **BatchID:** 109933  
**Date Analyzed:** 9/8/15 - 9/9/15      **Extraction Method:** SW3550B/3630C  
**Instrument:** GC2B, GC9b      **Analytical Method:** SW8015B  
**Matrix:** Soil      **Unit:** mg/Kg  
**Project:** 14-003-05; 106-110 Hegenberger      **Sample ID:** MB/LCS-109933  
1509192-016AMS/MSD

### QC Report for SW8015B with Silica Gel Clean-Up

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
TPH-Diesel (C10-C23)	ND	39.1	1.0	40	-	98	70-130
TPH-Motor Oil (C18-C36)	ND	-	5.0	-	-	-	-

#### Surrogate Recovery

C9	28.2	26.0		25	113	104	62-139
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Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
TPH-Diesel (C10-C23)	57.5	56.9	40	14.07	109	107	70-130	1.14	30
<b>Surrogate Recovery</b>									
C9	28.6	28.6	25		114	114	70-130	0	30



# CHAIN-OF-CUSTODY RECORD

Page 1 of 1

WorkOrder: 1509192

ClientCode: ERAS

WaterTrax     WriteOn     EDF     Excel     EQuIS     Email     HardCopy     ThirdParty     J-flag

## Report to:

Andrew Savage  
ERAS Environmental, Inc.  
1533 B Street  
Hayward, CA 94541  
(510) 247-9885    FAX: (510) 886-5399

Email: info@eras.biz; andrew@eras.biz  
cc/3rd Party:  
PO:  
ProjectNo: 14-003-05; 106-110 Hegenberger

## Bill to:

Kasey Cordoza  
ERAS Environmental, Inc.  
1533 B Street  
Hayward, CA 94541

Requested TAT: 5 days;

Date Received: 09/04/2015  
Date Printed: 09/08/2015

## Requested Tests (See legend below)

Lab ID	Client ID	Matrix	Collection Date	Hold	1	2	3	4	5	6	7	8	9	10	11	12
1509192-001	B-10, 3.5-4	Soil	9/3/2015 9:02	<input type="checkbox"/>	A	A	A									
1509192-002	B-10, 6-6.5	Soil	9/3/2015 9:25	<input type="checkbox"/>	A	A	A									
1509192-004	B-11, 5.5-6	Soil	9/3/2015 10:27	<input type="checkbox"/>	A	A	A									
1509192-005	B-11, 9-9.5	Soil	9/3/2015 10:30	<input type="checkbox"/>	A	A	A									
1509192-007	B-12, 3.5-4	Soil	9/3/2015 11:29	<input type="checkbox"/>	A	A	A									
1509192-008	B-12, 7-7.5	Soil	9/3/2015 11:32	<input type="checkbox"/>	A	A	A									
1509192-010	B-13, 3.5-4	Soil	9/3/2015 13:56	<input type="checkbox"/>	A	A	A									
1509192-011	B-13, 6.5-7	Soil	9/3/2015 14:00	<input type="checkbox"/>	A	A	A									
1509192-012	B-14, 3.5-4	Soil	9/3/2015 12:50	<input type="checkbox"/>	A	A	A									
1509192-013	B-14, 6.5-7	Soil	9/3/2015 12:53	<input type="checkbox"/>	A	A	A									
1509192-014	B-15, 3.5-4	Soil	9/4/2015 8:06	<input type="checkbox"/>	A	A	A									
1509192-015	B-15, 7-7.5	Soil	9/4/2015 8:09	<input type="checkbox"/>	A	A	A									
1509192-016	B-16, 3.5-4	Soil	9/4/2015 9:05	<input type="checkbox"/>	A	A	A									
1509192-017	B-16, 6.5-7	Soil	9/4/2015 9:08	<input type="checkbox"/>	A	A	A									

## Test Legend:

1	8260GAS_S
5	
9	

2	8260VOC_S
6	
10	

3	TPH(DMO)WSG_S
7	
11	

4	
8	
12	

The following SampIDs: 001A, 002A, 004A, 005A, 007A, 008A, 010A, 011A, 012A, 013A, 014A, 015A, 016A, 017A contain testgroup.

Prepared by: Maria Venegas

## 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.



## WORK ORDER SUMMARY

**Client Name:** ERAS ENVIRONMENTAL, INC.

**QC Level:** LEVEL 2

**Work Order:** 1509192

**Project:** 14-003-05; 106-110 Hegenberger

**Client Contact:** Andrew Savage

**Date Received:** 9/4/2015

**Comments:**

**Contact's Email:** info@eras.biz; andrew@eras.biz

WaterTrax     WriteOn     EDF     Excel     Fax     Email     HardCopy     ThirdParty     J-flag

Lab ID	Client ID	Matrix	Test Name	Containers /Composites	Bottle & Preservative	De-chlorinated	Collection Date & Time	TAT	Sediment Content	Hold	SubOut
1509192-001A	B-10, 3.5-4	Soil	SW8015B (TPH-d,mo w/ S.G. Clean-Up) TPH(g) & 8260 (Misc. Compounds) by P&T GCMS	1	Acetate Liner	<input type="checkbox"/> <input type="checkbox"/>	9/3/2015 9:02	5 days		<input type="checkbox"/> <input type="checkbox"/>	
1509192-002A	B-10, 6-6.5	Soil	SW8015B (TPH-d,mo w/ S.G. Clean-Up) TPH(g) & 8260 (Misc. Compounds) by P&T GCMS	1	Acetate Liner	<input type="checkbox"/> <input type="checkbox"/>	9/3/2015 9:25	5 days		<input type="checkbox"/> <input type="checkbox"/>	
1509192-003A	B-10, 11.5-12	Soil		1	Acetate Liner	<input type="checkbox"/>	9/3/2015 9:29		<input checked="" type="checkbox"/>		
1509192-004A	B-11, 5.5-6	Soil	SW8015B (TPH-d,mo w/ S.G. Clean-Up) TPH(g) & 8260 (Misc. Compounds) by P&T GCMS	1	Acetate Liner	<input type="checkbox"/> <input type="checkbox"/>	9/3/2015 10:27	5 days		<input type="checkbox"/> <input type="checkbox"/>	
1509192-005A	B-11, 9-9.5	Soil	SW8015B (TPH-d,mo w/ S.G. Clean-Up) TPH(g) & 8260 (Misc. Compounds) by P&T GCMS	1	Acetate Liner	<input type="checkbox"/> <input type="checkbox"/>	9/3/2015 10:30	5 days		<input type="checkbox"/> <input type="checkbox"/>	
1509192-006A	B-11, 15.5-16	Soil		1	Acetate Liner	<input type="checkbox"/>	9/3/2015 10:33		<input checked="" type="checkbox"/>		
1509192-007A	B-12, 3.5-4	Soil	SW8015B (TPH-d,mo w/ S.G. Clean-Up) TPH(g) & 8260 (Misc. Compounds) by P&T GCMS	1	Acetate Liner	<input type="checkbox"/> <input type="checkbox"/>	9/3/2015 11:29	5 days		<input type="checkbox"/> <input type="checkbox"/>	
1509192-008A	B-12, 7-7.5	Soil	SW8015B (TPH-d,mo w/ S.G. Clean-Up) TPH(g) & 8260 (Misc. Compounds) by P&T GCMS	1	Acetate Liner	<input type="checkbox"/> <input type="checkbox"/>	9/3/2015 11:32	5 days		<input type="checkbox"/> <input type="checkbox"/>	

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

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



## WORK ORDER SUMMARY

**Client Name:** ERAS ENVIRONMENTAL, INC.

**QC Level:** LEVEL 2

**Work Order:** 1509192

**Project:** 14-003-05; 106-110 Hegenberger

**Client Contact:** Andrew Savage

**Date Received:** 9/4/2015

**Comments:**

**Contact's Email:** info@eras.biz; andrew@eras.biz

WaterTrax     WriteOn     EDF     Excel     Fax     Email     HardCopy     ThirdParty     J-flag

Lab ID	Client ID	Matrix	Test Name	Containers /Composites	Bottle & Preservative	De-chlorinated	Collection Date & Time	TAT	Sediment Content	Hold	SubOut
1509192-009A	B-12, 15.5-16	Soil		1	Acetate Liner	<input type="checkbox"/>	9/3/2015 11:28			<input checked="" type="checkbox"/>	
1509192-010A	B-13, 3.5-4	Soil	SW8015B (TPH-d,mo w/ S.G. Clean-Up) TPH(g) & 8260 (Misc. Compounds) by P&T GCMS	1	Acetate Liner	<input type="checkbox"/>	9/3/2015 13:56	5 days		<input type="checkbox"/>	
1509192-011A	B-13, 6.5-7	Soil	SW8015B (TPH-d,mo w/ S.G. Clean-Up) TPH(g) & 8260 (Misc. Compounds) by P&T GCMS	1	Acetate Liner	<input type="checkbox"/>	9/3/2015 14:00	5 days		<input type="checkbox"/>	
1509192-012A	B-14, 3.5-4	Soil	SW8015B (TPH-d,mo w/ S.G. Clean-Up) TPH(g) & 8260 (Misc. Compounds) by P&T GCMS	1	Acetate Liner	<input type="checkbox"/>	9/3/2015 12:50	5 days		<input type="checkbox"/>	
1509192-013A	B-14, 6.5-7	Soil	SW8015B (TPH-d,mo w/ S.G. Clean-Up) TPH(g) & 8260 (Misc. Compounds) by P&T GCMS	1	Acetate Liner	<input type="checkbox"/>	9/3/2015 12:53	5 days		<input type="checkbox"/>	
1509192-014A	B-15, 3.5-4	Soil	SW8015B (TPH-d,mo w/ S.G. Clean-Up) TPH(g) & 8260 (Misc. Compounds) by P&T GCMS	1	Acetate Liner	<input type="checkbox"/>	9/4/2015 8:06	5 days		<input type="checkbox"/>	
1509192-015A	B-15, 7-7.5	Soil	SW8015B (TPH-d,mo w/ S.G. Clean-Up) TPH(g) & 8260 (Misc. Compounds) by P&T GCMS	1	Acetate Liner	<input type="checkbox"/>	9/4/2015 8:09	5 days		<input type="checkbox"/>	
1509192-016A	B-16, 3.5-4	Soil	SW8015B (TPH-d,mo w/ S.G. Clean-Up)	1	Acetate Liner	<input type="checkbox"/>	9/4/2015 9:05	5 days		<input type="checkbox"/>	

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

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



## WORK ORDER SUMMARY

**Client Name:** ERAS ENVIRONMENTAL, INC.

**QC Level:** LEVEL 2

**Work Order:** 1509192

**Project:** 14-003-05; 106-110 Hegenberger

**Client Contact:** Andrew Savage

**Date Received:** 9/4/2015

**Comments:**

**Contact's Email:** info@eras.biz; andrew@eras.biz

WaterTrax     WriteOn     EDF     Excel     Fax     Email     HardCopy     ThirdParty     J-flag

Lab ID	Client ID	Matrix	Test Name	Containers /Composites	Bottle & Preservative	De-chlorinated	Collection Date & Time	TAT	Sediment Content	Hold	SubOut
1509192-016A	B-16, 3.5-4	Soil	TPH(g) & 8260 (Misc. Compounds) by P&T GCMS	1	Acetate Liner	<input type="checkbox"/>	9/4/2015 9:05	5 days		<input type="checkbox"/>	
1509192-017A	B-16, 6.5-7	Soil	SW8015B (TPH-d,mo w/ S.G. Clean-Up)	1	Acetate Liner	<input type="checkbox"/>	9/4/2015 9:08	5 days		<input type="checkbox"/>	
			TPH(g) & 8260 (Misc. Compounds) by P&T GCMS			<input type="checkbox"/>		5 days		<input type="checkbox"/>	

**NOTES:** - STLC and TCLP extractions require 2 days to complete; therefore, all TATs begin after the extraction is completed (i.e., One-day TAT yields results in 3 days from sample submission).  
- MAI assumes that all material present in the provided sampling container is considered part of the sample - MAI does not exclude any material from the sample prior to sample preparation unless requested in writing by the client.

1509192

## **CHAIN OF CUSTODY FORM**

**McCampbell Analytical, Inc**  
1534 Willow Pass Rd.  
Pittsburg, CA 94565  
877.252.9262  
925.252.9269 - fax

**Report To:** ERAS      **Bill To:** ERAS  
**Company:** ERAS Environmental, Inc.

**Email:** info@eras.biz  
**Fax:** 510-886-5399

Project #	14-003-05		
Project location	106-110 Hegenberger		
Sampler:	Andrew Savage	Miners	Type

Sample ID	Location/Fiel d Point Name	Sampling		# of Cont	Contain	Matrix			Preservative			
		Date	Time			Soil	Water	Waste	HCL	H2SO4	HNO3	ICE
B-10, 3.5-4		9/3/2015	9:02	1	Tube	X						X
B-10, 6-6.5		9/3/2015	9:25	1	Tube	X						X
B-10, 11.5-12		9/3/2015	9:29	1	Tube	X						X
B-11, 5.5-6		9/3/2015	10:27	1	Tube	X						X
B-11, 9-9.5		9/3/2015	10:30	1	Tube	X						X
B-11, 15.5-16		9/3/2015	10:33	1	Tube	X						X
B-12, 3.5-4		9/3/2015	11:29	1	Tube	X						X
B-12, 7-7.5		9/3/2015	11:32	1	Tube	X						X
B-12, 15.5-16		9/3/2015	11:28	1	Tube	X						X
B-13, 3.5-4		9/3/2015	13:56	1	Tube	X						X
B-13, 6.5-7		9/3/2015	14:00	1	Tube	X						X
B-14, 3.5-4		9/3/2015	12:50	1	Tube	X						X
B-14, 6.5-7		9/3/2015	12:53	1	Tube	X						X

3-8

ICE/t° Condition	GOOD CONDITION		APPROPRIATE		
	HEAD SPACE ABSENT DECHLORINATED IN LAB		Comments: Please PDF PRESERVED IN LAB		
Head space absent	VOAS	PRESERVATION	O&G	METALS	OTHER
Dechlorinated in lab					
Appropriate containers					
Preserved in Lab					
	VOA's	O&G	Metals	Other	
Preservation	pH<2				

RELINQUISHED BY:		RECEIVED BY:	
Relinquished by:	Date: 9-4-15	Time: 1055	Received by: Byle
Relinquished by:	Date: 9/4	Time: 1850	Received by: D
Relinquished by:	Date:	Time:	Received by:

## **CHAIN OF CUSTODY FORM**

**McCampbell Analytical, Inc**  
1534 Willow Pass Rd.  
Pittsburg, CA 94565  
877.252.9262  
925.252.9269 - fax

**Report To:** ERAS      **Bill To:** ERAS  
**Company:** ERAS Environmental, Inc.

**Telephone:** 510-247-9885    **Email:** [info@eras.biz](mailto:info@eras.biz)  
**Fax:** 510-886-5399

Project #	14-003-05		
Project location	106-110 Hegenberger	Samplers	Type
Sampler:	Andrew Savage		

RELINQUISHED BY:			RECEIVED BY:
Relinquished by: 	Date: 9-4-15	Time: 1655	Received by: 
Relinquished by: 	Date: 9/4	Time: 1850	Received by: 
Relinquished by: 	Date:	Time:	Received by: 

ICE/t <sub>b</sub> Condition		Comments: Please PDF
Head space absent		
Dechlorinated in lab		
Appropriate containers		
Preserved in Lab		
	VOA's    O&G    Metals    Other	
Preservation	pH<2	



## Sample Receipt Checklist

Client Name: **ERAS Environmental, Inc.**

Date and Time Received: **9/4/2015 6:50:00 PM**

Project Name: **14-003-05; 106-110 Hegenberger**

LogIn Reviewed by: **Maria Venegas**

WorkOrder No: **1509192**

Matrix: **Soil**

Carrier: **Benjamin Yslas (MAI Courier)**

### Chain of Custody (COC) Information

- |   |   |                             |
|---|---|-----------------------------|
| Chain of custody present?                               | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> |
| Chain of custody signed when relinquished and received? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> |
| Chain of custody agrees with sample labels?             | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> |
| Sample IDs noted by Client on COC?                      | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> |
| Date and Time of collection noted by Client on COC?     | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> |
| Sampler's name noted on COC?                            | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> |

### Sample Receipt Information

- |  |   |                             |  |
|--|---|-----------------------------|--|
| Custody seals intact on shipping container/cooler? | Yes <input type="checkbox"/>            | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/> |
| Shipping container/cooler in good condition?       | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> |  |
| Samples in proper containers/bottles?              | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> |  |
| Sample containers intact?                          | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> |  |
| Sufficient sample volume for indicated test?       | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> |  |

### Sample Preservation and Hold Time (HT) Information

- |   |   |                             |  |
|---|---|-----------------------------|--|
| All samples received within holding time?                   | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> |  |
| Sample/Temp Blank temperature                               | Temp: 3.8°C                             |                             | NA <input type="checkbox"/>            |
| Water - VOA vials have zero headspace / no bubbles?         | Yes <input type="checkbox"/>            | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/> |
| Sample labels checked for correct preservation?             | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> |  |
| pH acceptable upon receipt (Metal: <2; 522: <4; 218.7: >8)? | Yes <input type="checkbox"/>            | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/> |
| Samples Received on Ice?                                    | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> |  |

(Ice Type: **WET ICE** )

### UCMR3 Samples:

- |  |                              |                             |  |
|--|------------------------------|-----------------------------|--|
| Total Chlorine tested and acceptable upon receipt for EPA 522?                   | Yes <input type="checkbox"/> | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/> |
| Free Chlorine tested and acceptable upon receipt for EPA 218.7, 300.1, 537, 539? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/> |

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

Comments:



# McCampbell Analytical, Inc.

"When Quality Counts"

## Analytical Report

**WorkOrder:** 1509192 A

**Report Created for:** ERAS Environmental, Inc.

1533 B Street  
Hayward, CA 94541

**Project Contact:** Andrew Savage

**Project P.O.:**

**Project Name:** 14-003-05; 106-110 Hegenberger

**Project Received:** 09/04/2015

Analytical Report reviewed & approved for release on 09/16/2015 by:

Angela Rydelius,  
Laboratory Manager

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



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



## Glossary of Terms & Qualifier Definitions

**Client:** ERAS Environmental, Inc.  
**Project:** 14-003-05; 106-110 Hegenberger  
**WorkOrder:** 1509192

### Glossary Abbreviation

95% Interval	95% Confident Interval
DF	Dilution Factor
DI WET	(DISTLC) Waste Extraction Test using DI water
DISS	Dissolved (direct analysis of 0.45 µm filtered and acidified water sample)
DUP	Duplicate
EDL	Estimated Detection Limit
ITEF	International Toxicity Equivalence Factor
LCS	Laboratory Control Sample
MB	Method Blank
MB % Rec	% Recovery of Surrogate in Method Blank, if applicable
MDL	Method Detection Limit
ML	Minimum Level of Quantitation
MS	Matrix Spike
MSD	Matrix Spike Duplicate
N/A	Not Applicable
ND	Not detected at or above the indicated MDL or RL
NR	Data Not Reported due to matrix interference or insufficient sample amount.
PF	Prep Factor
RD	Relative Difference
RL	Reporting Limit (The RL is the lowest calibration standard in a multipoint calibration.)
RPD	Relative Percent Deviation
RRT	Relative Retention Time
SPK Val	Spike Value
SPKRef Val	Spike Reference Value
SPLP	Synthetic Precipitation Leachate Procedure
TCLP	Toxicity Characteristic Leachate Procedure
TEQ	Toxicity Equivalents
WET (STLC)	Waste Extraction Test (Soluble Threshold Limit Concentration)

### Analytical Qualifiers

S	spike recovery outside accepted recovery limits
c2	surrogate recovery outside of the control limits due to matrix interference.
e2	diesel range compounds are significant; no recognizable pattern
e4	gasoline range compounds are significant.
e7	oil range compounds are significant
e11/e8	stoddard solvent/mineral spirit (?); and/or kerosene/kerosene range/jet fuel range
e11	stoddard solvent/mineral spirit (?)



## Glossary of Terms & Qualifier Definitions

**Client:** ERAS Environmental, Inc.

**Project:** 14-003-05; 106-110 Hegenberger

**WorkOrder:** 1509192

### Quality Control Qualifiers

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



## Analytical Report

**Client:** ERAS Environmental, Inc.  
**Date Received:** 9/4/15 18:50  
**Date Prepared:** 9/15/15  
**Project:** 14-003-05; 106-110 Hegenberger

**WorkOrder:** 1509192  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** mg/kg

---

### Benzene, Toluene, Ethylbenzene & Xylenes (BTEX) by P&T and GC/MS

---

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B-12, 15.5-16	1509192-009A	Soil	09/03/2015 11:28	GC18	110208
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Benzene	ND		0.0050	1	09/15/2015 16:32
Ethylbenzene	ND		0.0050	1	09/15/2015 16:32
Toluene	ND		0.0050	1	09/15/2015 16:32
Xylenes, Total	ND		0.0050	1	09/15/2015 16:32
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Dibromofluoromethane	97		70-130		09/15/2015 16:32
Toluene-d8	89		70-130		09/15/2015 16:32
Ethylbenzene-d10	114		60-140		09/15/2015 16:32
Benzene-d6	112		60-140		09/15/2015 16:32

---

Analyst(s): KF



## Quality Control Report

<b>Client:</b>	ERAS Environmental, Inc.	<b>WorkOrder:</b>	1509192
<b>Date Prepared:</b>	9/14/15	<b>BatchID:</b>	110208
<b>Date Analyzed:</b>	9/15/15	<b>Extraction Method:</b>	SW5030B
<b>Instrument:</b>	GC16	<b>Analytical Method:</b>	SW8260B
<b>Matrix:</b>	Soil	<b>Unit:</b>	mg/Kg
<b>Project:</b>	14-003-05; 106-110 Hegenberger	<b>Sample ID:</b>	MB/LCS-110208 1509474-018AMS/MSD

### QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Acetone	ND	-	0.10	-	-	-	-
tert-Amyl methyl ether (TAME)	ND	-	0.0050	-	-	-	-
Benzene	ND	0.0503	0.0050	0.050	-	101	63-137
Bromobenzene	ND	-	0.0050	-	-	-	-
Bromoform	ND	-	0.0050	-	-	-	-
Bromochloromethane	ND	-	0.0050	-	-	-	-
Bromodichloromethane	ND	-	0.0050	-	-	-	-
Bromomethane	ND	-	0.0050	-	-	-	-
2-Butanone (MEK)	ND	-	0.020	-	-	-	-
t-Butyl alcohol (TBA)	ND	-	0.050	-	-	-	-
n-Butyl benzene	ND	-	0.0050	-	-	-	-
sec-Butyl benzene	ND	-	0.0050	-	-	-	-
tert-Butyl benzene	ND	-	0.0050	-	-	-	-
Carbon Disulfide	ND	-	0.0050	-	-	-	-
Carbon Tetrachloride	ND	-	0.0050	-	-	-	-
Chlorobenzene	ND	-	0.0050	-	-	-	-
Chloroethane	ND	-	0.0050	-	-	-	-
Chloroform	ND	-	0.0050	-	-	-	-
Chloromethane	ND	-	0.0050	-	-	-	-
2-Chlorotoluene	ND	-	0.0050	-	-	-	-
4-Chlorotoluene	ND	-	0.0050	-	-	-	-
Dibromochloromethane	ND	-	0.0050	-	-	-	-
1,2-Dibromo-3-chloropropane	ND	-	0.0040	-	-	-	-
1,2-Dibromoethane (EDB)	ND	-	0.0040	-	-	-	-
Dibromomethane	ND	-	0.0050	-	-	-	-
1,2-Dichlorobenzene	ND	-	0.0050	-	-	-	-
1,3-Dichlorobenzene	ND	-	0.0050	-	-	-	-
1,4-Dichlorobenzene	ND	-	0.0050	-	-	-	-
Dichlorodifluoromethane	ND	-	0.0050	-	-	-	-
1,1-Dichloroethane	ND	-	0.0050	-	-	-	-
1,2-Dichloroethane (1,2-DCA)	ND	-	0.0040	-	-	-	-
1,1-Dichloroethene	ND	-	0.0050	-	-	-	-
cis-1,2-Dichloroethene	ND	-	0.0050	-	-	-	-
trans-1,2-Dichloroethene	ND	-	0.0050	-	-	-	-
1,2-Dichloropropane	ND	-	0.0050	-	-	-	-
1,3-Dichloropropane	ND	-	0.0050	-	-	-	-
2,2-Dichloropropane	ND	-	0.0050	-	-	-	-
1,1-Dichloropropene	ND	-	0.0050	-	-	-	-

(Cont.)

CDPH ELAP 1644 ♦ NELAP 4033ORELAP

 QA/QC Officer



## Quality Control Report

<b>Client:</b>	ERAS Environmental, Inc.	<b>WorkOrder:</b>	1509192
<b>Date Prepared:</b>	9/14/15	<b>BatchID:</b>	110208
<b>Date Analyzed:</b>	9/15/15	<b>Extraction Method:</b>	SW5030B
<b>Instrument:</b>	GC16	<b>Analytical Method:</b>	SW8260B
<b>Matrix:</b>	Soil	<b>Unit:</b>	mg/Kg
<b>Project:</b>	14-003-05; 106-110 Hegenberger	<b>Sample ID:</b>	MB/LCS-110208 1509474-018AMS/MSD

### QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
cis-1,3-Dichloropropene	ND	-	0.0050	-	-	-	-
trans-1,3-Dichloropropene	ND	-	0.0050	-	-	-	-
Diisopropyl ether (DIPE)	ND	-	0.0050	-	-	-	-
Ethylbenzene	ND	-	0.0050	-	-	-	-
Ethyl tert-butyl ether (ETBE)	ND	-	0.0050	-	-	-	-
Freon 113	ND	-	0.0050	-	-	-	-
Hexachlorobutadiene	ND	-	0.0050	-	-	-	-
Hexachloroethane	ND	-	0.0050	-	-	-	-
2-Hexanone	ND	-	0.0050	-	-	-	-
Isopropylbenzene	ND	-	0.0050	-	-	-	-
4-Isopropyl toluene	ND	-	0.0050	-	-	-	-
Methyl-t-butyl ether (MTBE)	ND	-	0.0050	-	-	-	-
Methylene chloride	ND	-	0.0050	-	-	-	-
4-Methyl-2-pentanone (MIBK)	ND	-	0.0050	-	-	-	-
Naphthalene	ND	-	0.0050	-	-	-	-
n-Propyl benzene	ND	-	0.0050	-	-	-	-
Styrene	ND	-	0.0050	-	-	-	-
1,1,1,2-Tetrachloroethane	ND	-	0.0050	-	-	-	-
1,1,2,2-Tetrachloroethane	ND	-	0.0050	-	-	-	-
Tetrachloroethene	ND	-	0.0050	-	-	-	-
Toluene	ND	0.0524	0.0050	0.050	-	105	76-130
1,2,3-Trichlorobenzene	ND	-	0.0050	-	-	-	-
1,2,4-Trichlorobenzene	ND	-	0.0050	-	-	-	-
1,1,1-Trichloroethane	ND	-	0.0050	-	-	-	-
1,1,2-Trichloroethane	ND	-	0.0050	-	-	-	-
Trichloroethene	ND	-	0.0050	-	-	-	-
Trichlorofluoromethane	ND	-	0.0050	-	-	-	-
1,2,3-Trichloropropane	ND	-	0.0050	-	-	-	-
1,2,4-Trimethylbenzene	ND	-	0.0050	-	-	-	-
1,3,5-Trimethylbenzene	ND	-	0.0050	-	-	-	-
Vinyl Chloride	ND	-	0.0050	-	-	-	-
Xylenes, Total	ND	-	0.0050	-	-	-	-

(Cont.)

CDPH ELAP 1644 ♦ NELAP 4033ORELAP

 QA/QC Officer



## Quality Control Report

<b>Client:</b>	ERAS Environmental, Inc.	<b>WorkOrder:</b>	1509192
<b>Date Prepared:</b>	9/14/15	<b>BatchID:</b>	110208
<b>Date Analyzed:</b>	9/15/15	<b>Extraction Method:</b>	SW5030B
<b>Instrument:</b>	GC16	<b>Analytical Method:</b>	SW8260B
<b>Matrix:</b>	Soil	<b>Unit:</b>	mg/Kg
<b>Project:</b>	14-003-05; 106-110 Hegenberger	<b>Sample ID:</b>	MB/LCS-110208 1509474-018AMS/MSD

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### QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
<b>Surrogate Recovery</b>							
Dibromofluoromethane	0.122	0.127		0.12	98	102	70-130
Toluene-d8	0.131	0.130		0.12	105	104	70-130
4-BFB	0.0118	-		0.0125	94	-	-
Benzene-d6	0.0962	0.0949		0.10	96	95	60-140
Ethylbenzene-d10	0.0986	0.104		0.10	99	104	60-140
1,2-DCB-d4	0.0783	-		0.1	78	-	-
<b>Surrogate Recovery</b>							
Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits
Benzene	0.0426	0.0436	0.050	ND	85	87	70-130
Toluene	0.0400	0.0413	0.050	ND	80	83	70-130
Dibromofluoromethane	0.122	0.123	0.12		98	99	70-130
Toluene-d8	0.112	0.112	0.12		89	90	70-130
Benzene-d6	0.102	0.103	0.10		101	103	60-140
Ethylbenzene-d10	0.106	0.108	0.10		106	108	60-140



# CHAIN-OF-CUSTODY RECORD

Page 1 of 1

WorkOrder: 1509192 A ClientCode: ERAS

WaterTrax  WriteOn  EDF  Excel  Fax  Email  HardCopy  ThirdParty  J-flag

## Report to:

Andrew Savage  
ERAS Environmental, Inc.  
1533 B Street  
Hayward, CA 94541  
(510) 247-9885 FAX: (510) 886-5399

Email: info@eras.biz; andrew@eras.biz  
cc/3rd Party:  
PO:  
ProjectNo: 14-003-05; 106-110 Hegenberger

## Bill to:

Kasey Cordoza  
ERAS Environmental, Inc.  
1533 B Street  
Hayward, CA 94541

Requested TAT: 2 days;

Date Received: 09/04/2015  
Date Add-On: 09/15/2015  
Date Printed: 09/15/2015

Lab ID	Client ID	Matrix	Collection Date	Hold	Requested Tests (See legend below)											
					1	2	3	4	5	6	7	8	9	10	11	12
1509192-009	B-12, 15.5-16	Soil	9/3/2015 11:28	<input type="checkbox"/>	A											

Test Legend:

1	8260B_BTEX_S
5	
9	

2	
6	
10	

3	
7	
11	

4	
8	
12	

Prepared by: Maria Venegas

Add-On Prepared By: Maria Venegas

Comments: BTEX by 8260 added to sample 009 9/15/15 2day TAT

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.



## WORK ORDER SUMMARY

**Client Name:** ERAS ENVIRONMENTAL, INC.

**QC Level:** LEVEL 2

**Work Order:** 1509192

**Project:** 14-003-05; 106-110 Hegenberger

**Client Contact:** Andrew Savage

**Date Received:** 9/4/2015

**Comments:** BTEX by 8260 added to sample 009 9/15/15 2day TAT

**Contact's Email:** info@eras.biz; andrew@eras.biz

**Date Add-On:** 9/15/2015

Lab ID	Client ID	Matrix	Test Name	Containers /Composites	Bottle & Preservative	Collection Date & Time	TAT	Sediment Content	Hold	SubOut
1509192-009A	B-12, 15.5-16	Soil	SW8260B (BTEX)	1	Acetate Liner	9/3/2015 11:28	2 days		<input type="checkbox"/>	

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

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

1509192

## **CHAIN OF CUSTODY FORM**

**McCampbell Analytical, Inc**  
1534 Willow Pass Rd.  
Pittsburg, CA 94565  
877.252.9262  
925.252.9269 - fax

**Report To:** ERAS      **Bill To:** ERAS  
**Company:** ERAS Environmental, Inc.

**Email:** info@eras.biz  
**Fax:** 510-886-5399

**Project #** 14-003-05      **Project location** 106-110 Hegenberger  
**Sampler:** Andrew Savage

Sample ID	Location/Fiel d Point Name	Sampling		# of Cont	Contain	Matrix			Preservative			
		Date	Time			Soil	Water	Waste	HCl	H2SO4	HNO3	ICE
B-10, 3.5-4		9/3/2015	9:02	1	Tube	X						X
B-10, 6-6.5		9/3/2015	9:25	1	Tube	X						X
B-10, 11.5-12		9/3/2015	9:29	1	Tube	X						X
B-11, 5.5-6		9/3/2015	10:27	1	Tube	X						X
B-11, 9-9.5		9/3/2015	10:30	1	Tube	X						X
B-11, 15.5-16		9/3/2015	10:33	1	Tube	X						X
B-12, 3.5-4		9/3/2015	11:29	1	Tube	X						X
B-12, 7-7.5		9/3/2015	11:32	1	Tube	X						X
B-12, 15.5-16		9/3/2015	11:28	1	Tube	X						X
B-13, 3.5-4		9/3/2015	13:56	1	Tube	X						X
B-13, 6.5-7		9/3/2015	14:00	1	Tube	X						X
B-14, 3.5-4		9/3/2015	12:50	1	Tube	X						X
B-14, 6.5-7		9/3/2015	12:53	1	Tube	X						X

GOOD CONDITION		APPROPRIATE		
ICE/t° Condition	HEAD SPACE ABSENT DECHLORINATED IN LAB	Comments: Please PDFS PRESERVED IN LAB		
Head space absent	VOAS	O&G	METALS	OTHER
Dechlorinated in lab	PRESERVATION			
Appropriate containers				
Preserved in Lab				
	VOA's O&G Metals Other			
Preservation	pH<2			

RELINQUISHED BY:			RECEIVED BY:
Relinquished by: 	Date: 9-4-15	Time: 1055	Received by: 
Relinquished by: 	Date: 9/4	Time: 1850	Received by: 
Relinquished by: 	Date:	Time:	Received by: 

## **Appendix F**

### **Analytical Results – Groundwater**



# McCampbell Analytical, Inc.

"When Quality Counts"

## Analytical Report

**WorkOrder:** 1505216

**Report Created for:** ERAS Environmental, Inc.

1533 B Street  
Hayward, CA 94541

**Project Contact:** Andrew Savage

**Project P.O.:**

**Project Name:** #14-003-01; 106-110 Hegenberger

**Project Received:** 05/06/2015

Analytical Report reviewed & approved for release on 05/12/2015 by:

Angela Rydelius,  
Laboratory Manager

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The analytical results relate only to the items tested. Results reported conform to the most current NELAP standards, where applicable, unless otherwise stated in the case narrative.*





## Glossary of Terms & Qualifier Definitions

**Client:** ERAS Environmental, Inc.  
**Project:** #14-003-01; 106-110 Hegenberger  
**WorkOrder:** 1505216

### Glossary Abbreviation

95% Interval	95% Confident Interval
DF	Dilution Factor
DI WET	(DISTLC) Waste Extraction Test using DI water
DISS	Dissolved (direct analysis of 0.45 µm filtered and acidified water sample)
DUP	Duplicate
EDL	Estimated Detection Limit
ITEF	International Toxicity Equivalence Factor
LCS	Laboratory Control Sample
MB	Method Blank
MB % Rec	% Recovery of Surrogate in Method Blank, if applicable
MDL	Method Detection Limit
ML	Minimum Level of Quantitation
MS	Matrix Spike
MSD	Matrix Spike Duplicate
N/A	Not Applicable
ND	Not detected at or above the indicated MDL or RL
NR	Data Not Reported due to matrix interference or insufficient sample amount.
PF	Prep Factor
RD	Relative Difference
RL	Reporting Limit (The RL is the lowest calibration standard in a multipoint calibration.)
RPD	Relative Percent Deviation
RRT	Relative Retention Time
SPK Val	Spike Value
SPKRef Val	Spike Reference Value
SPLP	Synthetic Precipitation Leachate Procedure
TCLP	Toxicity Characteristic Leachate Procedure
TEQ	Toxicity Equivalents
WET (STLC)	Waste Extraction Test (Soluble Threshold Limit Concentration)

### Analytical Qualifiers

e2	diesel range compounds are significant; no recognizable pattern
e4	gasoline range compounds are significant.
e7	oil range compounds are significant



## Analytical Report

**Client:** ERAS Environmental, Inc.

**WorkOrder:** 1505216

**Project:** #14-003-01; 106-110 Hegenberger

**Extraction Method:** SW5030B

**Date Received:** 5/6/15 19:11

**Analytical Method:** SW8260B

**Date Prepared:** 5/8/15-5/12/15

**Unit:**  $\mu\text{g/L}$

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

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-1	1505216-001C	Water	05/05/2015 10:25	GC16	104618

<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH(g)	ND	50	1	05/08/2015 13:34
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
Dibromofluoromethane	96	70-130		05/08/2015 13:34

Analyst(s): KF

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-2	1505216-002C	Water	05/05/2015 11:15	GC16	104618

<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH(g)	1400	1000	20	05/08/2015 14:17
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
Dibromofluoromethane	97	70-130		05/08/2015 14:17

Analyst(s): KF

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-3	1505216-003C	Water	05/05/2015 16:04	GC16	104618

<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH(g)	2300	1200	25	05/08/2015 15:00
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
Dibromofluoromethane	97	70-130		05/08/2015 15:00

Analyst(s): KF

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-4	1505216-004C	Water	05/05/2015 13:39	GC16	104739

<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH(g)	ND	50	1	05/12/2015 12:06
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
Dibromofluoromethane	97	70-130		05/12/2015 12:06

Analyst(s): KF

(Cont.)

CDPH ELAP 1644 ♦ NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



## Analytical Report

**Client:** ERAS Environmental, Inc.

**WorkOrder:** 1505216

**Project:** #14-003-01; 106-110 Hegenberger

**Extraction Method:** SW5030B

**Date Received:** 5/6/15 19:11

**Analytical Method:** SW8260B

**Date Prepared:** 5/8/15-5/12/15

**Unit:** µg/L

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

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-4 Shallow	1505216-005C	Water	05/05/2015 12:45	GC16	104739

<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH(g)	ND	50	1	05/12/2015 12:48
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
Dibromofluoromethane	97	70-130		05/12/2015 12:48

Analyst(s): KF

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-5	1505216-006C	Water	05/05/2015 15:19	GC16	104739

<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH(g)	ND	50	1	05/12/2015 13:31
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
Dibromofluoromethane	98	70-130		05/12/2015 13:31

Analyst(s): KF

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-6	1505216-007C	Water	05/05/2015 15:41	GC16	104739

<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH(g)	ND	50	1	05/12/2015 14:14
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
Dibromofluoromethane	98	70-130		05/12/2015 14:14

Analyst(s): KBO



## Analytical Report

**Client:** ERAS Environmental, Inc.  
**Project:** #14-003-01; 106-110 Hegenberger  
**Date Received:** 5/6/15 19:11  
**Date Prepared:** 5/8/15-5/12/15

**WorkOrder:** 1505216  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** µg/L

### Volatile Organics by P&T and GC/MS

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-1	1505216-001C	Water	05/05/2015 10:25	GC16	104618

Analyses	Result	RL	DF	Date Analyzed
Benzene	ND	0.50	1	05/08/2015 13:34
Ethylbenzene	ND	0.50	1	05/08/2015 13:34
Methyl-t-butyl ether (MTBE)	0.50	0.50	1	05/08/2015 13:34
Naphthalene	ND	0.50	1	05/08/2015 13:34
Toluene	ND	0.50	1	05/08/2015 13:34
Xylenes, Total	ND	0.50	1	05/08/2015 13:34
Surrogates	REC (%)	Limits		
Dibromofluoromethane	87	73-131		05/08/2015 13:34
Toluene-d8	87	72-117		05/08/2015 13:34
4-BFB	95	74-116		05/08/2015 13:34

Analyst(s): KF

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-2	1505216-002C	Water	05/05/2015 11:15	GC16	104618

Analyses	Result	RL	DF	Date Analyzed
Benzene	370	10	20	05/08/2015 14:17
Ethylbenzene	73	10	20	05/08/2015 14:17
Methyl-t-butyl ether (MTBE)	ND	10	20	05/08/2015 14:17
Naphthalene	13	10	20	05/08/2015 14:17
Toluene	ND	10	20	05/08/2015 14:17
Xylenes, Total	22	10	20	05/08/2015 14:17
Surrogates	REC (%)	Limits		
Dibromofluoromethane	86	73-131		05/08/2015 14:17
Toluene-d8	88	72-117		05/08/2015 14:17
4-BFB	86	74-116		05/08/2015 14:17

Analyst(s): KF

(Cont.)



## Analytical Report

**Client:** ERAS Environmental, Inc.  
**Project:** #14-003-01; 106-110 Hegenberger  
**Date Received:** 5/6/15 19:11  
**Date Prepared:** 5/8/15-5/12/15

**WorkOrder:** 1505216  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** µg/L

### Volatile Organics by P&T and GC/MS

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-3	1505216-003C	Water	05/05/2015 16:04	GC16	104618
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Benzene	430		12	25	05/08/2015 15:00
Ethylbenzene	210		12	25	05/08/2015 15:00
Methyl-t-butyl ether (MTBE)	ND		12	25	05/08/2015 15:00
Naphthalene	29		12	25	05/08/2015 15:00
Toluene	ND		12	25	05/08/2015 15:00
Xylenes, Total	150		12	25	05/08/2015 15:00
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Dibromofluoromethane	85		73-131		05/08/2015 15:00
Toluene-d8	88		72-117		05/08/2015 15:00
4-BFB	88		74-116		05/08/2015 15:00

Analyst(s): KF

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-4	1505216-004C	Water	05/05/2015 13:39	GC16	104739
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Benzene	ND		0.50	1	05/12/2015 12:06
Ethylbenzene	ND		0.50	1	05/12/2015 12:06
Methyl-t-butyl ether (MTBE)	ND		0.50	1	05/12/2015 12:06
Naphthalene	ND		0.50	1	05/12/2015 12:06
Toluene	ND		0.50	1	05/12/2015 12:06
Xylenes, Total	ND		0.50	1	05/12/2015 12:06
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Dibromofluoromethane	86		73-131		05/12/2015 12:06
Toluene-d8	88		72-117		05/12/2015 12:06
4-BFB	87		74-116		05/12/2015 12:06

Analyst(s): KF

(Cont.)



## Analytical Report

**Client:** ERAS Environmental, Inc.  
**Project:** #14-003-01; 106-110 Hegenberger  
**Date Received:** 5/6/15 19:11  
**Date Prepared:** 5/8/15-5/12/15

**WorkOrder:** 1505216  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** µg/L

### Volatile Organics by P&T and GC/MS

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-4 Shallow	1505216-005C	Water	05/05/2015 12:45	GC16	104739
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Benzene	ND		0.50	1	05/12/2015 12:48
Ethylbenzene	ND		0.50	1	05/12/2015 12:48
Methyl-t-butyl ether (MTBE)	ND		0.50	1	05/12/2015 12:48
Naphthalene	ND		0.50	1	05/12/2015 12:48
Toluene	ND		0.50	1	05/12/2015 12:48
Xylenes, Total	ND		0.50	1	05/12/2015 12:48
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Dibromofluoromethane	85		73-131		05/12/2015 12:48
Toluene-d8	88		72-117		05/12/2015 12:48
4-BFB	86		74-116		05/12/2015 12:48

Analyst(s): KF

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-5	1505216-006C	Water	05/05/2015 15:19	GC16	104739
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Benzene	ND		0.50	1	05/12/2015 13:31
Ethylbenzene	ND		0.50	1	05/12/2015 13:31
Methyl-t-butyl ether (MTBE)	ND		0.50	1	05/12/2015 13:31
Naphthalene	ND		0.50	1	05/12/2015 13:31
Toluene	ND		0.50	1	05/12/2015 13:31
Xylenes, Total	ND		0.50	1	05/12/2015 13:31
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Dibromofluoromethane	86		73-131		05/12/2015 13:31
Toluene-d8	86		72-117		05/12/2015 13:31
4-BFB	87		74-116		05/12/2015 13:31

Analyst(s): KF

(Cont.)



## Analytical Report

**Client:** ERAS Environmental, Inc.  
**Project:** #14-003-01; 106-110 Hegenberger  
**Date Received:** 5/6/15 19:11  
**Date Prepared:** 5/8/15-5/12/15

**WorkOrder:** 1505216  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** µg/L

### Volatile Organics by P&T and GC/MS

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-6	1505216-007C	Water	05/05/2015 15:41	GC16	104739
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Benzene	ND		0.50	1	05/12/2015 14:14
Ethylbenzene	ND		0.50	1	05/12/2015 14:14
Methyl-t-butyl ether (MTBE)	ND		0.50	1	05/12/2015 14:14
Naphthalene	ND		0.50	1	05/12/2015 14:14
Toluene	ND		0.50	1	05/12/2015 14:14
Xylenes, Total	ND		0.50	1	05/12/2015 14:14
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Dibromofluoromethane	86		73-131		05/12/2015 14:14
Toluene-d8	88		72-117		05/12/2015 14:14
4-BFB	88		74-116		05/12/2015 14:14

Analyst(s): KBO



## Analytical Report

**Client:** ERAS Environmental, Inc.

**Project:** #14-003-01; 106-110 Hegenberger

**Date Received:** 5/6/15 19:11

**Date Prepared:** 5/6/15

**WorkOrder:** 1505216

**Extraction Method:** E200.8

**Analytical Method:** E200.8

**Unit:** µg/L

### LUFT 5 Metals

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-1	1505216-001B	Water	05/05/2015 10:25	ICP-MS1	104527

<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Cadmium	ND	0.25	1	05/07/2015 15:49
Chromium	ND	0.50	1	05/07/2015 15:49
Lead	ND	0.50	1	05/07/2015 15:49
Nickel	<b>3.9</b>	0.50	1	05/07/2015 15:49
Zinc	ND	15	1	05/07/2015 15:49
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
Terbium	105	70-130		05/07/2015 15:49

Analyst(s): DVH

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-2	1505216-002B	Water	05/05/2015 11:15	ICP-MS2	104527

<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Cadmium	ND	0.25	1	05/08/2015 17:06
Chromium	ND	0.50	1	05/08/2015 17:06
Lead	ND	0.50	1	05/08/2015 17:06
Nickel	<b>5.2</b>	0.50	1	05/08/2015 17:06
Zinc	ND	15	1	05/08/2015 17:06
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
Terbium	100	70-130		05/08/2015 17:06

Analyst(s): DVH

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-3	1505216-003B	Water	05/05/2015 16:04	ICP-MS2	104527

<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Cadmium	ND	0.25	1	05/08/2015 17:12
Chromium	<b>0.70</b>	0.50	1	05/08/2015 17:12
Lead	<b>0.53</b>	0.50	1	05/08/2015 17:12
Nickel	<b>30</b>	0.50	1	05/08/2015 17:12
Zinc	ND	15	1	05/08/2015 17:12
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
Terbium	101	70-130		05/08/2015 17:12

Analyst(s): DVH

(Cont.)



## Analytical Report

**Client:** ERAS Environmental, Inc.      **WorkOrder:** 1505216  
**Project:** #14-003-01; 106-110 Hegenberger      **Extraction Method:** E200.8  
**Date Received:** 5/6/15 19:11      **Analytical Method:** E200.8  
**Date Prepared:** 5/6/15      **Unit:** µg/L

### LUFT 5 Metals

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-4	1505216-004B	Water	05/05/2015 13:39	ICP-MS2	104527
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Cadmium	ND		0.25	1	05/08/2015 17:19
Chromium	ND		0.50	1	05/08/2015 17:19
Lead	ND		0.50	1	05/08/2015 17:19
Nickel	<b>2.3</b>		0.50	1	05/08/2015 17:19
Zinc	ND		15	1	05/08/2015 17:19
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Terbium	97		70-130		05/08/2015 17:19
<u>Analyst(s):</u>	DVH				

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-4 Shallow	1505216-005B	Water	05/05/2015 12:45	ICP-MS1	104527
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Cadmium	ND		0.25	1	05/07/2015 15:55
Chromium	<b>0.83</b>		0.50	1	05/07/2015 15:55
Lead	<b>1.5</b>		0.50	1	05/07/2015 15:55
Nickel	<b>1.3</b>		0.50	1	05/07/2015 15:55
Zinc	ND		15	1	05/07/2015 15:55
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Terbium	100		70-130		05/07/2015 15:55
<u>Analyst(s):</u>	DVH				

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-5	1505216-006B	Water	05/05/2015 15:19	ICP-MS1	104527
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Cadmium	ND		0.25	1	05/07/2015 16:02
Chromium	ND		0.50	1	05/07/2015 16:02
Lead	ND		0.50	1	05/07/2015 16:02
Nickel	<b>1.8</b>		0.50	1	05/07/2015 16:02
Zinc	ND		15	1	05/07/2015 16:02
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Terbium	101		70-130		05/07/2015 16:02
<u>Analyst(s):</u>	DVH				

(Cont.)



## Analytical Report

**Client:** ERAS Environmental, Inc.

**Project:** #14-003-01; 106-110 Hegenberger

**Date Received:** 5/6/15 19:11

**Date Prepared:** 5/6/15

**WorkOrder:** 1505216

**Extraction Method:** E200.8

**Analytical Method:** E200.8

**Unit:** µg/L

### LUFT 5 Metals

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-6	1505216-007B	Water	05/05/2015 15:41	ICP-MS2	104527
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Cadmium	ND		0.25	1	05/08/2015 17:25
Chromium	ND		0.50	1	05/08/2015 17:25
Lead	ND		0.50	1	05/08/2015 17:25
Nickel	<b>5.3</b>		0.50	1	05/08/2015 17:25
Zinc	ND		15	1	05/08/2015 17:25
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Terbium	99		70-130		05/08/2015 17:25
<u>Analyst(s):</u>	DVH				



## Analytical Report

**Client:** ERAS Environmental, Inc.  
**Project:** #14-003-01; 106-110 Hegenberger  
**Date Received:** 5/6/15 19:11  
**Date Prepared:** 5/6/15

**WorkOrder:** 1505216  
**Extraction Method:** SW3510C/3630C  
**Analytical Method:** SW8015B  
**Unit:** µg/L

### Total Extractable Petroleum Hydrocarbons w/ SG Clean-Up

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-1	1505216-001A	Water	05/05/2015 10:25	GC11B	104490

<u>Analyses</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	ND	50	1	05/07/2015 14:17
TPH-Motor Oil (C18-C36)	ND	250	1	05/07/2015 14:17

<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>	
C9	108	70-130	05/07/2015 14:17

Analyst(s): TK

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-2	1505216-002A	Water	05/05/2015 11:15	GC11B	104490

<u>Analyses</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	330	50	1	05/07/2015 16:03
TPH-Motor Oil (C18-C36)	ND	250	1	05/07/2015 16:03

<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>	
C9	110	70-130	05/07/2015 16:03

Analyst(s): TK      Analytical Comments: e4,e2

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-3	1505216-003A	Water	05/05/2015 16:04	GC11B	104490

<u>Analyses</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	510	50	1	05/07/2015 17:11
TPH-Motor Oil (C18-C36)	ND	250	1	05/07/2015 17:11

<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>	
C9	107	70-130	05/07/2015 17:11

Analyst(s): TK      Analytical Comments: e4,e2

(Cont.)



## Analytical Report

**Client:** ERAS Environmental, Inc.  
**Project:** #14-003-01; 106-110 Hegenberger  
**Date Received:** 5/6/15 19:11  
**Date Prepared:** 5/6/15

**WorkOrder:** 1505216  
**Extraction Method:** SW3510C/3630C  
**Analytical Method:** SW8015B  
**Unit:** µg/L

### Total Extractable Petroleum Hydrocarbons w/ SG Clean-Up

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-4	1505216-004A	Water	05/05/2015 13:39	GC2A	104490

<u>Analyses</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	ND	50	1	05/08/2015 01:57
TPH-Motor Oil (C18-C36)	ND	250	1	05/08/2015 01:57

<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>	
C9	114	70-130	05/08/2015 01:57

Analyst(s): TK

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-4 Shallow	1505216-005A	Water	05/05/2015 12:45	GC2A	104490

<u>Analyses</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	200	50	1	05/08/2015 05:42
TPH-Motor Oil (C18-C36)	1200	250	1	05/08/2015 05:42

<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>	
C9	117	70-130	05/08/2015 05:42

Analyst(s): TK      Analytical Comments: e7,e2

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-5	1505216-006A	Water	05/05/2015 15:19	GC2A	104490

<u>Analyses</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	ND	50	1	05/08/2015 03:13
TPH-Motor Oil (C18-C36)	ND	250	1	05/08/2015 03:13

<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>	
C9	112	70-130	05/08/2015 03:13

Analyst(s): TK

(Cont.)



## Analytical Report

**Client:** ERAS Environmental, Inc.  
**Project:** #14-003-01; 106-110 Hegenberger  
**Date Received:** 5/6/15 19:11  
**Date Prepared:** 5/6/15

**WorkOrder:** 1505216  
**Extraction Method:** SW3510C/3630C  
**Analytical Method:** SW8015B  
**Unit:** µg/L

### Total Extractable Petroleum Hydrocarbons w/ SG Clean-Up

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-6	1505216-007A	Water	05/05/2015 15:41	GC2A	104490
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	ND		50	1	05/08/2015 04:28
TPH-Motor Oil (C18-C36)	ND		250	1	05/08/2015 04:28
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
C9	117		70-130		05/08/2015 04:28
<u>Analyst(s):</u>	TK				



## Quality Control Report

**Client:** ERAS Environmental, Inc.      **WorkOrder:** 1505216  
**Date Prepared:** 5/8/15      **BatchID:** 104618  
**Date Analyzed:** 5/7/15      **Extraction Method:** SW5030B  
**Instrument:** GC16      **Analytical Method:** SW8260B  
**Matrix:** Water      **Unit:** µg/L  
**Project:** #14-003-01; 106-110 Hegenberger      **Sample ID:** MB/LCS-104618

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### QC Summary Report for TPH(g)

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Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
VOC (C6-C12)	ND	508	50	644	-	79	75-105
<b>Surrogate Recovery</b>							
Dibromofluoromethane	24.4	24.7		25	98	99	70-130

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(Cont.)

CDPH ELAP 1644 ♦ NELAP 4033ORELAP

 QA/QC Officer

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## Quality Control Report

**Client:** ERAS Environmental, Inc.      **WorkOrder:** 1505216  
**Date Prepared:** 5/12/15      **BatchID:** 104739  
**Date Analyzed:** 5/12/15      **Extraction Method:** SW5030B  
**Instrument:** GC16      **Analytical Method:** SW8260B  
**Matrix:** Water      **Unit:** µg/L  
**Project:** #14-003-01; 106-110 Hegenberger      **Sample ID:** MB/LCS-104739

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### QC Summary Report for TPH(g)

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Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
VOC (C6-C12)	ND	490	50	644	-	76	75-105
<b>Surrogate Recovery</b>							
Dibromofluoromethane	24.4	24.6		25	97	98	70-130

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## Quality Control Report

<b>Client:</b>	ERAS Environmental, Inc.	<b>WorkOrder:</b>	1505216
<b>Date Prepared:</b>	5/8/15	<b>BatchID:</b>	104618
<b>Date Analyzed:</b>	5/7/15 - 5/8/15	<b>Extraction Method:</b>	SW5030B
<b>Instrument:</b>	GC16	<b>Analytical Method:</b>	SW8260B
<b>Matrix:</b>	Water	<b>Unit:</b>	µg/L
<b>Project:</b>	#14-003-01; 106-110 Hegenberger	<b>Sample ID:</b>	MB/LCS-104618 1505216-001CMS/MSD

### QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Acetone	ND	-	10	-	-	-	-
tert-Amyl methyl ether (TAME)	ND	8.21	0.50	10	-	82	54-140
Benzene	ND	8.23	0.50	10	-	82	47-158
Bromobenzene	ND	-	0.50	-	-	-	-
Bromochloromethane	ND	-	0.50	-	-	-	-
Bromodichloromethane	ND	-	0.50	-	-	-	-
Bromoform	ND	-	0.50	-	-	-	-
Bromomethane	ND	-	0.50	-	-	-	-
2-Butanone (MEK)	ND	-	2.0	-	-	-	-
t-Butyl alcohol (TBA)	ND	27.1	2.0	40	-	68	42-140
n-Butyl benzene	ND	-	0.50	-	-	-	-
sec-Butyl benzene	ND	-	0.50	-	-	-	-
tert-Butyl benzene	ND	-	0.50	-	-	-	-
Carbon Disulfide	ND	-	0.50	-	-	-	-
Carbon Tetrachloride	ND	-	0.50	-	-	-	-
Chlorobenzene	ND	8.68	0.50	10	-	87	43-157
Chloroethane	ND	-	0.50	-	-	-	-
Chloroform	ND	-	0.50	-	-	-	-
Chloromethane	ND	-	0.50	-	-	-	-
2-Chlorotoluene	ND	-	0.50	-	-	-	-
4-Chlorotoluene	ND	-	0.50	-	-	-	-
Dibromochloromethane	ND	-	0.50	-	-	-	-
1,2-Dibromo-3-chloropropane	ND	-	0.20	-	-	-	-
1,2-Dibromoethane (EDB)	ND	8.09	0.50	10	-	81	44-155
Dibromomethane	ND	-	0.50	-	-	-	-
1,2-Dichlorobenzene	ND	-	0.50	-	-	-	-
1,3-Dichlorobenzene	ND	-	0.50	-	-	-	-
1,4-Dichlorobenzene	ND	-	0.50	-	-	-	-
Dichlorodifluoromethane	ND	-	0.50	-	-	-	-
1,1-Dichloroethane	ND	-	0.50	-	-	-	-
1,2-Dichloroethane (1,2-DCA)	ND	7.96	0.50	10	-	80	66-125
1,1-Dichloroethene	ND	7.88	0.50	10	-	79	47-149
cis-1,2-Dichloroethene	ND	-	0.50	-	-	-	-
trans-1,2-Dichloroethene	ND	-	0.50	-	-	-	-
1,2-Dichloropropane	ND	-	0.50	-	-	-	-
1,3-Dichloropropane	ND	-	0.50	-	-	-	-
2,2-Dichloropropane	ND	-	0.50	-	-	-	-
1,1-Dichloropropene	ND	-	0.50	-	-	-	-
cis-1,3-Dichloropropene	ND	-	0.50	-	-	-	-
trans-1,3-Dichloropropene	ND	-	0.50	-	-	-	-

(Cont.)



## Quality Control Report

<b>Client:</b>	ERAS Environmental, Inc.	<b>WorkOrder:</b>	1505216
<b>Date Prepared:</b>	5/8/15	<b>BatchID:</b>	104618
<b>Date Analyzed:</b>	5/7/15 - 5/8/15	<b>Extraction Method:</b>	SW5030B
<b>Instrument:</b>	GC16	<b>Analytical Method:</b>	SW8260B
<b>Matrix:</b>	Water	<b>Unit:</b>	µg/L
<b>Project:</b>	#14-003-01; 106-110 Hegenberger	<b>Sample ID:</b>	MB/LCS-104618 1505216-001CMS/MSD

### QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Diisopropyl ether (DIPE)	ND	8.43	0.50	10	-	84	57-136
Ethylbenzene	ND	-	0.50	-	-	-	-
Ethyl tert-butyl ether (ETBE)	ND	8.46	0.50	10	-	85	55-137
Freon 113	ND	-	0.50	-	-	-	-
Hexachlorobutadiene	ND	-	0.50	-	-	-	-
Hexachloroethane	ND	-	0.50	-	-	-	-
2-Hexanone	ND	-	0.50	-	-	-	-
Isopropylbenzene	ND	-	0.50	-	-	-	-
4-Isopropyl toluene	ND	-	0.50	-	-	-	-
Methyl-t-butyl ether (MTBE)	ND	7.67	0.50	10	-	77	53-139
Methylene chloride	ND	-	0.50	-	-	-	-
4-Methyl-2-pentanone (MIBK)	ND	-	0.50	-	-	-	-
Naphthalene	ND	-	0.50	-	-	-	-
n-Propyl benzene	ND	-	0.50	-	-	-	-
Styrene	ND	-	0.50	-	-	-	-
1,1,1,2-Tetrachloroethane	ND	-	0.50	-	-	-	-
1,1,2,2-Tetrachloroethane	ND	-	0.50	-	-	-	-
Tetrachloroethene	ND	-	0.50	-	-	-	-
Toluene	ND	8.75	0.50	10	-	87	52-137
1,2,3-Trichlorobenzene	ND	-	0.50	-	-	-	-
1,2,4-Trichlorobenzene	ND	-	0.50	-	-	-	-
1,1,1-Trichloroethane	ND	-	0.50	-	-	-	-
1,1,2-Trichloroethane	ND	-	0.50	-	-	-	-
Trichloroethene	ND	8.30	0.50	10	-	83	43-157
Trichlorofluoromethane	ND	-	0.50	-	-	-	-
1,2,3-Trichloropropane	ND	-	0.50	-	-	-	-
1,2,4-Trimethylbenzene	ND	-	0.50	-	-	-	-
1,3,5-Trimethylbenzene	ND	-	0.50	-	-	-	-
Vinyl Chloride	ND	-	0.50	-	-	-	-
Xylenes, Total	ND	-	0.50	-	-	-	-

#### Surrogate Recovery

Dibromofluoromethane	21.3	21.7	25	85	87	65-135
Toluene-d8	21.8	21.8	25	87	87	64-127
4-BFB	2.18	2.17	2.5	87	87	59-139

(Cont.)



## Quality Control Report

<b>Client:</b>	ERAS Environmental, Inc.	<b>WorkOrder:</b>	1505216
<b>Date Prepared:</b>	5/8/15	<b>BatchID:</b>	104618
<b>Date Analyzed:</b>	5/7/15 - 5/8/15	<b>Extraction Method:</b>	SW5030B
<b>Instrument:</b>	GC16	<b>Analytical Method:</b>	SW8260B
<b>Matrix:</b>	Water	<b>Unit:</b>	µg/L
<b>Project:</b>	#14-003-01; 106-110 Hegenberger	<b>Sample ID:</b>	MB/LCS-104618 1505216-001CMS/MSD

### QC Summary Report for SW8260B

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
tert-Amyl methyl ether (TAME)	8.78	9.12	10	ND	88	91	69-139	3.78	20
Benzene	8.78	9.04	10	ND	88	90	69-141	2.92	20
t-Butyl alcohol (TBA)	28.0	29.1	40	4.9	58	60	41-152	3.58	20
Chlorobenzene	9.23	9.47	10	ND	92	95	77-120	2.66	20
1,2-Dibromoethane (EDB)	8.44	8.66	10	ND	84	87	76-135	2.53	20
1,2-Dichloroethane (1,2-DCA)	8.48	8.82	10	ND	85	88	73-139	3.93	20
1,1-Dichloroethene	8.51	8.70	10	ND	85	87	59-140	2.20	20
Diisopropyl ether (DIPE)	9.02	9.35	10	ND	90	94	72-140	3.59	20
Ethyl tert-butyl ether (ETBE)	8.95	9.29	10	ND	90	93	71-140	3.73	20
Methyl-t-butyl ether (MTBE)	8.21	8.59	10	0.5012	77	81	73-139	4.48	20
Toluene	9.30	9.42	10	ND	93	94	71-128	1.25	20
Trichloroethylene	8.79	9.07	10	ND	88	91	64-132	3.10	20
<b>Surrogate Recovery</b>									
Dibromofluoromethane	22.0	21.8	25		88	87	73-131	0.619	0
Toluene-d8	21.9	21.5	25		88	86	72-117	1.78	0
4-BFB	2.16	2.29	2.5		87	92	74-116	5.57	0

(Cont.)



## Quality Control Report

**Client:** ERAS Environmental, Inc.

**WorkOrder:** 1505216

**Date Prepared:** 5/12/15

**BatchID:** 104739

**Date Analyzed:** 5/12/15

**Extraction Method:** SW5030B

**Instrument:** GC16

**Analytical Method:** SW8260B

**Matrix:** Water

**Unit:**  $\mu\text{g/L}$

**Project:** #14-003-01; 106-110 Hegenberger

**Sample ID:** MB/LCS-104739  
1505259-003CMS/MSD

### QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Acetone	ND	-	10	-	-	-	-
tert-Amyl methyl ether (TAME)	ND	8.72	0.50	10	-	87	54-140
Benzene	ND	8.76	0.50	10	-	88	47-158
Bromobenzene	ND	-	0.50	-	-	-	-
Bromochloromethane	ND	-	0.50	-	-	-	-
Bromodichloromethane	ND	-	0.50	-	-	-	-
Bromoform	ND	-	0.50	-	-	-	-
Bromomethane	ND	-	0.50	-	-	-	-
2-Butanone (MEK)	ND	-	2.0	-	-	-	-
t-Butyl alcohol (TBA)	ND	27.5	2.0	40	-	69	42-140
n-Butyl benzene	ND	-	0.50	-	-	-	-
sec-Butyl benzene	ND	-	0.50	-	-	-	-
tert-Butyl benzene	ND	-	0.50	-	-	-	-
Carbon Disulfide	ND	-	0.50	-	-	-	-
Carbon Tetrachloride	ND	-	0.50	-	-	-	-
Chlorobenzene	ND	9.48	0.50	10	-	95	43-157
Chloroethane	ND	-	0.50	-	-	-	-
Chloroform	ND	-	0.50	-	-	-	-
Chloromethane	ND	-	0.50	-	-	-	-
2-Chlorotoluene	ND	-	0.50	-	-	-	-
4-Chlorotoluene	ND	-	0.50	-	-	-	-
Dibromochloromethane	ND	-	0.50	-	-	-	-
1,2-Dibromo-3-chloropropane	ND	-	0.20	-	-	-	-
1,2-Dibromoethane (EDB)	ND	8.59	0.50	10	-	86	44-155
Dibromomethane	ND	-	0.50	-	-	-	-
1,2-Dichlorobenzene	ND	-	0.50	-	-	-	-
1,3-Dichlorobenzene	ND	-	0.50	-	-	-	-
1,4-Dichlorobenzene	ND	-	0.50	-	-	-	-
Dichlorodifluoromethane	ND	-	0.50	-	-	-	-
1,1-Dichloroethane	ND	-	0.50	-	-	-	-
1,2-Dichloroethane (1,2-DCA)	ND	8.44	0.50	10	-	84	66-125
1,1-Dichloroethene	ND	8.49	0.50	10	-	85	47-149
cis-1,2-Dichloroethene	ND	-	0.50	-	-	-	-
trans-1,2-Dichloroethene	ND	-	0.50	-	-	-	-
1,2-Dichloropropane	ND	-	0.50	-	-	-	-
1,3-Dichloropropane	ND	-	0.50	-	-	-	-
2,2-Dichloropropane	ND	-	0.50	-	-	-	-
1,1-Dichloropropene	ND	-	0.50	-	-	-	-
cis-1,3-Dichloropropene	ND	-	0.50	-	-	-	-
trans-1,3-Dichloropropene	ND	-	0.50	-	-	-	-

(Cont.)



## Quality Control Report

<b>Client:</b>	ERAS Environmental, Inc.	<b>WorkOrder:</b>	1505216
<b>Date Prepared:</b>	5/12/15	<b>BatchID:</b>	104739
<b>Date Analyzed:</b>	5/12/15	<b>Extraction Method:</b>	SW5030B
<b>Instrument:</b>	GC16	<b>Analytical Method:</b>	SW8260B
<b>Matrix:</b>	Water	<b>Unit:</b>	µg/L
<b>Project:</b>	#14-003-01; 106-110 Hegenberger	<b>Sample ID:</b>	MB/LCS-104739 1505259-003CMS/MSD

### QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Diisopropyl ether (DIPE)	ND	8.94	0.50	10	-	89	57-136
Ethylbenzene	ND	-	0.50	-	-	-	-
Ethyl tert-butyl ether (ETBE)	ND	8.92	0.50	10	-	89	55-137
Freon 113	ND	-	0.50	-	-	-	-
Hexachlorobutadiene	ND	-	0.50	-	-	-	-
Hexachloroethane	ND	-	0.50	-	-	-	-
2-Hexanone	ND	-	0.50	-	-	-	-
Isopropylbenzene	ND	-	0.50	-	-	-	-
4-Isopropyl toluene	ND	-	0.50	-	-	-	-
Methyl-t-butyl ether (MTBE)	ND	8.20	0.50	10	-	82	53-139
Methylene chloride	ND	-	0.50	-	-	-	-
4-Methyl-2-pentanone (MIBK)	ND	-	0.50	-	-	-	-
Naphthalene	ND	-	0.50	-	-	-	-
n-Propyl benzene	ND	-	0.50	-	-	-	-
Styrene	ND	-	0.50	-	-	-	-
1,1,1,2-Tetrachloroethane	ND	-	0.50	-	-	-	-
1,1,2,2-Tetrachloroethane	ND	-	0.50	-	-	-	-
Tetrachloroethene	ND	-	0.50	-	-	-	-
Toluene	ND	9.39	0.50	10	-	94	52-137
1,2,3-Trichlorobenzene	ND	-	0.50	-	-	-	-
1,2,4-Trichlorobenzene	ND	-	0.50	-	-	-	-
1,1,1-Trichloroethane	ND	-	0.50	-	-	-	-
1,1,2-Trichloroethane	ND	-	0.50	-	-	-	-
Trichloroethene	ND	8.90	0.50	10	-	89	43-157
Trichlorofluoromethane	ND	-	0.50	-	-	-	-
1,2,3-Trichloropropane	ND	-	0.50	-	-	-	-
1,2,4-Trimethylbenzene	ND	-	0.50	-	-	-	-
1,3,5-Trimethylbenzene	ND	-	0.50	-	-	-	-
Vinyl Chloride	ND	-	0.50	-	-	-	-
Xylenes, Total	ND	-	0.50	-	-	-	-

#### Surrogate Recovery

Dibromofluoromethane	21.5	21.5	25	86	86	65-135
Toluene-d8	21.5	21.7	25	86	87	64-127
4-BFB	2.12	2.15	2.5	85	86	59-139

(Cont.)



## Quality Control Report

**Client:** ERAS Environmental, Inc.      **WorkOrder:** 1505216  
**Date Prepared:** 5/12/15      **BatchID:** 104739  
**Date Analyzed:** 5/12/15      **Extraction Method:** SW5030B  
**Instrument:** GC16      **Analytical Method:** SW8260B  
**Matrix:** Water      **Unit:** µg/L  
**Project:** #14-003-01; 106-110 Hegenberger      **Sample ID:** MB/LCS-104739  
1505259-003CMS/MSD

### QC Summary Report for SW8260B

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
tert-Amyl methyl ether (TAME)	10.6	10.2	10	ND	106	102	69-139	4.32	20
Benzene	10.3	9.67	10	ND	103	96	69-141	6.45	20
t-Butyl alcohol (TBA)	35.4	34.4	40	2.5	82	80	41-152	3.10	20
Chlorobenzene	10.7	10.0	10	ND	107	100	77-120	7.08	20
1,2-Dibromoethane (EDB)	10.2	9.85	10	ND	102	98	76-135	3.40	20
1,2-Dichloroethane (1,2-DCA)	10.2	9.73	10	ND	102	97	73-139	4.20	20
1,1-Dichloroethene	9.86	9.10	10	ND	99	91	59-140	8.11	20
Diisopropyl ether (DIPE)	10.7	10.0	10	ND	107	101	72-140	6.14	20
Ethyl tert-butyl ether (ETBE)	10.7	10.2	10	ND	107	103	71-140	4.36	20
Methyl-t-butyl ether (MTBE)	9.96	9.69	10	ND	100	97	73-139	2.75	20
Toluene	10.6	9.88	10	ND	106	99	71-128	7.04	20
Trichloroethylene	10.6	9.77	10	ND	106	98	64-132	8.48	20
<b>Surrogate Recovery</b>									
Dibromofluoromethane	21.8	22.0	25		87	88	73-131	0.792	20
Toluene-d8	21.2	21.1	25		85	84	72-117	0.632	20
4-BFB	2.18	2.10	2.5		87	84	74-116	3.84	20



## Quality Control Report

<b>Client:</b>	ERAS Environmental, Inc.	<b>WorkOrder:</b>	1505216
<b>Date Prepared:</b>	5/6/15	<b>BatchID:</b>	104527
<b>Date Analyzed:</b>	5/7/15	<b>Extraction Method:</b>	E200.8
<b>Instrument:</b>	ICP-MS2	<b>Analytical Method:</b>	E200.8
<b>Matrix:</b>	Water	<b>Unit:</b>	µg/L
<b>Project:</b>	#14-003-01; 106-110 Hegenberger	<b>Sample ID:</b>	MB/LCS-104527 1505193-001BMS/MSD

### QC Summary Report for Metals

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Cadmium	ND	48.7	0.25	50	-	97	85-115
Chromium	ND	49.0	0.50	50	-	98	85-115
Lead	ND	49.9	0.50	50	-	100	85-115
Nickel	ND	50.6	0.50	50	-	101	85-115
Zinc	ND	505	15	500	-	100	85-115

#### Surrogate Recovery

Terbium	722	723	750	96	96	70-130
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Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Cadmium	48.5	49.7	50	ND	97	99	70-130	2.46	20
Chromium	50.3	50.1	50	ND	100	100	70-130	0	20
Lead	51.2	52.0	50	0.50	101	103	70-130	1.47	20
Nickel	51.9	52.4	50	3.0	98	99	70-130	0.939	20
Zinc	540	548	500	47	98	100	70-130	1.58	20

#### Surrogate Recovery

Terbium	730	759	750	97	101	70-130	3.87	20
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## Quality Control Report

**Client:** ERAS Environmental, Inc.      **WorkOrder:** 1505216  
**Date Prepared:** 5/5/15      **BatchID:** 104490  
**Date Analyzed:** 5/6/15      **Extraction Method:** SW3510C/3630C  
**Instrument:** GC2A      **Analytical Method:** SW8015B  
**Matrix:** Water      **Unit:** µg/L  
**Project:** #14-003-01; 106-110 Hegenberger      **Sample ID:** MB/LCS-104490

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### QC Report for SW8015B w/ SG Clean-Up

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Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
TPH-Diesel (C10-C23)	ND	795	50	1000	-	80	59-151
TPH-Motor Oil (C18-C36)	ND	-	250	-	-	-	-

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**Surrogate Recovery**

C9	708	707	625	113	113	77-130
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# CHAIN-OF-CUSTODY RECORD

WorkOrder: 1505216

ClientCode: ERAS

WaterTrax     WriteOn     EDF     Excel     EQuIS     Email     HardCopy     ThirdParty     J-flag

## Report to:

Andrew Savage  
ERAS Environmental, Inc.  
1533 B Street  
Hayward, CA 94541  
(510) 247-9885    FAX: (510) 886-5399

Email: info@eras.biz; andrew@eras.biz  
cc/3rd Party:  
PO:  
ProjectNo: #14-003-01; 106-110 Hegenberger

## Bill to:

Kasey Cordoza  
ERAS Environmental, Inc.  
1533 B Street  
Hayward, CA 94541

Requested TAT: 5 days  
  
*Date Received:* 05/06/2015  
*Date Printed:* 05/14/2015

Lab ID	Client ID	Matrix	Collection Date	Hold	Requested Tests (See legend below)											
					1	2	3	4	5	6	7	8	9	10	11	12
1505216-001	B-1	Water	5/5/2015 10:25	<input type="checkbox"/>	C	C	B	A								
1505216-002	B-2	Water	5/5/2015 11:15	<input type="checkbox"/>	C	C	B	A								
1505216-003	B-3	Water	5/5/2015 16:04	<input type="checkbox"/>	C	C	B	A								
1505216-004	B-4	Water	5/5/2015 13:39	<input type="checkbox"/>	C	C	B	A								
1505216-005	B-4 Shallow	Water	5/5/2015 12:45	<input type="checkbox"/>	C	C	B	A								
1505216-006	B-5	Water	5/5/2015 15:19	<input type="checkbox"/>	C	C	B	A								
1505216-007	B-6	Water	5/5/2015 15:41	<input type="checkbox"/>	C	C	B	A								

Test Legend:

1	8260GAS_W	2	8260VOC_W	3	LUFTMS_W	4	TPH(DMO)WSG_W	5	
6		7		8		9		10	
11		12							

The following SampIDs: 001C, 002C, 003C, 004C, 005C, 006C, 007C contain testgroup.

Prepared by: Jena Alfaro

Comments: 1505216-005A and -005C were re-analyzed with different VOAs to confirm.

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.



## WORK ORDER SUMMARY

**Client Name:** ERAS ENVIRONMENTAL, INC.

**QC Level:** LEVEL 2

**Work Order:** 1505216

**Project:** #14-003-01; 106-110 Hegenberger

**Client Contact:** Andrew Savage

**Date Received:** 5/6/2015

**Comments:** 1505216-005A and -005C were re-analyzed with different VOAs  
to confirm.

**Contact's Email:** info@eras.biz; andrew@eras.biz

WaterTrax     WriteOn     EDF     Excel     Fax     Email     HardCopy     ThirdParty     J-flag

Lab ID	Client ID	Matrix	Test Name	Containers /Composites	Bottle & Preservative	De-chlorinated	Collection Date & Time	TAT	Sediment Content	Hold	SubOut
1505216-001A	B-1	Water	SW8015B (TPH-d,mo w/ S.G. Clean-Up)	2	1LA	<input type="checkbox"/>	5/5/2015 10:25	5 days	Present	<input type="checkbox"/>	
1505216-001B	B-1	Water	E200.8 (LUFT)	2	250mL HDPE w/ HNO3	<input type="checkbox"/>	5/5/2015 10:25	5 days	Present	<input type="checkbox"/>	
1505216-001C	B-1	Water	TPH(g) & 8260 (Basic List) by P&T GCMS	6	VOA w/ HCl	<input type="checkbox"/>	5/5/2015 10:25	5 days	Present	<input type="checkbox"/>	
1505216-002A	B-2	Water	SW8015B (TPH-d,mo w/ S.G. Clean-Up)	2	1LA	<input type="checkbox"/>	5/5/2015 11:15	5 days	Present	<input type="checkbox"/>	
1505216-002B	B-2	Water	E200.8 (LUFT)	2	250mL HDPE w/ HNO3	<input type="checkbox"/>	5/5/2015 11:15	5 days	Present	<input type="checkbox"/>	
1505216-002C	B-2	Water	TPH(g) & 8260 (Basic List) by P&T GCMS	6	VOA w/ HCl	<input type="checkbox"/>	5/5/2015 11:15	5 days	Present	<input type="checkbox"/>	
1505216-003A	B-3	Water	SW8015B (TPH-d,mo w/ S.G. Clean-Up)	2	1LA	<input type="checkbox"/>	5/5/2015 16:04	5 days	Present	<input type="checkbox"/>	
1505216-003B	B-3	Water	E200.8 (LUFT)	1	250mL HDPE w/ HNO3	<input type="checkbox"/>	5/5/2015 16:04	5 days	Present	<input type="checkbox"/>	
1505216-003C	B-3	Water	TPH(g) & 8260 (Basic List) by P&T GCMS	6	VOA w/ HCl	<input type="checkbox"/>	5/5/2015 16:04	5 days	Present	<input type="checkbox"/>	
1505216-004A	B-4	Water	SW8015B (TPH-d,mo w/ S.G. Clean-Up)	2	1LA	<input type="checkbox"/>	5/5/2015 13:39	5 days	Present	<input type="checkbox"/>	
1505216-004B	B-4	Water	E200.8 (LUFT)	2	250mL HDPE w/ HNO3	<input type="checkbox"/>	5/5/2015 13:39	5 days	Present	<input type="checkbox"/>	
1505216-004C	B-4	Water	TPH(g) & 8260 (Basic List) by P&T GCMS	6	VOA w/ HCl	<input type="checkbox"/>	5/5/2015 13:39	5 days	Present	<input type="checkbox"/>	
1505216-005A	B-4 Shallow	Water	SW8015B (TPH-d,mo w/ S.G. Clean-Up)	2	1LA	<input type="checkbox"/>	5/5/2015 12:45	5 days	Present	<input type="checkbox"/>	
1505216-005B	B-4 Shallow	Water	E200.8 (LUFT)	2	250mL HDPE w/ HNO3	<input type="checkbox"/>	5/5/2015 12:45	5 days	Present	<input type="checkbox"/>	
1505216-005C	B-4 Shallow	Water	TPH(g) & 8260 (Basic List) by P&T GCMS	6	VOA w/ HCl	<input type="checkbox"/>	5/5/2015 12:45	5 days	Present	<input type="checkbox"/>	

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

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



## WORK ORDER SUMMARY

**Client Name:** ERAS ENVIRONMENTAL, INC.

**QC Level:** LEVEL 2

**Work Order:** 1505216

**Project:** #14-003-01; 106-110 Hegenberger

**Client Contact:** Andrew Savage

**Date Received:** 5/6/2015

**Comments:** 1505216-005A and -005C were re-analyzed with different VOAs  
to confirm.

**Contact's Email:** info@eras.biz; andrew@eras.biz

WaterTrax     WriteOn     EDF     Excel     Fax     Email     HardCopy     ThirdParty     J-flag

Lab ID	Client ID	Matrix	Test Name	Containers /Composites	Bottle & Preservative	De-chlorinated	Collection Date & Time	TAT	Sediment Content	Hold	SubOut
1505216-006A	B-5	Water	SW8015B (TPH-d,mo w/ S.G. Clean-Up)	2	1LA	<input type="checkbox"/>	5/5/2015 15:19	5 days	Present	<input type="checkbox"/>	
1505216-006B	B-5	Water	E200.8 (LUFT)	2	250mL HDPE w/ HNO3	<input type="checkbox"/>	5/5/2015 15:19	5 days	Present	<input type="checkbox"/>	
1505216-006C	B-5	Water	TPH(g) & 8260 (Basic List) by P&T GCMS	6	VOA w/ HCl	<input type="checkbox"/>	5/5/2015 15:19	5 days	Present	<input type="checkbox"/>	
1505216-007A	B-6	Water	SW8015B (TPH-d,mo w/ S.G. Clean-Up)	2	1LA	<input type="checkbox"/>	5/5/2015 15:41	5 days	Present	<input type="checkbox"/>	
1505216-007B	B-6	Water	E200.8 (LUFT)	2	250mL HDPE w/ HNO3	<input type="checkbox"/>	5/5/2015 15:41	5 days	Present	<input type="checkbox"/>	
1505216-007C	B-6	Water	TPH(g) & 8260 (Basic List) by P&T GCMS	6	VOA w/ HCl	<input type="checkbox"/>	5/5/2015 15:41	5 days	Present	<input type="checkbox"/>	

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

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

ISOS 214  
**CHAIN OF CUSTODY FORM**

Page 1 of 2

<b>McCAMPBELL ANALYTICAL, INC</b> <b>1534 Willow Pass Rd.</b> <b>Pittsburg, CA 94565</b> <b>877.252.9262</b> <b>925.252.9269 - fax</b>	
--	--

Report To: ERAS      Bill To: ERAS  
 Company: ERAS Environmental, Inc.

Email: [info@eras.biz](mailto:info@eras.biz)

Telephone: 510-247-9885    Fax: 510-886-5399

Project # 14-003-01

Project location 106-110 Hegenberger

Sampler: Andrew Savage

Sample ID	Location/Fiel d Point Name	Sampling		# of Containers	Container Type	Matrix			Preservative			
		Date	Time			Soil	Water	Waste	HCl	H2SO4	HNO3	ICE
B-1		5/5/2015	10:25	2	1L	X						X
B-1		5/5/2015	10:25	2	Poly	X					X	
B-1		5/5/2015	10:25	6	VOA	X			X			
B-2		5/5/2015	11:15	2	1L	X						X
B-2		5/5/2015	11:15	2	Poly	X					X	
B-2		5/5/2015	11:15	6	VOA	X			X			
B-3		5/5/2015	16:04	2	1L	X						X
B-3		5/5/2015	16:04	1	Poly	X					X	
B-3		5/5/2015	16:04	6	VOA	X			X			
B-4		5/5/2015	13:39	2	1L	X						X
B-4		5/5/2015	13:39	2	Poly	X					X	
B-4		5/5/2015	13:39	6	VOA	X			X			

Turnaround Time:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>					
Geotracker:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
Analysis Requested									Other	Comments	
TPH as diesel and oil range organics by 8015 with silica gel											
LUFT 5 Metals											
TPH-gro, BTEX, MTBE, Naphthalene by 8260											

## **CHAIN OF CUSTODY FORM**

Page 2 of 2

**McCampbell Analytical, Inc**  
1534 Willow Pass Rd.  
Pittsburg, CA 94565  
877.252.9262  
925.252.9269 - fax

**Report To:** ERAS      **Bill To:** ERAS  
**Company:** ERAS Environmental, Inc.

---

**Email:** [info@eras.biz](mailto:info@eras.biz)

**Telephone:** 510-247-9885    **Fax:** 510-886-5399

**Project #** 14-003-01

**Sampler:** Andrew Savage

RELINQUISHED BY:			RECEIVED BY:
Relinquished by: 	Date: 5/6/15	Time: 12p	Received by: 
Relinquished by: 	Date: 5/6	Time: 1705	Received by: 
Relinquished by: 	Date:	Time:	Received by:

ICE/t <sub>b</sub> Condition					Comments: Please PDF
Head space absent					
Dechlorinated in lab					
Appropriate containers					
Preserved in Lab					
	VOA's	O&G	Metals	Other	
Preservation	pH<2				



## Sample Receipt Checklist

Client Name: **ERAS Environmental, Inc.**

Date and Time Received: **5/6/2015 7:11:47 PM**

Project Name: **#14-003-01; 106-110 Hegenberger**

Login Reviewed by: **Jena Alfaro**

WorkOrder No: **1505216**

Matrix: Water

Carrier: Benjamin Yslas (MAI Courier)

### Chain of Custody (COC) Information

- |   |   |                             |
|---|---|-----------------------------|
| Chain of custody present?                               | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> |
| Chain of custody signed when relinquished and received? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> |
| Chain of custody agrees with sample labels?             | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> |
| Sample IDs noted by Client on COC?                      | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> |
| Date and Time of collection noted by Client on COC?     | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> |
| Sampler's name noted on COC?                            | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> |

### Sample Receipt Information

- |  |   |                             |  |
|--|---|-----------------------------|--|
| Custody seals intact on shipping container/cooler? | Yes <input type="checkbox"/>            | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/> |
| Shipping container/cooler in good condition?       | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> |  |
| Samples in proper containers/bottles?              | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> |  |
| Sample containers intact?                          | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> |  |
| Sufficient sample volume for indicated test?       | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> |  |

### Sample Preservation and Hold Time (HT) Information

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

(Ice Type: WET ICE )

### UCMR3 Samples:

- |  |                              |                             |  |
|--|------------------------------|-----------------------------|--|
| Total Chlorine tested and acceptable upon receipt for EPA 522?                   | Yes <input type="checkbox"/> | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/> |
| Free Chlorine tested and acceptable upon receipt for EPA 218.7, 300.1, 537, 539? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/> |

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

Comments: pH adjusted in Lab.



# McCampbell Analytical, Inc.

"When Quality Counts"

## Analytical Report

**WorkOrder:** 1505259

**Report Created for:** ERAS Environmental, Inc.

1533 B Street  
Hayward, CA 94541

**Project Contact:** Andrew Savage

**Project P.O.:**

**Project Name:** #14-003-01; 106-110 Hegenberger

**Project Received:** 05/07/2015

Analytical Report reviewed & approved for release on 05/14/2015 by:

Angela Rydelius,  
Laboratory Manager

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





## Glossary of Terms & Qualifier Definitions

**Client:** ERAS Environmental, Inc.  
**Project:** #14-003-01; 106-110 Hegenberger  
**WorkOrder:** 1505259

### Glossary Abbreviation

95% Interval	95% Confident Interval
DF	Dilution Factor
DI WET	(DISTLC) Waste Extraction Test using DI water
DISS	Dissolved (direct analysis of 0.45 µm filtered and acidified water sample)
DUP	Duplicate
EDL	Estimated Detection Limit
ITEF	International Toxicity Equivalence Factor
LCS	Laboratory Control Sample
MB	Method Blank
MB % Rec	% Recovery of Surrogate in Method Blank, if applicable
MDL	Method Detection Limit
ML	Minimum Level of Quantitation
MS	Matrix Spike
MSD	Matrix Spike Duplicate
N/A	Not Applicable
ND	Not detected at or above the indicated MDL or RL
NR	Data Not Reported due to matrix interference or insufficient sample amount.
PF	Prep Factor
RD	Relative Difference
RL	Reporting Limit (The RL is the lowest calibration standard in a multipoint calibration.)
RPD	Relative Percent Deviation
RRT	Relative Retention Time
SPK Val	Spike Value
SPKRef Val	Spike Reference Value
SPLP	Synthetic Precipitation Leachate Procedure
TCLP	Toxicity Characteristic Leachate Procedure
TEQ	Toxicity Equivalents
WET (STLC)	Waste Extraction Test (Soluble Threshold Limit Concentration)

### Analytical Qualifiers

a1	sample diluted due to matrix interference
c9	Internal standard is out of acceptance criteria due to matrix interference therefore values are estimated
e2	diesel range compounds are significant; no recognizable pattern
e3	aged diesel is significant
e4	gasoline range compounds are significant.
e7	oil range compounds are significant



## Glossary of Terms & Qualifier Definitions

**Client:** ERAS Environmental, Inc.

**Project:** #14-003-01; 106-110 Hegenberger

**WorkOrder:** 1505259

### Quality Control Qualifiers

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



## Analytical Report

**Client:** ERAS Environmental, Inc.      **WorkOrder:** 1505259  
**Project:** #14-003-01; 106-110 Hegenberger      **Extraction Method:** SW5030B  
**Date Received:** 5/7/15 17:06      **Analytical Method:** SW8260B  
**Date Prepared:** 5/12/15      **Unit:**  $\mu\text{g/L}$

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

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-7	1505259-001C	Water	05/06/2015 09:00	GC16	104739

<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH(g)	13,000	500	10	05/12/2015 14:56
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
Dibromofluoromethane	103	70-130		05/12/2015 14:56
<u>Analyst(s):</u>	KF			

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-8-Shallow	1505259-002C	Water	05/06/2015 09:54	GC16	104739

<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH(g)	860	50	1	05/12/2015 15:38
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
Dibromofluoromethane	100	70-130		05/12/2015 15:38
<u>Analyst(s):</u>	KF			

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-8	1505259-003C	Water	05/06/2015 10:51	GC16	104739

<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH(g)	ND	50	1	05/12/2015 16:21
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
Dibromofluoromethane	98	70-130		05/12/2015 16:21
<u>Analyst(s):</u>	KF			

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-9-Shallow	1505259-004C	Water	05/06/2015 11:32	GC16	104739

<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH(g)	260	50	1	05/12/2015 17:03
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
Dibromofluoromethane	98	70-130		05/12/2015 17:03
<u>Analyst(s):</u>	KF			

(Cont.)



## Analytical Report

**Client:** ERAS Environmental, Inc.      **WorkOrder:** 1505259  
**Project:** #14-003-01; 106-110 Hegenberger      **Extraction Method:** SW5030B  
**Date Received:** 5/7/15 17:06      **Analytical Method:** SW8260B  
**Date Prepared:** 5/12/15      **Unit:** µg/L

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

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-9	1505259-005C	Water	05/06/2015 12:08	GC16	104739
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH(g)	ND		50	1	05/12/2015 17:46
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Dibromofluoromethane	98		70-130		05/12/2015 17:46
<u>Analyst(s):</u>	KF				



## Analytical Report

**Client:** ERAS Environmental, Inc.  
**Project:** #14-003-01; 106-110 Hegenberger  
**Date Received:** 5/7/15 17:06  
**Date Prepared:** 5/12/15-5/13/15

**WorkOrder:** 1505259  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** µg/L

### Volatile Organics by P&T and GC/MS

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-7	1505259-001C	Water	05/06/2015 09:00	GC16	104739

Analyses	Result	RL	DF	Date Analyzed
Benzene	3900	50	100	05/13/2015 03:47
Ethylbenzene	2000	50	100	05/13/2015 03:47
Methyl-t-butyl ether (MTBE)	ND	50	100	05/13/2015 03:47
Naphthalene	240	50	100	05/13/2015 03:47
Toluene	69	50	100	05/13/2015 03:47
Xylenes, Total	ND	50	100	05/13/2015 03:47
Surrogates	REC (%)	Limits		
Dibromofluoromethane	86	73-131		05/13/2015 03:47
Toluene-d8	87	72-117		05/13/2015 03:47
4-BFB	93	74-116		05/13/2015 03:47

Analyst(s): KF

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-8-Shallow	1505259-002C	Water	05/06/2015 09:54	GC16	104739

Analyses	Result	RL	DF	Date Analyzed
Benzene	0.60	0.50	1	05/13/2015 04:29
Ethylbenzene	ND	0.50	1	05/13/2015 04:29
Methyl-t-butyl ether (MTBE)	ND	0.50	1	05/13/2015 04:29
Naphthalene	ND	0.50	1	05/13/2015 04:29
Toluene	ND	0.50	1	05/13/2015 04:29
Xylenes, Total	0.91	0.50	1	05/13/2015 04:29
Surrogates	REC (%)	Limits		
Dibromofluoromethane	87	73-131		05/13/2015 04:29
Toluene-d8	86	72-117		05/13/2015 04:29
4-BFB	88	74-116		05/13/2015 04:29

Analyst(s): KF

(Cont.)



## Analytical Report

**Client:** ERAS Environmental, Inc.

**WorkOrder:** 1505259

**Project:** #14-003-01; 106-110 Hegenberger

**Extraction Method:** SW5030B

**Date Received:** 5/7/15 17:06

**Analytical Method:** SW8260B

**Date Prepared:** 5/12/15-5/13/15

**Unit:**  $\mu\text{g/L}$

### Volatile Organics by P&T and GC/MS

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-8	1505259-003C	Water	05/06/2015 10:51	GC16	104739

Analyses	Result	RL	DF	Date Analyzed
Benzene	ND	0.50	1	05/12/2015 16:21
Ethylbenzene	ND	0.50	1	05/12/2015 16:21
Methyl-t-butyl ether (MTBE)	ND	0.50	1	05/12/2015 16:21
Naphthalene	ND	0.50	1	05/12/2015 16:21
Toluene	ND	0.50	1	05/12/2015 16:21
Xylenes, Total	ND	0.50	1	05/12/2015 16:21
Surrogates	REC (%)	Limits		
Dibromofluoromethane	86	73-131		05/12/2015 16:21
Toluene-d8	86	72-117		05/12/2015 16:21
4-BFB	86	74-116		05/12/2015 16:21

Analyst(s): KF

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-9-Shallow	1505259-004C	Water	05/06/2015 11:32	GC16	104739

Analyses	Result	RL	DF	Date Analyzed
Benzene	ND	0.50	1	05/12/2015 17:03
Ethylbenzene	ND	0.50	1	05/12/2015 17:03
Methyl-t-butyl ether (MTBE)	ND	0.50	1	05/12/2015 17:03
Naphthalene	ND	0.50	1	05/12/2015 17:03
Toluene	ND	0.50	1	05/12/2015 17:03
Xylenes, Total	ND	0.50	1	05/12/2015 17:03
Surrogates	REC (%)	Limits		
Dibromofluoromethane	87	73-131		05/12/2015 17:03
Toluene-d8	85	72-117		05/12/2015 17:03
4-BFB	85	74-116		05/12/2015 17:03

Analyst(s): KF

(Cont.)

CDPH ELAP 1644 ♦ NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



## Analytical Report

**Client:** ERAS Environmental, Inc.  
**Project:** #14-003-01; 106-110 Hegenberger  
**Date Received:** 5/7/15 17:06  
**Date Prepared:** 5/12/15-5/13/15

**WorkOrder:** 1505259  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** µg/L

### Volatile Organics by P&T and GC/MS

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-9	1505259-005C	Water	05/06/2015 12:08	GC16	104739
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Benzene	ND		0.50	1	05/12/2015 17:46
Ethylbenzene	ND		0.50	1	05/12/2015 17:46
Methyl-t-butyl ether (MTBE)	ND		0.50	1	05/12/2015 17:46
Naphthalene	ND		0.50	1	05/12/2015 17:46
Toluene	ND		0.50	1	05/12/2015 17:46
Xylenes, Total	ND		0.50	1	05/12/2015 17:46
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Dibromofluoromethane	87		73-131		05/12/2015 17:46
Toluene-d8	85		72-117		05/12/2015 17:46
4-BFB	86		74-116		05/12/2015 17:46

Analyst(s): KF



## Analytical Report

**Client:** ERAS Environmental, Inc. **WorkOrder:** 1505259  
**Project:** #14-003-01; 106-110 Hegenberger **Extraction Method:** E200.8  
**Date Received:** 5/7/15 17:06 **Analytical Method:** E200.8  
**Date Prepared:** 5/7/15 **Unit:** µg/L

### LUFT 5 Metals

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-7	1505259-001B	Water	05/06/2015 09:00	ICP-MS1	104564
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Cadmium	ND		2.5	10	05/11/2015 19:26
Chromium	ND		5.0	10	05/11/2015 19:26
Lead	12		5.0	10	05/11/2015 19:26
Nickel	21		5.0	10	05/11/2015 19:26
Zinc	210		150	10	05/11/2015 19:26
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Terbium	111		70-130		05/11/2015 19:26
<u>Analyst(s):</u>	DB	<u>Analytical Comments:</u> a1			

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-8-Shallow	1505259-002B	Water	05/06/2015 09:54	ICP-MS2	104564
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Cadmium	ND		0.25	1	05/08/2015 20:49
Chromium	ND		0.50	1	05/08/2015 20:49
Lead	1.3		0.50	1	05/08/2015 20:49
Nickel	3.9		0.50	1	05/08/2015 20:49
Zinc	ND		15	1	05/08/2015 20:49
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Terbium	99		70-130		05/08/2015 20:49
<u>Analyst(s):</u>	DB				

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-8	1505259-003B	Water	05/06/2015 10:51	ICP-MS2	104564
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Cadmium	0.42		0.25	1	05/08/2015 20:55
Chromium	ND		0.50	1	05/08/2015 20:55
Lead	ND		0.50	1	05/08/2015 20:55
Nickel	88		0.50	1	05/08/2015 20:55
Zinc	ND		15	1	05/08/2015 20:55
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Terbium	96		70-130		05/08/2015 20:55
<u>Analyst(s):</u>	DB				

(Cont.)



## Analytical Report

**Client:** ERAS Environmental, Inc. **WorkOrder:** 1505259  
**Project:** #14-003-01; 106-110 Hegenberger **Extraction Method:** E200.8  
**Date Received:** 5/7/15 17:06 **Analytical Method:** E200.8  
**Date Prepared:** 5/7/15 **Unit:** µg/L

### LUFT 5 Metals

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-9-Shallow	1505259-004B	Water	05/06/2015 11:32	ICP-MS2	104564
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Cadmium	ND		0.25	1	05/08/2015 21:01
Chromium	ND		0.50	1	05/08/2015 21:01
Lead	ND		0.50	1	05/08/2015 21:01
Nickel	<b>2.5</b>		0.50	1	05/08/2015 21:01
Zinc	ND		15	1	05/08/2015 21:01
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Terbium	98		70-130		05/08/2015 21:01
<u>Analyst(s):</u>	DB				

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-9	1505259-005B	Water	05/06/2015 12:08	ICP-MS2	104564
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Cadmium	<b>0.32</b>		0.25	1	05/08/2015 21:07
Chromium	<b>1.2</b>		0.50	1	05/08/2015 21:07
Lead	ND		0.50	1	05/08/2015 21:07
Nickel	<b>100</b>		0.50	1	05/08/2015 21:07
Zinc	ND		15	1	05/08/2015 21:07
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Terbium	97		70-130		05/08/2015 21:07
<u>Analyst(s):</u>	DB				



## Analytical Report

**Client:** ERAS Environmental, Inc.

**Project:** #14-003-01; 106-110 Hegenberger

**Date Received:** 5/7/15 17:06

**Date Prepared:** 5/7/15

**WorkOrder:** 1505259

**Extraction Method:** SW3510C/3630C

**Analytical Method:** SW8015B

**Unit:** µg/L

### Total Extractable Petroleum Hydrocarbons w/ SG Clean-Up

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-7	1505259-001A	Water	05/06/2015 09:00	GC9a	104592

<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	4600	50	1	05/11/2015 18:23
TPH-Motor Oil (C18-C36)	720	250	1	05/11/2015 18:23

<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>	
C9	124	70-130	05/11/2015 18:23

Analyst(s): TK Analytical Comments: e4,e7,e2

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-8-Shallow	1505259-002A	Water	05/06/2015 09:54	GC6B	104592

<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	2000	500	10	05/14/2015 12:17
TPH-Motor Oil (C18-C36)	3600	2500	10	05/14/2015 12:17

<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>	
C9	110	70-130	05/14/2015 12:17

Analyst(s): TK Analytical Comments: e7,e4,e2

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-8	1505259-003A	Water	05/06/2015 10:51	GC6B	104592

<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	ND	50	1	05/10/2015 02:35
TPH-Motor Oil (C18-C36)	ND	250	1	05/10/2015 02:35

<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>	
C9	114	70-130	05/10/2015 02:35

Analyst(s): TK

(Cont.)



## Analytical Report

**Client:** ERAS Environmental, Inc.  
**Project:** #14-003-01; 106-110 Hegenberger  
**Date Received:** 5/7/15 17:06  
**Date Prepared:** 5/7/15

**WorkOrder:** 1505259  
**Extraction Method:** SW3510C/3630C  
**Analytical Method:** SW8015B  
**Unit:** µg/L

### Total Extractable Petroleum Hydrocarbons w/ SG Clean-Up

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-9-Shallow	1505259-004A	Water	05/06/2015 11:32	GC9a	104592
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	120		50	1	05/11/2015 15:59
TPH-Motor Oil (C18-C36)	260		250	1	05/11/2015 15:59
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
C9	110		70-130		05/11/2015 15:59
<u>Analyst(s):</u>	TK	<u>Analytical Comments:</u> e7,e2,e4			
Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-9	1505259-005A	Water	05/06/2015 12:08	GC9a	104592
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	ND		50	1	05/12/2015 07:28
TPH-Motor Oil (C18-C36)	ND		250	1	05/12/2015 07:28
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
C9	121		70-130		05/12/2015 07:28
<u>Analyst(s):</u>	TK				



## Quality Control Report

**Client:** ERAS Environmental, Inc.      **WorkOrder:** 1505259  
**Date Prepared:** 5/12/15      **BatchID:** 104739  
**Date Analyzed:** 5/12/15      **Extraction Method:** SW5030B  
**Instrument:** GC16      **Analytical Method:** SW8260B  
**Matrix:** Water      **Unit:** µg/L  
**Project:** #14-003-01; 106-110 Hegenberger      **Sample ID:** MB/LCS-104739

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### QC Summary Report for TPH(g)

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Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
VOC (C6-C12)	ND	490	50	644	-	76	75-105
<b>Surrogate Recovery</b>							
Dibromofluoromethane	24.4	24.6		25	97	98	70-130

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## Quality Control Report

**Client:** ERAS Environmental, Inc.  
**Date Prepared:** 5/7/15  
**Date Analyzed:** 5/7/15  
**Instrument:** GC16  
**Matrix:** Soil  
**Project:** #14-003-01; 106-110 Hegenberger

**WorkOrder:** 1505259  
**BatchID:** 104588  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** mg/Kg  
**Sample ID:** MB/LCS-104588  
1505255-001AMS/MSD

### QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
VOC (C6-C12)	ND	2.91	0.25	3.2	-	91	74-142
Acetone	ND	-	0.10	-	-	-	-
tert-Amyl methyl ether (TAME)	ND	0.0406	0.0050	0.050	-	81	53-116
Benzene	ND	0.0454	0.0050	0.050	-	91	63-137
Bromobenzene	ND	-	0.0050	-	-	-	-
Bromochloromethane	ND	-	0.0050	-	-	-	-
Bromodichloromethane	ND	-	0.0050	-	-	-	-
Bromoform	ND	-	0.0050	-	-	-	-
Bromomethane	ND	-	0.0050	-	-	-	-
2-Butanone (MEK)	ND	-	0.020	-	-	-	-
t-Butyl alcohol (TBA)	ND	0.161	0.050	0.20	-	81	41-135
n-Butyl benzene	ND	-	0.0050	-	-	-	-
sec-Butyl benzene	ND	-	0.0050	-	-	-	-
tert-Butyl benzene	ND	-	0.0050	-	-	-	-
Carbon Disulfide	ND	-	0.0050	-	-	-	-
Carbon Tetrachloride	ND	-	0.0050	-	-	-	-
Chlorobenzene	ND	0.0488	0.0050	0.050	-	98	77-121
Chloroethane	ND	-	0.0050	-	-	-	-
Chloroform	ND	-	0.0050	-	-	-	-
Chloromethane	ND	-	0.0050	-	-	-	-
2-Chlorotoluene	ND	-	0.0050	-	-	-	-
4-Chlorotoluene	ND	-	0.0050	-	-	-	-
Dibromochloromethane	ND	-	0.0050	-	-	-	-
1,2-Dibromo-3-chloropropane	ND	-	0.0040	-	-	-	-
1,2-Dibromoethane (EDB)	ND	0.0433	0.0040	0.050	-	87	67-119
Dibromomethane	ND	-	0.0050	-	-	-	-
1,2-Dichlorobenzene	ND	-	0.0050	-	-	-	-
1,3-Dichlorobenzene	ND	-	0.0050	-	-	-	-
1,4-Dichlorobenzene	ND	-	0.0050	-	-	-	-
Dichlorodifluoromethane	ND	-	0.0050	-	-	-	-
1,1-Dichloroethane	ND	-	0.0050	-	-	-	-
1,2-Dichloroethane (1,2-DCA)	ND	0.0449	0.0040	0.050	-	90	58-135
1,1-Dichloroethene	ND	0.0434	0.0050	0.050	-	87	42-145
cis-1,2-Dichloroethene	ND	-	0.0050	-	-	-	-
trans-1,2-Dichloroethene	ND	-	0.0050	-	-	-	-
1,2-Dichloropropane	ND	-	0.0050	-	-	-	-
1,3-Dichloropropane	ND	-	0.0050	-	-	-	-
2,2-Dichloropropane	ND	-	0.0050	-	-	-	-
1,1-Dichloropropene	ND	-	0.0050	-	-	-	-
cis-1,3-Dichloropropene	ND	-	0.0050	-	-	-	-

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## Quality Control Report

<b>Client:</b>	ERAS Environmental, Inc.	<b>WorkOrder:</b>	1505259
<b>Date Prepared:</b>	5/7/15	<b>BatchID:</b>	104588
<b>Date Analyzed:</b>	5/7/15	<b>Extraction Method:</b>	SW5030B
<b>Instrument:</b>	GC16	<b>Analytical Method:</b>	SW8260B
<b>Matrix:</b>	Soil	<b>Unit:</b>	mg/Kg
<b>Project:</b>	#14-003-01; 106-110 Hegenberger	<b>Sample ID:</b>	MB/LCS-104588 1505255-001AMS/MSD

### QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
trans-1,3-Dichloropropene	ND	-	0.0050	-	-	-	-
Diisopropyl ether (DIPE)	ND	0.0438	0.0050	0.050	-	88	52-129
Ethylbenzene	ND	-	0.0050	-	-	-	-
Ethyl tert-butyl ether (ETBE)	ND	0.0431	0.0050	0.050	-	86	53-125
Freon 113	ND	-	0.0050	-	-	-	-
Hexachlorobutadiene	ND	-	0.0050	-	-	-	-
Hexachloroethane	ND	-	0.0050	-	-	-	-
2-Hexanone	ND	-	0.0050	-	-	-	-
Isopropylbenzene	ND	-	0.0050	-	-	-	-
4-Isopropyl toluene	ND	-	0.0050	-	-	-	-
Methyl-t-butyl ether (MTBE)	ND	0.0412	0.0050	0.050	-	82	58-122
Methylene chloride	ND	-	0.0050	-	-	-	-
4-Methyl-2-pentanone (MIBK)	ND	-	0.0050	-	-	-	-
Naphthalene	ND	-	0.0050	-	-	-	-
n-Propyl benzene	ND	-	0.0050	-	-	-	-
Styrene	ND	-	0.0050	-	-	-	-
1,1,1,2-Tetrachloroethane	ND	-	0.0050	-	-	-	-
1,1,2,2-Tetrachloroethane	ND	-	0.0050	-	-	-	-
Tetrachloroethene	ND	-	0.0050	-	-	-	-
Toluene	ND	0.0518	0.0050	0.050	-	104	76-130
1,2,3-Trichlorobenzene	ND	-	0.0050	-	-	-	-
1,2,4-Trichlorobenzene	ND	-	0.0050	-	-	-	-
1,1,1-Trichloroethane	ND	-	0.0050	-	-	-	-
1,1,2-Trichloroethane	ND	-	0.0050	-	-	-	-
Trichloroethene	ND	0.0467	0.0050	0.050	-	93	72-132
Trichlorofluoromethane	ND	-	0.0050	-	-	-	-
1,2,3-Trichloropropane	ND	-	0.0050	-	-	-	-
1,2,4-Trimethylbenzene	ND	-	0.0050	-	-	-	-
1,3,5-Trimethylbenzene	ND	-	0.0050	-	-	-	-
Vinyl Chloride	ND	-	0.0050	-	-	-	-
Xylenes, Total	ND	-	0.0050	-	-	-	-

#### Surrogate Recovery

Dibromofluoromethane	0.103	0.104	0.12	82	83	72-126
Toluene-d8	0.119	0.118	0.12	95	94	81-115
4-BFB	0.0126	0.0118	0.012	101	95	55-127

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## Quality Control Report

<b>Client:</b>	ERAS Environmental, Inc.	<b>WorkOrder:</b>	1505259
<b>Date Prepared:</b>	5/7/15	<b>BatchID:</b>	104588
<b>Date Analyzed:</b>	5/7/15	<b>Extraction Method:</b>	SW5030B
<b>Instrument:</b>	GC16	<b>Analytical Method:</b>	SW8260B
<b>Matrix:</b>	Soil	<b>Unit:</b>	mg/Kg
<b>Project:</b>	#14-003-01; 106-110 Hegenberger	<b>Sample ID:</b>	MB/LCS-104588 1505255-001AMS/MSD

### QC Summary Report for SW8260B

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
tert-Amyl methyl ether (TAME)	0.0343	0.0324	0.050	ND	69,F1	65,F1	70-130	5.91	20
Benzene	0.0401	0.0382	0.050	ND	80	76	70-130	5.01	20
t-Butyl alcohol (TBA)	0.162	0.156	0.20	ND	81	78	70-130	3.45	20
Chlorobenzene	0.0389	0.0368	0.050	ND	78	74	70-130	5.36	20
1,2-Dibromoethane (EDB)	0.0343	0.0322	0.050	ND	69,F1	64,F1	70-130	6.25	20
1,2-Dichloroethane (1,2-DCA)	0.0376	0.0359	0.050	ND	75	72	70-130	4.47	20
1,1-Dichloroethene	0.0358	0.0342	0.050	ND	72	68,F1	70-130	4.57	20
Diisopropyl ether (DIPE)	0.0380	0.0364	0.050	ND	76	73	70-130	4.29	20
Ethyl tert-butyl ether (ETBE)	0.0373	0.0357	0.050	ND	75	71	70-130	4.17	20
Methyl-t-butyl ether (MTBE)	0.0370	0.0353	0.050	ND	74	71	70-130	4.76	20
Toluene	0.0401	0.0380	0.050	ND	80	76	70-130	5.56	20
Trichloroethylene	0.0385	0.0362	0.050	ND	77	72	70-130	6.19	20
<b>Surrogate Recovery</b>									
Dibromofluoromethane	0.114	0.115	0.12		91	92	70-130	1.24	20
Toluene-d8	0.120	0.119	0.12		96	95	70-130	0.388	20
4-BFB	0.0120	0.0116	0.012		96	93	70-130	3.16	20

(Cont.)

CDPH ELAP 1644 ♦ NELAP 4033ORELAP

*SJF* QA/QC Officer



## Quality Control Report

**Client:** ERAS Environmental, Inc.  
**Date Prepared:** 5/7/15  
**Date Analyzed:** 5/8/15  
**Instrument:** GC16  
**Matrix:** Soil  
**Project:** #14-003-01; 106-110 Hegenberger

**WorkOrder:** 1505259  
**BatchID:** 104595  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** mg/Kg  
**Sample ID:** MB/LCS-104595  
1505259-024AMS/MSD

### QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
VOC (C6-C12)	ND	2.84	0.25	3.2	-	89	74-142
Acetone	ND	-	0.10	-	-	-	-
tert-Amyl methyl ether (TAME)	ND	0.0393	0.0050	0.050	-	79	53-116
Benzene	ND	0.0444	0.0050	0.050	-	89	63-137
Bromobenzene	ND	-	0.0050	-	-	-	-
Bromochloromethane	ND	-	0.0050	-	-	-	-
Bromodichloromethane	ND	-	0.0050	-	-	-	-
Bromoform	ND	-	0.0050	-	-	-	-
Bromomethane	ND	-	0.0050	-	-	-	-
2-Butanone (MEK)	ND	-	0.020	-	-	-	-
t-Butyl alcohol (TBA)	ND	0.162	0.050	0.20	-	81	41-135
n-Butyl benzene	ND	-	0.0050	-	-	-	-
sec-Butyl benzene	ND	-	0.0050	-	-	-	-
tert-Butyl benzene	ND	-	0.0050	-	-	-	-
Carbon Disulfide	ND	-	0.0050	-	-	-	-
Carbon Tetrachloride	ND	-	0.0050	-	-	-	-
Chlorobenzene	ND	0.0468	0.0050	0.050	-	94	77-121
Chloroethane	ND	-	0.0050	-	-	-	-
Chloroform	ND	-	0.0050	-	-	-	-
Chloromethane	ND	-	0.0050	-	-	-	-
2-Chlorotoluene	ND	-	0.0050	-	-	-	-
4-Chlorotoluene	ND	-	0.0050	-	-	-	-
Dibromochloromethane	ND	-	0.0050	-	-	-	-
1,2-Dibromo-3-chloropropane	ND	-	0.0040	-	-	-	-
1,2-Dibromoethane (EDB)	ND	0.0426	0.0040	0.050	-	85	67-119
Dibromomethane	ND	-	0.0050	-	-	-	-
1,2-Dichlorobenzene	ND	-	0.0050	-	-	-	-
1,3-Dichlorobenzene	ND	-	0.0050	-	-	-	-
1,4-Dichlorobenzene	ND	-	0.0050	-	-	-	-
Dichlorodifluoromethane	ND	-	0.0050	-	-	-	-
1,1-Dichloroethane	ND	-	0.0050	-	-	-	-
1,2-Dichloroethane (1,2-DCA)	ND	0.0434	0.0040	0.050	-	87	58-135
1,1-Dichloroethene	ND	0.0426	0.0050	0.050	-	85	42-145
cis-1,2-Dichloroethene	ND	-	0.0050	-	-	-	-
trans-1,2-Dichloroethene	ND	-	0.0050	-	-	-	-
1,2-Dichloropropane	ND	-	0.0050	-	-	-	-
1,3-Dichloropropane	ND	-	0.0050	-	-	-	-
2,2-Dichloropropane	ND	-	0.0050	-	-	-	-
1,1-Dichloropropene	ND	-	0.0050	-	-	-	-
cis-1,3-Dichloropropene	ND	-	0.0050	-	-	-	-

(Cont.)



## Quality Control Report

**Client:** ERAS Environmental, Inc.  
**Date Prepared:** 5/7/15  
**Date Analyzed:** 5/8/15  
**Instrument:** GC16  
**Matrix:** Soil  
**Project:** #14-003-01; 106-110 Hegenberger

**WorkOrder:** 1505259  
**BatchID:** 104595  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** mg/Kg  
**Sample ID:** MB/LCS-104595  
1505259-024AMS/MSD

### QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
trans-1,3-Dichloropropene	ND	-	0.0050	-	-	-	-
Diisopropyl ether (DIPE)	ND	0.0424	0.0050	0.050	-	85	52-129
Ethylbenzene	ND	-	0.0050	-	-	-	-
Ethyl tert-butyl ether (ETBE)	ND	0.0423	0.0050	0.050	-	85	53-125
Freon 113	ND	-	0.0050	-	-	-	-
Hexachlorobutadiene	ND	-	0.0050	-	-	-	-
Hexachloroethane	ND	-	0.0050	-	-	-	-
2-Hexanone	ND	-	0.0050	-	-	-	-
Isopropylbenzene	ND	-	0.0050	-	-	-	-
4-Isopropyl toluene	ND	-	0.0050	-	-	-	-
Methyl-t-butyl ether (MTBE)	ND	0.0402	0.0050	0.050	-	80	58-122
Methylene chloride	ND	-	0.0050	-	-	-	-
4-Methyl-2-pentanone (MIBK)	ND	-	0.0050	-	-	-	-
Naphthalene	ND	-	0.0050	-	-	-	-
n-Propyl benzene	ND	-	0.0050	-	-	-	-
Styrene	ND	-	0.0050	-	-	-	-
1,1,1,2-Tetrachloroethane	ND	-	0.0050	-	-	-	-
1,1,2,2-Tetrachloroethane	ND	-	0.0050	-	-	-	-
Tetrachloroethene	ND	-	0.0050	-	-	-	-
Toluene	ND	0.0506	0.0050	0.050	-	101	76-130
1,2,3-Trichlorobenzene	ND	-	0.0050	-	-	-	-
1,2,4-Trichlorobenzene	ND	-	0.0050	-	-	-	-
1,1,1-Trichloroethane	ND	-	0.0050	-	-	-	-
1,1,2-Trichloroethane	ND	-	0.0050	-	-	-	-
Trichloroethene	ND	0.0468	0.0050	0.050	-	94	72-132
Trichlorofluoromethane	ND	-	0.0050	-	-	-	-
1,2,3-Trichloropropane	ND	-	0.0050	-	-	-	-
1,2,4-Trimethylbenzene	ND	-	0.0050	-	-	-	-
1,3,5-Trimethylbenzene	ND	-	0.0050	-	-	-	-
Vinyl Chloride	ND	-	0.0050	-	-	-	-
Xylenes, Total	ND	-	0.0050	-	-	-	-

#### Surrogate Recovery

Dibromofluoromethane	0.102	0.104	0.12	82	83	70-130
Toluene-d8	0.120	0.118	0.12	96	94	70-130
4-BFB	0.0122	0.0119	0.012	97	95	70-130

(Cont.)



## Quality Control Report

<b>Client:</b>	ERAS Environmental, Inc.	<b>WorkOrder:</b>	1505259
<b>Date Prepared:</b>	5/7/15	<b>BatchID:</b>	104595
<b>Date Analyzed:</b>	5/8/15	<b>Extraction Method:</b>	SW5030B
<b>Instrument:</b>	GC16	<b>Analytical Method:</b>	SW8260B
<b>Matrix:</b>	Soil	<b>Unit:</b>	mg/Kg
<b>Project:</b>	#14-003-01; 106-110 Hegenberger	<b>Sample ID:</b>	MB/LCS-104595 1505259-024AMS/MSD

### QC Summary Report for SW8260B

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
tert-Amyl methyl ether (TAME)	0.0332	0.0324	0.050	ND	66,F1	65,F1	70-130	2.27	20
Benzene	0.0429	0.0413	0.050	ND	86	83	70-130	3.92	20
t-Butyl alcohol (TBA)	0.158	0.154	0.20	ND	79	77	70-130	2.07	20
Chlorobenzene	0.0409	0.0393	0.050	ND	82	79	70-130	3.99	20
1,2-Dibromoethane (EDB)	0.0338	0.0325	0.050	ND	68,F1	65,F1	70-130	3.85	20
1,2-Dichloroethane (1,2-DCA)	0.0383	0.0377	0.050	ND	77	75	70-130	1.62	20
1,1-Dichloroethene	0.0387	0.0376	0.050	ND	77	75	70-130	2.89	20
Diisopropyl ether (DIPE)	0.0407	0.0394	0.050	ND	81	79	70-130	3.10	20
Ethyl tert-butyl ether (ETBE)	0.0392	0.0380	0.050	ND	78	76	70-130	3.16	20
Methyl-t-butyl ether (MTBE)	0.0375	0.0364	0.050	ND	75	73	70-130	3.12	20
Toluene	0.0434	0.0407	0.050	ND	87	81	70-130	6.29	20
Trichloroethylene	0.0600	0.0572	0.050	ND	120	115	70-130	4.75	20
<b>Surrogate Recovery</b>									
Dibromofluoromethane	0.111	0.114	0.12		89	91	70-130	2.79	20
Toluene-d8	0.120	0.118	0.12		96	94	70-130	2.08	20
4-BFB	0.0107	0.0113	0.012		86	90	70-130	4.92	20



## Quality Control Report

**Client:** ERAS Environmental, Inc.

**WorkOrder:** 1505259

**Date Prepared:** 5/12/15

**BatchID:** 104739

**Date Analyzed:** 5/12/15

**Extraction Method:** SW5030B

**Instrument:** GC16

**Analytical Method:** SW8260B

**Matrix:** Water

**Unit:**  $\mu\text{g/L}$

**Project:** #14-003-01; 106-110 Hegenberger

**Sample ID:** MB/LCS-104739  
1505259-003CMS/MSD

### QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Acetone	ND	-	10	-	-	-	-
tert-Amyl methyl ether (TAME)	ND	8.72	0.50	10	-	87	54-140
Benzene	ND	8.76	0.50	10	-	88	47-158
Bromobenzene	ND	-	0.50	-	-	-	-
Bromochloromethane	ND	-	0.50	-	-	-	-
Bromodichloromethane	ND	-	0.50	-	-	-	-
Bromoform	ND	-	0.50	-	-	-	-
Bromomethane	ND	-	0.50	-	-	-	-
2-Butanone (MEK)	ND	-	2.0	-	-	-	-
t-Butyl alcohol (TBA)	ND	27.5	2.0	40	-	69	42-140
n-Butyl benzene	ND	-	0.50	-	-	-	-
sec-Butyl benzene	ND	-	0.50	-	-	-	-
tert-Butyl benzene	ND	-	0.50	-	-	-	-
Carbon Disulfide	ND	-	0.50	-	-	-	-
Carbon Tetrachloride	ND	-	0.50	-	-	-	-
Chlorobenzene	ND	9.48	0.50	10	-	95	43-157
Chloroethane	ND	-	0.50	-	-	-	-
Chloroform	ND	-	0.50	-	-	-	-
Chloromethane	ND	-	0.50	-	-	-	-
2-Chlorotoluene	ND	-	0.50	-	-	-	-
4-Chlorotoluene	ND	-	0.50	-	-	-	-
Dibromochloromethane	ND	-	0.50	-	-	-	-
1,2-Dibromo-3-chloropropane	ND	-	0.20	-	-	-	-
1,2-Dibromoethane (EDB)	ND	8.59	0.50	10	-	86	44-155
Dibromomethane	ND	-	0.50	-	-	-	-
1,2-Dichlorobenzene	ND	-	0.50	-	-	-	-
1,3-Dichlorobenzene	ND	-	0.50	-	-	-	-
1,4-Dichlorobenzene	ND	-	0.50	-	-	-	-
Dichlorodifluoromethane	ND	-	0.50	-	-	-	-
1,1-Dichloroethane	ND	-	0.50	-	-	-	-
1,2-Dichloroethane (1,2-DCA)	ND	8.44	0.50	10	-	84	66-125
1,1-Dichloroethene	ND	8.49	0.50	10	-	85	47-149
cis-1,2-Dichloroethene	ND	-	0.50	-	-	-	-
trans-1,2-Dichloroethene	ND	-	0.50	-	-	-	-
1,2-Dichloropropane	ND	-	0.50	-	-	-	-
1,3-Dichloropropane	ND	-	0.50	-	-	-	-
2,2-Dichloropropane	ND	-	0.50	-	-	-	-
1,1-Dichloropropene	ND	-	0.50	-	-	-	-
cis-1,3-Dichloropropene	ND	-	0.50	-	-	-	-
trans-1,3-Dichloropropene	ND	-	0.50	-	-	-	-

(Cont.)



## Quality Control Report

<b>Client:</b>	ERAS Environmental, Inc.	<b>WorkOrder:</b>	1505259
<b>Date Prepared:</b>	5/12/15	<b>BatchID:</b>	104739
<b>Date Analyzed:</b>	5/12/15	<b>Extraction Method:</b>	SW5030B
<b>Instrument:</b>	GC16	<b>Analytical Method:</b>	SW8260B
<b>Matrix:</b>	Water	<b>Unit:</b>	µg/L
<b>Project:</b>	#14-003-01; 106-110 Hegenberger	<b>Sample ID:</b>	MB/LCS-104739 1505259-003CMS/MSD

### QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Diisopropyl ether (DIPE)	ND	8.94	0.50	10	-	89	57-136
Ethylbenzene	ND	-	0.50	-	-	-	-
Ethyl tert-butyl ether (ETBE)	ND	8.92	0.50	10	-	89	55-137
Freon 113	ND	-	0.50	-	-	-	-
Hexachlorobutadiene	ND	-	0.50	-	-	-	-
Hexachloroethane	ND	-	0.50	-	-	-	-
2-Hexanone	ND	-	0.50	-	-	-	-
Isopropylbenzene	ND	-	0.50	-	-	-	-
4-Isopropyl toluene	ND	-	0.50	-	-	-	-
Methyl-t-butyl ether (MTBE)	ND	8.20	0.50	10	-	82	53-139
Methylene chloride	ND	-	0.50	-	-	-	-
4-Methyl-2-pentanone (MIBK)	ND	-	0.50	-	-	-	-
Naphthalene	ND	-	0.50	-	-	-	-
n-Propyl benzene	ND	-	0.50	-	-	-	-
Styrene	ND	-	0.50	-	-	-	-
1,1,1,2-Tetrachloroethane	ND	-	0.50	-	-	-	-
1,1,2,2-Tetrachloroethane	ND	-	0.50	-	-	-	-
Tetrachloroethene	ND	-	0.50	-	-	-	-
Toluene	ND	9.39	0.50	10	-	94	52-137
1,2,3-Trichlorobenzene	ND	-	0.50	-	-	-	-
1,2,4-Trichlorobenzene	ND	-	0.50	-	-	-	-
1,1,1-Trichloroethane	ND	-	0.50	-	-	-	-
1,1,2-Trichloroethane	ND	-	0.50	-	-	-	-
Trichloroethene	ND	8.90	0.50	10	-	89	43-157
Trichlorofluoromethane	ND	-	0.50	-	-	-	-
1,2,3-Trichloropropane	ND	-	0.50	-	-	-	-
1,2,4-Trimethylbenzene	ND	-	0.50	-	-	-	-
1,3,5-Trimethylbenzene	ND	-	0.50	-	-	-	-
Vinyl Chloride	ND	-	0.50	-	-	-	-
Xylenes, Total	ND	-	0.50	-	-	-	-

#### Surrogate Recovery

Dibromofluoromethane	21.5	21.5	25	86	86	65-135
Toluene-d8	21.5	21.7	25	86	87	64-127
4-BFB	2.12	2.15	2.5	85	86	59-139

(Cont.)



## Quality Control Report

**Client:** ERAS Environmental, Inc.      **WorkOrder:** 1505259  
**Date Prepared:** 5/12/15      **BatchID:** 104739  
**Date Analyzed:** 5/12/15      **Extraction Method:** SW5030B  
**Instrument:** GC16      **Analytical Method:** SW8260B  
**Matrix:** Water      **Unit:** µg/L  
**Project:** #14-003-01; 106-110 Hegenberger      **Sample ID:** MB/LCS-104739  
1505259-003CMS/MSD

### QC Summary Report for SW8260B

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
tert-Amyl methyl ether (TAME)	10.6	10.2	10	ND	106	102	69-139	4.32	20
Benzene	10.3	9.67	10	ND	103	96	69-141	6.45	20
t-Butyl alcohol (TBA)	35.4	34.4	40	2.5	82	80	41-152	3.10	20
Chlorobenzene	10.7	10.0	10	ND	107	100	77-120	7.08	20
1,2-Dibromoethane (EDB)	10.2	9.85	10	ND	102	98	76-135	3.40	20
1,2-Dichloroethane (1,2-DCA)	10.2	9.73	10	ND	102	97	73-139	4.20	20
1,1-Dichloroethene	9.86	9.10	10	ND	99	91	59-140	8.11	20
Diisopropyl ether (DIPE)	10.7	10.0	10	ND	107	101	72-140	6.14	20
Ethyl tert-butyl ether (ETBE)	10.7	10.2	10	ND	107	103	71-140	4.36	20
Methyl-t-butyl ether (MTBE)	9.96	9.69	10	ND	100	97	73-139	2.75	20
Toluene	10.6	9.88	10	ND	106	99	71-128	7.04	20
Trichloroethylene	10.6	9.77	10	ND	106	98	64-132	8.48	20
<b>Surrogate Recovery</b>									
Dibromofluoromethane	21.8	22.0	25		87	88	73-131	0.792	20
Toluene-d8	21.2	21.1	25		85	84	72-117	0.632	20
4-BFB	2.18	2.10	2.5		87	84	74-116	3.84	20



## Quality Control Report

<b>Client:</b>	ERAS Environmental, Inc.	<b>WorkOrder:</b>	1505259
<b>Date Prepared:</b>	5/6/15	<b>BatchID:</b>	104541
<b>Date Analyzed:</b>	5/8/15	<b>Extraction Method:</b>	SW3050B
<b>Instrument:</b>	ICP-MS2	<b>Analytical Method:</b>	SW6020
<b>Matrix:</b>	Soil	<b>Unit:</b>	mg/Kg
<b>Project:</b>	#14-003-01; 106-110 Hegenberger	<b>Sample ID:</b>	MB/LCS-104541 1505215-006AMS/MSD

### QC Summary Report for Metals

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Cadmium	ND	50.6	0.25	50	-	101	75-125
Chromium	ND	53.0	0.50	50	-	106	75-125
Lead	ND	52.1	0.50	50	-	104	75-125
Nickel	ND	54.1	0.50	50	-	108	75-125
Zinc	ND	539	5.0	500	-	108	75-125

#### Surrogate Recovery

Terbium	533	515	500	107	103	70-130
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Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Cadmium	47.8	48.0	50	0.88	94	94	75-125	0	20
Chromium	85.0	96.4	50	49	72,F1	95	75-125	12.7	20
Lead	NR	NR	50	113.0	NR	NR	75-125	NR	20
Nickel	NR	NR	50	71	NR	NR	75-125	NR	20
Zinc	NR	NR	500	550	NR	NR	75-125	NR	20

#### Surrogate Recovery

Terbium	497	503	500	99	101	70-130	1.30	20
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## Quality Control Report

<b>Client:</b>	ERAS Environmental, Inc.	<b>WorkOrder:</b>	1505259
<b>Date Prepared:</b>	5/7/15	<b>BatchID:</b>	104564
<b>Date Analyzed:</b>	5/8/15	<b>Extraction Method:</b>	E200.8
<b>Instrument:</b>	ICP-MS2	<b>Analytical Method:</b>	E200.8
<b>Matrix:</b>	Water	<b>Unit:</b>	µg/L
<b>Project:</b>	#14-003-01; 106-110 Hegenberger	<b>Sample ID:</b>	MB/LCS-104564 1505230-007AMS/MSD

### QC Summary Report for Metals

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Cadmium	ND	48.6	0.25	50	-	97	85-115
Chromium	ND	50.2	0.50	50	-	100	85-115
Lead	ND	49.9	0.50	50	-	100	85-115
Nickel	ND	50.9	0.50	50	-	102	85-115
Zinc	ND	516	15	500	-	102	85-115

#### Surrogate Recovery

Terbium	748	710	750	100	95	70-130
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Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Cadmium	47.9	46.1	50	ND	96	92	70-130	3.89	20
Chromium	50.1	50.5	50	ND	100	101	70-130	0.835	20
Lead	49.7	47.0	50	ND	99	94	70-130	5.65	20
Nickel	48.6	49.4	50	ND	97	99	70-130	1.45	20
Zinc	497	504	500	ND	97	98	70-130	1.44	20

#### Surrogate Recovery

Terbium	749	729	750	100	97	70-130	2.64	20
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## Quality Control Report

<b>Client:</b>	ERAS Environmental, Inc.	<b>WorkOrder:</b>	1505259
<b>Date Prepared:</b>	5/7/15	<b>BatchID:</b>	104594
<b>Date Analyzed:</b>	5/8/15	<b>Extraction Method:</b>	SW3050B
<b>Instrument:</b>	ICP-MS1	<b>Analytical Method:</b>	SW6020
<b>Matrix:</b>	Soil	<b>Unit:</b>	mg/Kg
<b>Project:</b>	#14-003-01; 106-110 Hegenberger	<b>Sample ID:</b>	MB/LCS-104594 1505259-015AMS/MSD

### QC Summary Report for Metals

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Cadmium	ND	49.3	0.25	50	-	99	75-125
Chromium	ND	49.4	0.50	50	-	99	75-125
Lead	ND	49.3	0.50	50	-	99	75-125
Nickel	ND	47.9	0.50	50	-	96	75-125
Zinc	ND	500	5.0	500	-	100	75-125

#### Surrogate Recovery

Terbium	496	506	500	99	101	70-130
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Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Cadmium	50.7	51.6	50	ND	101	103	75-125	1.82	20
Chromium	88.4	97.4	50	34.33	108	126,F1	75-125	9.78	20
Lead	55.0	56.5	50	5.155	100	103	75-125	2.78	20
Nickel	94.5	104	50	43.25	103	122	75-125	9.93	20
Zinc	542	562	500	36.18	101	105	75-125	3.57	20

#### Surrogate Recovery

Terbium	530	542	500	106	108	70-130	2.31	20
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## Quality Control Report

**Client:** ERAS Environmental, Inc.      **WorkOrder:** 1505259  
**Date Prepared:** 5/7/15      **BatchID:** 104563  
**Date Analyzed:** 5/7/15 - 5/8/15      **Extraction Method:** SW3550B/3630C  
**Instrument:** GC11B, GC2A      **Analytical Method:** SW8015B  
**Matrix:** Soil      **Unit:** mg/Kg  
**Project:** #14-003-01; 106-110 Hegenberger      **Sample ID:** MB/LCS-104563  
1505241-006AMS/MSD

### QC Report for SW8015B w/ SG Clean-Up

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
TPH-Diesel (C10-C23)	ND	38.7	1.0	40	-	97	70-130
TPH-Motor Oil (C18-C36)	ND	-	5.0	-	-	-	-

#### Surrogate Recovery

C9	27.9	28.0		25	112	112	70-130
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Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
TPH-Diesel (C10-C23)	54.6	55.7	40	7.999	116	119	70-130	2.14	30

#### Surrogate Recovery

C9	27.9	27.5	25		112	110	70-130	1.48	30
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## Quality Control Report

**Client:** ERAS Environmental, Inc.      **WorkOrder:** 1505259  
**Date Prepared:** 5/7/15      **BatchID:** 104593  
**Date Analyzed:** 5/8/15      **Extraction Method:** SW3550B/3630C  
**Instrument:** GC2B, GC6A      **Analytical Method:** SW8015B  
**Matrix:** Soil      **Unit:** mg/Kg  
**Project:** #14-003-01; 106-110 Hegenberger      **Sample ID:** MB/LCS-104593  
1505259-020AMS/MSD

### QC Report for SW8015B w/ SG Clean-Up

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
TPH-Diesel (C10-C23)	ND	40.3	1.0	40	-	101	70-130
TPH-Motor Oil (C18-C36)	ND	-	5.0	-	-	-	-

#### Surrogate Recovery

C9	24.5	28.2		25	98	113	70-130
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Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
TPH-Diesel (C10-C23)	50.2	53.2	40	5.536	112	119	70-130	5.78	30

#### Surrogate Recovery

C9	26.6	30.6	25		107	122	70-130	13.9	30
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## Quality Control Report

**Client:** ERAS Environmental, Inc.      **WorkOrder:** 1505259  
**Date Prepared:** 5/7/15      **BatchID:** 104592  
**Date Analyzed:** 5/8/15      **Extraction Method:** SW3510C/3630C  
**Instrument:** GC11B, GC2A      **Analytical Method:** SW8015B  
**Matrix:** Water      **Unit:** µg/L  
**Project:** #14-003-01; 106-110 Hegenberger      **Sample ID:** MB/LCS-104592

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### QC Report for SW8015B w/ SG Clean-Up

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Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
TPH-Diesel (C10-C23)	ND	1040	50	1000	-	104	59-151
TPH-Motor Oil (C18-C36)	ND	-	250	-	-	-	-

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**Surrogate Recovery**

C9	694	706	625	111	113	77-130
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# CHAIN-OF-CUSTODY RECORD

WorkOrder: 1505259

ClientCode: ERAS

WaterTrax     WriteOn     EDF     Excel     EQuIS     Email     HardCopy     ThirdParty     J-flag

## Report to:

Andrew Savage  
ERAS Environmental, Inc.  
1533 B Street  
Hayward, CA 94541  
(510) 247-9885    FAX: (510) 886-5399

Email: info@eras.biz; andrew@eras.biz  
cc/3rd Party:  
PO:  
ProjectNo: #14-003-01; 106-110 Hegenberger

## Bill to:

Kasey Cordoza  
ERAS Environmental, Inc.  
1533 B Street  
Hayward, CA 94541

Requested TAT: 5 days  
  
*Date Received: 05/07/2015*  
*Date Printed: 05/11/2015*

Lab ID	Client ID	Matrix	Collection Date	Hold	Requested Tests (See legend below)												
					1	2	3	4	5	6	7	8	9	10	11	12	
1505259-001	B-7	Water	5/6/2015 9:00	<input type="checkbox"/>		C		C		B		A					
1505259-002	B-8-Shallow	Water	5/6/2015 9:54	<input type="checkbox"/>		C		C		B		A					
1505259-003	B-8	Water	5/6/2015 10:51	<input type="checkbox"/>		C		C		B		A					
1505259-004	B-9-Shallow	Water	5/6/2015 11:32	<input type="checkbox"/>		C		C		B		A					
1505259-005	B-9	Water	5/6/2015 12:08	<input type="checkbox"/>		C		C		B		A					
1505259-006	B-1, 1.5-2	Soil	5/5/2015 9:16	<input type="checkbox"/>	A		A		A		A						
1505259-007	B-1, 11.5-12	Soil	5/5/2015 9:24	<input type="checkbox"/>	A		A		A		A						
1505259-008	B-2, 3.5-4	Soil	5/5/2015 10:33	<input type="checkbox"/>	A		A		A		A						
1505259-009	B-2, 6-6.5	Soil	5/5/2015 10:34	<input type="checkbox"/>	A		A		A		A						
1505259-010	B-2, 10-10.5	Soil	5/5/2015 10:37	<input type="checkbox"/>	A		A		A		A						
1505259-011	B-3, 2.5-4	Soil	5/5/2015 11:23	<input type="checkbox"/>	A		A		A		A						
1505259-012	B-3, 7.5-8	Soil	5/5/2015 11:26	<input type="checkbox"/>	A		A		A		A						
1505259-013	B-3, 10.5-11	Soil	5/5/2015 11:28	<input type="checkbox"/>	A		A		A		A						
1505259-014	B-4, 5.5-6	Soil	5/5/2015 11:52	<input type="checkbox"/>	A		A		A		A						
1505259-015	B-4, 11.5-12	Soil	5/5/2015 13:01	<input type="checkbox"/>	A		A		A		A						

Test Legend:

1	8260GAS_S	2	8260GAS_W	3	8260VOC_S	4	8260VOC_W	5	LUFTMS_S
6	LUFTMS_W	7	TPH(DMO)WSG_S	8	TPH(DMO)WSG_W	9		10	
11		12							

The following SampIDs: 001C, 002C, 003C, 004C, 005C, 006A, 007A, 008A, 009A, 010A, 011A, 012A, 013A, 014A, 015A, 016A, 017A, 018A, 019A, 020A, 021A, 022A, 023A, 024A, 025A, 026A contain testgroup.

Prepared by: Jena Alfaro

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.



# CHAIN-OF-CUSTODY RECORD

WaterTrax     WriteOn     EDF     Excel     EQuIS     Email     HardCopy     ThirdParty     J-flag

## Report to:

Andrew Savage  
ERAS Environmental, Inc.  
1533 B Street  
Hayward, CA 94541  
(510) 247-9885    FAX: (510) 886-5399

Email: info@eras.biz; andrew@eras.biz  
cc/3rd Party:  
PO:  
ProjectNo: #14-003-01; 106-110 Hegenberger

## Bill to:

Kasey Cordoza  
ERAS Environmental, Inc.  
1533 B Street  
Hayward, CA 94541

Requested TAT: 5 days  
  
*Date Received: 05/07/2015*  
*Date Printed: 05/11/2015*

Lab ID	Client ID	Matrix	Collection Date	Hold	Requested Tests (See legend below)											
					1	2	3	4	5	6	7	8	9	10	11	12
1505259-016	B-5, 3-3.5	Soil	5/5/2015 13:53	<input type="checkbox"/>	A		A		A		A					
1505259-017	B-5, 10.5-11	Soil	5/5/2015 13:59	<input type="checkbox"/>	A		A		A		A					
1505259-018	B-6, 3.5-4	Soil	5/5/2015 14:30	<input type="checkbox"/>	A		A		A		A					
1505259-019	B-6, 7.5-8	Soil	5/5/2015 14:35	<input type="checkbox"/>	A		A		A		A					
1505259-020	B-7, 3.5-4	Soil	5/6/2015 7:58	<input type="checkbox"/>	A		A		A		A					
1505259-021	B-7, 6.5-7	Soil	5/6/2015 7:59	<input type="checkbox"/>	A		A		A		A					
1505259-022	B-7, 11-11.5	Soil	5/6/2015 8:01	<input type="checkbox"/>	A		A		A		A					
1505259-023	B-8, 3.5-4	Soil	5/6/2015 9:14	<input type="checkbox"/>	A		A		A		A					
1505259-024	B-8, 11.5-12	Soil	5/6/2015 9:25	<input type="checkbox"/>	A		A		A		A					
1505259-025	B-9, 2.5-3	Soil	5/6/2015 11:02	<input type="checkbox"/>	A		A		A		A					
1505259-026	B-9, 11.5-12	Soil	5/6/2015 11:37	<input type="checkbox"/>	A		A		A		A					

Test Legend:

1	8260GAS_S	2	8260GAS_W	3	8260VOC_S	4	8260VOC_W	5	LUFTMS_S
6	LUFTMS_W	7	TPH(DMO)WSG_S	8	TPH(DMO)WSG_W	9		10	
11		12							

The following SampIDs: 001C, 002C, 003C, 004C, 005C, 006A, 007A, 008A, 009A, 010A, 011A, 012A, 013A, 014A, 015A, 016A, 017A, 018A, 019A, 020A, 021A, 022A, 023A, 024A, 025A, 026A contain testgroup.

Prepared by: Jena Alfaro

## 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.



## WORK ORDER SUMMARY

**Client Name:** ERAS ENVIRONMENTAL, INC.

**QC Level:** LEVEL 2

**Work Order:** 1505259

**Project:** #14-003-01; 106-110 Hegenberger

**Client Contact:** Andrew Savage

**Date Received:** 5/7/2015

**Comments:**

**Contact's Email:** info@eras.biz; andrew@eras.biz

WaterTrax     WriteOn     EDF     Excel     Fax     Email     HardCopy     ThirdParty     J-flag

Lab ID	Client ID	Matrix	Test Name	Containers /Composites	Bottle & Preservative	De-chlorinated	Collection Date & Time	TAT	Sediment Content	Hold	SubOut
1505259-001A	B-7	Water	SW8015B (TPH-d,mo w/ S.G. Clean-Up)	2	1LA	<input type="checkbox"/>	5/6/2015 9:00	5 days	Present	<input type="checkbox"/>	
1505259-001B	B-7	Water	E200.8 (LUFT)	2	250mL HDPE w/ HNO3	<input type="checkbox"/>	5/6/2015 9:00	5 days	Present	<input type="checkbox"/>	
1505259-001C	B-7	Water	TPH(g) & 8260 (Basic List) by P&T GCMS	6	VOA w/ HCl	<input type="checkbox"/>	5/6/2015 9:00	5 days	Present	<input type="checkbox"/>	
1505259-002A	B-8-Shallow	Water	SW8015B (TPH-d,mo w/ S.G. Clean-Up)	1	1LA	<input type="checkbox"/>	5/6/2015 9:54	5 days	Present	<input type="checkbox"/>	
1505259-002B	B-8-Shallow	Water	E200.8 (LUFT)	1	250mL HDPE w/ HNO3	<input type="checkbox"/>	5/6/2015 9:54	5 days	Present	<input type="checkbox"/>	
1505259-002C	B-8-Shallow	Water	TPH(g) & 8260 (Basic List) by P&T GCMS	6	VOA w/ HCl	<input type="checkbox"/>	5/6/2015 9:54	5 days	Present	<input type="checkbox"/>	
1505259-003A	B-8	Water	SW8015B (TPH-d,mo w/ S.G. Clean-Up)	2	1LA	<input type="checkbox"/>	5/6/2015 10:51	5 days	Present	<input type="checkbox"/>	
1505259-003B	B-8	Water	E200.8 (LUFT)	2	250mL HDPE w/ HNO3	<input type="checkbox"/>	5/6/2015 10:51	5 days	Present	<input type="checkbox"/>	
1505259-003C	B-8	Water	TPH(g) & 8260 (Basic List) by P&T GCMS	6	VOA w/ HCl	<input type="checkbox"/>	5/6/2015 10:51	5 days	Present	<input type="checkbox"/>	
1505259-004A	B-9-Shallow	Water	SW8015B (TPH-d,mo w/ S.G. Clean-Up)	2	1LA	<input type="checkbox"/>	5/6/2015 11:32	5 days	Present	<input type="checkbox"/>	
1505259-004B	B-9-Shallow	Water	E200.8 (LUFT)	2	250mL HDPE w/ HNO3	<input type="checkbox"/>	5/6/2015 11:32	5 days	Present	<input type="checkbox"/>	
1505259-004C	B-9-Shallow	Water	TPH(g) & 8260 (Basic List) by P&T GCMS	6	VOA w/ HCl	<input type="checkbox"/>	5/6/2015 11:32	5 days	Present	<input type="checkbox"/>	
1505259-005A	B-9	Water	SW8015B (TPH-d,mo w/ S.G. Clean-Up)	2	1LA	<input type="checkbox"/>	5/6/2015 12:08	5 days	Present	<input type="checkbox"/>	
1505259-005B	B-9	Water	E200.8 (LUFT)	2	250mL HDPE w/ HNO3	<input type="checkbox"/>	5/6/2015 12:08	5 days	Present	<input type="checkbox"/>	
1505259-005C	B-9	Water	TPH(g) & 8260 (Basic List) by P&T GCMS	6	VOA w/ HCl	<input type="checkbox"/>	5/6/2015 12:08	5 days	Present	<input type="checkbox"/>	

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

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



## WORK ORDER SUMMARY

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**QC Level:** LEVEL 2

**Work Order:** 1505259

**Project:** #14-003-01; 106-110 Hegenberger

**Client Contact:** Andrew Savage

**Date Received:** 5/7/2015

**Comments:**

**Contact's Email:** info@eras.biz; andrew@eras.biz

WaterTrax     WriteOn     EDF     Excel     Fax     Email     HardCopy     ThirdParty     J-flag

Lab ID	Client ID	Matrix	Test Name	Containers /Composites	Bottle & Preservative	De-chlorinated	Collection Date & Time	TAT	Sediment Content	Hold	SubOut
1505259-006A	B-1, 1.5-2	Soil	SW8015B (TPH-d,mo w/ S.G. Clean-Up) SW6020 (LUFT) TPH(g) & 8260 (Basic List) by P&T GCMS	1	Acetate Liner	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	5/5/2015 9:16	5 days		<input type="checkbox"/>	
1505259-007A	B-1, 11.5-12	Soil	SW8015B (TPH-d,mo w/ S.G. Clean-Up) SW6020 (LUFT) TPH(g) & 8260 (Basic List) by P&T GCMS	1	Acetate Liner	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	5/5/2015 9:24	5 days		<input type="checkbox"/>	
1505259-008A	B-2, 3.5-4	Soil	SW8015B (TPH-d,mo w/ S.G. Clean-Up) SW6020 (LUFT) TPH(g) & 8260 (Basic List) by P&T GCMS	1	Acetate Liner	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	5/5/2015 10:33	5 days		<input type="checkbox"/>	
1505259-009A	B-2, 6-6.5	Soil	SW8015B (TPH-d,mo w/ S.G. Clean-Up) SW6020 (LUFT) TPH(g) & 8260 (Basic List) by P&T GCMS	1	Acetate Liner	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	5/5/2015 10:34	5 days		<input type="checkbox"/>	
1505259-010A	B-2, 10-10.5	Soil	SW8015B (TPH-d,mo w/ S.G. Clean-Up) SW6020 (LUFT) TPH(g) & 8260 (Basic List) by P&T GCMS	1	Acetate Liner	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	5/5/2015 10:37	5 days		<input type="checkbox"/>	

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

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**Comments:**

**Contact's Email:** info@eras.biz; andrew@eras.biz

WaterTrax     WriteOn     EDF     Excel     Fax     Email     HardCopy     ThirdParty     J-flag

Lab ID	Client ID	Matrix	Test Name	Containers /Composites	Bottle & Preservative	De-chlorinated	Collection Date & Time	TAT	Sediment Content	Hold	SubOut
1505259-011A	B-3, 2.5-4	Soil	SW8015B (TPH-d,mo w/ S.G. Clean-Up) SW6020 (LUFT) TPH(g) & 8260 (Basic List) by P&T GCMS	1	Acetate Liner	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	5/5/2015 11:23	5 days		<input type="checkbox"/>	
1505259-012A	B-3, 7.5-8	Soil	SW8015B (TPH-d,mo w/ S.G. Clean-Up) SW6020 (LUFT) TPH(g) & 8260 (Basic List) by P&T GCMS	1	Acetate Liner	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	5/5/2015 11:26	5 days		<input type="checkbox"/>	
1505259-013A	B-3, 10.5-11	Soil	SW8015B (TPH-d,mo w/ S.G. Clean-Up) SW6020 (LUFT) TPH(g) & 8260 (Basic List) by P&T GCMS	1	Acetate Liner	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	5/5/2015 11:28	5 days		<input type="checkbox"/>	
1505259-014A	B-4, 5.5-6	Soil	SW8015B (TPH-d,mo w/ S.G. Clean-Up) SW6020 (LUFT) TPH(g) & 8260 (Basic List) by P&T GCMS	1	Acetate Liner	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	5/5/2015 11:52	5 days		<input type="checkbox"/>	
1505259-015A	B-4, 11.5-12	Soil	SW8015B (TPH-d,mo w/ S.G. Clean-Up) SW6020 (LUFT) TPH(g) & 8260 (Basic List) by P&T GCMS	1	Acetate Liner	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	5/5/2015 13:01	5 days		<input type="checkbox"/>	

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

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**Comments:**

**Contact's Email:** info@eras.biz; andrew@eras.biz

WaterTrax     WriteOn     EDF     Excel     Fax     Email     HardCopy     ThirdParty     J-flag

Lab ID	Client ID	Matrix	Test Name	Containers /Composites	Bottle & Preservative	De-chlorinated	Collection Date & Time	TAT	Sediment Content	Hold	SubOut
1505259-016A	B-5, 3-3.5	Soil	SW8015B (TPH-d,mo w/ S.G. Clean-Up) SW6020 (LUFT) TPH(g) & 8260 (Basic List) by P&T GCMS	1	Acetate Liner	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	5/5/2015 13:53	5 days		<input type="checkbox"/>	
1505259-017A	B-5, 10.5-11	Soil	SW8015B (TPH-d,mo w/ S.G. Clean-Up) SW6020 (LUFT) TPH(g) & 8260 (Basic List) by P&T GCMS	1	Acetate Liner	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	5/5/2015 13:59	5 days		<input type="checkbox"/>	
1505259-018A	B-6, 3.5-4	Soil	SW8015B (TPH-d,mo w/ S.G. Clean-Up) SW6020 (LUFT) TPH(g) & 8260 (Basic List) by P&T GCMS	1	Acetate Liner	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	5/5/2015 14:30	5 days		<input type="checkbox"/>	
1505259-019A	B-6, 7.5-8	Soil	SW8015B (TPH-d,mo w/ S.G. Clean-Up) SW6020 (LUFT) TPH(g) & 8260 (Basic List) by P&T GCMS	1	Acetate Liner	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	5/5/2015 14:35	5 days		<input type="checkbox"/>	
1505259-020A	B-7, 3.5-4	Soil	SW8015B (TPH-d,mo w/ S.G. Clean-Up) SW6020 (LUFT) TPH(g) & 8260 (Basic List) by P&T GCMS	1	Acetate Liner	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	5/6/2015 7:58	5 days		<input type="checkbox"/>	

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**Client Contact:** Andrew Savage

**Date Received:** 5/7/2015

**Comments:**

**Contact's Email:** info@eras.biz; andrew@eras.biz

WaterTrax     WriteOn     EDF     Excel     Fax     Email     HardCopy     ThirdParty     J-flag

Lab ID	Client ID	Matrix	Test Name	Containers /Composites	Bottle & Preservative	De-chlorinated	Collection Date & Time	TAT	Sediment Content	Hold	SubOut
1505259-021A	B-7, 6.5-7	Soil	SW8015B (TPH-d,mo w/ S.G. Clean-Up) SW6020 (LUFT) TPH(g) & 8260 (Basic List) by P&T GCMS	1	Acetate Liner	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	5/6/2015 7:59	5 days		<input type="checkbox"/>	
1505259-022A	B-7, 11-11.5	Soil	SW8015B (TPH-d,mo w/ S.G. Clean-Up) SW6020 (LUFT) TPH(g) & 8260 (Basic List) by P&T GCMS	1	Acetate Liner	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	5/6/2015 8:01	5 days		<input type="checkbox"/>	
1505259-023A	B-8, 3.5-4	Soil	SW8015B (TPH-d,mo w/ S.G. Clean-Up) SW6020 (LUFT) TPH(g) & 8260 (Basic List) by P&T GCMS	1	Acetate Liner	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	5/6/2015 9:14	5 days		<input type="checkbox"/>	
1505259-024A	B-8, 11.5-12	Soil	SW8015B (TPH-d,mo w/ S.G. Clean-Up) SW6020 (LUFT) TPH(g) & 8260 (Basic List) by P&T GCMS	1	Acetate Liner	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	5/6/2015 9:25	5 days		<input type="checkbox"/>	
1505259-025A	B-9, 2.5-3	Soil	SW8015B (TPH-d,mo w/ S.G. Clean-Up) SW6020 (LUFT) TPH(g) & 8260 (Basic List) by P&T GCMS	1	Acetate Liner	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	5/6/2015 11:02	5 days		<input type="checkbox"/>	

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

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**QC Level:** LEVEL 2

**Work Order:** 1505259

**Project:** #14-003-01; 106-110 Hegenberger

**Client Contact:** Andrew Savage

**Date Received:** 5/7/2015

**Comments:**

**Contact's Email:** info@eras.biz; andrew@eras.biz

WaterTrax     WriteOn     EDF     Excel     Fax     Email     HardCopy     ThirdParty     J-flag

Lab ID	Client ID	Matrix	Test Name	Containers /Composites	Bottle & Preservative	De-chlorinated	Collection Date & Time	TAT	Sediment Content	Hold	SubOut
1505259-026A	B-9, 11.5-12	Soil	SW8015B (TPH-d,mo w/ S.G. Clean-Up) SW6020 (LUFT) TPH(g) & 8260 (Basic List) by P&T GCMS	1	Acetate Liner	<input type="checkbox"/>	5/6/2015 11:37	5 days	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
						<input type="checkbox"/>		5 days	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
						<input type="checkbox"/>		5 days	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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

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1SOSZS9

Page 1 of 3

## **CHAIN OF CUSTODY FORM**

**McCampbell Analytical, Inc**  
1534 Willow Pass Rd.  
Pittsburg, CA 94565  
877.252.9262  
925.252.9269 - fax

**Report To:** ERAS      **Bill To:** ERAS  
**Company:** ERAS Environmental, Inc.

---

**Email:** [info@eras.biz](mailto:info@eras.biz)

**Telephone:** 510-247-9885    **Fax:** 510-886-5399

<b>Project #</b>	14-003-01		
<b>Project location</b>	106-110 Hegenberger	inners	
<b>Sampler:</b>	Andrew Savage	Type	

Sample ID	Location/Fiel d Point Name	Sampling		# of Col	Contain	Matrix			Preservative			
		Date	Time			Soil	Water	Waste	HCL	H2SO4	HNO3	ICE
B-7		5/6/2015	9:00	2	1L	X						X
B-7		5/6/2015	9:00	2	Poly	X					X	
B-7		5/6/2015	9:00	6	VOA	X			X			
B-8-Shallow		5/6/2015	9:54	1	1L	X						X
B-8-Shallow		5/6/2015	9:54	1	Poly	X					X	
B-8-Shallow		5/6/2015	9:54	6	VOA	X			X			
B-8		5/6/2015	10:51	2	1L	X						X
B-8		5/6/2015	10:51	1	Poly	X					X	
B-8		5/6/2015	10:51	6	VOA	X			X			
B-9-Shallow		5/6/2015	11:32	2	1L	X						X
B-9-Shallow		5/6/2015	11:32	2	Poly	X					X	
B-9-Shallow		5/6/2015	11:32	6	VOA	X			X			

RELINQUISHED BY:			RECEIVED BY:
Relinquished by:	Date:	Time:	Received by:
	5/7/15	11:15	
Relinquished by:	Date:	Time:	Received by:
	5/7	1645	
Relinquished by:	Date:	Time:	Received by:

ICE/t <sub>°</sub> Condition	3.2	Comments: Please PDF
Head space absent		
Dechlorinated in lab		
Appropriate containers		
Preserved in Lab		
	VOA's O&G Metals Other	
Preservation	pH<2	

## **CHAIN OF CUSTODY FORM**

Page 2 of 3

**McCampbell Analytical, Inc**  
**1534 Willow Pass Rd.**  
**Pittsburg, CA 94565**  
**877.252.9262**  
**925.252.9269 - fax**

**Report To:** ERAS      **Bill To:** ERAS  
**Company:** ERAS Environmental, Inc.

**Email:** [info@eras.biz](mailto:info@eras.biz)

**Telephone:** 510-247-9885    **Fax:** 510-886-5399

Project # 14-003-01

**Project location** 106-110 Hegenberger

**Sampler:** Andrew Savage

Sample ID	Location/Fiel d Point Name	Sampling		# of Contain	Matrix			Preservative		
		Date	Time		Soil	Water	Waste	HCL	H2SO4	HNO3
B-9		5/6/2015	12:08	2	1L	X				X
B-9		5/6/2015	12:08	2	Poly	X				X
B-9		5/6/2015	12:08	6	VOA	X		X		
B-1, 1.5-2		5/5/2015	9:16	1	Tube	X				X
B-1, 11.5-12		5/5/2015	9:24	1	Tube	X				X
B-2, 3.5-4		5/5/2015	10:33	1	Tube	X				X
B-2, 6-6.5		5/5/2015	10:34	1	Tube	X				X
B-2, 10-105		5/5/2015	10:37	1	Tube	X				X
B-3, 2.5-4 <del>(X)</del>		5/5/2015	11:23	1	Tube	X				X
B-3, 7.5-8		5/5/2015	11:26	1	Tube	X				X
B-3, 10.5-11		5/5/2015	11:28	1	Tube	X				X
B-4, 5.5-6		5/5/2015	11:52	1	Tube	X				X
B-4, 11.5-12		5/5/2015	13:01	1	Tube	X				X
B-6, 3-3.5		5/5/2015	13:53	1	Tube	X				X

B-5

\* 3.5-4

**RELINQUISHED BY:**

RECEIVED BY:

Relinquished by:	Date:	Time:	Received by:
	5/7/15	1115	
Relinquished by:	Date:	Time:	Received by:
	5/7	1645	
Relinquished by:	Date:	Time:	Received by:

ICE/t° Condition	<u>3.2</u>	Comments: Please PDF
Head space absent		
Dechlorinated in lab		
Appropriate containers		
Preserved in Lab		
	VOA's    O&G    Metals    Other	
Preservation	pH<2	

## **CHAIN OF CUSTODY FORM**

**McCampbell Analytical, Inc**  
**1534 Willow Pass Rd.**  
**Pittsburg, CA 94565**  
**877.252.9262**  
**925.252.9269 - fax**

**Report To:** ERAS      **Bill To:** ERAS  
**Company:** ERAS Environmental, Inc.

**Telephone:** 510-247-9885    **Email:** [info@eras.biz](mailto:info@eras.biz)

<b>Project #</b>	14-003-01		
<b>Project location</b>	106-110 Hegenberger	liners	Type
<b>Sampler:</b>	Andrew Savage		

\* 11.5-12

RELINQUISHED BY:			RECEIVED BY:
Relinquished by: 	Date: 5/7/15	Time: 11:15	Received by: 
Relinquished by: 	Date: 5/7	Time: 1645	Received by: 
Relinquished by: 	Date:	Time:	Received by:

ICE/t° Condition	<u>3-2</u>	Comments: Please PDF
Head space absent		
Dechlorinated in lab		
Appropriate containers		
Preserved in Lab		
Preservation	VOA's pH<2	O&G Metals Other



## Sample Receipt Checklist

Client Name: **ERAS Environmental, Inc.**

Date and Time Received: **5/7/2015 5:06:02 PM**

Project Name: **#14-003-01; 106-110 Hegenberger**

Login Reviewed by: **Jena Alfaro**

WorkOrder No: **1505259**

Matrix: **Soil/Water**

Carrier: **Benjamin Yslas (MAI Courier)**

### Chain of Custody (COC) Information

- |   |   |                             |
|---|---|-----------------------------|
| Chain of custody present?                               | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> |
| Chain of custody signed when relinquished and received? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> |
| Chain of custody agrees with sample labels?             | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> |
| Sample IDs noted by Client on COC?                      | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> |
| Date and Time of collection noted by Client on COC?     | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> |
| Sampler's name noted on COC?                            | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> |

### Sample Receipt Information

- |  |   |                             |  |
|--|---|-----------------------------|--|
| Custody seals intact on shipping container/cooler? | Yes <input type="checkbox"/>            | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/> |
| Shipping container/cooler in good condition?       | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> |  |
| Samples in proper containers/bottles?              | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> |  |
| Sample containers intact?                          | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> |  |
| Sufficient sample volume for indicated test?       | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> |  |

### Sample Preservation and Hold Time (HT) Information

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

(Ice Type: **WET ICE** )

### UCMR3 Samples:

- |  |                              |                             |  |
|--|------------------------------|-----------------------------|--|
| Total Chlorine tested and acceptable upon receipt for EPA 522?                   | Yes <input type="checkbox"/> | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/> |
| Free Chlorine tested and acceptable upon receipt for EPA 218.7, 300.1, 537, 539? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/> |

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

-----

Comments: pH adjusted in Lab.



# McCampbell Analytical, Inc.

"When Quality Counts"

## Analytical Report

**WorkOrder:** 1509193

**Report Created for:** ERAS Environmental, Inc.

1533 B Street  
Hayward, CA 94541

**Project Contact:** Andrew Savage

**Project P.O.:**

**Project Name:** 14-003-05; 106-110 Hegenberger

**Project Received:** 09/04/2015

Analytical Report reviewed & approved for release on 09/14/2015 by:

Angela Rydelius,  
Laboratory Manager

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





## Glossary of Terms & Qualifier Definitions

**Client:** ERAS Environmental, Inc.  
**Project:** 14-003-05; 106-110 Hegenberger  
**WorkOrder:** 1509193

### Glossary Abbreviation

95% Interval	95% Confident Interval
DF	Dilution Factor
DI WET	(DISTLC) Waste Extraction Test using DI water
DISS	Dissolved (direct analysis of 0.45 µm filtered and acidified water sample)
DUP	Duplicate
EDL	Estimated Detection Limit
ITEF	International Toxicity Equivalence Factor
LCS	Laboratory Control Sample
MB	Method Blank
MB % Rec	% Recovery of Surrogate in Method Blank, if applicable
MDL	Method Detection Limit
ML	Minimum Level of Quantitation
MS	Matrix Spike
MSD	Matrix Spike Duplicate
N/A	Not Applicable
ND	Not detected at or above the indicated MDL or RL
NR	Data Not Reported due to matrix interference or insufficient sample amount.
PF	Prep Factor
RD	Relative Difference
RL	Reporting Limit (The RL is the lowest calibration standard in a multipoint calibration.)
RPD	Relative Percent Deviation
RRT	Relative Retention Time
SPK Val	Spike Value
SPKRef Val	Spike Reference Value
SPLP	Synthetic Precipitation Leachate Procedure
TCLP	Toxicity Characteristic Leachate Procedure
TEQ	Toxicity Equivalents
WET (STLC)	Waste Extraction Test (Soluble Threshold Limit Concentration)

### Analytical Qualifiers

b1	aqueous sample that contains greater than ~1 vol. % sediment
e2	diesel range compounds are significant; no recognizable pattern



## Analytical Report

**Client:** ERAS Environmental, Inc.  
**Date Received:** 9/4/15 18:50  
**Date Prepared:** 9/9/15-9/10/15  
**Project:** 14-003-05; 106-110 Hegenberger

**WorkOrder:** 1509193  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** µg/L

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B-10	1509193-001B	Water	09/03/2015 10:06	GC28	110053

<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH(g)	ND	50	1	09/09/2015 21:21
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
Dibromofluoromethane	98	70-130		09/09/2015 21:21
<u>Analyst(s):</u>	<u>Analytical Comments:</u> b1			

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B-11	1509193-002B	Water	09/03/2015 11:05	GC28	110053

<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH(g)	ND	50	1	09/09/2015 21:59
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
Dibromofluoromethane	98	70-130		09/09/2015 21:59
<u>Analyst(s):</u>	<u>Analytical Comments:</u> b1			

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B-12	1509193-003B	Water	09/03/2015 12:19	GC28	110053

<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH(g)	53	50	1	09/09/2015 22:37
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
Dibromofluoromethane	98	70-130		09/09/2015 22:37
<u>Analyst(s):</u>	<u>Analytical Comments:</u> b1			

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B-13	1509193-004B	Water	09/03/2015 14:42	GC28	110053

<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH(g)	ND	50	1	09/09/2015 23:15
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
Dibromofluoromethane	97	70-130		09/09/2015 23:15
<u>Analyst(s):</u>	<u>Analytical Comments:</u> b1			

(Cont.)



## Analytical Report

**Client:** ERAS Environmental, Inc.  
**Date Received:** 9/4/15 18:50  
**Date Prepared:** 9/9/15-9/10/15  
**Project:** 14-003-05; 106-110 Hegenberger

**WorkOrder:** 1509193  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** µg/L

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B-14	1509193-005B	Water	09/03/2015 13:41	GC28	110053

Analyses	Result	RL	DF	Date Analyzed
TPH(g)	ND	50	1	09/09/2015 23:53
Surrogates	REC (%)	Limits		
Dibromofluoromethane	96	70-130		09/09/2015 23:53
Analyst(s):	KF			

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B-15	1509193-006B	Water	09/04/2015 08:55	GC28	110053

Analyses	Result	RL	DF	Date Analyzed
TPH(g)	ND	50	1	09/10/2015 00:31
Surrogates	REC (%)	Limits		
Dibromofluoromethane	96	70-130		09/10/2015 00:31
Analyst(s):	KF			

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B-16	1509193-007B	Water	09/04/2015 10:14	GC28	110053

Analyses	Result	RL	DF	Date Analyzed
TPH(g)	ND	50	1	09/10/2015 01:09
Surrogates	REC (%)	Limits		
Dibromofluoromethane	96	70-130		09/10/2015 01:09
Analyst(s):	KF			



## Analytical Report

**Client:** ERAS Environmental, Inc.  
**Date Received:** 9/4/15 18:50  
**Date Prepared:** 9/9/15-9/10/15  
**Project:** 14-003-05; 106-110 Hegenberger

**WorkOrder:** 1509193  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** µg/L

### Volatile Organics by P&T and GC/MS

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B-10	1509193-001B	Water	09/03/2015 10:06	GC28	110053
<hr/>					
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Benzene	ND		0.50	1	09/09/2015 21:21
Ethylbenzene	ND		0.50	1	09/09/2015 21:21
Methyl-t-butyl ether (MTBE)	ND		0.50	1	09/09/2015 21:21
Naphthalene	ND		0.50	1	09/09/2015 21:21
Toluene	ND		0.50	1	09/09/2015 21:21
Xylenes, Total	ND		0.50	1	09/09/2015 21:21
<hr/>					
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Dibromofluoromethane	111		70-130		09/09/2015 21:21
Toluene-d8	109		70-130		09/09/2015 21:21
4-BFB	103		70-130		09/09/2015 21:21
Analyst(s): KF	Analytical Comments: b1				

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B-11	1509193-002B	Water	09/03/2015 11:05	GC28	110053
<hr/>					
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Benzene	ND		0.50	1	09/09/2015 21:59
Ethylbenzene	1.0		0.50	1	09/09/2015 21:59
Methyl-t-butyl ether (MTBE)	ND		0.50	1	09/09/2015 21:59
Naphthalene	ND		0.50	1	09/09/2015 21:59
Toluene	ND		0.50	1	09/09/2015 21:59
Xylenes, Total	0.84		0.50	1	09/09/2015 21:59
<hr/>					
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Dibromofluoromethane	112		70-130		09/09/2015 21:59
Toluene-d8	108		70-130		09/09/2015 21:59
4-BFB	100		70-130		09/09/2015 21:59
Analyst(s): KF	Analytical Comments: b1				

(Cont.)



## Analytical Report

**Client:** ERAS Environmental, Inc.  
**Date Received:** 9/4/15 18:50  
**Date Prepared:** 9/9/15-9/10/15  
**Project:** 14-003-05; 106-110 Hegenberger

**WorkOrder:** 1509193  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** µg/L

### Volatile Organics by P&T and GC/MS

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B-12	1509193-003B	Water	09/03/2015 12:19	GC28	110053
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Benzene	2.4		0.50	1	09/09/2015 22:37
Ethylbenzene	5.7		0.50	1	09/09/2015 22:37
Methyl-t-butyl ether (MTBE)	ND		0.50	1	09/09/2015 22:37
Naphthalene	0.79		0.50	1	09/09/2015 22:37
Toluene	ND		0.50	1	09/09/2015 22:37
Xylenes, Total	1.7		0.50	1	09/09/2015 22:37
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Dibromofluoromethane	112		70-130		09/09/2015 22:37
Toluene-d8	107		70-130		09/09/2015 22:37
4-BFB	102		70-130		09/09/2015 22:37
Analyst(s): KF	Analytical Comments: b1				

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B-13	1509193-004B	Water	09/03/2015 14:42	GC28	110053
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Benzene	ND		0.50	1	09/09/2015 23:15
Ethylbenzene	ND		0.50	1	09/09/2015 23:15
Methyl-t-butyl ether (MTBE)	ND		0.50	1	09/09/2015 23:15
Naphthalene	ND		0.50	1	09/09/2015 23:15
Toluene	ND		0.50	1	09/09/2015 23:15
Xylenes, Total	ND		0.50	1	09/09/2015 23:15
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Dibromofluoromethane	110		70-130		09/09/2015 23:15
Toluene-d8	109		70-130		09/09/2015 23:15
4-BFB	101		70-130		09/09/2015 23:15
Analyst(s): KF	Analytical Comments: b1				

(Cont.)



## Analytical Report

**Client:** ERAS Environmental, Inc.  
**Date Received:** 9/4/15 18:50  
**Date Prepared:** 9/9/15-9/10/15  
**Project:** 14-003-05; 106-110 Hegenberger

**WorkOrder:** 1509193  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** µg/L

### Volatile Organics by P&T and GC/MS

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B-14	1509193-005B	Water	09/03/2015 13:41	GC28	110053
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Benzene	ND		0.50	1	09/09/2015 23:53
Ethylbenzene	ND		0.50	1	09/09/2015 23:53
Methyl-t-butyl ether (MTBE)	ND		0.50	1	09/09/2015 23:53
Naphthalene	ND		0.50	1	09/09/2015 23:53
Toluene	ND		0.50	1	09/09/2015 23:53
Xylenes, Total	ND		0.50	1	09/09/2015 23:53
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Dibromofluoromethane	110		70-130		09/09/2015 23:53
Toluene-d8	108		70-130		09/09/2015 23:53
4-BFB	101		70-130		09/09/2015 23:53

Analyst(s): KF

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B-15	1509193-006B	Water	09/04/2015 08:55	GC28	110053
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Benzene	ND		0.50	1	09/10/2015 00:31
Ethylbenzene	ND		0.50	1	09/10/2015 00:31
Methyl-t-butyl ether (MTBE)	ND		0.50	1	09/10/2015 00:31
Naphthalene	ND		0.50	1	09/10/2015 00:31
Toluene	ND		0.50	1	09/10/2015 00:31
Xylenes, Total	ND		0.50	1	09/10/2015 00:31
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Dibromofluoromethane	111		70-130		09/10/2015 00:31
Toluene-d8	107		70-130		09/10/2015 00:31
4-BFB	98		70-130		09/10/2015 00:31

Analyst(s): KF

Analytical Comments: b1

(Cont.)



## Analytical Report

**Client:** ERAS Environmental, Inc.

**WorkOrder:** 1509193

**Date Received:** 9/4/15 18:50

**Extraction Method:** SW5030B

**Date Prepared:** 9/9/15-9/10/15

**Analytical Method:** SW8260B

**Project:** 14-003-05; 106-110 Hegenberger

**Unit:** µg/L

### Volatile Organics by P&T and GC/MS

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B-16	1509193-007B	Water	09/04/2015 10:14	GC28	110053
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Benzene	ND		0.50	1	09/10/2015 01:09
Ethylbenzene	ND		0.50	1	09/10/2015 01:09
Methyl-t-butyl ether (MTBE)	ND		0.50	1	09/10/2015 01:09
Naphthalene	ND		0.50	1	09/10/2015 01:09
Toluene	ND		0.50	1	09/10/2015 01:09
Xylenes, Total	ND		0.50	1	09/10/2015 01:09
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Dibromofluoromethane	109		70-130		09/10/2015 01:09
Toluene-d8	108		70-130		09/10/2015 01:09
4-BFB	98		70-130		09/10/2015 01:09
<u>Analyst(s):</u>	KF		<u>Analytical Comments:</u>	b1	



## Analytical Report

**Client:** ERAS Environmental, Inc.  
**Date Received:** 9/4/15 18:50  
**Date Prepared:** 9/8/15  
**Project:** 14-003-05; 106-110 Hegenberger

**WorkOrder:** 1509193  
**Extraction Method:** SW3510C/3630C  
**Analytical Method:** SW8015B  
**Unit:** µg/L

### Total Extractable Petroleum Hydrocarbons w/ SG Clean-Up

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B-10	1509193-001A	Water	09/03/2015 10:06	GC6A	109939

Analyses	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	ND	50	1	09/09/2015 14:45
TPH-Motor Oil (C18-C36)	ND	250	1	09/09/2015 14:45

Surrogates	REC (%)	Limits		
C9	91	70-130		09/09/2015 14:45

Analyst(s): TK      Analytical Comments: b1

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B-11	1509193-002A	Water	09/03/2015 11:05	GC9b	109939

Analyses	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	ND	50	1	09/09/2015 11:30
TPH-Motor Oil (C18-C36)	ND	250	1	09/09/2015 11:30

Surrogates	REC (%)	Limits		
C9	104	70-130		09/09/2015 11:30

Analyst(s): TK      Analytical Comments: b1

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B-12	1509193-003A	Water	09/03/2015 12:19	GC6A	109939

Analyses	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	ND	50	1	09/09/2015 12:14
TPH-Motor Oil (C18-C36)	ND	250	1	09/09/2015 12:14

Surrogates	REC (%)	Limits		
C9	89	70-130		09/09/2015 12:14

Analyst(s): TK      Analytical Comments: b1

(Cont.)



## Analytical Report

**Client:** ERAS Environmental, Inc.  
**Date Received:** 9/4/15 18:50  
**Date Prepared:** 9/8/15  
**Project:** 14-003-05; 106-110 Hegenberger

**WorkOrder:** 1509193  
**Extraction Method:** SW3510C/3630C  
**Analytical Method:** SW8015B  
**Unit:** µg/L

### Total Extractable Petroleum Hydrocarbons w/ SG Clean-Up

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B-13	1509193-004A	Water	09/03/2015 14:42	GC6A	109939

Analyses	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	ND	50	1	09/09/2015 00:35
TPH-Motor Oil (C18-C36)	ND	250	1	09/09/2015 00:35

Surrogates	REC (%)	Limits		
C9	83	70-130		09/09/2015 00:35
Analyst(s):	TK	<u>Analytical Comments:</u> b1		

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B-14	1509193-005A	Water	09/03/2015 13:41	GC6A	109939

Analyses	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	54	50	1	09/08/2015 22:10
TPH-Motor Oil (C18-C36)	ND	250	1	09/08/2015 22:10

Surrogates	REC (%)	Limits		
C9	87	70-130		09/08/2015 22:10
Analyst(s):	TK	<u>Analytical Comments:</u> e2		

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B-15	1509193-006A	Water	09/04/2015 08:55	GC6A	109939

Analyses	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	ND	50	1	09/09/2015 13:29
TPH-Motor Oil (C18-C36)	ND	250	1	09/09/2015 13:29

Surrogates	REC (%)	Limits		
C9	71	70-130		09/09/2015 13:29
Analyst(s):	TK	<u>Analytical Comments:</u> b1		

(Cont.)



## Analytical Report

**Client:** ERAS Environmental, Inc.

**WorkOrder:** 1509193

**Date Received:** 9/4/15 18:50

**Extraction Method:** SW3510C/3630C

**Date Prepared:** 9/8/15

**Analytical Method:** SW8015B

**Project:** 14-003-05; 106-110 Hegenberger

**Unit:** µg/L

### Total Extractable Petroleum Hydrocarbons w/ SG Clean-Up

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B-16	1509193-007A	Water	09/04/2015 10:14	GC6B	109939
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	ND		50	1	09/09/2015 00:35
TPH-Motor Oil (C18-C36)	ND		250	1	09/09/2015 00:35
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
C9	86		70-130		09/09/2015 00:35
<u>Analyst(s):</u>	TK		<u>Analytical Comments:</u>	b1	

CLIENT: ERAS Environmental, Inc.

Work Order: 1509193

Project: 14-003-05; 106-110 Hegenberger

**ANALYTICAL QC SUMMARY REPORT****BatchID: 110053**

SampleID	<b>MB-110053</b>	TestCode:	<b>8260gas_w</b>	Units:	<b>µg/L</b>	Prep Date:	<b>9/9/2015</b>
Batch ID:	<b>110053</b>	TestNo:	<b>SW8260B</b>	Run ID:	<b>GC28_150914F</b>	Analysis Date:	<b>9/9/2015</b>
Analyte		Result		PQL	SPKValue	SPKRefVal	%REC
TPH(g)		ND		50			Limits

**Surrogate Recovery**

Dibromofluoromethane      24.0      25      96      70 - 130

**Qualifiers:** ND - Not Detected at the Reporting Limit  
 J - Analyte detected below quantitation limits  
 B - Analyte detected in the associated Method Blank

S - Spike Recovery outside accepted recovery limits  
 R - RPD outside accepted recovery limits  
 E - Value above quantitation range

**CLIENT:** ERAS Environmental, Inc.  
**Work Order:** 1509193  
**Project:** 14-003-05; 106-110 Hegenberger

## ANALYTICAL QC SUMMARY REPORT

**BatchID:** 110053

SampleID	LCS-110053	TestCode:	8260gas_w	Units:	µg/L	Prep Date:	9/9/2015	
Batch ID:	110053	TestNo:	SW8260B	Run ID:	GC28_150914F	Analysis Date:	9/9/2015	
Analyte		Result		PQL	SPKValue	SPKRefVal	%REC	
VOC (C6-C12)		492		50	644	0	76	75 - 105

### Surrogate Recovery

Dibromofluoromethane	24.1	25	96	70 - 130
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**Qualifiers:**  
ND - Not Detected at the Reporting Limit  
J - Analyte detected below quantitation limits  
B - Analyte detected in the associated Method Blank

S - Spike Recovery outside accepted recovery limits  
R - RPD outside accepted recovery limits  
E - Value above quantitation range



## Quality Control Report

<b>Client:</b>	ERAS Environmental, Inc.	<b>WorkOrder:</b>	1509193
<b>Date Prepared:</b>	9/9/15	<b>BatchID:</b>	110053
<b>Date Analyzed:</b>	9/9/15	<b>Extraction Method:</b>	SW5030B
<b>Instrument:</b>	GC28	<b>Analytical Method:</b>	SW8260B
<b>Matrix:</b>	Water	<b>Unit:</b>	µg/L
<b>Project:</b>	14-003-05; 106-110 Hegenberger	<b>Sample ID:</b>	MB/LCS-110053 1509200-001BMS/MSD

### QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Acetone	ND	-	10	-	-	-	-
tert-Amyl methyl ether (TAME)	ND	9.74	0.50	10	-	97	54-140
Benzene	ND	9.84	0.50	10	-	98	47-158
Bromobenzene	ND	-	0.50	-	-	-	-
Bromoform	ND	-	0.50	-	-	-	-
Bromochloromethane	ND	-	0.50	-	-	-	-
Bromodichloromethane	ND	-	0.50	-	-	-	-
Bromomethane	ND	-	0.50	-	-	-	-
2-Butanone (MEK)	ND	-	2.0	-	-	-	-
t-Butyl alcohol (TBA)	ND	37.0	2.0	40	-	93	42-140
n-Butyl benzene	ND	-	0.50	-	-	-	-
sec-Butyl benzene	ND	-	0.50	-	-	-	-
tert-Butyl benzene	ND	-	0.50	-	-	-	-
Carbon Disulfide	ND	-	0.50	-	-	-	-
Carbon Tetrachloride	ND	-	0.50	-	-	-	-
Chlorobenzene	ND	9.45	0.50	10	-	94	43-157
Chloroethane	ND	-	0.50	-	-	-	-
Chloroform	ND	-	0.50	-	-	-	-
Chloromethane	ND	-	0.50	-	-	-	-
2-Chlorotoluene	ND	-	0.50	-	-	-	-
4-Chlorotoluene	ND	-	0.50	-	-	-	-
Dibromochloromethane	ND	-	0.50	-	-	-	-
1,2-Dibromo-3-chloropropane	ND	-	0.20	-	-	-	-
1,2-Dibromoethane (EDB)	ND	9.21	0.50	10	-	92	44-155
Dibromomethane	ND	-	0.50	-	-	-	-
1,2-Dichlorobenzene	ND	-	0.50	-	-	-	-
1,3-Dichlorobenzene	ND	-	0.50	-	-	-	-
1,4-Dichlorobenzene	ND	-	0.50	-	-	-	-
Dichlorodifluoromethane	ND	-	0.50	-	-	-	-
1,1-Dichloroethane	ND	-	0.50	-	-	-	-
1,2-Dichloroethane (1,2-DCA)	ND	9.50	0.50	10	-	95	66-125
1,1-Dichloroethylene	ND	10.2	0.50	10	-	102	47-149
cis-1,2-Dichloroethene	ND	-	0.50	-	-	-	-
trans-1,2-Dichloroethene	ND	-	0.50	-	-	-	-
1,2-Dichloropropane	ND	-	0.50	-	-	-	-
1,3-Dichloropropane	ND	-	0.50	-	-	-	-
2,2-Dichloropropane	ND	-	0.50	-	-	-	-
1,1-Dichloropropene	ND	-	0.50	-	-	-	-

(Cont.)

CDPH ELAP 1644 ♦ NELAP 4033ORELAP

 QA/QC Officer



## Quality Control Report

<b>Client:</b>	ERAS Environmental, Inc.	<b>WorkOrder:</b>	1509193
<b>Date Prepared:</b>	9/9/15	<b>BatchID:</b>	110053
<b>Date Analyzed:</b>	9/9/15	<b>Extraction Method:</b>	SW5030B
<b>Instrument:</b>	GC28	<b>Analytical Method:</b>	SW8260B
<b>Matrix:</b>	Water	<b>Unit:</b>	µg/L
<b>Project:</b>	14-003-05; 106-110 Hegenberger	<b>Sample ID:</b>	MB/LCS-110053 1509200-001BMS/MSD

### QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
cis-1,3-Dichloropropene	ND	-	0.50	-	-	-	-
trans-1,3-Dichloropropene	ND	-	0.50	-	-	-	-
Diisopropyl ether (DIPE)	ND	9.76	0.50	10	-	98	57-136
Ethylbenzene	ND	-	0.50	-	-	-	-
Ethyl tert-butyl ether (ETBE)	ND	9.36	0.50	10	-	94	55-137
Freon 113	ND	-	0.50	-	-	-	-
Hexachlorobutadiene	ND	-	0.50	-	-	-	-
Hexachloroethane	ND	-	0.50	-	-	-	-
2-Hexanone	ND	-	0.50	-	-	-	-
Isopropylbenzene	ND	-	0.50	-	-	-	-
4-Isopropyl toluene	ND	-	0.50	-	-	-	-
Methyl-t-butyl ether (MTBE)	ND	9.43	0.50	10	-	94	53-139
Methylene chloride	ND	-	0.50	-	-	-	-
4-Methyl-2-pentanone (MIBK)	ND	-	0.50	-	-	-	-
Naphthalene	ND	-	0.50	-	-	-	-
n-Propyl benzene	ND	-	0.50	-	-	-	-
Styrene	ND	-	0.50	-	-	-	-
1,1,1,2-Tetrachloroethane	ND	-	0.50	-	-	-	-
1,1,2,2-Tetrachloroethane	ND	-	0.50	-	-	-	-
Tetrachloroethene	ND	-	0.50	-	-	-	-
Toluene	ND	9.88	0.50	10	-	99	52-137
1,2,3-Trichlorobenzene	ND	-	0.50	-	-	-	-
1,2,4-Trichlorobenzene	ND	-	0.50	-	-	-	-
1,1,1-Trichloroethane	ND	-	0.50	-	-	-	-
1,1,2-Trichloroethane	ND	-	0.50	-	-	-	-
Trichloroethene	ND	9.62	0.50	10	-	96	43-157
Trichlorofluoromethane	ND	-	0.50	-	-	-	-
1,2,3-Trichloropropane	ND	-	0.50	-	-	-	-
1,2,4-Trimethylbenzene	ND	-	0.50	-	-	-	-
1,3,5-Trimethylbenzene	ND	-	0.50	-	-	-	-
Vinyl Chloride	ND	-	0.50	-	-	-	-
Xylenes, Total	ND	-	0.50	-	-	-	-

(Cont.)

CDPH ELAP 1644 ♦ NELAP 4033ORELAP

 QA/QC Officer



## Quality Control Report

<b>Client:</b>	ERAS Environmental, Inc.	<b>WorkOrder:</b>	1509193
<b>Date Prepared:</b>	9/9/15	<b>BatchID:</b>	110053
<b>Date Analyzed:</b>	9/9/15	<b>Extraction Method:</b>	SW5030B
<b>Instrument:</b>	GC28	<b>Analytical Method:</b>	SW8260B
<b>Matrix:</b>	Water	<b>Unit:</b>	µg/L
<b>Project:</b>	14-003-05; 106-110 Hegenberger	<b>Sample ID:</b>	MB/LCS-110053 1509200-001BMS/MSD

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### QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits		
<b>Surrogate Recovery</b>									
Dibromofluoromethane	26.6	27.1		25	107	108	70-130		
Toluene-d8	27.5	27.2		25	110	109	70-130		
4-BFB	2.54	2.63		2.5	102	105	70-130		
Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
tert-Amyl methyl ether (TAME)	11.4	11.8	10	ND	114	118	69-139	3.60	20
Benzene	10.0	10.3	10	ND	100	103	69-141	2.33	20
t-Butyl alcohol (TBA)	51.2	54.8	40	ND	128	137	41-152	6.86	20
Chlorobenzene	9.44	9.64	10	ND	94	96	77-120	2.15	20
1,2-Dibromoethane (EDB)	10.5	10.8	10	ND	105	108	76-135	2.75	20
1,2-Dichloroethane (1,2-DCA)	10.8	11.1	10	ND	108	111	73-139	2.79	20
1,1-Dichloroethene	10.2	10.6	10	ND	102	106	59-140	3.36	20
Diisopropyl ether (DIPE)	10.7	11.0	10	ND	107	110	72-140	2.60	20
Ethyl tert-butyl ether (ETBE)	10.6	10.9	10	ND	106	109	71-140	3.06	20
Methyl-t-butyl ether (MTBE)	11.4	11.7	10	ND	114	117	73-139	2.94	20
Toluene	9.64	9.88	10	ND	96	99	71-128	2.46	20
Trichloroethene	9.74	10.1	10	ND	95	99	64-132	3.50	20
<b>Surrogate Recovery</b>									
Dibromofluoromethane	27.7	28.1	25		111	112	70-130	1.29	20
Toluene-d8	26.4	26.6	25		106	106	70-130	0	20
4-BFB	2.55	2.52	2.5		102	101	70-130	1.16	20



## Quality Control Report

**Client:** ERAS Environmental, Inc.      **WorkOrder:** 1509193  
**Date Prepared:** 9/8/15      **BatchID:** 109939  
**Date Analyzed:** 9/8/15      **Extraction Method:** SW3510C/3630C  
**Instrument:** GC9a, GC9b      **Analytical Method:** SW8015B  
**Matrix:** Water      **Unit:** µg/L  
**Project:** 14-003-05; 106-110 Hegenberger      **Sample ID:** MB/LCS-109939

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### QC Report for SW8015B w/ SG Clean-Up

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Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
TPH-Diesel (C10-C23)	ND	924	50	1000	-	92	59-151
TPH-Motor Oil (C18-C36)	ND	-	250	-	-	-	-
<b>Surrogate Recovery</b>							
C9	651	664		625	104	106	65-122

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# CHAIN-OF-CUSTODY RECORD

Page 1 of 1

WorkOrder: 1509193

ClientCode: ERAS

WaterTrax     WriteOn     EDF     Excel     EQuIS     Email     HardCopy     ThirdParty     J-flag

## Report to:

Andrew Savage  
ERAS Environmental, Inc.  
1533 B Street  
Hayward, CA 94541  
(510) 247-9885    FAX: (510) 886-5399

Email: info@eras.biz; andrew@eras.biz  
cc/3rd Party:  
PO:  
ProjectNo: 14-003-05; 106-110 Hegenberger

## Bill to:

Kasey Cordoza  
ERAS Environmental, Inc.  
1533 B Street  
Hayward, CA 94541

Requested TAT: 5 days;

Date Received: 09/04/2015  
Date Printed: 09/08/2015

## Requested Tests (See legend below)

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
1509193-001	B-10	Water	9/3/2015 10:06	<input type="checkbox"/>	B	B	A									
1509193-002	B-11	Water	9/3/2015 11:05	<input type="checkbox"/>	B	B	A									
1509193-003	B-12	Water	9/3/2015 12:19	<input type="checkbox"/>	B	B	A									
1509193-004	B-13	Water	9/3/2015 14:42	<input type="checkbox"/>	B	B	A									
1509193-005	B-14	Water	9/3/2015 13:41	<input type="checkbox"/>	B	B	A									
1509193-006	B-15	Water	9/4/2015 8:55	<input type="checkbox"/>	B	B	A									
1509193-007	B-16	Water	9/4/2015 10:14	<input type="checkbox"/>	B	B	A									

Test Legend:

1	8260GAS_W
5	
9	

2	8260VOC_W
6	
10	

3	TPH(DMO)WSG_W
7	
11	

4	
8	
12	

The following SampIDs: 001B, 002B, 003B, 004B, 005B, 006B, 007B contain testgroup.

Prepared by: Maria Venegas

## 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.



## WORK ORDER SUMMARY

**Client Name:** ERAS ENVIRONMENTAL, INC.

**QC Level:** LEVEL 2

**Work Order:** 1509193

**Project:** 14-003-05; 106-110 Hegenberger

**Client Contact:** Andrew Savage

**Date Received:** 9/4/2015

**Comments:**

**Contact's Email:** info@eras.biz; andrew@eras.biz

WaterTrax     WriteOn     EDF     Excel     Fax     Email     HardCopy     ThirdParty     J-flag

Lab ID	Client ID	Matrix	Test Name	Containers /Composites	Bottle & Preservative	De-chlorinated	Collection Date & Time	TAT	Sediment Content	Hold	SubOut
1509193-001A	B-10	Water	SW8015B (TPH-d,mo w/ S.G. Clean-Up)	2	VOA w/ HCl	<input type="checkbox"/>	9/3/2015 10:06	5 days	1%+	<input type="checkbox"/>	
				2	ILA	<input type="checkbox"/>			1%+	<input type="checkbox"/>	
1509193-001B	B-10	Water	TPH(g) & 8260 (Misc. Compounds) by P&T GCMS	4	VOA w/ HCl	<input type="checkbox"/>	9/3/2015 10:06	5 days	1%+	<input type="checkbox"/>	
1509193-002A	B-11	Water	SW8015B (TPH-d,mo w/ S.G. Clean-Up)	2	VOA w/ HCl	<input type="checkbox"/>	9/3/2015 11:05	5 days	1%+	<input type="checkbox"/>	
				2	ILA	<input type="checkbox"/>			1%+	<input type="checkbox"/>	
1509193-002B	B-11	Water	TPH(g) & 8260 (Misc. Compounds) by P&T GCMS	4	VOA w/ HCl	<input type="checkbox"/>	9/3/2015 11:05	5 days	1%+	<input type="checkbox"/>	
1509193-003A	B-12	Water	SW8015B (TPH-d,mo w/ S.G. Clean-Up)	2	VOA w/ HCl	<input type="checkbox"/>	9/3/2015 12:19	5 days	1%+	<input type="checkbox"/>	
				2	ILA	<input type="checkbox"/>			1%+	<input type="checkbox"/>	
1509193-003B	B-12	Water	TPH(g) & 8260 (Misc. Compounds) by P&T GCMS	4	VOA w/ HCl	<input type="checkbox"/>	9/3/2015 12:19	5 days	1%+	<input type="checkbox"/>	
1509193-004A	B-13	Water	SW8015B (TPH-d,mo w/ S.G. Clean-Up)	2	VOA w/ HCl	<input type="checkbox"/>	9/3/2015 14:42	5 days	1%+	<input type="checkbox"/>	
				2	ILA	<input type="checkbox"/>			1%+	<input type="checkbox"/>	
1509193-004B	B-13	Water	TPH(g) & 8260 (Misc. Compounds) by P&T GCMS	4	VOA w/ HCl	<input type="checkbox"/>	9/3/2015 14:42	5 days	1%+	<input type="checkbox"/>	
1509193-005A	B-14	Water	SW8015B (TPH-d,mo w/ S.G. Clean-Up)	2	VOA w/ HCl	<input type="checkbox"/>	9/3/2015 13:41	5 days	Present	<input type="checkbox"/>	
				2	ILA	<input type="checkbox"/>			Present	<input type="checkbox"/>	
1509193-005B	B-14	Water	TPH(g) & 8260 (Misc. Compounds) by P&T GCMS	4	VOA w/ HCl	<input type="checkbox"/>	9/3/2015 13:41	5 days	Present	<input type="checkbox"/>	

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

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



## WORK ORDER SUMMARY

**Client Name:** ERAS ENVIRONMENTAL, INC.

**QC Level:** LEVEL 2

**Work Order:** 1509193

**Project:** 14-003-05; 106-110 Hegenberger

**Client Contact:** Andrew Savage

**Date Received:** 9/4/2015

**Comments:**

**Contact's Email:** info@eras.biz; andrew@eras.biz

WaterTrax     WriteOn     EDF     Excel     Fax     Email     HardCopy     ThirdParty     J-flag

Lab ID	Client ID	Matrix	Test Name	Containers /Composites	Bottle & Preservative	De-chlorinated	Collection Date & Time	TAT	Sediment Content	Hold	SubOut
1509193-006A	B-15	Water	SW8015B (TPH-d,mo w/ S.G. Clean-Up)	2	VOA w/ HCl	<input type="checkbox"/>	9/4/2015 8:55	5 days	2%+	<input type="checkbox"/>	
				2	ILA	<input type="checkbox"/>			2%+	<input type="checkbox"/>	
1509193-006B	B-15	Water	TPH(g) & 8260 (Misc. Compounds) by P&T GCMS	4	VOA w/ HCl	<input type="checkbox"/>	9/4/2015 8:55	5 days	2%+	<input type="checkbox"/>	
1509193-007A	B-16	Water	SW8015B (TPH-d,mo w/ S.G. Clean-Up)	2	VOA w/ HCl	<input type="checkbox"/>	9/4/2015 10:14	5 days	5%+	<input type="checkbox"/>	
				2	ILA	<input type="checkbox"/>			5%+	<input type="checkbox"/>	
1509193-007B	B-16	Water	TPH(g) & 8260 (Misc. Compounds) by P&T GCMS	4	VOA w/ HCl	<input type="checkbox"/>	9/4/2015 10:14	5 days	5%+	<input type="checkbox"/>	

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

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

1509193

## **CHAIN OF CUSTODY FORM**

**McCampbell Analytical, Inc**  
1534 Willow Pass Rd.  
Pittsburg, CA 94565  
877.252.9262  
925.252.9269 - fax

**Report To:** ERAS      **Bill To:** ERAS  
**Company:** ERAS Environmental, Inc.

<b>Telephone:</b>	510-247-9885	<b>Email:</b>	<a href="mailto:info@eras.biz">info@eras.biz</a>
<b>Project #</b>	14-003-05	<b>Fax:</b>	510-886-5399
<b>Project location</b>	106-110 Hegenberger	Managers	Type
<b>Sampler:</b>	Andrew Savage		

Sample ID	Location/Fiel d Point Name	Sampling		# of Cont	Contain	Matrix			Preservative			
		Date	Time			Soil	Water	Waste	HCl	H2SO4	HNO3	ICE
B-10		9/3/2015	10:06	2	1L	X						X
B-10		9/3/2015	10:06	6	VOA	X			X			
B-11		9/3/2015	11:05	2	1L	X						X
B-11		9/3/2015	11:05	6	VOA	X			X			
B-12		9/3/2015	12:19	2	1L	X						X
B-12		9/3/2015	12:19	6	VOA	X			X			
B-13		9/3/2015	14:42	2	1L	X						X
B-13		9/3/2015	14:42	6	VOA	X			X			
B-14		9/3/2015	13:41	2	1L	X						X
B-14		9/3/2015	13:41	6	VOA	X			X			
B-15		9/4/2015	8:55	2	1L	X						X
B-15		9/4/2015	8:55	6	VOA	X			X			
B-16		9/4/2015	10:14	2	L	X						X
B-16		9/4/2015	10:14	6	VOA	X			X			

RELINQUISHED BY:			RECEIVED BY:
Relinquished by: 	Date: 9-4-15	Time: 1050	Received by: 
Relinquished by: 	Date: 9/4	Time: 1050	Received by: 
Relinquished by: 	Date:	Time:	Received by:

	ICE/t°	ICE/t°	Comments: Please PDF APPROPRIATE CONTAINERS PRESERVED IN LAB		
ICE/t° Condition		GOOD CONDITION			
Head space absent		HEAD SPACE ABSENT			
Dechlorinated in lab		DECHLORINATED IN LAB			
Appropriate containers		VOAS	O&G	METALS	OTHER
Preserved in Lab		PRESERVATION			
Preservation	VOA's	O&G	Metals	Other	pH<2



## Sample Receipt Checklist

Client Name: **ERAS Environmental, Inc.**

Date and Time Received: **9/4/2015 6:50:00 PM**

Project Name: **14-003-05; 106-110 Hegenberger**

Login Reviewed by: **Maria Venegas**

WorkOrder No: **1509193**

Matrix: Water

Carrier: Benjamin Yslas (MAI Courier)

### Chain of Custody (COC) Information

- |   |   |                             |
|---|---|-----------------------------|
| Chain of custody present?                               | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> |
| Chain of custody signed when relinquished and received? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> |
| Chain of custody agrees with sample labels?             | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> |
| Sample IDs noted by Client on COC?                      | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> |
| Date and Time of collection noted by Client on COC?     | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> |
| Sampler's name noted on COC?                            | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> |

### Sample Receipt Information

- |  |   |                             |  |
|--|---|-----------------------------|--|
| Custody seals intact on shipping container/cooler? | Yes <input type="checkbox"/>            | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/> |
| Shipping container/cooler in good condition?       | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> |  |
| Samples in proper containers/bottles?              | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> |  |
| Sample containers intact?                          | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> |  |
| Sufficient sample volume for indicated test?       | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> |  |

### Sample Preservation and Hold Time (HT) Information

- |   |   |                             |  |
|---|---|-----------------------------|--|
| All samples received within holding time?                   | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> |  |
| Sample/Temp Blank temperature                               | Temp: 3.8°C                             |                             | NA <input type="checkbox"/>            |
| Water - VOA vials have zero headspace / no bubbles?         | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/>            |
| Sample labels checked for correct preservation?             | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> |  |
| pH acceptable upon receipt (Metal: <2; 522: <4; 218.7: >8)? | Yes <input type="checkbox"/>            | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/> |
| Samples Received on Ice?                                    | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> |  |

(Ice Type: WET ICE )

### UCMR3 Samples:

- |  |                              |                             |  |
|--|------------------------------|-----------------------------|--|
| Total Chlorine tested and acceptable upon receipt for EPA 522?                   | Yes <input type="checkbox"/> | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/> |
| Free Chlorine tested and acceptable upon receipt for EPA 218.7, 300.1, 537, 539? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/> |

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

Comments:

## **Appendix G**

### **Analytical Results – Soil Vapor**

# K PRIME, Inc.

CONSULTING ANALYTICAL CHEMISTS

3621 Westwind Blvd.  
Santa Rosa CA 95403  
Phone: 707 527 7574  
FAX: 707 527 7879

## TRANSMITTAL

**DATE:** 9/16/2015

**TO:** MR. ANDREW SAVAGE  
ERAS ENVIRONMENTAL, INC.  
1533 B STREET  
HAYWARD, CA 94541

**ACCT:** 4730  
**PROJ:** 14-003-05

Phone: 510-247-9885  
Fax: 510-886-5399  
Email: andrew@eras.biz

**CC:** MR. KASEY CORDOZA

Email: info@eras.biz

**FROM:** Richard A. Kagel, Ph.D. *RAK 9/16/2015*  
Laboratory Director

**SUBJECT:** LABORATORY RESULTS FOR YOUR PROJECT 14-003-05

Enclosed please find K Prime's laboratory reports for the following samples:

<b>SAMPLE ID</b>	<b>TYPE</b>	<b>DATE</b>	<b>TIME</b>	<b>KPI LAB #</b>
SV-15	AIR	9/10/2015	8:36	136650
SV-16	AIR	9/10/2015	9:57	136651

The above listed sample group was received 9/11/2015 and tested as requested on the chain of custody document.

Please call me if you have any questions or need further information.  
Thank you for this opportunity to be of service.

K PRIME, INC.  
LABORATORY REPORT

K PRIME PROJECT: 4730  
CLIENT PROJECT: 14-003-05  
METHOD: VOC'S IN AIR  
REFERENCE: EPA METHOD TO 15 (GC-MS-SCAN)

SAMPLE ID: SV-15  
LAB NO: 136650  
SAMPLE TYPE: AIR  
DATE SAMPLED: 09/10/2015  
TIME SAMPLED: 08:36  
BATCH ID: 091415A1  
DATE ANALYZED: 09/15/2015

COMPOUND NAME	CAS NO.	PPB (V/V)		μg/cu. m	
		MRL	SAMPLE CONC	MRL	SAMPLE CONC
BENZENE	71-43-2	2.00	2.38	6.39	7.60
TOLUENE	108-88-3	2.00	2.91	7.54	11.0
ETHYLBENZENE	100-41-4	2.00	ND	8.68	ND
XYLENE (M+P)	1330-20-7	2.00	4.40	8.68	19.1
XYLENE (O)	95-47-6	2.00	ND	8.68	ND

NOTES:

ND - NOT DETECTED AT OR ABOVE THE STATED REPORTING LIMIT

MRL - METHOD REPORTING LIMIT

NA - NOT APPLICABLE OR AVAILABLE

μg/cu. m VALUES ARE CALCULATED FROM PPB RESULTS USING NORMAL TEMPERATURE AND PRESSURE (NPT).

APPROVED BY: RMC  
DATE: 9/16/15

K PRIME, INC.  
LABORATORY REPORT

K PRIME PROJECT: 4730  
CLIENT PROJECT: 14-003-05  
METHOD: VOC'S IN AIR  
REFERENCE: EPA METHOD TO 15 (GC-MS-SCAN)

SAMPLE ID: SV-16  
LAB NO: 136651  
SAMPLE TYPE: AIR  
DATE SAMPLED: 09/10/2015  
TIME SAMPLED: 09:57  
BATCH ID: 091415A1  
DATE ANALYZED: 09/14/2015

COMPOUND NAME	CAS NO.	PPB (V/V)		µg/cu. m	
		MRL	SAMPLE CONC	MRL	SAMPLE CONC
BENZENE	71-43-2	1.00	1.19	3.19	3.80
TOLUENE	108-88-3	1.00	2.02	3.77	7.61
ETHYLBENZENE	100-41-4	1.00	ND	4.34	ND
XYLENE (M+P)	1330-20-7	1.00	1.56	4.34	6.77
XYLENE (O)	95-47-6	1.00	ND	4.34	ND

**NOTES:**

ND - NOT DETECTED AT OR ABOVE THE STATED REPORTING LIMIT

MRL - METHOD REPORTING LIMIT

NA - NOT APPLICABLE OR AVAILABLE

µg/cu. m VALUES ARE CALCULATED FROM PPB RESULTS USING NORMAL TEMPERATURE AND PRESSURE (NPT).

APPROVED BY: JMC  
DATE: 9/16/15

**K PRIME, INC.**  
LABORATORY REPORT

**K PRIME PROJECT: 4730**  
**CLIENT PROJECT: 14-003-05**

**METHOD: TVH C2-C10 AS HEXANE**

**REFERENCE: EPA TO 3**

**UNITS: PPM-V**

SAMPLE ID	LAB NO.	SAMPLE TYPE	DATE SAMPLED	BATCH ID	DATE ANALYZED	MRL	SAMPLE CONC
SV-15	136650	AIR	09/10/2015	091015A1	09/11/2015	5.00	ND
SV-16	136651	AIR	09/10/2015	091015A1	09/11/2015	5.00	ND

**NOTES:**

ND - NOT DETECTED AT OR ABOVE THE STATED METHOD REPORTING LIMIT

NA - NOT APPLICABLE OR AVAILABLE

MRL - METHOD REPORTING LIMIT

APPROVED BY: \_\_\_\_\_ *JMC*  
DATE: \_\_\_\_\_ *9/16/15*

**K PRIME, INC.**  
LABORATORY REPORT

K PRIME PROJECT: 4730  
CLIENT PROJECT: 14-003-05

METHOD: TVH C2-C10 AS HEXANE

REFERENCE: EPA TO 3

UNITS: MG/M3

SAMPLE ID	LAB NO.	SAMPLE TYPE	DATE SAMPLED	BATCH ID	DATE ANALYZED	MRL	SAMPLE CONC
SV-15	136650	AIR	09/10/2015	091015A1	09/11/2015	17.6	ND
SV-16	136651	AIR	09/10/2015	091015A1	09/11/2015	17.6	ND

**NOTES:**

ND - NOT DETECTED AT OR ABOVE THE STATED METHOD REPORTING LIMIT

NA - NOT APPLICABLE OR AVAILABLE

MRL - METHOD REPORTING LIMIT

APPROVED BY: JK  
DATE: 9/16/15

**K PRIME, INC.**  
LABORATORY REPORT

K PRIME PROJECT: 4730  
CLIENT PROJECT: 14-003-05

METHOD: 1,1-DIFLUOROETHANE

REFERENCE: EPA TO 3

UNITS: PPMV

SAMPLE ID	LAB NO.	SAMPLE TYPE	DATE SAMPLED	BATCH ID	DATE ANALYZED	MRL	SAMPLE CONC
SV-15	136650	AIR	09/10/2015	091015A1	09/11/2015	10.0	49.5
SV-16	136651	AIR	09/10/2015	091015A1	09/11/2015	10.0	171

**NOTES:**

ND - NOT DETECTED AT OR ABOVE THE STATED METHOD REPORTING LIMIT

NA - NOT APPLICABLE OR AVAILABLE

MRL - METHOD REPORTING LIMIT

APPROVED BY: RMC  
DATE: 9/16/15

## K PRIME, INC.

## LABORATORY METHOD BLANK REPORT

METHOD BLANK ID: B091415A1  
SAMPLE TYPE: AIRMETHOD: VOC'S IN AIR  
REFERENCE: EPA METHOD TO 15 (GC-MS-SCAN)BATCH ID: 091415A1  
DATE ANALYZED: 09/14/2015

COMPOUND NAME	CAS NO.	PPB (V/V)		µg/cu. m	
		MRL	SAMPLE CONC	MRL	SAMPLE CONC
BENZENE	71-43-2	0.500	ND	1.60	ND
TOLUENE	108-88-3	0.500	ND	1.88	ND
ETHYLBENZENE	100-41-4	0.500	ND	2.17	ND
XYLENE (M+P)	1330-20-7	0.500	ND	2.17	ND
XYLENE (O)	95-47-6	0.500	ND	2.17	ND

**NOTES:**

ND - NOT DETECTED AT OR ABOVE THE STATED REPORTING LIMIT

MRL - METHOD REPORTING LIMIT

NA - NOT APPLICABLE OR AVAILABLE

µg/cu. m VALUES ARE CALCULATED FROM PPB RESULTS USING NORMAL TEMPERATURE AND PRESSURE (NPT).

## K PRIME, INC.

## LABORATORY QUALITY CONTROL REPORT

LAB CONTROL ID: L091415A1  
 LAB CONTROL DUPLICATE ID: D091415A1

METHOD: VOC'S IN AIR  
 REFERENCE: EPA METHOD TO 15 (GC-MS-SCAN)

SAMPLE TYPE: AIR  
 BATCH ID: 091415A1  
 DATE ANALYZED: 09/14/2015

COMPOUND NAME	SPIKE ADDED (PPB)	REPORTING LIMIT (PPB)	SAMPLE CONC (PPB)	SPIKE CONC (PPB)	SPIKE REC (%)	REC LIMITS (%)
1,1-DICHLOROETHENE	10.0	0.500	ND	7.46	75	60 - 140
TRICHLOROETHENE	10.0	0.500	ND	10.8	108	60 - 140
BENZENE	10.0	0.500	ND	7.01	70	60 - 140
TOLUENE	10.0	0.500	ND	8.98	90	60 - 140
TETRACHLOROETHENE	10.0	0.500	ND	12.4	124	60 - 140

COMPOUND NAME	SPIKE ADDED (PPB)	SPIKE DUP CONC (PPB)	SPIKE DUP REC (%)	RPD (%)	QC LIMITS	
	RPD (%)	REC (%)				
1,1-DICHLOROETHENE	10.0	7.42	74	0.5	25	60 - 140
TRICHLOROETHENE	10.0	10.5	105	2.5	25	60 - 140
BENZENE	10.0	7.05	71	0.6	25	60 - 140
TOLUENE	10.0	8.83	88	1.7	25	60 - 140
TETRACHLOROETHENE	10.0	12.0	120	3.0	25	60 - 140

## NOTES:

NA - NOT APPLICABLE OR AVAILABLE

ND - NOT DETECTED AT OR ABOVE THE STATED REPORTING LIMIT

**K PRIME, INC.**  
**LABORATORY QC REPORT**

METHOD BLANK ID: B091015A1  
LAB CONTROL SAMPLE ID: L091015A1  
LAB CONTROL DUPLICATE ID: D091015A1  
BATCH ID: 091015A1

METHOD: TVH C2-C10 AS HEXANE  
REFERENCE: EPA TO 3

SAMPLE TYPE: AIR  
UNITS: PPM-V

**METHOD BLANK**

COMPOUNDNAME	REPORTING LIMIT	SAMPLE CONC
TVH	2.50	ND

**ACCURACY (LAB CONTROL SAMPLE)**

COMPOUNDNAME	EXPECTED CONC	MEASURED CONC	PERCENT RECOVERY	LIMITS (PERCENT)
TVH	167	186	111	60-140

**PRECISION (LAB CONTROL DUPLICATE)**

COMPOUNDNAME	SAMPLE RESULT	DUPLICATE RESULT	RPD (PERCENT)	LIMITS (PERCENT)
TVH	186	183	1.4	±30

**NOTES:**

ND - NOT DETECTED AT OR ABOVE THE STATED METHOD REPORTING LIMIT

NA - NOT APPLICABLE OR AVAILABLE

TVH - TOTAL VOLATILE HYDROCARBONS

**K PRIME, INC.**  
LABORATORY QC REPORT

METHOD BLANK ID: B091015A1  
LAB CONTROL SAMPLE ID: L091015A1  
LAB CONTROL DUPLICATE ID: D091015A1  
BATCH ID: 091015A1

METHOD: TVH C2-C10 AS HEXANE                   SAMPLE TYPE: AIR  
REFERENCE: EPA TO 3                               UNITS: MG/M3

**METHOD BLANK**

COMPOUNDNAME	REPORTING LIMIT	SAMPLE CONC
TVH	8.79	ND

**ACCURACY (LAB CONTROL SAMPLE)**

COMPOUNDNAME	EXPECTED CONC	MEASURED CONC	PERCENT RECOVERY	LIMITS (PERCENT)
TVH	586	653	111	60-140

**PRECISION (LAB CONTROL DUPLICATE)**

COMPOUNDNAME	SAMPLE RESULT	DUPLICATE RESULT	RPD (PERCENT)	LIMITS (PERCENT)
TVH	653	644	1.4	±30

**NOTES:**

ND - NOT DETECTED AT OR ABOVE THE STATED METHOD REPORTING LIMIT

NA - NOT APPLICABLE OR AVAILABLE

TVH - TOTAL VOLATILE HYDROCARBONS

**K PRIME, INC.**  
LABORATORY QC REPORT

METHOD BLANK ID: B091015A1  
LAB CONTROL SAMPLE ID: L091015A1  
LAB CONTROL DUPLICATE ID: D091015A1  
BATCH ID: 091015A1

METHOD: 1,1-DIFLUOROETHANE  
REFERENCE: EPA TO 3

SAMPLE TYPE: AIR  
UNITS: PPM -V/V

**METHOD BLANK**

COMPOUND NAME	REPORTING LIMIT	SAMPLE CONC
1,1-DIFLUOROETHANE	10.0	ND

**ACCURACY (LAB CONTROL SAMPLE)**

COMPOUND NAME	EXPECTED CONC	MEASURED CONC	PERCENT RECOVERY	LIMITS (PERCENT)
1,1-DIFLUOROETHANE	10000	10200	102	60-140

**PRECISION (LAB CONTROL DUPLICATE)**

COMPOUND NAME	SAMPLE RESULT	DUPLICATE RESULT	RPD (PERCENT)	LIMITS (PERCENT)
1,1-DIFLUOROETHANE	10200	10100	1.0	±30

**NOTES:**

ND - NOT DETECTED AT OR ABOVE THE STATED METHOD REPORTING LIMIT  
NA - NOT APPLICABLE OR AVAILABLE

**K PRIME, INC.**

## **CHAIN OF CUSTODY RECORD**

## CONSULTING ANALYTICAL CHEMISTS

3621 Westwind Blvd., Santa Rosa, CA 95403

PHONE: (707) 527-7574

FAX: (707) 527-7879

ERAS