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December 31, 2012

Barbara Jakub, P.G.
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1131 Harbor Bay Parkway
Alameda, California 94502

Subject: **TRANSMITTAL LETTER & CERTIFICATION STATEMENT**

Location: **Former Exxon Station, 3055 35th Avenue, Oakland ("Site")**

ACEH LOP#: **RO-0000271; GeoTracker #: T0600100538;**

Date of Report	Title of Report
December 31, 2012	**Limited Soil & Groundwater Data Gap Assessment** ***Includes: Updated Site Conceptual Model***

As the legally authorized representative for the responsible party, I certify the following statement to satisfy regulatory requirements for technical report submittals:

- ***I declare, under penalty of perjury, that the information and/or recommendations contained in the aforementioned report, prepared on my behalf by WEBER, HAYES AND ASSOCIATES, are true and correct to the best of my knowledge.***

Sincerely,

Lynn A Worthington

Mr. Lynn Worthington

c/o: **Golden Empire Properties, Inc.**
5942 MacArthur Blvd # B
Oakland. California 94605-1698

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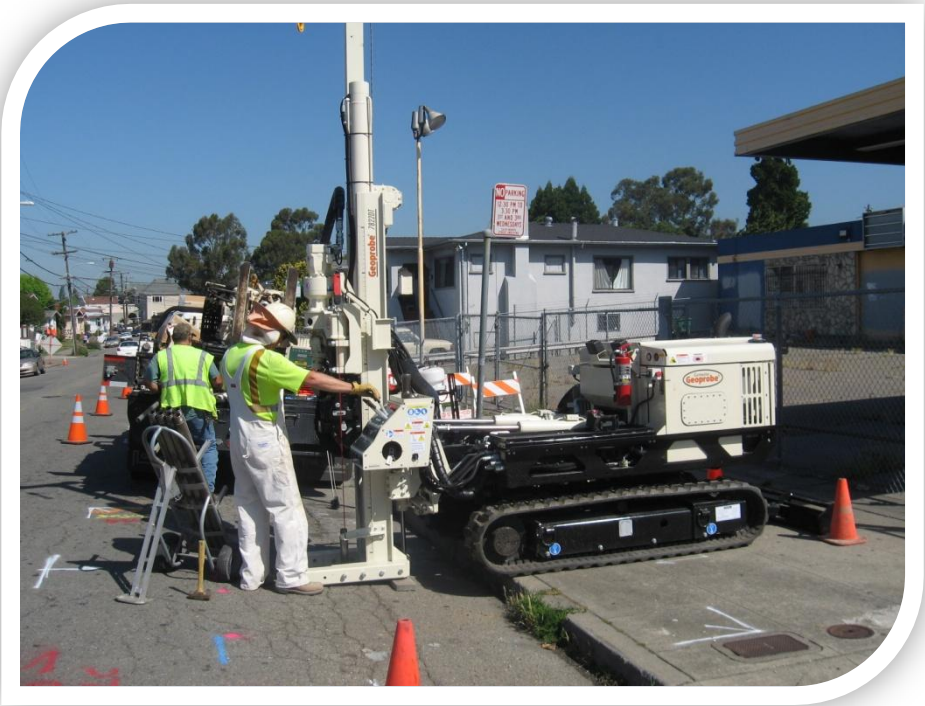
Limited Soil & Groundwater Data Gap Assessment

Includes: Updated Site Conceptual Model



Former Exxon Station
3055 35th Avenue
Oakland, California
December 31, 2012

Prepared for submittal to:

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ACRONYMS

ACEH	Alameda County Environmental Health
ACPW	Alameda County Public Works
bgs	below ground surface
BTEX	Benzene, Toluene, Ethylbenzene, and Xylenes
CAP	Corrective Action Plan
CHHSL	California Human Health Screening Level
COC	Chemical of Concern
CRA	Conestoga-Rovers & Associates
CRWQCB	California Regional Water Quality Control Board, Central Coast Region
DPE	Dual-Phase Extraction
EBMUD	East Bay Municipal Utility District
ESLs	Environmental Screening Levels
ISCO	In-Situ Chemical Oxidation
MTBE	Methyl-tert-Butyl Ether
MW	Monitoring Well
PHC	Petroleum Hydrocarbons
ppb	Part Per Billion
ppm_v	Parts per Million by Volume
SCM	Site Conceptual Model
SVE	Soil Vapor Extraction
TPH-gas	Total Petroleum Hydrocarbons as gasoline
State Cleanup Fund	State Underground Storage Tank Fund
USTs	Underground Fuel Storage Tanks
WHA	Weber, Hayes and Associates
WQOs	Water Quality Objectives

1.0 EXECUTIVE SUMMARY

This report presents the results of a limited soil and groundwater *Data Gap Assessment* conducted at the former Exxon Station located at 3055 35th Avenue, Oakland (see Figure 1, the Site) to address a historic release of gasoline from a former leaking underground storage tank system that was removed in 1991. This limited *Data Gap Assessment* was designed to: 1) confirm whether or not there are significant, contaminant contribution(s) originating from upgradient active and/or abandoned fueling facilities, and 2) collect soil quality data at a few, previously untested, potential source locations (i.e., beneath the former UST locations and fueling dispensers) to assess both the effectiveness of previous on-site soil and groundwater cleanup efforts and determine the *current* magnitude of residual, on-site soil impacts. *Note:* the vast majority of existing soil data collected at the Site is over 20 years old, and recent data collected in 2008[1] did not address these likely source areas. This *Assessment* was completed in order to fill data gaps identified in the *Site Conceptual Model* and lay the groundwork for selecting an appropriate remedial alternative for the Site. The tasks performed during this assessment followed a regulatory approved *Workplan*[2].

1.1 Results of Data Gap Assessment

Between May and November 2012, Weber Hayes and Associates (WHA) completed a regulatory approved assessment of soil and groundwater collected from: 1) three (3) upgradient off-site continuous core soil borings to confirm or deny potential off-site contaminant contribution from active and abandoned fueling facilities, 2) six (6) on-site continues core borings to assess current soil quality beneath the Site at previously untested locations, and 3) two (2) off-site upgradient monitoring wells to confirm detected off-site contaminate contribution (see Figures 2-4). Results of this investigation are as follows:

1.1.1 Off-Site, Upgradeint Borings DP-1, 2, and 3

Soil and groundwater samples were collected from three off-site, upgradient borings to determine whether the *abandoned* Texaco Station located immediately to the northeast (upgradient), and/or the *active* QuikStop fueling facility located approximately 100-feet to the east (upgradient) are contributing to an influx of groundwater contamination observed at the Site. Continuous soil cores were advanced to depths of 29 to 32 feet below ground surface (bgs).

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[1]: Constoga, Rovers and Associates (CRA)*: Site Characterization Report*, dated February 2009

[2]: Weber, Hayes and Associates: *Workplan for Limited Soil and Groundwater Data Gap Assessment*, dated February 21, 2012

- *Alameda County Environmental Health,* Work Plan Approval, *dated May 3, 2012.*

The data confirms there are petroleum hydrocarbon (TPH-gasoline, BTEX, TBA and/or MTBE) plumes flowing onto the 3055 35th Ave parcel from:

1. the *abandoned* Texaco station across school street, and
2. the *active* QuikStop station located across 35th Ave.

Specifically;

- **Boring DP-2** (positioned immediately downgradient of the *abandoned* Texaco station and upgradient of the Site): First groundwater was encountered in a thin, relatively permeable unit at a depth of approximately 25.5 to 27 feet below the ground surface (bgs). A collected groundwater sample yielded elevated concentrations of TPH-gas and benzene at concentrations of 3,800 parts per billion (ppb) and 72 ppb, respectively (see Figure 3 & Figure 2). Elevated field PID detections of VOCs in grab soil samples with associated moderate to high hydrocarbon odors were observed from approximately 7.5 to 17 feet bgs in this boring. These field observations are consistent with elevated soil analytical results previously obtained from adjacent 2008 boring B-20 (see Figures 2 & 3, and Table 1).
- **Boring DP-3** (positioned immediately downgradient of the *active* QuikStop station and upgradient of the Site): Similar to boring DP-2, first groundwater was encountered in a thin, relatively permeable unit at a depth of approximately 29 to 30 feet bgs. A collected groundwater sample yielded elevated concentrations of TPH-gas, benzene and MTBE at concentrations of 1,400, 92 and 97 ppb, respectively (see Figure 3 & Table 2). Elevated field PID detections in grab soil samples with associated moderate to high hydrocarbon odors were observed from approximately 12 to 21 feet bgs in this boring. Elevated concentrations of benzene were detected in collected soil samples at depths of 20 and 23 feet bgs in this boring (see Figures 2 & 3, and Table 1).

1.1.2 On-Site Soil Borings DP-4 through DP-9

Continuous soil cores were advanced to depths of 20 to 24 feet bgs at, and immediately adjacent to: 1) the former UST locations (DP-4, -5, and -6), in order to confirm the current magnitude of residual soil impacts from this obvious source area, and 2) the former dispenser island locations (DP-7, -8, and -9) in order to confirm or deny the presence of a shallow release at these suspect locations. Field observation of continuously cored borings coupled with laboratory analytical data indicate:

- **The most significant residual soil impacts are concentrated at, and around the former gasoline UST array (borings DP-5 and DP-6) and near the southern fuel dispenser location (boring DP-8).** Elevated concentrations of TPH-gas and benzene ranged from 130 to 4,600 mg/kg, and 0.22 to 6.2 mg/kg, respectively, with the most significant concentrations detected at depths ranging from 17 to 21 feet bgs. The commercial Environmental Screening Levels (ESL) for TPH-gas and benzene in soil are set at 100 and

0.044 mg/kg, respectively. Similarly, the most significantly impacted soil detected in boring DP-8 was concentrate at depth of 17 feet bgs with TPH-gas and benzene detected at concentrations of 970 and 2.6 mg/kg, respectively (see Figure 2 & Table 1).

- Elevated concentrations of hydrocarbons above ESLs were also detected in all other recently installed onsite borings, generally at depths below 10 feet bgs, and to a lesser extent.

- Shallow soil samples collected at depths of 4 and 8 feet bgs at several impacted on-site locations generally revealed non-detectable concentrations of hydrocarbons. This data confirms that on-site soil impacts are generally confined to depths of greater than 10 feet bgs. With this new data we can eliminate the direct exposure pathway for construction workers for most development scenarios (i.e., future development likely to be limited to shallow soil grading and trenching).

1.1.3 Upgradient, Off-Site Groundwater Monitoring Well Analytical Results

Based on the results of off-site grab groundwater samples, two regulatory approved monitoring wells were installed to confirm and periodically monitor the upgradient groundwater impacts. Newly installed monitoring wells MW-5 and MW-6 were professionally surveyed on November 2, 2012. Well development and post-development sampling was conducted on November 2 and 9, 2012. Results of sampling and well gauging are presented on Figure 4 and Tables 3 and 4. Results revealed:

Groundwater Gradient: Water levels collected from the fourteen on-site (MW-1 through MW-4 and RW-5 through RW-14) and two newly installed, and professionally surveyed off-site monitoring wells (MW-5 and MW-6) on November 9, 2012 were used in combination with the new well survey data to accurately calculate the groundwater elevation, gradient and flow direction at the Site. Calculated groundwater gradient and flow direction was 0.0087 ft/ft (i.e., 1 foot of vertical drop per 115 feet of lateral flow) in a westerly direction (see Figure 4).

- The groundwater gradient and flow direction calculated from the combined monitoring network (i.e., newly installed wells coupled with existing wells) is consistent with historical measurements, and confirms that **groundwater flows from the two east-lying gas station sites (*abandoned* Texaco and *active* QuikStop stations) towards the Site.**

Laboratory Testing: Post development sampling results confirm that significant groundwater contamination is migrating from the *active* QuikStop station, and to a lesser extent from the *abandoned* Texaco station. Specifically:

- **Well MW-5 (downgradient of the *active* QuickStop station)** revealed elevated concentrations of TPH-gas, benzene, MTBE and TBA at concentrations of 3,000, 1,300,

390, and 2,300 ppb, respectively. These concentrations exceed their respective Water Quality Objectives (WQOs) set at 1,000, 1, 5, and 12 ppb respectively.

- **Well MW-6 (downgradient of the *abandoned* Texaco station)** revealed elevated concentrations of benzene detected at 44 ug/L, above the WQO set at 1 ug/L.

1.2 Conclusions & Recommendations

The data gathered during this assessment has been incorporated into the *Site Conceptual Model (SCM).* **An updated *SCM* is presented in Appendix A.** Soil and Groundwater data collected during this *Data Gap Assessment* confirm:

- **Offsite soil and groundwater conditions:**
  - Based upon previous soil sampling conducted by CRA in 2008 (boring B-20), coupled with current field observations of soil impacts encountered at shallow depths **it is clear that a historic fuel release occurred at the nearby *abandoned* Texaco station fuel dispensers, product piping and possibly the USTs, which were all situated less than approximately 25 feet from impacted borings DP-2 and B-20.**
  - Based on current soil sampling analytical data from boring DP-3 coupled with field observations of soil impacts below approximately 10 feet bgs, **it is clear that a historic fuel release occurred at the *active* QuikStop station.**
  - Grab groundwater analytical data obtained from borings DP-2 and DP-3 coupled with post development sampling results from the newly installed wells MW-5 and MW-6 confirm that significant groundwater contamination is migrating to the Site from the *active* QuikStop station and apparently to a lesser extent from the *abandoned* Texaco station. **The observed increase of benzene in Site monitoring wells since 2009 can likely be attributed to these off-site releases (see Appendix A).**

  Note: We have also reviewed the active fuel release investigation located at 3201 35th Avenue (BP #11132; GeoTracker I.D. T0600100213) situated approximately one block (~ 300 feet) to the northeast of the Site to determine whether or not there may be a potential third source of groundwater contamination migrating to, and impacting the Site. **Based on our brief review of historical groundwater gradient and analytical data collected at this site it appears possible that there may have historically been some <u>limited</u> migration of groundwater contaminants towards the Site** (see Appendix D).

  The extent off-site groundwater contamination migrating to the Site remains a significant data gap.

- **Residual on-site soil conditions:**

- Elevated, residual soil contamination appears to be concentrated in the area at, and around the former gasoline UST array. Soil samples collected from borings DP-5 and DP-6 exhibited elevated concentrations of TPH-gasoline, benzene, ethylbenzene and xylenes, primarily at depths ranging from 17 to 21 feet bgs.
- Elevated, residual soil contamination was also encountered in soils collected from boring DP-8, near the former on-site fueling island, with the most significant impacts detected at a depth of 17 feet bgs.

Benzene appears to have decreased by several orders of magnitude since the investigation began over 20 years ago, likely due to a combination of natural attenuation coupled with four years of active soil remediation; however, it appears that TPH-gas concentrations outside the influence of the previous dual phase extraction system have not significantly attenuated during this time period (see Figure 2 and Appendix A).

The unifying theme between current and historical soil analytical data collected at the Site is that soil impacts are generally encountered at depths of greater than 10 feet bgs and attenuate at depths of approximately 20 to 23 feet bgs. This impacted soil zone corresponds with seasonal groundwater fluctuations measured to be approximately 8 to 18 feet bgs (see Appendix A). This indicates that the mechanism for persistent residual soil impacts detected within this approximate 10 foot zone at and downgradient of the Site is via groundwater transport as smear zone contamination. **Therefore, off-site plume migration to the Site is also contributing to the observed smear zone soil impacts.**

Based on the results of this *Data Gap Assessment* we recommend the following in order to move the Site towards regulatory case closure:

1. Investigation of Upgradient, Off-site Sources: **The mass of petroleum hydrocarbon contamination originating from the identified upgradient sources remains a significant data gap and the *Site Conceptual Model* is currently incomplete. At present, a cost effective *Corrective Action Plan* cannot be completed for the Site until upgradient responsible parties have been identified and these upgradient releases have been fully defined.** At this time it appears that a *Joint Corrective Action* through the State Water Resources Control Boards' *Commingled Plume Account* will likely be the most cost effective approach in reducing groundwater impacts in this area. **We recommend that the ACEH identify the responsible upgradient property owners and require that they complete an assessment of soil and groundwater impacts to determine the extent of contaminant plume migration to the Site.**
   - We recommend completing quarterly sampling of the newly installed wells MW-5 and MW-6, as well as quarterly sampling of upgradient property line wells RW-13 and RW-

14 in order to monitor trends and begin to build a data set of off-site contaminant migration to the Site. Annual sampling of key on-site monitoring wells (MW-1 through MW-4, and RW-5 and RW-9) will continue according the approved annual schedule.

This concludes the Executive Summary.

2.0 SITE BACKGROUND

Since 1991, soil, groundwater and soil vapor samples have been collected from twenty-four (24) on-site borings and thirteen (13) off-site borings, fourteen (14) wells have been installed on-site (4 monitoring and 10 remediation wells), and dual-phase remedial actions removed approximately 6,500 lbs of gasoline contaminants from the subsurface (2000-2004). The State Underground Storage Tank Fund (State Cleanup Fund) has reimbursed over $1 million dollars in assessment and remediation costs to date and despite significant characterization and remedial efforts, the Site soil and groundwater remains contaminated at concentrations well above regulatory threshold limits. Aside from on-going, semi-annual groundwater monitoring, the most recent investigative work was completed in 2008, and included milestone assessment of the extent and magnitude of contaminant concentrations in off-site soil, groundwater and soil vapor (CRA, 2009). The downgradient extent of the dissolved gasoline plume has been reasonably defined using GeoProbe grab groundwater samples approximately 200-255 feet off-site.

A detailed summary of site conditions and previous investigations (*Site Description and Background of Previously Completed Environmental Investigations)* and an *Updated Site Conceptual Model* are included as Appendix A as a reference.

Alameda County Environmental Health (ACEH) is the lead regulatory agency overseeing characterization and cleanup activities at the subject Site and has recently commented on the State Cleanup Fund's *5-Year Summary Report* (October 2010), which included a summary of Site information, a risk evaluation, and recommendations to complete the following tasks:

1. Update the site model conceptual (SCM) / preferential pathway survey.
2. Delineate the extent of the dissolved plume with off-site wells.
3. Complete an assessment of risk to human health and the environment.
4. Complete a C*orrective Action Plan*.

ACEH concurred with the State Cleanup Fund's recommendation to update the SCM[3], and a subsequent *Updated Site Conceptual Model*[4] identified the following data gaps:

[3]: *Electronic directive, Barbara Jakub, January 21, 2011, in response to proposed* Workplan to Address the State Fund's 5-year Review Comments.

[4]: *Weber, Hayes, and Associates:* Updated Site Conceptual Model – Fuel Release Investigation - Former Exxon Station, 3055 35th Avenue, Oakland, *dated June 24, 2011*

- The lack of upgradient groundwater data needed to confirm whether two nearby gasoline stations (i.e., an *abandoned* Texaco Gas Station located immediately upgradient of the Site, and/or an *active* QuikStop Gas Station located 100 feet upgradient of the Site) are contributing dissolved gasoline concentrations to the Site. The long term influx of dissolved contamination from either of these sites would have affected the efficiency of previous remedial efforts as well as would affect the selection of future remedial options.

  Note: Shallow soil impacts (i.e., 5 feet below the ground surface) were detected in a 2008 boring (B-20), located in the curb and gutter just in front of the *abandoned* Texaco Service Station (see Figure 2). This detection of shallow, near-surface gasoline contamination indicates that a second release has occurred, which originates across the street and upgradient of the subject Site.

- Aside from samples collected from two, recent on-site borings (2008), all on-site soil data is over 20 years old, and the lab results predate active remediation at the Site (2000-2004). No samples were collected from beneath the former tank pit or dispensers (known contaminant source areas and likely residual "hot-spot" areas). Only two of the seventy-two laboratory-tested soil samples collected from the Site were obtained from depths shallower than 10 feet. Accordingly:
  - Soil data following significant cleanup efforts to determine the magnitude of residual shallow sources of soil contamination (i.e., USTs and dispensers) or potential shallow sources of shallow soil contamination previously undefined (i.e., product piping runs) have not been collected.
- The *Site Conceptual Model* currently did not have the data set capable of eliminating construction worker direct exposure to soil as pathway for Site risk (i.e., shallow soils less than 10 feet deep.

3.0 PURPOSE & SCOPE OF INVESTIGATION

The current limited soil and groundwater *Data Gap Assessment* was designed to fill several identified data gaps in an effort to move the Site towards a regulatory required *Corrective Actions.* The sampling and analysis plan targeted the following data gaps identified in the *Updated Site Conceptual Model*[5].

1. Collect soil quality data at a few, previously untested, potential source locations (particularly at the unsampled UST pit and dispenser locations) to assess the *current* magnitude of residual, on-site soil impacts, and
2. Confirm whether or not there is contaminant contribution originating from upgradient,

[5] Weber, Hayes, and Associates: *Updated Site Conceptual Model – Fuel Release Investigation*, dated June 24, 2011

gas dispensing sites

These data gaps are being closed in order to move the Site towards regulatory required *Corrective Actions.* Once all data gaps have been reasonably address a *Corrective Action Plan* can effectively assess the feasibility of a number of remedial alternatives that: 1) reduce residual source contamination from continuing to contribute to the degradation of on-site and off-site groundwater, 2) create an environment to catalyze natural attenuation, and 3) reduce contaminant concentrations to cleanup goals within a reasonable timeframe. Given the incomplete cleanup following four years of Dual Phase Extraction technology at the Site (2000-2004), and the remaining budget left in the State Cleanup Fund's commitment to the Site, it appears that once the upgradient sources have been fully addressed one of the following on-site remedial options will likely be the most cost effective, remedial solution for the Site:

- Targeted mass removal of source contamination (up to 20 feet bgs) using large-diameter augers/excavation equipment; and
- Multiple, high-pressure injections of specialty chemical oxidizers, with emphasis on getting the oxidizer in contact (destroying) with the smear zone contamination

A *Human Health Risk Assessment* may also be considered for evaluating Site specific cleanup goals in order to address the cleanup of residual downgradient off-site impacts beneath a difficult to access, dense residential neighborhood.

Our scope of work included the installation of nine (9) strategically placed driven probe (DP) borings (DP-1 through DP-9; see Figure 2 for boring locations) for the collection of soil and groundwater samples. Following the receipt of laboratory analyzed groundwater samples from upgradient off-site groundwater samples, two (2) regulatory approved groundwater monitoring wells (MW-5 and MW-6) were installed for ongoing analysis of groundwater contamination confirmed to be originating from upgradient active and abandoned fueling facilities.

Installed and sampled soil borings included:

- **Borings DP-1, 2, and 3:** Soil and groundwater samples were collected from these three off-site, upgradient borings to determine whether the *abandoned* Texaco Station located immediately to the northeast (upgradient), and/or the *active* QuikStop fueling facility located approximately 100-feet to the east (upgradient) are contributing to an influx of groundwater contamination observed at the Site. Continuous soil cores were advanced to depths of 29 to 32 feet below ground surface (bgs).
- **Boring DP-4, 5, and 6:** Continuous soil cores were advanced to depths of 23 to 24 feet bgs at and immediately adjacent to the former UST locations, in order to confirm the current magnitude of residual soil impacts from this obvious source area.

- **Borings DP-7, 8, and 9:** Continuous soil cores were advanced to depths of 20 to 23 feet bgs at the former dispenser island locations in order to confirm or deny the presence of a shallow release at these suspect locations. We note that "strong hydrocarbon odor" was previously observed at a depth of 5 feet bgs in remediation well RW-11, located adjacent to current driven probe boring DP-8 (Appendix A).

Based on the grab groundwater analytical results obtained from DP-2 (situated immediately downgradient of the *abandoned* Texaco Station) and DP-3 (situated immediately downgradient of the *active* QuikStop station), two (2) regulatory approved[6] groundwater monitoring wells (MW-5 and MW-6) were installed for ongoing analysis of groundwater contamination confirmed to be originating from upgradient active and abandoned fueling facilities.

4.0 FIELD INVESTIGATION & RESULTS

Between May and November 2012, WHA completed the regulatory approved field investigation tasks described above (Section 3.0). Specifically:

- May 8 & 9, 2012 – Install and sample DP-1 through DP-9
- October 30, 2012 – Install off-site, upgradient monitoring wells MW-5 and MW-6
- November 2 and 9, 2012 – Develop and sample groundwater from wells MW-6 and MW-5, respectively

All work was supervised by a Professional Geologist registered in the State of California.

Pre-Drilling Activities included:

- Obtaining regulatory concurrence and approval of a written *Workplan*
- Procuring the required soil boring permits and monitoring well Installation permits through the Alameda County Public Works Agency (ACPWA – Water Resources Dept.), and the required Excavation, Obstruction, and Encroachment permits through the City of Oakland for boring and well installations completed in the public right of way (i.e., borings DP-1, 2, & 3, and wells MW-5 and MW-6);

  Note: procurement of the City of Oakland Encroachment Permit for well installation required the responsible party to purchase additional insurance and procure a notarized *Indenture Agreement* that was subsequently recorded on the property deed. **This process took nearly five months to complete.**

[6]: *Email Correspondence: Barbara Jakub (ACEH), Request for Authorization to Proceed with Upgradient Monitoring Well Installations, dated June 6, 2012.*

- Confirming the location of subsurface utilities with Underground Service Alert and a private utility locator

  Note: We contracted with Cruz Bros Locators to expose a Shell Pipeline distribution main via air-knife technique, as required by Shell Pipeline.

- Contracting with a professional traffic control service to provide the required traffic safety and control devices for work in the public right of way; and

- Contracting a C-57 licensed, driven probe drilling rig and hollow stem auger drilling rig, and scheduling the appropriate agencies for field inspection

Following boring installation and sample collection, each boring was completely sealed with neat cement grout and the ground surface was restored to match existing grade.

All investigative wastes generated during this investigation was properly containerized and temporarily stored at the Site and subsequently properly disposed of following the field investigation.

Permits, field notes, boring logs, project photo sheets and investigative derived waste disposal documentation are presented in Appendix B.

4.1 Hydraulic Driven Probe Drilling & Sampling

On May 8 and 9, 2012, we mobilized a hydraulically-driven Geoprobe drill rig to advance nine (9) borings (DP-1 through DP-9), at the locations specified above (see Figure 2 for boring locations).

Fieldwork was conducted according to our *Field Methodology for Hydraulic Driven Probes*, which is presented in Appendix B. Soils were continuously cored to the following depths: 1) 29 to 32 feet bgs for off-site borings DP-1 through DP-3 in order to vertically profile any potential soil contamination, identify the first encountered water bearing zone, and collection of grab groundwater samples, and 2) approximately 20 to 24 feet bgs in the on-site borings (DP-4 through DP-9) to vertically profile any residual soil contamination and collect soil samples for laboratory analysis. An experienced geologist carefully logged the continuously cored borings and a Photoionization Detector (PID) was used to monitor potential volatile organic vapors form the collected soil cores. Geologic Logs for each of the continuously cored borings are presented in Appendix B.

No on-site groundwater sample collection was proposed or conducted, as an extensive on-site groundwater analytical record already exists. We also note that no soil sample analysis was conducted for off-site boring DP-2 as abundant soil samples were recently collected and analyzed from an adjacent soil boring (boring B-20; CRA 2008).

4.1.1 Drilling Observations

In general, the subsurface soils described by previous consultants consist of an extremely heterogeneous mix of the following soil types (see Appendix A):

- The dominant soil type encountered consists of low-permeability soils that include clays, clayey-mixtures (clayey-silts and clayey-sands), and silty-mixtures (sandy-silts);
- The secondary soil type encountered consists of moderately-permeable sandy units (high silt content, fine-grained sand units identified as silty-sands with clay binder), and
- Locally, some relatively thin, discontinuous, highly-permeable sand lenses were encountered (low silt content silty-sands).

Observed Lithology:

Subsurface lithology observed at the Site during the current investigation is in general agreement with observations made by other consultants previously working on this fuel release investigation. Specifically, we have interpreted the following lithology beneath the Site (see Geologic Logs, Appendix B):

- *Clayey Sand with or without Gravel*, encountered beneath surface improvements to depths ranging from approximately 3 to 4.5 feet bgs (damp to moist), and up to approximately 14 to 17 feet bgs (dry to damp at depth) with our without interbeds of more permeable material (Clayey Gravelly Well Graded Sand – see below). **This material is interpreted to have relatively low permeability with up to approximately 30 to 40% clay fines.**
- *Clayey Gravelly Well Graded Sand*, dry to damp, with or without interbeds of the Clayey Sand units to depths of approximately 15 to 20 feet bgs. **This material is interpreted to be the more permeable unit beneath the Site with less than approximately 20-25% clay fines**;
- *Sandy Lean Clay with Gravel*, dry to slightly damp, encountered to depths below approximately 15.5 to 19 feet bgs. **This material is interpreted to have very low permeability with up to approximately 40 to 50% clay fines and appears to inhibit the vertical migration of contaminants as observed soil impacts appear to diminish rather abruptly within the top few feet of this unit** (see *Observed Soil Impacts* below).

In general, the unifying theme for the lithology observed beneath the Site is: 1) the interbedded, heterogeneous nature of soils, and 2) the ubiquitous presence of fine-grained clays and/or silts in the soil mixtures (low-to-moderately permeable units), that would appear to retard the vertical and lateral movement of precipitation, chemicals and groundwater.

First Encountered Groundwater:

First groundwater was encountered under confined conditions in a relatively thin (i.e., 1.5 to 3 foot thick), wet to saturated Clayey Well Graded Sand unit of moderate to higher permeability (approximately 15-20% clay fines) encountered at depths of approximately 24 to 29 feet bgs. This relatively thin water bearing zone is overlain by a low permeability Clay unit. Groundwater within the cased boreholes slowly rose to depths of approximately 13 to 18 feet bgs.

We note that the UST pit backfill material encountered in borings DP-4 and DP-6 to depths of 11.5 feet bgs was fully saturated from approximately 1 foot bgs to the base of the fill material at the native soil contact. This fill material acts like a bath tub and appears to have been completely filled by infiltrating surface water generated during precipitation events.

Observed Soil Impacts:

Based on visual and olfactory evidence of soil discoloration and petroleum odors in the continuous soil cores coupled with field PID readings (i.e., VOC concentrations) the following soil impacts were observed:

Upgradient, Off-site Impacts:

- **Adjacent to the *abandoned* Texaco station (DP-1 & -2):** Both borings exhibited low to moderate petroleum odors and associated field detections of VOCs from approximately 10-15 feet bgs in boring DP-1 and approximately 7-17 feet bgs in boring DP-2. Soil impacts were trace to non-evident below approximately 19 feet bgs in both borings. Boring DP-2 exhibited some gray soil discoloration throughout the impacted interval, and appeared more significantly impacted relative to boring DP-1.
- **Adjacent to the *active* QuikStop station (DP-3):** Moderate to high petroleum odors and associated field detections of VOCs were observed from approximately 12.5 to 21 feet bgs. Soil impacts were trace to non-evident below approximately 21 feet bgs.

On-Site Impacts:

- **At and adjacent to the former UST pit (DP-4, -5, and -6):** Boring DP-4 and 6 exhibited moderate to high petroleum odors and associated field detections of VOCs from immediately beneath the UST pit backfill material to depths of approximately 21 feet bgs. Moderate to high petroleum odors and associated field detections of VOCs were observed from approximately 9 to 18 feet bgs in boring DP-5. Boring DP-5 exhibited some gray soil discoloration throughout the impacted interval. Soil impacts were trace to non-evident below approximately 23 feet bgs in all three borings.
- **At and adjacent to the former Fuel Dispenser (DP-7, -8, and -9):** Boring DP-7, situated at the former northern pump island and adjacent to the former UST location, exhibited moderate to high petroleum odors and associated field detections of VOCs from approximately 10 to 19 feet bgs, diminishing to non-evident at approximately 23 feet bgs.

Associated dark gray discoloration encountered from approximately 17 to 19 feet bgs was also observed at boring DP-7. Borings DP-8 and -9, situated at, and adjacent to the former southern pump island location exhibited moderate to high petroleum odors and associated field detections of VOCs from approximately 9 to 20 feet and 11.5 to 18.5 feet, respectively. Both borings exhibited dark gray soil discoloration through this interval. Observed impacts diminished to trace to non-evident at depths of 23 and 21 feet bgs in borings DP-8 and -9, respectively.

4.1.2 Soil Sampling and Laboratory Analytical Results

Soil samples retained for laboratory analysis were selected based on field evidence of potential impacts. Three (3) to 4 soil samples per boring were submitted for analysis in order to vertically profile potential impacts according to our regulatory approved *Workplan*.

Note: no soil samples were retained from boring DP-2 for laboratory analysis as adequate soil sampling and analysis at an adjacent boring (B-20) was completed by the previous consultant (CRA, 2008).

Collected soil samples were submitted to a State-certified testing laboratory (Torrent Laboratories, CA-DHS ELAP #1991) for the following analyses:

- TPH-gasoline by EPA Method 8260B
- TPH-diesel (with silica gel cleanup) by EPA Method 8015M (only for 4 potential worst case soil samples)
- Benzene, Toluene, Ethylbenzene, Xylenes (BTEX) by EPA Method 8260B
- The fuel oxygenates Methyl-tert-Butyl-Ether (MTBE), and tert-Butanol (TBA) by EPA Method 8260B

Note: we currently do not have clear documentation as to whether or not diesel was historically dispensed at the Site; however, previous soil and groundwater investigations conducted at the Site have detected TPH-diesel range hydrocarbons in both soil and groundwater. The presence of diesel range hydrocarbons may be a result of the weathered nature of this old gasoline release (i.e., the chromatographic pattern of aged gasoline will tend to shift towards the diesel quantification range as lighter constituents naturally degrade). Therefore, we included TPH-diesel by EPA Method 8015M in the suite of analysis and requested that the laboratory attempt to fingerprint the results to determine if TPH-diesel is a Site *Contaminant of Concern* (COC).

The Laboratory reports and Chain-of-Custody documentation are included in Appendix C. Soil analytical results are presented on Table 1 and Figure 2.

Note: Detected concentrations in soil have been compared with the Commercial Environmental Screening Levels (ESLs)[7] to assess the magnitude of residual impacts.

Off-Site Soil Sampling Results:

- **Adjacent to the *abandoned* Texaco station (DP-1):** Only a trace concentration of TPH-gas was detected at a concentration of 8.4 mg/kg (parts per million, ppm) in the sample collected from 14 feet bgs. This is well below the commercial ESL set at 100 mg/kg. No other significant concentrations were detected from samples collected from this boring.

  Previously cored and sample boring B-20 (CRA, 2008) situated immediately **adjacent to DP-2** revealed elevated concentrations of TPH-gas above the commercial ESL from depths of 5 to 15 feet bgs, ranging in concentration from 100 to 1,100 mg/kg. Elevated concentrations of benzene were also detected above the ESL (set at 0.044 mg/kg) from depths of 7.5 to 19.5 feet bgs. MTBE was not detected in any of these soil samples.

- **Adjacent to the *active* QuikStop station (DP-3):** Only trace concentrations of TPH-gas well below the ESL were detected in samples collected from 11 to 23 feet bgs. Slightly elevated concentrations of benzene were detected in deeper samples collected from 20 and 23 feet bgs at concentrations of 0.06 and 0.17 mg/kg (ESL set at 0.044 mg/kg). No other significant concentrations of contaminants were detected.

On-Site Soil Sampling Results:

- **At and adjacent to the former UST pit (DP-4, -5, and -6):** Elevated concentrations of TPH-gas and benzene, ethylbenzene and/or xylenes were detected at concentrations exceeding their respective ESL, **concentrated at depths of 11 to 23 feet bgs**. Specifically:
  - **TPH-gasoline** was detected at concentrations **ranging from 96 to 4,600 mg/kg** with the most significant concentrations detected in borings DP-5 (1,000 mg/kg) at depth of 17 feet bgs and DP-6 (4,600 mg/kg) at a depth of 21 feet bgs, exceeding the commercial ESL of 100 mg/kg.
  - **Benzene** was detected at concentrations **ranging from 0.17 to 36 mg/kg**, with the most significant concentrations detected in borings DP-5 (6.2 mg/kg) at depth of 17 feet bgs and DP-6 (36 mg/kg) at a depth of 21 feet bgs, exceeding the commercial ESL of 0.044 mg/kg.

[7] •Environmental Screening Levels (ESLs): California Regional Water Quality Control Board- San Francisco Bay Region has prepared and provided the ESLs in a document entitled: Screening for Environmental Concerns at Sites with Contaminated Soil and Groundwater (interim Final, November 2007, Revised May 2008). The ESLs are intended to provide guidance on whether or not remediation of detected contamination should be warranted

- **Ethylbenzene** was detected at concentrations were detected in borings DP-5 (**37 mg/kg**) at depth of 17 feet bgs and DP-6 (**81 mg/kg**) at a depth of 21 feet bgs, exceeding the commercial ESL of 3.3 mg/kg.
- **Xylenes** were detected at concentrations **ranging from 3.1 to 450 mg/kg**, with the most significant concentrations detected in borings DP-5 (197 mg/kg) at depth of 17 feet bgs and DP-6 (450 mg/kg) at a depth of 21 feet bgs, exceeding the commercial ESL of 2.3 mg/kg.

  All other concentrations were either below their respective ESLs or not detected above lab reporting limits

- **At and adjacent to the former Fuel Dispenser (DP-7, -8, and -9):** Elevated concentrations of TPH-gas and benzene, ethylbenzene and/or xylenes were detected at concentrations exceeding their respective ESL, also concentrated at depths of 11 to 23 feet bgs. Specifically:
  - **TPH-gasoline** was detected at a concentration of **970 mg/kg in boring DP-8 at a depth of 17 feet bgs**, exceeding the commercial ESL of 100 mg/kg. TPH-gas was not detected above the ESL in any other sample.
  - **Benzene** was detected at concentrations **ranging from 0.069 to 2.6 mg/kg**, with the most significant concentrations detected in borings DP-8 (2.6 mg/kg) at depth of 17 feet bgs and DP-9 (0.22 mg/kg) at a depth of 18 feet bgs, exceeding the commercial ESL of 0.044 mg/kg.
  - **Ethylbenzene** was detected at a concentration of **21 mg/kg in boring DP-8 at a depth of 17 feet bgs**, exceeding the commercial ESL of 3.3 mg/kg. Ethylbenzene was not detected above the ESL in any other sample.
  - **Xylenes** were detected at a concentration of **63 mg/kg in boring DP-8 at a depth of 17 feet bgs**, exceeding the commercial ESL of 2.3 mg/kg. Xylenes were not detected above the ESL in any other sample.

Shallow soil samples obtained from depths of 4 and/or 8 feet bgs collected at borings DP-5, -7, -8 and -9 contained <u>no detections</u> of Site *Contaminates of Concern*.

Note: We have confirmed with the Torrent Laboratory director that a low level concentration of TPH-diesel detected in boring DP-4, -7 and -9 do not resemble a TPH-diesel pattern and is the result of discrete peaks within the TPH-diesel range. Diesel is not present in these samples.

4.1.3 Grab Groundwater Sampling and Laboratory Analytical Results

Grab groundwater samples were collected from first encountered groundwater in borings DP-1, -2 and -3. All groundwater samples selected for analysis were submitted to a State-certified

(Torrent Laboratories, CA-DHS ELAP #1991) testing laboratory for the following required analyses:

- TPH-diesel by EPA Method 8015M
- TPH-gasoline by EPA Method 8260B
- Benzene, Toluene, Ethylbenzene, Xylenes (BTEX) by EPA Method 8260B
- The fuel oxygenates Methyl-tert-Butyl-Ether (MTBE), and tert-Butanol (TBA) by EPA Method 8260B

The Laboratory reports and Chain-of-Custody documentation are included in Appendix C. Grab Groundwater analytical results are presented on Table 2 and Figure 3.

Grab Groundwater Sampling Results:

- **Adjacent to and downgradient of the *abandoned* Texaco station (DP-1 & DP-2)**
  - **Boring DP-1 revealed no detection of petroleum contaminants.**
  - **Boring DP-2 revealed elevated detections of TPH-gas and benzene at concentrations of 3,800 and 72 ug/L (parts per billion, ppb), respectively**, **above Water Quality Objectives (WQOs) set at 1,000 and 1 ppb, respectively.** All other constituents were either below WQOs or not detected above laboratory reporting limits.

    Note: We have confirmed with the Torrent Laboratory director that a low level concentration of TPH-diesel detected in boring DP-2 (310 ppb) does not resemble a TPH-diesel pattern and is the result of discrete peaks within the TPH-diesel range. Diesel is not present in this sample.
- **Adjacent to and downgradient of the *active* QuikStop station (DP-3)**: Groundwater collected from boring DP-3 revealed elevated **detections of TPH-gas, benzene, MTBE, and TBA at concentrations of 1,400, 92, 97, and 55 ppb, respectively**, **above Water Quality Goals set at 1,000, 1, 5, and 12 ppb, respectively.**

4.2 Off-Site Monitoring Well Installation and Post-Development Sampling

On October 30, 2012, we contracted with Exploration Geoservices Inc., a licensed C-57 driller, to install two (2) 2-inch diameter monitoring wells (MW-5 and MW-6) at locations immediately adjacent to impacted borings DP-2 and DP-3. These wells were installed with approval from ACEH to confirm groundwater contamination originating from both the *active* QuikStop station and *abandoned* Texaco station. Monitoring well installation followed our standard *Field Methodology for Hollow Stem Auger Drilling and Monitoring Well Installation*, which is included in Appendix B. Based on observation of soil cores and depth of the first encountered groundwater zone at in borings DP-2 and DP-3, the wells were constructed as follows:

- Wells were installed to a total depth of 30 feet bgs
- 10 feet of 0.010 slot screen from 20 to 30 feet bgs
- # 3 sand pack from 18 to 30 feet bgs
- 3/8-inch bentonite chips from 16-18 feet bgs (hydrated)
- Neat cement grout well seal from the surface completion (~0.5 feet bgs) to 16 feet bgs
- Surface completion consists of an 8-inch diameter traffic rated monitoring well vault

4.2.1 Professional Well Survey

On November 2, 2012, we subcontracted Mid Coast Engineers (licensed Land Surveyor No. 5029) to professionally survey the top-of-casing elevations and latitude / longitude coordinates of the newly installed monitoring wells in accordance with State GeoTracker requirements. Professional survey data is used to accurately calculate groundwater elevations across the well network and create groundwater counter maps for estimating groundwater gradient and flow direction. A copy of the professional well survey is included in Appendix B.

4.2.2 Groundwater Gradient and Flow Direction

Water levels collected from the fourteen on-site (MW-1 through MW-4 and RW-5 through RW-14) and two newly installed off-site (MW-5 and MW-6) monitoring wells on November 9, 2012 were used in combination with the new well survey data to accurately calculate the groundwater elevation, gradient and flow direction at the Site.

Groundwater was encountered at depths ranging from 14.23 to 18.58 feet below top-of-well casing. Calculated groundwater elevations ranged from 147.88 to 150.63 feet above MSL across the well network. Calculated groundwater gradient and flow direction was 0.0087 ft/ft (i.e., 1 foot of vertical drop per 115 feet of lateral flow) in a westerly direction (see Figure 4).

The groundwater gradient and flow direction calculated from the combined monitoring network (i.e., newly installed wells coupled with existing wells) is consistent with historical measurements, and confirms that groundwater flows from the two east-lying gas station sites (*abandoned* Texaco and *active* QuikStop stations) to the Site.

4.2.3 Post-Development Sampling & Groundwater Analytical Results

On November 2 and 9, 2012, we conducted well development and post-development sampling according to the methodology described in our *Field Methodology for Hollow Stem Auger Drilling and Monitoring Well Installation* (Appendix B). *Note*: well MW-5 was not accessible for development and post development sampling on November 2 due to a vehicle being parked over the well. Post development groundwater samples were submitted to a State-certified testing laboratory (Torrent Laboratories, CA-DHS ELAP #1991) for the following analyses:

- TPH-diesel by EPA Method 8015M
- TPH-gasoline by EPA Method 8260B
- Benzene, Toluene, Ethylbenzene, Xylenes (BTEX) by EPA Method 8260B
- The fuel oxygenates Methyl-tert-Butyl-Ether (MTBE), and tert-Butanol (TBA) by EPA Method 8260B
- The lead scavengers 1,2-dichloroethane (1,2-DCA) & ethylene dibromide (EDB) by EPA Method 8260B

The Laboratory Reports and Chain of Custody are included in Appendix C.

Post Well Development Groundwater Sampling Results:

Post-development groundwater analytical results are included on Table 3 and Figure 4. Both current and historical monitoring well groundwater analytical results are tabulated on Table 4. Groundwater analytical results indicate the following:

- **Well MW-5 (downgradient of the *active* QuickStop station)** revealed elevated concentrations of TPH-gas, benzene, MTBE and TBA at concentrations of 3,000, 1,300, 390, and 2,300 ppb, respectively. These concentrations exceed their respective WQOs set at 1,000, 1, 5, and 12 ppb, respectively.
- **Well MW-6 (downgradient of the *abandoned* Texaco station)** revealed elevated **concentrations of benzene detected at 44 ppb, above the WQO set at 1 ppb.**

Post development sampling results confirm that significant groundwater contamination is migrating from the active QuikStop station, and to a lesser extent from the abandoned Texaco station, to the Site.

5.0 DISCUSSION OF DATA GAP ASESSMENT RESULTS

5.1.1 Off-Site, Upgradient Soil Analytical Data

Adjacent to the *abandoned* Texaco station (DP-1, DP-2 and B-20): Previous soil analytical data collected near the downgradient property line from the abandoned Texaco station (CRA boring B-20) revealed elevated concentrations of TPH-gas and benzene at shallow depths of 5 feet bgs, extending to approximately 20 feet bgs at boring B-20. Field observation of moderate to high petroleum odors, soil discoloration and elevated PID readings at current adjacent boring DP-2 are consistent with these previous findings. **The elevated soil impacts encountered at shallow depths indicate a historic fuel release occurred at the nearby fuel dispensers, product piping and possibly the USTs which were all situated less than approximately 25 feet from this impacted boring.** Further, boring DP-1 revealed relatively minimal impacts, indicating the release is localized to the abandoned Texaco stations' historic fuel dispensing infrastructure.

Based on the position of the former Exxon stations' fuel dispensing infrastructure (over 80 feet from boring DP-2 and B-20) coupled with the shallow soil impacts detected at boring B-20 and DP-2 positioned within close proximity to the abandoned Texaco stations' fuel dispensing infrastructure (approximately 25 feet from boring DP-2 and B-20) we can conclude that a historic release of fuel hydrocarbons occurred at the abandoned Texaco Station.

Adjacent to the *active* QuikStop station (DP-3): Elevated soil impacts (specifically benzene) were detected in deeper soil samples at depths of 20 and 23 feet bgs, with only trace concentrations of TPH-gas detected at shallower depths. These deeper, elevated concentrations indicates lateral and vertical migration of fuel released from the *active* QuikStop station (likely smear zone impacts).

5.1.2 On-Site Soil Analytical Data

The most significant residual soil impacts are concentrated at, and around the former gasoline UST array (borings DP-5 and DP-6) and near the southern fuel dispenser location (boring DP-8). Soil samples collected from borings DP-5 and DP-6 exhibited elevated concentrations of TPH-gasoline, benzene, ethylbenzene and xylenes, with the most significant concentrations detected at depths ranging from 17 to 21 feet bgs. Similarly, the most significantly impacted soil detected in boring DP-8 was concentrated at depth of 17 feet bgs. Elevated concentrations of hydrocarbons above ESLs were also detected in all other recently installed onsite borings, generally at depths below 10 feet bgs, and to a lesser extent.

The current soil data indicates that attenuation of contaminates has occurred since the initial 1991 soil investigation, likely a result of active soil remediation (SVE) from 2000-2004 and perhaps natural attenuation. Specifically, benzene concentrations detected in 1991 borings near the UST array and the southern fuel dispenser island have decreased by several orders of magnitude. However, TPH-gas concentrations detected during the current investigation are of similar magnitude compared with concentrations detected in 1991 (see Figure 2 and Appendix A). These elevated, residual TPH-gas concentrations were likely outside the influence of the previous Dual Phase Extraction System wells. In contrast, TPH-gas concentrations detected in boring DP-4 at a depth of 18 feet bgs are two orders of magnitude less than 1991 adjacent boring B-1 soil at 20 feet bgs. These borings are situated immediately adjacent to remediation well RW-10 and indicate that four years of active soil remediation was effective in reducing concentration within very close proximity to the individual extraction wells, and confirms that extraction well radius of influence was very limited.

In general, TPH-gas concentrations have not significantly attenuated since the investigation began over 20 years ago; however, benzene appears to have decreased by several orders of magnitude during this time period, likely due to a combination of natural attenuation coupled with four years of active soil remediation.

The unifying theme between current and historical soil analytical data collected at the Site is that soil impacts are generally encountered at depths of greater than 10 feet bgs and attenuate at depths of approximately 20 to 23 feet bgs. This impacted soil zone corresponds with seasonal groundwater fluctuations measured to be approximately 8 to 18 feet bgs. This indicates that the one significant mechanism for persistent residual soil impacts detected at and downgradient of the Site is via groundwater transport as smear zone contamination.

5.1.3 Offsite, Upgradient Groundwater Analytical Data

Elevated concentrations of TPH-gas and benzene detected in groundwater collected from boring DP-2 coupled with impacted soil observed in adjacent soil boring B-20 confirms that a historic release of fuel hydrocarbons has occurred at the *abandoned* Texaco station and is contributing to an influx of contaminants observed in the former Exxon station monitoring well network.

Elevated concentrations of TPH-gas, benzene, MTBE and TBA detected in groundwater collected from boring DP-3 confirms that a historic (and possibly ongoing) release of fuel hydrocarbons has occurred at the *active* QuikStop station and is contributing to an influx of contaminants observed in the former Exxon station monitoring well network.

Post development sampling results from newly installed wells MW-5 and MW-6 confirm that significant groundwater contamination is migrating from the active QuikStop station, and to a lesser extent from the abandoned Texaco station.

Twenty years of groundwater monitoring data collected at the Site shows a gradual degradation of the chemicals of concern over time, yet the extent of groundwater degraded by hydrocarbons still exceeds Water Quality Objectives. **The persistence of these elevated levels in Site groundwater after several phases of remediation coupled with an observed increase in benzene concentrations in wells MW-1 through MW-4 since early 2009 (see Appendix A) can in part be attributed to the influx of impacted groundwater confirmed to be originating from originating from both the *active* QuikStop station and the *abandoned* Texaco station.**

We have also reviewed the active fuel release investigation located at 3201 35th Avenue (BP #11132; GeoTracker I.D. T0600100213) situated approximately one block (~ 300 feet) to the northeast of the Site to determine whether there may be a potential third source of groundwater contamination migrating to, and impacting the Site. We have provided select tables and figures obtained from the GeoTracker database as Appendix D for reference. Based on our brief review of historical groundwater gradient and analytical data collected at this site it appears possible that there may have historically been some migration of groundwater contaminants towards the Site; however, groundwater down-to-sidegradient of impacted historical BP borings TW-3 and TW-6, and BP well MW-9 has never been collect to confirm or deny this (likely due to the limited access to collect samples beneath the residences to the southwest of this site). We also note that the groundwater gradient direction coupled with the plume configuration is in more of a south to

southwesterly direction as compared with the westerly direction measured at the former Exxon Site.

6.0 CONCLUSIONS

The data gathered during this assessment has been incorporated into the *Site Conceptual Model (SCM).* **An updated *SCM* is presented in Appendix A.** Soil and Groundwater data collected during this *Data Gap Assessment* confirm:

- **Offsite soil and groundwater conditions:**
  - Based upon previous soil sampling conducted by CRA in 2008 (boring B-20), coupled with current field observations of soil impacts encountered at shallow depths **it is clear that a historic fuel release occurred at the nearby *abandoned* Texaco station fuel dispensers, product piping and possibly the USTs, which were all situated less than approximately 25 feet from impacted borings DP-2 and B-20.**
  - Based on current soil sampling analytical data from boring DP-3 coupled with field observations of soil impacts below approximately 10 feet bgs, **it is clear that a historic fuel release occurred at the *active* QuikStop station.**
  - Grab groundwater analytical data obtained from borings DP-2 and DP-3 coupled with post development sampling results from the newly installed wells MW-5 and MW-6 confirm that significant groundwater contamination is migrating to the Site from the *active* QuikStop station and apparently to a lesser extent from the *abandoned* Texaco station. **The observed increase of benzene in Site monitoring wells since 2009 can likely be attributed to these off-site releases (see Appendix A).**

  Note: We have also reviewed the active fuel release investigation located at 3201 35th Avenue (BP #11132; GeoTracker I.D. T0600100213) situated approximately one block (~ 300 feet) to the northeast of the Site to determine whether or not there may be a potential third source of groundwater contamination migrating to, and impacting the Site. **Based on our brief review of historical groundwater gradient and analytical data collected at this site it appears possible that there may have historically been some <u>limited</u> migration of groundwater contaminants towards the Site** (see Appendix D).

  The extent of off-site groundwater contamination migrating to the Site remains a significant data gap.

- **Residual on-site soil conditions:**
  - Elevated, residual soil contamination appears to be concentrated in the area at, and around the former gasoline UST array. Soil samples collected from borings DP-5 and

DP-6 exhibited elevated concentrations of TPH-gasoline, benzene, ethylbenzene and xylenes, primarily at depths ranging from 17 to 21 feet bgs.

- Elevated, residual soil contamination was also encountered in soils collected from boring DP-8, near the former on-site fueling island, with the most significant impacts detected at a depth of 17 feet bgs.

Benzene appears to have decreased by several orders of magnitude since the investigation began over 20 years ago, likely due to a combination of natural attenuation coupled with four years of active soil remediation; however, it appears that TPH-gas concentrations outside the influence of the previous dual phase extraction system have not significantly attenuated during this time period (see Figure 2 and Appendix A).

The unifying theme between current and historical soil analytical data collected at the Site is that soil impacts are generally encountered at depths of greater than 10 feet bgs and attenuate at depths of approximately 20 to 23 feet bgs. This impacted soil zone corresponds with seasonal groundwater fluctuations measured to be approximately 8 to 18 feet bgs (see Appendix A). This indicates that the mechanism for persistent residual soil impacts detected within this approximate 10 foot zone at and downgradient of the Site is via groundwater transport as smear zone contamination. **Therefore, off-site plume migration to the Site is contributing to the observed smear zone soil impacts.**

7.0 RECOMMENDATIONS

Based on the results of this *Data Gap Assessment* we recommend the following in order to move the Site towards regulatory case closure:

1. Investigation of Upgradient, Off-site Sources: **The mass of petroleum hydrocarbon contamination originating from the identified upgradient sources remains a significant data gap and the *Site Conceptual Model* is currently incomplete. At present, a cost effective *Corrective Action Plan* cannot be completed for the Site until upgradient responsible parties have been identified and these upgradient releases have been fully defined.** At this time it appears that a *Joint Corrective Action* through the State Water Resources Control Boards' *Commingled Plume Account* will likely be the most cost effective approach in reducing groundwater impacts in this area. **We recommend that the ACEH identify the responsible upgradient property owners and require that they complete an assessment of soil and groundwater impacts to determine the extent of contaminant plume migration to the Site.**

    - We recommend completing quarterly sampling of the newly installed wells MW-5 and MW-6, as well as quarterly sampling of upgradient property line wells RW-13 and RW-14 in order to monitor trends and begin to build a data set of off-site contaminant

migration to the Site. Annual sampling of key on-site monitoring wells (MW-1 through MW-4, and RW-5 and RW-9) will continue according the approved annual schedule.

8.0 LIMITATIONS

Our service consists of professional opinions and recommendations made in accordance with generally accepted geologic principles and practices. This warranty is in lieu of all others, either expressed or implied. The analysis and conclusions in this report are based on sampling and testing which are necessarily limited. Additional data from future work may lead to modifications of the options expressed herein.

Thank you for this opportunity to be of service. Should you have any questions or comments regarding this Report, please contact us at our offices.

Respectfully submitted,

WEBER, HAYES AND ASSOCIATES

A California Corporation

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9.0 REFERENCES

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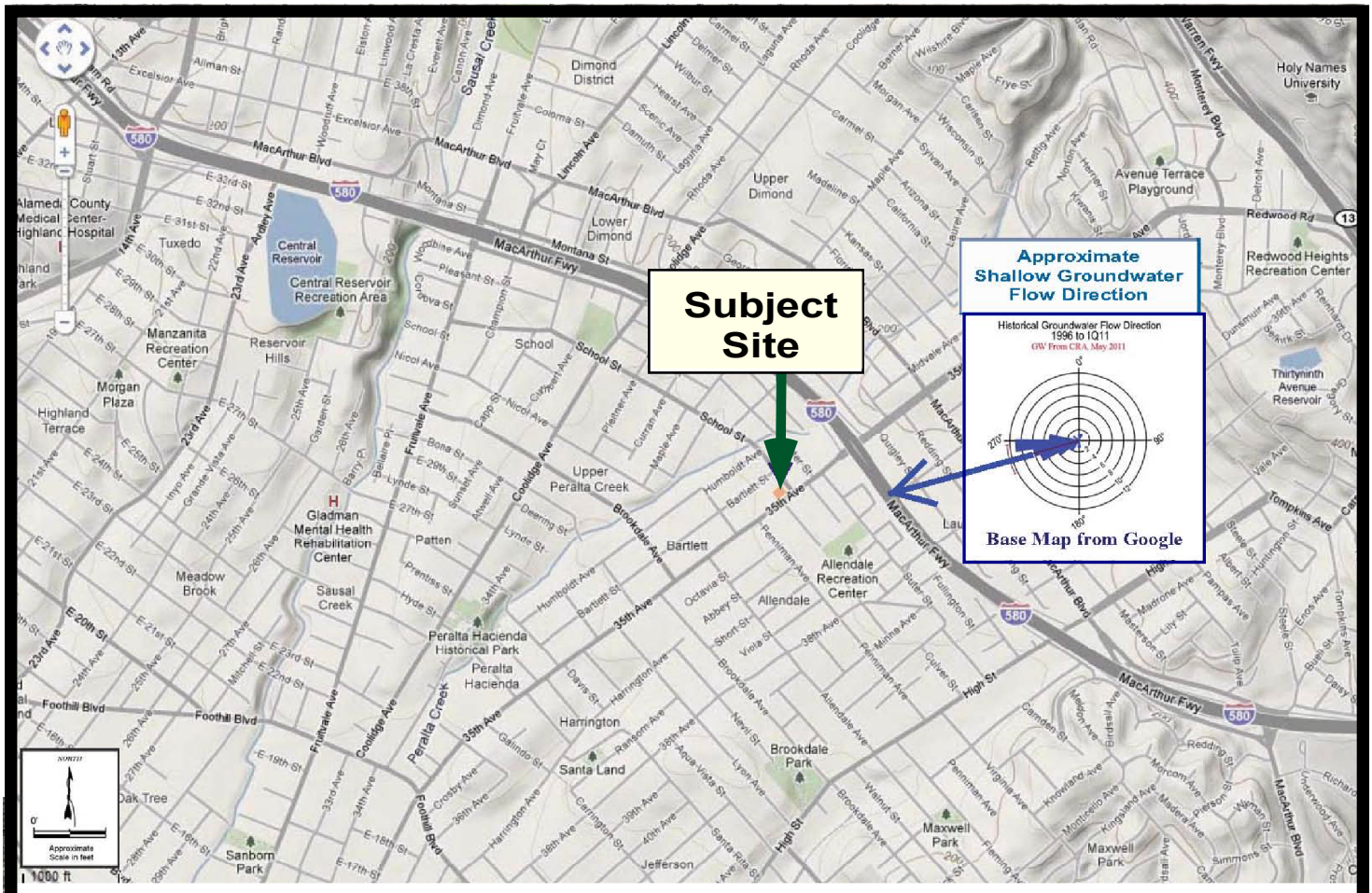
Figures



Weber, Hayes & Associates
Hydrogeology and Environmental Engineering
120 Westgate Drive, Watsonville, CA

Location Map
Former Exxon Station
3055 35th Avenue
Oakland, California

FIGURE 1
Job # 2X103

NORTH

0' 30'

Approximate Scale (in feet)

Base Map from Conestoga-Rovers & Associates & Google Earth 2011

DP-4

Depth	TPH-d	TPH-g	Benzene	MTBE
12'	--	<0.10	<0.010	<0.010
18'	12	96*	0.22	<0.13
24'	--	0.83✱	0.30	<0.026

DP-5

Depth	TPH-g	Benzene	MTBE
8'	ND	<0.010	< 0.010
11'	130*	< 0.15	< 0.26
17'	1,000*	6.2	< 1.0
23'	1.5C	0.55	< 0.013

DP-6

Depth	TPH-g	Benzene	MTBE
12'	13*	0.010J	<0.013
21'	4,600*	36	<5.2
23'	1.3✱	0.47	<0.013

DP-7

Depth	TPH-d	TPH-g	Benzene	MTBE
4'	--	<0.10	<0.010	<0.010
8'	--	0.23**	<0.010	<0.010
11'	5.8+	2.8**	0.11	<0.010
17'	--	15*	0.024J	<0.013
23'	--	1.2✱	0.069	<0.0052

DP-1

Depth	TPH-d	TPH-g	Benzene	MTBE
8'	--	<0.10	<0.010	<0.010
14'	<2.0	8.4*	<0.0075	<0.013
17'	--	<100	<0.010	<0.010
A17B'	--	0.80**	<0.010	<0.010

B-20 (CRA - 2008)

Depth	TPH-d	TPH-g	Benzene	MTBE
5'	24	110	<0.10	<0.005
7.5'	63	240	0.090	<0.050
9.5'	170	590	0.68	<0.10
11'	370	1,100	1.3	<0.10
15'	23	100	0.39	<0.005
19.5'	25	54	0.35	<0.010
24.5'	<1.0	<1.0	<0.005	<0.005
29.5'	<1.0	<1.0	<0.005	<0.005
35'	<1.0	<1.0	<0.005	<0.005
40'	<1.0	<1.0	<0.005	<0.005
44.5'	<1.0	<1.0	<0.005	<0.005

DP-8

Depth	TPH-g	Benzene	MTBE
8'	<0.10	<0.010	<0.010
17'	970*	2.6	<0.26
20'	69*	0.81J	< 0.26
23'	<0.10	<0.010	<0.010

DP-9

Depth	TPH-d	TPH-g	Benzene	MTBE
12'	--	<0.10	<0.010	<0.010
18'	4.8+	5.8*	0.22	<0.0065
24'	--	1.7✱	0.16	<0.0052

DP-3

Depth	TPH-g	Benzene	MTBE
8'	<0.10	<0.010	<0.010
11'	0.33**	<0.010	<0.010
14'	10**	< 0.0075	< 0.013
20'	6.4	0.060	< 0.013
23'	0.93✱	0.17	0.0080J

Historical Groundwater Flow Direction
(based on previous consultants 1996-2008 and WHA Results since 2011)

SCHOOL STREET

35TH AVENUE

Former Exxon Station

Former Gasoline UST Location (two 4,000-gallon & two 6,500-gallon gasoline USTs removed in 1991)

Former Pump Island

Former 500 gallon Waste Oil UST Location

Former Pump Island

Canopy / Former Dispens

QuikStop Station

Canopy / Dispenser Islands

SV-1 SV-2 SV-3 SV-4 SV-5 SV-6

RW-5 RW-6 RW-7 RW-8 RW-9 RW-10 RW-11 RW-12 RW-13 RW-14

MW-1 (SB-G) MW-2 (SB-F) MW-3 (SB-C) MW-4

B1 B2 B3 B4 B5 B6 B7 B8 B9 B10 B11 B12 B-18 B-19 B-20 DP-2

SB-A SB-B SB-D SB-E

Explanation

All soil sample results are in parts per million (mg/kg, ppm)

DP-1

Depth	TPH-d	TPH-g	Benzene	MTBE
8'	--	<0.10	<0.010	<0.010
14'	<2.0	8.4*	<0.0075	<0.013
17'	--	<100	<0.010	<0.010
A17B'	--	0.80**	<0.010	<0.010

Grab Groundwater Boring Location & Analytical Results

Soil samples were analyzed for the following constituents

1) TPH-diesel
2) TPH-gasoline
3) BTEX = Benzene, Toluene, Ethylbenzene, & Xylenes
4) MTBE = Methyl Tert Butyl Ether & Methylene Chloride
5) TBA = tert Butanol

TPH = Total Petroleum Hydrocarbons
ND = Not detected at or above the laboratory detection limit.
< # = Reporting limit elevated due to sample dilution and compound not detected at or above reporting limit.
* = TPH result due to significant heavier hydrocarbons (possibly aged gasoline).
** = TPH result due to non-target hydrocarbons in C5-C12 range quantified as gasoline.
+ = Laboratory reports result not typical of TPH as Diesel standard pattern (lighter than diesel).
✱= Reported value is the result of discrete peak and contribution from non-fuel hydrocarbon.
J = Indicates a value between the method MDL and PQL and that the reported concentration should be considered as estimated rather than quantitative.
✱ = Sample labeling error; DP-1 17B ft was mislabeled, as a result there is a duplication of results for DP-1 @ 17ft. See Table 2 for details.

Previous Subsurface Investigation Locations

- Approximate Soil Boring Location - B1 through B12, Consolidated Technologies, Nov. 1991
- Approximate Soil Boring Location - SB-A through SB-G, Cambria, May 1994
- Groundwater Remediation Well Location - Cambria, Aug. 1998, Oct.
- Approximate Monitoring Well Location - MW-1 through MW-3, Cambria, May 1994 & MW-4, Cambria, May 1997
- Soil Vapor Sampling Location Location - CRA, May 2007
- Approximate Soil Boring Location - CRA, Oct. 2008

2X103.Oakland-35th WP\Reports\2012-11 Data-Gap\Figures\2-Soil_Results.CNV

Figure 2
Project 2X103

Soil Analytical Results
Data Gap Investigation (May 2012)
Former Exxon Station
3055 35th Avenue
Oakland, California

Weber, Hayes & Associates
Hydrogeology and Environmental Engineering
120 Westgate Drive, Watsonville, CA
831.722.3580 / www.weber-hayes.com

NORTH

0' 30'

Approximate Scale (in feet)

Base Map from Conestoga-Rovers & Associates & Google Earth 2011

SCHOOL STREET

Former Exxon Station

SV-5 SV-6 SV-4 SV-3 SV-2 SV-1

RW-10 RW-9 RW-8 RW-7 RW-6 RW-5 RW-12 RW-14 RW-13 RW-11

MW-4 MW-1 (SB-G) MW-3 (SB-C) MW-2 (SB-F)

SB-D SB-E SB-B SB-A

B1 B2 B3 B4 B5 B6 B7 B8 B9 B10 B11 B12 B-18 B-19 B-20

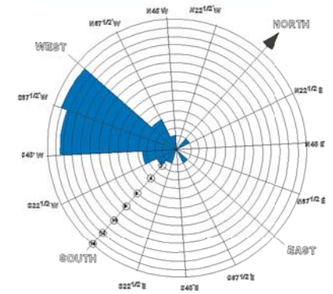
DP-4 DP-5 DP-6 DP-7 DP-8 DP-9

Former Gasoline UST Location (two 4,000-gallon & two 6,500-gallon gasoline USTs removed in 1991)

Former Pump Island

Former Pump Island

Former 500 gallon Waste Oil UST Location



Historical Groundwater Flow Direction
(based on previous consultants 1996-2008 and WHA Results since 2011)

DP-1

TPH-diesel:	ND
TPH-gasoline:	ND
B-T-E-X:	ND
MTBE:	ND
TBA:	ND

Abandoned Texaco Station

DP-2

TPH-diesel:	310
TPH-gasoline:	*3,800
Benzene:	72
Toluene:	24
Ethylbenzene:	130
Xylene:	145.9
MTBE:	ND
TBA:	ND

DP-3

TPH-diesel:	ND
TPH-gasoline:	**1,400
Benzene:	92
Toluene:	1.7
Ethylbenzene:	63
Xylene:	21
MTBE:	97
TBA:	55

35TH AVENUE

QuikStop Station

Canopy / Dispenser Islands

Explanation

All Groundwater sample results are in parts per billion (ug/L, ppb)

DP-1
TPH-motor oil: ND
TPH-diesel: ND
TPH-gasoline: ND
B-T-E-X: ND
MTBE: ND
TBA: ND

Grab Groundwater Boring Location & Analytical Results

Groundwater samples were analyzed for the following constituents

1) TPH-d =Total Petroleum Hydrocarbons as Diesel
2) TPH-g=Total Petroleum Hydrocarbons as Gasoline
3) BTEX = Benzene, Toluene, Ethylbenzene, & Xylenes
4) MTBE = Methyl Tert Butyl Ether & Methylene Chloride
5) TBA = tert Butanol

ND = Not detected at or above the laboratory detection limit.
*= TPH result due to significant heavier hydrocarbons (pcssibly aged gasoline).
**= TPH result due to non-target hydrocarbons in C5-C12 range quantified as gasoline.
See Table 1 for details

Previous Subsurface Investigation Locations

- Approximate Soil Boring Location - B1 through B12, Consolidated Technologies, Nov. 1991
- Approximate Soil Boring Location - SB-A through SB-G, Cambria, May 1994
- Groundwater Remediation Well Location - Cambria, Aug. 1998, Oct.
- Approximate Monitoring Well Location - MW-1 through MW-3, Cambria, May 1994 & MW-4, Cambria, May 1997
- Soil Vapor Sampling Location Location - CRA, May 2007
- Approximate Soil Boring Location - CRA, Oct. 2008

2X103.Oakland-35th WP\Reports\2012-11 Data-Gap\Figures\3-Grab-GW_Results.CNV

Figure 3
Project 2X103

Grab Groundwater Analytical Results Data Gap Investigation (May 2012)

Former Exxon Station
3055 35th Avenue
Oakland, California

Weber, Hayes & Associates
Hydrogeology and Environmental Engineering
120 Westgate Drive, Watsonville, CA
831.722.3580 / www.weber-hayes.com

NORTH

0' 30'

Approximate Scale (in feet)

Base Map from Conestoga-Rovers & Associates & Google Earth 2011

RW-9
Elevation = 148.39'

MW-4
Elevation = 148.12'

Former Exxon Station

RW-10
Elevation = 148.50'

Former Gasoline UST Location (two 4,000-gallon & two 6,500-gallon gasoline USTs removed in 1991)

SCHOOL STREET

RW-7
Elevation = 147.95

RW-8
Elevation = 148.32'

Former Pump Island

MW-1
Elevation = 148.44'

Former 500 gallon Waste Oil UST Location

MW-3
Elevation = 148.25'

RW-12
Elevation = 148.08'

RW-14
Elevation = 149.04'

Former Pump Island

RW-6
Elevation = 148.05'

RW-11
Elevation = 148.76'

RW-13
Elevation = 149.23'

RW-5
Elevation = 147.88'

MW-2
Elevation = 148.73'

35TH AVENUE

148.5'

149.0'

149.5'

150.0'

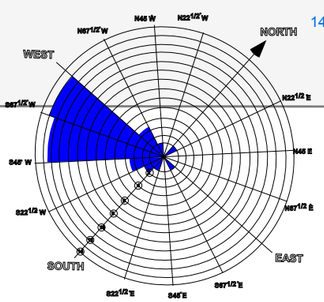
Canopy / Former Disp

MW-6
Elevation = 149.69'
TPH-d: 120* ppb
TPH-g: 540** ppb
B: 44 ppb
T: 0.74 ppb
E: 7.5 ppb
X: 2.3 ppb
MTBE: ND
TBA: ND
D.O.: 6.63 mg/L
Sample collected November 2, 2012

MW-5
Elevation = 150.63'
TPH-d: 340*** ppb
TPH-g: 3.000** ppb**
B: 1,300 ppb
T: 16 ppb
E: 340 ppb
X: 35.2 ppb
MTBE: 390 ppb
TBA: 2,300 ppb
D.O.: 1.65 mg/L
Sample collected November 9, 2012

QuikStop Station

Canopy / Dispenser Islands



Historical Groundwater Flow Direction
(based on previous consultants 1996-2008
and WHA Results since 2011)

Explanation

MW-6
Elevation = 149.69'
TPH-d: 120* ppb
TPH-g: 540** ppb
B: 44 ppb
T: 0.74 ppb
E: 7.5 ppb
X: 2.3 ppb
MTBE: ND
TBA: ND
D.O.: 6.63 mg/L
Sample collected November 2, 2012

Groundwater Monitoring Well Location, Designation, and groundwater elevation.

MW-6 was sampled on November 2, 2012. MW-5 was sampled on November 9, 2012.

147.80'

Interpolated Groundwater Elevation Contours & Flow Direction

The groundwater gradient measured on November 9, 2012 was 0.0087 ft/ft in a westerly direction (equivalent to approximately 1 foot of vertical drop per 115 feet of lateral flow)

Wells MW-3, RW-5 & RW-12 showed slightly anomalous groundwater elevations and were not used in the contour calculations.

Notes:
-Site wells MW-1, MW-2, MW-3, MW-4, RW-5, RW-6, RW-7, RW-8, RW-9, RW-10, RW-11, RW-12, RW-13, RW-14 and were re-surveyed by Virgil Chavez Land Surveying on June 2, 2004

-Site wells MW-5 and MW-6 were surveyed by Mid Coast Engineers on November 2, 2012

* Diesel result due to discrete unknown peaks within quantified range
** Does not match pattern of reference Gasoline standard. Reported value die to contribution from non-fuel light hydrocarbons within C5-C12 range quantified as Gasoline.
***Diesel result due to discrete unknown peaks within quantified range
****Although TPH as Gasoline constituents are present, sample chromatogram does not resemble pattern of reference Gasoline standard. Reported TPH value includes amount due to discrete peak and non-target light hydrocarbons within gasoline range.

2X103.Oakland-35th WP\Reports\2012-11 Data-Gap\Figures\4-Gradient and Results

Figure 4
Project 2X103

Groundwater Analytical Results with Elevations and Gradient - Newly Installed Wells
November 2 & 9, 2012
Former Exxon Station
3055 35th Avenue
Oakland, California

Weber, Hayes & Associates
Hydrogeology and Environmental Engineering
120 Westgate Drive, Watsonville, CA
831.722.3580 / www.weber-hayes.com

Tables

Table 1: Soil Analytical Results - May 8 - 9, 2012

Former Exxon Station

3055 35th Avenue, Oakland, CA

All soil sample results are in parts per million (mg/kg).

Soil Sampling Information		Laboratory Analytical Results							
		Total Petroleum Hydrocarbons		Volatile Organic Compounds (VOC's by EPA 8260)					
Sample Location	Sample Depth (feet, bgs)	Extractables (w/ silica gel cleanup) Diesel	Gasoline	Benzene	Toluene	Ethylbenzene	Xylene	MTBE	TBA
DP-1 (Off-site)	8'	--	ND	ND	ND	ND	ND	ND	ND
	14'	ND	8.4*	< 0.0075	< 0.0049	< 0.0043	< 0.0126	< 0.013	< 0.10
	17'	--	ND	ND	ND	ND	ND	ND	ND
	★17B'	--	0.80**	ND	ND	0.064	ND	ND	ND
DP-3 (Off-site)	8'	--	ND	ND	ND	ND	ND	ND	ND
	11'	--	0.33**	ND	ND	ND	ND	ND	ND
	14'	--	10**	< 0.0075	< 0.0049	0.30	< 0.0126	< 0.013	< 0.10
	20'	--	6.4	**0.060**	< 0.0049	0.22	0.17	< 0.013	< 0.10
	23'	--	0.93✱	**0.17**	< 0.0025	0.046	< 0.038	0.0080J	< 0.0052
DP-4 (On-site)	12'	--	ND	ND	ND	ND	ND	ND	ND
	18'	12	96*	**0.22**	< 0.0049	0.91	1.446	< 0.13	< 0.10
	24'	--	0.83✱	**0.30**	< 0.0098	0.025J	< 0.0256	< 0.026	< 0.21
DP- 5 (On-site)	8'	--	ND	ND	ND	ND	ND	ND	ND
	11'	--	**130***	< 0.15	< 0.098	1.8	**3.1**	< 0.26	< 2.1
	17'	--	**1,000***	**6.2**	2.1J	**37**	**197**	< 1.0	< 8.3
	23'	--	1.5✱	**0.55**	0.015J	0.14	0.5	< 0.013	< 0.10
Laboratory Reporting Limit (RLs):		*2.0*	*0.10*	*0.010*			*0.015*	*0.010*	*0.050*
Commercial / Industrial Environmental Screening Levels (ESLs) for Shallow and Deep Soils [(1)]:		*100*		*0.044*	*2.9*	*3.3*	*2.3*	*0.023*	*0.073*

Table 1: Soil Analytical Results - May 8 - 9, 2012

Former Exxon Station

3055 35th Avenue, Oakland, CA

All soil sample results are in parts per million (mg/kg).

Soil Sampling Information		*Laboratory Analytical Results*							
Sample Location	*Sample Depth (feet, bgs)*	*Total Petroleum Hydrocarbons*		*Volatile Organic Compounds (VOC's by EPA 8260)*					
		Extractables (w/ silica gel cleanup) Diesel	*Gasoline*	*Benzene*	*Toluene*	*Ethylbenzene*	*Xylene*	*MTBE*	*TBA*
DP-6 (On-site)	*12'*	--	13*	0.010J	0.020J	0.67	1.33	< 0.013	< 0.10
	21'	--	**4,600***	**36**	**37**	**81**	**450**	< 5.2	< 42
	23'	--	1.3✱	**0.47**	0.064	0.096	0.246	< 0.013	< 0.10
DP-7 (On-site)	*4'*	--	ND	ND	ND	ND	ND	ND	ND
	8'	--	0.23**	ND	ND	ND	ND	ND	ND
	11'	5.8※	2.8**	**0.11**	ND	ND	ND	ND	ND
	17'	--	15*	0.024J	0.043J	0.89	1.568	< 0.013	< 0.10
	23'	--	1.2✱	**0.069**	< 0.0020	0.042	0.0039J	< 0.0052	< 0.042
DP-8 (On-site)	*8'*	--	ND	ND	ND	ND	ND	ND	ND
	17'	--	**970***	**2.6**	0.63J	**21**	**63**	< 0.26	< 2.1
	20'	--	69*	**0.81J**	< 0.098	1.4	**5.5**	< 0.26	< 2.1
	23'	--	ND	ND	ND	ND	ND	ND	ND
DP-9 (On-site)	*4'*	--	ND	ND	ND	ND	ND	ND	ND
	18'	4.8※	5.8*	**0.22**	0.013J	0.42	0.111J	< 0.0065	< 0.052
	20'	--	1.7✱	**0.16**	< 0.0020	0.065	0.0437J	< 0.0052	< 0.042
Laboratory Reporting Limit (RLs):		***2.0***	***0.10***	***0.010***			***0.015***	***0.010***	***0.050***
Commercial / Industrial Environmental Screening Levels (ESLs) for Shallow and Deep Soils [(1)] :		***100***		***0.044***	***2.9***	***3.3***	***2.3***	***0.023***	***0.073***

Notes:

1 = **Environmental Screening Levels (ESLs):** California Regional Water Quality Control Board - San Francisco Bay Region has prepared and provided these ESLs in a document entiled: *Screening for Environmental Concerns at Sites With Contaminated Soil and Groundwater (interim Final, November 2007, Revised May 2008)* . The ESLs are intended to provide guidance on whether or not remediation of detected contamination should be warranted. The ESLs used for this table were obtained from the above referenced document, Table A. Shallow Soils (<3m), Groundwater IS a current or potential Source of Drinking Water. The ESL document catogorizes TPH as either gasoline, middle distillates, or residual fuels. "Middle distillates" are considered to include diesel fuel, kerosene, stoddard solvent, heating fuel, and jet fuel, whereas "residual fuels" include fuel oil (bunker fuel), lubricating oils (motor oil, oil and grease, waste oils) and asphalts.

Bold Font = Concentration exceeds Residential ESL

ND = Not detected at or above the lab's reporting limit.

< # = Reporting limit elevated due to sample dilution and compound not detected at or above reporting limit.

-- = Sample not analyzed for this compound(s).

*** =** Laboratory reports sample does not

**** =** Laboratory reports sample does not match pattern of reference Gasoline standard. Hydrocarbons in the range of C5-C12 quantified as Gasoline.

✱ = Laboratory reports result does not match pattern of reference gasoline standard. Reported value is the result of discrete peak and contribution from non-fuel hydrocarbon to range of C5-C12 quantified as Gasoline.

J = Indicates a value between the method MDL and PQL and that the reported concentration should be considered as estimated rather than

★ = Sample labeling error; DP-1 17B ft was mislabeled, as a result there is a duplication of results for DP-1 @ 17ft.

※ = Laboratory reports result not typical of TPH as Diesel standard pattern (lighter than diesel). Hydrocarbons with TPH as Diesel range are quantified as Diesel.

Table 2: Current & Historical Grab Groundwater Analytical Results

Former Exxon Station

3055 35th Avenue, Oakland, CA

All groundwater sample results are in parts per billion (ug/L).

Groundwater Sampling Information				*Laboratory Analytical Results*								
Consultant & Investigation Date	*Sample ID #*	** Depth to Groundwater (feet, TOC)*	*Temporary Screen Interval (feet, bgs)*	*Total Petroleum Hydrocarbons*		*Volatile Organic Compounds (VOC's by EPA 8260)*						*Notes*
				Diesel	*Gasoline*	*Benzene*	*Toluene*	*Ethyl-benzene*	*Xylene*	*MTBE*	*TBA*	
Weber, Hayes & Associates Grab Groundwater (May 9, 2012)	*DP-1*	**18.2'**	**19 - 29'**	ND	ND	ND	ND	ND	ND	ND	ND	--
	DP-2	**17.5'**	**19 - 29'**	310	**3,800★**	**72**	24	130	145.9	ND	ND	--
	DP-3	**12.3'**	**22 - 32'**	ND	**1,400▲**	**92**	1.7	63	21	**97**	**55**	--
Conestoga-Rovers & Associates (CRA) On-site Boring (October 31, 2008)	*B-18A*	**30'**	**@ 30'**	380	350	**23**	2.6	5.9	54	**7.0**	2.3	d1, e4
CRA Off-site Boring (October 31, 2008)	*B-21*	**NM**	@ 30'	< 50	60	< 0.5	< 0.5	< 0.5	< 0.5	170	< 20	e2
	B-22	**NM**	@ 30'	< 50	68	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 2.0	e2
	B-23	**NM**	**@ 30'**	< 50	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 2.0	--
	B-24	**NM**	@ 30'	< 50	73	< 0.5	< 0.5	< 0.5	< 0.5	1.2	< 2.0	e2
	B-25	**NM**	@ 30'	< 50	330	< 0.5	< 0.5	< 0.5	< 0.5	**12**	2.2	b1, e7, e2, e6
	B-26	**NM**	**@ 30'**	< 50	< 50	< 0.5	< 0.5	< 0.5	< 0.5	0.54	< 2.0	b1
	B-27	**NM**	@ 30'	< 50	< 50	< 0.5	< 0.5	< 0.5	< 0.5	**150**	< 10	
	B-28	**NM**	@ 30'	< 50	53	< 0.5	< 0.5	< 0.5	< 0.5	**29**	2.8	b1, e2
Laboratory Reporting Limit (RLs):				*100*	*50*	*0.5*	*0.5*	*0.5*	*1.5*	*0.5*	*5.0*	--
Water Quality Goals (WQG)				***1,000 (as Total Petroleum Hydrocarbons)***		***1***	***150***	***300***	***1,750***	***5***	***10***	--

Table 2: Current & Historical Grab Groundwater Analytical Results

Former Exxon Station

3055 35th Avenue, Oakland, CA

All groundwater sample results are in parts per billion (ug/L).

Groundwater Sampling Information				*Laboratory Analytical Results*								
Consultant & Investigation Date	*Sample ID #*	** Depth to Groundwater (feet, TOC)*	*Temporary Screen Interval (feet, bgs)*	*Total Petroleum Hydrocarbons*		*Volatile Organic Compounds (VOC's by EPA 8260)*						*Notes*
				Diesel	*Gasoline*	*Benzene*	*Toluene*	*Ethyl-benzene*	*Xylene*	*MTBE*	*TBA*	
CRA Off-site Boring (July 2007)	***B-13***	**14.61**	--	**8,000**	**7,100**	**110**	390	250	990	**1,500**	< 500	a,b,d,g
	B-14	**14.05**	--	**1,100**	270	**150**	55	34	170	**3,500**	< 500	a,d,f
	B-16	**12.50**	--	**69,000**	**6,000**	**7,700**	**1,500**	**1,600**	**8,200**	**430**	< 250	a,d
	B-17	**11.73**	--	< 50	< 50	< 0.5	< 0.5	< 0.5	< 0.5	**12**	< 5	
Laboratory Reporting Limit (RLs):				*100*	*50*	*0.5*	*0.5*	*0.5*	*1.5*	*0.5*	*5.0*	--
Water Quality Goals (WQG)				***1,000 (as Total Petroleum Hydrocarbons)***		***1***	***150***	***300***	***1,750***	***5***	***10***	--

NOTES:

Tabulated data prior to September 22, 2011 was provided by Conestoga-Rovers & Associates (CRA).

Notes from Previous Consultant

a = unmodified or weakly modified gasoline is significant
b = diesel range compounds are significant; no recognizable pattern
d = gasoline range compounds are significant
f = one to a few isolated peaks present
g = oil range compounds are significant
b1 = aqueous sample that contains greater than ~ 1vol. % sediment
d1 = weakly modified or unmodified gasoline is significant
e2 = diesel range compounds are significant; no recognizable pattern
e4 = gasoline range compounds are significant
e6 = one to a few isolated peaks present in the TPH(d/mo) chromatogram
e7 = oil range compounds are significant
NM = Not Measured

WQG = **W**ater **Q**uality **G**oals: Goals established by the CRWQCB Central Coast Region based on Maximum Contaminant Limits (Department of Health Services) or taste & odor threshold limits. **BOLD results indicate detected concentrations are above WQG's Threshold limits.**

ND = Not detected at or above the lab's reporting limit. **bgs =** below ground surface.

*** =** Depth to groundwater encountered just prior to sample collection; not neccesarily stabilized groundwater.

MTBE = Methyl-tert-Butyl-Ether **TBA =** tert-Butanol

★ = TPH result due to presence of heavy end hydrocarbons within range of C5-C12 quantified as gasoline (possibly aged gasoline).

▲ = TPH result due to contribution from non-target hydrocarbons in C5-C12 range quantified as gasoline.

Table 3: Current Groundwater Elevation and Analytical Data - Monitoring Wells

FORMER EXXON SERVICE STATION

3055 35th AVENUE, OAKLAND, CALIFORNIA

All groundwater results are micrograms per liter (ug/L or ppb)

Monitoring Point Information		Date	Depth to Groundwater (feet, TOC)	Groundwater Elevation (feet, MSL)	Petroleum Hydrocarbon Concentration Data								Field Measurements	
Well # TOC	TOC Elevation (feet)				Total Petroleum Hydrocarbons		Volatile Organic Compounds						Dissolved Oxygen (mg/L)	Oxidation Reduction Potential (mV)
					Diesel	Gasoline	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	TBA		
MW-1	167.02	11/9/2012	18.58	148.44	--								--	--
MW-2	166.14	11/9/2012	17.41	148.73	--								--	--
MW-3	162.94	11/9/2012	14.69	148.25	--								--	--
MW-4	163.49	11/9/2012	15.37	148.12	--								--	--
MW-5	165.74	11/9/2012	15.11	150.63	340*	**3,000****	**1,300**	16	**340**	35.2	**390**	**2,300**	1.65	90
MW-6	164.3	11/2/2012	14.23	150.07	120#	540★	**44**	0.74	7.5	2.3	< 0.50	< 5.0	6.63	62
RW-5	162.34	11/9/2012	14.46	147.88	--								--	--
RW-6	162.36	11/9/2012	14.31	148.05	--								--	--
RW-7	162.72	11/9/2012	14.77	147.95	--								--	--
RW-8	164.13	11/9/2012	15.81	148.32	--								--	--
RW-9	163.86	11/9/2012	15.47	148.39	--								--	--
RW-10	163.02	11/9/2012	14.52	148.50	--								--	--
RW-11	162.67	11/9/2012	13.91	148.76	--								--	--
RW-12	163.06	11/9/2012	14.98	148.08	--								--	--
RW-13	164.34	11/9/2012	15.11	149.23	--								--	--
RW-14	163.76	11/9/2012	14.72	149.04	--								--	--
Laboratory Detection Limit:					**100**	**50**	**0.5**	**0.5**	**0.5**	**1.5**	**0.5**	**5**	**Field Instrument**	
Central Coast Region Water Quality Objectives (WQOs):					**1,000**		**1**	**150**	**300**	**1,750**	**5**	**12**	--	--

Notes

WQG = Water Quality Goals: Goals established by the CRWQCB Central Coast Region based on Maximum Contaminant Limits (Department of Health Services) or taste & odor threshold limits.

BOLD = Above WQG Threshold **TOC =** Top of Casing -- = Data not available. < # = Not detected at or above reporting limit.

= Diesel result due to discrete unknown peaks within quantified range

★ = Laboratory report indicates although TPH Gasoline compounds are present, the sample pattern does not match pattern of reference Gasoline standard. Hydrocarbons within range of C5-C12 quantified as Gasoline.

* = Not typical of Diesel standard pattern (possibly fuel lighter than diesel)

** = Although TPH as Gasoline constituents are present, sample chromatogram does not resemble pattern of reference Gasoline standard. Reported TPH value includes amount due to discrete peak and non-target light hydrocarbons within gasoline range.

Table 4: Current & Historic Groundwater Elevation and Analytical Data - Monitoring Wells

FORMER EXXON SERVICE STATION

3055 35th AVENUE, OAKLAND, CALIFORNIA

All groundwater results are micrograms per liter (ug/L or ppb)

Monitoring Point Information		Date	SPH (feet)	Note	Depth to Groundwater (feet, TOC)	Groundwater Elevation (feet, MSL)	Petroleum Hydrocarbon Concentration Data												Field Measurements	Oxidation Reduction Potential (mV)
							Total Petroleum Hydrocarbons			Volatile Organic Compounds										
Well # TOC	TOC Elevation (feet)						Diesel	Fuel Oil	Gasoline	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	TBA	EDB	1,2-DCE	DIPE,ETBE,TAME (µg/L)	Dissolved Oxygen (mg/L)	
MW-1	167.02																			
		11/9/2012	--		18.58	148.44	--	--	--	--	--	--	--	--	--	--	--	--	--	--
		9/28/2012	--		20.14	146.88	**1,800*** **	--	**1,600***	**3,100**	9	110	9.4J	< 1.5	**210**	< 0.59	< 0.99	< 0.84 - 1.4	0.85	-109
		3/30/2012	--		11.10	155.92	**1,400*** **	--	**3,300★**	**1,200**	3.6J	82	8.7J	< 1.5	< 14	< 0.59	< 0.99	< 0.84 - 1.4	2.39	-100
		9/22/2011	--		19.22	147.80	690**	--	**6,700***	**1,900**	< 8.4	140	< 14.4	**23**	--	--	--	--	0.72	-91
		3/17/2011	--		11.65	155.37	**1,100** [e]	--	**4,700** [d]	**940**	17	5.7	55	**(34)**	--	--	--	--	0.69	Not operating
		9/10/2010	--	(Z[TPHd])	19.99	147.03	**1,700** [e,f] **(790)** [e,f]	--	**6,800** [d]	**1,700**	17	150	150	**(28)**	--	--	--	--	0.65	Not operating
		3/14/2010	--	(Z[TPHd])	11.08	155.94	**2,100** [e,f] **(2,000)** [e,f]	--	**7,700** [d]	**1,400**	22	10	210	**(42)**	--	--	--	--	1.64	Not operating
		9/5/2009	--	(Z[TPHd])	19.78	147.24	**1500** [e,f,k] **(1,200)** [e,k]	--	**5,800** [d]	**1,400**	21	60	150	**(37)**	--	--	--	--	1.22	Not operating
		6/7/2009	Sheen [Field]	(Z[TPHd])	17.17	149.85	**1,400** [e,f,m] **(690)** [e]	--	**5,100** [d]	**1,000**	9.2	35	71	**(42)**	--	--	--	--	0.95	Not operating
		3/14/2009	Sheen [Field]	(Z[TPHd])	12.57	154.45	**2,000** [e,f,k] **(860** [e]**)**	--	**6,700** [d]	**1,100**	23	100	180	**(35)**	--	--	--	--	1.19	Not operating
		12/28/2008	Sheen [Field]	(Z[TPHd])	16.57	150.45	**(2,800** [e]**)**	< 250	**5,700** [d]	**660**	17	110	320	**(41)**	--	--	--	--	1.06	Not operating
		9/6/2008	--	(Z[TPHd])	20.66	146.36	(420 [e])	--	**2,400** [d]	**500**	11	30	67	< 75	--	--	--	--	1.20	Not operating
		6/14/2008	--	(Z)	18.98	148.04	(410 [e])	(< 250)	**(3,800** [d]**)**	**(690)**	(12)	(64)	(240)	(< 80)	--	--	--	--	1.95	Not operating
		3/9/2008	Sheen [Field]	(Z)	12.98	154.04	(470 [e])	(< 250)	**(4,600** [d]**)**	**(1,100)**	(23)	(82)	(140)	(< 50)	--	--	--	--	1.17	Not operating
		12/8/2007	Sheen [Field]		18.66	148.36	520 [e,f]	--	**4,500** [d]	**570**	13	57	200	< 120	--	--	--	--	1.24	Not operating
		9/6/2007	--		20.84	146.18	690 [e,f]	--	**2,800** [d]	**590**	17	35	100	< 80	--	--	--	--	0.90	Not operating
		6/15/2007	Sheen [Field]		18.07	148.95	**1,500** [e,k,f]	--	**5,600** [d]	**1,200**	29	84	190	**56**	--	--	--	--	0.74	Not operating
		3/16/2007	--		13.62	153.40	**1,800** [e,f]	--	**7,500** [d]	**1,400**	30	100	270	< 150	--	--	--	--	0.58	Not operating
		12/6/2006	Sheen [Lab]		19.92	147.10	760 [e,g]	--	**4,500** [d,g]	**440**	13	42	190	< 60	--	--	--	--	0.55	Not operating
		9/5/2006	Sheen [Lab]		19.96	147.06	**1,500** [e,f,k,g]	--	**5,500** [d,g]	**1,000**	45	81	310	< 120	--	--	--	--	0.38	Not operating
		6/30/2006	Sheen [Field]		16.33	150.69	**1,500** [m,k,l]	--	**2,100** [d,l]	**320**	6.1	< 1.0	77	< 90	--	--	--	--	0.66	Not operating
		3/22/2006	Sheen [Field]		10.52	156.50	**1,100** [e,f,k]	--	**8,300** [d]	**1,700**	100	190	660	< 150	--	--	--	--	0.84	Not operating
		12/14/2005	Sheen [Field]		17.63	149.39	**4,000** [e,f,k]	--	**6,200** [d]	**570**	32	72	420	< 110	--	--	--	--	1.08	Not operating
		9/21/2005	--		19.64	147.38	860 [e,k,f]	--	**2,900** [d]	**430**	19	46	150	< 50	< 66	< 8.6	< 12	< 14 - 17	1.14	Not operating
		6/21/2005	--		14.60	152.42	930 [e,k]	--	**6,500** [d]	**820**	26	57	110	< 250	--	--	--	--	--	Not operating
		3/7/2005	--		10.73	156.29	**1,300** [e,f,k]	--	**8,700** [d]	**1,200**	99	140	770	< 500	--	--	--	--	0.91	Not operating
	100.85	12/27/2004	--		17.04	83.81	**1,400** [e]	--	**10,000** [d]	**2,400**	**170**	170	1,500	< 120	--	--	--	--	0.41	Not operating
		9/27/2004	--		23.07	77.78	**1,700** [e]	--	**7,800** [d]	**1,800**	110	120	670	< 180	--	--	--	--	0.28	Not operating
		6/16/2004	--		19.20	81.65	**2,300** [e,f]	--	**8,100** [d]	**1,500**	69	22	1,000	< 100	--	--	--	--	--	Not operating
		3/18/2004	--		17.70	83.15	**1,100** [e,f]	--	**3,600** [d]	**650**	59	38	370	< 90	--	--	--	--	--	Operating
		12/2/2003	Sheen [Lab]		24.12	76.73	**9,300** [e,f,g]	--	**7,100** [d,g]	**1,400**	**230**	160	820	< 100	--	--	--	--	--	Operating
		9/3/2003	--		24.16	76.69	**36,000** [e,f]	--	**14,000** [d]	**300**	50	33	480	< 50	--	--	--	--	--	Operating
		5/30/2003	--		16.65	84.20	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		4/25/2003	--		20.90	79.95	320 [e]	--	**4,200** [d]	**580**	81	59	470	< 50	--	--	--	--	--	Operating
		1/13/2003	--		14.80	86.05	**5,300** [e,f]	--	**20,000** [d]	**2,300**	**480**	**300**	**2,100**	< 500	--	--	--	--	0.33	Not operating
		11/21/2002	--		21.55	79.30	**200,000** [e,g]	--	**83,000** [d,g]	**7,100**	**1,700**	**3,000**	**13,000**	< 1,000	--	--	--	--	0.49	Operating
		9/26/2002	--		20.30	80.55	**1,300** [e,f,k]	--	**7,000** [d]	**1,300**	**190**	200	760	< 100	--	--	--	--	0.70	Operating
		6/10/2002	--		24.10	76.75	900 [e,k]	--	**4,200** [d]	**830**	**170**	110	460	< 100	--	--	--	--	--	Operating
		3/11/2002	--		17.13	83.72	**1,400** [e]	--	**9,400** [d]	**2,100**	**200**	74	470	< 20	--	--	--	--	0.39	Operating
		12/7/2001	--		26.55	74.30	**1,900** [e,f]	--	**8,700** [d]	**1,300**	**160**	38	730	< 20	--	--	--	--	0.59	Operating
		8/30/2001	--		21.70	79.15	**1,400** [d]	--	**8,800** [a]	**2,100**	45	91	240	< 130	--	--	--	--	0.27	Operating
		6/6/2001	--		18.47	82.38	**4,000**	--	**19,000**	**4,500**	130	270	430	< 400	--	--	--	--	0.39	Not operating
		3/7/2001	--		16.19	84.66	**2,400**	--	**13,000**	**2,700**	43	69	300	< 100	--	--	--	--	0.49	Not operating
		12/5/2000	--		18.60	82.25	**3,400** [e]	--	**26,000** [a]	**7,900**	**150**	**580**	810	< 300	--	--	--	--	0.35	Not operating
		9/7/2000	--		19.45	81.40	**12,000** [e,g]	--	**40,000** [d,g]	**3,700**	**1,400**	**910**	**4,900**	< 50	--	--	--	--	0.17	
		3/23/2000	--		12.76	88.09	**3,300** [f]	--	**21,000** [d]	**4,700**	140	**470**	1,100	< 350	--	--	--	--	--	
		12/10/1999	--		17.02	83.83	**2,900** [e,f]	--	**25,000** [d]	**5,400**	130	**620**	1,400	< 1,000	--	--	--	--	1.03	
		9/28/1999	--		19.68	81.17	**3,600** [e,f]	--	**13,000** [d]	**3,200**	130	**320**	1,100	< 210	--	--	--	--	0.55	
		6/29/1999	--		20.77	80.08	**3,500** [e]	--	**28,000** [d]	**7,300**	**420**	**810**	1,700	< 1,300	--	--	--	--	0.10	
		3/29/1999	--		11.98	88.87	**6,800** [e]	--	**36,000** [d]	**12,000**	**750**	**1,300**	**2,400**	**950**	--	--	--	--	0.50	
Laboratory Detection Limit:							**10**	**20**	**50**	**0.5**	**0.5**	**0.5**	**1.5**	**5**	**5**	**0.5**	**0.5**	**0.5**	**Field Instrument**	
Central Coast Region Water Quality Objectives (WQOs): [1]							**1,000**			**1**	**150**	**300**	**1,750**	**5**	**12**	**0.05**	**0.5**	--	--	--

Table 4: Current & Historic Groundwater Elevation and Analytical Data - Monitoring Wells

FORMER EXXON SERVICE STATION

3055 35th AVENUE, OAKLAND, CALIFORNIA

All groundwater results are micrograms per liter (ug/L or ppb)

Monitoring Point Information		Date	SPH (feet)	Note	Depth to Groundwater (feet, TOC)	Groundwater Elevation (feet, MSL)	Petroleum Hydrocarbon Concentration Data												Field Measurements	Oxidation Reduction Potential (mV)
							Total Petroleum Hydrocarbons			Volatile Organic Compounds									Dissolved Oxygen (mg/L)	
Well # TOC	TOC Elevation (feet)						Diesel	Fuel Oil	Gasoline	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	TBA	EDB	1,2-DCE	DIPE,ETBE,TAME (µg/L)		
Continued		12/8/1998	--		15.62	85.23	**3,700**	--	**22,000**	**3,000**	**1,200**	**730**	**3,100**	< 900	--	--	--	--	--	
MW-1		9/30/1998	--		19.90	80.95	**3,300**	--	**37,000**	**11,000**	**950**	**1,200**	**2,800**	< 20	--	--	--	--	2.0	
		7/14/1998	--		17.34	83.51	**8,900** [e,f]	--	**41,000** [d]	**8,200**	**1,100**	**1,200**	**3,000**	< 200	--	--	--	--	1.8	
		3/18/1998	Sheen		12.34	88.51	**4,200** [e,f]	--	**30,000** [d]	**7,800**	**820**	**840**	**2,000**	< 1,100	--	--	--	--	1.3	
		12/22/1997	--		12.95	87.90	**5,800** [e]	--	**26,000** [d]	**7,900**	**370**	**920**	1,500	< 790	--	--	--	--	0.7	
		9/17/1997	--		20.12	80.73	**3,500** [e]	--	**32,000** [d]	**9,100**	**550**	**1,000**	**2,000**	< 1,000	--	--	--	--	2.1	
		6/25/1997	--		19.77	81.08	**7,400** [a]	--	**31,000**	**7,400**	**440**	**890**	**1,800**	< 400	--	--	--	--	3.7	
		3/20/1997	--		16.65	84.20	**10,000**	--	**33,000**	**6,100**	**560**	**970**	**2,200**	< 400	--	--	--	--	8.5	
		11/27/1996	Sheen		17.24	83.61	**6,100**	--	**38,000**	**9,600**	**950**	**1,600**	**3,100**	< 400	--	--	--	--	5.6	
		8/22/1996	--		22.30	78.55	**6,200**	--	**41,000**	**8,600**	**1,300**	**1,500**	**2,900**	< 200	--	--	--	--	8.0	
		5/21/1996	--		14.62	86.23	**8,500**	--	**36,000**	**8,500**	**1,400**	**1,300**	**2,800**	**1,900**	--	--	--	--	--	
		2/21/1996	--		11.69	89.16	**4,300**	--	**33,000**	**10,000**	**480**	**1,000**	**1,800**	**3,300**	--	--	--	--	--	
		11/29/1995	--		22.19	78.66	--	--	**37,000**	**9,900**	**530**	**1,600**	**2,900**	--	--	--	--	--	--	
		8/22/1995	--		20.90	79.95	--	--	**23,000**	**6,900**	**340**	**1,200**	**1,900**	--	--	--	--	--	--	
		5/23/1995	--		15.29	85.56	--	--	**22,000**	**9,900**	**990**	**790**	**2,000**	--	--	--	--	--	--	
		2/27/1995	--		15.53	85.32	--	--	**45,000**	**2,900**	**2,500**	**760**	**4,100**	--	--	--	--	--	--	
		11/11/1994	--		15.80	85.05	--	--	**57,000**	**14,000**	**4,400**	**1,400**	**6,400**	--	--	--	--	--	--	
		8/18/1994	Sheen		21.04	79.81	--	--	**925,000**	**16,500**	**6,200**	**1,000**	**9,400**	--	--	--	--	--	--	
		7/19/1994	--		20.77		--	--	--	--	--	--	--	--	--	--	--	--	--	
		5/25/1994	Sheen		16.79	84.06	**25,000**	< 50,000	**120,000**	**22,000**	**17,000**	**2,800**	**16,000**	--	--	--	--	--	--	
MW-2	166.14																			
		11/9/2012	--		17.41	148.73	--	--	--	--	--	--	--	--	--	--	--	--	--	--
		9/28/2012	Sheen [Field]		18.95	147.19	**1,500*** **	--	**2,900***	**1,900**	12	270	12J	**42**	**300**	< 0.59	< 0.99	< 1.1 - 1.5	4.27	-101
		3/30/2012	--		9.84	156.30	**1,800*** **	--	**4,100★**	**620**	5.0	140	8.6J	**21**	< 9.7	< 0.43	< 0.71	< 6.0 - 0.97	2.66	-104
		9/22/2011	--		17.94	148.20	690**	--	**7,100***	**1,900**	< 8.4	**350**	< 14.4	**39**	< 66	< 8.6	< 12	< 14 - 17	0.76	-106
		3/17/2011	--		10.51	155.63	**2,200** [e,f]	--	**5,500** [d]	**380**	12	1.8	15	**(35)**	--	--	--	--	0.68	Not operating
		9/10/2010	--	(Z [TPHd,])	18.84	147.30	**2,400** [e,f] **(2,200)** [e,f]	--	**11,000** [d]	**1,900**	40	**380**	110	**(81)**	--	--	--	--	0.40	Not operating
		3/14/2010	Sheen [Lab]	(Z [TPHd,])	9.82	156.32	**20,000** [e,f,k,g] **(2,900)** [e,f]	--	**8,800** [d,g]	**840**	18	67	92	**(65)**	--	--	--	--	0.81	Not operating
		9/5/2009	Sheen [Lab]	(Z [TPHd,])	19.41	146.73	**11,000** [e,f,k,g] **(4,800)** [e,f,k]	--	**12,000** [d,g]	**1,500**	30	170	220	**(77)**	--	--	--	--	0.95	Not operating
		6/7/2009	Sheen [Field & Lab]	(Z [TPHd,])	16.64	149.50	**13,000** [m,f] **(2,500)** [e]	--	**15,000** [d]	**710**	37	210	180	**(88)**	--	--	--	--	0.71	Not operating
		3/14/2009	Sheen [Field]	(Z [TPHd,])	10.52	155.62	**3,300** [e,f,k] **(2,700** [e]**)**	--	**11,000** [d]	**1,100**	23	23	250	**(120)**	--	--	--	--	0.67	Not operating
		12/28/2008	Sheen [Field]	(Z [TPHd,])	15.73	150.41	**(2,400** [e]**)**	< 250	**9,800** [d]	**690**	19	250	180	**(120)**	--	--	--	--	0.63	Not operating
		9/6/2008	Sheen [Field & Lab]	(Z [TPHd,])	19.41	146.73	**(2,500** [e,g]**)**	--	**10,000** [d,g]	**430**	17	270	370	< 180	--	--	--	--	0.81	Not operating
		6/14/2008	Sheen [Field]	(Z)	18.66	147.48	**(2,500** [e]**)**	(< 250)	**(10,000** [d]**)**	**(520)**	(18)	(200)	(370)	(< 350)	--	--	--	--	0.97	Not operating
		3/9/2008	Sheen [Field]	(Z)	12.09	154.05	**(3,100** [e]**)**	(< 250)	**(7,900** [d]**)**	**(840)**	(24)	(280)	(380)	(< 380)	--	--	--	--	0.68	Not operating
		12/8/2007	Sheen [Field & Lab]		17.72	148.42	**3,600** [e,f,g]	--	**14,000** [d,g]	**640**	13	220	520	< 300	--	--	--	--	0.80	Not operating
		9/6/2007	Sheen [Field & Lab]		19.28	146.86	**8,400** [e,f,g]	--	**17,000** [a,h]	**1,000**	53	**450**	1,100	< 700	--	--	--	--	0.72	Not operating
		6/15/2007	Sheen [Field & lab]		17.31	148.83	**21,000** [e,h,f,g]	--	**18,000** [d,g]	**700**	22	290	740	< 650	--	--	--	--	0.68	Not operating
		3/16/2007	Sheen [Field & Lab]		12.31	153.83	**49,000** [e,f,h,g]	--	**44,000** [d,g]	**1,800**	71	**670**	**2,200**	< 900	--	--	--	--	0.52	Not operating
		12/6/2006	Sheen [Field & Lab]		18.01	148.13	**31,000** [e,f,h,g]	--	**27,000** [d,g]	**1,100**	51	**420**	1,600	< 900	--	--	--	--	0.48	Not operating
		9/5/2006	Sheen [Lab]		18.96	147.18	**19,000** [e,f,h,g]	--	**15,000** [d,g]	**680**	70	260	1,400	< 1,000	--	--	--	--	0.79	Not operating
		6/30/2006	Sheen [Field & Lab]		16.78	149.36	**55,000** [e,f,h,g]	--	**18,000** [d,g]	**1,100**	71	270	1,400	**1,200**	--	--	--	--	0.84	Not operating
		3/22/2006	Sheen [Lab]		9.15	156.99	**23,000** [e,f,h,g]	--	**21,000** [d,g]	**2,300**	**200**	**550**	**2,800**	**1,200**	--	--	--	--	0.91	Not operating
		12/14/2005	Sheen [Field & Lab]		16.40	149.74	**49,000** [e,f,h,g]	--	**29,000** [d,g]	**1,700**	**260**	**600**	**3,700**	**1,000**	--	--	--	--	0.99	Not operating
		9/21/2005	Sheen [Field]		18.50	147.64	**1,100** [e,f]	--	**4,600** [d]	**370**	62	110	740	**1,100**	--	--	--	--	0.86	Not operating
		6/21/2005	Sheen [Lab]		13.42	152.72	**15,000** [e,f,g]	--	**36,000** [d,g]	**1,700**	**310**	**460**	**3,100**	**1,200**	--	--	--	--	--	Not operating
		3/7/2005	Sheen [Field & Lab]		9.31	156.83	**8,300** [e,f,h,g]	--	**20,000** [d,g]	**1,400**	**330**	**430**	**2,600**	**1,100**	--	--	--	--	0.88	Not operating
		12/27/2004	--		16.81	149.33	**3,800** [e,f]	--	**17,000** [d]	**1,300**	**370**	**540**	**3,800**	**620**	--	--	--	--	0.94	Not operating
		9/27/2004	--	**	27.55	138.59	**1,000** [e,f,k]	--	770 [d]	**20**	7.9	10	140	**1,600**	--	--	--	--	0.79	Operating
		6/16/2004	--		18.15	147.99	**9,800** [e,f]	--	**15,000** [d]	**800**	**210**	290	**1,800**	**2,000**	--	--	--	--	--	Not operating
Well box)	100.00	3/18/2004	--		15.78	84.22	870 [e,f]	--	**4,200** [d]	**730**	89	< 5.0	480	**2,300**	--	--	--	--	--	Operating
(Monument		12/2/2003	Sheen [Lab]		23.17	76.83	**3,300** [e,f,g]	--	**2,400** [d,g]	**91**	20	14	250	**890**	--	--	--	--	--	Operating
		9/3/2003	--		23.57	76.43	**2,300** [e]	--	**2,900** [d]	**240**	57	68	380	**770**	--	--	--	--	--	Operating
		5/30/2003	--		15.23	84.77	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
Laboratory Detection Limit:							**10**	**20**	**50**	**0.5**	**0.5**	**0.5**	**1.5**	**5**	**5**	**0.5**	**0.5**	**0.5**	**Field Instrument**	
Central Coast Region Water Quality Objectives (WQOs): [1]							**1,000**			**1**	**150**	**300**	**1,750**	**5**	**12**	**0.05**	**0.5**	**--**	**--**	**--**

Table 4: Current & Historic Groundwater Elevation and Analytical Data - Monitoring Wells

FORMER EXXON SERVICE STATION

3055 35th AVENUE, OAKLAND, CALIFORNIA

All groundwater results are micrograms per liter (ug/L or ppb)

Monitoring Point Information		Date	SPH (feet)	Note	Depth to Groundwater (feet, TOC)	Groundwater Elevation (feet, MSL)	Petroleum Hydrocarbon Concentration Data												Field Measurements	Oxidation Reduction Potential (mV)
							Total Petroleum Hydrocarbons			Volatile Organic Compounds										
Well # TOC	TOC Elevation (feet)						Diesel	Fuel Oil	Gasoline	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	TBA	EDB	1,2-DCE	DIPE,ETBE,TAME (µg/L)	Dissolved Oxygen (mg/L)	
Continued		4/25/2003	--		19.05	80.95	310[c]	--	**3,800**[d]	**460**	78	72	410	**310**	--	--	--	--	--	Operating
MW-2		1/13/2003	Sheen [Lab]		13.60	86.40	**14,000**[e,f,g,k]	--	**32,000**[d,g]	**4,500**	**1,600**	**920**	**3,600**	< 1000	--	--	--	--	0.39	Not operating
		11/21/2002	--		18.75	81.25	**350,000**[e,g]	--	**210,000**[d,g]	**14,000**	**23,000**	**4,400**	**28,000**	< 1,700	--	--	--	--	0.43	Operating
		9/26/2002	--		20.39	79.61	660[e]	--	**4,800**[d]	**770**	**200**	140	740	< 50	--	--	--	--	0.29	Operating
		6/10/2002	--		18.59	81.41	**2,000**[e]	--	**14,000**[d]	**2,600**	**710**	150	**2,000**	< 800	--	--	--	--	--	Operating
		3/11/2002	--		16.95	83.05	590[e]	--	**4,700**[d]	**1,200**	**150**	30	310	< 50	--	--	--	--	0.24	Operating
		12/7/2001	--		24.45	75.55	750[e,f]	--	**4,100**[d]	**510**	88	8.2	580	< 20	--	--	--	--	0.47	Operating
		8/30/2001	--		21.00	79.00	**15,000**[d,h]	--	**43,000**[a,h]	**3,100**	**720**	**980**	**5,500**	< 200	--	--	--	--	--	Operating
		6/6/2001	--		17.51	82.49	**48,000**	--	**110,000**	**14,000**	**9,000**	**1,900**	**12,000**	< 950	--	--	--	--	0.24	Not operating
		3/7/2001	--		15.68	84.32	**3,900**	--	**34,000**	**1,200**	**770**	**620**	**4,300**	< 200	--	--	--	--	0.44	Not operating
		12/5/2000	--		17.45	82.55	**87,000**[e,f,g]	--	**60,000**[d,g]	**5,100**	**2,200**	**1,600**	**9,000**	< 200	--	--	--	--	0.31	Not operating
		9/7/2000	--		18.25	81.75	**32,000**[e,g]	--	**62,000**[d,g]	**5,300**	**2,300**	**1,500**	**8,400**	< 100	--	--	--	--	0.39	
		3/23/2000	--		13.56	86.44	**3,100**[i]	--	**25,000**[d]	**1,900**	**1,100**	**660**	**3,700**	< 500	--	--	--	--	--	
		12/10/1999	--		16.53	83.47	**2,500**[e,f]	--	**17,000**[d]	**1,300**	**780**	**420**	**2,700**	< 40	--	--	--	--	0.17	
		9/28/1999	--		18.61	81.39	**3,400**[e,f]	--	**15,000**[d]	**1,200**	**540**	230	**2,300**	< 36	--	--	--	--	1.18	
		6/29/1999	--		19.54	80.46	**3,300**[e]	--	**28,000**[d]	**3,500**	**1,100**	**690**	**3,100**	< 1,000	--	--	--	--	0.41	
		3/29/1999	--		11.81	88.19	**7,500**[e,f]	--	**28,000**[d]	**4,400**	**1,600**	**950**	**4,100**	**410**	--	--	--	--	1.86	
		12/8/1998	--		14.80	85.20	**3,100**	--	**32,000**	**9,200**	**680**	**1,100**	**2,300**	< 2,000	--	--	--	--	--	
		9/30/1998	--		18.71	81.29	**2,400**	--	**22,000**	**3,600**	**1,300**	**720**	**3,200**	< 30	--	--	--	--	1.8	
		7/14/1998	--		16.07	83.93	**5,300**[e,f]	--	**42,000**[d]	**6,000**	**3,000**	**1,000**	**4,800**	< 200	--	--	--	--	1.5	
		3/18/1998	Sheen		10.83	89.17	**7,000**[e,f]	--	**58,000**[d]	**9,300**	**6,100**	**1,800**	**8,200**	< 1,100	--	--	--	--	1.1	
		12/22/1997	--		14.09	85.91	**6,100**[e]	--	**47,000**[d]	**8,500**	**4,600**	**1,800**	**8,400**	< 1,200	--	--	--	--	1.2	
		9/17/1997	Sheen		19.05	80.95	**8,900**[e]	--	**41,000**[d]	**5,200**	**3,400**	**1,300**	**5,900**	< 700	--	--	--	--	1.2	
		6/25/1997	--		18.62	81.38	**7,800**[b]	--	**42,000**	**7,400**	**3,800**	**1,200**	**5,700**	< 200	--	--	--	--	0.9	
		3/20/1997	--		15.39	84.61	**6,100**	--	**27,000**	**3,700**	**2,300**	**580**	**2,800**	< 400	--	--	--	--	8.1	
		11/27/1996	Sheen		16.61	83.39	**10,000**	--	**54,000**	**9,800**	**7,000**	**1,800**	**7,900**	< 2,000	--	--	--	--	3.1	
		8/22/1996	--		19.12	80.88	**5,700**	--	**37,000**	**5,100**	**3,500**	**960**	**4,500**	< 200	--	--	--	--	3.0	
		5/21/1996	--		13.47	86.53	**3,400**	--	**51,000**	**8,200**	**5,200**	**1,300**	**6,600**	**2,400**	--	--	--	--	--	
		2/21/1996	--		10.53	89.47	--	--	**59,000**	**8,000**	**6,000**	**1,800**	**8,900**	**4,500**	--	--	--	--	--	
		11/29/95	--		21.05	78.95	--	--	**46,000**	**7,100**	**5,300**	**1,300**	**6,000**	--	--	--	--	--	--	
		8/22/1995	--		19.80	80.20	--	--	**38,000**	**6,400**	**5,000**	**1,100**	**5,600**	--	--	--	--	--	--	
		5/23/1995	--		14.17	85.83	--	--	**33,000**	**8,200**	**5,600**	**900**	**6,600**	--	--	--	--	--	--	
		2/27/1995	Sheen		14.46	85.54	--	--	**44,000**	**5,100**	**5,300**	**930**	**6,400**	--	--	--	--	--	--	
		11/11/94	--		15.52	84.48	--	--	**54,000**	**5,900**	**6,700**	**1,300**	**7,500**	--	--	--	--	--	--	
		8/18/1994	--		20.37	79.63	--	--	**88,000**	**10,750**	**10,500**	**1,850**	**9,600**	--	--	--	--	--	--	
		7/19/1994	--		19.81	80.19	--	--	--	--	--	--	--	--	--	--	--	--	--	
		5/25/1994	--		15.65	84.35	**6,900**	< 5,000	**61,000**	**9,900**	**7,400**	**960**	**4,600**	--	--	--	--	--	--	
Laboratory Detection Limit:							**10**	**20**	**50**	**0.5**	**0.5**	**0.5**	**1.5**	**5**	**5**	**0.5**	**0.5**	**0.5**	**Field Instrument**	
Central Coast Region Water Quality Objectives (WQOs):[1]							**1,000**			**1**	**150**	**300**	**1,750**	**5**	**12**	**0.05**	**0.5**	--	--	--

Table 4: Current & Historic Groundwater Elevation and Analytical Data - Monitoring Wells

FORMER EXXON SERVICE STATION

3055 35th AVENUE, OAKLAND, CALIFORNIA

All groundwater results are micrograms per liter (ug/L or ppb)

Monitoring Point Information		Date	SPH (feet)	Note	Depth to Groundwater (feet, TOC)	Groundwater Elevation (feet, MSL)	Petroleum Hydrocarbon Concentration Data												Field Measurements	Oxidation Reduction Potential (mV)
							Total Petroleum Hydrocarbons			Volatile Organic Compounds									Dissolved Oxygen (mg/L)	
Well # TOC	TOC Elevation (feet)						Diesel	Fuel Oil	Gasoline	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	TBA	EDB	1,2-DCE	DIPE,ETBE,TAME (µg/L)		
MW-3	162.94																			
		11/9/2012	--		14.69	148.25	--	--	--	--	--	--	--	--	--	--	--	--	--	--
		9/28/2012	--		16.22	146.72	**2,700***	--	**6,100***	**10,000**	36	**860**	104J	**87**	**650**	< 3.0	< 5.0	< 4.2-6.8	0.75	-98
		3/30/2012	--		7.51	155.43	**2,200***	--	**3,400▲**	**3,800**	14J	**360**	57.3	**63J**	< 68	< 3.0	< 5.0	< 4.2 - 6.8	7.23	-113
		9/22/2011	--		15.34	147.60	**1,500****	--	**14,000***	**8,400**	< 17	**790**	130	**89**	< 130	< 17	< 24	< 28 - 35	1.04	-82
		3/17/2011	--		7.90	155.04	2,400 [c]	--	**17,000** [d]	**5,600**	43	**660**	210	**(83)**	--	--	--	--	0.83	Not operating
		9/10/2010	--	(Z[TPHd])	16.14	146.80	**2,500** [e,f] **(2,200)** [e,f]	--	**21,000** [d]	**8,100**	59	**800**	300	**(100)**	--	--	--	--	0.91	Not operating
		3/14/2010	Sheen [Lab]	(Z[TPHd])	8.56	154.38	**19,000** [e,f,g,k] **(4,300)** [e]	--	**21,000** [d,g]	**4,300**	76	**530**	710	**(97)**	--	--	--	--	1.07	Not operating
		9/5/2009	Sheen [Lab]	(Z[TPHd])	16.67	146.27	**31000** [e,f,k,m,g] **(11,000)** [e,f,k]	--	**32,000** [d,g]	**6,200**	120	**590**	1,000	**(80)**	--	--	--	--	0.98	Not operating
		6/7/2009	Sheen [Field & Lab]	(Z[TPHd])	13.94	149.00	**6,900** [e,f,m] **(3,700)** [e]	--	**23,000** [d]	**4,400**	81	**710**	670	**(97)**	--	--	--	--	1.02	Not operating
		3/14/2009	Sheen [Field & lab]	(Z[TPHd])	9.02	153.92	**8,700** [e,f,k,g] **(8,100** [e,f]**)**	--	**41,000** [d,g]	**4,900**	140	**940**	1,600	**(97)**	--	--	--	--	1.14	Not operating
		12/28/2008	Sheen [Field & Lab]	(Z[TPHd])	12.72	150.22	**(4,100** [e,f]**)**	< 250	**24,000** [d,g]	**4,100**	91	**380**	960	**(91)**	--	--	--	--	0.91	Not operating
		9/6/2008	Sheen [Field & Lab]	(Z[TPHd])	16.65	146.29	**(7,900** [e,f,g]**)**	--	**42,000** [d,g]	**5,800**	**190**	**1,100**	2,400	< 800	--	--	--	--	1.03	Not operating
		6/14/2008	Sheen [Field]	(Z)	15.92	147.02	**(4,900** [e]**)**	(600)	**(36,000** [d]**)**	**(4,700)**	(140)	**(830)**	(1,600)	(< 500)	--	--	--	--	1.05	Not operating
		3/9/2008	Sheen [Field]	(Z)	10.40	152.54	**(3,400** [e]**)**	(310)	**(23,000** [d]**)**	**(4,200)**	(120)	**(650)**	(1,600)	(< 250)	--	--	--	--	0.71	Not operating
		12/8/2007	Sheen [Field & Lab]		14.49	148.45	**4,000** [e,f,g]	--	**33,000** [d,g]	**4,300**	120	**370**	**2,200**	< 250	--	--	--	--	0.77	Not operating
		9/6/2007	Sheen [Field & Lab]		16.55	146.39	**14,000** [e,f,g]	--	**41,000** [d,g]	**4,400**	**180**	**1,000**	**3,800**	< 700	--	--	--	--	0.70	Not operating
		6/15/2007	Sheen [Field & Lab]		14.57	148.37	**25,000** [e,h,f,g]	--	**56,000** [d,g]	**5,100**	**200**	**1,100**	**3,200**	< 1000	--	--	--	--	0.48	Not operating
		3/16/2007	Sheen [Field & Lab]		10.25	152.69	**5,300** [e,f,h,g]	--	**72,000** [d,g]	**6,500**	**420**	**1,200**	**3,900**	< 1,000	--	--	--	--	0.61	Not operating
		12/6/2006	Sheen [Field & Lab]		15.25	147.69	**19,000** [e,f,h,g]	--	**44,000** [d,g]	**4,500**	110	**930**	**3,600**	< 500	--	--	--	--	0.70	Not operating
		9/5/2006	Sheen [Field & Lab]		16.25	146.69	**16,000**[e,f,h,g]	--	**56,000**[d,g]	**5,400**	**300**	**1,200**	**6,200**	< 500	--	--	--	--	0.55	Not operating
		6/30/2006	Sheen [Field & Lab]		14.10	148.84	**15,000**[e,f,h,g]	--	**44,000**[d,g]	**4,000**	**160**	**550**	**4,000**	< 450	--	--	--	--	0.81	Not operating
		3/22/2006	Sheen [Field & Lab]		8.10	154.84	**15,000**[e,f,h,g]	--	**45,000**[d,g]	**4,300**	**390**	**1,100**	**5,300**	< 1,000					0.88	Not operating
		12/14/2005	Sheen [Field & Lab]		13.65	149.29	**19,000**[e,f,h,g]	--	**53,000**[d,g]	**4,700**	**350**	**1,100**	**7,400**	< 1,000	--	--	--	--	0.95	Not operating
		9/21/2005	Sheen [Field & Lab]		15.73	147.21	**16,000**[e,f,h,g]	--	**41,000**[d,g]	**3,700**	**480**	**930**	**5,700**	< 500	--	--	--	--	0.90	Not operating
		6/21/2005	Sheen [Field & Lab]		10.79	152.15	**12,000**[e,g]	--	**44,000**[d,g]	**4,900**	**870**	**1,100**	**6,500**	< 1,200	--	--	--	--	--	Not operating
		3/7/2005	Sheen [Field & Lab]		6.91	156.03	**14,000**[e,f,g]	--	**50,000**[d,g]	**6,100**	**2,100**	**1,300**	**7,400**	< 500	--	--	--	--	0.62	Not operating
		12/27/2004	Sheen [Lab]		14.58	148.36	**24,000**[e,f,g,k]	--	**32,000**[d,g]	**4,400**	**2,800**	**650**	**4,800**	< 250	--	--	--	--	0.71	Not operating
		9/27/2004	--		23.65	139.29	**1,700**[e,f]	--	**5,200**[d]	**430**	**220**	100	680	**250**	--	--	--	--	0.55	Operating
	96.87	6/16/2004	--		15.40	81.47	**8,800**[e,f]	--	**23,000**[d]	**2,100**	**1,300**	**360**	**2,800**	< 1,000	--	--	--	--	--	Operating
		3/18/2004	--		16.49	80.38	**2,300**[e,f]	--	**15,000**[d]	**2,600**	**990**	260	1,700	< 300	--	--	--	--	--	Operating
		12/2/2003	Sheen [Lab]		17.70	79.17	**8,400**[e,f,g]	--	**30,000**[d,g]	**2,900**	**2,100**	**530**	**3,600**	< 500	--	--	--	--	--	Operating
		9/3/2003	--		21.65	75.22	**3,300**[e]	--	**8,100**[d]	**220**	**170**	66	560	< 50	--	--	--	--	--	Operating
		5/30/2003	--		13.30	83.57	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		4/25/2003	--		18.30	78.57	**1,200**[e]	--	**12,000**[d]	**1,800**	**850**	150	1,200	< 500	--	--	--	--	--	Operating
		1/13/2003	Sheen [Lab]		11.43	85.44	**6,300**[e,f,g,k]	--	**21,000**[d,g]	**2,400**	**2,300**	**390**	**3,000**	< 500	--	--	--	--	0.31	Not operating
		11/21/2002	0.05		17.85	79.02	**120,000**[e,g]	--	**37,000**[d,g]	**4,000**	**660**	**1,200**	**5,100**	< 1,700	--	--	--	--	0.28	Operating
		9/26/2002	--		18.85	78.02	**130,000**[e,g]	--	**50,000**[d,g]	**3,900**	**5,400**	**820**	**6,600**	< 500	--	--	--	--	0.19	Operating
		6/10/2002	--		22.94	73.93	990[e,k]	--	**9,000**[d]	**1,800**	**1,300**	96	1,000	< 300	--	--	--	--	--	Operating
		3/11/2002	--		14.69	82.18	**2,800**[e,g,k]	--	**30,000**[d]	**5,000**	**2,400**	190	**1,800**	< 1,300	--	--	--	--	0.30	Operating
		12/7/2001	--		24.65	72.22	**3,900**[e,f]	--	**25,000**[d]	**2,500**	**1,700**	64	**2,200**	< 200	--	--	--	--	0.19	Operating
		8/30/2001	--		12.43	84.44	**190,000**[d,h]	--	**95,000**[d,h]	**6,900**	**10,000**	**2,700**	**15,000**	< 250	--	--	--	--	0.24	Operating
		6/6/2001	--		14.88	81.99	**12,000**	--	**43,000**	**3,000**	**1,000**	**770**	**5,200**	< 400	--	--	--	--	1.71	Not operating
		3/7/2001	--		14.27	82.60	**13,000**	--	**60,000**	**7,000**	**4,600**	**900**	**7,100**	< 350	--	--	--	--	0.49	Not operating
		12/5/2000	--		14.80	82.07	**17,000**[e,g]	--	**110,000**[d,g]	**17,000**	**11,000**	**1,900**	**12,000**	< 750	--	--	--	--	0.37	Not operating
		9/7/2000	--		15.61	81.26	**19,000**[e,f,g]	--	**100,000**[d,g]	**17,000**	**12,000**	**1,600**	**11,000**	< 500	--	--	--	--	--	
		3/23/2000	--		8.98	87.89	**11,000**[g,i]	--	**77,000**[d,g]	**10,000**	**9,400**	**1,600**	**11,000**	< 430	--	--	--	--	--	
		12/10/1999	--		13.31	83.56	**5,300**[e,f]	--	**53,000**[d]	**8,000**	**6,400**	**1,100**	**8,100**	< 200	--	--	--	--	0.48	
		9/28/1999	--		15.99	80.88	**7,800**[e]	--	**60,000**[d]	**9,400**	**9,200**	**1,000**	**9,900**	**200**	--	--	--	--	0.53	
		6/29/1999	--		16.98	79.89	**6,900**[e]	--	**71,000**[d]	**12,000**	**7,300**	**1,400**	**8,400**	< 1,700	--	--	--	--	0.19	
		3/29/1999	--		7.95	88.92	**4,600**[e]	--	**39,000**[d]	**8,900**	**4,400**	**940**	**4,500**	**810**	--	--	--	--	0.56	
		12/8/1998	--		11.20	85.67	**4,200**	--	**51,000**	**8,000**	**6,800**	**1,400**	**7,500**	< 1,100	--	--	--	--	--	
		9/30/1998	--		16.14	80.73	**9,800**	--	**91,000**	**17,000**	**13,000**	**2,100**	**12,000**	< 1300	--	--	--	--	2.0	
Laboratory Detection Limit:							**10**	**20**	**50**	**0.5**	**0.5**	**0.5**	**1.5**	**5**	**5**	**0.5**	**0.5**	**0.5**	**Field Instrument**	
Central Coast Region Water Quality Objectives (WQOs):[1]							**1,000**			**1**	**150**	**300**	**1,750**	**5**	**12**	**0.05**	**0.5**	**--**	**--**	**--**

Table 4: Current & Historic Groundwater Elevation and Analytical Data - Monitoring Wells

FORMER EXXON SERVICE STATION

3055 35th AVENUE, OAKLAND, CALIFORNIA

All groundwater results are micrograms per liter (ug/L or ppb)

Monitoring Point Information		Date	SPH (feet)	Note	Depth to Groundwater (feet, TOC)	Groundwater Elevation (feet, MSL)	Petroleum Hydrocarbon Concentration Data												Field Measurements	Oxidation Reduction Potential (mV)
							Total Petroleum Hydrocarbons			Volatile Organic Compounds									Dissolved Oxygen (mg/L)	
Well # TOC	TOC Elevation (feet)						Diesel	Fuel Oil	Gasoline	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	TBA	EDB	1,2-DCE	DIPE,ETBE,TAME (µg/L)		
Continued		7/14/1998	--		13.51	83.36	**65,000** e,f,g	--	**94,000** d,g	**18,000**	**14,000**	**1,900**	**11,000**	< 1,400	--	--	--	--	1.8	
MW-3		3/18/1998	Sheen		8.41	88.46	**20,000** e,f	--	**120,000** d	**21,000**	**19,000**	**2,600**	**15,000**	< 1,600	--	--	--	--	1.6	
		12/22/1997	Sheen		10.71	86.16	**14,000** e	--	**49,000** d	**7,300**	**5,300**	**1,400**	**7,500**	< 1,100	--	--	--	--	3.1	
		9/17/1997	Sheen		16.34	80.53	**15,000** e	--	**78,000** d	**11,000**	**9,900**	**1,800**	**10,000**	< 1,200	--	--	--	--	0.7	
		6/25/1997	--		15.98	80.89	**7,700** b	--	**49,000**	**9,700**	**7,100**	**1,300**	**7,000**	**220**	--	--	--	--	5.8	
		3/20/1997	--		12.86	84.01	**11,000**	--	**56,000**	**9,900**	**6,900**	**1,300**	**8,000**	**3,500**	--	--	--	--	9.0	
		11/27/1996	Sheen		13.47	83.40	**24,000**	--	**82,000**	**14,000**	**13,000**	**2,400**	**13,000**	< 1,000	--	--	--	--	2.4	
		8/22/1996	--		16.50	80.37	**16,000**	--	**94,000**	**17,000**	**15,000**	**2,100**	**12,000**	**330**	--	--	--	--	2.0	
		5/21/1996	Sheen		10.86	86.01	**13,000**	--	**69,000**	**17,000**	**9,400**	**1,700**	**9,400**	**2,600**	--	--	--	--	--	
		2/21/1996	--		7.92	88.95	--	--	**60,000**	**10,000**	**7,800**	**1,500**	**8,800**	**3,400**	--	--	--	--	--	
		11/29/1995	--		16.34	80.53	--	--	**220,000**	**25,000**	**25,000**	**3,500**	**19,000**	--	--	--	--	--	--	
		8/22/1995	--		17.10	79.77	--	--	**74,000**	**14,000**	**13,000**	**1,900**	**11,000**	--	--	--	--	--	--	
		5/23/1995	Sheen		11.60	85.27	--	--	**310,000**	**18,000**	**17,000**	**4,500**	**2,800**	--	--	--	--	--	--	
		2/27/1995	Sheen		11.86	85.01	--	--	**250,000**	**22,000**	**26,000**	**7,800**	**21,000**	--	--	--	--	--	--	
		11/11/94	--		17.80	79.07	--	--	**89,000**	**1,600**	**1,900**	**1,900**	**14,000**	--	--	--	--	--	--	
		8/18/1994	--		17.75	79.12	--	--	**116,000**	**28,300**	**26,000**	**2,400**	**15,000**	--	--	--	--	--	--	
		7/19/1994	--		17.04	79.83	--	--	--	--	--	--	--	--	--	--	--	--	--	
		5/25/1994	Sheen		13.93	82.94	**14,000**	< 50,000	**56,000**	**14,000**	**14,000**	**1,300**	**11,000**	--	--	--	--	--	--	
MW-4	163.49																			
		11/9/2012	--		15.37	148.12	--	--	--	--	--	--	--	--	--	--	--	--	--	--
		9/28/2012	--		17.01	146.48	**2,100***		**3,000***	**4,700**	13	200	67	**34**	**220**	< 0.59	< 0.99	< 0.84 - 1.4	0.66	-108
		3/30/2012	--		8.05	155.44	**1,900***		**6,000★**	**3,300**	5.0J	95	28J	**40**	< 68	< 3.0	< 5.0	< 4.2 - 6.8	6.41	-101
		9/22/2011	--		16.05	147.44	**2,000***	--	**11,000***	**4,100**	< 17	160	100	< 33	< 130	< 17	< 24	< 28 - 35	0.69	-98
		3/17/2011	--		8.55	154.94	**1,900** e	--	**11,000** d	**4,800**	17	190	110	**(59)**	--	--	--	--	0.75	Not operating
		9/10/2010	--	(Z TPHd,g)	16.89	146.60	**2,200** e,f **(2,000)** e,f	--	**11,000** d	**3,300**	24	160	330	**(46)**	--	--	--	--	0.88	Not operating
		3/14/2010	--	(Z TPHd,g)	8.25	155.24	**2,400** e,f **(1,800)** e	--	**6,800** d	**1,500**	21	53	120	**(33)**	--	--	--	--	1.13	Not operating
		9/5/2009	Sheen Lab	(Z TPHd,g)	17.39	146.10	**1,200** e,f,m **(1,600)** e,f	--	**3,600** d	**830**	17	13	53	**(30)**	--	--	--	--	1.01	Not operating
		6/7/2009	Sheen Field & Lab	(Z TPHd,g)	14.83	148.66	**4,200** e,f,m **(2,000)** e	--	**6,900** d	**1,200**	23	41	190	**(25)**	--	--	--	--	1.05	Not operating
		3/14/2009	Sheen Field	(Z TPHd,g)	9.30	154.19	**2,800** e,f,k **(3,200** e**)**	--	**8,800** d	**980**	23	61	220	**(22)**	--	--	--	--	1.27	Not operating
		12/28/2008	Sheen Field & Lab	(Z TPHd,g)	13.35	150.14	**(1,800** e,g**)**	< 250	**7,500** d,g	**630**	21	40	210	**(22)**	--	--	--	--	1.20	Not operating
		9/6/2008	Sheen Field & Lab	(Z TPHd,g)	17.27	146.22	**(2,800** e,g**)**	--	**24,000** d,g	**1,400**	65	130	**2,300**	< 250	--	--	--	--	1.28	Not operating
		6/14/2008	Sheen Field	(Z)	16.68	146.81	**(4,200** e**)**	(< 250)	**(15,000** d**)**	**(1,100)**	(50)	(86)	(1,300)	(< 150)	--	--	--	--	1.2	Not operating
		3/9/2008	Sheen Field	(Z)	10.77	152.72	**(3,000** e**)**	(< 250)	**(8,100** d**)**	**(830)**	(7.7)	(55)	(310)	(< 50)	--	--	--	--	0.79	Not operating
		12/8/2007	Sheen Field & Lab		15.15	148.34	**790** e,f,g	--	**7,600** d,g	**690**	27	39	570	< 80	--	--	--	--	0.72	Not operating
		9/6/2007	Sheen Field & Lab		17.25	146.24	**8,400** e,f,h,g	--	**27,000** d,g	**1,500**	**150**	120	**4,500**	< 250	--	--	--	--	0.55	Not operating
		6/15/2007	Sheen Field & Lab		15.43	148.06	**7,200** e,g	--	**14,000** d,g	**1,200**	46	63	850	< 110	--	--	--	--	0.61	Not operating
		3/16/2007	Sheen Field & Lab		10.71	152.78	**2,700** e,f,h,g	--	**13,000** d,g	**1,400**	32	93	740	< 100	--	--	--	--	0.65	Not operating
		12/6/2006	Sheen Field & Lab		15.95	147.54	**22,000** e,f,g	--	**21,000** d,g	**920**	56	73	1,500	< 100	--	--	--	--	0.71	Not operating
		9/5/2006	Sheen Field & Lab		16.96	146.53	**9,400** e,f,h,g	--	**30,000** d,g	**1,400**	**180**	110	**4,300**	< 500	--	--	--	--	0.75	Not operating
		6/30/2006	Sheen Field & Lab		15.00	148.49	**19,000** e,f,g	--	**18,000** d,g	**1,400**	50	60	1,300	< 100	--	--	--	--	0.85	Not operating
		3/22/2006	Sheen Field & Lab		7.52	155.97	**9,300** e,f,h,g	--	**17,000** d,g	**2,000**	**230**	150	**1,900**	< 50	--	--	--	--	0.80	Not operating
		12/14/2005	Sheen Field & Lab		14.43	149.06	**9,800** e,f,h,g	--	**5,200** d,g	**710**	41	91	540	< 50	--	--	--	--	0.91	Not operating
		9/21/2005	Sheen Field & Lab		16.55	146.94	**15,000** e,f,h,g	--	**12,000** d,g	**540**	100	54	**1,800**	< 50	--	--	--	--	0.89	Not operating
		6/21/2005	Sheen Field & Lab		11.82	151.67	**12,000** e,g	--	**30,000** d,g	**3,300**	**270**	250	**2,800**	< 500	--	--	--	--	--	Not operating
		3/7/2005	Sheen Field & Lab		7.81	155.68	**9,300** e,f,g	--	**15,000** d,g	**1,100**	140	88	**1,900**	< 100	--	--	--	--	0.65	Not operating
		12/27/2004	Sheen Lab		14.79	148.70	**5,300** e,f,g,k	--	**10,000** d,g	**1,000**	99	34	1,600	< 50	--	--	--	--	0.74	Not operating
		9/27/2004	--		19.93	143.56	980 e,f,k	--	**1,300** d	**140**	10	11	81	< 50	--	--	--	--	0.68	Not operating
		6/16/2004	--		16.02	147.47	**3,400** e,f	--	**9,100** d	**940**	96	120	800	< 50	--	--	--	--	--	Not operating
	97.34	3/18/2004	--		14.92	82.42	**1,500** e	--	**5,300** d	**1,300**	55	37	440	< 180	--	--	--	--	--	Operating
		12/2/2003	--		19.17	78.17	**5,800** e,f	--	**13,000** d	**1,300**	**180**	120	**1,900**	< 250	--	--	--	--	--	Operating
		9/3/2003	--		21.65	75.69	**27,000** e,f	--	**29,000** d	**2,200**	**380**	280	**2,300**	-	--	--	--	--	--	Operating
		5/30/2003	--		13.56	83.78	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		4/25/2003	--		19.37	77.97	**2,200** e,f	--	**6,600** d	**960**	130	100	560	< 170	--	--	--	--	--	Operating
Laboratory Detection Limit:							**10**	**20**	**50**	**0.5**	**0.5**	**0.5**	**1.5**	**5**	**5**	**0.5**	**0.5**	**0.5**	**Field Instrument**	
Central Coast Region Water Quality Objectives (WQOs):[1]							**1,000**			**1**	**150**	**300**	**1,750**	**5**	**12**	**0.05**	**0.5**	**--**	**--**	**--**

Table 4: Current & Historic Groundwater Elevation and Analytical Data - Monitoring Wells

FORMER EXXON SERVICE STATION

3055 35th AVENUE, OAKLAND, CALIFORNIA

All groundwater results are micrograms per liter (ug/L or ppb)

Monitoring Point Information		Date	SPH (feet)	Note	Depth to Groundwater (feet, TOC)	Groundwater Elevation (feet, MSL)	Petroleum Hydrocarbon Concentration Data												Field Measurements	Oxidation Reduction Potential (mV)
							Total Petroleum Hydrocarbons			Volatile Organic Compounds									Dissolved Oxygen (mg/L)	
Well # TOC	TOC Elevation (feet)						Diesel	Fuel Oil	Gasoline	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	TBA	EDB	1,2-DCE	DIPE,ETBE,TAME (µg/L)		
Continued		1/13/2003	Sheen [1,ab]		11.75	85.59	**15,000**[e,f,g,k]	--	**35,000**[d,g]	**5,100**	**1,500**	**510**	**4,500**	< 800	--	--	--	--	0.28	Not operating
MW-4		11/21/2002	--		17.55	79.79	**2,400**[e,k]	--	**5,700**[d]	**1,400**	**290**	63	640	**550**	--	--	--	--	--	Operating
		9/26/2002	--		17.93	79.41	800[c]	--	**21,000**[d]	**3,300**	**1,300**	**450**	**2,900**	< 500	--	--	--	--	0.24	Operating
		6/10/2002	--		22.30	75.04	**3,400**[e]	--	**9,400**[d]	**1,400**	50	< 5.0	690	< 200	--	--	--	--	--	Operating
		3/11/2002	--		14.95	82.39	**1,600**[e,f,k]	--	**15,000**[d]	**3,700**	**500**	92	790	< 500	--	--	--	--	0.30	Operating
		12/7/2001	--		23.45	73.89	**11,000**[e,f,g]	--	**32,000**[d,g]	**4,500**	**740**	**310**	**2,300**	< 200	--	--	--	--	0.21	Operating
		8/30/2001	--		18.00	79.34	**3,200**[d]	--	**43,000**[a]	**6,400**	**630**	**510**	**2,600**	< 200	--	--	--	--	0.32	Operating
		6/6/2001	--		15.49	81.85	**5,400**	--	**75,000**	**22,000**	**1,800**	**1,900**	**6,400**	< 1,200	--	--	--	--	2.22	Not operating
		3/20/2001	--		14.03	83.31	--	--	**46,000**	**13,000**	**1,000**	**900**	**2,800**	< 350	--	--	--	--	0.39	Not operating
		12/5/2000	--		15.55	81.79	**2,600**[e,g]	--	**69,000**[d,g]	**16,000**	**1,300**	**1,300**	**3,400**	< 200	--	--	--	--	0.35	Not operating
		9/7/2000	--		16.40	80.94	**5,900**[e]	--	**43,000**[d]	**10,000**	**1,100**	**1,100**	**3,400**	< 450	--	--	--	--	1.04	
		3/23/2000	--		10.22	87.12	**3,100**[e,f]	--	**40,000**[d]	**11,000**	**1,600**	**910**	**3,100**	**690**	--	--	--	--	--	
		12/10/1999	--		13.99	83.35	**3,100**[e,f]	--	**47,000**[d]	**12,000**	**1,800**	**1,000**	**4,400**	< 100	--	--	--	--	0.62	
		9/28/1999	--		16.58	80.76	**3,200**[e,f]	--	**24,000**[d]	**7,500**	**1,200**	190	**2,200**	**210**	--	--	--	--	14.29[#]	
	*	6/29/1999	--		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
		3/29/1999	--		9.10	88.24	**2,400**[e,f,h]	--	**48,000**[d]	**15,000**	**3,000**	**1,300**	**5,000**	**1,300**	--	--	--	--	1.32	
		12/8/1998	--		13.45	83.89	**1,600**	--	**27,000**	**8,900**	**1,600**	**730**	**2,300**	< 1,500	--	--	--	--	--	
		9/30/1998	--		16.84	80.50	**2,100**	--	**39,000**	**12,000**	**2,700**	**1,000**	**3,400**	**510**	--	--	--	--	1.1	
		7/14/1998	--		14.15	83.19	**2,900**[e,f]	--	**73,000**[d]	**22,000**	**7,000**	**1,800**	**7,300**	< 200	--	--	--	--	1.0	
		3/18/1998	--		9.54	87.80	**5,500**[e,f]	--	**58,000**[d]	**14,000**	**4,700**	**1,400**	**5,700**	< 1,200	--	--	--	--	0.8	
		12/22/1997	--		9.21	88.13	**3,100**[e]	--	**43,000**[d]	**13,000**	**3,900**	**1,100**	**4,200**	< 960	--	--	--	--	3.7	
		9/17/1997	--		17.10	80.24	**4,400**[e]	--	**60,000**[d]	**17,000**	**4,900**	**1,500**	**5,700**	< 1,500	--	--	--	--	1.5	
		6/25/1997	--		16.15	81.19	**5,800**[b]	--	**61,000**	**16,000**	**6,100**	**1,500**	**5,900**	**780**[c]	--	--	--	--	1.4	
		3/20/1997	--		13.75	83.59	**3,100**	--	**47,000**	**11,000**	**4,500**	**1,100**	**5,200**	3,400	--	--	--	--	8.4	
MW-5	165.74	11/9/2012	--		15.11	150.63	340***	--	**3000***	**1,300**	16	**340**	**35.2**	**390**	**2,300**	< 0.30	< 0.50	< 0.68	1.7	90
MW-6	164.3	11/9/2012	--		14.61	149.69	--	--	--	--	--	--	--	--	--	--	--	--	--	--
		11/2/2012	--		14.23	150.07	120[#]	--	540*	44	0.74	7.5	2.3	< 0.50	< 5.0	< 0.50	< 0.50	< 0.50	6.63	62
RW-5	162.34																			
		11/9/2012	--		14.46	147.88	--	--	--	--	--	--	--	--	--	--	--	--	--	--
		9/28/2012	--		15.49	146.85	120^	--	120[v]	**320**	1.3	0.98	1.4	0.80	5.7	< 0.50	< 0.50	< 0.50	0.73	-78
	◇	3/30/2012	--		0.40	161.94	< 100	--	< 50	< 0.50	< 0.50	< 0.50	< 1.50	< 0.50	< 5.0	< 0.50	< 0.50	< 0.50	7.31	-3
		9/22/2011	--		14.44	147.90	120**	--	680*	**480**	< 2.1	< 1.7	16	< 4.1	< 17	< 2.1	< 3.0	< 3.5 - 4.4	0.66	-65
		3/17/2011	--		7.20	155.14	< 50	--	84[d]	**21**	< 0.5	3.9	1.2	(< 0.5)	--	--	--	--	0.79	Not operating
		9/10/2010	--	(Z[TPHd])	15.40	146.94	270[c] (200)[c]	--	**1,600**[d]	**470**	5.1	19	21	(3.6)	--	--	--	--	0.54	Not operating
		3/14/2010	--	(Z[TPHd])	4.40	157.94	480[c,f,k] (340)[c]	--	970[d]	**210**	5.2	12.0	13.0	**(41)**	--	--	--	--	1.03	Not operating
		9/5/2009	--	(Z[TPHd])	16.00	146.34	**1,700**[f,k,m] **(600)**[f,m]	--	**2,200**[n,p]	**350**	8.5	4.6	13.0	**(50)**	--	--	--	--	1.05	Not operating
		6/7/2009	Sheen [Field]	(Z[TPHd])	13.19	149.15	720[m,f] (210)[c]	--	**870**[d]	**100**	4.4	1.3	2.8	**(110)**	--	--	--	--	1.13	Not operating
		3/14/2009	Sheen [Field]	(Z[TPHd])	6.82	155.52	**2,000**[f,k,m] **(750*)**	--	**2,000**[d]	**260**	9.8	9.5	18.0	**(38)**	--	--	--	--	1.15	Not operating
		12/28/2008	Sheen [Field]	(Z[TPHd])	10.55	151.79	(250[m])	< 250	**1,200**[d,n]	**110**	5.6	2.5	9.8	**(81)**	--	--	--	--	1.13	Not operating
		9/6/2008	Sheen [Field]	(Z[TPHd])	16.01	146.33	(220[c])	--	**1,100**[d]	**120**	2.6	2.2	13	**120**	--	--	--	--	1.42	Not operating
		6/14/2008	Sheen [Field]	(Z)	15.21	147.13	(190[c])	(< 250)	**(1,200**[d]**)**	**(310)**	(5.8)	(3.5)	(25)	(< 250)	--	--	--	--	1.73	Not operating
		3/9/2008	Sheen [Field]	(Z)	8.77	153.57	(90[c])	(< 250)	**(1,100**[d]**)**	**(220)**	(5.3)	(4.9)	(10)	(< 90)	--	--	--	--	0.92	Not operating
		12/8/2007	Sheen [Field]		13.99	148.35	370[e,f]	--	**1,900**[d]	**220**	4.0	10	38	**500**	--	--	--	--	0.74	Not operating
		9/6/2007	Sheen [Field]		15.85	146.49	**1,000**[e,f]	--	**2,500**[d]	**600**	12	24	92	**180**	--	--	--	--	0.68	Not operating
		6/15/2007	Sheen [Field & Lab]		13.84	148.50	**2,000**[e,k,f,g]	--	**3,700**[d,g]	**730**	14	36	80	< 150	--	--	--	--	0.65	Not operating
		3/16/2007	Sheen [Field & Lab]		8.81	153.53	**2,500**[e,f,k,g]	--	**2,400**[d,g]	**180**	3.3	7.3	10	< 17	--	--	--	--	0.62	Not operating
		12/6/2006	Sheen [Field & Lab]		14.53	147.81	**5,500**[e,f,g]	--	**8,500**[d,g]	**1,200**	24	91	250	< 900	--	--	--	--	0.79	Not operating
		9/5/2006	Sheen [Field & Lab]		15.55	146.79	**3,200**[e,f,k,g]	--	**5,300**[d,g]	**1,000**	31	61	230	**370**	--	--	--	--	0.81	Not operating
		6/30/2006	Sheen [Field]		13.32	149.02	**3,100**[e,f,k]	--	**3,100**[d]	**590**	15	27	88	**410**	--	--	--	--	0.89	Not operating
		3/22/2006	Sheen [Field]		2.55	159.79	**2,700**[e,f,k]	--	**7,400**[d]	**59**	76	20	120	< 50	--	--	--	--	1.10	Not operating
		12/14/2005	Sheen [Field & Lab]		12.95	149.39	**6,200**[e,f,k,g]	--	**8,900**[d,g]	**1,500**	92	180	750	**2,300**	--	--	--	--	1.03	Not operating
		9/21/2005	Sheen [Field & Lab]		15.07	147.27	**2,500**[e,f,k,g]	--	**2,000**[d,g]	**390**	16	24	170	**1,300**	--	--	--	--	0.99	Not operating
		6/21/2005	Sheen [Field]		10.02	152.32	490[c]	--	**11,000**[d]	**1,200**	67	68	690	< 500	--	--	--	--	--	Not operating
		3/7/2005	Sheen [Field]		4.42	157.92	**6,100**[e,f,k]	--	**7,000**[d]	**720**	63	97	670	< 400	--	--	--	--	0.93	Not operating
		12/27/2004	--		10.45	151.89	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		9/27/2004	--		25.55	136.79	--	--	--	--	--	--	--	--	--	--	--	--	--	Operating
		6/16/2004	--		14.73	147.61	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		3/18/2003	--		14.48	--	--	--	**12,000**	**2,000**	**380**	190	1,500	**830**	--	--	--	--	--	
		1/13/2003	--		10.20	--	**3,000**	--	**14,000**	**2,100**	**750**	**300**	**1,800**	**950**	--	--	--	--	0.17	
Laboratory Detection Limit:							**10**	**20**	**50**	**0.5**	**0.5**	**0.5**	**1.5**	**5**	**5**	**0.5**	**0.5**	**0.5**	**Field Instrument**	
Central Coast Region Water Quality Objectives (WQOs):[1]							**1,000**			**1**	**150**	**300**	**1,750**	**5**	**12**	**0.05**	**0.5**	--	--	--

Table 4: Current & Historic Groundwater Elevation and Analytical Data - Monitoring Wells

FORMER EXXON SERVICE STATION

3055 35th AVENUE, OAKLAND, CALIFORNIA

All groundwater results are micrograms per liter (ug/L or ppb)

Monitoring Point Information		Date	SPH (feet)	Note	Depth to Groundwater (feet, TOC)	Groundwater Elevation (feet, MSL)	Petroleum Hydrocarbon Concentration Data												Field Measurements	Oxidation Reduction Potential (mV)
							Total Petroleum Hydrocarbons			Volatile Organic Compounds									Dissolved Oxygen (mg/L)	
Well # TOC	TOC Elevation (feet)						Diesel	Fuel Oil	Gasoline	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	TBA	EDB	1,2-DCE	DIPE,ETBE,TAME (µg/L)		
RW-6	162.36																			
		11/9/2012	--		14.31	148.05	--	--	--	--	--	--	--	--	--	--	--	--		
		9/28/2012	--		15.57	146.79	--	--	--	--	--	--	--	--	--	--	--	--		
		3/30/2012	--		6.50	155.86	--	--	--	--	--	--	--	--	--	--	--	--	3.54	70
		9/22/2011	--		14.52	147.84	--	--	--	--	--	--	--	--	--	--	--	--	0.83	-86
		3/17/2011	--		7.18	155.18	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		9/10/2010	--		15.47	146.89	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		3/14/2010	--		6.45	155.91	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		9/5/2009	--		16.04	146.32	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		6/7/2009	--		13.21	149.15	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		3/14/2009	--		7.16	155.20	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		12/28/2008	--		12.02	150.34	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		9/6/2008	--		16.08	146.28	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		6/14/2008	--		15.28	147.08	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		3/9/2008	--		8.93	153.43	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		12/8/2007	--		14.21	148.15	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		9/6/2007	--		15.92	146.44	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		6/15/2007	--		13.90	148.46	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		3/16/2007	--		8.89	153.47	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		12/6/2006	--		14.63	147.73	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		9/5/2006	--		15.63	146.73	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		6/30/2006	--		13.44	148.92	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		3/22/2006	--		5.85	156.51	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		12/14/2005	--		13.02	149.34	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		9/21/2005	--		15.13	147.23	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		6/21/2005	--		10.13	152.23	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		3/7/2005	--		6.05	156.31	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		12/27/2004	--		9.82	152.54	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		9/27/2004	--		18.46	143.90	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		6/16/2004	--		14.80	147.56	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		3/18/2004	--		11.47	--	--	--	**8,500**	**1,300**	**260**	71	990	**1,300**	--	--	--	--	--	
		1/13/2003	--		10.35	--	**2,900**	--	**15,000**	**2,200**	**1,200**	130	**2,200**	**440**	--	--	--	--	0.24	
		3/11/2002	--		--	--	**3,100**	--	**14,000**	**970**	**520**	170	**2,200**	< 130	--	--	--	--	--	
RW-7	162.72																			
		11/9/2012	--		14.77	147.95	--	--	--	--	--	--	--	--	--	--	--	--	--	--
		9/28/2012	--		18.23	144.49	--	--	--	--	--	--	--	--	--	--	--	--	--	--
		3/30/2012	--		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
		9/22/2011	--		15.15	147.57	--	--	--	--	--	--	--	--	--	--	--	--	1.16	-69
		3/17/2011	--		7.75	154.97	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		9/10/2010	--		16.04	146.68	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		3/14/2010	--		8.70	154.02	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		9/5/2009	--		16.55	146.17	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		6/7/2009	--		13.91	148.81	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		3/14/2009	--		7.94	154.78	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		12/28/2008	--		12.62	150.10	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		9/6/2008	--		16.51	146.21	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		6/14/2008	--		15.80	146.92	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		3/9/2008	--		9.69	153.03	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		12/8/2007	--		14.46	148.26	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		9/6/2007	--		16.42	146.30	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		6/15/2007	--		14.54	148.18	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		3/16/2007	--		9.69	153.03	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		12/6/2006	--		15.13	147.59	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		9/5/2006	--		16.12	146.60	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		6/30/2006	--		14.05	148.67	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
Laboratory Detection Limit:							**10**	**20**	**50**	**0.5**	**0.5**	**0.5**	**1.5**	**5**	**5**	**0.5**	**0.5**	**0.5**	**Field Instrument**	
Central Coast Region Water Quality Objectives (WQOs):[1]							**1,000**			**1**	**150**	**300**	**1,750**	**5**	**12**	**0.05**	**0.5**	--	--	--

Table 4: Current & Historic Groundwater Elevation and Analytical Data - Monitoring Wells
FORMER EXXON SERVICE STATION
3055 35th AVENUE, OAKLAND, CALIFORNIA
All groundwater results are micrograms per liter (ug/L or ppb)

Monitoring Point Information		Date	SPH (feet)	Note	Depth to Groundwater (feet, TOC)	Groundwater Elevation (feet, MSL)	Petroleum Hydrocarbon Concentration Data												Field Measurements	Oxidation Reduction Potential (mV)
							Total Petroleum Hydrocarbons			Volatile Organic Compounds										
Well # TOC	TOC Elevation (feet)						Diesel	Fuel Oil	Gasoline	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	TBA	EDB	1,2-DCE	DIPE,ETBE,TAME (µg/L)	Dissolved Oxygen (mg/L)	
Continued		3/22/2006	--		5.75	156.97	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
RW-7		12/14/2005	--		13.58	149.14	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		9/21/2005	--		15.70	147.02	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		6/21/2005	--		10.85	151.87	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		3/7/2005	--		5.82	156.90	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		12/27/2004	--		9.85	152.87	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		9/27/2004	--		18.98	143.74	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		6/16/2004	--		15.22	147.50	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		3/18/2004	--		15.33	--	--	--	250	**66**	4.8	3.2	10	< 15	--	--	--	--	--	
		1/13/2003	--		10.95	--	67	--	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 5.0	--	--	--	--	0.22	
		3/11/2002	--		--	--	< 50	--	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 5.0	--	--	--	--	--	
RW-8	164.13																			
		11/9/2012	--		15.81	148.32	--	--	--	--	--	--	--	--	--	--	--	--	--	--
		9/28/2012	--		17.38	146.75	--	--	--	--	--	--	--	--	--	--	--	--	--	--
		3/30/2012	--		8.49	155.64	--	--	--	--	--	--	--	--	--	--	--	--	0.74	-45
		9/22/2011	--		16.40	147.73	--	--	--	--	--	--	--	--	--	--	--	--	1.22	-58
		3/17/2011	--		8.92	155.21	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		9/10/2010	--		17.25	146.88	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		9/10/2010	--		17.25	146.88	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		3/14/2010	--		8.43	155.70	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		9/5/2009	--		17.80	146.33	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		6/7/2009	--		15.20	148.93	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		3/14/2009	--		9.25	154.88	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		12/28/2008	--		13.80	150.33	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		9/6/2008	--		17.70	146.43	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		6/14/2008	--		17.07	147.06	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		3/9/2008	--		11.05	153.08	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		12/8/2007	--		15.60	148.53	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		9/6/2007	--		17.63	146.50	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		6/15/2007	--		15.81	148.32	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		3/16/2007	--		11.04	153.09	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		12/6/2006	--		16.37	147.76	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		9/5/2006	--		17.38	146.75	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		6/30/2006	--		15.31	148.82	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		3/22/2006	--		7.88	156.25	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		12/14/2005	--		14.80	149.33	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		9/21/2005	--		16.90	147.23	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		6/21/2005	--		12.15	151.98	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		3/7/2005	--		8.10	156.03	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		12/27/2004	--		12.32	151.81	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		9/27/2004	--		19.74	144.39	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		6/16/2004	--		16.41	147.72	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		3/18/2004	--		15.34	--	--	--	760	**310**	9.9	11	16	< 25	--	--	--	--	--	
		1/13/2003	--		12.80	--	56	--	390	**150**	11	4.1	4.1	**13**	--	--	--	--	0.31	
		3/11/2002	--		--	--	80	--	**1,300**	**620**	11	15	14	< 60	--	--	--	--	--	
Laboratory Detection Limit:							**10**	**20**	**50**	**0.5**	**0.5**	**0.5**	**1.5**	**5**	**5**	**0.5**	**0.5**	**0.5**	**Field Instrument**	
Central Coast Region Water Quality Objectives (WQOs):[1]							**1,000**			**1**	**150**	**300**	**1,750**	**5**	**12**	**0.05**	**0.5**	**--**	**--**	**--**

Table 4: Current & Historic Groundwater Elevation and Analytical Data - Monitoring Wells
FORMER EXXON SERVICE STATION
3055 35th AVENUE, OAKLAND, CALIFORNIA
All groundwater results are micrograms per liter (ug/L or ppb)

Monitoring Point Information		Date	SPH (feet)	Note	Depth to Groundwater (feet, TOC)	Groundwater Elevation (feet, MSL)	Petroleum Hydrocarbon Concentration Data												Field Measurements	Oxidation Reduction Potential (mV)
							Total Petroleum Hydrocarbons			Volatile Organic Compounds									Dissolved Oxygen (mg/L)	
Well # TOC	TOC Elevation (feet)						Diesel	Fuel Oil	Gasoline	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	TBA	EDB	1,2-DCE	DIPE,ETBE,TAME (µg/L)		
RW-9	163.86																			
		11/9/2012	--		15.47	148.39	--	--	--	--	--	--	--	--	--	--	--	--	--	--
		9/28/2012	--		17.05	146.81	230^	--	230[v]	**980**	5.6	2.2	2.5	**7.4**	**110**	< 0.50	< 0.50	< 0.50	0.37	-133
		3/30/2012	--		8.12	155.74	< 100	--	< 50	**5.1**	< 0.50	< 0.50	< 1.50	< 0.50	< 5.0	< 0.50	< 0.50	< 0.50	6.13	20
		9/22/2011	--		16.12	147.74	230**	--	**1,900***	**1,600**	8.4	12	ND	**8.3**	< 17	< 2.1	< 3.0	< 3.5 - 4.4	1.03	-123
		3/17/2011	--		8.60	155.26	< 50	--	300 [d]	**83**	1.6	< 0.5	< 0.5	(1.9)	--	--	--	--	0.88	Not operating
		9/10/2010	--	(Z[TPHd])	16.91	146.95	310 [e,f] (210) [e,f]	--	**5,700** [d]	**2,800**	16	< 2.5	37	**(20)**	--	--	--	--	0.70	Not operating
		3/14/2010	--	(Z[TPHd])	8.15	155.71	770 [e] (700) [e]	--	**11,000** [d]	**3,900**	80	120.0	450	**(31)**	--	--	--	--	1.10	Not operating
		9/5/2009	--	(Z[TPHd])	17.40	146.46	**3,000** [f,m] **(1,100)** [e,f,m]	--	**8,300** [d]	**3,100**	32	5.5	69	**(25)**	--	--	--	--	1.02	Not operating
		6/7/2009	Sheen [Field & Lab]	(Z[TPHd])	14.90	148.96	**4,800** [m,f] **(910)** [e]	--	**12,000** [d]	**3,500**	87	150	330	**(30)**	--	--	--	--	1.19	Not operating
		3/14/2009	Sheen [Field]	(Z[TPHd])	8.97	154.89	450 [e] (440 [e])	--	**14,000** [d]	**3,600**	71	190	380	**(31)**	--	--	--	--	1.21	Not operating
		12/28/2008	Sheen [Field]	(Z[TPHd])	13.41	150.45	(950 [e])	< 250	**7,300** [d]	**3,500**	24	150	200	**(30)**	--	--	--	--	1.28	Not operating
		9/6/2008	Sheen [Lab]	(Z[TPHd])	17.31	146.55	**(1,600** [e,g]**)**	--	**13,000** [d,g]	**3,600**	52	170	220	< 350	--	--	--	--	1.22	Not operating
		6/14/2008	--	(Z)	16.71	147.15	(610)	(< 250)	**(8,100** [d]**)**	**(2,800)**	(33)	(100)	(220)	(< 210)	--	--	--	--	1.29	Not operating
		3/9/2008	--	(Z)	10.86	153.00	(570 [e])	(< 250)	**(10,000** [d]**)**	**(4,200)**	(71)	(180)	(380)	(< 35)	--	--	--	--	0.86	Not operating
		12/8/2007	Sheen [Field]		15.22	148.64	**1,000** [e,f]	--	**9,300** [d]	**2,900**	24	150	170	< 250	--	--	--	--	0.89	Not operating
		9/6/2007	Sheen [Field & Lab]		17.29	146.57	**2,200** [e,f,g]	--	**13,000** [d,g]	**2,700**	61	240	350	< 400	--	--	--	--	0.66	Not operating
		6/15/2007	--		15.48	148.38	670 [e]	--	**12,000** [d]	**3,000**	44	170	220	< 250	--	--	--	--	0.68	Not operating
		3/16/2007	Sheen [Lab]		10.83	153.03	**1,200** [e]	--	**16,000** [d,g]	**3,700**	76	230	340	< 350	--	--	--	--	0.71	Not operating
		12/6/2006	Sheen [Lab]		16.04	147.82	660 [e,g]	--	**13,000** [d,g]	**3,000**	29	180	260	< 250	--	--	--	--	0.74	Not operating
		9/5/2006	--		17.02	146.84	**1,100**[e]	--	**14,000**[d]	**3,900**	39	200	230	< 330	--	--	--	--	0.69	Not operating
		6/30/2006	--		15.04	148.82	**1,400**[e]	--	**14,000**[d]	**3,100**	53	130	260	< 300	--	--	--	--	0.73	Not operating
		3/22/2006	--		7.63	156.23	680[e]	--	**7,600**[d]	**2,900**	59	190	310	< 200	--	--	--	--	0.95	Not operating
		12/14/2005	--		14.52	149.34	**1,100**[e,f]	--	**6,300**[d]	**1,900**	29	150	260	< 50	--	--	--	--	0.98	Not operating
		9/21/2005	Sheen [Lab]		16.62	147.24	820[e,f,g]	--	**8,300**[d,g]	**2,500**	36	190	310	< 170	--	--	--	--	1.04	Not operating
		6/21/2005	--		11.90	151.96	630[e]	--	**9,400**[d]	**2,400**	69	210	470	< 350	--	--	--	--	--	Not operating
		3/7/2005	--		7.87	155.99	510[e]	--	**9,000**[d]	**2,600**	69	200	550	< 500	--	--	--	--	0.91	Not operating
		12/27/2004	--		24.88	138.98	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		9/27/2004	--		19.83	144.03	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		6/16/2004	--		16.03	147.83	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		3/18/2004	--		13.69	--	--	--	**2,300**	**770**	32	15	200	< 50	--	--	--	--	--	
		1/13/2003	--		11.85	--	**2,000**	--	**23,000**	**7,700**	**610**	**310**	310	< 500	--	--	--	--	0.39	
		3/11/2002	--		--	--	**880**	--	**12,000**	**3,400**	**230**	78	1,300	< 240	--	--	--	--	--	
RW-10	163.02																			
		11/9/2012	--		14.52	148.50	--	--	--	--	--	--	--	--	--	--	--	--	--	--
		9/28/2012	--		16.01	147.01	--	--	--	--	--	--	--	--	--	--	--	--	--	--
		3/30/2012	--		7.02	156.00	--	--	--	--	--	--	--	--	--	--	--	--	0.79	-43
		9/22/2011	--		15.11	147.91	--	--	**1,900***	**1,600**	8.4	12	< 3.6	< 4.1	--	--	--	< 3.5 - 4.4	0.77	-104
		3/17/2011	--		7.64	155.38	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		9/10/2010	--		15.87	147.15	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		3/14/2010	--		6.32	156.70	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		9/5/2009	--		16.36	146.66	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		6/7/2009	--		13.96	149.06	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		3/14/2009	--		8.02	155.00	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		12/28/2008	--		12.42	150.60	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		9/6/2008	--		16.23	146.79	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		6/14/2008	--		15.64	147.38	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		3/9/2008	--		9.96	153.06	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		12/8/2007	--		14.23	148.79	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		9/6/2007	--		16.23	146.79	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		6/15/2007	--		14.52	148.50	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		3/16/2007	--		9.91	153.11	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		12/6/2006	--		15.02	148.00	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		9/5/2006	--		15.98	147.04	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		6/30/2006	--		14.13	148.89	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		3/22/2006	--		6.53	156.49	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
Laboratory Detection Limit:							**10**	**20**	**50**	**0.5**	**0.5**	**0.5**	**1.5**	**5**	**5**	**0.5**	**0.5**	**0.5**	**Field Instrument**	
Central Coast Region Water Quality Objectives (WQOs):[1]							**1,000**			**1**	**150**	**300**	**1,750**	**5**	**12**	**0.05**	**0.5**	**--**	**--**	**--**

Table 4: Current & Historic Groundwater Elevation and Analytical Data - Monitoring Wells

FORMER EXXON SERVICE STATION

3055 35th AVENUE, OAKLAND, CALIFORNIA

All groundwater results are micrograms per liter (ug/L or ppb)

Monitoring Point Information		Date	SPH (feet)	Note	Depth to Groundwater (feet, TOC)	Groundwater Elevation (feet, MSL)	Petroleum Hydrocarbon Concentration Data												Field Measurements	Oxidation Reduction Potential (mV)
							Total Petroleum Hydrocarbons			Volatile Organic Compounds									Dissolved Oxygen (mg/L)	
Well # TOC	TOC Elevation (feet)						Diesel	Fuel Oil	Gasoline	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	TBA	EDB	1,2-DCE	DIPE,ETBE,TAME (µg/L)		
Continued		12/14/2005	--		13.37	149.65	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
RW-10		9/21/2005	--		15.51	147.51	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		6/21/2005	--		10.95	152.07	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		3/7/2005	--		6.40	156.62	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		12/27/2004	--		19.39	143.63	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		9/27/2004	--		18.35	144.67	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		6/16/2004	--		15.03	147.99	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		3/18/2004	--		13.13	--	--	--	**5,800**	**2,400**	11	< 10	110	< 300	--	--	--	--	--	
		1/13/2003	--		10.75	--	330	--	**4,300**	**1,500**	43	98	98	< 100	--	--	--	--	0.41	
		3/11/2002	--		--	--	740	--	**12,000**	**3,900**	**150**	110	1,100	< 270	--	--	--	--	--	
RW-11	162.67																			
		11/9/2012	--		13.91	148.76	--	--	--	--	--	--	--	--	--	--	--	--	--	--
		9/28/2012	--		15.61	147.06	--	--	--	--	--	--	--	--	--	--	--	--	--	--
		3/30/2012	--		6.51	156.16	--	--	--	--	--	--	--	--	--	--	--	--	1.32	-106
		9/22/2011	--		14.50	148.17	--	--	--	--	--	--	--	--	--	--	--	--	0.94	-96
		3/17/2011	--		7.10	155.57	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		9/10/2010	--		15.42	147.25	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		3/14/2010	--		6.50	156.17	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		9/5/2009	--		16.02	146.65	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		6/7/2009	--		13.21	149.46	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		3/14/2009	--		7.14	155.53	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		12/28/2008	--		12.01	150.66	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		9/6/2008	--		15.99	146.68	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		6/14/2008	--		15.26	147.41	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		3/9/2008	--		8.81	153.86	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		12/8/2007	--		13.83	148.84	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		9/6/2007	--		15.84	146.83	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		6/15/2007	--		13.90	148.77	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		3/16/2007	--		8.85	153.82	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		12/6/2006	--		14.55	148.12	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		9/5/2006	--		15.56	147.11	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		6/30/2006	--		13.36	149.31	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		3/22/2006	--		5.70	156.97	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		12/14/2005	--		12.96	149.71	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		9/21/2005	--		15.09	147.58	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		6/21/2005	--		9.96	152.71	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		3/7/2005	--		5.95	156.72	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		12/27/2004	--		10.07	152.60	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		9/27/2004	--		18.44	144.23	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		6/16/2004	--		14.75	147.92	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		3/18/2004	--		12.45	--	--	--	**9,300**	**980**	120	180	770	**2,000**	--	--	--	--	--	
		1/13/2003	--		9.80	--	**2,700**	--	**5,300**	**490**	110	120	120	**180**	--	--	--	--	0.24	
		3/11/2002	--		--	--	< 50	--	260	**34**	5.3	8.1	48	< 5.0	--	--	--	--	--	
RW-12	163.06																			
		11/9/2012	--		14.98	148.08	--	--	--	--	--	--	--	--	--	--	--	--	--	--
		9/28/2012	--		15.94	147.12	--	--	--	--	--	--	--	--	--	--	--	--	--	--
		3/30/2012	--		7.06	156.00	--	--	--	--	--	--	--	--	--	--	--	--	1.09	-8
		9/22/2011	--		15.01	148.05	--	--	--	--	--	--	--	--	--	--	--	--	0.75	-77
		3/17/2011	--		7.68	155.38	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		9/10/2010	--		15.93	147.13	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		3/14/2010	--		6.29	156.77	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		9/5/2009	--		16.59	146.47	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		6/7/2009	--		13.70	149.36	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		3/14/2009	--		7.77	155.29	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		12/28/2008	--		12.80	150.26	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		9/6/2008	--		16.58	146.48	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		6/14/2008	--		15.74	147.32	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		3/9/2008	--		9.43	153.63	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		12/8/2007	--		14.87	148.19	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
Laboratory Detection Limit:							**10**	**20**	**50**	**0.5**	**0.5**	**0.5**	**1.5**	**5**	**5**	**0.5**	**0.5**	**0.5**	**Field Instrument**	
Central Coast Region Water Quality Objectives (WQOs):[1]							**1,000**			**1**	**150**	**300**	**1,750**	**5**	**12**	**0.05**	**0.5**	**--**	**--**	**--**

Table 4: Current & Historic Groundwater Elevation and Analytical Data - Monitoring Wells
FORMER EXXON SERVICE STATION
3055 35th AVENUE, OAKLAND, CALIFORNIA
All groundwater results are micrograms per liter (ug/L or ppb)

Monitoring Point Information		Date	SPH (feet)	Note	Depth to Groundwater (feet, TOC)	Groundwater Elevation (feet, MSL)	Petroleum Hydrocarbon Concentration Data												Field Measurements	Oxidation Reduction Potential (mV)
							Total Petroleum Hydrocarbons			Volatile Organic Compounds									Dissolved Oxygen (mg/L)	
Well # TOC	TOC Elevation (feet)						Diesel	Fuel Oil	Gasoline	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	TBA	EDB	1,2-DCE	DIPE,ETBE,TAME (µg/L)		
Continued		9/6/2007	--		16.42	146.64	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
RW-12		6/15/2007	--		14.44	148.62	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		3/16/2007	--		9.52	153.54	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		3/16/2007	--		9.52	153.54	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		12/6/2006	--		15.11	147.95	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		9/5/2006	--		16.11	146.95	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		6/30/2006	--		13.95	149.11	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		3/22/2006	--		6.35	156.71	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		12/14/2005	--		13.43	149.63	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		9/21/2005	--		15.63	147.43	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		6/21/2005	--		10.58	152.48	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		3/7/2005	--		6.59	156.47	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		12/27/2004	--		10.85	152.21	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		9/27/2004	--		19.09	143.97	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		6/16/2004	--		15.30	147.76	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		3/18/2004	--		13.63	--	--	--	**17,000**	**2,700**	**960**	230	1,500	**1,400**	--	--	--	--	--	
		1/13/2003	--		10.90	--	**1,800**	--	**4,100**	**1,000**	130	99	99	< 100	--	--	--	--	0.21	
		3/11/2002	--		--	--	900	--	**13,000**	**4,500**	130	130	270	< 5.0	--	--	--	--	--	
RW-13	164.34																			
		11/9/2012	--		15.11	149.23	--	--	--	--	--	--	--	--	--	--	--	--	--	--
		9/28/2012	--		16.39	147.95	--	--	--	--	--	--	--	--	--	--	--	--	--	--
		3/30/2012	--		7.45	156.89	--	--	--	--	--	--	--	--	--	--	--	--	3.65	43
		9/22/2011	--		15.55	148.79	--	--	--	--	--	--	--	--	--	--	--	--	0.78	-78
		3/17/2011	--		8.19	156.15	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		9/10/2010	--		16.45	147.89	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		3/14/2010	--		7.49	156.85	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		9/5/2009	--		17.10	147.24	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		6/7/2009	--		14.31	150.03	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		3/14/2009	--		8.16	156.18	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		12/28/2008	--		13.26	151.08	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		9/6/2008	--		17.10	147.24	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		6/14/2008	--		16.32	148.02	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		3/9/2008	--		9.85	154.49	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		12/8/2007	--		14.97	149.37	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		9/6/2007	--		16.95	147.39	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		6/15/2007	--		14.98	149.36	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		3/16/2007	--		9.93	154.41	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		12/6/2006	--		15.70	148.64	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		9/5/2006	--		16.62	147.72	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		6/30/2006	--		14.44	149.90	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		3/22/2006	--		6.65	157.69	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		12/14/2005	--		14.11	150.23	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		9/21/2005	--		16.20	148.14	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		6/21/2005	--		11.05	153.29	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		3/7/2005	--		6.90	157.44	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		12/27/2004	--		18.12	146.22	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		9/27/2004	--		19.55	144.79	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		6/16/2004	--		15.83	148.51	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		3/18/2004	--		13.45	--	--	--	150	**47**	1.0	2.1	1.5	< 5.0	--	--	--	--	--	
		1/13/2003	--		11.20	--	92	--	210	**54**	2.0	2.7	2.7	< 5.0	--	--	--	--	0.35	
		3/11/2002	--		--	--	79	--	830	**190**	13	13	34	< 5.0	--	--	--	--	--	
RW-14	163.76																			
		11/9/2012	--		14.72	149.04	--	--	--	--	--	--	--	--	--	--	--	--	--	--
		9/28/2012	--		16.12	147.64	--	--	--	--	--	--	--	--	--	--	--	--	--	--
		3/30/2012	--		7.11	156.65	--	--	--	--	--	--	--	--	--	--	--	--	1.43	10
		9/22/2011	--		15.22	148.54	--	--	--	--	--	--	--	--	--	--	--	--	0.80	-108
		3/17/2011	--		7.82	155.94	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
Laboratory Detection Limit:							**10**	**20**	**50**	**0.5**	**0.5**	**0.5**	**1.5**	**5**	**5**	**0.5**	**0.5**	**0.5**	**Field Instrument**	
Central Coast Region Water Quality Objectives (WQOs):[1]							**1,000**			**1**	**150**	**300**	**1,750**	**5**	**12**	**0.05**	**0.5**	**--**	**--**	**--**

Table 4: Current & Historic Groundwater Elevation and Analytical Data - Monitoring Wells
FORMER EXXON SERVICE STATION
3055 35th AVENUE, OAKLAND, CALIFORNIA

All groundwater results are micrograms per liter (ug/L or ppb)

Monitoring Point Information		Date	SPH (feet)	Note	Depth to Groundwater (feet, TOC)	Groundwater Elevation (feet, MSL)	Petroleum Hydrocarbon Concentration Data												Field Measurements	Oxidation Reduction Potential (mV)
							Total Petroleum Hydrocarbons			Volatile Organic Compounds									Dissolved Oxygen (mg/L)	
Well # TOC	TOC Elevation (feet)						Diesel	Fuel Oil	Gasoline	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	TBA	EDB	1,2-DCE	DIPE,ETBE,TAME (µg/L)		
Continued		9/10/10	--		16.10	147.66	--	--	--	--	--	--	--	--	--	--	--	--	--	
RW-14		3/14/10	--		7.10	156.66	--	--	--	--	--	--	--	--	--	--	--	--	--	
		9/5/09	--		16.71	147.05	--	--	--	--	--	--	--	--	--	--	--	--	--	
		6/7/09	--		13.97	149.79	--	--	--	--	--	--	--	--	--	--	--	--	--	
		3/14/09	--		7.88	155.88	--	--	--	--	--	--	--	--	--	--	--	--	--	
		12/28/08	--		12.82	150.94	--	--	--	--	--	--	--	--	--	--	--	--	--	
		9/6/08	--		16.68	147.08	--	--	--	--	--	--	--	--	--	--	--	--	--	
		6/14/08	--		15.90	147.86	--	--	--	--	--	--	--	--	--	--	--	--	--	
		3/9/2008	--		9.60	154.16	--	--	--	--	--	--	--	--	--	--	--	--	--	
		12/8/2007	--		14.57	149.19	--	--	--	--	--	--	--	--	--	--	--	--	--	
		9/6/2007	--		16.54	147.22	--	--	--	--	--	--	--	--	--	--	--	--	--	
		6/15/2007	--		14.61	149.15	--	--	--	--	--	--	--	--	--	--	--	--	--	
		3/16/2007	--		9.66	154.10	--	--	--	--	--	--	--	--	--	--	--	--	--	
		12/6/2006	--		15.31	148.45	--	--	--	--	--	--	--	--	--	--	--	--	--	
		9/5/2006	--		16.21	147.55	--	--	--	--	--	--	--	--	--	--	--	--	--	
		6/30/2006	--		14.10	149.66	--	--	--	--	--	--	--	--	--	--	--	--	--	
		3/22/2006	--		6.43	157.33	--	--	--	--	--	--	--	--	--	--	--	--	--	
		12/14/2005	--		13.73	150.03	--	--	--	--	--	--	--	--	--	--	--	--	--	
		9/21/2005	--		15.82	147.94	--	--	--	--	--	--	--	--	--	--	--	--	--	
		6/21/2005	--		10.80	152.96	--	--	--	--	--	--	--	--	--	--	--	--	--	
		3/7/2005	--		6.61	157.15	--	--	--	--	--	--	--	--	--	--	--	--	--	
		12/27/2004	--		12.62	151.14	--	--	--	--	--	--	--	--	--	--	--	--	--	
		9/27/2004	--		19.20	144.56	--	--	--	--	--	--	--	--	--	--	--	--	--	
		6/16/2004	--		15.41	148.35	--	--	--	--	--	--	--	--	--	--	--	--	--	
		3/18/2004	--		12.81	--	--	--	220	**42**	1.4	0.99	5.2	< 5.0	--	--	--	--	--	
		1/13/2003	--		11.00	--	**6800**	--	**3700**	**230**	77	91	91	< 50	--	--	--	--	0.38	
		3/11/2002	--		--	--	82	--	270	**44**	0.99	< 0.5	4.2	< 5.0	--	--	--	--	--	
Laboratory Detection Limit:							**10**	**20**	**50**	**0.5**	**0.5**	**0.5**	**1.5**	**5**	**5**	**0.5**	**0.5**	**0.5**	**Field Instrument**	
Central Coast Region Water Quality Objectives (WQOs):[1]							**1,000**			**1**	**150**	**300**	**1,750**	**5**	**12**	**0.05**	**0.5**	--	--	--

Notes

Tabulated data prior to September 22, 2011 was provided by Conestoga-Rovers & Associates (CRA).

Notes for Previously Collected Data

All site wells were re-surveyed by Virgil Chavez Land Surveying on June 2, 2004 to the CA State Coordinate System, Zone III (NAD83). Benchmark elevation = 177.397 feet (NGVD 29)

SPH = Separate-phase hydrocarbons depth measured from TOC.

(Z) = Laboratory used Zemo Gravity Separation Protocol for Extractables & Purgeables

(Z^{TPHd}) = Laboratory used Zemo Gravity Separation Protocol for Extractables (TPHd)

( ) = Zero Gravity Separation Protocol Use Prior to Analysis

TPHg = Total petroleum hydrocarbons as gasoline by modified EPA Method SW8015C

TPHd = Total petroleum hydrocarbons as diesel by modified EPA Method SW8015C; with Dawn Zemo Separation in (parentheses)

TPHmo = Total petroleum hydrocarbons as motor oil by modified EPA Method SW8015C

Benzene, Toluene, Ethylbenzene, and Xylenes by EPA Method SW8021B

MTBE = Methyl tertiary butyl ether by EPA Method SW8021B, or by SW8260B (designated by parentheses)

Sheen = A sheen was observed on the water's surface.

Field = Observed in field

Lab = Observed in analytical laboratory

Notes:

a = Result has an atypical pattern for diesel analysis

b = Result appears to be a lighter hydrocarbon than diesel

Notes:

c = There is a >40% difference between primary and confirmation analysis

d = Unmodified or weakly modified gasoline is significant

e = Gasoline range compounds are significant

f = Diesel range compounds are significant; no recognizable pattern

g = Lighter than water immiscible sheen/product is present

h = One to a few isolated peaks present

i = Medium boiling point pattern does not match diesel (stoddard solvent)

j = Aged diesel is significant

k = Oil range compounds are significant

l = Liquid sample that contains greater than ~1 vol. % sediment

m = Stoddard solvent/mineral spirit

n = Strongly aged gasoline or diesel range compounds are significant in the TPHg chromatogram.

o = MTBE by EPA Method SW8260B

p = No recognizable pattern

* = Well inaccessible during site visit

** = No water in well due to system operating in well, value reflects total well depth.

= abnormally high reading due to added hydrogen peroxide

-- = Not sampled; not analyzed ; not applicable; or no SPH measured or observed

---

Weber, Hayes and Associates Notes:

Newly installed wells MW-5 and MW-6 were proffesionally surveyed and tied into the existing well network by Mid-Coast Engineers on November 2, 2012.

1 = Water Quality Goals: Goals estabilised by the CRWQCB Central Coast Region based on Maximum Contaminant Limits (Department of Health Services) or taste & odor threshold limits.

TAME (Tert-amyl-methyl ether), TBA (tert-Butyl alcohol), EDB (1,2-Dibromoethane) , 1,2-DCE (1,2-Dichloroethene), DIPE, (Diisopropyl ether), ETBE (Ethyl Tert-Butyl Ether).

Bold Font = Detected concentration exceeds Water Quality Objectives

***** = Laboratory report indicates that although TPH-gas results are present, sample chromatogram does not resemble pattern of reference Gasoline standard (possibly aged gasoline)

****** = Laboratory reports that result not typical of Diesel #2 standard pattern (possibly aged diesel or other fuel within the diesel quantification range such as diesel #4 or fuel oil).

******* = Laboratory report indicates that the sample chromatographic pattern does not resemble typical diesel standard pattern; unknown fuel pattern lighter than diesel possibly a type of naptha or weathered gasoline.

^ = Sample chromatographic pattern does not resemblr typical diesel standard pattern; unknown organics within diesel range quantifired as diesel.

∇ = Not typical of Gasoline standard pattern. Result due to discrete peak (Benzene).

J = Laboratory indicates a value between the method MDL and PQL and that the reported concentration should be considered as estimated rather the quantitative.

★ = Laboratory report indicates although TPH Gasoline compounds are present, the sample pattern does not match pattern of reference Gasoline standard. Hydrocarbons within range of C5-C12 quantified as Gasoline.

▲ = Laboratory reports result does not match pattern of reference Gasoline standard. Reported TPH value includes amount due to discrete peaks and non-target hydrocarbons within range of C5-C12 quantified as Gasoline.

= Diesel result due to discrete unknown peaks within quantified range

✠ = Wells RW-5 and RW-7 exhibited anomalously high water levels on March 30, 2012; analytical results from well MW-5 are likely not representative.

APPENDIX A

Site Description and Background

&

Updated Site Conceptual Model – December 2012

Site Description and Surrounding Land Use

The vacant, undeveloped subject Site is a former Exxon Service Station located at the northeast corner of 35th Avenue and School Street, in Oakland, California (see aerial photo, right). The Site is flat-lying, but the regional topography generally slopes southwestward from the Oakland hills towards the San Francisco Bay (see regional see terrain/aerial maps, Figure 1).

Historical aerial photographs dated 1959, 1980, and 2000, agree with reports stating the Site's gas dispensing station was constructed around 1970 and was decommissioned in 1991, when the Site's five (5) underground storage tanks (USTs) were removed and the gasoline fuel release was first discovered. The Site has remained an undeveloped, unpaved vacant lot since it was decommissioned. The general area surrounding the Site is a mixture of commercial businesses along the main thoroughfares and residential neighborhoods beyond the thoroughfares. An abandoned, former Texaco gas station is located immediately upgradient of the Site, across School Street to the east. Previous reports indicate the UST's from this station were removed in approximately 1984, but there is no record that closure soil samples were collected.

Site Information Details		
Site Address:	3055 35th Avenue, Oakland -- currently a vacant lot	(APN No. 027-0890-006-02).
Owner:	Golden Empire Properties, Inc	Mr. Lynn Worthington
Agency Contacts:	Alameda County Environmental Health (Case #RO 0000271[8]) San Francisco Bay RWQCB (Case #: 01-0585 [9])	Barbara Jakub Barbar.Jakub@acgov.org CherieMcCaulou cmccaulou@waterboards.ca.gov

[8]: *ACEH Site website: http://ehgis.acgov.org/dehpublic/dehpublic.jsp*

[9]: *RWQCB Site website: http://geotracker.swrcb.ca.gov/profile_report.asp?global_id=T0600100538*

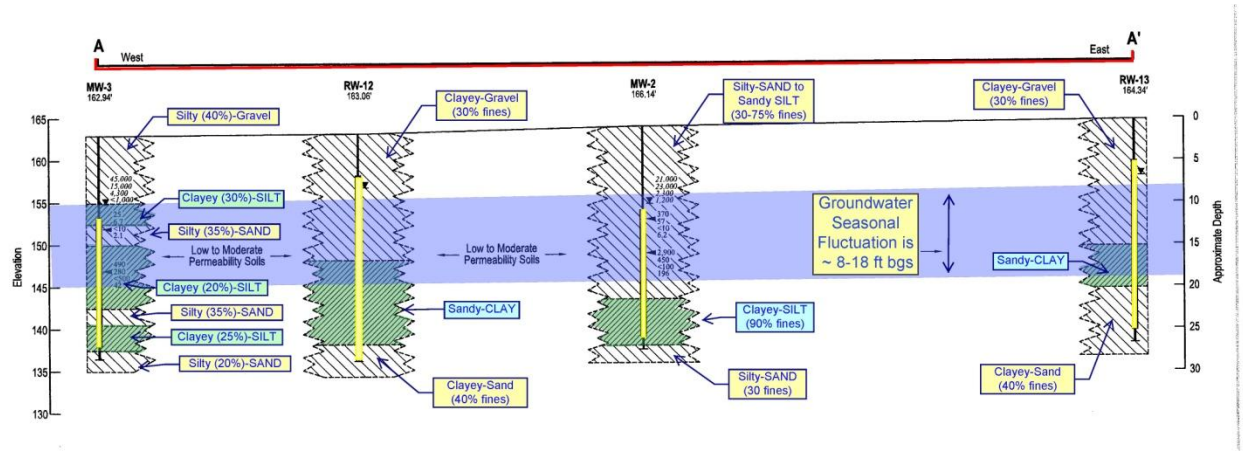
LOCAL GEOLOGY AND HYDROGEOLOGY

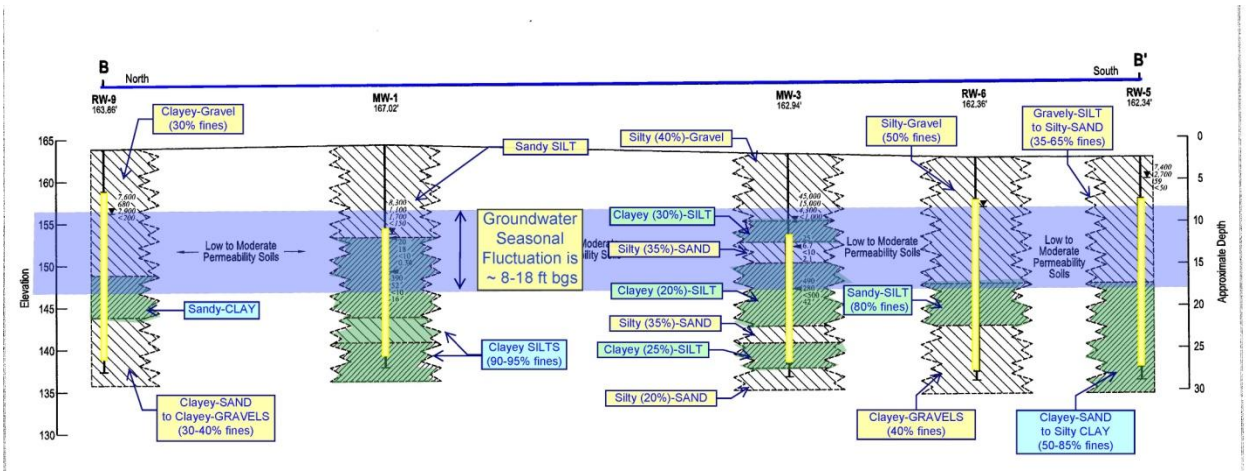
The Site is located within a large, regional, northwest-trending alluvial basin (the East Bay Plain Subbasin), that reportedly extends beneath the San Francisco Bay to the west. The Subbasin's regional aquifer in the vicinity of the Site has a westerly groundwater flow direction, towards San Francisco Bay. The East Bay Municipal Utility District (EBMUD) has provided water supply to Oakland and other communities since the 1930's because of historical over-pumping that reportedly damaged the water supply by seepage or saltwater intrusion. EBMUD obtains its drinking supply from protected Sierra runoff from the Mokelumne River watershed, which eliminated the need for local groundwater supply wells.

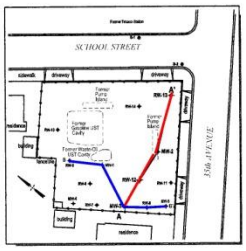
Shallow soil conditions have been logged during the installation of twenty-four (24) on-site borings and thirteen (13) off-site borings drilled to a maximum depth of 45 feet. First-encountered groundwater beneath the Site fluctuates seasonally, roughly between the depths of 8-to-18 feet below ground surface (bgs). Exploratory borings have been logged by a number of field geologists since subsurface drilling investigations were initiated in 1991. Soil samples obtained from the earlier exploratory borings and well installation borings were collected using hollow stem drill rigs (5-foot sample intervals) while more recently sampling (2007-8) was completed using driven probe rigs (continuous core sampling). Although drill logs show individual geologist variation with logging descriptions, designations, and opinions of permeability, the unifying theme is that the subsurface soils consist of an extremely heterogeneous mix of the following soil types:

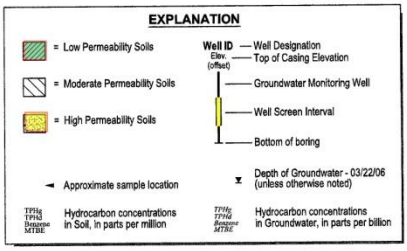
- The dominant soil type encountered consisted of low-permeability soils that included clays, clayey-mixtures (clayey-silts and clayey-sands), and silty-mixtures (sandy-silts);
- The secondary soil type encountered consisted of moderately-permeable sandy units (high silt content, fine-grained sand units identified as silty-sands with clay binder), and
- Occasionally, some relatively thin, discontinuous, highly-permeable sand lenses were encountered (low silt content silty-sands).

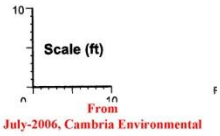
The following geologic cross-sections of soil types logged across the Site show: 1) the interbedded, heterogeneous nature of soils beneath the Site; 2) the ubiquitous presence of fine-grained clays and/or silts in the soil mixtures (low-to-moderately permeable units), which generally retard the vertical and lateral movement of precipitation, chemicals and groundwater, and 3) a visual, presentation of the seasonal groundwater fluctuation across these relatively low-permeability units.



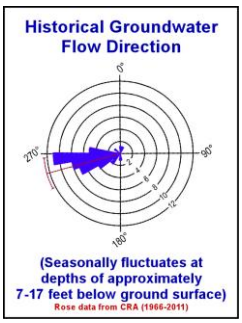








Note: Remediation feasibility testing by soil vapor extraction, air sparging, and groundwater extraction techniques showed only limited air and groundwater flow rates (no vacuum influence/easy dewatering but no groundwater drawdown at nearby wells), which confirms the low permeability conditions beneath the Site (Cambria, 1996).



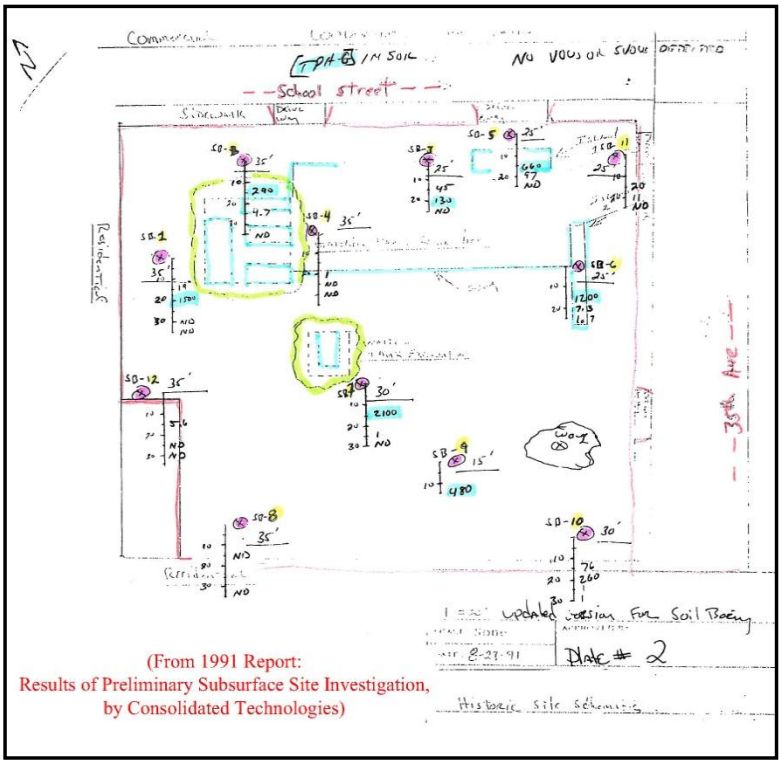
First-encountered groundwater levels in Site monitoring wells have been measured to fluctuate as much as from approximately 6 to 19-ft bgs, but seasonal

fluctuations generally fall between 8-18 feet[10]. Survey-calculated groundwater flow direction beneath the Site is primarily towards the west, as shown by the cumulative-flow, rose diagrams presented on Figures 2, 3, and 4 of this report. Gradient is approximately 0.009 ft/ft (approximately 1 foot of groundwater drop for 111 feet of lateral run).

SUMMARY OF PREVIOUS SOIL AND GROUNDWATER INVESTIGATIONS AND CORRECTIVE ACTIONS

1991, Fuel Tank Removals: In January 1991, Pacific Excavators is reported to have removed two (2) 4,000-gallon, and two (2) 6,500-gallon gasoline USTs, as well as one (1) 500-gallon waste oil UST from the Site. While there are some figures indicating soil stockpiles were present on-site, there is no record of tank pit over-excavation or off-site disposal. Figure 3 identifies tank excavation (cavity) and dispenser locations. Subsequent environmental reports indicated that no UST closure samples were analyzed.

1991, Initial Soil Sampling Investigation: In November 1991, Consolidated Technologies drilled twelve (12) hollow stem augured soil borings (B-1 to B-12) and collected soil samples from depths of 15 to 35-ft below ground surface (bgs). Locations are shown in figure clip (right). A gasoline release was confirmed based on field observations of moderate-to-strong petroleum odors in eleven of the twelve soil borings generally encountered at depths of approximately 12-to-22 feet (in the groundwater fluctuation, "smear" zone) and confirmation laboratory detections of total petroleum hydrocarbons as gasoline (TPH-gas) concentrations in samples collected from eleven of the twelve soil borings [the maximum concentration was detected at boring B-7 = 2,100 mg/kg (or parts per million, ppm].



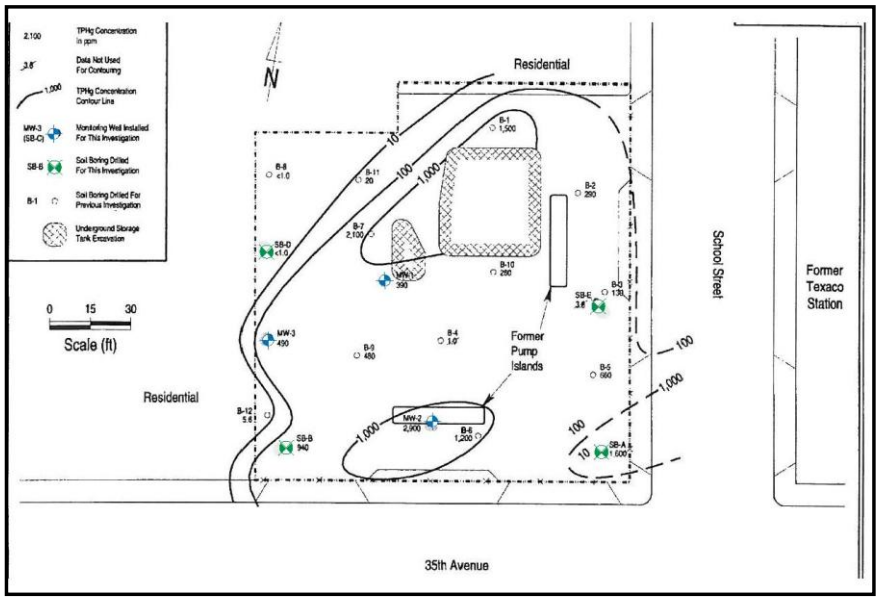
(From 1991 Report:
Results of Preliminary Subsurface Site Investigation,
by Consolidated Technologies)

The highest concentrations of TPH-gas and the volatile constituent compounds of benzene, toluene, ethylbenzene, and xylenes (BTEX) were detected in samples collected at 15 and 20 feet bgs. Note: A boring targeting the waste oil tank (B7), contained no additional contaminants of

[10]: *Note: Water depths for MW-1 and MW-2 are not reflective of groundwater levels below ground surface due to their elevated casing height within monument well boxes.*

concern from a suite of analysis including: diesel, petroleum oil and grease, semi volatile organics (Method 8270 SVOCs), or other volatile solvent compounds aside from BTEX (Method 8010). Of note: only limited contamination was observed in the two downgradient borings, B-8 and B-12.

1994, Follow-up Subsurface Investigation & Monitoring Well Installations: In May 1994, Cambria drilled seven (7) hollow-stem augured soil borings (SB-A through SB-G, (see figure, right), analyzed two soil samples per boring, and converted three of the borings into on-site monitoring wells (MW-1 through MW-3, each screened from 10-25 ft bgs). Groundwater samples were analyzed from the 3 newly installed wells in addition to 3 of the exploratory borings (grab samples). Boring logs indicated moderate to very strong, weathered gasoline odors in all the borings starting a depth of eight feet below ground surface.



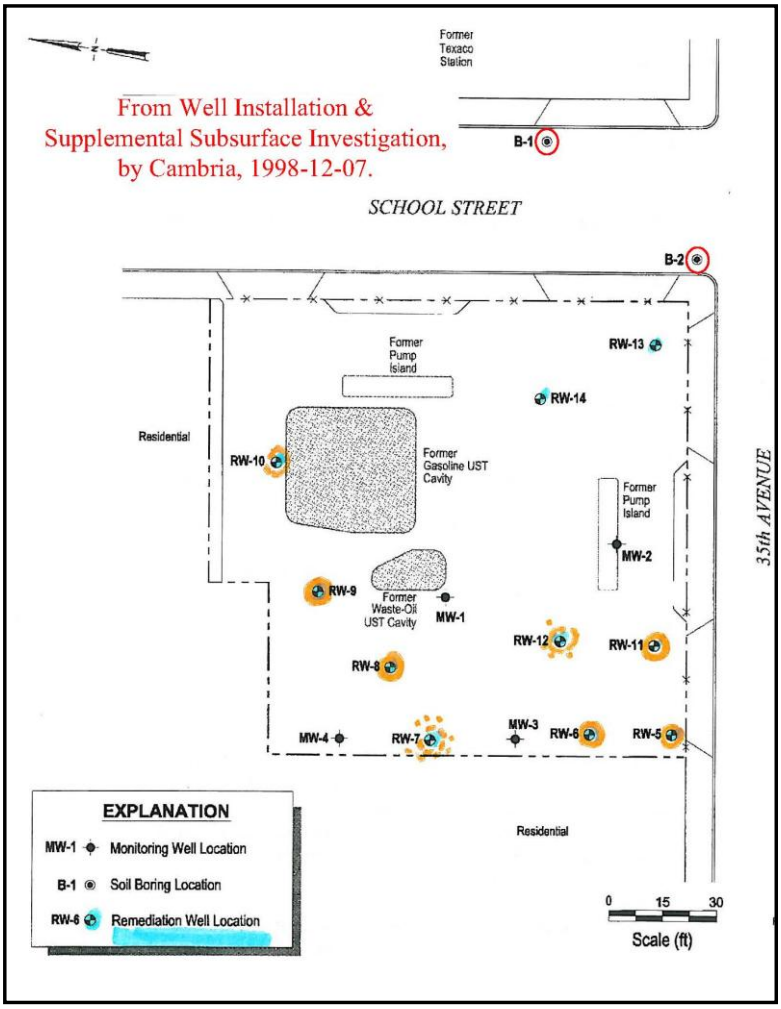
- Soil: TPH-gas concentrations were detected in soil samples collected for analysis in six of the seven soil borings, (max concentration = 2,900 ppm in MW-2 at 15-ft),

- Groundwater: TPH-gas/benzene concentrations were detected in all six groundwater samples. The maximum TPH-gas/benzene concentrations detected in grab groundwater samples were 120,000/10,000 ug/L (or parts per billion, ppb, in SB-B @ 15-ft), max TPH-gas/benzene concentrations in a developed monitoring well were 120,000/22,000 (MW-1 @ 16.8-ft). Tabulated analytical results are provided in Table 4 of this report.

1996, Feasibility Testing: In July 1996, Cambria conducted a series of remediation feasibility tests involving soil vapor extraction-only (SVE), SVE/air sparging, and SVE/aquifer pumping. SVE vacuums of up to 150 inches-of-water were applied to the three monitoring wells for 20-to-45 minutes (approx. 5-ft of well screen available for SVE above groundwater). TPH-gas soil vapor concentrations collected from each well at the end of the SVE test ranged from less than 250 parts per million by volume (ppm_v) in test wells MW-1 and MW-2, to greater than 10,000 ppm_v in test well MW-3. Cambria did not note any significant increases in air flow or soil vapor concentrations when SVE was combined with air sparging (no radius of influence of vacuum or groundwater drawdown was observed in any monitored well). However, Cambria stated that they believed dewatering combined with SVE could enhance remedial efforts.

The generally low air and groundwater flow rates are indicative of low permeability soils. Results of the remedial testing indicated that SVE-alone, or SVE combined with air sparging would not be effective in removing hydrocarbons from the subsurface soils. However, it was believed that Dual Phase Extraction was a promising remedial alternative.

1997, Additional Downgradient, Monitoring Well: In February 1997, Cambria installed one additional on-site monitoring well (MW-4, screened from 10-30 ft bgs) at the downgradient (west) corner of the parcel. Soil samples for logging were obtained on 5-foot intervals using hollow-stem augers but no field measurements (photoionization meter) or contaminant observations were logged, but two analyzed soil samples contained TPH-gasoline contamination The maximum concentration of TPH-gas in soil was detected at a depth of 15-ft bgs (@ 530 ppm). TPH-gas and benzene concentrations in groundwater were detected at concentrations of 47,000, and 11,000 ppb, respectively.



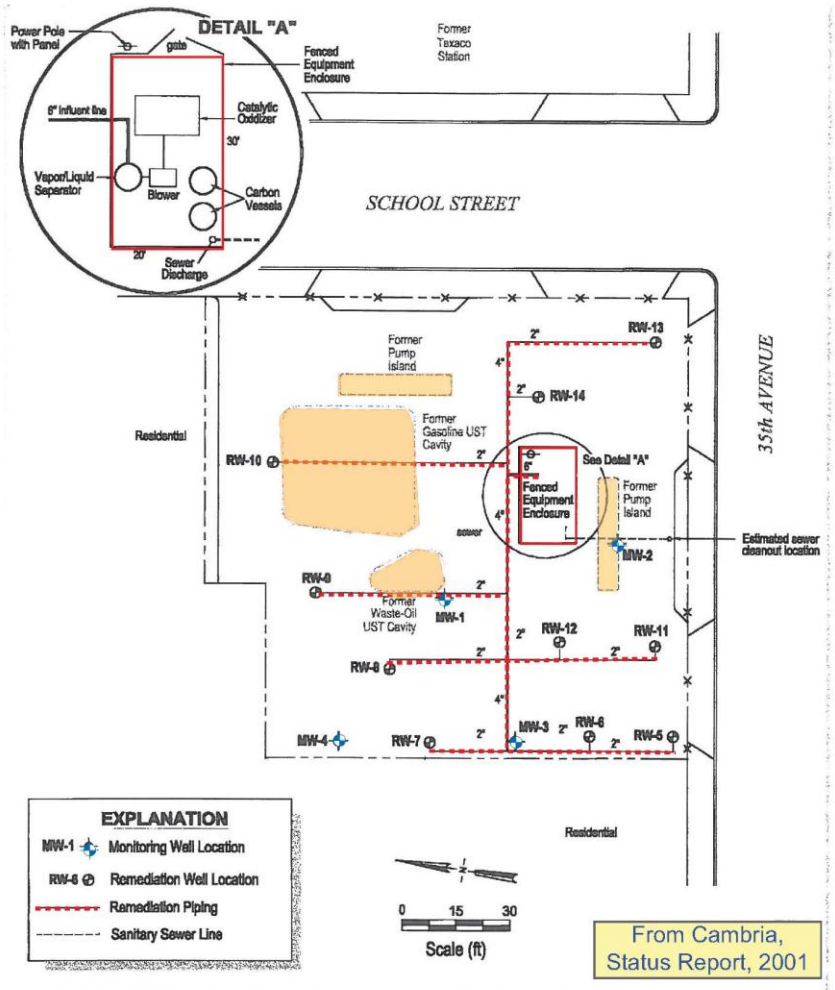
1998, Remediation Well Installation (see figure, right): In August 1998, Cambria installed ten (10), on-site, 4-inch diameter, dual-phase extraction (DPE) remediation wells (RW-5 through RW-14). Soil samples for logging were obtained from the hollow-stem augers on 5-foot intervals (5 borings) or directly from augured drill cuttings (5 borings) and the majority of borings had very similar subsurface logs (low permeability clayey sands/gravels, and sandy clays having strong to moderate petroleum hydrocarbon odors in the groundwater fluctuation, smear zone). No soil samples were laboratory analyzed.

In addition to the 10 installed remediation wells, an attempt was made to obtain upgradient, hydropunch-type, grab groundwater samples (two geoprobe borings, B-1 and B-2), on School Street. Sampling rods were advanced directly to depths of 28 and 38 feet (no soil cores collected). Apparently, the low permeability soils encountered at those depths did not produce groundwater, so no water samples could be collected.

1999, Interim Remedial Action - Injection of Hydrogen Peroxide: In August 1999, Cambria poured a limited volume (7-12 gallons) of a hydrogen peroxide solution into each of the four

monitoring wells and ten remediation wells in an attempt to oxygenate impacted groundwater while Dual Phase Extraction (DPE) remediation system planning was underway. Dissolved oxygen concentrations in groundwater did not significantly increase nor did contaminant concentrations decrease following the placement of 7.5% hydrogen peroxide into all fourteen on-site wells and the results did not change ongoing plans for installing DPE remediation system.

2000-2004, Site Remediation by Dual-Phase Vacuum Extraction: In October 2000, Cambria initiated remediation by DPE which consisted of extraction from the Site's 10 remediation wells by a 200 cfm positive-displacement blower. The blower simultaneously extracted liquid/dissolved-phase contaminants to a centrally located treatment compound where vapor phase hydrocarbons were destroyed using a catalytic oxidizer; dissolved phase hydrocarbons were treated using two, 1,000-lb carbon vessels and was discharged to the sanitary sewer. In August 2002, the blower was upgraded in an effort to increase hydrocarbon removal. The positive-placement blower was replaced by a more powerful, 20-HP liquid ring vacuum pump capable of generating higher vacuums. The system design included simultaneous extraction of soil vapor and groundwater from the 4 monitoring wells (MW-1 though MW-4) and the ten, on-site, 4-inch diameter, remediation wells (RW-5 through RW-14) using 1-inch diameter suction hose stingers lowered to depths typically ranging from 16-20 feet bgs.



In September 2004, the DPE system was dismantled due to asymptotically low hydrocarbon removal rates. Approximately 6,545 pounds of vapor-phase hydrocarbons were removed after 13,965 hours of extraction and 11 pounds of dissolved-phase hydrocarbons were removed from 1,447,419 gallons of DPE pumped groundwater (equal to an average of 1.7 gal/min extracted).

2006, Proposed Additional Remedial Actions (January), and Off-site Delineation Workplan (July): Following the cessation of the DPE remediation, Alameda County Health Care Services (AC-HCS) requested that a *Workplan* be prepared to implement an alternative remedial technique (December 2004). Post-remediation monitoring (2005) of six on-site wells (MW-1 though MW-4, RW-5 and RW-9) showed sheen was present in each of the wells along with elevated concentrations of residual dissolved fuel contaminants, primarily as TPH-gas, benzene, and MTBE. Maximum 2005 concentrations detected in these 6 monitoring wells ranged from 9,400-to-53,000 ppb for TPH-gas, 1,200-to-6,100 ppb for benzene, and non-detect-to-2,300 for MTBE.

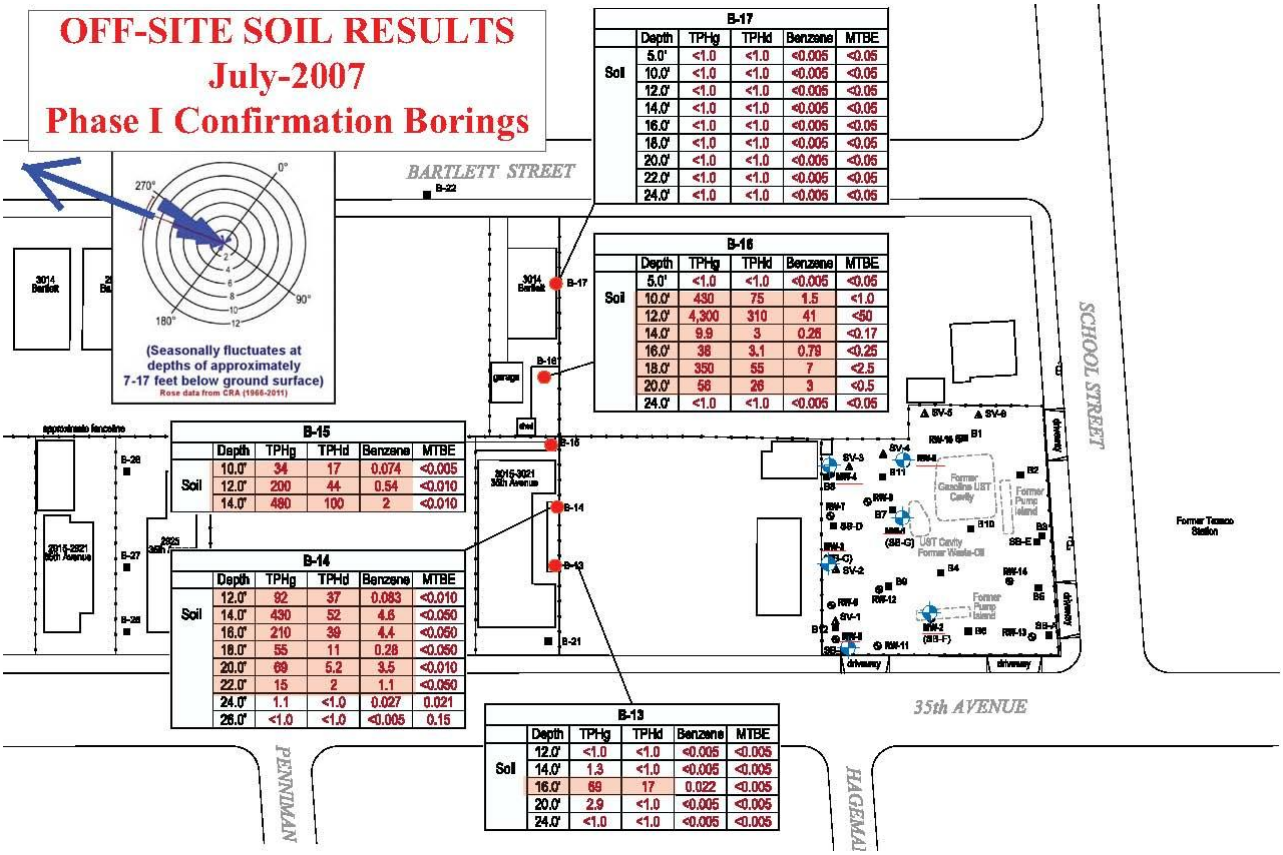
Cambria's *Revised Remediation Workplan* proposed completing interim remedial pilot testing of seven (7) sparge points in order to confirm the ability and cost-effectiveness of *In-Situ Chemical Oxidation* (ISCO) injection as an option for cleanup of residual, fuel-impacted groundwater in a low-permeability, shallow aquifer. Gaseous ozone was selected as the ISCO oxidizer because of: 1) ozone gas' reported ability to transfer though fine-grained, saturated soils, and 2) ozone's ability to destroy hydrocarbons on contact.

AC-HCS determined that previous Dual Phase Extraction remediation at the Site (2000-2004) was not successful due to the low permeability restrictions that Site soils have on air and groundwater flow, and those same restrictions would likely limit the distribution of sparged ozone from coming into contact with residual contamination (May-2006). AC-HCS instead requested that: 1) the original *Corrective Action Plan* (dated 1996) be updated with new understandings of the subsurface conditions in order to better evaluate proposed remedial options, and 2) an *Off-site Soil & Groundwater Investigation Workplan/Site Conceptual Model* be submitted to delineate extent of off-site soil contamination, the extent of groundwater plume migration, and a survey of wells within 2,000 feet and other sensitive receptors.

Cambria's *Well and Sensitive Receptor Survey* (July 2006) concluded that none of the active supply wells identified within a 2,000-foot radius of the Site were likely to be impacted based on their relative upgradient/sidegradient locations. A review of other potential sensitive receptors (schools, churches, and surface water bodies) concluded there were negligible direct risks from impacted groundwater but there did exist a potential risk for plume off-gassing (vapor intrusion) if the residual hydrocarbon plume extended under residences (identified data gap). Cambria's proposed data gap sampling plan called for off-site soil and groundwater sampling of six (6) downgradient borings installed at distances ranging between ~300-600 feet off-site.

AC-HCS's response opinion was that the distance between the proposed boring locations and the source was such that collected data would not be useful for Site characterization or delineation of the dissolved plume (Oct-2006). In addition to requesting new proposed boring locations, AC-HCS requested completion of a soil gas investigation in the vicinity of the western property boundary.

2007, Phase I Off-site Characterization and On-Site Soil Gas Investigations: In May and July 2007, a preliminary round of off-site groundwater and soil samples, and on-site soil gas samples were collected and analyzed by Conestaoga-Rovers & Associates (CRA, which mergered with Cambria). The objectives of the Phase I investigation (and a follow-up Phase II characterization



Phase I Borings –

investigation completed in Nov-2008) were to: 1) investigate the extent of the dissolved petroleum hydrocarbon plume in groundwater; 2) determine the soil smear-zone impacts resulting from lateral plume migration and seasonal groundwater fluctuation; and 3) identify whether subsurface soil gas concentrations (vapor) indicated a potential vapor intrusion risk. The Phase I investigation included the collection of soil and groundwater samples from a transect of five (5) downgradient, continuously cored driven probe locations (B-13 through B-17, see figure below), and the collection of six (6) on-site soil gas sampling locations (V-1 through V-6).

Off-site, smear zone gasoline contamination was observed during continuous core logging of the Phase I transect borings, which were placed at accessible locations, approximately perpendicular

to dominant groundwater flow and 150-ft downgradient of the Site. Results of laboratory-tested off-site soil samples confirmed field observations as elevated gasoline constituent concentrations were present within the initial transect borings (see shaded results, above). Results of laboratory-tested off-site groundwater grab samples from these initial Phase I transect borings contained elevated gasoline, benzene, and MTBE concentrations, indicating that a portion of the dissolved gasoline plume extended to this transect. In addition, Phase I, on-site soil gas sampling along the property line contained elevated vapor concentrations (summarized with Phase II results, below).

2008, Phase II Additional Off-Site Characterization and Limited On-Site Investigations: In October-November, 2008, a follow-up round of *Phase II Off-site Characterization Sampling* was completed to address previous detections of elevated gasoline constituent concentrations in soil, groundwater, and soil gas. The follow-up, Phase II investigation included:

- Eight (8), continuously cored step-out soil borings (off-site), one installed as an infill boring (B-21) and the remaining seven (B-22 to B-28) positioned downgradient of the Phase I transect (the second transect was placed at accessible locations generally 230-ft downgradient of the initial, Phase I transect).
- One upgradient (off-site) and two on-site soil borings were continuously-cored to a depth of 45-ft bgs to: 1) inspect for potential upgradient contribution from an abandoned gas station site (Texaco), and 2) inspect post-remediation, on-site soil conditions.
- Eight (8), grab groundwater samples were collected from on-site boring B-18, and off-site borings B-21 through B-28.

Phase II Soil Sampling Results

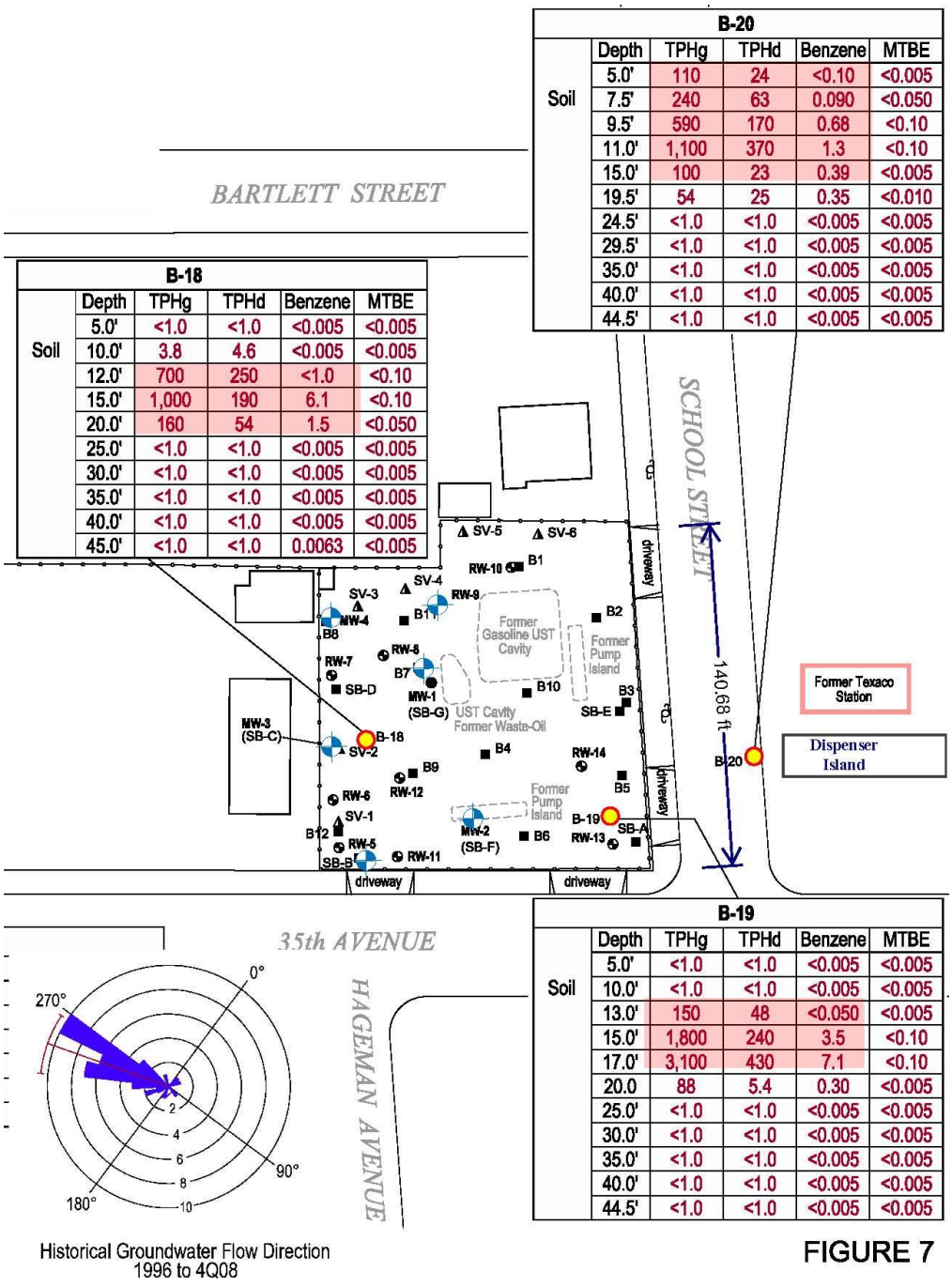
Off-site Soils: No additional off-site, smear zone gasoline contamination was observed during continuous core logging of the second, downgradient boring transect or in lab samples, which indicates smear zone impacts from lateral plume transport/fluctuating groundwater have not extended as far as the second transect. Results of laboratory-tested off-site soil samples confirmed field observations as no contaminant concentrations were detected.

On-site Soils: Smear zone gasoline contamination was observed in continuous soil cores collected from two, post-remediation borings drilled at the downgradient (B-18) and upgradient (B-19) sides of the property. Field observations and laboratory results confirm elevated concentrations of residual gasoline contamination remain within the smear zone created by fluctuating groundwater, primarily found at depths of approximately 11 to 20 feet (see highlighted impact elevations in the graphic below). Despite the removal of over 6,500 lbs of gasoline from the subsurface during four years of Dual Phase Extraction, residual constituent concentrations continue to exceed regulatory threshold limits. The lack of remedial success using Dual Phase Extraction as a cleanup technique is likely due to:

1. Dual phase extraction's inability to efficiently pull residual fuel contamination from low permeability soils present beneath the Site. And,
2. Contribution from a secondary, upgradient source (the abandoned Texaco Station across School Street). Specifically, data collected from exploratory boring B-20 (see figure on next page), which was drilled immediately adjacent to Texaco Station's former fuel dispenser islands. Field observations of soil cores and confirmation laboratory testing contained elevated gasoline contamination at very shallow depths (<5 feet below ground surface, see graphic next page). These elevated, off-site gasoline concentrations, combined with the elevated gasoline concentrations detected in borings installed along the subject Site's upgradient property line indicate the abandoned Texaco station is a secondary source of contamination (see recent boring B-19, and previous borings SB-A & B-4).

In addition to the shallow contamination detected in upgradient boring (DP-20, see figure below) indicating a nearby, off-site source, it is notable that soil and groundwater data suggest this second source has no apparent evidence of the fuel additive MTBE. Specifically:

- There were no detections of MTBE in soil samples analyzed from the upgradient Texaco Station site.
- Results of groundwater collected from upgradient property line wells (RW-13, RW-14) did not contain the fuel additive, while mid-site and downgradient property line wells (MW-1 through MW-3 and RW-6 and RW-9) have contained MTBE. These distinctively different fuel fingerprints indicate a second source originates off site and the resulting plume is migrating onto the property (discussed further below).



B-18

	Depth	TPHg	TPHd	Benzene	MTBE
Soil	5.0'	<1.0	<1.0	<0.005	<0.005
	10.0'	3.8	4.6	<0.005	<0.005
	12.0'	700	250	<1.0	<0.10
	15.0'	1,000	190	6.1	<0.10
	20.0'	160	54	1.5	<0.050
	25.0'	<1.0	<1.0	<0.005	<0.005
	30.0'	<1.0	<1.0	<0.005	<0.005
	35.0'	<1.0	<1.0	<0.005	<0.005
	40.0'	<1.0	<1.0	<0.005	<0.005
	45.0'	<1.0	<1.0	0.0063	<0.005

B-20

	Depth	TPHg	TPHd	Benzene	MTBE
Soil	5.0'	110	24	<0.10	<0.005
	7.5'	240	63	0.090	<0.050
	9.5'	590	170	0.68	<0.10
	11.0'	1,100	370	1.3	<0.10
	15.0'	100	23	0.39	<0.005
	19.5'	54	25	0.35	<0.010
	24.5'	<1.0	<1.0	<0.005	<0.005
	29.5'	<1.0	<1.0	<0.005	<0.005
	35.0'	<1.0	<1.0	<0.005	<0.005
	40.0'	<1.0	<1.0	<0.005	<0.005
	44.5'	<1.0	<1.0	<0.005	<0.005

B-19

	Depth	TPHg	TPHd	Benzene	MTBE
Soil	5.0'	<1.0	<1.0	<0.005	<0.005
	10.0'	<1.0	<1.0	<0.005	<0.005
	13.0'	150	48	<0.050	<0.005
	15.0'	1,800	240	3.5	<0.10
	17.0'	3,100	430	7.1	<0.10
	20.0	88	5.4	0.30	<0.005
	25.0'	<1.0	<1.0	<0.005	<0.005
	30.0'	<1.0	<1.0	<0.005	<0.005
	35.0'	<1.0	<1.0	<0.005	<0.005
	40.0'	<1.0	<1.0	<0.005	<0.005
	44.5'	<1.0	<1.0	<0.005	<0.005

Historical Groundwater Flow Direction
1996 to 4Q08

FIGURE 7

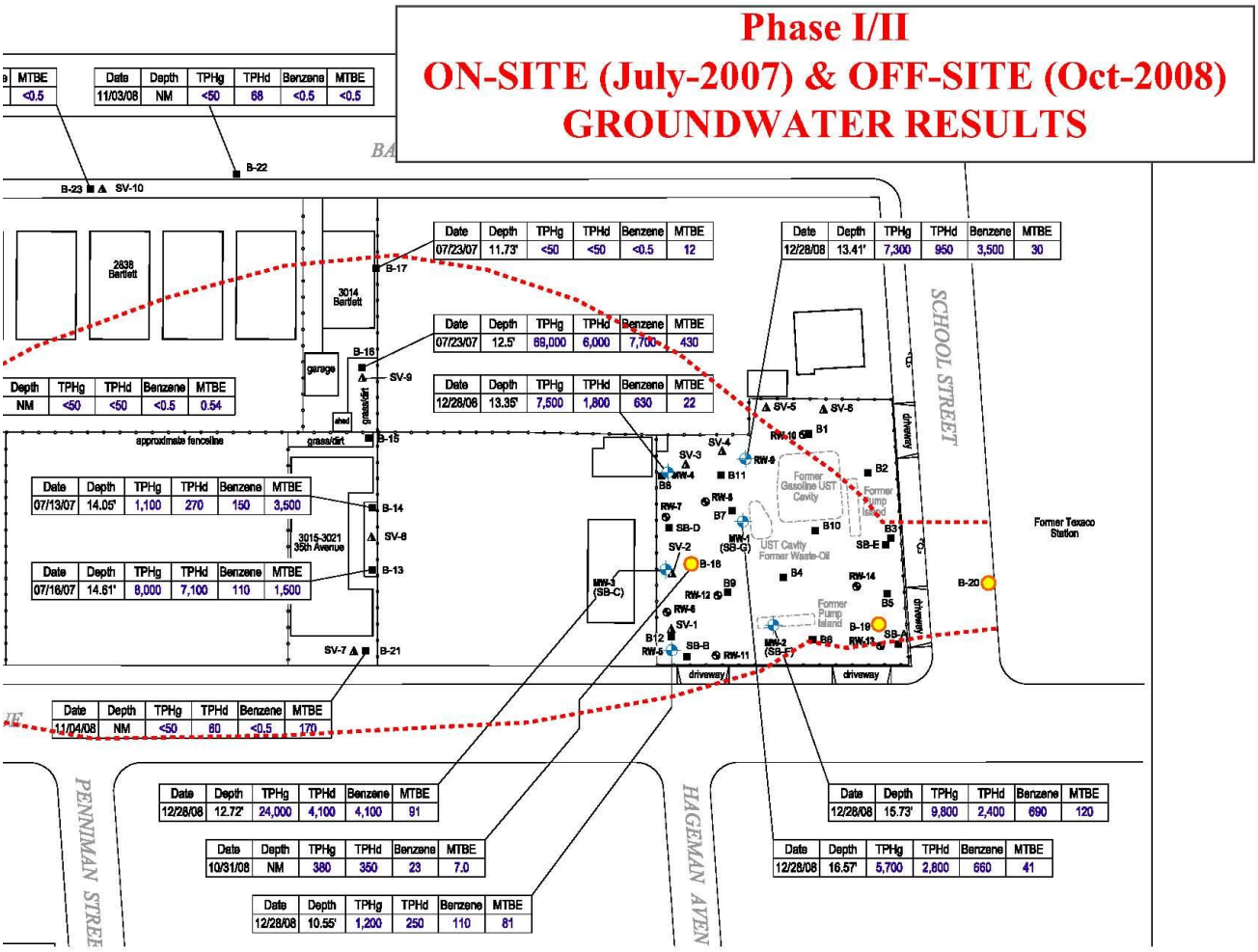
PHASE II HYDROCARBON CONCENTRATIONS in SOIL

Phase II, Post-remediation on-site borings (B-18, B-19) and upgradient boring B-20 (2008).

Phase I & II Groundwater Sampling Results:

Grab groundwater samples were collected from Phase I and Phase II transects, and from on-site boring B-18. The data was compared with monitoring well results (2008 fourth quarter event). No groundwater sample was obtained from the upgradient boring B-20.

Groundwater Results (Phase I & II borings, and monitoring wells).



- TPH-gasoline was detected in all on-site wells and borings (380-24,000 ppb, max in MW-3), and five of the six first transect borings (from "not detected" to 69,000 ppb, max. in DP-16). No TPH-gasoline was detected in the downgradient, Phase II transect borings.
- Benzene was detected in all on-site wells and borings (23-4,100 ppb, max in MW-3), and five of the six first transect borings (from "not detected" to 7,700 ppb, max. in DP-16). No benzene was detected in the downgradient, Phase II transect borings.
- MTBE, was detected in all on-site wells and borings (7-120 ppb, max in MW-2), and all the first transect borings (12 to 3,500 ppb, max. in DP-14). MTBE was detected in five

of the seven downgradient, Phase II transect borings primarily as trace to non-detectable concentrations borings (from "not detected" to 150 ppb, max. in DP-27).

- The set of groundwater data suggests two sources because results of groundwater collected from upgradient property line wells (RW-13, RW-14) did not contain the fuel additive, while mid-site and downgradient property line wells (MW-1 through MW-3 and RW-6 and RW-9) have contained MTBE. These differing fuel fingerprints indicates one source originates on-site and a second plume is migrating onto the property. It is likely that the 4 years of Dual Phase Extraction conducted at the subject Site would have also pulled residual contamination from the abandoned, upgradient Texaco Station to the on-site cleanup system.

The set of groundwater test results indicates that a thin plume of MTBE extends from the Site to the second transect (330 feet) but that the low concentrations detected in the downgradient grab samples suggests the downgradient limit of the MTBE plume is in close proximity to the Phase II transect borings. The lack of TPH-gasoline and benzene detections in the second transect indicates that TPH-gasoline and constituent compounds are attenuated and limited to a distance between the two transects (approximately 200-225 ft from the Site).

Phase I & II Soil Gas Survey Results:

A second round of vapor samples were collected in October-2008 because elevated concentrations were detected in the initial round of Phase I, on-site soil gas sampling locations positioned along the property line (July-2007). Phase II sampling was completed at accessible locations along the two previously described soil and groundwater sampling transects, positioned approximately 150 feet (V-7 through V-9), and approximately 330 feet (V-10 through V-14), from the Site in the downgradient groundwater direction.

- TPH-gasoline was detected in all on-site, soil gas wells (@5-ft: 8,400-53,000 ug/m^3, max at SV-5; and increasing at the 10-ft sampling interval: 23,000-620,000 ug/m^3, max at SV-4_{dup}). No TPH-gasoline soil gas was detected in any of the seven, off-site soil gas wells (SV-7 through SV-14).
- Benzene was also detected in all on-site, soil gas wells (@5-ft: 14-99 ug/m^3, max at SV-5; and again increasing at the 10-ft sampling interval: 31-4,600 ug/m^3, max at SV-6). No benzene was detected in soil gas from any of the seven, off-site soil gas wells (SV-7 through SV-14). The residential/commercial threshold limits for benzene in soil gas is 36/122 ug/m^3, respectively[11].

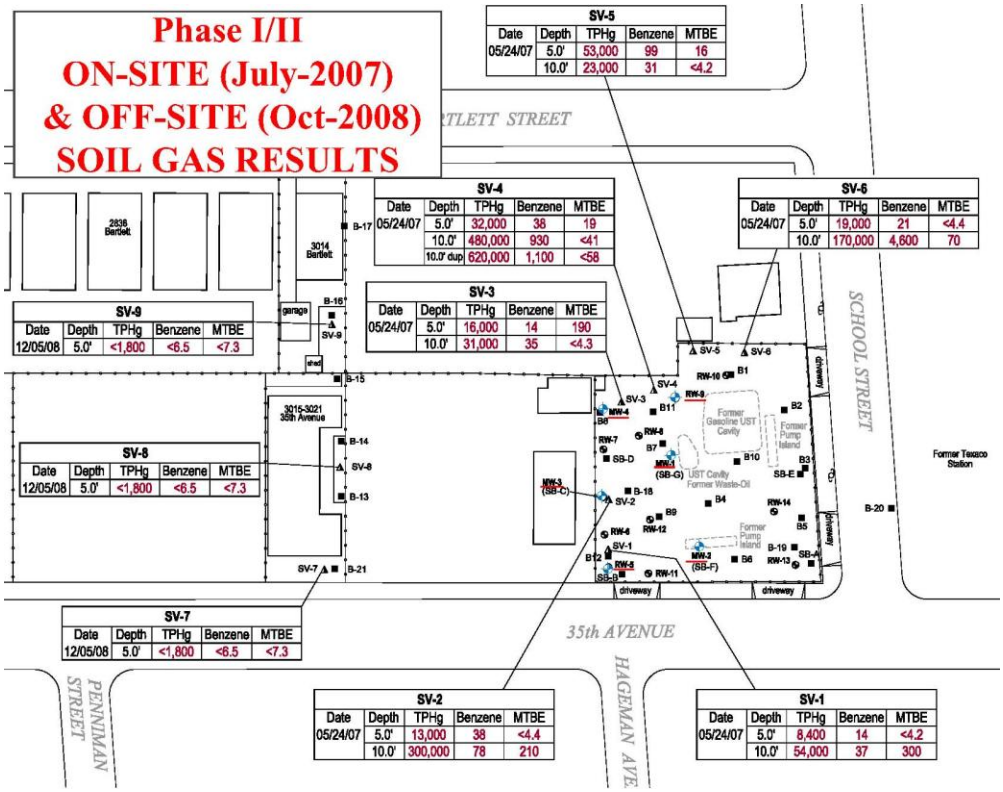
[11]: *The California Human Health Screening Levels (CHHSLs, 2005) were developed as a tool to assist in the evaluation of contaminated sites for potential adverse threats to human health. Residential and commercial/industrial land use screening levels for soil gas are based on soil gas data collected five feet below a*

- MTBE was detected in all on-site, soil gas wells but in only three of the shallow sampling intervals (@5-ft: "not detected" to 190 ug/m^3, max at SV-3; the 10-ft sampling interval concentrations ranged from not detected in three of the soil gas wells to 300 ug/m^3, max at SV-1). No MTBE was detected in soil gas from any of the seven, off-site soil gas wells (SV-7 through SV-14). The residential/commercial threshold limits for MTBE in soil gas is 4,000/13,400 ug/m^3, respectively

- Toluene, Ethylbenzene, and Xylenes: Trace concentrations of these constituent gasoline compounds were detected in a few offsite soil gas wells (SV-7, -10 & -13) but at levels well below established threshold limits.

Soil Vapor Survey Results

Includes Phase I borings (SV-1 thought SV-6, July 2007) & Phase II (SV-7 through SV-14) borings.



The set of soil gas test results indicates that elevated soil gas concentrations persist at the Site, 7 years after the Dual Phase Extraction system was decommissioned. The lack of soil gas detections in any of the off-site samples indicates that dissolved plume off-gassing is not a risk at distances of 150 ft from the Site.

building foundation or the ground surface. Intended for evaluation of potential vapor intrusion into buildings and subsequent impacts to indoor-air. Screening levels apply to sites that overlie plumes of VOC impacted groundwater.

Documents relating to the discovery, investigation and remediation of the fuel releases release are listed in the reference section at the end of this report.

UPDATED SITE CONCEPTUAL MODEL – DECEMBER 2012

Source of Contamination: The source of on-site gasoline hydrocarbon contamination originated from multiple sources associated with the former USTs and associated appurtenances that were removed in 1991. Elevated gasoline concentrations were found at the former UST pit and dispensers locations and continue to have the highest detections during on-going groundwater monitoring. In addition, data collected from recent off-site, upgradient exploratory borings confirms additional gasoline contamination has migrated onto the Site from both the *abandoned* Texaco and the *active* QuikStop stations, and appears to be feeding the plume. It is also suspected that that there may have historically been some limited migration of groundwater contaminants towards the Site from an active fuel release investigation located at 3201 35th Avenue (BP #11132; GeoTracker I.D. T0600100213) situated approximately one block (~ 300 feet) to the northeast of the Site (see Appendix D). It is currently unclear whether or not contaminates from this historic release have impacted the Site.

Nature and Extent of Contamination:

Soils: After the initial source zone excavations in 1991, gasoline-range petroleum hydrocarbons and volatile constituent compounds were identified as the Contaminants of Concern (COCs) for the Site. Specifically, Total Petroleum Hydrocarbons as gasoline [TPH-gas], benzene, toluene, ethylbenzene, and xylenes [BTEX], and Methyl tert Butyl Ether [MTBE]) were found at concentrations in excess of Tier I Environmental Screening Levels[12] for Residential/Commercial land uses (ESLs), both in on-site and off-site soils. Diesel-range Total Petroleum Hydrocarbons (TPH-diesel) were also encountered but generally identified as overlapping lighter fraction gasoline hydrocarbons detected within the diesel range.

[12]: *Environmental Screening Levels (ESLs): California Regional Water Quality Control Board - San Francisco Bay Region has developed these ESLs in a document entitled*: Screening for Environmental Concerns at Sites with Contaminated Soil and Groundwater *(interim Final, November 2007, Revised May 2008). The ESLs are intended to provide guidance on whether or not remediation of detected contamination is warranted based on conservative risk.*

Tier 1 Soil Screening Threshold Concentrations (mg/kg, or ppm)

(Groundwater IS a current or potential Source of Drinking Water)

Chemical of Concern	Residential		Commercial	
	Shallow (< 10 feet)	Deep (> 10 feet)	Shallow (< 10 feet)	Deep (> 10 feet)
TPH-gas TPH-diesel	83	83	83	83
Benzene	0.044	0.044	0.044	0.044
Toluene	2.9	2.9	2.9	2.9
Ethylbenzene	2.3	3.3	3.3	3.3
Xylenes	2.3	2.3	2.3	2.3
MTBE	0.023	0.023	0.023	2.3

- Reference: *Screening For Environmental Concerns at Sites with Contaminated Soil and Groundwater* (November 2007), http://www.waterboards.ca.gov/sanfranciscobay/esl.htm
- No additional fuel oxygenates or lead scavengers were detected.

As noted above (see summary write-up of the 2007-8 Soils Investigation, above), on-site smear zone gasoline contamination was observed in two, post-remediation (2008) continuously-cored exploratory borings (B-18, and B-19). Field observations and laboratory results confirm that elevated concentrations of residual gasoline contamination remains within the smear zone created by fluctuating groundwater (e.g., observed smear zone is primarily encountered at depths of between 11 to 20 feet below ground surface). *Note:* confirmation lab analysis of shallow on-site soils (i.e., < 10 feet bgs) was previously very limited because only 2 of the 72 analyzed soil samples collected on-site were laboratory-analyzed. **However, results obtained during the current *Data Gap Assessment* confirm that elevated residual soil impacts are confined to depths of approximately greater than 10 feet bgs.** Despite the removal of over 6,500 lbs of gasoline from the on-site remediation wells during four years of Dual Phase Extraction, residual constituent concentrations in on-site soils continue to exceed regulatory threshold limits. The persistence of on-site petroleum hydrocarbon contamination appears due in part to: 1) DPE's inability to pull residual fuel contamination from low permeability soils, and 2) the confirmed contribution from secondary, upgradient sources (the *abandoned* Texaco station across School Street, and the active QuikStop station across 35th Avenue; see Figure 2).

The extent of downgradient, off-site, smear zone gasoline contamination was determined by logging 13 off-site borings and laboratory-analyzing 91 discrete soil samples. Smear zone gasoline was observed during continuous core logging of the Phase I transect borings, placed at accessible locations approximately 150-ft downgradient of the Site. Laboratory-tested soil and groundwater samples confirmed field observations, indicating that a portion of the dissolved gasoline plume extended to this transect. Smear zone contamination did not extend to the second

set of transect borings, placed at accessible locations approximately 330-ft downgradient of the Site.

Groundwater: On-site groundwater has been sampled seasonally since 1994 and chemicals of concern have consistently been detected at concentrations in excess of ACEH groundwater quality objectives.

Chemical of Concern	Groundwater Quality Goal (µg/L)
Total Petroleum Hydrocarbons	1,000
Benzene	1
Toluene	150
Ethylbenzene	300
Xylenes	1,750
MTBE	5

Note: The East Bay Municipal Utility District (EBMUD) provides water supply to Oakland and obtains its drinking supply from Sierra runoff (Mokelumne River watershed), which eliminated the need for local groundwater wells.

Post remediation water quality monitoring (sampling, testing, and reporting) has been completed on 6 on-site wells since 2004. Individual concentration-v-time charts for benzene and TPH-gasoline have been placed on an aerial photograph of the Site to assess changes and trends (see Figures A-1 and A-2 in this Appendix). An increase in benzene concentrations observed for wells MW-1 through MW-4 since early 2009 indicates the potential influx of confirmed upgradient off-site dissolved hydrocarbon plumes, which have been confirmed during the recent *Data Gap Assessment.* The upward trends may also be the result of post remediation rebound, lateral transport of source-zone mass (residual fuel release contaminants), or a combination of the two. No new source of contamination is expected since the site has remained undeveloped since 1991. TPH-gas concentrations on the other hand, have deceasing trends in most of the wells (MW-2, -3, & -4, and RW-5, & -9), and a stable trend in MW-1.

A number of additional charts have been generated to see if any other trends or conditions exist. Chart 1 presents post remediation benzene concentrations in all six monitored wells. Chart 2 presents a similar data for TPH-gas. Chart 3 presents seasonal groundwater fluctuation data. Charts 4 through 7 present historical and current benzene and TPH-g concentrations versus groundwater levels for wells MW- 1 through -4 (see Charts below):

Chart 1
BENZENE Concentrations vs Time
(Post-Remediation On-Site Trends)

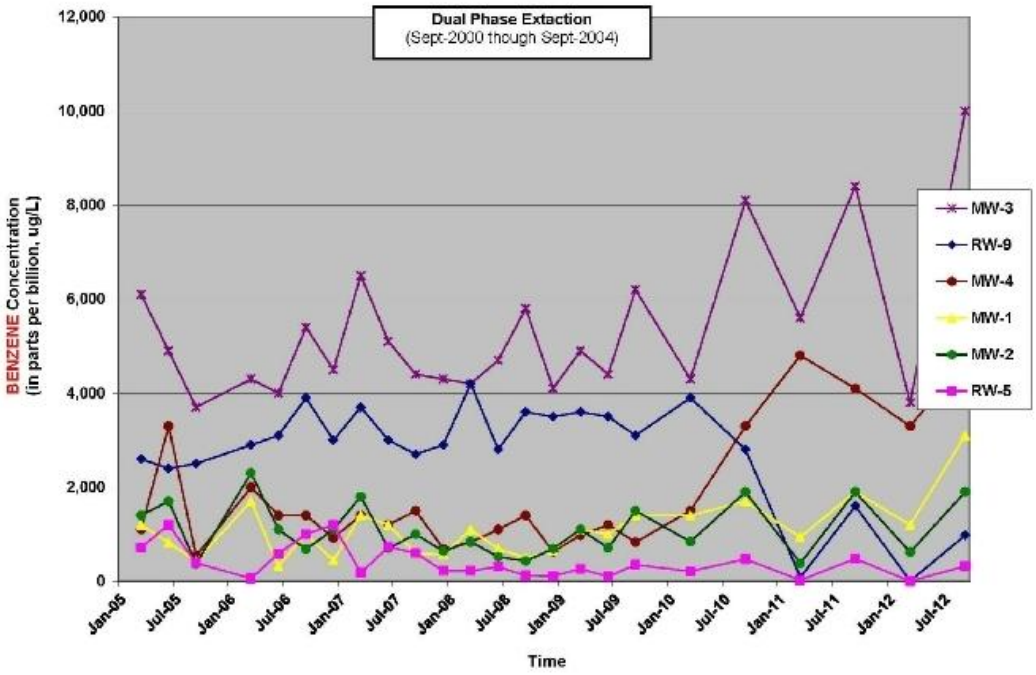
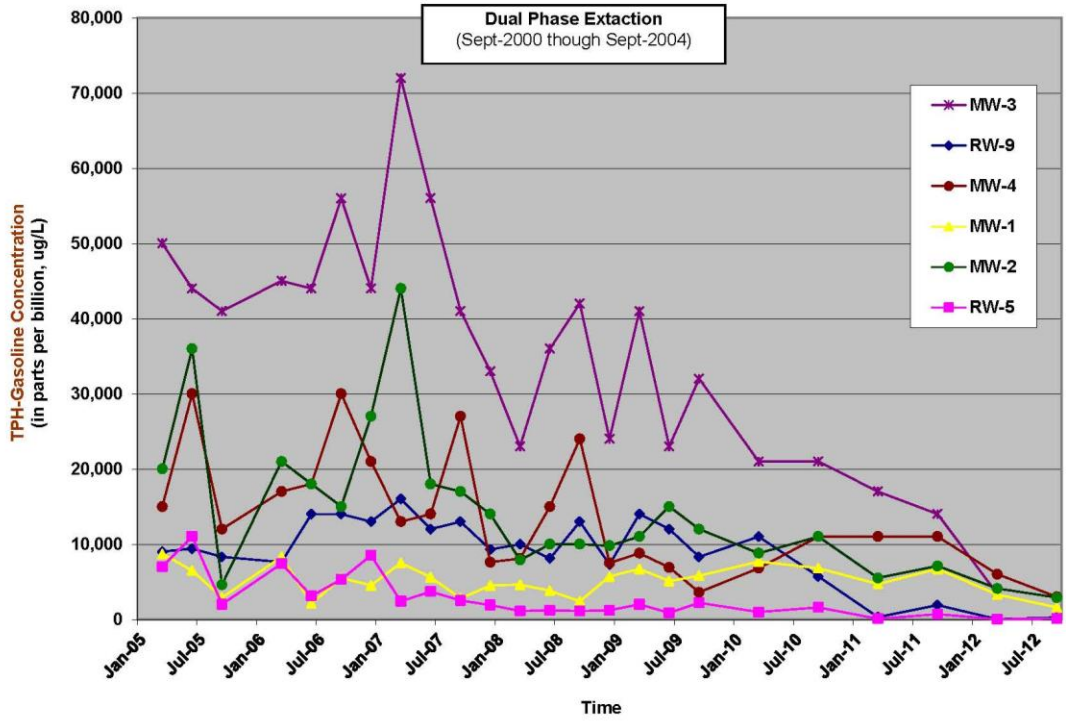
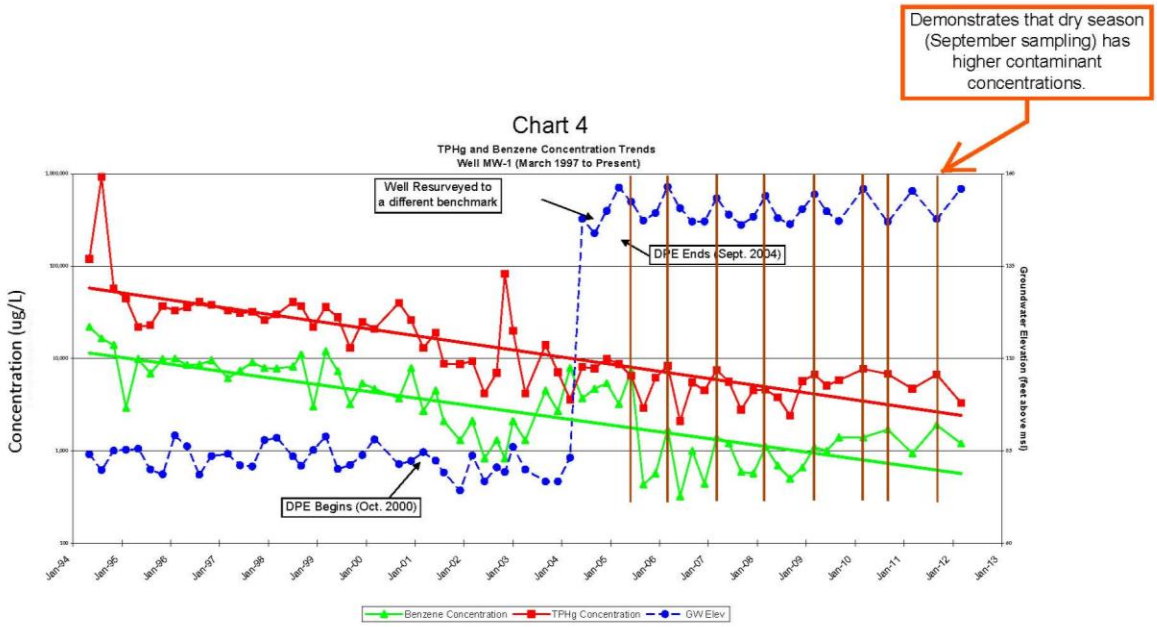
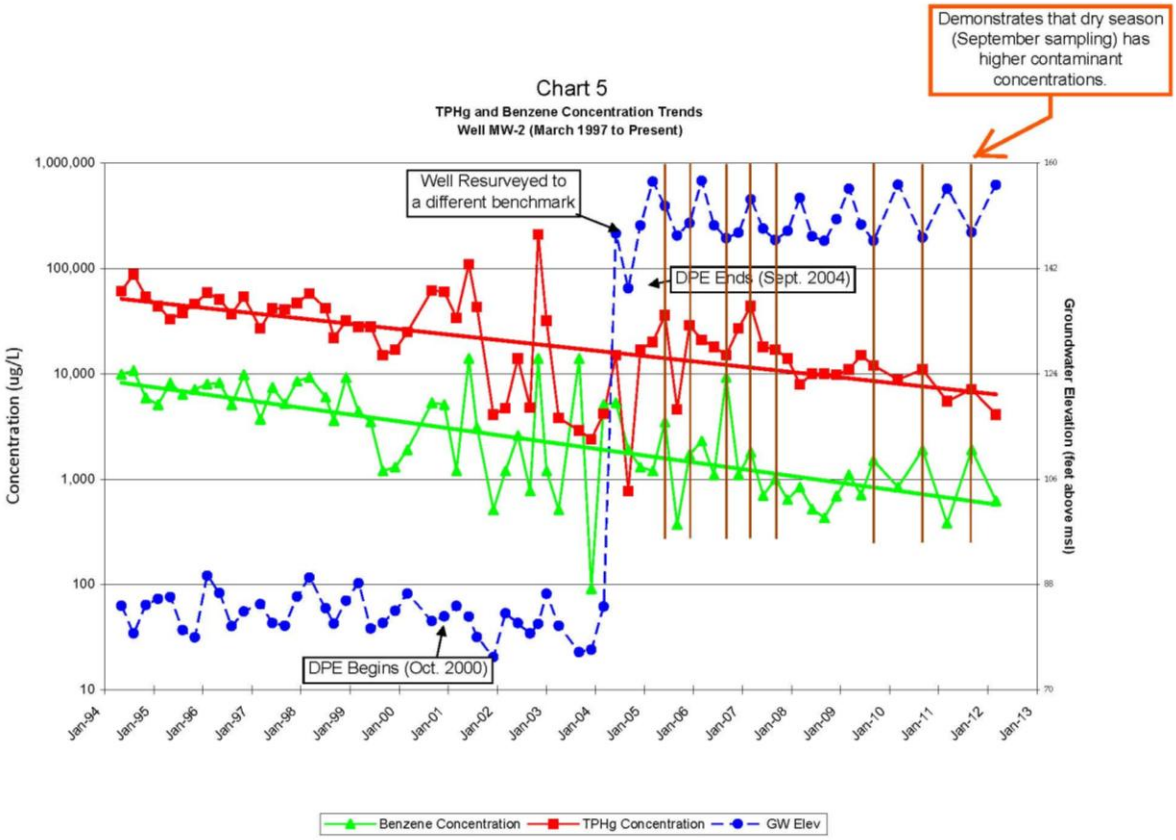
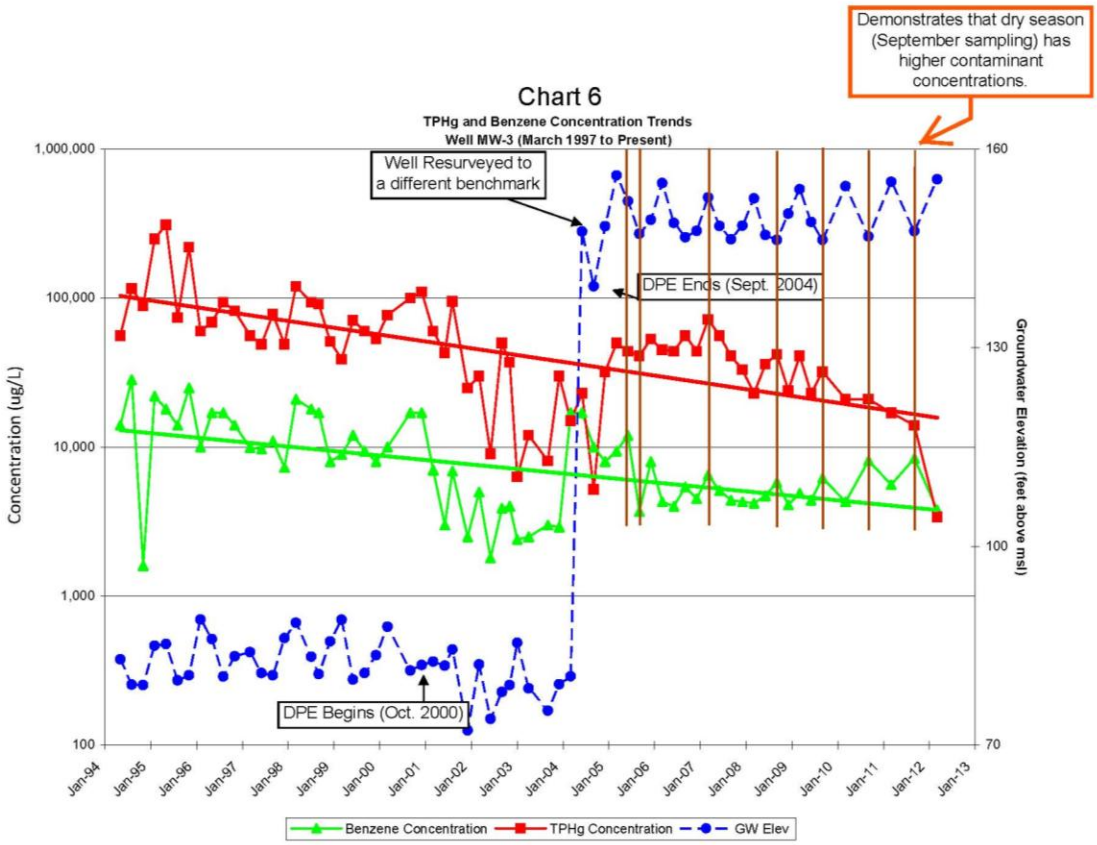


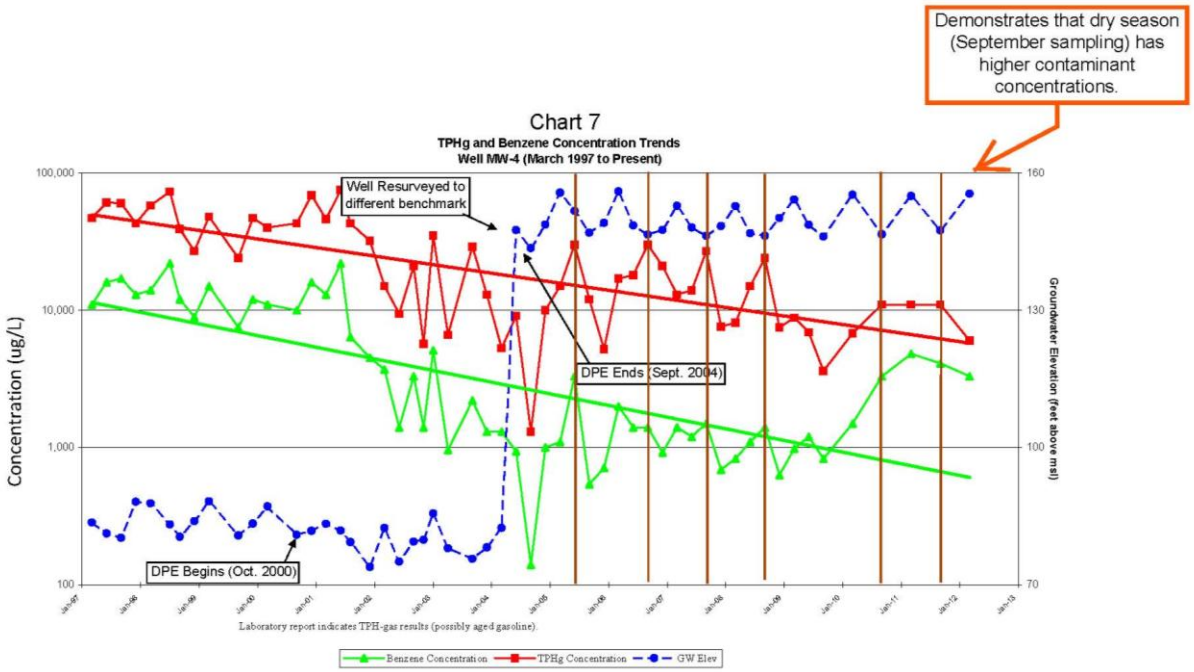
Chart 2
Total Petoleum Hydrocarbons as Gasoline
Concentrations vs Time
(Post-Remediation On-Site Trends)

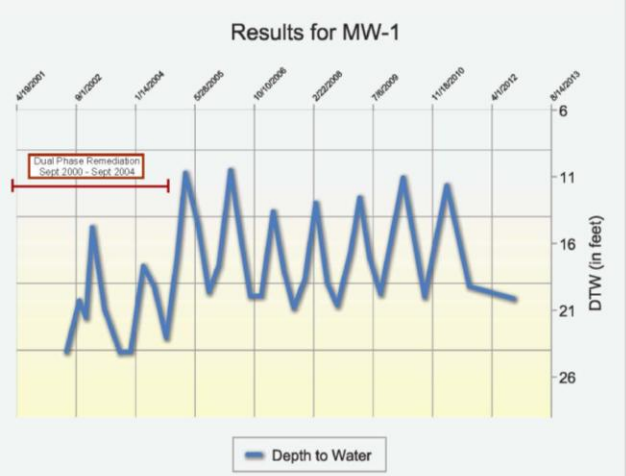


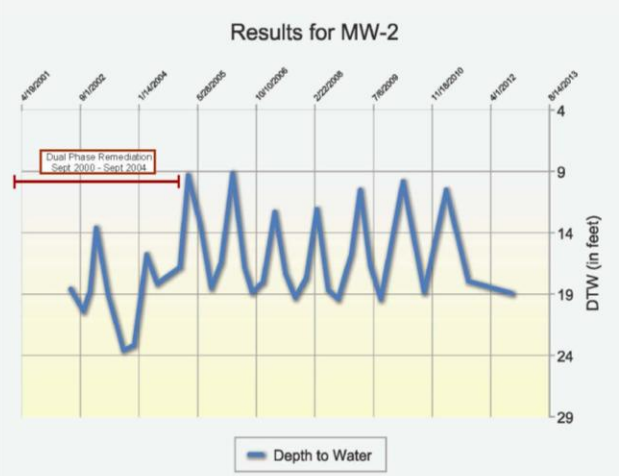

Demonstrates that dry season (September sampling) has higher contaminant concentrations.
Chart 4
TPHg and Benzene Concentration Trends
Well MW-1 (March 1997 to Present)
Well Resurveyed to a different benchmark
DPE Ends (Sept. 2004)
DPE Begins (Oct. 2000)
Concentration (ug/L)
Groundwater Elevation (feet above msl)
Benzene Concentration
TPHg Concentration
GW Elev

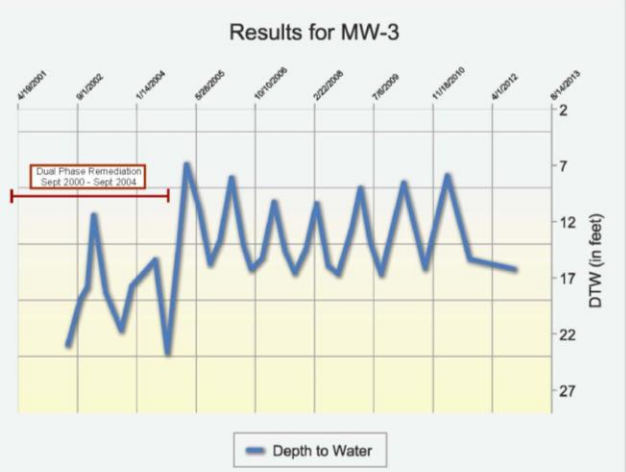

Demonstrates that dry season (September sampling) has higher contaminant concentrations.
Chart 5
TPHg and Benzene Concentration Trends
Well MW-2 (March 1997 to Present)
1,000,000
100,000
10,000
1,000
100
10
Well Resurveyed to a different benchmark
DPE Ends (Sept. 2004)
DPE Begins (Oct. 2000)
Concentration (ug/L)
Groundwater Elevation (feet above msl)
Jan-94
Jan-95
Jan-96
Jan-97
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07
Jan-08
Jan-09
Jan-10
Jan-11
Jan-12
Jan-13
Benzene Concentration
TPHg Concentration
GW Elev

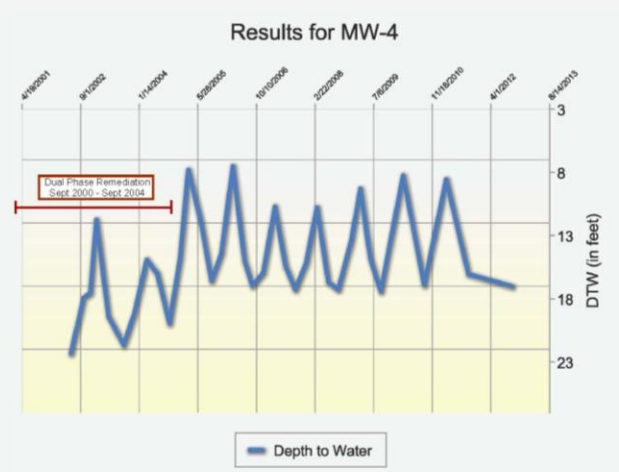

Demonstrates that dry season (September sampling) has higher contaminant concentrations.
Chart 6
TPHg and Benzene Concentration Trends
Well MW-3 (March 1997 to Present)
Well Resurveyed to a different benchmark
DPE Ends (Sept. 2004)
DPE Begins (Oct. 2000)
Concentration (ug/L)
Groundwater Elevation (feet above msl)
1,000,000
100,000
10,000
1,000
100
160
130
100
70
Jan-94
Jan-95
Jan-96
Jan-97
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07
Jan-08
Jan-09
Jan-10
Jan-11
Jan-12
Jan-13
Benzene Concentration
TPHg Concentration
GW Elev

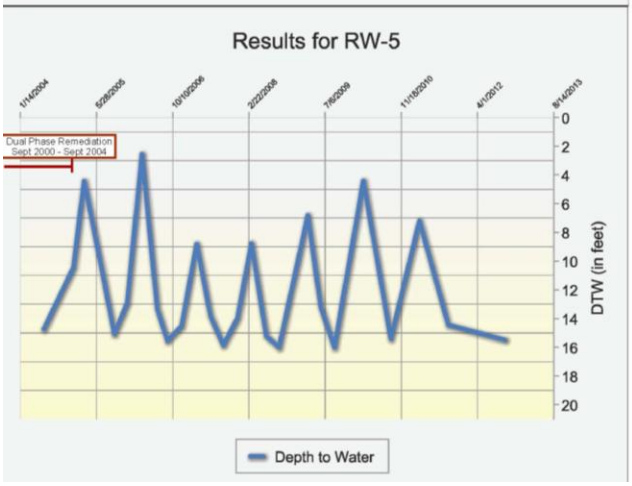

Demonstrates that dry season (September sampling) has higher contaminant concentrations.
Chart 7
TPHg and Benzene Concentration Trends
Well MW-4 (March 1997 to Present)
Well Resurveyed to different benchmark
DPE Ends (Sept. 2004)
DPE Begins (Oct. 2000)
Concentration (ug/L)
Groundwater Elevation (feet above msl)
100,000
10,000
1,000
100
160
130
100
70
Laboratory report indicates TPH-gas results (possibly aged gasoline)
Benzene Concentration
TPHg Concentration
GW Elev

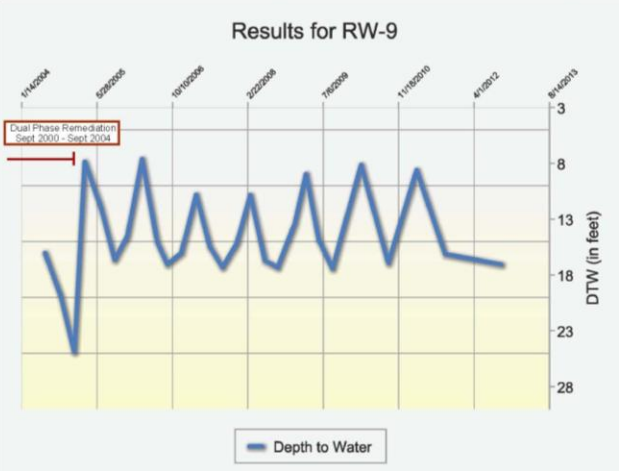

Results for MW-1
Dual Phase Remediation Sept 2000 - Sept 2004
DTW (in feet)
Depth to Water


Results for MW-2
Dual Phase Remediation Sept 2000 - Sept 2004
DTW (in feet)
Depth to Water


Results for MW-3
Dual Phase Remediation Sept 2000 - Sept 2004
DTW (in feet)
Depth to Water


Results for MW-4
Dual Phase Remediation Sept 2000 - Sept 2004
DTW (in feet)
Depth to Water


Results for RW-5
Dual Phase Remediation Sept 2000 - Sept 2004
DTW (in feet)
Depth to Water


Results for RW-9
Dual Phase Remediation Sept 2000 - Sept 2004
DTW (in feet)
Depth to Water

The data suggests:

- Seasonal fluctuations in groundwater generally fall between 8-18 feet (see Chart 3). Note MW-1 and MW-2 have casing stick-up above ground surface. Gradient is approximately 0.009 ft/ft (approximately 1 foot of groundwater drop for 111 feet of lateral run) towards the west
- Increasing benzene concentrations in wells MW-1 through -4 since 2009, and a steady decrease in TPH-gasoline concentrations since Site monitoring began
- An inverse relationship between groundwater levels and contaminant concentrations. Groundwater concentrations are most significantly elevated when water levels are at their lowest point (i.e., September/October)

In summary, the post-remediation set of groundwater test results (wells and groundwater grab samples) indicate:

- A thin plume of MTBE extends off-site to the second transect (330 feet)
- The low concentrations detected in to the second transect suggest the downgradient limit of the MTBE plume is in close proximity
- An increase in benzene concentrations observed for wells MW-1 through MW-4 since early 2009 indicates the potential influx of confirmed upgradient off-site dissolved hydrocarbon plumes, which have been confirmed during the recent *Data Gap Assessment.* The upward trends may also be the result of post remediation rebound, lateral transport of source-zone mass (residual fuel release contaminants), or a combination of the two.
- The lack of TPH-gasoline and benzene detections in the second transect indicates that TPH-gasoline and constituent compounds are attenuated and limited to a distance between the two transects (i.e., approximately 200-225 ft from the Site).

Soil Gas: The completed set of soil gas test results generated during two mobilizations (on-site, off-site) indicate that elevated soil gas concentrations persist on-site, 7 years after the Dual Phase Extraction system was decommissioned.

Tier 1 Shallow Soil Gas Human Health Screening Levels for Vapor Intrusion

(Concentrations in ug/m^3)

Chemical of Concern	Land Use	
	Residential	Commercial
TPH-gas TPH-diesel	Not Established	
Benzene	36.2	122
Toluene	135,000	378,000
Ethylbenzene	Not Established	
Xylenes	31,500	87,900
MTBE	4,000	13,400

- Reference: *California Human Health Screening Levels*[13] *for Indoor air and soil gas (CHHSLs)* (January 2005). Soil gas screening levels are based on soil gas data collected five feet below a building foundation or the ground surface. Intended for evaluation of potential vapor intrusion into buildings and subsequent impacts to indoor-air. For sites with significant areas of VOC-impacted soil or sites that overlie plumes of VOC-impacted groundwater.

Benzene concentrations slightly exceeded the Tier 1 threshold limits in three of the six property boundary locations (SV-2, -4, & -5); no other volatile compound thresholds were exceeded. The lack of soil gas detections in any of the off-site samples indicates that dissolved plume off-gassing is not a risk at distances of 150 ft from the site.

Dominant Fate and Transport Characteristics

The dominant fate and transport characteristics of hydrocarbons released at the Site are that they drain by gravity through the low-to-moderately permeable soil matrix to groundwater. During this process a portion of the hydrocarbon mass is adsorbed onto soil particles in the unsaturated zone.

Hydrocarbons reached the saturated zone in sufficient quantity to form a sheen on top of the first encountered groundwater beneath the Site. No measurable free product has been documented during over 65 monitoring events, although sheen was observed in all 6 wells in the monitoring network.

In the saturated zone at this Site hydrocarbons have been transported by groundwater through advective and dispersive processes in the general downgradient direction (west). Off-site

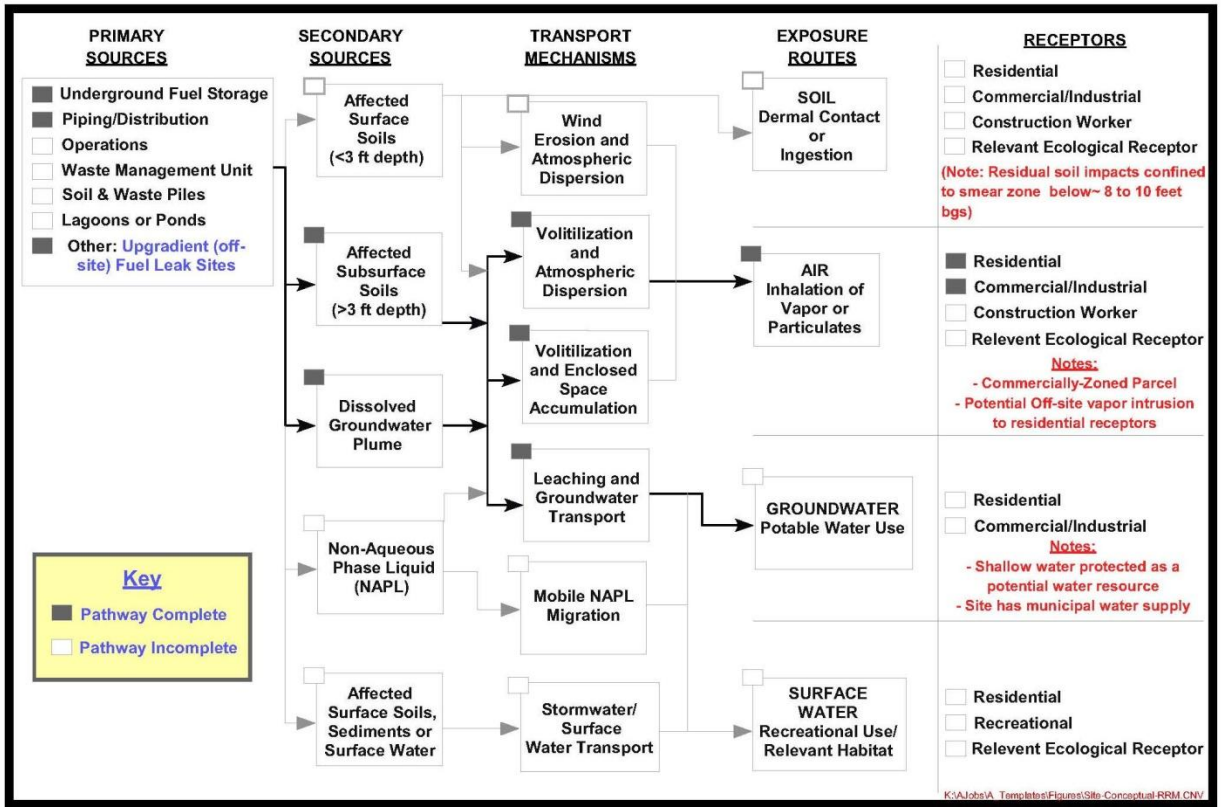
[13]: *California Human Health Screening Levels for indoor air and soil gas (CHHSLs): The California Human Health Screening Levels are concentrations of 54 Hazardous Chemicals in soil or soil gas that the California Environmental Protection Agency (Cal/EPA) considers to be below thresholds of concern for risks to human health. The CHHSLs were developed by the Office of Environmental Health Hazard Assessment (OEHHA) on behalf of Cal/EPA.*

characterization drilling and sampling results suggest that a thin plume of MTBE extends from the Site to the second transect (330 feet); however, the low concentrations detected in the downgradient grab sample borings suggest the downgradient limit of the MTBE plume is in close proximity to the Phase II transect borings. The lack of TPH-gasoline and benzene detections in the second transect indicates that TPH-gasoline and constituent compounds are attenuated and limited to a distance between the two transects (approximately 200-225 ft from the Site). The truncated plume indicates natural attenuation processes are at equilibrium with dissolved contaminant flux at the periphery of the plume. Natural attenuation, combined with source removal of the leaking USTs/infrastructure, and four years of vapor and groundwater extraction appear to limit the advective and dispersive transport of hydrocarbons by groundwater.

When a volatile organic compound, such as gasoline's constituent compound benzene, is released to the environment, it will partition into different phases. It can: 1) be adsorbed onto soil particles, 2) be dispersed into soil vapor, 3) remain as free phase gasoline in soil interstices or floating on groundwater (this is known as "light non-aqueous phase liquid", or free product/sheen), and 4) be dissolved into groundwater. Gasoline/VOCs will reach a dynamic equilibrium between these phases, all of which have been observed at the Site.

Potential Exposure Pathways

Currently there are no buildings present on the property and groundwater is not being used for drinking water. The potential exposure pathways (the ways humans or the environment may be exposed to the hydrocarbons that have been released at the Site) are presented graphically in the flow-chart presented below.



A limited risk remains associated with on-site vapor intrusion (residual soil gas) if the Site is developed without vapor intrusion mitigations / institutional controls. There is a risk of off-site soil vapor intrusion to downgradient residences. A description of potential exposure pathways follows:

- Recent shallow soil sampling was completed to confirm post remediation concentrations in shallow soils (< 10 feet bgs) at worst case locations (dispensers, product piping runs) since previously only 2 of 72 on-site shallow soil samples were laboratory-analyzed. Current data coupled with previously collected data indicates that residual soil impacts are limited to depths greater than approximately 8 to 10 feet bgs. It is unlikely that these soils would be encountered during future Site development, unless basements or sub-grade parking were proposed for the Site.

- **Exposure to soil vapors containing hydrocarbons.** The completed soil gas survey indicates the volatile constituent gasoline compound of benzene was detected at concentrations exceeding the Tier 1 threshold limits in three of the six property boundary locations (SV-4, -5, & -6). No other volatile compound thresholds were exceeded. The lack of soil gas detections in any of the off-site samples indicates that dissolved plume off-gassing is not a risk at distances of 150 feet from the Site. Elevated grab groundwater concentrations of benzene (specifically B-16) coupled with benzene soil gas

concentrations detected in SV-4, -5, and -6 indicate that there is a potential soil vapor intrusion risk to residences immediately adjacent to the west-southwest of the Site

- **Ingesting (drinking) hydrocarbon contaminated groundwater.** This exposure pathway is incomplete – a previously completed 2,000-ft radius well survey investigation determined there are no drinking water wells screened within or near the dissolved hydrocarbon plume.

- Groundwater quality is considered a sensitive receptor that must be protected from degradation by hydrocarbons (all State groundwaters are considered a potential water supply resource). Active remediation of groundwater impacted by hydrocarbons was undertaken with the goal of removing hydrocarbons to a point where natural processes will restore groundwater quality to what it was prior to degradation by hydrocarbons.

Potential Sensitive Receptors

A 2,000-ft radius, sensitive receptor survey was completed in 2006 (Cambria, 2006), which researched potential supply wells, schools, churches, hospitals, and known daycare facilities within the target radius. The survey concluded that within the target radius, no water supply wells existed and the residual dissolved gasoline plume was not likely to impact the three identified irrigation wells, the closest well being 750 feet away in a sidegradient direction (north). Additionally, none of the other potential sensitive receptors (schools, churches, rec-parks) are located downgradient of the plume footprint, and therefore are unlikely to be impacted by the dissolved plume.

The nearest surface water body is west-flowing Peralta Creek, located approximately 600-ft northwest of the site (see Figure 1). It is highly unlikely that dissolved gasoline plume compounds could reach Peralta Creek based on distance, attenuated plume limits (approximately 300 ft), and the low transmissivity of site soils.

Potential sensitive receptors that may be exposed to hydrocarbons from the release at the Site include Site users and groundwater as a potential drinking water resource. The release poses no immediate threats to site users because the Site remains undeveloped. Though groundwater is degraded by hydrocarbons at the Site, there is no complete pathway for drinking water ingestion as there are no water supply wells in the immediate vicinity of the Site.

Data Gaps

1) **The mass of petroleum hydrocarbon contamination originating from the identified upgradient sources remains a significant data gap and the *Site Conceptual Model* is currently incomplete.** At present, a cost effective *Corrective Action Plan* cannot be completed for the Site until upgradient responsible parties have been identified and these upgradient releases have been fully defined. The long term influx of dissolved contamination

onto the subject Site has likely affected the efficiency of previous remedial system operation and will affect the selection of future remedial options.

2) The downgradient extent of dissolved gasoline plume has been reasonably defined using GeoProbe grab groundwater samples approximately 200-255 feet off-site.

3) Soil results obtained from the current *Data Gap Assessment* revealed that:

   - TPH-gas concentrations outside the influence of the previous dual phase extraction system have not significantly attenuated since the investigation began over 20 years ago; however, benzene appears to have decrease by several orders of magnitude during this time period, likely due to a combination of natural attenuation coupled with four years of active soil remediation.

   - The unifying theme between current and historical soil analytical data collected at the Site is that soil impacts are generally encountered at depths of greater than 10 feet bgs and attenuate at depths of approximately 20 to 23 feet bgs. This impacted soil zone corresponds with seasonal groundwater fluctuations measured to be approximately 8 to 18 feet bgs. This indicates that the mechanism for persistent residual soil impacts detected within this approximate 10 foot zone at and downgradient of the Site is via groundwater transport as smear zone contamination. Therefore, off-site plume migration to the Site is also contributing to the observed smear zone soil impacts.

   - Shallow soil samples collected at depths of 4 and 8 feet bgs at several impacted on-site locations generally revealed non-detectable concentrations of hydrocarbons.

Based on the results of the current *Data Gap Assessment,* construction worker *direct exposure to soil* as pathway for Site risk does not appear to be complete as residual soil impacts are encountered at depths greater than approximately 10 feet bgs. Direct exposure to residual, deeper soil contamination (i.e., greater than 10 feet bgs) is present, and would be limited to deep construction excavation (i.e., sub-grade parking garage or basement construction).

A significant effort and expense has been made to remove residual gasoline contaminants from the Site subsurface. Despite the removal of approximately 6,500 lbs of gasoline in soil-gas and in groundwater during four years of Dual Phase Extraction, residual constituent concentrations still significantly exceed regulatory threshold limits. Residual gasoline contamination remains trapped within the seasonally-submerged, smear zone where vertically fluctuating and laterally migrating groundwater has impacted low-permeability soils, primarily at depths between 11 to 20 feet (groundwater seasonally fluctuates between approximately 8-18 feet bgs).

The lack of success with the Dual Phase Extraction remediation technology appears to be due to: 1) its inability to effectively pull residual fuel contamination sorbed within low permeability

soils, and 2) ongoing contribution from apparent upgradient sources (the *abandoned* Texaco station across School Street and the active QuikStop station across 35th Avenue).

At this time it appears that a *Joint Corrective Action* through the State Water Resources Control Boards' *Commingled Plume Account* will likely be the most cost effective approach in reducing groundwater impacts in this area. However, as it will likely take months, if not years for upgradient responsible parties to be identified and the necessary upgradient soil and groundwater assessments to be completed, a cost effective *Joint Corrective Action Plan* could potentially be years away. It is our opinion that the best current approach for: 1) reducing residual on-site soil impacts, and 2) reducing off-site plume migration downgradient of the Site will be to complete an *Interim Remedial Action Plan (IRAP)*. The *IRAP* will likely include:

- Targeted mass removal of source contamination (up to ~20 feet bgs) using large-diameter augers/excavation equipment;
- Multiple, high-pressure injections of specialty chemical oxidizers at the downgradient property line as a "barrier treatment", with emphasis on getting the oxidizer in contact (destroying) with the thin water bearing zone and smear zone contamination

An effort should be made to select a remedial option that can be incorporated with development plans for the Site, if desired. The property has remained undeveloped for over 20 years and previous efforts to develop the Site have been sidetracked out of fear of contaminant liability and risk. *Interim Remedial Action* and future *Joint Corrective Action* should be able to be completed in conjunction with redevelopment, if desired, in order to prevent loss of local property values and to prevent Brownfield blight.

APPENDIX B

Field Documentation

Driven Probe Soil and Grab Groundwater Sampling

- *Field Methodology for Hydraulic Driven Probes*
- *Geologic Logs for Soil Borings*
- *Field Notes*

Well Installation, Well Development & Post-Development Sampling

- *Field Methodology for Hollow Stem Auger Drilling & Well Installation*
- *Field Notes & Field Data Sheets*
- *DWR Well Completion Reports*

Approved Permits

Project Photo Sheets

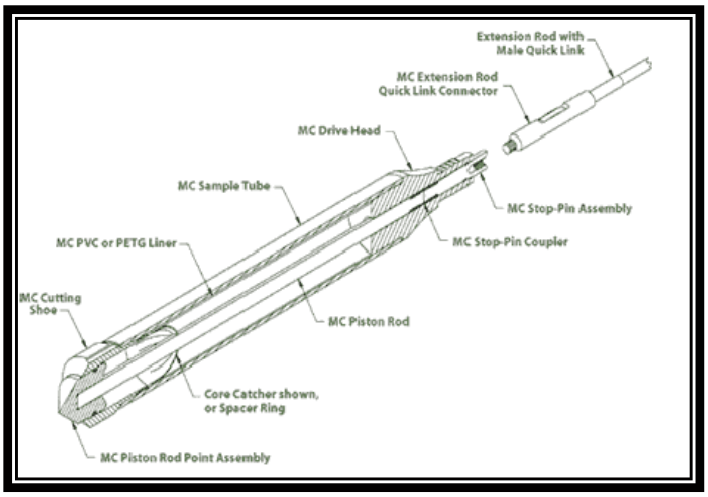
Professional Well Survey

Waste Disposal Documentation

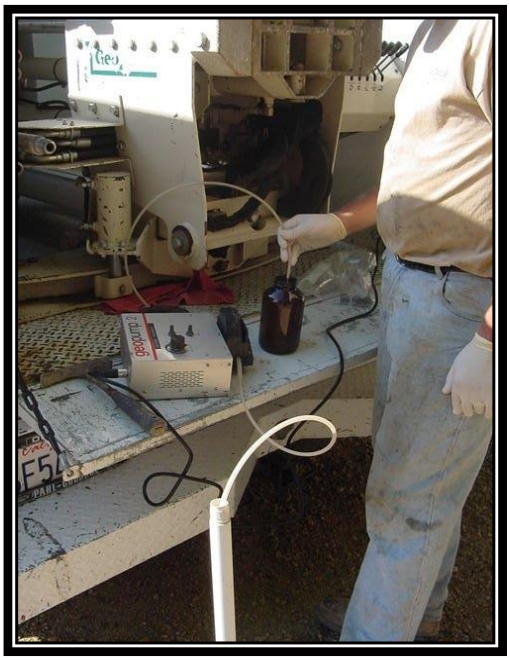
Driven Probe Soil and Grab Groundwater Sampling

Standard Field Methodology for Hydraulic Driven Probes

Using Macro-Core®, Large Bore® or Dual Tube® Hydraulic Driven Probes



Direct push exploratory borings are "drilled" Geo-Probe rig, which hydraulically drives and vibrates steel probes into the soil. No drill cuttings are produced. This sampling technology has the ability for either continuous or discrete sampling using a 4-foot long nickel-plated sampling probes fitted with clear acetate liners. During coring operations, the sampler remains open as it is driven into undisturbed soil over its entire 4-foot sampling interval. After drilling, all exploratory boreholes are grouted according to county regulations.



The soil cores are logged by an experienced geologist using the Unified Soil Classification System (USCS), noting in particular, the lithology of the soils, moisture content, and any unusual odor or discoloration. Relatively undisturbed soil samples are obtained for both lithologic logging and laboratory analysis. A portion of individual soil cores are stored in a sealed plastic bags for field screening of hydrocarbons and/or volatile organic compounds by an Organic Vapor Analyzer (Photoionization Detector, PID). Vapor readings in parts per million (ppm) are recorded on the boring logs. The PID is also used during drilling for monitoring the work area for site safety.

All drilling equipment is steam cleaned prior to arriving on-site to prevent possible transfer of contamination from another site. The sampling probe and all other soil sampling equipment are thoroughly cleaned between each sampling event by washing in a Liqui-Nox or Alconox solution followed by a double rinsing with distilled water to prevent the transfer of contamination.

Samples Targeted for Laboratory Analysis: Soil samples targeted for laboratory analysis are immediately protected at both ends with Teflon tape, sealed with non-reactive caps, taped, labeled, and immediately stored in an insulated container cooled with blue ice. A portion of the soil is placed in a ZipLock Bag and the soil gas is measured using the PID. Groundwater samples are collected after temporary casing is placed in the hole and at least one borehole volume has been purged. Relatively representative groundwater samples are collected with individual disposable acrylic bailers, peristaltic pump and dedicated tubing, or ball and check valve with dedicated tubing and dispensed directly into containers specifically prepared for the analyses. Once collected, groundwater samples are immediately placed in ice chests cooled with blue ice. Soil and groundwater samples are then transported to a State-certified laboratory under appropriate chain-of-custody documents.

Geologic Symbols and Terms

	Major Divisions	Symbols	Descriptions
Coarse Grained Soils	Gravels (More than 1/2 of coarse fraction > no. 4 sieve size)	GW	Well Graded Gravels, little or no fines
		GP	Poorly Graded Gravels, little or no fines
		GM	Silty Gravels, gravel-silt mixtures
		GC	Clayey Gravels, gravel-clay mixtures
	Sands (More than 1/2 of coarse fraction < no. 4 sieve size)	SW	Well Graded Sand, little to no fines
		SP	Poorly Graded Sand
		SM	Silty Sand, sand-silt mixtures
		SC	Clayey Sand, sand-clay mixtures
Fine Grained Soils	Silts and Clays Liquid Limit < 50%	ML	Silt or Very Fine Sands, rock flour, with slight plasticity
		CL	Inorganic Clay with high plasticity, lean clay
	Silts and Clays Liquid Limit > 50%	MH	Inorganic Sandy Clay or Silt, elastic silts
		CH	Inorganic Sandy Clay or Silt, with high plasticity, fat clays

Symbols and Terms

- First encountered groundwater
- Stabilized groundwater
- Sample interval
- Soil sample sent to laboratory for targeted analysis
- Water sample sent to laboratory for targeted analysis

Trace = < 5%
Few = 5 - 10%
Little = 15 - 20%
Some = 30 - 45%
Dominantly = > 50%

SOIL DENSITY/CONSISTENCY			
SANDS & GRAVELS	BLOWS/FT.	SILTS & CLAYS	BLOWS/FT.
VERY LOOSE	0 - 4	VERY SOFT	0 - 2
LOOSE	4 - 10	SOFT	2 - 4
MED. DENSE	10 - 30	FIRM	4 - 8
DENSE	30 - 50	STIFF	8 - 16
VERY DENSE	> 50	VERY STIFF	16 - 32
		HARD	> 32

Blow count is the number of blows required to drive a 2-inch diameter California Modified Split-Spoon Sampler the last 12 inches of an 18 inch sample interval by a 140-pound hammer free-falling 30 inches.

Well Construction Details:

- Bentonite Seal
- Cement Seal
- Filter Pack
- Screened Interval

ags = above ground surface bgs = below ground surface
PID = Photo-Ionization Detector ppmv = parts per million by volume
USCS = Unified Soil Classification System

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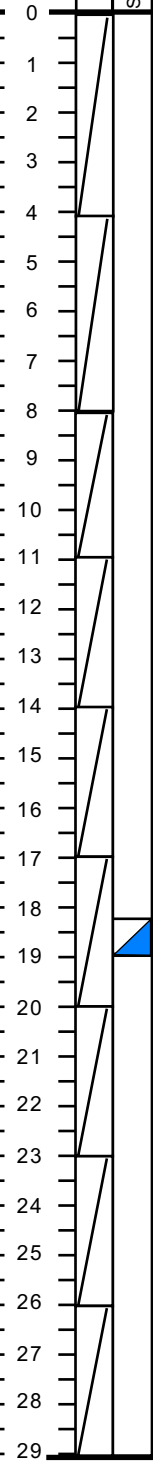
GEOLOGIC LOG

Hydraulic Driven Geo-Probe Boring

JOB NO.: 2X103.B DATE: May 8, 2012
CLIENT: Golden Empire Properties Inc.
LOCATION: 3055 35th Avenue, Oakland, CA
LOGGED BY: J. Chaney, PG #8452
DRILLER: ECA - Jeff Edmond
DRILL METHOD: Hydraulic Driven MacroCore Probes

BORING # **DP-1**

Sheet 1 of 1



USCS symbol	SOIL DESCRIPTION & CLASSIFICATION (Lithologic name, color, moisture, density/consistency, grain size%, other descriptors, HC odor.)
--	**Asphalt** - ~6-inchs thick underlain with road base
SC	**Clayey SAND**, very dark brown (10YR 2/2), damp to moist, appears medium dense, slightly plastic, 60-70% fine to medium sand, trace coarse sand, trace localized fine gravel, 30-40% clay fines, trace odor, no discoloration. Gradational contact.
CL/GP/ SW-ML	**Clayey Gravelly Well Graded SAND w/ Silt**, dominantly olive brown (2.5Y 4/4), dry to damp, appears medium dense, 30-40% fine to medium sand, up to 10% coarse sand, 20-25% fine to medium subangular gravels, 15-20% clay fines, up to 10-15% silt fines, trace odor, no apparent discoloration. - Gradational contact.
SP/CL-GP	**Sandy Lean Clay w/ Gravel**, dark yellowish brown (10YR 4/4) , dry to slightly damp, very stiff to hard, dominantly clay fines, 25-30% fine to medium sand, some coarse sand, 10-15% fine subangular to subrounded gravels, low odor, no discoloration. - Low to moderate odor. - Gradational contact.
CL/GP/ SW	**Clayey Gravelly Well Graded SAND**, dominantly olive brown (2.5Y 4/4), dry to damp, appears dense to locally very dense, 30-40% fine to medium sand, up to 15% coarse sand, 20-30% fine to coarse subangular gravels, 20-25% clay fines, low to moderate odor, no apparent discoloration. - Gradational contact.
SP/GP/ CL	**Sandy Gravelly Lean CLAY**, dark yellowish brown (10YR 4/4) , dry to slightly damp, very stiff to hard, dominantly clay fines, 20-25% fine to medium sand, trace coarse sand, 30-35% fine subrounded gravels, low odor, no discoloration. - Gravel content decreasing to ~10-15% - Trace to no odor. - No apparent odor. - Gradational contact.
SW/SP-GP	**Clayey Well Graded SAND w/ Gravel**, dominantly dark yellowish brown (10YR 4/4), very moist to wet between gravel clasts and sand/clay matrix, appears medium dense to dense, 50-60% fine to medium sand, up to 10% coarse sand, 10-15 fine to medium subangular gravels, 15-20% clay fines, no odor, no apparent discoloration. Gradational contact
GP/SC	**Gravelly Sandy Lean CLAY**, dark yellowish brown (10YR 4/4), dry to slightly damp, very stiff to hard, dominantly clay fines, 30-35% fine to medium sand, trace coarse sand, 20-25% fine subrounded gravels, no odor, no discoloration.

AJOB\2X103\FIGURES\LOGS\DP-1.CNV

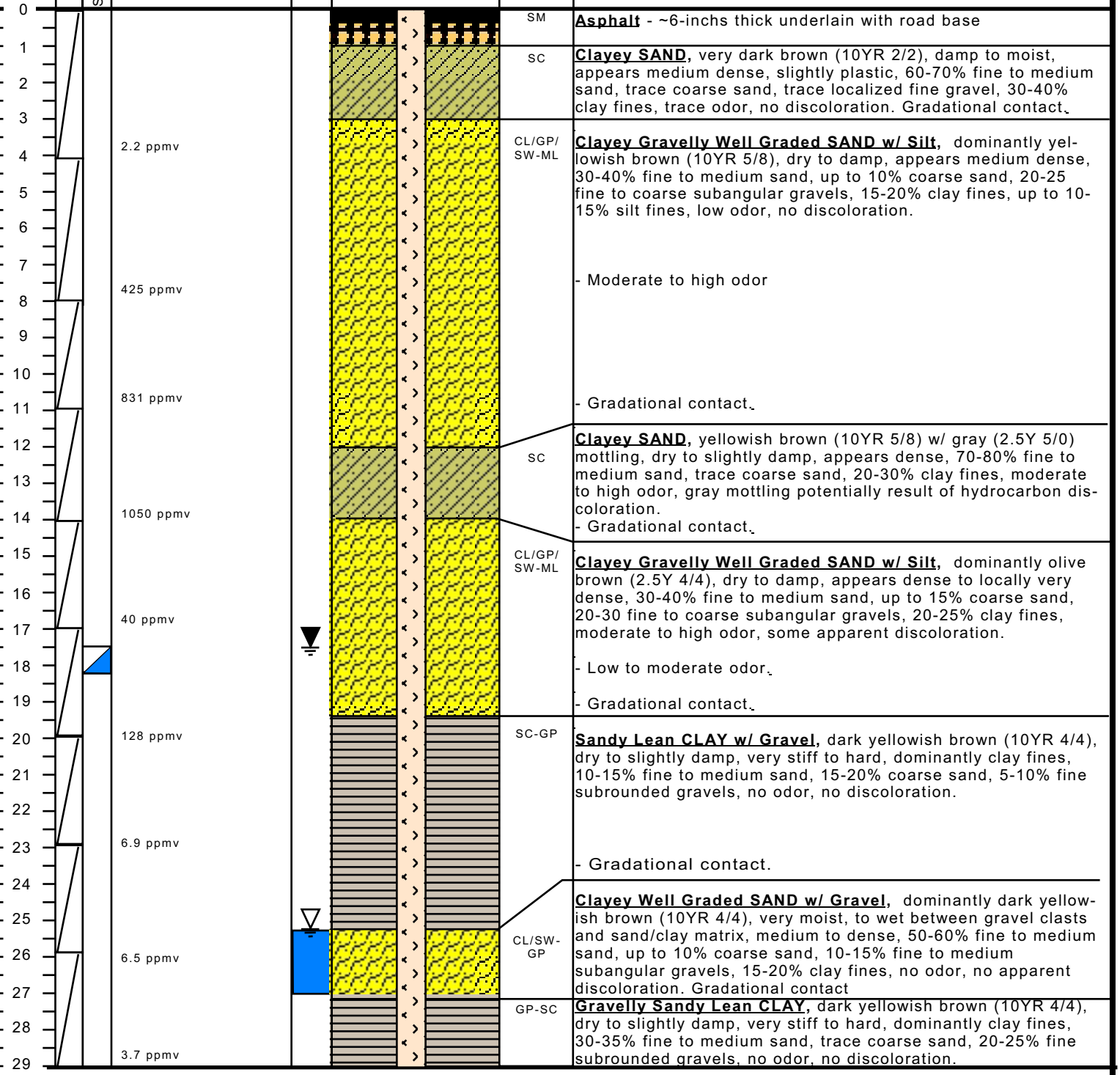
GEOLOGIC LOG

Hydraulic Driven Geo-Probe Boring

JOB NO.: 2X103.B DATE: May 9, 2012
CLIENT: Golden Empire Properties Inc.
LOCATION: 3055 35th Avenue, Oakland, CA
LOGGED BY: J. Chaney, PG #8452
DRILLER: ECA - Jeff Edmond
DRILL METHOD: Hydraulic Driven MacroCore Probes

BORING # **DP-2**

Sheet 1 of 1



AJOB\2X103\FIGURES\LOGS\DP-2.CNV

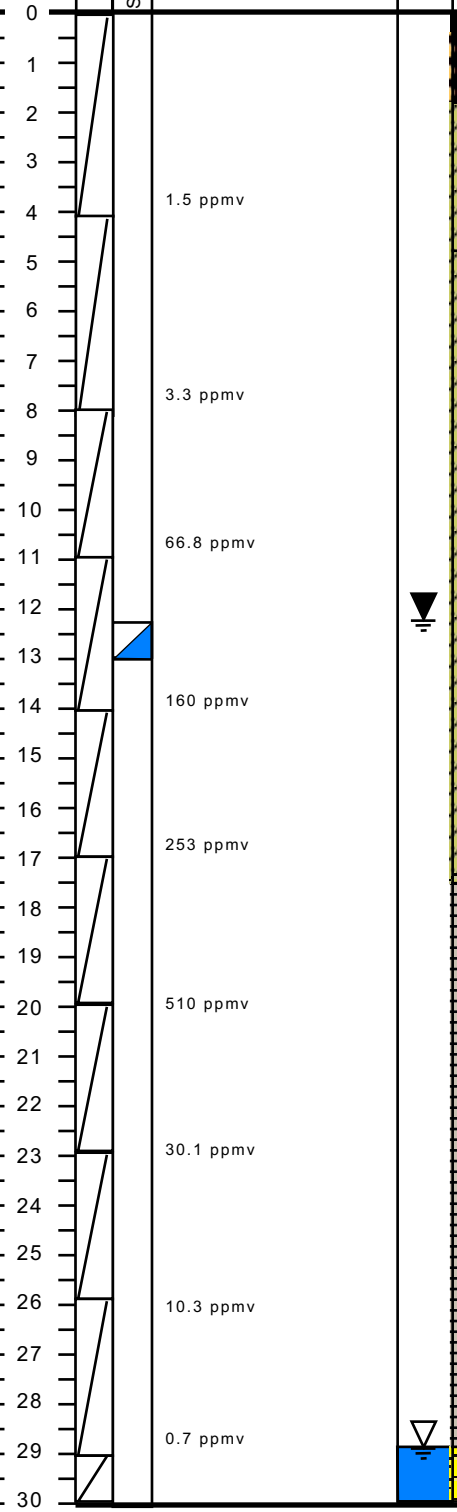
GEOLOGIC LOG

Hydraulic Driven Geo-Probe Boring

JOB NO.: 2X103.B DATE: May 9, 2012
CLIENT: Golden Empire Properties Inc.
LOCATION: 3055 35th Avenue, Oakland, CA
LOGGED BY: J. Chaney, PG #8452
DRILLER: ECA - Jeff Edmond
DRILL METHOD: Hydraulic Driven MacroCore Probes

BORING # **DP-3**

Sheet 1 of 1



USCS symbol	SOIL DESCRIPTION & CLASSIFICATION (Lithologic name, color, moisture, density/consistency, grain size%, other descriptors, HC odor.)
SM	**Asphalt** - ~6-inchs thick underlain with road base
SC	**Clayey SAND,** yellowish brown (10YR 5/8), w/ gray (2.5Y 5/0) mottling, dry to damp, appears medium dense, 60-70% fine to medium sand, trace coarse sand, trace localized fine gravel, 30-40% clay fines, trace odor, no discoloration.
	- Gradational contact
SC-GP	**Clayey SAND w/ Gravel ,** yellowish brown (10YR 5/8), w/ gray (2.5Y 5/0) mottling, dry to damp, appears medium dense, 50-60% fine to medium sand, trace coarse sand, 10-15% fine gravel, 30-40% clay fines, no odor, no discoloration.
	- Low to moderate level hydrocarbon odor encountered below 10.5 feet bgs - Color changes to dominantly dark yellowish brown (10YR 4/4) otherwise same as above.
	- Moderate to high odor encountered at 12.5 feet bgs, coarse sand content increasing up to 20-30%.
	- Same as above.
	- Gradational contact.
SP/GP/ CL	**Sandy Gravelly Lean CLAY,** dark yellowish brown (10YR 4/4) , dry to slightly damp, very stiff to hard, dominantly clay fines, 20-25% fine to medium sand, trace coarse sand, 30-35% fine subrounded gravels, moderate to high odor, no discoloration.
	- Gravel content decreasing to <10%.
	- Trace to no odor below ~21 feet bgs.
	- Gravelly lens <1 foot thick from ~25-26 feet bgs. - Gradational contact.
SC/SW-GP	**Clayey Well Graded SAND w/ Gravel,** dominantly dark yellowish brown (10YR 4/4), very moist, wet to saturated, appears medium dense to dense, 50-60% fine to medium sand, up to 10% coarse sand, 10-15 fine to medium subangular gravels, 15-20% clay fines, no odor, no apparent discoloration.
GP-SC	**Gravelly Sandy Lean CLAY (30-32 feet),** dark yellowish brown (10YR 4/4) , dry to slightly damp, very stiff to hard, dominantly clay fines, 30-35% fine to medium sand, trace coarse sand, 20% fine subrounded gravels, no odor, no discoloration.

AJOB\2X103\FIGURES\LOGS\DP-3.CNV

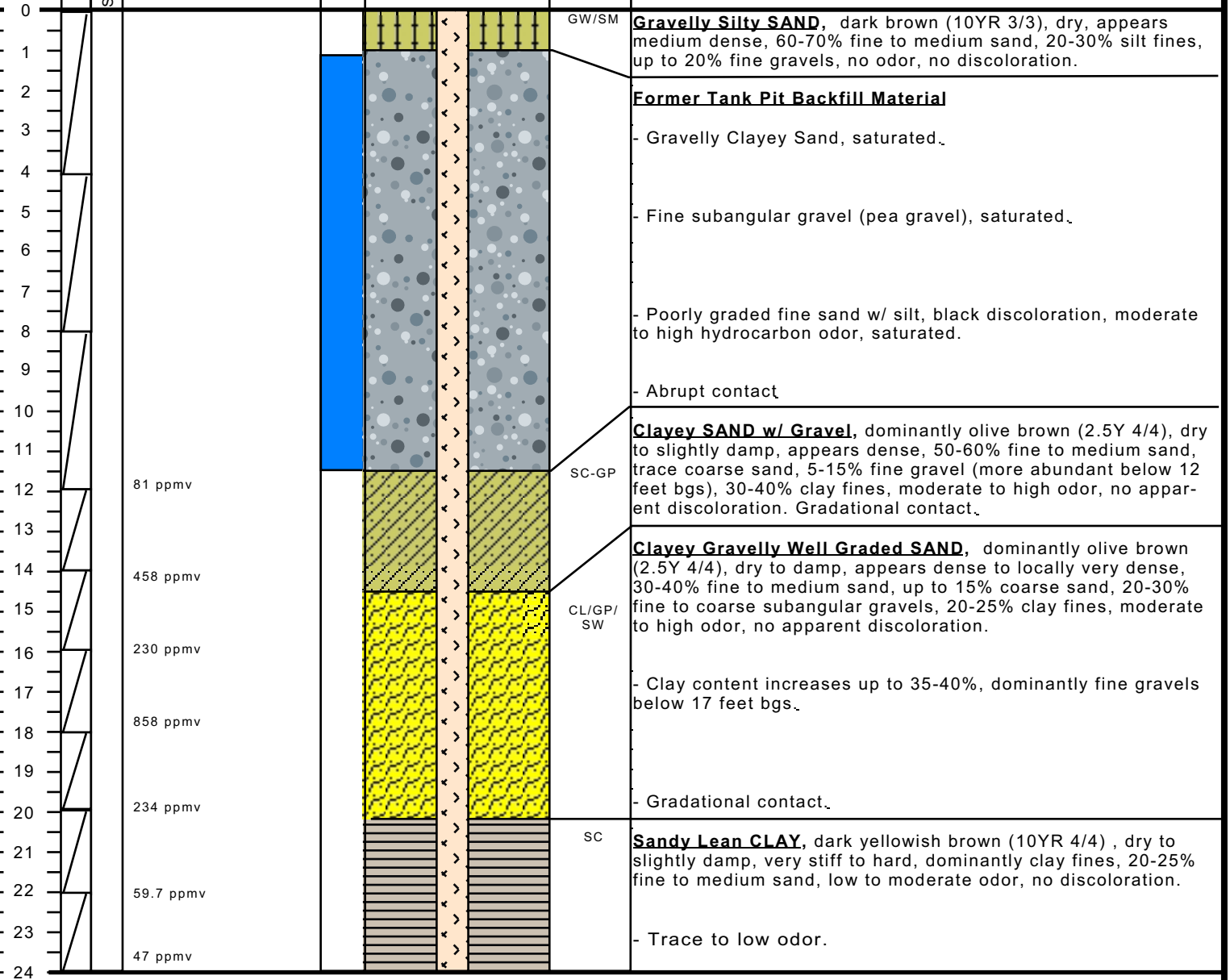
GEOLOGIC LOG

Hydraulic Driven Geo-Probe Boring

JOB NO.: 2X103.B DATE: May 9, 2012
CLIENT: Golden Empire Properties Inc.
LOCATION: 3055 35th Avenue, Oakland, CA
LOGGED BY: J. Chaney, PG #8452
DRILLER: ECA - Jeff Edmond
DRILL METHOD: Hydraulic Driven Dual Wall Probes

BORING # **DP-4**

Sheet 1 of 1



AJOB\2X103\FIGURES\LOGS\DP-4.CNV

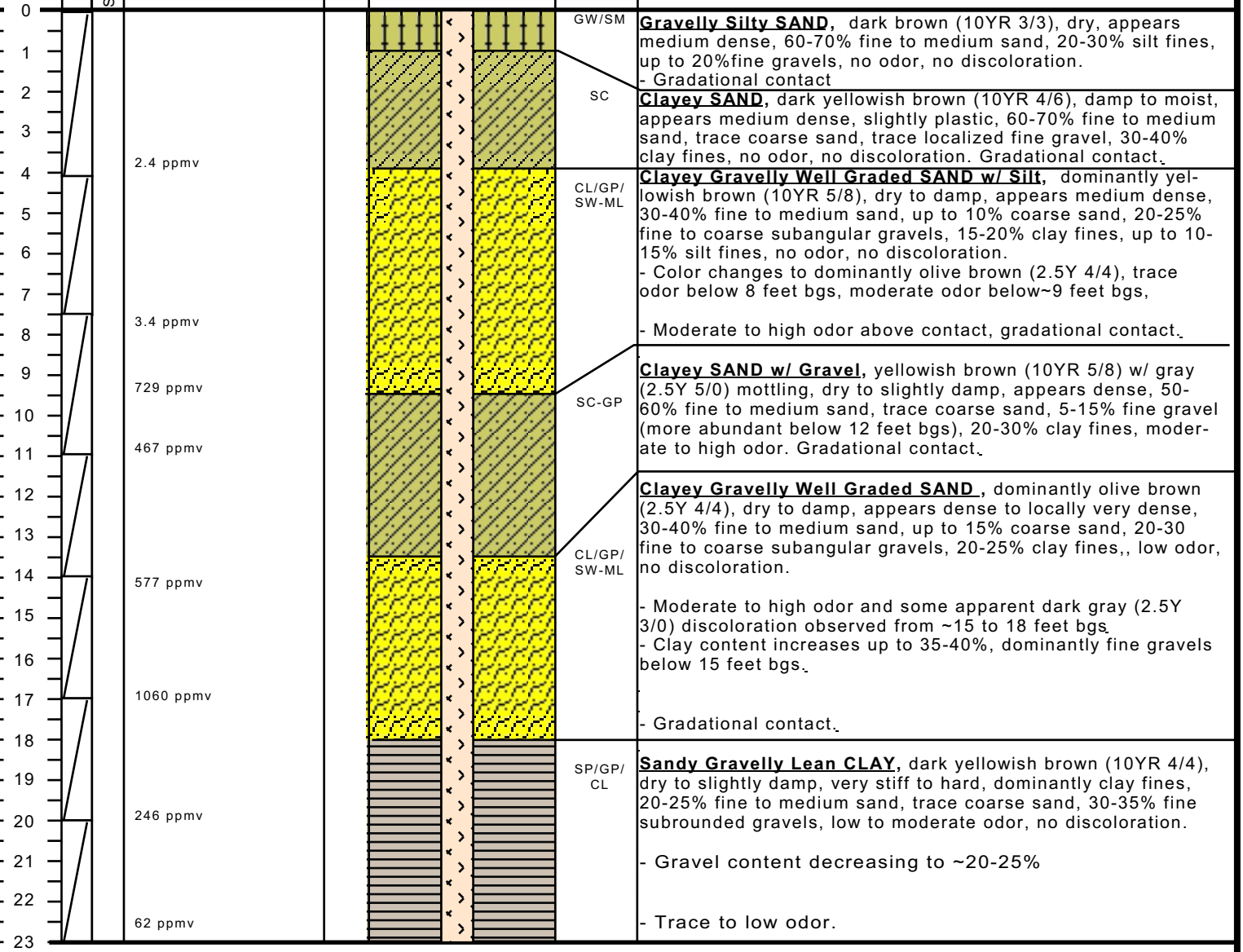
GEOLOGIC LOG

Hydraulic Driven Geo-Probe Boring

JOB NO.: 2X103.B DATE: May 8, 2012
CLIENT: Golden Empire Properties Inc.
LOCATION: 3055 35th Avenue, Oakland, CA
LOGGED BY: J. Chaney, PG #8452
DRILLER: ECA - Jeff Edmond
DRILL METHOD: Hydraulic Driven MacroCore Probes

BORING # **DP-5**

Sheet 1 of 1



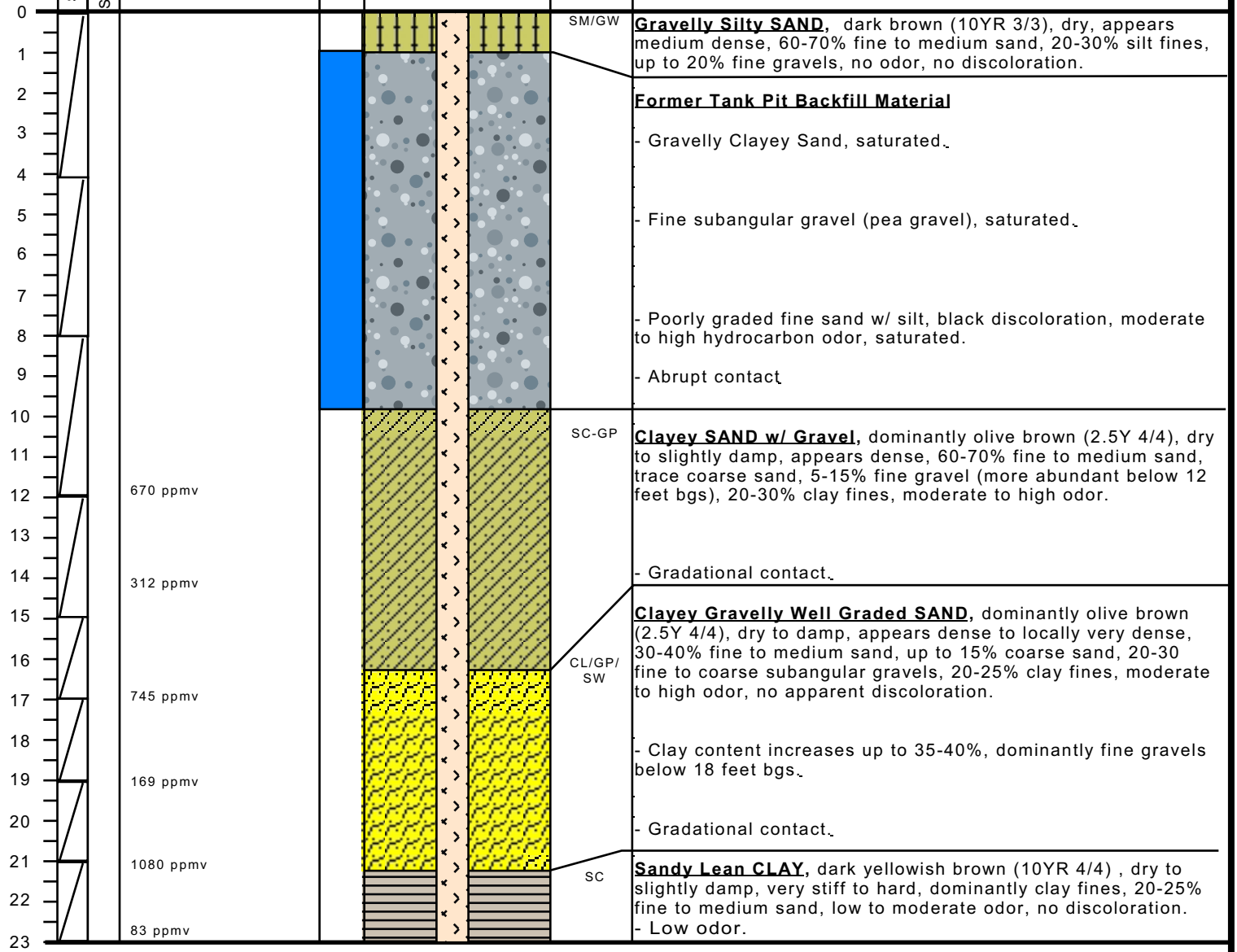
AJOB\2X103\FIGURES\LOGS\DP-5.CNV

GEOLOGIC LOG

Hydraulic Driven Geo-Probe Boring

JOB NO.: 2X103.B DATE: May 8 & 9, 2012
CLIENT: Golden Empire Properties Inc.
LOCATION: 3055 35th Avenue, Oakland, CA
LOGGED BY: J. Chaney, PG #8452
DRILLER: ECA - Jeff Edmond
DRILL METHOD: Hydraulic Driven Dual Wall Probes

BORING # **DP-6**
Sheet 1 of 1



AJOB\2X103\FIGURES\LOGS\DP-6.CNV

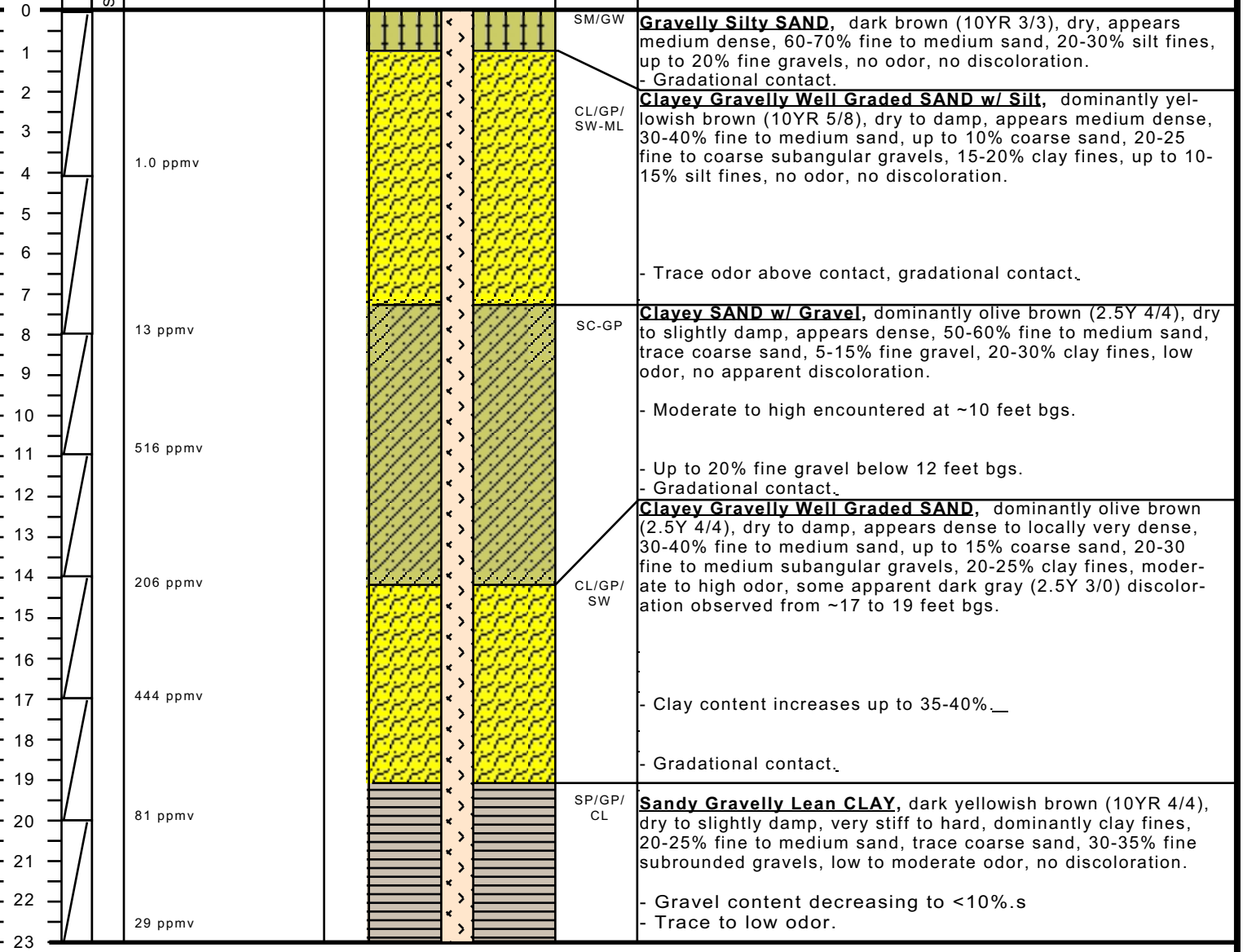
GEOLOGIC LOG

Hydraulic Driven Geo-Probe Boring

JOB NO.: 2X103.B DATE: May 9, 2012
CLIENT: Golden Empire Properties Inc.
LOCATION: 3055 35th Avenue, Oakland, CA
LOGGED BY: J. Chaney, PG #8452
DRILLER: ECA - Jeff Edmond
DRILL METHOD: Hydraulic Driven MacroCore Probes

BORING # **DP-7**

Sheet 1 of 1



AJOB\2X103\FIGURES\LOGS\DP-7.CNV

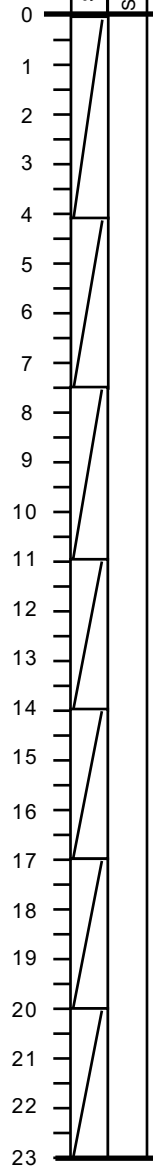
GEOLOGIC LOG

Hydraulic Driven Geo-Probe Boring

JOB NO.: 2X103.B DATE: May 8, 2012
CLIENT: Golden Empire Properties Inc.
LOCATION: 3055 35th Avenue, Oakland, CA
LOGGED BY: J. Chaney, PG #8452
DRILLER: ECA - Jeff Edmond
DRILL METHOD: Hydraulic Driven MacroCore Probes

BORING # **DP-8**

Sheet 1 of 1



Depth (feet)	Sample Identification & Field PID Data (ppmV) Calibrated for TVOC	USCS symbol	SOIL DESCRIPTION & CLASSIFICATION (Lithologic name, color, moisture, density/consistency, grain size%, other descriptors, HC odor.)
0		SM	**Silty SAND**, dark brown (10YR 3/3), damp, appears medium dense, 70-80% fine to medium sand, 20-30% silt fines, trace clay binder, no odor, no discoloration. Gradational contact
1			
2		CL/GP/ SW-ML	**Clayey Gravelly Well Graded SAND w/ Silt**, dominantly yellowish brown (10YR 5/8), dry to damp, appears medium dense, 30-40% fine to medium sand, up to 10% coarse sand, 20-25% fine to coarse subangular gravels, 15-20% clay fines, up to 10-15% silt fines, no odor, no discoloration.
3			
4	0.8 ppmv		
5			- Same as above.
6			
7			- Trace odor above contact, gradational contact.
8	6.3 ppmv		**Clayey SAND**, yellowish brown (10YR 5/8) w/ gray (2.5Y 5/0) mottling, dry to slightly damp, appears dense, 70-80% fine to medium sand, trace coarse sand, trace localized fine gravel, 20-30% clay fines, low to moderate odor potentially associated with gray mottling. Gradational contact.
9	93.3 ppmv	SC	
10			
11	825 ppmv	CL/GP/ SW-ML	**Clayey Gravelly Well Graded SAND**, dominantly olive brown (2.5Y 4/4), dry to damp, appears dense to locally very dense, 30-40% fine to medium sand, up to 15% coarse sand, 20-30 fine to coarse subangular gravels, 20-25% clay fines, moderate to high odor, no discoloration.
12			
13			- Moderate to high odor and some apparent dark gray (2.5Y 3/0) discoloration observed from ~11 to 18.3 feet bgs.
14	289 ppmv		- Clay content increases up to 35%, dominantly fine gravels from ~14.5 to 16.5 feet bgs.
15			
16			- Formation becomes very moist above contact, moderate to high odor.
17	837 ppmv		- Gradational contact.
18		SP/GP/ CL	
19			**Sandy Gravelly Lean CLAY**, dark yellowish brown (10YR 4/4) , dry to slightly damp, very stiff to hard, dominantly clay fines, 20-25% fine to medium sand, trace coarse sand, 30-35% fine subrounded gravels, moderate to high odor, no discoloration.
20	600 ppmv		
21			- No apparent odor below ~21 feet bgs.
22			
23	10.1 ppmv		
24			
25			
26			
27			
28			
29			
30			

AJOB\2X103\FIGURES\LOGS\DP-8.CNV

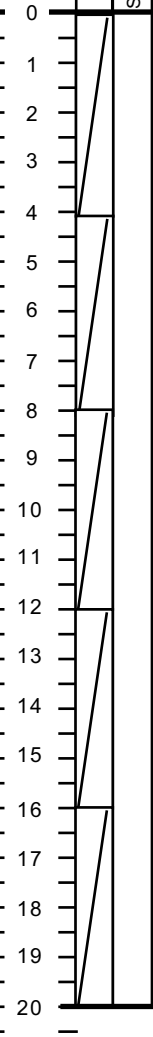
GEOLOGIC LOG

Hydraulic Driven Geo-Probe Boring

JOB NO.: 2X103.B DATE: May 8, 2012
CLIENT: Golden Empire Properties Inc.
LOCATION: 3055 35th Avenue, Oakland, CA
LOGGED BY: J. Chaney, PG #8452
DRILLER: ECA - Jeff Edmond
DRILL METHOD: Hydraulic Driven MacroCore Probes

BORING # **DP-9**

Sheet 1 of 1



Sample Interval	Sample Analyzed	Sample Identification & Field PID Data (ppmV) Calibrated for TVOC	Groundwater Depth	Lithologic Pattern	USCS symbol	SOIL DESCRIPTION & CLASSIFICATION (Lithologic name, color, moisture, density/consistency, grain size%, other descriptors, HC odor.)
					SM	**Silty SAND**, dark brown (10YR 3/3), damp, appears medium dense, 70-80% fine to medium sand, 20-30% silt fines, trace clay binder, no odor, no discoloration. Gradational contact
		0 ppmv			CL/GP/ SW-ML	**Clayey Gravelly Well Graded SAND w/ Silt**, dominantly yellowish brown (10YR 5/8), dry to damp, appears medium dense, 30-40% fine to medium sand, up to 10% coarse sand, 20-25% fine to coarse subangular gravels, 15-20% clay fines, up to 10-15% silt fines, no odor, no discoloration. - Same as above. - Gradational contact.
		0 ppmv				
		1.2 ppmv			SC	**Clayey SAND**, yellowish brown (10YR 5/8) w/ gray (2.5Y 5/0) mottling, dry to slightly damp, appears dense, 70-80% fine to medium sand, trace coarse sand, 20-30% clay fines, trace odor associated with gray mottling. Gradational contact.
		17.3 ppmv			CL/GP/ SW	**Clayey Gravelly Well Graded SAND**, dominantly olive brown (2.5Y 4/4), dry to damp, appears dense to locally very dense, 30-40% fine to medium sand, up to 15% coarse sand, 20-30% fine to coarse subangular gravels, 20-25% clay fines, no odor, no discoloration. - Moderate to high odor and dark gray (2.5Y 3/0) discoloration observed from ~11.5 to 12 feet and ~13 to 18.5 feet bgs. - Formation becomes very moist above contact. - Gradational contact.
		1030 ppmv				
		4000 ppmv			SP/GP/ CL	**Sandy Gravelly Lean CLAY**, dark yellowish brown (10YR 4/4) , dry to slightly damp, very stiff to hard, dominantly clay fines, 20-25% fine to medium sand, trace coarse sand, 30-35% fine subrounded gravels, trace to no odor, no discoloration.
		19 ppmv				

AJOB\2X103\FIGURES\LOGS\DP-9.CNV

Weber, Hayes & Associates
Hydrogeology and Environmental Engineering
120 Westgate Dr., Watsonville, CA 95076
(831) 722-3580 (831) 662-3100
Fax: (831) 722-1159

INDICATE ATTACHMENTS THAT APPLY
- ___ Site Map
- ___ Data Sheets
- ___ Geologic Logs
- ___ Photo Sheets
- ___ COC's
- ___ Chargeable Materials

Client: **Golden Empire Properties Inc.**	Date: 5/8/12
Site Location: **3055 35th Avenue, Oakland, CA**	Study #: **2X103.B**
Field Tasks: ☑ Drilling ☑ Sampling ☑ Other (see below): **Soil and Groundwater Data Gap Sampling**	Weather Conditions: Sunny → Warming
Personnel / Company On-Site: **Jered Chaney (Weber, Hayes and Associates: WHA)**	

TIME:

0610	=> Leave Santa Cruz area for Site.
0730	=> Arrive onsite. Prep for drilling.
0740	=> ECA - Jeff Edmond on site ↳ Go over work scope for the day → 6 continuous cores onsite for soil sampling (DP-4 through 9)
0800	=> Stage rig @ DP-9; prep for continuous core.
0820	=> Commence drilling DP-9 - see log for details.
0900	=> ACDW inspector onsite - Vicky Hanlin - Cruz Bros locators onsite → Clear off-site boring DP-1, 2 & 3
0905	=> DP-9 terminated at 20' bgs Discoloration & Moderate to high odor encountered from ~11.5-12' & 13 to 18.5' bgs → Tremi-grout boreh.
0930	ACDW inspector leaves Site
0950	=> Stage rig at DP-8 → Continuous core to ~20'
1000	↳ Commence coring
1030	=> Cruz Bros locating complete. Boring DP-1 & 2 are clear as marked. → Confirm Shell Pipeline at DP-3 ↳ Cruz Bros leaves Site.
1050	=> Terminate boring DP-8 at 23' bgs → Trace to low odor below ~7.5' bgs → Moderate to high odor and some apparent gray discoloration from ~13-18.5' bgs. No observable odor below ~21' bgs ↳ Tremi-grout boring.
1105	=> Stage rig at DP-5
1110	=> Commence drilling.
1240	=> Terminate boring @ 23' bgs → Trace to low odor below ~7.5' → Moderate odor below ~9' bgs → Moderate to high odor below ~9.5' to ~18' → Trace odor below ~21' bgs. ↳ Grout borehole.
1310	=> Commence coring DP-6
1335	=> At 15' bgs in DP-6 → Hammer on Geoprobe rig quit working
	→ Attempt to fix - recharge w/ Nitrogen
1400	→ Still not working.
1430	→ Will bring alternate rig tomorrow to finish job • Clean up & demob.

Signature of Field Personnel & Date

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INDICATE ATTACHMENTS THAT APPLY
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- ___ Chargeable Materials

Client: **Golden Empire Properties Inc.**	Date: 5/9/12
Site Location: **3055 35th Avenue, Oakland, CA**	Study #: **2X103.B**
Field Tasks: ☑ Drilling ☑ Sampling ☑ Other (see below): **Soil and Groundwater Data Gap Sampling**	Weather Conditions: Clear Skies, Working
Personnel / Company On-Site: **Jered Chaney (Weber, Hayes and Associates: WHA)**	

TIME:

0610	⇒ Leave Santa Cruz area for Site.
0730	⇒ Arrive on-site ; Prep for drilling / sampling.
	→ ECA (Jeff) on-site ; ECA (John) on-site w/ Track Rig to replace Jeff's non-functional rig.
	→ Cruz Bros on-site (Traffic Control) → Setting up required traffic control for all borings DP-1, 2, 3
	↳ Cruz Bros will also be pot-holing at DP-3 w/ Shell Pipeline utility standby.
0745	⇒ Stage rig at DP-1
0800	⇒ Commence Drilling (continuous core) at DP-1 ; to ~30' for soil & grab groundwater sampling
0830	⇒ Cruz Bros (Pot-holing crew) on-site ⇒ Prep for ~9:00 AM pot hole at DP-3 location.
0850	⇒ At 29' bgs in DP-1 ; Water bearing zone encountered from ~ 24.2 ~ 27' (Not Fully saturated ; Formation wet between Sand/Clay matrix & gravel clasts
	→ Screen borehole from 19-29' w/ 0.010 slot screen.
0900	⇒ Tag water @ 18.2' bgs
	↳ Purge borehole w/ peristaltic pump & dedicated tubing Attempt to purge one borehole volume (~1 gallon) prior to sampling (Note 0.09 gal/ft in 1.5 inch bore).
0930	⇒ Groundwater sample collection complete → Purge ~2 gallons prior to sampling.
0940	⇒ Stage rig at DP-2 → Continuous core For grab ground water Sampling only.
1030	⇒ At 29' bgs → Limited water bearing zone encountered from ~25.2 - 27' bgs (Same as DP-1)
1055	⇒ Bore hole still dry → leave cased & move on to DP-3 → will come back
	↳ This borehole appears to be significantly impacted - See log for details
	Note: Pot-holing for shell pipeline completed → line exposed ↳ Clear to drill ~ 3.5' away from exposed line.
1110	⇒ Commence coring DP-3
	DP-3 → Low level petroleum odor encountered @ ~10.5' bgs
1225	⇒ At 32' bgs → Saturated zone From ~ 29 - 30' bgs

5/9/12
Signature of Field Personnel & Date

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INDICATE ATTACHMENTS THAT APPLY
- ___ Site Map
- ___ Data Sheets
- ___ Geologic Logs
- ___ Photo Sheets
- ___ COC's
- ___ Chargeable Materials

Client: **Golden Empire Properties Inc.**	Date: 5/9/12
Site Location: **3055 35th Avenue, Oakland, CA**	Study #: **2X103.B**
Field Tasks: ✓ Drilling ✓ Sampling ✓ Other (see below): **Soil and Groundwater Data Gap Sampling**	Weather Conditions: Clear skies - Warm
Personnel / Company On-Site: **Jered Chaney (Weber, Hayes and Associates: WHA)**	

TIME:

1230	⇒ Ground water in DP-3 rose to ~12.3' bgs → Purge ~2 gallons w/ peristaltic pump + dedicated tubing → then collect ground water sample w/ same system.
1245	⇒ Grab ground water sampling complete. → Patch pot-hole location w/ exhumed materials + finish surface w/ quick set concrete to match existing grade. → Seal borehole w/ neat cement grout → patch surface w/ 6" concrete dyed black
1339	⇒ Tag water in DP-2 → 17.5' bgs. → Purge + collect sample using same protocol.
1345	⇒ Sample collection complete → Tremi-grout borehole w/ neat cement patch surface w/ 6" concrete dyed black.
1355	⇒ Stage rig at on-site boring DP-7
1400	⇒ Commence Continuous core at DP-7 to ~23' bgs
1425	⇒ Cruz Bros Traffic control demob
1440	⇒ Terminate DP-7 @ 23' bgs → Moderate to high odor (i.e. most significant impact) observed from ~10-20' bgs ; Trace odor @ ~8' bgs → No significant shallow impacts above ~8' bgs.
1450	⇒ Stage rig @ DP-4
1530	⇒ DP-4 Terminated at 24' bgs → Tank pit backfill to ~11.5' bgs → Mapped UST/Tank pit slightly mislocated on map. ↳ See log for details →
1540	⇒ Continue coring adjacent to abandoned borehole DP-6 ↳ See log for details.
1605	⇒ Boring DP-6 Terminated at 23' bgs
1615	⇒ Clean up + Prep to demob. - All soil cuttings containerized in one on-site 55-gallon drum ↳ Will schedule disposal following receipt of lab results. → All soil and water samples are inside a chilled cooler lined w/ blue ice → Torrent lab courier scheduled to pick up select samples at WHA office tomorrow.
1650	⇒ Demob.

Jered Chaney 8/9/12
Signature of Field Personnel & Date

Well Installation, Well Development & Post-Development Sampling

Field Methodology for:
Hollow Stem Auger Drilling and Monitoring Well Installation

This appendix describes the methods employed in hollow stem auger drilling for soil and groundwater investigations and/or monitoring and/or remediation well installations. Included are specifications for borehole drilling and soil sampling procedures, and the conversion of boreholes into monitoring wells, piezometers, sparge wells, vapor monitoring, and /or vapor extraction wells. Fieldwork tasks comply with standards set in the State Water Resources Control Board's Leaking Underground Fuel Tank Manual (LUFT Manual, 1989).

Borehole Drilling and Soil Sampling Procedures: Exploratory borehole(s) locations are determined based on data from previous investigation(s), local and regional groundwater flow direction, surface topography, underground utilities, overhead utilities and obstructions, property lines, and structures.

The exploratory boreholes are drilled using a truck-mounted drill rig equipped with eight-inch diameter hollow-stem augers. Soil samples are obtained for lithologic logging of native materials and laboratory analysis. The retrieved soil is logged by an experienced geologist using the Unified Soil Classification System (USCS). Soil samples are collected above groundwater and at the soil-groundwater interface. An Organic Vapor Analyzer (OVA) is used during drilling operations for site safety purposes and for on-site interpretation of potential "hot-spots". Vapor readings in parts per million (ppm) are recorded on the boring logs.

The samples are collected by advancing the boring to a point immediately above the sampling depth and driving a modified-California split-spoon sampler into relatively undisturbed soil through the center of the drill augers. The sampler contains three separate six-inch brass sleeves that are driven into undisturbed soils by a standard 140-pound hammer that is repeatedly dropped from a height of 30 inches. The number of blows required to drive the sampler each successive 6-inches is recorded to evaluate the relative consistency of the soil. When driving the split-spoon sampler is complete, the driller advances the auger flight over the split-spoon sampler, thus freeing the sampler to be retrieved. Drilling cuttings are continuously observed and materials retrieved from the sampler are logged by the field geologist. Three brass sleeves are retained from the modified-California split-spoon sampler at 5-foot intervals. The soil sleeves are retained for the following purposes:

- One sleeve is protected at both ends with Teflon tape, sealed with non-reactive caps, taped, labeled, and immediately stored in an insulated container cooled with blue ice. Selected samples (generally at least one per borehole, though soil samples may not be analyzed from borings for remediation wells at well characterized sites) are transported under

appropriate chain-of-custody documentation to a State Certified laboratory for analysis specific to the investigation.

- The second sample is extracted from its brass liner and stored in a sealed plastic bag so that it may be screened by the portable OVA for hydrocarbon odors and/or volatile organic compounds.
- The third sample is also extracted from its brass liner and used to describe the subsurface lithology at the specific sampling depth. The retrieved soil is logged by an experienced geologist using the USCS criteria for soil description.

Soil cuttings are either (1) stockpiled on, and covered with, plastic sheeting to eliminate aeration of potentially contaminated soil, or (2) containerized in 55-gallon steel drums. Soil cuttings from drilling operations are disposed of under proper hazardous waste manifest(s) in landfills capable of accepting the appropriate waste type and contaminant concentration.

Conversion of Borehole(s) into Well(s): The boreholes are converted into groundwater monitoring wells, piezometers, sparge wells, vapor monitoring, and /or vapor extraction wells by installing threaded schedule 40 PVC well casing of the appropriate diameter (dependant upon well type). A predetermined portion of the well casing is constructed of machine-slotted sections, which allow for the flow of groundwater and/or soil vapor/air into and out of the well casing. The size of the machined slots (measured in 100thsof inches) is determined by the grain size of the native materials encountered during drilling and by the well's intended use. The well casing is lowered into the borehole through the hollow stem augers and the annular space adjacent to the screened interval is slowly backfilled with sand (sand size is determined by the slot size noted above). A weighted measuring tape with the appropriate graduations (feet and 10ths of feet) is used to prevent bridging of the annular material and to insure that the well is constructed according to the predetermined construction specifications. The annular sand (or filter pack) is extended one to two feet above the top of the screened interval. A two-foot thick bentonite seal is placed above the sand and the remaining annular space is back filled with cement slurry to prevent the inflow of surface water. The wellhead is fitted with a locking watertight plug and is encased in a traffic-rated vault to protect against damage and unauthorized access.

Well Development and Groundwater Sample Collection: Weber, Hayes and Associates' groundwater monitoring field methodology is based on procedures specified in the LUFT Field Manual. The first step in groundwater well sampling is for Weber, Hayes and Associates field personnel to measure the depth-to-groundwater to the nearest hundredth (0.01) of a foot with an electric sounder. If the well appears to be pressurized, or the groundwater level is fluctuating, measurements are made until the groundwater levels stabilize, and a final depth-to-groundwater measurement is taken and recorded. After the depth-to-groundwater is measured, the well is then

checked for the presence of free product with a clear, disposable polyethylene bailer. If free product is present, the thickness of the layer is recorded, and the product is bailed to a sheen. All field data (depth-to-groundwater, well purge volume, physical parameters, and sampling method) is recorded on field data sheets. Because removing free product may skew the data, wells that contain free product are not used in groundwater elevation and gradient calculations.

After measuring the depth-to-groundwater, a surge block is used to physically swab the wells entire screened interval a minimum of 50 strokes in order to remove fines for the sand pack and promote gradation between the surrounding formation and the sand pack. Following well swabbing a minimum of 10 well volumes is purged with a low flow submersible electric pump. During purging the physical parameters of temperature, conductivity, pH, dissolved oxygen (D.O.) concentration, and Oxidation-Reduction Potential (ORP) of the purge water are monitored with a QED MP20 Micropurge Flow Through Cell equipped meter to insure that these parameters have stabilized (are within ~ 15 percent of the previous measurement). The QED MP20 meter is capable of continuously monitoring the physical parameters of the purge water via the flow through cell and providing an alarm to indicate when the physical parameters have stabilized to the users specifications. Purging is determined to be complete (stabilized aquifer conditions reached) after the removal of approximately ten well volumes of water or when the physical parameters have stabilized. Dissolved oxygen and ORP measurements are used as an indicator of intrinsic bioremediation within hydrocarbon plumes. All field instruments are calibrated before use.

All purge water is stored on site in DOT-approved, 55-gallon drums for disposal by a state-licensed contractor pending laboratory analysis for fuel hydrocarbons.

After purging, the water level in the well is allowed to recover to 80 percent of its original depth before a sample is collected. After water level recovery, a groundwater sample is collected from each well with a new, disposable bailer, and decanted into the appropriate laboratory-supplied sample container(s). The sample containers at this site were 40-ml. vials. Each vial was filled until a convex meniscus formed above the vial rim, then sealed with a Teflon®-septum cap, and inverted to insure that there were no air bubbles or head space in the vial. All samples are labeled in the field and transported in insulated containers cooled with blue ice to state-certified laboratories under proper chain of custody procedures.

All field and sampling equipment is decontaminated before, between, and after measurements or sampling by washing in a Liqui-Nox and tap water solution, rinsing with tap water, and rinsing with distilled water.

Equipment Decontamination and Decontamination Fluid Containerization Procedures: All drilling equipment is steam cleaned prior to arriving on-site to prevent the transfer of contamination from another site. Accordingly, all drilling equipment is steam cleaned between

boreholes (if applicable) and at the end of drilling operations to prevent the transfer of contamination to another site. The drill augers, all soil sampling equipment, and groundwater sampling and/or measurement equipment is thoroughly cleaned between each sampling run with a Liqui-Nox® or Alconox® solution followed by a double rinsing with distilled water to prevent transferring contamination vertically.

All cleaning rinsate, wash water, and other fluids or solids produced during the drilling process are containerized on-site in 55-gallon steel drum(s), and/or are disposed of under proper hazardous waste manifest(s) to an appropriate recycling facility with the capacity to accept the type and concentration of contaminant(s).

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INDICATE ATTACHMENTS THAT APPLY
- ___ Site Map
- ___ Data Sheets
- ___ Geologic Logs
- ___ Photo Sheets
- ___ COC's
- ___ Chargeable Materials

Client: **Golden Empire Properties, Inc.**	Date: **October 30, 2012**
Site Location: **3055 35th Avenue, Oakland, CA**	Study #: **2X103.B**
Field Tasks: ☑ Drilling ☐ Sampling ☑ Other (see below):	Weather Conditions:
Off-Site, Upgradient Monitoring Well Installation	Heavy Fog - Cool
Personnel / Company On-Site: **Jered Chaney (Weber, Hayes and Associates: WHA)**	

TIME:

0630 ⇒ Leave Santa Cruz area for site
0800 ⇒ Arrive on site
- Romero Concrete on site
- Cruz Bros Traffic control on site

0810 ⇒ Contact Shell Pipe line rep. (Dennis Dooly) as required and scheduled to Site well MW-5.
- Dennis cannot make it out → okay to proceed w/out his presence.
→ Locate well boring ~2' from marked and previously uncovered (via Air Knife) pipe line.

0815 ⇒ Romero Concrete Cores 12" concrete core at MW-5 location
0845 ⇒ Coring complete (10" thick)
↳ Romero demobs

0850 ⇒ Exploration GeoServices (John + Jason) arrive on site.
→ Stage rig / support equipment at MW-5 location.

0950 ⇒ Commence drilling MW-5 → Straight drill to 30' bgs
→ No sampling → 8" hollow stem augers

1030 ⇒ At 30' bgs → Driller reports water on rods @ ~24' bgs
→ Construct Monitoring well
- 10' 0.010 slot PVC screen (20-30' bgs)
- #3 sand from 18-30' bgs
- 3/8 bentonite chips from 16-18' bgs
- Neat cement to surface completion.
- 8" Traffic rated vault.

1115 ⇒ ACPW (Vicky) grout inspection scheduled for ~~next~~ 15 min
1120 ⇒ City of Oakland Obstruction / Excavation permit inspector on site briefly
1130 ⇒ Vicky (ACPW) inspector on site to inspect well seal
→ Commence w/ well seal
1140 ⇒ Vicky (ACPW) leaves site → okay to grout second well w/out her
→ Set well vault in concrete.

10/30/12
Signature of Field Personnel & Date

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INDICATE ATTACHMENTS THAT APPLY
- ___ Site Map
- ___ Data Sheets
- ___ Geologic Logs
- ___ Photo Sheets
- ___ COC's
- ___ Chargeable Materials

Client: **Golden Empire Properties, Inc.**	Date: **October 30, 2012**
Site Location: **3055 35th Avenue, Oakland, CA**	Study #: **2X103.B**
Field Tasks: ☑ Drilling ☐ Sampling ☑ Other (see below): **Off-Site, Upgradient Monitoring Well Installation**	Weather Conditions: Foggy & Cool
Personnel / Company On-Site: **Jered Chaney (Weber, Hayes and Associates: WHA)**	

TIME:

1210 ⇒ Stage rig at MW-6 location.
→ Commence drilling → Duplicate program of MW-5 drilling and construction.

1230 ⇒ Tag water level in MW-5 = 16.6' bTOC

1350 ⇒ At 30' bgs → Begin well construction - identical construction to that of MW-5 (See p.1 Notes)

1415 ⇒ Bottom augers appears to have Free product / Sheen - High odors.
↳ Will check newly installed wells for Free product prior to well development.

1430 ⇒ Tag water level in MW-6 : 15.7' bTOC
↳ Commence w/ neat cement grout seal and surface completion (8" vault set in concrete)

- NOTE: generated 4 x 55-gallon drums of soil cuttings
↳ Collect soil samples for waste disposal profiling
↳ Samples placed in cooler, chilled w/ blue ice for transport back to WHA office - laboratory sample pick up scheduled for tomorrow.

1510 ⇒ Well vault set.
→ Clean up and prep to demob.

1545 ⇒ Giga Drillers tag → Demob.

- Cruz Bros locators will remain on site for ~1hr longer until concrete around vault box sets up.

JC 10/30/12

10/30/12
Signature of Field Personnel & Date

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Text Page___/___
INDICATE ATTACHMENTS THAT APPLY
___ Site Map
___ Data Sheets
___ Geologic Logs
___ Photo Sheets
___ COC's
___ Chargeable Materials

Client	***Former Exxon Station***			*Date:* ***November 2, 2012***
Site Location:	***3055 35th Ave, Oakland***			*Study #:* ***2X103.B***
Field Tasks:	[ ] *Drilling*	[X] *Sampling*	[x] *Other (see below):*	*Weather Conditions:*
Development				Clear, warm
Personnel / Company On-Site:	***Josh Pritchard (Weber, Hayes and Associates: WHA)***			

FIELD WORK PLANNING: Performed on: **October 24, 2012**

Meet with Project Manager: [X] Yes [ ] No
Number of Wells to be Gauged: **All Wells**
Sample Wells: **MW-5, & MW-6**
Analyze for: **TPH-D, TPH-G, BTEX, Lead Scavengers, & Fuel Oxygenates**
Proposed Sampling Date: **November 2, 2012**

ON-SITE FIELD WORK:
Arrive on-site at 1000 to conduct 3rd Quarter 2012 Quarterly Groundwater Monitoring Well Sampling.

LABORATORY:
(Initial) Send all analytical to: **Torrent Analytical Laboratory, 408.263.5258, 483 Sinclair Frontage Rd., Milpitas, CA**
JP

GROUNDWATER MONITORING FIELD WORK STANDARD OPERATING PROCEDURES:
(Initial)
- All sampling is conducted according to Standard Operating Procedure (SOP) 10I/
JP - All pertinant information regarding the well, including water quality physical parameters are recorded on the following pages.
- All samples are placed in a refrigerated cooler immediately after sampling.
- All groundwater monitoring/purging/sampling equipment is decontaminated according to SOP 10B/at the beginning of on-site work, in between each well, and at the end of work
- All purge water is propoerly containerized in 55-gallon drums, or another suitable container, for later removal by a licensed subcontractor.
- All samples are recorded on field Chain-of-Custody sheets for documentation of proper transportation to the appropriate Laboratory.

INSTRUMENT CALIBRATION:
QED MP20 Flow Through Cell: **Temperature =** 15.89 **pH =** 7.00 **&** 10.00 **Electrical Conductivity =** 718 **Barometric Pressure =** 760 mmHg
D.O. % Saturation = 100% **Oxidation Reduction Potential (ORP) =** 219

BEGIN SAMPLING WELLS:
MW-6, MW-5

COMMENTS:
All wells will be purged until the QED MP20 unit indicates that the physical parameters of the water (pH, Conductivity, Temp, D.O., and ORP) have stabilized to within ~ 15%, or once four casing volumes in the well column requiring sampling have been removed (see Groundwater Monitoring Well Sampling Field Data Sheet(s) for details). Wells will be purged from the bottom up and in accord with all WHA SOPs. Wells will only be sampled using a Bladder Pump or a disposable bailer, as per RWQCB guidlines.

JP / 11-9-12

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11-9-12

Location	Groundwater Depth	Total Depth of Well	D.O. (mg/L)	ORP (mV)	Floating Product (comments)
MW-1	18.58' TOC	26.5'	–	–	–
MW-2	17.41' TOC	26.5'	–	–	–
MW-3	14.69'	26.5'	–	–	–
MW-4	15.37'	30'	–	–	–
MW-5	15.11'	30'	1.65	90	No FP, No odor
MW-6	14.61'	30'	–	–	–
RW-5	14.46'	25.7'	–	–	–
RW-6	14.31'	25.5'	–	–	–
RW-7	14.77'	29.5'	–	–	–
RW-8	15.81'	29.5'	–	–	–
RW-9	15.47'	25'	–	–	–
RW-10	14.52'	25'	–	–	–
RW-11	13.91'	25'	–	–	–
RW-12	14.98'	27'	–	–	–
RW-13	15.11'	25'	–	–	–
RW-14	14.72'	25'	–	–	–

HOW MANY PURGE DRUMS WERE LEFT ON-SITE: ~~2~~ 1 APPROXIMATE VOLUME (gallons): 60
CALL PURGE WATER REMOVAL SUBCONTRACTOR ON: 11-9-12
DRUMS WILL BE PURGED ON: ? ? ?

COMMENTS:

11-9-12
Signature of Field Personel & Date

WELL DEVELOPMENT INFORMATION

Project Name/No.: *Former Exxon / 2X103.B* **Date:** *November 9, 2012*

Sample No.: MW-5 **Sample Location:** MW-5

Samplers Name: *Josh Pritchard* **Recorded by:** *JP*

Purge Equipment:

- ____ Bailer: Disposable or Acrylic
- X Whaler # 1
- ____ Bladder Pump
- ____ SS Monsoon #

Sample Equipment:

- X Disposable Bailer
- ____ Whaler # ____
- ____ Bladder Pump
- ____ Submersible Pump

Analyses Requested (cricle all that apply):

~~TPH-gas~~, ~~VOC's~~, ~~BTEX~~, ~~MtBE, TBA~~, ~~1,2, DCA, EDB~~, ~~Methanol~~, ~~Fuel Oxygenates~~

~~TPH-diesel~~, ~~TPH-Motor Oil~~, ~~TPH-Hydrolic Oil~~, ~~Naphthalene~~

~~Intrinsic Bio. Parameters~~, ~~Perchlorate~~

Number and Types of Bottle Used:

2 x 1 Liter Ambers

3 X Preserved voa's

Well Number: MW-5

Depth to Water: 15.11' TOC

Well Depth: 30' BGS or TOC

Height W-Column: 14.89' feet (well depth - depth to water)

Volume in Well: 2.4 gallons (casing volume X height)

Gallons to purge: 23.8 gallons (volume X 10)

Well Diameter: 2" **with Casing Volume of:**

- 1" = (0.04 Gallon/Feet)
- 2" = (0.16 Gallon/Feet)
- 4" = (0.65 Gallon/Feet)
- 5" = (1.02 Gallon/Feet)
- 6" = (1.47 Gallon/Feet)

Lab: *Torrent* **Transportation:** *Courier*

Time (24 hr.)	Volume Purged (Gallons)	Temperature (°C)	Conductivity (ms/cm)	D.O. (ppm)	pH	ORP (mV)	Turbidity: Color, Fines	Micropurge Parameters Stabilized
1033	~~0~~	18.99	1.65	2.66	6.53	103	High: Brown, many	
1034	1	20.11	1.53	1.93	6.47	128	↓ ↓ ↓	
1034	2	20.27	1.52	2.22	6.46	127		
1036	5	20.58	1.490	1.31	6.42	113		
1039	8	20.57	1.53	1.25	6.46	95		
1041	10	20.28	1.404	0.44	6.39	94		
1045	13	20.23	1.368	0.33	6.37	85		
1047	15	20.34	1.359	0.44	6.37	79	↓ ↓ ↓	
1049	18	20.36	1.345	0.97	6.40	77	Moderate: Clear Brown, mod.	
1051	20	20.34	1.341	1.04	6.40	79	↓ ↓ ↓	
1052	21	20.29	1.335	1.21	6.41	77		
1053	22	20.20	1.332	1.32	6.41	86	↓ ↓ ↓	
1054	23	20.23	1.329	1.62	6.42	83	Low: Clear, minor	
1055	24	20.24	1.328	1.65	6.42	90	↓ ↓ ↓	

JP 11-9-12

Wait for 80% well volume recovery prior to sampling.

Calculate depth to water (from TOC), for 80% well volume recovery:

Calculate 80% of orginal well volume:

Original Height of Water Column = 14.89' x 0.8 = 11.91' - (Well Depth) 30' = Depth to water 18.09'

Time: 1057 1st measured depth to water, 24.25' feet below TOC. Is well within 80% of original well casing volume: Yes ____ No X

Time: 1100 1st measured depth to water, 20.89' feet below TOC. Is well within 80% of original well casing volume: Yes ____ No X

Time: 1102 1st measured depth to water, 18.09' feet below TOC. Is well within 80% of original well casing volume: Yes X No ____

Sample Well

Time: 1103 Sample ID: MW-5 Depth: 18.09' feet below TOC

Comments: TOC is 0.63' below vault Rim, Swab 50x before Purge. No FP, No odor

Well Condition: Good

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CHAIN -OF-CUSTODY RECORD

(OF (

PROJECT NAME AND NUMBER: Former Exxon / 2X103.B

LABORATORY: Torrent

SEND CERTIFIED RESULTS TO: Weber, Hayes & Associates - Attention: Jered Chaney

TURNAROUND TIME: Standard 5 Day 72hr Rush

ELECTRONIC DELIVERABLE FORMAT: [x] YES [ ] NO

GLOBAL I.D.: T0600100538

Sampler: *Josh Pritchard*

Date: 11-9-12

Field Point Name (Geo Tracker)	Sample Identification	Date Sampled	Matrix	SAMPLE CONTAINERS				REQUESTED ANALYSIS							
								Total Petroleum Hydrocarbons			Volatile Organics			Additional Analysis	
				40 mL VOAs (preserved)	250 ml Poly Bottle	1 liter Amber Jars	Liner Acetate or Brass	Motor Oil EPA Method # 8015	TPH-D EPA Method# 8015	TPH-G EPA Method# 8260	MtBE EPA Method 8260	TBA EPA Method # 8260	BTEX EPA Method# 8260	Fuel Oxygenates EPA Method# 8260	1,2, DCA & EDB EPA Method# 8260
MW-5	MW-5	11-9-12	W	3		1			X	X			X	X	X

	RELEASED BY:	Date & Time		RECEIVED BY:	Date & Time	SAMPLE CONDITION: (circle 1)		
1.)	[signature]	11-9-12 / 1255	→	[signature]	11/9/12 12:55 pm	Ambient	Refrigerated	Frozen
2.)			→			Ambient	Refrigerated	Frozen
3.)			→			Ambient	Refrigerated	Frozen
4.)			→			Ambient	Refrigerated	Frozen
5.)			→			Ambient	Refrigerated	Frozen

NOTES:

[x] *Please use MDL (Minimum Detection Limit) for any diluted samples.*

- Please produce and email an EDF of these results to lab@weber-hayes.com
- Fuel Oxygenates should only include DIPE, TAME, EtBE, MtBE, TBA

D/O

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Location	Groundwater Depth	Total Depth of Well	D.O. (mg/L)	ORP (mV)	Floating Product (comments)
MW-1	18.21' TOC	26.5'	–	–	–
MW-2	17.05' TOC	26.5'	–	–	–
MW-3	14.30'	26.5'	–	–	–
MW-4	15.00'	30'	–	–	–
MW-5	NA	30'	–	–	–
MW-6	14.23'	30'	6.63	62	NO FP, High Odor
RW-5	14.09'	25.7'	–	–	–
RW-6	13.95'	25.5'	–	–	–
RW-7	14.39'	29.5'	–	–	–
RW-8	15.42'	29.5'	–	–	–
RW-9	15.09'	25'	–	–	–
RW-10	14.13'	25'	–	–	–
RW-11	13.52'	25'	–	–	–
RW-12	14.61'	27'	–	–	–
RW-13	14.74'	25'	–	–	–
RW-14	14.34'	25'	–	–	–

HOW MANY PURGE DRUMS WERE LEFT ON-SITE: 1 APPROXIMATE VOLUME (gallons): 35
CALL PURGE WATER REMOVAL SUBCONTRACTOR ON: 11-9-12
DRUMS WILL BE PURGED ON: ? ? ?

COMMENTS:

11-2-12
Signature of Field Personel & Date

WELL DEVELOPMENT INFORMATION

Project Name/No.: *Former Exxon / 2X103.B* **Date:** *November 2, 2012*

Sample No.: MW-6 **Sample Location:** MW-6

Samplers Name: *Josh Pritchard* **Recorded by:** *JP*

Purge Equipment:

_____ Bailer: Disposable or Acrylic
X Whaler # 1
_____ Bladder Pump
_____ SS Monsoon #

Sample Equipment:

X Disposable Bailer
_____ Whaler #
_____ Bladder Pump
_____ Submersible Pump

Analyses Requested (cricle all that apply):

~~TPH-gas~~ ~~VOC's~~ ~~BTEX~~ ~~MtBE, TBA, 1,2, DCA, EDB, Methanol~~ ~~Fuel Oxygenates~~
~~TPH-diesel~~ ~~TPH-Motor Oil, TPH-Hydrolic Oil, Nephthalene~~
~~Intrinsic Bio. Parameters, Perchlorate~~

Number and Types of Bottle Used:

2 x 1 Liter Ambers
3 X Preserved voa's

Well Number: MW-6
Depth to Water: 14.23' TOC
Well Depth: 30' BGS or TOC
Height W-Column: 15.77' feet (well depth - depth to water)
Volume in Well: 2.5 gallons (casing volume X height)
Gallons to purge: 25.2 gallons (volume X 10)

Well Diameter: 2" **with Casing Volume of:**

1" = (0.04 Gallon/Feet)
2" = (0.16 Gallon/Feet)
4" = (0.65 Gallon/Feet)
5" = (1.02 Gallon/Feet)
6" = (1.47 Gallon/Feet)

Lab: *Torrent* **Transportation:** *Courier*

Time (24 hr.)	Volume Purged (Gallons)	Temperature (°C)	Conductivity (ms/cm)	D.O. (ppm)	pH	ORP (mV)	Turbidity: Color, Fines	Microptrge Parameters Stabilized
1140	0	22.95	1.165	9.31	7.16	68	High: Brown, major	
1141	1	21.19	1.326	2.05	6.97	55	↓ ↓ ↓	
1141	2	21.18	1.237	2.84	6.89	58		
1142	3	21.21	1.198	3.77	6.86	65		
1143	4	21.14	1.156	2.54	6.74	67		
1147	8	20.91	0.978	0.60	6.64	52	Moderate: clear Brown, mod	
1149	10	20.81	0.995	0.54	6.64	50	↓ ↓ ↓	
1151	12	20.71	0.982	0.67	6.64	53		
1154	15	20.59	1.111	2.05	6.79	55		
1158	18	20.80	0.842	6.40	6.78	40	Low: Clear, minor	
1201	20	20.81	0.815	6.79	6.76	52	↓ ↓ ↓	
1202	21	20.84	0.812	6.78	6.76	53		
1204	22	20.87	0.805	6.73	6.75	56		
1206	23	20.81	0.800	6.69	6.74	59		
1208	24	20.82	0.802	6.65	6.74	61		
1210	25	20.82	0.795	6.63	6.73	62	↓ ↓ ↓	
Stop:	Purge	Complete						

Wait for 80% well volume recovery prior to sampling.

Calculate depth to water (from TOC), for 80% well volume recovery:

Calculate 80% of orginal well volume:

Original Height of Water Column = 15.77' x 0.8 = 12.62' - (Well Depth) 30' = Depth to water 17.38'

Time: 1211 1st measured depth to water, 26.58' feet below TOC. Is well within 80% of original well casing volume: Yes ____ No X
Time: 1212 1st measured depth to water, 25.59' feet below TOC. Is well within 80% of original well casing volume: Yes ____ No X
Time: 1223 1st measured depth to water, 17.38' feet below TOC. Is well within 80% of original well casing volume: Yes X No ____

Sample Well

Time: 1225 Sample ID: MW-6 Depth: 17.38' feet below TOC

Comments: NO FP Tagged well before Purging/Sampling Swab Well 50X. High odor
Well Condition: Good

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Fax: (831) 722-1159

CHAIN -OF-CUSTODY RECORD

PROJECT NAME AND NUMBER: Former Exxon / 2X103.B

SEND CERTIFIED RESULTS TO: Weber, Hayes & Associates - Attention: Jered Chaney

ELECTRONIC DELIVERABLE FORMAT: [x] YES [ ] NO

LABORATORY: Torrent

TURNAROUND TIME: Standard 5 Day 72hr Rush

GLOBAL I.D.: T0600100538

Sampler: *Josh Pritchard*

Date: 11-2-12

Field Point Name (Geo Tracker)	Sample Identification	Date Sampled	Matrix	SAMPLE CONTAINERS				REQUESTED ANALYSIS								
								Total Petroleum Hydrocarbons			Volatile Organics			Additional Analysis	
				40 mL VOAs (preserved)	250 ml Poly Bottle	1 liter Amber Jars	Liner Acetate or Brass	Motor Oil EPA Method # 8015	TPH-D EPA Method# 3015	TPH-G EPA Method# 8260	MtBE EPA Method 8260	TBA EPA Method # 8260	BTEX EPA Method# 8260	Fuel Oxygenates EPA Method# 8260	1,2, DCA & EDB EPA Method# 8260
MW-6	MW-6	11-2-12	AQ	3		2			X	X			X	X	X

RELEASED BY: / Date & Time / RECEIVED BY: / Date & Time

1.) [signature] 11-2-12 1352 → NAVIN G [signature] 11-2-12 1:52 P.M.

2.) → → Ambient Refrigerated Frozen

3.) → → Ambient Refrigerated Frozen

4.) → → Ambient Refrigerated Frozen

5.) → → Ambient Refrigerated Frozen

SAMPLE CONDITION: (circle 1)

NOTES:

[x] *Please use MDL (Minimum Detection Limit) for any diluted samples.*

- Please produce and email an EDF of these results to lab@weber-hayes.com
- Fuel Oxygenates should only include DIPE, TAME, EtBE, MtBE, TBA

D/O.

CONFIDENTIAL

STATE OF CALIFORNIA DWR
WELL COMPLETION REPORT
(WELL LOGS)

REMOVED

CONFIDENTIAL

STATE OF CALIFORNIA DWR
WELL COMPLETION REPORT
(WELL LOGS)

REMOVED

Approved Permits

Alameda County Public Works Agency - Water Resources Well Permit

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

Application Approved on: 06/15/2012 By jamesy

Permit Numbers: W2012-0417 to W2012-0418
Permits Valid from 10/30/2012 to 10/30/2012

Application Id:	1339698674058	**City of Project Site:**	Oakland
Site Location:	3055 35th Avenue, Oakland, CA		
Project Start Date:	06/20/2012	**Completion Date:**	06/21/2012
Assigned Inspector:	Contact Vicky Hamlin at (510) 670-5443 or vickyh@acpwa.org		
Extension Start Date:	10/30/2012	**Extension End Date:**	10/30/2012
Extension Count:	1	**Extended By:**	vickyh1

Applicant:	Weber, Hayes & Associates - Jered Chaney 120 Westgate Dr, Watsonville, CA 95076	**Phone:**	831-722-3580
Property Owner:	Golden Empire Properties Inc 5942 MacArthur Blvd #B, Oakland, CA 94605	**Phone:**	510-562-8600
Client:	** same as Property Owner **		

	Total Due:	$794.00
Receipt Number: WR2012-0183	**Total Amount Paid:**	$794.00
Payer Name : Weber, Hayes & Associates	Paid By: CHECK	**PAID IN FULL**

Works Requesting Permits:

Well Construction-Monitoring-Monitoring - 2 Wells
Driller: Exploration Geoservices - Lic #: 484288 - Method: hstem **Work Total: $794.00**

Specifications

Permit #	Issued Date	Expire Date	Owner Well Id	Hole Diam.	Casing Diam.	Seal Depth	Max. Depth
W2012-0417	06/15/2012	09/18/2012	MW5	8.00 in.	2.00 in.	18.00 ft	30.00 ft
W2012-0418	06/15/2012	09/18/2012	MW6	8.00 in.	2.00 in.	18.00 ft	30.00 ft

Specific Work Permit Conditions

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

2. Permittee, permittee's contractors, consultants or agents shall be responsible to assure that all material or waters generated during drilling, boring destruction, and/or other activities associated with this Permit will be safely handled, properly managed, and disposed of according to all applicable federal, state, and local statutes regulating such. In no case shall these materials and/or waters be allowed to enter, or potentially enter, on or off-site storm sewers, dry wells, or waterways or be allowed to move off the property where work is being completed.

3. Prior to any drilling activities, it shall be the applicant's responsibility to contact and coordinate an Underground Service Alert (USA), obtain encroachment permit(s), excavation permit(s) or any other permits or agreements required for that Federal, State, County or City, and follow all City or County Ordinances. No work shall begin until all the permits and requirements have been approved or obtained. It shall also be the applicants responsibilities to provide to the Cities or to Alameda County an Traffic Safety Plan for any lane closures or detours planned. No work shall begin until all the permits and requirements have been approved or obtained.

4. Compliance with the well-sealing specifications shall not exempt the well-sealing contractor from complying with

appropriate State reporting-requirements related to well construction or destruction (Sections 13750 through 13755 (Division 7, Chapter 10, Article 3) of the California Water Code). Contractor must complete State DWR Form 188 and mail original to the Alameda County Public Works Agency, Water Resources Section, within 60 days. Include permit number and site map.

5. Applicant shall submit the copies of the approved encroachment permit to this office within 60 days.

6. Applicant shall contact Vicky Hamlin for an inspection time at 510-670-5443 or email to vickyh@acpwa.org at least five (5) working days prior to starting, once the permit has been approved. Confirm the scheduled date(s) at least 24 hours prior to drilling.

7. Wells shall have a Christy box or similar structure with a locking cap or cover. Well(s) shall be kept locked at all times. Well(s) that become damaged by traffic or construction shall be repaired in a timely manner or destroyed immediately (through permit process). No well(s) shall be left in a manner to act as a conduit at any time.

8. Minimum surface seal thickness is two inches of cement grout placed by tremie.

9. Minimum seal (Neat Cement seal) depth for monitoring wells is 5 feet below ground surface(BGS) or the maximum depth practicable or 20 feet.

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

Alameda County Public Works Agency - Water Resources Well Permit

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

Application Approved on: 04/17/2012 By jamesy

Permit Numbers: W2012-0258
Permits Valid from 05/08/2012 to 05/09/2012

Application Id:	1334267094762	**City of Project Site:**	Oakland
Site Location:	3055 35th Avenue, Oakland		
Project Start Date:	05/08/2012	**Completion Date:**	05/09/2012
Assigned Inspector:	Contact Steve Miller at (510) 670-5517 or stevem@acpwa.org		
Applicant:	Weber, Hayes & Asscoaites - Jered Chaney PG 120 Westgate Dr, Watsonville, CA 95076	**Phone:**	831-722-3580
Property Owner:	Golden Empire Prop. Inc. 5941 MacArthur Bl #B, Oakland, CA 94605	**Phone:**	510-562-8600
Client:	** same as Property Owner **		

	Total Due:	$265.00
Receipt Number: WR2012-0114	**Total Amount Paid:**	$265.00
Payer Name : Weber, Hayes & Associates	Paid By: CHECK	**PAID IN FULL**

Works Requesting Permits:

Borehole(s) for Investigation-Contamination Study - 9 Boreholes
Driller: Environmental Control Associates - Lic #: 695970 - Method: other **Work Total: $265.00**

Specifications

Permit Number	Issued Dt	Expire Dt	# Boreholes	Hole Diam	Max Depth
W2012-0258	04/17/2012	08/06/2012	9	2.00 in.	25.00 ft

Specific Work Permit Conditions

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

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

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

4. Prior to any drilling activities, it shall be the applicant's responsibility to contact and coordinate an Underground Service Alert (USA), obtain encroachment permit(s), excavation permit(s) or any other permits or agreements required for that Federal, State, County or City, and follow all City or County Ordinances. No work shall begin until all the permits and requirements have been approved or obtained. It shall also be the applicants responsibilities to provide to the Cities or to Alameda County an Traffic Safety Plan for any lane closures or detours planned. No work shall begin until all the permits and requirements have been approved or obtained.

5. Applicant shall contact Steve Miller for an inspection time at (510) 670-5517 or email to stevem@acpwa.org at least

five (5) working days prior to starting, once the permit has been approved. Confirm the scheduled date(s) at least 24 hours prior to drilling.

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

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

CITY OF OAKLAND • Department of Planning, Building and Neighborhood Preservation
250 Frank H. Ogawa Plaza, 2nd Floor, Oakland, CA 94612 • Phone (510) 238-3443 • Fax (510) 238-2263

Applications for which no permit is issued within 180 days shall expire by limitation. No refund more than 180 days after expiration or final.

Appl# OB120389 Job Site 3055 35TH AV Parcel# 027 -0890-006-02

Divert traffic per approved TSD12-0072 and reserve 150' parking on both sides of School St & 75' on 35th Ave. One parking space NO FEE per each: X1200773 & X1200774.

Permit Issued 05/03/12

Nbr of days: 1 **Display on Dashboard** Linear feet: 325
Effective: 05/09/12 Expiration: 05/09/12

SHORT TERM NON-METERED

		Applcnt	Phone#	Lic#	--License Classes--
Owner	GOLDEN EMPIRE PROPERTIES INC				
Contractor	ENVIRONMENTAL CONTROL ASSO	X	(831)662-8178	695970	C57
Arch/Engr					
Agent	WEBER, HAYES & ASSOC/J CHANEY		(831)722-3580		
Applic Addr	3011 TWIN PALM DR, APTOS CA, 95003				

$339.08 FEES TO BE PAID AT FILING $.00 FEES TO BE PAID AT ISSUANCE

$71.00	Applic	$224.50	Permit
$.00	Process	$28.07	Rec Mgmt
$.00	Gen Plan	$.00	Invstg
$.00	Other	$15.51	Tech Enh

Display on Dashboard

JOB SITE

To Have Illegally Parked Vehicle Ticketed Call 510-777-3333

For Towed Car Call 510-238-3021

TCP needs to be approved by Transportation Services every 30 days or whenever deviated from the previously approved plan.

ADDRESS:

Applicant: On File

Issued by:

DIST:

Date: 05/03/12 Amt Paid: $1,211.16
By: SYK Register R03 Receipt# 166687

CITY OF OAKLAND • Department of Planning, Building and Neighborhood Preservation
250 Frank H. Ogawa Plaza, 2nd Floor, Oakland, CA 94612 • Phone (510) 238-3443 • Fax (510) 238-2263

Applications for which no permit is issued within 180 days shall expire by limitation. No refund more than 180 days after expiration or final.

Appl# X1200774 Job Site 3055 35TH AV Parcel# 027 -0890-006-02

Descr Soil boring(s) on School St; DP-1 & DP-2. Permit Issued 04/30/12
Impact on traffic lane per TSD-12-
Call PWA INSPECTION prior to start: 510-238-3651. 4th FLOOR.
Work Type EXCAVATION-PRIVATE P

USA # Util Co. Job # 2X103 Acctg#:
Util Fund #:

	Name	Applcnt	Phone#	Lic#	--License Classes--
Owner	GOLDEN EMPIRE PROPERTIES INC				
Contractor	ENVIRONMENTAL CONTROL ASSO	X	(831)662-8178	695970	C57
Arch/Engr					
Agent	WEBER, HAYES & ASSOC/J CHANEY		(831)722-3580		
Applic Addr	3011 TWIN PALM DR, APTOS CA, 95003				

JOB SITE

$436.05	FEES TO BE PAID AT ISSUANCE		
$71.00	Applic	$309.00	Permit
$.00	Process	$36.10	Rec Mgmt
$.00	Gen Plan	$.00	Invstg
$.00	Other	$19.95	Tech Enh

Permit Issued By ______________ Date: __________

Finaled By ______________ Date: __________

ADDRESS:

DIST:

Date: 05/03/12 Amt Paid: $1,211.16
By: [illegible] Register 005 Receipt# [illegible]

CITY OF OAKLAND • Department of Planning, Building and Neighborhood Preservation
250 Frank H. Ogawa Plaza, 2nd Floor, Oakland, CA 94612 • Phone (510) 238-3443 • Fax (510) 238-2263

Applications for which no permit is issued within 180 days shall expire by limitation. No refund more than 180 days after expiration or final.

Permit No. X1200774 Parcel #: 027 -0890-006-02
Project Address: 3055 35TH AV

Licensed Contractors' Declaration
I hereby affirm under penalty of perjury that I am licensed under provisions of Chapter 9 (commencing with Section 7000) of Division 3 of the Business and Professions Code, and my license is in full force and effect.

Construction Lending Agency Declaration
I hereby affirm under penalty of perjury that there is a construction-lending agency for the performance of the work for which this permit is issued, as provided by Section 3097 of the Business and Professions Code. N/A under Lender implies No Lending Agency.

Lender_____ Address_____

Workers' Compensation Declaration

I hereby affirm under penalty of perjury one of the following declarations:

[ ] I have and will maintain a certificate of consent to self-insure for workers' compensation, as provided for by Section 3700 of the Labor Code, for the performance of the work for which this permit is issued.

[ ] I have and will maintain workers' compensation insurance, as required by Section 3700 of the Labor Code, for the performance of the work for which this permit is issued.

CARRIER:_____POLICY NO. _____

[ ] I certify that in the performance of the work for which this permit is issued, I shall not employ any person in any manner so as to become subject to the workers' compensation laws of California, and agree that if I should become subject to the workers' compensation provisions of Section 3700 of the Labor Code, I shall forthwith comply with those provisions.

WARNING: FAILURE TO SECURE WORKERS' COMPENSATION COVERAGE IS UNLAWFUL, AND SHALL SUBJECT AN EMPLOYER TO CRIMINAL PENALTIES AND CIVIL FINES UP TO ONE HUNDRED THOUSAND DOLLARS, IN ADDITION TO THE COST OF COMPENSATION, DAMAGES AS PROVIDED FOR IN SECTION 3707 OF THE LABOR CODE, INTEREST, AND ATTORNEY'S FEES.

Hazardous Materials Declaration

I hereby affirm that the intended occupancy [ ] WILL [ ] WILL NOT use, handle or store any hazardous, or acutely hazardous, materials. (Checking "WILL" acknowledges that Sections 25505, 25533, & 25534 of the Health & Safety Code, as well as filing instructions, were made available to you.)

I HEREBY CERTIFY THE FOLLOWING: That I have read this document; that the above information is correct; and that I have truthfully affirmed all applicable declarations contained in this document. I agree to comply with all city and county ordinances and state laws relating to building construction, and hereby authorize representatives of this city to enter upon the above-mentioned property for inspection. I am fully authorized by the owner and to perform the work authorized by this permit.

PRINT NAME _____ Signature [ ] Contractor, or [ ] Agent _____ Date

ADDRESS:

DIST:

CITY OF OAKLAND • Department of Planning, Building and Neighborhood Preservation
250 Frank H. Ogawa Plaza, 2nd Floor, Oakland, CA 94612 • Phone (510) 238-3443 • Fax (510) 238-2263

Applications for which no permit is issued within 180 days shall expire by limitation. No refund more than 180 days after expiration or final.

Appl# X1200773 Job Site 3055 35TH AV Parcel# 027 -0890-006-02

Descr Soil boring(s) on 35th Av; DP-3 Permit Issued 04/30/12
Impact on traffic lane per TSD-12-
Call PWA INSPECTION prior to start: 510-238-3651. 4th FLOOR.
Work Type EXCAVATION-PRIVATE P

USA # Util Co. Job # 2X103 Acctg#:
Util Fund #:

	Name	Applcnt	Phone#	Lic#	--License Classes--
Owner	GOLDEN EMPIRE PROPERTIES INC				
Contractor	ENVIRONMENTAL CONTROL ASSO	X	(831)662-8178	695970	C57
Arch/Engr					
Agent	WEBER, HAYES & ASSOC/J CHANEY		(831)722-3580		
Applic Addr	3011 TWIN PALM DR, APTOS CA, 95003				

JOB SITE

$436.05 FEES TO BE PAID AT ISSUANCE

$71.00	Applic	$309.00	Permit
$.00	Process	$36.10	Rec Mgmt
$.00	Gen Plan	$.00	Invstg
$.00	Other	$19.95	Tech Enh

Permit Issued By ____________ Date: ____________

Finaled By ____________ Date: ____________

ADDRESS:

DIST:

Date: 05/03/12 Amt Paid: $1,211.18
By: SYK Register R03 Receipt 166289

CITY OF OAKLAND

CITY OF OAKLAND • Department of Planning, Building and Neighborhood Preservation
250 Frank H. Ogawa Plaza, 2nd Floor, Oakland, CA 94612 • Phone (510) 238-3443 • Fax (510) 238-2263

Applications for which no permit is issued within 180 days shall expire by limitation. No refund more than 180 days after expiration or final.

Project Address: 3055 35TH AV

Licensed Contractors' Declaration
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Construction Lending Agency Declaration
I hereby affirm under penalty of perjury that there is a construction-lending agency for the performance of the work for which this permit is issued, as provided by Section 3097 of the Business and Professions Code. N/A under Lender implies No Lending Agency.

Lender_____ Address_____

Workers' Compensation Declaration

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CARRIER:_____POLICY NO. _____

[ ] I certify that in the performance of the work for which this permit is issued, I shall not employ any person in any manner so as to become subject to the workers' compensation laws of California, and agree that if I should become subject to the workers' compensation provisions of Section 3700 of the Labor Code, I shall forthwith comply with those provisions.

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_____ _____ _____
PRINT NAME Signature [ ] Contractor, or [ ] Agent Date

ADDRESS: _____

DIST: _____

CITY OF OAKLAND • Department of Planning, Building and Neighborhood Preservation
250 Frank H. Ogawa Plaza, 2nd Floor, Oakland, CA 94612 • Phone (510) 238-3443 • Fax (510) 238-2263

Applications for which no permit is issued within 180 days shall expire by limitation. No refund more than 180 days after expiration or final.

Appl# X1202184 Job Site 3055 35TH AV Parcel# 027 -0890-006-02

Descr Install MW-5 on 35th Ave. Job 2X103. Permit Issued 10/25/12
Impact on traffic lane per TSD-12-0276.
Call PWA INSPECTION prior to start: 510-238-3651. 4th FLOOR.
Work Type EXCAVATION-PRIVATE P

USA # Util Co. Job # 2X103 Acctg#:
Util Fund #:

		Applcnt	Phone#	Lic#	--License Classes--
Owner	GOLDEN EMPIRE PROPERTIES INC				
Contractor	EXPLORATION GEOSERVICES INC	X	(408)280-6822	484288	C57
Arch/Engr					
Agent	WEBER, HAYES & ASSOC/J CHANEY		(831)722-3580		
Applic Addr	1535 INDUSTRIAL AVE, SAN JOSE, CA, 95112				

JOB SITE

$436.05 FEES TO BE PAID AT ISSUANCE

$71.00	Applic	$309.00	Permit
$.00	Process	$36.10	Rec Mgmt
$.00	Gen Plan	$.00	Invstg
$.00	Other	$19.95	Tech Enh

Application Processed By _____ Date: _____

Permit Issued By _____ Date: _____

Finaled By _____ Date: _____

Application Docs Forwarded To _____ Date: _____

ADDRESS:

DIST:

CITY OF OAKLAND

Date: 10/25/12 Ck# Paid $436.05 11/16
By: SYK Register# R03 Receipt# 171591

CITY OF OAKLAND • Department of Planning, Building and Neighborhood Preservation
250 Frank H. Ogawa Plaza, 2nd Floor, Oakland, CA 94612 • Phone (510) 238-3443 • Fax (510) 238-2263

Applications for which no permit is issued within 180 days shall expire by limitation. No refund more than 180 days after expiration or final.

Permit No. X1202184 Parcel #: 027 -0890-006-02
Project Address: 3055 35TH AV

Licensed Contractors' Declaration
I hereby affirm under penalty of perjury that I am licensed under provisions of Chapter 9 (commencing with Section 7000) of Division 3 of the Business and Professions Code, and my license is in full force and effect.

Construction Lending Agency Declaration
I hereby affirm under penalty of perjury that there is a construction-lending agency for the performance of the work for which this permit is issued, as provided by Section 3097 of the Business and Professions Code. N/A under Lender implies No Lending Agency.

Lender_____ Address_____

Workers' Compensation Declaration

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[ ] I have and will maintain a certificate of consent to self-insure for workers' compensation, as provided for by Section 3700 of the Labor Code, for the performance of the work for which this permit is issued.

[ ] I have and will maintain workers' compensation insurance, as required by Section 3700 of the Labor Code, for the performance of the work for which this permit is issued.

CARRIER:_____POLICY NO. _____

[ ] I certify that in the performance of the work for which this permit is issued, I shall not employ any person in any manner so as to become subject to the workers' compensation laws of California, and agree that if I should become subject to the workers' compensation provisions of Section 3700 of the Labor Code, I shall forthwith comply with those provisions.

WARNING: FAILURE TO SECURE WORKERS' COMPENSATION COVERAGE IS UNLAWFUL, AND SHALL SUBJECT AN EMPLOYER TO CRIMINAL PENALTIES AND CIVIL FINES UP TO ONE HUNDRED THOUSAND DOLLARS, IN ADDITION TO THE COST OF COMPENSATION, DAMAGES AS PROVIDED FOR IN SECTION 3707 OF THE LABOR CODE, INTEREST, AND ATTORNEY'S FEES.

Hazardous Materials Declaration

I hereby affirm that the intended occupancy [ ] WILL [ ] WILL NOT use, handle or store any hazardous, or acutely hazardous, materials. (Checking "WILL" acknowledges that Sections 25505, 25533, & 25534 of the Health & Safety Code, as well as filing instructions, were made available to you.)

I HEREBY CERTIFY THE FOLLOWING: That I have read this document; that the above information is correct; and that I have truthfully affirmed all applicable declarations contained in this document. I agree to comply with all city and county ordinances and state laws relating to building construction, and hereby authorize representatives of this city to enter upon the above-mentioned property for inspection. I am fully authorized by the owner and to perform the work authorized by this permit.

PRINT NAME _____ Signature [ ] Contractor, or [ ] Agent _____ Date

ADDRESS:

DIST:

CITY OF OAKLAND • Department of Planning, Building and Neighborhood Preservation
250 Frank H. Ogawa Plaza, 2nd Floor, Oakland, CA 94612 • Phone (510) 238-3443 • Fax (510) 238-2263

Applications for which no permit is issued within 180 days shall expire by limitation. No refund more than 180 days after expiration or final.

Appl# X1202181 Job Site 3055 35TH AV Parcel# 027 -0890-006-02

Descr Install MW-6 on School Street. Job 2X103. Permit Issued 10/25/12
Impact on traffic lane per TSD-12-0276.
Call PWA INSPECTION prior to start: 510-238-3651. 4th FLOOR.
Work Type EXCAVATION-PRIVATE P

USA #
Util Co. Job # 2X103
Util Fund #:
Acctg#:

	Name	Applcnt	Phone#	Lic#	--License Classes--
Owner	GOLDEN EMPIRE PROPERTIES INC				
Contractor	EXPLORATION GEOSERVICES INC	X	(408)280-6822	484288	C57
Arch/Engr					
Agent	WEBER, HAYES & ASSOC/J CHANEY		(831)722-3580		
Applic Addr	1535 INDUSTRIAL AVE, SAN JOSE, CA, 95112				

JOB SITE

$436.05 FEES TO BE PAID AT ISSUANCE

$71.00	Applic	$309.00	Permit
$.00	Process	$36.10	Rec Mgmt
$.00	Gen Plan	$.00	Invstg
$.00	Other	$19.95	Tech Enh

Application Processed By ______________ Date: __________

Permit Issued By ______________ Date: __________

Finaled By ______________ Date: __________

Application Docs Forwarded To ______________ Date: __________

ADDRESS:

DIST:

Date: 10/25/12 Amt Paid: $1,211.19
By: SYK Register RDC Receipt# 1711[illegible]

CITY OF OAKLAND • Department of Planning, Building and Neighborhood Preservation
250 Frank H. Ogawa Plaza, 2nd Floor, Oakland, CA 94612 • Phone (510) 238-3443 • Fax (510) 238-2263

Applications for which no permit is issued within 180 days shall expire by limitation. No refund more than 180 days after expiration or final.

Permit No. X1202181 Parcel #: 027 -0890-006-02
Project Address: 3055 35TH AV

Licensed Contractors' Declaration
I hereby affirm under penalty of perjury that I am licensed under provisions of Chapter 9 (commencing with Section 7000) of Division 3 of the Business and Professions Code, and my license is in full force and effect.

Construction Lending Agency Declaration
I hereby affirm under penalty of perjury that there is a construction-lending agency for the performance of the work for which this permit is issued, as provided by Section 3097 of the Business and Professions Code. N/A under Lender implies No Lending Agency.

Lender_____ Address_____

Workers' Compensation Declaration

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[ ] I have and will maintain workers' compensation insurance, as required by Section 3700 of the Labor Code, for the performance of the work for which this permit is issued.

CARRIER:_____POLICY NO. _____

[ ] I certify that in the performance of the work for which this permit is issued, I shall not employ any person in any manner so as to become subject to the workers' compensation laws of California, and agree that if I should become subject to the workers' compensation provisions of Section 3700 of the Labor Code, I shall forthwith comply with those provisions.

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Hazardous Materials Declaration

I hereby affirm that the intended occupancy [ ] WILL [ ] WILL NOT use, handle or store any hazardous, or acutely hazardous, materials. (Checking "WILL" acknowledges that Sections 25505, 25533, & 25534 of the Health & Safety Code, as well as filing instructions, were made available to you.)

I HEREBY CERTIFY THE FOLLOWING: That I have read this document; that the above information is correct; and that I have truthfully affirmed all applicable declarations contained in this document. I agree to comply with all city and county ordinances and state laws relating to building construction, and hereby authorize representatives of this city to enter upon the above-mentioned property for inspection. I am fully authorized by the owner and to perform the work authorized by this permit.

PRINT NAME _____ Signature [ ] Contractor, or [ ] Agent _____ Date _____

DIST:_____ ADDRESS:_____

CITY OF OAKLAND • Department of Planning, Building and Neighborhood Preservation
250 Frank H. Ogawa Plaza, 2nd Floor, Oakland, CA 94612 • Phone (510) 238-3443 • Fax (510) 238-2263

Applications for which no permit is issued within 180 days shall expire by limitation. No refund more than 180 days after expiration or final.

Appl# OB120970 Job Site 3055 35TH AV Parcel# 027 -0890-006-02

Divert traffic per approved TSD12-0276 and reserve 150' parking on both sides of School St & 75' on 35th Ave. One parking space NO FEE per each: X1202181 & X1202184.

Permit Issued 10/25/12

Nbr of days: 1 Linear feet: 325
Effective: 10/30/12 Expiration: 10/30/12

SHORT TERM NON-METERED

		Applcnt	Phone#	Lic#	--License Classes--
Owner	GOLDEN EMPIRE PROPERTIES INC				
Contractor	EXPLORATION GEOSERVICES INC	X	(408)280-6822	484288	C57
Arch/Engr					
Agent	WEBER, HAYES & ASSOC/J CHANEY		(831)722-3580		
Applic Addr	1535 INDUSTRIAL AVE, SAN JOSE, CA, 95112				

$339.08 FEES TO BE PAID AT FILING

$71.00	Applic	$224.50	Permit
$.00	Process	$28.07	Rec Mgmt
$.00	Gen Plan	$.00	Invstg
$.00	Other	$15.51	Tech Enh

$.00 FEES TO BE PAID AT ISSUANCE

JOB SITE

TCP needs to be approved by Transportation Services every 30 days or whenever deviated from the previously approved plan.

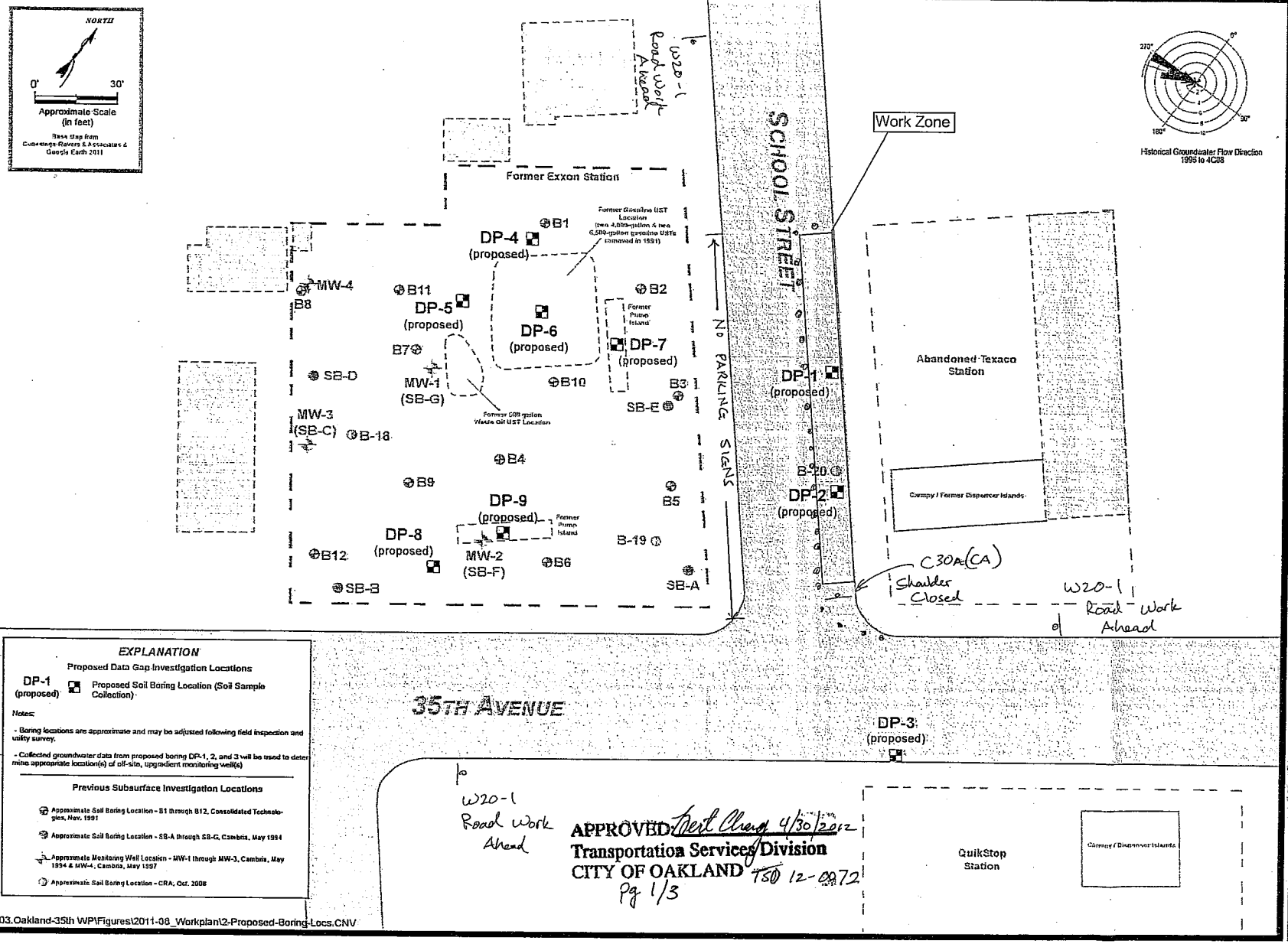
ADDRESS:

Applicant: _____ _____

Issued by: _____ _____

DIST:

Date: 10/25/12 Amt Paid: $1,211.18
By: SYK Register# 803 Receipt# 171391



2x103.Oakland-35th WP\Figures\2011-08_Workplan\2-Proposed-Boring-Locs.CNV

Figure 2 Project 2X103

Site Map with Proposed Data Gap Investigation Locations
Former Exxon Station
3055 35th Avenue
Oakland, California

Weber, Hayes & Associates
Hydrogeology and Environmental Engineering
120 Westgate Drive, Watsonville, Ca. 95076
(831) 722 - 3580 Fax (831) 722 - 1159
www.weber-hayes.com

SPECIAL PROVISION 7-10.1 TRAFFIC REQUIREMENTS

Project Name: _____
Project Number: TSD-12-0072__
Reviewed By: B.Chang
Date: 4/30/2012_
Permit good from_5/7/2012__
or____6/11/2012___

ADD NEW SUBSECTION TO READ:
SP 7-10.1.4 Vehicular Traffic

Attention is directed to Section 7-10. Public Convenience and Safety, of the City of Oakland Standard Specification for Public Works Construction, 2006 Edition (Include this paragraph for p-jobs, excavation permits or obstruction permits).

The Contractor shall conduct its work in such a manner as to provide public convenience and safety and according to the provisions in this subsection. The provisions shall not be modified or altered without written approval from the Engineer.

Standard traffic control devices shall be placed at the construction zone according to the latest edition of the Work Area Traffic Control Handbook or Manual on Uniform Traffic Control Devices (MUTCD), Chapter 6 – "Traffic Controls for Construction and Maintenance Work Zone," or as directed by the Engineer.

All trenches and excavations in any public street or roadway shall be back filled and opened to traffic, or covered with suitable steel plates securely placed and opened to traffic at all times except during actual construction operations unless otherwise permitted by the Engineer.

Each section of work shall be completed or temporarily paved and open to traffic in not more than 5 days after commencing work unless otherwise permitted in writing by the Engineer.

Where construction encroaches into the sidewalk area, a minimum of 5 ½ feet of unobstructed sidewalk shall be maintained at all times for pedestrian use. Pedestrian barricades, shelter, and detour signs per Caltrans standards may be required.

The contractor shall conduct its operation in such a manner as to leave the following traffic lanes unobstructed and in a condition satisfactory for vehicular travel during the Obstruction Period. At all times traffic lanes will be restricted and reopened to travel. Emergency access shall be provided at all times.

Street Name Limits	Obstruction Period	North Bound	South Bound	East Bound	West Bound
School St between 35th Ave and Bartlett St	Mon. – Fri. 8am – 5pm	Shoulder Closure No Parking	No Parking	N/A	N/A
35th Ave between Mangels Ave and Hegeman Ave	Mon. – Fri. 8am – 5pm	Shoulder Closure No Parking	N/A	N/A	N/A

The Contractor Shall Also include all check item:

1. ☐ Design a construction traffic control plan and submit (2) copies to the Engineer for approval prior to starting any work.
2. ☒ Replace all signs, pavement markings, and traffic detector loops damaged or removed due to construction within 3 days of completion of work or the final pavement lift.
3. ☒ Provide advance notice to Oakland Police at (510) 777-3333 (24-hrs) and Oakland Fire at (510) 238-3331 (2-rhs) when a single lane of traffic or less is provided on any street.
4. ☒ Provide 72-hour advance notice to AC Transit at (510) 891-4909 when affecting a bus stop.
5. ☒ For Caltrans roadways, ramps, or maintained facilities, the Contractor shall obtain appropriate permits and notify the Traffic Management Center 24 hours in advance of any work.
6. ☐ Flagger control is required. Certified Flagger is required.
7. ☐ Pedestrian walkway by K-rail, Canopy or Plywood is required. (See detour plan)
8. ☒ Pedestrian traffic shall be maintained and guided through the project at all times.
9. ☒ Provide advance notice to Business and Residence within 72-hours.
10. ☒ Allow all traffic movement at intersection.

Nothing specified herein shall prohibit emergency work and/or repair necessary to ensure public health and safety.

Notes for Figure 6H-6—Typical Application 6
Shoulder Work with Minor Encroachment

Guidance:

1. All lanes should be a minimum of 3 m (10 ft) in width as measured to the near face of the channelizing devices.
2. The treatment shown should be used on a minor road having low speeds. For higher-speed traffic conditions, a lane closure should be used.

Option:

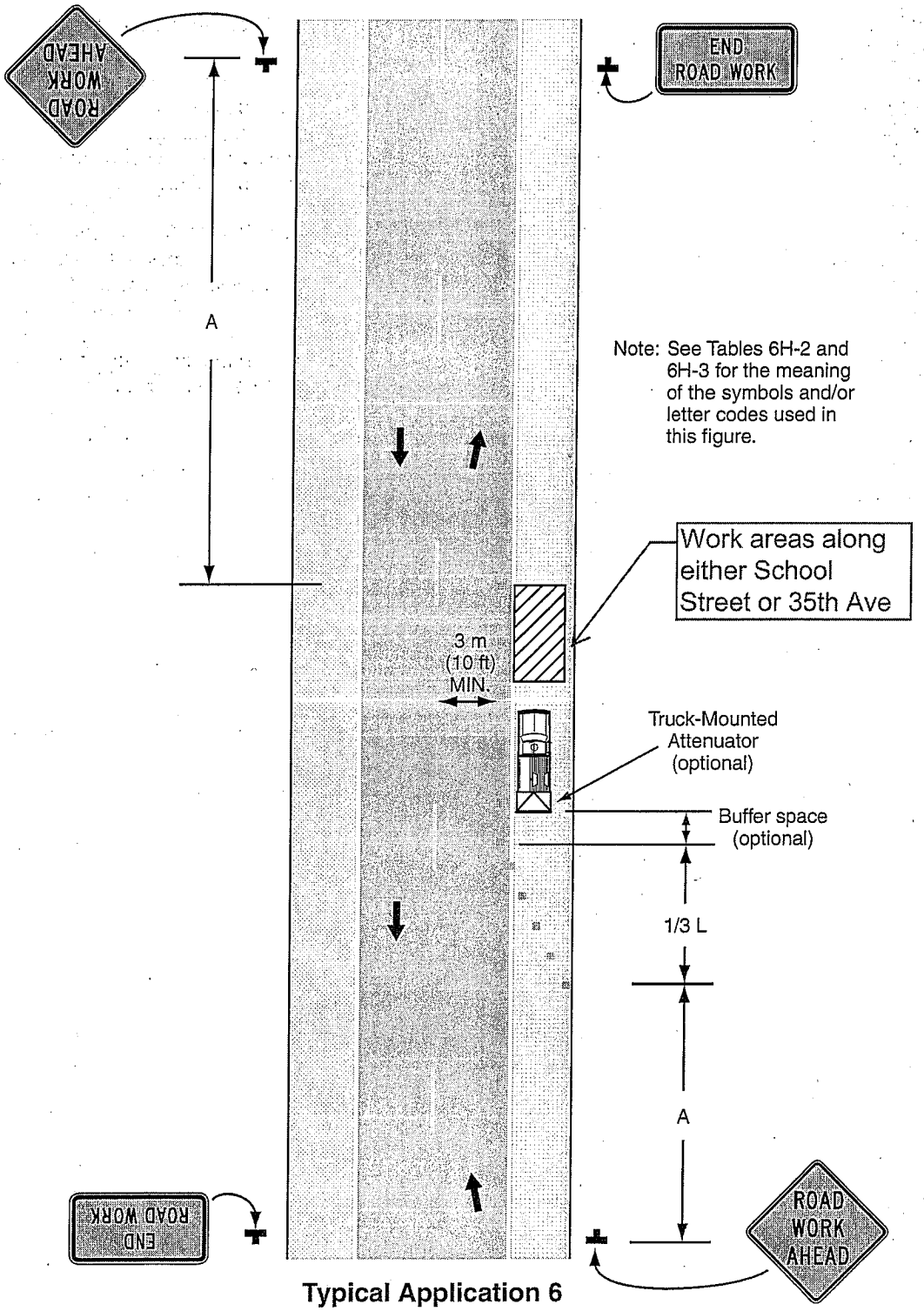
3. For short-term use on low-volume, low-speed roadways with vehicular traffic that does not include longer and wider heavy commercial vehicles, a minimum lane width of 2.7 m (9 ft) may be used.
4. Where the opposite shoulder is suitable for carrying vehicular traffic and of adequate width, lanes may be shifted by use of closely spaced channelizing devices, provided that the minimum lane width of 3 m (10 ft) is maintained.
5. Additional advance warning may be appropriate, such as a ROAD NARROWS sign.
6. Temporary traffic barriers may be used along the work space.
7. The shadow vehicle may be omitted if a taper and channelizing devices are used.
8. A truck-mounted attenuator may be used on the shadow vehicle.
9. For short-duration work, the taper and channelizing devices may be omitted if a shadow vehicle with activated high-intensity rotating, flashing, oscillating, or strobe lights is used.
10. Vehicle hazard warning signals may be used to supplement high-intensity rotating, flashing, oscillating, or strobe lights.

Standard:

11. Vehicle hazard warning signals shall not be used instead of the vehicle's high-intensity rotating, flashing, oscillating, or strobe lights.

APPROVED: Bert Chang 4/30/2012
Transportation Services Division
CITY OF OAKLAND TSD 12-0072
Pg 2/3

Figure 6H-6. Shoulder Work with Minor Encroachment (TA-6)



Typical Application 6

APPROVED: Bert Cleary 4/30/2012
Transportation Services Division
CITY OF OAKLAND
Pg 3/3 TSD 12-00-12

Weber, Hayes & Associates
Hydrogeology and Environmental Engineering
120 Westgate Dr., Watsonville, CA 95076
(831) 722-3580 (831) 662-3100
Fax: (831) 722-1159

INDICATE ATTACHMENTS THAT APPLY
- ___ Site Map
- ___ Data Sheets
- ___ Geologic Logs
- ___ Photo Sheets
- ___ COC's
- ___ Chargeable Materials

Client: **Golden Empire Properties Inc.**	Date: 4/27/12
Site Location: **Former Exxon Station, 3055 35th Avenue, Oakland**	Study #: **2X103.B**
Field Tasks: ☐ Drilling ☐ Sampling ☑ Other (see below): **Pre Drill Site Inspection**	Weather Conditions: Sunny & Warm
Personnel / Company On-Site: **Jered Chaney (Weber, Hayes and Associates: WHA)**	

TIME:

0730 ⇒ Leave Santa Cruz area for site.

0900 ⇒ Arrive onsite.

- Mark "Public right-of-way" boring locations DP-1, 2 & 3 as shown on attached site map. Mark for USA

0915 ⇒ Onsite → Begin marking prescribed ✱ locations w/ white stakes as shown on attached site map.

0940 ⇒ All locations marked – Perimeter of site marked for USA

- Contact USA for 3 Ticket No's

DP-1 & 2 : 144 864 Exp 25th May

DP-3 : 144 865

Onsite : 144 868

1000 Demob.

JC 4/27/12

Jered Chaney 4/27/12
Signature of Field Personnel & Date

Project Photo Sheets

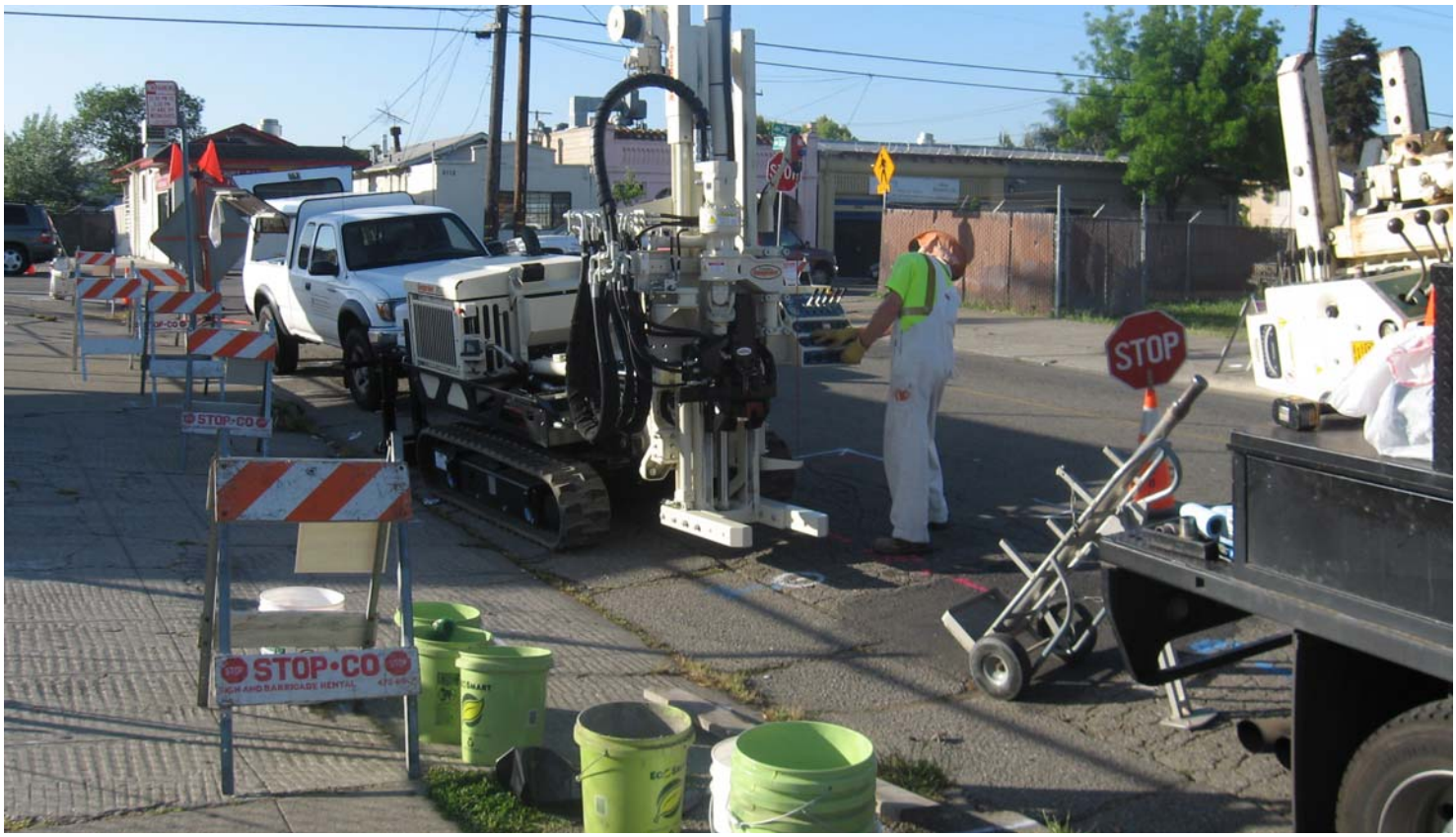
001.Advancing on-site soil borings for soil sampling

002.Subsurface lithology dominantly comprised of lower permeability Clay-Sand-Gravel mixtures

003.Lower permeability Gravelly Lean Clay encountered in all borings below 17-20 feet bgs

005.Saturated tank pit fill materials

006.Clearing utilities via air-knife at boring DP-3 - required by Shell Pipeline



007.Advancing off-site boring DP-1

008.Advancing boring DP-2

009.Advancing DP-2 just downgradient of abandoned fueling facility

010.Advancing boring DP-3 just downgradient of the active QuikStop fueling facility

011.Boring DP-3 adjusted to avoid exposed Shell Pipeline

012.Narrow, confined saturated zone encounterd from 29-30 feet bgs in DP-3

013.Continuous soil cores

014.On-site drilling and soil sampling

015.Collecting grab groundwater sample from boring DP-2

001.Pre-coring concrete at well MW-5 location - avoiding multiple utilities

002.Precored conceret at MW-5 location

003.Drilling and installing well MW-5

004.Advancing MW-5 borehole

005.ACPW grout seal inspection

006.Setting traffic rated well box at MW-5

007.Advancing well MW-6

008.Completing well seal at MW-6

009.Installing MW-6 well casing

Professional Well Survey

Mid Coast Engineers
Civil Engineers and Land Surveyors
70 Penny Lane, Suite A - Watsonville, CA 95076
Phone: (831) 724-2580
Fax: (831) 724-8025
e-mail: lee@midcoastengineers.com

Richard A. Wadsworth
Civil Engineer
Stanley O. Nielsen
Land Surveyor
Lee D. Vaage
Land Surveyor
Jeff S. Nielsen
Land Surveyor

LETTER OF TRANSMITTAL

To: Jered Chaney
Weber, Hayes and Associates
120 Westgate Drive
Watsonville, CA 95076

Date: 12 November 2012

Job No.: 12105

Re: GeoTracker Report

We are transmitting herewith:

Survey Report for Former Exxon Station, 3055 35th Avenue, Oakland, California
Weber Hayes Project 2X103

Copy To:

Signed: Lee Vaage, Land Surveyor

If enclosures are not as noted, kindly notify us at once.

Mid Coast Engineers
Civil Engineers and Land Surveyors
70 Penny Lane, Suite A - Watsonville, CA 95076
phone: (831) 724-2580
fax: (831) 724-8025
e-mail: lee@midcoastengineers.com

Richard A. Wadsworth
Civil Engineer
Stanley O. Nielsen
Land Surveyor
Lee D. Vaage
Land Surveyor
Jeff S. Nielsen
Land Surveyor

November 12, 2012

Jered Chaney
Weber, Hayes & Associates
120 Westgate Drive
Watsonville, CA 95076

Re: **FORMER EXXON STATION, 3055 35TH Avenue, Oakland, California;** Weber Hayes Project 2X103, MCE Job No. 12105

Dear Mr. Chaney,

As you requested, on November 2 we surveyed two new monitoring wells at the designated site. Our findings are listed on the attached sheets, expressed in State Plane Coordinates and in Latitude/Longitude. Please note that because we were unable to access the top of casing (toc) of MW-5, we are using a measurement supplied by you for this report.

A notch was cut in the north rim of the PVC casing (toc) and a cross chiseled in the north rim of the standard box (tob).

Measurements were obtained from conventional survey techniques in combination with GPS techniques (Code CGPS), using the top of casing (toc) of existing wells RW-8 and RW-14, as reported to GeoTracker from a survey by Virgil Chavez Land Surveying dated 6/2/2004, and indicated by an asterisk (*). Latitude and Longitude as shown were determined from the California Coordinate System, Zone 3, NAD 83 Datum. The accuracy range of the reported information is +/- 1cm. GPS equipment is the Trimble 5700/5800 system (Code T57).

The benchmark is top of casing of RW-14, as described above. Elevation = 163.76 feet, reported as NGVD 29 datum.

Please let me know if you have questions or need additional information.

Yours truly,

Lee D. Vaage

FORMER EXXON STATION
3055 35TH Avenue
Oakland, California

WEBER HAYES Project 2X103

Project : 12105
User name MCE Date & Time 9:40:55 AM 11/12/2012
Coordinate System US State Plane 1983 Zone California Zone 3 0403
Project Datum NAD 1983 (Conus)
Vertical Datum NGVD 29
Coordinate Units US survey feet
Distance Units US survey feet
Elevation Units US survey feet

Point Number	Northing	Easting	Elevation	Description
198	2114926.75	6068915.56	165.74	MW-5toc
197	2114927.10	6068915.59	166.37	MW-5tob
124	2114980.20	6068855.83	164.30	MW-6toc
125	2114980.55	6068855.86	164.77	MW-6tob
8	2114936.86	6068700.36	164.13	RW-8toc*
14	2114946.71	6068792.94	163.76	RW-14toc*

FORMER EXXON STATION
3055 35TH Avenue
Oakland, California

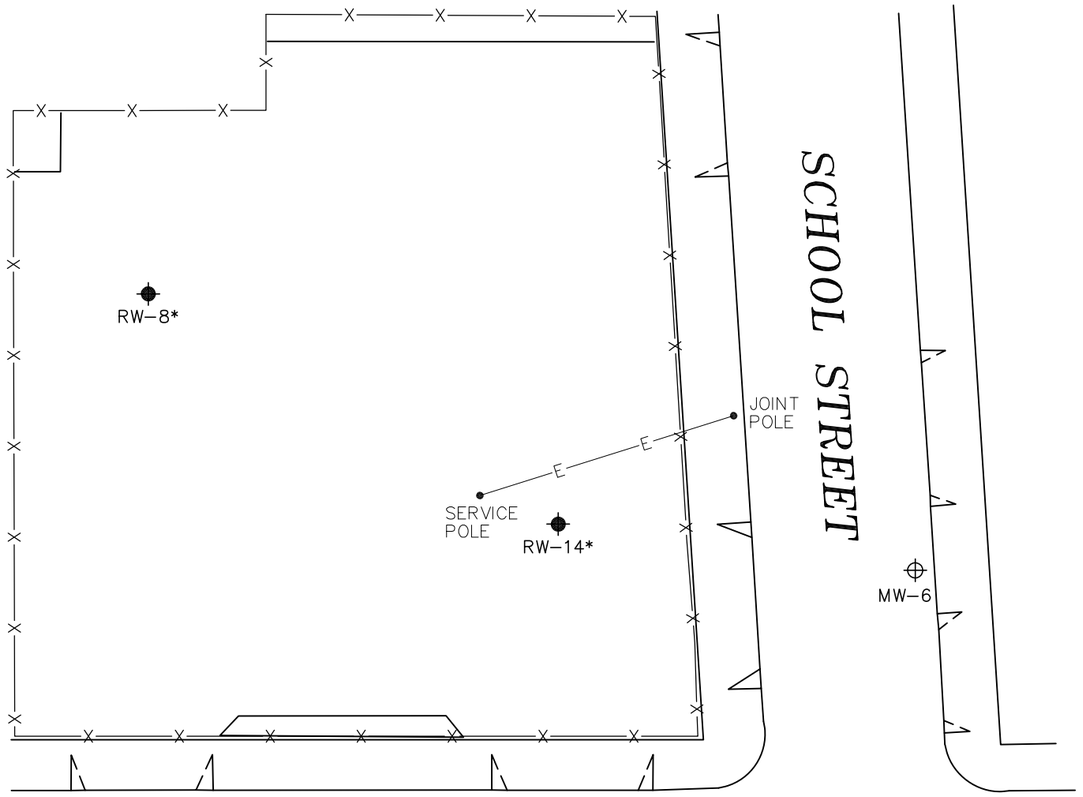
WEBER HAYES Project 2X103

Project : 12105
User name MCE Date & Time 9:40:55 AM 11/12/2012
Coordinate System US State Plane 1983 Zone California Zone 3 0403
Project Datum NAD 1983 (Conus)
Vertical Datum NGVD 29
Coordinate Units US survey feet
Distance Units US survey feet
Elevation Units US survey feet

Point Number	Latitude	Longitude	Elevation	Description
198	37.790874123°N	122.205353554°W	165.74	MW-5toc
197	37.790875082°N	122.205353474°W	166.37	MW-5tob
124	37.791017898°N	122.205563592°W	164.30	MW-6toc
125	37.791018854°N	122.205563513°W	164.77	MW-6tob
8	37.790891100°N	122.206098801°W	164.13	RW-8toc*
14	37.790922800°N	122.205779099°W	163.76	RW-14toc*

	A	B	C	D	E	F	G	H	I	J	K	L
1	**FORMER EXXON STATION**											
2	**3055 35TH Avenue**											
3	**Oakland, California**											
4												
5	**WEBER HAYES Project 2X103**											
6												
7	Project : 12105											
8	User name MCE			Date & Time 9:40:55 AM 11/12/2012								
9	Coordinate System US State Plane 1983			Zone California Zone 3 0403								
10	Project Datum NAD 1983 (Conus)											
11	Vertical Datum NGVD 29											
12	Coordinate Units US survey feet											
13	Distance Units US survey feet											
14	Elevation Units US survey feet											
15												
16		MW-5	MW	11/02/2012	37.7908741	-122.2053536	CGPS	NAD83	1	Mid Coast Engineers	T57	top of casing
17		MW-6	MW	11/02/2012	37.7910179	-122.2055636	CGPS	NAD83	1	Mid Coast Engineers	T57	top of casing

	A	B	C	D	E	F	G	H	I	J
1	**FORMER EXXON STATION**									
2	**3055 35TH Avenue**									
3	**Oakland, California**									
4										
5	**WEBER HAYES Project 2X103**									
6										
7	Project : 12105									
8	User name MCE		Date & Time	9:40:55 AM 11/12/2012						
9	Coordinate System	US State Plane 1983		Zone	California Zone 3 0403					
10	Project Datum	NAD 1983 (Conus)								
11	Vertical Datum	NGVD 29								
12	Coordinate Units	US survey feet								
13	Distance Units	US survey feet								
14	Elevation Units	US survey feet								
15										
16		MW-5	11/02/2012	165.74	CGPS	29	0.5	Mid Coast Engineers	-0.63	BM TOC RW-14 CHAVEZ LAND SURVEYING 6/2/2004 EL=163.76 FEET
17		**MW-6**	**11/02/2012**	**164.30**	**CGPS**	**29**	**0.5**	**Mid Coast Engineers**	**-0.47**	**BM TOC RW-14 CHAVEZ LAND SURVEYING 6/2/2004 EL=163.76 FEET**



NOTES:

1. COORDINATES ARE BASED ON THE CALIFORNIA COORDINATE SYSTEM, ZONE III, NAD 83.
2. BENCHMARK IS TOC RW-14 AS REPORTED TO GEOTRACKER FROM A SURVEY BY CHAVEZ LAND SURVEYING DATED 6/2/2004.
ELEVATION = 163.76, NGVD '29 DATUM.
3. SURVEYED AT THE REQUEST OF WEBER HAYES IN NOVEMBER 2012, PROJECT 2X103.

MONITORING WELL LOCATION MAP FOR
FORMER EXXON STATION

3055 35TH AVENUE
OAKLAND, CALIFORNIA

MID COAST ENGINEERS
CIVIL ENGINEERS AND LAND SURVEYORS
70 PENNY LANE SUITE A WATSONVILLE, CA 95076
(831) 724-2580

SCALE IN FEET
0 30 60

SCALE:	1"=30'
JOB NO.	12105
DATE:	NOV. 12, 2012
SHEET:	1 OF 1

Waste Disposal Documentation

Bayside Oil II, Inc.
210 Encinal Street
Santa Cruz, Ca 95060
1-800-433-7425

Phone (831) 427-3773

Fax (831) 427-9502

EPA ID# CAD088838222

Purge Water Disposal

Hauler # 3488

INVOICE
932238

Billing Information		Generator Location	
Name	Weber Thays + Associates	Name	Golden Empire Properties
Address	120 Westgate Dr.	Address	3055 35th Ave
City	Watsonville CA 95076	City	Oakland CA. 94619
Phone	8317223580	Phone	5105628600
Contact Person	Jared or Josh	Contact Person	

Customer # WAA02 | Cash or Charge | P.O. # | EPA ID# CAL000379105

Product	Waste Code	Quantity	Units	Price	Amount
Used Oil -- Non RCRA Hazardous Waste Liquid	221		Aprox. Gal.		
Used Antifreeze -- Non RCRA Hazardous Waste Liquid	134		Aprox. Gal.		
Oily- Water Mixed -- Non RCRA Hazardous Waste Liquid	221		Aprox. Gal.		
Water -- Non RCRA Hazardous Waste Liquid	134	60	Aprox. Gal.	1.65	99.00
Parts Washer Service	-		Each		
Drum Disposal	-		Each		
Waste Flammable Liquid N.O.S. (_____), 3, NA1993, P/G III	214/D001		Drum		
Non RCRA Hazardous Waste Liquid (_____)	343		Drum		
Non RCRA Hazardous Waste Solid (_____)	352		Drum		
Transportation Standby			Hrs.		
Other					
Clor-D-tect Sniffer Pass Fail PPM				**Total**	99.00

If a large generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable. I have selected the practicable method of treatment, storage or disposal currently available to me which minimizes the present and future threat to human health and the environment. If a small generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford. Bayside Oil II, Inc. hereby advises generator that shipments of used oil may be transported to a facility that is required to comply with federal regulations applicable to management of used oil, but that is not required to comply with the more stringent requirements applicable to hazardous waste management facilities. California facilities that handle or process used oil are required to meet those more stringent requirements and some out of state facilities that process used oil also meet those requirements. These include more stringent leak detection and prevention requirements, engineering certification of tank integrity and financial assurances for closure and accidental releases. It is lawful to send used oil to out of state facilities that comply only with federal used oil management standards and not these more stringent requirements. This is for information purposes only. EA _____ .

TERMS NET 30 DAY FROM DATE OF INVOICE - FINANCE CHARGE 1.5% PER MONTH

If the account is unpaid when due, customer agrees to pay interest at 18% per annum and attorney fees if referred to any attorney for collection. The person signed hereby states he is authorized to bind the principal to the terms hereof.

Bayside Oil II, Inc. 210 Encinal Street Santa Cruz, Ca 95060 Manifest # 001880460GBF	Driver Signature Eduardo Arreola Truck # 10 Date 11-19-12	Customer Signature Eduardo Arreola Print Name Eduardo Arreola for Weber Hayes Date 11-19-12

IWM, Inc.

INTEGRATED WASTESTREAM MANAGEMENT, INC.
1945 CONCOURSE DRIVE, SAN JOSE, CA 95131
PHONE: 408.433.1990 FAX: 408.433.9521

CERTIFICATE OF DISPOSAL

Generator Name:	Mr. Lynn Worthington c/o Golden Empire Properties Inc.	Facility Name:	Former Exxon Service Station
Address:	5942 MacArthur Blvd, #B	Address:	3055 35th Avenue
	Oakland, CA 94608-1698		Oakland, CA
Contact:	---	Facility Contact:	Jered Chaney, Weber, Hayes & Assoc.
Phone:	510-562-8600	Phone:	831-722-3580

IWM Job #:	100087-DS
Description of Waste:	4 Drum(s) of Non-Hazardous Soil
Removal Date:	12/11/12
Ticket #:	RSVRL111212

Transporter Information

Name:	IWM, Inc.
Address:	1945 Concourse Drive
	San Jose, CA 95131
Phone:	(408) 433-1990

Disposal Facility Information

Name:	Republic Services Vasco Road Landfill
Address:	4001 N. Vasco Road
	Livermore, CA 94550
Phone:	(925) 447-0491

IWM, INC. CERTIFIES THAT THE ABOVE LISTED NON-HAZARDOUS WASTE WILL BE TREATED AND DISPOSED AT THE DESIGNATED FACILITY IN ACCORDANCE WITH APPLICABLE FEDERAL, STATE, AND LOCAL REGULATIONS.

William T. DeLon William T. DeLon
Authorized Representative (Print Name and Signature)

12/11/12
Date

APPENDIX C

Laboratory Reports & Chain-of-Custody Documentation

- *Soil and Grab Groundwater, May 8 & 9, 2012*
- *Post Well Development Groundwater (MW-6), November 2, 2012*
- *Post Well Development Groundwater (MW-5), November 9, 2012*
- *Soil Drum, October 21, 2012*

Weber, Hayes & Associates
120 Westgate Dr
Watsonville, CA 95076
Tel: 831-722-3580
Fax: 831-662-3100

RE: Oakland / 2X103.B

Work Order No.: 1205066

Dear Jered Chaney:

Torrent Laboratory, Inc. received 14 sample(s) on May 10, 2012 for the analyses presented in the following Report.

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

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

Patti Sandrock
QA Officer

May 18, 2012
Date

Date: 5/18/2012

Client: Weber, Hayes & Associates

Project: Oakland / 2X103.B

Work Order: 1205066

CASE NARRATIVE

No issues encountered with the preparation, analysis or reporting of the results associated with this work order.

Unless otherwise indicated in the following narrative, no results have been method and/or field blank corrected.

Reported results relate only to the items/samples tested by the laboratory.

Although sample DP-3-d17 (-006A) was listed on the CoC, no sample was received. The client was informed and the sample was submitted under a separate work order.

Torrent LABORATORY, INC.

Sample Result Summary

Report prepared for: Jered Chaney
Weber, Hayes & Associates

Date Received: 05/10/12
Date Reported: 05/18/12

DP-1 1205066-001

Parameters:	Analysis Method	DF	MDL	PQL	Results	Unit

All compounds were non-detectable for this sample.

DP-2 1205066-002

Parameters:	Analysis Method	DF	MDL	PQL	Results	Unit
Benzene	SW8260B	1	0.087	0.50	72	ug/L
Toluene	SW8260B	1	0.059	0.50	24	ug/L
Ethyl Benzene	SW8260B	1	0.074	0.50	130	ug/L
m,p-Xylene	SW8260B	1	0.13	1.0	140	ug/L
o-Xylene	SW8260B	1	0.076	0.50	5.9	ug/L
TPH(Gasoline)	8260TPH	11	350	550	3800	ug/L
TPH as Diesel/Oil (C9-C42)	SW8015B	1	0.0440	0.10	0.31	mg/L

DP-3 1205066-003

Parameters:	Analysis Method	DF	MDL	PQL	Results	Unit
Benzene	SW8260B	1	0.087	0.50	92	ug/L
Toluene	SW8260B	1	0.059	0.50	1.7	ug/L
Ethyl Benzene	SW8260B	1	0.074	0.50	63	ug/L
m,p-Xylene	SW8260B	1	0.13	1.0	21	ug/L
MTBE	SW8260B	1	0.17	0.50	97	ug/L
tert-Butanol	SW8260B	1	1.5	5.0	55	ug/L
TPH(Gasoline)	8260TPH	1	31	50	1400	ug/L

DP-1-d8 1205066-004

Parameters:	Analysis Method	DF	MDL	PQL	Results	Unit

All compounds were non-detectable for this sample.

Torrent LABORATORY, INC.

Sample Result Summary

Report prepared for: Jered Chaney
Weber, Hayes & Associates

Date Received: 05/10/12
Date Reported: 05/18/12

DP-1-d14 1205066-005

Parameters:	Analysis Method	DF	MDL	PQL	Results	Unit
TPH(Gasoline)	8260TPH	5	0.15	0.50	8.4	mg/Kg

DP-1-d17-A 1205066-006

Parameters:	Analysis Method	DF	MDL	PQL	Results	Unit

All compounds were non-detectable for this sample.

DP-3-d8 1205066-007

Parameters:	Analysis Method	DF	MDL	PQL	Results	Unit

All compounds were non-detectable for this sample.

DP-3-d11 1205066-008

Parameters:	Analysis Method	DF	MDL	PQL	Results	Unit
TPH(Gasoline)	8260TPH	1	0.030	0.10	0.33	mg/Kg

DP-3-d14 1205066-009

Parameters:	Analysis Method	DF	MDL	PQL	Results	Unit
Ethyl Benzene	SW8260B	5	0.0043	0.050	0.30	mg/Kg
TPH(Gasoline)	8260TPH	5	0.15	0.50	10	mg/Kg

Torrent LABORATORY, INC.

Sample Result Summary

Report prepared for: Jered Chaney
Weber, Hayes & Associates

Date Received: 05/10/12
Date Reported: 05/18/12

DP-3-d20 1205066-011

Parameters:	Analysis Method	DF	MDL	PQL	Results	Unit
Benzene	SW8260B	5	0.0075	0.050	0.060	mg/Kg
Ethyl Benzene	SW8260B	5	0.0043	0.050	0.22	mg/Kg
m,p-Xylene	SW8260B	5	0.0093	0.050	0.17	mg/Kg
TPH(Gasoline)	8260TPH	5	0.15	0.50	6.4	mg/Kg

DP-3-d23 1205066-012

Parameters:	Analysis Method	DF	MDL	PQL	Results	Unit
TPH(Gasoline)	8260TPH	1	0.030	0.10	0.93	mg/Kg
Benzene	SW8260B	2.5	0.0038	0.025	0.17	mg/Kg
Ethyl Benzene	SW8260B	2.5	0.0022	0.025	0.046	mg/Kg
MTBE	SW8260B	2.5	0.0065	0.025	0.0080	mg/Kg

DP-4-d12 1205066-013

Parameters:	Analysis Method	DF	MDL	PQL	Results	Unit

All compounds were non-detectable for this sample.

DP-4-d18 1205066-014

Parameters:	Analysis Method	DF	MDL	PQL	Results	Unit
TPH(Gasoline)	8260TPH	100	3.0	10	96	mg/Kg
TPH as Diesel (SG)	SW8015B(M)	1	0.87	2.0	12	mg/Kg
Benzene	SW8260B	5	0.0075	0.050	0.22	mg/Kg
Ethyl Benzene	SW8260B	5	0.0043	0.050	0.91	mg/Kg
m,p-Xylene	SW8260B	5	0.0093	0.050	1.4	mg/Kg
o-Xylene	SW8260B	5	0.0033	0.025	0.046	mg/Kg

Sample Result Summary

Report prepared for: Jered Chaney
Weber, Hayes & Associates

Date Received: 05/10/12
Date Reported: 05/18/12

DP-1-d17-B 1205066-015

Parameters:	Analysis Method	DF	MDL	PQL	Results	Unit
Ethyl Benzene	SW8260B	1	0.00086	0.010	0.064	mg/Kg
TPH(Gasoline)	8260TPH	1	0.030	0.10	0.80	mg/Kg

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Jered Chaney
Weber, Hayes & Associates

Date Received: 05/10/12
Date Reported: 05/18/12

Client Sample ID:	DP-1	**Lab Sample ID:**	1205066-001A
Project Name/Location:	Oakland / 2X103.B	**Sample Matrix:**	Aqueous
Project Number:			
Date/Time Sampled:	05/09/12 / 0:00		
Tag Number:	Oakland / 2X103.B		

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
Benzene	SW8260B	NA	05/11/12	1	0.087	0.50	ND		ug/L	409732	NA
Toluene	SW8260B	NA	05/11/12	1	0.059	0.50	ND		ug/L	409732	NA
Ethyl Benzene	SW8260B	NA	05/11/12	1	0.074	0.50	ND		ug/L	409732	NA
m,p-Xylene	SW8260B	NA	05/11/12	1	0.13	1.0	ND		ug/L	409732	NA
o-Xylene	SW8260B	NA	05/11/12	1	0.076	0.50	ND		ug/L	409732	NA
MTBE	SW8260B	NA	05/11/12	1	0.17	0.50	ND		ug/L	409732	NA
tert-Butanol	SW8260B	NA	05/11/12	1	1.5	5.0	ND		ug/L	409732	NA
(S) Dibromofluoromethane	SW8260B	NA	05/11/12	1	61.2	131	93.1		%	409732	NA
(S) Toluene-d8	SW8260B	NA	05/11/12	1	75.1	127	88.3		%	409732	NA
(S) 4-Bromofluorobenzene	SW8260B	NA	05/11/12	1	64.1	120	91.6		%	409732	NA

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
TPH(Gasoline)	8260TPH	5/11/12	05/11/12	1	31	50	ND		ug/L	409732	5495
(S) 4-Bromofluorobenzene	8260TPH	5/11/12	05/11/12	1	41.5	125	108		%	409732	5495

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Jered Chaney
Weber, Hayes & Associates

Date Received: 05/10/12
Date Reported: 05/18/12

Client Sample ID:	DP-1	**Lab Sample ID:**	1205066-001B
Project Name/Location:	Oakland / 2X103.B	**Sample Matrix:**	Aqueous
Project Number:			
Date/Time Sampled:	05/09/12 / 0:00		
Tag Number:	Oakland / 2X103.B		

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
TPH as Diesel/Oil (C9-C42)	SW8015B	NA	05/16/12	1	0.0440	0.10	ND		mg/L	409779	NA
Pentacosane (S)	SW8015B	NA	05/16/12	1	64.2	123	88.9		%	409779	NA

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Jered Chaney
Weber, Hayes & Associates

Date Received: 05/10/12
Date Reported: 05/18/12

Client Sample ID:	DP-2	**Lab Sample ID:**	1205066-002A
Project Name/Location:	Oakland / 2X103.B	**Sample Matrix:**	Aqueous
Project Number:			
Date/Time Sampled:	05/09/12 / 0:00		
Tag Number:	Oakland / 2X103.B		

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
Benzene	SW8260B	NA	05/11/12	1	0.087	0.50	72		ug/L	409732	NA
Toluene	SW8260B	NA	05/11/12	1	0.059	0.50	24		ug/L	409732	NA
Ethyl Benzene	SW8260B	NA	05/11/12	1	0.074	0.50	130		ug/L	409732	NA
m,p-Xylene	SW8260B	NA	05/11/12	1	0.13	1.0	140		ug/L	409732	NA
o-Xylene	SW8260B	NA	05/11/12	1	0.076	0.50	5.9		ug/L	409732	NA
MTBE	SW8260B	NA	05/11/12	1	0.17	0.50	ND		ug/L	409732	NA
tert-Butanol	SW8260B	NA	05/11/12	1	1.5	5.0	ND		ug/L	409732	NA
(S) Dibromofluoromethane	SW8260B	NA	05/11/12	1	61.2	131	94.5		%	409732	NA
(S) Toluene-d8	SW8260B	NA	05/11/12	1	75.1	127	94.8		%	409732	NA
(S) 4-Bromofluorobenzene	SW8260B	NA	05/11/12	1	64.1	120	92.1		%	409732	NA

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
TPH(Gasoline)	8260TPH	5/11/12	05/11/12	11	350	550	3800	x	ug/L	409732	5495
(S) 4-Bromofluorobenzene	8260TPH	5/11/12	05/11/12	11	41.5	125	126	S	%	409732	5495

NOTE: x-Not typical of Gasoline Standard pattern. Result is elevated due to contribution from non-target hydrocarbons in C5-C12 gasoline range. S - High surrogate recovery due to interference (heavy end hydrocarbons).

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Jered Chaney
Weber, Hayes & Associates

Date Received: 05/10/12
Date Reported: 05/18/12

Client Sample ID:	DP-2	**Lab Sample ID:**	1205066-002B
Project Name/Location:	Oakland / 2X103.B	**Sample Matrix:**	Aqueous
Project Number:			
Date/Time Sampled:	05/09/12 / 0:00		
Tag Number:	Oakland / 2X103.B		

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
TPH as Diesel/Oil (C9-C42)	SW8015B	NA	05/16/12	1	0.0440	0.10	0.31		mg/L	409779	NA
Pentacosane (S)	SW8015B	NA	05/16/12	1	64.2	123	89.6		%	409779	NA

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Jered Chaney
Weber, Hayes & Associates

Date Received: 05/10/12
Date Reported: 05/18/12

Client Sample ID:	DP-3	**Lab Sample ID:**	1205066-003A
Project Name/Location:	Oakland / 2X103.B	**Sample Matrix:**	Aqueous
Project Number:			
Date/Time Sampled:	05/09/12 / 0:00		
Tag Number:	Oakland / 2X103.B		

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
Benzene	SW8260B	NA	05/11/12	1	0.087	0.50	92		ug/L	409732	NA
Toluene	SW8260B	NA	05/11/12	1	0.059	0.50	1.7		ug/L	409732	NA
Ethyl Benzene	SW8260B	NA	05/11/12	1	0.074	0.50	63		ug/L	409732	NA
m,p-Xylene	SW8260B	NA	05/11/12	1	0.13	1.0	21		ug/L	409732	NA
o-Xylene	SW8260B	NA	05/11/12	1	0.076	0.50	ND		ug/L	409732	NA
MTBE	SW8260B	NA	05/11/12	1	0.17	0.50	97		ug/L	409732	NA
tert-Butanol	SW8260B	NA	05/11/12	1	1.5	5.0	55		ug/L	409732	NA
(S) Dibromofluoromethane	SW8260B	NA	05/11/12	1	61.2	131	93.3		%	409732	NA
(S) Toluene-d8	SW8260B	NA	05/11/12	1	75.1	127	87.4		%	409732	NA
(S) 4-Bromofluorobenzene	SW8260B	NA	05/11/12	1	64.1	120	87.4		%	409732	NA

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
TPH(Gasoline)	8260TPH	5/11/12	05/11/12	1	31	50	1400	x	ug/L	409732	5495
(S) 4-Bromofluorobenzene	8260TPH	5/11/12	05/11/12	1	41.5	125	114		%	409732	5495

NOTE: x-Not typical of Gasoline Standard pattern. Result is elevated due to contribution from non-target hydrocarbons in C5-C12 range quantified as Gasoline.

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Jered Chaney
Weber, Hayes & Associates

Date Received: 05/10/12
Date Reported: 05/18/12

Client Sample ID:	DP-3	**Lab Sample ID:**	1205066-003B
Project Name/Location:	Oakland / 2X103.B	**Sample Matrix:**	Aqueous
Project Number:			
Date/Time Sampled:	05/09/12 / 0:00		
Tag Number:	Oakland / 2X103.B		

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
TPH as Diesel/Oil (C9-C42)	SW8015B	NA	05/16/12	1	0.0440	0.10	ND		mg/L	409779	NA
Pentacosane (S)	SW8015B	NA	05/16/12	1	64.2	123	89.0		%	409779	NA

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Jered Chaney
Weber, Hayes & Associates

Date Received: 05/10/12
Date Reported: 05/18/12

Client Sample ID:	DP-1-d8	**Lab Sample ID:**	1205066-004A
Project Name/Location:	Oakland / 2X103.B	**Sample Matrix:**	Soil
Project Number:			
Date/Time Sampled:	05/09/12 / 0:00		
Tag Number:	Oakland / 2X103.B		

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
Benzene	SW8260B	NA	05/14/12	1	0.0015	0.010	ND		mg/Kg	409737	NA
Toluene	SW8260B	NA	05/14/12	1	0.00098	0.010	ND		mg/Kg	409737	NA
Ethyl Benzene	SW8260B	NA	05/14/12	1	0.00086	0.010	ND		mg/Kg	409737	NA
m,p-Xylene	SW8260B	NA	05/14/12	1	0.0019	0.010	ND		mg/Kg	409737	NA
o-Xylene	SW8260B	NA	05/14/12	1	0.00066	0.0050	ND		mg/Kg	409737	NA
MTBE	SW8260B	NA	05/14/12	1	0.0026	0.010	ND		mg/Kg	409737	NA
tert-Butanol	SW8260B	NA	05/14/12	1	0.021	0.050	ND		mg/Kg	409737	NA
(S) Dibromofluoromethane	SW8260B	NA	05/14/12	1	59.8	148	114		%	409737	NA
(S) Toluene-d8	SW8260B	NA	05/14/12	1	55.2	133	110		%	409737	NA
(S) 4-Bromofluorobenzene	SW8260B	NA	05/14/12	1	55.8	141	114		%	409737	NA

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
TPH(Gasoline)	8260TPH	NA	05/14/12	1	0.030	0.10	ND		mg/Kg	409737	NA
(S) 4-Bromofluorobenzene	8260TPH	NA	05/14/12	1	43.9	127	73.8		%	409737	NA

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Jered Chaney
Weber, Hayes & Associates

Date Received: 05/10/12
Date Reported: 05/18/12

Client Sample ID:	DP-1-d14	**Lab Sample ID:**	1205066-005A
Project Name/Location:	Oakland / 2X103.B	**Sample Matrix:**	Soil
Project Number:			
Date/Time Sampled:	05/09/12 / 0:00		
Tag Number:	Oakland / 2X103.B		

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
The results shown below are reported using their MDL.											
Benzene	SW8260B	NA	05/17/12	5	0.0075	0.050	ND		mg/Kg	409796	NA
Toluene	SW8260B	NA	05/17/12	5	0.0049	0.050	ND		mg/Kg	409796	NA
Ethyl Benzene	SW8260B	NA	05/17/12	5	0.0043	0.050	ND		mg/Kg	409796	NA
m,p-Xylene	SW8260B	NA	05/17/12	5	0.0093	0.050	ND		mg/Kg	409796	NA
o-Xylene	SW8260B	NA	05/17/12	5	0.0033	0.025	ND		mg/Kg	409796	NA
MTBE	SW8260B	NA	05/17/12	5	0.013	0.050	ND		mg/Kg	409796	NA
tert-Butanol	SW8260B	NA	05/17/12	5	0.10	0.25	ND		mg/Kg	409796	NA
(S) Dibromofluoromethane	SW8260B	NA	05/17/12	5	59.8	148	103		%	409796	NA
(S) Toluene-d8	SW8260B	NA	05/17/12	5	55.2	133	114		%	409796	NA
(S) 4-Bromofluorobenzene	SW8260B	NA	05/17/12	5	55.8	141	112		%	409796	NA

NOTE: Reporting limits were raised due to high level of non-target hydrocarbons.

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
The results shown below are reported using their MDL.											
TPH(Gasoline)	8260TPH	5/17/12	05/17/12	5	0.15	0.50	8.4	x	mg/Kg	409796	5531
(S) 4-Bromofluorobenzene	8260TPH	5/17/12	05/17/12	5	43.9	127	128	S	%	409796	5531

NOTE: x - Does not match pattern of reference Gasoline standard. Hydrocarbons in the range of C5-C12 quantified as Gasoline. S - High surrogate recovery attributed to matrix interference (heavy end hydrocarbons).

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
TPH as Diesel (SG)	SW8015B(M)	5/15/12	05/15/12	1	0.87	2.0	ND		mg/Kg	409762	5506
TPH as Motor Oil (SG)	SW8015B(M)	5/15/12	05/15/12	1	1.3	10	ND		mg/Kg	409762	5506
Pentacosane (S)	SW8015B(M)	5/15/12	05/15/12	1	61.5	133	81.7		%	409762	5506

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Jered Chaney
Weber, Hayes & Associates

Date Received: 05/10/12
Date Reported: 05/18/12

Client Sample ID:	DP-1-d17-A	**Lab Sample ID:**	1205066-006A
Project Name/Location:	Oakland / 2X103.B	**Sample Matrix:**	Soil
Project Number:			
Date/Time Sampled:	05/09/12 / 0:00		
Tag Number:	Oakland / 2X103.B		

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
Benzene	SW8260B	NA	05/14/12	1	0.0015	0.010	ND		mg/Kg	409737	NA
Toluene	SW8260B	NA	05/14/12	1	0.00098	0.010	ND		mg/Kg	409737	NA
Ethyl Benzene	SW8260B	NA	05/14/12	1	0.00086	0.010	ND		mg/Kg	409737	NA
m,p-Xylene	SW8260B	NA	05/14/12	1	0.0019	0.010	ND		mg/Kg	409737	NA
o-Xylene	SW8260B	NA	05/14/12	1	0.00066	0.0050	ND		mg/Kg	409737	NA
MTBE	SW8260B	NA	05/14/12	1	0.0026	0.010	ND		mg/Kg	409737	NA
tert-Butanol	SW8260B	NA	05/14/12	1	0.021	0.050	ND		mg/Kg	409737	NA
(S) Dibromofluoromethane	SW8260B	NA	05/14/12	1	59.8	148	141		%	409737	NA
(S) Toluene-d8	SW8260B	NA	05/14/12	1	55.2	133	110		%	409737	NA
(S) 4-Bromofluorobenzene	SW8260B	NA	05/14/12	1	55.8	141	124		%	409737	NA

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
TPH(Gasoline)	8260TPH	NA	05/14/12	1	30	100	ND		mg/Kg	409737	NA
(S) 4-Bromofluorobenzene	8260TPH	NA	05/14/12	1	43.9	127	64.6		%	409737	NA

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Jered Chaney
Weber, Hayes & Associates

Date Received: 05/10/12
Date Reported: 05/18/12

Client Sample ID:	DP-3-d8	**Lab Sample ID:**	1205066-007A
Project Name/Location:	Oakland / 2X103.B	**Sample Matrix:**	Soil
Project Number:			
Date/Time Sampled:	05/09/12 / 0:00		
Tag Number:	Oakland / 2X103.B		

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
Benzene	SW8260B	NA	05/14/12	1	0.0015	0.010	ND		mg/Kg	409737	NA
Toluene	SW8260B	NA	05/14/12	1	0.00098	0.010	ND		mg/Kg	409737	NA
Ethyl Benzene	SW8260B	NA	05/14/12	1	0.00086	0.010	ND		mg/Kg	409737	NA
m,p-Xylene	SW8260B	NA	05/14/12	1	0.0019	0.010	ND		mg/Kg	409737	NA
o-Xylene	SW8260B	NA	05/14/12	1	0.00066	0.0050	ND		mg/Kg	409737	NA
MTBE	SW8260B	NA	05/14/12	1	0.0026	0.010	ND		mg/Kg	409737	NA
tert-Butanol	SW8260B	NA	05/14/12	1	0.021	0.050	ND		mg/Kg	409737	NA
(S) Dibromofluoromethane	SW8260B	NA	05/14/12	1	59.8	148	141		%	409737	NA
(S) Toluene-d8	SW8260B	NA	05/14/12	1	55.2	133	112		%	409737	NA
(S) 4-Bromofluorobenzene	SW8260B	NA	05/14/12	1	55.8	141	125		%	409737	NA

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
TPH(Gasoline)	8260TPH	NA	05/14/12	1	0.030	0.10	ND		mg/Kg	409737	NA
(S) 4-Bromofluorobenzene	8260TPH	NA	05/14/12	1	43.9	127	62.9		%	409737	NA

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Jered Chaney
Weber, Hayes & Associates

Date Received: 05/10/12
Date Reported: 05/18/12

Client Sample ID:	DP-3-d11	**Lab Sample ID:**	1205066-008A
Project Name/Location:	Oakland / 2X103.B	**Sample Matrix:**	Soil
Project Number:			
Date/Time Sampled:	05/09/12 / 0:00		
Tag Number:	Oakland / 2X103.B		

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
Benzene	SW8260B	NA	05/14/12	1	0.0015	0.010	ND		mg/Kg	409737	NA
Toluene	SW8260B	NA	05/14/12	1	0.00098	0.010	ND		mg/Kg	409737	NA
Ethyl Benzene	SW8260B	NA	05/14/12	1	0.00086	0.010	ND		mg/Kg	409737	NA
m,p-Xylene	SW8260B	NA	05/14/12	1	0.0019	0.010	ND		mg/Kg	409737	NA
o-Xylene	SW8260B	NA	05/14/12	1	0.00066	0.0050	ND		mg/Kg	409737	NA
MTBE	SW8260B	NA	05/14/12	1	0.0026	0.010	ND		mg/Kg	409737	NA
tert-Butanol	SW8260B	NA	05/14/12	1	0.021	0.050	ND		mg/Kg	409737	NA
(S) Dibromofluoromethane	SW8260B	NA	05/14/12	1	59.8	148	139		%	409737	NA
(S) Toluene-d8	SW8260B	NA	05/14/12	1	55.2	133	113		%	409737	NA
(S) 4-Bromofluorobenzene	SW8260B	NA	05/14/12	1	55.8	141	116		%	409737	NA

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
TPH(Gasoline)	8260TPH	NA	05/14/12	1	0.030	0.10	0.33	x	mg/Kg	409737	NA
(S) 4-Bromofluorobenzene	8260TPH	NA	05/14/12	1	43.9	127	64.6		%	409737	NA

NOTE: x - Does not match pattern of reference Gasoline standard. Hydrocarbons in the range of C5-C12 quantified as Gasoline.

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Jered Chaney
Weber, Hayes & Associates

Date Received: 05/10/12
Date Reported: 05/18/12

Client Sample ID:	DP-3-d14	**Lab Sample ID:**	1205066-009A
Project Name/Location:	Oakland / 2X103.B	**Sample Matrix:**	Soil
Project Number:			
Date/Time Sampled:	05/09/12 / 0:00		
Tag Number:	Oakland / 2X103.B		

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
The results shown below are reported using their MDL.											
Benzene	SW8260B	NA	05/15/12	5	0.0075	0.050	ND		mg/Kg	409759	NA
Toluene	SW8260B	NA	05/15/12	5	0.0049	0.050	ND		mg/Kg	409759	NA
Ethyl Benzene	SW8260B	NA	05/15/12	5	0.0043	0.050	0.30		mg/Kg	409759	NA
m,p-Xylene	SW8260B	NA	05/15/12	5	0.0093	0.050	ND		mg/Kg	409759	NA
o-Xylene	SW8260B	NA	05/15/12	5	0.0033	0.025	ND		mg/Kg	409759	NA
MTBE	SW8260B	NA	05/15/12	5	0.013	0.050	ND		mg/Kg	409759	NA
tert-Butanol	SW8260B	NA	05/15/12	5	0.10	0.25	ND		mg/Kg	409759	NA
(S) Dibromofluoromethane	SW8260B	NA	05/15/12	5	59.8	148	126		%	409759	NA
(S) Toluene-d8	SW8260B	NA	05/15/12	5	55.2	133	113		%	409759	NA
(S) 4-Bromofluorobenzene	SW8260B	NA	05/15/12	5	55.8	141	109		%	409759	NA

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
The results shown below are reported using their MDL.											
TPH(Gasoline)	8260TPH	NA	05/15/12	5	0.15	0.50	10	x	mg/Kg	409759	NA
(S) 4-Bromofluorobenzene	8260TPH	NA	05/15/12	5	43.9	127	68.5		%	409759	NA

NOTE: x - Does not match pattern of reference Gasoline standard. Hydrocarbons in the range of C5-C12 quantified as Gasoline.

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Jered Chaney
Weber, Hayes & Associates

Date Received: 05/10/12
Date Reported: 05/18/12

Client Sample ID:	DP-3-d20	**Lab Sample ID:**	1205066-011A
Project Name/Location:	Oakland / 2X103.B	**Sample Matrix:**	Soil
Project Number:			
Date/Time Sampled:	05/09/12 / 0:00		
Tag Number:	Oakland / 2X103.B		

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
The results shown below are reported using their MDL.											
Benzene	SW8260B	NA	05/15/12	5	0.0075	0.050	0.060		mg/Kg	409759	NA
Toluene	SW8260B	NA	05/15/12	5	0.0049	0.050	ND		mg/Kg	409759	NA
Ethyl Benzene	SW8260B	NA	05/15/12	5	0.0043	0.050	0.22		mg/Kg	409759	NA
m,p-Xylene	SW8260B	NA	05/15/12	5	0.0093	0.050	0.17		mg/Kg	409759	NA
o-Xylene	SW8260B	NA	05/15/12	5	0.0033	0.025	ND		mg/Kg	409759	NA
MTBE	SW8260B	NA	05/15/12	5	0.013	0.050	ND		mg/Kg	409759	NA
tert-Butanol	SW8260B	NA	05/15/12	5	0.10	0.25	ND		mg/Kg	409759	NA
(S) Dibromofluoromethane	SW8260B	NA	05/15/12	5	59.8	148	109		%	409759	NA
(S) Toluene-d8	SW8260B	NA	05/15/12	5	55.2	133	112		%	409759	NA
(S) 4-Bromofluorobenzene	SW8260B	NA	05/15/12	5	55.8	141	103		%	409759	NA

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
The results shown below are reported using their MDL.											
TPH(Gasoline)	8260TPH	NA	05/15/12	5	0.15	0.50	6.4		mg/Kg	409759	NA
(S) 4-Bromofluorobenzene	8260TPH	NA	05/15/12	5	43.9	127	78.1		%	409759	NA

NOTE: Result is elevated due to significant contribution from non-target heavy hydrocarbons in the C5-C12 range quantified as Gasoline.

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Jered Chaney
Weber, Hayes & Associates

Date Received: 05/10/12
Date Reported: 05/18/12

Client Sample ID:	DP-3-d23	**Lab Sample ID:**	1205066-012A
Project Name/Location:	Oakland / 2X103.B	**Sample Matrix:**	Soil
Project Number:			
Date/Time Sampled:	05/09/12 / 0:00		
Tag Number:	Oakland / 2X103.B		

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
The results shown below are reported using their MDL.											
Benzene	SW8260B	NA	05/15/12	2.5	0.0038	0.025	0.17		mg/Kg	409759	NA
Toluene	SW8260B	NA	05/15/12	2.5	0.0025	0.025	ND		mg/Kg	409759	NA
Ethyl Benzene	SW8260B	NA	05/15/12	2.5	0.0022	0.025	0.046		mg/Kg	409759	NA
m,p-Xylene	SW8260B	NA	05/15/12	2.5	0.0046	0.025	ND		mg/Kg	409759	NA
o-Xylene	SW8260B	NA	05/15/12	2.5	0.0017	0.013	ND		mg/Kg	409759	NA
MTBE	SW8260B	NA	05/15/12	2.5	0.0065	0.025	0.0080	J	mg/Kg	409759	NA
tert-Butanol	SW8260B	NA	05/15/12	2.5	0.052	0.13	ND		mg/Kg	409759	NA
(S) Dibromofluoromethane	SW8260B	NA	05/15/12	2.5	59.8	148	114		%	409759	NA
(S) Toluene-d8	SW8260B	NA	05/15/12	2.5	55.2	133	113		%	409759	NA
(S) 4-Bromofluorobenzene	SW8260B	NA	05/15/12	2.5	55.8	141	103		%	409759	NA

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
TPH(Gasoline)	8260TPH	NA	05/14/12	1	0.030	0.10	0.93	x	mg/Kg	409737	NA
(S) 4-Bromofluorobenzene	8260TPH	NA	05/14/12	1	43.9	127	64.9		%	409737	NA

NOTE: x - Does not match pattern of reference Gasoline standard. Reported value is the result of discrete peaks and non-target compounds within range of C5-C12 quantified as Gasoline.

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Jered Chaney
Weber, Hayes & Associates

Date Received: 05/10/12
Date Reported: 05/18/12

Client Sample ID:	DP-4-d12	**Lab Sample ID:**	1205066-013A
Project Name/Location:	Oakland / 2X103.B	**Sample Matrix:**	Soil
Project Number:			
Date/Time Sampled:	05/09/12 / 0:00		
Tag Number:	Oakland / 2X103.B		

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
Benzene	SW8260B	NA	05/14/12	1	0.0015	0.010	ND		mg/Kg	409737	NA
Toluene	SW8260B	NA	05/14/12	1	0.00098	0.010	ND		mg/Kg	409737	NA
Ethyl Benzene	SW8260B	NA	05/14/12	1	0.00086	0.010	ND		mg/Kg	409737	NA
m,p-Xylene	SW8260B	NA	05/14/12	1	0.0019	0.010	ND		mg/Kg	409737	NA
o-Xylene	SW8260B	NA	05/14/12	1	0.00066	0.0050	ND		mg/Kg	409737	NA
MTBE	SW8260B	NA	05/14/12	1	0.0026	0.010	ND		mg/Kg	409737	NA
tert-Butanol	SW8260B	NA	05/14/12	1	0.021	0.050	ND		mg/Kg	409737	NA
(S) Dibromofluoromethane	SW8260B	NA	05/14/12	1	59.8	148	134		%	409737	NA
(S) Toluene-d8	SW8260B	NA	05/14/12	1	55.2	133	114		%	409737	NA
(S) 4-Bromofluorobenzene	SW8260B	NA	05/14/12	1	55.8	141	131		%	409737	NA

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
TPH(Gasoline)	8260TPH	NA	05/14/12	1	0.030	0.10	ND		mg/Kg	409737	NA
(S) 4-Bromofluorobenzene	8260TPH	NA	05/14/12	1	43.9	127	64.6		%	409737	NA

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Jered Chaney
Weber, Hayes & Associates

Date Received: 05/10/12
Date Reported: 05/18/12

Client Sample ID:	DP-4-d18	**Lab Sample ID:**	1205066-014A
Project Name/Location:	Oakland / 2X103.B	**Sample Matrix:**	Soil
Project Number:			
Date/Time Sampled:	05/09/12 / 0:00		
Tag Number:	Oakland / 2X103.B		

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
The results shown below are reported using their MDL.											
Benzene	SW8260B	NA	05/15/12	5	0.0075	0.050	0.22		mg/Kg	409759	NA
Toluene	SW8260B	NA	05/15/12	5	0.0049	0.050	ND		mg/Kg	409759	NA
Ethyl Benzene	SW8260B	NA	05/15/12	5	0.0043	0.050	0.91		mg/Kg	409759	NA
m,p-Xylene	SW8260B	NA	05/15/12	5	0.0093	0.050	1.4		mg/Kg	409759	NA
o-Xylene	SW8260B	NA	05/15/12	5	0.0033	0.025	0.046		mg/Kg	409759	NA
MTBE	SW8260B	NA	05/15/12	5	0.013	0.050	ND		mg/Kg	409759	NA
tert-Butanol	SW8260B	NA	05/15/12	5	0.10	0.25	ND		mg/Kg	409759	NA
(S) Dibromofluoromethane	SW8260B	NA	05/15/12	5	59.8	148	135		%	409759	NA
(S) Toluene-d8	SW8260B	NA	05/15/12	5	55.2	133	112		%	409759	NA
(S) 4-Bromofluorobenzene	SW8260B	NA	05/15/12	5	55.8	141	114		%	409759	NA

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
The results shown below are reported using their MDL.											
TPH(Gasoline)	8260TPH	NA	05/14/12	100	3.0	10	96	x	mg/Kg	409737	NA
(S) 4-Bromofluorobenzene	8260TPH	NA	05/14/12	100	43.9	127	78.3		%	409737	NA

NOTE: x - Does not match pattern of reference Gasoline standard. Reported TPH value includes contribution from heavy end hydrocarbons (possibly aged gasoline).

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
TPH as Diesel (SG)	SW8015B(M)	5/15/12	05/15/12	1	0.87	2.0	12		mg/Kg	409762	5506
TPH as Motor Oil (SG)	SW8015B(M)	5/15/12	05/15/12	1	1.3	10	ND		mg/Kg	409762	5506
Pentacosane (S)	SW8015B(M)	5/15/12	05/15/12	1	61.5	133	93.8		%	409762	5506

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Jered Chaney
Weber, Hayes & Associates

Date Received: 05/10/12
Date Reported: 05/18/12

Client Sample ID:	DP-1-d17-B	**Lab Sample ID:**	1205066-015A
Project Name/Location:	Oakland / 2X103.B	**Sample Matrix:**	Soil
Project Number:			
Date/Time Sampled:	05/09/12 / 0:00		
Tag Number:	Oakland / 2X103.B		

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
Benzene	SW8260B	NA	05/14/12	1	0.0015	0.010	ND		mg/Kg	409737	NA
Toluene	SW8260B	NA	05/14/12	1	0.00098	0.010	ND		mg/Kg	409737	NA
Ethyl Benzene	SW8260B	NA	05/14/12	1	0.00086	0.010	0.064		mg/Kg	409737	NA
m,p-Xylene	SW8260B	NA	05/14/12	1	0.0019	0.010	ND		mg/Kg	409737	NA
o-Xylene	SW8260B	NA	05/14/12	1	0.00066	0.0050	ND		mg/Kg	409737	NA
MTBE	SW8260B	NA	05/14/12	1	0.0026	0.010	ND		mg/Kg	409737	NA
tert-Butanol	SW8260B	NA	05/14/12	1	0.021	0.050	ND		mg/Kg	409737	NA
(S) Dibromofluoromethane	SW8260B	NA	05/14/12	1	59.8	148	141		%	409737	NA
(S) Toluene-d8	SW8260B	NA	05/14/12	1	55.2	133	110		%	409737	NA
(S) 4-Bromofluorobenzene	SW8260B	NA	05/14/12	1	55.8	141	117		%	409737	NA

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
TPH(Gasoline)	8260TPH	NA	05/14/12	1	0.030	0.10	0.80	x	mg/Kg	409737	NA
(S) 4-Bromofluorobenzene	8260TPH	NA	05/14/12	1	43.9	127	60.2		%	409737	NA

NOTE: x - Does not match pattern of reference Gasoline standard. Hydrocarbons in the range of C5-C12 quantified as Gasoline.

Torrent LABORATORY, INC.

MB Summary Report

Work Order:	1205066	**Prep Method:**	NA	**Prep Date:**	NA	**Prep Batch:**	NA
Matrix:	Water	**Analytical Method:**	SW8260B	**Analyzed Date:**	05/11/12	**Analytical Batch:**	409732
Units:	ug/L						

Parameters	MDL	PQL	Method Blank Conc.	Lab Qualifier
Dichlorodifluoromethane	0.18	0.50	ND	
Chloromethane	0.16	0.50	ND	
Vinyl Chloride	0.16	0.50	ND	
Bromomethane	0.18	0.50	ND	
Trichlorofluoromethane	0.18	0.50	ND	
1,1-Dichloroethene	0.15	0.50	ND	
Freon 113	0.19	0.50	ND	
Methylene Chloride	0.23	5.0	ND	
trans-1,2-Dichloroethene	0.19	0.50	ND	
MTBE	0.17	0.50	ND	
tert-Butanol	1.5	5.0	ND	
Diisopropyl ether (DIPE)	0.13	0.50	ND	
1,1-Dichloroethane	0.13	0.50	ND	
ETBE	0.17	0.50	ND	
cis-1,2-Dichloroethene	0.19	0.50	ND	
2,2-Dichloropropane	0.15	0.50	ND	
Bromochloromethane	0.20	0.50	ND	
Chloroform	0.13	0.50	ND	
Carbon Tetrachloride	0.15	0.50	ND	
1,1,1-Trichloroethane	0.097	0.50	ND	
1,1-Dichloropropene	0.15	0.50	ND	
Benzene	0.13	0.50	ND	
TAME	0.17	0.50	ND	
1,2-Dichloroethane	0.14	0.50	ND	
Trichloroethylene	0.13	0.50	ND	
Dibromomethane	0.15	0.50	ND	
1,2-Dichloropropane	0.17	0.50	ND	
Bromodichloromethane	0.13	0.50	ND	
cis-1,3-Dichloropropene	0.096	0.50	ND	
Toluene	0.14	0.50	ND	
Tetrachloroethylene	0.14	0.50	ND	
trans-1,3-Dichloropropene	0.23	0.50	ND	
1,1,2-Trichloroethane	0.14	0.50	ND	
Dibromochloromethane	0.096	0.50	ND	
1,3-Dichloropropane	0.10	0.50	ND	
1,2-Dibromoethane	0.19	0.50	ND	
Chlorobenzene	0.14	0.50	ND	
Ethyl Benzene	0.15	0.50	ND	
1,1,1,2-Tetrachloroethane	0.096	0.50	ND	
m,p-Xylene	0.13	1.0	0.19	

Torrent LABORATORY, INC.

MB Summary Report

Work Order:	1205066	**Prep Method:**	NA	**Prep Date:**	NA	**Prep Batch:**	NA
Matrix:	Water	**Analytical Method:**	SW8260B	**Analyzed Date:**	05/11/12	**Analytical Batch:**	409732
Units:	ug/L						

Parameters	MDL	PQL	Method Blank Conc.	Lab Qualifier	
o-Xylene	0.15	0.50	ND		
Styrene	0.21	0.50	ND		
Bromoform	0.21	1.0	ND		
Isopropyl Benzene	0.097	0.50	ND		
Bromobenzene	0.15	0.50	ND		
1,1,2,2-Tetrachloroethane	0.11	0.50	ND		
n-Propylbenzene	0.078	0.50	ND		
2-Chlorotoluene	0.076	0.50	ND		
1,3,5,-Trimethylbenzene	0.074	0.50	ND		
4-Chlorotoluene	0.088	0.50	ND		
tert-Butylbenzene	0.081	0.50	ND		
1,2,3-Trichloropropane	0.14	0.50	ND		
1,2,4-Trimethylbenzene	0.083	0.50	0.10		
sec-Butyl Benzene	0.092	0.50	ND		
p-Isopropyltoluene	0.093	0.50	0.11		
1,3-Dichlorobenzene	0.10	0.50	ND		
1,4-Dichlorobenzene	0.069	0.50	ND		
n-Butylbenzene	0.081	0.50	ND		
1,2-Dichlorobenzene	0.057	0.50	ND		
1,2-Dibromo-3-Chloropropane	0.15	0.50	ND		
Hexachlorobutadiene	0.19	0.50	ND		
1,2,4-Trichlorobenzene	0.12	0.50	ND		
Naphthalene	0.14	0.50	ND		
1,2,3-Trichlorobenzene	0.23	0.50	ND		
(S) Dibromofluoromethane			95.8		
(S) Toluene-d8			88.6		
(S) 4-Bromofluorobenzene			92.6		
Ethanol	0.21	0.50	ND	TIC	

Torrent LABORATORY, INC.

MB Summary Report

Work Order:	1205066	**Prep Method:**	NA	**Prep Date:**	NA	**Prep Batch:**	NA
Matrix:	Soil	**Analytical Method:**	SW8260B	**Analyzed Date:**	05/14/12	**Analytical Batch:**	409737
Units:	ug/Kg						

Parameters	MDL	PQL	Method Blank Conc.	Lab Qualifier
Dichlorodifluoromethane	4.4	10	ND	
Chloromethane	4.6	10	ND	
Vinyl Chloride	2.6	10	ND	
Bromomethane	4.7	10	ND	
Trichlorofluoromethane	2.9	10	ND	
1,1-Dichloroethene	1.5	10	ND	
Freon 113	3.7	10	ND	
Methylene Chloride	2.0	50	ND	
trans-1,2-Dichloroethene	1.1	10	ND	
MTBE	2.6	10	ND	
tert-Butanol	21	50	ND	
Diisopropyl ether (DIPE)	2.2	10	ND	
1,1-Dichloroethane	1.3	10	ND	
ETBE	2.4	10	ND	
cis-1,2-Dichloroethene	1.8	10	ND	
2,2-Dichloropropane	1.2	10	ND	
Bromochloromethane	2.3	10	ND	
Chloroform	1.2	10	ND	
Carbon Tetrachloride	1.6	10	ND	
1,1,1-Trichloroethane	1.2	10	ND	
1,1-Dichloropropene	1.4	10	ND	
Benzene	1.5	10	ND	
TAME	2.1	10	ND	
1,2-Dichloroethane	1.9	10	ND	
Trichloroethylene	3.9	10	ND	
Dibromomethane	2.2	10	ND	
1,2-Dichloropropane	1.3	10	ND	
Bromodichloromethane	1.1	10	ND	
cis-1,3-Dichloropropene	1.4	10	ND	
Toluene	0.98	10	ND	
Tetrachloroethylene	1.8	10	ND	
trans-1,3-Dichloropropene	1.2	10	ND	
1,1,2-Trichloroethane	1.8	10	ND	
Dibromochloromethane	1.1	10	ND	
1,3-Dichloropropane	2.1	10	ND	
1,2-Dibromoethane	1.7	10	ND	
Ethyl Benzene	0.86	10	ND	
Chlorobenzene	4.2	10	ND	
1,1,1,2-Tetrachloroethane	0.86	10	ND	
m,p-Xylene	1.9	10	ND	
o-Xylene	0.66	5.0	ND	

Torrent LABORATORY, INC.

MB Summary Report

Work Order:	1205066	**Prep Method:**	NA	**Prep Date:**	NA	**Prep Batch:**	NA
Matrix:	Soil	**Analytical Method:**	SW8260B	**Analyzed Date:**	05/14/12	**Analytical Batch:**	409737
Units:	ug/Kg						

Parameters	MDL	PQL	Method Blank Conc.	Lab Qualifier	
Styrene	0.77	10	ND		
Bromoform	1.9	10	ND		
Isopropyl Benzene	1.2	10	ND		
n-Propylbenzene	1.4	10	ND		
Bromobenzene	1.2	10	ND		
1,1,2,2-Tetrachloroethane	3.0	10	ND		
1,3,5-Trimethylbenzene	1.1	10	ND		
1,2,3-Trichloropropane	3.3	10	ND		
4-Chlorotoluene	1.6	10	ND		
2-Chlorotoluene	1.6	10	ND		
tert-Butylbenzene	1.4	10	ND		
1,2,4-Trimethylbenzene	1.1	10	ND		
sec-Butyl Benzene	1.6	10	ND		
p-Isopropyltoluene	1.5	10	ND		
1,3-Dichlorobenzene	1.8	10	ND		
1,4-Dichlorobenzene	1.5	10	ND		
n-Butylbenzene	2.2	10	ND		
1,2-Dichlorobenzene	1.3	10	ND		
1,2-Dibromo-3-Chloropropane	4.2	10	ND		
Hexachlorobutadiene	2.6	10	ND		
1,2,4-Trichlorobenzene	2.1	10	ND		
Naphthalene	2.8	10	ND		
1,2,3-Trichlorobenzene	2.9	10	ND		
(S) Dibromofluoromethane			115		
(S) Toluene-d8			101		
(S) 4-Bromofluorobenzene			106		

Torrent LABORATORY, INC.

MB Summary Report

Work Order:	1205066	**Prep Method:**	NA	**Prep Date:**	NA	**Prep Batch:**	NA
Matrix:	Soil	**Analytical Method:**	SW8260B	**Analyzed Date:**	05/15/12	**Analytical Batch:**	409759
Units:	ug/Kg						

Parameters	MDL	PQL	Method Blank Conc.	Lab Qualifier	
Dichlorodifluoromethane	4.4	10	ND		
Chloromethane	4.6	10	ND		
Vinyl Chloride	2.6	10	ND		
Bromomethane	4.7	10	ND		
Trichlorofluoromethane	2.9	10	ND		
1,1-Dichloroethene	1.5	10	ND		
Freon 113	3.7	10	ND		
Methylene Chloride	2.0	50	ND		
trans-1,2-Dichloroethene	1.1	10	ND		
MTBE	2.6	10	ND		
tert-Butanol	21	50	ND		
Diisopropyl ether (DIPE)	2.2	10	ND		
1,1-Dichloroethane	1.3	10	ND		
ETBE	2.4	10	ND		
cis-1,2-Dichloroethene	1.8	10	ND		
2,2-Dichloropropane	1.2	10	ND		
Bromochloromethane	2.3	10	ND		
Chloroform	1.2	10	ND		
Carbon Tetrachloride	1.6	10	ND		
1,1,1-Trichloroethane	1.2	10	ND		
1,1-Dichloropropene	1.4	10	ND		
Benzene	1.5	10	ND		
TAME	2.1	10	ND		
1,2-Dichloroethane	1.9	10	ND		
Trichloroethylene	3.9	10	ND		
Dibromomethane	2.2	10	ND		
1,2-Dichloropropane	1.3	10	ND		
Bromodichloromethane	1.1	10	ND		
cis-1,3-Dichloropropene	1.4	10	ND		
Toluene	0.98	10	ND		
Tetrachloroethylene	1.8	10	ND		
trans-1,3-Dichloropropene	1.2	10	ND		
1,1,2-Trichloroethane	1.8	10	ND		
Dibromochloromethane	1.1	10	ND		
1,3-Dichloropropane	2.1	10	ND		
1,2-Dibromoethane	1.7	10	ND		
Ethyl Benzene	0.86	10	ND		
Chlorobenzene	4.2	10	ND		
1,1,1,2-Tetrachloroethane	0.86	10	ND		
m,p-Xylene	1.9	10	ND		
o-Xylene	0.66	5.0	ND		

Torrent LABORATORY, INC.

MB Summary Report

Work Order:	1205066	**Prep Method:**	NA	**Prep Date:**	NA	**Prep Batch:**	NA
Matrix:	Soil	**Analytical Method:**	SW8260B	**Analyzed Date:**	05/15/12	**Analytical Batch:**	409759
Units:	ug/Kg						

Parameters	MDL	PQL	Method Blank Conc.	Lab Qualifier
Styrene	0.77	10	ND	
Bromoform	1.9	10	ND	
Isopropyl Benzene	1.2	10	ND	
n-Propylbenzene	1.4	10	ND	
Bromobenzene	1.2	10	ND	
1,1,2,2-Tetrachloroethane	3.0	10	ND	
1,3,5-Trimethylbenzene	1.1	10	ND	
1,2,3-Trichloropropane	3.3	10	ND	
4-Chlorotoluene	1.6	10	ND	
2-Chlorotoluene	1.6	10	ND	
tert-Butylbenzene	1.4	10	ND	
1,2,4-Trimethylbenzene	1.1	10	ND	
sec-Butyl Benzene	1.6	10	ND	
p-Isopropyltoluene	1.5	10	ND	
1,3-Dichlorobenzene	1.8	10	ND	
1,4-Dichlorobenzene	1.5	10	ND	
n-Butylbenzene	2.2	10	ND	
1,2-Dichlorobenzene	1.3	10	ND	
1,2-Dibromo-3-Chloropropane	4.2	10	ND	
Hexachlorobutadiene	2.6	10	ND	
1,2,4-Trichlorobenzene	2.1	10	ND	
Naphthalene	2.8	10	ND	
1,2,3-Trichlorobenzene	2.9	10	ND	
(S) Dibromofluoromethane			108	
(S) Toluene-d8			104	
(S) 4-Bromofluorobenzene			110	

Work Order:	1205066	**Prep Method:**	NA	**Prep Date:**	NA	**Prep Batch:**	NA
Matrix:	Water	**Analytical Method:**	SW8015B	**Analyzed Date:**	05/16/12	**Analytical Batch:**	409779
Units:	mg/L						

Parameters	MDL	PQL	Method Blank Conc.	Lab Qualifier
TPH as Diesel/Oil (C9-C42)	0.0440	0.10	ND	
Pentacosane (S)			88.5	

Torrent LABORATORY, INC.

MB Summary Report

Work Order:	1205066	**Prep Method:**	NA	**Prep Date:**	NA	**Prep Batch:**	NA
Matrix:	Soil	**Analytical Method:**	SW8260B	**Analyzed Date:**	05/17/12	**Analytical Batch:**	409796
Units:	ug/Kg						

Parameters	MDL	PQL	Method Blank Conc.	Lab Qualifier	
Dichlorodifluoromethane	4.4	10	ND		
Chloromethane	4.6	10	ND		
Vinyl Chloride	2.6	10	ND		
Bromomethane	4.7	10	ND		
Trichlorofluoromethane	2.9	10	ND		
1,1-Dichloroethene	1.5	10	ND		
Freon 113	3.7	10	ND		
Methylene Chloride	2.0	50	ND		
trans-1,2-Dichloroethene	1.1	10	ND		
MTBE	2.6	10	ND		
tert-Butanol	21	50	ND		
Diisopropyl ether (DIPE)	2.2	10	ND		
1,1-Dichloroethane	1.3	10	ND		
ETBE	2.4	10	ND		
cis-1,2-Dichloroethene	1.8	10	ND		
2,2-Dichloropropane	1.2	10	ND		
Bromochloromethane	2.3	10	ND		
Chloroform	1.2	10	ND		
Carbon Tetrachloride	1.6	10	ND		
1,1,1-Trichloroethane	1.2	10	ND		
1,1-Dichloropropene	1.4	10	ND		
Benzene	1.5	10	ND		
TAME	2.1	10	ND		
1,2-Dichloroethane	1.9	10	ND		
Trichloroethylene	3.9	10	ND		
Dibromomethane	2.2	10	ND		
1,2-Dichloropropane	1.3	10	ND		
Bromodichloromethane	1.1	10	ND		
cis-1,3-Dichloropropene	1.4	10	ND		
Toluene	0.98	10	ND		
Tetrachloroethylene	1.8	10	ND		
trans-1,3-Dichloropropene	1.2	10	ND		
1,1,2-Trichloroethane	1.8	10	ND		
Dibromochloromethane	1.1	10	ND		
1,3-Dichloropropane	2.1	10	ND		
1,2-Dibromoethane	1.7	10	ND		
Ethyl Benzene	0.86	10	ND		
Chlorobenzene	4.2	10	ND		
1,1,1,2-Tetrachloroethane	0.86	10	ND		
m,p-Xylene	1.9	10	ND		
o-Xylene	0.66	5.0	ND		

Torrent LABORATORY, INC.

MB Summary Report

Work Order:	1205066	**Prep Method:**	NA	**Prep Date:**	NA	**Prep Batch:**	NA
Matrix:	Soil	**Analytical Method:**	SW8260B	**Analyzed Date:**	05/17/12	**Analytical Batch:**	409796
Units:	ug/Kg						

Parameters	MDL	PQL	Method Blank Conc.	Lab Qualifier
Styrene	0.77	10	ND	
Bromoform	1.9	10	ND	
Isopropyl Benzene	1.2	10	ND	
n-Propylbenzene	1.4	10	ND	
Bromobenzene	1.2	10	ND	
1,1,2,2-Tetrachloroethane	3.0	10	ND	
1,3,5-Trimethylbenzene	1.1	10	ND	
1,2,3-Trichloropropane	3.3	10	ND	
4-Chlorotoluene	1.6	10	ND	
2-Chlorotoluene	1.6	10	ND	
tert-Butylbenzene	1.4	10	ND	
1,2,4-Trimethylbenzene	1.1	10	ND	
sec-Butyl Benzene	1.6	10	ND	
p-Isopropyltoluene	1.5	10	ND	
1,3-Dichlorobenzene	1.8	10	ND	
1,4-Dichlorobenzene	1.5	10	ND	
n-Butylbenzene	2.2	10	ND	
1,2-Dichlorobenzene	1.3	10	ND	
1,2-Dibromo-3-Chloropropane	4.2	10	ND	
Hexachlorobutadiene	2.6	10	ND	
1,2,4-Trichlorobenzene	2.1	10	ND	
Naphthalene	2.8	10	ND	
1,2,3-Trichlorobenzene	2.9	10	ND	
(S) Dibromofluoromethane			99.2	
(S) Toluene-d8			113	
(S) 4-Bromofluorobenzene			104	

Work Order:	1205066	**Prep Method:**	5035	**Prep Date:**	05/14/12	**Prep Batch:**	5491
Matrix:	Soil	**Analytical Method:**	8260TPH	**Analyzed Date:**	05/14/12	**Analytical Batch:**	409737
Units:	ug/Kg						

Parameters	MDL	PQL	Method Blank Conc.	Lab Qualifier
TPH(Gasoline)	30	100	ND	
(S) 4-Bromofluorobenzene			75.1	

Torrent LABORATORY, INC.

MB Summary Report

Work Order:	1205066	**Prep Method:**	5030	**Prep Date:**	05/11/12	**Prep Batch:**	5495
Matrix:	Water	**Analytical Method:**	8260TPH	**Analyzed Date:**	05/11/12	**Analytical Batch:**	409732
Units:	ug/L						

Parameters	MDL	PQL	Method Blank Conc.	Lab Qualifier
TPH(Gasoline)	31	50	ND	
(S) 4-Bromofluorobenzene			96.9	

Work Order:	1205066	**Prep Method:**	3545_TPHSG	**Prep Date:**	05/15/12	**Prep Batch:**	5506
Matrix:	Soil	**Analytical Method:**	SW8015B(M)	**Analyzed Date:**	05/15/12	**Analytical Batch:**	409762
Units:	mg/Kg						

Parameters	MDL	PQL	Method Blank Conc.	Lab Qualifier
TPH as Diesel (SG)	0.87	2.0	ND	
TPH as Motor Oil (SG)	1.3	10	1.9	
Pentacosane (S)			85.2	

Work Order:	1205066	**Prep Method:**	5035	**Prep Date:**	05/14/12	**Prep Batch:**	5511
Matrix:	Soil	**Analytical Method:**	8260TPH	**Analyzed Date:**	05/15/12	**Analytical Batch:**	409759
Units:	ug/Kg						

Parameters	MDL	PQL	Method Blank Conc.	Lab Qualifier
TPH(Gasoline)	30	100	ND	
(S) 4-Bromofluorobenzene			69.2	

Work Order:	1205066	**Prep Method:**	5035	**Prep Date:**	05/17/12	**Prep Batch:**	5531
Matrix:	Soil	**Analytical Method:**	8260TPH	**Analyzed Date:**	05/17/12	**Analytical Batch:**	409796
Units:	ug/Kg						

Parameters	MDL	PQL	Method Blank Conc.	Lab Qualifier
TPH(Gasoline)	30	100	98	
(S) 4-Bromofluorobenzene			123	

Torrent LABORATORY, INC.

LCS/LCSD Summary Report

Raw values are used in quality control assessment.

Work Order:	1205066	**Prep Method:**	NA	**Prep Date:**	NA	**Prep Batch:**	NA
Matrix:	Water	**Analytical Method:**	SW8260B	**Analyzed Date:**	05/11/12	**Analytical Batch:**	409732
Units:	ug/L						

Parameters	MDL	PQL	Method Blank Conc.	Spike Conc.	LCS % Recovery	LCSD % Recovery	LCS/LCSD % RPD	% Recovery Limits	% RPD Limits	Lab Qualifier
1,1-Dichloroethene	0.14	0.50	ND	17.04	91.6	111	19.3	61.4 - 129	30	
Benzene	0.087	0.50	ND	17.04	98.2	114	14.8	66.9 - 140	30	
Trichloroethylene	0.057	0.50	ND	17.04	91.4	101	9.46	69.3 - 144	30	
Toluene	0.059	0.50	ND	17.04	96.7	104	6.99	76.6 - 123	30	
Chlorobenzene	0.068	0.50	ND	17.04	95.2	101	5.80	73.9 - 137	30	
(S) Dibromofluoromethane			ND	11.36	88.9	87.2		61.2 - 131		
(S) Toluene-d8			ND	11.36	91.3	86.9		75.1 - 127		
(S) 4-Bromofluorobenzene			ND	11.36	91.9	91.0		64.1 - 120		

Work Order:	1205066	**Prep Method:**	NA	**Prep Date:**	NA	**Prep Batch:**	NA
Matrix:	Soil	**Analytical Method:**	SW8260B	**Analyzed Date:**	05/14/12	**Analytical Batch:**	409737
Units:	ug/Kg						

Parameters	MDL	PQL	Method Blank Conc.	Spike Conc.	LCS % Recovery	LCSD % Recovery	LCS/LCSD % RPD	% Recovery Limits	% RPD Limits	Lab Qualifier
1,1-Dichloroethene	1.5	10	ND	50	118	124	5.01	53.7 - 139	30	
Benzene	1.5	10	ND	50	95.3	93.5	2.03	66.5 - 135	30	
Trichloroethylene	3.9	10	ND	50	85.7	89.8	4.83	57.5 - 150	30	
Toluene	0.98	10	ND	50	97.7	104	6.55	56.8 - 134	30	
Chlorobenzene	4.2	10	ND	50	114	121	5.45	57.4 - 134	30	
(S) Dibromofluoromethane			ND	50	114	102		59.8 - 148		
(S) Toluene-d8			ND	50	108	110		55.2 - 133		
(S) 4-Bromofluorobenzene			ND	50	105	106		55.8 - 141		

Torrent LABORATORY, INC.

LCS/LCSD Summary Report

Raw values are used in quality control assessment.

Work Order:	1205066	**Prep Method:**	NA	**Prep Date:**	NA	**Prep Batch:**	NA
Matrix:	Soil	**Analytical Method:**	SW8260B	**Analyzed Date:**	05/15/12	**Analytical Batch:**	409759
Units:	ug/Kg						

Parameters	MDL	PQL	Method Blank Conc.	Spike Conc.	LCS % Recovery	LCSD % Recovery	LCS/LCSD % RPD	% Recovery Limits	% RPD Limits	Lab Qualifier
1,1-Dichloroethene	1.5	10	ND	50	80.8	102	23.5	53.7 - 139	30	
Benzene	1.5	10	ND	50	90.6	99.0	8.86	66.5 - 135	30	
Trichloroethylene	3.9	10	ND	50	85.2	89.3	4.74	57.5 - 150	30	
Toluene	0.98	10	ND	50	91.6	104	12.9	56.8 - 134	30	
Chlorobenzene	4.2	10	ND	50	101	96.9	3.99	57.4 - 134	30	
(S) Dibromofluoromethane			ND	50	115	114		59.8 - 148		
(S) Toluene-d8			ND	50	100	107		55.2 - 133		
(S) 4-Bromofluorobenzene			ND	50	99.1	101		55.8 - 141		

Work Order:	1205066	**Prep Method:**	NA	**Prep Date:**	NA	**Prep Batch:**	NA
Matrix:	Water	**Analytical Method:**	SW8015B	**Analyzed Date:**	05/16/12	**Analytical Batch:**	409779
Units:	mg/L						

Parameters	MDL	PQL	Method Blank Conc.	Spike Conc.	LCS % Recovery	LCSD % Recovery	LCS/LCSD % RPD	% Recovery Limits	% RPD Limits	Lab Qualifier
TPH as Diesel/Oil (C9-C42)	0.0440	0.10	ND	15	87.8	86.4	1.52	70.0 - 130	30	
Pentacosane (S)			88.5	200	107	106		70.0 - 130		

Work Order:	1205066	**Prep Method:**	NA	**Prep Date:**	NA	**Prep Batch:**	NA
Matrix:	Soil	**Analytical Method:**	SW8260B	**Analyzed Date:**	05/17/12	**Analytical Batch:**	409796
Units:	ug/Kg						

Parameters	MDL	PQL	Method Blank Conc.	Spike Conc.	LCS % Recovery	LCSD % Recovery	LCS/LCSD % RPD	% Recovery Limits	% RPD Limits	Lab Qualifier
1,1-Dichloroethene	1.5	10	ND	50	87.8	114	25.8	53.7 - 139	30	
Benzene	1.5	10	ND	50	89.5	115	24.5	66.5 - 135	30	
Trichloroethylene	3.9	10	ND	50	87.2	117	29.0	57.5 - 150	30	
Toluene	0.98	10	ND	50	94.7	121	24.2	56.8 - 134	30	
Chlorobenzene	4.2	10	ND	50	90.4	118	26.5	57.4 - 134	30	
(S) Dibromofluoromethane			ND	50	99.1	97.8		59.8 - 148		
(S) Toluene-d8			ND	50	111	111		55.2 - 133		
(S) 4-Bromofluorobenzene			ND	50	103	107		55.8 - 141		

Torrent LABORATORY, INC.

LCS/LCSD Summary Report

Raw values are used in quality control assessment.

Work Order:	1205066	**Prep Method:**	5035	**Prep Date:**	05/14/12	**Prep Batch:**	5491
Matrix:	Soil	**Analytical Method:**	8260TPH	**Analyzed Date:**	05/14/12	**Analytical Batch:**	409737
Units:	ug/Kg						

Parameters	MDL	PQL	Method Blank Conc.	Spike Conc.	LCS % Recovery	LCSD % Recovery	LCS/LCSD % RPD	% Recovery Limits	% RPD Limits	Lab Qualifier
TPH(Gasoline)	30	100	ND	1000	81.1	80.8	0.398	64.0 - 133.2	30	
(S) 4-Bromofluorobenzene			75.1	50	78.2	74.9		43.9 - 127		

Work Order:	1205066	**Prep Method:**	5030	**Prep Date:**	05/11/12	**Prep Batch:**	5495
Matrix:	Water	**Analytical Method:**	8260TPH	**Analyzed Date:**	05/11/12	**Analytical Batch:**	409732
Units:	ug/L						

Parameters	MDL	PQL	Method Blank Conc.	Spike Conc.	LCS % Recovery	LCSD % Recovery	LCS/LCSD % RPD	% Recovery Limits	% RPD Limits	Lab Qualifier
TPH(Gasoline)	31	50	ND	227.27	97.5	94.5	3.20	52.4 - 127	30	
(S) 4-Bromofluorobenzene			96.9	11.36	80.2	90.7		41.5 - 125		

Work Order:	1205066	**Prep Method:**	3545_TPHSG	**Prep Date:**	05/15/12	**Prep Batch:**	5506
Matrix:	Soil	**Analytical Method:**	SW8015B(M)	**Analyzed Date:**	05/15/12	**Analytical Batch:**	409762
Units:	mg/Kg						

Parameters	MDL	PQL	Method Blank Conc.	Spike Conc.	LCS % Recovery	LCSD % Recovery	LCS/LCSD % RPD	% Recovery Limits	% RPD Limits	Lab Qualifier
TPH as Diesel (SG)	0.87	2.0	ND	33.33	65.6	67.7	3.02	50.8 - 111	30	
Pentacosane (S)			1.9	100	92.9	97.5		61.5 - 133		

Work Order:	1205066	**Prep Method:**	5035	**Prep Date:**	05/14/12	**Prep Batch:**	5511
Matrix:	Soil	**Analytical Method:**	8260TPH	**Analyzed Date:**	05/15/12	**Analytical Batch:**	409759
Units:	ug/Kg						

Parameters	MDL	PQL	Method Blank Conc.	Spike Conc.	LCS % Recovery	LCSD % Recovery	LCS/LCSD % RPD	% Recovery Limits	% RPD Limits	Lab Qualifier
TPH(Gasoline)	30	100	ND	1000	80.3	80.5	0.307	64.0 - 133.2	30	
(S) 4-Bromofluorobenzene			69.2	50	73.1	74.7		43.9 - 127		

Torrent LABORATORY, INC.

LCS/LCSD Summary Report

Raw values are used in quality control assessment.

Work Order:	1205066	**Prep Method:**	5035	**Prep Date:**	05/17/12	**Prep Batch:**	5531
Matrix:	Soil	**Analytical Method:**	8260TPH	**Analyzed Date:**	05/17/12	**Analytical Batch:**	409796
Units:	ug/Kg						

Parameters	MDL	PQL	Method Blank Conc.	Spike Conc.	LCS % Recovery	LCSD % Recovery	LCS/LCSD % RPD	% Recovery Limits	% RPD Limits	Lab Qualifier
TPH(Gasoline)	30	100	98	1000	113	104	8.23	64.0 - 133.2	30	
(S) 4-Bromofluorobenzene			123	50	117	113		43.9 - 127		

Torrent LABORATORY, INC.

MS/MSD Summary Report

Raw values are used in quality control assessment.

Work Order:	1205066	**Prep Method:**	NA	**Prep Date:**	NA	**Prep Batch:**	NA
Matrix:	**Soil**	**Analytical Method:**	SW8260B	**Analyzed Date:**	05/14/12	**Analytical Batch:**	409737
Spiked Sample:	1205066-006A						
Units:	mg/Kg						

Parameters	MDL	PQL	Sample Conc.	Spike Conc.	MS % Recovery	MSD % Recovery	MS/MSD % RPD	% Recovery Limits	% RPD Limits	Lab Qualifier
Benzene	0.0015	0.010	0	0.05	120	119	0.969	66.5 - 135	30	
Toluene	0.00098	0.010	0	0.05	119	116	2.75	56.8 - 134	30	
(S) Dibromofluoromethane				50	134	135		59.8 - 148		
(S) Toluene-d8				50	110	113		55.2 - 133		
(S) 4-Bromofluorobenzene				50	122	117		55.8 - 141		

Laboratory Qualifiers and Definitions

DEFINITIONS:

Accuracy/Bias (% Recovery) - The closeness of agreement between an observed value and an accepted reference value.
Blank (Method/Preparation Blank) -MB/PB - An analyte-free matrix to which all reagents are added in the same volumes/proportions as used in sample processing. The method blank is used to document contamination resulting from the analytical process.
Duplicate - a field sample and/or laboratory QC sample prepared in duplicate following all of the same processes and procedures used on the original sample (sample duplicate, LCSD, MSD)
Laboratory Control Sample (LCS ad LCSD) - A known matrix spiked with compounds representative of the target analyte(s). This is used to document laboratory performance.
Matrix - the component or substrate that contains the analyte of interest (e.g., - groundwater, sediment, soil, waste water, etc)
Matrix Spike (MS/MSD) - Client sample spiked with identical concentrations of target analyte (s). The spiking occurs prior to the sample preparation and analysis. They are used to document the precision and bias of a method in a given sample matrix.
Method Detection Limit (MDL) - the minimum concentration of a substance that can be measured and reported with a 99% confidence that the analyte concentration is greater than zero
Practical Quantitation Limit (PQL) - a laboratory determined value at 2 to 5 times above the MDL that can be reproduced in a manner that results in a 99% confidence level that the result is both accurate and precise. PQLs reflect all preparation factors and/or dilution factors that have been applied to the sample during the preparation and/or analytical processes.
Precision (%RPD) - The agreement among a set of replicate/duplicate measurements without regard to known value of the replicates
Surrogate (S) or (Surr) - An organic compound which is similar to the target analyte(s) in chemical composition and behavior in the analytical process, but which is not normally found in environmental samples. Surrogates are used in most organic analysis to demonstrate matrix compatibility with the chosen method of analysis
Tentatively Identified Compound (TIC) - A compound not contained within the analytical calibration standards but present in the GCMS library of defined compounds. When the library is searched for an unknown compound, it can frequently give a tentative identification to the compound based on retention time and primary and secondary ion match. TICs are reported as estimates and are candidates for further investigation.
Units: the unit of measure used to express the reported result - **mg/L** and ***mg/Kg*** (equivalent to PPM - parts per million in **liquid** and ***solid***), **ug/L** and ***ug/Kg*** (equivalent to PPB - parts per billion in **liquid** and ***solid***), **ug/m3**, ***mg.m3***, **ppbv** and ***ppmv*** (all units of measure for reporting concentrations in air), **%** (equivalent to 10000 ppm or 1,000,000 ppb), **ug/Wipe** (concentration found on the surface of a single Wipe usually taken over a 100cm2 surface)

LABORATORY QUALIFIERS:

B - Indicates when the anlayte is found in the associated method or preparation blank
D - Surrogate is not recoverable due to the necessary dilution of the sample
E - Indicates the reportable value is outside of the calibration range of the instrument but within the linear range of the instrument (unless otherwise noted) Values reported with an E qualifier should be considered as estimated.
H- Indicates that the recommended holding time for the analyte or compound has been exceeded
J- Indicates a value between the method MDL and PQL and that the reported concentration should be considered as estimated rather the quantitative
NA - Not Analyzed
N/A - Not Applicable
NR - Not recoverable - a matrix spike concentration is not recoverable due to a concentration within the original sample that is greater than four times the spike concentration added
R- The % RPD between a duplicate set of samples is outside of the absolute values established by laboratory control charts
S- Spike recovery is outside of established method and/or laboratory control limits. Further explanation of the use of this qualifier should be included within a case narrative
X -Used to indicate that a value based on pattern identification is within the pattern range but not typical of the pattern found in standards. Further explanation may or may not be provided within the sample footnote and/or the case narrative.

Sample Receipt Checklist

Client Name: Weber, Hayes & Associates

Project Name: Oakland / 2X103.B

Work Order No.: 1205066

Date and Time Received: 5/10/2012 17:30

Received By: NG

Physically Logged By: NG

Checklist Completed By: YB

Carrier Name: Streetwise Courier

Chain of Custody (COC) Information

Chain of custody present?	Yes
Chain of custody signed when relinquished and received?	Yes
Chain of custody agrees with sample labels?	Yes
Custody seals intact on sample bottles?	No

Sample Receipt Information

Custody seals intact on shipping container/cooler?	No
Shipping Container/Cooler In Good Condition?	Yes
Samples in proper container/bottle?	Yes
Samples containers intact?	Yes
Sufficient sample volume for indicated test?	Yes

Sample Preservation and Hold Time (HT) Information

All samples received within holding time?	Yes		
Container/Temp Blank temperature in compliance?		Temperature: 12	°C
Water-VOA vials have zero headspace?			
Water-pH acceptable upon receipt?			
pH Checked by:		pH Adjusted by:	

Chilling has begun. We received 2 samples with same id-DP-1-d17(006A) and did not receive sample DP-3-d17 (010A).

Torrent LABORATORY, INC.

Login Summary Report

Client ID: TL5105 Weber, Hayes & Associates

Project Name: Oakland / 2X103.B

Project # :

Report Due Date: 5/17/2012

QC Level:

TAT Requested: 5+ day:0

Date Received: 5/10/2012

Time Received: 17:30

Comments: 5 Day TAT. Samples originally received on 3 CoCs. Broken into two work orders in order to facilitate batch preparation and reporting. Page 1 samples on WO#1205066 and page 2-3 on WO#1205067.

Work Order # : ***1205066***

WO Sample ID	Client Sample ID	Collection Date/Time	Matrix	Scheduled Disposal	Sample On Hold	Test On Hold	Requested Tests	Subbed
1205066-001A	DP-1	05/09/12 0:00	Water	06/24/12			W_GCMS-GRO W_8260PetWHA	
Sample Note:	For petr - BTEX, MTBE and TBA only. Use MDL for any diluted samples.							
1205066-001B	DP-1	05/09/12 0:00	Water	06/24/12			W_DRO	
1205066-002A	DP-2	05/09/12 0:00	Water	06/24/12			W_GCMS-GRO W_8260PetWHA	
1205066-002B	DP-2	05/09/12 0:00	Water	06/24/12			W_DRO	
1205066-003A	DP-3	05/09/12 0:00	Water	06/24/12			W_GCMS-GRO W_8260PetWHA	
1205066-003B	DP-3	05/09/12 0:00	Water	06/24/12			W_DRO	
1205066-004A	DP-1-d8	05/09/12 0:00	Soil	11/06/12			S_GCMS-GRO S_8260PetWHA	
Sample Note:	For petr - BTEX, MTBE and TBA only. Use MDL for any diluted samples.							
1205066-005A	DP-1-d14	05/09/12 0:00	Soil	11/06/12			S_GCMS-GRO S_TPHDOSG S_8260PetWHA S_GCMS-GRO S_8260PetWHA	
1205066-006A	DP-1-d17-A	05/09/12 0:00	Soil	11/06/12			S_GCMS-GRO S_8260PetWHA	
1205066-007A	DP-3-d8	05/09/12 0:00	Soil	11/06/12			S_GCMS-GRO S_8260PetWHA	
1205066-008A	DP-3-d11	05/09/12 0:00	Soil	11/06/12			S_GCMS-GRO S_8260PetWHA	

Login Summary Report

Client ID: TL5105 Weber, Hayes & Associates

Project Name: Oakland / 2X103.B

Project # :

Report Due Date: 5/17/2012

QC Level:

TAT Requested: 5+ day:0

Date Received: 5/10/2012

Time Received: 17:30

Comments: 5 Day TAT. Samples originally received on 3 CoCs. Broken into two work orders in order to facilitate batch preparation and reporting. Page 1 samples on WO#1205066 and page 2-3 on WO#1205067.

Work Order # : ***1205066***

WO Sample ID	Client Sample ID	Collection Date/Time	Matrix	Scheduled Disposal	Sample On Hold	Test On Hold	Requested Tests	Subbed
1205066-009A	DP-3-d14	05/09/12 0:00	Soil	11/06/12			S_8260PetWHA S_GCMS-GRO	
1205066-010A	DP-3-d17	05/09/12 0:00	Soil	11/06/12			DUMMY	
Sample Note:	We did not receive his sample DP-3-d17.							
1205066-011A	DP-3-d20	05/09/12 0:00	Soil	11/06/12			S_8260PetWHA S_GCMS-GRO	
1205066-012A	DP-3-d23	05/09/12 0:00	Soil	11/06/12			S_8260PetWHA S_GCMS-GRO	
1205066-013A	DP-4-d12	05/09/12 0:00	Soil	11/06/12			S_GCMS-GRO S_8260PetWHA	
1205066-014A	DP-4-d18	05/09/12 0:00	Soil	11/06/12			S_8260PetWHA S_GCMS-GRO S_TPHDOSG	
1205066-015A	DP-1-d17-B	05/09/12 0:00	Soil	11/06/12			S_GCMS-GRO S_8260PetWHA	

Torrent LABORATORY, INC.

Weber, Hayes & Associates
Hydrogeology and Environmental Engineering
120 Westgate Dr., Watsonville, CA 95076
(831) 722-3580 (831) 662-3100
Fax: (831) 722-1159

CHAIN -OF-CUSTODY RECORD

1205066

1 OF 3

PROJECT NAME AND JOB #: Oakland / 2X103.B

SEND CERTIFIED RESULTS TO: Weber, Hayes & Associates - Attention: Jered Chaney

ELECTRONIC DELIVERABLE FORMAT: ☐ YES ☒ NO

LABORATORY: Torrent

TURNAROUND TIME: (Standard) 48hr Rush

GLOBAL I.D.: --

Sampler: Jered Chaney

Date: 5/8+9/12

	Sample Identification	Date Sampled	Matrix	SAMPLE CONTAINERS: 40 mL VOAs (preserved)	60 mL VOAs	Terra Core Prep Kit VOAs (preserved)	Liner Acetate or Brass	REQUESTED ANALYSIS: Total Petroleum Hydrocarbons: TPH-diesel w/ silica gel cleanup EPA Method# 8015M	TPH-Diesel EPA Method 8015M	TPH-Gas by EPA Method 8260B	Volatile Organics: BTEX EPA Method# 8260B	MtBE & TBA EPA Method# 8260B	1,2-DCA & EDB EPA Method# 8260B	Additional Analysis: Luft 5 Metals	PCBs
001A/B	DP-1	5/9/12	Ag	3	2				X	X	X	X			
002A/B	DP-2		↓	3	2				X						
003A/B	DP-3		↓	3	2				X						
004A	DP-1-d8		Soil				1								
005A	DP-1-d14						1	X							
006A	DP-1-d17						1								
007A	DP-3-d8						1								
008A	DP-3-d11						1								
009A	DP-3-d14						1								
010A	DP-3-d17						1	X							
011A	DP-3-d20						1								
012A	DP-3-d23						1								
013A	DP-4-d12						1								
014A	DP-4-d18						1	X							

Temp. 12 °C
Chilling has begun.

	RELEASED BY:	Date & Time		RECEIVED BY:	Date & Time	SAMPLE CONDITION: (circle 1)		
1.)		5/10/12 1350	→		5-1042 1350	Ambient	Refrigerated	Frozen
2.)		5/10/12 455	→		4:55	Ambient	Refrigerated	Frozen
3.)		5/10/12 5:30	→		5/10/12 5:30 p.m.	Ambient	Refrigerated	Frozen
4.)			→			Ambient	Refrigerated	Frozen
5.)			→			Ambient	Refrigerated	Frozen

NOTES:

☒ Please use MDL (Minimum Detection Limit) for any diluted samples.

ADDITIONAL COMMENTS

S.W.

JC\Fieldog\FORMS.xls - COC 1 of 1 Weber, Hayes and Associates

Weber, Hayes & Associates
Hydrogeology and Environmental Engineering
120 Westgate Dr., Watsonville, CA 95076
(831) 722-3580 (831) 662-3100
Fax: (831) 722-1159

CHAIN -OF-CUSTODY RECORD

1205066

1 OF 3

PROJECT NAME AND JOB #: Oakland / 2X103.B

LABORATORY: Torrent

SEND CERTIFIED RESULTS TO: Weber, Hayes & Associates - Attention: Jered Chaney

TURNAROUND TIME: (Standard) 48hr Rush

ELECTRONIC DELIVERABLE FORMAT: [ ] YES [X] NO

GLOBAL I.D.: --

Sampler: *Jered Chaney*

Date: 5/8+9/12

	Sample Identification	Date Sampled	Matrix	SAMPLE CONTAINERS: 40 mL VOAs (preserved)	60 mL VOAs	Terra Core Prep Kit VOAs (preserved)	Liner Acetate or Brass	REQUESTED ANALYSIS: Total Petroleum Hydrocarbons: TPH-diesel w/ silica gel cleanup EPA Method# 8015M	TPH-Diesel EPA Method 8015M	TPH-Gas by EPA Method 8260B	Volatile Organics: BTEX EPA Method# 8260B	MtBE & TBA EPA Method# 8260B	1,2-DCA & EDB EPA Method# 8260B	Additional Analysis: Luft 5 Metals	PCBs
001A/B	DP-1	5/9/12	Ag	3	2				X	X	X	X			
002A/B	DP-2		↓	3	2				X						
003A/B	DP-3		↓	3	2				X						
004A	DP-1-d8		Soil				1								
005A	DP-1-d14						1	X							
006A	DP-1-d17-A						1								
007A	DP-3-d8						1								
008A	DP-3-d11						1								
009A	DP-3-d14						1								
010A	DP-3-d17						1	X							
011A	DP-3-d20						1								
012A	DP-3-d23						1								
013A	DP-4-d12						1								
014A	DP-4-d18		↓				1	X		↓	↓	↓			
015A	DP-1-d17-B														

Temp 12 °C
Chilling has begun.

	RELEASED BY:	Date & Time	RECEIVED BY:	Date & Time	SAMPLE CONDITION: (circle 1)		
1.)		5/10/12 1350		5-1042 1350	Ambient	(Refrigerated)	Frozen
2.)		5/10/12 455		4:55	Ambient	~~Refrigerated~~	Frozen
3.)		5/10/12 5:30		5/10/12 5:30 p.m.	Ambient	(Refrigerated)	Frozen
4.)					Ambient	Refrigerated	Frozen
5.)					Ambient	Refrigerated	Frozen

NOTES:

[X] *Please use MDL (Minimum Detection Limit) for any diluted samples.*

ADDITIONAL COMMENTS

S.W.

Weber, Hayes & Associates
120 Westgate Dr
Watsonville, CA 95076
Tel: 831-722-3580
Fax: 831-662-3100

RE: Oakland / 2X103.B

Work Order No.: 1205067

Dear Jered Chaney:

Torrent Laboratory, Inc. received 20 sample(s) on May 10, 2012 for the analyses presented in the following Report.

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

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

Patti Sandrock
QA Officer

May 18, 2012
Date

Date: 5/18/2012

Client: Weber, Hayes & Associates

Project: Oakland / 2X103.B

Work Order: 1205067

CASE NARRATIVE

No issues encountered with the receiving, preparation, analysis or reporting of the results associated with this work order.

Unless otherwise indicated in the following narrative, no results have been method and/or field blank corrected.

Reported results relate only to the items/samples tested by the laboratory.

Torrent LABORATORY, INC.

Sample Result Summary

Report prepared for: Jered Chaney
Weber, Hayes & Associates

Date Received: 05/10/12
Date Reported: 05/18/12

DP-4-d24 1205067-001

Parameters:	Analysis Method	DF	MDL	PQL	Results	Unit
Benzene	SW8260B	10	0.015	0.10	0.30	mg/Kg
Ethyl Benzene	SW8260B	10	0.0086	0.10	0.025	mg/Kg
TPH(Gasoline)	8260TPH	1	0.030	0.10	0.83	mg/Kg

DP-5-d8 1205067-002

Parameters:	Analysis Method	DF	MDL	PQL	Results	Unit

All compounds were non-detectable for this sample.

DP-5-d11 1205067-003

Parameters:	Analysis Method	DF	MDL	PQL	Results	Unit
Ethyl Benzene	SW8260B	100	0.086	1.0	1.8	mg/Kg
m,p-Xylene	SW8260B	100	0.19	1.0	3.1	mg/Kg
TPH(Gasoline)	8260TPH	100	3.0	10	130	mg/Kg

DP-5-d17 1205067-004

Parameters:	Analysis Method	DF	MDL	PQL	Results	Unit
TPH(Gasoline)	8260TPH	1000	30	100	1000	mg/Kg
Benzene	SW8260B	400	0.60	4.0	6.2	mg/Kg
Toluene	SW8260B	400	0.39	4.0	2.1	mg/Kg
Ethyl Benzene	SW8260B	400	0.34	4.0	37	mg/Kg
m,p-Xylene	SW8260B	400	0.74	4.0	150	mg/Kg
o-Xylene	SW8260B	400	0.26	2.0	47	mg/Kg

Torrent LABORATORY, INC.

Sample Result Summary

Report prepared for: Jered Chaney
Weber, Hayes & Associates

Date Received: 05/10/12
Date Reported: 05/18/12

DP-5-d23 1205067-005

Parameters:	Analysis Method	DF	MDL	PQL	Results	Unit
Benzene	SW8260B	5	0.0075	0.050	0.55	mg/Kg
Toluene	SW8260B	5	0.0049	0.050	0.015	mg/Kg
Ethyl Benzene	SW8260B	5	0.0043	0.050	0.14	mg/Kg
m,p-Xylene	SW8260B	5	0.0093	0.050	0.37	mg/Kg
o-Xylene	SW8260B	5	0.0033	0.025	0.13	mg/Kg
TPH(Gasoline)	8260TPH	5	0.15	0.50	1.5	mg/Kg

DP-6-d12 1205067-006

Parameters:	Analysis Method	DF	MDL	PQL	Results	Unit
TPH(Gasoline)	8260TPH	100	3.0	10	13	mg/Kg
Benzene	SW8260B	5	0.0075	0.050	0.010	mg/Kg
Toluene	SW8260B	5	0.0049	0.050	0.020	mg/Kg
Ethyl Benzene	SW8260B	5	0.0043	0.050	0.67	mg/Kg
m,p-Xylene	SW8260B	5	0.0093	0.050	1.2	mg/Kg
o-Xylene	SW8260B	5	0.0033	0.025	0.13	mg/Kg

DP-6-d23 1205067-008

Parameters:	Analysis Method	DF	MDL	PQL	Results	Unit
Benzene	SW8260B	5	0.0075	0.050	0.47	mg/Kg
Toluene	SW8260B	5	0.0049	0.050	0.064	mg/Kg
Ethyl Benzene	SW8260B	5	0.0043	0.050	0.096	mg/Kg
m,p-Xylene	SW8260B	5	0.0093	0.050	0.19	mg/Kg
o-Xylene	SW8260B	5	0.0033	0.025	0.056	mg/Kg
TPH(Gasoline)	8260TPH	5	0.15	0.50	1.3	mg/Kg

DP-7-d4 1205067-009

Parameters:	Analysis Method	DF	MDL	PQL	Results	Unit

All compounds were non-detectable for this sample.

Sample Result Summary

Report prepared for: Jered Chaney
Weber, Hayes & Associates

Date Received: 05/10/12
Date Reported: 05/18/12

DP-7-d8 1205067-010

Parameters:	Analysis Method	DF	MDL	PQL	Results	Unit
TPH(Gasoline)	8260TPH	1	0.030	0.10	0.23	mg/Kg

DP-7-d11 1205067-011

Parameters:	Analysis Method	DF	MDL	PQL	Results	Unit
Benzene	SW8260B	1	0.0015	0.010	0.11	mg/Kg
TPH as Diesel (SG)	SW8015B(M)	1	0.87	2.0	5.8	mg/Kg
TPH(Gasoline)	8260TPH	5	0.15	0.50	2.8	mg/Kg

DP-7-d17 1205067-012

Parameters:	Analysis Method	DF	MDL	PQL	Results	Unit
TPH(Gasoline)	8260TPH	100	3.0	10	15	mg/Kg
Benzene	SW8260B	5	0.0075	0.050	0.024	mg/Kg
Toluene	SW8260B	5	0.0049	0.050	0.043	mg/Kg
Ethyl Benzene	SW8260B	5	0.0043	0.050	0.89	mg/Kg
m,p-Xylene	SW8260B	5	0.0093	0.050	1.5	mg/Kg
o-Xylene	SW8260B	5	0.0033	0.025	0.068	mg/Kg

DP-7-d23 1205067-013

Parameters:	Analysis Method	DF	MDL	PQL	Results	Unit
TPH(Gasoline)	8260TPH	1	30	100	1200	ug/Kg
Benzene	SW8260B	2	0.0030	0.020	0.069	mg/Kg
Ethyl Benzene	SW8260B	2	0.0017	0.020	0.042	mg/Kg
m,p-Xylene	SW8260B	2	0.0037	0.020	0.0039	mg/Kg

Torrent LABORATORY, INC.

Sample Result Summary

Report prepared for: Jered Chaney
Weber, Hayes & Associates

Date Received: 05/10/12
Date Reported: 05/18/12

DP-8-d8 1205067-014

Parameters:	Analysis Method	DF	MDL	PQL	Results	Unit

All compounds were non-detectable for this sample.

DP-8-d17 1205067-015

Parameters:	Analysis Method	DF	MDL	PQL	Results	Unit
Benzene	SW8260B	100	0.15	1.0	2.6	mg/Kg
Toluene	SW8260B	100	0.098	1.0	0.63	mg/Kg
Ethyl Benzene	SW8260B	100	0.086	1.0	21	mg/Kg
m,p-Xylene	SW8260B	100	0.19	1.0	45	mg/Kg
o-Xylene	SW8260B	100	0.066	0.50	18	mg/Kg
TPH(Gasoline)	8260TPH	500	15	50	970	mg/Kg

DP-8-d20 1205067-016

Parameters:	Analysis Method	DF	MDL	PQL	Results	Unit
Benzene	SW8260B	100	0.15	1.0	0.81	mg/Kg
Ethyl Benzene	SW8260B	100	0.086	1.0	1.4	mg/Kg
m,p-Xylene	SW8260B	100	0.19	1.0	3.9	mg/Kg
o-Xylene	SW8260B	100	0.066	0.50	1.6	mg/Kg
TPH(Gasoline)	8260TPH	100	3.0	10	69	mg/Kg

DP-8-d23 1205067-017

Parameters:	Analysis Method	DF	MDL	PQL	Results	Unit

All compounds were non-detectable for this sample.

DP-9-d4 1205067-018

Parameters:	Analysis Method	DF	MDL	PQL	Results	Unit

All compounds were non-detectable for this sample.

Torrent LABORATORY, INC.

Sample Result Summary

Report prepared for: Jered Chaney
Weber, Hayes & Associates

Date Received: 05/10/12
Date Reported: 05/18/12

DP-9-d18 1205067-019

Parameters:	Analysis Method	DF	MDL	PQL	Results	Unit
Benzene	SW8260B	2.5	0.0038	0.025	0.22	mg/Kg
Toluene	SW8260B	2.5	0.0025	0.025	0.013	mg/Kg
Ethyl Benzene	SW8260B	2.5	0.0022	0.025	0.42	mg/Kg
m,p-Xylene	SW8260B	2.5	0.0046	0.025	0.10	mg/Kg
o-Xylene	SW8260B	2.5	0.0017	0.013	0.011	mg/Kg
TPH(Gasoline)	8260TPH	2.5	0.074	0.25	5.8	mg/Kg
TPH as Diesel (SG)	SW8015B(M)	1	0.87	2.0	4.8	mg/Kg

DP-9-d20 1205067-020

Parameters:	Analysis Method	DF	MDL	PQL	Results	Unit
TPH(Gasoline)	8260TPH	1	0.030	0.10	1.7	mg/Kg
Benzene	SW8260B	2	0.0030	0.020	0.16	mg/Kg
Ethyl Benzene	SW8260B	2	0.0017	0.020	0.065	mg/Kg
m,p-Xylene	SW8260B	2	0.0037	0.020	0.042	mg/Kg
o-Xylene	SW8260B	2	0.0013	0.010	0.0017	mg/Kg

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Jered Chaney
Weber, Hayes & Associates

Date Received: 05/10/12
Date Reported: 05/18/12

Client Sample ID:	DP-4-d24	**Lab Sample ID:**	1205067-001A
Project Name/Location:	Oakland / 2X103.B	**Sample Matrix:**	Soil
Project Number:			
Date/Time Sampled:	05/09/12 / 0:00		
Tag Number:	Oakland / 2X103.B		

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
The results shown below are reported using their MDL.											
Benzene	SW8260B	NA	05/17/12	10	0.015	0.10	0.30		mg/Kg	409792	NA
Toluene	SW8260B	NA	05/17/12	10	0.0098	0.10	ND		mg/Kg	409792	NA
Ethyl Benzene	SW8260B	NA	05/17/12	10	0.0086	0.10	0.025	J	mg/Kg	409792	NA
m,p-Xylene	SW8260B	NA	05/17/12	10	0.019	0.10	ND		mg/Kg	409792	NA
o-Xylene	SW8260B	NA	05/17/12	10	0.0066	0.050	ND		mg/Kg	409792	NA
MTBE	SW8260B	NA	05/17/12	10	0.026	0.10	ND		mg/Kg	409792	NA
tert-Butanol	SW8260B	NA	05/17/12	10	0.21	0.50	ND		mg/Kg	409792	NA
(S) Dibromofluoromethane	SW8260B	NA	05/17/12	10	59.8	148	109		%	409792	NA
(S) Toluene-d8	SW8260B	NA	05/17/12	10	55.2	133	107		%	409792	NA
(S) 4-Bromofluorobenzene	SW8260B	NA	05/17/12	10	55.8	141	104		%	409792	NA

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
TPH(Gasoline)	8260TPH	NA	05/16/12	1	0.030	0.10	0.83	x	mg/Kg	409788	NA
(S) 4-Bromofluorobenzene	8260TPH	NA	05/16/12	1	43.9	127	71.8		%	409788	NA

NOTE: x - Does not match pattern of reference Gasoline standard. Reported value is the result of discrete peak and contribution from non-fuel hydrocarbons to range of C5-C12 quantified as gasoline.

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Jered Chaney
Weber, Hayes & Associates

Date Received: 05/10/12
Date Reported: 05/18/12

Client Sample ID:	DP-5-d8	**Lab Sample ID:**	1205067-002A
Project Name/Location:	Oakland / 2X103.B	**Sample Matrix:**	Soil
Project Number:			
Date/Time Sampled:	05/08/12 / 0:00		
Tag Number:	Oakland / 2X103.B		

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
Benzene	SW8260B	NA	05/17/12	1	0.0015	0.010	ND		mg/Kg	409792	NA
Toluene	SW8260B	NA	05/17/12	1	0.00098	0.010	ND		mg/Kg	409792	NA
Ethyl Benzene	SW8260B	NA	05/17/12	1	0.00086	0.010	ND		mg/Kg	409792	NA
m,p-Xylene	SW8260B	NA	05/17/12	1	0.0019	0.010	ND		mg/Kg	409792	NA
o-Xylene	SW8260B	NA	05/17/12	1	0.00066	0.0050	ND		mg/Kg	409792	NA
MTBE	SW8260B	NA	05/17/12	1	0.0026	0.010	ND		mg/Kg	409792	NA
tert-Butanol	SW8260B	NA	05/17/12	1	0.021	0.050	ND		mg/Kg	409792	NA
(S) Dibromofluoromethane	SW8260B	NA	05/17/12	1	59.8	148	105		%	409792	NA
(S) Toluene-d8	SW8260B	NA	05/17/12	1	55.2	133	106		%	409792	NA
(S) 4-Bromofluorobenzene	SW8260B	NA	05/17/12	1	55.8	141	109		%	409792	NA

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
TPH(Gasoline)	8260TPH	NA	05/17/12	1	0.030	0.10	ND		mg/Kg	409792	NA
(S) 4-Bromofluorobenzene	8260TPH	NA	05/17/12	1	43.9	127	84.3		%	409792	NA

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Jered Chaney
Weber, Hayes & Associates

Date Received: 05/10/12
Date Reported: 05/18/12

Client Sample ID:	DP-5-d11	**Lab Sample ID:**	1205067-003A
Project Name/Location:	Oakland / 2X103.B	**Sample Matrix:**	Soil
Project Number:			
Date/Time Sampled:	05/08/12 / 0:00		
Tag Number:	Oakland / 2X103.B		

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
The results shown below are reported using their MDL.											
Benzene	SW8260B	NA	05/17/12	100	0.15	1.0	ND		mg/Kg	409792	NA
Toluene	SW8260B	NA	05/17/12	100	0.098	1.0	ND		mg/Kg	409792	NA
Ethyl Benzene	SW8260B	NA	05/17/12	100	0.086	1.0	1.8		mg/Kg	409792	NA
m,p-Xylene	SW8260B	NA	05/17/12	100	0.19	1.0	3.1		mg/Kg	409792	NA
o-Xylene	SW8260B	NA	05/17/12	100	0.066	0.50	ND		mg/Kg	409792	NA
MTBE	SW8260B	NA	05/17/12	100	0.26	1.0	ND		mg/Kg	409792	NA
tert-Butanol	SW8260B	NA	05/17/12	100	2.1	5.0	ND		mg/Kg	409792	NA
(S) Dibromofluoromethane	SW8260B	NA	05/17/12	100	59.8	148	107		%	409792	NA
(S) Toluene-d8	SW8260B	NA	05/17/12	100	55.2	133	100		%	409792	NA
(S) 4-Bromofluorobenzene	SW8260B	NA	05/17/12	100	55.8	141	106		%	409792	NA

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
The results shown below are reported using their MDL.											
TPH(Gasoline)	8260TPH	5/17/12	05/17/12	100	3.0	10	130	x	mg/Kg	409792	5529
(S) 4-Bromofluorobenzene	8260TPH	5/17/12	05/17/12	100	43.9	127	107		%	409792	5529

NOTE: x - Does not match pattern of reference Gasoline standard. Reported TPH value includes contribution from heavy end hydrocarbons (possibly aged gasoline).

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Jered Chaney
Weber, Hayes & Associates

Date Received: 05/10/12
Date Reported: 05/18/12

Client Sample ID:	DP-5-d17	**Lab Sample ID:**	1205067-004A
Project Name/Location:	Oakland / 2X103.B	**Sample Matrix:**	Soil
Project Number:			
Date/Time Sampled:	05/08/12 / 0:00		
Tag Number:	Oakland / 2X103.B		

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
The results shown below are reported using their MDL.											
Benzene	SW8260B	NA	05/14/12	400	0.60	4.0	6.2		mg/Kg	409737	NA
Toluene	SW8260B	NA	05/14/12	400	0.39	4.0	2.1	J	mg/Kg	409737	NA
Ethyl Benzene	SW8260B	NA	05/14/12	400	0.34	4.0	37		mg/Kg	409737	NA
m,p-Xylene	SW8260B	NA	05/14/12	400	0.74	4.0	150		mg/Kg	409737	NA
o-Xylene	SW8260B	NA	05/14/12	400	0.26	2.0	47		mg/Kg	409737	NA
MTBE	SW8260B	NA	05/14/12	400	1.0	4.0	ND		mg/Kg	409737	NA
tert-Butanol	SW8260B	NA	05/14/12	400	8.3	20	ND		mg/Kg	409737	NA
(S) Dibromofluoromethane	SW8260B	NA	05/14/12	400	59.8	148	105		%	409737	NA
(S) Toluene-d8	SW8260B	NA	05/14/12	400	55.2	133	109		%	409737	NA
(S) 4-Bromofluorobenzene	SW8260B	NA	05/14/12	400	55.8	141	105		%	409737	NA

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
The results shown below are reported using their MDL.											
TPH(Gasoline)	8260TPH	NA	05/15/12	1000	30	100	1000		mg/Kg	409759	NA
(S) 4-Bromofluorobenzene	8260TPH	NA	05/15/12	1000	43.9	127	70.7		%	409759	NA

NOTE: Result is elevated due to contribution from heavy end hydrocarbons (possibly aged gasoline).

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Jered Chaney
Weber, Hayes & Associates

Date Received: 05/10/12
Date Reported: 05/18/12

Client Sample ID:	DP-5-d23	**Lab Sample ID:**	1205067-005A
Project Name/Location:	Oakland / 2X103.B	**Sample Matrix:**	Soil
Project Number:			
Date/Time Sampled:	05/08/12 / 0:00		
Tag Number:	Oakland / 2X103.B		

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
The results shown below are reported using their MDL.											
Benzene	SW8260B	NA	05/15/12	5	0.0075	0.050	0.55		mg/Kg	409759	NA
Toluene	SW8260B	NA	05/15/12	5	0.0049	0.050	0.015	J	mg/Kg	409759	NA
Ethyl Benzene	SW8260B	NA	05/15/12	5	0.0043	0.050	0.14		mg/Kg	409759	NA
m,p-Xylene	SW8260B	NA	05/15/12	5	0.0093	0.050	0.37		mg/Kg	409759	NA
o-Xylene	SW8260B	NA	05/15/12	5	0.0033	0.025	0.13		mg/Kg	409759	NA
MTBE	SW8260B	NA	05/15/12	5	0.013	0.050	ND		mg/Kg	409759	NA
tert-Butanol	SW8260B	NA	05/15/12	5	0.10	0.25	ND		mg/Kg	409759	NA
(S) Dibromofluoromethane	SW8260B	NA	05/15/12	5	59.8	148	130		%	409759	NA
(S) Toluene-d8	SW8260B	NA	05/15/12	5	55.2	133	109		%	409759	NA
(S) 4-Bromofluorobenzene	SW8260B	NA	05/15/12	5	55.8	141	119		%	409759	NA

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
The results shown below are reported using their MDL.											
TPH(Gasoline)	8260TPH	NA	05/15/12	5	0.15	0.50	1.5	x	mg/Kg	409759	NA
(S) 4-Bromofluorobenzene	8260TPH	NA	05/15/12	5	43.9	127	67.3		%	409759	NA

NOTE: x - Not typical of Gasoline standard pattern. Reported value due to discrete peaks of aromatic compounds and non-target heavy hydrocarbons within range of C5-C12 quantified as Gasoline.

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Jered Chaney
Weber, Hayes & Associates

Date Received: 05/10/12
Date Reported: 05/18/12

Client Sample ID:	DP-6-d12	**Lab Sample ID:**	1205067-006A
Project Name/Location:	Oakland / 2X103.B	**Sample Matrix:**	Soil
Project Number:			
Date/Time Sampled:	05/08/12 / 0:00		
Tag Number:	Oakland / 2X103.B		

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
The results shown below are reported using their MDL.											
Benzene	SW8260B	NA	05/16/12	5	0.0075	0.050	0.010	J	mg/Kg	409788	NA
Toluene	SW8260B	NA	05/16/12	5	0.0049	0.050	0.020	J	mg/Kg	409788	NA
Ethyl Benzene	SW8260B	NA	05/16/12	5	0.0043	0.050	0.67		mg/Kg	409788	NA
m,p-Xylene	SW8260B	NA	05/16/12	5	0.0093	0.050	1.2		mg/Kg	409788	NA
o-Xylene	SW8260B	NA	05/16/12	5	0.0033	0.025	0.13		mg/Kg	409788	NA
MTBE	SW8260B	NA	05/16/12	5	0.013	0.050	ND		mg/Kg	409788	NA
tert-Butanol	SW8260B	NA	05/16/12	5	0.10	0.25	ND		mg/Kg	409788	NA
(S) Dibromofluoromethane	SW8260B	NA	05/16/12	5	59.8	148	118		%	409788	NA
(S) Toluene-d8	SW8260B	NA	05/16/12	5	55.2	133	104		%	409788	NA
(S) 4-Bromofluorobenzene	SW8260B	NA	05/16/12	5	55.8	141	107		%	409788	NA

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
The results shown below are reported using their MDL.											
TPH(Gasoline)	8260TPH	NA	05/14/12	100	3.0	10	13	x	mg/Kg	409737	NA
(S) 4-Bromofluorobenzene	8260TPH	NA	05/14/12	100	43.9	127	67.9		%	409737	NA

NOTE: x - Does not match pattern of reference Gasoline standard. Reported TPH value includes contribution from heavy end hydrocarbons (possibly aged gasoline).

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Jered Chaney
Weber, Hayes & Associates

Date Received: 05/10/12
Date Reported: 05/18/12

Client Sample ID:	DP-6-d23	**Lab Sample ID:**	1205067-008A
Project Name/Location:	Oakland / 2X103.B	**Sample Matrix:**	Soil
Project Number:			
Date/Time Sampled:	05/09/12 / 0:00		
Tag Number:	Oakland / 2X103.B		

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
The results shown below are reported using their MDL.											
Benzene	SW8260B	NA	05/15/12	5	0.0075	0.050	0.47		mg/Kg	409759	NA
Toluene	SW8260B	NA	05/15/12	5	0.0049	0.050	0.064		mg/Kg	409759	NA
Ethyl Benzene	SW8260B	NA	05/15/12	5	0.0043	0.050	0.096		mg/Kg	409759	NA
m,p-Xylene	SW8260B	NA	05/15/12	5	0.0093	0.050	0.19		mg/Kg	409759	NA
o-Xylene	SW8260B	NA	05/15/12	5	0.0033	0.025	0.056		mg/Kg	409759	NA
MTBE	SW8260B	NA	05/15/12	5	0.013	0.050	ND		mg/Kg	409759	NA
tert-Butanol	SW8260B	NA	05/15/12	5	0.10	0.25	ND		mg/Kg	409759	NA
(S) Dibromofluoromethane	SW8260B	NA	05/15/12	5	59.8	148	135		%	409759	NA
(S) Toluene-d8	SW8260B	NA	05/15/12	5	55.2	133	107		%	409759	NA
(S) 4-Bromofluorobenzene	SW8260B	NA	05/15/12	5	55.8	141	116		%	409759	NA

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
The results shown below are reported using their MDL.											
TPH(Gasoline)	8260TPH	NA	05/15/12	5	0.15	0.50	1.3	x	mg/Kg	409759	NA
(S) 4-Bromofluorobenzene	8260TPH	NA	05/15/12	5	43.9	127	65.9		%	409759	NA

NOTE: x - Not typical of Gasoline standard pattern. Reported value due to discrete peaks of aromatic compounds and non-target heavy hydrocarbons within range of C5-C12 quantified as Gasoline.

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Jered Chaney
Weber, Hayes & Associates

Date Received: 05/10/12
Date Reported: 05/18/12

Client Sample ID:	DP-7-d4	**Lab Sample ID:**	1205067-009A
Project Name/Location:	Oakland / 2X103.B	**Sample Matrix:**	Soil
Project Number:			
Date/Time Sampled:	05/09/12 / 0:00		
Tag Number:	Oakland / 2X103.B		

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
Benzene	SW8260B	NA	05/11/12	1	0.0015	0.010	ND		mg/Kg	409731	NA
Toluene	SW8260B	NA	05/11/12	1	0.00098	0.010	ND		mg/Kg	409731	NA
Ethyl Benzene	SW8260B	NA	05/11/12	1	0.00086	0.010	ND		mg/Kg	409731	NA
m,p-Xylene	SW8260B	NA	05/11/12	1	0.0019	0.010	ND		mg/Kg	409731	NA
o-Xylene	SW8260B	NA	05/11/12	1	0.00066	0.0050	ND		mg/Kg	409731	NA
MTBE	SW8260B	NA	05/11/12	1	0.0026	0.010	ND		mg/Kg	409731	NA
tert-Butanol	SW8260B	NA	05/11/12	1	0.021	0.050	ND		mg/Kg	409731	NA
(S) Dibromofluoromethane	SW8260B	NA	05/11/12	1	59.8	148	131		%	409731	NA
(S) Toluene-d8	SW8260B	NA	05/11/12	1	55.2	133	113		%	409731	NA
(S) 4-Bromofluorobenzene	SW8260B	NA	05/11/12	1	55.8	141	122		%	409731	NA

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
TPH(Gasoline)	8260TPH	NA	05/11/12	1	0.030	0.10	ND		mg/Kg	409731	NA
(S) 4-Bromofluorobenzene	8260TPH	NA	05/11/12	1	43.9	127	75.2		%	409731	NA

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Jered Chaney
Weber, Hayes & Associates

Date Received: 05/10/12
Date Reported: 05/18/12

Client Sample ID:	DP-7-d8	**Lab Sample ID:**	1205067-010A
Project Name/Location:	Oakland / 2X103.B	**Sample Matrix:**	Soil
Project Number:			
Date/Time Sampled:	05/09/12 / 0:00		
Tag Number:	Oakland / 2X103.B		

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
Benzene	SW8260B	NA	05/11/12	1	0.0015	0.010	ND		mg/Kg	409731	NA
Toluene	SW8260B	NA	05/11/12	1	0.00098	0.010	ND		mg/Kg	409731	NA
Ethyl Benzene	SW8260B	NA	05/11/12	1	0.00086	0.010	ND		mg/Kg	409731	NA
m,p-Xylene	SW8260B	NA	05/11/12	1	0.0019	0.010	ND		mg/Kg	409731	NA
o-Xylene	SW8260B	NA	05/11/12	1	0.00066	0.0050	ND		mg/Kg	409731	NA
MTBE	SW8260B	NA	05/11/12	1	0.0026	0.010	ND		mg/Kg	409731	NA
tert-Butanol	SW8260B	NA	05/11/12	1	0.021	0.050	ND		mg/Kg	409731	NA
(S) Dibromofluoromethane	SW8260B	NA	05/11/12	1	59.8	148	116		%	409731	NA
(S) Toluene-d8	SW8260B	NA	05/11/12	1	55.2	133	104		%	409731	NA
(S) 4-Bromofluorobenzene	SW8260B	NA	05/11/12	1	55.8	141	110		%	409731	NA

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
TPH(Gasoline)	8260TPH	NA	05/11/12	1	0.030	0.10	0.23	x	mg/Kg	409731	NA
(S) 4-Bromofluorobenzene	8260TPH	NA	05/11/12	1	43.9	127	66.8		%	409731	NA

NOTE: x - Does not match pattern of reference Gasoline standard. Hydrocarbons in the range of C5-C12 quantified as Gasoline.

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Jered Chaney
Weber, Hayes & Associates

Date Received: 05/10/12
Date Reported: 05/18/12

Client Sample ID:	DP-7-d11	**Lab Sample ID:**	1205067-011A
Project Name/Location:	Oakland / 2X103.B	**Sample Matrix:**	Soil
Project Number:			
Date/Time Sampled:	05/09/12 / 0:00		
Tag Number:	Oakland / 2X103.B		

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
Benzene	SW8260B	NA	05/11/12	1	0.0015	0.010	0.11		mg/Kg	409731	NA
Toluene	SW8260B	NA	05/11/12	1	0.00098	0.010	ND		mg/Kg	409731	NA
Ethyl Benzene	SW8260B	NA	05/11/12	1	0.00086	0.010	ND		mg/Kg	409731	NA
m,p-Xylene	SW8260B	NA	05/11/12	1	0.0019	0.010	ND		mg/Kg	409731	NA
o-Xylene	SW8260B	NA	05/11/12	1	0.00066	0.0050	ND		mg/Kg	409731	NA
MTBE	SW8260B	NA	05/11/12	1	0.0026	0.010	ND		mg/Kg	409731	NA
tert-Butanol	SW8260B	NA	05/11/12	1	0.021	0.050	ND		mg/Kg	409731	NA
(S) Dibromofluoromethane	SW8260B	NA	05/11/12	1	59.8	148	119		%	409731	NA
(S) Toluene-d8	SW8260B	NA	05/11/12	1	55.2	133	108		%	409731	NA
(S) 4-Bromofluorobenzene	SW8260B	NA	05/11/12	1	55.8	141	0.000	S	%	409731	NA

NOTE: S - Surrogate (BFB) out of limits. No corrective action required: surrogate not associated with reported compounds.

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
The results shown below are reported using their MDL.											
TPH(Gasoline)	8260TPH	NA	05/17/12	5	0.15	0.50	2.8	x	mg/Kg	409792	NA
(S) 4-Bromofluorobenzene	8260TPH	NA	05/17/12	5	43.9	127	105		%	409792	NA

NOTE: x - Does not match pattern of reference Gasoline standard. Hydrocarbons in the range of C5-C12 quantified as Gasoline.

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
TPH as Diesel (SG)	SW8015B(M)	5/15/12	05/15/12	1	0.87	2.0	5.8	x	mg/Kg	409762	5506
TPH as Motor Oil (SG)	SW8015B(M)	5/15/12	05/15/12	1	1.3	10	ND		mg/Kg	409762	5506
Pentacosane (S)	SW8015B(M)	5/15/12	05/15/12	1	61.5	133	89.0		%	409762	5506

NOTE: x-Not typical of TPH as Diesel Standard pattern (lighter than Diesel). Hydrocarbons with TPH as Diesel range are quantiated as Diesel.

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Jered Chaney
Weber, Hayes & Associates

Date Received: 05/10/12
Date Reported: 05/18/12

Client Sample ID:	DP-7-d17	**Lab Sample ID:**	1205067-012A
Project Name/Location:	Oakland / 2X103.B	**Sample Matrix:**	Soil
Project Number:			
Date/Time Sampled:	05/09/12 / 0:00		
Tag Number:	Oakland / 2X103.B		

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
The results shown below are reported using their MDL.											
Benzene	SW8260B	NA	05/15/12	5	0.0075	0.050	0.024	J	mg/Kg	409759	NA
Toluene	SW8260B	NA	05/15/12	5	0.0049	0.050	0.043	J	mg/Kg	409759	NA
Ethyl Benzene	SW8260B	NA	05/15/12	5	0.0043	0.050	0.89		mg/Kg	409759	NA
m,p-Xylene	SW8260B	NA	05/15/12	5	0.0093	0.050	1.5		mg/Kg	409759	NA
o-Xylene	SW8260B	NA	05/15/12	5	0.0033	0.025	0.068		mg/Kg	409759	NA
MTBE	SW8260B	NA	05/15/12	5	0.013	0.050	ND		mg/Kg	409759	NA
tert-Butanol	SW8260B	NA	05/15/12	5	0.10	0.25	ND		mg/Kg	409759	NA
(S) Dibromofluoromethane	SW8260B	NA	05/15/12	5	59.8	148	129		%	409759	NA
(S) Toluene-d8	SW8260B	NA	05/15/12	5	55.2	133	117		%	409759	NA
(S) 4-Bromofluorobenzene	SW8260B	NA	05/15/12	5	55.8	141	111		%	409759	NA

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
The results shown below are reported using their MDL.											
TPH(Gasoline)	8260TPH	NA	05/14/12	100	3.0	10	15	x	mg/Kg	409737	NA
(S) 4-Bromofluorobenzene	8260TPH	NA	05/14/12	100	43.9	127	70.0		%	409737	NA

NOTE: x - Does not match pattern of reference Gasoline standard. Reported TPH value includes contribution from heavy end hydrocarbons (possibly aged gasoline).

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Jered Chaney
Weber, Hayes & Associates

Date Received: 05/10/12
Date Reported: 05/18/12

Client Sample ID:	DP-7-d23	**Lab Sample ID:**	1205067-013A
Project Name/Location:	Oakland / 2X103.B	**Sample Matrix:**	Soil
Project Number:			
Date/Time Sampled:	05/09/12 / 0:00		
Tag Number:	Oakland / 2X103.B		

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
The results shown below are reported using their MDL.											
Benzene	SW8260B	NA	05/15/12	2	0.0030	0.020	0.069		mg/Kg	409759	NA
Toluene	SW8260B	NA	05/15/12	2	0.0020	0.020	ND		mg/Kg	409759	NA
Ethyl Benzene	SW8260B	NA	05/15/12	2	0.0017	0.020	0.042		mg/Kg	409759	NA
m,p-Xylene	SW8260B	NA	05/15/12	2	0.0037	0.020	0.0039	J	mg/Kg	409759	NA
o-Xylene	SW8260B	NA	05/15/12	2	0.0013	0.010	ND		mg/Kg	409759	NA
MTBE	SW8260B	NA	05/15/12	2	0.0052	0.020	ND		mg/Kg	409759	NA
tert-Butanol	SW8260B	NA	05/15/12	2	0.042	0.10	ND		mg/Kg	409759	NA
(S) Dibromofluoromethane	SW8260B	NA	05/15/12	2	59.8	148	136		%	409759	NA
(S) Toluene-d8	SW8260B	NA	05/15/12	2	55.2	133	107		%	409759	NA
(S) 4-Bromofluorobenzene	SW8260B	NA	05/15/12	2	55.8	141	119		%	409759	NA

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
TPH(Gasoline)	8260TPH	NA	05/11/12	1	30	100	1200	x	ug/Kg	409731	NA
(S) 4-Bromofluorobenzene	8260TPH	NA	05/11/12	1	43.9	127	88.2		%	409731	NA

NOTE: x - Does not match pattern of reference Gasoline standard. Reported value due to discrete peaks and non-target hydrocarbons within range of C5-C12 quantified as gasoline.

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Jered Chaney
Weber, Hayes & Associates

Date Received: 05/10/12
Date Reported: 05/18/12

Client Sample ID:	DP-8-d8	**Lab Sample ID:**	1205067-014A
Project Name/Location:	Oakland / 2X103.B	**Sample Matrix:**	Soil
Project Number:			
Date/Time Sampled:	05/08/12 / 0:00		
Tag Number:	Oakland / 2X103.B		

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
Benzene	SW8260B	NA	05/11/12	1	0.0015	0.010	ND		mg/Kg	409731	NA
Toluene	SW8260B	NA	05/11/12	1	0.00098	0.010	ND		mg/Kg	409731	NA
Ethyl Benzene	SW8260B	NA	05/11/12	1	0.00086	0.010	ND		mg/Kg	409731	NA
m,p-Xylene	SW8260B	NA	05/11/12	1	0.0019	0.010	ND		mg/Kg	409731	NA
o-Xylene	SW8260B	NA	05/11/12	1	0.00066	0.0050	ND		mg/Kg	409731	NA
MTBE	SW8260B	NA	05/11/12	1	0.0026	0.010	ND		mg/Kg	409731	NA
tert-Butanol	SW8260B	NA	05/11/12	1	0.021	0.050	ND		mg/Kg	409731	NA
(S) Dibromofluoromethane	SW8260B	NA	05/11/12	1	59.8	148	128		%	409731	NA
(S) Toluene-d8	SW8260B	NA	05/11/12	1	55.2	133	104		%	409731	NA
(S) 4-Bromofluorobenzene	SW8260B	NA	05/11/12	1	55.8	141	118		%	409731	NA

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
TPH(Gasoline)	8260TPH	NA	05/11/12	1	0.030	0.10	ND		mg/Kg	409731	NA
(S) 4-Bromofluorobenzene	8260TPH	NA	05/11/12	1	43.9	127	81.3		%	409731	NA

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Jered Chaney
Weber, Hayes & Associates

Date Received: 05/10/12
Date Reported: 05/18/12

Client Sample ID:	DP-8-d17	**Lab Sample ID:**	1205067-015A
Project Name/Location:	Oakland / 2X103.B	**Sample Matrix:**	Soil
Project Number:			
Date/Time Sampled:	05/08/12 / 0:00		
Tag Number:	Oakland / 2X103.B		

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
The results shown below are reported using their MDL.											
Benzene	SW8260B	NA	05/11/12	100	0.15	1.0	2.6		mg/Kg	409731	NA
Toluene	SW8260B	NA	05/11/12	100	0.098	1.0	0.63	J	mg/Kg	409731	NA
Ethyl Benzene	SW8260B	NA	05/11/12	100	0.086	1.0	21		mg/Kg	409731	NA
m,p-Xylene	SW8260B	NA	05/11/12	100	0.19	1.0	45		mg/Kg	409731	NA
o-Xylene	SW8260B	NA	05/11/12	100	0.066	0.50	18		mg/Kg	409731	NA
MTBE	SW8260B	NA	05/11/12	100	0.26	1.0	ND		mg/Kg	409731	NA
tert-Butanol	SW8260B	NA	05/11/12	100	2.1	5.0	ND		mg/Kg	409731	NA
(S) Dibromofluoromethane	SW8260B	NA	05/11/12	100	59.8	148	128		%	409731	NA
(S) Toluene-d8	SW8260B	NA	05/11/12	100	55.2	133	112		%	409731	NA
(S) 4-Bromofluorobenzene	SW8260B	NA	05/11/12	100	55.8	141	104		%	409731	NA

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
The results shown below are reported using their MDL.											
TPH(Gasoline)	8260TPH	5/16/12	05/16/12	500	15	50	970	x	mg/Kg	409788	5526
(S) 4-Bromofluorobenzene	8260TPH	5/16/12	05/16/12	500	43.9	127	103		%	409788	5526

NOTE: x - Does not match pattern of reference Gasoline standard. Reported TPH value includes contribution from non-target hydrocarbons (possibly aged gasoline).

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Jered Chaney
Weber, Hayes & Associates

Date Received: 05/10/12
Date Reported: 05/18/12

Client Sample ID:	DP-8-d20	**Lab Sample ID:**	1205067-016A
Project Name/Location:	Oakland / 2X103.B	**Sample Matrix:**	Soil
Project Number:			
Date/Time Sampled:	05/08/12 / 0:00		
Tag Number:	Oakland / 2X103.B		

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
The results shown below are reported using their MDL.											
Benzene	SW8260B	NA	05/11/12	100	0.15	1.0	0.81	J	mg/Kg	409731	NA
Toluene	SW8260B	NA	05/11/12	100	0.098	1.0	ND		mg/Kg	409731	NA
Ethyl Benzene	SW8260B	NA	05/11/12	100	0.086	1.0	1.4		mg/Kg	409731	NA
m,p-Xylene	SW8260B	NA	05/11/12	100	0.19	1.0	3.9		mg/Kg	409731	NA
o-Xylene	SW8260B	NA	05/11/12	100	0.066	0.50	1.6		mg/Kg	409731	NA
MTBE	SW8260B	NA	05/11/12	100	0.26	1.0	ND		mg/Kg	409731	NA
tert-Butanol	SW8260B	NA	05/11/12	100	2.1	5.0	ND		mg/Kg	409731	NA
(S) Dibromofluoromethane	SW8260B	NA	05/11/12	100	59.8	148	138		%	409731	NA
(S) Toluene-d8	SW8260B	NA	05/11/12	100	55.2	133	111		%	409731	NA
(S) 4-Bromofluorobenzene	SW8260B	NA	05/11/12	100	55.8	141	108		%	409731	NA

NOTE: Reporting limit raised due to significant amount of hydrocarbons.

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
The results shown below are reported using their MDL.											
TPH(Gasoline)	8260TPH	NA	05/11/12	100	3.0	10	69	x	mg/Kg	409731	NA
(S) 4-Bromofluorobenzene	8260TPH	NA	05/11/12	100	43.9	127	86.5		%	409731	NA

NOTE: x - Does not match pattern of reference Gasoline standard. Reported TPH value includes contribution from heavy end hydrocarbons (possibly aged gasoline).

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Jered Chaney
Weber, Hayes & Associates

Date Received: 05/10/12
Date Reported: 05/18/12

Client Sample ID:	DP-8-d23	**Lab Sample ID:**	1205067-017A
Project Name/Location:	Oakland / 2X103.B	**Sample Matrix:**	Soil
Project Number:			
Date/Time Sampled:	05/08/12 / 0:00		
Tag Number:	Oakland / 2X103.B		

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
Benzene	SW8260B	NA	05/11/12	1	0.0015	0.010	ND		mg/Kg	409731	NA
Toluene	SW8260B	NA	05/11/12	1	0.00098	0.010	ND		mg/Kg	409731	NA
Ethyl Benzene	SW8260B	NA	05/11/12	1	0.00086	0.010	ND		mg/Kg	409731	NA
m,p-Xylene	SW8260B	NA	05/11/12	1	0.0019	0.010	ND		mg/Kg	409731	NA
o-Xylene	SW8260B	NA	05/11/12	1	0.00066	0.0050	ND		mg/Kg	409731	NA
MTBE	SW8260B	NA	05/11/12	1	0.0026	0.010	ND		mg/Kg	409731	NA
tert-Butanol	SW8260B	NA	05/11/12	1	0.021	0.050	ND		mg/Kg	409731	NA
(S) Dibromofluoromethane	SW8260B	NA	05/11/12	1	59.8	148	127		%	409731	NA
(S) Toluene-d8	SW8260B	NA	05/11/12	1	55.2	133	107		%	409731	NA
(S) 4-Bromofluorobenzene	SW8260B	NA	05/11/12	1	55.8	141	115		%	409731	NA

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
TPH(Gasoline)	8260TPH	NA	05/11/12	1	0.030	0.10	ND		mg/Kg	409731	NA
(S) 4-Bromofluorobenzene	8260TPH	NA	05/11/12	1	43.9	127	85.8		%	409731	NA

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Jered Chaney
Weber, Hayes & Associates

Date Received: 05/10/12
Date Reported: 05/18/12

Client Sample ID:	DP-9-d4	**Lab Sample ID:**	1205067-018A
Project Name/Location:	Oakland / 2X103.B	**Sample Matrix:**	Soil
Project Number:			
Date/Time Sampled:	05/08/12 / 0:00		
Tag Number:	Oakland / 2X103.B		

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
Benzene	SW8260B	NA	05/11/12	1	0.0015	0.010	ND		mg/Kg	409731	NA
Toluene	SW8260B	NA	05/11/12	1	0.00098	0.010	ND		mg/Kg	409731	NA
Ethyl Benzene	SW8260B	NA	05/11/12	1	0.00086	0.010	ND		mg/Kg	409731	NA
m,p-Xylene	SW8260B	NA	05/11/12	1	0.0019	0.010	ND		mg/Kg	409731	NA
o-Xylene	SW8260B	NA	05/11/12	1	0.00066	0.0050	ND		mg/Kg	409731	NA
MTBE	SW8260B	NA	05/11/12	1	0.0026	0.010	ND		mg/Kg	409731	NA
tert-Butanol	SW8260B	NA	05/11/12	1	0.021	0.050	ND		mg/Kg	409731	NA
(S) Dibromofluoromethane	SW8260B	NA	05/11/12	1	59.8	148	123		%	409731	NA
(S) Toluene-d8	SW8260B	NA	05/11/12	1	55.2	133	98.3		%	409731	NA
(S) 4-Bromofluorobenzene	SW8260B	NA	05/11/12	1	55.8	141	108		%	409731	NA

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
TPH(Gasoline)	8260TPH	NA	05/11/12	1	0.030	0.10	ND		mg/Kg	409731	NA
(S) 4-Bromofluorobenzene	8260TPH	NA	05/11/12	1	43.9	127	86.5		%	409731	NA

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Jered Chaney
Weber, Hayes & Associates

Date Received: 05/10/12
Date Reported: 05/18/12

Client Sample ID:	DP-9-d18	**Lab Sample ID:**	1205067-019A
Project Name/Location:	Oakland / 2X103.B	**Sample Matrix:**	Soil
Project Number:			
Date/Time Sampled:	05/08/12 / 0:00		
Tag Number:	Oakland / 2X103.B		

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
The results shown below are reported using their MDL.											
Benzene	SW8260B	NA	05/16/12	2.5	0.0038	0.025	0.22		mg/Kg	409788	NA
Toluene	SW8260B	NA	05/16/12	2.5	0.0025	0.025	0.013	J	mg/Kg	409788	NA
Ethyl Benzene	SW8260B	NA	05/16/12	2.5	0.0022	0.025	0.42		mg/Kg	409788	NA
m,p-Xylene	SW8260B	NA	05/16/12	2.5	0.0046	0.025	0.10		mg/Kg	409788	NA
o-Xylene	SW8260B	NA	05/16/12	2.5	0.0017	0.013	0.011	J	mg/Kg	409788	NA
MTBE	SW8260B	NA	05/16/12	2.5	0.0065	0.025	ND		mg/Kg	409788	NA
tert-Butanol	SW8260B	NA	05/16/12	2.5	0.052	0.13	ND		mg/Kg	409788	NA
(S) Dibromofluoromethane	SW8260B	NA	05/16/12	2.5	59.8	148	126		%	409788	NA
(S) Toluene-d8	SW8260B	NA	05/16/12	2.5	55.2	133	102		%	409788	NA
(S) 4-Bromofluorobenzene	SW8260B	NA	05/16/12	2.5	55.8	141	114		%	409788	NA

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
The results shown below are reported using their MDL.											
TPH(Gasoline)	8260TPH	5/16/12	05/16/12	2.5	0.074	0.25	5.8	x	mg/Kg	409788	5526
(S) 4-Bromofluorobenzene	8260TPH	5/16/12	05/16/12	2.5	43.9	127	68.0		%	409788	5526

NOTE: x - Does not match pattern of reference Gasoline standard. Reported TPH value includes contribution from non-target hydrocarbons (possibly aged gasoline).

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
TPH as Diesel (SG)	SW8015B(M)	5/15/12	05/15/12	1	0.87	2.0	4.8	x	mg/Kg	409762	5506
TPH as Motor Oil (SG)	SW8015B(M)	5/15/12	05/15/12	1	1.3	10	ND		mg/Kg	409762	5506
Pentacosane (S)	SW8015B(M)	5/15/12	05/15/12	1	61.5	133	87.3		%	409762	5506

NOTE: x-Not typical of TPH as Diesel Standard pattern (lighter than Diesel). Hydrocarbons with TPH as Diesel range are quantiated as Diesel.

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Jered Chaney
Weber, Hayes & Associates

Date Received: 05/10/12
Date Reported: 05/18/12

Client Sample ID:	DP-9-d20	**Lab Sample ID:**	1205067-020A
Project Name/Location:	Oakland / 2X103.B	**Sample Matrix:**	Soil
Project Number:			
Date/Time Sampled:	05/08/12 / 0:00		
Tag Number:	Oakland / 2X103.B		

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
The results shown below are reported using their MDL.											
Benzene	SW8260B	NA	05/15/12	2	0.0030	0.020	0.16		mg/Kg	409759	NA
Toluene	SW8260B	NA	05/15/12	2	0.0020	0.020	ND		mg/Kg	409759	NA
Ethyl Benzene	SW8260B	NA	05/15/12	2	0.0017	0.020	0.065		mg/Kg	409759	NA
m,p-Xylene	SW8260B	NA	05/15/12	2	0.0037	0.020	0.042		mg/Kg	409759	NA
o-Xylene	SW8260B	NA	05/15/12	2	0.0013	0.010	0.0017	J	mg/Kg	409759	NA
MTBE	SW8260B	NA	05/15/12	2	0.0052	0.020	ND		mg/Kg	409759	NA
tert-Butanol	SW8260B	NA	05/15/12	2	0.042	0.10	ND		mg/Kg	409759	NA
(S) Dibromofluoromethane	SW8260B	NA	05/15/12	2	59.8	148	135		%	409759	NA
(S) Toluene-d8	SW8260B	NA	05/15/12	2	55.2	133	111		%	409759	NA
(S) 4-Bromofluorobenzene	SW8260B	NA	05/15/12	2	55.8	141	118		%	409759	NA

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
TPH(Gasoline)	8260TPH	NA	05/11/12	1	0.030	0.10	1.7	x	mg/Kg	409731	NA
(S) 4-Bromofluorobenzene	8260TPH	NA	05/11/12	1	43.9	127	86.3		%	409731	NA

NOTE: x - Does not match pattern of reference Gasoline standard. Reported value due to discrete peaks and non-target hydrocarbons within range of C5-C12 quantified as gasoline.

Torrent LABORATORY, INC.

MB Summary Report

Work Order:	1205067	**Prep Method:**	NA	**Prep Date:**	NA	**Prep Batch:**	NA
Matrix:	Soil	**Analytical Method:**	SW8260B	**Analyzed Date:**	05/11/12	**Analytical Batch:**	409731
Units:	ug/Kg						

Parameters	MDL	PQL	Method Blank Conc.	Lab Qualifier
Dichlorodifluoromethane	4.4	10	ND	
Chloromethane	4.6	10	ND	
Vinyl Chloride	2.6	10	ND	
Bromomethane	4.7	10	ND	
Trichlorofluoromethane	2.9	10	ND	
1,1-Dichloroethene	1.5	10	ND	
Freon 113	3.7	10	ND	
Methylene Chloride	2.0	50	ND	
trans-1,2-Dichloroethene	1.1	10	ND	
MTBE	2.6	10	ND	
tert-Butanol	21	50	ND	
Diisopropyl ether (DIPE)	2.2	10	ND	
1,1-Dichloroethane	1.3	10	ND	
ETBE	2.4	10	ND	
cis-1,2-Dichloroethene	1.8	10	ND	
2,2-Dichloropropane	1.2	10	ND	
Bromochloromethane	2.3	10	ND	
Chloroform	1.2	10	ND	
Carbon Tetrachloride	1.6	10	ND	
1,1,1-Trichloroethane	1.2	10	ND	
1,1-Dichloropropene	1.4	10	ND	
Benzene	1.5	10	ND	
TAME	2.1	10	ND	
1,2-Dichloroethane	1.9	10	ND	
Trichloroethylene	3.9	10	ND	
Dibromomethane	2.2	10	ND	
1,2-Dichloropropane	1.3	10	ND	
Bromodichloromethane	1.1	10	ND	
cis-1,3-Dichloropropene	1.4	10	ND	
Toluene	0.98	10	ND	
Tetrachloroethylene	1.8	10	ND	
trans-1,3-Dichloropropene	1.2	10	ND	
1,1,2-Trichloroethane	1.8	10	ND	
Dibromochloromethane	1.1	10	ND	
1,3-Dichloropropane	2.1	10	ND	
1,2-Dibromoethane	1.7	10	ND	
Ethyl Benzene	0.86	10	ND	
Chlorobenzene	4.2	10	ND	
1,1,1,2-Tetrachloroethane	0.86	10	ND	
m,p-Xylene	1.9	10	ND	

Torrent LABORATORY, INC.

MB Summary Report

Work Order:	1205067	**Prep Method:**	NA	**Prep Date:**	NA	**Prep Batch:**	NA
Matrix:	Soil	**Analytical Method:**	SW8260B	**Analyzed Date:**	05/11/12	**Analytical Batch:**	409731
Units:	ug/Kg						

Parameters	MDL	PQL	Method Blank Conc.	Lab Qualifier	
o-Xylene	0.66	5.0	ND		
Styrene	0.77	10	ND		
Bromoform	1.9	10	ND		
Isopropyl Benzene	1.2	10	ND		
n-Propylbenzene	1.4	10	ND		
Bromobenzene	1.2	10	ND		
1,1,2,2-Tetrachloroethane	3.0	10	ND		
1,3,5-Trimethylbenzene	1.1	10	ND		
1,2,3-Trichloropropane	3.3	10	ND		
4-Chlorotoluene	1.6	10	ND		
2-Chlorotoluene	1.6	10	ND		
tert-Butylbenzene	1.4	10	ND		
1,2,4-Trimethylbenzene	1.1	10	ND		
sec-Butyl Benzene	1.6	10	ND		
p-Isopropyltoluene	1.5	10	ND		
1,3-Dichlorobenzene	1.8	10	ND		
1,4-Dichlorobenzene	1.5	10	ND		
n-Butylbenzene	2.2	10	ND		
1,2-Dichlorobenzene	1.3	10	ND		
1,2-Dibromo-3-Chloropropane	4.2	10	ND		
Hexachlorobutadiene	2.6	10	ND		
1,2,4-Trichlorobenzene	2.1	10	ND		
Naphthalene	2.8	10	ND		
1,2,3-Trichlorobenzene	2.9	10	ND		
(S) Dibromofluoromethane			109		
(S) Toluene-d8			106		
(S) 4-Bromofluorobenzene			110		

Torrent LABORATORY, INC.

MB Summary Report

Work Order:	1205067	**Prep Method:**	NA	**Prep Date:**	NA	**Prep Batch:**	NA
Matrix:	Soil	**Analytical Method:**	SW8260B	**Analyzed Date:**	05/14/12	**Analytical Batch:**	409737
Units:	ug/Kg						

Parameters	MDL	PQL	Method Blank Conc.	Lab Qualifier
Dichlorodifluoromethane	4.4	10	ND	
Chloromethane	4.6	10	ND	
Vinyl Chloride	2.6	10	ND	
Bromomethane	4.7	10	ND	
Trichlorofluoromethane	2.9	10	ND	
1,1-Dichloroethene	1.5	10	ND	
Freon 113	3.7	10	ND	
Methylene Chloride	2.0	50	ND	
trans-1,2-Dichloroethene	1.1	10	ND	
MTBE	2.6	10	ND	
tert-Butanol	21	50	ND	
Diisopropyl ether (DIPE)	2.2	10	ND	
1,1-Dichloroethane	1.3	10	ND	
ETBE	2.4	10	ND	
cis-1,2-Dichloroethene	1.8	10	ND	
2,2-Dichloropropane	1.2	10	ND	
Bromochloromethane	2.3	10	ND	
Chloroform	1.2	10	ND	
Carbon Tetrachloride	1.6	10	ND	
1,1,1-Trichloroethane	1.2	10	ND	
1,1-Dichloropropene	1.4	10	ND	
Benzene	1.5	10	ND	
TAME	2.1	10	ND	
1,2-Dichloroethane	1.9	10	ND	
Trichloroethylene	3.9	10	ND	
Dibromomethane	2.2	10	ND	
1,2-Dichloropropane	1.3	10	ND	
Bromodichloromethane	1.1	10	ND	
cis-1,3-Dichloropropene	1.4	10	ND	
Toluene	0.98	10	ND	
Tetrachloroethylene	1.8	10	ND	
trans-1,3-Dichloropropene	1.2	10	ND	
1,1,2-Trichloroethane	1.8	10	ND	
Dibromochloromethane	1.1	10	ND	
1,3-Dichloropropane	2.1	10	ND	
1,2-Dibromoethane	1.7	10	ND	
Ethyl Benzene	0.86	10	ND	
Chlorobenzene	4.2	10	ND	
1,1,1,2-Tetrachloroethane	0.86	10	ND	
m,p-Xylene	1.9	10	ND	
o-Xylene	0.66	5.0	ND	

Torrent LABORATORY, INC.

MB Summary Report

Work Order:	1205067	**Prep Method:**	NA	**Prep Date:**	NA	**Prep Batch:**	NA
Matrix:	Soil	**Analytical Method:**	SW8260B	**Analyzed Date:**	05/14/12	**Analytical Batch:**	409737
Units:	ug/Kg						

Parameters	MDL	PQL	Method Blank Conc.	Lab Qualifier	
Styrene	0.77	10	ND		
Bromoform	1.9	10	ND		
Isopropyl Benzene	1.2	10	ND		
n-Propylbenzene	1.4	10	ND		
Bromobenzene	1.2	10	ND		
1,1,2,2-Tetrachloroethane	3.0	10	ND		
1,3,5-Trimethylbenzene	1.1	10	ND		
1,2,3-Trichloropropane	3.3	10	ND		
4-Chlorotoluene	1.6	10	ND		
2-Chlorotoluene	1.6	10	ND		
tert-Butylbenzene	1.4	10	ND		
1,2,4-Trimethylbenzene	1.1	10	ND		
sec-Butyl Benzene	1.6	10	ND		
p-Isopropyltoluene	1.5	10	ND		
1,3-Dichlorobenzene	1.8	10	ND		
1,4-Dichlorobenzene	1.5	10	ND		
n-Butylbenzene	2.2	10	ND		
1,2-Dichlorobenzene	1.3	10	ND		
1,2-Dibromo-3-Chloropropane	4.2	10	ND		
Hexachlorobutadiene	2.6	10	ND		
1,2,4-Trichlorobenzene	2.1	10	ND		
Naphthalene	2.8	10	ND		
1,2,3-Trichlorobenzene	2.9	10	ND		
(S) Dibromofluoromethane			115		
(S) Toluene-d8			101		
(S) 4-Bromofluorobenzene			106		

Torrent LABORATORY, INC.

MB Summary Report

Work Order:	1205067	**Prep Method:**	NA	**Prep Date:**	NA	**Prep Batch:**	NA
Matrix:	Soil	**Analytical Method:**	SW8260B	**Analyzed Date:**	05/15/12	**Analytical Batch:**	409759
Units:	ug/Kg						

Parameters	MDL	PQL	Method Blank Conc.	Lab Qualifier	
Dichlorodifluoromethane	4.4	10	ND		
Chloromethane	4.6	10	ND		
Vinyl Chloride	2.6	10	ND		
Bromomethane	4.7	10	ND		
Trichlorofluoromethane	2.9	10	ND		
1,1-Dichloroethene	1.5	10	ND		
Freon 113	3.7	10	ND		
Methylene Chloride	2.0	50	ND		
trans-1,2-Dichloroethene	1.1	10	ND		
MTBE	2.6	10	ND		
tert-Butanol	21	50	ND		
Diisopropyl ether (DIPE)	2.2	10	ND		
1,1-Dichloroethane	1.3	10	ND		
ETBE	2.4	10	ND		
cis-1,2-Dichloroethene	1.8	10	ND		
2,2-Dichloropropane	1.2	10	ND		
Bromochloromethane	2.3	10	ND		
Chloroform	1.2	10	ND		
Carbon Tetrachloride	1.6	10	ND		
1,1,1-Trichloroethane	1.2	10	ND		
1,1-Dichloropropene	1.4	10	ND		
Benzene	1.5	10	ND		
TAME	2.1	10	ND		
1,2-Dichloroethane	1.9	10	ND		
Trichloroethylene	3.9	10	ND		
Dibromomethane	2.2	10	ND		
1,2-Dichloropropane	1.3	10	ND		
Bromodichloromethane	1.1	10	ND		
cis-1,3-Dichloropropene	1.4	10	ND		
Toluene	0.98	10	ND		
Tetrachloroethylene	1.8	10	ND		
trans-1,3-Dichloropropene	1.2	10	ND		
1,1,2-Trichloroethane	1.8	10	ND		
Dibromochloromethane	1.1	10	ND		
1,3-Dichloropropane	2.1	10	ND		
1,2-Dibromoethane	1.7	10	ND		
Ethyl Benzene	0.86	10	ND		
Chlorobenzene	4.2	10	ND		
1,1,1,2-Tetrachloroethane	0.86	10	ND		
m,p-Xylene	1.9	10	ND		
o-Xylene	0.66	5.0	ND		

Torrent LABORATORY, INC.

MB Summary Report

Work Order:	1205067	**Prep Method:**	NA	**Prep Date:**	NA	**Prep Batch:**	NA
Matrix:	Soil	**Analytical Method:**	SW8260B	**Analyzed Date:**	05/15/12	**Analytical Batch:**	409759
Units:	ug/Kg						

Parameters	MDL	PQL	Method Blank Conc.	Lab Qualifier	
Styrene	0.77	10	ND		
Bromoform	1.9	10	ND		
Isopropyl Benzene	1.2	10	ND		
n-Propylbenzene	1.4	10	ND		
Bromobenzene	1.2	10	ND		
1,1,2,2-Tetrachloroethane	3.0	10	ND		
1,3,5-Trimethylbenzene	1.1	10	ND		
1,2,3-Trichloropropane	3.3	10	ND		
4-Chlorotoluene	1.6	10	ND		
2-Chlorotoluene	1.6	10	ND		
tert-Butylbenzene	1.4	10	ND		
1,2,4-Trimethylbenzene	1.1	10	ND		
sec-Butyl Benzene	1.6	10	ND		
p-Isopropyltoluene	1.5	10	ND		
1,3-Dichlorobenzene	1.8	10	ND		
1,4-Dichlorobenzene	1.5	10	ND		
n-Butylbenzene	2.2	10	ND		
1,2-Dichlorobenzene	1.3	10	ND		
1,2-Dibromo-3-Chloropropane	4.2	10	ND		
Hexachlorobutadiene	2.6	10	ND		
1,2,4-Trichlorobenzene	2.1	10	ND		
Naphthalene	2.8	10	ND		
1,2,3-Trichlorobenzene	2.9	10	ND		
(S) Dibromofluoromethane			108		
(S) Toluene-d8			104		
(S) 4-Bromofluorobenzene			110		

Torrent LABORATORY, INC.

MB Summary Report

Work Order:	1205067	**Prep Method:**	NA	**Prep Date:**	NA	**Prep Batch:**	NA
Matrix:	Soil	**Analytical Method:**	SW8260B	**Analyzed Date:**	05/16/12	**Analytical Batch:**	409788
Units:	ug/Kg						

Parameters	MDL	PQL	Method Blank Conc.	Lab Qualifier	
Dichlorodifluoromethane	4.4	10	ND		
Chloromethane	4.6	10	ND		
Vinyl Chloride	2.6	10	ND		
Bromomethane	4.7	10	ND		
Trichlorofluoromethane	2.9	10	ND		
1,1-Dichloroethene	1.5	10	ND		
Freon 113	3.7	10	ND		
Methylene Chloride	2.0	50	ND		
trans-1,2-Dichloroethene	1.1	10	ND		
MTBE	2.6	10	ND		
tert-Butanol	21	50	ND		
Diisopropyl ether (DIPE)	2.2	10	ND		
1,1-Dichloroethane	1.3	10	ND		
ETBE	2.4	10	ND		
cis-1,2-Dichloroethene	1.8	10	ND		
2,2-Dichloropropane	1.2	10	ND		
Bromochloromethane	2.3	10	ND		
Chloroform	1.2	10	ND		
Carbon Tetrachloride	1.6	10	ND		
1,1,1-Trichloroethane	1.2	10	ND		
1,1-Dichloropropene	1.4	10	ND		
Benzene	1.5	10	ND		
TAME	2.1	10	ND		
1,2-Dichloroethane	1.9	10	ND		
Trichloroethylene	3.9	10	ND		
Dibromomethane	2.2	10	ND		
1,2-Dichloropropane	1.3	10	ND		
Bromodichloromethane	1.1	10	ND		
cis-1,3-Dichloropropene	1.4	10	ND		
Toluene	0.98	10	ND		
Tetrachloroethylene	1.8	10	ND		
trans-1,3-Dichloropropene	1.2	10	ND		
1,1,2-Trichloroethane	1.8	10	ND		
Dibromochloromethane	1.1	10	ND		
1,3-Dichloropropane	2.1	10	ND		
1,2-Dibromoethane	1.7	10	ND		
Ethyl Benzene	0.86	10	ND		
Chlorobenzene	4.2	10	ND		
1,1,1,2-Tetrachloroethane	0.86	10	ND		
m,p-Xylene	1.9	10	ND		
o-Xylene	0.66	5.0	ND		

Torrent LABORATORY, INC.

MB Summary Report

Work Order:	1205067	**Prep Method:**	NA	**Prep Date:**	NA	**Prep Batch:**	NA
Matrix:	Soil	**Analytical Method:**	SW8260B	**Analyzed Date:**	05/16/12	**Analytical Batch:**	409788
Units:	ug/Kg						

Parameters	MDL	PQL	Method Blank Conc.	Lab Qualifier
Styrene	0.77	10	ND	
Bromoform	1.9	10	ND	
Isopropyl Benzene	1.2	10	ND	
n-Propylbenzene	1.4	10	ND	
Bromobenzene	1.2	10	ND	
1,1,2,2-Tetrachloroethane	3.0	10	ND	
1,3,5-Trimethylbenzene	1.1	10	ND	
1,2,3-Trichloropropane	3.3	10	ND	
4-Chlorotoluene	1.6	10	ND	
2-Chlorotoluene	1.6	10	ND	
tert-Butylbenzene	1.4	10	ND	
1,2,4-Trimethylbenzene	1.1	10	ND	
sec-Butyl Benzene	1.6	10	ND	
p-Isopropyltoluene	1.5	10	ND	
1,3-Dichlorobenzene	1.8	10	ND	
1,4-Dichlorobenzene	1.5	10	ND	
n-Butylbenzene	2.2	10	ND	
1,2-Dichlorobenzene	1.3	10	ND	
1,2-Dibromo-3-Chloropropane	4.2	10	ND	
Hexachlorobutadiene	2.6	10	ND	
1,2,4-Trichlorobenzene	2.1	10	ND	
Naphthalene	2.8	10	ND	
1,2,3-Trichlorobenzene	2.9	10	ND	
(S) Dibromofluoromethane			99.8	
(S) Toluene-d8			104	
(S) 4-Bromofluorobenzene			109	

Torrent LABORATORY, INC.

MB Summary Report

Work Order:	1205067	**Prep Method:**	NA	**Prep Date:**	NA	**Prep Batch:**	NA
Matrix:	Soil	**Analytical Method:**	SW8260B	**Analyzed Date:**	05/17/12	**Analytical Batch:**	409792
Units:	ug/Kg						

Parameters	MDL	PQL	Method Blank Conc.	Lab Qualifier	
Dichlorodifluoromethane	4.4	10	ND		
Chloromethane	4.6	10	ND		
Vinyl Chloride	2.6	10	ND		
Bromomethane	4.7	10	ND		
Trichlorofluoromethane	2.9	10	ND		
1,1-Dichloroethene	1.5	10	ND		
Freon 113	3.7	10	ND		
Methylene Chloride	2.0	50	ND		
trans-1,2-Dichloroethene	1.1	10	ND		
MTBE	2.6	10	ND		
tert-Butanol	21	50	ND		
Diisopropyl ether (DIPE)	2.2	10	ND		
1,1-Dichloroethane	1.3	10	ND		
ETBE	2.4	10	ND		
cis-1,2-Dichloroethene	1.8	10	ND		
2,2-Dichloropropane	1.2	10	ND		
Bromochloromethane	2.3	10	ND		
Chloroform	1.2	10	ND		
Carbon Tetrachloride	1.6	10	ND		
1,1,1-Trichloroethane	1.2	10	ND		
1,1-Dichloropropene	1.4	10	ND		
Benzene	1.5	10	ND		
TAME	2.1	10	ND		
1,2-Dichloroethane	1.9	10	ND		
Trichloroethylene	3.9	10	ND		
Dibromomethane	2.2	10	ND		
1,2-Dichloropropane	1.3	10	ND		
Bromodichloromethane	1.1	10	ND		
cis-1,3-Dichloropropene	1.4	10	ND		
Toluene	0.98	10	ND		
Tetrachloroethylene	1.8	10	ND		
trans-1,3-Dichloropropene	1.2	10	ND		
1,1,2-Trichloroethane	1.8	10	ND		
Dibromochloromethane	1.1	10	ND		
1,3-Dichloropropane	2.1	10	ND		
1,2-Dibromoethane	1.7	10	ND		
Ethyl Benzene	0.86	10	ND		
Chlorobenzene	4.2	10	ND		
1,1,1,2-Tetrachloroethane	0.86	10	ND		
m,p-Xylene	1.9	10	ND		
o-Xylene	0.66	5.0	ND		

Torrent LABORATORY, INC.

MB Summary Report

Work Order:	1205067	**Prep Method:**	NA	**Prep Date:**	NA	**Prep Batch:**	NA
Matrix:	Soil	**Analytical Method:**	SW8260B	**Analyzed Date:**	05/17/12	**Analytical Batch:**	409792
Units:	ug/Kg						

Parameters	MDL	PQL	Method Blank Conc.	Lab Qualifier
Styrene	0.77	10	ND	
Bromoform	1.9	10	ND	
Isopropyl Benzene	1.2	10	ND	
n-Propylbenzene	1.4	10	ND	
Bromobenzene	1.2	10	ND	
1,1,2,2-Tetrachloroethane	3.0	10	ND	
1,3,5-Trimethylbenzene	1.1	10	ND	
1,2,3-Trichloropropane	3.3	10	ND	
4-Chlorotoluene	1.6	10	ND	
2-Chlorotoluene	1.6	10	ND	
tert-Butylbenzene	1.4	10	ND	
1,2,4-Trimethylbenzene	1.1	10	ND	
sec-Butyl Benzene	1.6	10	ND	
p-Isopropyltoluene	1.5	10	ND	
1,3-Dichlorobenzene	1.8	10	ND	
1,4-Dichlorobenzene	1.5	10	ND	
n-Butylbenzene	2.2	10	ND	
1,2-Dichlorobenzene	1.3	10	ND	
1,2-Dibromo-3-Chloropropane	4.2	10	ND	
Hexachlorobutadiene	2.6	10	ND	
1,2,4-Trichlorobenzene	2.1	10	ND	
Naphthalene	2.8	10	ND	
1,2,3-Trichlorobenzene	2.9	10	ND	
(S) Dibromofluoromethane			111	
(S) Toluene-d8			110	
(S) 4-Bromofluorobenzene			106	

Work Order:	1205067	**Prep Method:**	5035	**Prep Date:**	05/11/12	**Prep Batch:**	5486
Matrix:	Soil	**Analytical Method:**	8260TPH	**Analyzed Date:**	05/11/12	**Analytical Batch:**	409731
Units:	ug/Kg						

Parameters	MDL	PQL	Method Blank Conc.	Lab Qualifier
TPH(Gasoline)	30	100	ND	
(S) 4-Bromofluorobenzene			91.7	

Torrent LABORATORY, INC.

MB Summary Report

Work Order:	1205067	**Prep Method:**	5035	**Prep Date:**	05/14/12	**Prep Batch:**	5491
Matrix:	Soil	**Analytical Method:**	8260TPH	**Analyzed Date:**	05/14/12	**Analytical Batch:**	409737
Units:	ug/Kg						

Parameters	MDL	PQL	Method Blank Conc.	Lab Qualifier
TPH(Gasoline)	30	100	ND	
(S) 4-Bromofluorobenzene			75.1	

Work Order:	1205067	**Prep Method:**	3545_TPHSG	**Prep Date:**	05/15/12	**Prep Batch:**	5506
Matrix:	Soil	**Analytical Method:**	SW8015B(M)	**Analyzed Date:**	05/15/12	**Analytical Batch:**	409762
Units:	mg/Kg						

Parameters	MDL	PQL	Method Blank Conc.	Lab Qualifier
TPH as Diesel (SG)	0.87	2.0	ND	
TPH as Motor Oil (SG)	1.3	10	1.9	
Pentacosane (S)			85.2	

Work Order:	1205067	**Prep Method:**	5035	**Prep Date:**	05/14/12	**Prep Batch:**	5511
Matrix:	Soil	**Analytical Method:**	8260TPH	**Analyzed Date:**	05/15/12	**Analytical Batch:**	409759
Units:	ug/Kg						

Parameters	MDL	PQL	Method Blank Conc.	Lab Qualifier
TPH(Gasoline)	30	100	ND	
(S) 4-Bromofluorobenzene			69.2	

Work Order:	1205067	**Prep Method:**	5035	**Prep Date:**	05/16/12	**Prep Batch:**	5526
Matrix:	Soil	**Analytical Method:**	8260TPH	**Analyzed Date:**	05/16/12	**Analytical Batch:**	409788
Units:	ug/Kg						

Parameters	MDL	PQL	Method Blank Conc.	Lab Qualifier
TPH(Gasoline)	30	100	ND	
(S) 4-Bromofluorobenzene			72.1	

Torrent LABORATORY, INC.

MB Summary Report

Work Order:	1205067	**Prep Method:**	5035	**Prep Date:**	05/17/12	**Prep Batch:**	5529
Matrix:	Soil	**Analytical Method:**	8260TPH	**Analyzed Date:**	05/17/12	**Analytical Batch:**	409792
Units:	ug/Kg						

Parameters	MDL	PQL	Method Blank Conc.	Lab Qualifier	
TPH(Gasoline)	30	100	92		
(S) 4-Bromofluorobenzene			95.7		

Torrent LABORATORY, INC.

LCS/LCSD Summary Report

Raw values are used in quality control assessment.

Work Order:	1205067	**Prep Method:**	NA	**Prep Date:**	NA	**Prep Batch:**	NA
Matrix:	Soil	**Analytical Method:**	SW8260B	**Analyzed Date:**	05/11/12	**Analytical Batch:**	409731
Units:	ug/Kg						

Parameters	MDL	PQL	Method Blank Conc.	Spike Conc.	LCS % Recovery	LCSD % Recovery	LCS/LCSD % RPD	% Recovery Limits	% RPD Limits	Lab Qualifier
1,1-Dichloroethene	1.5	10	ND	50	132	128	3.48	53.7 - 139	30	
Benzene	1.5	10	ND	50	97.6	96.6	1.07	66.5 - 135	30	
Trichloroethylene	3.9	10	ND	50	97.0	96.9	0.0825	57.5 - 150	30	
Toluene	0.98	10	ND	50	107	107	0.616	56.8 - 134	30	
Chlorobenzene	4.2	10	ND	50	123	110	11.4	57.4 - 134	30	
(S) Dibromofluoromethane			ND	50	105	108		59.8 - 148		
(S) Toluene-d8			ND	50	103	105		55.2 - 133		
(S) 4-Bromofluorobenzene			ND	50	99.8	107		55.8 - 141		

Work Order:	1205067	**Prep Method:**	NA	**Prep Date:**	NA	**Prep Batch:**	NA
Matrix:	Soil	**Analytical Method:**	SW8260B	**Analyzed Date:**	05/14/12	**Analytical Batch:**	409737
Units:	ug/Kg						

Parameters	MDL	PQL	Method Blank Conc.	Spike Conc.	LCS % Recovery	LCSD % Recovery	LCS/LCSD % RPD	% Recovery Limits	% RPD Limits	Lab Qualifier
1,1-Dichloroethene	1.5	10	ND	50	118	124	5.01	53.7 - 139	30	
Benzene	1.5	10	ND	50	95.3	93.5	2.03	66.5 - 135	30	
Trichloroethylene	3.9	10	ND	50	85.7	89.8	4.83	57.5 - 150	30	
Toluene	0.98	10	ND	50	97.7	104	6.55	56.8 - 134	30	
Chlorobenzene	4.2	10	ND	50	114	121	5.45	57.4 - 134	30	
(S) Dibromofluoromethane			ND	50	114	102		59.8 - 148		
(S) Toluene-d8			ND	50	108	110		55.2 - 133		
(S) 4-Bromofluorobenzene			ND	50	105	106		55.8 - 141		

Torrent LABORATORY, INC.

LCS/LCSD Summary Report

Raw values are used in quality control assessment.

Work Order:	1205067	**Prep Method:**	NA	**Prep Date:**	NA	**Prep Batch:**	NA
Matrix:	Soil	**Analytical Method:**	SW8260B	**Analyzed Date:**	05/15/12	**Analytical Batch:**	409759
Units:	ug/Kg						

Parameters	MDL	PQL	Method Blank Conc.	Spike Conc.	LCS % Recovery	LCSD % Recovery	LCS/LCSD % RPD	% Recovery Limits	% RPD Limits	Lab Qualifier
1,1-Dichloroethene	1.5	10	ND	50	80.8	102	23.5	53.7 - 139	30	
Benzene	1.5	10	ND	50	90.6	99.0	8.86	66.5 - 135	30	
Trichloroethylene	3.9	10	ND	50	85.2	89.3	4.74	57.5 - 150	30	
Toluene	0.98	10	ND	50	91.6	104	12.9	56.8 - 134	30	
Chlorobenzene	4.2	10	ND	50	101	96.9	3.99	57.4 - 134	30	
(S) Dibromofluoromethane			ND	50	115	114		59.8 - 148		
(S) Toluene-d8			ND	50	100	107		55.2 - 133		
(S) 4-Bromofluorobenzene			ND	50	99.1	101		55.8 - 141		

Work Order:	1205067	**Prep Method:**	NA	**Prep Date:**	NA	**Prep Batch:**	NA
Matrix:	Soil	**Analytical Method:**	SW8260B	**Analyzed Date:**	05/16/12	**Analytical Batch:**	409788
Units:	ug/Kg						

Parameters	MDL	PQL	Method Blank Conc.	Spike Conc.	LCS % Recovery	LCSD % Recovery	LCS/LCSD % RPD	% Recovery Limits	% RPD Limits	Lab Qualifier
1,1-Dichloroethene	1.5	10	ND	50	80.2	87.6	8.84	53.7 - 139	30	
Benzene	1.5	10	ND	50	95.7	93.4	2.29	66.5 - 135	30	
Trichloroethylene	3.9	10	ND	50	85.4	92.0	7.46	57.5 - 150	30	
Toluene	0.98	10	ND	50	96.3	103	7.06	56.8 - 134	30	
Chlorobenzene	4.2	10	ND	50	108	123	12.6	57.4 - 134	30	
(S) Dibromofluoromethane			ND	50	123	105		59.8 - 148		
(S) Toluene-d8			ND	50	102	106		55.2 - 133		
(S) 4-Bromofluorobenzene			ND	50	100	109		55.8 - 141		

Torrent LABORATORY, INC.

LCS/LCSD Summary Report

Raw values are used in quality control assessment.

Work Order:	1205067	**Prep Method:**	NA	**Prep Date:**	NA	**Prep Batch:**	NA
Matrix:	Soil	**Analytical Method:**	SW8260B	**Analyzed Date:**	05/17/12	**Analytical Batch:**	409792
Units:	ug/Kg						

Parameters	MDL	PQL	Method Blank Conc.	Spike Conc.	LCS % Recovery	LCSD % Recovery	LCS/LCSD % RPD	% Recovery Limits	% RPD Limits	Lab Qualifier
1,1-Dichloroethene	1.5	10	ND	50	114	111	2.86	53.7 - 139	30	
Benzene	1.5	10	ND	50	91.2	111	19.9	66.5 - 135	30	
Trichloroethylene	3.9	10	ND	50	93.6	114	19.7	57.5 - 150	30	
Toluene	0.98	10	ND	50	105	112	6.04	56.8 - 134	30	
Chlorobenzene	4.2	10	ND	50	109	104	4.65	57.4 - 134	30	
(S) Dibromofluoromethane			ND	50	102	106		59.8 - 148		
(S) Toluene-d8			ND	50	109	103		55.2 - 133		
(S) 4-Bromofluorobenzene			ND	50	103	110		55.8 - 141		

Work Order:	1205067	**Prep Method:**	5035	**Prep Date:**	05/11/12	**Prep Batch:**	5486
Matrix:	Soil	**Analytical Method:**	8260TPH	**Analyzed Date:**	05/11/12	**Analytical Batch:**	409731
Units:	ug/Kg						

Parameters	MDL	PQL	Method Blank Conc.	Spike Conc.	LCS % Recovery	LCSD % Recovery	LCS/LCSD % RPD	% Recovery Limits	% RPD Limits	Lab Qualifier
TPH(Gasoline)	30	100	ND	1000	87.3	87.7	0.536	64.0 - 133.2	30	
(S) 4-Bromofluorobenzene			91.7	50	91.2	93.8		43.9 - 127		

Work Order:	1205067	**Prep Method:**	5035	**Prep Date:**	05/14/12	**Prep Batch:**	5491
Matrix:	Soil	**Analytical Method:**	8260TPH	**Analyzed Date:**	05/14/12	**Analytical Batch:**	409737
Units:	ug/Kg						

Parameters	MDL	PQL	Method Blank Conc.	Spike Conc.	LCS % Recovery	LCSD % Recovery	LCS/LCSD % RPD	% Recovery Limits	% RPD Limits	Lab Qualifier
TPH(Gasoline)	30	100	ND	1000	81.1	80.8	0.398	64.0 - 133.2	30	
(S) 4-Bromofluorobenzene			75.1	50	78.2	74.9		43.9 - 127		

Torrent LABORATORY, INC.

LCS/LCSD Summary Report

Raw values are used in quality control assessment.

Work Order:	1205067	**Prep Method:**	3545_TPHSG	**Prep Date:**	05/15/12	**Prep Batch:**	5506
Matrix:	Soil	**Analytical Method:**	SW8015B(M)	**Analyzed Date:**	05/15/12	**Analytical Batch:**	409762
Units:	mg/Kg						

Parameters	MDL	PQL	Method Blank Conc.	Spike Conc.	LCS % Recovery	LCSD % Recovery	LCS/LCSD % RPD	% Recovery Limits	% RPD Limits	Lab Qualifier
TPH as Diesel (SG)	0.87	2.0	ND	33.33	65.6	67.7	3.02	50.8 - 111	30	
Pentacosane (S)			1.9	100	92.9	97.5		61.5 - 133		

Work Order:	1205067	**Prep Method:**	5035	**Prep Date:**	05/14/12	**Prep Batch:**	5511
Matrix:	Soil	**Analytical Method:**	8260TPH	**Analyzed Date:**	05/15/12	**Analytical Batch:**	409759
Units:	ug/Kg						

Parameters	MDL	PQL	Method Blank Conc.	Spike Conc.	LCS % Recovery	LCSD % Recovery	LCS/LCSD % RPD	% Recovery Limits	% RPD Limits	Lab Qualifier
TPH(Gasoline)	30	100	ND	1000	80.3	80.5	0.307	64.0 - 133.2	30	
(S) 4-Bromofluorobenzene			69.2	50	73.1	74.7		43.9 - 127		

Work Order:	1205067	**Prep Method:**	5035	**Prep Date:**	05/16/12	**Prep Batch:**	5526
Matrix:	Soil	**Analytical Method:**	8260TPH	**Analyzed Date:**	05/16/12	**Analytical Batch:**	409788
Units:	ug/Kg						

Parameters	MDL	PQL	Method Blank Conc.	Spike Conc.	LCS % Recovery	LCSD % Recovery	LCS/LCSD % RPD	% Recovery Limits	% RPD Limits	Lab Qualifier
TPH(Gasoline)	30	100	ND	1000	87.9	80.7	8.52	64.0 - 133.2	30	
(S) 4-Bromofluorobenzene			72.1	50	76.3	68.5		43.9 - 127		

Work Order:	1205067	**Prep Method:**	5035	**Prep Date:**	05/17/12	**Prep Batch:**	5529
Matrix:	Soil	**Analytical Method:**	8260TPH	**Analyzed Date:**	05/17/12	**Analytical Batch:**	409792
Units:	ug/Kg						

Parameters	MDL	PQL	Method Blank Conc.	Spike Conc.	LCS % Recovery	LCSD % Recovery	LCS/LCSD % RPD	% Recovery Limits	% RPD Limits	Lab Qualifier
TPH(Gasoline)	30	100	92	1000	86.1	88.3	2.61	64.0 - 133.2	30	
(S) 4-Bromofluorobenzene			95.7	50	102	99.4		43.9 - 127		

Laboratory Qualifiers and Definitions

DEFINITIONS:

Accuracy/Bias (% Recovery) - The closeness of agreement between an observed value and an accepted reference value.
Blank (Method/Preparation Blank) -MB/PB - An analyte-free matrix to which all reagents are added in the same volumes/proportions as used in sample processing. The method blank is used to document contamination resulting from the analytical process.
Duplicate - a field sample and/or laboratory QC sample prepared in duplicate following all of the same processes and procedures used on the original sample (sample duplicate, LCSD, MSD)
Laboratory Control Sample (LCS ad LCSD) - A known matrix spiked with compounds representative of the target analyte(s). This is used to document laboratory performance.
Matrix - the component or substrate that contains the analyte of interest (e.g., - groundwater, sediment, soil, waste water, etc)
Matrix Spike (MS/MSD) - Client sample spiked with identical concentrations of target analyte (s). The spiking occurs prior to the sample preparation and analysis. They are used to document the precision and bias of a method in a given sample matrix.
Method Detection Limit (MDL) - the minimum concentration of a substance that can be measured and reported with a 99% confidence that the analyte concentration is greater than zero
Practical Quantitation Limit (PQL) - a laboratory determined value at 2 to 5 times above the MDL that can be reproduced in a manner that results in a 99% confidence level that the result is both accurate and precise. PQLs reflect all preparation factors and/or dilution factors that have been applied to the sample during the preparation and/or analytical processes.
Precision (%RPD) - The agreement among a set of replicate/duplicate measurements without regard to known value of the replicates
Surrogate (S) or (Surr) - An organic compound which is similar to the target analyte(s) in chemical composition and behavior in the analytical process, but which is not normally found in environmental samples. Surrogates are used in most organic analysis to demonstrate matrix compatibility with the chosen method of analysis
Tentatively Identified Compound (TIC) - A compound not contained within the analytical calibration standards but present in the GCMS library of defined compounds. When the library is searched for an unknown compound, it can frequently give a tentative identification to the compound based on retention time and primary and secondary ion match. TICs are reported as estimates and are candidates for further investigation.
Units: the unit of measure used to express the reported result - **mg/L** and ***mg/Kg*** (equivalent to PPM - parts per million in **liquid** and ***solid***), **ug/L** and ***ug/Kg*** (equivalent to PPB - parts per billion in **liquid** and ***solid***), **ug/m3**, ***mg.m3***, **ppbv** and ***ppmv*** (all units of measure for reporting concentrations in air), **%** (equivalent to 10000 ppm or 1,000,000 ppb), **ug/Wipe** (concentration found on the surface of a single Wipe usually taken over a 100cm2 surface)

LABORATORY QUALIFIERS:

B - Indicates when the anlayte is found in the associated method or preparation blank
D - Surrogate is not recoverable due to the necessary dilution of the sample
E - Indicates the reportable value is outside of the calibration range of the instrument but within the linear range of the instrument (unless otherwise noted) Values reported with an E qualifier should be considered as estimated.
H- Indicates that the recommended holding time for the analyte or compound has been exceeded
J- Indicates a value between the method MDL and PQL and that the reported concentration should be considered as estimated rather the quantitative
NA - Not Analyzed
N/A - Not Applicable
NR - Not recoverable - a matrix spike concentration is not recoverable due to a concentration within the original sample that is greater than four times the spike concentration added
R- The % RPD between a duplicate set of samples is outside of the absolute values established by laboratory control charts
S- Spike recovery is outside of established method and/or laboratory control limits. Further explanation of the use of this qualifier should be included within a case narrative
X -Used to indicate that a value based on pattern identification is within the pattern range but not typical of the pattern found in standards. Further explanation may or may not be provided within the sample footnote and/or the case narrative.

Sample Receipt Checklist

Client Name: Weber, Hayes & Associates

Project Name: Oakland / 2X103.B

Work Order No.: 1205067

Date and Time Received: 5/10/2012 17:30

Received By: NG

Physically Logged By: NG

Checklist Completed By: YB

Carrier Name: Streetwise Courier

Chain of Custody (COC) Information

Chain of custody present?	Yes
Chain of custody signed when relinquished and received?	Yes
Chain of custody agrees with sample labels?	Yes
Custody seals intact on sample bottles?	No

Sample Receipt Information

Custody seals intact on shipping container/cooler?	No
Shipping Container/Cooler In Good Condition?	Yes
Samples in proper container/bottle?	Yes
Samples containers intact?	Yes
Sufficient sample volume for indicated test?	Yes

Sample Preservation and Hold Time (HT) Information

All samples received within holding time?	Yes
Container/Temp Blank temperature in compliance?	Temperature: 12 °C
Water-VOA vials have zero headspace?	
Water-pH acceptable upon receipt?	
pH Checked by:	pH Adjusted by:

Chilling has begun. Did not receive sample DP-6-d21(1205067-007A)

Torrent LABORATORY, INC.

Login Summary Report

Client ID: TL5105 Weber, Hayes & Associates

Project Name: Oakland / 2X103.B

Project # :

Report Due Date: 5/17/2012

QC Level:

TAT Requested: 5+ day:0

Date Received: 5/10/2012

Time Received: 17:30

Comments: 5 Day TAT. Samples originally received on 3 CoCs. Broken into two work orders in order to facilitate batch preparation and reporting. Page 1 samples on WO#1205066.

Work Order # : ***1205067***

WO Sample ID	Client Sample ID	Collection Date/Time	Matrix	Scheduled Disposal	Sample On Hold	Test On Hold	Requested Tests	Subbed
1205067-001A	DP-4-d24	05/09/12 0:00	Soil	11/06/12			S_GCMS-GRO S_8260PetWHA	
Sample Note:	For petr - BTEX, MTBE and TBA only. Use MDL for any diluted samples.							
1205067-002A	DP-5-d8	05/08/12 0:00	Soil	11/06/12			S_GCMS-GRO S_8260PetWHA	
1205067-003A	DP-5-d11	05/08/12 0:00	Soil	11/06/12			S_8260PetWHA S_GCMS-GRO	
1205067-004A	DP-5-d17	05/08/12 0:00	Soil	11/06/12			S_GCMS-GRO S_8260PetWHA	
1205067-005A	DP-5-d23	05/08/12 0:00	Soil	11/06/12			S_GCMS-GRO S_8260PetWHA	
1205067-006A	DP-6-d12	05/08/12 0:00	Soil	11/06/12			S_GCMS-GRO S_8260PetWHA	
1205067-007A	DP-6-d21	05/09/12 0:00	Soil	11/06/12	On-Hold		S_GCMS-GRO S_8260PetWHA	
Sample Note:	We did not receive his sample -DP-6-d21.							
1205067-008A	DP-6-d23	05/09/12 0:00	Soil	11/06/12			S_GCMS-GRO S_8260PetWHA	
1205067-009A	DP-7-d4	05/09/12 0:00	Soil	11/06/12			S_GCMS-GRO S_8260PetWHA	
1205067-010A	DP-7-d8	05/09/12 0:00	Soil	11/06/12			S_GCMS-GRO S_8260PetWHA	
1205067-011A	DP-7-d11	05/09/12 0:00	Soil	11/06/12			S_8260PetWHA S_GCMS-GRO	

Torrent LABORATORY, INC.

Login Summary Report

Client ID: TL5105 Weber, Hayes & Associates

Project Name: Oakland / 2X103.B

Project # :

Report Due Date: 5/17/2012

QC Level:

TAT Requested: 5+ day:0

Date Received: 5/10/2012

Time Received: 17:30

Comments: 5 Day TAT. Samples originally received on 3 CoCs. Broken into two work orders in order to facilitate batch preparation and reporting. Page 1 samples on WO#1205066.

Work Order # : ***1205067***

WO Sample ID	Client Sample ID	Collection Date/Time	Matrix	Scheduled Disposal	Sample On Hold	Test On Hold	Requested Tests	Subbed
1205067-012A	DP-7-d17	05/09/12 0:00	Soil	11/06/12			S_TPHDOSG S_GCMS-GRO S_8260PetWHA	
1205067-013A	DP-7-d23	05/09/12 0:00	Soil	11/06/12			S_8260PetWHA S_GCMS-GRO	
1205067-014A	DP-8-d8	05/08/12 0:00	Soil	11/06/12			S_GCMS-GRO S_8260PetWHA	
1205067-015A	DP-8-d17	05/08/12 0:00	Soil	11/06/12			S_GCMS-GRO S_8260PetWHA	
1205067-016A	DP-8-d20	05/08/12 0:00	Soil	11/06/12			S_GCMS-GRO S_8260PetWHA	
1205067-017A	DP-8-d23	05/08/12 0:00	Soil	11/06/12			S_GCMS-GRO S_8260PetWHA	
1205067-018A	DP-9-d4	05/08/12 0:00	Soil	11/06/12			S_GCMS-GRO S_8260PetWHA	
1205067-019A	DP-9-d18	05/08/12 0:00	Soil	11/06/12			S_GCMS-GRO S_8260PetWHA S_TPHDOSG	
1205067-020A	DP-9-d20	05/08/12 0:00	Soil	11/06/12			S_GCMS-GRO S_8260PetWHA	

Torrent LABORATORY, INC.

Weber, Hayes & Associates
Hydrogeology and Environmental Engineering
120 Westgate Dr., Watsonville, CA 95076
(831) 722-3580 (831) 662-3100
Fax: (831) 722-1159

CHAIN -OF-CUSTODY RECORD

1205067

1 of 2

2 OF 3

PROJECT NAME AND JOB #: Oakland / 2X103.B

LABORATORY: Torrent

SEND CERTIFIED RESULTS TO: Weber, Hayes & Associates - Attention: Jered Chaney

TURNAROUND TIME: (Standard) 48hr Rush

ELECTRONIC DELIVERABLE FORMAT: ☐ YES ☒ NO

GLOBAL I.D.: --

Sampler: Jered Chaney

Date: 5/8 + 9/12

	Sample Identification	Date Sampled	Matrix	40 mL VOAs (preserved)	60 mL VOAs	Terra Core Prep Kit VOAs (preserved)	Liner Acetate or Brass	TPH-dieselw/ silica gel cleanup EPA Method# 8015M	TPH-Diesel EPA Method 8015M	TPH-Gas by EPA Method 8260B	BTEX EPA Method# 8260B	MtBE & TBA EPA Method# 8260B	1,2-DCA & EDB EPA Method# 8260B	Luft 5 Metals	PCBs
001A	DP-4-d24	5/9/12	Soil				1			x	x	x			
002A	DP-5-d8	5/8/12	↓				1			↓	↓	↓			
003A	DP-5-d11						1								
004A	DP-5-d17						1								
005A	DP-5-d23	↓					1								
006A	DP-6-d12						1								
007A	DP-6-d21	5/9/12					1								
008A	DP-6-d23						1								Temp 12 °C has chilling begun
009A	DP-7-d4						1								
010A	DP-7-d8						1								
011A	DP-7-d11						1	x							
012A	DP-7-d17						1								
013A	DP-7-d23	↓					1								
014A	DP-8-d8	5/8/12	↓				1			↓	↓	↓			

RELEASED BY:	Date & Time		RECEIVED BY:	Date & Time	SAMPLE CONDITION: (circle 1)		
1.) [signature]	5/10/12 1350	→	[signature]	5/10/12 1350	Ambient	(Refrigerated)	Frozen
2.) [signature]	5/10/12 456	→	M. Kelley	5/10/12 4:57	Ambient	Refrigerated	Frozen
3.) M. Kelley	5/10/12 5:30PM	→	[signature]	5/10/12 5:30P.M	Ambient	(Refrigerated)	Frozen
4.)		→			Ambient	Refrigerated	Frozen
5.)		→			Ambient	Refrigerated	Frozen

NOTES:

☒ *Please use MDL (Minimum Detection Limit) for any diluted samples.*

ADDITIONAL COMMENTS

S.W

Torrent LABORATORY, INC.

Weber, Hayes & Associates
Hydrogeology and Environmental Engineering
120 Westgate Dr., Watsonville, CA 95076
(831) 722-3580 (831) 662-3100
Fax: (831) 722-1159

CHAIN -OF-CUSTODY RECORD

2 of 2

1205067

3 OF 3

PROJECT NAME AND JOB #: Oakland / 2X103.B

SEND CERTIFIED RESULTS TO: Weber, Hayes & Associates - Attention: Jered Chaney

ELECTRONIC DELIVERABLE FORMAT: ☐ YES ☒ NO

Sampler: Jered Chaney

Date: 5/8+9/12

LABORATORY: Torrent

TURNAROUND TIME: (Standard) 48hr Rush

GLOBAL I.D.: --

	Sample Identification	Date Sampled	Matrix	40 mL VOAs (preserved)	60 mL VOAs	Terra Core Prep Kit VOAs (preserved)	Liner Acetate or Brass	TPH-diesel w/ silica gel cleanup EPA Method# 8015M	TPH-Diesel EPA Method 8015M	TPH-Gas by EPA Method 8260B	BTEX EPA Method# 8260B	MtBE & TBA EPA Method# 8260B	1,2-DCA & EDB EPA Method# 8260B	Luft 5 Metals	PCBs
015A	DP-8-d17	5/8/12	Soil				1			x	x	x			
016A	DP-8-d20	↓	↓				1			x	x	x			
017A	DP-8-d23	↓	↓				1			x	x	x			
018A	DP-9-d4	↓	↓				1			x	x	x			
019A	DP-9-d18	↓	↓				1	x		x	x	x			
020A	DP-9-d20	↓	↓				1			x	x	x			

Temp. 12°C chilling has begun

RELEASED BY:	Date & Time	RECEIVED BY:	Date & Time	SAMPLE CONDITION: (circle 1)		
1.) [signature]	5/10/12 1350	[signature]	5/10/12 1350	Ambient	(Refrigerated)	Frozen
2.) [signature]	5/10/12 455	[signature]	5/10/12 4:55	Ambient	(Refrigerated)	Frozen
3.) M. Tably	5/10/12 5:30PM	[signature]	5/10/12 5:30PM	Ambient	(Refrigerated)	Frozen
4.)				Ambient	Refrigerated	Frozen
5.)				Ambient	Refrigerated	Frozen

NOTES:

☒ Please use MDL (Minimum Detection Limit) for any diluted samples.

ADDITIONAL COMMENTS

S.W

JC\Fieldlog\FORMS.xls - COC 1 of 1 Weber, Hayes and Associates

Weber, Hayes & Associates
120 Westgate Dr
Watsonville, CA 95076
Tel: 831-722-3580
Fax: 831-662-3100

RE: Oakland / 2X103.B

Work Order No.: 1205092

Dear Jered Chaney:

Torrent Laboratory, Inc. received 1 sample(s) on May 15, 2012 for the analyses presented in the following Report.

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

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

Patti Sandrock
QA Officer

May 22, 2012
Date

Date: 5/22/2012

Client: Weber, Hayes & Associates

Project: Oakland / 2X103.B

Work Order: 1205092

CASE NARRATIVE

No issues encountered with the receiving, preparation, analysis or reporting of the results associated with this work order.

Unless otherwise indicated in the following narrative, no results have been method and/or field blank corrected.

Reported results relate only to the items/samples tested by the laboratory.

Torrent LABORATORY, INC.

Sample Result Summary

Report prepared for: Jered Chaney
Weber, Hayes & Associates

Date Received: 05/15/12
Date Reported: 05/22/12

DP-6-d21 1205092-001

Parameters:	Analysis Method	DF	MDL	PQL	Results	Unit
Benzene	SW8260B	2000	3.0	20	36	mg/Kg
Toluene	SW8260B	2000	2.0	20	37	mg/Kg
Ethyl Benzene	SW8260B	2000	1.7	20	81	mg/Kg
m,p-Xylene	SW8260B	2000	3.7	20	330	mg/Kg
o-Xylene	SW8260B	2000	1.3	10	120	mg/Kg
TPH(Gasoline)	8260TPH	2000	59	200	4600	mg/Kg

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Jered Chaney
Weber, Hayes & Associates

Date Received: 05/15/12
Date Reported: 05/22/12

Client Sample ID:	DP-6-d21	**Lab Sample ID:**	1205092-001A
Project Name/Location:	Oakland / 2X103.B	**Sample Matrix:**	Soil
Project Number:	2X103.B		
Date/Time Sampled:	05/09/12 / 0:00		
Tag Number:	Oakland / 2X103.B		

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
The results shown below are reported using their MDL.											
Benzene	SW8260B	NA	05/21/12	2000	3.0	20	36		mg/Kg	409833	NA
Toluene	SW8260B	NA	05/21/12	2000	2.0	20	37		mg/Kg	409833	NA
Ethyl Benzene	SW8260B	NA	05/21/12	2000	1.7	20	81		mg/Kg	409833	NA
m,p-Xylene	SW8260B	NA	05/21/12	2000	3.7	20	330		mg/Kg	409833	NA
o-Xylene	SW8260B	NA	05/21/12	2000	1.3	10	120		mg/Kg	409833	NA
MTBE	SW8260B	NA	05/21/12	2000	5.2	20	ND		mg/Kg	409833	NA
tert-Butanol	SW8260B	NA	05/21/12	2000	42	100	ND		mg/Kg	409833	NA
(S) Dibromofluoromethane	SW8260B	NA	05/21/12	2000	59.8	148	80.2		%	409833	NA
(S) Toluene-d8	SW8260B	NA	05/21/12	2000	55.2	133	96.7		%	409833	NA
(S) 4-Bromofluorobenzene	SW8260B	NA	05/21/12	2000	55.8	141	103		%	409833	NA

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
The results shown below are reported using their MDL.											
TPH(Gasoline)	8260TPH	5/21/12	05/21/12	2000	59	200	4600	x	mg/Kg	409833	5550
(S) 4-Bromofluorobenzene	8260TPH	5/21/12	05/21/12	2000	43.9	127	105		%	409833	5550

NOTE: x-Although TPH as Gasoline is present, pattern does not match TPH as Gaoline standard. Results are elevated due to heavy end hydrocarbons (possibly aged gasoline).

Torrent LABORATORY, INC.

MB Summary Report

Work Order:	1205092	**Prep Method:**	NA	**Prep Date:**	NA	**Prep Batch:**	NA
Matrix:	Soil	**Analytical Method:**	SW8260B	**Analyzed Date:**	05/21/12	**Analytical Batch:**	409833
Units:	ug/Kg						

Parameters	MDL	PQL	Method Blank Conc.	Lab Qualifier
Dichlorodifluoromethane	4.4	10	ND	
Chloromethane	4.6	10	ND	
Vinyl Chloride	2.6	10	ND	
Bromomethane	4.7	10	ND	
Trichlorofluoromethane	2.9	10	ND	
1,1-Dichloroethene	1.5	10	ND	
Freon 113	3.7	10	ND	
Methylene Chloride	2.0	50	ND	
trans-1,2-Dichloroethene	1.1	10	ND	
MTBE	2.6	10	ND	
tert-Butanol	21	50	ND	
Diisopropyl ether (DIPE)	2.2	10	ND	
1,1-Dichloroethane	1.3	10	ND	
ETBE	2.4	10	ND	
cis-1,2-Dichloroethene	1.8	10	ND	
2,2-Dichloropropane	1.2	10	ND	
Bromochloromethane	2.3	10	ND	
Chloroform	1.2	10	ND	
Carbon Tetrachloride	1.6	10	ND	
1,1,1-Trichloroethane	1.2	10	ND	
1,1-Dichloropropene	1.4	10	ND	
Benzene	1.5	10	ND	
TAME	2.1	10	ND	
1,2-Dichloroethane	1.9	10	ND	
Trichloroethylene	3.9	10	ND	
Dibromomethane	2.2	10	ND	
1,2-Dichloropropane	1.3	10	ND	
Bromodichloromethane	1.1	10	ND	
cis-1,3-Dichloropropene	1.4	10	ND	
Toluene	0.98	10	ND	
Tetrachloroethylene	1.8	10	ND	
trans-1,3-Dichloropropene	1.2	10	ND	
1,1,2-Trichloroethane	1.8	10	ND	
Dibromochloromethane	1.1	10	ND	
1,3-Dichloropropane	2.1	10	ND	
1,2-Dibromoethane	1.7	10	ND	
Ethyl Benzene	0.86	10	ND	
Chlorobenzene	4.2	10	ND	
1,1,1,2-Tetrachloroethane	0.86	10	ND	
m,p-Xylene	1.9	10	ND	

Torrent LABORATORY, INC.

MB Summary Report

Work Order:	1205092	**Prep Method:**	NA	**Prep Date:**	NA	**Prep Batch:**	NA
Matrix:	Soil	**Analytical Method:**	SW8260B	**Analyzed Date:**	05/21/12	**Analytical Batch:**	409833
Units:	ug/Kg						

Parameters	MDL	PQL	Method Blank Conc.	Lab Qualifier
o-Xylene	0.66	5.0	ND	
Styrene	0.77	10	ND	
Bromoform	1.9	10	ND	
Isopropyl Benzene	1.2	10	ND	
n-Propylbenzene	1.4	10	ND	
Bromobenzene	1.2	10	ND	
1,1,2,2-Tetrachloroethane	3.0	10	ND	
1,3,5-Trimethylbenzene	1.1	10	ND	
1,2,3-Trichloropropane	3.3	10	ND	
4-Chlorotoluene	1.6	10	ND	
2-Chlorotoluene	1.6	10	ND	
tert-Butylbenzene	1.4	10	ND	
1,2,4-Trimethylbenzene	1.1	10	ND	
sec-Butyl Benzene	1.6	10	ND	
p-Isopropyltoluene	1.5	10	ND	
1,3-Dichlorobenzene	1.8	10	ND	
1,4-Dichlorobenzene	1.5	10	ND	
n-Butylbenzene	2.2	10	ND	
1,2-Dichlorobenzene	1.3	10	ND	
1,2-Dibromo-3-Chloropropane	4.2	10	ND	
Hexachlorobutadiene	2.6	10	ND	
1,2,4-Trichlorobenzene	2.1	10	ND	
Naphthalene	2.8	10	ND	
1,2,3-Trichlorobenzene	2.9	10	ND	
(S) Dibromofluoromethane			80.7	
(S) Toluene-d8			96.7	
(S) 4-Bromofluorobenzene			115	

Work Order:	1205092	**Prep Method:**	5035	**Prep Date:**	05/21/12	**Prep Batch:**	5550
Matrix:	Soil	**Analytical Method:**	8260TPH	**Analyzed Date:**	05/21/12	**Analytical Batch:**	409833
Units:	ug/Kg						

Parameters	MDL	PQL	Method Blank Conc.	Lab Qualifier
TPH(Gasoline)	30	100	58	
(S) 4-Bromofluorobenzene			92.7	

Torrent LABORATORY, INC.

LCS/LCSD Summary Report

Raw values are used in quality control assessment.

Work Order:	1205092	**Prep Method:**	NA	**Prep Date:**	NA	**Prep Batch:**	NA
Matrix:	Soil	**Analytical Method:**	SW8260B	**Analyzed Date:**	05/21/12	**Analytical Batch:**	409833
Units:	ug/Kg						

Parameters	MDL	PQL	Method Blank Conc.	Spike Conc.	LCS % Recovery	LCSD % Recovery	LCS/LCSD % RPD	% Recovery Limits	% RPD Limits	Lab Qualifier
1,1-Dichloroethene	1.5	10	ND	50	103	93.9	9.63	53.7 - 139	30	
Benzene	1.5	10	ND	50	84.9	85.0	0.000	66.5 - 135	30	
Trichloroethylene	3.9	10	ND	50	96.6	89.9	7.21	57.5 - 150	30	
Toluene	0.98	10	ND	50	97.1	81.4	17.5	56.8 - 134	30	
Chlorobenzene	4.2	10	ND	50	98.8	99.4	0.585	57.4 - 134	30	
(S) Dibromofluoromethane			ND	50	77.1	96.9		59.8 - 148		
(S) Toluene-d8			ND	50	94.6	96.9		55.2 - 133		
(S) 4-Bromofluorobenzene			ND	50	101	113		55.8 - 141		

Work Order:	1205092	**Prep Method:**	5035	**Prep Date:**	05/21/12	**Prep Batch:**	5550
Matrix:	Soil	**Analytical Method:**	8260TPH	**Analyzed Date:**	05/21/12	**Analytical Batch:**	409833
Units:	ug/Kg						

Parameters	MDL	PQL	Method Blank Conc.	Spike Conc.	LCS % Recovery	LCSD % Recovery	LCS/LCSD % RPD	% Recovery Limits	% RPD Limits	Lab Qualifier
TPH(Gasoline)	30	100	58	1000	86.9	96.0	9.95	64.0 - 133.2	30	
(S) 4-Bromofluorobenzene			92.7	50	100	99.8		43.9 - 127		

Laboratory Qualifiers and Definitions

DEFINITIONS:

Accuracy/Bias (% Recovery) - The closeness of agreement between an observed value and an accepted reference value.
Blank (Method/Preparation Blank) -MB/PB - An analyte-free matrix to which all reagents are added in the same volumes/proportions as used in sample processing. The method blank is used to document contamination resulting from the analytical process.
Duplicate - a field sample and/or laboratory QC sample prepared in duplicate following all of the same processes and procedures used on the original sample (sample duplicate, LCSD, MSD)
Laboratory Control Sample (LCS ad LCSD) - A known matrix spiked with compounds representative of the target analyte(s). This is used to document laboratory performance.
Matrix - the component or substrate that contains the analyte of interest (e.g., - groundwater, sediment, soil, waste water, etc)
Matrix Spike (MS/MSD) - Client sample spiked with identical concentrations of target analyte (s). The spiking occurs prior to the sample preparation and analysis. They are used to document the precision and bias of a method in a given sample matrix.
Method Detection Limit (MDL) - the minimum concentration of a substance that can be measured and reported with a 99% confidence that the analyte concentration is greater than zero
Practical Quantitation Limit (PQL) - a laboratory determined value at 2 to 5 times above the MDL that can be reproduced in a manner that results in a 99% confidence level that the result is both accurate and precise. PQLs reflect all preparation factors and/or dilution factors that have been applied to the sample during the preparation and/or analytical processes.
Precision (%RPD) - The agreement among a set of replicate/duplicate measurements without regard to known value of the replicates
Surrogate (S) or (Surr) - An organic compound which is similar to the target analyte(s) in chemical composition and behavior in the analytical process, but which is not normally found in environmental samples. Surrogates are used in most organic analysis to demonstrate matrix compatibility with the chosen method of analysis
Tentatively Identified Compound (TIC) - A compound not contained within the analytical calibration standards but present in the GCMS library of defined compounds. When the library is searched for an unknown compound, it can frequently give a tentative identification to the compound based on retention time and primary and secondary ion match. TICs are reported as estimates and are candidates for further investigation.
Units: the unit of measure used to express the reported result - **mg/L** and ***mg/Kg*** (equivalent to PPM - parts per million in **liquid** and ***solid***), **ug/L** and ***ug/Kg*** (equivalent to PPB - parts per billion in **liquid** and ***solid***), **ug/m3**, ***mg.m3***, **ppbv** and ***ppmv*** (all units of measure for reporting concentrations in air), **%** (equivalent to 10000 ppm or 1,000,000 ppb), **ug/Wipe** (concentration found on the surface of a single Wipe usually taken over a 100cm2 surface)

LABORATORY QUALIFIERS:

B - Indicates when the anlayte is found in the associated method or preparation blank
D - Surrogate is not recoverable due to the necessary dilution of the sample
E - Indicates the reportable value is outside of the calibration range of the instrument but within the linear range of the instrument (unless otherwise noted) Values reported with an E qualifier should be considered as estimated.
H- Indicates that the recommended holding time for the analyte or compound has been exceeded
J- Indicates a value between the method MDL and PQL and that the reported concentration should be considered as estimated rather the quantitative
NA - Not Analyzed
N/A - Not Applicable
NR - Not recoverable - a matrix spike concentration is not recoverable due to a concentration within the original sample that is greater than four times the spike concentration added
R- The % RPD between a duplicate set of samples is outside of the absolute values established by laboratory control charts
S- Spike recovery is outside of established method and/or laboratory control limits. Further explanation of the use of this qualifier should be included within a case narrative
X -Used to indicate that a value based on pattern identification is within the pattern range but not typical of the pattern found in standards. Further explanation may or may not be provided within the sample footnote and/or the case narrative.

Sample Receipt Checklist

Client Name: Weber, Hayes & Associates

Project Name: Oakland / 2X103.B

Work Order No.: 1205092

Date and Time Received: 5/15/2012 10:40

Received By: NG

Physically Logged By: NG

Checklist Completed By: NG

Carrier Name: First Courier

Chain of Custody (COC) Information

Chain of custody present?	Yes
Chain of custody signed when relinquished and received?	Yes
Chain of custody agrees with sample labels?	Yes
Custody seals intact on sample bottles?	Not Present

Sample Receipt Information

Custody seals intact on shipping container/cooler?	Not Present
Shipping Container/Cooler In Good Condition?	Yes
Samples in proper container/bottle?	Yes
Samples containers intact?	Yes
Sufficient sample volume for indicated test?	Yes

Sample Preservation and Hold Time (HT) Information

All samples received within holding time?	Yes
Container/Temp Blank temperature in compliance?	Temperature: 6 °C
Water-VOA vials have zero headspace?	No VOA vials submitted
Water-pH acceptable upon receipt?	N/A
pH Checked by:	pH Adjusted by:

All samples present and correct.

Login Summary Report

Client ID:	TL5105 Weber, Hayes & Associates	**QC Level:**	
Project Name:	Oakland / 2X103.B	**TAT Requested:**	5+ day:0
Project # :	2X103.B	**Date Received:**	5/15/2012
Report Due Date:	5/22/2012	**Time Received:**	10:40

Comments: 5 Day TAT! TPHGas/BTEX/MTBE/TBA! Report to Jered!

Work Order # : ***1205092***

WO Sample ID	Client Sample ID	Collection Date/Time	Matrix	Scheduled Disposal	Sample On Hold	Test On Hold	Requested Tests	Subbed
1205092-001A	DP-6-d21	05/09/12 0:00	Soil	11/11/12			S_GCMS-GRO S_8260PetWHA	

Sample Note: Please use MDL for any diluted samples.
The sample was inadvertantly not picked up with batch of samples.

Torrent LABORATORY, INC.

Weber, Hayes & Associates
Hydrogeology and Environmental Engineering
120 Westgate Dr., Watsonville, CA 95076
(831) 722-3580 (831) 662-3100
Fax: (831) 722-1159

CHAIN -OF-CUSTODY RECORD

1205092

1 OF 1

PROJECT NAME AND JOB #: Oakland / 2X103.B

LABORATORY: Torrent

SEND CERTIFIED RESULTS TO: Weber, Hayes & Associates - Attention: Jered Chaney

TURNAROUND TIME: (Standard) 48hr Rush

ELECTRONIC DELIVERABLE FORMAT: ☐ YES ☒ NO

GLOBAL I.D.: --

Sampler: Jered Chaney

Date: 5/9/12

	Sample Identification	Date Sampled	Matrix	SAMPLE CONTAINERS: 40 mL VOAs (preserved)	60 mL VOAs	Terra Core Prep Kit VOAs (preserved)	Liner Acetate or Brass	REQUESTED ANALYSIS: Total Petroleum Hydrocarbons: TPH-diesel w/ silica gel cleanup EPA Method# 8015M	TPH-Diesel EPA Method 8015M	TPH-Gas by EPA Method 8260B	Volatile Organics: BTEX EPA Method# 8260B	MtBE & TBA EPA Method# 8260B	1,2-DCA & EDB EPA Method# 8260B	Additional Analysis: Luft 5 Metals	PCBs
001A	DP-6-d21	5/9/12	Soil				1			X	X	X			

Temp 6°C

RELEASED BY:	Date & Time		RECEIVED BY:	Date & Time	SAMPLE CONDITION: (circle 1)		
1.)	5/10/12 1350	→	Lutha Frazer	5/10/12 1350	Ambient	(Refrigerated)	Frozen
2.) Lutha Frazer	5/14/12 1730	→		5/14/12 1730	Ambient	Refrigerated	(Frozen)
3.)	5/15/12 0926	→	Carl Jacobsen	5/15/12 926	Ambient	Refrigerated	(Frozen)
4.) Carl Jacobsen	5/15/12 1040	→	[illegible]	5/15/12 10:40	Ambient	(Refrigerated)	Frozen
5.)		→			Ambient	Refrigerated	Frozen

NOTES:

1

☒ Please use MDL (Minimum Detection Limit) for any diluted samples.

ADDITIONAL COMMENTS

- Sample DP-6-d21 inadvertently not picked up w/ initial batch of samples.

F. C.

J:\Fieldlog\FORMS.xls - COC 1 of 1 Weber, Hayes and Associates

Weber, Hayes & Associates
120 Westgate Dr
Watsonville, CA 95076
Tel: 831-722-3580
Fax: 831-662-3100

RE: Former Exxon

Work Order No.: 1211016

Dear Jered Chaney:

Torrent Laboratory, Inc. received 1 sample(s) on November 02, 2012 for the analyses presented in the following Report.

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

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

Patti Sandrock
QA Officer

November 12, 2012
Date

Date: 11/12/2012

Client: Weber, Hayes & Associates

Project: Former Exxon

Work Order: 1211016

CASE NARRATIVE

No issues encountered with the receiving, preparation, analysis or reporting of the results associated with this work order.

Unless otherwise indicated in the following narrative, no results have been method and/or field blank corrected.

Reported results relate only to the items/samples tested by the laboratory.

Torrent LABORATORY, INC.

Sample Result Summary

Report prepared for: Jered Chaney
Weber, Hayes & Associates

Date Received: 11/02/12
Date Reported: 11/12/12

MW-6 1211016-001

Parameters:	Analysis Method	DF	MDL	PQL	Results	Unit
Benzene	SW8260B	1	0.087	0.50	44	ug/L
Toluene	SW8260B	1	0.059	0.50	0.74	ug/L
Ethyl Benzene	SW8260B	1	0.074	0.50	7.5	ug/L
m,p-Xylene	SW8260B	1	0.13	1.0	1.8	ug/L
TPH(Gasoline)	8260TPH	1	31	50	540	ug/L
TPH as Diesel	SW8015B(M)	1	0.0400	0.10	0.12	mg/L

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Jered Chaney
Weber, Hayes & Associates

Date Received: 11/02/12
Date Reported: 11/12/12

Client Sample ID:	MW-6	**Lab Sample ID:**	1211016-001A
Project Name/Location:	Former Exxon	**Sample Matrix:**	Aqueous
Project Number:	2X103.B		
Date/Time Sampled:	11/02/12 / 0:00		
Tag Number:	Former Exxon		

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
Benzene	SW8260B	NA	11/09/12	1	0.087	0.50	44		ug/L	412480	NA
Toluene	SW8260B	NA	11/09/12	1	0.059	0.50	0.74		ug/L	412480	NA
Ethyl Benzene	SW8260B	NA	11/09/12	1	0.074	0.50	7.5		ug/L	412480	NA
m,p-Xylene	SW8260B	NA	11/09/12	1	0.13	1.0	1.8		ug/L	412480	NA
o-Xylene	SW8260B	NA	11/09/12	1	0.076	0.50	ND		ug/L	412480	NA
MTBE	SW8260B	NA	11/09/12	1	0.17	0.50	ND		ug/L	412480	NA
Diisopropyl ether (DIPE)	SW8260B	NA	11/09/12	1	0.15	0.50	ND		ug/L	412480	NA
ETBE	SW8260B	NA	11/09/12	1	0.13	0.50	ND		ug/L	412480	NA
TAME	SW8260B	NA	11/09/12	1	0.095	0.50	ND		ug/L	412480	NA
tert-Butanol	SW8260B	NA	11/09/12	1	1.5	5.0	ND		ug/L	412480	NA
1,2-Dichloroethane	SW8260B	NA	11/09/12	1	0.11	0.50	ND		ug/L	412480	NA
1,2-Dibromoethane	SW8260B	NA	11/09/12	1	0.068	0.50	ND		ug/L	412480	NA
(S) Dibromofluoromethane	SW8260B	NA	11/09/12	1	61.2	131	98.3		%	412480	NA
(S) Toluene-d8	SW8260B	NA	11/09/12	1	75.1	127	85.5		%	412480	NA
(S) 4-Bromofluorobenzene	SW8260B	NA	11/09/12	1	64.1	120	95.5		%	412480	NA

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
TPH(Gasoline)	8260TPH	11/9/12	11/09/12	1	31	50	540	x	ug/L	412480	7096
(S) 4-Bromofluorobenzene	8260TPH	11/9/12	11/09/12	1	41.5	125	107		%	412480	7096

NOTE: x - Does not match pattern of reference Gasoline standard. Reported value due to contribution from non-fuel light hydrocarbons within C5-C12 range quantified as Gasoline.

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Jered Chaney
Weber, Hayes & Associates

Date Received: 11/02/12
Date Reported: 11/12/12

Client Sample ID:	MW-6	**Lab Sample ID:**	1211016-001B
Project Name/Location:	Former Exxon	**Sample Matrix:**	Aqueous
Project Number:	2X103.B		
Date/Time Sampled:	11/02/12 / 0:00		
Tag Number:	Former Exxon		

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
TPH as Diesel	SW8015B(M)	11/6/12	11/06/12	1	0.0400	0.10	0.12	x	mg/L	412400	7057
Pentacosane (S)	SW8015B(M)	11/6/12	11/06/12	1	64.2	123	79.1		%	412400	7057

NOTE: x- Diesel result due to discrete unknown peaks within quantified range

Torrent LABORATORY, INC.

MB Summary Report

Work Order:	1211016	**Prep Method:**	NA	**Prep Date:**	NA	**Prep Batch:**	NA
Matrix:	Water	**Analytical Method:**	SW8260B	**Analyzed Date:**	11/09/12	**Analytical Batch:**	412480
Units:	ug/L						

Parameters	MDL	PQL	Method Blank Conc.	Lab Qualifier
Dichlorodifluoromethane	0.18	0.50	ND	
Chloromethane	0.16	0.50	ND	
Vinyl Chloride	0.16	0.50	ND	
Bromomethane	0.18	0.50	ND	
Trichlorofluoromethane	0.18	0.50	ND	
1,1-Dichloroethene	0.15	0.50	ND	
Freon 113	0.19	0.50	ND	
Methylene Chloride	0.23	5.0	ND	
trans-1,2-Dichloroethene	0.19	0.50	ND	
MTBE	0.17	0.50	ND	
tert-Butanol	1.5	5.0	ND	
Diisopropyl ether (DIPE)	0.13	0.50	ND	
1,1-Dichloroethane	0.13	0.50	ND	
ETBE	0.17	0.50	ND	
cis-1,2-Dichloroethene	0.19	0.50	ND	
2,2-Dichloropropane	0.15	0.50	ND	
Bromochloromethane	0.20	0.50	ND	
Chloroform	0.13	0.50	ND	
Carbon Tetrachloride	0.15	0.50	ND	
1,1,1-Trichloroethane	0.097	0.50	ND	
1,1-Dichloropropene	0.15	0.50	ND	
Benzene	0.13	0.50	ND	
TAME	0.17	0.50	ND	
1,2-Dichloroethane	0.14	0.50	ND	
Trichloroethylene	0.13	0.50	ND	
Dibromomethane	0.15	0.50	ND	
1,2-Dichloropropane	0.17	0.50	ND	
Bromodichloromethane	0.13	0.50	ND	
cis-1,3-Dichloropropene	0.096	0.50	ND	
Toluene	0.14	0.50	ND	
Tetrachloroethylene	0.14	0.50	ND	
trans-1,3-Dichloropropene	0.23	0.50	ND	
1,1,2-Trichloroethane	0.14	0.50	ND	
Dibromochloromethane	0.096	0.50	ND	
1,3-Dichloropropane	0.10	0.50	ND	
1,2-Dibromoethane	0.19	0.50	ND	
Chlorobenzene	0.14	0.50	ND	
Ethyl Benzene	0.15	0.50	ND	
1,1,1,2-Tetrachloroethane	0.096	0.50	ND	
m,p-Xylene	0.13	1.0	ND	

Torrent LABORATORY, INC.

MB Summary Report

Work Order:	1211016	**Prep Method:**	NA	**Prep Date:**	NA	**Prep Batch:**	NA
Matrix:	Water	**Analytical Method:**	SW8260B	**Analyzed Date:**	11/09/12	**Analytical Batch:**	412480
Units:	ug/L						

Parameters	MDL	PQL	Method Blank Conc.	Lab Qualifier
o-Xylene	0.15	0.50	ND	
Styrene	0.21	0.50	ND	
Bromoform	0.21	1.0	ND	
Isopropyl Benzene	0.097	0.50	ND	
Bromobenzene	0.15	0.50	ND	
1,1,2,2-Tetrachloroethane	0.11	0.50	ND	
n-Propylbenzene	0.078	0.50	ND	
2-Chlorotoluene	0.076	0.50	ND	
1,3,5,-Trimethylbenzene	0.074	0.50	ND	
4-Chlorotoluene	0.088	0.50	ND	
tert-Butylbenzene	0.081	0.50	ND	
1,2,3-Trichloropropane	0.14	0.50	ND	
1,2,4-Trimethylbenzene	0.083	0.50	ND	
sec-Butyl Benzene	0.092	0.50	ND	
p-Isopropyltoluene	0.093	0.50	ND	
1,3-Dichlorobenzene	0.10	0.50	ND	
1,4-Dichlorobenzene	0.069	0.50	ND	
n-Butylbenzene	0.081	0.50	ND	
1,2-Dichlorobenzene	0.057	0.50	ND	
1,2-Dibromo-3-Chloropropane	0.15	0.50	ND	
Hexachlorobutadiene	0.19	0.50	ND	
1,2,4-Trichlorobenzene	0.12	0.50	ND	
Naphthalene	0.14	1.0	ND	
1,2,3-Trichlorobenzene	0.23	0.50	ND	
(S) Dibromofluoromethane			102	
(S) Toluene-d8			84.9	
(S) 4-Bromofluorobenzene			98.5	
Ethanol	0.21	0.50	ND	TIC

Work Order:	1211016	**Prep Method:**	3510_TPH	**Prep Date:**	11/06/12	**Prep Batch:**	7057
Matrix:	Water	**Analytical Method:**	SW8015B(M)	**Analyzed Date:**	11/06/12	**Analytical Batch:**	412400
Units:	mg/L						

Parameters	MDL	PQL	Method Blank Conc.	Lab Qualifier
TPH as Diesel	0.0440	0.10	ND	
TPH as Motor Oil	0.0920	0.40	0.15	
Pentacosane (S)			82.8	

Torrent LABORATORY, INC.

MB Summary Report

Work Order:	1211016	**Prep Method:**	5030	**Prep Date:**	11/09/12	**Prep Batch:**	7096
Matrix:	Water	**Analytical Method:**	8260TPH	**Analyzed Date:**	11/09/12	**Analytical Batch:**	412480
Units:	ug/L						

Parameters	MDL	PQL	Method Blank Conc.	Lab Qualifier	
TPH(Gasoline)	31	50	ND		
(S) 4-Bromofluorobenzene			104		

Torrent LABORATORY, INC.

LCS/LCSD Summary Report

Raw values are used in quality control assessment.

Work Order:	1211016	**Prep Method:**	NA	**Prep Date:**	NA	**Prep Batch:**	NA
Matrix:	Water	**Analytical Method:**	SW8260B	**Analyzed Date:**	11/09/12	**Analytical Batch:**	412480
Units:	ug/L						

Parameters	MDL	PQL	Method Blank Conc.	Spike Conc.	LCS % Recovery	LCSD % Recovery	LCS/LCSD % RPD	% Recovery Limits	% RPD Limits	Lab Qualifier
1,1-Dichloroethene	0.14	0.50		17.04	109	118	7.63	61.4 - 129	30	
Benzene	0.087	0.50		17.04	116	120	3.35	66.9 - 140	30	
Trichloroethylene	0.057	0.50		17.04	101	107	5.37	69.3 - 144	30	
Toluene	0.059	0.50		17.04	88.7	91.9	3.62	76.6 - 123	30	
Chlorobenzene	0.068	0.50		17.04	97.3	97.8	0.403	73.9 - 137	30	
(S) Dibromofluoromethane				17.04	110	98.8		61.2 - 131		
(S) Toluene-d8				17.04	88.8	81.1		75.1 - 127		
(S) 4-Bromofluorobenzene				17.04	98.0	93.1		64.1 - 120		

Work Order:	1211016	**Prep Method:**	3510_TPH	**Prep Date:**	11/06/12	**Prep Batch:**	7057
Matrix:	Water	**Analytical Method:**	SW8015B(M)	**Analyzed Date:**	11/06/12	**Analytical Batch:**	412400
Units:	mg/L						

Parameters	MDL	PQL	Method Blank Conc.	Spike Conc.	LCS % Recovery	LCSD % Recovery	LCS/LCSD % RPD	% Recovery Limits	% RPD Limits	Lab Qualifier
TPH as Diesel	0.0440	0.10	ND	1	77.6	71.4	8.36	50.3 - 125	30	
Pentacosane (S)			0.15	100	86.3	73.0		57.9 - 125		

Work Order:	1211016	**Prep Method:**	5030	**Prep Date:**	11/09/12	**Prep Batch:**	7096
Matrix:	Water	**Analytical Method:**	8260TPH	**Analyzed Date:**	11/09/12	**Analytical Batch:**	412480
Units:	ug/L						

Parameters	MDL	PQL	Method Blank Conc.	Spike Conc.	LCS % Recovery	LCSD % Recovery	LCS/LCSD % RPD	% Recovery Limits	% RPD Limits	Lab Qualifier
TPH(Gasoline)	31	50	ND	227.27	93.7	94.6	0.945	52.4 - 127	30	
(S) 4-Bromofluorobenzene			104	11.36	101	101		41.5 - 125		

Laboratory Qualifiers and Definitions

DEFINITIONS:

Accuracy/Bias (% Recovery) - The closeness of agreement between an observed value and an accepted reference value.
Blank (Method/Preparation Blank) -MB/PB - An analyte-free matrix to which all reagents are added in the same volumes/proportions as used in sample processing. The method blank is used to document contamination resulting from the analytical process.
Duplicate - a field sample and/or laboratory QC sample prepared in duplicate following all of the same processes and procedures used on the original sample (sample duplicate, LCSD, MSD)
Laboratory Control Sample (LCS ad LCSD) - A known matrix spiked with compounds representative of the target analyte(s). This is used to document laboratory performance.
Matrix - the component or substrate that contains the analyte of interest (e.g., - groundwater, sediment, soil, waste water, etc)
Matrix Spike (MS/MSD) - Client sample spiked with identical concentrations of target analyte (s). The spiking occurs prior to the sample preparation and analysis. They are used to document the precision and bias of a method in a given sample matrix.
Method Detection Limit (MDL) - the minimum concentration of a substance that can be measured and reported with a 99% confidence that the analyte concentration is greater than zero
Practical Quantitation Limit (PQL) - a laboratory determined value at 2 to 5 times above the MDL that can be reproduced in a manner that results in a 99% confidence level that the result is both accurate and precise. PQLs reflect all preparation factors and/or dilution factors that have been applied to the sample during the preparation and/or analytical processes.
Precision (%RPD) - The agreement among a set of replicate/duplicate measurements without regard to known value of the replicates
Surrogate (S) or (Surr) - An organic compound which is similar to the target analyte(s) in chemical composition and behavior in the analytical process, but which is not normally found in environmental samples. Surrogates are used in most organic analysis to demonstrate matrix compatibility with the chosen method of analysis
Tentatively Identified Compound (TIC) - A compound not contained within the analytical calibration standards but present in the GCMS library of defined compounds. When the library is searched for an unknown compound, it can frequently give a tentative identification to the compound based on retention time and primary and secondary ion match. TICs are reported as estimates and are candidates for further investigation.
Units: the unit of measure used to express the reported result - **mg/L** and ***mg/Kg*** (equivalent to PPM - parts per million in **liquid** and ***solid***), **ug/L** and ***ug/Kg*** (equivalent to PPB - parts per billion in **liquid** and ***solid***), **ug/m3**, ***mg.m3***, **ppbv** and ***ppmv*** (all units of measure for reporting concentrations in air), **%** (equivalent to 10000 ppm or 1,000,000 ppb), **ug/Wipe** (concentration found on the surface of a single Wipe usually taken over a 100cm2 surface)

LABORATORY QUALIFIERS:

B - Indicates when the anlayte is found in the associated method or preparation blank
D - Surrogate is not recoverable due to the necessary dilution of the sample
E - Indicates the reportable value is outside of the calibration range of the instrument but within the linear range of the instrument (unless otherwise noted) Values reported with an E qualifier should be considered as estimated.
H- Indicates that the recommended holding time for the analyte or compound has been exceeded
J- Indicates a value between the method MDL and PQL and that the reported concentration should be considered as estimated rather the quantitative
NA - Not Analyzed
N/A - Not Applicable
NR - Not recoverable - a matrix spike concentration is not recoverable due to a concentration within the original sample that is greater than four times the spike concentration added
R- The % RPD between a duplicate set of samples is outside of the absolute values established by laboratory control charts
S- Spike recovery is outside of established method and/or laboratory control limits. Further explanation of the use of this qualifier should be included within a case narrative
X -Used to indicate that a value based on pattern identification is within the pattern range but not typical of the pattern found in standards. Further explanation may or may not be provided within the sample footnote and/or the case narrative.

Sample Receipt Checklist

Client Name: Weber, Hayes & Associates

Project Name: Former Exxon

Work Order No.: 1211016

Date and Time Received: 11/2/2012 13:52

Received By: ng

Physically Logged By: lorna

Checklist Completed By: lorna

Carrier Name: Client Drop Off

Chain of Custody (COC) Information

Chain of custody present?	Yes
Chain of custody signed when relinquished and received?	Yes
Chain of custody agrees with sample labels?	Yes
Custody seals intact on sample bottles?	Not Present

Sample Receipt Information

Custody seals intact on shipping container/cooler?	Not Present
Shipping Container/Cooler In Good Condition?	Yes
Samples in proper container/bottle?	Yes
Samples containers intact?	Yes
Sufficient sample volume for indicated test?	Yes

Sample Preservation and Hold Time (HT) Information

All samples received within holding time?	Yes			
Container/Temp Blank temperature in compliance?	No	Temperature:	10	°C
Water-VOA vials have zero headspace?	Yes			
Water-pH acceptable upon receipt?	N/A			

pH Checked by: n/a

pH Adjusted by: n/a

Login Summary Report

Client ID:	TL5105	Weber, Hayes & Associates	**QC Level:**	
Project Name:	Former Exxon		**TAT Requested:**	5+ day:0
Project # :	2X103.B		**Date Received:**	11/2/2012
Report Due Date:	11/9/2012		**Time Received:**	13:52

Comments: 5 day TAT!!! 1 water for TPHD, BTEX,Oxys, Lead Scav, Gas. EDF / Pls. use MDL for any diluted samples. Report to Jered!

Work Order # : ***1211016***

WO Sample ID	Client Sample ID	Collection Date/Time	Matrix	Scheduled Disposal	Sample On Hold	Test On Hold	Requested Tests	Subbed
1211016-001A	MW-6	11/02/12 0:00	Water	12/17/12			EDF W_GCMS-GRO W_8260PetWHA	
Sample Note:	EDF							
1211016-001B	MW-6	11/02/12 0:00	Water	12/17/12			W_TPHDO	
Sample Note:	Diesel only							

Torrent LABORATORY, INC.

Weber, Hayes & Associates
Hydrogeology and Environmental Engineering
120 Westgate Dr., Watsonville, CA 95076
(831) 722-3580 (831) 662-3100
Fax: (831) 722-1159

CHAIN -OF-CUSTODY RECORD

12/10/6 — 1 OF 1

PROJECT NAME AND NUMBER: Former Exxon / 2X103.B
SEND CERTIFIED RESULTS TO: Weber, Hayes & Associates - Attention: Jered Chaney
ELECTRONIC DELIVERABLE FORMAT: [x] YES [ ] NO

LABORATORY: Torrent
TURNAROUND TIME: Standard 5 Day / 72hr Rush
GLOBAL I.D.: T0600100538

Sampler: Josh Pritchard
Date: 11-2-12

Field Point Name (Geo Tracker)	Sample Identification	Date Sampled	Matrix	SAMPLE CONTAINERS: 40 mL VOAs (preserved)	250 ml Poly Bottle	1 liter Amber Jars	Liner Acetate or Brass	REQUESTED ANALYSIS: Total Petroleum Hydrocarbons: Motor Oil EPA Method # 8015	TPH-D EPA Method# 8015	TPH-G EPA Method# 8260	Volatile Organics: MtBE EPA Method 8260	TBA EPA Method # 8260	BTEX EPA Method# 8260	Additional Analysis: Fuel Oxygenates EPA Method# 8260	1,2 DCA & EDB EPA Method# 8260
-001A MW-6	MW-6	11-2-12	AQ	3		2			X	X			X	X	X

Temp. 10 °C
Chilling has begun.

RELEASED BY:	Date & Time		RECEIVED BY:	Date & Time
1.)	11-2-12/ 1352	→	NAVIN G	11-2-12 1:52 P.m.
2.)		→		
3.)		→		
4.)		→		
5.)		→		

SAMPLE CONDITION: (circle 1)

Ambient	Refrigerated	Frozen
Ambient	Refrigerated	Frozen
Ambient	Refrigerated	Frozen
Ambient	Refrigerated	Frozen
Ambient	Refrigerated	Frozen

NOTES:

[x] Please use MDL (Minimum Detection Limit) for any diluted samples.

- Please produce and email an EDF of these results to lab@weber-hayes.com
-Fuel Oxygenates should only include DIPE, TAME, EtBE, MtBE, TBA

D/O.

11/2/12

JC\Fieldlog\FORMS - COC

1 of 1

Weber, Hayes and Associates

Weber, Hayes & Associates
120 Westgate Dr
Watsonville, CA 95076
Tel: 831-722-3580
Fax: 831-662-3100

RE: Former Exxon / 2X103.B

Work Order No.: 1211077

Dear Jered Chaney:

Torrent Laboratory, Inc. received 1 sample(s) on November 09, 2012 for the analyses presented in the following Report.

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

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

Patti Sandrock
QA Officer

November 16, 2012
Date

Date: 11/16/2012

Client: Weber, Hayes & Associates

Project: Former Exxon / 2X103.B

Work Order: 1211077

CASE NARRATIVE

No issues encountered with the receiving, preparation, analysis or reporting of the results associated with this work order.

Unless otherwise indicated in the following narrative, no results have been method and/or field blank corrected.

Reported results relate only to the items/samples tested by the laboratory.

Torrent LABORATORY, INC.

Sample Result Summary

Report prepared for: Jered Chaney
Weber, Hayes & Associates

Date Received: 11/09/12
Date Reported: 11/16/12

MW-5 1211077-001

Parameters:	Analysis Method	DF	MDL	PQL	Results	Unit
Benzene	SW8260B	22	1.9	11	1300	ug/L
Toluene	SW8260B	4.4	0.26	2.2	16	ug/L
Ethyl Benzene	SW8260B	4.4	0.33	2.2	340	ug/L
m,p-Xylene	SW8260B	4.4	0.59	4.4	33	ug/L
o-Xylene	SW8260B	4.4	0.33	2.2	2.2	ug/L
MTBE	SW8260B	4.4	0.76	2.2	390	ug/L
tert-Butanol	SW8260B	4.4	6.8	22	2300	ug/L
TPH(Gasoline)	8260TPH	4.4	140	220	3000	ug/L
TPH as Diesel	SW8015B(M)	1	40.0	100	340	ug/L

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Jered Chaney
Weber, Hayes & Associates

Date Received: 11/09/12
Date Reported: 11/16/12

Client Sample ID:	MW-5	**Lab Sample ID:**	1211077-001A
Project Name/Location:	Former Exxon / 2X103.B	**Sample Matrix:**	Aqueous
Project Number:			
Date/Time Sampled:	11/09/12 /		
Tag Number:	Former Exxon / 2X103.B		

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
The results shown below are reported using their MDL.											
Benzene	SW8260B	NA	11/16/12	22	1.9	11	1300		ug/L	412602	NA
(S) Dibromofluoromethane	SW8260B	NA	11/16/12	22	61.2	131	85.8		%	412602	NA
(S) Toluene-d8	SW8260B	NA	11/16/12	22	75.1	127	63.2	S	%	412602	NA
(S) 4-Bromofluorobenzene	SW8260B	NA	11/16/12	22	64.1	120	76.4		%	412602	NA

NOTE: S - Surrogate out of limits. No corrective action required: surrogate not associated with reported compounds.

The results shown below are reported using their MDL.											
Toluene	SW8260B	NA	11/15/12	4.4	0.26	2.2	16		ug/L	412590	NA
Ethyl Benzene	SW8260B	NA	11/15/12	4.4	0.33	2.2	340		ug/L	412590	NA
m,p-Xylene	SW8260B	NA	11/15/12	4.4	0.59	4.4	33		ug/L	412590	NA
o-Xylene	SW8260B	NA	11/15/12	4.4	0.33	2.2	2.2		ug/L	412590	NA
MTBE	SW8260B	NA	11/15/12	4.4	0.76	2.2	390		ug/L	412590	NA
Diisopropyl ether (DIPE)	SW8260B	NA	11/15/12	4.4	0.68	2.2	ND		ug/L	412590	NA
ETBE	SW8260B	NA	11/15/12	4.4	0.56	2.2	ND		ug/L	412590	NA
TAME	SW8260B	NA	11/15/12	4.4	0.42	2.2	ND		ug/L	412590	NA
tert-Butanol	SW8260B	NA	11/15/12	4.4	6.8	22	2300		ug/L	412590	NA
1,2-Dichloroethane	SW8260B	NA	11/15/12	4.4	0.50	2.2	ND		ug/L	412590	NA
1,2-Dibromoethane	SW8260B	NA	11/15/12	4.4	0.30	2.2	ND		ug/L	412590	NA
(S) Dibromofluoromethane	SW8260B	NA	11/15/12	4.4	61.2	131	105		%	412590	NA
(S) Toluene-d8	SW8260B	NA	11/15/12	4.4	75.1	127	80.1		%	412590	NA
(S) 4-Bromofluorobenzene	SW8260B	NA	11/15/12	4.4	64.1	120	106		%	412590	NA

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
The results shown below are reported using their MDL.											
TPH(Gasoline)	8260TPH	11/15/12	11/15/12	4.4	140	220	3000	x	ug/L	412590	7156
(S) 4-Bromofluorobenzene	8260TPH	11/15/12	11/15/12	4.4	41.5	125	100		%	412590	7156

NOTE: x - Although TPH as Gasoline constituents are present, sample chromatogram does not resemble pattern of reference Gasoline standard. Reported TPH value includes amount due to discrete peak and non-target light hydrocarbons within gasoline range.

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Jered Chaney
Weber, Hayes & Associates

Date Received: 11/09/12
Date Reported: 11/16/12

Client Sample ID:	MW-5	**Lab Sample ID:**	1211077-001B
Project Name/Location:	Former Exxon / 2X103.B	**Sample Matrix:**	Aqueous
Project Number:			
Date/Time Sampled:	11/09/12 /		
Tag Number:	Former Exxon / 2X103.B		

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
TPH as Diesel	SW8015B(M)	11/14/12	11/14/12	1	40.0	100	340	x	ug/L	412556	7129
Pentacosane (S)	SW8015B(M)	11/14/12	11/14/12	1	64.2	123	85.6		%	412556	7129

NOTE: x- Not typical of Diesel standard pattern (possibly fuel lighter than diesel)

Torrent LABORATORY, INC.

MB Summary Report

Work Order:	1211077	**Prep Method:**	NA	**Prep Date:**	NA	**Prep Batch:**	NA
Matrix:	Water	**Analytical Method:**	SW8260B	**Analyzed Date:**	11/15/12	**Analytical Batch:**	412590
Units:	ug/L						

Parameters	MDL	PQL	Method Blank Conc.	Lab Qualifier
Dichlorodifluoromethane	0.18	0.50	ND	
Chloromethane	0.16	0.50	ND	
Vinyl Chloride	0.16	0.50	ND	
Bromomethane	0.18	0.50	ND	
Trichlorofluoromethane	0.18	0.50	ND	
1,1-Dichloroethene	0.15	0.50	ND	
Freon 113	0.19	0.50	ND	
Methylene Chloride	0.23	5.0	ND	
trans-1,2-Dichloroethene	0.19	0.50	ND	
MTBE	0.17	0.50	ND	
tert-Butanol	1.5	5.0	ND	
Diisopropyl ether (DIPE)	0.13	0.50	ND	
1,1-Dichloroethane	0.13	0.50	ND	
ETBE	0.17	0.50	ND	
cis-1,2-Dichloroethene	0.19	0.50	ND	
2,2-Dichloropropane	0.15	0.50	ND	
Bromochloromethane	0.20	0.50	ND	
Chloroform	0.13	0.50	ND	
Carbon Tetrachloride	0.15	0.50	ND	
1,1,1-Trichloroethane	0.097	0.50	ND	
1,1-Dichloropropene	0.15	0.50	ND	
Benzene	0.13	0.50	ND	
TAME	0.17	0.50	ND	
1,2-Dichloroethane	0.14	0.50	ND	
Trichloroethylene	0.13	0.50	ND	
Dibromomethane	0.15	0.50	ND	
1,2-Dichloropropane	0.17	0.50	ND	
Bromodichloromethane	0.13	0.50	ND	
cis-1,3-Dichloropropene	0.096	0.50	ND	
Toluene	0.14	0.50	ND	
Tetrachloroethylene	0.14	0.50	ND	
trans-1,3-Dichloropropene	0.23	0.50	ND	
1,1,2-Trichloroethane	0.14	0.50	ND	
Dibromochloromethane	0.096	0.50	ND	
1,3-Dichloropropane	0.10	0.50	ND	
1,2-Dibromoethane	0.19	0.50	ND	
Chlorobenzene	0.14	0.50	ND	
Ethyl Benzene	0.15	0.50	ND	
1,1,1,2-Tetrachloroethane	0.096	0.50	ND	
m,p-Xylene	0.13	1.0	ND	

Torrent LABORATORY, INC.

MB Summary Report

Work Order:	1211077	**Prep Method:**	NA	**Prep Date:**	NA	**Prep Batch:**	NA
Matrix:	Water	**Analytical Method:**	SW8260B	**Analyzed Date:**	11/15/12	**Analytical Batch:**	412590
Units:	ug/L						

Parameters	MDL	PQL	Method Blank Conc.	Lab Qualifier	
o-Xylene	0.15	0.50	ND		
Styrene	0.21	0.50	ND		
Bromoform	0.21	1.0	ND		
Isopropyl Benzene	0.097	0.50	ND		
Bromobenzene	0.15	0.50	ND		
1,1,2,2-Tetrachloroethane	0.11	0.50	ND		
n-Propylbenzene	0.078	0.50	ND		
2-Chlorotoluene	0.076	0.50	ND		
1,3,5,-Trimethylbenzene	0.074	0.50	ND		
4-Chlorotoluene	0.088	0.50	ND		
tert-Butylbenzene	0.081	0.50	ND		
1,2,3-Trichloropropane	0.14	0.50	ND		
1,2,4-Trimethylbenzene	0.083	0.50	ND		
sec-Butyl Benzene	0.092	0.50	ND		
p-Isopropyltoluene	0.093	0.50	ND		
1,3-Dichlorobenzene	0.10	0.50	ND		
1,4-Dichlorobenzene	0.069	0.50	ND		
n-Butylbenzene	0.081	0.50	ND		
1,2-Dichlorobenzene	0.057	0.50	ND		
1,2-Dibromo-3-Chloropropane	0.15	0.50	ND		
Hexachlorobutadiene	0.19	0.50	ND		
1,2,4-Trichlorobenzene	0.12	0.50	ND		
Naphthalene	0.14	1.0	ND		
1,2,3-Trichlorobenzene	0.23	0.50	ND		
(S) Dibromofluoromethane			90.7		
(S) Toluene-d8			77.8		
(S) 4-Bromofluorobenzene			81.2		
Ethanol	0.21	0.50	ND	TIC	

Torrent LABORATORY, INC.

MB Summary Report

Work Order:	1211077	**Prep Method:**	NA	**Prep Date:**	NA	**Prep Batch:**	NA
Matrix:	Water	**Analytical Method:**	SW8260B	**Analyzed Date:**	11/16/12	**Analytical Batch:**	412602
Units:	ug/L						

Parameters	MDL	PQL	Method Blank Conc.	Lab Qualifier
Dichlorodifluoromethane	0.18	0.50	ND	
Chloromethane	0.16	0.50	ND	
Vinyl Chloride	0.16	0.50	ND	
Bromomethane	0.18	0.50	ND	
Trichlorofluoromethane	0.18	0.50	ND	
1,1-Dichloroethene	0.15	0.50	ND	
Freon 113	0.19	0.50	ND	
Methylene Chloride	0.23	5.0	ND	
trans-1,2-Dichloroethene	0.19	0.50	ND	
MTBE	0.17	0.50	ND	
tert-Butanol	1.5	5.0	ND	
Diisopropyl ether (DIPE)	0.13	0.50	ND	
1,1-Dichloroethane	0.13	0.50	ND	
ETBE	0.17	0.50	ND	
cis-1,2-Dichloroethene	0.19	0.50	ND	
2,2-Dichloropropane	0.15	0.50	ND	
Bromochloromethane	0.20	0.50	ND	
Chloroform	0.13	0.50	ND	
Carbon Tetrachloride	0.15	0.50	ND	
1,1,1-Trichloroethane	0.097	0.50	ND	
1,1-Dichloropropene	0.15	0.50	ND	
Benzene	0.13	0.50	ND	
TAME	0.17	0.50	ND	
1,2-Dichloroethane	0.14	0.50	ND	
Trichloroethylene	0.13	0.50	ND	
Dibromomethane	0.15	0.50	ND	
1,2-Dichloropropane	0.17	0.50	ND	
Bromodichloromethane	0.13	0.50	ND	
cis-1,3-Dichloropropene	0.096	0.50	ND	
Toluene	0.14	0.50	ND	
Tetrachloroethylene	0.14	0.50	ND	
trans-1,3-Dichloropropene	0.23	0.50	ND	
1,1,2-Trichloroethane	0.14	0.50	ND	
Dibromochloromethane	0.096	0.50	ND	
1,3-Dichloropropane	0.10	0.50	ND	
1,2-Dibromoethane	0.19	0.50	ND	
Chlorobenzene	0.14	0.50	ND	
Ethyl Benzene	0.15	0.50	ND	
1,1,1,2-Tetrachloroethane	0.096	0.50	ND	
m,p-Xylene	0.13	1.0	ND	
o-Xylene	0.15	0.50	ND	

Torrent LABORATORY, INC.

MB Summary Report

Work Order:	1211077	**Prep Method:**	NA	**Prep Date:**	NA	**Prep Batch:**	NA
Matrix:	Water	**Analytical Method:**	SW8260B	**Analyzed Date:**	11/16/12	**Analytical Batch:**	412602
Units:	ug/L						

Parameters	MDL	PQL	Method Blank Conc.	Lab Qualifier
Styrene	0.21	0.50	ND	
Bromoform	0.21	1.0	ND	
Isopropyl Benzene	0.097	0.50	ND	
Bromobenzene	0.15	0.50	ND	
1,1,2,2-Tetrachloroethane	0.11	0.50	ND	
n-Propylbenzene	0.078	0.50	ND	
2-Chlorotoluene	0.076	0.50	ND	
1,3,5,-Trimethylbenzene	0.074	0.50	ND	
4-Chlorotoluene	0.088	0.50	ND	
tert-Butylbenzene	0.081	0.50	ND	
1,2,3-Trichloropropane	0.14	0.50	ND	
1,2,4-Trimethylbenzene	0.083	0.50	ND	
sec-Butyl Benzene	0.092	0.50	ND	
p-Isopropyltoluene	0.093	0.50	ND	
1,3-Dichlorobenzene	0.10	0.50	ND	
1,4-Dichlorobenzene	0.069	0.50	ND	
n-Butylbenzene	0.081	0.50	0.15	
1,2-Dichlorobenzene	0.057	0.50	ND	
1,2-Dibromo-3-Chloropropane	0.15	0.50	ND	
Hexachlorobutadiene	0.19	0.50	ND	
1,2,4-Trichlorobenzene	0.12	0.50	ND	
Naphthalene	0.14	1.0	ND	
1,2,3-Trichlorobenzene	0.23	0.50	ND	
(S) Dibromofluoromethane			112	
(S) Toluene-d8			81.8	
(S) 4-Bromofluorobenzene			110	
Ethanol	0.21	0.50	ND	TIC

Work Order:	1211077	**Prep Method:**	3510_TPH	**Prep Date:**	11/14/12	**Prep Batch:**	7129
Matrix:	Water	**Analytical Method:**	SW8015B(M)	**Analyzed Date:**	11/14/12	**Analytical Batch:**	412556
Units:	mg/L						

Parameters	MDL	PQL	Method Blank Conc.	Lab Qualifier
TPH as Diesel	0.0440	0.10	ND	
TPH as Motor Oil	0.0920	0.40	0.11	
Pentacosane (S)			89.6	

Torrent LABORATORY, INC.

MB Summary Report

Work Order:	1211077	**Prep Method:**	5030	**Prep Date:**	11/15/12	**Prep Batch:**	7156
Matrix:	Water	**Analytical Method:**	8260TPH	**Analyzed Date:**	11/15/12	**Analytical Batch:**	412590
Units:	ug/L						

Parameters	MDL	PQL	Method Blank Conc.	Lab Qualifier	
TPH(Gasoline)	31	50	35		
(S) 4-Bromofluorobenzene			94.3		

Torrent LABORATORY, INC.

LCS/LCSD Summary Report

Raw values are used in quality control assessment.

Work Order:	1211077	**Prep Method:**	NA	**Prep Date:**	NA	**Prep Batch:**	NA
Matrix:	Water	**Analytical Method:**	SW8260B	**Analyzed Date:**	11/15/12	**Analytical Batch:**	412590
Units:	ug/L						

Parameters	MDL	PQL	Method Blank Conc.	Spike Conc.	LCS % Recovery	LCSD % Recovery	LCS/LCSD % RPD	% Recovery Limits	% RPD Limits	Lab Qualifier
1,1-Dichloroethene	0.14	0.50	ND	17.04	95.7	105	8.86	61.4 - 129	30	
Benzene	0.087	0.50	ND	17.04	107	116	8.35	66.9 - 140	30	
Trichloroethylene	0.057	0.50	ND	17.04	91.3	97.1	5.92	69.3 - 144	30	
Toluene	0.059	0.50	ND	17.04	79.3	86.0	8.20	76.6 - 123	30	
Chlorobenzene	0.068	0.50	ND	17.04	86.4	92.8	7.26	73.9 - 137	30	
(S) Dibromofluoromethane			ND	11.36	105	108		61.2 - 131		
(S) Toluene-d8			ND	11.36	80.6	84.1		75.1 - 127		
(S) 4-Bromofluorobenzene			ND	11.36	109	111		64.1 - 120		

Work Order:	1211077	**Prep Method:**	NA	**Prep Date:**	NA	**Prep Batch:**	NA
Matrix:	Water	**Analytical Method:**	SW8260B	**Analyzed Date:**	11/16/12	**Analytical Batch:**	412602
Units:	ug/L						

Parameters	MDL	PQL	Method Blank Conc.	Spike Conc.	LCS % Recovery	LCSD % Recovery	LCS/LCSD % RPD	% Recovery Limits	% RPD Limits	Lab Qualifier
1,1-Dichloroethene	0.14	0.50	ND	17.04	110	103	6.87	61.4 - 129	30	
Benzene	0.087	0.50	ND	17.04	110	119	7.41	66.9 - 140	30	
Trichloroethylene	0.057	0.50	ND	17.04	90.7	99.0	8.51	69.3 - 144	30	
Toluene	0.059	0.50	ND	17.04	85.0	86.2	1.34	76.6 - 123	30	
Chlorobenzene	0.068	0.50	ND	17.04	94.7	98.0	3.64	73.9 - 137	30	
(S) Dibromofluoromethane			ND	11.36	131	105		61.2 - 131		
(S) Toluene-d8			ND	11.36	108	77.8		75.1 - 127		
(S) 4-Bromofluorobenzene			ND	11.36	114	106		64.1 - 120		

Work Order:	1211077	**Prep Method:**	3510_TPH	**Prep Date:**	11/14/12	**Prep Batch:**	7129
Matrix:	Water	**Analytical Method:**	SW8015B(M)	**Analyzed Date:**	11/14/12	**Analytical Batch:**	412556
Units:	mg/L						

Parameters	MDL	PQL	Method Blank Conc.	Spike Conc.	LCS % Recovery	LCSD % Recovery	LCS/LCSD % RPD	% Recovery Limits	% RPD Limits	Lab Qualifier
TPH as Diesel	0.0440	0.10	ND	1	69.9	77.7	10.6	50.3 - 125	30	
Pentacosane (S)			0.11	100	87.5	91.2		57.9 - 125		

Torrent LABORATORY, INC.

LCS/LCSD Summary Report

Raw values are used in quality control assessment.

Work Order:	1211077	**Prep Method:**	5030	**Prep Date:**	11/15/12	**Prep Batch:**	7156
Matrix:	Water	**Analytical Method:**	8260TPH	**Analyzed Date:**	11/15/12	**Analytical Batch:**	412590
Units:	ug/L						

Parameters	MDL	PQL	Method Blank Conc.	Spike Conc.	LCS % Recovery	LCSD % Recovery	LCS/LCSD % RPD	% Recovery Limits	% RPD Limits	Lab Qualifier
TPH(Gasoline)	31	50	35	227.27	71.0	83.8	16.5	52.4 - 127	30	
(S) 4-Bromofluorobenzene			94.3	11.36	84.9	80.6		41.5 - 125		

Laboratory Qualifiers and Definitions

DEFINITIONS:

Accuracy/Bias (% Recovery) - The closeness of agreement between an observed value and an accepted reference value.
Blank (Method/Preparation Blank) -MB/PB - An analyte-free matrix to which all reagents are added in the same volumes/proportions as used in sample processing. The method blank is used to document contamination resulting from the analytical process.
Duplicate - a field sample and/or laboratory QC sample prepared in duplicate following all of the same processes and procedures used on the original sample (sample duplicate, LCSD, MSD)
Laboratory Control Sample (LCS ad LCSD) - A known matrix spiked with compounds representative of the target analyte(s). This is used to document laboratory performance.
Matrix - the component or substrate that contains the analyte of interest (e.g., - groundwater, sediment, soil, waste water, etc)
Matrix Spike (MS/MSD) - Client sample spiked with identical concentrations of target analyte (s). The spiking occurs prior to the sample preparation and analysis. They are used to document the precision and bias of a method in a given sample matrix.
Method Detection Limit (MDL) - the minimum concentration of a substance that can be measured and reported with a 99% confidence that the analyte concentration is greater than zero
Practical Quantitation Limit (PQL) - a laboratory determined value at 2 to 5 times above the MDL that can be reproduced in a manner that results in a 99% confidence level that the result is both accurate and precise. PQLs reflect all preparation factors and/or dilution factors that have been applied to the sample during the preparation and/or analytical processes.
Precision (%RPD) - The agreement among a set of replicate/duplicate measurements without regard to known value of the replicates
Surrogate (S) or (Surr) - An organic compound which is similar to the target analyte(s) in chemical composition and behavior in the analytical process, but which is not normally found in environmental samples. Surrogates are used in most organic analysis to demonstrate matrix compatibility with the chosen method of analysis
Tentatively Identified Compound (TIC) - A compound not contained within the analytical calibration standards but present in the GCMS library of defined compounds. When the library is searched for an unknown compound, it can frequently give a tentative identification to the compound based on retention time and primary and secondary ion match. TICs are reported as estimates and are candidates for further investigation.
Units: the unit of measure used to express the reported result - **mg/L** and ***mg/Kg*** (equivalent to PPM - parts per million in **liquid** and ***solid***), **ug/L** and ***ug/Kg*** (equivalent to PPB - parts per billion in **liquid** and ***solid***), **ug/m3**, ***mg.m3***, **ppbv** and ***ppmv*** (all units of measure for reporting concentrations in air), **%** (equivalent to 10000 ppm or 1,000,000 ppb), **ug/Wipe** (concentration found on the surface of a single Wipe usually taken over a 100cm2 surface)

LABORATORY QUALIFIERS:

B - Indicates when the anlayte is found in the associated method or preparation blank
D - Surrogate is not recoverable due to the necessary dilution of the sample
E - Indicates the reportable value is outside of the calibration range of the instrument but within the linear range of the instrument (unless otherwise noted) Values reported with an E qualifier should be considered as estimated.
H- Indicates that the recommended holding time for the analyte or compound has been exceeded
J- Indicates a value between the method MDL and PQL and that the reported concentration should be considered as estimated rather the quantitative
NA - Not Analyzed
N/A - Not Applicable
NR - Not recoverable - a matrix spike concentration is not recoverable due to a concentration within the original sample that is greater than four times the spike concentration added
R- The % RPD between a duplicate set of samples is outside of the absolute values established by laboratory control charts
S- Spike recovery is outside of established method and/or laboratory control limits. Further explanation of the use of this qualifier should be included within a case narrative
X -Used to indicate that a value based on pattern identification is within the pattern range but not typical of the pattern found in standards. Further explanation may or may not be provided within the sample footnote and/or the case narrative.

Sample Receipt Checklist

Client Name: Weber, Hayes & Associates

Project Name: Former Exxon / 2X103.B

Work Order No.: 1211077

Date and Time Received: 11/9/2012 12:55

Received By: ng

Physically Logged By: ng

Checklist Completed By: ng

Carrier Name: Client Drop Off

Chain of Custody (COC) Information

Chain of custody present?	Yes
Chain of custody signed when relinquished and received?	Yes
Chain of custody agrees with sample labels?	Yes
Custody seals intact on sample bottles?	Not Present

Sample Receipt Information

Custody seals intact on shipping container/cooler?	Not Present
Shipping Container/Cooler In Good Condition?	Yes
Samples in proper container/bottle?	Yes
Samples containers intact?	Yes
Sufficient sample volume for indicated test?	Yes

Sample Preservation and Hold Time (HT) Information

All samples received within holding time?	Yes		
Container/Temp Blank temperature in compliance?	No	Temperature: 11	°C
Water-VOA vials have zero headspace?	Yes		
Water-pH acceptable upon receipt?	N/A		

pH Checked by: n/a

pH Adjusted by: n/a

Samples received in a cooler with ice. chilling has begun.

Login Summary Report

Client ID:	TL5105	Weber, Hayes & Associates	**QC Level:**		
Project Name:	Former Exxon / 2X103.B		**TAT Requested:**	5+ day:0	
Project # :			**Date Received:**	11/9/2012	
Report Due Date:	11/16/2012		**Time Received:**	12:55	

Comments: 5day TAT!! One sample submitted for VOCs, TPHD, and TPHG. No sampling time listed on CoC. EDF requested.

Work Order # : ***1211077***

WO Sample ID	Client Sample ID	Collection Date/Time	Matrix	Scheduled Disposal	Sample On Hold	Test On Hold	Requested Tests	Subbed
1211077-001A	MW-5	11/09/12	Water	12/24/12			EDF W_8260PetWHA W_GCMS-GRO	
Sample Note:	Please use MDL for any diluted samples. EDF report. Fuel oxygenates should include DIPE, TAME, ETBE, MTBE and TBA.							
1211077-001B	MW-5	11/09/12	Water	12/24/12			W_TPHDO	

Torrent LABORATORY, INC.

Weber, Hayes & Associates
Hydrogeology and Environmental Engineering
120 Westgate Dr., Watsonville, CA 95076
(831) 722-3580 (831) 662-3100
Fax: (831) 722-1159

CHAIN -OF-CUSTODY RECORD

1211077 1 OF 1

PROJECT NAME AND NUMBER: Former Exxon / 2X103.B
SEND CERTIFIED RESULTS TO: Weber, Hayes & Associates - Attention: Jered Chaney
ELECTRONIC DELIVERABLE FORMAT: [x] YES [ ] NO

LABORATORY: Torrent
TURNAROUND TIME: (Standard 5 Day) 72hr Rush
GLOBAL I.D.: T0600100538

Sampler: Josh Pritchard
Date: 11-9-12

Field Point Name (Geo Tracker)	Sample Identification	Date Sampled	Matrix	SAMPLE CONTAINERS: 40 mL VOAs (preserved)	250 ml Poly Bottle	1 liter Amber Jars	Liner Acetate or Brass	REQUESTED ANALYSIS: Total Petroleum Hydrocarbons: Motor Oil EPA Method # 8015	TPH-D EPA Method# 8015	TPH-G EPA Method# 8260	Volatile Organics: MtBE EPA Method 8260	TBA EPA Method # 8260	BTEX EPA Method# 8260	Additional Analysis: Fuel Oxygenates EPA Method# 8260	1,2 DCA & EDB EPA Method# 8260
001A/B MW-5	MW-5	11-9-12	W	3		1			X	X			X	X	X

Temp 11.0°C Chilling Intact

RELEASED BY:	Date & Time		RECEIVED BY:	Date & Time	SAMPLE CONDITION: (circle 1)		
1.) [signature]	11-9-12/ 1255	→	Kris Kaur	11/9/12 12:55 PM	Ambient	(Refrigerated)	Frozen
2.)		→			Ambient	Refrigerated	Frozen
3.)		→			Ambient	Refrigerated	Frozen
4.)		→			Ambient	Refrigerated	Frozen
5.)		→			Ambient	Refrigerated	Frozen

NOTES:

[x] Please use MDL (Minimum Detection Limit) for any diluted samples.

- Please produce and email an EDF of these results to lab@weber-hayes.com
-Fuel Oxygenates should only include DIPE, TAME, EtBE, MtBE, TBA

D/O

Log-in [signature] 11/9/12

J:\Fieldlog\FORMS - COC 1 of 1 Weber, Hayes and Associates

Weber, Hayes & Associates
120 Westgate Dr
Watsonville, CA 95076
Tel: 831-722-3580
Fax: 831-662-3100

RE: Oakland /2X103.B

Work Order No.: 1210267

Dear Jered Chaney:

Torrent Laboratory, Inc. received 1 sample(s) on October 31, 2012 for the analyses presented in the following Report.

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

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

Patti Sandrock
QA Officer

November 07, 2012
Date

Date: 11/7/2012

Client: Weber, Hayes & Associates

Project: Oakland /2X103.B

Work Order: 1210267

CASE NARRATIVE

No issues encountered with the receiving, preparation, analysis or reporting of the results associated with this work order.

Unless otherwise indicated in the following narrative, no results have been method and/or field blank corrected.

Reported results relate only to the items/samples tested by the laboratory.

Analytical Comments for method S_TPHDOSG, 1210267-001A MS/MSD, QC Analytical Batch ID 412380, Note:The % recoveries for TPH as Diesel are outside of laboratory control limits but % RPD is within limits. The associated LCS/LCSD is within both % Recovery and %RPD limits. No corrective action required.

Torrent LABORATORY, INC.

Sample Result Summary

Report prepared for: Jered Chaney
Weber, Hayes & Associates

Date Received: 10/31/12
Date Reported: 11/07/12

Soil Drum 1210267-001

Parameters:	Analysis Method	DF	MDL	PQL	Results	Unit
Lead	SW6010B	1	0.13	1.0	7.2	mg/Kg
TPH as Diesel (SG)	SW8015B(M)	1	0.87	2.0	1.8	mg/Kg

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Jered Chaney
Weber, Hayes & Associates

Date Received: 10/31/12
Date Reported: 11/07/12

Client Sample ID:	Soil Drum	**Lab Sample ID:**	1210267-001A
Project Name/Location:	Oakland /2X103.B	**Sample Matrix:**	Soil
Project Number:			
Date/Time Sampled:	10/30/12 / 0:00		
Tag Number:	Oakland /2X103.B		

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
Lead	SW6010B	11/2/12	11/02/12	1	0.13	1.0	7.2		mg/Kg	412351	7035

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
Benzene	SW8260B	NA	11/01/12	1	0.0015	0.010	ND		mg/Kg	412337	NA
Toluene	SW8260B	NA	11/01/12	1	0.00098	0.010	ND		mg/Kg	412337	NA
Ethyl Benzene	SW8260B	NA	11/01/12	1	0.00086	0.010	ND		mg/Kg	412337	NA
m,p-Xylene	SW8260B	NA	11/01/12	1	0.0019	0.010	ND		mg/Kg	412337	NA
o-Xylene	SW8260B	NA	11/01/12	1	0.00066	0.0050	ND		mg/Kg	412337	NA
MTBE	SW8260B	NA	11/01/12	1	0.0026	0.010	ND		mg/Kg	412337	NA
(S) Dibromofluoromethane	SW8260B	NA	11/01/12	1	59.8	148	90.1		%	412337	NA
(S) Toluene-d8	SW8260B	NA	11/01/12	1	55.2	133	108		%	412337	NA
(S) 4-Bromofluorobenzene	SW8260B	NA	11/01/12	1	55.8	141	125		%	412337	NA

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
TPH(Gasoline)	8260TPH	NA	11/01/12	1	0.030	0.10	ND		mg/Kg	412337	NA
(S) 4-Bromofluorobenzene	8260TPH	NA	11/01/12	1	43.9	127	61.3		%	412337	NA

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
The results shown below are reported using their MDL.											
TPH as Diesel (SG)	SW8015B(M)	11/5/12	11/05/12	1	0.87	2.0	1.8	J	mg/Kg	412380	7049
Pentacosane (S)	SW8015B(M)	11/5/12	11/05/12	1	49.9	144	95.7		%	412380	7049

Torrent LABORATORY, INC.

MB Summary Report

Work Order:	1210267	**Prep Method:**	NA	**Prep Date:**	NA	**Prep Batch:**	NA
Matrix:	Soil	**Analytical Method:**	SW8260B	**Analyzed Date:**	11/01/12	**Analytical Batch:**	412337
Units:	ug/Kg						

Parameters	MDL	PQL	Method Blank Conc.	Lab Qualifier
Dichlorodifluoromethane	4.4	10	ND	
Chloromethane	4.6	10	ND	
Vinyl Chloride	2.6	10	ND	
Bromomethane	4.7	10	ND	
Trichlorofluoromethane	2.9	10	ND	
1,1-Dichloroethene	1.5	10	ND	
Freon 113	3.7	10	ND	
Methylene Chloride	2.0	50	ND	
trans-1,2-Dichloroethene	1.1	10	ND	
MTBE	2.6	10	ND	
tert-Butanol	21	50	ND	
Diisopropyl ether (DIPE)	2.2	10	ND	
1,1-Dichloroethane	1.3	10	ND	
ETBE	2.4	10	ND	
cis-1,2-Dichloroethene	1.8	10	ND	
2,2-Dichloropropane	1.2	10	ND	
Bromochloromethane	2.3	10	ND	
Chloroform	1.2	10	ND	
Carbon Tetrachloride	1.6	10	ND	
1,1,1-Trichloroethane	1.2	10	ND	
1,1-Dichloropropene	1.4	10	ND	
Benzene	1.5	10	ND	
TAME	2.1	10	ND	
1,2-Dichloroethane	1.9	10	ND	
Trichloroethylene	3.9	10	ND	
Dibromomethane	2.2	10	ND	
1,2-Dichloropropane	1.3	10	ND	
Bromodichloromethane	1.1	10	ND	
cis-1,3-Dichloropropene	1.4	10	ND	
Toluene	0.98	10	ND	
Tetrachloroethylene	1.8	10	ND	
trans-1,3-Dichloropropene	1.2	10	ND	
1,1,2-Trichloroethane	1.8	10	ND	
Dibromochloromethane	1.1	10	ND	
1,3-Dichloropropane	2.1	10	ND	
1,2-Dibromoethane	1.7	10	ND	
Ethyl Benzene	0.86	10	ND	
Chlorobenzene	4.2	10	ND	
1,1,1,2-Tetrachloroethane	0.86	10	ND	
m,p-Xylene	1.9	10	ND	

Torrent LABORATORY, INC.

MB Summary Report

Work Order:	1210267	**Prep Method:**	NA	**Prep Date:**	NA	**Prep Batch:**	NA
Matrix:	Soil	**Analytical Method:**	SW8260B	**Analyzed Date:**	11/01/12	**Analytical Batch:**	412337
Units:	ug/Kg						

Parameters	MDL	PQL	Method Blank Conc.	Lab Qualifier
o-Xylene	0.66	5.0	ND	
Styrene	0.77	10	ND	
Bromoform	1.9	10	ND	
Isopropyl Benzene	1.2	10	ND	
n-Propylbenzene	1.4	10	ND	
Bromobenzene	1.2	10	ND	
1,1,2,2-Tetrachloroethane	3.0	10	ND	
1,3,5-Trimethylbenzene	1.1	10	ND	
1,2,3-Trichloropropane	3.3	10	ND	
4-Chlorotoluene	1.6	10	ND	
2-Chlorotoluene	1.6	10	ND	
tert-Butylbenzene	1.4	10	ND	
1,2,4-Trimethylbenzene	1.1	10	ND	
sec-Butyl Benzene	1.6	10	ND	
p-Isopropyltoluene	1.5	10	ND	
1,3-Dichlorobenzene	1.8	10	ND	
1,4-Dichlorobenzene	1.5	10	ND	
n-Butylbenzene	2.2	10	ND	
1,2-Dichlorobenzene	1.3	10	ND	
1,2-Dibromo-3-Chloropropane	4.2	10	ND	
Hexachlorobutadiene	2.6	10	ND	
1,2,4-Trichlorobenzene	2.1	10	ND	
Naphthalene	2.8	10	ND	
1,2,3-Trichlorobenzene	2.9	10	ND	
(S) Dibromofluoromethane			87.3	
(S) Toluene-d8			105	
(S) 4-Bromofluorobenzene			125	

Work Order:	1210267	**Prep Method:**	5035	**Prep Date:**	11/01/12	**Prep Batch:**	7026
Matrix:	Soil	**Analytical Method:**	8260TPH	**Analyzed Date:**	11/01/12	**Analytical Batch:**	412337
Units:	ug/Kg						

Parameters	MDL	PQL	Method Blank Conc.	Lab Qualifier
TPH(Gasoline)	30	100	ND	
(S) 4-Bromofluorobenzene			88.1	

Torrent LABORATORY, INC.

MB Summary Report

Work Order:	1210267	**Prep Method:**	3050	**Prep Date:**	11/02/12	**Prep Batch:**	7035
Matrix:	Soil	**Analytical Method:**	SW6010B	**Analyzed Date:**	11/02/12	**Analytical Batch:**	412351
Units:	mg/Kg						

Parameters	MDL	PQL	Method Blank Conc.	Lab Qualifier
Antimony	0.20	5.0	ND	
Arsenic	0.25	1.7	ND	
Barium	0.07	5.0	0.51	
Beryllium	0.0800	2.0	ND	
Cadmium	0.055	1.0	ND	
Chromium	0.050	5.0	0.40	
Cobalt	0.055	5.0	ND	
Copper	0.65	5.0	0.99	
Lead	0.14	1.0	0.49	
Molybdenum	0.12	5.0	ND	
Nickel	0.050	5.0	0.13	
Selenium	0.42	5.0	ND	
Silver	0.37	1.0	ND	
Thallium	0.49	5.0	ND	
Vanadium	0.18	5.0	ND	
Zinc	0.25	5.0	ND	

Work Order:	1210267	**Prep Method:**	3545_TPHSG	**Prep Date:**	11/05/12	**Prep Batch:**	7049
Matrix:	Soil	**Analytical Method:**	SW8015B(M)	**Analyzed Date:**	11/05/12	**Analytical Batch:**	412380
Units:	mg/Kg						

Parameters	MDL	PQL	Method Blank Conc.	Lab Qualifier
TPH as Diesel (SG)	0.87	2.0	0.88	
TPH as Motor Oil (SG)	1.3	10	3.7	
Pentacosane (S)			93.1	

Torrent LABORATORY, INC.

LCS/LCSD Summary Report

Raw values are used in quality control assessment.

Work Order:	1210267	**Prep Method:**	NA	**Prep Date:**	NA	**Prep Batch:**	NA
Matrix:	Soil	**Analytical Method:**	SW8260B	**Analyzed Date:**	11/01/12	**Analytical Batch:**	412337
Units:	ug/Kg						

Parameters	MDL	PQL	Method Blank Conc.	Spike Conc.	LCS % Recovery	LCSD % Recovery	LCS/LCSD % RPD	% Recovery Limits	% RPD Limits	Lab Qualifier
1,1-Dichloroethene	1.5	10	ND	50	103	105	1.42	53.7 - 139	30	
Benzene	1.5	10	ND	50	109	102	6.97	66.5 - 135	30	
Trichloroethylene	3.9	10	ND	50	110	101	8.62	57.5 - 150	30	
Toluene	0.98	10	ND	50	102	94.0	8.21	56.8 - 134	30	
Chlorobenzene	4.2	10	ND	50	90.6	115	23.4	57.4 - 134	30	
(S) Dibromofluoromethane			ND	50	86.9	93.8		59.8 - 148		
(S) Toluene-d8			ND	50	110	110		55.2 - 133		
(S) 4-Bromofluorobenzene			ND	50	121	127		55.8 - 141		

Work Order:	1210267	**Prep Method:**	5035	**Prep Date:**	11/01/12	**Prep Batch:**	7026
Matrix:	Soil	**Analytical Method:**	8260TPH	**Analyzed Date:**	11/01/12	**Analytical Batch:**	412337
Units:	ug/Kg						

Parameters	MDL	PQL	Method Blank Conc.	Spike Conc.	LCS % Recovery	LCSD % Recovery	LCS/LCSD % RPD	% Recovery Limits	% RPD Limits	Lab Qualifier
TPH(Gasoline)	30	100	ND	1000		85.8	13.8	64.0 - 133.2	30	
(S) 4-Bromofluorobenzene			88.1	50	79.1	80.4		43.9 - 127		

Torrent LABORATORY, INC.

LCS/LCSD Summary Report

Raw values are used in quality control assessment.

Work Order:	1210267	**Prep Method:**	3050	**Prep Date:**	11/02/12	**Prep Batch:**	7035
Matrix:	Soil	**Analytical Method:**	SW6010B	**Analyzed Date:**	11/02/12	**Analytical Batch:**	412351
Units:	mg/Kg						

Parameters	MDL	PQL	Method Blank Conc.	Spike Conc.	LCS % Recovery	LCSD % Recovery	LCS/LCSD % RPD	% Recovery Limits	% RPD Limits	Lab Qualifier
Antimony	0.20	5.0	ND	50	97.4	99.6	2.27	30.7 - 130	30	
Arsenic	0.25	1.7	ND	50	94.6	97.1	2.57	71 - 121	30	
Barium	0.07	5.0	0.51	50	103	98.4	4.60	70.2 - 130	30	
Beryllium	0.0800	2.0	ND	50	98.1	96.9	1.16	73.3 - 115	30	
Cadmium	0.055	1.0	ND	50	98.0	93.4	4.83	68.7 - 110	30	
Chromium	0.050	5.0	0.40	50	103	97.7	5.27	76 - 116	30	
Cobalt	0.055	5.0	ND	50	102	97.6	4.38	57.4 - 122	30	
Copper	0.65	5.0	0.99	50	105	99.5	5.38	74.8 - 119	30	
Lead	0.14	1.0	0.49	50	94.3	96.3	2.13	67.9 - 118	30	
Molybdenum	0.12	5.0	ND	50	98.4	100	2.01	62.9 - 123	30	
Nickel	0.050	5.0	0.13	50	99.0	95.2	3.89	61.5 - 122	30	
Selenium	0.42	5.0	ND	50	91.7	93.9	2.33	62 - 111	30	
Silver	0.37	1.0	ND	50	100	95.8	4.28	81.1 - 109	30	
Thallium	0.49	5.0	ND	50	93.4	95.6	2.35	39.2 - 125	30	
Vanadium	0.18	5.0	ND	50	102	96.4	5.67	65.8 - 122	30	
Zinc	0.25	5.0	ND	50	96.5	92.6	4.08	59.9 - 122	30	

Work Order:	1210267	**Prep Method:**	3545_TPHSG	**Prep Date:**	11/05/12	**Prep Batch:**	7049
Matrix:	Soil	**Analytical Method:**	SW8015B(M)	**Analyzed Date:**	11/05/12	**Analytical Batch:**	412380
Units:	mg/Kg						

Parameters	MDL	PQL	Method Blank Conc.	Spike Conc.	LCS % Recovery	LCSD % Recovery	LCS/LCSD % RPD	% Recovery Limits	% RPD Limits	Lab Qualifier
TPH as Diesel (SG)	0.87	2.0	0.88	33.33	54.7	60.5	10.2	50.8 - 111	30	
Pentacosane (S)			3.7	100	81.7	89.4		49.9 - 144		

Torrent LABORATORY, INC.

MS/MSD Summary Report

Raw values are used in quality control assessment.

Work Order:	1210267	**Prep Method:**	3545_TPHSG	**Prep Date:**	11/05/12	**Prep Batch:**	7049
Matrix:	**Soil**	**Analytical Method:**	SW8015B(M)	**Analyzed Date:**	11/05/12	**Analytical Batch:**	412380
Spiked Sample:	1210267-001A						
Units:	mg/Kg						

Parameters	MDL	PQL	Sample Conc.	Spike Conc.	MS % Recovery	MSD % Recovery	MS/MSD % RPD	% Recovery Limits	% RPD Limits	Lab Qualifier
TPH as Diesel (SG)	0.87	2.0	54.33229	33.33	31.1	36.7	14.3	50.8 - 111	30	S
Pentacosane (S)				100	85.0	93.1		49.9 - 144		

Laboratory Qualifiers and Definitions

DEFINITIONS:

Accuracy/Bias (% Recovery) - The closeness of agreement between an observed value and an accepted reference value.
Blank (Method/Preparation Blank) -MB/PB - An analyte-free matrix to which all reagents are added in the same volumes/proportions as used in sample processing. The method blank is used to document contamination resulting from the analytical process.
Duplicate - a field sample and/or laboratory QC sample prepared in duplicate following all of the same processes and procedures used on the original sample (sample duplicate, LCSD, MSD)
Laboratory Control Sample (LCS ad LCSD) - A known matrix spiked with compounds representative of the target analyte(s). This is used to document laboratory performance.
Matrix - the component or substrate that contains the analyte of interest (e.g., - groundwater, sediment, soil, waste water, etc)
Matrix Spike (MS/MSD) - Client sample spiked with identical concentrations of target analyte (s). The spiking occurs prior to the sample preparation and analysis. They are used to document the precision and bias of a method in a given sample matrix.
Method Detection Limit (MDL) - the minimum concentration of a substance that can be measured and reported with a 99% confidence that the analyte concentration is greater than zero
Practical Quantitation Limit (PQL) - a laboratory determined value at 2 to 5 times above the MDL that can be reproduced in a manner that results in a 99% confidence level that the result is both accurate and precise. PQLs reflect all preparation factors and/or dilution factors that have been applied to the sample during the preparation and/or analytical processes.
Precision (%RPD) - The agreement among a set of replicate/duplicate measurements without regard to known value of the replicates
Surrogate (S) or (Surr) - An organic compound which is similar to the target analyte(s) in chemical composition and behavior in the analytical process, but which is not normally found in environmental samples. Surrogates are used in most organic analysis to demonstrate matrix compatibility with the chosen method of analysis
Tentatively Identified Compound (TIC) - A compound not contained within the analytical calibration standards but present in the GCMS library of defined compounds. When the library is searched for an unknown compound, it can frequently give a tentative identification to the compound based on retention time and primary and secondary ion match. TICs are reported as estimates and are candidates for further investigation.
Units: the unit of measure used to express the reported result - **mg/L** and ***mg/Kg*** (equivalent to PPM - parts per million in **liquid** and ***solid***), **ug/L** and ***ug/Kg*** (equivalent to PPB - parts per billion in **liquid** and ***solid***), **ug/m3**, ***mg.m3***, **ppbv** and ***ppmv*** (all units of measure for reporting concentrations in air), **%** (equivalent to 10000 ppm or 1,000,000 ppb), **ug/Wipe** (concentration found on the surface of a single Wipe usually taken over a 100cm2 surface)

LABORATORY QUALIFIERS:

B - Indicates when the anlayte is found in the associated method or preparation blank
D - Surrogate is not recoverable due to the necessary dilution of the sample
E - Indicates the reportable value is outside of the calibration range of the instrument but within the linear range of the instrument (unless otherwise noted) Values reported with an E qualifier should be considered as estimated.
H- Indicates that the recommended holding time for the analyte or compound has been exceeded
J- Indicates a value between the method MDL and PQL and that the reported concentration should be considered as estimated rather the quantitative
NA - Not Analyzed
N/A - Not Applicable
NR - Not recoverable - a matrix spike concentration is not recoverable due to a concentration within the original sample that is greater than four times the spike concentration added
R- The % RPD between a duplicate set of samples is outside of the absolute values established by laboratory control charts
S- Spike recovery is outside of established method and/or laboratory control limits. Further explanation of the use of this qualifier should be included within a case narrative
X -Used to indicate that a value based on pattern identification is within the pattern range but not typical of the pattern found in standards. Further explanation may or may not be provided within the sample footnote and/or the case narrative.

Sample Receipt Checklist

Client Name: Weber, Hayes & Associates

Project Name: Oakland /2X103.B

Work Order No.: 1210267

Date and Time Received: 10/31/2012 10:34

Received By: ng

Physically Logged By: lorna

Checklist Completed By: lorna

Carrier Name: First Courier

Chain of Custody (COC) Information

Chain of custody present?	Yes
Chain of custody signed when relinquished and received?	Yes
Chain of custody agrees with sample labels?	Yes
Custody seals intact on sample bottles?	Not Present

Sample Receipt Information

Custody seals intact on shipping container/cooler?	Not Present
Shipping Container/Cooler In Good Condition?	Yes
Samples in proper container/bottle?	Yes
Samples containers intact?	Yes
Sufficient sample volume for indicated test?	Yes

Sample Preservation and Hold Time (HT) Information

All samples received within holding time?	Yes			
Container/Temp Blank temperature in compliance?	No	Temperature:	14	°C
Water-VOA vials have zero headspace?	No VOA vials submitted			
Water-pH acceptable upon receipt?	N/A			

pH Checked by: n/a

pH Adjusted by: n/a

Login Summary Report

Client ID:	TL5105	Weber, Hayes & Associates	**QC Level:**	
Project Name:	Oakland /2X103.B		**TAT Requested:**	5+ day:0
Project # :			**Date Received:**	10/31/2012
Report Due Date:	11/7/2012		**Time Received:**	10:34

Comments: 5 day TAT!!! 1 Soil rec'd@ 14'C (Chilling begun) for TPH as Diesel w/SiO2, TOH Gas, MBTEX and total Lead.

Work Order # : ***1210267***

WO Sample ID	Client Sample ID	Collection Date/Time	Matrix	Scheduled Disposal	Sample On Hold	Test On Hold	Requested Tests	Subbed
1210267-001A	Soil Drum	10/30/12 0:00	Soil	04/29/13			S_6010BAs/Pb S_GCMS-GRO S_8260PetWHA S_TPHDOSG	

Sample Note: MBTEX, Gas, TPH D and Lead

Torrent LABORATORY, INC.

Weber, Hayes & Associates
Hydrogeology and Environmental Engineering
120 Westgate Dr., Watsonville, CA 95076
(831) 722-3580 (831) 662-3100
Fax: (831) 722-1159

CHAIN -OF-CUSTODY RECORD

1210267

1 OF 1

PROJECT NAME AND JOB #: Oakland / 2X103.B
SEND CERTIFIED RESULTS TO: Weber, Hayes & Associates - Attention: Jered Chaney
ELECTRONIC DELIVERABLE FORMAT: ☐ YES ☒ NO

LABORATORY: Torrent
TURNAROUND TIME: (Standard) 48hr Rush
GLOBAL I.D.: --

Sampler: Jered Chaney
Date: 10/30/12

Sample Identification	Date Sampled	Matrix	SAMPLE CONTAINERS: 40 mL VOAs (preserved)	60 mL VOAs	Terra Core Prep Kit VOAs (preserved)	Liner Acetate or Brass	REQUESTED ANALYSIS: Total Petroleum Hydrocarbons: TPH-diesel w/ silica gel cleanup EPA Method# 8015M	TPH-diesel EPA Method 8015M	TPH-Gas by EPA Method 8260B	Volatile Organics: MtBE & BTEX EPA Method# 8260B	Full List VOCs EPA Method# 8260B	Lead Scavengers EPA Method# 8260B	Additional Analysis: PAHs (low-level) EPA Method# 8270C SIM	Total Lead
001A Soil Drum	10/30/12	Soil				1	X		X	X				X

RELEASED BY:	Date & Time	RECEIVED BY:	Date & Time	SAMPLE CONDITION: (circle 1)		
1.)	10/30/12 0906		10/31/12 9:06	Ambient	Refrigerated	Frozen
2.)	10/31/12 1034		10/31/12 10:34	Ambient	Refrigerated	Frozen
3.)				Ambient	Refrigerated	Frozen
4.)				Ambient	Refrigerated	Frozen
5.)				Ambient	Refrigerated	Frozen

NOTES:

☐ Please use MDL (Minimum Detection Limit) for any diluted samples.

ADDITIONAL COMMENTS

10-31-12

F.C.S.

Temp. 14°C

JC\Fieldog\FORMS - COC

1 of 1

Weber, Hayes and Associates

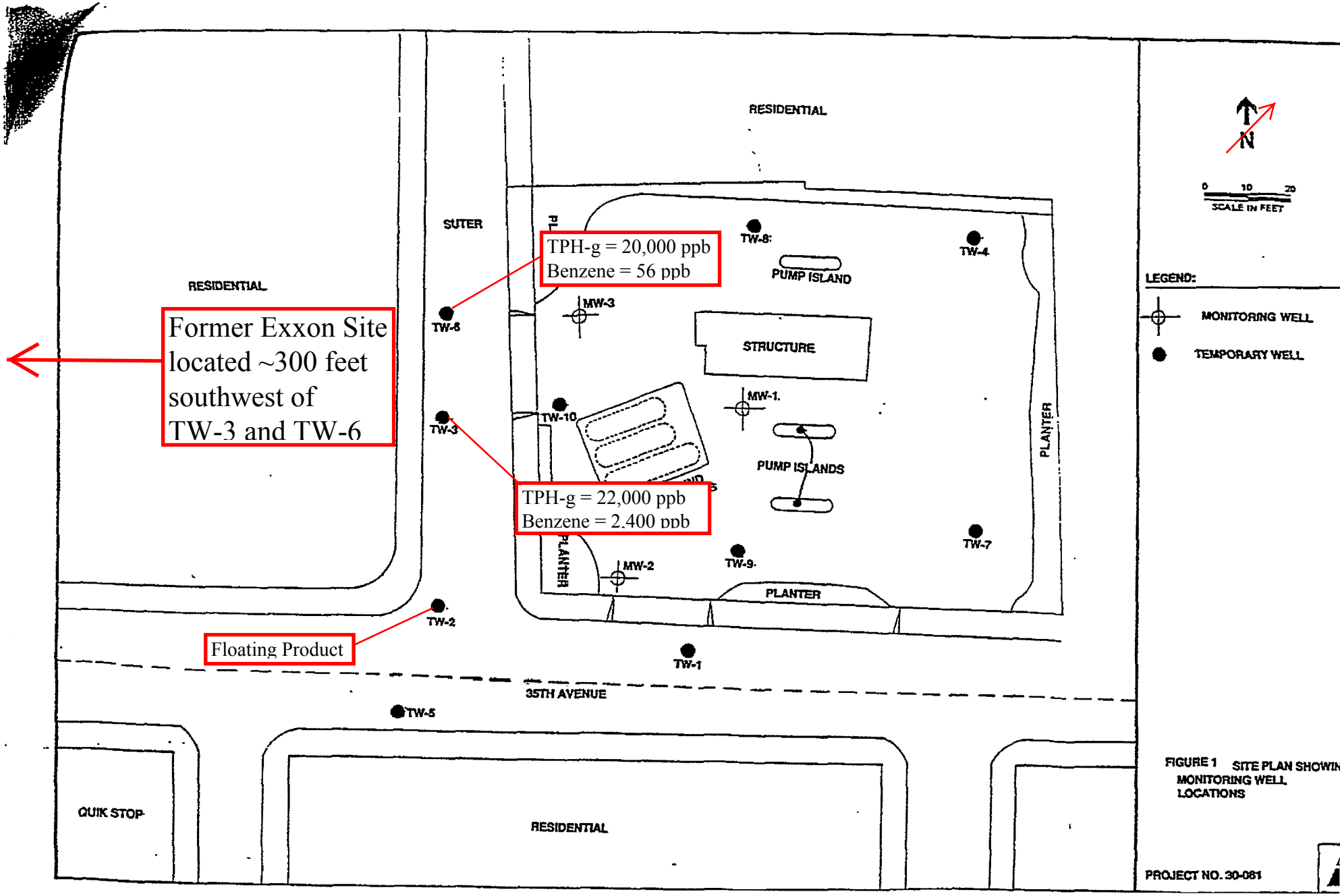
APPENDIX D

Select Tables & Figures from Active Fuel Release Investigation Reports BP #11132, located at 3201 35th Avenue

- Atlantic Richfield Company: *Site Conceptual Model with Feasibility Study Report,* dated July 21, 2008
- ARCADIS: *Third Quarter 2012 Groundwater Monitoring Report,* dated October 30, 2012

Source: Alton, February 28, 1990

Figure C-2



TPH-g = 20,000 ppb
Benzene = 56 ppb

Former Exxon Site located ~300 feet southwest of TW-3 and TW-6

TPH-g = 22,000 ppb
Benzene = 2,400 ppb

Floating Product

TABLE 1

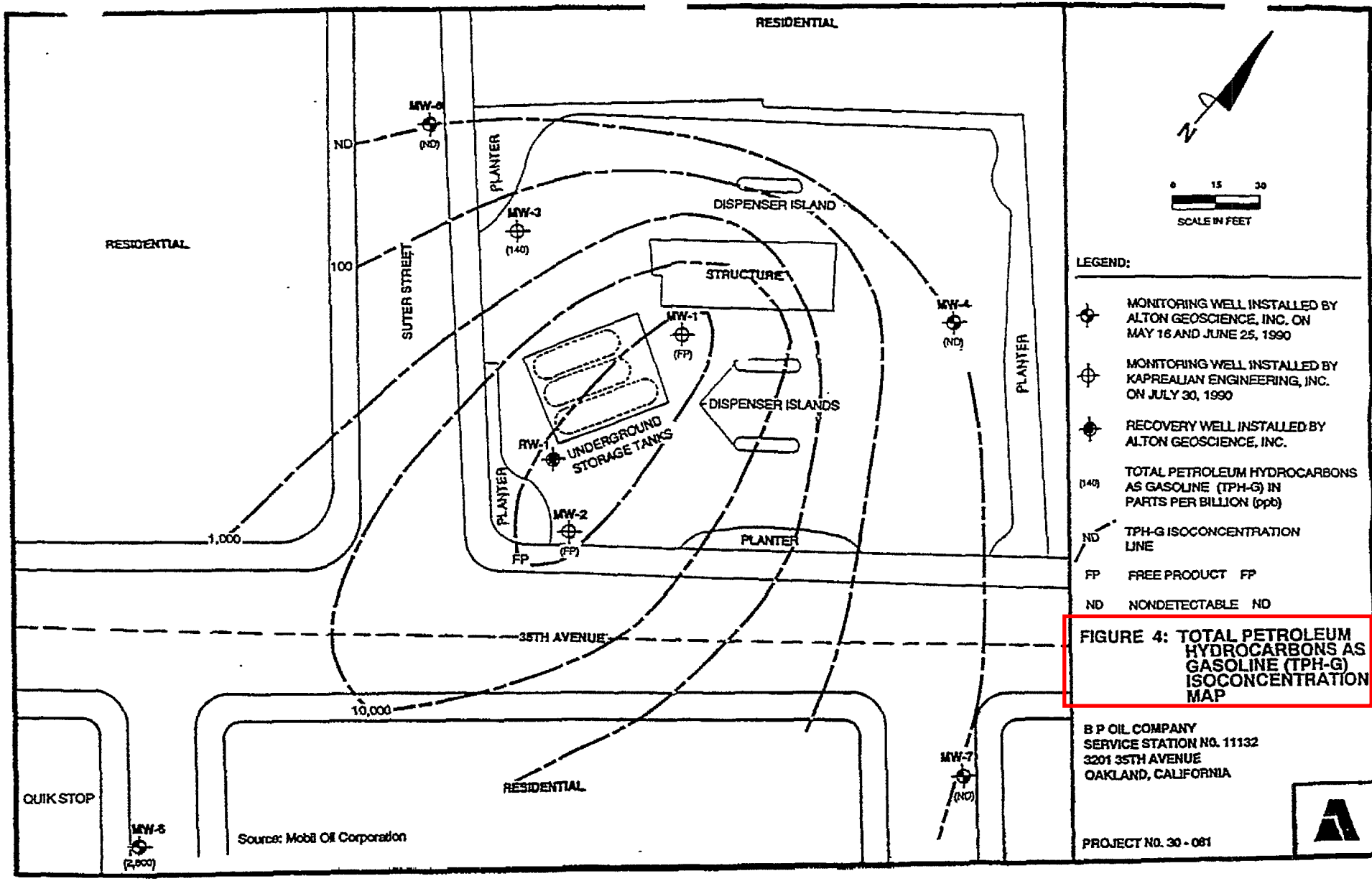
RESULTS OF ANALYSIS
GROUND WATER SAMPLES

Well	TPH (ppm)	Benzene (ppb)	Toluene (ppb)	Ethyl-benzene (ppb)	Total Xylenes (ppb)
MW-1	FP	---	---	---	---
MW-2	14	580	1300	460	2300
MW-3	0.5	20	30	24	35
TW-1	7.4	230	180	690	1200
TW-2	FP	---	---	---	---
TW-3	22	2400	2800	530	4000
TW-4	ND <0.1	ND <0.3	ND <0.3	ND <0.3	0.7
TW-5	240	1100	5100	5600	28000
TW-6	20	56	910	590	3700
TW-7	ND <0.1	ND <0.3	0.4	0.7	4.3
TW-8	ND <0.1	0.3	0.6	1.1	7.9
TW-9	41	2100	5700	120	6900
TW-10	50	1900	7300	1400	8000

ND = Non-Detected
FP = Free Product
ppm = parts per million
ppb = parts per billion
MW = Monitoring Well
TW = Temporary Well

Source: Alton, February 28, 1990

Table C-5



Source: Alton, September 4, 1990

Figure C-3

Former Exxon Site located ~300 feet southwest of MW-9

MW-6 (147.49)
MW-3 (147.75)
MW-9 (147.41)
MW-1 (147.98)
MW-4 (148.36)
MW-8 (146.86)
MW-10 (147.37)
MW-7 (147.79)
MW-5 (146.92)
MW-2 (147.48)
VM-1
RW-1 (147.95)
AS-1
OW-1
SVE-1

147.0
147.2
147.4
147.6
147.8
148.0
148.2
148.2

SUTER STREET
35TH AVENUE
MANGELS AVENUE
SUTER STREET

0.007 FT/FT

remediation system compound
dispenser island
Service Station Building
USTs
dispenser islands
planter
planter
Car Wash
Liquor Store
Residential
Quick Stop
Residential
Residential

LEGEND:

- EXISTING MONITORING WELL
- GROUNDWATER RECOVERY WELL
- (XX.xx) GROUNDWATER ELEVATION (FEET ABOVE MEAN SEA LEVEL)
- XX.x GROUNDWATER ELEVATION CONTOUR LINE (DASHED WHERE INFERRED)
- 0.007 FT/FT GROUNDWATER FLOW DIRECTION (FOOT PER FOOT)

NOTES:

1. SITE MAP ADAPTED FROM CAMBRIA ENVIRONMENTAL FIGURES. SITE DIMENSIONS AND FIGURES FACILITY LOCATIONS NOT VERIFIED.
2. WELL MW-7 AND SUTER STREET LOCATIONS HAVE BEEN CORRECTED FROM PREVIOUS MAPS.

0 50 100
SCALE IN FEET

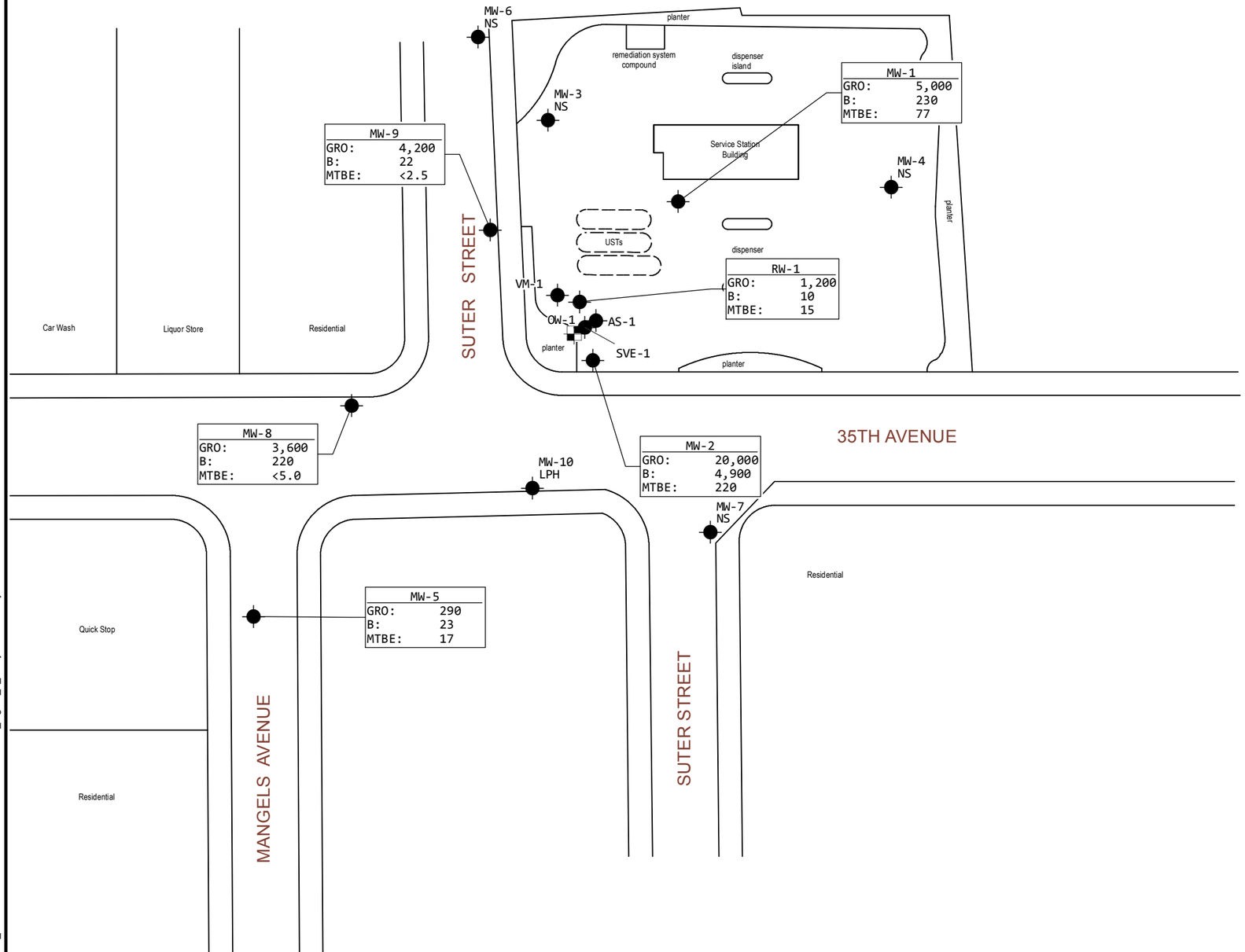
FORMER BP SERVICE STATION #11132
3201 35TH AVENUE
OAKLAND, CALIFORNIA

GROUNDWATER ELEVATION CONTOUR MAP

ARCADIS

FIGURE
2

CITY: SAN FRANCISCO DIV/GROUP: ENV/IM DB: kernst LD: PIC: PM: TM:
PROJECT: PATH: H:\GISPROJECTS_ENV\BP_FOXGLOVE\CA\CA11132\GIS\MXD\CA11132_Figure_2_GW_Elev.mxd DATE: 10/30/2012 11:53:18 AM



LEGEND:

- EXISTING MONITORING WELL
- GROUNDWATER RECOVERY WELL

MW-8	
GRO:	3,600
B:	220
MTBE:	<5.0

- SAMPLE LOCATION ID
- CONCENTRATION IN MICROGRAMS PER LITER (µg/L)
- ANALYTE

GRO	GASOLINE RANGE ORGANICS
B	BENZENE
MTBE	METHYL TERTIARY-BUTYL ETHER
<	NOT DETECTED AT OR ABOVE STATED LABORATORY REPORTING LIMIT
LPH	LIQUID PHASE HYDROCARBONS
NS	WELL NOT SAMPLED

NOTES:

1. SITE MAP ADAPTED FROM CAMBRIA ENVIRONMENTAL FIGURES. SITE DIMENSIONS AND FIGURES FACILITY LOCATIONS NOT VERIFIED.
2. WELL MW-7 AND SUTER STREET LOCATIONS HAVE BEEN CORRECTED FROM PREVIOUS MAPS.

0 50 100

SCALE IN FEET

FORMER BP SERVICE STATION #11132
3201 35TH AVENUE
OAKLAND, CALIFORNIA

GROUNDWATER ANALYTICAL SUMMARY MAP

ARCADIS

FIGURE
3

CITY: SAN FRANCISCO DIV/GROUP: ENV/M DB: kernst LD: PIC: PM: TM:
PROJECT: PATH: H:\GISPROJECTS_ENV\BP_FOXGLOVE\CA\CA11132\GIS\MXD\CA11132_Figure_3_AnalyticalSummary.mxd DATE: 10/30/2012 12:06:40 PM

Table 3
Historical Groundwater Flow Direction and Gradient
CA-11132
3201 35th Ave, Oakland, CA 94619

Date Measured	Approximate Gradient Direction	Approximate Gradient Magnitude (ft/ft)
5/19/2006	South	0.003 to 0.005
8/23/2006	Southwest	0.01
11/15/2006	South	0.004
2/14/2007	Southeast	0.01
5/22/2007	South	0.005
8/15/2007	South-Southwest	0.008
11/8/2007	Southwest	0.006
2/20/2008	Southeast	0.008
5/7/2008	South-Southwest	0.003
8/20/2008	South-Southwest	0.007
11/17/2008	South-Southwest	0.005
2/25/2009	Southeast	0.01
5/28/2009	South	0.004
8/6/2009	South-Southwest	0.005
3/4/2010	East-Southeast	0.02
9/2/2010	Southwest	0.01
3/15/2011	Southeast	0.01
8/17/2011	Southwest	0.003
2/6/2012	Southeast	0.005
8/21/2012	Southwest	0.007

Notes:
The data within this table collected prior to April 2006 was provided to Broadbent & Associated, Inc. by Atlantic Richfield Company and their previous consultants. Broadbent & Associates, Inc. has not verified the accuracy of this information.

Table 2
Historical Groundwater Monitoring and Analytical Data
CA-11132
3201 35th Ave, Oakland, CA 94619

Well ID	Date	Type	TOC (ft msl)	DTW (ft)	Measured LNAPL Thickness (ft)	GW Elev (ft msl)	GRO (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE (µg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	Ethanol (µg/L)	DO (mg/l)	Notes
MW-7	2/23/2004		168.08	15.92	--	152.16	--	--	--	--	--	--	--	--	--	--	--	--	s
MW-7	5/4/2004		168.08	18.86	--	149.22	--	--	--	--	--	--	--	--	--	--	--	--	
MW-7	8/4/2004		168.08	19.10	--	148.98	--	--	--	--	--	--	--	--	--	--	--	--	
MW-7	11/10/2004		168.08	20.25	--	147.83	--	--	--	--	--	--	--	--	--	--	--	--	
MW-7	2/15/2005		168.08	16.37	--	151.71	--	--	--	--	--	--	--	--	--	--	--	--	
MW-7	8/17/2005		168.08	19.74	--	148.34	--	--	--	--	--	--	--	--	--	--	--	--	
MW-7	11/18/2005		168.08	20.82	--	147.26	--	--	--	--	--	--	--	--	--	--	--	--	
MW-7	2/7/2006		168.08	14.26	--	153.82	<500	<5.0	<5.0	<5.0	<5.0	270	<200	<5.0	<5.0	<5.0	<3,000	--	P
MW-7	5/19/2006		168.08	16.51	--	151.57	--	--	--	--	--	--	--	--	--	--	--	--	
MW-7	8/23/2006		168.08	20.30	--	147.78	--	--	--	--	--	--	--	--	--	--	--	--	
MW-7	11/15/2006		168.08	20.85	--	147.23	--	--	--	--	--	--	--	--	--	--	--	--	
MW-7	2/14/2007		168.08	16.57	--	151.51	520	<5.0	<5.0	<5.0	<5.0	740	<200	<5.0	<5.0	9.6	<3,000	3.08	v, P
MW-7	5/22/2007		168.08	18.40	--	149.68	--	--	--	--	--	--	--	--	--	--	--	--	
MW-7	8/15/2007		168.08	20.85	--	147.23	--	--	--	--	--	--	--	--	--	--	--	--	
MW-7	11/8/2007		168.08	20.41	--	147.67	--	--	--	--	--	--	--	--	--	--	--	--	
MW-7	2/20/2008		168.08	15.90	--	152.18	<50	<0.50	<0.50	<0.50	<0.50	700	13	<0.50	<0.50	12	<100	4.34	P
MW-7	5/7/2008		168.08	19.41	--	148.67	--	--	--	--	--	--	--	--	--	--	--	--	
MW-7	8/20/2008		168.08	21.34	--	146.74	--	--	--	--	--	--	--	--	--	--	--	--	
MW-7	11/17/2008		168.08	20.54	--	147.54	--	--	--	--	--	--	--	--	--	--	--	--	
MW-7	2/25/2009		168.08	14.89	--	153.19	130	<20	<20	<20	<20	540	<400	<20	<20	<20	<12,000	4.28	P
MW-7	5/28/2009		168.08	18.57	--	149.51	--	--	--	--	--	--	--	--	--	--	--	--	
MW-7	8/6/2009		168.08	20.83	--	147.25	--	--	--	--	--	--	--	--	--	--	--	--	
MW-7	3/4/2010		168.00	14.02	--	153.98	430	<0.50	<0.50	<0.50	<1.0	920	4.0	<0.50	<0.50	17	<100	3.30	P
MW-7	9/2/2010		168.00	20.43	--	147.57	--	--	--	--	--	--	--	--	--	--	--	--	
MW-7	3/15/2011		168.00	14.86	--	153.14	<1,000	<0.50	<0.50	<0.50	<1.0	990	130	<0.50	<0.50	17	<250	4.05	P
MW-7	8/17/2011		168.00	19.01	--	148.99	--	--	--	--	--	--	--	--	--	--	--	--	
MW-7	2/6/2012		168.00	18.20	--	149.80	<50	<0.50	<0.50	<0.50	<1.0	22	<4.0	<0.50	<0.50	<0.50	<250	1.58	P
MW-7	8/21/2012		168.00	20.29	--	147.71	--	--	--	--	--	--	--	--	--	--	--	--	
MW-8	3/7/1991		165.74	16.72	--	149.02	2.7	780	450	64	310	--	--	--	--	--	--	--	
MW-8	4/1/1991		165.74	12.54	--	153.20	15,000	3,600	2,600	410	1,900	--	--	--	--	--	--	--	
MW-8	6/27/1991		--	--	--	--	12,000	3,400	1,100	240	750	--	--	--	--	--	--	--	
MW-8	9/27/1991		--	--	--	--	41	5,700	5,200	1,100	4,300	--	--	--	--	--	--	--	
MW-8	12/18/1991		--	--	--	--	3.2	990	150	120	250	--	--	--	--	--	--	--	
MW-8	7/3/1992		165.74	18.78	--	146.96	72,000	19,000	32,000	3,000	15,000	--	--	--	--	--	--	--	
MW-8	10/5/1992		165.74	20.48	--	145.26	--	--	--	--	--	--	--	--	--	--	--	--	
MW-8	1/13/1993		165.74	12.87	--	152.87	--	--	--	--	--	--	--	--	--	--	--	--	
MW-8	4/23/1993		165.74	13.90	--	151.84	--	--	--	--	--	--	--	--	--	--	--	--	t
MW-8	7/12/1993		165.74	18.30	--	147.44	--	--	--	--	--	--	--	--	--	--	--	--	t
MW-8	10/21/1993		165.74	21.91	--	142.88	--	--	--	--	--	--	--	--	--	--	--	--	
MW-8	10/2/93-12/9/98		165.74	--	0.12	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-8	1/21/1994		165.74	19.12	--	146.62	--	--	--	--	--	--	--	--	--	--	--	--	
MW-8	4/20/1994		165.74	19.28	--	146.46	26,000	1,700	4,100	960	4,000	632	--	--	--	--	--	1.1	i
MW-8	12/23/1994		165.74	13.81	--	151.93	--	--	--	--	--	--	--	--	--	--	--	--	
MW-8	6/8/1995		165.74	17.82	--	147.92	--	--	--	--	--	--	--	--	--	--	--	--	
MW-8	8/22/1995		165.74	19.41	--	146.33	--	--	--	--	--	--	--	--	--	--	--	--	
MW-8	10/27/1995		165.74	20.47	--	145.27	--	--	--	--	--	--	--	--	--	--	--	--	
MW-8	1/25/1996		165.74	13.35	--	152.39	--	--	--	--	--	--	--	--	--	--	--	--	
MW-8	4/19/1996		165.74	14.40	--	151.34	--	--	--	--	--	--	--	--	--	--	--	--	
MW-8	7/23/1996		165.74	18.35	--	147.39	--	--	--	--	--	--	--	--	--	--	--	--	
MW-8	11/11/1996		165.74	19.41	--	146.33	--	--	--	--	--	--	--	--	--	--	--	--	
MW-8	1/21/1997		165.74	12.29	--	153.45	--	--	--	--	--	--	--	--	--	--	--	--	
MW-8	8/21/1997		165.74	19.61	--	146.13	240,000	1,100	9,300	4,100	31,100	<1,000	--	--	--	--	--	5.2	
MW-8	11/5/1997		165.74	19.45	--	146.29	57,000	790	2,700	2,300	15,200	<1,000	--	--	--	--	--	5	
MW-8	2/3/1998		165.74	9.33	--	156.41	--	--	--	--	--	--	--	--	--	--	--	--	
MW-8	2/4/1998		--	--	--	--	94,000	570	1,500	2,100	15,200	<2,500	--	--	--	--	--	5.5	

Table 2
Historical Groundwater Monitoring and Analytical Data
CA-11132
3201 35th Ave, Oakland, CA 94619

Well ID	Date	Type	TOC (ft msl)	DTW (ft)	Measured LNAPL Thickness (ft)	GW Elev (ft msl)	GRO (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE (µg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	Ethanol (µg/L)	DO (mg/l)	Notes
MW-8	12/30/1998		165.74	15.48	--	150.26	120,000	460	2,300	2,200	15,000	150	--	--	--	--	--	--	
MW-8	2/2/1999		165.74	18.29	--	147.45	82,000	450	2,200	3,700	26,000	<500	--	--	--	--	--	--	
MW-8	5/10/1999		165.74	15.62	--	150.12	28,000	740	1,800	1,100	5,800	<25	--	--	--	--	--	--	
MW-8	8/24/1999		165.74	18.41	--	147.33	75,000	530	1,400	3,300	21,000	150	--	--	--	--	--	--	
MW-8	11/3/1999		165.74	18.71	--	147.03	70,000	600	1,300	3,600	20,500	750	--	--	--	--	--	--	
MW-8	3/1/2000		165.74	19.37	--	146.37	27,000	1,600	1,200	2,600	6,600	120	--	--	--	--	--	--	
MW-8	11/20/2000		165.74	17.42	--	148.32	1,300,000	1,400	1,700	20,000	16,000	5,700	--	--	--	--	--	--	
MW-8	9/5/2001		165.74	21.45	0.04	144.25	--	--	--	--	--	--	--	--	--	--	--	--	j
MW-8	11/30/2001		165.74	18.31	--	147.43	--	--	--	--	--	--	--	--	--	--	--	--	h
MW-8	2/20/2002		165.74	14.02	--	151.72	20,000	163	114	403	3,810	80.4	--	--	--	--	--	--	
MW-8	6/20/2002		165.74	17.56	--	148.18	28,000	466	141	962	5,850	2,520	--	--	--	--	--	--	
MW-8	9/11/2002		165.74	19.45	--	146.29	190,000	1,500	670	4,500	23,000	1,200	--	--	--	--	--	--	
MW-8	11/12/2002		165.74	19.15	--	146.59	420	6.4	2.9	16	110	31	--	--	--	--	--	--	t
MW-8	1/29/2003		165.74	15.02	--	150.72	200,000	810	<500	2,000	11,000	<500	<2,000	<50	<50	<50	<4,000	--	n
MW-8	5/22/2003		165.74	15.07	--	150.67	--	--	--	--	--	--	<1,000	<25	<25	<25	<5,000	--	t
MW-8	6/24/2003		165.74	17.95	--	147.79	43,000	860	300	2,100	9,600	46	--	--	--	--	--	--	
MW-8	7/28/2003		165.74	19.45	--	146.29	62,000	690	230	1,800	15,000	2,100	<4,000	<100	<100	<100	<20,000	--	
MW-8	8/12/2003		165.74	19.40	<0.01	146.34	--	--	--	--	--	--	--	--	--	--	--	--	o, t
MW-8	9/12/2003		165.74	19.34	--	146.40	--	--	--	--	--	--	--	--	--	--	--	--	o
MW-8	10/3/2003		165.74	--	<0.01	--	--	--	--	--	--	--	--	--	--	--	--		
MW-8	11/18/2003		165.74	18.80	<0.01	146.94	8,800	500	37	530	930	1,700	<400	<10	<10	20	<2,000	--	o, p, P
MW-8	12/31/2003		165.74	--	<0.01	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-8	2/2/2004		165.74	--	<0.01	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-8	2/23/2004		165.74	12.82	<0.01	152.92	32,000	840	360	1,000	7,100	110	<2,000	<50	<50	<50	<10,000	--	t, P
MW-8	3/18/2004		165.74	--	<0.01	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-8	4/13/2004		165.74	--	<0.01	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-8	5/4/2004		165.74	18.87	<0.01	146.87	42,000	570	230	1,700	8,400	2,000	<1,000	<25	<25	33	<5,000	--	t, P
MW-8	6/2/2004		165.74	--	<0.01	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-8	8/4/2004		165.74	19.37	0.05	146.41	--	--	--	--	--	--	--	--	--	--	--	--	
MW-8	9/22/2004		165.74	19.60	--	146.14	--	--	--	--	--	--	--	--	--	--	--	--	NP
MW-8	11/10/2004		165.74	16.58	--	149.16	11,000	790	61	1,000	830	74	<1,000	<25	<25	<25	<5,000	--	t, P
MW-8	2/15/2005		165.74	12.85	--	152.89	38,000	1,300	390	2,300	7,900	<50	<2,000	<50	<50	<50	<10,000	--	P
MW-8	5/16/2005		165.74	12.22	--	153.52	31,000	1,000	360	2,500	7,500	<50	<2,000	<50	<50	<50	<10,000	--	P
MW-8	8/17/2005		165.74	17.80	--	147.94	60,000	540	240	2,500	8,600	<50	<2,000	<50	<50	<50	<10,000	--	P
MW-8	11/18/2005		165.74	21.02	--	144.72	33,000	340	120	1,400	4,900	140	<2,000	<50	<50	<50	<10,000	--	P
MW-8	2/7/2006		165.74	10.73	--	155.01	5,700	94	27	260	820	7.5	<200	<5.0	<5.0	<5.0	<3,000	--	P
MW-8	5/19/2006		165.74	13.89	--	151.85	40,000	1,100	320	2,900	6,000	<25	<1,000	<25	<25	<25	<15,000	--	t, P
MW-8	8/23/2006		165.74	18.85	--	146.89	21,000	520	150	1,800	6,300	82	<1,000	<25	<25	<25	<15,000	--	P
MW-8	11/15/2006		165.74	18.75	--	146.99	3,300	81	<25	130	430	110	<1,000	<25	<25	<25	<15,000	0.81	P
MW-8	2/14/2007		165.74	13.45	(Sheen)	152.29	9,300	320	<25	360	710	82	<1,000	<25	<25	<25	<15,000	1.89	t, P
MW-8	5/22/2007		165.74	15.92	(Sheen)	149.82	17,000	370	51	760	1,600	11	<400	<10	<10	<10	<6,000	1.05	t, P
MW-8	8/15/2007		165.74	19.11	(Sheen)	146.63	17,000	170	44	1,000	2,700	28	<400	<10	<10	<10	<6,000	3.93	P
MW-8	11/8/2007		165.74	18.46	(Sheen)	147.28	24,000	150	43	1,100	3,200	27	<1,000	<25	<25	<25	<15,000	1.29	t, P
MW-8	8/20/2008		165.74	19.66	0.01	146.08	--	--	--	--	--	--	--	--	--	--	--	--	b
MW-8	2/25/2009		165.74	11.50	(Sheen)	154.24	3,400	160	11	88	65	35	<200	<10	<10	<10	<6,000	2.18	t, P
MW-8	4/8/2009		165.74	14.55	--	151.19	--	--	--	--	--	--	--	--	--	--	--	--	
MW-8	5/28/2009		165.74	16.12	(Sheen)	149.62	8,300	410	54	660	800	<2.5	<50	<2.5	<2.5	<2.5	<1,500	0.06	t, x, P
MW-8	6/16/2009		165.74	17.63	--	148.11	--	--	--	--	--	--	--	--	--	--	--	--	
MW-8	3/4/2010		166.00	10.33	--	155.67	11,000	520	110	830	1,600	<5.0	<40	<5.0	<5.0	<5.0	<1,000	0.82	P
MW-8	9/2/2010		166.00	18.52	--	147.48	6,900	180	24	280	480	<5.0	<40	<5.0	<5.0	<5.0	<1,000	0.56	P
MW-8	3/15/2011		166.00	11.03	(Sheen)	154.97	14,000	470	150	1,400	3,000	<2.5	<20	<2.5	<2.5	<2.5	<1,200	0.90	P
MW-8	8/17/2011		166.00	17.14	--	148.86	4,100	180	24	280	340	<5.0	<40	<5.0	<5.0	<5.0	<2,500	0.61	P
MW-8	2/6/2012		166.00	15.07	--	150.93	5,100	140	18	210	220	<5.0	<40	<5.0	<5.0	<5.0	2,900	0.91	P
MW-8	8/21/2012		166.00	18.88	--	147.12	3,600	220	25	170	170	<5.0	<40	<5.0	<5.0	<5.0	<2,500	1.13	
MW-9	3/7/1991		166.20	16.79	--	149.41	7.1	220	4	2.4	2,400	--	--	--	--	--	--	--	
MW-9	4/1/1991		166.20	12.89	--	153.31	14,000	2,000	2,600	360	1,600	<10	<80	<10	<10	<10	<2,000	--	

Table 2
Historical Groundwater Monitoring and Analytical Data
CA-11132
3201 35th Ave, Oakland, CA 94619

Well ID	Date	Type	TOC (ft msl)	DTW (ft)	Measured LNAPL Thickness (ft)	GW Elev (ft msl)	GRO (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE (µg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	Ethanol (µg/L)	DO (mg/l)	Notes
MW-9	6/27/1991		--	--	--	--	3,600	520	400	85	310	--	--	--	--	--	--	--	
MW-9	9/27/1991		--	--	--	--	3.2	720	150	50	180	--	--	--	--	--	--	--	
MW-9	12/18/1991		--	--	--	--	--	2.5	1.1	0.3	5.8	--	--	--	--	--	--	--	
MW-9	7/3/1992		166.20	18.89	--	147.31	5,700	17,000	840	230	800	--	--	--	--	--	--	--	
MW-9	10/5/1992		166.20	20.52	--	145.68	1,400	440	17	14	100	--	--	--	--	--	--	--	
MW-9	1/13/1993		166.20	12.92	--	153.28	11,000	1,200	1,700	340	1,400	--	--	--	--	--	--	--	i
MW-9	1/13/1993	Dup	166.20	12.92	--	153.28	11,000	1,200	1,600	330	1,300	--	--	--	--	--	--	--	i, (Dup)
MW-9	4/23/1993		166.20	14.08	--	152.12	24,000	2,800	4,500	730	3,400	350	2,600	<5.0	<5.0	12	<1,000	--	i
MW-9	7/12/1993		166.20	18.44	--	147.76	13,000	1,400	1,100	360	1,400	20.8	--	--	--	--	--	--	i
MW-9	7/12/1993	Dup	166.20	18.44	--	147.76	10,000	1,200	900	310	1,200	--	--	--	--	--	--	--	(Dup)
MW-9	10/21/1993		166.20	21.81	--	143.50	--	--	--	--	--	--	--	--	--	--	--	--	
MW-9	11/2/93-4/29/97		166.20	--	0.10	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-9	1/21/1994		166.20	19.28	--	146.92	--	--	--	--	--	--	--	--	--	--	--	--	
MW-9	4/20/1994		166.20	19.72	--	146.48	43,000	2,800	6,800	1,300	7,900	768	--	--	--	--	--	1.7	d
MW-9	4/20/1994	Dup	166.20	19.72	--	146.48	45,000	2,700	6,800	1,200	8,200	740	160	<2.5	<2.5	<2.5	<500	--	(Dup)
MW-9	8/1/1994		166.20	20.18	--	146.02	--	--	--	--	--	--	--	--	--	--	--	--	
MW-9	12/23/1994		166.20	14.22	--	151.98	--	--	--	--	--	--	--	--	--	--	--	--	
MW-9	1/26/1995		166.20	11.85	--	154.35	--	--	--	--	--	--	--	--	--	--	--	--	
MW-9	6/8/1995		166.20	18.33	--	147.87	--	--	--	--	--	--	--	--	--	--	--	--	
MW-9	8/22/1995		166.20	19.95	--	146.25	--	--	--	--	--	--	--	--	--	--	--	--	
MW-9	10/27/1995		166.20	20.88	--	145.32	--	--	--	--	--	--	--	--	--	--	--	--	
MW-9	1/25/1996		166.20	13.84	--	152.36	--	--	--	--	--	--	--	--	--	--	--	--	
MW-9	7/23/1996		166.20	18.84	--	147.36	--	--	--	--	--	--	--	--	--	--	--	--	
MW-9	11/11/1996		166.20	19.91	--	146.29	--	--	--	--	--	--	--	--	--	--	--	--	
MW-9	1/21/1997		166.20	12.93	--	153.27	--	--	--	--	--	--	--	--	--	--	--	--	
MW-9	4/29/1997		166.20	18.03	0.10	148.17	--	--	--	--	--	--	--	--	--	--	--	--	t
MW-9	4/30/1997		--	--	--	--	78,000	1,900	3,600	3,100	20,600	<5,000	<4.0	<0.50	<0.50	<0.50	<100	5.5	
MW-9	8/21/1997		166.20	19.56	--	146.64	110,000	2,100	3,400	2,300	18,800	<500	--	--	--	--	--	5.1	
MW-9	11/5/1997		166.20	20.59	0.01	145.60	59,000	1,400	1,700	2,200	17,000	<500	--	--	--	--	--	4.5	
MW-9	2/3/1998		166.20	10.56	--	155.64	55,000	490	1,200	1,400	10,200	<1,000	--	--	--	--	--	4.9	
MW-9	5/28/1998		166.20	14.21	--	151.99	430	250	1,200	1,500	11,400	<250	4.0	<0.50	<0.50	17	<100	3.8	
MW-9	5/28/1998	Dup	166.20	14.21	--	151.99	53,000	290	830	1,400	10,500	<500	<40	<5.0	<5.0	<5.0	<1,000	--	(Dup)
MW-9	12/30/1998		166.20	15.61	--	150.59	83,000	860	1,300	2,400	21,000	180	--	--	--	--	--	--	
MW-9	2/2/1999		166.20	12.33	--	153.87	75,000	530	960	1,900	17,000	<50	--	--	--	--	--	--	
MW-9	5/10/1999		166.20	15.67	--	150.53	22,000	600	1,500	1,100	4,400	72	--	--	--	--	--	--	
MW-9	8/24/1999		166.20	19.10	--	147.10	85,000	850	1,300	1,700	20,000	<250	--	--	--	--	--	--	
MW-9	11/3/1999		166.20	19.58	--	146.62	72,000	700	780	1,900	19,000	<5.0	--	--	--	--	--	--	
MW-9	3/1/2000		166.20	13.19	--	153.01	34,000	78	490	1,100	8,200	63	--	--	--	--	--	--	
MW-9	4/21/2000		166.20	14.29	--	151.91	55,000	260	920	1,500	16,000	<5.0	--	--	--	--	--	--	
MW-9	7/31/2000		166.20	15.01	--	151.19	1,200,000	1,500	6,300	15,000	120,000	1,600	--	--	--	--	--	--	
MW-9	11/20/2000		166.20	18.23	--	147.97	320,000	3,500	19,000	5,000	40,000	3,900	--	--	--	--	--	--	
MW-9	2/18/2001		166.20	13.14	--	153.06	32,000	290	417	1,180	10,400	121	--	--	--	--	--	--	
MW-9	6/7/2001		166.20	17.41	--	148.79	96,000	421	704	2,330	17,300	223	--	--	--	--	--	--	
MW-9	9/5/2001		166.20	20.56	--	145.64	39,000	445	323	1,240	8,940	310	--	--	--	--	--	--	
MW-9	11/30/2001		166.20	17.42	--	148.78	60,000	310	586	1,890	14,200	285	--	--	--	--	--	--	
MW-9	2/20/2002		166.20	13.87	--	152.33	14,000	64	122	897	2,650	293	--	--	--	--	--	--	
MW-9	6/20/2002		166.20	18.22	--	147.98	29,000	307	168	1,100	5,670	208	--	--	--	--	--	--	
MW-9	9/11/2002		166.20	20.27	--	145.93	230,000	1,400	680	3,600	23,000	<2,500	--	--	--	--	--	--	
MW-9	11/12/2002		166.20	19.40	--	146.80	840	5.8	3.6	28	160	21	--	--	--	--	--	--	t
MW-9	1/29/2003		166.20	14.30	0.10	151.80	--	--	--	--	--	--	--	--	--	--	--	--	j, n
MW-9	5/22/2003		166.20	15.16	--	151.04	23,000	420	<50	1,000	2,900	<50	38	<50	<50	<50	<100	--	t
MW-9	7/28/2003		166.20	19.55	<0.01	146.65	1,500,000	<500	<500	9,800	79,000	<500	<20,000	<500	<500	<500	<100,000	--	
MW-9	8/12/2003		166.20	19.60	<0.01	146.60	--	--	--	--	--	--	--	--	--	--	--	--	o, t
MW-9	9/12/2003		166.20	19.60	<0.01	146.60	--	--	--	--	--	--	--	--	--	--	--	--	o, t
MW-9	11/18/2003		166.20	18.98	<0.01	147.22	19,000	250	18	690	2,400	45	<400	<10	<10	<10	<2,000	--	o, p, P
MW-9	12/31/2003		166.20	--	<0.01	--	--	--	--	--	--	--	--	--	--	--	--	--	

Table 2
Historical Groundwater Monitoring and Analytical Data
CA-11132
3201 35th Ave, Oakland, CA 94619

Well ID	Date	Type	TOC (ft msl)	DTW (ft)	Measured LNAPL Thickness (ft)	GW Elev (ft msl)	GRO (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE (µg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	Ethanol (µg/L)	DO (mg/l)	Notes
MW-9	2/2/2004		166.20	--	<0.01	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-9	2/23/2004		166.20	13.91	<0.01	152.29	91,000	<250	440	2,200	13,000	<250	<10,000	<250	<250	<250	<50,000	--	t, P
MW-9	3/18/2004		166.20	--	<0.01	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-9	4/13/2004		166.20	--	<0.01	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-9	5/4/2004		166.20	18.11	<0.01	148.09	39,000	230	44	1,100	4,200	<25	<1,000	<25	<25	<25	<5,000	--	t, P
MW-9	6/2/2004		166.20	--	<0.01	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-9	8/4/2004		166.20	18.90	0.03	147.32	--	--	--	--	--	--	--	--	--	--	--	--	
MW-9	9/22/2004		166.20	19.69	--	146.51	--	--	--	--	--	--	--	--	--	--	--	--	
MW-9	11/10/2004		166.20	16.95	--	149.25	31,000	300	<50	1,100	3,800	<50	<2,000	<50	<50	<50	<10,000	--	t, NP
MW-9	2/15/2005		166.20	12.95	--	153.25	19,000	200	<50	720	2,000	<50	<2,000	<50	<50	<50	<10,000	--	t, P
MW-9	5/16/2005		166.20	12.53	--	153.67	17,000	99	15	770	2,500	<10	4.4	<10	<10	<10	<2,000	--	P
MW-9	8/17/2005		166.20	18.03	--	148.17	28,000	160	26	1,000	2,700	<12	<500	<12	<12	<12	<2,500	--	P
MW-9	11/18/2005		166.20	19.04	--	147.16	12,000	98	<5.0	410	510	19	<200	<5.0	<5.0	<5.0	<1,000	--	P
MW-9	2/7/2006		166.20	10.95	(Sheen)	155.25	18,000	110	8.7	770	1,500	<5.0	<4.0	<5.0	<5.0	5.4	<3,000	--	t, P
MW-9	8/23/2006		166.20	18.91	--	147.29	28,000	84	<50	1,600	6,200	<50	<2,000	<50	<50	<50	<30,000	--	P
MW-9	11/15/2006		166.20	18.60	--	147.60	8,200	44	<25	190	370	26	<1,000	<25	<25	<25	<15,000	0.92	P
MW-9	2/14/2007		166.20	13.30	--	152.90	20,000	64	<25	720	2,000	<25	<1,000	<25	<25	<25	<15,000	0.87	t, P
MW-9	5/22/2007		166.20	16.14	(Sheen)	150.06	16,000	80	<25	460	1,200	<25	<1,000	<25	<25	<25	<15,000	0.81	t, P
MW-9	8/15/2007		166.20	19.31	(Sheen)	146.89	5,900	27	<2.5	59	170	27	<100	<2.5	<2.5	<2.5	<1,500	2.57	P
MW-9	11/8/2007		166.20	18.70	--	147.50	6,100	29	<5.0	98	250	52	<200	<5.0	<5.0	<5.0	<3,000	1.24	P
MW-9	2/20/2008		166.20	12.79	0.03	153.41	--	--	--	--	--	--	--	--	--	--	--	--	b, j
MW-9	5/7/2008		166.20	17.68	0.03	148.52	--	--	--	--	--	--	--	--	--	--	--	--	b, j
MW-9	8/20/2008		166.20	19.75	0.01	146.45	--	--	--	--	--	--	--	--	--	--	--	--	b
MW-9	11/17/2008		166.20	18.73	--	147.47	10,000	24	<2.5	160	140	33	<50	<2.5	<2.5	<2.5	<1,500	--	w, P
MW-9	2/25/2009		166.20	11.23	(Sheen)	154.97	14,000	60	<10	550	140	<10	<200	<10	<10	<10	<6,000	2.27	t, P
MW-9	4/8/2009		166.20	14.21	--	151.99	--	--	--	--	--	--	--	--	--	--	--	--	
MW-9	5/28/2009		166.20	16.33	(Sheen)	149.87	8,000	49	<2.5	790	140	<2.5	<200	<2.5	<2.5	<2.5	<6,000	0.07	t, x, P
MW-9	6/16/2009		166.20	17.82	0.01	148.38	--	--	--	--	--	--	--	--	--	--	--	--	
MW-9	8/6/2009		166.20	19.25	(Sheen)	146.95	6,800	19	<2.0	120	250	18	<40	<2.0	<2.0	<2.0	<1,200	0.00	x, P
MW-9	3/4/2010		166.00	10.32	--	155.68	6,000	29	<2.5	<2.5	100	<2.5	<20	<2.5	<2.5	<2.5	<500	0.62	P
MW-9	9/2/2010		166.00	18.72	--	147.28	5,700	31	<2.5	160	120	<2.5	<20	<2.5	<2.5	<2.5	<500	0.46	NP
MW-9	3/15/2011		166.00	11.08	--	154.92	6,500	17	<2.5	150	73	<2.5	<20	<2.5	<2.5	<2.5	<1,200	1.07	P
MW-9	8/17/2011		166.00	17.35	--	148.65	5,200	9.5	<2.5	71	54	<2.5	<20	<2.5	<2.5	<2.5	<1,300	0.64	
MW-9	2/6/2012		166.00	15.52	--	150.48	4,200	14	<2.5	49	22	<2.5	<20	<2.5	<2.5	<2.5	<1,300	1.43	P
MW-9	8/21/2012		166.00	18.79	--	147.21	4,200	22	<2.5	42	21	<2.5	<20	<2.5	<2.5	<2.5	<1,300	1.13	
MW-10	3/7/1991		167.01	18.09	--	148.92	1.6	120	190	32	230	--	--	--	--	--	--	--	
MW-10	4/1/1991		167.01	13.92	--	153.09	--	--	--	--	--	--	--	--	--	--	--	--	
MW-10	6/27/1991		--	--	--	--	12,000	7,300	500	150	300	--	--	--	--	--	--	--	
MW-10	9/27/1991		--	--	--	--	57	12,000	7,200	1,400	4,600	--	--	--	--	--	--	--	
MW-10	12/18/1991		--	--	--	--	5.3	2,500	120	36	79	--	--	--	--	--	--	--	
MW-10	7/3/1992		167.01	19.92	--	147.09	8,600	5,100	1,300	180	690	--	--	--	--	--	--	--	
MW-10	10/5/1992		167.01	21.92	--	145.09	--	--	--	--	--	--	--	--	--	--	--	--	
MW-10	1/13/1993		167.01	14.43	--	152.58	--	--	--	--	--	--	--	--	--	--	--	--	
MW-10	4/23/1993		167.01	15.26	--	151.75	--	--	--	--	--	--	--	--	--	--	--	--	
MW-10	7/12/1993		167.01	19.78	--	147.23	--	--	--	--	--	--	--	--	--	--	--	--	
MW-10	10/21/1993		167.01	22.90	--	144.11	--	--	--	--	--	--	--	--	--	--	--	--	
MW-10	1/21/1994		167.01	20.25	--	146.76	--	--	--	--	--	--	--	--	--	--	--	--	
MW-10	4/20/1994		167.01	20.74	--	146.27	100,000	12,000	24,000	2,400	14,000	1,577	--	--	--	--	--	1	d, i
MW-10	8/1/1994		167.01	22.00	--	145.01	--	--	--	--	--	--	--	--	--	--	--	--	
MW-10	12/23/1994		167.01	16.08	--	150.93	--	--	--	--	--	--	--	--	--	--	--	--	
MW-10	1/26/1995		167.01	13.68	--	153.33	--	--	--	--	--	--	--	--	--	--	--	--	
MW-10	6/8/1995		167.01	19.08	--	147.93	--	--	--	--	--	--	--	--	--	--	--	--	
MW-10	8/22/1995		167.01	20.73	--	146.28	--	--	--	--	--	--	--	--	--	--	--	--	
MW-10	10/27/1995		167.01	21.69	--	145.32	--	--	--	--	--	--	--	--	--	--	--	--	
MW-10	1/25/1996		167.01	15.05	--	151.96	--	--	--	--	--	--	--	--	--	--	--	--	
MW-10	4/19/1996		167.01	16.26	--	150.75	--	--	--	--	--	--	--	--	--	--	--	--	