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10:08 am, Mar 31, 2011

Alameda County  
Environmental Health



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March 29, 2011

Ms. Barbara Jakub  
Hazardous Materials Specialist  
Alameda County Environmental Health Services  
1131 Harbor Bay Parkway, Suite 250  
Alameda, CA 94502

Subject: Report Submittal- 6th Street & Castro Street, Oakland, CA 94607

Reference: ACEH Fuel Leak Case No. RO250, Facility Global ID # T0600102155

Dear Ms. Jakub:

On behalf of California Department of Transportation (Caltrans), I am pleased to submit the following environmental investigation reports for the above referenced site:

1. 6th at Castro St, Oakland Work Plan
2. 4th Quarter 2008 Quarter Groundwater Monitoring Report
3. 1st Quarter 2009 Groundwater Monitoring Report
4. 2nd Quarter 2009 Groundwater Monitoring Report
5. Caltrans Site Investigation 6th and castro\_OAK9R048.pdf
6. 2nd Quarter 2000 GW Monitoring Report

The groundwater monitoring reports were prepared by Kleinfelder, Inc. and Professional Service Industries. The work plan for further investigation was prepared by Northgate Environmental Management, Inc.

**Certification**

*I certify under penalty of law that these documents are prepared for Caltrans by the consultants in accordance with the system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who managed the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing the violations.*

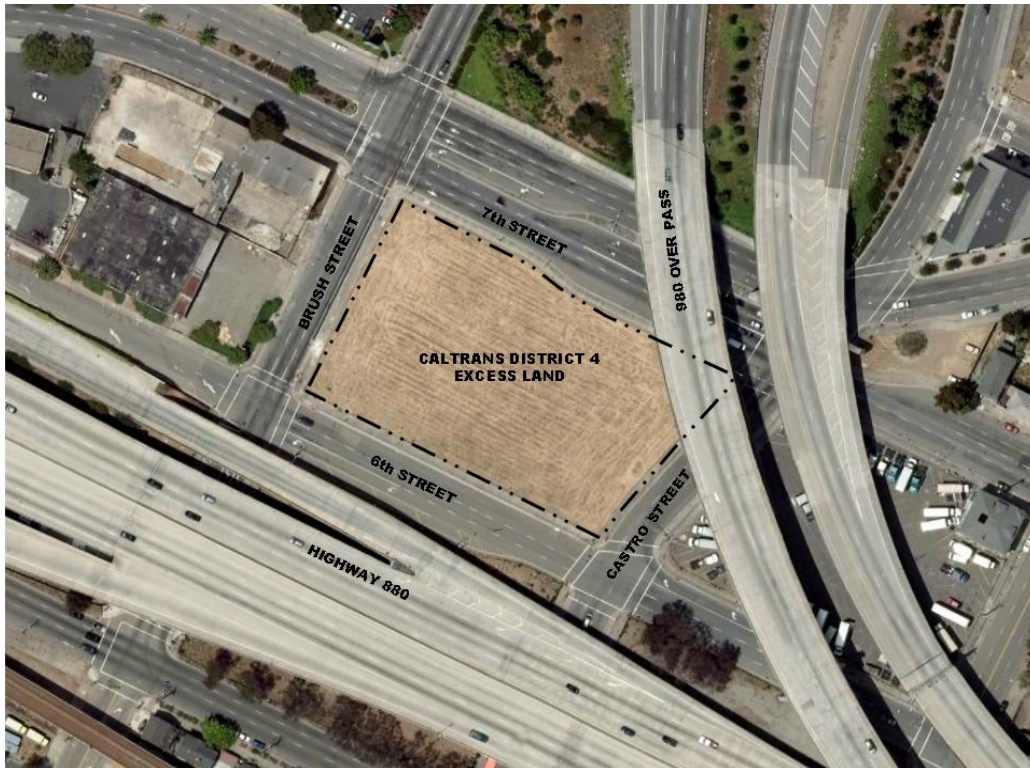
If you have any questions, or comments, please contact me at (510) 286-5635.

Sincerely,

A handwritten signature in blue ink that reads "Charles D. Smith".

CHARLES D. SMITH, P.E.  
Senior Transportation Engineer  
Office of Environmental Engineering

**FOURTH QUARTER 2008  
GROUNDWATER MONITORING REPORT  
CALTRANS PROPERTY  
SIXTH STREET AND CASTRO STREET  
OAKLAND, CALIFORNIA**



**KLEINFELDER**

**May 13, 2009**

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A Report Prepared for:

California Department of Transportation  
Consultant Services Unit, District 4  
111 Grand Avenue  
Oakland, CA 94623-0660


**FOURTH QUARTER 2008  
GROUNDWATER MONITORING REPORT  
CALTRANS PROPERTY  
SIXTH STREET AND CASTRO STREET  
OAKLAND, CALIFORNIA**

Project No. 95539/4

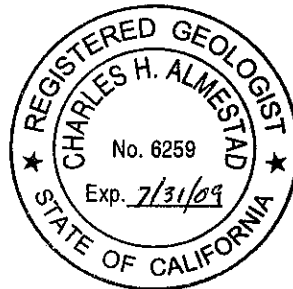
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May 13, 2009

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## 1.0 INTRODUCTION

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This report describes Fourth Quarter 2008 groundwater monitoring activities for the Caltrans property, located on the northwest corner of Sixth Street and Castro Street in Oakland, California (the site) (Plates 1 and 2). The work was performed by Kleinfelder for California Department of Transportation (Caltrans) in response to Work Order Number 4 issued by Caltrans on June 15, 2008.

Kleinfelder performed the following field tasks discussed in detail in this report:

- Collection of groundwater samples from the seven existing monitoring wells for total petroleum hydrocarbon and volatile organic chemical analysis;
- Measurement of groundwater levels in the seven monitoring wells; and
- Containment of the purge water generated during groundwater sampling for disposal.



## **2.0 BACKGROUND INFORMATION**

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This section presents a brief description of the site and a summary of previous investigations performed at the site.

### **2.1 SITE DESCRIPTION**

This Caltrans-owned site is located in Oakland, California and is bordered to the north by Seventh Street, to the south by Sixth Street, to the west by Brush Street, and to the east by Castro Street. The site is approximately 1.6 acres in size. The Site Assessors Parcel Number (APN) is 1-221-14-1. The site was historically used for residential and commercial purposes dating back to at least 1936. The site is located in an area of commercial land use, which is relatively flat and at an elevation of approximately 20 feet above mean sea level.

The State of California acquired the site between July 1, 1969 and March 30, 1971. Since this time, Caltrans has owned and maintained the site. In approximately 1973, the buildings that occupied the site were removed or demolished with the exception of the residence at 722 Sixth Street. Prior to the demolition of the buildings, the site was subdivided into lots, which were used for a gasoline retail and auto repair station, a machine shop, a dairy, a laundry facility, a materials warehouse, residences, and retail stores (Kleinfelder 2008).

### **2.2 PREVIOUS INVESTIGATIONS**

Previous environmental work at the site includes a Phase I Environmental Site Assessment (ESA), a geophysical survey, and multiple subsequent subsurface investigations.

#### **2.2.1 Initial Investigations**

According to information provided in a Phase I ESA Report prepared by Engeo Incorporated (Engeo, 1993), at least four former underground storage tanks (USTs) were installed at the site, and were utilized by a service station, warehouse, and dairy. Engeo made various recommendations, including a subsurface investigation and a geophysical survey.

The Oakland Fire Department issued a permit to Caltrans in January 1971 for the removal of three on-site USTs: one 10,000-, one 7,500-, and one 5,000-gallon UST.

In 1987, ERM-West (ERM-West, 1987) compiled a site history and identified the former businesses on the site with potential environmental concern. This included a gas station, a dairy and a commercial warehouse. ERM-West conducted a soil and groundwater study in which seven boreholes were advanced (Plate 2). The results of this investigation indicated detection of low concentrations of ethylbenzene, toluene, and xylene in four soil samples. Low concentrations of ethylbenzene, toluene, xylenes, hydrocarbons, and other aliphatic and alicyclic compounds were detected in a groundwater sample.

A geophysical survey was conducted at the site by Norcal Geophysical Consultants, Inc. on July 21, 1995 (Norcal, 1995). Five anomalies, A through E, were identified during the geophysical survey, as well as a storm drain. Just north of the storm drain, a buried object, thought to be a large nonmetallic pipe or possibly a nonferrous tank was identified. Norcal estimated the depth of this object to be approximately two to three feet bgs.

### **2.2.2 Subsequent Subsurface Investigations**

In October 1995, Geocon (Geocon, 1995) advanced seven borings at the site (Plate 2). Surface and subsurface soil samples were analyzed for total lead, metals, and oil and grease. Groundwater samples were collected from two of the borings and were analyzed for total petroleum hydrocarbons as gasoline (TPH-g), total petroleum hydrocarbons as diesel (TPH-d), and benzene, toluene, ethylbenzene, and xylenes (BTEX). Lead and oil & grease were detected in site subsurface soil. Relatively low concentrations of metals were detected in site surface and subsurface soil.

In 1996, International Technology Corporation (ITC, 1996) advanced 11 borings, collecting samples at multiple depths to be analyzed for TPH-g, TPH-d, oil and grease, and BTEX. The majority of analytes tested were not detected at or above the laboratory detection limit. One boring location contained elevated concentrations of hydrocarbons and associated constituents in soil and groundwater.



In 1999, PSI (PSI, 1999) advanced 11 soil borings and installed three groundwater monitoring wells at the site. The soil boring locations were in approximately the same location as ITC's soil boring locations (Plate 2). The laboratory analysis of soil samples indicated that elevated concentrations of oil and grease and lead were detected throughout the site, especially in subsurface soil. PSI conducted groundwater monitoring in three wells, MW-1, MW-2, and MW-3, from 1999 to 2001. The groundwater samples were analyzed for TPH-g, TPH-d, TPH-motor oil (TPH-mo), oil and grease, BTEX, volatile organic compounds (VOCs), and lead. For seven quarters, analytes tested in MW-1 and MW-3 contained either relatively low concentrations or analytes were not detected above laboratory reporting limits. Monitoring well MW-2 exhibited elevated concentrations of TPH-g, BTEX, and VOCs.

In November 2001, IRIS Environmental conducted an investigation on the site and two adjacent parcels also owned by Caltrans for the Port of Oakland (Caltrans, 2002). TPH-mo, TPH-g, TPH-d, and lead were detected in soil samples from multiple locations. TPH-g, ethylbenzene, toluene, and xylene were reported in most groundwater samples.

### **2.2.3 Kleinfelder Investigation**

Kleinfelder conducted a site investigation in September 2008, in accordance with Work Order Number 4 issued by Caltrans on June 15, 2008. Kleinfelder performed exploratory excavation, advancement of five borings (DP-1 through DP-5), installation of four groundwater monitoring wells (MW-4 through MW-7), and collection of soil and groundwater samples for analysis to assess the extent of petroleum-related compounds in soil and groundwater and to recommend further remedial action at the site, as necessary. The purpose of the investigation was also to address anomalies identified in a previous geophysical survey performed at the site. Locations of investigation points are shown on Plate 2. Results of the Kleinfelder investigation were summarized in a Site Investigation report dated April 24, 2009 (Kleinfelder 2009).

It was Kleinfelder's opinion that the hydrocarbons detected in soil and groundwater from boring DP-5 and groundwater from monitoring well MW-2, at the site originated from a former service and gas station that previously occupied the western corner of the site. Based on the results of this site investigation performed at the site and on Kleinfelder's review of previous reports provided by Caltrans, it was Kleinfelder's opinion that the

impacted soil and groundwater appeared to be limited to the area of the former service & gas station located at the western corner of the site. Kleinfelder made recommendations for the site that included the advancement of soil borings in the vicinity of DP-5 and MW-2 in order to better define the vertical and lateral extent of the petroleum-stained soil encountered in trenches, and excavation of pipes encountered in various trenches.

## **3.0 FIELD ACTIVITIES**

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This section summarizes the groundwater monitoring activities performed at the site in the fourth quarter of 2008.

### **3.1 GROUNDWATER MONITORING ACTIVITIES**

The fourth quarter 2008 groundwater monitoring event took place on December 22 and 23, 2008. Prior to monitoring activities, field instrumentation was checked and calibrated.

#### **3.1.1 Water Level Measurements**

Prior to groundwater sample collection, the depth to water in each well was measured to the nearest 0.01-foot using a clean, calibrated electronic water-level indicator. Water-level measurements were used to calculate the volume of water present in the well for sampling purposes. Water level measurements were also made to assess groundwater flow patterns as discussed in Section 4.1.

#### **3.1.2 Groundwater Sample Collection**

Upon completing the water-level measurements, Kleinfelder purged the monitoring wells with disposable bailers. The wells were purged of a minimum of three casing volumes of groundwater prior to collecting samples for chemical analysis. During purging, pH, temperature, and electrical conductivity were measured. Samples were collected when these field parameters became stable (three measurements within 10 percent of each other), or after three volume casings had been removed.

After purging, groundwater from each monitoring well was collected using a disposable bailer. The groundwater sample was decanted into the appropriate laboratory supplied containers. The containers were labeled and subsequently placed into a pre-chilled cooler with ice for delivery to the laboratory for chemical analysis. Samples were delivered under Chain of Custody protocol.

### **3.1.3 Analytical Laboratory Parameters**

Torrent Laboratory, Inc., a state-certified analytical laboratory, performed the chemical analysis for the fourth quarter 2008 groundwater monitoring event. Samples were analyzed for the following parameters:

- TPH-d, using Environmental Protection Agency (EPA) Method 8015M,
- VOCs, including fuel oxygenates, and TPH-g, using EPA Method 8260B, and

### **3.2 DECONTAMINATION PROCEDURES**

Prior to performing groundwater level measurements and between measurements at each well location, the electronic water level indicator probe and cable was cleaned with an Alconox™ water solution and subsequently rinsed with tap water, followed by distilled water. Equipment used to sample each well, including disposable bailers and twine, was dedicated to each well and disposed of after use.

### **3.3 INVESTIGATION-DERIVED WASTE (IDW) HANDLING PROCEDURES**

Investigation-derived wastes (IDW), consisting of well purge water and decontamination rinsate fluids were containerized onsite in one United States Department of Transportation (DOT)-approved 55-gallon drum. Prior to use, the drum was inspected for physical integrity and condition, and was left onsite with an appropriate label identifying the waste source location, physical contents, date, and generator's name. The drum was removed on February 23, 2009 by Dillard Environmental Services for proper disposal.

## **4.0 SUMMARY OF RESULTS**

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As described in Section 3, the fourth quarter 2008 groundwater monitoring event took place on December 22-23, 2008. On December 22, 2008, water level measurements were collected from the seven site monitoring wells and the wells were sampled for chemical analysis. A duplicate sample, identified as MW-2D, was collected at well MW-2. The groundwater samples were chemically analyzed at Torrent Laboratory Inc., a state-certified laboratory.

This section summarizes the water-level measurements and groundwater chemical analysis results. Table 1 provides monitoring well construction details. Plate 3 shows the location of the monitoring wells.

### **4.1 GROUNDWATER LEVELS**

On December 22, 2008 the depth to groundwater below the top of casings ranged from 15.58 to 21.02 feet. Groundwater surface elevations ranged from 8.44 to 9.10 feet (NAVD, 1988) (Table 2). Since September 16, 2008, the last time water levels were measured, the groundwater surface elevation for MW-1, MW-2, MW-3, MW-4, MW-5, MW-6, and MW-7 dropped approximately 0.22 feet, 0.1 feet, 0.1 feet, 0.15 feet, 0.06 feet, 0.07 feet, and 0.05 feet, respectively.

The water-level measurements were used to estimate groundwater surface elevation contours, which are shown on Plate 3. Based on the December 22, 2008 depth to groundwater data, groundwater beneath the site was estimated to flow to the southwest, with an approximate 0.003 ft/ft hydraulic gradient. The fourth quarter 2008 flow directions are similar to those found on September 16, 2008. On September 16, 2008, groundwater was also estimated to flow to the southwest.

### **4.2 GROUNDWATER SAMPLE RESULTS**

Groundwater samples collected from wells MW-1, MW-2, MW-3, MW-4, MW-5, MW-6, and MW-7 on December 22 and 23, 2008, were analyzed for TPH-g, TPH-d, VOCs including fuel oxygenates, and TDS. Final purge characteristic data are summarized on

Table 3. Groundwater analytical results are summarized in Table 4. Certified analytical laboratory reports are included in Appendix B.

#### **4.2.1 Purge Characteristic Data**

Prior to sample collection, the wells were purged to allow the inflow of water from the water bearing zones. Temperature, pH and electrical conductivity (EC) were measured during purging. Table 3 provides final purge characteristic data prior to collecting the samples in December 2008.

#### **4.2.2 Total Petroleum Hydrocarbons and Volatile Organics**

##### 4.2.2.1 Environmental Screening Levels (ESLs)

The San Francisco Bay Regional Water Quality Control Board (RWQCB) developed ESLs to be used as initial indicators of potential impacts to human health or the environment. Kleinfelder compared the reported concentrations of each detected compound to its respective lowest ESL, as available and presented in the RWQCB's guidance document *Screening for Environmental Concerns at Sites with Contaminated Soil and Groundwater* (Interim Final – November 2007, revised May 2008). In the discussion of detected chemicals below, Kleinfelder references the ESLs for groundwater where groundwater is a current or potential source of drinking water.

##### 4.2.2.2 Total Petroleum Hydrocarbons

Groundwater samples from wells MW-1, MW-2, MW-3, MW-4, MW-5, MW-6, and MW-7 were analyzed for TPH-g and TPH-d using EPA Methods 8260B and 8015M respectively. Samples MW-2 and MW-2D (duplicate sample from well MW-2) were found to contain TPH-g at 33,000 µg/L 31,000 µg/L respectively, exceeding its ESL of 210 µg/L. In samples MW-2 and MW-2D, TPH-d<sup>1</sup> was reported at 1,510 µg/L and 2,010 µg/L respectively, which exceeds the ESL of 100 µg/L. Lab dilution of samples collected from MW-1, MW-3, MW-4, and MW-5 slightly raised the reporting limit for TPH-d above its ESL. Also, lab dilution of samples collected from MW-4 and MW-5 slightly raised the reporting limit for 1,2 Dichloroethane above its ESL. No TPH-g or

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<sup>1</sup> Sample chromatogram did not resemble typical diesel pattern. Lighter end hydrocarbons and hydrocarbon peaks within diesel range quantified as diesel.



TPH-d was detected at or above the reporting limits in the samples from MW-1, MW-3, MW-4, MW-5, MW-6, and MW-7. In general, in each case where laboratory reporting limits were raised, prior results indicate that the chemicals of interest were not detected at or above the respective ESL.

As indicated on Table 4, TPH-d and TPH-g concentrations in well MW-2 were lower than those found in September 2008. Neither TPH-d nor TPH-g concentrations were reported for the samples collected at MW-1, MW-3, MW-4, MW-5, MW-6, and MW-7.

#### 4.2.2.3 Volatile Organics

Groundwater samples from wells MW-1, MW-2, MW-3, MW-4, MW-5, MW-6, and MW-7 were analyzed for VOCs using EPA Method 8260B. From September 2008 to December 2008, benzene, toluene, ethylbenzene, concentrations for the samples MW-2 and MW-2D decreased. During the same period, total xylenes concentrations decreased in sample MW-2D and increased in sample MW-2. Samples MW-2 and MW-2D were found to contain benzene concentrations of 437 µg/L and 480 µg/L, respectively, exceeding its ESL of 1.0 µg/L. The reported ethylbenzene concentrations in samples MW-2 and MW-2D were 1,360 µg/L and 1,500 µg/L respectively, exceeding its ESL of 30 µg/L. Samples MW-2 and MW-2D were found to contain toluene concentrations of 1,200 µg/L and 1,490 µg/L respectively, exceeding its ESL of 40 µg/L. Total xylenes were detected in samples MW-2 and MW-2D at reported concentrations of 8,870 µg/L and 10,200 µg/L respectively, exceeding its ESL of 20 µg/L. Samples MW-2 and MW-2D were found to contain naphthalene concentrations of 89.3 µg/L and 198 µg/L respectively, exceeding its ESL of 17 µg/L. 1,2 Dichloroethane was reported in samples MW-2 and MW-2D at a concentration of 31.7 µg/L and 34.3 µg/L, exceeding its ESL of 0.5 µg/L. 1,2,4-Trimethylbenzene, 1,3,5-Trimethylbenzene, Propylbenzene (-n), and Isopropylbenzene concentrations were detected in samples MW-2 and MW-2D; no ESLs have been established for these volatile organic compounds. Lab dilution of samples MW-2 and MW-2D raised the reporting limits for Trichloroethene, Tetrachloroethene, and Methyl Tert Butyl Ether above their respective ESLs. No other VOC concentrations in samples MW-2 and MW-2D exceeded their respective ESLs. No VOC concentrations were reported for the samples collected at MW-1, MW-3, MW-4, MW-5, MW-6, and MW-7.

## 5.0 CONCLUSIONS

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The conclusions presented below are based on the groundwater monitoring event performed in December 2008.

### 5.1 HYDRAULIC CONDITIONS

The direction of groundwater flow in December 2008 was to the southwest (Plate 3). This flow pattern is similar to that observed in September 2008 (southwest). Groundwater surface elevation declined in wells MW-1, MW-2, MW-3, MW-4, MW-5, MW-6, and MW-7 between September 2008 and December 2008.

### 5.2 WATER QUALITY

Analytical results for the groundwater samples collected in December 2008 were similar to those found during the September 2008 sampling event. Reported BTEX concentrations generally decreased in samples collected from MW-2. Reported concentrations of TPH-d, TPH-g, benzene, ethylbenzene, toluene, total xylenes, 1,2 Dichloroethane, and naphthalene in samples MW-2 and MW-2D exceeded ESLs. The highest concentrations were found in samples MW-2 and MW-2D. No chemicals of concern were detected in groundwater from wells MW-1, MW-3, MW-4, MW-5, MW-6, and MW-7.

## 6.0 REFERENCES

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- California Regional Water Quality Control Board – San Francisco Bay Region, 2007. *Screening for Environmental Concerns at Sites with Contaminated Soil and Groundwater* (Interim Final – November 2007, revised May 2008), *Volume 1: Summary Tier 1 Lookup Tables*.
- Engeo Incorporated (Engeo), 1993. Phase I Environmental Site Assessment, Sixth Street and Castro Street Parcel, Oakland, California. January 27.
- ERM-West, 2001. Site Investigation Workplan, California Department of Transportation District 4 Excess Land, Sixth and Castro Street, Oakland, California. August 6.
- Geocon, Incorporated (Geocon), 1995. Summary of Soil and Groundwater Results, Caltrans District 4 Excess Land, Oakland, CA, October 9.
- International Technology Corporation (ITC), 1996. Boring Logs and Locations and Detected Analytes in Soil and Groundwater, Oakland Site, Sixth Street and Castro Street. October 15.
- Kleinfelder 2008 Site Investigation Work Plan, Caltrans Property, Sixth Street and Castro Street. Oakland, California. May 30.
- Kleinfelder 2009 Site Investigation, Caltrans Property, Sixth Street and Castro Street. Oakland, California. April 24.
- Norcal Geophysical Consultants, Inc. (Norcal), 1995. Geophysical Survey Investigation. September 1.
- PSI, 1999. Summary of Groundwater Analytical Data, State Right-of-Way, Sixth and Castro Streets, Oakland, California. October 25.
- PSI, 2000a. Summary of Groundwater Analytical Data, State Right-of-Way, Sixth and Castro Streets, Oakland, California. February 7.
- PSI, 2000b. Summary of Groundwater Analytical Data, State Right-of-Way, Sixth and Castro Streets, Oakland, California. April 27.
- PSI, 2000c. Summary of Groundwater Analytical Data, State Right-of-Way, Sixth and Castro Streets, Oakland, California. August 8.
- PSI, 2000d. Summary of Groundwater Analytical Data, State Right-of-Way, Sixth and Castro Streets, Oakland, California. November 16.

PSI, 2001. Summary of Groundwater Analytical Data, State Right-of-Way, Sixth and Castro Streets, Oakland, California. March 27.

## 7.0 LIMITATIONS

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Kleinfelder prepared this report in accordance with generally accepted standards of care that exist in Alameda County at this time. All information gathered by Kleinfelder is considered confidential and will be released only upon written authorization of Caltrans or as required by law.

Kleinfelder offers various levels of investigation and engineering services to suit the varying needs of different clients. It should be recognized that definition and evaluation of geologic and environmental conditions are a difficult and inexact science. Judgments leading to conclusions and recommendations are generally made with incomplete knowledge of the subsurface conditions present. Although risk can never be eliminated, more-detailed and extensive investigations yield more information, which may help understand and manage the level of risk. Since detailed investigation and analysis involves greater expense, our clients participate in determining levels of service that provide adequate information for their purposes at acceptable levels of risk. More extensive studies, including subsurface investigations or field tests, may be performed to reduce uncertainties. Acceptance of this report will indicate that Caltrans has reviewed the document and determined that it does not need or want a greater level of service than provided.

During the course of the performance of Kleinfelder's services, hazardous materials may be discovered. Kleinfelder will assume no responsibility or liability whatsoever for any claim, loss of property value, damage, or injury that results from pre-existing hazardous materials being encountered or present on the project site, or from the discovery of such hazardous materials. Nothing contained in this reports should be construed or interpreted as requiring Kleinfelder to assume the status of an owner, operator, generator, or person who arranges for disposal, transport, storage or treatment of hazardous materials within the meaning of any governmental statute, regulation or order. Caltrans will be solely responsible for notifying all governmental agencies, and the public at large, of the existence, release, treatment or disposal of any hazardous materials observed at the project site, either before or during performance of Kleinfelder's services. Caltrans will be responsible for all arrangements to lawfully store, treat, recycle, dispose, or otherwise handle hazardous materials, including cuttings and samples resulting from Kleinfelder's services.

Regulations and professional standards applicable to Kleinfelder's services are continually evolving. Techniques are, by necessity, often new and relatively untried. Different professionals may reasonably adopt different approaches to similar problems. As such, our services are intended to provide Caltrans with a source of professional advice, opinions and recommendations. Our professional opinions and recommendations are/will be based on our limited number of field observations and tests, collected and performed in accordance with the generally accepted engineering practice that exists at the time and may depend on, and be qualified by, information gathered previously by others and provided to Kleinfelder by Caltrans. Consequently, no warranty or guarantee, expressed or implied, is intended or made.



## TABLES

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**Table 1**  
**Monitoring Well Construction Details**  
 Caltrans Property  
 Sixth Street and Castro Street  
 Oakland, California

Construction Details by Depth Intervals (Feet Below Ground Surface)								Survey Data		
								Latitude	Longitude	Top of Casing Elevation (Feet*)
Well ID	Installation Date	Boring Depth	Solid Casing	Screen Interval	Sand Pack	Bentonite Seal	Grout Seal			
MW-1	6/17/1999	20.0	NA	NA	NA	NA	NA	37.8018364	-122.2810228	30.12
MW-2	6/17/1999	21.5	NA	NA	NA	NA	NA	37.8015895	-122.2813935	24.27
MW-3	6/17/1999	21.0	NA	NA	NA	NA	NA	37.8013935	-122.2809037	24.76
MW-4	9/3/2008	24.0	0.25-13	13-23	11-23	9-11	0.75-9	37.8017651	-122.2814128	26.30
MW-5	4/9/2008	24.0	0.25-13	13-23	11-23	9-11	0.75-9	37.8014889	-122.2810836	24.71
MW-6	4/9/2008	24.0	0.25-13	13-23	11-23	9-11	0.75-9	37.8013169	-122.2814004	24.26
MW-7	4/9/2008	24.0	0.25-13	13-23	11-23	9-11	0.75-9	37.8012081	-122.2811495	24.91

**Notes:**

Survey elevations North American Vertical Datum of 1988 (NAVD88), horizontal NAD 83.

Top of Casing elevations for MW-1 through MW-7, were surveyed 9/24/2008, by Mid Coast Engineers.

Wells MW-1, MW-2, and MW-3 installed by PSI, Inc.

Wells MW-4, MW-5, MW-6, and MW-7 installed by Kleinfelder, Inc.

\* Elevations in feet, North American Vertical Datum, 1988.

NA = not available

**Table 2**

Depth to Water Measurements and Ground Water Surface Elevations  
Caltrans Property  
Sixth Street and Castro Street  
Oakland, California

Well ID	Date Measured	Depth to Water (feet)	Groundwater Surface Elevation (feet*)
MW-1	9/16/2008	20.8	9.32
	12/22/2008	21.02	9.10
MW-2	9/16/2008	15.48	8.79
	12/22/2008	15.58	8.69
MW-3	9/16/2008	15.92	8.84
	12/22/2008	16.02	8.74
MW-4	9/16/2008	17.29	9.01
	12/22/2008	17.44	8.86
MW-5	9/16/2008	15.87	8.84
	12/22/2008	15.93	8.78
MW-6	9/16/2008	15.74	8.52
	12/22/2008	15.81	8.45
MW-7	9/16/2008	16.42	8.49
	12/22/2008	16.47	8.44

**Notes:**

Depth to water below top of well casing.

Top of Casing elevations for MW-1 through MW-7, were surveyed 9/24/2008, by Mid Coast Engineers. Measuring point elevations are included on Table 1.

\* Elevations in feet, North American Vertical Datum, 1988

**Table 3**  
**Final Purge Characteristics in Groundwater**  
 Caltrans Property  
 Sixth Street and Castro Street  
 Oakland, California

Well ID	Date Sampled	Gallons Purged	Final pH	Final Specific Conductivity (µmhos/cm)	Final Temperature (degrees C)
MW-1	9/16/2008	NR	5.98	453	18.95
	12/22/2008	1.5	6.47	809	18.61
MW-2	9/16/2008	4.0	6.29	457	20.19
	12/22/2008	4.5	6.60	758	20.00
MW-3	9/16/2008	4.0	6.21	391	20.03
	12/22/2008	4.0	6.54	670	19.65
MW-4	9/16/2008	5.0	6.42	799	18.32
	12/22/2008	5.0	6.70	1,259	18.76
MW-5	9/16/2008	5.0	6.32	683	19.79
	12/22/2008	5.25	6.47	695	19.24
MW-6	9/16/2008	5.75	6.58	607	17.08
	12/23/2008	6.0	6.84	753	17.07
MW-7	9/16/2008	6.0	6.33	529	16.88
	12/23/2008	6.0	6.82	895	16.55

**Acronyms:**

a Exceeds equipment limits  
 C Celsius  
 µmhos/cm microsiemens per centimeter  
 NR Not Recorded

**Table 4**  
Total Petroleum Hydrocarbons, Volatile Organic Compounds, and Total Dissolved Solids in Groundwater

Caltrans Property  
Sixth Street and Castro Street

Sample Location Date Sampled	MW-1		MW-2		MW-2D (DUP)		MW-3		MW-4		MW-5		MW-6		MW-7		ESL*
	9/16/2008	12/22/2008	9/16/2008	12/22/2008	9/16/2008	12/22/2008	9/16/2008	12/22/2008	9/16/2008	12/22/2008	9/16/2008	12/22/2008	9/16/2008	12/23/2008	9/16/2008	12/23/2008	
TPH-d	<50	<113	<b>2,800</b>	<b>1,510a</b>	<b>3,030</b>	<b>2,010a</b>	<50	<120	<50	<117	<50	<117	<50	<100	<50	<100	100
TPH-g	<125	<50	<b>47,000</b>	<b>33,000</b>	<b>57,000</b>	<b>31,000</b>	<125	<50	<100	<55	<100	<55	<122	<50	<125	<50	100
Benzene	<0.50	<0.50	<b>496</b>	<b>437</b>	<b>437</b>	<b>480</b>	<0.50	<0.50	<0.50	<0.55	<0.60	<0.57	<0.50	<0.50	<0.50	<0.50	1.0
1,2 Dichloroethane (EDC)	<0.50	<0.50	<b>41.4</b>	<b>31.7</b>	<b>40.9</b>	<b>34.3</b>	<0.50	<0.50	<0.50	<0.55	<0.60	<0.57	<0.50	<0.50	<0.50	<0.50	0.5
Ethylbenzene	<0.50	<0.50	<b>1,530</b>	<b>1,360</b>	<b>1,770</b>	<b>1,500</b>	<0.50	<0.50	<0.50	<0.55	<0.60	<0.57	<0.50	<0.50	<0.50	<0.50	30
Isopropylbenzene	<1.00	<1.00	66.0	63.8	112	65.6	<1.00	<1.00	<1.00	<1.10	<1.19	<1.13	<1.00	<1.00	<1.00	<1.00	NE
Naphthalene	<6.00	<1.00	<b>1,050</b>	<b>89.3</b>	<b>3,500</b>	<b>198</b>	<6.00	<1.00	<6.00	<1.10	<7.14	<1.13	<6.00	<1.00	<6.00	<1.00	17
Propylbenzene (n-)	<0.50	<0.50	270	226	547	238	<0.50	<0.50	<0.50	<0.55	<0.60	<0.57	<0.50	<0.50	<0.50	<0.50	NE
Tetrachloroethene (PCE)	<0.50	<0.50	<22.0	<22.0	<22.0	<22.0	<0.50	<0.50	<0.50	<0.55	<0.60	<0.57	3.94	<0.50	<0.50	<0.50	5.0
Toluene	<0.50	<0.50	<b>1,710</b>	<b>1,200</b>	<b>1,680</b>	<b>1,490</b>	<0.50	<0.50	<0.50	<0.55	<0.60	<0.57	<0.50	<0.50	<0.50	<0.50	40
Trichloroethene (TCE)	<0.50	<0.50	<22.0	<22.0	<22.0	<22.0	<0.50	<0.50	0.92	<0.55	<0.60	<0.57	<0.50	<0.50	<0.50	<0.50	5.0
Trimethylbenzene (1,2,4-)	<0.50	<0.50	2,120	1,850	4,250	1,930	<0.50	<0.50	<0.50	<0.55	<0.60	<0.57	<0.50	<0.50	<0.50	<0.50	NE
Trimethylbenzene (1,3,5-)	<0.50	<0.50	410	398	859	433	<0.50	<0.50	<0.50	<0.55	<0.60	<0.57	<0.50	<0.50	<0.50	<0.50	NE
Xylenes, total	<1.50	<1.50	<b>8,040</b>	<b>8,870</b>	<b>10,400</b>	<b>10,200</b>	<1.50	<1.50	<1.50	<1.65	<1.79	<1.70	<1.50	<1.50	<1.50	<1.50	20
Methyl tert butyl ether (MTBE)	NT	<0.500	NT	<22.0	NT	<22.0	NT	<0.500	NT	<0.550	NT	<0.565	NT	<0.500	NT	<0.500	5.0
Total Dissolved Solids (TDS)	590	NT	600	NT	NT	NT	430	NT	900	NT	750	NT	540	NT	580	NT	NE

**Notes:**

**All results in micrograms per liter (ug/l). Values in bold exceed corresponding ESLs.**

a - Sample chromatogram does not resemble typical diesel pattern (possibly fuel lighter than diesel). Lighter end hydrocarbons and hydrocarbon peaks within the diesel range quantified as diesel.

\* ESL - Environmental Screening Levels from San Francisco Regional Water Quality Control Board, Interim Final - November 2007 (revised May 2008). Lowest level reported from:

Table A. Environmental Screening Levels. Groundwater IS a current or potential drinking water source.

**Acronyms:**

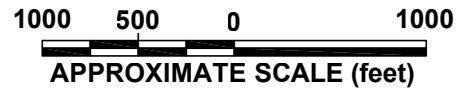
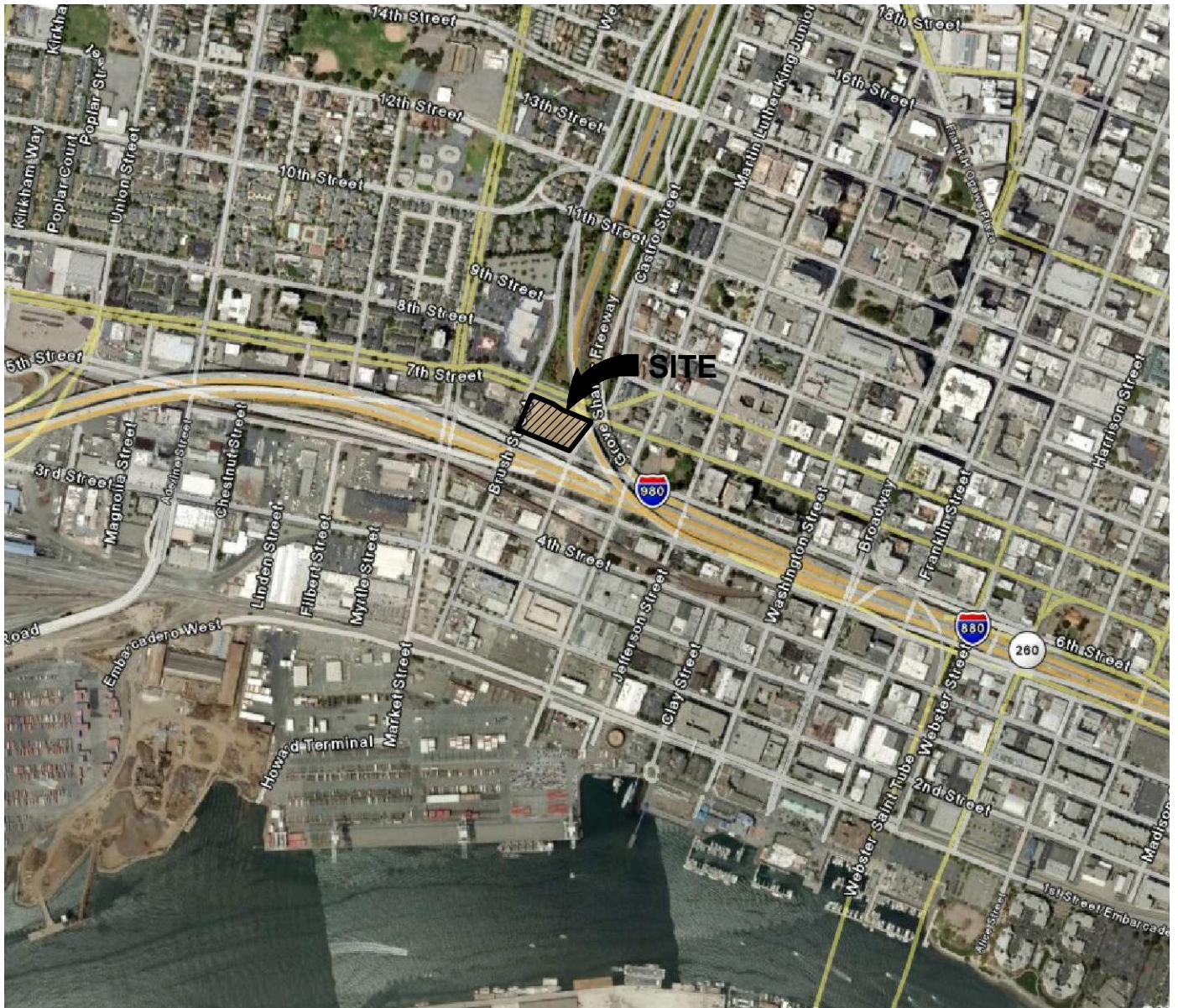
DUP - Duplicate sample

NE - Not established

## PLATES

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REFERENCE:  
[www.google.com](http://www.google.com), 2006

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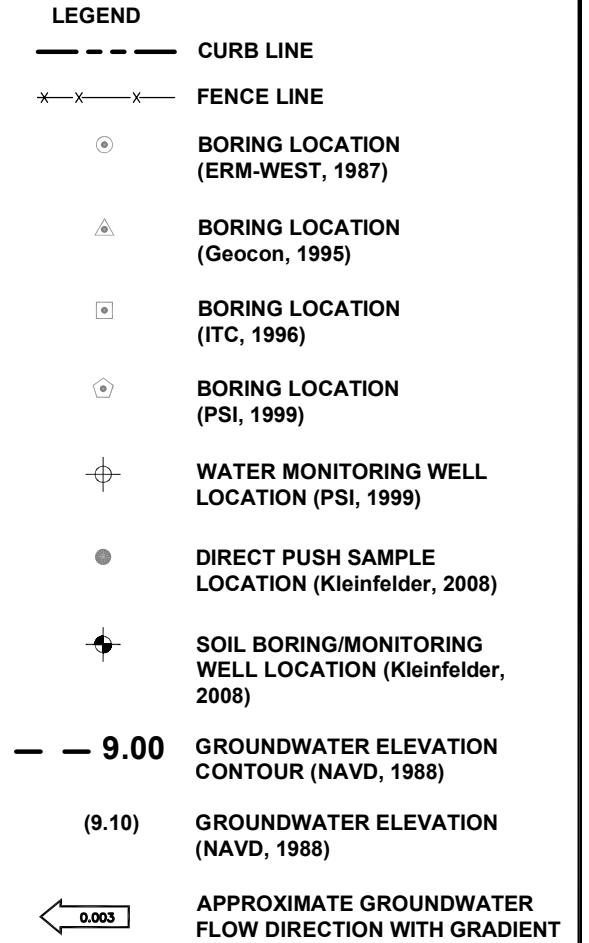
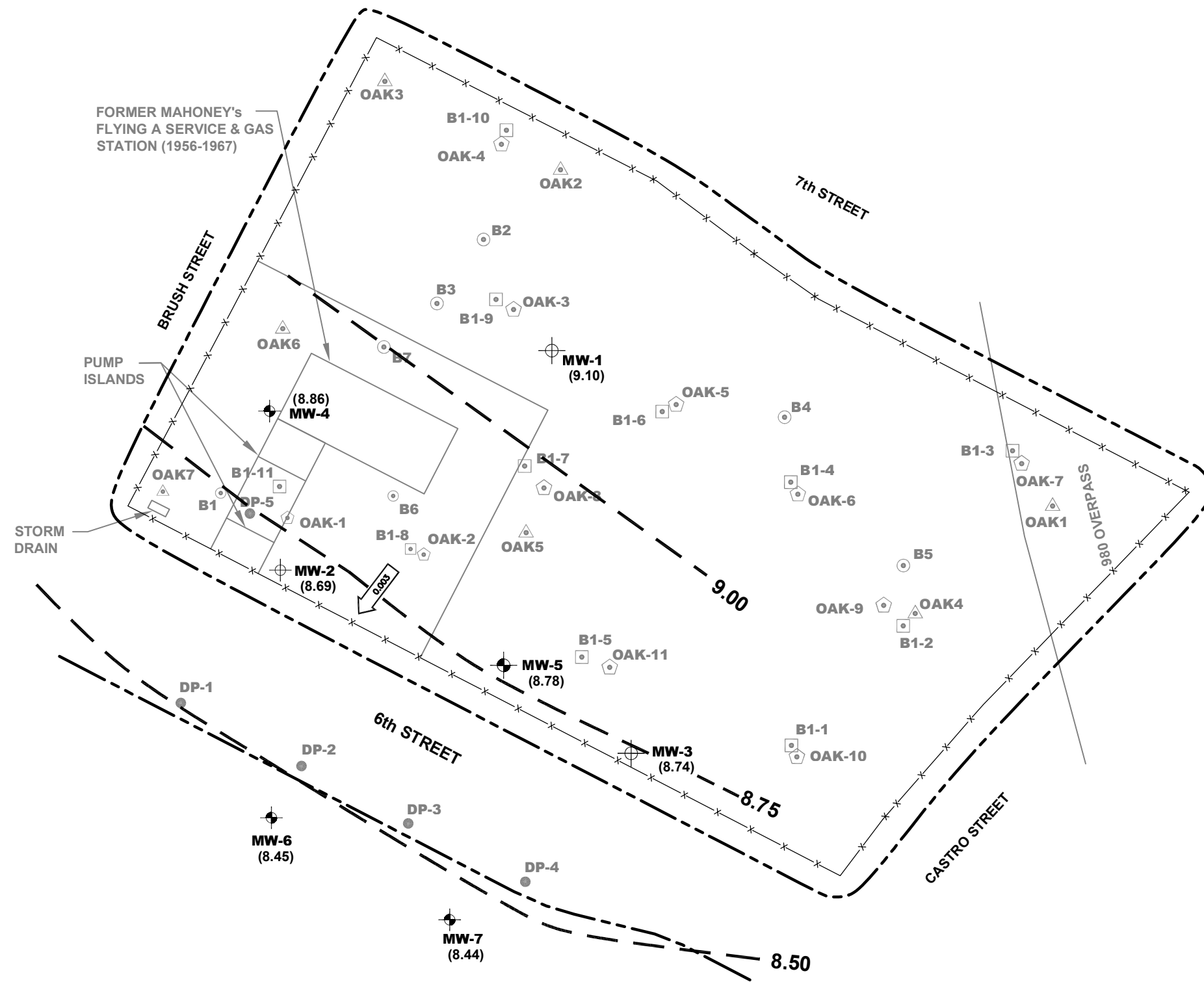
PROJECT NO.	95539
DRAWN:	MAY 2009
DRAWN BY:	JDS
CHECKED BY:	GF
FILE NAME:	
GWS_Dec08.dwg	

**SITE VICINITY MAP**

CALTRANS DISTRICT 4 EXCESS LAND  
 SIXTH STREET AND CASTRO STREET  
 OAKLAND, CALIFORNIA

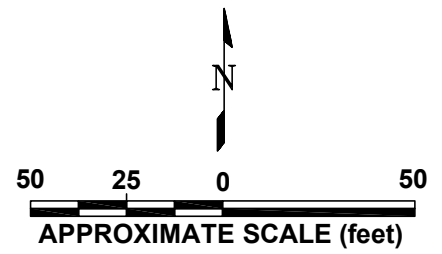
PLATE

**1**



**NOTES:**

- Contour lines are interpretive and represent interpolation between known data points.
- Locations are approximate.



**REFERENCE:**  
 Engeo Inc., Site Plan, dated January 1993  
 ERM, Site Plan, dated August, 2001

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PROJECT NO.	95539
DRAWN:	MAY 2009
DRAWN BY:	JDS
CHECKED BY:	GF
FILE NAME:	GWS_Dec08.dwg

**GROUNDWATER ELEVATION CONTOUR:  
 DECEMBER 22, 2008**

CALTRANS DISTRICT 4 EXCESS LAND  
 SIXTH STREET AND CASTRO STREET  
 OAKLAND, CALIFORNIA

PLATE  
**2**

**APPENDIX A**

**CHAIN OF CUSTODY RECORDS**

---



EM 9260  
8015

PROJECT NO. 95539/4		PROJECT NAME Caltrans - Oakland CA -			NO. OF CON- TAINERS	TYPE OF CON- TAINERS	ANALYSIS										RECEIVING LAB: Torrent Lab Milpitas	
L.P. NO. (P.O. NO.)	SAMPLES (Signature/Number) <i>But Staff</i>			VOL, Fuel, Dry, TPH, G&D, A, EPA, TDS by 16.D.1										INSTRUCTIONS/REMARKS Standard TAT				
DATE MM/DD/YY	SAMPLE I.D. TIME HH-MM-SS	SAMPLE I.D.	MATRIX															
001A	12/22/08	11:00	MW-1	162D	5	V,A	X	X	X									
002A	12/22/08	14:55	MW-2		5	V,A	X	X	X									
003A	12/22/08	12:00	MW-3		5	V,A	X	X	X									
004A	12/22/08	14:00	MW-4		5	V,A	X	X	X									
005A	12/22/08	13:00	MW-5		15	V,A	X	X	X							MS/MSD Taken outside		
006A	12/23/08	10:00	MW-6		5	V,A	X	X	X									
007A	12/23/08	10:55	MW-7		5	V,A	X	X	X									
008A	12/22/08	15:00	MW-2D		5	V,A	X	X	X									
009A	12/22/08	#1	TB		2	V,	X											
10																		
11														4	V = VOA 20ml			
12														1	A = Liter glass Amber			
13																		
14																		
15																		
16																		
17																		
18																		
19																		
20																		

Relinquished by: (Signature) <i>But Staff</i>	Date/Time 12/23/08 3:36	Received by: (Signature) <i>D. G. Chodasara</i>	Instructions/Remarks: Email to: Calmes tad @kleinfelder.com Jgravesen @kleinfelder.com	Send Results To: Kleinfelder Attn: Charlie Almes tad 1970 Broadway, Suite... Oakland, CA
Relinquished by: (Signature)	Date/Time	Received by: (Signature)		
Relinquished by: (Signature)	Date/Time	Received for Laboratory by: (Signature)		

**APPENDIX B**

**CERTIFIED ANALYTICAL LABORATORY REPORTS**

---



January 14, 2009(Revised)

Charlie Almestad  
KLEINFELDER  
1970 Broadway, Suite 710  
Oakland, CA 94612

TEL: (510) 628-9000

FAX (510) 628-9009

RE: 95539/4

Order No.: 0812210

Dear Charlie Almestad:

Torrent Laboratory, Inc. received 9 samples on 12/23/2008 for the analyses presented in the following report.

All data for associated QC met EPA or laboratory specification(s) except where noted in the case narrative.

Reported data is applicable for only the samples received as part of the order number referenced above.

Torrent Laboratory, Inc, is certified by the State of California, ELAP #1991. If you have any questions regarding these tests results, please feel free to contact the Project Management Team at (408)263-5258;ext: 204.

Sincerely,

  
Laboratory Director

1/14/09  
Date

Patti Sandrock

QA Officer 



**Torrent Laboratory, Inc.**

**Date:** 14-Jan-09

---

**CLIENT:** KLEINFELDER  
**Project:** 95539/4  
**Lab Order:** 0812210

**CASE NARRATIVE**

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Analytical Comments for METHOD TDS\_W, Note: Due to insufficient sample submitted, no TDS analysis was performed.

Per client request, report was revised to include full ist 8260B (including Fuel Oxygenates).

Rev 1 (1/13/09)



# TORRENT LABORATORY, INC.

483 Sinclair Frontage Road • Milpitas, CA • Phone: (408) 263-5258 • Fax: (408) 263-8293

Visit us at [www.torrentlab.com](http://www.torrentlab.com) email: [analysis@torrentlab.com](mailto:analysis@torrentlab.com)

**Report prepared for:** Charlie Almestad  
KLEINFELDER

**Date Received:** 12/23/2008

**Date Reported:** 1/14/2009

**Client Sample ID:** MW-1  
**Sample Location:** Caltrans ;Oakland  
**Sample Matrix:** WATER  
**Date/Time Sampled** 12/22/2008 11:00:00 AM

**Lab Sample ID:** 0812210-001

**Date Prepared:** 12/27/2008

Parameters	Analysis Method	Date Analyzed	RL	Dilution Factor	MRL	Result	Units	Analytical Batch
TPH (Diesel)	SW8015B	12/28/2008	0.1	1	0.113	ND	mg/L	R18330
Surr: Pentacosane	SW8015B	12/28/2008	0	1	57.9-125	61.0	%REC	R18330

Note: Reporting limits increased due to limited sample available (sediment present).

Client Sample ID: MW-1  
Sample Location: Caltrans ;Oakland  
Sample Matrix: WATER  
Date/Time Sampled 12/22/2008 11:00:00 AM

Lab Sample ID: 0812210-001

Date Prepared: 12/27/2008

Parameters	Analysis Method	Date Analyzed	RL	Dilution Factor	MRL	Result	Units	Analytical Batch
1,1,1,2-Tetrachloroethane	SW8260B	12/30/2008	1	1	1.00	ND	µg/L	F18343
1,1,1-Trichloroethane	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
1,1,2,2-Tetrachloroethane	SW8260B	12/30/2008	1	1	1.00	ND	µg/L	F18343
1,1,2-Trichloroethane	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
1,1-Dichloroethane	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
1,1-Dichloroethene	SW8260B	12/30/2008	1	1	1.00	ND	µg/L	F18343
1,1-Dichloropropene	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
1,2,3-Trichlorobenzene	SW8260B	12/30/2008	1	1	1.00	ND	µg/L	F18343
1,2,3-Trichloropropane	SW8260B	12/30/2008	1	1	1.00	ND	µg/L	F18343
1,2,4-Trichlorobenzene	SW8260B	12/30/2008	1	1	1.00	ND	µg/L	F18343
1,2,4-Trimethylbenzene	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
1,2-Dibromo-3-chloropropane	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
1,2-Dibromoethane (EDB)	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
1,2-Dichlorobenzene	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
1,2-Dichloroethane (EDC)	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
1,2-Dichloropropane	SW8260B	12/30/2008	1	1	1.00	ND	µg/L	F18343
1,3,5-Trimethylbenzene	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
1,3-Dichlorobenzene	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
1,3-Dichloropropene	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
1,4-Dichlorobenzene	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
2,2-Dichloropropane	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
2-Chloroethyl vinyl ether	SW8260B	12/30/2008	1	1	1.00	ND	µg/L	F18343
2-Chlorotoluene	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
4-Chlorotoluene	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
4-Isopropyltoluene	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
Acetone	SW8260B	12/30/2008	10	1	10.0	ND	µg/L	F18343
Benzene	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
Bromobenzene	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
Bromochloromethane	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
Bromodichloromethane	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
Bromoform	SW8260B	12/30/2008	1	1	1.00	ND	µg/L	F18343
Bromomethane	SW8260B	12/30/2008	1	1	1.00	ND	µg/L	F18343
Carbon tetrachloride	SW8260B	12/30/2008	1	1	1.00	ND	µg/L	F18343
Chlorobenzene	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
Chloroform	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
Chloromethane	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
cis-1,2-Dichloroethene	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
cis-1,3-Dichloropropene	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
Dibromochloromethane	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
Dibromomethane	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
Dichlorodifluoromethane	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
Diisopropyl ether (DIPE)	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
Ethyl tert-butyl ether (ETBE)	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343

<b>Client Sample ID:</b>	MW-1	<b>Lab Sample ID:</b>	0812210-001
<b>Sample Location:</b>	Caltrans ;Oakland	<b>Date Prepared:</b>	12/27/2008
<b>Sample Matrix:</b>	WATER		
<b>Date/Time Sampled</b>	12/22/2008 11:00:00 AM		

Parameters	Analysis Method	Date Analyzed	RL	Dilution Factor	MRL	Result	Units	Analytical Batch
Ethylbenzene	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
Freon-113	SW8260B	12/30/2008	1	1	1.00	ND	µg/L	F18343
Hexachlorobutadiene	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
Isopropylbenzene	SW8260B	12/30/2008	1	1	1.00	ND	µg/L	F18343
Methyl tert-butyl ether (MTBE)	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
Methylene chloride	SW8260B	12/30/2008	5	1	5.00	ND	µg/L	F18343
Naphthalene	SW8260B	12/30/2008	1	1	1.00	ND	µg/L	F18343
n-Butylbenzene	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
n-Propylbenzene	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
sec-Butylbenzene	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
Styrene	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
t-Butyl alcohol (t-Butanol)	SW8260B	12/30/2008	5	1	5.00	ND	µg/L	F18343
tert-Amyl methyl ether (TAME)	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
tert-Butylbenzene	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
Tetrachloroethene	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
Toluene	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
trans-1,2-Dichloroethene	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
trans-1,3-Dichloropropene	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
Trichloroethene	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
Trichlorofluoromethane	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
Vinyl chloride	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
Xylenes, Total	SW8260B	12/30/2008	1.5	1	1.50	ND	µg/L	F18343
Surr: Dibromofluoromethane	SW8260B	12/30/2008	0	1	61.2-131	92.2	%REC	F18343
Surr: 4-Bromofluorobenzene	SW8260B	12/30/2008	0	1	64.1-120	101	%REC	F18343
Surr: Toluene-d8	SW8260B	12/30/2008	0	1	75.1-127	83.3	%REC	F18343
TPH (Gasoline)	SW8260B(TPH)	12/30/2008	50	1	50	ND	µg/L	G18343
Surr: 4-Bromofluorobenzene	SW8260B(TPH)	12/30/2008	0	1	58.4-133	69.9	%REC	G18343

**Report prepared for:** Charlie Almestad  
KLEINFELDER

**Date Received:** 12/23/2008  
**Date Reported:** 1/14/2009

**Client Sample ID:** MW-2  
**Sample Location:** Caltrans ;Oakland  
**Sample Matrix:** WATER  
**Date/Time Sampled** 12/22/2008 2:55:00 PM

**Lab Sample ID:** 0812210-002  
**Date Prepared:** 12/27/2008

Parameters	Analysis Method	Date Analyzed	RL	Dilution Factor	MRL	Result	Units	Analytical Batch
TPH (Diesel)	SW8015B	12/28/2008	0.1	1	0.114	1.51x	mg/L	R18330
Surr: Pentacosane	SW8015B	12/28/2008	0	1	57.9-125	57.0	%REC	R18330

Note:x-Sample chromatogram does not resemble typical diesel pattern (possibly fuel lighter than diesel). Lighter end hydrocarbons within the diesel range quantitated as diesel. Surrogate recoveries fall outside the control limit possibly due to matrix effects (emulsion present during extraction).

<b>Client Sample ID:</b> MW-2	<b>Lab Sample ID:</b> 0812210-002
<b>Sample Location:</b> Caltrans ;Oakland	<b>Date Prepared:</b> 12/27/2008
<b>Sample Matrix:</b> WATER	
<b>Date/Time Sampled</b> 12/22/2008 2:55:00 PM	

Parameters	Analysis Method	Date Analyzed	RL	Dilution Factor	MRL	Result	Units	Analytical Batch
1,1,1,2-Tetrachloroethane	SW8260B	12/30/2008	1	44	44.0	ND	µg/L	F18343
1,1,1-Trichloroethane	SW8260B	12/30/2008	0.5	44	22.0	ND	µg/L	F18343
1,1,2,2-Tetrachloroethane	SW8260B	12/30/2008	1	44	44.0	ND	µg/L	F18343
1,1,2-Trichloroethane	SW8260B	12/30/2008	0.5	44	22.0	ND	µg/L	F18343
1,1-Dichloroethane	SW8260B	12/30/2008	0.5	44	22.0	ND	µg/L	F18343
1,1-Dichloroethene	SW8260B	12/30/2008	1	44	44.0	ND	µg/L	F18343
1,1-Dichloropropene	SW8260B	12/30/2008	0.5	44	22.0	ND	µg/L	F18343
1,2,3-Trichlorobenzene	SW8260B	12/30/2008	1	44	44.0	ND	µg/L	F18343
1,2,3-Trichloropropane	SW8260B	12/30/2008	1	44	44.0	ND	µg/L	F18343
1,2,4-Trichlorobenzene	SW8260B	12/30/2008	1	44	44.0	ND	µg/L	F18343
1,2,4-Trimethylbenzene	SW8260B	12/30/2008	0.5	44	22.0	1850	µg/L	F18343
1,2-Dibromo-3-chloropropane	SW8260B	12/30/2008	0.5	44	22.0	ND	µg/L	F18343
1,2-Dibromoethane (EDB)	SW8260B	12/30/2008	0.5	44	22.0	ND	µg/L	F18343
1,2-Dichlorobenzene	SW8260B	12/30/2008	0.5	44	22.0	ND	µg/L	F18343
1,2-Dichloroethane (EDC)	SW8260B	12/30/2008	0.5	44	22.0	31.7	µg/L	F18343
1,2-Dichloropropane	SW8260B	12/30/2008	1	44	44.0	ND	µg/L	F18343
1,3,5-Trimethylbenzene	SW8260B	12/30/2008	0.5	44	22.0	398	µg/L	F18343
1,3-Dichlorobenzene	SW8260B	12/30/2008	0.5	44	22.0	ND	µg/L	F18343
1,3-Dichloropropene	SW8260B	12/30/2008	0.5	44	22.0	ND	µg/L	F18343
1,4-Dichlorobenzene	SW8260B	12/30/2008	0.5	44	22.0	ND	µg/L	F18343
2,2-Dichloropropane	SW8260B	12/30/2008	0.5	44	22.0	ND	µg/L	F18343
2-Chloroethyl vinyl ether	SW8260B	12/30/2008	1	44	44.0	ND	µg/L	F18343
2-Chlorotoluene	SW8260B	12/30/2008	0.5	44	22.0	ND	µg/L	F18343
4-Chlorotoluene	SW8260B	12/30/2008	0.5	44	22.0	ND	µg/L	F18343
4-Isopropyltoluene	SW8260B	12/30/2008	0.5	44	22.0	ND	µg/L	F18343
Acetone	SW8260B	12/30/2008	10	44	440	ND	µg/L	F18343
Benzene	SW8260B	12/30/2008	0.5	44	22.0	437	µg/L	F18343
Bromobenzene	SW8260B	12/30/2008	0.5	44	22.0	ND	µg/L	F18343
Bromochloromethane	SW8260B	12/30/2008	0.5	44	22.0	ND	µg/L	F18343
Bromodichloromethane	SW8260B	12/30/2008	0.5	44	22.0	ND	µg/L	F18343
Bromoform	SW8260B	12/30/2008	1	44	44.0	ND	µg/L	F18343
Bromomethane	SW8260B	12/30/2008	1	44	44.0	ND	µg/L	F18343
Carbon tetrachloride	SW8260B	12/30/2008	1	44	44.0	ND	µg/L	F18343
Chlorobenzene	SW8260B	12/30/2008	0.5	44	22.0	ND	µg/L	F18343
Chloroform	SW8260B	12/30/2008	0.5	44	22.0	ND	µg/L	F18343
Chloromethane	SW8260B	12/30/2008	0.5	44	22.0	ND	µg/L	F18343
cis-1,2-Dichloroethene	SW8260B	12/30/2008	0.5	44	22.0	ND	µg/L	F18343
cis-1,3-Dichloropropene	SW8260B	12/30/2008	0.5	44	22.0	ND	µg/L	F18343
Dibromochloromethane	SW8260B	12/30/2008	0.5	44	22.0	ND	µg/L	F18343
Dibromomethane	SW8260B	12/30/2008	0.5	44	22.0	ND	µg/L	F18343
Dichlorodifluoromethane	SW8260B	12/30/2008	0.5	44	22.0	ND	µg/L	F18343
Diisopropyl ether (DIPE)	SW8260B	12/30/2008	0.5	44	22.0	ND	µg/L	F18343
Ethyl tert-butyl ether (ETBE)	SW8260B	12/30/2008	0.5	44	22.0	ND	µg/L	F18343

**Client Sample ID:** MW-2  
**Sample Location:** Caltrans ;Oakland  
**Sample Matrix:** WATER  
**Date/Time Sampled** 12/22/2008 2:55:00 PM

**Lab Sample ID:** 0812210-002  
**Date Prepared:** 12/27/2008

Parameters	Analysis Method	Date Analyzed	RL	Dilution Factor	MRL	Result	Units	Analytical Batch
Ethylbenzene	SW8260B	12/30/2008	0.5	44	22.0	1360	µg/L	F18343
Freon-113	SW8260B	12/30/2008	1	44	44.0	ND	µg/L	F18343
Hexachlorobutadiene	SW8260B	12/30/2008	0.5	44	22.0	ND	µg/L	F18343
Isopropylbenzene	SW8260B	12/30/2008	1	44	44.0	63.8	µg/L	F18343
Methyl tert-butyl ether (MTBE)	SW8260B	12/30/2008	0.5	44	22.0	ND	µg/L	F18343
Methylene chloride	SW8260B	12/30/2008	5	44	220	ND	µg/L	F18343
Naphthalene	SW8260B	12/30/2008	1	44	44.0	89.3	µg/L	F18343
n-Butylbenzene	SW8260B	12/30/2008	0.5	44	22.0	ND	µg/L	F18343
n-Propylbenzene	SW8260B	12/30/2008	0.5	44	22.0	226	µg/L	F18343
sec-Butylbenzene	SW8260B	12/30/2008	0.5	44	22.0	ND	µg/L	F18343
Styrene	SW8260B	12/30/2008	0.5	44	22.0	ND	µg/L	F18343
t-Butyl alcohol (t-Butanol)	SW8260B	12/30/2008	5	44	220	ND	µg/L	F18343
tert-Amyl methyl ether (TAME)	SW8260B	12/30/2008	0.5	44	22.0	ND	µg/L	F18343
tert-Butylbenzene	SW8260B	12/30/2008	0.5	44	22.0	ND	µg/L	F18343
Tetrachloroethene	SW8260B	12/30/2008	0.5	44	22.0	ND	µg/L	F18343
Toluene	SW8260B	12/30/2008	0.5	44	22.0	1200	µg/L	F18343
trans-1,2-Dichloroethene	SW8260B	12/30/2008	0.5	44	22.0	ND	µg/L	F18343
trans-1,3-Dichloropropene	SW8260B	12/30/2008	0.5	44	22.0	ND	µg/L	F18343
Trichloroethene	SW8260B	12/30/2008	0.5	44	22.0	ND	µg/L	F18343
Trichlorofluoromethane	SW8260B	12/30/2008	0.5	44	22.0	ND	µg/L	F18343
Vinyl chloride	SW8260B	12/30/2008	0.5	44	22.0	ND	µg/L	F18343
Xylenes, Total	SW8260B	12/30/2008	1.5	44	66.0	8870	µg/L	F18343
Surr: Dibromofluoromethane	SW8260B	12/30/2008	0	44	61.2-131	104	%REC	F18343
Surr: 4-Bromofluorobenzene	SW8260B	12/30/2008	0	44	64.1-120	107	%REC	F18343
Surr: Toluene-d8	SW8260B	12/30/2008	0	44	75.1-127	105	%REC	F18343
TPH (Gasoline)	SW8260B(TPH)	12/30/2008	50	44	2200	33000	µg/L	G18343
Surr: 4-Bromofluorobenzene	SW8260B(TPH)	12/30/2008	0	44	58.4-133	73.9	%REC	G18343

Note: Although TPH as gasoline compounds are present, TPH value includes the portion of non-target gasoline compounds within range of C5-C12 quantified as gasoline (possibly aged gasoline).

**Report prepared for:** Charlie Almestad  
KLEINFELDER

**Date Received:** 12/23/2008  
**Date Reported:** 1/14/2009

**Client Sample ID:** MW-3  
**Sample Location:** Caltrans ;Oakland  
**Sample Matrix:** WATER  
**Date/Time Sampled** 12/22/2008 12:00:00 PM

**Lab Sample ID:** 0812210-003  
**Date Prepared:** 12/27/2008

Parameters	Analysis Method	Date Analyzed	RL	Dilution Factor	MRL	Result	Units	Analytical Batch
TPH (Diesel)	SW8015B	12/27/2008	0.1	1	0.120	ND	mg/L	R18330
Surr: Pentacosane	SW8015B	12/27/2008	0	1	57.9-125	88.0	%REC	R18330

Note: Reporting limits increased due to limited sample available (sediment present).



Client Sample ID: MW-3  
Sample Location: Caltrans ;Oakland  
Sample Matrix: WATER  
Date/Time Sampled 12/22/2008 12:00:00 PM

Lab Sample ID: 0812210-003

Date Prepared: 12/27/2008

Parameters	Analysis Method	Date Analyzed	RL	Dilution Factor	MRL	Result	Units	Analytical Batch
1,1,1,2-Tetrachloroethane	SW8260B	12/30/2008	1	1	1.00	ND	µg/L	F18343
1,1,1-Trichloroethane	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
1,1,2,2-Tetrachloroethane	SW8260B	12/30/2008	1	1	1.00	ND	µg/L	F18343
1,1,2-Trichloroethane	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
1,1-Dichloroethane	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
1,1-Dichloroethene	SW8260B	12/30/2008	1	1	1.00	ND	µg/L	F18343
1,1-Dichloropropene	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
1,2,3-Trichlorobenzene	SW8260B	12/30/2008	1	1	1.00	ND	µg/L	F18343
1,2,3-Trichloropropane	SW8260B	12/30/2008	1	1	1.00	ND	µg/L	F18343
1,2,4-Trichlorobenzene	SW8260B	12/30/2008	1	1	1.00	ND	µg/L	F18343
1,2,4-Trimethylbenzene	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
1,2-Dibromo-3-chloropropane	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
1,2-Dibromoethane (EDB)	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
1,2-Dichlorobenzene	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
1,2-Dichloroethane (EDC)	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
1,2-Dichloropropane	SW8260B	12/30/2008	1	1	1.00	ND	µg/L	F18343
1,3,5-Trimethylbenzene	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
1,3-Dichlorobenzene	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
1,3-Dichloropropene	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
1,4-Dichlorobenzene	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
2,2-Dichloropropane	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
2-Chloroethyl vinyl ether	SW8260B	12/30/2008	1	1	1.00	ND	µg/L	F18343
2-Chlorotoluene	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
4-Chlorotoluene	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
4-Isopropyltoluene	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
Acetone	SW8260B	12/30/2008	10	1	10.0	ND	µg/L	F18343
Benzene	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
Bromobenzene	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
Bromochloromethane	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
Bromodichloromethane	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
Bromoform	SW8260B	12/30/2008	1	1	1.00	ND	µg/L	F18343
Bromomethane	SW8260B	12/30/2008	1	1	1.00	ND	µg/L	F18343
Carbon tetrachloride	SW8260B	12/30/2008	1	1	1.00	ND	µg/L	F18343
Chlorobenzene	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
Chloroform	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
Chloromethane	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
cis-1,2-Dichloroethene	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
cis-1,3-Dichloropropene	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
Dibromochloromethane	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
Dibromomethane	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
Dichlorodifluoromethane	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
Diisopropyl ether (DIPE)	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
Ethyl tert-butyl ether (ETBE)	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343

<b>Client Sample ID:</b> MW-3	<b>Lab Sample ID:</b> 0812210-003
<b>Sample Location:</b> Caltrans ;Oakland	<b>Date Prepared:</b> 12/27/2008
<b>Sample Matrix:</b> WATER	
<b>Date/Time Sampled</b> 12/22/2008 12:00:00 PM	

Parameters	Analysis Method	Date Analyzed	RL	Dilution Factor	MRL	Result	Units	Analytical Batch
Ethylbenzene	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
Freon-113	SW8260B	12/30/2008	1	1	1.00	ND	µg/L	F18343
Hexachlorobutadiene	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
Isopropylbenzene	SW8260B	12/30/2008	1	1	1.00	ND	µg/L	F18343
Methyl tert-butyl ether (MTBE)	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
Methylene chloride	SW8260B	12/30/2008	5	1	5.00	ND	µg/L	F18343
Naphthalene	SW8260B	12/30/2008	1	1	1.00	ND	µg/L	F18343
n-Butylbenzene	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
n-Propylbenzene	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
sec-Butylbenzene	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
Styrene	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
t-Butyl alcohol (t-Butanol)	SW8260B	12/30/2008	5	1	5.00	ND	µg/L	F18343
tert-Amyl methyl ether (TAME)	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
tert-Butylbenzene	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
Tetrachloroethene	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
Toluene	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
trans-1,2-Dichloroethene	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
trans-1,3-Dichloropropene	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
Trichloroethene	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
Trichlorofluoromethane	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
Vinyl chloride	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
Xylenes, Total	SW8260B	12/30/2008	1.5	1	1.50	ND	µg/L	F18343
Surr: Dibromofluoromethane	SW8260B	12/30/2008	0	1	61.2-131	92.5	%REC	F18343
Surr: 4-Bromofluorobenzene	SW8260B	12/30/2008	0	1	64.1-120	111	%REC	F18343
Surr: Toluene-d8	SW8260B	12/30/2008	0	1	75.1-127	92.3	%REC	F18343
TPH (Gasoline)	SW8260B(TPH)	12/30/2008	50	1	50	ND	µg/L	G18343
Surr: 4-Bromofluorobenzene	SW8260B(TPH)	12/30/2008	0	1	58.4-133	76.6	%REC	G18343

**Report prepared for:** Charlie Almestad  
KLEINFELDER

**Date Received:** 12/23/2008  
**Date Reported:** 1/14/2009

**Client Sample ID:** MW-4  
**Sample Location:** Caltrans ;Oakland  
**Sample Matrix:** WATER  
**Date/Time Sampled** 12/22/2008 2:00:00 PM

**Lab Sample ID:** 0812210-004  
**Date Prepared:** 12/27/2008

Parameters	Analysis Method	Date Analyzed	RL	Dilution Factor	MRL	Result	Units	Analytical Batch
TPH (Diesel)	SW8015B	12/28/2008	0.1	1	0.117	ND	mg/L	R18330
Surr: Pentacosane	SW8015B	12/28/2008	0	1	57.9-125	58.0	%REC	R18330

Note: Reporting limits increased due to limited sample available (sediment present).

<b>Client Sample ID:</b> MW-4	<b>Lab Sample ID:</b> 0812210-004
<b>Sample Location:</b> Caltrans ;Oakland	<b>Date Prepared:</b> 12/27/2008
<b>Sample Matrix:</b> WATER	
<b>Date/Time Sampled</b> 12/22/2008 2:00:00 PM	

Parameters	Analysis Method	Date Analyzed	RL	Dilution Factor	MRL	Result	Units	Analytical Batch
1,1,1,2-Tetrachloroethane	SW8260B	12/30/2008	1	1.1	1.10	ND	µg/L	F18343
1,1,1-Trichloroethane	SW8260B	12/30/2008	0.5	1.1	0.55	ND	µg/L	F18343
1,1,2,2-Tetrachloroethane	SW8260B	12/30/2008	1	1.1	1.10	ND	µg/L	F18343
1,1,2-Trichloroethane	SW8260B	12/30/2008	0.5	1.1	0.55	ND	µg/L	F18343
1,1-Dichloroethane	SW8260B	12/30/2008	0.5	1.1	0.55	ND	µg/L	F18343
1,1-Dichloroethene	SW8260B	12/30/2008	1	1.1	1.10	ND	µg/L	F18343
1,1-Dichloropropene	SW8260B	12/30/2008	0.5	1.1	0.55	ND	µg/L	F18343
1,2,3-Trichlorobenzene	SW8260B	12/30/2008	1	1.1	1.10	ND	µg/L	F18343
1,2,3-Trichloropropane	SW8260B	12/30/2008	1	1.1	1.10	ND	µg/L	F18343
1,2,4-Trichlorobenzene	SW8260B	12/30/2008	1	1.1	1.10	ND	µg/L	F18343
1,2,4-Trimethylbenzene	SW8260B	12/30/2008	0.5	1.1	0.55	ND	µg/L	F18343
1,2-Dibromo-3-chloropropane	SW8260B	12/30/2008	0.5	1.1	0.55	ND	µg/L	F18343
1,2-Dibromoethane (EDB)	SW8260B	12/30/2008	0.5	1.1	0.55	ND	µg/L	F18343
1,2-Dichlorobenzene	SW8260B	12/30/2008	0.5	1.1	0.55	ND	µg/L	F18343
1,2-Dichloroethane (EDC)	SW8260B	12/30/2008	0.5	1.1	0.55	ND	µg/L	F18343
1,2-Dichloropropane	SW8260B	12/30/2008	1	1.1	1.10	ND	µg/L	F18343
1,3,5-Trimethylbenzene	SW8260B	12/30/2008	0.5	1.1	0.55	ND	µg/L	F18343
1,3-Dichlorobenzene	SW8260B	12/30/2008	0.5	1.1	0.55	ND	µg/L	F18343
1,3-Dichloropropene	SW8260B	12/30/2008	0.5	1.1	0.55	ND	µg/L	F18343
1,4-Dichlorobenzene	SW8260B	12/30/2008	0.5	1.1	0.55	ND	µg/L	F18343
2,2-Dichloropropane	SW8260B	12/30/2008	0.5	1.1	0.55	ND	µg/L	F18343
2-Chloroethyl vinyl ether	SW8260B	12/30/2008	1	1.1	1.10	ND	µg/L	F18343
2-Chlorotoluene	SW8260B	12/30/2008	0.5	1.1	0.55	ND	µg/L	F18343
4-Chlorotoluene	SW8260B	12/30/2008	0.5	1.1	0.55	ND	µg/L	F18343
4-Isopropyltoluene	SW8260B	12/30/2008	0.5	1.1	0.55	ND	µg/L	F18343
Acetone	SW8260B	12/30/2008	10	1.1	11.0	ND	µg/L	F18343
Benzene	SW8260B	12/30/2008	0.5	1.1	0.55	ND	µg/L	F18343
Bromobenzene	SW8260B	12/30/2008	0.5	1.1	0.55	ND	µg/L	F18343
Bromochloromethane	SW8260B	12/30/2008	0.5	1.1	0.55	ND	µg/L	F18343
Bromodichloromethane	SW8260B	12/30/2008	0.5	1.1	0.55	ND	µg/L	F18343
Bromoform	SW8260B	12/30/2008	1	1.1	1.10	ND	µg/L	F18343
Bromomethane	SW8260B	12/30/2008	1	1.1	1.10	ND	µg/L	F18343
Carbon tetrachloride	SW8260B	12/30/2008	1	1.1	1.10	ND	µg/L	F18343
Chlorobenzene	SW8260B	12/30/2008	0.5	1.1	0.55	ND	µg/L	F18343
Chloroform	SW8260B	12/30/2008	0.5	1.1	0.55	ND	µg/L	F18343
Chloromethane	SW8260B	12/30/2008	0.5	1.1	0.55	ND	µg/L	F18343
cis-1,2-Dichloroethene	SW8260B	12/30/2008	0.5	1.1	0.55	ND	µg/L	F18343
cis-1,3-Dichloropropene	SW8260B	12/30/2008	0.5	1.1	0.55	ND	µg/L	F18343
Dibromochloromethane	SW8260B	12/30/2008	0.5	1.1	0.55	ND	µg/L	F18343
Dibromomethane	SW8260B	12/30/2008	0.5	1.1	0.55	ND	µg/L	F18343
Dichlorodifluoromethane	SW8260B	12/30/2008	0.5	1.1	0.55	ND	µg/L	F18343
Diisopropyl ether (DIPE)	SW8260B	12/30/2008	0.5	1.1	0.55	ND	µg/L	F18343
Ethyl tert-butyl ether (ETBE)	SW8260B	12/30/2008	0.5	1.1	0.55	ND	µg/L	F18343



**Report prepared for:** Charlie Almestad  
KLEINFELDER

**Date Received:** 12/23/2008  
**Date Reported:** 1/14/2009

**Client Sample ID:** MW-5  
**Sample Location:** Caltrans ;Oakland  
**Sample Matrix:** WATER  
**Date/Time Sampled** 12/22/2008 1:00:00 PM

**Lab Sample ID:** 0812210-005  
**Date Prepared:** 12/27/2008

Parameters	Analysis Method	Date Analyzed	RL	Dilution Factor	MRL	Result	Units	Analytical Batch
TPH (Diesel)	SW8015B	12/28/2008	0.1	1	0.117	ND	mg/L	R18330
Surr: Pentacosane	SW8015B	12/28/2008	0	1	57.9-125	45.0	%REC	R18330

Note: Reporting limits increased due to limited sample available (sediment present). Surrogate recoveries fall outside the control limit possibly due to matrix effects (emulsion present during extraction).

<b>Client Sample ID:</b> MW-5	<b>Lab Sample ID:</b> 0812210-005
<b>Sample Location:</b> Caltrans ;Oakland	<b>Date Prepared:</b> 12/27/2008
<b>Sample Matrix:</b> WATER	
<b>Date/Time Sampled</b> 12/22/2008 1:00:00 PM	

Parameters	Analysis Method	Date Analyzed	RL	Dilution Factor	MRL	Result	Units	Analytical Batch
1,1,1,2-Tetrachloroethane	SW8260B	12/30/2008	1	1.13	1.13	ND	µg/L	F18343
1,1,1-Trichloroethane	SW8260B	12/30/2008	0.5	1.13	0.57	ND	µg/L	F18343
1,1,2,2-Tetrachloroethane	SW8260B	12/30/2008	1	1.13	1.13	ND	µg/L	F18343
1,1,2-Trichloroethane	SW8260B	12/30/2008	0.5	1.13	0.57	ND	µg/L	F18343
1,1-Dichloroethane	SW8260B	12/30/2008	0.5	1.13	0.57	ND	µg/L	F18343
1,1-Dichloroethene	SW8260B	12/30/2008	1	1.13	1.13	ND	µg/L	F18343
1,1-Dichloropropene	SW8260B	12/30/2008	0.5	1.13	0.57	ND	µg/L	F18343
1,2,3-Trichlorobenzene	SW8260B	12/30/2008	1	1.13	1.13	ND	µg/L	F18343
1,2,3-Trichloropropane	SW8260B	12/30/2008	1	1.13	1.13	ND	µg/L	F18343
1,2,4-Trichlorobenzene	SW8260B	12/30/2008	1	1.13	1.13	ND	µg/L	F18343
1,2,4-Trimethylbenzene	SW8260B	12/30/2008	0.5	1.13	0.57	ND	µg/L	F18343
1,2-Dibromo-3-chloropropane	SW8260B	12/30/2008	0.5	1.13	0.57	ND	µg/L	F18343
1,2-Dibromoethane (EDB)	SW8260B	12/30/2008	0.5	1.13	0.57	ND	µg/L	F18343
1,2-Dichlorobenzene	SW8260B	12/30/2008	0.5	1.13	0.57	ND	µg/L	F18343
1,2-Dichloroethane (EDC)	SW8260B	12/30/2008	0.5	1.13	0.57	ND	µg/L	F18343
1,2-Dichloropropane	SW8260B	12/30/2008	1	1.13	1.13	ND	µg/L	F18343
1,3,5-Trimethylbenzene	SW8260B	12/30/2008	0.5	1.13	0.57	ND	µg/L	F18343
1,3-Dichlorobenzene	SW8260B	12/30/2008	0.5	1.13	0.57	ND	µg/L	F18343
1,3-Dichloropropene	SW8260B	12/30/2008	0.5	1.13	0.57	ND	µg/L	F18343
1,4-Dichlorobenzene	SW8260B	12/30/2008	0.5	1.13	0.57	ND	µg/L	F18343
2,2-Dichloropropane	SW8260B	12/30/2008	0.5	1.13	0.57	ND	µg/L	F18343
2-Chloroethyl vinyl ether	SW8260B	12/30/2008	1	1.13	1.13	ND	µg/L	F18343
2-Chlorotoluene	SW8260B	12/30/2008	0.5	1.13	0.57	ND	µg/L	F18343
4-Chlorotoluene	SW8260B	12/30/2008	0.5	1.13	0.57	ND	µg/L	F18343
4-Isopropyltoluene	SW8260B	12/30/2008	0.5	1.13	0.57	ND	µg/L	F18343
Acetone	SW8260B	12/30/2008	10	1.13	11.3	ND	µg/L	F18343
Benzene	SW8260B	12/30/2008	0.5	1.13	0.57	ND	µg/L	F18343
Bromobenzene	SW8260B	12/30/2008	0.5	1.13	0.57	ND	µg/L	F18343
Bromochloromethane	SW8260B	12/30/2008	0.5	1.13	0.57	ND	µg/L	F18343
Bromodichloromethane	SW8260B	12/30/2008	0.5	1.13	0.57	ND	µg/L	F18343
Bromoform	SW8260B	12/30/2008	1	1.13	1.13	ND	µg/L	F18343
Bromomethane	SW8260B	12/30/2008	1	1.13	1.13	ND	µg/L	F18343
Carbon tetrachloride	SW8260B	12/30/2008	1	1.13	1.13	ND	µg/L	F18343
Chlorobenzene	SW8260B	12/30/2008	0.5	1.13	0.57	ND	µg/L	F18343
Chloroform	SW8260B	12/30/2008	0.5	1.13	0.57	ND	µg/L	F18343
Chloromethane	SW8260B	12/30/2008	0.5	1.13	0.57	ND	µg/L	F18343
cis-1,2-Dichloroethene	SW8260B	12/30/2008	0.5	1.13	0.57	ND	µg/L	F18343
cis-1,3-Dichloropropene	SW8260B	12/30/2008	0.5	1.13	0.57	ND	µg/L	F18343
Dibromochloromethane	SW8260B	12/30/2008	0.5	1.13	0.57	ND	µg/L	F18343
Dibromomethane	SW8260B	12/30/2008	0.5	1.13	0.57	ND	µg/L	F18343
Dichlorodifluoromethane	SW8260B	12/30/2008	0.5	1.13	0.57	ND	µg/L	F18343
Diisopropyl ether (DIPE)	SW8260B	12/30/2008	0.5	1.13	0.57	ND	µg/L	F18343
Ethyl tert-butyl ether (ETBE)	SW8260B	12/30/2008	0.5	1.13	0.57	ND	µg/L	F18343

<b>Client Sample ID:</b> MW-5	<b>Lab Sample ID:</b> 0812210-005
<b>Sample Location:</b> Caltrans ;Oakland	<b>Date Prepared:</b> 12/27/2008
<b>Sample Matrix:</b> WATER	
<b>Date/Time Sampled</b> 12/22/2008 1:00:00 PM	

Parameters	Analysis Method	Date Analyzed	RL	Dilution Factor	MRL	Result	Units	Analytical Batch
Ethylbenzene	SW8260B	12/30/2008	0.5	1.13	0.57	ND	µg/L	F18343
Freon-113	SW8260B	12/30/2008	1	1.13	1.13	ND	µg/L	F18343
Hexachlorobutadiene	SW8260B	12/30/2008	0.5	1.13	0.57	ND	µg/L	F18343
Isopropylbenzene	SW8260B	12/30/2008	1	1.13	1.13	ND	µg/L	F18343
Methyl tert-butyl ether (MTBE)	SW8260B	12/30/2008	0.5	1.13	0.57	ND	µg/L	F18343
Methylene chloride	SW8260B	12/30/2008	5	1.13	5.65	ND	µg/L	F18343
Naphthalene	SW8260B	12/30/2008	1	1.13	1.13	ND	µg/L	F18343
n-Butylbenzene	SW8260B	12/30/2008	0.5	1.13	0.57	ND	µg/L	F18343
n-Propylbenzene	SW8260B	12/30/2008	0.5	1.13	0.57	ND	µg/L	F18343
sec-Butylbenzene	SW8260B	12/30/2008	0.5	1.13	0.57	ND	µg/L	F18343
Styrene	SW8260B	12/30/2008	0.5	1.13	0.57	ND	µg/L	F18343
t-Butyl alcohol (t-Butanol)	SW8260B	12/30/2008	5	1.13	5.65	ND	µg/L	F18343
tert-Amyl methyl ether (TAME)	SW8260B	12/30/2008	0.5	1.13	0.57	ND	µg/L	F18343
tert-Butylbenzene	SW8260B	12/30/2008	0.5	1.13	0.57	ND	µg/L	F18343
Tetrachloroethene	SW8260B	12/30/2008	0.5	1.13	0.57	ND	µg/L	F18343
Toluene	SW8260B	12/30/2008	0.5	1.13	0.57	ND	µg/L	F18343
trans-1,2-Dichloroethene	SW8260B	12/30/2008	0.5	1.13	0.57	ND	µg/L	F18343
trans-1,3-Dichloropropene	SW8260B	12/30/2008	0.5	1.13	0.57	ND	µg/L	F18343
Trichloroethene	SW8260B	12/30/2008	0.5	1.13	0.57	ND	µg/L	F18343
Trichlorofluoromethane	SW8260B	12/30/2008	0.5	1.13	0.57	ND	µg/L	F18343
Vinyl chloride	SW8260B	12/30/2008	0.5	1.13	0.57	ND	µg/L	F18343
Xylenes, Total	SW8260B	12/30/2008	1.5	1.13	1.70	ND	µg/L	F18343
Surr: Dibromofluoromethane	SW8260B	12/30/2008	0	1.13	61.2-131	94.5	%REC	F18343
Surr: 4-Bromofluorobenzene	SW8260B	12/30/2008	0	1.13	64.1-120	116	%REC	F18343
Surr: Toluene-d8	SW8260B	12/30/2008	0	1.13	75.1-127	87.4	%REC	F18343
TPH (Gasoline)	SW8260B(TPH)	12/31/2008	50	1.1	55	ND	µg/L	G18362
Surr: 4-Bromofluorobenzene	SW8260B(TPH)	12/31/2008	0	1.1	58.4-133	64.2	%REC	G18362

Note: Sample was diluted prior to analysis due to sediment in all VOAs.



**Report prepared for:** Charlie Almestad  
KLEINFELDER

**Date Received:** 12/23/2008  
**Date Reported:** 1/14/2009

**Client Sample ID:** MW-6  
**Sample Location:** Caltrans ;Oakland  
**Sample Matrix:** WATER  
**Date/Time Sampled** 12/22/2008 10:00:00 AM

**Lab Sample ID:** 0812210-006  
**Date Prepared:** 12/27/2008

Parameters	Analysis Method	Date Analyzed	RL	Dilution Factor	MRL	Result	Units	Analytical Batch
TPH (Diesel)	SW8015B	12/27/2008	0.1	1	0.100	ND	mg/L	R18330
Surr: Pentacosane	SW8015B	12/27/2008	0	1	57.9-125	80.0	%REC	R18330

<b>Client Sample ID:</b> MW-6	<b>Lab Sample ID:</b> 0812210-006
<b>Sample Location:</b> Caltrans ;Oakland	<b>Date Prepared:</b> 12/27/2008
<b>Sample Matrix:</b> WATER	
<b>Date/Time Sampled</b> 12/22/2008 10:00:00 AM	

Parameters	Analysis Method	Date Analyzed	RL	Dilution Factor	MRL	Result	Units	Analytical Batch
1,1,1,2-Tetrachloroethane	SW8260B	12/30/2008	1	1	1.00	ND	µg/L	F18343
1,1,1-Trichloroethane	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
1,1,2,2-Tetrachloroethane	SW8260B	12/30/2008	1	1	1.00	ND	µg/L	F18343
1,1,2-Trichloroethane	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
1,1-Dichloroethane	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
1,1-Dichloroethene	SW8260B	12/30/2008	1	1	1.00	ND	µg/L	F18343
1,1-Dichloropropene	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
1,2,3-Trichlorobenzene	SW8260B	12/30/2008	1	1	1.00	ND	µg/L	F18343
1,2,3-Trichloropropane	SW8260B	12/30/2008	1	1	1.00	ND	µg/L	F18343
1,2,4-Trichlorobenzene	SW8260B	12/30/2008	1	1	1.00	ND	µg/L	F18343
1,2,4-Trimethylbenzene	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
1,2-Dibromo-3-chloropropane	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
1,2-Dibromoethane (EDB)	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
1,2-Dichlorobenzene	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
1,2-Dichloroethane (EDC)	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
1,2-Dichloropropane	SW8260B	12/30/2008	1	1	1.00	ND	µg/L	F18343
1,3,5-Trimethylbenzene	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
1,3-Dichlorobenzene	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
1,3-Dichloropropene	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
1,4-Dichlorobenzene	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
2,2-Dichloropropane	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
2-Chloroethyl vinyl ether	SW8260B	12/30/2008	1	1	1.00	ND	µg/L	F18343
2-Chlorotoluene	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
4-Chlorotoluene	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
4-Isopropyltoluene	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
Acetone	SW8260B	12/30/2008	10	1	10.0	ND	µg/L	F18343
Benzene	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
Bromobenzene	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
Bromochloromethane	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
Bromodichloromethane	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
Bromoform	SW8260B	12/30/2008	1	1	1.00	ND	µg/L	F18343
Bromomethane	SW8260B	12/30/2008	1	1	1.00	ND	µg/L	F18343
Carbon tetrachloride	SW8260B	12/30/2008	1	1	1.00	ND	µg/L	F18343
Chlorobenzene	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
Chloroform	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
Chloromethane	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
cis-1,2-Dichloroethene	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
cis-1,3-Dichloropropene	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
Dibromochloromethane	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
Dibromomethane	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
Dichlorodifluoromethane	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
Diisopropyl ether (DIPE)	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
Ethyl tert-butyl ether (ETBE)	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343

<b>Client Sample ID:</b> MW-6	<b>Lab Sample ID:</b> 0812210-006
<b>Sample Location:</b> Caltrans ;Oakland	<b>Date Prepared:</b> 12/27/2008
<b>Sample Matrix:</b> WATER	
<b>Date/Time Sampled</b> 12/22/2008 10:00:00 AM	

Parameters	Analysis Method	Date Analyzed	RL	Dilution Factor	MRL	Result	Units	Analytical Batch
Ethylbenzene	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
Freon-113	SW8260B	12/30/2008	1	1	1.00	ND	µg/L	F18343
Hexachlorobutadiene	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
Isopropylbenzene	SW8260B	12/30/2008	1	1	1.00	ND	µg/L	F18343
Methyl tert-butyl ether (MTBE)	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
Methylene chloride	SW8260B	12/30/2008	5	1	5.00	ND	µg/L	F18343
Naphthalene	SW8260B	12/30/2008	1	1	1.00	ND	µg/L	F18343
n-Butylbenzene	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
n-Propylbenzene	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
sec-Butylbenzene	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
Styrene	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
t-Butyl alcohol (t-Butanol)	SW8260B	12/30/2008	5	1	5.00	ND	µg/L	F18343
tert-Amyl methyl ether (TAME)	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
tert-Butylbenzene	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
Tetrachloroethene	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
Toluene	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
trans-1,2-Dichloroethene	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
trans-1,3-Dichloropropene	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
Trichloroethene	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
Trichlorofluoromethane	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
Vinyl chloride	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
Xylenes, Total	SW8260B	12/30/2008	1.5	1	1.50	ND	µg/L	F18343
Surr: Dibromofluoromethane	SW8260B	12/30/2008	0	1	61.2-131	93.4	%REC	F18343
Surr: 4-Bromofluorobenzene	SW8260B	12/30/2008	0	1	64.1-120	100	%REC	F18343
Surr: Toluene-d8	SW8260B	12/30/2008	0	1	75.1-127	110	%REC	F18343
TPH (Gasoline)	SW8260B(TPH)	12/31/2008	50	1	50	ND	µg/L	G18362
Surr: 4-Bromofluorobenzene	SW8260B(TPH)	12/31/2008	0	1	58.4-133	70.9	%REC	G18362

**Report prepared for:** Charlie Almestad  
KLEINFELDER

**Date Received:** 12/23/2008  
**Date Reported:** 1/14/2009

**Client Sample ID:** MW-7  
**Sample Location:** Caltrans ;Oakland  
**Sample Matrix:** WATER  
**Date/Time Sampled** 12/22/2008 10:55:00 AM

**Lab Sample ID:** 0812210-007  
**Date Prepared:** 12/27/2008

Parameters	Analysis Method	Date Analyzed	RL	Dilution Factor	MRL	Result	Units	Analytical Batch
TPH (Diesel)	SW8015B	12/27/2008	0.1	1	0.100	ND	mg/L	R18330
Surr: Pentacosane	SW8015B	12/27/2008	0	1	57.9-125	82.0	%REC	R18330

<b>Client Sample ID:</b> MW-7	<b>Lab Sample ID:</b> 0812210-007
<b>Sample Location:</b> Caltrans ;Oakland	<b>Date Prepared:</b> 12/27/2008
<b>Sample Matrix:</b> WATER	
<b>Date/Time Sampled</b> 12/22/2008 10:55:00 AM	

Parameters	Analysis Method	Date Analyzed	RL	Dilution Factor	MRL	Result	Units	Analytical Batch
1,1,1,2-Tetrachloroethane	SW8260B	12/30/2008	1	1	1.00	ND	µg/L	F18343
1,1,1-Trichloroethane	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
1,1,2,2-Tetrachloroethane	SW8260B	12/30/2008	1	1	1.00	ND	µg/L	F18343
1,1,2-Trichloroethane	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
1,1-Dichloroethane	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
1,1-Dichloroethene	SW8260B	12/30/2008	1	1	1.00	ND	µg/L	F18343
1,1-Dichloropropene	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
1,2,3-Trichlorobenzene	SW8260B	12/30/2008	1	1	1.00	ND	µg/L	F18343
1,2,3-Trichloropropane	SW8260B	12/30/2008	1	1	1.00	ND	µg/L	F18343
1,2,4-Trichlorobenzene	SW8260B	12/30/2008	1	1	1.00	ND	µg/L	F18343
1,2,4-Trimethylbenzene	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
1,2-Dibromo-3-chloropropane	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
1,2-Dibromoethane (EDB)	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
1,2-Dichlorobenzene	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
1,2-Dichloroethane (EDC)	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
1,2-Dichloropropane	SW8260B	12/30/2008	1	1	1.00	ND	µg/L	F18343
1,3,5-Trimethylbenzene	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
1,3-Dichlorobenzene	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
1,3-Dichloropropene	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
1,4-Dichlorobenzene	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
2,2-Dichloropropane	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
2-Chloroethyl vinyl ether	SW8260B	12/30/2008	1	1	1.00	ND	µg/L	F18343
2-Chlorotoluene	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
4-Chlorotoluene	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
4-Isopropyltoluene	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
Acetone	SW8260B	12/30/2008	10	1	10.0	ND	µg/L	F18343
Benzene	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
Bromobenzene	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
Bromochloromethane	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
Bromodichloromethane	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
Bromoform	SW8260B	12/30/2008	1	1	1.00	ND	µg/L	F18343
Bromomethane	SW8260B	12/30/2008	1	1	1.00	ND	µg/L	F18343
Carbon tetrachloride	SW8260B	12/30/2008	1	1	1.00	ND	µg/L	F18343
Chlorobenzene	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
Chloroform	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
Chloromethane	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
cis-1,2-Dichloroethene	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
cis-1,3-Dichloropropene	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
Dibromochloromethane	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
Dibromomethane	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
Dichlorodifluoromethane	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
Diisopropyl ether (DIPE)	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
Ethyl tert-butyl ether (ETBE)	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343



**Report prepared for:** Charlie Almestad  
KLEINFELDER

**Date Received:** 12/23/2008  
**Date Reported:** 1/14/2009

**Client Sample ID:** MW-2D  
**Sample Location:** Caltrans ;Oakland  
**Sample Matrix:** WATER  
**Date/Time Sampled** 12/22/2008 3:00:00 PM

**Lab Sample ID:** 0812210-008  
**Date Prepared:** 12/27/2008

Parameters	Analysis Method	Date Analyzed	RL	Dilution Factor	MRL	Result	Units	Analytical Batch
TPH (Diesel)	SW8015B	12/27/2008	0.1	1	0.114	2.01x	mg/L	R18330
Surr: Pentacosane	SW8015B	12/27/2008	0	1	57.9-125	84.0	%REC	R18330

Note:x-Sample chromatogram does not resemble typical diesel pattern (possibly fuel lighter than diesel). Lighter end hydrocarbons within the diesel range quantitated as diesel.

Client Sample ID: MW-2D  
Sample Location: Caltrans ;Oakland  
Sample Matrix: WATER  
Date/Time Sampled 12/22/2008 3:00:00 PM

Lab Sample ID: 0812210-008

Date Prepared: 12/27/2008

Parameters	Analysis Method	Date Analyzed	RL	Dilution Factor	MRL	Result	Units	Analytical Batch
1,1,1,2-Tetrachloroethane	SW8260B	12/30/2008	1	44	44.0	ND	µg/L	F18343
1,1,1-Trichloroethane	SW8260B	12/30/2008	0.5	44	22.0	ND	µg/L	F18343
1,1,2,2-Tetrachloroethane	SW8260B	12/30/2008	1	44	44.0	ND	µg/L	F18343
1,1,2-Trichloroethane	SW8260B	12/30/2008	0.5	44	22.0	ND	µg/L	F18343
1,1-Dichloroethane	SW8260B	12/30/2008	0.5	44	22.0	ND	µg/L	F18343
1,1-Dichloroethene	SW8260B	12/30/2008	1	44	44.0	ND	µg/L	F18343
1,1-Dichloropropene	SW8260B	12/30/2008	0.5	44	22.0	ND	µg/L	F18343
1,2,3-Trichlorobenzene	SW8260B	12/30/2008	1	44	44.0	ND	µg/L	F18343
1,2,3-Trichloropropane	SW8260B	12/30/2008	1	44	44.0	ND	µg/L	F18343
1,2,4-Trichlorobenzene	SW8260B	12/30/2008	1	44	44.0	ND	µg/L	F18343
1,2,4-Trimethylbenzene	SW8260B	12/30/2008	0.5	44	22.0	1930	µg/L	F18343
1,2-Dibromo-3-chloropropane	SW8260B	12/30/2008	0.5	44	22.0	ND	µg/L	F18343
1,2-Dibromoethane (EDB)	SW8260B	12/30/2008	0.5	44	22.0	ND	µg/L	F18343
1,2-Dichlorobenzene	SW8260B	12/30/2008	0.5	44	22.0	ND	µg/L	F18343
1,2-Dichloroethane (EDC)	SW8260B	12/30/2008	0.5	44	22.0	34.3	µg/L	F18343
1,2-Dichloropropane	SW8260B	12/30/2008	1	44	44.0	ND	µg/L	F18343
1,3,5-Trimethylbenzene	SW8260B	12/30/2008	0.5	44	22.0	433	µg/L	F18343
1,3-Dichlorobenzene	SW8260B	12/30/2008	0.5	44	22.0	ND	µg/L	F18343
1,3-Dichloropropene	SW8260B	12/30/2008	0.5	44	22.0	ND	µg/L	F18343
1,4-Dichlorobenzene	SW8260B	12/30/2008	0.5	44	22.0	ND	µg/L	F18343
2,2-Dichloropropane	SW8260B	12/30/2008	0.5	44	22.0	ND	µg/L	F18343
2-Chloroethyl vinyl ether	SW8260B	12/30/2008	1	44	44.0	ND	µg/L	F18343
2-Chlorotoluene	SW8260B	12/30/2008	0.5	44	22.0	ND	µg/L	F18343
4-Chlorotoluene	SW8260B	12/30/2008	0.5	44	22.0	ND	µg/L	F18343
4-Isopropyltoluene	SW8260B	12/30/2008	0.5	44	22.0	ND	µg/L	F18343
Acetone	SW8260B	12/30/2008	10	44	440	ND	µg/L	F18343
Benzene	SW8260B	12/30/2008	0.5	44	22.0	480	µg/L	F18343
Bromobenzene	SW8260B	12/30/2008	0.5	44	22.0	ND	µg/L	F18343
Bromochloromethane	SW8260B	12/30/2008	0.5	44	22.0	ND	µg/L	F18343
Bromodichloromethane	SW8260B	12/30/2008	0.5	44	22.0	ND	µg/L	F18343
Bromoform	SW8260B	12/30/2008	1	44	44.0	ND	µg/L	F18343
Bromomethane	SW8260B	12/30/2008	1	44	44.0	ND	µg/L	F18343
Carbon tetrachloride	SW8260B	12/30/2008	1	44	44.0	ND	µg/L	F18343
Chlorobenzene	SW8260B	12/30/2008	0.5	44	22.0	ND	µg/L	F18343
Chloroform	SW8260B	12/30/2008	0.5	44	22.0	ND	µg/L	F18343
Chloromethane	SW8260B	12/30/2008	0.5	44	22.0	ND	µg/L	F18343
cis-1,2-Dichloroethene	SW8260B	12/30/2008	0.5	44	22.0	ND	µg/L	F18343
cis-1,3-Dichloropropene	SW8260B	12/30/2008	0.5	44	22.0	ND	µg/L	F18343
Dibromochloromethane	SW8260B	12/30/2008	0.5	44	22.0	ND	µg/L	F18343
Dibromomethane	SW8260B	12/30/2008	0.5	44	22.0	ND	µg/L	F18343
Dichlorodifluoromethane	SW8260B	12/30/2008	0.5	44	22.0	ND	µg/L	F18343
Diisopropyl ether (DIPE)	SW8260B	12/30/2008	0.5	44	22.0	ND	µg/L	F18343
Ethyl tert-butyl ether (ETBE)	SW8260B	12/30/2008	0.5	44	22.0	ND	µg/L	F18343



<b>Client Sample ID:</b> MW-2D	<b>Lab Sample ID:</b> 0812210-008
<b>Sample Location:</b> Caltrans ;Oakland	<b>Date Prepared:</b> 12/27/2008
<b>Sample Matrix:</b> WATER	
<b>Date/Time Sampled</b> 12/22/2008 3:00:00 PM	

Parameters	Analysis Method	Date Analyzed	RL	Dilution Factor	MRL	Result	Units	Analytical Batch
Ethylbenzene	SW8260B	12/30/2008	0.5	44	22.0	1500	µg/L	F18343
Freon-113	SW8260B	12/30/2008	1	44	44.0	ND	µg/L	F18343
Hexachlorobutadiene	SW8260B	12/30/2008	0.5	44	22.0	ND	µg/L	F18343
Isopropylbenzene	SW8260B	12/30/2008	1	44	44.0	65.6	µg/L	F18343
Methyl tert-butyl ether (MTBE)	SW8260B	12/30/2008	0.5	44	22.0	ND	µg/L	F18343
Methylene chloride	SW8260B	12/30/2008	5	44	220	ND	µg/L	F18343
Naphthalene	SW8260B	12/30/2008	1	44	44.0	198	µg/L	F18343
n-Butylbenzene	SW8260B	12/30/2008	0.5	44	22.0	ND	µg/L	F18343
n-Propylbenzene	SW8260B	12/30/2008	0.5	44	22.0	238	µg/L	F18343
sec-Butylbenzene	SW8260B	12/30/2008	0.5	44	22.0	ND	µg/L	F18343
Styrene	SW8260B	12/30/2008	0.5	44	22.0	ND	µg/L	F18343
t-Butyl alcohol (t-Butanol)	SW8260B	12/30/2008	5	44	220	ND	µg/L	F18343
tert-Amyl methyl ether (TAME)	SW8260B	12/30/2008	0.5	44	22.0	ND	µg/L	F18343
tert-Butylbenzene	SW8260B	12/30/2008	0.5	44	22.0	ND	µg/L	F18343
Tetrachloroethene	SW8260B	12/30/2008	0.5	44	22.0	ND	µg/L	F18343
Toluene	SW8260B	12/30/2008	0.5	44	22.0	1490	µg/L	F18343
trans-1,2-Dichloroethene	SW8260B	12/30/2008	0.5	44	22.0	ND	µg/L	F18343
trans-1,3-Dichloropropene	SW8260B	12/30/2008	0.5	44	22.0	ND	µg/L	F18343
Trichloroethene	SW8260B	12/30/2008	0.5	44	22.0	ND	µg/L	F18343
Trichlorofluoromethane	SW8260B	12/30/2008	0.5	44	22.0	ND	µg/L	F18343
Vinyl chloride	SW8260B	12/30/2008	0.5	44	22.0	ND	µg/L	F18343
Xylenes, Total	SW8260B	12/30/2008	1.5	44	66.0	10200	µg/L	F18343
Surr: Dibromofluoromethane	SW8260B	12/30/2008	0	44	61.2-131	98.0	%REC	F18343
Surr: 4-Bromofluorobenzene	SW8260B	12/30/2008	0	44	64.1-120	110	%REC	F18343
Surr: Toluene-d8	SW8260B	12/30/2008	0	44	75.1-127	106	%REC	F18343
TPH (Gasoline)	SW8260B(TPH)	12/30/2008	50	44	2200	31000	µg/L	G18343
Surr: 4-Bromofluorobenzene	SW8260B(TPH)	12/30/2008	0	44	58.4-133	68.0	%REC	G18343

Note: Although TPH as gasoline compounds are present, TPH value includes the portion of non-target gasoline compounds within range of C5-C12 quantified as gasoline (possibly aged gasoline).

<b>Client Sample ID:</b> TB	<b>Lab Sample ID:</b> 0812210-009
<b>Sample Location:</b> Caltrans ;Oakland	<b>Date Prepared:</b> 12/30/2008
<b>Sample Matrix:</b> WATER	
<b>Date/Time Sampled</b> 12/22/2008	

Parameters	Analysis Method	Date Analyzed	RL	Dilution Factor	MRL	Result	Units	Analytical Batch
1,1,1,2-Tetrachloroethane	SW8260B	12/30/2008	1	1	1.00	ND	µg/L	F18343
1,1,1-Trichloroethane	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
1,1,2,2-Tetrachloroethane	SW8260B	12/30/2008	1	1	1.00	ND	µg/L	F18343
1,1,2-Trichloroethane	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
1,1-Dichloroethane	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
1,1-Dichloroethene	SW8260B	12/30/2008	1	1	1.00	ND	µg/L	F18343
1,1-Dichloropropene	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
1,2,3-Trichlorobenzene	SW8260B	12/30/2008	1	1	1.00	ND	µg/L	F18343
1,2,3-Trichloropropane	SW8260B	12/30/2008	1	1	1.00	ND	µg/L	F18343
1,2,4-Trichlorobenzene	SW8260B	12/30/2008	1	1	1.00	ND	µg/L	F18343
1,2,4-Trimethylbenzene	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
1,2-Dibromo-3-chloropropane	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
1,2-Dibromoethane (EDB)	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
1,2-Dichlorobenzene	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
1,2-Dichloroethane (EDC)	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
1,2-Dichloropropane	SW8260B	12/30/2008	1	1	1.00	ND	µg/L	F18343
1,3,5-Trimethylbenzene	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
1,3-Dichlorobenzene	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
1,3-Dichloropropene	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
1,4-Dichlorobenzene	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
2,2-Dichloropropane	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
2-Chloroethyl vinyl ether	SW8260B	12/30/2008	1	1	1.00	ND	µg/L	F18343
2-Chlorotoluene	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
4-Chlorotoluene	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
4-Isopropyltoluene	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
Acetone	SW8260B	12/30/2008	10	1	10.0	ND	µg/L	F18343
Benzene	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
Bromobenzene	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
Bromochloromethane	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
Bromodichloromethane	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
Bromoform	SW8260B	12/30/2008	1	1	1.00	ND	µg/L	F18343
Bromomethane	SW8260B	12/30/2008	1	1	1.00	ND	µg/L	F18343
Carbon tetrachloride	SW8260B	12/30/2008	1	1	1.00	ND	µg/L	F18343
Chlorobenzene	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
Chloroform	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
Chloromethane	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
cis-1,2-Dichloroethene	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
cis-1,3-Dichloropropene	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
Dibromochloromethane	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
Dibromomethane	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
Dichlorodifluoromethane	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
Diisopropyl ether (DIPE)	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
Ethyl tert-butyl ether (ETBE)	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343

<b>Client Sample ID:</b> TB	<b>Lab Sample ID:</b> 0812210-009
<b>Sample Location:</b> Caltrans ;Oakland	<b>Date Prepared:</b> 12/30/2008
<b>Sample Matrix:</b> WATER	
<b>Date/Time Sampled</b> 12/22/2008	

Parameters	Analysis Method	Date Analyzed	RL	Dilution Factor	MRL	Result	Units	Analytical Batch
Ethylbenzene	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
Freon-113	SW8260B	12/30/2008	1	1	1.00	ND	µg/L	F18343
Hexachlorobutadiene	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
Isopropylbenzene	SW8260B	12/30/2008	1	1	1.00	ND	µg/L	F18343
Methyl tert-butyl ether (MTBE)	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
Methylene chloride	SW8260B	12/30/2008	5	1	5.00	ND	µg/L	F18343
Naphthalene	SW8260B	12/30/2008	1	1	1.00	ND	µg/L	F18343
n-Butylbenzene	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
n-Propylbenzene	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
sec-Butylbenzene	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
Styrene	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
t-Butyl alcohol (t-Butanol)	SW8260B	12/30/2008	5	1	5.00	ND	µg/L	F18343
tert-Amyl methyl ether (TAME)	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
tert-Butylbenzene	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
Tetrachloroethene	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
Toluene	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
trans-1,2-Dichloroethene	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
trans-1,3-Dichloropropene	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
Trichloroethene	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
Trichlorofluoromethane	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
Vinyl chloride	SW8260B	12/30/2008	0.5	1	0.50	ND	µg/L	F18343
Xylenes, Total	SW8260B	12/30/2008	1.5	1	1.50	ND	µg/L	F18343
Surr: Dibromofluoromethane	SW8260B	12/30/2008	0	1	61.2-131	98.2	%REC	F18343
Surr: 4-Bromofluorobenzene	SW8260B	12/30/2008	0	1	64.1-120	102	%REC	F18343
Surr: Toluene-d8	SW8260B	12/30/2008	0	1	75.1-127	87.9	%REC	F18343

**Definitions, legends and Notes**

Note	Description
ug/kg	Microgram per kilogram (ppb, part per billion).
ug/L	Microgram per liter (ppb, part per billion).
mg/kg	Milligram per kilogram (ppm, part per million).
mg/L	Milligram per liter (ppm, part per million).
LCS/LCSD	Laboratory control sample/laboratory control sample duplicate.
MDL	Method detection limit.
MRL	Modified reporting limit. When sample is subject to dilution, reporting limit times dilution factor yields MRL.
MS/MSD	Matrix spike/matrix spike duplicate.
N/A	Not applicable.
ND	Not detected at or above detection limit.
NR	Not reported.
QC	Quality Control.
RL	Reporting limit.
% RPD	Percent relative difference.
a	pH was measured immediately upon the receipt of the sample, but it was still done outside the holding time.
sub	Analyzed by subcontracting laboratory, Lab Certificate #

**CLIENT:** KLEINFELDER  
**Work Order:** 0812210  
**Project:** 95539/4

**ANALYTICAL QC SUMMARY REPORT**

**BatchID: G18343**

Sample ID <b>MB_G18343</b>	SampType: <b>MBLK</b>	TestCode: <b>TPH_GAS_W</b>	Units: <b>µg/L</b>	Prep Date: <b>12/30/2008</b>	RunNo: <b>18343</b>						
Client ID: <b>ZZZZZ</b>	Batch ID: <b>G18343</b>	TestNo: <b>SW8260B(TP)</b>	Analysis Date: <b>12/30/2008</b>	SeqNo: <b>263899</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPH (Gasoline)	ND	50									
Surr: 4-Bromofllurobenzene	9.700	0	11.36	0	85.4	58.4	133				

Sample ID <b>LCS_G18343</b>	SampType: <b>LCS</b>	TestCode: <b>TPH_GAS_W</b>	Units: <b>µg/L</b>	Prep Date: <b>12/30/2008</b>	RunNo: <b>18343</b>						
Client ID: <b>ZZZZZ</b>	Batch ID: <b>G18343</b>	TestNo: <b>SW8260B(TP)</b>	Analysis Date: <b>12/30/2008</b>	SeqNo: <b>263900</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPH (Gasoline)	197.0	50	227	0	86.8	52.4	127				
Surr: 4-Bromofllurobenzene	8.690	0	11.36	0	76.5	58.4	133				

Sample ID <b>LCSD_G18343</b>	SampType: <b>LCSD</b>	TestCode: <b>TPH_GAS_W</b>	Units: <b>µg/L</b>	Prep Date: <b>12/30/2008</b>	RunNo: <b>18343</b>						
Client ID: <b>ZZZZZ</b>	Batch ID: <b>G18343</b>	TestNo: <b>SW8260B(TP)</b>	Analysis Date: <b>12/30/2008</b>	SeqNo: <b>263901</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPH (Gasoline)	200.0	50	227	0	88.1	52.4	127	197	1.51	20	
Surr: 4-Bromofllurobenzene	8.650	0	11.36	0	76.1	58.4	133	0	0	0	

**Qualifiers:** E Value above quantitation range      H Holding times for preparation or analysis exceeded      J Analyte detected below quantitation limits  
 ND Not Detected at the Reporting Limit      R RPD outside accepted recovery limits      S Spike Recovery outside accepted recovery limits

**CLIENT:** KLEINFELDER  
**Work Order:** 0812210  
**Project:** 95539/4

## ANALYTICAL QC SUMMARY REPORT

**BatchID: G18362**

Sample ID <b>MB_G18362</b>	SampType: <b>MBLK</b>	TestCode: <b>TPH_GAS_W</b>	Units: <b>µg/L</b>	Prep Date: <b>12/31/2008</b>	RunNo: <b>18362</b>						
Client ID: <b>ZZZZZ</b>	Batch ID: <b>G18362</b>	TestNo: <b>SW8260B(TP)</b>	Analysis Date: <b>12/31/2008</b>	SeqNo: <b>264139</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

TPH (Gasoline)	ND	50									
Surr: 4-Bromoflurobenzene	9.460	0	11.36	0	83.3	58.4	133				

Sample ID <b>LCS_G18362</b>	SampType: <b>LCS</b>	TestCode: <b>TPH_GAS_W</b>	Units: <b>µg/L</b>	Prep Date: <b>12/31/2008</b>	RunNo: <b>18362</b>						
Client ID: <b>ZZZZZ</b>	Batch ID: <b>G18362</b>	TestNo: <b>SW8260B(TP)</b>	Analysis Date: <b>12/31/2008</b>	SeqNo: <b>264140</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

TPH (Gasoline)	209.0	50	227	0	92.1	52.4	127				
Surr: 4-Bromoflurobenzene	9.940	0	11.36	0	87.5	58.4	133				

Sample ID <b>LCSD_G18362</b>	SampType: <b>LCSD</b>	TestCode: <b>TPH_GAS_W</b>	Units: <b>µg/L</b>	Prep Date: <b>12/31/2008</b>	RunNo: <b>18362</b>						
Client ID: <b>ZZZZZ</b>	Batch ID: <b>G18362</b>	TestNo: <b>SW8260B(TP)</b>	Analysis Date: <b>12/31/2008</b>	SeqNo: <b>264141</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

TPH (Gasoline)	230.0	50	227	0	101	52.4	127	209	9.57	20	
Surr: 4-Bromoflurobenzene	8.970	0	11.36	0	79.0	58.4	133	0	0	0	

Sample ID <b>0812210-005A MSG</b>	SampType: <b>MS</b>	TestCode: <b>TPH_GAS_W</b>	Units: <b>µg/L</b>	Prep Date: <b>12/31/2008</b>	RunNo: <b>18362</b>						
Client ID: <b>MW-5</b>	Batch ID: <b>G18362</b>	TestNo: <b>SW8260B(TP)</b>	Analysis Date: <b>12/31/2008</b>	SeqNo: <b>264144</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

TPH (Gasoline)	169.4	55	249.7	0	67.8	52.4	127				
Surr: 4-Bromoflurobenzene	9.262	0	12.5	0	74.1	58.4	133				

Sample ID <b>0812210-005A MSD</b>	SampType: <b>MSD</b>	TestCode: <b>TPH_GAS_W</b>	Units: <b>µg/L</b>	Prep Date: <b>12/31/2008</b>	RunNo: <b>18362</b>						
Client ID: <b>MW-5</b>	Batch ID: <b>G18362</b>	TestNo: <b>SW8260B(TP)</b>	Analysis Date: <b>12/31/2008</b>	SeqNo: <b>264147</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

TPH (Gasoline)	168.3	55	249.7	0	67.4	52.4	127	169.4	0.651	20	
Surr: 4-Bromoflurobenzene	9.581	0	12.5	0	76.7	58.4	133	0	0	0	

**Qualifiers:** E Value above quantitation range      H Holding times for preparation or analysis exceeded      J Analyte detected below quantitation limits  
 ND Not Detected at the Reporting Limit      R RPD outside accepted recovery limits      S Spike Recovery outside accepted recovery limits

**CLIENT:** KLEINFELDER  
**Work Order:** 0812210  
**Project:** 95539/4

## ANALYTICAL QC SUMMARY REPORT

**BatchID: R18330**

Sample ID <b>WD081227A-MB</b>	SampType: <b>MBLK</b>	TestCode: <b>TPHD_W</b>	Units: <b>mg/L</b>	Prep Date: <b>12/27/2008</b>	RunNo: <b>18330</b>						
Client ID: <b>ZZZZZ</b>	Batch ID: <b>R18330</b>	TestNo: <b>SW8015B</b>		Analysis Date: <b>12/27/2008</b>	SeqNo: <b>263596</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

TPH (Diesel)	ND	0.100									
Surr: Pentacosane	0.1130	0	0.1	0	113	57.9	125				

Sample ID <b>WD081227A-LCS</b>	SampType: <b>LCS</b>	TestCode: <b>TPHD_W</b>	Units: <b>mg/L</b>	Prep Date: <b>12/27/2008</b>	RunNo: <b>18330</b>						
Client ID: <b>ZZZZZ</b>	Batch ID: <b>R18330</b>	TestNo: <b>SW8015B</b>		Analysis Date: <b>12/27/2008</b>	SeqNo: <b>263600</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

TPH (Diesel)	0.7360	0.100	1	0	73.6	50.3	125				
Surr: Pentacosane	0.1090	0	0.1	0	109	57.9	125				

Sample ID <b>WD081227A-LCSD</b>	SampType: <b>LCSD</b>	TestCode: <b>TPHD_W</b>	Units: <b>mg/L</b>	Prep Date: <b>12/27/2008</b>	RunNo: <b>18330</b>						
Client ID: <b>ZZZZZ</b>	Batch ID: <b>R18330</b>	TestNo: <b>SW8015B</b>		Analysis Date: <b>12/27/2008</b>	SeqNo: <b>263603</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

TPH (Diesel)	0.8180	0.100	1	0	81.8	50.3	125	0.736	10.6	30	
Surr: Pentacosane	0.1220	0	0.1	0	122	57.9	125	0	0	0	

<b>Qualifiers:</b>	E Value above quantitation range	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	R RPD outside accepted recovery limits	S Spike Recovery outside accepted recovery limits

**CLIENT:** KLEINFELDER  
**Work Order:** 0812210  
**Project:** 95539/4

## ANALYTICAL QC SUMMARY REPORT

**BatchID: R18343**

Sample ID <b>MB_R18343</b>	SampType: <b>MBLK</b>	TestCode: <b>8260B_W_PE</b>	Units: <b>µg/L</b>	Prep Date: <b>12/30/2008</b>	RunNo: <b>18343</b>						
Client ID: <b>ZZZZZ</b>	Batch ID: <b>R18343</b>	TestNo: <b>SW8260B</b>	Analysis Date: <b>12/30/2008</b>	SeqNo: <b>263873</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Methyl tert-butyl ether (MTBE)	ND	0.500									
Diisopropyl ether (DIPE)	ND	0.500									
Ethyl tert-butyl ether (ETBE)	ND	0.500									
tert-Amyl methyl ether (TAME)	ND	0.500									
t-Butyl alcohol (t-Butanol)	ND	10.0									
Surr: Dibromofluoromethane	11.33	0	11.36	0	99.7	61.2	131				
Surr: 4-Bromofluorobenzene	13.33	0	11.36	0	117	64.1	120				
Surr: Toluene-d8	11.18	0	11.36	0	98.4	75.1	127				

Sample ID <b>LCS_R18343</b>	SampType: <b>LCS</b>	TestCode: <b>8260B_W_PE</b>	Units: <b>µg/L</b>	Prep Date: <b>12/30/2008</b>	RunNo: <b>18343</b>						
Client ID: <b>ZZZZZ</b>	Batch ID: <b>R18343</b>	TestNo: <b>SW8260B</b>	Analysis Date: <b>12/30/2008</b>	SeqNo: <b>263874</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Surr: Dibromofluoromethane	11.33	0	11.36	0	99.7	61.2	131				
Surr: 4-Bromofluorobenzene	12.74	0	11.36	0	112	64.1	120				
Surr: Toluene-d8	11.30	0	11.36	0	99.5	75.1	127				

Sample ID <b>LCSD_R18343</b>	SampType: <b>LCSD</b>	TestCode: <b>8260B_W_PE</b>	Units: <b>µg/L</b>	Prep Date: <b>12/30/2008</b>	RunNo: <b>18343</b>						
Client ID: <b>ZZZZZ</b>	Batch ID: <b>R18343</b>	TestNo: <b>SW8260B</b>	Analysis Date: <b>12/30/2008</b>	SeqNo: <b>263875</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Surr: Dibromofluoromethane	11.52	0	11.36	0	101	61.2	131	0	0	0	
Surr: 4-Bromofluorobenzene	11.65	0	11.36	0	103	64.1	120	0	0	0	
Surr: Toluene-d8	11.40	0	11.36	0	100	75.1	127	0	0	0	

Sample ID <b>0812210-005A MS</b>	SampType: <b>MS</b>	TestCode: <b>8260B_W_PE</b>	Units: <b>µg/L</b>	Prep Date: <b>12/30/2008</b>	RunNo: <b>18343</b>						
Client ID: <b>MW-5</b>	Batch ID: <b>R18343</b>	TestNo: <b>SW8260B</b>	Analysis Date: <b>12/30/2008</b>	SeqNo: <b>263884</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Surr: Dibromofluoromethane	12.09	0	12.84	0	94.2	61.2	131				
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**Qualifiers:** E Value above quantitation range      H Holding times for preparation or analysis exceeded      J Analyte detected below quantitation limits  
 ND Not Detected at the Reporting Limit              R RPD outside accepted recovery limits              S Spike Recovery outside accepted recovery limits



**CLIENT:** KLEINFELDER  
**Work Order:** 0812210  
**Project:** 95539/4

## ANALYTICAL QC SUMMARY REPORT

**BatchID: R18343**

Sample ID <b>0812210-005A MS</b>	SampType: <b>MS</b>	TestCode: <b>8260B_W_PE</b>	Units: <b>µg/L</b>	Prep Date: <b>12/30/2008</b>	RunNo: <b>18343</b>						
Client ID: <b>MW-5</b>	Batch ID: <b>R18343</b>	TestNo: <b>SW8260B</b>	Analysis Date: <b>12/30/2008</b>	SeqNo: <b>263884</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Surr: Toluene-d8	12.01	0	12.84	0	93.6	75.1	127
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Sample ID <b>0812210-005A MSD</b>	SampType: <b>MSD</b>	TestCode: <b>8260B_W_PE</b>	Units: <b>µg/L</b>	Prep Date: <b>12/31/2008</b>	RunNo: <b>18343</b>						
Client ID: <b>MW-5</b>	Batch ID: <b>R18343</b>	TestNo: <b>SW8260B</b>	Analysis Date: <b>12/31/2008</b>	SeqNo: <b>263885</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Surr: Dibromofluoromethane	12.36	0	12.84	0	96.3	61.2	131	0	0	0
Surr: Toluene-d8	13.32	0	12.84	0	104	75.1	127	0	0	0

<b>Qualifiers:</b>	E Value above quantitation range	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	R RPD outside accepted recovery limits	S Spike Recovery outside accepted recovery limits



## Change Order Form

Date: _____	Time: _____
Client: _____	Order ID#: _____
Project Number: _____	Project Name: _____
Order Taken by: _____	Ordered by: _____

Laboratory ID	Client ID	Change Requested
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**Remarks:**

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Date Test(s) Added: \_\_\_\_\_ Test(s) Added by: \_\_\_\_\_

Note: Original to be placed in client file (electronic and/or hardcopy).

PROJECT NO. 95539/4		PROJECT NAME Caltrans - Oakland CA -			NO. OF CONTAINERS	TYPE OF CONTAINERS	ANALYSIS										RECEIVING LAB: Torrent Lab Milpitas	
L.P. NO. (PO. NO.)		SAMPLES (Signature/Number) Bret Stiff					VOL, Fuel Only by EPA 8240 TPH GFD by EPA 8015 TDS by 160.1										INSTRUCTIONS/REMARKS Standard TAT	
DATE MM/DD/YY	SAMPLE I.D. TIME HH-MM-SS	SAMPLE I.D.	MATRIX															
001A	12/22/08	11:00	MW-1	H2O	5	V,A	X	X	X									
002A	12/22/08	14:55	MW-2		5	V,A	X	X	X									
003A	12/22/08	12:00	MW-3		5	V,A	X	X	X									
004A	12/22/08	14:00	MW-4		5	V,A	X	X	X									
005A	12/22/08	13:00	MW-5		15	V,A	X	X	X								MS/MSD Taken outside well	
006A	12/23/08	10:00	MW-6		5	V,A	X	X	X									
007A	12/23/08	10:55	MW-7		5	V,A	X	X	X									
008A	12/22/08	15:00	MW-2D		5	V,A	X	X	X									
009A	12/22/08	#1	TB		2	V,	X											
10																		
11																	4 V = VOA 40ml	
12																	1 A = Liter glass Amber	
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Relinquished by: (Signature) <i>Bret Stiff</i>	Date/Time 12/23/08 3:36	Received by: (Signature) <i>D. G. Choclesara</i>	Instructions/Remarks: Email to: Calmesfad@kleinfelder.com Jgravesen@kleinfelder.com	Send Results To: Kleinfelder Attn: Charlie Ames tad 1970 Broadway, Suite... Oakland, CA
Relinquished by: (Signature)	Date/Time	Received by: (Signature)		
Relinquished by: (Signature)	Date/Time	Received for Laboratory by: (Signature)		