January 13, 2009

Mr. Jerry Wickham, PG, CEG, CHG
Alameda County Environmental Health Services
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577

RE: Cardanal Partners, LLC
632-638 2nd Street (aka 626 2nd Street)
Oakland, California 94607
Case Number RO0002949
Clearwater Group Project # GB001H
Geotracker Global ID TO619758441

Dear Mr. Wickham,

As the legally authorized representative of the above-referenced project, I have reviewed the *Soil and Groundwater Investigation Report* prepared by my consultant of record, Clearwater Group. I declare, under penalty of perjury, that the information and/or recommendations contained in this report are true and correct to the best of my knowledge.

Sincerely,

Mr. Daniel Altwarg
Cardanal Partners

CLEARWATER
GROUP
*Environmental Services*

# SOIL AND GROUNDWATER INVESTIGATION REPORT

**Markus Supply Hardware**
632-638 2nd Street (aka 626 2nd Street)
Oakland, CA
Case No. RO0002949
Clearwater Group Project # GB001H
Geotracker Global ID TO619758441

Prepared for:

**Cardanal Partners, LLC**
c/o Bartlett, Leader-Picone & Young, LLP
2201 Broadway, Suite 803
Oakland, CA 94612

Prepared by:

**Clearwater Group**
229 Tewksbury Avenue
Point Richmond, CA 94801

**January 26, 2009**

CLEARWATER GROUP
Environmental Services

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CLEARWATER
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*Environmental Services*

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Appendix D: Kiff Laboratory Reports 65220, 65221, and 65279

# 1 INTRODUCTION

In a December 4, 2007 letter to Cardanal Partners, LLC, the owner of the property located at 632-638 2nd Street (aka 626 2nd Street), Oakland, California (*Site*), Alameda County Environmental Health Services (ACEH) requested a soil and groundwater investigation of the *Site*, in accordance with California Health and Safety Code Section 25296.10, and California Code of Regulations, 23 CCR, Sections 2652 through 2654, and 2721 through 2728.

In response to the above request, Clearwater Group (Clearwater) submitted a *Soil and Groundwater Investigation Workplan*, dated March 7, 2008. ACEH comments about this document were described in a letter dated April 25, 2008. In response to the ACEH comments, Clearwater submitted a *Workplan Addendum Letter,* dated June 24, 2008. In their review letter dated August 12, 2008 (**Appendix A**), ACEH concurred with the proposed scope of work described in the *Soil and Groundwater Investigation Workplan* dated March 7, 2008, as amended in the *Workplan Addendum Letter* dated June 24, 2008. The approved work included fifteen DPT locations for soil and grab groundwater sampling and depth discrete sampling with objectives at each hole based on its proximity to the suspected location of the release.

On the basis of the above decisions, Clearwater performed soil and groundwater (grab) sampling at the *Site* on October 6, 7, and 9, 2008. This *Soil and Groundwater Investigation Report* summarizes the results of the field investigation. The contents of this report include background information, objectives of investigation, investigation results, discussion, and recommendations for *Site* closure.

# 2 BACKGROUND

## 2.1 Site Description

The *Site* is located in the western portion of the City of Oakland, Alameda County, California. The *Site* is located approximately 1,000 feet west of Interstate Highway 880 and at the northeastern corner of the intersection of Martin Luther King Jr. Way and 2nd Street (**Figure 1**). It is bordered by Martin Luther King Jr. Way to the west, 2nd Street to the south, 3rd Street to the north, and a parking area (and Jefferson Street) to the east. A PG&E electrical substation is located across Second Street to the west-southwest. The *Site* constitutes a large portion of a city block southwest of Interstate Highway 880 and three blocks west of Jack London Square.

The *Site* is zoned M-30 (general industry) and is included in the Estuary Planning Area of the 1999 City of Oakland Estuary Policy Plan (Plan). The Plan includes objectives and policies to plan an enhanced future of the area of Oakland between Adeline Street, the Nimitz Freeway, 66th Avenue, and the Oakland Estuary shoreline.

## 2.2 Site Investigation History

An underground storage tank (UST) closure-in-place application, for five out-of-service USTs (I, II, III, IV, and V, **Figure 2**), was permitted on June 26, 2006, by the City of Oakland Fire Department (OFD). The closure-in-place was completed in two events over three days from May 1 to May 2, 2007, and May 25, 2007. On May 1 to May 2, 2007, USTs I, II, III, and IV were triple rinsed, pumped out, and filled with concrete.

Following the cleaning and pumping of UST V on May 1, on May 2, a creosote/water liquid mix was observed to have partially re-filled that UST. Therefore, the OFD staff requested that Clearwater determine the source of the creosote and postpone the closure of UST V. Clearwater staff monitored the creosote level in UST V over a 2-week period following the May 2 cleaning event and determined that the volume of creosote had not increased in that period. The most logical hypothesis is that the creosote was draining into the UST from an abandoned delivery line. On May 25, 2007, Clearwater staff and Clearwater Environmental Management remobilized to the *Site* to triple rinse (steam clean) UST V again and pump out the contents with a vacuum truck. After this pumping and cleaning event, no creosote was observed coming into the UST. The UST was subsequently filled with concrete.

Before the tanks were filled with concrete, on February 2, 2007, twelve borings were driven around the USTs to collect soil and groundwater samples. The boring locations are shown in **Figure 2**. Borings T2-A, T3-B, T4-C, and T5-C were bored on an angle of 30° from vertical to obtain soil samples from under the USTs. Total depth varied from 10.0 feet below ground surface (bgs) to 16.5 feet bgs. Only five of the twelve borings (T1-B, T2-A, T3-B, T4-C, and T5-C) contained enough groundwater to sample. Grab groundwater samples were obtained at T1-B (at 10 feet bgs), which was a straight boring, and then from all the slant borings (T2-A [15 feet bgs], T3-B [12 feet bgs], T4-C [15 feet bgs], and T5-C [16.5 feet bgs]).

The soil sample analytical results indicated that there is no contamination from Total Petroleum Hydrocarbons–diesel range (TPH-d), Total Petroleum Hydrocarbons-gasoline range (TPH-g), Benzene, Toluene, Ethylbenzene, Xylenes (BTEX), or semi-volatile organic compounds (SVOCs) in the soil samples above the San Francisco Bay Regional Water Quality Control Board's Environmental Screening Level (ESL) for commercial land where groundwater is not a current or potential source of drinking water.

The groundwater samples obtained from borings T4-C and T5-C show slightly elevated TPH-d concentrations. However, these concentrations are below the ESL. The groundwater samples taken from borings T1-B, T2-A, and T3-B contained concentrations that exceed the ESL of TPH-d, TPH-g, and BTEX. Boring T1-B had the highest reported concentration of TPH-d, TPH-g, ethylbenzene, and total xylenes, at <40,000 µg/L, 35,000 µg/L, 1,800 µg/L, and 4,500 µg/L, respectively. The groundwater sample from T3-B had the highest reported benzene concentration of all the samples, at 360 µg/L.

In summary, the analytical results provide no evidence that USTs IV and V have leaked. With USTs I, II and III, there is indication that the leak sources not at the tanks, but

upgradient of the tanks in the piping system; there is evidence that the piping, and, in particular, the piping to and of the dispenser, has leaked petroleum hydrocarbons and BTEX compounds into the soil and thus into the surrounding groundwater.

# 3 SOIL AND GROUNDWATER INVESTIGATION

The objectives of the soil and groundwater investigation were to obtain lithologic and contaminant information to further characterize the *Site*'s lithology and hydrology, and to assess the extent of soil and groundwater impact prior to preparing a Corrective Action Plan for source area remediation.

A total of fifteen borings were completed by Fast-Tek Engineering Support Services, of Point Richmond, California, using a truck-mounted direct push technology rig, at the locations shown in **Figure 3**. Three borings were pushed to 32 feet below ground surface (bgs) (SB-7, SB-15, and SB-16); eleven borings were pushed to 12 feet bgs (SB-4, SB-5, SB-6, SB-8, SB-9, SB-10, SB-12, SB-13, SB-14, SB-17, and SB-18), and one boring was pushed to 16 feet bgs (SB-11). The soil boring logs can be found in **Appendix B**.

## 3.1 Soil Sample Collection

Soil samples were collected and preserved according to Clearwater's standard procedures for direct-push soil sampling (**Appendix C**). Soil was pre-screened using a photo-ionization detector (PID), an instrument that can detect organic vapors in the soil. Soil samples were collected where any visible staining, odor, or high PID readings occurred. Absent any staining or odor, soil samples were collected at 4 feet bgs and the vadose zone. In the three deep borings, SB-7, SB-15, and SB-16, soil samples were collected every 5 feet from 5 feet bgs to 30 feet bgs. All soil samples were analyzed using EPA Methods 8015 and 8260B as described in the Workplan Addendum Letter dated June 24, 2008.

A total of 29 soil samples were sent to Kiff Analytical, a California Department of Health-certified laboratory, located in Davis, California, for the analysis of lead, BTEX, MTBE, TPH-g, TPH-d, and lead scavengers 1,2-dichloroethane (1,2-DCA) and 1,2-dibromoethane (EDB). **Appendix D** presents Kiff reports 65220, 65221, and 65279. **Table 1** presents soil sample analytical results from the October 2008 and February 2007 events.

## 3.2 Grab Groundwater Sample Collection

Grab groundwater samples were collected in accordance with Clearwater's field procedure (**Appendix C**), once the total desired depth was achieved at each boring. A new, one-inch length of polyvinyl chloride (PVC) well screen was placed into the completed boring, the annulus around the screen was filled with clean 12/20 Monterey silica sand, and a groundwater sample was collected using a new, disposable bailer. A total of 15 grab groundwater samples (one per boring) were sent to Kiff Analytical for the analysis of TPH-d, TPH-g, BTEX, MTBE, and lead scavengers 1,2-DCA and EDB. **Appendix D** presents Kiff reports 65220, 65221, and 65279. **Table 2** presents grab groundwater sample analytical results from the October 2008 and February 2007 events.

# 4 INVESTIGATION RESULTS

## 4.1 Subsurface Lithology

Soil borings generated from this investigation show that sediments from the ground surface to 32 ft bgs are primarily fine sands and silty fine sands, with lenses of very fine sand beginning at approximately 15 feet bgs (**Figures 4 through 7**). The boring log for SB-7 did not indicate any very fine sand lenses at the depths at which they were encountered in SB-15 and SB-16, suggesting that this lithology is not entirely homogeneous across 2nd Street, although the lithology is generally consistent across Section A-A' (parallel with 2nd Street).

No obvious natural contaminant migration paths were observed. However, numerous utilities within the migration path of the TPH-d plume suggest a strong potential for artificial features to provide preferential pathways for horizontal contaminant migration.

## 4.2 Level and Range of Soil Impact

After field screening with a PID, twenty-nine soil samples were delivered to the analytical laboratory for the analysis of TPH-d, TPH-g, BTEX, MTBE, and lead scavengers 1,2-DCA and EDB. The soil analytical data presented in **Table 1** and **Figure 8** show that soil in the borings completed during this investigation is minimally impacted. No soil borings from either the February 2007 or the October 2008 investigations had contaminants of concern (COCs) above the ESL recommended by the San Francisco Bay Regional Water Quality Control Board (SFBRWQCB) for soil at commercial/industrial sites where groundwater is **not** a current or potential source of drinking water.

## 4.3 Level and Range of Groundwater Impact

The groundwater sampling analytical results presented in **Table 2** and **Figure 9** reveals that groundwater under the *Site* has been impacted by TPH-d. The concentration of TPH-d ranged from 190 µg/L at SB-15 to 21,000 µg/L at SB-12. The other contaminants of concern, TPH-g, BTEX, MTBE, 1,2-DCA, and EDB, had concentrations below laboratory detection limits for all groundwater samples collected. The Kiff Laboratory reports numbered 65220, 65221, and 65279 can be found in **Appendix D**.

Results from grab groundwater samples collected during this investigation show that four locations had concentrations of TPH-d greater than the environmental screening level (ESL) of 2,500 µg/L recommended by the SFBRWQCB for TPH-d in groundwater in a commercial/industrial area that is **not** a current or potential source of drinking water. The highest concentration of TPH-d found during this investigation was 21,000 µg/L at SB-12. Three other locations, SB-4 (12,000 µg/L), SB-7 (10,000 µg/L), and SB-5 (3,600 µg/L), also had TPH-d concentrations above the ESL.

In order to evaluate the extent of groundwater impact as well as contaminant distribution under the *Site*, the groundwater contaminant concentration data for TPH-d were plotted. The iso-concentration contours for TPH-d in groundwater are presented in **Figure 10**. These grab

groundwater data show that the extent of contamination is currently defined laterally in all directions except for the upgradient (north) direction. The iso-concentration map, based on data collected during the October 2008 investigation, suggests that the highest concentrations of TPH-d may have migrated off-site and are currently present under 2nd Street. The inferred groundwater gradient direction (based on the migration path of TPH-d) is oriented from the north to the south. Historical groundwater direction, established by PG&E at their Substation C property across 2nd Street (data on Envirostor), has been towards the south to southwest.

The residual mass of TPH-d in groundwater was estimated on the basis of calculations that assume certain parameters determined from the October 2008 field event. These estimated parameters include average area of the TPH-d plume, average depth of TPH-d-affected groundwater, and average porosity of the subsurface material within the groundwater-bearing unit (calculations are provided in **Table 3**). Based on these assumptions, the estimated quantity of residual TPH-d present in groundwater was calculated to be 57 pounds, or approximately 8 gallons.

## 5 CONCLUSIONS

The results of this 2008 soil and groundwater investigation indicate that:

- Except for TPH-d and lead, no contaminants of concern were found in the soil at concentrations above laboratory detection limits. The highest concentration of TPH-d encountered at the *Site* was 12 mg/kg and the highest concentration of lead was 44 mg/kg, both of which are well below the ESL for shallow soils (groundwater **not** a drinking water source) of 180 mg/kg and 750 mg/kg, respectively.

- The only contaminant of concern detected in groundwater during this investigation was TPH-d. TPH-d was detected at a maximum concentration of 21,000 ug/L at SB-12, at a location in the center of 2nd Street. This finding indicates that TPH-d has migrated approximately 65 feet in a southeastern direction from the original location of its release and the highest level is presently located under 2nd Street.

- Manmade conduits are present in the subsurface in the form of utility lines that may be acting as preferential pathways for the migration of TPH-d from the *Site*. **Figure 10** and **Figure 11** show the plan view and cross-section, respectively, of the utilities in the street.

    - As can be seen on **Figure 11**, the large sanitary sewer (between around 6 to 14 feet bgs) and the brick combined sanitary and storm sewer (between around 7 to 12 feet bgs) extend into the groundwater (located around 8 feet bgs). The 1,000 ppb iso-contour line on **Figure 10** has an oblong shape based on the regional prevalent groundwater flow in the south/southwest direction.

It appears that the southeast/south plume configuration is not consistent with that trend. Utility conduits could serve as preferred flow pathways.

- Also from **Figure 10**, the shape of the contaminant plume is consistent with either of two scenarios:
  - Due to hydraulic conductivity and other site parameters, the 2,500 µg/l TPH-d contaminant iso-contour is just now reaching the combined sanitary and storm sewer, or
  - This conduit is in groundwater so it could be acting as a preferential pathway.

- TPH-d in groundwater has been laterally defined to levels below the ESL. Groundwater impacted with TPH-d is present outside of this defined boundary at concentrations below the ESL. However, no line of delineation quantified below the detection limit for TPH-d could be determined from this investigation.

Soil samples collected during February 2007 and October 2008 were free from a level of contamination required to produce the concentrations shown in the groundwater. The highest level of TPH-d in soil was found in soil in boring T1-B (31 ppm), closest to the building and between SB-4 and SB-5. Even the slant borings under the USTs, of which T1-B was one, did not show concentrations of contaminants with levels high enough to source the observed plume. The data suggest a contaminant source upgradient from the USTs and more likely from the piping or the dispensers. The groundwater sample from location SB-4 (upgradient) had a TPH-d concentration of 12,000 µg/L; it is one of the highest concentrations collected during the investigation and it is directly in the presumed upgradient direction of the plume. Based on the soil and groundwater evidence and the location of the former fuel dispensers at the *Site*, confirmed by a retired (Markus Hardware) employee, Clearwater concludes that:

- Soil data show the USTs are likely not the source of the groundwater contamination;
- The source appears to be small and localized under the piping/former fuel dispensers, based on the groundwater plume map.

## 6 RECOMMENDATIONS

Clearwater believes the *Site* poses minimal risk to humans and the environment via contaminant migration pathways (direct exposure with soil or groundwater, indirect exposure by inhalation of soil vapor) as well as transport mechanisms (travel by man-made and natural subsurface conduits) for the following reasons:

- The source of soil contamination is presumed to be under the building. Therefore, direct contact exposure pathways with humans are unlikely. Likewise, leaching due to vertical infiltration is also unlikely. No significant soil contamination has been found at the *Site* to date;

- Direct contact with groundwater is possible as follows:

    - Utility workers, who are digging deeper than approximately 7 feet below ground surface, risk contact with contaminated groundwater.

    - Dewatering operations would risk exposing workers to contaminated groundwater.

  These human exposure risks can be controlled by land use restrictions and proper notification of utility workers.

- Soil vapor inhalation is a critical human exposure pathway. As the contaminant is an old fuel product, and most of the volatile constituents have already volatilized, the risk of contaminant vapor inhalation is low. The source is presumed to be directly under the building; however, a significant concrete pad has been poured for a recording studio in this tenant space.

Subsurface preferred flow pathways may influence the risk of exposure:

- The plume shape does not support any underground utility trench acting as a preferential pathway. Interception and transporting the contaminated groundwater or vapor plume could occur within the utility trench network in 2nd Street.

- Direct migration of the impacted groundwater to the San Francisco Bay via the Oakland Inner Harbor Channel may be possible. In this scenario, the groundwater plume will have to travel a minimum of approximately 700 feet to reach the San Francisco Bay. At hydraulic conductivities typical for the soil sediments in the area ($10^{-2}$ to $10^{-3}$ meters/day from Todd, 1980) travel time ranges from 60 to 600 years. This time period provides ample time to allow natural attenuation processes of the hydrocarbons to occur.

In summary, Clearwater believes that this site poses a minimal risk and thus requests no further action. The plume is currently delineated to ESL levels.

The vapor analysis results from these two locations will help determine if soil vapor intrusion is an issue at this site.

After these investigations and analyses, Clearwater will produce a report detailing the findings and recommendation for either low risk closure or additional site work if applicable.

## 7 CERTIFICATION

This report was prepared under the supervision of a State of California Professional Geologist at Clearwater Group. All statements, conclusions, and recommendations are based solely upon published results from previous consultants, field observations by Clearwater Group, and laboratory analysis performed by a California Department of Health Services-certified laboratory related to the work performed by Clearwater Group. Information and interpretation presented herein are for the sole use of the client and regulating agency. A third party should not rely upon the information and interpretation contained in this document. The service performed by Clearwater Group has been conducted in a manner consistent with the level of care and skill ordinarily exercised by members of our profession currently practicing under similar conditions in the area of the *Site*. No other warranty, expressed or implied, is made.

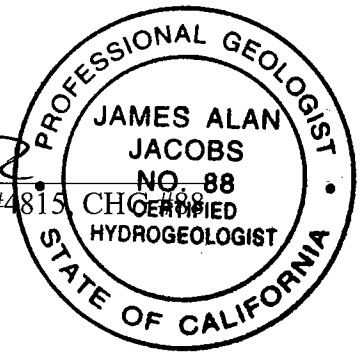
Sincerely,
**CLEARWATER GROUP**

Prepared by:

Erik Lervaag
Project Manager

Reviewed by:

James A. Jacobs, PG #4815, CHG #88
Chief Hydrogeologist



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**DISTRIBUTION**

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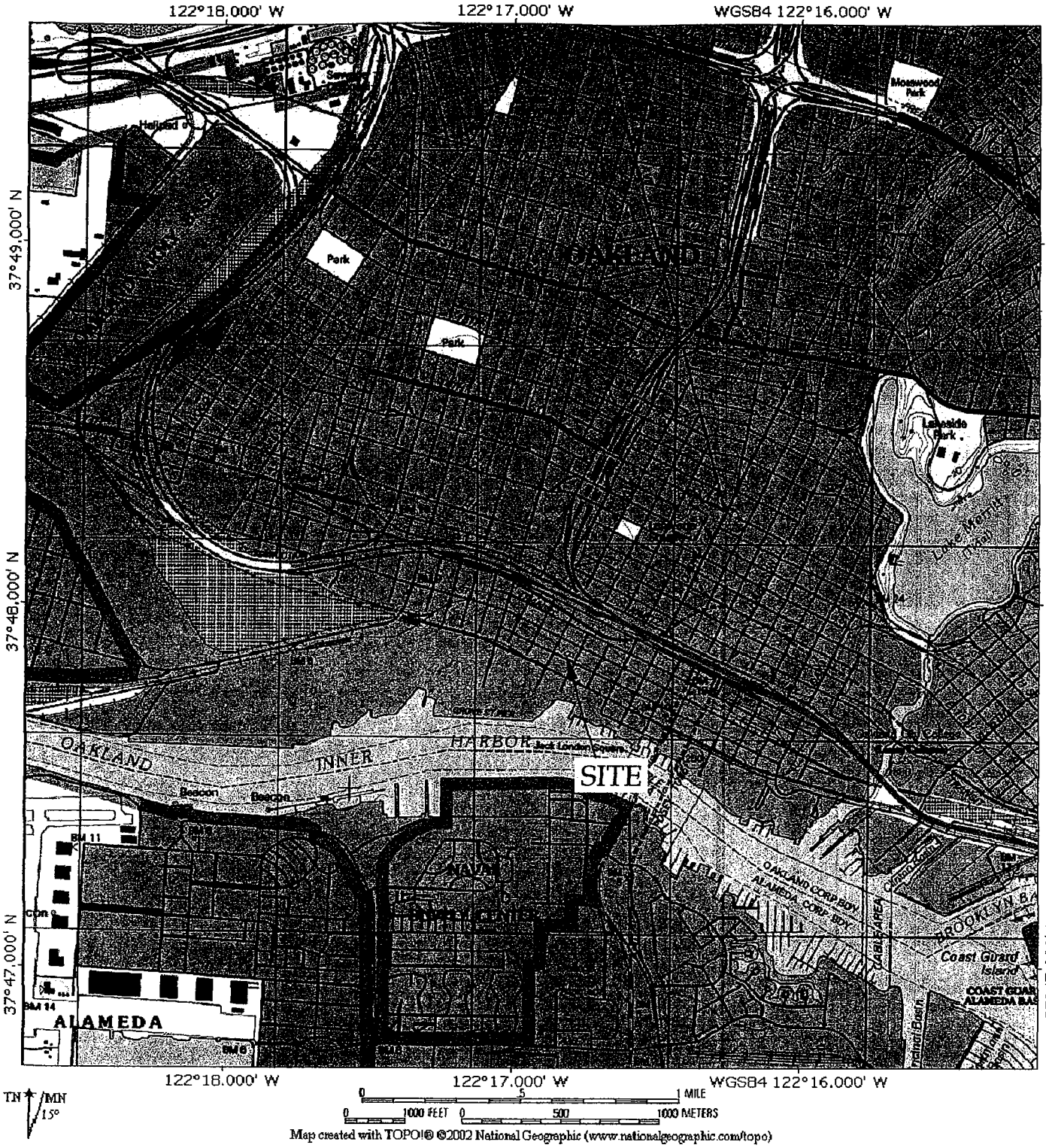
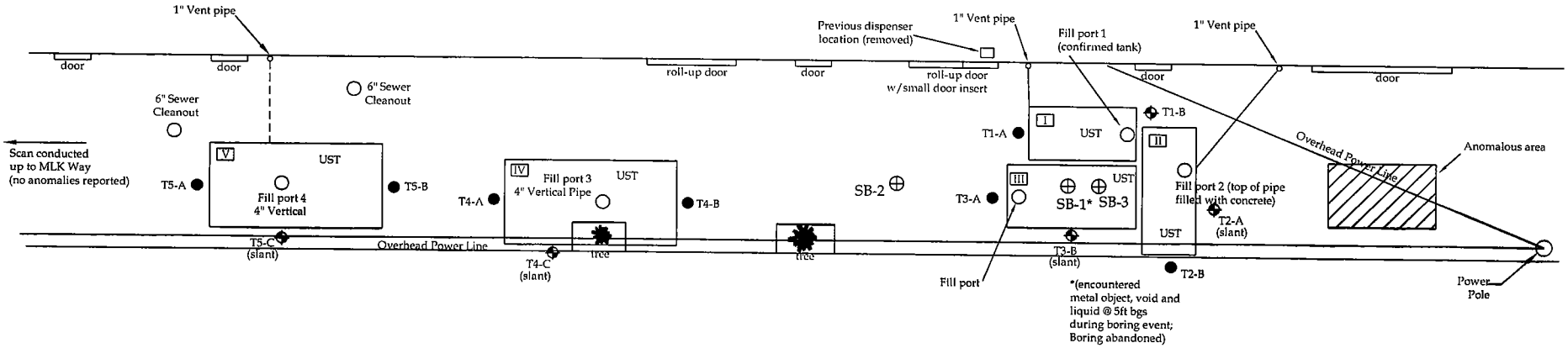
# FIGURES




| SITE LOCATION MAP | CLEARWATER GROUP | | |
|---|---|---|---|
| Markus Supply<br>626 2nd Street, Oakland, CA | Project No.<br>**GB001** | Figure Date<br>**5/06** | Figure<br>**1** |

Markus Supply
Ace Hardware
Building




2nd Street

KEY:
- Boring (locations approximate) for samples taken in 1996
- Fill port
- I Tank #
- Tank Outline
- Soil and Groundwater Sampling Locations
- Soil Boring Sampling Locations

TANK DIMENSIONS
I - 10' x 5'
II - ~12' x 6'
III - 12' x 5'
IV - 16' x 8'
V - 16' x 8'

Scale 1" = 15'

N

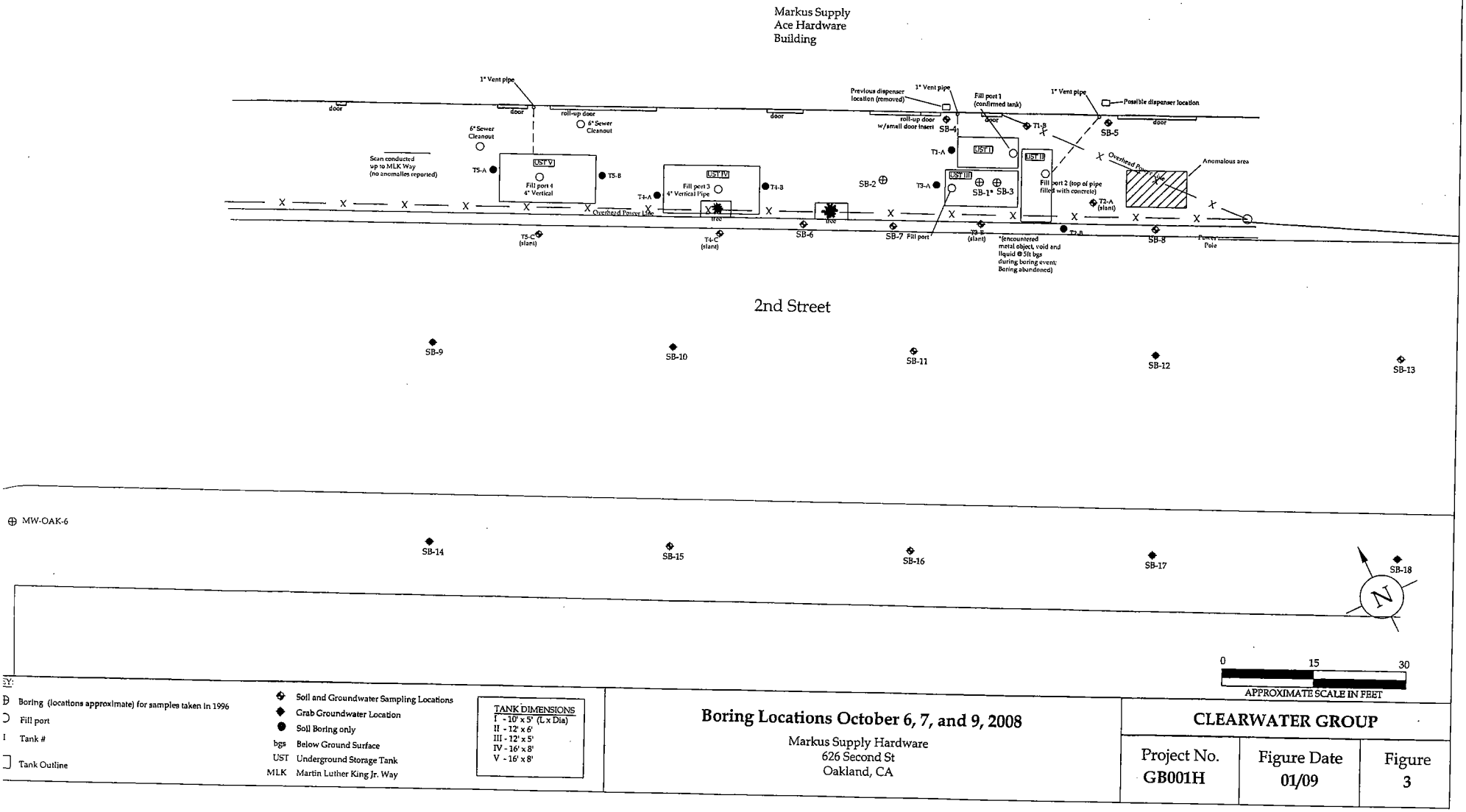
0 15 30

APPROXIMATE SCALE IN FEET

**Site Plan - Existing Features**
**Markus Supply Hardware**
**626 2nd Street, Oakland, California**

**CLEARWATER GROUP**

| Project No. | Figure Date | Figure |
|---|---|---|
| **GB001H** | **01/09** | **2** |




KEY:

- Boring (locations approximate) for samples taken in 1996
- Fill port
- Tank #
- Tank Outline
- Soil and Groundwater Sampling Locations
- Grab Groundwater Location
- Soil Boring only
- bgs Below Ground Surface
- UST Underground Storage Tank
- MLK Martin Luther King Jr. Way

TANK DIMENSIONS

| | |
|---|---|
| I | - 10' x 5' (L x Dia) |
| II | - 12' x 6' |
| III | - 12' x 5' |
| IV | - 16' x 8' |
| V | - 16' x 8' |

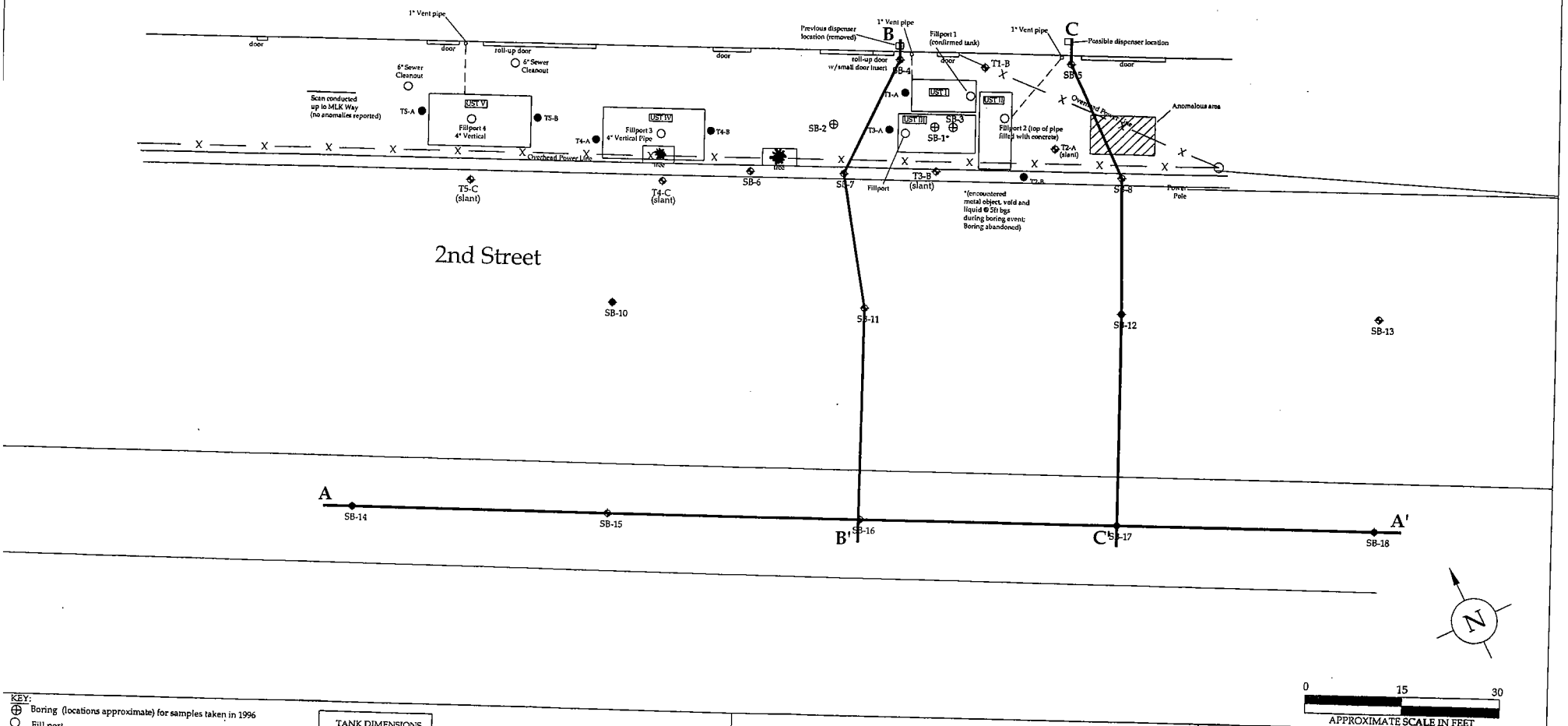
# Boring Locations October 6, 7, and 9, 2008

Markus Supply Hardware
626 Second St
Oakland, CA

**CLEARWATER GROUP**

| Project No. | Figure Date | Figure |
|---|---|---|
| GB001H | 01/09 | 3 |

Markus Supply
Ace Hardware
Building




KEY:
- Boring (locations approximate) for samples taken in 1996
- Fill port
- I Tank #
- Tank Outline
- Soil and Groundwater Sampling Locations
- Grab Groundwater Location
- Soil Boring only

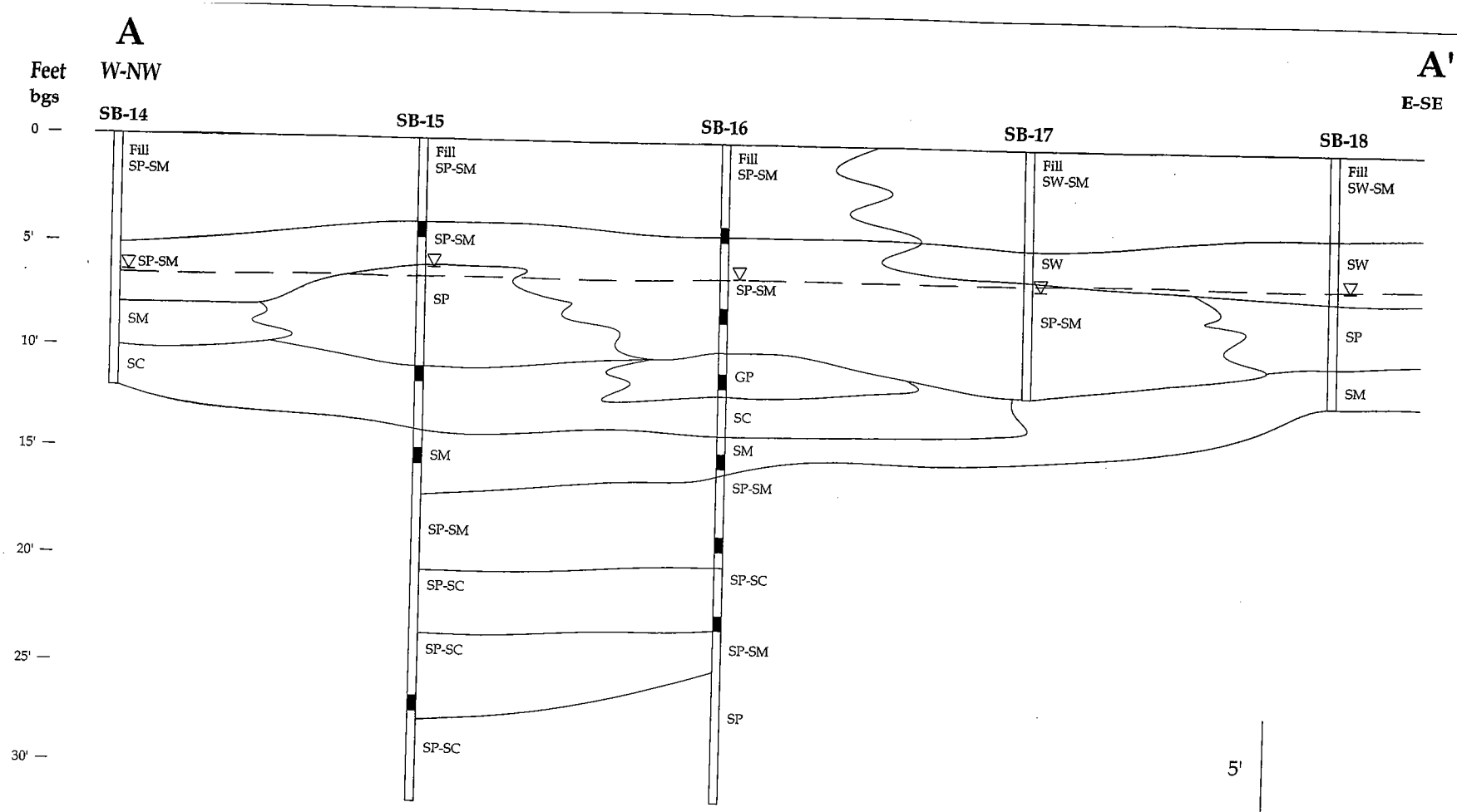
TANK DIMENSIONS
I - 10' x 5' (L x Dia)
II - 12' x 6'
III - 12' x 5'
IV - 16' x 8'
V - 16' x 8'

xxxxxxx

**Cross Section Location Map**
Markus Supply Hardware
626 2nd St
Oakland, CA

**CLEARWATER GROUP**

| Project No. | Figure Date | Figure |
|---|---|---|
| GB001H | 01/09 | 4 |



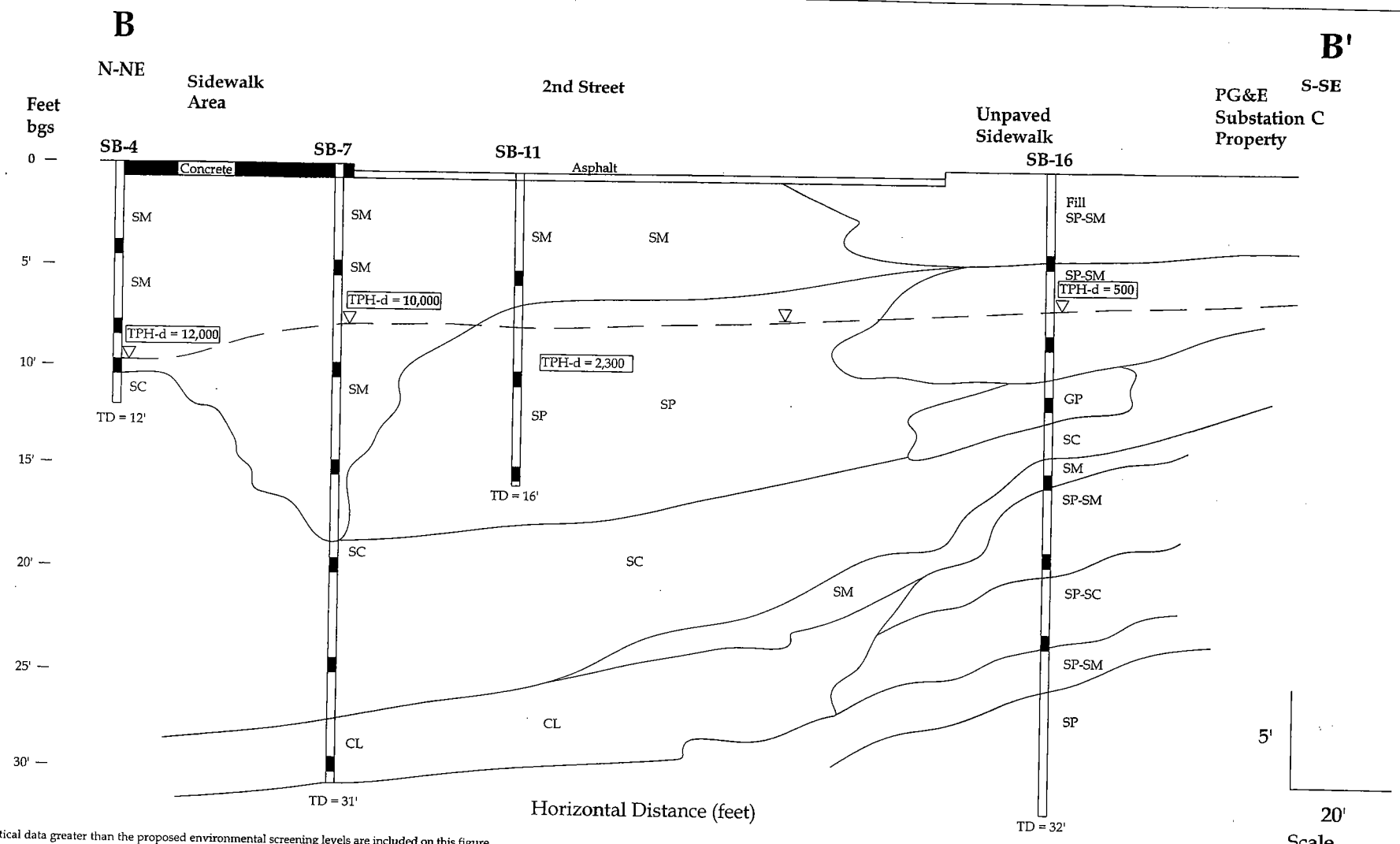

## Legend

| | | | | | |
|---|---|---|---|---|---|
| ▪ | Soil Sample Interval | **Bold** | Sample Detected Above Assessment Level (only values above assessment level reported) | SW | Well Graded Sand |
| ▽ | Groundwater Depth | - - - - - | Groundwater | SP | Poorly Graded Sand |
| TD | Total Depth | SW-SM | Well Graded Sand with Silt | SC | Clayey Sand |
| bgs | Below Ground Surface | SP-SM | Poorly Graded Sand with Silt | SM | Silty Sand |
| | | | | GP | Poorly Graded Gravel |
| | | | | SP-SC | Poorly Graded Sand with Clay |

**Cross Section A-A'**
Markus Supply Hardware
626 2nd St
Oakland, CA

**CLEARWATER GROUP**

| Project No. | Figure Date | Figure |
|---|---|---|
| GB001H | 01/09 | 5 |




Note: Only analytical data greater than the proposed environmental screening levels are included on this figure.

## Legend

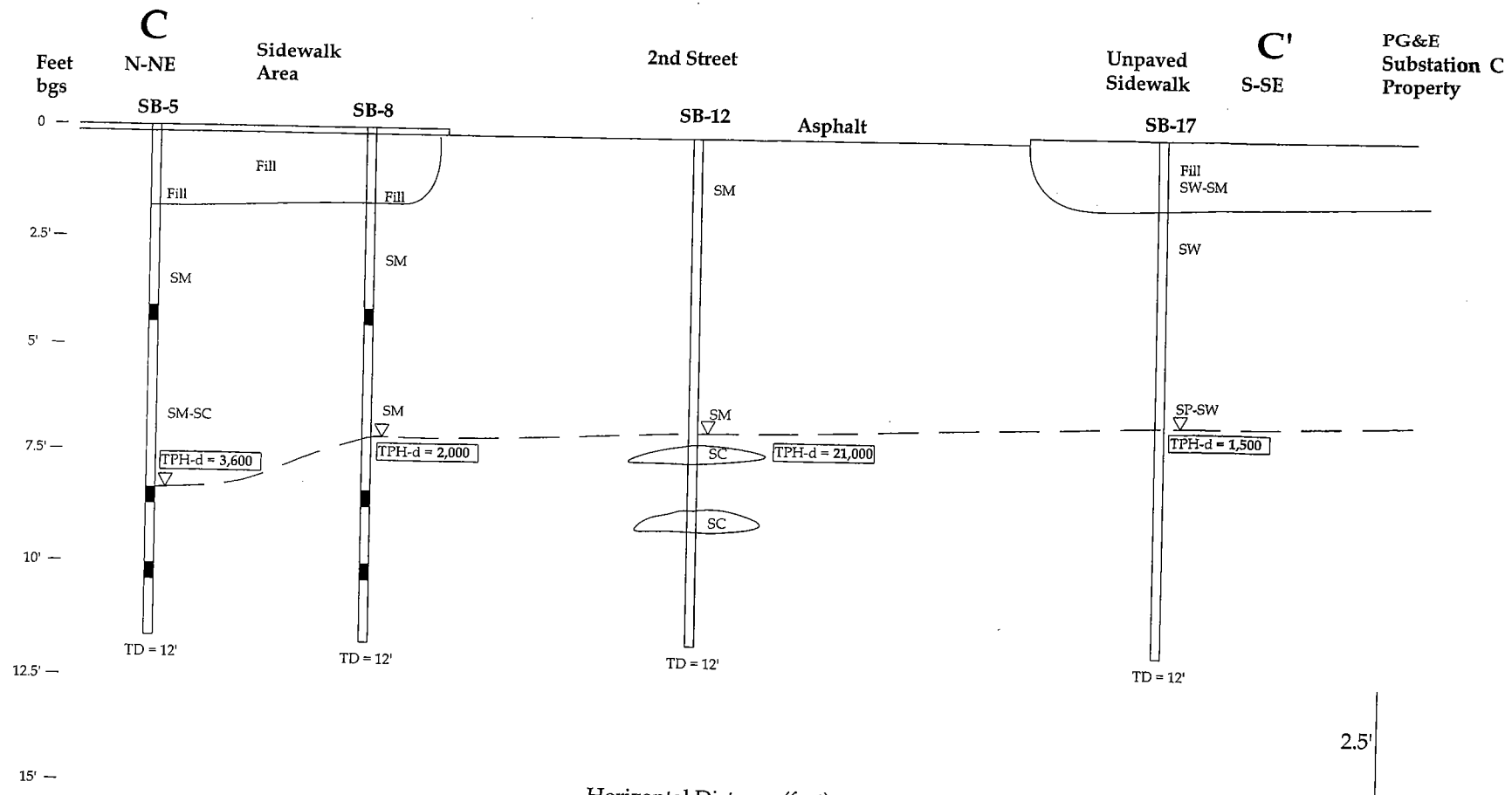
- Concrete
- Soil Sample Interval
- Groundwater Depth
- TD Total Depth
- bgs Below Ground Surface
- **Bold** Sample Detected Above Assessment Level (only values above assessment level reported)
- TPH-d Total Petroleum Hydrocarbons as Diesel
- SW-SM Well Graded Sand with Silt
- Groundwater

| | |
|---|---|
| SP-SM | Poorly Graded Sand with Silt |
| SW | Well Graded Sand |
| SP | Poorly Graded Sand |
| SC | Clayey Sand |
| SM | Silty Sand |
| GP | Poorly Graded Gravel |
| SP-SC | Poorly Graded Sand with Clay |

**Cross Section B-B'**
Markus Supply Hardware
626 2nd St
Oakland, CA

**CLEARWATER GROUP**

| Project No. | Figure Date | Figure |
|---|---|---|
| GB001H | 01/09 | 6 |




All TPH-d values given in micrograms per liter (µg/L)

## Legend

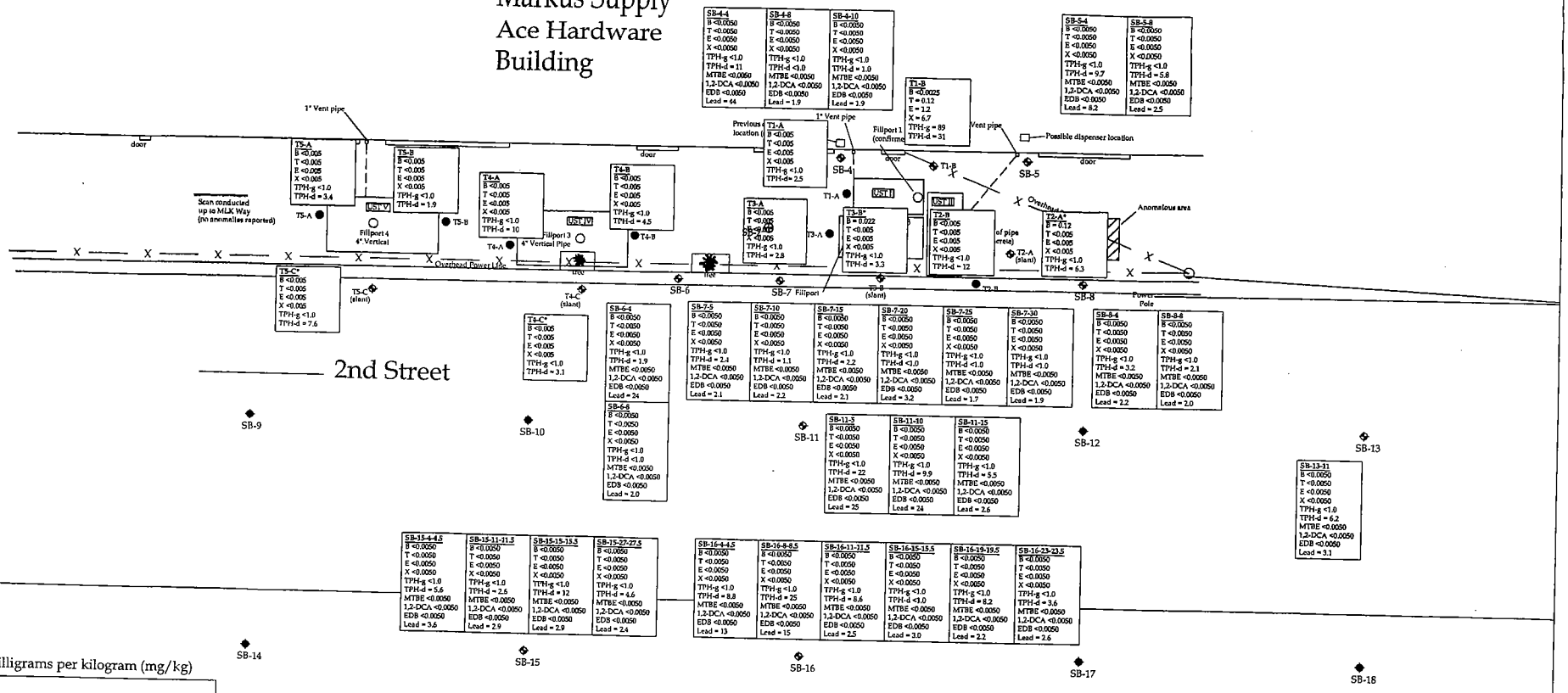
| | | | | |
|---|---|---|---|---|
| Soil Sample Interval | Bold | Sample Detected Above Assessment Level (only values above assessment level reported) | SP-SM | Poorly Graded Sand with Silt |
| Groundwater Depth | | | SW | Well Graded Sand |
| TD Total Depth | | | SP | Poorly Graded Sand |
| bgs Below Ground Surface | SW-SM | Well Graded Sand with Silt | SC | Clayey Sand |
| | TPH-d | Total Petroleum Hydrocarbons as Diesel | SM | Silty Sand |
| | | | GP | Poorly Graded Gravel |
| | | | SP-SC | Poorly Graded Sand with Clay |

**Cross Section C-C'**
Markus Supply Hardware
626 2nd St
Oakland, CA

**CLEARWATER GROUP**

| Project No. | Figure Date | Figure |
|---|---|---|
| GB001H | 01/09 | 7 |

# Markus Supply
# Ace Hardware
# Building




Values are given in milligrams per kilogram (mg/kg)

| Legend | |
|---|---|
| TPH-g | Total Petroleum Hydrocarbons as Gasoline |
| TPH-d | Total Petroleum Hydrocarbons as Diesel |
| B | Benzene |
| T | Toluene |
| E | Ethylbenzene |
| X | Total Xylenes |
| MTBE | Methyl Tertiary Butyl Ether |
| 1,2-DCA | 1,2-Dichloroethane |
| EDB | 1,2-Dibromoethane |
| Lead | Lead |
| ESL | Environmental Screening Level (for commercial land use where groundwater is **not** a source of drinking water) |
| MLK | Martin Luther King Jr. Way |

KEY:
- Boring (locations approximate) for samples taken in 1996
- Fill port
- UST # Underground Storage Tank Number
- Tank Outline
- Soil and Groundwater Sampling Locations
- Soil Boring locations
- Grab Groundwater Location

TANK DIMENSIONS
I - 10' x 5' (L x Dia)
II - 12' x 6'
III - 12' x 5'
IV - 16' x 8'
V - 16' x 8'

N

0 15 30
APPROXIMATE SCALE IN FEET

## Soil Sample Analytical Results from October 6, 7, and 9, 2008

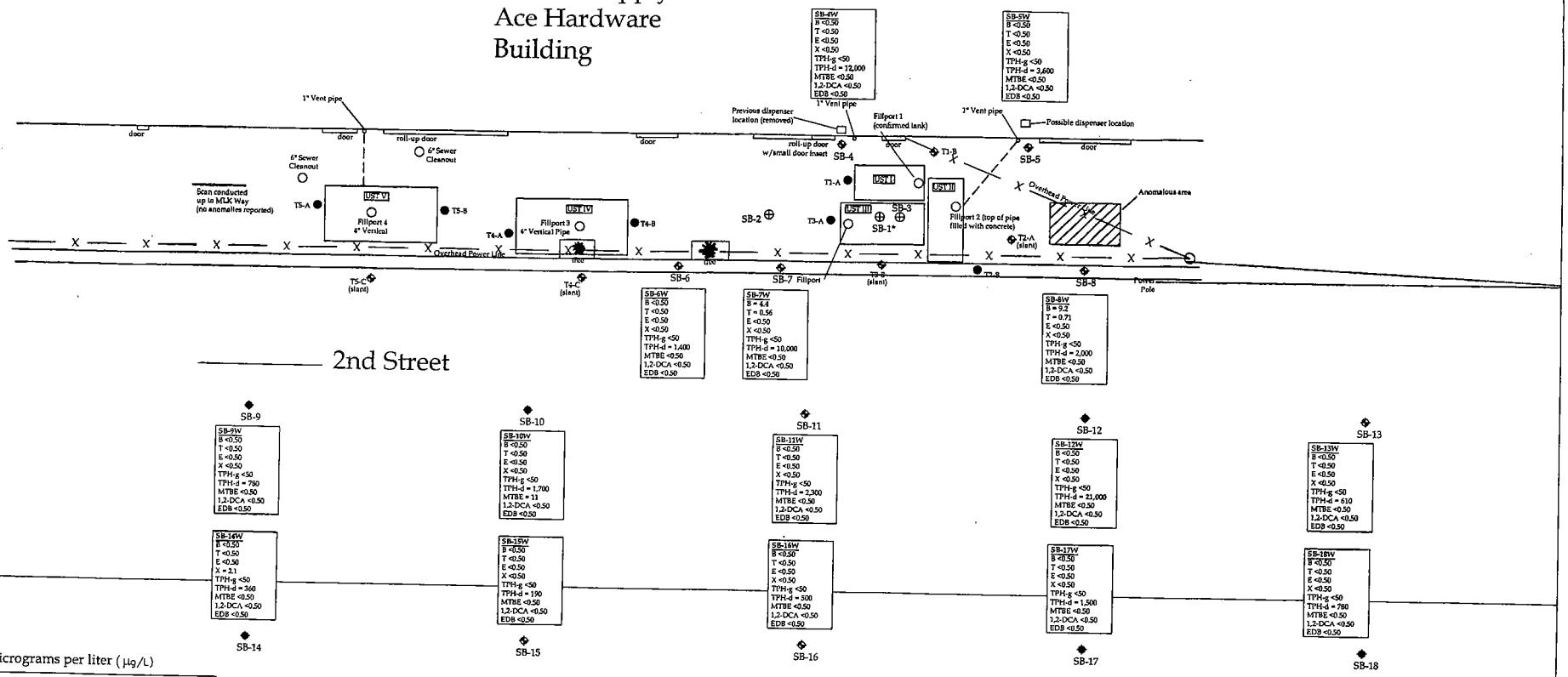
Markus Supply Hardware
626 2nd St
Oakland, CA

**CLEARWATER GROUP**

| Project No. | Figure Date | Figure |
|---|---|---|
| GB001H | 01/09 | 8 |

H:\Department\Jobs\GB001 Markus Hardware\CAD\Soil Investigation\Fig 8 Soil Sample Analytical Results

# Markus Supply
# Ace Hardware
# Building




Values are given in micrograms per liter (µg/L)

**Legend**

| | |
|---|---|
| TPH-g | Total Petroleum Hydrocarbons as Gasoline |
| TPH-d | Total Petroleum Hydrocarbons as Diesel |
| B | Benzene |
| T | Toluene |
| E | Ethylbenzene |
| X | Total Xylenes |
| MTBE | Methyl Tertiary Butyl Ether |
| 1,2-DCA | Dichloroethane |
| EDB | Dibromoethane |
| ESL | Environmental Screening Level (for commercial land use where groundwater is not a source of drinking water) |
| Bold | Detected Concentration Exceeds ESL |
| MLK | Martin Luther King Jr. Way |

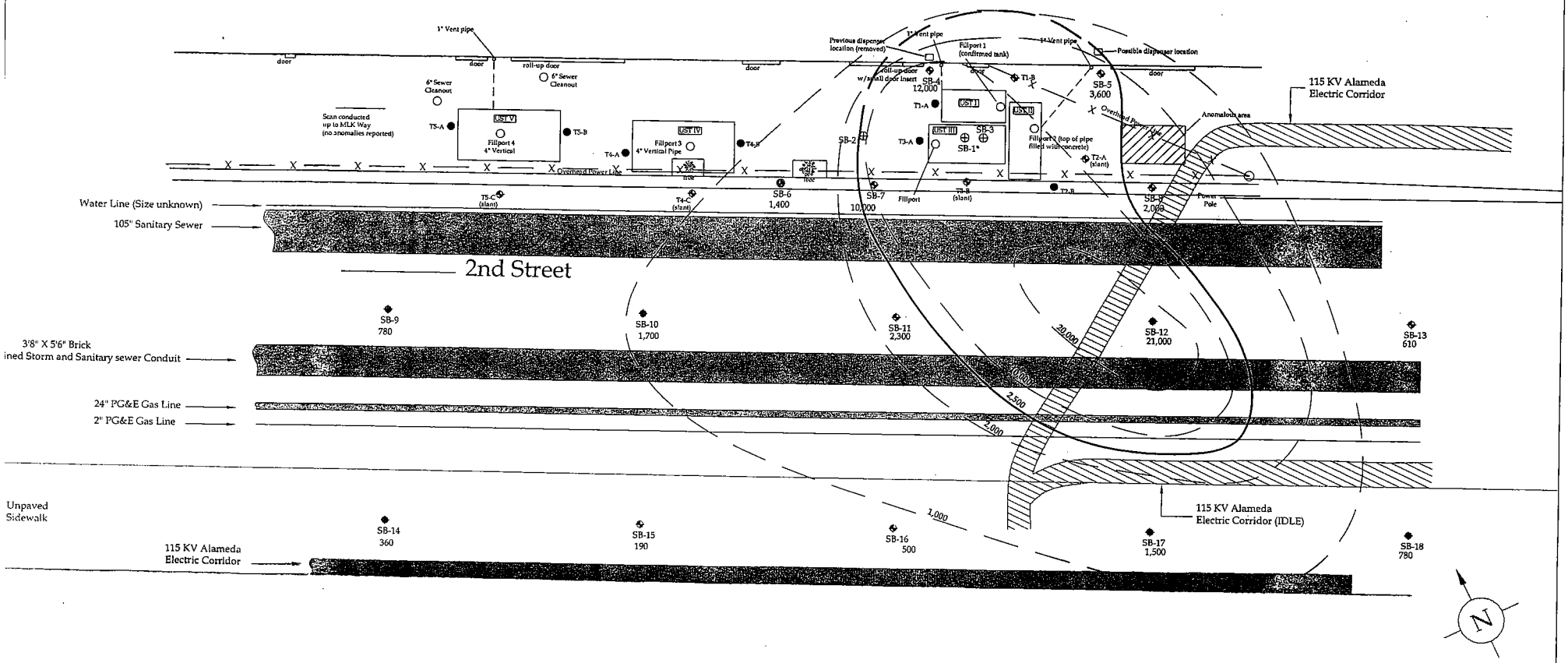
**Groundwater Sample Analytical Results from October 6, 7, and 9, 2008**

Markus Supply Hardware
626 2nd St
Oakland, CA

**CLEARWATER GROUP**

| Project No. | Figure Date | Figure |
|---|---|---|
| GB001H | 11/08 | 9 |

# Markus Supply
# Ace Hardware
# Building




All TPH-d values given in micrograms per liter (µg/L)

0 15 30

APPROXIMATE SCALE IN FEET

KEY:

- ⊕ Boring (locations approximate) for samples taken in 1996
- ○ Fill port
- 1 Tank #
- ▭ Tank Outline
- ◆ Soil and Groundwater Sampling Locations
- ● Soil Boring locations
- ◆ Grab Groundwater Location
- UST Underground Storage Tank
- ESL Line (2,500 µg/L)
- TPH-d Iso-Contour Line

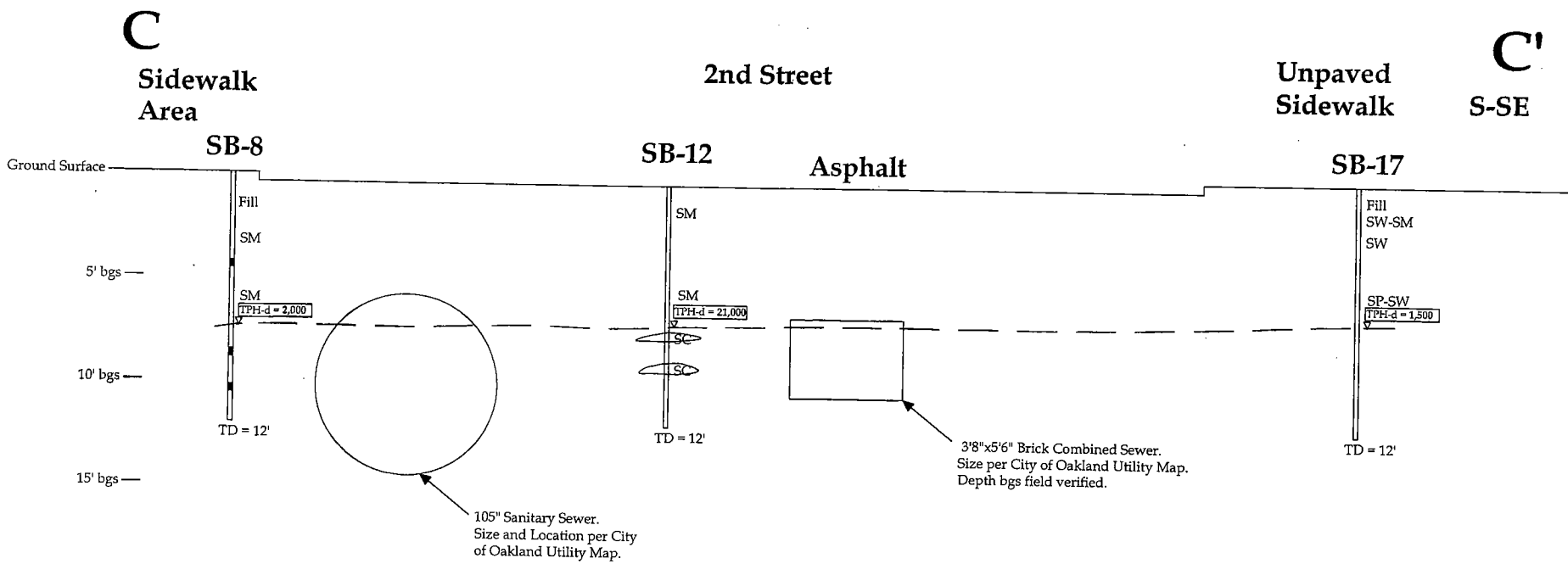
TANK DIMENSIONS
I - 10' x 5' (L x Dia)
II - 12' x 6'
III - 12' x 5'
IV - 16' x 8'
V - 16' x 8'

## Groundwater TPH-d Iso-concentration Map for Grab Groundwater Samples Collected Oct. 6, 7 & 9, 2008

Markus Supply Hardware
626 Second St
Oakland, CA

CLEARWATER GROUP

| Project No. | Figure Date | Figure |
|---|---|---|
| GB001H | 01/09 | 10 |




Note: Only analytical data greater than the proposed environmental screening levels are included on this figure.
Only utility lines in groundwater are shown.
All values given in micrograms per liter (µg/L)

0 5 10
APPROXIMATE SCALE IN FEET

## Legend

- Soil Sample Interval
- Groundwater Depth
- TD Total Depth
- bgs Below Ground Surface
- **Bold** Sample Detected Above Assessment Level (only values above assessment level reported)
- SW-SM Well Graded Sand with Silt
- TPH-d Total Petroleum Hydrocarbons as Diesel

| | |
|---|---|
| SP-SM | Poorly Graded Sand with Silt |
| SW | Well Graded Sand |
| SP | Poorly Graded Sand |
| SC | Clayey Sand |
| SM | Silty Sand |
| GP | Poorly Graded Gravel |
| SP-SC | Poorly Graded Sand with Clay |

**2nd Street Cross-Section**
Markus Supply Hardware
626 2nd St
Oakland, CA

**CLEARWATER GROUP**

| Project No. | Figure Date | Figure |
|---|---|---|
| GB001H | 01/09 | 11 |

# TABLES

# Table 1
## Soil Sample Analytical Results
Markus Hardware Store
626 2nd Street
Oakland, CA

| Sample | Date | Benzene mg/kg | Toluene mg/kg | Ethylbenzene mg/kg | Xylenes mg/kg | TPH-g mg/kg | TPH-d mg/kg | MTBE mg/kg | 1,2-DCA mg/kg | EDB mg/kg | Lead mg/kg |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ESL shallow soils <3 meters bgs | | **0.26** | **29** | **33** | **100** | **450** | **150** | **8.4** | **0.48** | **0.042** | **750** |
| ESL deep soils >3 meters bgs | | **11** | **29** | **33** | **420** | **4200** | **150** | **8.4** | **1.8** | **1.0** | **750** |
| T1-A (9.5 to 10.0 feet bgs) | 2/2/07 | <0.005 | <0.005 | <0.005 | <0.005 | <1.0 | 2.5 | NA | NA | NA | NA |
| T1-B (9.5 to 10.0 feet bgs) | 2/2/07 | <0.025 | 0.12 | 1.2 | 6.7 | 89 | 31 | NA | NA | NA | NA |
| T2-A* (14.5 to 15.0 feet bgs) | 2/2/07 | 0.012 | <0.005 | <0.005 | <0.005 | <1.0 | 6.3 | NA | NA | NA | NA |
| T2-B (9.0 to 9.5 feet bgs) | 2/2/07 | <0.005 | <0.005 | <0.005 | <0.005 | <1.0 | 12 | NA | NA | NA | NA |
| T3-A (7.0 to 7.5 feet bgs) | 2/2/07 | <0.005 | <0.005 | <0.005 | <0.005 | <1.0 | 2.8 | NA | NA | NA | NA |
| T3-B* (11.5 to 12.0 feet bgs) | 2/2/07 | 0.022 | <0.005 | <0.005 | <0.005 | <1.0 | 3.3 | NA | NA | NA | NA |
| T4-A (8.0 to 8.5 feet bgs) | 2/2/07 | <0.005 | <0.005 | <0.005 | <0.005 | <1.0 | 10 | NA | NA | NA | NA |
| T4-B (8.0 to 8.5 feet bgs) | 2/2/07 | <0.005 | <0.005 | <0.005 | <0.005 | <1.0 | 4.5 | NA | NA | NA | NA |
| T4-C* (14.5 to 15.0 feet bgs) | 2/2/07 | <0.005 | <0.005 | <0.005 | <0.005 | <1.0 | 3.1 | NA | NA | NA | NA |
| T5-A (9.5 to 10.0 feet bgs) | 2/2/07 | <0.005 | <0.005 | <0.005 | <0.005 | <1.0 | 3.4 | NA | NA | NA | NA |
| T5-B (9.5 to 10.0 feet bgs) | 2/2/07 | <0.005 | <0.005 | <0.005 | <0.005 | <1.0 | 1.9 | NA | NA | NA | NA |
| T5-C* (16.0 to 16.5 feet bgs) | 2/2/07 | <0.005 | <0.005 | <0.005 | <0.005 | <1.0 | 7.6 | NA | NA | NA | NA |
| SB-4-4 | 10/7/08 | < 0.0050 | < 0.0050 | < 0.0050 | < 0.0050 | < 1.0 | 11 | < 0.0050 | < 0.0050 | < 0.0050 | 44 |
| SB-4-8 | 10/7/08 | < 0.0050 | < 0.0050 | < 0.0050 | < 0.0050 | < 1.0 | < 1.0 | < 0.0050 | < 0.0050 | < 0.0050 | 1.9 |
| SB-4-10 | 10/7/08 | < 0.0050 | < 0.0050 | < 0.0050 | < 0.0050 | < 1.0 | 1.0 | < 0.0050 | < 0.0050 | < 0.0050 | 1.9 |
| SB-5-4 | 10/7/08 | < 0.0050 | < 0.0050 | < 0.0050 | < 0.0050 | < 1.0 | 9.7 | < 0.0050 | < 0.0050 | < 0.0050 | 8.2 |
| SB-5-8 | 10/7/08 | < 0.0050 | < 0.0050 | < 0.0050 | < 0.0050 | < 1.0 | 5.8 | < 0.0050 | < 0.0050 | < 0.0050 | 2.5 |
| SB-6-4 | 10/7/08 | < 0.0050 | < 0.0050 | < 0.0050 | < 0.0050 | < 1.0 | 1.9 | < 0.0050 | < 0.0050 | < 0.0050 | 24 |
| SB-6-8 | 10/7/08 | < 0.0050 | < 0.0050 | < 0.0050 | < 0.0050 | < 1.0 | < 1.0 | < 0.0050 | < 0.0050 | < 0.0050 | 2.0 |
| SB-7-5 | 10/7/08 | < 0.0050 | < 0.0050 | < 0.0050 | < 0.0050 | < 1.0 | 2.4 | < 0.0050 | < 0.0050 | < 0.0050 | 2.1 |
| SB-7-10 | 10/7/08 | < 0.0050 | < 0.0050 | < 0.0050 | < 0.0050 | < 1.0 | 1.1 | < 0.0050 | < 0.0050 | < 0.0050 | 2.2 |
| SB-7-15 | 10/7/08 | < 0.0050 | < 0.0050 | < 0.0050 | < 0.0050 | < 1.0 | 2.2 | < 0.0050 | < 0.0050 | < 0.0050 | 2.1 |
| SB-7-20 | 10/7/08 | < 0.0050 | < 0.0050 | < 0.0050 | < 0.0050 | < 1.0 | < 1.0 | < 0.0050 | < 0.0050 | < 0.0050 | 3.2 |
| SB-7-25 | 10/7/08 | < 0.0050 | < 0.0050 | < 0.0050 | < 0.0050 | < 1.0 | < 1.0 | < 0.0050 | < 0.0050 | < 0.0050 | 1.7 |
| SB-7-30 | 10/7/08 | < 0.0050 | < 0.0050 | < 0.0050 | < 0.0050 | < 1.0 | < 1.0 | < 0.0050 | < 0.0050 | < 0.0050 | 1.9 |
| SB-8-4 | 10/7/08 | < 0.0050 | < 0.0050 | < 0.0050 | < 0.0050 | < 1.0 | 3.2 | < 0.0050 | < 0.0050 | < 0.0050 | 2.2 |
| SB-8-8 | 10/7/08 | < 0.0050 | < 0.0050 | < 0.0050 | < 0.0050 | < 1.0 | 2.1 | < 0.0050 | < 0.0050 | < 0.0050 | 2.0 |
| SB-11-5 | 10/6/08 | < 0.0050 | < 0.0050 | < 0.0050 | < 0.0050 | < 1.0 | 22 | < 0.0050 | < 0.0050 | < 0.0050 | 25 |
| SB-11-10 | 10/6/08 | < 0.0050 | < 0.0050 | < 0.0050 | < 0.0050 | < 1.0 | 9.9 | < 0.0050 | < 0.0050 | < 0.0050 | 24 |
| SB-11-15 | 10/6/08 | < 0.0050 | < 0.0050 | < 0.0050 | < 0.0050 | < 1.0 | 5.5 | < 0.0050 | < 0.0050 | < 0.0050 | 2.6 |
| SB-13-11 | 10/6/08 | < 0.0050 | < 0.0050 | < 0.0050 | < 0.0050 | < 1.0 | 6.2 | < 0.0050 | < 0.0050 | < 0.0050 | 3.1 |
| SB-15-4-4.5 | 10/9/08 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <1.0 | 5.6 | <0.0050 | <0.0050 | <0.0050 | 3.6 |

# Table 1
## Soil Sample Analytical Results
Markus Hardware Store
626 2nd Street
Oakland, CA

| Sample | Date | Benzene mg/kg | Toluene mg/kg | Ethylbenzene mg/kg | Xylenes mg/kg | TPH-g mg/kg | TPH-d mg/kg | MTBE mg/kg | 1,2-DCA mg/kg | EDB mg/kg | Lead mg/kg |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ESL shallow soils <3 meters bgs | | **0.26** | **29** | **33** | **100** | **450** | **150** | **8.4** | **0.48** | **0.042** | **750** |
| ESL deep soils >3 meters bgs | | **11** | **29** | **33** | **420** | **4200** | **150** | **8.4** | **1.8** | **1.0** | **750** |
| SB-15-11-11.5 | 10/9/08 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <1.0 | 2.6 | <0.0050 | <0.0050 | <0.0050 | 2.9 |
| SB-15-15-15.5 | 10/9/08 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <1.0 | 12 | <0.0050 | <0.0050 | <0.0050 | 2.9 |
| SB-15-27-27.5 | 10/9/08 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <1.0 | 4.6 | <0.0050 | <0.0050 | <0.0050 | 2.4 |
| SB-16-4-4.5 | 10/9/08 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <1.0 | 8.8 | <0.0050 | <0.0050 | <0.0050 | 13 |
| SB-16-8-8.5 | 10/9/08 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <1.0 | 25 | <0.0050 | <0.0050 | <0.0050 | 15 |
| SB-16-11-11.5 | 10/9/08 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <1.0 | 8.6 | <0.0050 | <0.0050 | <0.0050 | 2.5 |
| SB-16-15-15.5 | 10/9/08 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <1.0 | <1.0 | <0.0050 | <0.0050 | <0.0050 | 3.0 |
| SB-16-19-19.5 | 10/9/08 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <1.0 | 8.2 | <0.0050 | <0.0050 | <0.0050 | 2.2 |
| SB-16-23-23.5 | 10/9/08 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <1.0 | 3.6 | <0.0050 | <0.0050 | <0.0050 | 2.6 |

ESLs = Environmental Screening Levels for commercial/industrial use when groundwater is **not** a current or potential source of drinking water
bgs = Below ground surface
* = Boring completed at a 30 degree angle from vertical
EDB = 1,2-Dibromoethane
1,2-DCA = 1,2-Dichloroethane
TPH-d = Total petroleum hydrocarbons - diesel
TPH-g = Total petroleum hydrocarbons - gasoline
MTBE = Methyl tert-butyl ether
**Bold** = Detected concentration exceeds specified ESL
NA = Not available
<0.005 = Contaminant not detected above laboratory detection limit

# Table 2

## Grab Groundwater Analytical Results

Markus Hardware

626 2nd Street

Oakland, CA

| Sample Name | Date | Benzene µg/L | Toluene µg/L | Ethylbenzene µg/L | Xylenes µg/L | TPH-g µg/L | TPH-d µg/L | MTBE µg/L | 1,2-DCA µg/L | EDB µg/L |
|---|---|---|---|---|---|---|---|---|---|---|
| **ESLs** | | **540** | **400** | **300** | **5,300** | **5,000** | **2,500** | **1,800** | **200** | **150** |
| T1-B | 2/2/2007 | 110 | 58 | **1,800** | 4,500 | **35,000** | **<40,000*** | **NA** | **NA** | **NA** |
| T2-A | 2/2/2007 | 70 | 8 | 5.1 | 15 | 2,700 | 2,400 | **NA** | **NA** | **NA** |
| T3-B | 2/2/2007 | 360 | 13 | 9.5 | 44 | **9,300** | **8,100** | **NA** | **NA** | **NA** |
| T4-C | 2/2/2007 | <0.50 | <0.50 | <0.50 | <0.50 | <50 | 140 | **NA** | **NA** | **NA** |
| T5-C | 2/2/2007 | <0.50 | <0.50 | <0.50 | 0.65 | <50 | 200 | **NA** | **NA** | **NA** |
| SB-4-W | 10/07/08 | < 0.50 | < 0.50 | < 0.50 | < 0.50 | < 50 | **12,000** | < 0.50 | < 0.50 | < 0.50 |
| SB-5-W | 10/07/08 | < 0.50 | < 0.50 | < 0.50 | < 0.50 | < 50 | **3,600** | < 0.50 | < 0.50 | < 0.50 |
| SB-6-W | 10/07/08 | < 0.50 | < 0.50 | < 0.50 | < 0.50 | < 50 | 1,400 | < 0.50 | < 0.50 | < 0.50 |
| SB-7-W | 10/07/08 | 4.4 | 0.56 | < 0.50 | < 0.50 | < 50 | **10,000** | < 0.50 | < 0.50 | < 0.50 |
| SB-8-W | 10/07/08 | 9.2 | 0.71 | < 0.50 | < 0.50 | < 50 | 2,000 | < 0.50 | < 0.50 | < 0.50 |
| SB-9-W | 10/06/08 | < 0.50 | < 0.50 | < 0.50 | < 0.50 | < 50 | 780 | < 0.50 | < 0.50 | < 0.50 |
| SB-10-W | 10/06/08 | < 0.50 | < 0.50 | < 0.50 | < 0.50 | < 50 | 1,700 | 11 | < 0.50 | < 0.50 |
| SB-11-W | 10/06/08 | < 0.50 | < 0.50 | < 0.50 | < 0.50 | < 50 | 2,300 | < 0.50 | < 0.50 | < 0.50 |
| SB-12-W | 10/06/08 | < 0.50 | < 0.50 | < 0.50 | < 0.50 | < 50 | **21,000** | < 0.50 | < 0.50 | < 0.50 |
| SB-13-W | 10/06/08 | < 0.50 | < 0.50 | < 0.50 | < 0.50 | < 50 | 610 | < 0.50 | < 0.50 | < 0.50 |
| SB-14-W | 10/09/08 | <0.50 | <0.50 | <0.50 | 2.1 | <50 | 360 | <0.50 | <0.50 | <0.50 |
| SB-15-W | 10/09/08 | <0.50 | <0.50 | <0.50 | <0.50 | <50 | 190 | <0.50 | <0.50 | <0.50 |
| SB-16-W | 10/09/08 | <0.50 | <0.50 | <0.50 | <0.50 | <50 | 500 | <0.50 | <0.50 | <0.50 |
| SB-17-W | 10/09/08 | <0.50 | <0.50 | <0.50 | <0.50 | <50 | 1,500 | <0.50 | <0.50 | <0.50 |
| SB-18-W | 10/09/08 | <0.50 | <0.50 | <0.50 | <0.50 | <50 | 780 | <0.50 | <0.50 | <0.50 |

ESLs = Environmental Screening Levels for Groundwater, NOT current or potential drinking water source, Commercial/Industrial

EDB = 1,2-Dibromoethane

MTBE = Methyl tert-butyl ether

1,2-DCA = 1,2-Dichloroethane

TPH-d = Total petroleum hydrocarbons - diesel

TPH-g = Total petroleum hydrocarbons - gasoline

Bold = Detected concentration exceeds specified Environmental Screening Level (ESL)

SB-4-W = Grab groundwater sample collected from 1" temporary polyvinyl chloride (PVC) well casing

NA = Not available

* = The method reporting limit for TPH-d is increased due to interference from gasoline-range hydrocarbons

# Table 3

**Calculation of the Mass of TPH-d in Groundwater**

Markus Hardware

626 2nd Street

Oakland, CA

**TPH-d plume**

- Area within 8,250 µg/L averaged contour (From Figure 8) = 20,000 $ft^2$
- Volume of Soil including porosity factor (within 8,250 µg/L averaged contour)

= 20,000 $ft^2$ x 10 ft (thickness of horizontal contamination) x 0.43

= 86,000 $ft^3$

gallons of groundwater in 86,000 $ft^3$ = 86,000 $ft^3$ x $\frac{7.48\ gal}{ft^3}$ = 643,280 gal

- gals of groundwater x concentration = 64,3280 gal x 8,250 µg/L x1 L/0.204 gal x 1 kg/1,000,000,000 µg x 1 lb/0.454 kg (1 gal of TPH-d weighs 7.22 lbs)
- gals of TPH-d within 8,250 µg/L averaged contour area = 57 lbs or 8 gal of TPH-d estimated

**Total TPH-d in groundwater on-site plume = 57 lbs or 8 gal estimated**

# ATTACHMENT A

ALAMEDA COUNTY
**HEALTH CARE SERVICES**
AGENCY
DAVID J. KEARS, Agency Director

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

August 12, 2008

Mr. Daniel Altwarg
Cardanal Properties, LLC
C/o Bartlett, Leader-Picone & Young, LLP
2201 Broadway, Suite 803
Oakland, CA 94612

Ms. Betty Brunswick
PG&E
77 Beal Street, Room 2439C
San Francisco, CA 94105

Mr. Richard Arnold, et al
Gamma Investments
301 Jefferson Street
Oakland, CA 94607

Mr. Ray Garnica
United California Bank
601 South Figueroa
Los Angeles, CA 90017-5704

Subject: Fuel Leak Case No. RO0002949 and Geotracker Global ID T0619758441, Markus Supply Hardware, 632-638 2nd Street, Oakland, CA 94607

Dear Mr. Altwarg, Ms. Brunswick, Mr. Arnold, and Mr. Garnica:

Alameda County Environmental Health (ACEH) staff has reviewed the case file for the above-referenced site, including the most recent document entitled, "*Workplan Addendum Letter*," dated June 25, 2008 and prepared on your behalf by Clearwater Group. The "*Workplan Addendum Letter*," was prepared in response to ACEH comments on the previous "*Soil and Groundwater Investigation Work Plan*," dated March 7, 2008. The "*Workplan Addendum Letter*," dated June 25, 2008 proposes advancing 15 soil borings in the vicinity and south of the former tanks.

The scope of work is conditionally approved and may be implemented provided that the technical comments below are addressed and incorporated during the proposed activities. Submittal of a revised Work Plan or Work Plan Addendum is not required unless an alternate scope of work outside that described in the Work Plan and technical comment below is proposed. We request that you address the following technical comments, perform the proposed work, and send us the reports described below.

## TECHNICAL COMMENTS

1. **Depth of Soil Borings.** The Work Plan does not indicate the depth of the proposed soil borings. For the three soil borings that are proposed for vertical delineation, we request that the soil borings be extended to a depth of 30 feet bgs. For the remaining soil borings, the soil borings are to be extended a sufficient depth below first-encountered groundwater to obtain a representative groundwater sample.

2. **Soil Sampling.** Soil samples are to be collected for laboratory analysis from any zones where visible staining, odor, or elevated PID readings are observed. If no visible staining, odor, or elevated PID readings are observed in the borings in the immediate vicinity of the underground storage tanks, the collection of soil samples for laboratory analysis at the proposed fixed interval of 4 feet bgs and at the capillary fringe is acceptable. For soil borings

SB-9 through SB-18, the collection of soil samples for laboratory analysis only if visible staining, odor, or elevated PID readings are observed is acceptable. For the proposed deep borings to 30 feet bgs, we request that soil samples be collected for laboratory analysis from any zones where visible staining, odor, or elevated PID readings are observed or if no visible staining, odor, or elevated PID readings are observed, at fixed depths of 5, 10, 15, 20, and 30 feet bgs. Please present sampling results in the Site Investigation Report requested below.

3. **Laboratory Analyses.** In addition to the proposed laboratory analyses for TPHs using EPA method 8015 and TPHg and BTEX using EPA Method 8260, we request that soil and groundwater samples be analyzed for MTBE, 1,2-dichloroethane, and ethylene dibromide using EPA Method 8260. We also request that all soil samples be analyzed for lead using EPA Method 6010. Please present sampling results in the Site Investigation Report requested below.

## TECHNICAL REPORT REQUEST

Please submit technical reports to Alameda County Environmental Health (Attention: Jerry Wickham), according to the following schedule:

- **December 15, 2008** – Soil and Groundwater Investigation Report

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

## ELECTRONIC SUBMITTAL OF REPORTS

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

PERJURY STATEMENT

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

PROFESSIONAL CERTIFICATION & CONCLUSIONS/RECOMMENDATIONS

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

UNDERGROUND STORAGE TANK CLEANUP FUND

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

AGENCY OVERSIGHT

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

If you have any questions, please call me at (510) 567-6791 or send me an electronic mail message at jerry.wickham@acgov.org.

Sincerely,

Jerry Wickham, California PG 3766, CEG 1177, and CHG 297
Senior Hazardous Materials Specialist

Enclosure: ACEH Electronic Report Upload (ftp) Instructions

cc: Leroy Griffin, Oakland Fire Department, 250 Frank H. Ogawa Plaza, Ste. 3341, Oakland, CA 94612-2032

Erik Lervaag, Clearwater Group, 229 Tewksbury Avenue, Point Richmond, CA 94801

Robert Saur, PG&E, Environmental Services Site Remediation, 3400 Crow Canyon Road, San Ramon, CA 94583

Donna Drogos, ACEH
Jerry Wickham, ACEH
File

| Alameda County Environmental Cleanup Oversight Programs (LOP and SLIC) | **ISSUE DATE:** July 5, 2005 |
|---|---|
| | **REVISION DATE:** December 16, 2005 |
| | **PREVIOUS REVISIONS:** October 31, 2005 |
| **SECTION:** Miscellaneous Administrative Topics & Procedures | **SUBJECT:** Electronic Report Upload (ftp) Instructions |

Effective **January 31, 2006**, the Alameda County Environmental Cleanup Oversight Programs (LOP and SLIC) require submission of all reports in electronic form to the county's ftp site. Paper copies of reports will no longer be accepted. The electronic copy replaces the paper copy and will be used for all public information requests, regulatory review, and compliance/enforcement activities.

**REQUIREMENTS**

- Entire report including cover letter must be submitted to the ftp site as **a single portable document format (PDF) with no password protection.** (Please do not submit reports as attachments to electronic mail.)
- **It is preferable** that reports be converted to PDF format from their original format, (e.g., Microsoft Word) rather than scanned.
- Signature pages and perjury statements **must** be included and have either original or electronic signature.
- **Do not password protect the document.** Once indexed and inserted into the correct electronic case file, the document will be secured in compliance with the County's current security standards and a password. **Documents with password protection will not be accepted.**
- Each page in the PDF document should be rotated in the direction that will make it easiest to read on a computer monitor.
- Reports must be named and saved using the following naming convention:
  RO#_Report Name_Year-Month-Date (e.g., RO#5555_WorkPlan_2005-06-14)

**Additional Recommendations**

- A separate copy of the tables in the document should be submitted by e-mail to your Caseworker in Excel format. These are for use by assigned Caseworker only.

**Submission Instructions**

1) Obtain User Name and Password:
   a) Contact the Alameda County Environmental Health Department to obtain a User Name and Password to upload files to the ftp site.
      i) Send an e-mail to dehloptoxic@acgov.org
         or
      ii) Send a fax on company letterhead to (510) 337-9335, to the attention of Alicia Lam-Finneke.
   b) In the subject line of your request, be sure to include **"ftp PASSWORD REQUEST"** and in the body of your request, include the **Contact Information, Site Addresses, and the Case Numbers (RO# available in Geotracker) you will be posting for.**

2) Upload Files to the ftp Site
   a) Using Internet Explorer (IE4+), go to ftp://alcoftp1.acgov.org
      (i) Note: Netscape and Firefox browsers will not open the FTP site.
   b) Click on File, then on Login As.
   c) Enter your User Name and Password. (Note: Both are Case Sensitive.)
   d) Open "My Computer" on your computer and navigate to the file(s) you wish to upload to the ftp site.
   e) With both "My Computer" and the ftp site open in separate windows, drag and drop the file(s) from "My Computer" to the ftp window.

3) Send E-mail Notifications to the Environmental Cleanup Oversight Programs
   a) Send email to dehloptoxic@acgov.org notify us that you have placed a report on our ftp site.
   b) Copy your Caseworker on the e-mail. Your Caseworker's e-mail address is the entire first name then a period and entire last name at acgov.org. (e.g., firstname.lastname@acgov.org)
   c) The subject line of the e-mail must start with the RO# followed by **Report Upload.** (e.g., Subject: RO1234 Report Upload)

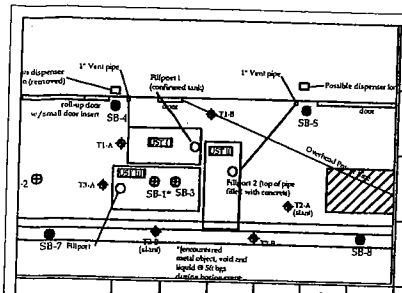
# APPENDIX B

# SOIL BORING AND WELL CONSTRUCTION LOG:

CLEARWATER GROUP

Project No. GB001H

Sheet 1 of 1




| CLIENT/LOCATION: Markus Supply Hardware 626 Second St. Oakland, CA | JOB NO#. GB001G | PROJ. MANAGER: E. Lervaag | BORING/WELL NO.: SB-4 |
|---|---|---|---|
| DRILLING CONTRACTOR: Fast-Tek | DRILL RIG TYPE: Geoprobe 5400 | WELL DEPTH: NA | BORING DIAMETER: 2" |
| DRILL RIG OPERATOR: Eric Austin | WELL MATERIAL: NA | BORING DEPTH: 12.0' | FILTER PACK: NA |
| | | | DRILLING DATE: 10/07/08 |

SAMPLING METHOD: Continuous Core

MONITORING INSTRUMENT: Photoionization Detector

| TPH-d mg/Kg | SAMPLE DEPTH | SAMPLE TYPE | BLOWS/6" INTERVAL | INCHES DRIVEN | INCHES RECOVERED | SAMPLE CONDITION | DRILLING RATE (min/ft) | ODOR | PID | DEPTH (FEET) | GRAPHIC LOG |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 48 | 40 | G | | NO | 0 | 0 | |
| | | | | | | | | | | 1 | |
| | | | | | | | | | | 2 | |
| | | | | | | | | NO | 0 | 3 | |
| | | | | | | | | | | 4 | |
| | | | | 48 | 40 | G | | NO | 0 | 5 | |
| | | | | | | | | | | 6 | |
| | | | | | | | | NO | 0 | 7 | |
| | | | | | | | | | | 8 | |
| | | | | 48 | 40 | G | | NO | 0 | 9 | |
| | | | | | | | | NO | 0 | 10 | |
| | | | | | | | | | | 11 | |
| | | | | | | | | NO | 0 | 12 | |
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8" Concrete

Silty sand (SM), yellowish brown (10YR 5/6), loose, dry to moist, 85% very fine sand, 15% silt.

Silty sand to clayey sand (SM-SC), dark brown (10YR 3/3), loose, dry, 80% well sorted very fine to fine sand, 10% silt, 10% clay.

Wet at 10'

Color change to dark yellowish brown (10YR 5/6).

Clayey sand (SC), loose to medium dense, wet, light iron oxide stain, 80% fine well sorted rounded sand, 20% clay.

Total depth 12' bgs.

REGISTERED GEOLOGIST
Robert L. Nelson
ROBERT L. NELSON
No. 2087
CERTIFIED ENGINEERING GEOLOGIST
STATE OF CALIFORNIA

LOGGED BY: Robert L. Nelson

APPROVED BY: Eric Lervaag

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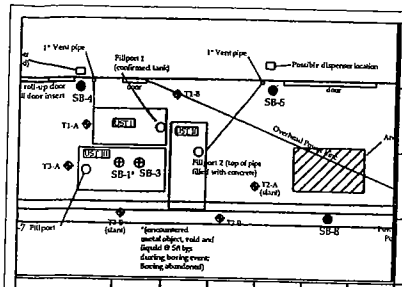
# SOIL BORING AND WELL CONSTRUCTION LOG:

CLEARWATER GROUP

Project No. GB001H

Sheet 1 of 1




| CLIENT/LOCATION: Markus Supply Hardware 626 Second St. Oakland, CA | JOB NO#. GB001G | PROJ. MANAGER: E. Lervaag | BORING/WELL NO.: SB-5 |
|---|---|---|---|
| DRILLING CONTRACTOR: Fast-Tek | DRILL RIG TYPE: Geoprobe 5400 | WELL DEPTH: NA | BORING DIAMETER: 2" |
| DRILL RIG OPERATOR: Eric Austin | WELL MATERIAL: NA | BORING DEPTH: 12.0' | FILTER PACK: NA |
| | | | DRILLING DATE: 10/07/08 |

Silty sand (SM), yellowish brown (10YR 5/6), loose, dry, 85% fine sand, 15% silt.

SAMPLING METHOD: Continuous Core

MONITORING INSTRUMENT: Photoionization Detector

| TPH-d mg/Kg | SAMPLE DEPTH | SAMPLE TYPE | BLOWS/6" INTERVAL | INCHES DRIVEN | INCHES RECOVERED | SAMPLE CONDITION | DRILLING RATE (min/ft) | ODOR | PID | DEPTH (FEET) | GRAPHIC LOG |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 48 | 40 | G | | | | 1 | |
| | | | | | | | | NO | 0 | 2 | |
| | | | | | | | | NO | 0 | 3 | |
| | | | | 48 | 42 | G | | NO | 0 | 4 | |
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| | | | | | | | | NO | 0 | 7 | |
| | | | | 48 | 42 | G | | | | 8 | |
| | | | | | | | | NO | 0 | 9 | |
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8" Concrete

Silty sand (SM), yellowish brown (10YR 5/6), loose, dry, 85% fine sand, 15% silt.

Silty sand to clayey sand (SM-SC), dark brown (10YR 3/3), loose, dry to moist, 80% very fine to fine sand, 10% silt, 10% clay.
Wet at 8'.
Color changes to brown (10YR 4/3) at 8'.
Iron oxide stain below 6'.

Color changes to dark greenish gray (5GY 4/1).

Total depth 12' bgs.

REGISTERED GEOLOGIST
ROBERT L. NELSON
No. 2087
CERTIFIED ENGINEERING GEOLOGIST
STATE OF CALIFORNIA

LOGGED BY: Robert L. Nelson

APPROVED BY: Eric Lervaag

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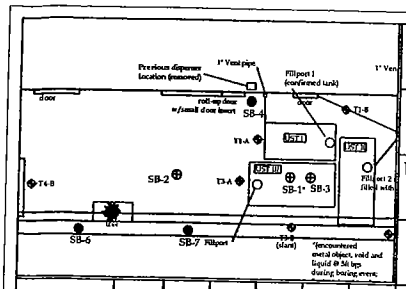
# SOIL BORING AND WELL CONSTRUCTION LOG:

CLEARWATER GROUP

Project No. GB001H

Sheet 1 of 1




| CLIENT/LOCATION: Markus Supply Hardware 626 Second St. Oakland, CA | JOB NO#. GB001G | PROJ. MANAGER: E. Lervaag | BORING/WELL NO.: SB-6 |
|---|---|---|---|
| DRILLING CONTRACTOR: Fast-Tek | DRILL RIG TYPE: Geoprobe 5400 | WELL DEPTH: NA | BORING DIAMETER: 2" |
| DRILL RIG OPERATOR: Eric Austin | WELL MATERIAL: NA | BORING DEPTH: 12.0' | FILTER PACK: NA |
| | | | DRILLING DATE: 10/07/08 |

SAMPLING METHOD: Continuous Core

MONITORING INSTRUMENT: Photoionization Detector

| TPH-d mg/Kg | SAMPLE DEPTH | SAMPLE TYPE | BLOWS/6" INTERVAL | INCHES DRIVEN | INCHES RECOVERED | SAMPLE CONDITION | DRILLING RATE (min/ft) | ODOR | PID | DEPTH (FEET) | GRAPHIC LOG |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 48 | 40 | G | | NO | 0 | 0 | |
| | | | | | | | | | | 1 | |
| | | | | | | | | NO | 0 | 2 | |
| | | | | | | | | NO | 0 | 3 | |
| | | | | 48 | 40 | G | | | | 4 | |
| | | | | | | | | NO | 0 | 5 | |
| | | | | | | | | | | 6 | |
| | | | | | | | | | | 7 | |
| | | | | 48 | 40 | G | | NO | 0 | 8 | |
| | | | | | | | | NO | 0 | 9 | |
| | | | | | | | | | | 10 | |
| | | | | | | | | NO | 0 | 11 | |
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6" Concrete

Silty sand (SM), dark yellowish brown (10YR 4/4), loose, dry, 85% fine rounded sand , 15% silt, trace roots.

Silty sand (SM), wet at 7', trace iron oxide staining, sharp color change at 7.5% to dark olive gray (5Y 3/2), wet, loose, 80% fine sand, 20% silt, medium dense.

Total depth 12' bgs.

REGISTERED GEOLOGIST
ROBERT L. NELSON
No. 2087
CERTIFIED ENGINEERING GEOLOGIST
STATE OF CALIFORNIA

LOGGED BY: Robert L. Nelson

APPROVED BY: Eric Lervaag

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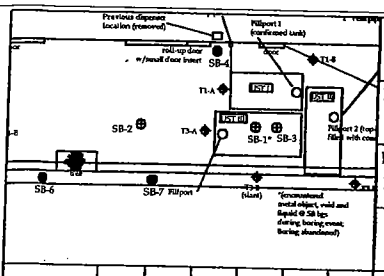
# SOIL BORING AND WELL CONSTRUCTION LOG:

CLEARWATER GROUP

Project No. GB001H

Sheet 1 of 1




| CLIENT/LOCATION: Markus Supply Hardware 626 Second St. Oakland, CA | JOB NO#. GB001G | PROJ. MANAGER: E. Lervaag | BORING/WELL NO.: SB-7 |
|---|---|---|---|
| DRILLING CONTRACTOR: Fast-Tek | DRILL RIG TYPE: Geoprobe 5400 | WELL DEPTH: NA | BORING DIAMETER: 2" |
| DRILL RIG OPERATOR: Eric Austin | WELL MATERIAL: NA | BORING DEPTH: 31.0' | FILTER PACK: NA |
| | | | DRILLING DATE: 10/07/08 |

SAMPLING METHOD: Continuous Core

MONITORING INSTRUMENT: Photoionization Detector

| TPH-d mg/Kg | SAMPLE DEPTH | SAMPLE TYPE | BLOWS/6" INTERVAL | INCHES DRIVEN | INCHES RECOVERED | SAMPLE CONDITION | DRILLING RATE (min/ft) | ODOR | PID | DEPTH (FEET) | GRAPHIC LOG | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 48 | 30 | F | | NO | 0 | 1 | | 6" Concrete |
| | | | | | | | | | | 2 | | Silty sand (SM), dark yellowish brown (10YR 4/4), loose, moist, 75% fine sand, 20% silt, 5% clay. |
| | | | | | | | | NO | 0 | 3 | | |
| | | | | | | | | | | 4 | | |
| | | | | 48 | 45 | G | | NO | 0 | | | |
| | | | | | | | | NO | 0 | 5 | | |
| | | | | | | | | | | 6 | | Silty sand (SM), very dark grayish brown (10YR 3/2), loose, dry to moist, 80% fine well sorted sand, 20% silt. |
| | | | | | | | | NO | 0 | 7 | | |
| | | | | 48 | 40 | F | | | | 8 | | Wet at 8'. |
| | | | | | | | | NO | 0 | 9 | | |
| | | | | | | | | | | 10 | | Sharp color change at 10.0' to olive gray (5Y 4/3). |
| | | | | | | | | | | 11 | | |
| | | | | 48 | 20 | P | | NO | 0 | 12 | | Silty sand (SM), dark greenish gray (5GY 4/1), loose to medium dense, wet, 80% fine well sorted rounded sand, 15% silt, 5% silt. |
| | | | | | | | | | | 13 | | |
| | | | | | | | | NO | 0 | 14 | | |
| | | | | | | | | NO | 0 | 15 | | |
| | | | | 48 | 20 | P | | | | 16 | | |
| | | | | | | | | NO | 0 | 17 | | Clay contest increasing with depth. |
| | | | | | | | | | | 18 | | |
| | | | | | | | | NO | 0 | 19 | | Clayey sand (SC), yellowish brown (10YR 5/6), wet, soft, 85% very fine to fine, well sorted rounded sand, 10% clay, 5% silt. |
| | | | | 48 | 38 | F | | | | 20 | | |
| | | | | | | | | NO | 0 | 21 | | |
| | | | | | | | | | | 22 | | |
| | | | | | | | | NO | 0 | 23 | | Becoming stiff. |
| | | | | 48 | 30 | F-P | | | | 24 | | |
| | | | | | | | | NO | 0 | 25 | | |
| | | | | | | | | | | 26 | | |
| | | | | | | | | NO | 0 | 27 | | |
| | | | | 36 | 12 | P | | | | 28 | | Very stiff, 20% lean clay. |
| | | | | | | | | NO | 0 | 29 | | |
| | | | | | | | | | | 30 | | |
| | | | | | | | | | | 31 | | Total depth 31' bgs. |

LOGGED BY: Robert L. Nelson

APPROVED BY: Eric Lervaag

REGISTERED GEOLOGIST
ROBERT L. NELSON
No. 2087
CERTIFIED ENGINEERING GEOLOGIST
STATE OF CALIFORNIA

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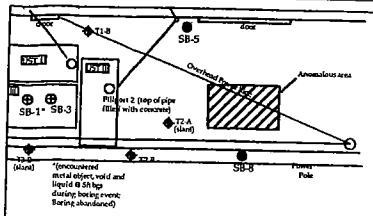
# SOIL BORING AND WELL CONSTRUCTION LOG:

CLEARWATER GROUP

Project No. GB001H

Sheet 1 of 1




| CLIENT/LOCATION: Markus Supply Hardware 626 Second St. Oakland, CA | JOB NO#. GB001G | PROJ. MANAGER: E. Lervaag | BORING/WELL NO.: SB-8 |
|---|---|---|---|
| DRILLING CONTRACTOR: Fast-Tek | DRILL RIG TYPE: Geoprobe 5400 | WELL DEPTH: NA | BORING DIAMETER: 2" |
| DRILL RIG OPERATOR: Eric Austin | WELL MATERIAL: NA | BORING DEPTH: 12.0' | FILTER PACK: NA |
| | | | DRILLING DATE: 10/07/08 |

SAMPLING METHOD: Continuous Core

MONITORING INSTRUMENT: Photoionization Detector

| TPH-d mg/Kg | SAMPLE DEPTH | SAMPLE TYPE | BLOWS/6" INTERVAL | INCHES DRIVEN | INCHES RECOVERED | SAMPLE CONDITION | DRILLING RATE (min/ft) | ODOR | PID | DEPTH (FEET) | GRAPHIC LOG |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 48 | 35 | F | | | | 0 | |
| | | | | | | | | NO | 0 | 1 | |
| | | | | | | | | NO | 0 | 2 | |
| | | | | | | | | NO | 0 | 3 | |
| | | | | 48 | 40 | G | | | | 4 | |
| | | | | | | | | NO | 0 | 5 | |
| | | | | | | | | NO | 0 | 6 | |
| | | | | | | | | | | 7 | |
| | | | | 48 | 44 | G | | NO | 0 | 8 | |
| | | | | | | | | | | 9 | |
| | | | | | | | | NO | 0 | 10 | |
| | | | | | | | | NO | 0 | 11 | |
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6" Concrete
Fill soil

Silty sand (SM), very dark grayish brown (10YR 3/2), moist, loose, 80% fine well sorted sand, 20% silt.

Silty sand (SM), dark yellowish brown (10YR 4/4), loose, moist (wet from 7'), 85% fine well sorted sand, 15% silt, sharp color change at 7.5' to very dark greenish gray (5GY 3/1).

Mottled dark greenish gray (5GY 4/1) and olive gray (5Y 4/2) clay content increase to 5%.

Total depth 12' bgs.

REGISTERED GEOLOGIST
ROBERT L. NELSON
No. 2087
CERTIFIED ENGINEERING GEOLOGIST
STATE OF CALIFORNIA

LOGGED BY: Robert L. Nelson

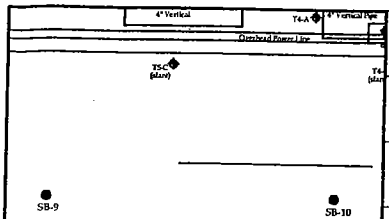
APPROVED BY: Eric Lervaag

## SOIL BORING AND WELL CONSTRUCTION LOG:

CLEARWATER GROUP

Project No. GB001H

Sheet 1 of 1




| CLIENT/LOCATION: Markus Supply Hardware 626 Second St. Oakland, CA | JOB NO#. GB001G | PROJ. MANAGER: E. Lervaag | BORING/WELL NO.: SB-9 |
|---|---|---|---|
| DRILLING CONTRACTOR: Fast-Tek | DRILL RIG TYPE: Geoprobe 5400 | WELL DEPTH: NA | BORING DIAMETER: 2" |
| DRILL RIG OPERATOR: Eric Austin | WELL MATERIAL: NA | BORING DEPTH: 12.0' | FILTER PACK: NA |
| | | | DRILLING DATE: 10/06/08 |

SAMPLING METHOD: Continuous Core

MONITORING INSTRUMENT: Photoionization Detector

| TPH-d mg/Kg | SAMPLE DEPTH | SAMPLE TYPE | BLOWS/6" INTERVAL | INCHES DRIVEN | INCHES RECOVERED | SAMPLE CONDITION | DRILLING RATE (min./ft) | ODOR | PID | DEPTH (FEET) | GRAPHIC LOG |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 48 | 35 | F | | | | 1 | |
| | | | | | | | | NO | 0 | 2 | |
| | | | | | | | | | | 3 | |
| | | | | 48 | 38 | F | | NO | 0 | 4 | |
| | | | | | | | | NO | 0 | 5 | |
| | | | | | | | | | | 6 | |
| | | | | | | | | NO | 0 | 7 | |
| | | | | 48 | 38 | F | | | | 8 | |
| | | | | | | | | NO | 0 | 9 | |
| | | | | | | | | | | 10 | |
| | | | | | | | | NO | 0 | 11 | |
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2" Asphalt
9" Concrete

Silty sand (SM), mottled dark yellowish brown (10YR 4/4), iron oxide stained, moist, loose, 75% medium fine sand, 20% silt, 5% clay.

Silty sand to clayey sand (SM-SC), greenish black (5GY 2.5/1), loose, wet, 80% fine well rounded sand, well sorted sand, 10% silt, 10% clay.

Total depth 12' bgs.

REGISTERED GEOLOGIST
ROBERT L. NELSON
No. 2087
CERTIFIED ENGINEERING GEOLOGIST
STATE OF CALIFORNIA

LOGGED BY: Robert L. Nelson

APPROVED BY: Eric Lervaag

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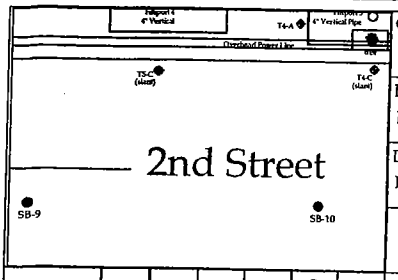
## SOIL BORING AND WELL CONSTRUCTION LOG:

CLEARWATER GROUP

Project No. GB001H

Sheet 1 of 1




| CLIENT/LOCATION: Markus Supply Hardware 626 Second St. Oakland, CA | JOB NO#. GB001G | PROJ. MANAGER: E. Lervaag | BORING/WELL NO.: SB-10 |
|---|---|---|---|
| DRILLING CONTRACTOR: Fast-Tek | DRILL RIG TYPE: Geoprobe 5400 | WELL DEPTH: NA | BORING DIAMETER: 2" |
| DRILL RIG OPERATOR: Eric Austin | WELL MATERIAL: NA | BORING DEPTH: 12.0' | FILTER PACK: NA |
| | | | DRILLING DATE: 10/06/08 |

SAMPLING METHOD: Continuous Core

MONITORING INSTRUMENT: Photoionization Detector

| TPH-d mg/Kg | SAMPLE DEPTH | SAMPLE TYPE | BLOWS/6" INTERVAL | INCHES DRIVEN | INCHES RECOVERED | SAMPLE CONDITION | DRILLING RATE (min/ft) | ODOR | PID | DEPTH (FEET) | GRAPHIC LOG |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 48 | 40 | G | | NO | 0 | 1 | |
| | | | | | | | | | | 2 | |
| | | | | | | | | NO | 0 | 3 | |
| | | | | | | | | | | 4 | |
| | | | | 48 | 38 | G | | NO | 0 | 5 | |
| | | | | | | | | | | 6 | |
| | | | | | | | | NO | 0 | 7 | |
| | | | | | | | | | | 8 | |
| | | | | 48 | 42 | G | | NO | 0 | 9 | |
| | | | | | | | | | | 10 | |
| | | | | | | | | NO | 0 | 11 | |
| | | | | | | | | NO | 0 | 12 | |
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2" Asphalt
6" Concrete

Silty sand to clayey sand (SM-SC), dark yellowish brown (10YR 4/4), grading to olive (5Y 4/3) at 5', loose, dry to moist.

Silty sand (SM), dark yellowish brown (10YR 4/4), loose, wet at 7.5', color change to very dark greenish gray (5GY 3/1) at 7.5', 85% medium fine sand, 10% silt, 5% clay.

Total depth 12' bgs.

REGISTERED GEOLOGIST
ROBERT L. NELSON
No. 2087
CERTIFIED ENGINEERING GEOLOGIST
STATE OF CALIFORNIA

LOGGED BY: Robert L. Nelson

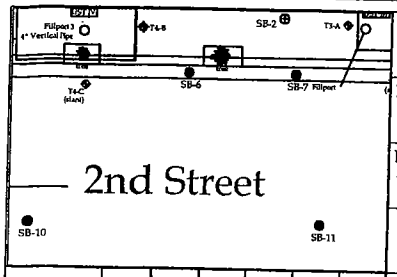
APPROVED BY: Eric Lervaag

# SOIL BORING AND WELL CONSTRUCTION LOG:

CLEARWATER GROUP

Project No. GB001H

Sheet 1 of 1




| CLIENT/LOCATION: Markus Supply Hardware 626 Second St. Oakland, CA | JOB NO#. GB001G | PROJ. MANAGER: E. Lervaag | BORING/WELL NO.: SB-11 |
|---|---|---|---|
| DRILLING CONTRACTOR: Fast-Tek | DRILL RIG TYPE: Geoprobe 5400 | WELL DEPTH: NA | BORING DIAMETER: 2" |
| DRILL RIG OPERATOR: Eric Austin | WELL MATERIAL: NA | BORING DEPTH: 16.0' | FILTER PACK: NA |
| | | | DRILLING DATE: 10/06/08 |

SAMPLING METHOD: Continuous Core

MONITORING INSTRUMENT: Photoionization Detector

| TPH-d mg/Kg | SAMPLE DEPTH | SAMPLE TYPE | BLOWS/6" INTERVAL | INCHES DRIVEN | INCHES RECOVERED | SAMPLE CONDITION | DRILLING RATE (min/ft) | ODOR | PID | DEPTH (FEET) | GRAPHIC LOG |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 48 | 40 | G | | | | 0 | |
| | | | | | | | | NO | 0 | 1 | |
| | | | | | | | | | | 2 | |
| | | | | | | | | NO | 0 | 3 | |
| | | | | | | | | | | 4 | |
| | | | | 48 | 40 | G | | | | 5 | |
| | | | | | | | | NO | 0 | 6 | |
| | | | | | | | | | | 7 | |
| | | | | | | | | NO | 0 | 8 | |
| | | | | 48 | 36 | F | | | | 9 | |
| | | | | | | | | NO | 0 | 10 | |
| | | | | | | | | | | 11 | |
| | | | | | | | | NO | 0 | 12 | |
| | | | | 48 | 40 | G | | | | 13 | |
| | | | | | | | | NO | 0 | 14 | |
| | | | | | | | | | | 15 | |
| | | | | | | | | NO | 0 | 16 | |
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2" Asphalt
6" Concrete

Silty sand (SM), very dark greenish gray (5GY 3/1), loose, moist, 85% medium to medium fine subrounded sand, 10% silt, 5% clay, trace of shells.

Wet.

Poorly graded sand (SP), greenish black (10G 2.5/1), loose, wet, 95% fine to medium subrounded well sorted sand, 5% silt, trace mica, trace of shells.

Refusal at 16'.
Total depth 16' bgs.

REGISTERED GEOLOGIST
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No. 2087
CERTIFIED ENGINEERING GEOLOGIST
STATE OF CALIFORNIA

LOGGED BY: Robert L. Nelson

APPROVED BY: Eric Lervaag

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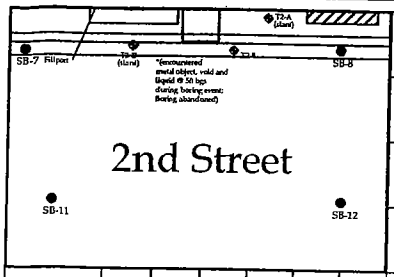
# SOIL BORING AND WELL CONSTRUCTION LOG:

CLEARWATER GROUP

Project No. GB001H

Sheet 1 of 1




| CLIENT/LOCATION: Markus Supply Hardware 626 Second St. Oakland, CA | JOB NO#. GB001G | PROJ. MANAGER: E. Lervaag | BORING/WELL NO.: SB-12 |
|---|---|---|---|
| DRILLING CONTRACTOR: Fast-Tek | DRILL RIG TYPE: Geoprobe 5400 | WELL DEPTH: NA | BORING DIAMETER: 2" |
| DRILL RIG OPERATOR: Eric Austin | WELL MATERIAL: NA | BORING DEPTH: 12.0' | FILTER PACK: NA |
| | | | DRILLING DATE: 10/06/08 |

SAMPLING METHOD: Continuous Core

MONITORING INSTRUMENT: Photoionization Detector

| TPH-d mg/Kg | SAMPLE DEPTH | SAMPLE TYPE | BLOWS/6" INTERVAL | INCHES DRIVEN | INCHES RECOVERED | SAMPLE CONDITION | DRILLING RATE (min/ft) | ODOR | PID | DEPTH (FEET) | GRAPHIC LOG |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 48 | 40 | G | | | | 0 | |
| | | | | | | | | NO | 0 | 1 | |
| | | | | | | | | | | 2 | |
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| | | | | 48 | 40 | G | | | | 4 | |
| | | | | | | | | NO | 0 | 5 | |
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| | | | | 48 | 44 | G | | | | 8 | |
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| | | | | | | | | NO | 0 | 10 | |
| | | | | | | | | NO | 0 | 11 | |
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2" Asphalt
6" Concrete

Silty sand (SM), dark yellowish brown (10YR 4/4), loose, moist, 60% fine to medium well rounded sand, 35% silt, 5% clay.

Silty sand to clayey sand (SM-SC), loose, moist, 80% fine to medium well rounded sand, 10% silt, 10% clay, trace shells, sand coarsens with depth to medium sand at 12', below 10' < 5% clay.

Water sample SB-12.
Total depth 12' bgs.

REGISTERED GEOLOGIST
ROBERT L. NELSON
No. 2087
CERTIFIED ENGINEERING GEOLOGIST
STATE OF CALIFORNIA

LOGGED BY: Robert L. Nelson

APPROVED BY: Eric Lervaag

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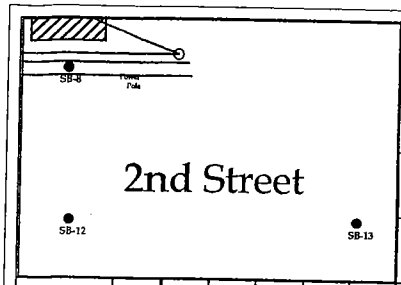
## SOIL BORING AND WELL CONSTRUCTION LOG:

CLEARWATER GROUP

Project No. GB001H

Sheet 1 of 1




| CLIENT/LOCATION: Markus Supply Hardware 626 Second St. Oakland, CA | JOB NO#. GB001G | PROJ. MANAGER: E. Lervaag | BORING/WELL NO.: SB-13 |
|---|---|---|---|
| DRILLING CONTRACTOR: Fast-Tek | DRILL RIG TYPE: Geoprobe 5400 | WELL DEPTH: NA | BORING DIAMETER: 2" |
| DRILL RIG OPERATOR: Eric Austin | WELL MATERIAL: NA | BORING DEPTH: 12.0' | FILTER PACK: NA |
| | | | DRILLING DATE: 10/06/08 |

SAMPLING METHOD: Continuous Core

MONITORING INSTRUMENT: Photoionization Detector

| TPH-d mg/Kg | SAMPLE DEPTH | SAMPLE TYPE | BLOWS/6" INTERVAL | INCHES DRIVEN | INCHES RECOVERED | SAMPLE CONDITION | DRILLING RATE (min/ft) | ODOR | PID | DEPTH (FEET) | GRAPHIC LOG |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 48 | 30 | F | | | | 1 | |
| | | | | | | | | NO | 0 | 2 | |
| | | | | | | | | | | 3 | |
| | | | | 48 | 40 | G | | NO | 0 | 4 | |
| | | | | | | | | | | 5 | |
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| | | | | | | | | FAINT | 0 | 7 | |
| | | | | 48 | 42 | G | | | | 8 | |
| | | | | | | | | NO | 0 | 9 | |
| | | | | | | | | | | 10 | |
| | | | | | | | | NO | 0 | 11 | |
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2" Asphalt
6" Concrete

Silty sand (SM), very dark greenish gray (5GY 3/1), loose, wet, 80% fine to medium sand, 15% silt, 5% clay.

Trace of shells below 4'.

Wet at 8', trace sheen on water.

Sand coarsens to medium at 9'.

Total depth 12' bgs.
Water level at 7.9' bgs at time of water sample SB-13W collection.

REGISTERED GEOLOGIST
ROBERT L. NELSON
No. 2087
CERTIFIED ENGINEERING GEOLOGIST
STATE OF CALIFORNIA

LOGGED BY: Robert L. Nelson

APPROVED BY: Eric Lervaag

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## SOIL BORING AND WELL CONSTRUCTION LOG:

CLEARWATER GROUP

Project No. GB001H

Sheet 1 of 1

**2nd Street**

SB-14 SB-15

| | | | |
|---|---|---|---|
| CLIENT/LOCATION: Markus Supply Hardware 626 Second St. Oakland, CA | JOB NO#. GB001G | PROJ. MANAGER: E. Lervaag | BORING/WELL NO.: SB-14 |
| DRILLING CONTRACTOR: Fast-Tek | DRILL RIG TYPE: Geoprobe 5400 | WELL DEPTH: NA | BORING DIAMETER: 2" |
| DRILL RIG OPERATOR: Eric Austin | WELL MATERIAL: NA | BORING DEPTH: 12.0' | FILTER PACK: NA |
| | | | DRILLING DATE: 10/09/08 |

SAMPLING METHOD: Continuous Core

MONITORING INSTRUMENT: Photoionization Detector

| TPH-d mg/Kg | SAMPLE DEPTH | SAMPLE TYPE | BLOWS/6" INTERVAL | INCHES DRIVEN | INCHES RECOVERED | SAMPLE CONDITION | DRILLING RATE (min/ft) | ODOR | PID | DEPTH (FEET) | GRAPHIC LOG |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | NO | 0 | 1 | |
| | | | | | | | | | | 2 | |
| | | | | | | | | | | 3 | |
| | | | | 48 | 42 | G | | NO | 0 | 4 | |
| | | | | | | | | | | 5 | |
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| | | | | 48 | 42 | G | | NO | 0 | 8 | |
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Poorly graded fine to medium sand with silt (SP-SM), dark brown (10YR 4/1), very soft, moist, loose, 80% fine sand, 10% medium sand (fill).

Poorly graded fine sand with silt (SP-SM), olive brown (2.5YR 4/3), very soft, wet, 90% fine sand, 10% silt.

Silty fine to very fine sand (SM), brown (10YR 5/3), very soft, wet, 70% fine sand, 20% silt, 10% very fine sand.

Clayey fine to very fine sand (SC), brown (10YR 5/3), very soft, moist, iron staining yellow and gray, 70% fine sand, 15% clay, 10% very fine sand, 5% silt.

Total depth 12' bgs.

Water sample collected at 6.5'.

REGISTERED GEOLOGIST
ROBERT L. NELSON
No. 2087
CERTIFIED ENGINEERING GEOLOGIST
STATE OF CALIFORNIA

LOGGED BY: Arron Wilder

APPROVED BY: Eric Lervaag

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# SOIL BORING AND WELL CONSTRUCTION LOG:

CLEARWATER GROUP

Project No. GB001H

Sheet 1 of 1

2nd Street

SB-15 SB-16

| CLIENT/LOCATION: Markus Supply Hardware 626 Second St. Oakland, CA | JOB NO#. GB001G | PROJ. MANAGER: E. Lervaag | BORING/WELL NO.: SB-15 |
|---|---|---|---|
| DRILLING CONTRACTOR: Fast-Tek | DRILL RIG TYPE: Geoprobe 5400 | WELL DEPTH: NA | BORING DIAMETER: 2" |
| DRILL RIG OPERATOR: Eric Austin | WELL MATERIAL: NA | BORING DEPTH: 32.0' | FILTER PACK: NA |
| | | | DRILLING DATE: 10/09/08 |

SAMPLING METHOD: Continuous Core

MONITORING INSTRUMENT: Photoionization Detector

| TPH-d mg/Kg | SAMPLE DEPTH | SAMPLE TYPE | BLOWS/6" INTERVAL | INCHES DRIVEN | INCHES RECOVERED | SAMPLE CONDITION | DRILLING RATE (min/ft) | ODOR | PID | DEPTH (FEET) | GRAPHIC LOG | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | NO | 0 | 1 | | Poorly graded fine to medium sand with silt (SP-SM), dark brown (10YR 4/1), firm, moist, loose, 80% fine sand, 10% medium sand (fill). |
| | | | | 48 | 48 | G | | NO | 0 | 4 | | Poorly graded sand with silt (SP-SM), very dark brown (7.5YR 4/1), soft, moist, 90% fine sand, 10% silt. |
| | | | | | | | | | | 6 ▽ | | |
| | | | | 48 | 48 | G | | NO | 0 | 8 | | Poorly graded fine sand (SP), brown (10YR 4/3), loose, wet, soft, 95% fine sand, 5% very fine sand. |
| | | | | | | | | | | 11 | | |
| | | | | 48 | 48 | G | | NO | 0 | 12 | | Clayey fine and very fine sand (SC), brown (10YR 4/3), soft, moist, low plasticity, 70% fine sand, 15% very fine sand, 15% clay. |
| | | | | | | | | | | 15 | | Silty sand (SM), gray, soft, wet, loose, 80% fine sand, 15% silt, 5% very fine sand, moist, silt increases. |
| | | | | 48 | 48 | G | | NO | 0 | 16 | | |
| | | | | | | | | | | 18 | | Poorly graded sand with silt (SP-SM), dark greenish gray (5GY 4/1), wet, very soft,, 90% very fine sand, 10% silt. |
| | | | | 48 | 48 | G | | NO | 0 | 20 | | |
| | | | | | | | | | | 23 | | |
| | | | | 48. | 48 | G | | NO | 0 | 24 | | Poorly graded sand with clay (SP-SC), dark greenish gray (5GY 4/1), very soft, wet, 90% very fine sand, 10% silt. |
| | | | | | | | | | | 27 | | Poorly graded sand with silt (SP-SM), grayish brown, very soft, wet, 90% very fine sand, 10% silt. |
| | | | | | | | | | | 29 | | Poorly graded (SP), gray, soft, moist, 95% very fine sand, 5% silt. |
| | | | | | | | | | | 31 | | Clayey sand (SC), yellowish brown (2.5Y 5/4), moist, dense, 80% fine sand, 15% clay, 5% silt. Total depth 32' bgs. |

REGISTERED GEOLOGIST
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No. 2087
CERTIFIED ENGINEERING GEOLOGIST
STATE OF CALIFORNIA

LOGGED BY: Arron Wilder

APPROVED BY: Eric Lervaag

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# SOIL BORING AND WELL CONSTRUCTION LOG:

CLEARWATER GROUP

Project No. GB001H

Sheet 1 of 1

2nd Street

SB-15 SB-16

| CLIENT/LOCATION: Markus Supply Hardware 626 Second St. Oakland, CA | JOB NO#. GB001G | PROJ. MANAGER: E. Lervaag | BORING/WELL NO.: SB-16 |
|---|---|---|---|
| DRILLING CONTRACTOR: Fast-Tek | DRILL RIG TYPE: Geoprobe 5400 | WELL DEPTH: NA | BORING DIAMETER: 2" |
| DRILL RIG OPERATOR: Eric Austin | WELL MATERIAL: NA | BORING DEPTH: 28.0' | FILTER PACK: NA |
| | | | DRILLING DATE: 10/09/08 |

SAMPLING METHOD: Continuous Core

MONITORING INSTRUMENT: Photoionization Detector

| TPH-d mg/Kg | SAMPLE DEPTH | SAMPLE TYPE | BLOWS/6" INTERVAL | INCHES DRIVEN | INCHES RECOVERED | SAMPLE CONDITION | DRILLING RATE (min/ft) | ODOR | PID | DEPTH (FEET) | GRAPHIC LOG | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | NO | 0 | 1 | | Poorly graded fine to medium sand with silt (SP-SM), dark brown (7.5YR 4/1), firm, moist, (fill), 80% fine sand, 10% medium sand. |
| | | | | 48 | 12 | | | NO | 0 | 4 | | Poorly graded fine sand with silt (SP-SM), brown (10YR 5/3), loose, moist, 85% fine sand, 10% silt, 5% medium sand. |
| | | | | 48 | 12 | | | NO | 0 | 8 | | Poorly graded fine sand with silt (SP-SM), dark greenish gray (5GY 4/1), wet, 85% fine sand, 10% silt, 5% medium sand. |
| | | | | | | | | | | 10 | | Poorly graded gravel (GP), very hard, wet, 80% coarse gravel, 20% fine gravel. |
| | | | | 48 | 48 | G | | NO | 0 | 12 | | Clayey sand (SC), medium grayish brown, very soft, loose, low plasticity, wet, 80% fine sand, 5% silt, 5% very fine sand. |
| | | | | | | | | | | 14 | | Silty sand (SM), dark greenish gray (5GY 4/1), loose, wet, iron staining, 80% fine sand, 15% silt, 5% very fine sand. |
| | | | | 48 | 48 | | | NO | 0 | 16 | | Poorly graded sand with silt (SP-SM), dark gray (5GY 4/1), loose, wet, iron staining, 90% very fine sand, 10% silt. |
| | | | | 48 | 48 | | | NO | 0 | 20 | | Poorly graded sand (SP-SC), dark gray (5GY 4/1), loose, wet, very soft, 85% fine sand, 15% clay, 5% silt. |
| | | | | 48 | 48 | | | NO | 0 | 24 | | Poorly graded sand with silt (SP-SM), 85% fine sand, moist, iron staining, 15% silt. |
| | | | | | | | | | | 25 | | Poorly graded sand (SP), loose, wet, 90% very fine sand, 10% fine sand. |
| | | | | 48 | 0 | | | | | 28 | | Total depth 28' bgs. No recovery |

LOGGED BY: Arron Wilder

APPROVED BY: Eric Lervaag

REGISTERED GEOLOGIST
ROBERT L. NELSON
No. 2087
CERTIFIED ENGINEERING GEOLOGIST
STATE OF CALIFORNIA

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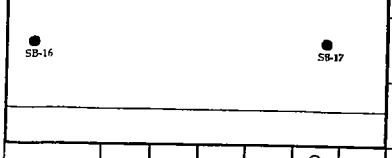
## SOIL BORING AND WELL CONSTRUCTION LOG:

CLEARWATER GROUP

Project No. GB001H

Sheet 1 of 1




| CLIENT/LOCATION: Markus Supply Hardware 626 Second St. Oakland, CA | JOB NO#. GB001G | PROJ. MANAGER: E. Lervaag | BORING/WELL NO.: SB-17 |
|---|---|---|---|
| DRILLING CONTRACTOR: Fast-Tek | DRILL RIG TYPE: Geoprobe 5400 | WELL DEPTH: NA | BORING DIAMETER: 2" |
| DRILL RIG OPERATOR: Eric Austin | WELL MATERIAL: NA | BORING DEPTH: 12.0' | FILTER PACK: NA |
| | | | DRILLING DATE: 10/09/08 |

SAMPLING METHOD: Continuous Core

MONITORING INSTRUMENT: Photoionization Detector

| TPH-d mg/Kg | SAMPLE DEPTH | SAMPLE TYPE | BLOWS/6" INTERVAL | INCHES DRIVEN | INCHES RECOVERED | SAMPLE CONDITION | DRILLING RATE (min/ft) | ODOR | PID | DEPTH (FEET) | GRAPHIC LOG |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | NO | 0 | 1 | |
| | | | | | | | | | | 2 | |
| | | | | | | | | | | 3 | |
| | | | | 48 | 48 | | | NO | 0 | 4 | |
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| | | | | | | | | | | 6 | |
| | | | | | | | | | | 7 | |
| | | | | 48 | 48 | | | NO | 0 | 8 | |
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| | | | | | | | | | | 30 | |

Well graded fine to medium sand (SW-SM), dark brown (7.5YR 4/1), moist, loose, 80% fine sand, 10% medium sand, 10% silt.

Well graded fine sand (SW), reddish brown, loose, moist, 60% fine sand, 20% very fine sand, 10% coarse sand.

Poorly graded sand with silt (SP-SM), grayish brown, iron staining, wet, loose, 80% fine sand, 10% very fine sand.

Poorly graded sand with silt (SP-SM), loose, moist, 85% fine sand, 15% very fine sand.

Total depth 12' bgs.

Groundwater sample collected at 6.5' bgs

REGISTERED GEOLOGIST
ROBERT L. NELSON
No. 2087
CERTIFIED ENGINEERING GEOLOGIST
STATE OF CALIFORNIA

LOGGED BY: Arron Wilder

APPROVED BY: Eric Lervaag

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## SOIL BORING AND WELL CONSTRUCTION LOG:

CLEARWATER GROUP

Project No. GB001H

Sheet 1 of 1

2nd Street

SB-17 SB-18

| CLIENT/LOCATION: Markus Supply Hardware 626 Second St. Oakland, CA | JOB NO#. GB001G | PROJ. MANAGER: E. Lervaag | BORING/WELL NO.: SB-18 |
|---|---|---|---|
| DRILLING CONTRACTOR: Fast-Tek | DRILL RIG TYPE: Geoprobe 5400 | WELL DEPTH: NA | BORING DIAMETER: 2" |
| DRILL RIG OPERATOR: Eric Austin | WELL MATERIAL: NA | BORING DEPTH: 12.0' | FILTER PACK: NA |
| | | | DRILLING DATE: 10/09/08 |

SAMPLING METHOD: Continuous Core

MONITORING INSTRUMENT: Photoionization Detector

| TPH-d mg/Kg | SAMPLE DEPTH | SAMPLE TYPE | BLOWS/6" INTERVAL | INCHES DRIVEN | INCHES RECOVERED | SAMPLE CONDITION | DRILLING RATE (min/ft) | ODOR | PID | DEPTH (FEET) | GRAPHIC LOG |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | NO | 0 | 1 | |
| | | | | | | | | | | 2 | |
| | | | | | | | | | | 3 | |
| | | | | 48 | 48 | G | | NO | 0 | 4 | |
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| | | | | | | | | | | 6 | |
| | | | | | | | | | | 7 | |
| | | | | 48 | 48 | G | | NO | 0 | 8 | |
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| | | | | | | | | | | 30 | |

Well graded sand with silt (SW-SM), dark brown (10YR 4/1), loose, moist, 80% fine sand, 10% silt, 10% very fine sand.

Well graded fine sand (SW), trace of silt, reddish brown, loose, moist, 60% fine sand, 15% very fine sand, 15% medium sand.

Poorly graded fine sand (SP), trace silt, orangeish brown, loose, wet, 80% fine sand, 15% very fine sand.

Silty fine sand (SW-SM), little silt, trace of clay, iron staining, moist, 75% fine sand, 10% silt, 10% very fine sand.

Total depth 12' bgs.

Groundwater sample collected at 6.5' bgs

REGISTERED GEOLOGIST
ROBERT L. NELSON
No. 2087
CERTIFIED ENGINEERING GEOLOGIST
STATE OF CALIFORNIA

LOGGED BY: Arron Wilder

APPROVED BY: Eric Lervaag

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# APPENDIX C

**CLEARWATER GROUP**

**Direct-Push Drilling Investigation Procedures**

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The direct-push method of drilling soil borings has several advantages over hollow-stem auger drilling. The direct-push method produces no drill cuttings and is capable of 150 to 200 feet of soil boring or well installation work per day. Direct-push drilling can be used for soil gas surveys, soil sampling, groundwater sampling, and installation of small-diameter monitoring well and remediation system components such as air sparge points. The equipment required to perform direct-push work is varied, ranging from a roto-hammer and operator to a pickup truck-mounted rig capable of substantial static downward force combined with percussive force. This method allows subsurface investigation work to be performed in areas inaccessible to conventional drill rigs such as basements, beneath canopies, or below power lines. Direct-push equipment is ideal at sites with unconsolidated soil or overburden, and for sampling depths less than 30 feet. This method is not appropriate for boring through bedrock or gravelly soils.

**Permitting and Site Preparation**

Prior to direct-push drilling, Clearwater Group will obtain all necessary permits and locate all underground and above-ground utilities through Underground Service Alert and a thorough site inspection. All drilling equipment will be inspected daily and will be maintained in safe operating condition. All down-hole drilling equipment will be cleaned prior to arriving on-site. Working components of the rig near the borehole, as well as casing and sampling equipment, will be thoroughly decontaminated between each boring location by either steam cleaning or washing with an Alconox® solution. All drilling and sampling methods will be consistent with ASTM Method D-1452-80 and county, state, and federal regulations.

**Boring Installation and Soil Sampling**

Direct-push drilling uses a 1.5-inch outer barrel with an inner rod held in place during pushing. Soil samples are collected by penetrating to the desired depth, retracting the inner rod, and attaching a soil sampler. The sampler is then thrust beyond the outer barrel into native soil. Soil samples are recovered in brass, stainless steel, or acetate sample tubes held inside the sampler.

Soil removed from the upper tube section is used for lithologic descriptions, according to the Unified Soil Classification System. If organic vapors will be analyzed in the field, a portion of each soil sample will be placed in a plastic zip-lock bag. The bag will be sealed and warmed for approximately 10 minutes to allow soil vapors to be released from the sample and diffused into the head space of the bag. The bag is then pierced with the probe of a calibrated organic vapor detector and the detector readings recorded with the lithologic descriptions on the soil boring log. Soil samples selected for laboratory analysis will be covered on both ends with Teflon™ tape and plastic end caps. The samples will then be labeled, recorded on a chain-of-custody document, stored on ice in a cooler, and transported to a state-certified analytical laboratory.

**Temporary Well Installation and Groundwater Sampling**

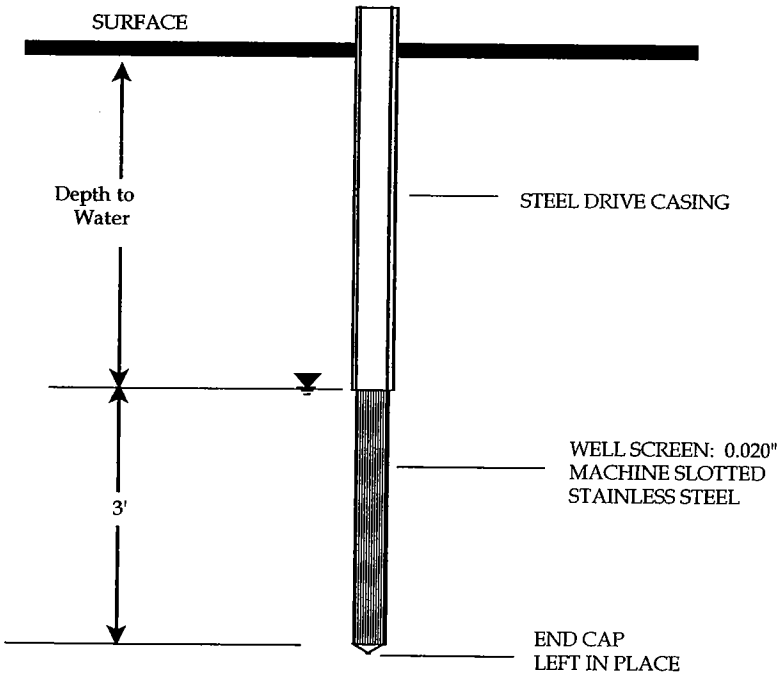


Figure 1

**Grab Groundwater Sample Collection**

Groundwater samples are collected by removing the inner rod and attaching a 4-foot stainless steel screen with a drive point at the end (**Figure 1**). The screen and rod are then inserted inside the outer barrel and driven to the desired depth, where the outer rod is retracted to expose the screen. If enough water for sampling is not produced through the stainless well screen, a 1-inch

PVC screen can be installed in the boring and the outer rod retracted to leave a temporary well point for collecting groundwater samples, water level, or other parameters.

**Monitoring Well Installation and Development**

Permanent small-diameter monitoring wells are installed by driving a 2-inch diameter outer barrel and inner rod as described above. Upon reaching the desired depth, the system is removed, and 1-inch outside diameter (OD) (1/2-inch inside diameter [ID]) pre-packed PVC piping is installed. The well plug is created using granular bentonite. The well seal is constructed of cement and sealed at the surface with a conventional "Christy® Box" or similar vault. Monitoring wells are developed by surging the well with a small-diameter bailer and removing approximately 10 casing volumes of water, until the water is clear.

**Groundwater Sample Collection and Water Level Measurement from Monitoring Wells**

Before groundwater is collected from the wells, the water levels are measured in all wells using an electronic water-level gauge. Monitoring wells are prepared for sampling by purging three or more well volumes of water. Water is removed using small-diameter bailers, a peristaltic pump, or by manually pumping using tubing with a check valve at the bottom. During removal of each well volume of water, the temperature, pH, and conductivity are measured and recorded on the field sampling form. Successive well volumes are removed until the parameters have stabilized or the well has gone dry. Prior to sampling, the well is allowed to recover to within 90% of the stabilized water levels. The groundwater samples[1] are collected using small-diameter bailers.

The samples are decanted into laboratory-supplied containers, labeled, recorded on a chain-of-custody document, stored on ice in a cooler, and transported to a certified analytical laboratory for analysis.

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[1] Small-diameter wells often produce small sample quantities and are appropriate for analysis of volatile and aromatic compounds and dissolved metals analysis using VOA vials. Obtaining liter-size samples can be difficult and time consuming. Monitoring wells installed by the direct-push method are most effective at sites where the subsurface soils are more coarse than silt, gasoline components are the key contaminants of concern, and water levels are not more than 25 feet below ground surface.

# CLEARWATER GROUP

## Grab Groundwater Sample Collection Protocol

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Permits, Site Safety Plan, Utility Clearance

Clearwater Group (Clearwater) staff will obtain all the required permits, unless contracted by a permitting party. Clearwater prepares a site-specific Site Safety Plan detailing site hazards, site safety and control, decontamination procedures, and emergency response procedures to be employed throughout the work. Usually seven, and at least two, working days prior to drilling, Underground Service Alert (USA) will be notified of the planned work. Clearwater attempts to locate all underground and above-ground utilities by site inspection and with hand-held magnetic line locating equipment, in conjunction with its subcontractors and knowledgeable site managers, and review the site as-built drawings. Clearwater may employ a private, professional utility locator or a subcontractor who performs ground penetrating radar surveys, to refine the site utility inspection. Clearwater provides notification to those agencies which require notification prior to drilling in order to schedule a grouting inspection.

Drilling Equipment

All soil borings are drilled using a truck-mounted, direct-push, Geoprobe® drill rig, unless site conditions warrant a different drilling method. Subsurface conditions permitting, the first five feet of each boring is advanced using a hand-auger or post-hole digger. All drilling equipment will be inspected daily and maintained in safe working condition by the operator. All down-hole drilling equipment will be steam cleaned prior to arriving on site. Working components of the drill rig near the borehole, as well as probe rods, will be thoroughly steam cleaned between each boring location. All drilling and sampling methods will be consistent with local, state, and federal regulations.

Grab Groundwater Sample Collection

- Drive the soil boring to the depth zone(s) of interest. For petroleum hydrocarbons and floating compounds, the primary zone of interest is the top of static groundwater. For

dense non-aqueous-phase liquid compounds, the zone of interest will be below the top of static groundwater and above an aquitard.

- Remove the Geoprobe® rods from the boring, and insert a short (5-foot-long or less), 1-inch diameter PVC temporary well screen. Attach enough blank well casing above the well screen to reach the target depth.
- If the boring was drilled with a hollow-stem auger, it may be possible to collect the sample from within the augers without setting temporary well casing.
- Lower a clean disposable bailer down the temporary well casing to collect the grab groundwater sample.
- Decant the sample into laboratory-provided containers.
- Seal and label the containers, and record the sample information on a Chain-of-Custody document.
- Place the labeled containers in watertight plastic bags (zip-lock opening).
- Store the sample in a cooler containing ice.
- Block the bags of samples with bubblewrap to prevent container breakage.
- Remove the temporary well casing.
- Grout the boring with bentonite chips or cement grout according to agency regulations.
- Hydrate the bentonite chips with clean water.
- Patch the ground surface with concrete, asphalt cold patch, or other material to match the ground surface.
- Measure the sample location from known landmarks using a tape measure and/or use a global positioning system (GPS) to locate the sample. If a GPS is used, located nearby landmarks with the GPS, and confirm the locations with a tape measure.
- Sketch the sample location in the field notes with dimensions.
- Photograph the sample location with nearby landmarks visible in the photograph's background.

Recordkeeping

Proper record keeping consists of recording the following information, at a minimum:

- Sample identification information (location, depth, sample identifiers, data, and time)

- Chain-of-custody document
- Field personnel
- Weather conditions (temperature, wind speed, precipitation, etc.)
- Sampling method, devices, and equipment used
- Shipment information, including a copy of the FedEx, or other transporter, shipping label and tracking number.

Quality Assurance Procedures

To prevent contamination of the samples, Clearwater personnel adhere to the following procedures in the field:

- Put on a new, clean pair of latex gloves prior to collecting each sample.
- Collect samples in the expected order of increasing degree of contamination based on historical analytical results.
- All sampling equipment will be thoroughly decontaminated between each boring.

Soil Waste Management

Soil cuttings will be stockpiled onsite and covered with plastic sheeting to control runoff, or contained in labeled 55-gallon D.O.T.-approved drums, pending disposal. Wastes will be sampled, to profile them for disposal, and, once profiled and accepted, hauled by a licensed waste hauler to an appropriate landfill. All waste stored on site will be properly labeled at the time of production.

# APPENDIX D

KIFF Analytical LLC

Report Number : 65220
Date : 10/15/2008

Erik Lervaag
The Auger Group
229 Tewksbury Avenue
Point Richmond, CA 94801

Subject : 15 Soil Samples and 5 Water Samples
Project Name : Marcus Hardware
Project Number : GB001H

Dear Mr. Lervaag,

Chemical analysis of the samples referenced above has been completed. Summaries of the data are contained on the following pages. Sample(s) were received under documented chain-of-custody. US EPA protocols for sample storage and preservation were followed.

Kiff Analytical is certified by the State of California (# 2236). If you have any questions regarding procedures or results, please call me at 530-297-4800.

Sincerely,

Joel Kiff

KIFF Analytical LLC

Report Number : 65220
Date : 10/15/2008

Project Name : **Marcus Hardware**
Project Number : **GB001H**

Sample : **SB-5-4** Matrix : Soil Lab Number : 65220-01
Sample Date :10/07/2008

| Parameter | Measured Value | Method Reporting Limit | Units | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|
| **Lead** | **8.2** | 0.50 | mg/Kg | EPA 6010B | 10/13/2008 |
| **Benzene** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/09/2008 |
| **Toluene** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/09/2008 |
| **Ethylbenzene** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/09/2008 |
| **Total Xylenes** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/09/2008 |
| **Methyl-t-butyl ether (MTBE)** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/09/2008 |
| **TPH as Gasoline** | **< 1.0** | 1.0 | mg/Kg | EPA 8260B | 10/09/2008 |
| **1,2-Dichloroethane** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/09/2008 |
| **1,2-Dibromoethane** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/09/2008 |
| 1,2-Dichloroethane-d4 (Surr) | 101 | | % Recovery | EPA 8260B | 10/09/2008 |
| Toluene - d8 (Surr) | 97.8 | | % Recovery | EPA 8260B | 10/09/2008 |
| **TPH as Diesel** | **9.7** | 1.0 | mg/Kg | M EPA 8015 | 10/10/2008 |
| (Note: Hydrocarbons are higher-boiling than typical Diesel Fuel.) | | | | | |
| 1-Chlorooctadecane (Diesel Surrogate) | 86.4 | | % Recovery | M EPA 8015 | 10/10/2008 |

KIFF Analytical LLC

Report Number : 65220
Date : 10/15/2008

Project Name : **Marcus Hardware**
Project Number : **GB001H**

Sample : **SB-5-8** Matrix : Soil Lab Number : 65220-02
Sample Date :10/07/2008

| Parameter | Measured Value | Method Reporting Limit | Units | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|
| **Lead** | **2.5** | 0.50 | mg/Kg | EPA 6010B | 10/13/2008 |
| **Benzene** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/09/2008 |
| **Toluene** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/09/2008 |
| **Ethylbenzene** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/09/2008 |
| **Total Xylenes** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/09/2008 |
| **Methyl-t-butyl ether (MTBE)** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/09/2008 |
| **TPH as Gasoline** | **< 1.0** | 1.0 | mg/Kg | EPA 8260B | 10/09/2008 |
| **1,2-Dichloroethane** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/09/2008 |
| **1,2-Dibromoethane** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/09/2008 |
| 1,2-Dichloroethane-d4 (Surr) | 99.1 | | % Recovery | EPA 8260B | 10/09/2008 |
| Toluene - d8 (Surr) | 97.7 | | % Recovery | EPA 8260B | 10/09/2008 |
| **TPH as Diesel** | **5.8** | 1.0 | mg/Kg | M EPA 8015 | 10/10/2008 |
| (Note: Hydrocarbons are higher-boiling than typical Diesel Fuel.) | | | | | |
| 1-Chlorooctadecane (Diesel Surrogate) | 96.3 | | % Recovery | M EPA 8015 | 10/10/2008 |

KIFF Analytical LLC

Report Number : 65220
Date : 10/15/2008

Project Name : **Marcus Hardware**
Project Number : **GB001H**

Sample : **SB-5-W** Matrix : Water Lab Number : 65220-03
Sample Date :10/07/2008

| Parameter | Measured Value | Method Reporting Limit | Units | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|
| **Benzene** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 10/11/2008 |
| **Toluene** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 10/11/2008 |
| **Ethylbenzene** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 10/11/2008 |
| **Total Xylenes** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 10/11/2008 |
| **Methyl-t-butyl ether (MTBE)** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 10/11/2008 |
| **TPH as Gasoline** | **< 50** | 50 | ug/L | EPA 8260B | 10/11/2008 |
| **1,2-Dichloroethane** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 10/11/2008 |
| **1,2-Dibromoethane** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 10/11/2008 |
| 1,2-Dichloroethane-d4 (Surr) | 100 | | % Recovery | EPA 8260B | 10/11/2008 |
| Toluene - d8 (Surr) | 97.3 | | % Recovery | EPA 8260B | 10/11/2008 |
| **TPH as Diesel** | **3600** | 250 | ug/L | M EPA 8015 | 10/14/2008 |
| (Note: Hydrocarbons are higher-boiling than typical Diesel Fuel.) | | | | | |
| Octacosane (Diesel Surrogate) | 130 | | % Recovery | M EPA 8015 | 10/14/2008 |

KIFF Analytical LLC

Report Number : 65220
Date : 10/15/2008

Project Name : **Marcus Hardware**
Project Number : **GB001H**

Sample : **SB-4-4** Matrix : Soil Lab Number : 65220-04
Sample Date :10/07/2008

| Parameter | Measured Value | Method Reporting Limit | Units | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|
| **Lead** | **44** | 0.50 | mg/Kg | EPA 6010B | 10/13/2008 |
| **Benzene** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/10/2008 |
| **Toluene** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/10/2008 |
| **Ethylbenzene** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/10/2008 |
| **Total Xylenes** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/10/2008 |
| **Methyl-t-butyl ether (MTBE)** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/10/2008 |
| **TPH as Gasoline** | **< 1.0** | 1.0 | mg/Kg | EPA 8260B | 10/10/2008 |
| **1,2-Dichloroethane** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/10/2008 |
| **1,2-Dibromoethane** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/10/2008 |
| 1,2-Dichloroethane-d4 (Surr) | 103 | | % Recovery | EPA 8260B | 10/10/2008 |
| Toluene - d8 (Surr) | 89.9 | | % Recovery | EPA 8260B | 10/10/2008 |
| **TPH as Diesel** | **11** | 1.0 | mg/Kg | M EPA 8015 | 10/10/2008 |
| (Note: Hydrocarbons are higher-boiling than typical Diesel Fuel.) | | | | | |
| 1-Chlorooctadecane (Diesel Surrogate) | 93.5 | | % Recovery | M EPA 8015 | 10/10/2008 |

KIFF Analytical LLC

Report Number : 65220
Date : 10/15/2008

Project Name : **Marcus Hardware**
Project Number : **GB001H**

Sample : **SB-4-8** Matrix : Soil Lab Number : 65220-05
Sample Date :10/07/2008

| Parameter | Measured Value | Method Reporting Limit | Units | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|
| **Lead** | **1.9** | 0.50 | mg/Kg | EPA 6010B | 10/13/2008 |
| **Benzene** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/10/2008 |
| **Toluene** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/10/2008 |
| **Ethylbenzene** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/10/2008 |
| **Total Xylenes** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/10/2008 |
| **Methyl-t-butyl ether (MTBE)** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/10/2008 |
| **TPH as Gasoline** | **< 1.0** | 1.0 | mg/Kg | EPA 8260B | 10/10/2008 |
| **1,2-Dichloroethane** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/10/2008 |
| **1,2-Dibromoethane** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/10/2008 |
| 1,2-Dichloroethane-d4 (Surr) | 102 | | % Recovery | EPA 8260B | 10/10/2008 |
| Toluene - d8 (Surr) | 97.4 | | % Recovery | EPA 8260B | 10/10/2008 |
| **TPH as Diesel** | **< 1.0** | 1.0 | mg/Kg | M EPA 8015 | 10/13/2008 |
| 1-Chlorooctadecane (Diesel Surrogate) | 89.7 | | % Recovery | M EPA 8015 | 10/13/2008 |

KIFF Analytical LLC

Report Number : 65220
Date : 10/15/2008

Project Name : **Marcus Hardware**
Project Number : **GB001H**

Sample : **SB-4-10** Matrix : Soil Lab Number : 65220-06
Sample Date :10/07/2008

| Parameter | Measured Value | Method Reporting Limit | Units | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|
| **Lead** | **1.9** | 0.50 | mg/Kg | EPA 6010B | 10/13/2008 |
| **Benzene** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/10/2008 |
| **Toluene** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/10/2008 |
| **Ethylbenzene** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/10/2008 |
| **Total Xylenes** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/10/2008 |
| **Methyl-t-butyl ether (MTBE)** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/10/2008 |
| **TPH as Gasoline** | **< 1.0** | 1.0 | mg/Kg | EPA 8260B | 10/10/2008 |
| **1,2-Dichloroethane** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/10/2008 |
| **1,2-Dibromoethane** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/10/2008 |
| 1,2-Dichloroethane-d4 (Surr) | 102 | | % Recovery | EPA 8260B | 10/10/2008 |
| Toluene - d8 (Surr) | 90.6 | | % Recovery | EPA 8260B | 10/10/2008 |
| **TPH as Diesel** | **1.0** | 1.0 | mg/Kg | M EPA 8015 | 10/10/2008 |
| (Note: Hydrocarbons are higher-boiling than typical Diesel Fuel.) | | | | | |
| 1-Chlorooctadecane (Diesel Surrogate) | 100 | | % Recovery | M EPA 8015 | 10/10/2008 |

KIFF Analytical LLC

Report Number : 65220
Date : 10/15/2008

Project Name : **Marcus Hardware**
Project Number : **GB001H**

Sample : **SB-4-W** Matrix : Water Lab Number : 65220-07
Sample Date :10/07/2008

| Parameter | Measured Value | Method Reporting Limit | Units | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|
| **Benzene** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 10/11/2008 |
| **Toluene** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 10/11/2008 |
| **Ethylbenzene** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 10/11/2008 |
| **Total Xylenes** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 10/11/2008 |
| **Methyl-t-butyl ether (MTBE)** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 10/11/2008 |
| **TPH as Gasoline** | **< 50** | 50 | ug/L | EPA 8260B | 10/11/2008 |
| **1,2-Dichloroethane** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 10/11/2008 |
| **1,2-Dibromoethane** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 10/11/2008 |
| 1,2-Dichloroethane-d4 (Surr) | 104 | | % Recovery | EPA 8260B | 10/11/2008 |
| Toluene - d8 (Surr) | 97.5 | | % Recovery | EPA 8260B | 10/11/2008 |
| **TPH as Diesel** | **12000** | 1000 | ug/L | M EPA 8015 | 10/15/2008 |
| (Note: Hydrocarbons are higher-boiling than typical Diesel Fuel.) | | | | | |
| Octacosane (Diesel Surrogate) | Diluted Out | | % Recovery | M EPA 8015 | 10/15/2008 |

KIFF Analytical LLC

Report Number : 65220
Date : 10/15/2008

Project Name : **Marcus Hardware**
Project Number : **GB001H**

Sample : **SB-8-4** Matrix : Soil Lab Number : 65220-08
Sample Date :10/07/2008

| Parameter | Measured Value | Method Reporting Limit | Units | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|
| **Lead** | **2.2** | 0.50 | mg/Kg | EPA 6010B | 10/13/2008 |
| **Benzene** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/10/2008 |
| **Toluene** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/10/2008 |
| **Ethylbenzene** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/10/2008 |
| **Total Xylenes** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/10/2008 |
| **Methyl-t-butyl ether (MTBE)** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/10/2008 |
| **TPH as Gasoline** | **< 1.0** | 1.0 | mg/Kg | EPA 8260B | 10/10/2008 |
| **1,2-Dichloroethane** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/10/2008 |
| **1,2-Dibromoethane** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/10/2008 |
| 1,2-Dichloroethane-d4 (Surr) | 98.6 | | % Recovery | EPA 8260B | 10/10/2008 |
| Toluene - d8 (Surr) | 97.2 | | % Recovery | EPA 8260B | 10/10/2008 |
| **TPH as Diesel** (Note: Hydrocarbons are higher-boiling than typical Diesel Fuel.) | **3.2** | 1.0 | mg/Kg | M EPA 8015 | 10/11/2008 |
| 1-Chlorooctadecane (Diesel Surrogate) | 104 | | % Recovery | M EPA 8015 | 10/11/2008 |

KIFF Analytical LLC

Report Number : 65220
Date : 10/15/2008

Project Name : **Marcus Hardware**
Project Number : **GB001H**

Sample : **SB-8-8** Matrix : Soil Lab Number : 65220-09
Sample Date :10/07/2008

| Parameter | Measured Value | Method Reporting Limit | Units | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|
| **Lead** | **2.0** | 0.50 | mg/Kg | EPA 6010B | 10/13/2008 |
| **Benzene** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/10/2008 |
| **Toluene** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/10/2008 |
| **Ethylbenzene** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/10/2008 |
| **Total Xylenes** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/10/2008 |
| **Methyl-t-butyl ether (MTBE)** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/10/2008 |
| **TPH as Gasoline** | **< 1.0** | 1.0 | mg/Kg | EPA 8260B | 10/10/2008 |
| **1,2-Dichloroethane** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/10/2008 |
| **1,2-Dibromoethane** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/10/2008 |
| 1,2-Dichloroethane-d4 (Surr) | 104 | | % Recovery | EPA 8260B | 10/10/2008 |
| Toluene - d8 (Surr) | 88.0 | | % Recovery | EPA 8260B | 10/10/2008 |
| **TPH as Diesel** | **2.1** | 1.0 | mg/Kg | M EPA 8015 | 10/11/2008 |
| (Note: Hydrocarbons are higher-boiling than typical Diesel Fuel.) | | | | | |
| 1-Chlorooctadecane (Diesel Surrogate) | 90.2 | | % Recovery | M EPA 8015 | 10/11/2008 |

KIFF Analytical LLC

Report Number : 65220
Date : 10/15/2008

Project Name : **Marcus Hardware**
Project Number : **GB001H**

Sample : **SB-8-W** Matrix : Water Lab Number : 65220-10
Sample Date :10/07/2008

| Parameter | Measured Value | Method Reporting Limit | Units | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|
| **Benzene** | **9.2** | 0.50 | ug/L | EPA 8260B | 10/11/2008 |
| **Toluene** | **0.71** | 0.50 | ug/L | EPA 8260B | 10/11/2008 |
| **Ethylbenzene** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 10/11/2008 |
| **Total Xylenes** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 10/11/2008 |
| **Methyl-t-butyl ether (MTBE)** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 10/11/2008 |
| **TPH as Gasoline** | **< 50** | 50 | ug/L | EPA 8260B | 10/11/2008 |
| **1,2-Dichloroethane** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 10/11/2008 |
| **1,2-Dibromoethane** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 10/11/2008 |
| 1,2-Dichloroethane-d4 (Surr) | 101 | | % Recovery | EPA 8260B | 10/11/2008 |
| Toluene - d8 (Surr) | 96.2 | | % Recovery | EPA 8260B | 10/11/2008 |
| **TPH as Diesel** | **2000** | 100 | ug/L | M EPA 8015 | 10/14/2008 |
| (Note: Hydrocarbons are higher-boiling than typical Diesel Fuel.) | | | | | |
| Octacosane (Diesel Surrogate) | 108 | | % Recovery | M EPA 8015 | 10/14/2008 |

KIFF Analytical LLC

Report Number : 65220
Date : 10/15/2008

Project Name : **Marcus Hardware**
Project Number : **GB001H**

Sample : **SB-7-5** Matrix : Soil Lab Number : 65220-11
Sample Date :10/07/2008

| Parameter | Measured Value | Method Reporting Limit | Units | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|
| **Lead** | **2.1** | 0.50 | mg/Kg | EPA 6010B | 10/13/2008 |
| **Benzene** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/09/2008 |
| **Toluene** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/09/2008 |
| **Ethylbenzene** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/09/2008 |
| **Total Xylenes** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/09/2008 |
| **Methyl-t-butyl ether (MTBE)** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/09/2008 |
| **TPH as Gasoline** | **< 1.0** | 1.0 | mg/Kg | EPA 8260B | 10/09/2008 |
| **1,2-Dichloroethane** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/09/2008 |
| **1,2-Dibromoethane** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/09/2008 |
| 1,2-Dichloroethane-d4 (Surr) | 103 | | % Recovery | EPA 8260B | 10/09/2008 |
| Toluene - d8 (Surr) | 99.1 | | % Recovery | EPA 8260B | 10/09/2008 |
| **TPH as Diesel** | **2.4** | 1.0 | mg/Kg | M EPA 8015 | 10/13/2008 |
| (Note: Hydrocarbons are higher-boiling than typical Diesel Fuel.) | | | | | |
| 1-Chlorooctadecane (Diesel Surrogate) | 89.0 | | % Recovery | M EPA 8015 | 10/13/2008 |

KIFF Analytical LLC

Report Number : 65220
Date : 10/15/2008

Project Name : **Marcus Hardware**
Project Number : **GB001H**

Sample : **SB-7-10** Matrix : Soil Lab Number : 65220-12
Sample Date :10/07/2008

| Parameter | Measured Value | Method Reporting Limit | Units | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|
| **Lead** | **2.2** | 0.50 | mg/Kg | EPA 6010B | 10/13/2008 |
| **Benzene** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/10/2008 |
| **Toluene** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/10/2008 |
| **Ethylbenzene** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/10/2008 |
| **Total Xylenes** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/10/2008 |
| **Methyl-t-butyl ether (MTBE)** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/10/2008 |
| **TPH as Gasoline** | **< 1.0** | 1.0 | mg/Kg | EPA 8260B | 10/10/2008 |
| **1,2-Dichloroethane** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/10/2008 |
| **1,2-Dibromoethane** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/10/2008 |
| 1,2-Dichloroethane-d4 (Surr) | 104 | | % Recovery | EPA 8260B | 10/10/2008 |
| Toluene - d8 (Surr) | 100 | | % Recovery | EPA 8260B | 10/10/2008 |
| **TPH as Diesel** | **1.1** | 1.0 | mg/Kg | M EPA 8015 | 10/14/2008 |
| (Note: Discrete peaks in Diesel range, atypical for Diesel Fuel.) | | | | | |
| 1-Chlorooctadecane (Diesel Surrogate) | 90.7 | | % Recovery | M EPA 8015 | 10/14/2008 |

KIFF Analytical LLC

Report Number : 65220
Date : 10/15/2008

Project Name : **Marcus Hardware**
Project Number : **GB001H**

Sample : **SB-7-W** Matrix : Water Lab Number : 65220-13
Sample Date :10/07/2008

| Parameter | Measured Value | Method Reporting Limit | Units | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|
| **Benzene** | **4.4** | 0.50 | ug/L | EPA 8260B | 10/11/2008 |
| **Toluene** | **0.56** | 0.50 | ug/L | EPA 8260B | 10/11/2008 |
| **Ethylbenzene** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 10/11/2008 |
| **Total Xylenes** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 10/11/2008 |
| **Methyl-t-butyl ether (MTBE)** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 10/11/2008 |
| **TPH as Gasoline** | **< 50** | 50 | ug/L | EPA 8260B | 10/11/2008 |
| **1,2-Dichloroethane** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 10/11/2008 |
| **1,2-Dibromoethane** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 10/11/2008 |
| 1,2-Dichloroethane-d4 (Surr) | 98.1 | | % Recovery | EPA 8260B | 10/11/2008 |
| Toluene - d8 (Surr) | 97.1 | | % Recovery | EPA 8260B | 10/11/2008 |
| **TPH as Diesel** | **10000** | 1000 | ug/L | M EPA 8015 | 10/15/2008 |
| (Note: Hydrocarbons are higher-boiling than typical Diesel Fuel.) | | | | | |
| Octacosane (Diesel Surrogate) | Diluted Out | | % Recovery | M EPA 8015 | 10/15/2008 |

KIFF Analytical LLC

Report Number : 65220
Date : 10/15/2008

Project Name : **Marcus Hardware**
Project Number : **GB001H**

Sample : **SB-7-15** Matrix : Soil Lab Number : 65220-14
Sample Date :10/07/2008

| Parameter | Measured Value | Method Reporting Limit | Units | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|
| **Lead** | **2.1** | 0.50 | mg/Kg | EPA 6010B | 10/13/2008 |
| **Benzene** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/10/2008 |
| **Toluene** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/10/2008 |
| **Ethylbenzene** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/10/2008 |
| **Total Xylenes** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/10/2008 |
| **Methyl-t-butyl ether (MTBE)** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/10/2008 |
| **TPH as Gasoline** | **< 1.0** | 1.0 | mg/Kg | EPA 8260B | 10/10/2008 |
| **1,2-Dichloroethane** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/10/2008 |
| **1,2-Dibromoethane** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/10/2008 |
| 1,2-Dichloroethane-d4 (Surr) | 106 | | % Recovery | EPA 8260B | 10/10/2008 |
| Toluene - d8 (Surr) | 100 | | % Recovery | EPA 8260B | 10/10/2008 |
| **TPH as Diesel** | **2.2** | 1.0 | mg/Kg | M EPA 8015 | 10/11/2008 |
| (Note: Hydrocarbons are higher-boiling than typical Diesel Fuel.) | | | | | |
| 1-Chlorooctadecane (Diesel Surrogate) | 91.6 | | % Recovery | M EPA 8015 | 10/11/2008 |

KIFF Analytical LLC

Report Number : 65220
Date : 10/15/2008

Project Name : **Marcus Hardware**
Project Number : **GB001H**

Sample : **SB-7-20** Matrix : Soil Lab Number : 65220-15
Sample Date :10/07/2008

| Parameter | Measured Value | Method Reporting Limit | Units | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|
| **Lead** | **3.2** | 0.50 | mg/Kg | EPA 6010B | 10/13/2008 |
| **Benzene** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/10/2008 |
| **Toluene** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/10/2008 |
| **Ethylbenzene** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/10/2008 |
| **Total Xylenes** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/10/2008 |
| **Methyl-t-butyl ether (MTBE)** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/10/2008 |
| **TPH as Gasoline** | **< 1.0** | 1.0 | mg/Kg | EPA 8260B | 10/10/2008 |
| **1,2-Dichloroethane** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/10/2008 |
| **1,2-Dibromoethane** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/10/2008 |
| 1,2-Dichloroethane-d4 (Surr) | 109 | | % Recovery | EPA 8260B | 10/10/2008 |
| Toluene - d8 (Surr) | 100 | | % Recovery | EPA 8260B | 10/10/2008 |
| **TPH as Diesel** | **< 1.0** | 1.0 | mg/Kg | M EPA 8015 | 10/11/2008 |
| 1-Chlorooctadecane (Diesel Surrogate) | 90.1 | | % Recovery | M EPA 8015 | 10/11/2008 |

KIFF Analytical LLC

Report Number : 65220
Date : 10/15/2008

Project Name : **Marcus Hardware**
Project Number : **GB001H**

Sample : **SB-7-25** Matrix : Soil Lab Number : 65220-16
Sample Date :10/07/2008

| Parameter | Measured Value | Method Reporting Limit | Units | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|
| **Lead** | **1.7** | 0.50 | mg/Kg | EPA 6010B | 10/13/2008 |
| **Benzene** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/10/2008 |
| **Toluene** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/10/2008 |
| **Ethylbenzene** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/10/2008 |
| **Total Xylenes** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/10/2008 |
| **Methyl-t-butyl ether (MTBE)** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/10/2008 |
| **TPH as Gasoline** | **< 1.0** | 1.0 | mg/Kg | EPA 8260B | 10/10/2008 |
| **1,2-Dichloroethane** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/10/2008 |
| **1,2-Dibromoethane** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/10/2008 |
| 1,2-Dichloroethane-d4 (Surr) | 105 | | % Recovery | EPA 8260B | 10/10/2008 |
| Toluene - d8 (Surr) | 100 | | % Recovery | EPA 8260B | 10/10/2008 |
| **TPH as Diesel** | **< 1.0** | 1.0 | mg/Kg | M EPA 8015 | 10/11/2008 |
| 1-Chlorooctadecane (Diesel Surrogate) | 94.9 | | % Recovery | M EPA 8015 | 10/11/2008 |

KIFF Analytical LLC

Report Number : 65220
Date : 10/15/2008

Project Name : **Marcus Hardware**
Project Number : **GB001H**

Sample : **SB-7-30** Matrix : Soil Lab Number : 65220-17
Sample Date :10/07/2008

| Parameter | Measured Value | Method Reporting Limit | Units | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|
| **Lead** | **1.9** | 0.50 | mg/Kg | EPA 6010B | 10/13/2008 |
| **Benzene** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/10/2008 |
| **Toluene** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/10/2008 |
| **Ethylbenzene** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/10/2008 |
| **Total Xylenes** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/10/2008 |
| **Methyl-t-butyl ether (MTBE)** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/10/2008 |
| **TPH as Gasoline** | **< 1.0** | 1.0 | mg/Kg | EPA 8260B | 10/10/2008 |
| **1,2-Dichloroethane** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/10/2008 |
| **1,2-Dibromoethane** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/10/2008 |
| 1,2-Dichloroethane-d4 (Surr) | 107 | | % Recovery | EPA 8260B | 10/10/2008 |
| Toluene - d8 (Surr) | 99.8 | | % Recovery | EPA 8260B | 10/10/2008 |
| **TPH as Diesel** | **< 1.0** | 1.0 | mg/Kg | M EPA 8015 | 10/11/2008 |
| 1-Chlorooctadecane (Diesel Surrogate) | 81.9 | | % Recovery | M EPA 8015 | 10/11/2008 |

KIFF Analytical LLC

Report Number : 65220
Date : 10/15/2008

Project Name : **Marcus Hardware**
Project Number : **GB001H**

Sample : **SB-6-4** Matrix : Soil Lab Number : 65220-18
Sample Date :10/07/2008

| Parameter | Measured Value | Method Reporting Limit | Units | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|
| **Lead** | **24** | 0.50 | mg/Kg | EPA 6010B | 10/14/2008 |
| **Benzene** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/10/2008 |
| **Toluene** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/10/2008 |
| **Ethylbenzene** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/10/2008 |
| **Total Xylenes** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/10/2008 |
| **Methyl-t-butyl ether (MTBE)** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/10/2008 |
| **TPH as Gasoline** | **< 1.0** | 1.0 | mg/Kg | EPA 8260B | 10/10/2008 |
| **1,2-Dichloroethane** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/10/2008 |
| **1,2-Dibromoethane** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/10/2008 |
| 1,2-Dichloroethane-d4 (Surr) | 103 | | % Recovery | EPA 8260B | 10/10/2008 |
| Toluene - d8 (Surr) | 101 | | % Recovery | EPA 8260B | 10/10/2008 |
| **TPH as Diesel** | **1.9** | 1.0 | mg/Kg | M EPA 8015 | 10/10/2008 |
| (Note: Hydrocarbons are higher-boiling than typical Diesel Fuel.) | | | | | |
| 1-Chlorooctadecane (Diesel Surrogate) | 83.4 | | % Recovery | M EPA 8015 | 10/10/2008 |

KIFF Analytical LLC

Report Number : 65220
Date : 10/15/2008

Project Name : **Marcus Hardware**
Project Number : **GB001H**

Sample : **SB-6-8** Matrix : Soil Lab Number : 65220-19
Sample Date :10/07/2008

| Parameter | Measured Value | Method Reporting Limit | Units | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|
| **Lead** | **2.0** | 0.50 | mg/Kg | EPA 6010B | 10/13/2008 |
| **Benzene** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/10/2008 |
| **Toluene** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/10/2008 |
| **Ethylbenzene** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/10/2008 |
| **Total Xylenes** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/10/2008 |
| **Methyl-t-butyl ether (MTBE)** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/10/2008 |
| **TPH as Gasoline** | **< 1.0** | 1.0 | mg/Kg | EPA 8260B | 10/10/2008 |
| **1,2-Dichloroethane** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/10/2008 |
| **1,2-Dibromoethane** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/10/2008 |
| 1,2-Dichloroethane-d4 (Surr) | 107 | | % Recovery | EPA 8260B | 10/10/2008 |
| Toluene - d8 (Surr) | 98.8 | | % Recovery | EPA 8260B | 10/10/2008 |
| **TPH as Diesel** | **< 1.0** | 1.0 | mg/Kg | M EPA 8015 | 10/10/2008 |
| 1-Chlorooctadecane (Diesel Surrogate) | 72.7 | | % Recovery | M EPA 8015 | 10/10/2008 |

KIFF Analytical LLC

Report Number : 65220
Date : 10/15/2008

Project Name : **Marcus Hardware**
Project Number : **GB001H**

Sample : **SB-6-W** Matrix : Water Lab Number : 65220-20
Sample Date :10/07/2008

| Parameter | Measured Value | Method Reporting Limit | Units | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|
| **Benzene** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 10/11/2008 |
| **Toluene** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 10/11/2008 |
| **Ethylbenzene** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 10/11/2008 |
| **Total Xylenes** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 10/11/2008 |
| **Methyl-t-butyl ether (MTBE)** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 10/11/2008 |
| **TPH as Gasoline** | **< 50** | 50 | ug/L | EPA 8260B | 10/11/2008 |
| **1,2-Dichloroethane** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 10/11/2008 |
| **1,2-Dibromoethane** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 10/11/2008 |
| 1,2-Dichloroethane-d4 (Surr) | 98.8 | | % Recovery | EPA 8260B | 10/11/2008 |
| Toluene - d8 (Surr) | 97.3 | | % Recovery | EPA 8260B | 10/11/2008 |
| **TPH as Diesel** | **1400** | 50 | ug/L | M EPA 8015 | 10/14/2008 |
| (Note: Hydrocarbons are higher-boiling than typical Diesel Fuel.) | | | | | |
| Octacosane (Diesel Surrogate) | 102 | | % Recovery | M EPA 8015 | 10/14/2008 |

**QC Report : Method Blank Data**

Project Name : **Marcus Hardware**

Project Number : **GB001H**

Report Number : 65220

Date : 10/15/2008

| Parameter | Measured Value | Method Reporting Limit | Units | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|
| Lead | < 0.50 | 0.50 | mg/Kg | EPA 6010B | 10/10/2008 |
| Lead | < 0.50 | 0.50 | mg/Kg | EPA 6010B | 10/14/2008 |
| TPH as Diesel | < 50 | 50 | ug/L | M EPA 8015 | 10/11/2008 |
| Octacosane (Diesel Surrogate) | 106 | | % | M EPA 8015 | 10/11/2008 |
| TPH as Diesel | < 1.0 | 1.0 | mg/Kg | M EPA 8015 | 10/10/2008 |
| 1-Chlorooctadecane (Diesel Surrogate) | 87.6 | | % | M EPA 8015 | 10/10/2008 |
| TPH as Diesel | < 1.0 | 1.0 | mg/Kg | M EPA 8015 | 10/13/2008 |
| 1-Chlorooctadecane (Diesel Surrogate) | 95.9 | | % | M EPA 8015 | 10/13/2008 |
| Benzene | < 0.0050 | 0.0050 | mg/Kg | EPA 8260B | 10/09/2008 |
| Ethylbenzene | < 0.0050 | 0.0050 | mg/Kg | EPA 8260B | 10/09/2008 |
| Toluene | < 0.0050 | 0.0050 | mg/Kg | EPA 8260B | 10/09/2008 |
| Total Xylenes | < 0.0050 | 0.0050 | mg/Kg | EPA 8260B | 10/09/2008 |
| Methyl-t-butyl ether (MTBE) | < 0.0050 | 0.0050 | mg/Kg | EPA 8260B | 10/09/2008 |
| TPH as Gasoline | < 1.0 | 1.0 | mg/Kg | EPA 8260B | 10/09/2008 |
| 1,2-Dibromoethane | < 0.0050 | 0.0050 | mg/Kg | EPA 8260B | 10/09/2008 |
| 1,2-Dichloroethane | < 0.0050 | 0.0050 | mg/Kg | EPA 8260B | 10/09/2008 |
| 1,2-Dichloroethane-d4 (Surr) | 104 | | % | EPA 8260B | 10/09/2008 |
| Toluene - d8 (Surr) | 101 | | % | EPA 8260B | 10/09/2008 |

| Parameter | Measured Value | Method Reporting Limit | Units | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|
| Benzene | < 0.50 | 0.50 | ug/L | EPA 8260B | 10/11/2008 |
| Ethylbenzene | < 0.50 | 0.50 | ug/L | EPA 8260B | 10/11/2008 |
| Toluene | < 0.50 | 0.50 | ug/L | EPA 8260B | 10/11/2008 |
| Total Xylenes | < 0.50 | 0.50 | ug/L | EPA 8260B | 10/11/2008 |
| Methyl-t-butyl ether (MTBE) | < 0.50 | 0.50 | ug/L | EPA 8260B | 10/11/2008 |
| TPH as Gasoline | < 50 | 50 | ug/L | EPA 8260B | 10/11/2008 |
| 1,2-Dibromoethane | < 0.50 | 0.50 | ug/L | EPA 8260B | 10/11/2008 |
| 1,2-Dichloroethane | < 0.50 | 0.50 | ug/L | EPA 8260B | 10/11/2008 |
| 1,2-Dichloroethane-d4 (Surr) | 101 | | % | EPA 8260B | 10/11/2008 |
| Toluene - d8 (Surr) | 96.2 | | % | EPA 8260B | 10/11/2008 |
| Benzene | < 0.50 | 0.50 | ug/L | EPA 8260B | 10/11/2008 |
| Ethylbenzene | < 0.50 | 0.50 | ug/L | EPA 8260B | 10/11/2008 |
| Toluene | < 0.50 | 0.50 | ug/L | EPA 8260B | 10/11/2008 |
| Total Xylenes | < 0.50 | 0.50 | ug/L | EPA 8260B | 10/11/2008 |
| Methyl-t-butyl ether (MTBE) | < 0.50 | 0.50 | ug/L | EPA 8260B | 10/11/2008 |
| TPH as Gasoline | < 50 | 50 | ug/L | EPA 8260B | 10/11/2008 |
| 1,2-Dibromoethane | < 0.50 | 0.50 | ug/L | EPA 8260B | 10/11/2008 |
| 1,2-Dichloroethane | < 0.50 | 0.50 | ug/L | EPA 8260B | 10/11/2008 |
| 1,2-Dichloroethane-d4 (Surr) | 102 | | % | EPA 8260B | 10/11/2008 |
| Toluene - d8 (Surr) | 97.9 | | % | EPA 8260B | 10/11/2008 |

**QC Report : Matrix Spike/ Matrix Spike Duplicate**

Report Number : 65220

Date : 10/15/2008

Project Name : **Marcus Hardware**

Project Number : **GB001H**

| Parameter | Spiked Sample | Sample Value | Spike Level | Spike Dup. Level | Spiked Sample Value | Duplicate Spiked Sample Value | Units | Analysis Method | Date Analyzed | Spiked Sample Percent Recov. | Duplicate Spiked Sample Percent Recov. | Relative Percent Diff. | Spiked Sample Percent Recov. Limit | Relative Percent Diff. Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,2-Dichloroethane | 65250-02 | <0.0050 | 0.0381 | 0.0377 | 0.0320 | 0.0326 | mg/Kg | EPA 8260B | 10/9/08 | 84.1 | 86.5 | 2.80 | 70-130 | 25 |
| Benzene | 65250-02 | <0.0050 | 0.0390 | 0.0386 | 0.0322 | 0.0317 | mg/Kg | EPA 8260B | 10/9/08 | 82.7 | 82.1 | 0.772 | 70-130 | 25 |
| Methyl-t-butyl ether | 65250-02 | <0.0050 | 0.0384 | 0.0380 | 0.0335 | 0.0371 | mg/Kg | EPA 8260B | 10/9/08 | 87.3 | 97.4 | 10.9 | 70-130 | 25 |
| Toluene | 65250-02 | <0.0050 | 0.0384 | 0.0380 | 0.0319 | 0.0310 | mg/Kg | EPA 8260B | 10/9/08 | 83.0 | 81.4 | 1.94 | 70-130 | 25 |
| 1,2-Dichloroethane | 65221-09 | <0.50 | 39.2 | 39.2 | 37.7 | 37.0 | ug/L | EPA 8260B | 10/11/08 | 96.3 | 94.6 | 1.82 | 70-130 | 25 |
| Benzene | 65221-09 | <0.50 | 40.0 | 40.0 | 40.4 | 40.4 | ug/L | EPA 8260B | 10/11/08 | 101 | 101 | 0.0995 | 70-130 | 25 |
| Methyl-t-butyl ether | 65221-09 | <0.50 | 39.5 | 39.5 | 41.4 | 40.8 | ug/L | EPA 8260B | 10/11/08 | 105 | 103 | 1.42 | 70-130 | 25 |
| Toluene | 65221-09 | <0.50 | 39.5 | 39.5 | 38.1 | 38.2 | ug/L | EPA 8260B | 10/11/08 | 96.7 | 96.7 | 0.0540 | 70-130 | 25 |
| 1,2-Dichloroethane | 65290-02 | <0.50 | 39.2 | 39.2 | 41.6 | 41.6 | ug/L | EPA 8260B | 10/11/08 | 106 | 106 | 0.0485 | 70-130 | 25 |
| Benzene | 65290-02 | <0.50 | 40.1 | 40.1 | 38.9 | 38.9 | ug/L | EPA 8260B | 10/11/08 | 96.8 | 96.8 | 0.00767 | 70-130 | 25 |
| Methyl-t-butyl ether | 65290-02 | 0.77 | 39.6 | 39.6 | 40.1 | 40.8 | ug/L | EPA 8260B | 10/11/08 | 99.4 | 101 | 1.78 | 70-130 | 25 |
| Toluene | 65290-02 | <0.50 | 39.5 | 39.5 | 38.8 | 38.3 | ug/L | EPA 8260B | 10/11/08 | 98.0 | 96.8 | 1.28 | 70-130 | 25 |
| Lead | 65223-32 | 5.3 | 50.0 | 50.0 | 54.8 | 54.4 | mg/Kg | EPA 6010B | 10/10/08 | 98.9 | 98.1 | 0.733 | 75-125 | 20 |
| Lead | 65220-18 | 24 | 50.0 | 50.0 | 75.2 | 75.9 | mg/Kg | EPA 6010B | 10/14/08 | 102 | 103 | 0.993 | 75-125 | 20 |
| TPH as Diesel | BLANK | <50 | 1000 | 1000 | 967 | 943 | ug/L | M EPA 8015 | 10/11/08 | 96.7 | 94.3 | 2.52 | 70-130 | 25 |
| TPH as Diesel | 65220-19 | <1.0 | 20.0 | 20.0 | 18.3 | 19.5 | mg/Kg | M EPA 8015 | 10/10/08 | 91.5 | 97.7 | 6.58 | 60-140 | 25 |

**QC Report : Matrix Spike/ Matrix Spike Duplicate**

Report Number : 65220
Date : 10/15/2008

Project Name : **Marcus Hardware**
Project Number : **GB001H**

| Parameter | Spiked Sample | Sample Value | Spike Level | Spike Dup. Level | Spiked Sample Value | Duplicate Spiked Sample Value | Units | Analysis Method | Date Analyzed | Spiked Sample Percent Recov. | Duplicate Spiked Sample Percent Recov. | Relative Percent Diff. | Spiked Sample Percent Recov. Limit | Relative Percent Diff. Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TPH as Diesel | 65276-01 | 140 | 20.0 | 20.0 | 133 | 106 | mg/Kg | M EPA 8015 | 10/13/08 | 85.0 | 67.5 | 23.0 | 60-140 | 25 |

**QC Report : Laboratory Control Sample (LCS)**

Report Number : 65220
Date : 10/15/2008

Project Name : **Marcus Hardware**
Project Number : **GB001H**

| Parameter | Spike Level | Units | Analysis Method | Date Analyzed | LCS Percent Recov. | LCS Percent Recov. Limit |
|---|---|---|---|---|---|---|
| Lead | 50.0 | mg/Kg | EPA 6010B | 10/10/08 | 102 | 85-115 |
| Lead | 50.0 | mg/Kg | EPA 6010B | 10/14/08 | 103 | 85-115 |
| TPH as Diesel | 20.0 | mg/Kg | M EPA 8015 | 10/10/08 | 76.5 | 70-130 |
| TPH as Diesel | 20.0 | mg/Kg | M EPA 8015 | 10/13/08 | 81.5 | 70-130 |
| 1,2-Dichloroethane | 0.0385 | mg/Kg | EPA 8260B | 10/9/08 | 86.5 | 70-130 |
| Benzene | 0.0393 | mg/Kg | EPA 8260B | 10/9/08 | 85.5 | 70-130 |
| Methyl-t-butyl ether | 0.0388 | mg/Kg | EPA 8260B | 10/9/08 | 96.8 | 70-130 |
| Toluene | 0.0388 | mg/Kg | EPA 8260B | 10/9/08 | 85.1 | 70-130 |
| 1,2-Dichloroethane | 39.2 | ug/L | EPA 8260B | 10/11/08 | 93.7 | 70-130 |
| Benzene | 40.1 | ug/L | EPA 8260B | 10/11/08 | 101 | 70-130 |
| Methyl-t-butyl ether | 39.6 | ug/L | EPA 8260B | 10/11/08 | 101 | 70-130 |
| Toluene | 39.5 | ug/L | EPA 8260B | 10/11/08 | 97.0 | 70-130 |
| 1,2-Dichloroethane | 40.2 | ug/L | EPA 8260B | 10/11/08 | 104 | 70-130 |
| Benzene | 40.2 | ug/L | EPA 8260B | 10/11/08 | 96.2 | 70-130 |
| Methyl-t-butyl ether | 39.8 | ug/L | EPA 8260B | 10/11/08 | 92.1 | 70-130 |

**QC Report : Laboratory Control Sample (LCS)**

Report Number : 65220
Date : 10/15/2008

Project Name : **Marcus Hardware**
Project Number : **GB001H**

| Parameter | Spike Level | Units | Analysis Method | Date Analyzed | LCS Percent Recov. | LCS Percent Recov. Limit |
|---|---|---|---|---|---|---|
| Toluene | 40.2 | ug/L | EPA 8260B | 10/11/08 | 99.1 | 70-130 |

KIFF ANALYTICAL, LLC
2795 2nd Street, Suite 300 Davis, CA 95618 530-297-4800

**KIFF Analytical LLC**

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Davis, CA 95618
Lab: 530.297.4800
Fax: 530.297.4802

SRG # / Lab No. 65220

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# Chain-of-Custody Record and Analysis Request

| | |
|---|---|
| Project Contact (Hardcopy or PDF To): Eric Lorvaag | California EDF Report? ☒ Yes ☐ No |
| Company / Address: Clearwater Group | Sampling Company Log Code: GWGO |
| Phone Number: 510-307-9918 | Global ID: |
| Fax Number: 510-232-2823 | EDF Deliverable To (Email Address): elorvaag@clearwatergroup.com |
| Project #: GB001H / P.O. #: | Bill to: |
| Project Name: Marcus Hardware | Sampler Print Name: Robert L. Nelson |
| Project Address: 626 2nd Street Oakland | Sampler Signature: Robert L. Nelson |

| Sample Designation | Sampling Date | Sampling Time | Container: 40 ml VOA | Container: Sleeve | Container: Poly | Container: Glass | Container: Tedlar | Preservative: HCl | Preservative: $HNO_3$ | Preservative: None | Matrix: Water | Matrix: Soil | Matrix: Air |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SB-5-4 | 10-7 | 0725 | | 1 | | | | | | X | | X | |
| SB-5-8 | 10-7 | 0735 | | 1 | | | | | | X | | X | |
| SB-5-W | 10-7 | 0800 | 6 | | | | | | | X | X | | |
| SB-4-4 | 10-7 | 0850 | | 1 | | | | | | X | | X | |
| SB-4-8 | 10-7 | 0855 | | 1 | | | | | | X | | X | |
| SB-4-10 | 10-7 | 0900 | | 1 | | | | | | X | | X | |
| SB-4-W | 10-7 | 0905 | 6 | | | | | | | X | X | | |
| SB-8-4 | 10-7 | 1030 | | 1 | | | | | | X | | X | |
| SB-8-8 | 10-7 | 1035 | | 1 | | | | | | X | | X | |
| SB-8-W | 10-7 | 1040 | 6 | | | | | | | X | X | | |

Analysis Request

PLEASE CIRCLE METHOD

| MTBE @ 0.5 ppb (EPA 8260B) | BTEX (EPA 8260B) | TPH Gas (EPA 8260B) | 5 Oxygenates (MTBE, DIPE, ETBE, TAME, TBA) (EPA 8260B) | 7 Oxygenates (5 oxy + EtOH, MeOH) (EPA 8260B) | Lead Scav. (1,2 DCA & 1,2 EDB) (EPA 8260B) | Volatile Halocarbons (EPA 8260B) | Volatile Organics Full List (EPA 8260B) | Volatile Organics (EPA 524.2 Drinking Water) | TPH as Diesel (EPA 8015M) | TPH as Motor Oil (EPA 8015M) | CAM 17 Metals (EPA 200.7 / 6010) | 5 Waste Oil Metals (Cd,Cr,Ni,Pb,Zn) (EPA 200.7 / 6010) | Mercury (EPA 245.1 / 7470 / 7471) | Total Lead (EPA 200.7 / 6010) | W.E.T. Lead (STLC) | TAT | For Lab Use Only |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| X | X | X | | | X | | | | X | | | | | X | | ☐ 12 hr | 01 |
| X | X | X | | | X | | | | X | | | | | X | | ☐ 24 hr | 02 |
| X | X | X | | | X | | | | X | | | | | X | | ☐ 48hr | 03 |
| X | X | X | | | X | | | | X | | | | | X | | ☐ 72hr | 04 |
| X | X | X | | | X | | | | X | | | | | X | | ☒ 1 wk | 05 |
| X | X | X | | | X | | | | X | | | | | X | | | 06 |
| X | X | X | | | X | | | | X | | | | | | | | 07 |
| X | X | X | | | X | | | | X | | | | | X | | | 08 |
| X | X | X | | | X | | | | X | | | | | X | | | 09 |
| X | X | X | | | X | | | | X | | | | | | | | 10 |

| Relinquished by: | Date | Time | Received by: |
|---|---|---|---|
| Robert L. Nelson | | | |
| Relinquished by: | Date | Time | Received by: |
| | | | |
| Relinquished by: | Date | Time | Received by Laboratory: |
| | 100808 | 1126 | Kiff Analytical |

Remarks:

SAMPLE RECEIPT
Temp °C 4.6 Therm. ID# JR-1
Date 100808
Time 1509 Coolant present: Yes / No

For Lab Use Only: Sample Receipt

| Temp °C | Initials | Date | Time | Therm. ID # | Coolant Present |
|---|---|---|---|---|---|
| 4.6 | NWP | 100808 | 1509 | JR-1 | (Yes) / No |

Distribution: White - Lab; Pink - Originator
Rev: 061708

**KIFF Analytical LLC**

2795 2nd Street, Suite 300
Davis, CA 95616
Lab: 530.297.4800
Fax: 530.297.4802

SRG # / Lab No. 65220

Page 2 of 2

# Chain-of-Custody Record and Analysis Request

| | |
|---|---|
| Project Contact (Hardcopy or PDF To): Eric Lervaag | California EDF Report? ☒ Yes ☐ No |
| Company / Address: Clearwater Group | Sampling Company Log Code: CWGO |
| Phone #: 510-382-9943 / Fax #: | Global ID: |
| Project #: 510-232-7923 / P.O. #: | EDF Deliverable To (Email Address): elervaag@clearwatergroup.com |
| Project Name: Marcus Hardware | Sampler Signature: Robert L. Nelson |
| Project Address: 626 2nd Street Oakland | |

| Sample Designation | Sampling: Date | Sampling: Time | Container: 40 ml VOA | Container: Sleeve | Container: Poly | Container: Glass | Container: Tedlar | Preservative: HCl | Preservative: $HNO_3$ | Preservative: None | Matrix: Water | Matrix: Soil | Matrix: Air |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SB-7-5 | 10-7 | 1245 | | 1 | | | | | | X | | 1 | |
| SB-7-10 | -2008 | 1255 | | 1 | | | | | | X | | 1 | |
| SB-7-W | | 1300 | 6 | | | | | | | X | X | | |
| SB-7-15 | | 1320 | | 1 | | | | | | X | | 1 | |
| SB-7-20 | | 1330 | | 1 | | | | | | X | | 1 | |
| SB-7-25 | | 1415 | | 1 | | | | | | X | | 1 | |
| SB-7-30 | | 1445 | | 1 | | | | | | X | | 1 | |
| SB-6-4 | | 1530 | | 1 | | | | | | X | | 1 | |
| SB-6-8 | | 1545 | | 1 | | | | | | X | | 1 | |
| SB-6-W | | 1600 | 6 | | | | | | | X | X | | |

Analysis Request

| MTBE (EPA 8260B) per EPA 8021 level @ 5.0 ppb | MTBE (EPA 8260B) @ 0.5 ppb | BTEX (EPA 8260B) | TPH Gas (EPA 8260B) | 5 Oxygenates (EPA 8260B) | 7 Oxygenates (EPA 8260B) | Lead Scav.(1,2 DCA & 1,2 EDB-EPA 8260B) | Volatile Halocarbons (EPA 8260B) | Volatile Organics Full List (EPA 8260B) | Volatile Organics (EPA 524.2 Drinking Water) | TPH as Diesel (EPA 8015M) | TPH as Motor Oil (EPA 8015M) | Total Lead (EPA 6010) | W.E.T. Lead (STLC) | TAT | For Lab Use Only |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| X | X | X | X | | | X | | | | X | | X | | ☐ 12 hr | 11 |
| | X | X | X | | | X | | | | X | | X | | ☐ 24 hr | 12 |
| | X | X | X | | | X | | | | X | | | | ☐ 48 hr | 13 |
| | X | X | X | | | X | | | | X | | X | | ☐ 72 hr | 14 |
| | X | X | X | | | X | | | | X | | X | | ☒ 1 wk | 15 |
| | X | X | X | | | X | | | | X | | X | | | 16 |
| | X | X | X | | | X | | | | X | | X | | | 17 |
| | X | X | X | | | X | | | | X | | X | | | 18 |
| | X | X | X | | | X | | | | X | | X | | | 19 |
| | X | X | X | | | X | | | | X | | | | | 20 |

| Relinquished by: | Date | Time | Received by: |
|---|---|---|---|
| Robert L. Nelson | | | |
| Relinquished by: | Date | Time | Received by: |
| | | | |
| Relinquished by: | Date | Time | Received by Laboratory: |
| | 100808 | 1126 | Kiff Analytical |

Remarks:

Bill to:

For Lab Use Only: Sample Receipt

| Temp °C | Initials | Date | Time | Therm. ID # | Coolant Present |
|---|---|---|---|---|---|
| | | | | | Yes / No |

Distribution: White - Lab; Pink - Originator
Rev: 051805

KIFF Analytical LLC

Report Number : 65221
Date : 10/15/2008

Erik Lervaag
The Auger Group
229 Tewksbury Avenue
Point Richmond, CA 94801

Subject : 4 Soil Samples and 5 Water Samples
Project Name : Marcus Hardware
Project Number : GB001H

Dear Mr. Lervaag,

Chemical analysis of the samples referenced above has been completed. Summaries of the data are contained on the following pages. Sample(s) were received under documented chain-of-custody. US EPA protocols for sample storage and preservation were followed.

Kiff Analytical is certified by the State of California (# 2236). If you have any questions regarding procedures or results, please call me at 530-297-4800.

Sincerely,

Joel Kiff

KIFF Analytical LLC

Report Number : 65221
Date : 10/15/2008

Subject : 4 Soil Samples and 5 Water Samples
Project Name : Marcus Hardware
Project Number : GB001H

# Case Narrative

Samples SB-12-W and SB-10-W were analyzed by EPA Method 8260B using bottles that contained headspace bubbles greater than 1/4 inch in diameter.

KIFF Analytical LLC

Report Number : 65221
Date : 10/15/2008

Project Name : **Marcus Hardware**
Project Number : **GB001H**

Sample : **SB-13-11** Matrix : Soil Lab Number : 65221-01
Sample Date :10/06/2008

| Parameter | Measured Value | Method Reporting Limit | Units | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|
| **Lead** | **3.1** | 0.50 | mg/Kg | EPA 6010B | 10/14/2008 |
| **Benzene** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/09/2008 |
| **Toluene** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/09/2008 |
| **Ethylbenzene** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/09/2008 |
| **Total Xylenes** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/09/2008 |
| **Methyl-t-butyl ether (MTBE)** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/09/2008 |
| **TPH as Gasoline** | **< 1.0** | 1.0 | mg/Kg | EPA 8260B | 10/09/2008 |
| **1,2-Dichloroethane** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/09/2008 |
| **1,2-Dibromoethane** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/09/2008 |
| 1,2-Dichloroethane-d4 (Surr) | 102 | | % Recovery | EPA 8260B | 10/09/2008 |
| Toluene - d8 (Surr) | 96.3 | | % Recovery | EPA 8260B | 10/09/2008 |
| **TPH as Diesel** | **6.2** | 1.0 | mg/Kg | M EPA 8015 | 10/13/2008 |
| (Note: Hydrocarbons are higher-boiling than typical Diesel Fuel.) | | | | | |
| 1-Chlorooctadecane (Diesel Surrogate) | 85.3 | | % Recovery | M EPA 8015 | 10/13/2008 |

KIFF Analytical LLC

Report Number : 65221
Date : 10/15/2008

Project Name : **Marcus Hardware**
Project Number : **GB001H**

Sample : **SB-13-W** Matrix : Water Lab Number : 65221-02
Sample Date :10/06/2008

| Parameter | Measured Value | Method Reporting Limit | Units | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|
| **Benzene** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 10/11/2008 |
| **Toluene** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 10/11/2008 |
| **Ethylbenzene** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 10/11/2008 |
| **Total Xylenes** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 10/11/2008 |
| **Methyl-t-butyl ether (MTBE)** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 10/11/2008 |
| **TPH as Gasoline** | **< 50** | 50 | ug/L | EPA 8260B | 10/11/2008 |
| **1,2-Dichloroethane** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 10/11/2008 |
| **1,2-Dibromoethane** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 10/11/2008 |
| 1,2-Dichloroethane-d4 (Surr) | 100 | | % Recovery | EPA 8260B | 10/11/2008 |
| Toluene - d8 (Surr) | 97.6 | | % Recovery | EPA 8260B | 10/11/2008 |
| **TPH as Diesel** | **610** | 50 | ug/L | M EPA 8015 | 10/14/2008 |
| (Note: Hydrocarbons are higher-boiling than typical Diesel Fuel.) | | | | | |
| Octacosane (Diesel Surrogate) | 112 | | % Recovery | M EPA 8015 | 10/14/2008 |

KIFF Analytical LLC

Report Number : 65221
Date : 10/15/2008

Project Name : **Marcus Hardware**
Project Number : **GB001H**

Sample : **SB-12-W** Matrix : Water Lab Number : 65221-03
Sample Date :10/06/2008

| Parameter | Measured Value | Method Reporting Limit | Units | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|
| **Benzene** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 10/13/2008 |
| **Toluene** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 10/13/2008 |
| **Ethylbenzene** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 10/13/2008 |
| **Total Xylenes** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 10/13/2008 |
| **Methyl-t-butyl ether (MTBE)** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 10/13/2008 |
| **TPH as Gasoline** | **< 50** | 50 | ug/L | EPA 8260B | 10/13/2008 |
| **1,2-Dichloroethane** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 10/13/2008 |
| **1,2-Dibromoethane** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 10/13/2008 |
| 1,2-Dichloroethane-d4 (Surr) | 102 | | % Recovery | EPA 8260B | 10/13/2008 |
| Toluene - d8 (Surr) | 97.0 | | % Recovery | EPA 8260B | 10/13/2008 |
| **TPH as Diesel** | **21000** | 500 | ug/L | M EPA 8015 | 10/15/2008 |
| (Note: Hydrocarbons are higher-boiling than typical Diesel Fuel.) | | | | | |
| Octacosane (Diesel Surrogate) | Diluted Out | | % Recovery | M EPA 8015 | 10/15/2008 |

KIFF Analytical LLC

Report Number : 65221
Date : 10/15/2008

Project Name : **Marcus Hardware**
Project Number : **GB001H**

Sample : **SB-11-5** Matrix : Soil Lab Number : 65221-04
Sample Date :10/06/2008

| Parameter | Measured Value | Method Reporting Limit | Units | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|
| **Lead** | **25** | 0.50 | mg/Kg | EPA 6010B | 10/14/2008 |
| **Benzene** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/10/2008 |
| **Toluene** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/10/2008 |
| **Ethylbenzene** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/10/2008 |
| **Total Xylenes** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/10/2008 |
| **Methyl-t-butyl ether (MTBE)** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/10/2008 |
| **TPH as Gasoline** | **< 1.0** | 1.0 | mg/Kg | EPA 8260B | 10/10/2008 |
| **1,2-Dichloroethane** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/10/2008 |
| **1,2-Dibromoethane** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/10/2008 |
| 1,2-Dichloroethane-d4 (Surr) | 102 | | % Recovery | EPA 8260B | 10/10/2008 |
| Toluene - d8 (Surr) | 96.3 | | % Recovery | EPA 8260B | 10/10/2008 |
| **TPH as Diesel** | **22** | 1.0 | mg/Kg | M EPA 8015 | 10/13/2008 |
| (Note: Hydrocarbons are higher-boiling than typical Diesel Fuel.) | | | | | |
| 1-Chlorooctadecane (Diesel Surrogate) | 74.1 | | % Recovery | M EPA 8015 | 10/13/2008 |

KIFF Analytical LLC

Report Number : 65221
Date : 10/15/2008

Project Name : **Marcus Hardware**
Project Number : **GB001H**

Sample : **SB-11-10** Matrix : Soil Lab Number : 65221-05
Sample Date :10/06/2008

| Parameter | Measured Value | Method Reporting Limit | Units | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|
| **Lead** | **24** | 0.50 | mg/Kg | EPA 6010B | 10/14/2008 |
| **Benzene** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/10/2008 |
| **Toluene** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/10/2008 |
| **Ethylbenzene** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/10/2008 |
| **Total Xylenes** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/10/2008 |
| **Methyl-t-butyl ether (MTBE)** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/10/2008 |
| **TPH as Gasoline** | **< 1.0** | 1.0 | mg/Kg | EPA 8260B | 10/10/2008 |
| **1,2-Dichloroethane** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/10/2008 |
| **1,2-Dibromoethane** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/10/2008 |
| 1,2-Dichloroethane-d4 (Surr) | 100 | | % Recovery | EPA 8260B | 10/10/2008 |
| Toluene - d8 (Surr) | 96.6 | | % Recovery | EPA 8260B | 10/10/2008 |
| **TPH as Diesel** | **9.9** | 1.0 | mg/Kg | M EPA 8015 | 10/15/2008 |
| (Note: Hydrocarbons are higher-boiling than typical Diesel Fuel.) | | | | | |
| 1-Chlorooctadecane (Diesel Surrogate) | 93.6 | | % Recovery | M EPA 8015 | 10/15/2008 |

KIFF Analytical LLC

Report Number : 65221
Date : 10/15/2008

Project Name : **Marcus Hardware**
Project Number : **GB001H**

Sample : **SB-11-W** Matrix : Water Lab Number : 65221-06
Sample Date :10/06/2008

| Parameter | Measured Value | Method Reporting Limit | Units | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|
| **Benzene** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 10/13/2008 |
| **Toluene** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 10/13/2008 |
| **Ethylbenzene** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 10/13/2008 |
| **Total Xylenes** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 10/13/2008 |
| **Methyl-t-butyl ether (MTBE)** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 10/13/2008 |
| **TPH as Gasoline** | **< 50** | 50 | ug/L | EPA 8260B | 10/13/2008 |
| **1,2-Dichloroethane** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 10/13/2008 |
| **1,2-Dibromoethane** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 10/13/2008 |
| 1,2-Dichloroethane-d4 (Surr) | 103 | | % Recovery | EPA 8260B | 10/13/2008 |
| Toluene - d8 (Surr) | 100 | | % Recovery | EPA 8260B | 10/13/2008 |
| **TPH as Diesel** | **2300** | 100 | ug/L | M EPA 8015 | 10/14/2008 |
| (Note: Hydrocarbons are higher-boiling than typical Diesel Fuel.) | | | | | |
| Octacosane (Diesel Surrogate) | 120 | | % Recovery | M EPA 8015 | 10/14/2008 |

KIFF Analytical LLC

Report Number : 65221
Date : 10/15/2008

Project Name : **Marcus Hardware**
Project Number : **GB001H**

Sample : **SB-11-15** Matrix : Soil Lab Number : 65221-07
Sample Date :10/06/2008

| Parameter | Measured Value | Method Reporting Limit | Units | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|
| **Lead** | **2.6** | 0.50 | mg/Kg | EPA 6010B | 10/14/2008 |
| **Benzene** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/10/2008 |
| **Toluene** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/10/2008 |
| **Ethylbenzene** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/10/2008 |
| **Total Xylenes** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/10/2008 |
| **Methyl-t-butyl ether (MTBE)** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/10/2008 |
| **TPH as Gasoline** | **< 1.0** | 1.0 | mg/Kg | EPA 8260B | 10/10/2008 |
| **1,2-Dichloroethane** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/10/2008 |
| **1,2-Dibromoethane** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/10/2008 |
| 1,2-Dichloroethane-d4 (Surr) | 101 | | % Recovery | EPA 8260B | 10/10/2008 |
| Toluene - d8 (Surr) | 96.5 | | % Recovery | EPA 8260B | 10/10/2008 |
| **TPH as Diesel** | **5.5** | 1.0 | mg/Kg | M EPA 8015 | 10/13/2008 |
| (Note: Hydrocarbons are higher-boiling than typical Diesel Fuel.) | | | | | |
| 1-Chlorooctadecane (Diesel Surrogate) | 78.4 | | % Recovery | M EPA 8015 | 10/13/2008 |

KIFF Analytical LLC

Report Number : 65221
Date : 10/15/2008

Project Name : **Marcus Hardware**
Project Number : **GB001H**

Sample : **SB-10-W** Matrix : Water Lab Number : 65221-08
Sample Date :10/06/2008

| Parameter | Measured Value | Method Reporting Limit | Units | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|
| **Benzene** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 10/13/2008 |
| **Toluene** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 10/13/2008 |
| **Ethylbenzene** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 10/13/2008 |
| **Total Xylenes** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 10/13/2008 |
| **Methyl-t-butyl ether (MTBE)** | **11** | 0.50 | ug/L | EPA 8260B | 10/13/2008 |
| **TPH as Gasoline** | **< 50** | 50 | ug/L | EPA 8260B | 10/13/2008 |
| **1,2-Dichloroethane** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 10/13/2008 |
| **1,2-Dibromoethane** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 10/13/2008 |
| 1,2-Dichloroethane-d4 (Surr) | 98.8 | | % Recovery | EPA 8260B | 10/13/2008 |
| Toluene - d8 (Surr) | 100 | | % Recovery | EPA 8260B | 10/13/2008 |
| **TPH as Diesel** | **1700** | 100 | ug/L | M EPA 8015 | 10/14/2008 |
| (Note: Hydrocarbons are higher-boiling than typical Diesel Fuel.) | | | | | |
| Octacosane (Diesel Surrogate) | 87.7 | | % Recovery | M EPA 8015 | 10/14/2008 |

KIFF Analytical LLC

Report Number : 65221
Date : 10/15/2008

Project Name : **Marcus Hardware**
Project Number : **GB001H**

Sample : **SB-9-W** Matrix : Water Lab Number : 65221-09
Sample Date :10/06/2008

| Parameter | Measured Value | Method Reporting Limit | Units | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|
| **Benzene** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 10/11/2008 |
| **Toluene** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 10/11/2008 |
| **Ethylbenzene** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 10/11/2008 |
| **Total Xylenes** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 10/11/2008 |
| **Methyl-t-butyl ether (MTBE)** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 10/11/2008 |
| **TPH as Gasoline** | **< 50** | 50 | ug/L | EPA 8260B | 10/11/2008 |
| **1,2-Dichloroethane** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 10/11/2008 |
| **1,2-Dibromoethane** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 10/11/2008 |
| 1,2-Dichloroethane-d4 (Surr) | 97.9 | | % Recovery | EPA 8260B | 10/11/2008 |
| Toluene - d8 (Surr) | 96.6 | | % Recovery | EPA 8260B | 10/11/2008 |
| **TPH as Diesel** | **780** | 50 | ug/L | M EPA 8015 | 10/14/2008 |
| (Note: Hydrocarbons are higher-boiling than typical Diesel Fuel.) | | | | | |
| Octacosane (Diesel Surrogate) | 115 | | % Recovery | M EPA 8015 | 10/14/2008 |

Report Number : 65221

Date : 10/15/2008

**QC Report : Method Blank Data**

Project Name : **Marcus Hardware**

Project Number : **GB001H**

| Parameter | Measured Value | Method Reporting Limit | Units | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|
| Lead | < 0.50 | 0.50 | mg/Kg | EPA 6010B | 10/14/2008 |
| TPH as Diesel | < 50 | 50 | ug/L | M EPA 8015 | 10/11/2008 |
| Octacosane (Diesel Surrogate) | 106 | | % | M EPA 8015 | 10/11/2008 |
| TPH as Diesel | < 1.0 | 1.0 | mg/Kg | M EPA 8015 | 10/10/2008 |
| 1-Chlorooctadecane (Diesel Surrogate) | 87.6 | | % | M EPA 8015 | 10/10/2008 |
| Benzene | < 0.0050 | 0.0050 | mg/Kg | EPA 8260B | 10/09/2008 |
| Ethylbenzene | < 0.0050 | 0.0050 | mg/Kg | EPA 8260B | 10/09/2008 |
| Toluene | < 0.0050 | 0.0050 | mg/Kg | EPA 8260B | 10/09/2008 |
| Total Xylenes | < 0.0050 | 0.0050 | mg/Kg | EPA 8260B | 10/09/2008 |
| Methyl-t-butyl ether (MTBE) | < 0.0050 | 0.0050 | mg/Kg | EPA 8260B | 10/09/2008 |
| TPH as Gasoline | < 1.0 | 1.0 | mg/Kg | EPA 8260B | 10/09/2008 |
| 1,2-Dibromoethane | < 0.0050 | 0.0050 | mg/Kg | EPA 8260B | 10/09/2008 |
| 1,2-Dichloroethane | < 0.0050 | 0.0050 | mg/Kg | EPA 8260B | 10/09/2008 |
| 1,2-Dichloroethane-d4 (Surr) | 102 | | % | EPA 8260B | 10/09/2008 |
| Toluene - d8 (Surr) | 101 | | % | EPA 8260B | 10/09/2008 |
| Benzene | < 0.50 | 0.50 | ug/L | EPA 8260B | 10/11/2008 |
| Ethylbenzene | < 0.50 | 0.50 | ug/L | EPA 8260B | 10/11/2008 |
| Toluene | < 0.50 | 0.50 | ug/L | EPA 8260B | 10/11/2008 |
| Total Xylenes | < 0.50 | 0.50 | ug/L | EPA 8260B | 10/11/2008 |
| Methyl-t-butyl ether (MTBE) | < 0.50 | 0.50 | ug/L | EPA 8260B | 10/11/2008 |
| TPH as Gasoline | < 50 | 50 | ug/L | EPA 8260B | 10/11/2008 |
| 1,2-Dibromoethane | < 0.50 | 0.50 | ug/L | EPA 8260B | 10/11/2008 |
| 1,2-Dichloroethane | < 0.50 | 0.50 | ug/L | EPA 8260B | 10/11/2008 |
| 1,2-Dichloroethane-d4 (Surr) | 101 | | % | EPA 8260B | 10/11/2008 |
| Toluene - d8 (Surr) | 96.2 | | % | EPA 8260B | 10/11/2008 |

| Parameter | Measured Value | Method Reporting Limit | Units | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|
| Benzene | < 0.50 | 0.50 | ug/L | EPA 8260B | 10/13/2008 |
| Ethylbenzene | < 0.50 | 0.50 | ug/L | EPA 8260B | 10/13/2008 |
| Toluene | < 0.50 | 0.50 | ug/L | EPA 8260B | 10/13/2008 |
| Total Xylenes | < 0.50 | 0.50 | ug/L | EPA 8260B | 10/13/2008 |
| Methyl-t-butyl ether (MTBE) | < 0.50 | 0.50 | ug/L | EPA 8260B | 10/13/2008 |
| TPH as Gasoline | < 50 | 50 | ug/L | EPA 8260B | 10/13/2008 |
| 1,2-Dibromoethane | < 0.50 | 0.50 | ug/L | EPA 8260B | 10/13/2008 |
| 1,2-Dichloroethane | < 0.50 | 0.50 | ug/L | EPA 8260B | 10/13/2008 |
| 1,2-Dichloroethane-d4 (Surr) | 96.8 | | % | EPA 8260B | 10/13/2008 |
| Toluene - d8 (Surr) | 100 | | % | EPA 8260B | 10/13/2008 |
| Benzene | < 0.50 | 0.50 | ug/L | EPA 8260B | 10/13/2008 |
| Ethylbenzene | < 0.50 | 0.50 | ug/L | EPA 8260B | 10/13/2008 |
| Toluene | < 0.50 | 0.50 | ug/L | EPA 8260B | 10/13/2008 |
| Total Xylenes | < 0.50 | 0.50 | ug/L | EPA 8260B | 10/13/2008 |
| Methyl-t-butyl ether (MTBE) | < 0.50 | 0.50 | ug/L | EPA 8260B | 10/13/2008 |
| TPH as Gasoline | < 50 | 50 | ug/L | EPA 8260B | 10/13/2008 |
| 1,2-Dibromoethane | < 0.50 | 0.50 | ug/L | EPA 8260B | 10/13/2008 |
| 1,2-Dichloroethane | < 0.50 | 0.50 | ug/L | EPA 8260B | 10/13/2008 |
| 1,2-Dichloroethane-d4 (Surr) | 104 | | % | EPA 8260B | 10/13/2008 |
| Toluene - d8 (Surr) | 97.6 | | % | EPA 8260B | 10/13/2008 |

**QC Report : Matrix Spike/ Matrix Spike Duplicate**

Report Number : 65221

Date : 10/15/2008

Project Name : **Marcus Hardware**

Project Number : **GB001H**

| Parameter | Spiked Sample | Sample Value | Spike Level | Spike Dup. Level | Spiked Sample Value | Duplicate Spiked Sample Value | Units | Analysis Method | Date Analyzed | Spiked Sample Percent Recov. | Duplicate Spiked Sample Percent Recov. | Relative Percent Diff. | Spiked Sample Percent Recov. Limit | Relative Percent Diff. Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TPH as Diesel | BLANK | <50 | 1000 | 1000 | 967 | 943 | ug/L | M EPA 8015 | 10/11/08 | 96.7 | 94.3 | 2.52 | 70-130 | 25 |
| TPH as Diesel | 65220-19 | <1.0 | 20.0 | 20.0 | 18.3 | 19.5 | mg/Kg | M EPA 8015 | 10/10/08 | 91.5 | 97.7 | 6.58 | 60-140 | 25 |
| 1,2-Dichloroethane | 65221-01 | <0.0050 | 0.0389 | 0.0388 | 0.0346 | 0.0330 | mg/Kg | EPA 8260B | 10/10/08 | 88.8 | 85.1 | 4.26 | 70-130 | 25 |
| Benzene | 65221-01 | <0.0050 | 0.0398 | 0.0396 | 0.0368 | 0.0364 | mg/Kg | EPA 8260B | 10/10/08 | 92.6 | 91.7 | 0.936 | 70-130 | 25 |
| Methyl-t-butyl ether | 65221-01 | <0.0050 | 0.0393 | 0.0391 | 0.0390 | 0.0376 | mg/Kg | EPA 8260B | 10/10/08 | 99.3 | 96.0 | 3.40 | 70-130 | 25 |
| Toluene | 65221-01 | <0.0050 | 0.0392 | 0.0391 | 0.0347 | 0.0341 | mg/Kg | EPA 8260B | 10/10/08 | 88.6 | 87.2 | 1.59 | 70-130 | 25 |
| 1,2-Dichloroethane | 65221-09 | <0.50 | 39.2 | 39.2 | 37.7 | 37.0 | ug/L | EPA 8260B | 10/11/08 | 96.3 | 94.6 | 1.82 | 70-130 | 25 |
| Benzene | 65221-09 | <0.50 | 40.0 | 40.0 | 40.4 | 40.4 | ug/L | EPA 8260B | 10/11/08 | 101 | 101 | 0.0995 | 70-130 | 25 |
| Methyl-t-butyl ether | 65221-09 | <0.50 | 39.5 | 39.5 | 41.4 | 40.8 | ug/L | EPA 8260B | 10/11/08 | 105 | 103 | 1.42 | 70-130 | 25 |
| Toluene | 65221-09 | <0.50 | 39.5 | 39.5 | 38.1 | 38.2 | ug/L | EPA 8260B | 10/11/08 | 96.7 | 96.7 | 0.0540 | 70-130 | 25 |
| 1,2-Dichloroethane | 65283-04 | <0.50 | 39.2 | 39.1 | 35.5 | 35.9 | ug/L | EPA 8260B | 10/13/08 | 90.7 | 92.0 | 1.39 | 70-130 | 25 |
| Benzene | 65283-04 | <0.50 | 40.0 | 40.0 | 36.3 | 36.4 | ug/L | EPA 8260B | 10/13/08 | 90.6 | 91.0 | 0.433 | 70-130 | 25 |
| Methyl-t-butyl ether | 65283-04 | <0.50 | 39.5 | 39.4 | 40.8 | 41.8 | ug/L | EPA 8260B | 10/13/08 | 103 | 106 | 2.69 | 70-130 | 25 |
| Toluene | 65283-04 | <0.50 | 39.5 | 39.4 | 36.4 | 36.3 | ug/L | EPA 8260B | 10/13/08 | 92.3 | 92.1 | 0.129 | 70-130 | 25 |
| 1,2-Dichloroethane | 65220-07 | <0.50 | 39.0 | 39.1 | 39.8 | 39.4 | ug/L | EPA 8260B | 10/13/08 | 102 | 101 | 1.13 | 70-130 | 25 |
| Benzene | 65220-07 | <0.50 | 39.9 | 40.0 | 39.8 | 39.9 | ug/L | EPA 8260B | 10/13/08 | 99.7 | 99.7 | 0.0101 | 70-130 | 25 |
| Methyl-t-butyl ether | 65220-07 | <0.50 | 39.3 | 39.4 | 40.6 | 46.7 | ug/L | EPA 8260B | 10/13/08 | 103 | 118 | 13.7 | 70-130 | 25 |

**QC Report : Matrix Spike/ Matrix Spike Duplicate**

Report Number : 65221

Date : 10/15/2008

Project Name : **Marcus Hardware**

Project Number : **GB001H**

| Parameter | Spiked Sample | Sample Value | Spike Level | Spike Dup. Level | Spiked Sample Value | Duplicate Spiked Sample Value | Units | Analysis Method | Date Analyzed | Spiked Sample Percent Recov. | Duplicate Spiked Sample Percent Recov. | Relative Percent Diff. | Spiked Sample Percent Recov. Limit | Relative Percent Diff. Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Toluene | 65220-07 | <0.50 | 39.3 | 39.4 | 40.2 | 40.3 | ug/L | EPA 8260B | 10/13/08 | 102 | 102 | 0.0762 | 70-130 | 25 |
| Lead | 65220-18 | 24 | 50.0 | 50.0 | 75.2 | 75.9 | mg/Kg | EPA 6010B | 10/14/08 | 102 | 103 | 0.993 | 75-125 | 20 |

**QC Report : Laboratory Control Sample (LCS)**

Report Number : 65221
Date : 10/15/2008

Project Name : **Marcus Hardware**
Project Number : **GB001H**

| Parameter | Spike Level | Units | Analysis Method | Date Analyzed | LCS Percent Recov. | LCS Percent Recov. Limit |
|---|---|---|---|---|---|---|
| Lead | 50.0 | mg/Kg | EPA 6010B | 10/14/08 | 103 | 85-115 |
| TPH as Diesel | 20.0 | mg/Kg | M EPA 8015 | 10/10/08 | 76.5 | 70-130 |
| 1,2-Dichloroethane | 0.0386 | mg/Kg | EPA 8260B | 10/9/08 | 87.7 | 70-130 |
| Benzene | 0.0395 | mg/Kg | EPA 8260B | 10/9/08 | 92.0 | 70-130 |
| Methyl-t-butyl ether | 0.0390 | mg/Kg | EPA 8260B | 10/9/08 | 98.6 | 70-130 |
| Toluene | 0.0389 | mg/Kg | EPA 8260B | 10/9/08 | 87.6 | 70-130 |
| 1,2-Dichloroethane | 39.2 | ug/L | EPA 8260B | 10/11/08 | 93.7 | 70-130 |
| Benzene | 40.1 | ug/L | EPA 8260B | 10/11/08 | 101 | 70-130 |
| Methyl-t-butyl ether | 39.6 | ug/L | EPA 8260B | 10/11/08 | 101 | 70-130 |
| Toluene | 39.5 | ug/L | EPA 8260B | 10/11/08 | 97.0 | 70-130 |
| 1,2-Dichloroethane | 39.2 | ug/L | EPA 8260B | 10/13/08 | 90.7 | 70-130 |
| Benzene | 40.1 | ug/L | EPA 8260B | 10/13/08 | 99.6 | 70-130 |
| Methyl-t-butyl ether | 39.6 | ug/L | EPA 8260B | 10/13/08 | 102 | 70-130 |
| Toluene | 39.5 | ug/L | EPA 8260B | 10/13/08 | 95.9 | 70-130 |
| 1,2-Dichloroethane | 39.2 | ug/L | EPA 8260B | 10/13/08 | 85.1 | 70-130 |
| Benzene | 40.1 | ug/L | EPA 8260B | 10/13/08 | 92.4 | 70-130 |

**QC Report : Laboratory Control Sample (LCS)**

Report Number : 65221
Date : 10/15/2008

Project Name : **Marcus Hardware**
Project Number : **GB001H**

| Parameter | Spike Level | Units | Analysis Method | Date Analyzed | LCS Percent Recov. | LCS Percent Recov. Limit |
|---|---|---|---|---|---|---|
| Methyl-t-butyl ether | 39.6 | ug/L | EPA 8260B | 10/13/08 | 90.9 | 70-130 |
| Toluene | 39.5 | ug/L | EPA 8260B | 10/13/08 | 92.8 | 70-130 |

**KIFF Analytical LLC**

2795 2nd Street, Suite 300
Davis, CA 95618
Lab: 530.297.4800
Fax: 530.297.4802

SRG # / Lab No. 65221

Page 1 of 1

# Chain-of-Custody Record and Analysis Request

Project Contact (Hardcopy or PDF To): elorway@clearwatergroup.com

Company / Address: 229 Tewkesbury Ave Richmond

Phone Number: 510-307-9943

Fax Number: 510-232-2823

Project #: GBOOH

P.O. #:

Project Name: Moraga Hardware

California EDF Report? ☒ Yes ☐ No

Sampling Company Log Code: CWGO

Global ID:

EDF Deliverable To (Email Address): elorway@clearwatergroup.com

Bill to:

Sampler Print Name: Robert L Nelson

Sampler Signature: Robert L. Nelson

Project Address: 626 2nd Street Oakland

## Analysis Request

PLEASE CIRCLE METHOD

TAT: ☐ 12 hr ☐ 24 hr ☐ 48hr ☐ 72hr ☒ 1 wk

| Sample Designation | Date | Time | Sampling | Container: 40 ml VOA | Container: Sleeve | Container: Poly | Container: Glass | Container: Tedlar | Preservative: HCl | Preservative: $HNO_3$ | Preservative: None | Matrix: Water | Matrix: Soil | Matrix: Air | MTBE @ 0.5 ppb (EPA 8260B) | BTEX (EPA 8260B) | TPH Gas (EPA 8260B) | 5 Oxygenates (MTBE, DIPE, ETBE, TAME, TBA) (EPA 8260B) | 7 Oxygenates (5 oxy + EtOH, MeOH) (EPA 8260B) | Lead Scav. (1,2 DCA & 1,2 EDB) (EPA 8260B) | Volatile Halocarbons (EPA 8260B) | Volatile Organics Full List (EPA 8260B) | Volatile Organics (EPA 524.2 Drinking Water) | TPH as Diesel (EPA 8015M) | TPH as Motor Oil (EPA 8015M) | CAM 17 Metals (EPA 200.7 / 6010) | 5 Waste Oil Metals (Cd,Cr,Ni,Pb,Zn) (EPA 200.7 / 6010) | Mercury (EPA 245.1 / 7470 / 7471) | Total Lead (EPA 200.7 / 6010) | W.E.T. Lead (STLC) | For Lab Use Only |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SB-13-11 | 10-6 | 820 | | | X | | | | | | X | | X | | X | X | X | | | X | | | | X | | | | | X | | 01 |
| SB-13-W | 10-6 | 835 | 6 | | | | | | X | | | X | | | X | X | X | | | X | | | | X | | | | | X | | 02 |
| SB-12-W | | 930 | 6 | | | | | | X | | | X | | | X | X | X | | | X | | | | X | | | | | X | | 03 |
| SB-11-5 | | 1050 | | | X | | | | | | X | | X | | X | X | X | | | X | | | | X | | | | | X | | 04 |
| SB-11-10 | | 1055 | | | X | | | | | | X | | X | | X | X | X | | | X | | | | X | | | | | X | | 05 |
| SB-11-W | | 1110 | 6 | | | | | | X | | | X | | | X | X | X | | | X | | | | X | | | | | X | | 06 |
| SB-11-15 | | 1130 | | | X | | | | | | X | | X | | X | X | X | | | X | | | | X | | | | | X | | 07 |
| SB-10-W | | 1330 | 6 | | | | | | X | | | X | | | X | X | X | | | X | | | | X | | | | | | | 08 |
| SB-9-W | | 1445 | 6 | | | | | | X | | | X | | | X | X | X | | | X | | | | X | | | | | | | 09 |
| RLN | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

| Relinquished by: | Date | Time | Received by: |
|---|---|---|---|
| Robert L. Nelson | | | |
| Relinquished by: | Date | Time | Received by: |
| | | | |
| Relinquished by: | Date | Time | Received by Laboratory: |
| | 100808 | 1117 | McPherson Kiff Analytical |

Remarks:

For Lab Use Only: Sample Receipt

| Temp °C | Initials | Date | Time | Therm. ID # | Coolant Present |
|---|---|---|---|---|---|
| 4.6 | NLP | 100808 | 1510 | IR-1 | (Yes) / No |
| 2.4 | NLP | 100808 | 1508 | IR-1 | (Yes) |

Distribution: White - Lab; Pink - Originator
Rev: 061708

KIFF Analytical LLC

Report Number : 65279
Date : 10/23/2008

Erik Lervaag
The Auger Group
229 Tewksbury Avenue
Point Richmond, CA 94801

Subject : 10 Soil Samples and 5 Water Samples
Project Name : Markus Hardware
Project Number : GB001

Dear Mr. Lervaag,

Chemical analysis of the samples referenced above has been completed. Summaries of the data are contained on the following pages. Sample(s) were received under documented chain-of-custody. US EPA protocols for sample storage and preservation were followed.

Kiff Analytical is certified by the State of California (# 2236). If you have any questions regarding procedures or results, please call me at 530-297-4800.

Sincerely,

Joel Kiff

KIFF Analytical LLC

Report Number : 65279
Date : 10/23/2008

Subject : 10 Soil Samples and 5 Water Samples
Project Name : Markus Hardware
Project Number : GB001

# Case Narrative

Matrix Spike/Matrix Spike Duplicate results associated with samples SB-15-15-15.5, SB-15-27-27.5, SB-16-19-19.5, SB-16-23-23.5, and SB-16-11-11.5 for the analyte TPH as Diesel were outside of control limits. This may indicate a bias for the sample that was spiked. Since the LCS recoveries were within control limits, no data are flagged.

KIFF Analytical LLC

Report Number : 65279
Date : 10/23/2008

Project Name : **Markus Hardware**
Project Number : **GB001**

Sample : **SB-14-W** Matrix : Water Lab Number : 65279-01
Sample Date :10/09/2008

| Parameter | Measured Value | Method Reporting Limit | Units | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|
| **Benzene** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 10/13/2008 |
| **Toluene** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 10/13/2008 |
| **Ethylbenzene** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 10/13/2008 |
| **Total Xylenes** | **2.1** | 0.50 | ug/L | EPA 8260B | 10/13/2008 |
| **Methyl-t-butyl ether (MTBE)** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 10/13/2008 |
| **TPH as Gasoline** | **< 50** | 50 | ug/L | EPA 8260B | 10/13/2008 |
| **1,2-Dichloroethane** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 10/13/2008 |
| **1,2-Dibromoethane** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 10/13/2008 |
| 1,2-Dichloroethane-d4 (Surr) | 104 | | % Recovery | EPA 8260B | 10/13/2008 |
| Toluene - d8 (Surr) | 100 | | % Recovery | EPA 8260B | 10/13/2008 |
| **TPH as Diesel** | **360** | 50 | ug/L | M EPA 8015 | 10/21/2008 |
| (Note: Hydrocarbons are higher-boiling than typical Diesel Fuel.) | | | | | |
| Octacosane (Diesel Surrogate) | 104 | | % Recovery | M EPA 8015 | 10/21/2008 |

KIFF Analytical LLC

Report Number : 65279
Date : 10/23/2008

Project Name : **Markus Hardware**
Project Number : **GB001**

Sample : **SB-15-4-4.5** Matrix : Soil Lab Number : 65279-02
Sample Date :10/09/2008

| Parameter | Measured Value | Method Reporting Limit | Units | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|
| **Lead** | **3.6** | 0.50 | mg/Kg | EPA 6010B | 10/14/2008 |
| **Benzene** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/11/2008 |
| **Toluene** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/11/2008 |
| **Ethylbenzene** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/11/2008 |
| **Total Xylenes** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/11/2008 |
| **Methyl-t-butyl ether (MTBE)** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/11/2008 |
| **TPH as Gasoline** | **< 1.0** | 1.0 | mg/Kg | EPA 8260B | 10/11/2008 |
| **1,2-Dichloroethane** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/11/2008 |
| **1,2-Dibromoethane** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/11/2008 |
| 1,2-Dichloroethane-d4 (Surr) | 102 | | % Recovery | EPA 8260B | 10/11/2008 |
| Toluene - d8 (Surr) | 96.4 | | % Recovery | EPA 8260B | 10/11/2008 |
| **TPH as Diesel** | **5.6** | 1.0 | mg/Kg | M EPA 8015 | 10/21/2008 |
| (Note: Hydrocarbons are higher-boiling than typical Diesel Fuel.) | | | | | |
| 1-Chlorooctadecane (Diesel Surrogate) | 115 | | % Recovery | M EPA 8015 | 10/21/2008 |

KIFF Analytical LLC

Report Number : 65279
Date : 10/23/2008

Project Name : **Markus Hardware**
Project Number : **GB001**

Sample : **SB-15-11-11.5** Matrix : Soil Lab Number : 65279-03
Sample Date :10/09/2008

| Parameter | Measured Value | Method Reporting Limit | Units | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|
| **Lead** | **2.9** | 0.50 | mg/Kg | EPA 6010B | 10/14/2008 |
| **Benzene** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/11/2008 |
| **Toluene** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/11/2008 |
| **Ethylbenzene** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/11/2008 |
| **Total Xylenes** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/11/2008 |
| **Methyl-t-butyl ether (MTBE)** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/11/2008 |
| **TPH as Gasoline** | **< 1.0** | 1.0 | mg/Kg | EPA 8260B | 10/11/2008 |
| **1,2-Dichloroethane** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/11/2008 |
| **1,2-Dibromoethane** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/11/2008 |
| 1,2-Dichloroethane-d4 (Surr) | 100 | | % Recovery | EPA 8260B | 10/11/2008 |
| Toluene - d8 (Surr) | 96.0 | | % Recovery | EPA 8260B | 10/11/2008 |
| **TPH as Diesel** | **2.6** | 1.0 | mg/Kg | M EPA 8015 | 10/21/2008 |
| (Note: Hydrocarbons are higher-boiling than typical Diesel Fuel.) | | | | | |
| 1-Chlorooctadecane (Diesel Surrogate) | 96.1 | | % Recovery | M EPA 8015 | 10/21/2008 |

KIFF Analytical LLC

Report Number : 65279
Date : 10/23/2008

Project Name : **Markus Hardware**
Project Number : **GB001**

Sample : **SB-15-15-15.5** Matrix : Soil Lab Number : 65279-04
Sample Date :10/09/2008

| Parameter | Measured Value | Method Reporting Limit | Units | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|
| **Lead** | **2.9** | 0.50 | mg/Kg | EPA 6010B | 10/14/2008 |
| **Benzene** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/11/2008 |
| **Toluene** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/11/2008 |
| **Ethylbenzene** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/11/2008 |
| **Total Xylenes** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/11/2008 |
| **Methyl-t-butyl ether (MTBE)** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/11/2008 |
| **TPH as Gasoline** | **< 1.0** | 1.0 | mg/Kg | EPA 8260B | 10/11/2008 |
| **1,2-Dichloroethane** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/11/2008 |
| **1,2-Dibromoethane** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/11/2008 |
| 1,2-Dichloroethane-d4 (Surr) | 99.2 | | % Recovery | EPA 8260B | 10/11/2008 |
| Toluene - d8 (Surr) | 96.3 | | % Recovery | EPA 8260B | 10/11/2008 |
| **TPH as Diesel** | **12** | 1.0 | mg/Kg | M EPA 8015 | 10/23/2008 |
| (Note: Hydrocarbons are higher-boiling than typical Diesel Fuel.) | | | | | |
| 1-Chlorooctadecane (Diesel Surrogate) | 102 | | % Recovery | M EPA 8015 | 10/23/2008 |

KIFF Analytical LLC

Report Number : 65279
Date : 10/23/2008

Project Name : **Markus Hardware**
Project Number : **GB001**

Sample : **SB-15-27-27.5** Matrix : Soil Lab Number : 65279-05
Sample Date :10/09/2008

| Parameter | Measured Value | Method Reporting Limit | Units | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|
| **Lead** | **2.4** | 0.50 | mg/Kg | EPA 6010B | 10/14/2008 |
| **Benzene** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/11/2008 |
| **Toluene** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/11/2008 |
| **Ethylbenzene** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/11/2008 |
| **Total Xylenes** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/11/2008 |
| **Methyl-t-butyl ether (MTBE)** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/11/2008 |
| **TPH as Gasoline** | **< 1.0** | 1.0 | mg/Kg | EPA 8260B | 10/11/2008 |
| **1,2-Dichloroethane** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/11/2008 |
| **1,2-Dibromoethane** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/11/2008 |
| 1,2-Dichloroethane-d4 (Surr) | 102 | | % Recovery | EPA 8260B | 10/11/2008 |
| Toluene - d8 (Surr) | 96.4 | | % Recovery | EPA 8260B | 10/11/2008 |
| **TPH as Diesel** | **4.6** | 1.0 | mg/Kg | M EPA 8015 | 10/23/2008 |
| (Note: Hydrocarbons are higher-boiling than typical Diesel Fuel.) | | | | | |
| 1-Chlorooctadecane (Diesel Surrogate) | 97.5 | | % Recovery | M EPA 8015 | 10/23/2008 |

KIFF Analytical LLC

Report Number : 65279
Date : 10/23/2008

Project Name : **Markus Hardware**
Project Number : **GB001**

Sample : **SB-15-W** Matrix : Water Lab Number : 65279-06
Sample Date :10/09/2008

| Parameter | Measured Value | Method Reporting Limit | Units | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|
| **Benzene** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 10/13/2008 |
| **Toluene** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 10/13/2008 |
| **Ethylbenzene** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 10/13/2008 |
| **Total Xylenes** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 10/13/2008 |
| **Methyl-t-butyl ether (MTBE)** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 10/13/2008 |
| **TPH as Gasoline** | **< 50** | 50 | ug/L | EPA 8260B | 10/13/2008 |
| **1,2-Dichloroethane** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 10/13/2008 |
| **1,2-Dibromoethane** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 10/13/2008 |
| 1,2-Dichloroethane-d4 (Surr) | 103 | | % Recovery | EPA 8260B | 10/13/2008 |
| Toluene - d8 (Surr) | 96.8 | | % Recovery | EPA 8260B | 10/13/2008 |
| **TPH as Diesel** | **190** | 50 | ug/L | M EPA 8015 | 10/21/2008 |
| (Note: Hydrocarbons are higher-boiling than typical Diesel Fuel.) | | | | | |
| Octacosane (Diesel Surrogate) | 95.4 | | % Recovery | M EPA 8015 | 10/21/2008 |

KIFF Analytical LLC

Report Number : 65279
Date : 10/23/2008

Project Name : **Markus Hardware**
Project Number : **GB001**

Sample : **SB-16-4-4.5** Matrix : Soil Lab Number : 65279-07
Sample Date :10/09/2008

| Parameter | Measured Value | Method Reporting Limit | Units | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|
| **Lead** | **13** | 0.50 | mg/Kg | EPA 6010B | 10/14/2008 |
| **Benzene** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/11/2008 |
| **Toluene** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/11/2008 |
| **Ethylbenzene** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/11/2008 |
| **Total Xylenes** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/11/2008 |
| **Methyl-t-butyl ether (MTBE)** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/11/2008 |
| **TPH as Gasoline** | **< 1.0** | 1.0 | mg/Kg | EPA 8260B | 10/11/2008 |
| **1,2-Dichloroethane** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/11/2008 |
| **1,2-Dibromoethane** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/11/2008 |
| 1,2-Dichloroethane-d4 (Surr) | 104 | | % Recovery | EPA 8260B | 10/11/2008 |
| Toluene - d8 (Surr) | 99.2 | | % Recovery | EPA 8260B | 10/11/2008 |
| **TPH as Diesel** | **8.8** | 1.0 | mg/Kg | M EPA 8015 | 10/22/2008 |
| (Note: Hydrocarbons are higher-boiling than typical Diesel Fuel.) | | | | | |
| 1-Chlorooctadecane (Diesel Surrogate) | 94.2 | | % Recovery | M EPA 8015 | 10/22/2008 |

KIFF Analytical LLC

Report Number : 65279
Date : 10/23/2008

Project Name : **Markus Hardware**
Project Number : **GB001**

Sample : **SB-16-8-8.5** Matrix : Soil Lab Number : 65279-08
Sample Date :10/09/2008

| Parameter | Measured Value | Method Reporting Limit | Units | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|
| **Lead** | **15** | 0.50 | mg/Kg | EPA 6010B | 10/14/2008 |
| **Benzene** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/11/2008 |
| **Toluene** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/11/2008 |
| **Ethylbenzene** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/11/2008 |
| **Total Xylenes** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/11/2008 |
| **Methyl-t-butyl ether (MTBE)** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/11/2008 |
| **TPH as Gasoline** | **< 1.0** | 1.0 | mg/Kg | EPA 8260B | 10/11/2008 |
| **1,2-Dichloroethane** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/11/2008 |
| **1,2-Dibromoethane** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/11/2008 |
| 1,2-Dichloroethane-d4 (Surr) | 105 | | % Recovery | EPA 8260B | 10/11/2008 |
| Toluene - d8 (Surr) | 96.8 | | % Recovery | EPA 8260B | 10/11/2008 |
| **TPH as Diesel** | **25** | 1.0 | mg/Kg | M EPA 8015 | 10/22/2008 |
| (Note: Hydrocarbons are higher-boiling than typical Diesel Fuel.) | | | | | |
| 1-Chlorooctadecane (Diesel Surrogate) | 80.3 | | % Recovery | M EPA 8015 | 10/22/2008 |

KIFF Analytical LLC

Report Number : 65279
Date : 10/23/2008

Project Name : **Markus Hardware**
Project Number : **GB001**

Sample : **SB-16-W** Matrix : Water Lab Number : 65279-09
Sample Date :10/09/2008

| Parameter | Measured Value | Method Reporting Limit | Units | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|
| **Benzene** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 10/13/2008 |
| **Toluene** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 10/13/2008 |
| **Ethylbenzene** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 10/13/2008 |
| **Total Xylenes** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 10/13/2008 |
| **Methyl-t-butyl ether (MTBE)** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 10/13/2008 |
| **TPH as Gasoline** | **< 50** | 50 | ug/L | EPA 8260B | 10/13/2008 |
| **1,2-Dichloroethane** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 10/13/2008 |
| **1,2-Dibromoethane** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 10/13/2008 |
| 1,2-Dichloroethane-d4 (Surr) | 104 | | % Recovery | EPA 8260B | 10/13/2008 |
| Toluene - d8 (Surr) | 98.8 | | % Recovery | EPA 8260B | 10/13/2008 |
| **TPH as Diesel** | **500** | 50 | ug/L | M EPA 8015 | 10/22/2008 |
| (Note: Hydrocarbons are higher-boiling than typical Diesel Fuel.) | | | | | |
| Octacosane (Diesel Surrogate) | 105 | | % Recovery | M EPA 8015 | 10/22/2008 |

KIFF Analytical LLC

Report Number : 65279
Date : 10/23/2008

Project Name : **Markus Hardware**
Project Number : **GB001**

Sample : **SB-16-15-15.5** Matrix : Soil Lab Number : 65279-10
Sample Date :10/09/2008

| Parameter | Measured Value | Method Reporting Limit | Units | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|
| **Lead** | **3.0** | 0.50 | mg/Kg | EPA 6010B | 10/14/2008 |
| **Benzene** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/11/2008 |
| **Toluene** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/11/2008 |
| **Ethylbenzene** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/11/2008 |
| **Total Xylenes** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/11/2008 |
| **Methyl-t-butyl ether (MTBE)** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/11/2008 |
| **TPH as Gasoline** | **< 1.0** | 1.0 | mg/Kg | EPA 8260B | 10/11/2008 |
| **1,2-Dichloroethane** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/11/2008 |
| **1,2-Dibromoethane** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/11/2008 |
| 1,2-Dichloroethane-d4 (Surr) | 109 | | % Recovery | EPA 8260B | 10/11/2008 |
| Toluene - d8 (Surr) | 98.9 | | % Recovery | EPA 8260B | 10/11/2008 |
| **TPH as Diesel** | **< 1.0** | 1.0 | mg/Kg | M EPA 8015 | 10/22/2008 |
| 1-Chlorooctadecane (Diesel Surrogate) | 96.8 | | % Recovery | M EPA 8015 | 10/22/2008 |

KIFF Analytical LLC

Report Number : 65279
Date : 10/23/2008

Project Name : **Markus Hardware**
Project Number : **GB001**

Sample : **SB-16-19-19.5** Matrix : Soil Lab Number : 65279-11
Sample Date :10/09/2008

| Parameter | Measured Value | Method Reporting Limit | Units | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|
| **Lead** | **2.2** | 0.50 | mg/Kg | EPA 6010B | 10/14/2008 |
| **Benzene** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/11/2008 |
| **Toluene** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/11/2008 |
| **Ethylbenzene** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/11/2008 |
| **Total Xylenes** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/11/2008 |
| **Methyl-t-butyl ether (MTBE)** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/11/2008 |
| **TPH as Gasoline** | **< 1.0** | 1.0 | mg/Kg | EPA 8260B | 10/11/2008 |
| **1,2-Dichloroethane** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/11/2008 |
| **1,2-Dibromoethane** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/11/2008 |
| 1,2-Dichloroethane-d4 (Surr) | 105 | | % Recovery | EPA 8260B | 10/11/2008 |
| Toluene - d8 (Surr) | 99.8 | | % Recovery | EPA 8260B | 10/11/2008 |
| **TPH as Diesel** | **8.2** | 1.0 | mg/Kg | M EPA 8015 | 10/22/2008 |
| (Note: Hydrocarbons are higher-boiling than typical Diesel Fuel.) | | | | | |
| 1-Chlorooctadecane (Diesel Surrogate) | 119 | | % Recovery | M EPA 8015 | 10/22/2008 |

KIFF Analytical LLC

Report Number : 65279
Date : 10/23/2008

Project Name : **Markus Hardware**
Project Number : **GB001**

Sample : **SB-16-23-23.5** Matrix : Soil Lab Number : 65279-12
Sample Date :10/09/2008

| Parameter | Measured Value | Method Reporting Limit | Units | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|
| **Lead** | **2.6** | 0.50 | mg/Kg | EPA 6010B | 10/14/2008 |
| **Benzene** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/11/2008 |
| **Toluene** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/11/2008 |
| **Ethylbenzene** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/11/2008 |
| **Total Xylenes** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/11/2008 |
| **Methyl-t-butyl ether (MTBE)** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/11/2008 |
| **TPH as Gasoline** | **< 1.0** | 1.0 | mg/Kg | EPA 8260B | 10/11/2008 |
| **1,2-Dichloroethane** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/11/2008 |
| **1,2-Dibromoethane** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/11/2008 |
| 1,2-Dichloroethane-d4 (Surr) | 106 | | % Recovery | EPA 8260B | 10/11/2008 |
| Toluene - d8 (Surr) | 100 | | % Recovery | EPA 8260B | 10/11/2008 |
| **TPH as Diesel** | **3.6** | 1.0 | mg/Kg | M EPA 8015 | 10/23/2008 |
| (Note: Hydrocarbons are higher-boiling than typical Diesel Fuel.) | | | | | |
| 1-Chlorooctadecane (Diesel Surrogate) | 106 | | % Recovery | M EPA 8015 | 10/23/2008 |

KIFF Analytical LLC

Report Number : 65279
Date : 10/23/2008

Project Name : **Markus Hardware**
Project Number : **GB001**

Sample : **SB-17-W** Matrix : Water Lab Number : 65279-13
Sample Date :10/09/2008

| Parameter | Measured Value | Method Reporting Limit | Units | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|
| **Benzene** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 10/13/2008 |
| **Toluene** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 10/13/2008 |
| **Ethylbenzene** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 10/13/2008 |
| **Total Xylenes** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 10/13/2008 |
| **Methyl-t-butyl ether (MTBE)** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 10/13/2008 |
| **TPH as Gasoline** | **< 50** | 50 | ug/L | EPA 8260B | 10/13/2008 |
| **1,2-Dichloroethane** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 10/13/2008 |
| **1,2-Dibromoethane** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 10/13/2008 |
| 1,2-Dichloroethane-d4 (Surr) | 99.4 | | % Recovery | EPA 8260B | 10/13/2008 |
| Toluene - d8 (Surr) | 96.9 | | % Recovery | EPA 8260B | 10/13/2008 |
| **TPH as Diesel** (Note: Hydrocarbons are higher-boiling than typical Diesel Fuel.) | **1500** | 50 | ug/L | M EPA 8015 | 10/22/2008 |
| Octacosane (Diesel Surrogate) | 122 | | % Recovery | M EPA 8015 | 10/22/2008 |

KIFF Analytical LLC

Report Number : 65279
Date : 10/23/2008

Project Name : **Markus Hardware**
Project Number : **GB001**

Sample : **SB-18-W** Matrix : Water Lab Number : 65279-14
Sample Date :10/09/2008

| Parameter | Measured Value | Method Reporting Limit | Units | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|
| **Benzene** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 10/13/2008 |
| **Toluene** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 10/13/2008 |
| **Ethylbenzene** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 10/13/2008 |
| **Total Xylenes** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 10/13/2008 |
| **Methyl-t-butyl ether (MTBE)** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 10/13/2008 |
| **TPH as Gasoline** | **< 50** | 50 | ug/L | EPA 8260B | 10/13/2008 |
| **1,2-Dichloroethane** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 10/13/2008 |
| **1,2-Dibromoethane** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 10/13/2008 |
| 1,2-Dichloroethane-d4 (Surr) | 99.0 | | % Recovery | EPA 8260B | 10/13/2008 |
| Toluene - d8 (Surr) | 97.6 | | % Recovery | EPA 8260B | 10/13/2008 |
| **TPH as Diesel** | **780** | 50 | ug/L | M EPA 8015 | 10/22/2008 |
| (Note: Hydrocarbons are higher-boiling than typical Diesel Fuel.) | | | | | |
| Octacosane (Diesel Surrogate) | 110 | | % Recovery | M EPA 8015 | 10/22/2008 |

KIFF Analytical LLC

Report Number : 65279
Date : 10/23/2008

Project Name : **Markus Hardware**
Project Number : **GB001**

Sample : **SB-16-11-11.5** Matrix : Soil Lab Number : 65279-15
Sample Date :10/09/2008

| Parameter | Measured Value | Method Reporting Limit | Units | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|
| **Lead** | **2.5** | 0.50 | mg/Kg | EPA 6010B | 10/14/2008 |
| **Benzene** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/11/2008 |
| **Toluene** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/11/2008 |
| **Ethylbenzene** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/11/2008 |
| **Total Xylenes** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/11/2008 |
| **Methyl-t-butyl ether (MTBE)** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/11/2008 |
| **TPH as Gasoline** | **< 1.0** | 1.0 | mg/Kg | EPA 8260B | 10/11/2008 |
| **1,2-Dichloroethane** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/11/2008 |
| **1,2-Dibromoethane** | **< 0.0050** | 0.0050 | mg/Kg | EPA 8260B | 10/11/2008 |
| 1,2-Dichloroethane-d4 (Surr) | 104 | | % Recovery | EPA 8260B | 10/11/2008 |
| Toluene - d8 (Surr) | 98.0 | | % Recovery | EPA 8260B | 10/11/2008 |
| **TPH as Diesel** (Note: Hydrocarbons are higher-boiling than typical Diesel Fuel.) | **8.6** | 1.0 | mg/Kg | M EPA 8015 | 10/23/2008 |
| 1-Chlorooctadecane (Diesel Surrogate) | 120 | | % Recovery | M EPA 8015 | 10/23/2008 |

Report Number : 65279

Date : 10/23/2008

**QC Report : Method Blank Data**

Project Name : **Markus Hardware**

Project Number : **GB001**

| Parameter | Measured Value | Method Reporting Limit | Units | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|
| Lead | < 0.50 | 0.50 | mg/Kg | EPA 6010B | 10/16/2008 |
| TPH as Diesel | < 1.0 | 1.0 | mg/Kg | M EPA 8015 | 10/21/2008 |
| 1-Chlorooctadecane (Diesel Surrogate) | 94.9 | | % | M EPA 8015 | 10/21/2008 |
| TPH as Diesel | < 50 | 50 | ug/L | M EPA 8015 | 10/21/2008 |
| Octacosane (Diesel Surrogate) | 92.7 | | % | M EPA 8015 | 10/21/2008 |
| TPH as Diesel | < 1.0 | 1.0 | mg/Kg | M EPA 8015 | 10/22/2008 |
| 1-Chlorooctadecane (Diesel Surrogate) | 77.0 | | % | M EPA 8015 | 10/22/2008 |
| Benzene | < 0.0050 | 0.0050 | mg/Kg | EPA 8260B | 10/11/2008 |
| Ethylbenzene | < 0.0050 | 0.0050 | mg/Kg | EPA 8260B | 10/11/2008 |
| Toluene | < 0.0050 | 0.0050 | mg/Kg | EPA 8260B | 10/11/2008 |
| Total Xylenes | < 0.0050 | 0.0050 | mg/Kg | EPA 8260B | 10/11/2008 |
| Methyl-t-butyl ether (MTBE) | < 0.0050 | 0.0050 | mg/Kg | EPA 8260B | 10/11/2008 |
| TPH as Gasoline | < 1.0 | 1.0 | mg/Kg | EPA 8260B | 10/11/2008 |
| 1,2-Dibromoethane | < 0.0050 | 0.0050 | mg/Kg | EPA 8260B | 10/11/2008 |
| 1,2-Dichloroethane | < 0.0050 | 0.0050 | mg/Kg | EPA 8260B | 10/11/2008 |
| 1,2-Dichloroethane-d4 (Surr) | 108 | | % | EPA 8260B | 10/11/2008 |
| Toluene - d8 (Surr) | 100 | | % | EPA 8260B | 10/11/2008 |

| Parameter | Measured Value | Method Reporting Limit | Units | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|
| Benzene | < 0.50 | 0.50 | ug/L | EPA 8260B | 10/13/2008 |
| Ethylbenzene | < 0.50 | 0.50 | ug/L | EPA 8260B | 10/13/2008 |
| Toluene | < 0.50 | 0.50 | ug/L | EPA 8260B | 10/13/2008 |
| Total Xylenes | < 0.50 | 0.50 | ug/L | EPA 8260B | 10/13/2008 |
| Methyl-t-butyl ether (MTBE) | < 0.50 | 0.50 | ug/L | EPA 8260B | 10/13/2008 |
| TPH as Gasoline | < 50 | 50 | ug/L | EPA 8260B | 10/13/2008 |
| 1,2-Dibromoethane | < 0.50 | 0.50 | ug/L | EPA 8260B | 10/13/2008 |
| 1,2-Dichloroethane | < 0.50 | 0.50 | ug/L | EPA 8260B | 10/13/2008 |
| 1,2-Dichloroethane-d4 (Surr) | 96.8 | | % | EPA 8260B | 10/13/2008 |
| Toluene - d8 (Surr) | 100 | | % | EPA 8260B | 10/13/2008 |

**QC Report : Matrix Spike/ Matrix Spike Duplicate**

Report Number : 65279
Date : 10/23/2008

Project Name : **Markus Hardware**
Project Number : **GB001**

| Parameter | Spiked Sample | Sample Value | Spike Level | Spike Dup. Level | Spiked Sample Value | Duplicate Spiked Sample Value | Units | Analysis Method | Date Analyzed | Spiked Sample Percent Recov. | Duplicate Spiked Sample Percent Recov. | Relative Percent Diff. | Spiked Sample Percent Recov. Limit | Relative Percent Diff. Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lead | 65220-18 | 24 | 50.0 | 50.0 | 75.4 | 73.6 | mg/Kg | EPA 6010B | 10/16/08 | 102 | 98.6 | 2.48 | 75-125 | 20 |
| 1,2-Dichloroethane | 65221-04 | <0.0050 | 0.0391 | 0.0388 | 0.0354 | 0.0341 | mg/Kg | EPA 8260B | 10/10/08 | 90.5 | 87.9 | 2.88 | 70-130 | 25 |
| Benzene | 65221-04 | <0.0050 | 0.0400 | 0.0396 | 0.0348 | 0.0336 | mg/Kg | EPA 8260B | 10/10/08 | 87.1 | 84.8 | 2.65 | 70-130 | 25 |
| Methyl-t-butyl ether | 65221-04 | <0.0050 | 0.0394 | 0.0391 | 0.0418 | 0.0412 | mg/Kg | EPA 8260B | 10/10/08 | 106 | 105 | 0.570 | 70-130 | 25 |
| Toluene | 65221-04 | <0.0050 | 0.0394 | 0.0391 | 0.0334 | 0.0318 | mg/Kg | EPA 8260B | 10/10/08 | 84.8 | 81.4 | 4.14 | 70-130 | 25 |
| 1,2-Dichloroethane | 65283-04 | <0.50 | 39.2 | 39.1 | 35.5 | 35.9 | ug/L | EPA 8260B | 10/13/08 | 90.7 | 92.0 | 1.39 | 70-130 | 25 |
| Benzene | 65283-04 | <0.50 | 40.0 | 40.0 | 36.3 | 36.4 | ug/L | EPA 8260B | 10/13/08 | 90.6 | 91.0 | 0.433 | 70-130 | 25 |
| Methyl-t-butyl ether | 65283-04 | <0.50 | 39.5 | 39.4 | 40.8 | 41.8 | ug/L | EPA 8260B | 10/13/08 | 103 | 106 | 2.69 | 70-130 | 25 |
| Toluene | 65283-04 | <0.50 | 39.5 | 39.4 | 36.4 | 36.3 | ug/L | EPA 8260B | 10/13/08 | 92.3 | 92.1 | 0.129 | 70-130 | 25 |
| TPH as Diesel | 65395-01 | 2.7 | 20.0 | 20.0 | 18.9 | 19.0 | mg/Kg | M EPA 8015 | 10/21/08 | 83.2 | 83.4 | 0.262 | 60-140 | 25 |
| TPH as Diesel | BLANK | <50 | 1000 | 1000 | 1090 | 1050 | ug/L | M EPA 8015 | 10/21/08 | 109 | 105 | 4.02 | 70-130 | 25 |
| TPH as Diesel | 65279-03 | 3.6 | 20.0 | 20.0 | 25.4 | 19.1 | mg/Kg | M EPA 8015 | 10/22/08 | 107 | 80.6 | 28.5 | 60-140 | 25 |

**QC Report : Laboratory Control Sample (LCS)**

Report Number : 65279
Date : 10/23/2008

Project Name : **Markus Hardware**
Project Number : **GB001**

| Parameter | Spike Level | Units | Analysis Method | Date Analyzed | LCS Percent Recov. | LCS Percent Recov. Limit |
|---|---|---|---|---|---|---|
| Lead | 50.0 | mg/Kg | EPA 6010B | 10/16/08 | 103 | 85-115 |
| TPH as Diesel | 20.0 | mg/Kg | M EPA 8015 | 10/21/08 | 91.5 | 70-130 |
| TPH as Diesel | 20.0 | mg/Kg | M EPA 8015 | 10/22/08 | 84.0 | 70-130 |
| 1,2-Dichloroethane | 0.0388 | mg/Kg | EPA 8260B | 10/10/08 | 91.8 | 70-130 |
| Benzene | 0.0397 | mg/Kg | EPA 8260B | 10/10/08 | 88.8 | 70-130 |
| Methyl-t-butyl ether | 0.0392 | mg/Kg | EPA 8260B | 10/10/08 | 101 | 70-130 |
| Toluene | 0.0392 | mg/Kg | EPA 8260B | 10/10/08 | 89.5 | 70-130 |
| 1,2-Dichloroethane | 39.2 | ug/L | EPA 8260B | 10/13/08 | 90.7 | 70-130 |
| Benzene | 40.1 | ug/L | EPA 8260B | 10/13/08 | 99.6 | 70-130 |
| Methyl-t-butyl ether | 39.6 | ug/L | EPA 8260B | 10/13/08 | 102 | 70-130 |
| Toluene | 39.5 | ug/L | EPA 8260B | 10/13/08 | 95.9 | 70-130 |

**KIFF Analytical LLC**

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Davis, CA 95618
Lab: 530.297.4800
Fax: 530.297.4802

SRG # / Lab No. 65279

Page ___ of ___

# Chain-of-Custody Record and Analysis Request

| | |
|---|---|
| Project Contact (Hardcopy or PDF To): Eric Lervaag | California EDF Report? Yes No |
| Company / Address: 227 Tewksbury Rd. Richmond, CA | Sampling Company Log Code: |
| Phone Number: 510-307-9943 | Global ID: |
| Fax Number: | EDF Deliverable To (Email Address): |
| Project #: GB001 / P.O. #: | Bill to: |
| Project Name: Markus Hardware | Sampler Signature: |
| Project Address: 2nd + MLK Oakland | |

| Sample Designation | Date | Time | Sampling | Container: 40 ml VOA | Container: Sleeve | Container: Poly | Container: Glass | Container: Tedlar | Preservative: HCl | Preservative: $HNO_3$ | Preservative: None | Preservative: 4°C | Matrix: Water | Matrix: Soil | Matrix: Air | MTBE @ 0.5 ppb (EPA 8260B) | BTEX (EPA 8260B) | TPH Gas (EPA 8260B) | 5 Oxygenates (MTBE, DIPE, ETBE, TAME, TBA) (EPA 8260B) | 7 Oxygenates (5 oxy + EtOH, MeOH) (EPA 8260B) | Lead Scav. (1,2 DCA & 1,2 EDB) (EPA 8260B) | Volatile Halocarbons (EPA 8260B) | Volatile Organics Full List (EPA 8260B) | Volatile Organics (EPA 524.2 Drinking Water) | TPH as Diesel (EPA 8015M) | TPH as Motor Oil (EPA 8015M) | CAM 17 Metals (EPA 200.7 / 6010) | 5 Waste Oil Metals (Cd,Cr,Ni,Pb,Zn) (EPA 200.7 / 6010) | Mercury (EPA 245.1 / 7470 / 7471) | Total Lead (EPA 200.7 / 6010) | W.E.T. Lead (STLC) | TAT | For Lab Use Only |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ~~SB-14-4-4.5~~ | ~~10/9/08~~ | ~~0740~~ | | | X | | | | | | X | X | | X | | X | X | X | | | X | | | | | | | | | X | 4w | | |
| ~~SB-14-11-11.5~~ | 10/9/08 | 0750 | | | X | | | | | | X | X | | X | | X | X | X | | | X | | | | | | | | | X | 4w | | |
| SB-14-W | 10/9/08 | 0800 | | X | | | X | | | | X | X | X | | | X | X | X | | | X | | | | | | | | | X | 4w | | |
| SB-15-4-4.5 | 10/9/08 | 0840 | | | X | | | | | | X | X | | X | | X | X | X | | | X | | | | | | | | | X | | | 01 |
| SB-15-11-11.5 | 10/9/08 | 0850 | | | X | | | | | | X | X | | X | | X | X | X | | | X | | | | | | | | | X | | | 02 |
| SB-15-15-15.5 | 10/9/08 | 0910 | | | X | | | | | | X | X | | X | | X | X | X | | | X | | | | | | | | | X | | | 03 |
| SB-15-27-27.5 | 10/9/08 | 1010 | | | X | | | | | | X | X | | X | | X | X | X | | | X | | | | | | | | | X | | | 04 |
| SB-15-W | 10/9/08 | 0900 | X | | | | X | | | | X | X | X | | | X | X | X | | | X | | | | | | | | | X | | | 05 |
| SB-16-4-4.5 | 10/9/08 | 1110 | | | X | | | | | | X | X | | X | | X | X | X | | | X | | | | | | | | | X | | | 06 |
| SB-16-8-8.5 | 10/9/08 | 1120 | | | X | | | | | | X | X | | X | | X | X | X | | | X | | | | | | | | | X | | | 07 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | X | | | 08 |

| Relinquished by: | Date | Time | Received by: |
|---|---|---|---|
| | 10/10/08 | 1101 | |
| Relinquished by: | Date | Time | Received by: |
| | | | |
| Relinquished by: | Date | Time | Received by Laboratory: |
| | 101008 | 1101 | Kiff Analytical |

Remarks: Remove SB-14-4-4.5 and SB-14-11-11.5

For Lab Use Only: Sample Receipt

| Temp °C | Initials | Date | Time | Therm. ID # | Coolant Present |
|---|---|---|---|---|---|
| 1.9 | JJ- | 101008 | 1653 | IR1 | Yes / No |

Distribution: White - Lab; Pink - Originator
Rev: 031308

**KIFF Analytical LLC**

2795 2nd Street, Suite 300
Davis, CA 95618
Lab: 530.297.4800
Fax: 530.297.4802

SRG # / Lab No. 65279

Page __ of __

# Chain-of-Custody Record and Analysis Request

| | |
|---|---|
| Project Contact (Hardcopy or PDF To): Eric Lervaag | California EDF Report? Yes No |
| Company / Address: 227 Tewksbury Rd, Portland, CA | Sampling Company Log Code: |
| Phone Number: 510-307-9943 | Global ID: |
| Fax Number: | EDF Deliverable To (Email Address): |
| Project #: GD001 / P.O. #: | Bill to: |
| Project Name: Markus Hardware | Sampler Signature: |
| Project Address: 2nd + MLK Oakland, CA | |

| Sample Designation | Sampling Date | Sampling Time | Container: 40 ml VOA | Container: Sleeve | Container: Poly | Container: Glass | Container: Tedlar | Preservative: HCl | Preservative: $HNO_3$ | Preservative: None | Preservative: $H_2SO_4$ | Matrix: Water | Matrix: Soil | Matrix: Air | MTBE @ 0.5 ppb (EPA 8260B) | BTEX (EPA 8260B) | TPH Gas (EPA 8260B) | 5 Oxygenates (MTBE, DIPE, ETBE, TAME, TBA) (EPA 8260B) | 7 Oxygenates (5 oxy + EtOH, MeOH) (EPA 8260B) | Lead Scav. (1,2 DCA & 1,2 EDB) (EPA 8260B) | Volatile Halocarbons (EPA 8260B) | Volatile Organics Full List (EPA 8260B) | Volatile Organics (EPA 524.2 Drinking Water) | TPH as Diesel (EPA 8015M) | TPH as Motor Oil (EPA 8015M) | CAM 17 Metals (EPA 200.7 / 6010) | 5 Waste Oil Metals (Cd,Cr,Ni,Pb,Zn) (EPA 200.7 / 6010) | Mercury (EPA 245.1 / 7470 / 7471) | Total Lead (EPA 200.7 / 6010) | W.E.T. Lead (STLC) | TAT | For Lab Use Only |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | circle method | | | | | | | | | | | | | | | | | | | | | | | | | | | | 12 hr | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 24 hr | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 48hr | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 72hr | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 wk | |
| SB-16-W | 10/9/08 | 1145 | X | | | X | | | | X | X | X | | | X | X | X | | | X | | | | | | | | | | | | 09 |
| SB-16-15-15.5 | 10/9/08 | 1230 | | X | | | | | | X | X | | X | | X | X | X | | | X | | | | | | | | | | | | 10 |
| SB-16-19-19.5 | 10/9/08 | 1240 | | X | | | | | | X | X | | X | | X | X | X | | | X | | | | | | | | | | | | 11 |
| SB-16-23-23.5 | 10/9/08 | 1300 | | X | | | | | | X | X | | X | | X | X | X | | | X | | | | | | | | | | | | 12 |
| ~~SB-17-4-4.5~~ | ~~10/9/08~~ | 1355 | | X | | | | | | X | X | | X | | X | X | X | | | X | | | | | | | | | | | | Aw |
| ~~SB-17-11-11.5~~ | ~~10/9/08~~ | 1400 | | X | | | | | | X | X | | X | | X | X | X | | | X | | | | | | | | | | | | Aw |
| SD-17-W | 10/9/08 | 1410 | X | | | X | | | | X | X | X | | | X | X | X | | | X | | | | | | | | | | | | 13 |
| SB-18-W | 10/9/08 | 1510 | X | | | X | | | | X | X | X | | | X | X | X | | | X | | | | | | | | | | | | 14 |
| SB-16-11-11.5 | 10/9/08 | 1215 | | X | | | | | | X | X | | X | | X | X | X | | | X | | | | | | | | | | | | 15 |

| Relinquished by: | Date | Time | Received by: |
|---|---|---|---|
| | 10/10/08 | 1101 | |
| Relinquished by: | Date | Time | Received by: |
| | | | |
| Relinquished by: | Date | Time | Received by Laboratory: |
| | 101008 | 1101 | Analytical |

Remarks: Remove SB-17-4-4.5 and SB-17-11-11.5

For Lab Use Only: Sample Receipt

| Temp °C | Initials | Date | Time | Therm. ID # | Coolant Present |
|---|---|---|---|---|---|
| | | | | | Yes / No |

Distribution: White - Lab; Pink - Originator
Rev: 031308