ExxonMobil
Environmental Services Company
4096 Piedmont Avenue #194
Oakland, CA 94611
510.547.8196
510.547.8706 FAX
jennifer.c.sedlachek@exxonmobil.com

RECEIVED

2:32 pm, Mar 27, 2009

Alameda County
Environmental Health

Jennifer C. Sedlachek
Project Manager

ExxonMobil

March 26, 2009

Ms. Barbara Jakub
Alameda County Health Care Services Agency
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502

Subject: Former Mobil Station 04334, 2492 Castro Valley Boulevard, Castro Valley, California

Dear Ms. Jakub:

Attached for your review and comment is a copy of the *Report of Well Installation and Site Conceptual Model* for the above-referenced site. This report, prepared by ETIC Engineering, Inc. of Pleasant Hill, California, is being submitted in response to a letter from the Alameda County Health Care Services Agency dated December 5, 2008.

Upon information and belief, I declare, under penalty of perjury, that the information contained in the attached report is true and correct.

If you have any questions or comments, please contact me at 510.547.8196.

Sincerely,

Jennifer C. Sedlachek
Project Manager

Attachment: ETIC Report of Well Installation and Site Conceptual Model

c: w/ attachment:
Ms. Paula Floeck – Jiffy Lube International
Mr. Joseph D. Phillips – Jiffy Lube Remediation Coordinator
Mr. William Slautterback – Cal Lube Real Estate Limited Partnership
Mr. William Peterson – Owner of Castro Valley Lumber Company
East Bay Equities (formerly Truman Food Services Five)

c: w/o attachment:
Mr. Bryan Campbell – ETIC Engineering, Inc.

ETIC ENGINEERING

Report of Well Installation and Site Conceptual Model

Former Mobil Station 04334
2492 Castro Valley Boulevard
Castro Valley, California

Prepared for

ExxonMobil Oil Corporation

Prepared by

ETIC Engineering, Inc.
2285 Morello Avenue
Pleasant Hill, California 94523
(925) 602-4710

March 26, 2009

K. Erik Appel
Project Manager

Date

PROFESSIONAL GEOLOGIST
BRYAN CAMPBELL
No. 7724
Exp. 2/28/10
STATE OF CALIFORNIA

3/26/09

Bryan Campbell, P.G. #7724
Senior Geologist

Date

March 2009

CONTENTS

Page

CONTENTS

(CONTINUED)

LIST OF FIGURES AND TABLES

Former Mobil Station 04334

SITE CONTACTS

Site Name:	Former Mobil Station 04334
Site Address:	2492 Castro Valley Boulevard Castro Valley, California
ExxonMobil Project Manager:	Jennifer C. Sedlachek ExxonMobil Environmental Services Company 4096 Piedmont Avenue #194 Oakland, California 94611 (510) 547-8196
Consultant to ExxonMobil:	ETIC Engineering, Inc. 2285 Morello Avenue Pleasant Hill, California 94523 (925) 602-4710
ETIC Project Manager:	K. Erik Appel
Regulatory Oversight:	Barbara Jakub Alameda County Health Care Services Agency 1131 Harbor Bay Parkway, 2nd Floor Alameda, California 94502 (510) 567-6700

1. INTRODUCTION

At the request of ExxonMobil Environmental Services Company on behalf of ExxonMobil Oil Corporation (ExxonMobil), ETIC Engineering, Inc. (ETIC) has prepared this Report of Well Installation and Site Conceptual Model for former Mobil Station 04334, located at 2492 Castro Valley Boulevard, Castro Valley, California (Figure 1).

A Work Plan for Subsurface Investigation, dated September 2008, was submitted to the Alameda County Health Care Services Agency (ACHCSA) (ETIC 2008). The work plan proposed the installation of one groundwater monitoring well in the downgradient direction to further investigate hydrocarbon impacts to soil and groundwater in the area. The work plan was approved by the ACHCSA in a letter dated 5 December 2008.

In its letter, the ACHCSA also requested a Site Conceptual Model along with the results of the proposed investigation.

Correspondence with the ACHCSA is provided in Appendix A. This report documents the installation of the groundwater monitoring well and includes Site Conceptual Model information.

Scope of Work

The investigation consisted of the following activities:

- On 29 and 30 January 2009, soil boring MW5 was drilled to a depth of 15 feet below ground surface (bgs). The boring was completed as a 2-inch-diameter groundwater monitoring well.
- Soil samples were collected during the advancement of the boring.
- The well was surveyed on 10 February 2009.
- The well was developed on 4 March 2009.
- Groundwater samples were collected from the well on 4 March 2009.

2. SITE BACKGROUND

2.1 SITE LOCATION, HISTORY, AND LAND USE

Former Mobil Station 04334 is an active Jiffy Lube-branded oil change service business located at 2492 Castro Valley Boulevard, on the northwest corner of the intersection of Castro Valley Boulevard and Stanton Avenue (Figures 1 and 2). The site was previously operated as a service station by GP Petroleum from 1956 to 1969. In 1956, two 6,000-gallon underground storage tanks (USTs) and one used-oil UST were installed. The service station was operated by Mobil Oil from 1969 to 1983. An 8,000-gallon UST was installed in 1971. In 1983, the three fuel USTs and one used-oil UST were removed from the site. The property is currently owned by Cal Lube Real Estate Limited Partnership.

The site lies in a predominantly commercial district. To the east, across Stanton Avenue, is a former Tosco 76 Service Station which is a former Thrifty Oil station. The former Thrifty Oil site is an active Leaking Underground Storage Tank site under the jurisdiction of the ACHCSA. The former Thrifty Oil site has 12 groundwater monitoring wells, including one well (RS9) which is located adjacent to the east side of the former Mobil site. To the west of the former Mobil site is a Big-O Tire business and to the south across Castro Valley Boulevard is a Wendy's Restaurant. To the southeast of the site is the Castro Valley Lumber Co. business. To the north is a residential area.

The site is situated near the base of the northwest trending foothills separating Castro Valley from Hayward. The site is located at an elevation of approximately 180 feet above mean sea level.

2.2 REGIONAL GEOLOGY AND HYDROGEOLOGY

The former Mobil site is underlain by Quaternary-age alluvium. Mapped bedrock outcrops near the site include the Panoche Formation, which is described as a conglomerate with a sandstone matrix, and the Knoxville Formation, which is described as a micaceous shale with thin beds of sandstone (Alton 1997). The site is located in the Castro Valley Groundwater Basin, which is a 4-square mile basin that is drained by the San Lorenzo Creek (DWR 1975).

The nearest surface water body to the site is the South Reservoir, located approximately 2,300 feet southeast of the site. San Lorenzo Creek is located approximately 3,500 feet southwest of the site.

2.3 LOCAL GEOLOGY AND HYDROGEOLOGY

The geology and hydrogeology of the site have been evaluated using the boring logs from previous site investigations. The majority of the native soil types encountered during drilling consist of silts and clays to at least 20 feet bgs, the maximum explored depth. Relatively minor lenses of silty sand and silty gravel have been encountered within the major soil types with a thickness of no more than 4 feet beneath the site. Underlying bedrock has been observed at a depth as shallow as 10 feet bgs.

The depth to groundwater at the site ranges between approximately 3 and 8 feet bgs. Groundwater flow direction is variable but is predominantly toward the southeast.

2.4 SUMMARY OF PREVIOUS INVESTIGATIONS

During removal of the USTs in 1983, soil samples were collected for geotechnical and physical properties analysis to determine compaction specifications for backfill of the tank cavity. Petroleum hydrocarbon odor was not noted during backfilling of the tank cavity (Judd Hall and Associates 1983).

In 1986, a geotechnical assessment was conducted by Giles Engineering Associates, Inc. on behalf of California Lubricants Ltd. Six soil borings were advanced onsite and sampled. Slight to moderate petroleum hydrocarbon odor was noted from 3 feet to 8.6 feet bgs while drilling in the backfill and former tank cavity (Alisto 1994). No soil samples were submitted for analysis during this assessment.

In March 1999, TRC advanced five direct-push borings (AB1 through AB5) to total depths ranging between 16 and 20 feet bgs. Soil and groundwater samples were collected (TRC 1999).

In November 2003, ETIC conducted a subsurface investigation. Seven direct-push soil borings (SB1-SB7) were advanced to total depths ranging between 15 and 20 feet bgs (with the exception of SB4 which was terminated at 2 feet bgs). Soil and groundwater samples were collected (ETIC 2004a).

In June 2004, ETIC observed the installation of three onsite groundwater monitoring wells (MW1, MW2, MW3), and one offsite groundwater monitoring well (MW4). Soil samples were collected (ETIC 2004b). Groundwater samples collected from the wells are analyzed quarterly.

In October 2007, ETIC observed the advancement of seven soil borings (SB8 through SB14). The borings were advanced to depths ranging from 10 to 15 feet bgs. Soil and groundwater samples were collected from SB8 and SB11 through SB14 (ETIC 2007).

Well construction details are provided in Table 1. Historical soil analytical results are summarized in Tables 2 and 3. Cumulative groundwater monitoring data are summarized in Table 4. Groundwater sample analytical results for temporary borings are summarized in Table 5. The groundwater analytical results and groundwater flow direction for the January 2009 monitoring event (ETIC 2009) are included on Figures 3 and 4.

3. SUBSURFACE INVESTIGATION

On 29 and 30 January 2009, ETIC observed the installation of one groundwater monitoring well (MW5). Prior to drilling, a permit to drill was obtained from the Alameda County Public Works Agency (ACPWA). A copy of the permit is included in Appendix B. The location of the monitoring well is shown on Figure 2.

3.1 DRILLING OF SOIL BORINGS

On 29 January 2009, boring MW5 was cleared by Woodward Drilling, Inc. (Woodward) of Rio Vista, California (C-57 license #710079) with a hand auger and air vacuum rig to ensure that there were no obstructions near the potential path of the augers. The boring was cleared to a depth of 8 feet bgs.

On 30 January 2009, boring MW5 was drilled by Woodward using a truck-mounted rotary drill rig equipped with hollow-stem augers (HSA). The boring was drilled to a depth of 15 feet bgs. The boring was continuously logged from the surface to the total depth explored, and selected soil samples were collected from the boring for laboratory analysis. The HSA and downhole equipment were pressure-washed upon completion of the borehole. Soil cuttings and equipment rinsate were contained in 55-gallon drums and temporarily stored onsite. Field methods and procedures are described in the protocols, presented in Appendix C. The boring log is presented in Appendix D.

3.2 SOIL SAMPLING

Soil samples were collected by driving an 18-inch-by-2-inch-diameter California-modified split-spoon sampler containing 6-inch stainless steel sleeves ahead of the augers into undisturbed soil. The samples were examined for soil characteristics and screened in the field with a photoionization detector (PID) to determine the relative hydrocarbon content. The soils are described and the PID readings are recorded on the soil boring log presented in Appendix D. Selected soil samples were sealed with Teflon tape, capped, labeled, placed in a cooler with ice, and submitted to a state-certified laboratory for analysis. Soil sampling procedures are described in the protocols, presented in Appendix C.

3.3 GROUNDWATER MONITORING WELL INSTALLATION

The boring was completed as a groundwater monitoring well. The well was completed in accordance with the protocols in Appendix C and the well installation requirements issued by the ACPWA.

Well MW5 was constructed with 2-inch-diameter Schedule 40 polyvinyl chloride (PVC) blank well casing and screened with 0.010-inch slotted Schedule 40 PVC casing. A filter pack of #2/12 sand was placed from the total depth of the boring to 2 feet above the top of the screened interval of the well. The well was then sealed with a 2-foot layer of hydrated bentonite chips, followed by neat cement grout to just below ground surface.

Well construction details are summarized in Table 1 and are shown on the soil boring log provided in Appendix D.

3.4 WELL DEVELOPMENT

On 4 March 2009, the well was developed. Prior to the development, the well was gauged for depth to water with a water level meter. The well was surged for approximately 15 minutes using a 2-inch surge block. The WaTerra tubing was installed, and the well was purged of up to 4 casing volumes of water using the WaTerra system. Groundwater pH, temperature, and electrical conductivity were monitored during purging. Well development procedures are described in Appendix C. Field data recorded during well development are presented in Appendix E.

3.5 GROUNDWATER SAMPLING

On 4 March 2009, groundwater samples were collected from the well. The samples were submitted to a state-certified laboratory for analysis. The groundwater monitoring and sampling procedures are described in Appendix C. Field data recorded during sampling are presented in Appendix E.

3.6 SURVEYING OF WELLS

On 10 February 2009, the location and top-of-casing elevation of groundwater monitoring well MW5 was surveyed by Morrow Surveying, a licensed land surveyor. The top-of-casing elevations for the wells are listed in Table 1. The surveyor's report is provided in Appendix F.

3.7 WASTE CONTAINMENT AND DISPOSAL

The soil generated during drilling activities was collected in 55-gallon drums and temporarily stored onsite. A soil sample was collected from each drum, submitted to a state-certified laboratory, and analyzed for Total Petroleum Hydrocarbons as gasoline (TPH-g), benzene, toluene, ethylbenzene, and total xylenes (BTEX), and total lead in order to characterize the soil for proper disposal. The laboratory analytical reports and chain-of-custody documentation are included in Appendix G. The soil was removed from the site on 18 February 2009 and transported to an ExxonMobil-approved facility. Documentation of the waste disposal can be found in Appendix H.

Equipment rinsate water was contained in 55-gallon drums. The drums were removed from the site on 18 February 2009 and transported to an ExxonMobil-approved facility. Documentation of the waste disposal can be found in Appendix H.

4. RESULTS

4.1 SITE GEOLOGY AND HYDROGEOLOGY

Soils encountered during the drilling activities were generally consistent with those observed in previous investigations at the site. The majority of the native soils encountered during drilling generally consisted of clay with various amounts of silt and sandy silt layers. Underlying bedrock was encountered from 13 to 15 feet bgs, the total depth explored during this investigation. Geologic cross-sections are provided on Figures 2, 5, and 6. Detailed soil descriptions are presented in the boring log in Appendix D.

First water was encountered at a depth of approximately 15 feet bgs.

4.2 SOIL SAMPLE ANALYTICAL METHODS AND RESULTS

Soil samples were submitted to Calscience Environmental Laboratories, Inc. (Calscience), a California state-certified laboratory in Garden Grove, California, and analyzed for TPH-g by EPA Method 8015B, BTEX by EPA Method 8021B(M), methyl tertiary butyl ether (MTBE), 1,2-dichloroethane (1,2-DCA), diisopropyl ether (DIPE), 1,2-dibromoethane (EDB), ethyl tertiary butyl ether (ETBE), tertiary amyl methyl ether (TAME), tertiary butyl alcohol (TBA), and ethanol by EPA Method 8260B. Analytical results are summarized in Tables 2 and 3 and on Figure 5. The laboratory analytical reports and chain-of-custody documentation are included in Appendix G.

- TPH-g and benzene were not detected at or above laboratory reporting limits in any of the soil samples collected during this investigation.
- MTBE was detected at a maximum concentration of 0.00038 milligrams per kilogram (mg/kg) (15.5-16 feet bgs).
- No other oxygenates or additives were detected at or above laboratory reporting limits in any of the soil samples collected in this investigation.

4.3 GROUNDWATER SAMPLE ANALYTICAL METHODS AND RESULTS

Groundwater samples were submitted to Calscience and analyzed for TPH-g by EPA Method 8015B, BTEX by EPA Method 8021B(M), MTBE, 1,2-DCA, DIPE, EDB, ETBE, TAME, TBA, and ethanol by EPA Method 8260B. Analytical results are summarized in Table 4 and on Figure 7. The laboratory analytical reports and chain-of-custody documentation are included in Appendix G.

- TPH-g was detected at a concentration of 150 micrograms per liter (µg/L).
- MTBE was detected at a concentration of 10 µg/L.
- No other analytes were detected at or above laboratory reporting limits in groundwater samples collected from the well.

5. ASSESSMENT OF HISTORICAL SOIL AND GROUNDWATER DATA

As part of the Site Conceptual Model for the site, the following is a summary of the distribution of petroleum hydrocarbons in soil and groundwater associated with the site.

5.1 DISTRIBUTION OF PETROLEUM HYDROCARBONS IN SOIL

Elevated concentrations of petroleum hydrocarbons were detected in soil samples collected from UST excavation samples and borings drilled in the immediate vicinity of the former gasoline UST system. The borings located in the vicinity of the former gasoline UST system include AB4, SB3, and MW3. Much lower concentrations were detected in soil samples from borings drilled around the UST system. Historical soil analytical results are summarized in Tables 2 and 3.

5.2 DISTRIBUTION OF PETROLEUM HYDROCARBONS IN GROUNDWATER

Analytical data obtained from quarterly groundwater sampling and site investigations performed through January 2009 indicate that the maximum concentrations of hydrocarbons in groundwater were located near the former USTs. Well MW3 is located near or within the backfill of the former USTs and concentrations of hydrocarbons in samples from MW3 have generally been the highest in all of the wells related to the site.

Groundwater conditions are adequately defined downgradient of the former USTs.

Currently, the concentrations in samples from MW3 are near or below the laboratory detection limits. Concentrations in surrounding wells are also currently near or below the laboratory detection limits and this includes wells MW4 and MW5 which are generally located downgradient of the former USTs.

Cumulative groundwater monitoring data are summarized in Table 4. Groundwater sample analytical results for temporary borings are summarized in Table 5. The groundwater analytical results and groundwater flow direction for the January 2009 monitoring event (ETIC 2009) are included on Figures 3 and 4.

5.3 DISTRIBUTION OF LIQUID-PHASE HYDROCARBONS

To date, liquid-phase hydrocarbons have not been detected in groundwater monitoring wells at the site.

6. SENSITIVE RECEPTORS AND PREFERENTIAL PATHWAYS

As part of the Site Conceptual Model for the site, the following is a summary of the sensitive receptors and preferential pathways associated with the site.

6.1 WELLS

A well search was conducted for public and private wells within a 2,000-foot radius of the site (ETIC 2008). One well (DW) was identified within a 2,000-foot radius from the site. The location of the well is presented on Figure 8. Well DW is located on Tyee Court which is located approximately 1,400 feet to the southeast of the site. The well is identified as a domestic well and the total depth of the well is 52 feet although the screened interval was not provided. No other wells were located within 2,000 feet of the site. Based on quarterly groundwater monitoring at the site, the groundwater flow direction is generally toward the southeast and well DW appears to be downgradient from the site. Based on the concentrations at the former Mobil site and the distance to the well, groundwater at the well is not expected to be impacted by the concentrations at the site.

6.2 SUBSURFACE UTILITIES

A conduit (utility) study was included in the Subsurface Investigation Report dated September 2004 (ETIC 2004a). The study indicated that although the offsite utilities near the site may intersect the depth of static groundwater, information from the current and previous investigations indicates that saturation of the relatively low permeability soils offsite is not encountered above approximately 10 feet bgs.

6.3 OTHER

Information from visits to the site indicates that a subgrade basement is located beneath the building at the site for use by the Jiffy Lube business (ETIC 2004a). The basement is approximately 10 feet deep and contains a sump and a sump pump. The sump is apparently used to collect subgrade water from outside the basement walls and floor, and the sump pump is used to pump this water out of the basement. According to a map provided by Shell Lubricants, the sump pump is connected to a drain line which terminates at the curb on the east side of the property. It is unclear if the sump pump is removing water from the unsaturated or saturated zone (groundwater) beneath the site.

7. SITE CONCEPTUAL MODEL

As an initial step in evaluating the significance, if any, of chemicals of potential concern (COPCs) in soil and/or groundwater beneath the site, a site conceptual model (SCM) of chemical occurrence, fate, transport, and potential exposure was developed. Specifically, the SCM documents potential sources for COPCs, affected media and transport mechanisms, and potential exposure pathways and receptors at and in the vicinity of the site. Development of the SCM was based on available information characterizing hydrogeologic conditions, soil and groundwater quality, and land use at and in the vicinity of the site. Figures 9 and 10 graphically represent the various components of the SCM, which are discussed in more detail below.

7.1 CHEMICALS OF POTENTIAL CONCERN AND SOURCES OF IMPACT

Historical site investigations have identified detections of hydrocarbons and MTBE in soil and/or groundwater beneath the site, helping to identify these constituents as COPCs. Specifically, the COPCs for soil and groundwater beneath the site are TPH-g, TPH as diesel (TPH-d), BTEX, and MTBE (although MTBE has only been detected in soil and groundwater at very low concentrations).

Based on previously documented site usage, these chemicals are consistent with those handled and used at the site. Base on the observed concentrations and associated trends over time, there appear to be no ongoing source/release of hydrocarbons and MTBE at the site.

7.2 AFFECTED MEDIA AND TRANSPORT MECHANISMS

Review of historical investigation results indicates the subsurface presence of petroleum hydrocarbons and MTBE in the soil and/or groundwater. Presence of impacted groundwater may be the result of chemical dissolution from soil and subsequent migration to the water table.

Due to the volatile nature of various petroleum hydrocarbon compounds and MTBE, soil vapor underlying the site may also be impacted. As a result, volatilization of hydrocarbons from soil and groundwater, and subsequent transport in soil vapor toward the ground surface is a possible transport mechanism for hydrocarbons and MTBE.

Hydrocarbons and MTBE in groundwater may be subject to offsite migration via groundwater transport.

7.3 STABILITY OF HYDROCARBONS IN GROUNDWATER

As indicated in the groundwater monitoring data, the concentrations of benzene, TPH-g, TPH-d, and MTBE have declined over time. Hence, the current concentration trends do not reflect an ongoing source/release. Cumulative groundwater monitoring data are summarized in Table 4.

7.4 POTENTIAL EXPOSURE PATHWAYS AND RECEPTORS

Potential exposure pathways and receptors at the site and neighboring properties were evaluated based on current and potential future usage. The site is an active commercial property, with nearby land used for commercial purposes and a school is located adjacent and to the north of the site. The entire site is paved with asphalt and the eastern yard is unpaved. An oil change facility building occupies the central portion of the site and the facility has a concrete floor.

Potentially-complete exposure pathways and receptors have been identified for the site, with the following criteria:

- A source and mechanism of chemical release;
- One or more retention or transport media (e.g., soil, groundwater, soil vapor, air, or surface water);
- A point of potential contact with the impacted medium (referred to as the exposure point); and
- An exposure route at the point of contact (e.g., inhalation, ingestion, or dermal contact).

The site and the areas surrounding the site are commercial properties. Although a school exists adjacent to the site, it is located in a generally upgradient direction and is not expected to be impacted by the remaining COPCs at the site. The potential exposure pathways and receptors evaluated include the following:

- Commercial workers (onsite and offsite)
- Construction workers
- Sensitive receptors

Figure 9 illustrates a schematic diagram of the site conceptual model and Figure 10 shows the exposure pathway flow chart. The potentially-complete exposure routes for each potentially affected media at the point of contact are reviewed below:

Soil (Near or Subsurface)

The direct exposure pathway to near surface soil is considered incomplete (dermal contact or ingestion). Based on the presence of a paved surface and the depth of the residual impacts, commercial workers will not be subject to direct exposure (ingestion or dermal contact) with residual impacts in surface soil for the current land use at the site.

The direct exposure pathway to subsurface soil is considered complete for construction workers (ingestion or dermal contact) and is considered incomplete for commercial workers (dermal contact).

If excavation occurs in the future, construction workers could have direct exposure to the residual impacts to soil.

Air (Indoor or Outdoor)

The vapor intrusion pathway from impacted soil and/or groundwater to outdoor or indoor air is potentially complete (inhalation).

Groundwater

The direct exposure pathway from impacted groundwater is considered complete for onsite commercial workers and construction workers (dermal contact). Information from site visits indicates that there is a sump pump which pumps water from around the subgrade basement for the Jiffy Lube business onsite (ETIC 2004a). Construction workers may have direct exposure to the residual impacts in groundwater if excavation and/or dewatering activities occur in the future due to the shallow nature of groundwater at the site.

The direct exposure pathway from impacted groundwater via ingestion is considered incomplete. A well search was conducted for public and private wells within a 2,000-foot radius of the site and one well (DW) was identified within a 2,000-foot radius from the site. No other wells were located within 2,000 feet of the site. Based on the concentrations at the former Mobil site and the distance to the well, groundwater at the well is not expected to be impacted by the concentrations of COPCs at the site.

Surface Water

The direct exposure pathway from impacted groundwater to surface water (dermal contact or ingestion) is considered incomplete. Based on the concentrations at the site and the distance to the nearest surface water body, surface water is not expected to be impacted by the concentrations of COPCs at the site. Based on the sensitive receptor survey there are no surface waters within a 2,000-foot radius of the site (see Figure 8). The closest surface water is the South Reservoir which is located approximately 2,300 feet southeast of the site. Based on quarterly groundwater monitoring at the site, the groundwater flow direction is generally toward the southeast and the South Reservoir appears to be downgradient from the site. The South Reservoir is not expected to be impacted by the COPCs at the site based on the concentrations of COPCs at the site and the distance to the South Reservoir.

Summary

Based on the reasoning above, the site-specific and potentially-complete exposure pathways and potential receptors are summarized as follows:

- Dermal contact with or ingestion of soil (construction workers);

- Inhalation of chemicals volatilizing from soil or groundwater to indoor or outdoor air (onsite or offsite commercial or construction workers); and

- Dermal contact with groundwater through excavation or an onsite sump (onsite or offsite construction workers).

A risk assessment assessing the risk to each potential receptor via each potentially-complete exposure pathway should be completed prior to case closure.

8. SUMMARY

On 29 and 30 January 2009, ETIC observed the installation of offsite groundwater monitoring well MW5 for former Mobil Station 04334, located at 2492 Castro Valley Boulevard, Castro Valley, California.

Groundwater conditions are adequately defined downgradient of the former USTs. The newly installed well will be incorporated into the quarterly groundwater monitoring program for the site.

Groundwater monitoring is recommended for an additional two quarters in order to gauge concentration fluctuations in all wells and especially in MW5. After that time, if the site conditions appear to meet case closure requirements, then case closure will be requested.

In addition, Site Conceptual Model information was included with this report. Based on the SCM, several site-specific and potentially-complete exposure pathways and potential receptors were identified. A risk assessment assessing the risk to each potential receptor via each potentially-complete exposure pathway should be completed prior to case closure.

REFERENCES

Alisto (Alisto Engineering Group). 1994. Workplan for Preliminary Site Investigation, Former Mobil Oil Corporation Station 04-334. Alisto, Walnut Creek, California. 3 February.

Alton (Alton Geoscience). 1997. Site Assessment Workplan, Former Mobil Station 04-334. Alton, Livermore, California. 17 July.

DWR (California Department of Water Resources). 1975. California's Ground Water, Bulletin No. 118. September.

ETIC (ETIC Engineering, Inc.). 2004a. Subsurface Investigation Report, Former Mobil Station 04-334, 2492 Castro Valley Boulevard, Castro Valley, California. ETIC, Pleasant Hill, California. February.

ETIC (ETIC Engineering, Inc.). 2004b. Report of Well Installation, Former Mobil Station 04-334, 2492 Castro Valley Boulevard, Castro Valley, California. ETIC, Pleasant Hill, California. September.

ETIC (ETIC Engineering, Inc.). 2007. Subsurface Investigation Report, Former Mobil Station 04-334, 2426 Castro Valley Boulevard, Castro Valley, California. ETIC, Pleasant Hill, California. December.

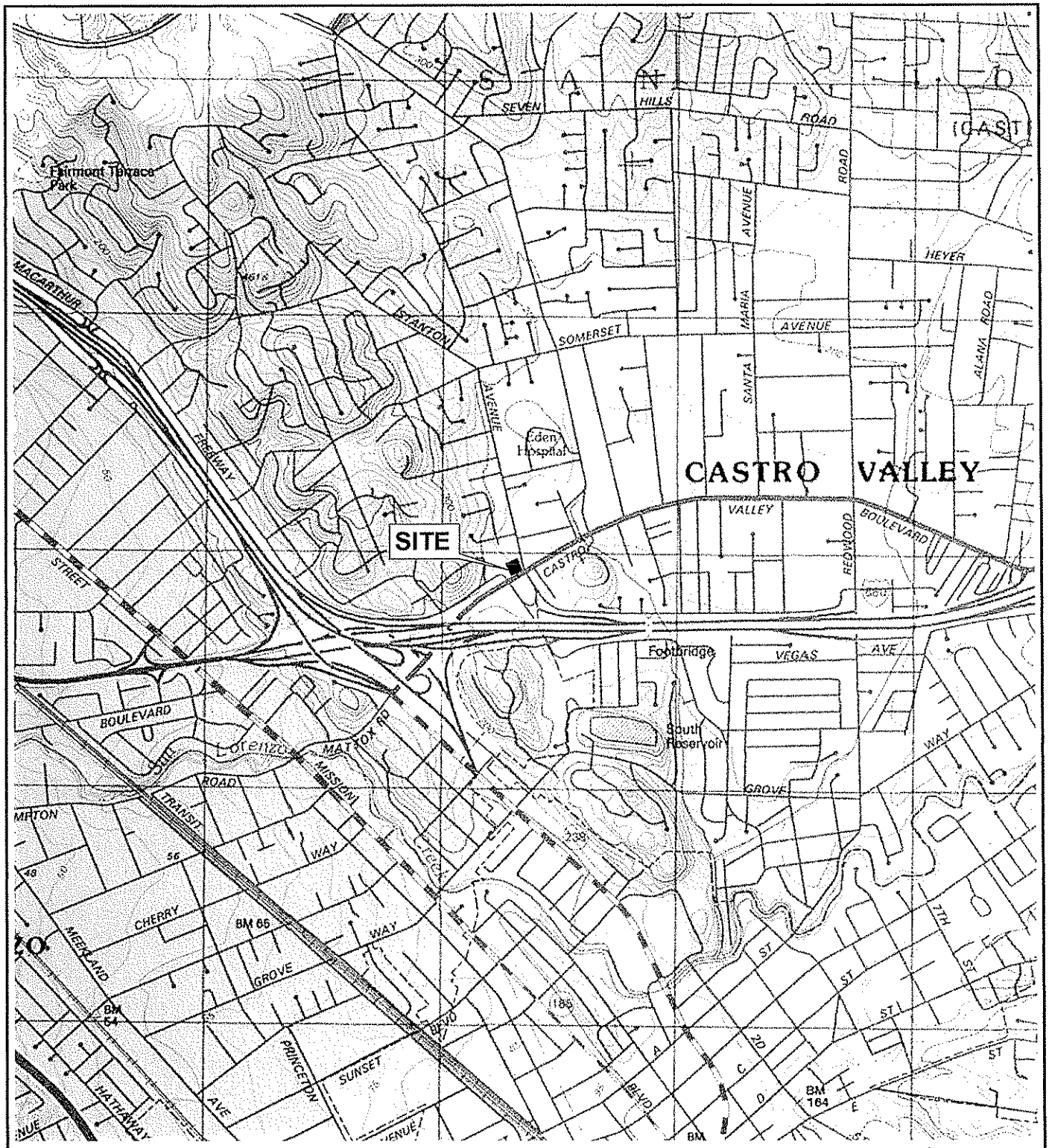
ETIC (ETIC Engineering, Inc.). 2008. Work Plan for Subsurface Investigation, 2426 Castro Valley Boulevard, Castro Valley, California. ETIC, Pleasant Hill, California. September.

ETIC (ETIC Engineering, Inc.). 2009. Report of Groundwater Monitoring, First Quarter 2009, Former Mobil Station 04334, 2426 Castro Valley Boulevard, Castro Valley, California. ETIC, Pleasant Hill, California. February.

Judd Hall and Associates. 1983. Backfill of Tank Excavation at 2492 Castro Valley Boulevard, Alameda County, California. Judd Hall and Associates, Hayward, California. 15 November.

TRC (TRC Alton Geoscience). 1999. Initial Site Assessment Report, Former Mobil Station 04-334, 2492 Castro Valley Boulevard, Castro Valley, California. TRC, Concord, California. 3 September.

Figures



(Map Source: USGS Topographic Map)

FILENAME: TOPO.DWG 12/24/07

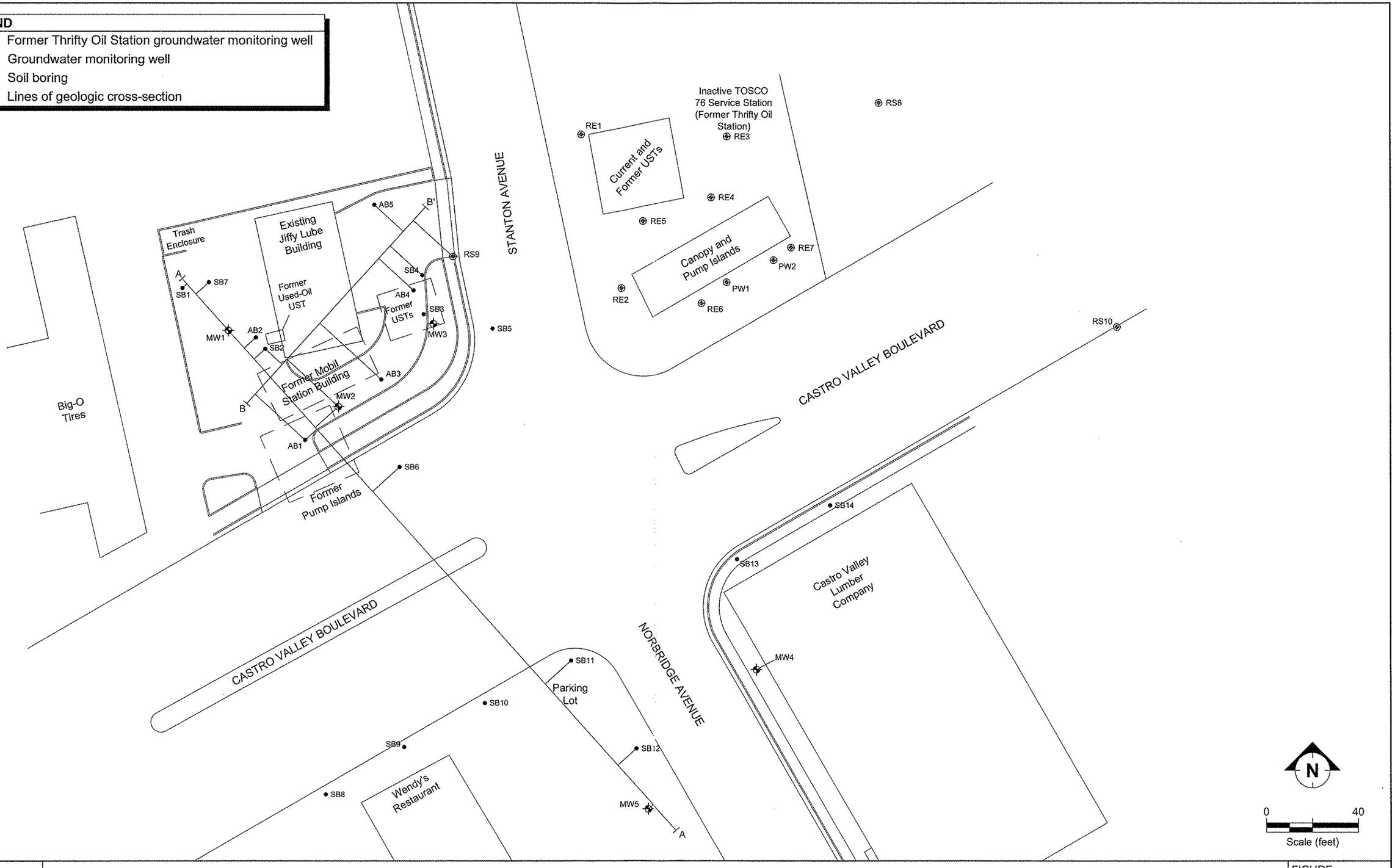
ETIC ENGINEERING

SITE LOCATION AND TOPOGRAPHIC MAP
FORMER MOBIL STATION 04334
2492 CASTRO VALLEY BOULEVARD
CASTRO VALLEY, CALIFORNIA

FIGURE: 1

LEGEND

- Former Thrifty Oil Station groundwater monitoring well
- Groundwater monitoring well
- Soil boring
- A — A' Lines of geologic cross-section

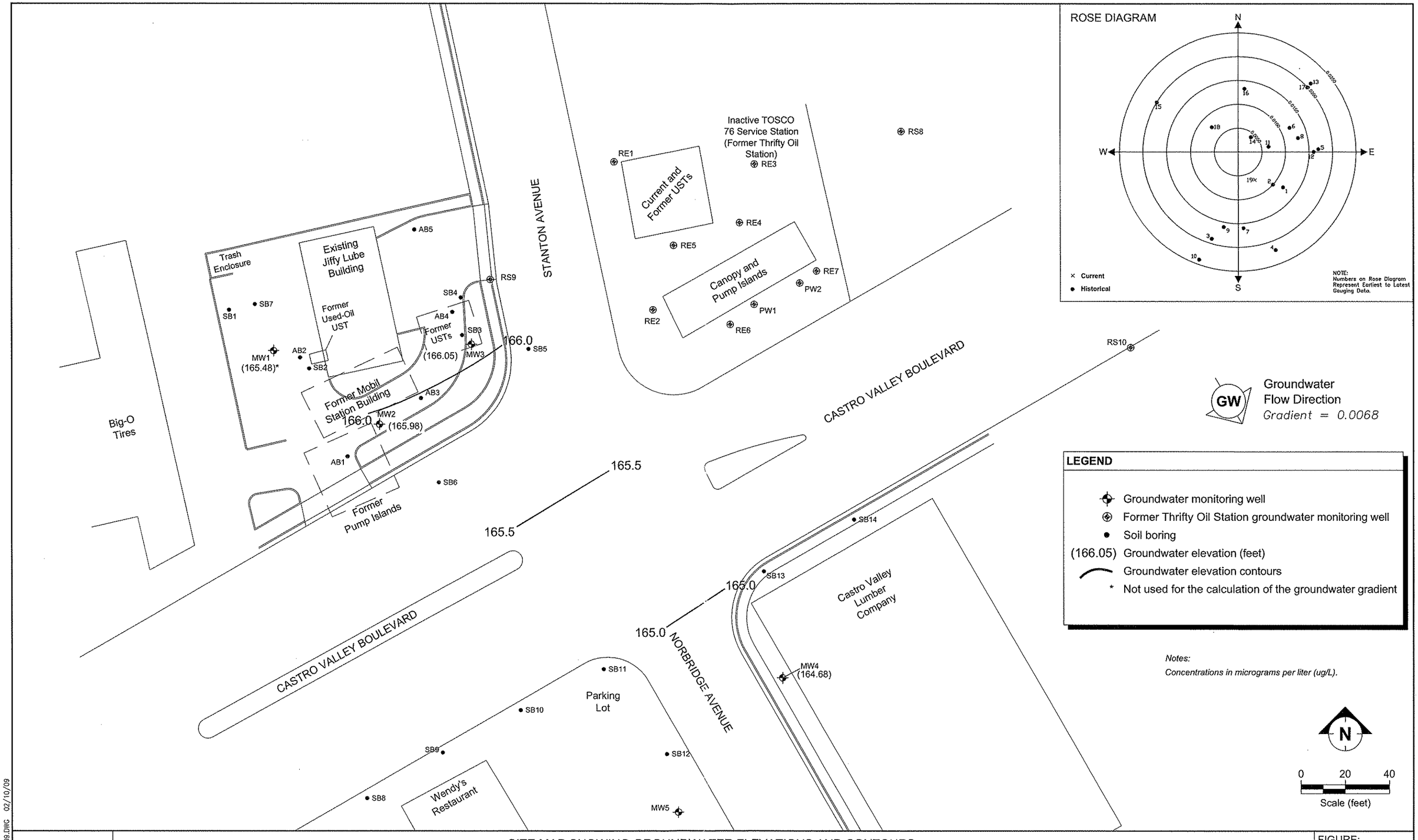


ETIC ENGINEERING

SITE MAP SHOWING LINES OF GEOLOGIC CROSS-SECTION
FORMER MOBIL STATION 04334
2492 CASTRO VALLEY BOULEVARD
CASTRO VALLEY, CALIFORNIA

FIGURE: **2**

FILENAME: sections0309.DWG 3/3/2009

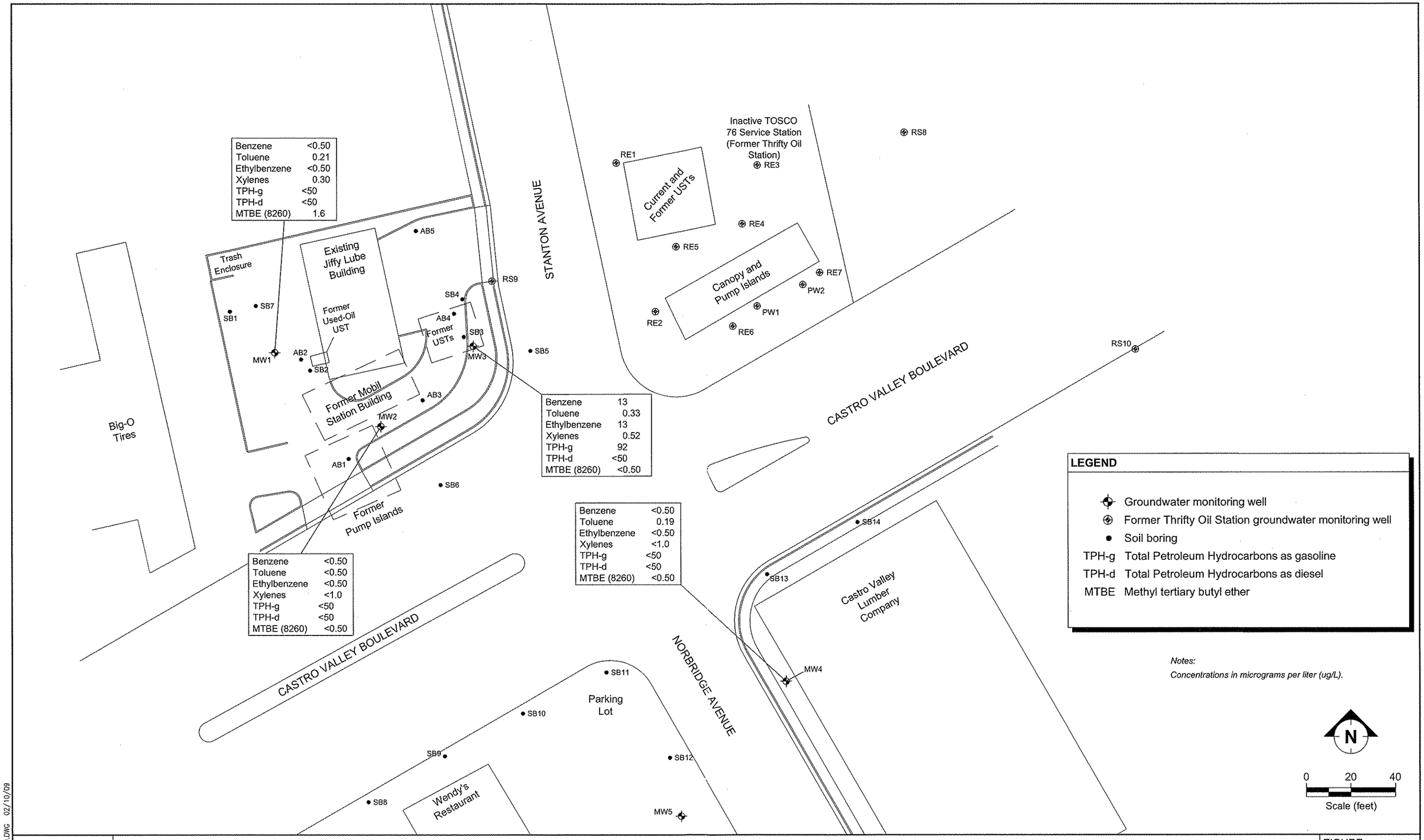


FILENAME: 102009.DWG 02/10/09

ETIC ENGINEERING

SITE MAP SHOWING GROUNDWATER ELEVATIONS AND CONTOURS
FORMER MOBIL STATION 04334
2492 CASTRO VALLEY BOULEVARD, CASTRO VALLEY, CALIFORNIA
29 JANUARY 2009

FIGURE:
3

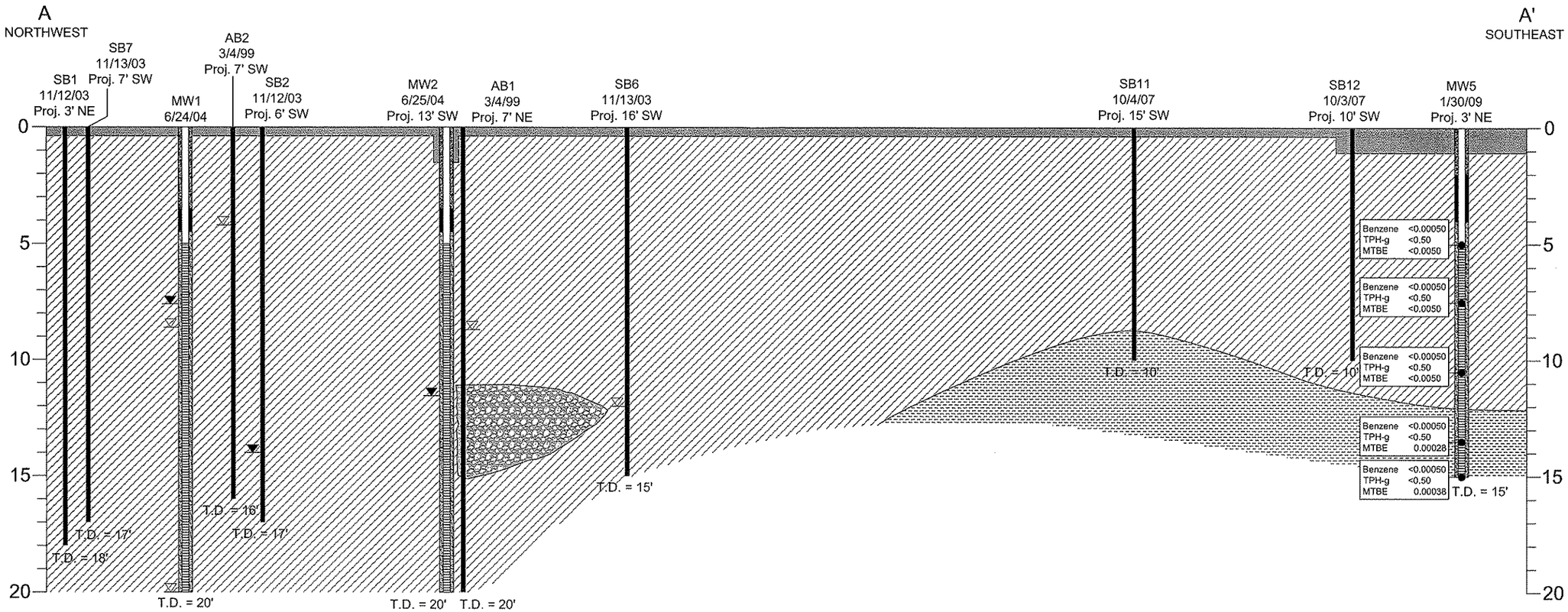


ETIC ENGINEERING

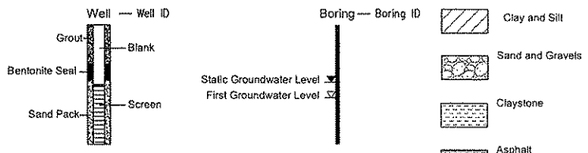
SITE MAP SHOWING GROUNDWATER ANALYTICAL RESULTS
FORMER MOBIL STATION 04334
2492 CASTRO VALLEY BOULEVARD, CASTRO VALLEY, CALIFORNIA
29 JANUARY 2009

FIGURE: 4

FILENAME: 1O2009.DWG 02/10/09

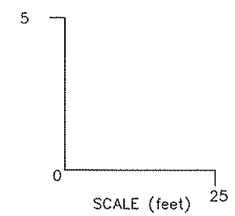


LEGEND



TPH-g	Total Petroleum Hydrocarbons as gasoline
MTBE	Methyl tertiary butyl ether by EPA Method 8260B
TD	Total Depth
Proj.	Projected

Notes:
Soil analytical results in milligrams per kilogram (mg/kg).

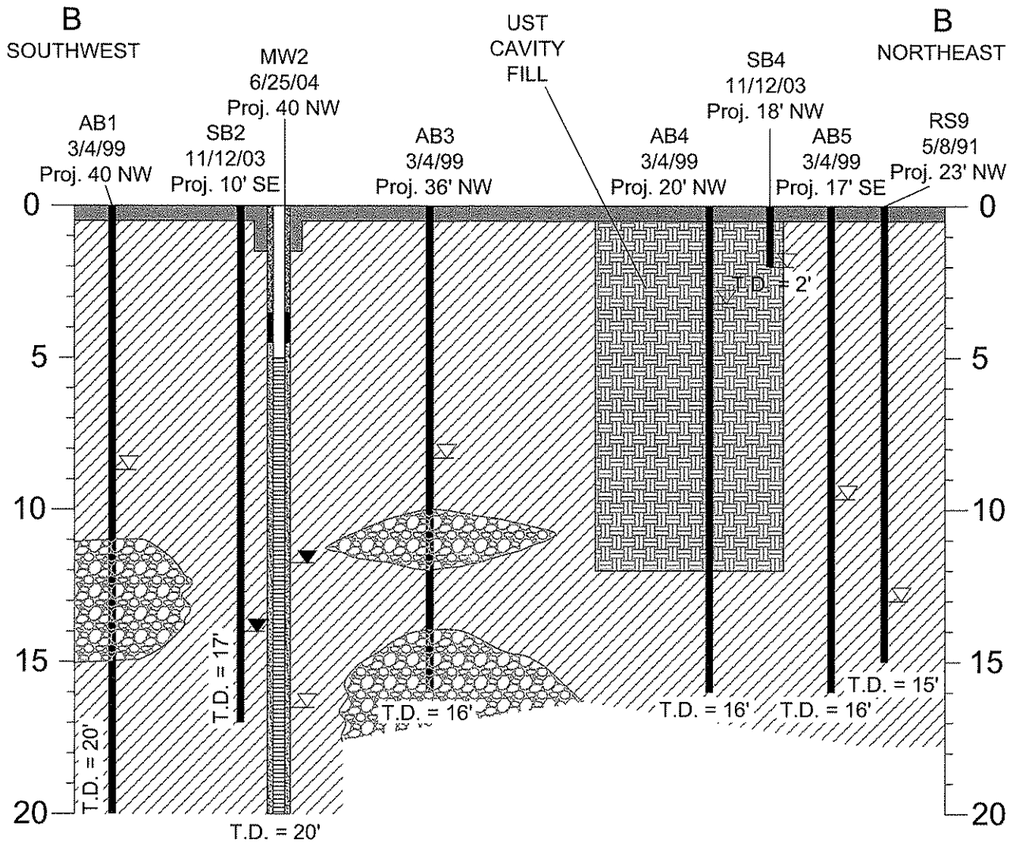


ETIC ENGINEERING

GEOLOGIC CROSS-SECTION A-A' AND SOIL SAMPLE ANALYTICAL RESULTS
FORMER MOBIL STATION 04334
2492 CASTRO VALLEY BOULEVARD, CASTRO VALLEY, CALIFORNIA
29 AND 30 JANUARY 2009

FIGURE: **5**

FILENAME: sections0708.DWG 7/29/2008



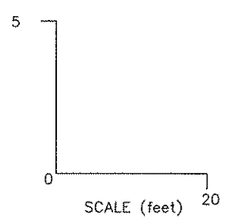
LEGEND

Well — Well ID
Grout
Blank
Bentonite Seal
Sand Pack
Screen

Boring — Boring ID
Static Groundwater Level
First Groundwater Level

Clay
Sand and Gravels
Asphalt

T.D. Total Depth of Boring
Proj. Projected

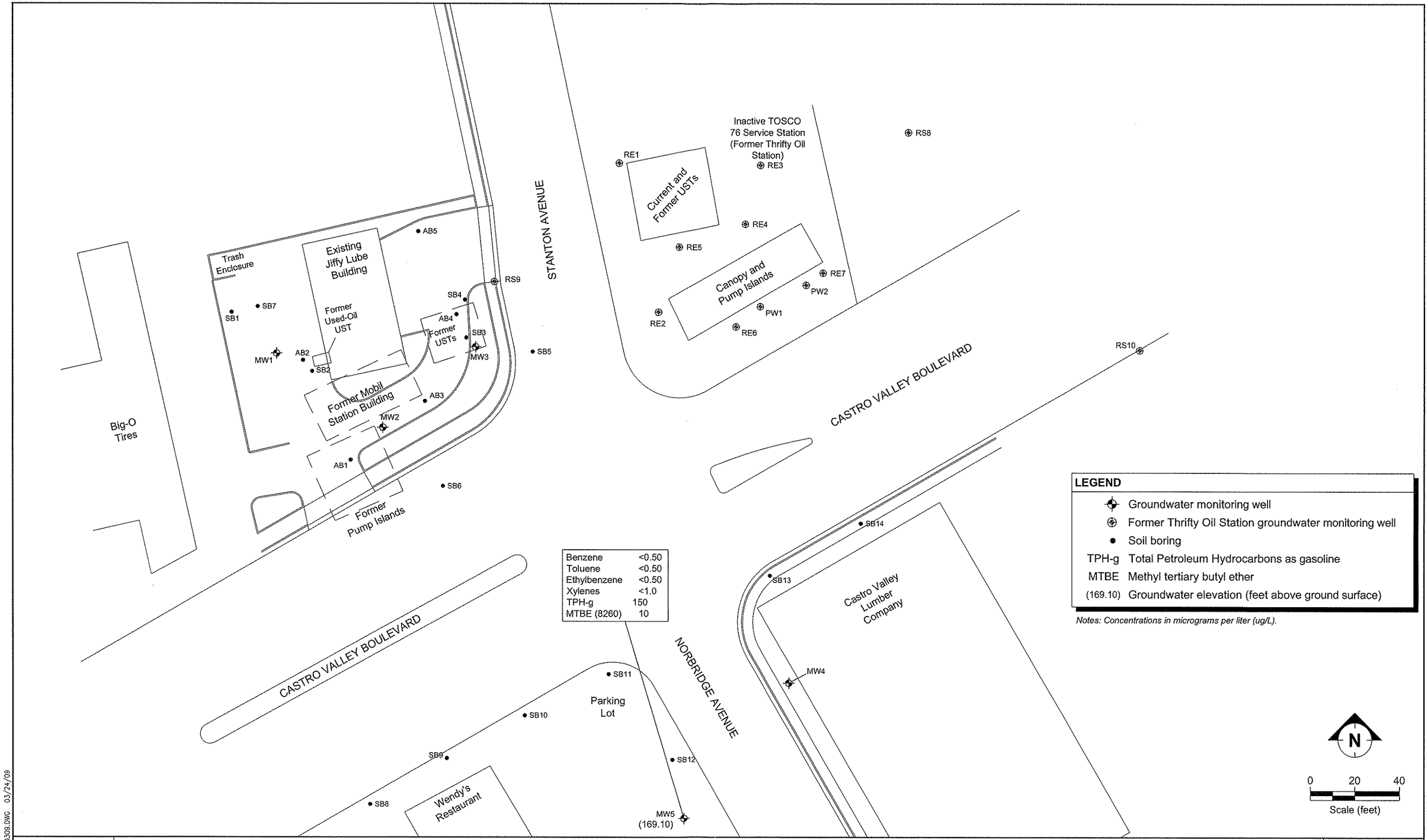


ETIC ENGINEERING

GEOLOGIC CROSS-SECTION B-B'
FORMER MOBIL STATION 04334
2492 CASTRO VALLEY BOULEVARD
CASTRO VALLEY, CALIFORNIA

FIGURE: 6

FILENAME: sections0708.DWG 7/29/2008

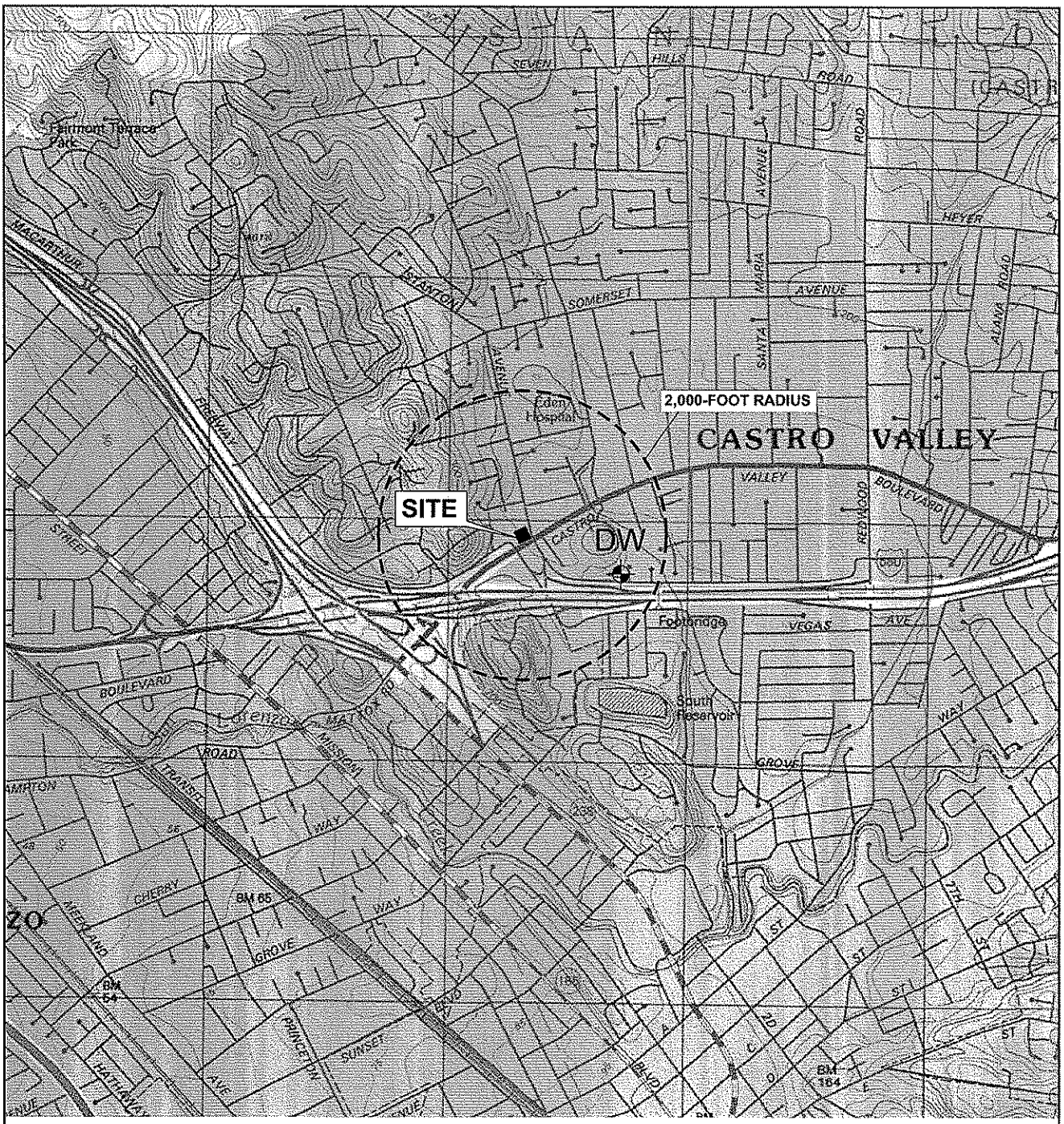


ETIC ENGINEERING

SITE MAP SHOWING GROUNDWATER ANALYTICAL RESULTS
FORMER MOBIL STATION 04334
2492 CASTRO VALLEY BOULEVARD, CASTRO VALLEY, CALIFORNIA
4 MARCH 2009

FIGURE: 7

FILENAME: sample0309.DWG 03/24/09



LEGEND:

1 ✦ PUBLIC OR PRIVATE WELL

N

0 2,000

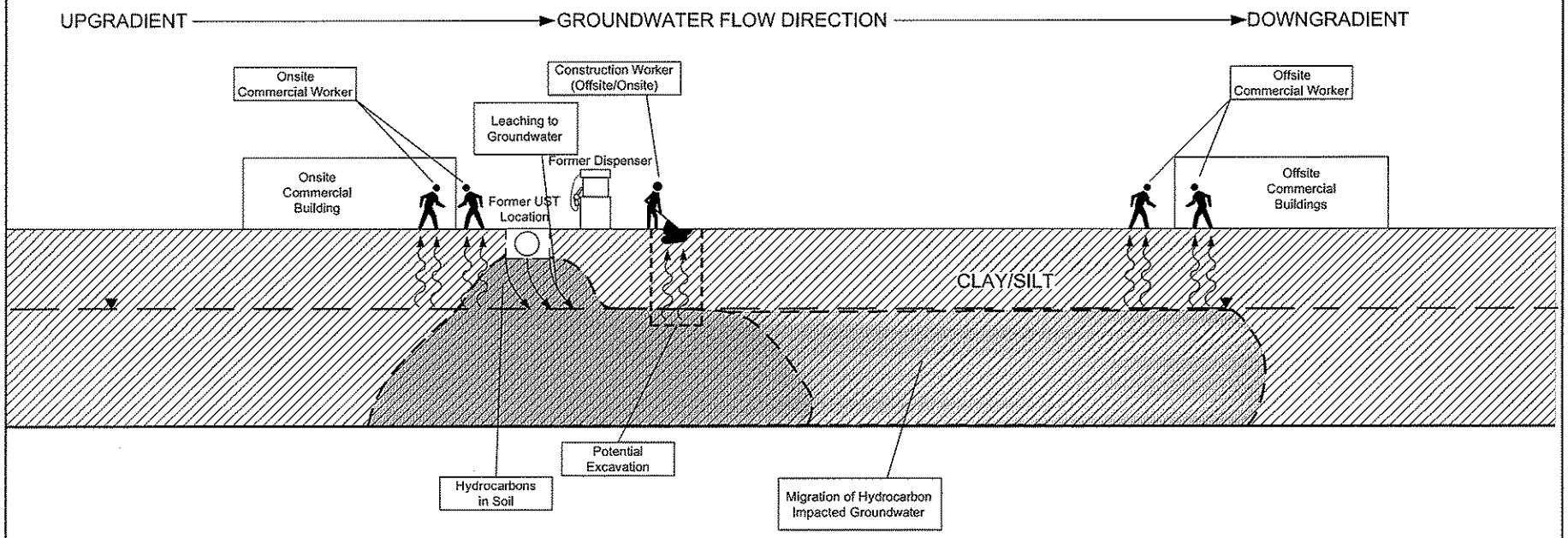
Scale (feet)

Note: Public or private wells shown within 2,000 feet.

(Map Source: USGS Topographic Map)

ETIC ENGINEERING	REGIONAL AREA MAP FORMER MOBIL STATION 04334 2492 CASTRO VALLEY BOULEVARD CASTRO VALLEY, CALIFORNIA	FIGURE: **8**

FILENAME: SRS0706.DWG 07/13/06



LEGEND

Volatilization to onsite/offsite indoor/outdoor air

NEAREST SURFACE WATER BODY APPROXIMATELY 2,300 ft. SOUTHEAST OF THE SITE

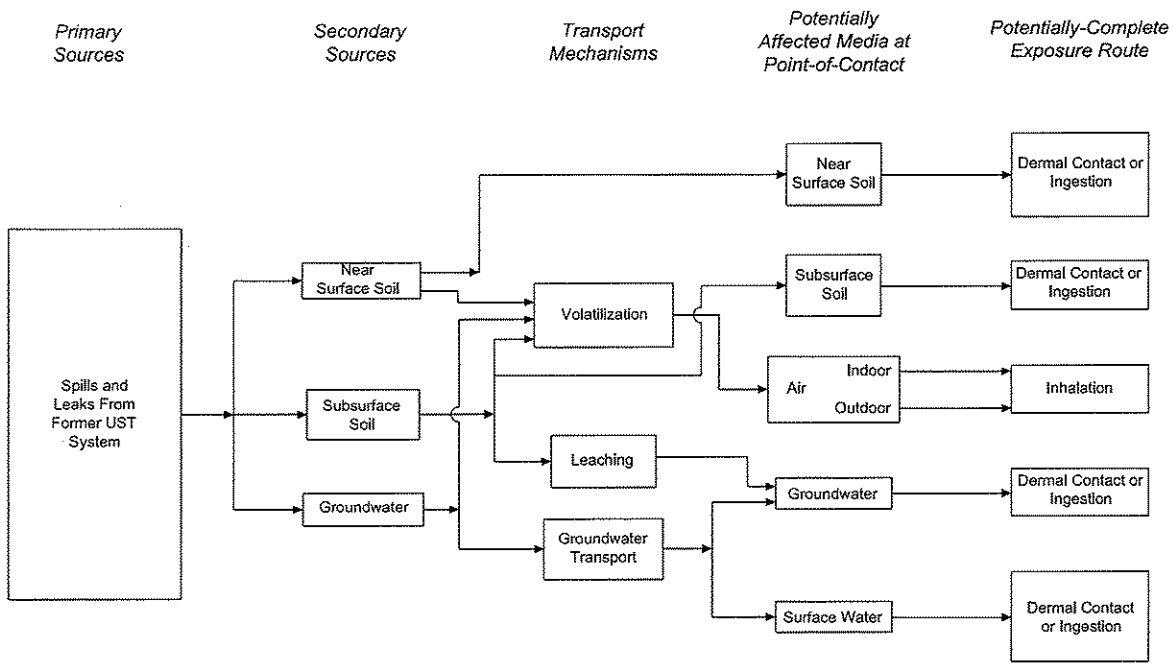
Not to Scale

ETIC ENGINEERING

SITE CONCEPTUAL MODEL SCHEMATIC DIAGRAM
FORMER MOBIL STATION 04334
2492 CASTRO VALLEY BOULEVARD
CASTRO VALLEY, CALIFORNIA

FIGURE: **9**

FILENAME: SCHEMATIC.DWG 3/18/09



Potential Human Receptors	Onsite Commercial Workers	Construction Workers	Offsite Commercial Workers
Near Surface Soil	inc	inc	inc
Subsurface Soil	inc	◆	inc
Air	◆	◆	◆
Groundwater	◆	◆	◆
Surface Water	inc	inc	inc

LEGEND

◆ Potentially-Complete Exposure Pathway

inc Incomplete Exposure Pathway

ETIC ENGINEERING

EXPOSURE PATHWAY FLOW CHART
FORMER MOBIL STATION 04334
2492 CASTRO VALLEY BOULEVARD
CASTRO VALLEY, CALIFORNIA

FIGURE: **10**

FILENAME: exposure.DWG 3/18/09

Tables

TABLE 1 WELL CONSTRUCTION DETAILS, FORMER MOBIL STATION 04334, 2492 CASTRO VALLEY BOULEVARD, CASTRO VALLEY, CALIFORNIA

Well Number		Well Installation Date	Elevation TOC (feet)	Casing Material	Total Depth (feet)	Well Depth (feet)	Borehole Diameter (inches)	Casing Diameter (inches)	Screened Interval (feet)	Slot Size (inches)	Filter Pack Interval (feet)	Filter Pack Material
MW1	a	06/24/04	173.23	PVC	20	20	8.25	2	5 - 20	0.010	4.5 - 20	#2/12 Sand
MW2	a	06/25/04	173.63	PVC	20	20	8.25	2	5 - 20	0.010	4.5 - 20	#2/12 Sand
MW3	a	06/25/04	171.91	PVC	20	20	8.25	2	5 - 20	0.010	4.5 - 20	#2/12 Sand
MW4	a	06/24/04	170.48	PVC	15	14	8.25	2	4 - 14	0.010	3.5 - 15	#2/12 Sand
MW5	**a**	**01/30/09**	**173.80**	**PVC**	**15**	**15**	**8.25**	**2**	**5 - 15**	**0.010**	**4.0 - 15**	**#2/12 Sand**

Notes:

a Well surveyed on 10 February 2009 by Morrow Surveying.

PVC Polyvinyl chloride.
TOC Top of casing.

TABLE 2 SOIL SAMPLE ANALYTICAL RESULTS, FORMER MOBIL STATION 04334, 2492 CASTRO VALLEY BOULEVARD, CASTRO VALLEY, CALIFORNIA

Boring Number	Date	Sample Depth (feet bgs)	Concentration (mg/kg)								
			Benzene	Toluene	Ethyl-benzene	Xylenes	TPH-g	TPH-d	TRPH	MTBE (8021B)	MTBE (8260B)
AB1	03/04/99	4-5	ND	ND	0.010	ND	3.2	ND	--	ND	--
AB1	03/04/99	10-11	ND	ND	ND	ND	ND	ND	--	ND	--
AB1	03/04/99	15-16	ND	ND	ND	ND	ND	ND	--	ND	--
AB1	03/04/99	19-20	ND	ND	ND	ND	ND	ND	--	ND	--
AB2	03/04/99	4-5	ND	ND	ND	ND	ND	ND	ND	ND	--
AB2	03/04/99	10-11	ND	ND	ND	ND	ND	ND	13	ND	--
AB2	03/04/99	15-16	ND	ND	ND	ND	ND	ND	ND	ND	--
AB3	03/04/99	4-5	ND	0.09	1.9	ND	280	170	--	0.4	--
AB3	03/04/99	10-11	ND	ND	ND	ND	ND	ND	--	ND	--
AB3	03/04/99	15-16	ND	ND	ND	ND	ND	10	--	ND	--
AB4	03/04/99	4-5	0.2	ND	18	62	1,100	100	--	ND	--
AB4	03/04/99	10-11	3.4	18	38	170	2,600	700	--	8	ND
AB4	03/04/99	15-16	0.005	0.011	0.038	0.12	2.8	ND	--	ND	--
AB5	03/04/99	4-5	ND	ND	ND	ND	ND	ND	--	ND	--
AB5	03/04/99	10-11	ND	ND	ND	ND	ND	ND	--	ND	--
AB5	03/04/99	15-16	ND	ND	ND	ND	ND	ND	--	ND	--
SB1	11/12/03	5.5-6	<0.001	<0.001	<0.001	<0.001	<5.05	<9.88	--	--	<0.002
SB1	11/12/03	11-11.5	0.002	0.0022	<0.001	<0.001	<4.88	<10.1	--	--	<0.002
SB1	11/12/03	14.5-15	0.0027	0.0061	<0.001	0.0029	<4.98	<10.1	--	--	<0.002
SB1	11/12/03	17.5-18	0.0051	0.0112	0.0011	0.0039	<5.06	<10	--	--	<0.002
SB2	11/12/03	5.5-6	<0.001	<0.001	<0.001	<0.001	<4.93	<10	47.4	--	<0.002
SB2	11/12/03	10-10.5	0.0013	0.0023	<0.001	0.0018	<5.07	<9.96	30.3	--	<0.002
SB3	11/12/03	5-5.5	0.131	0.0027	0.0456	0.0153	6.19	<9.92	--	--	<0.002
SB3	11/12/03	10.5-11	2.67	0.782	19.6	32	1,960	876	--	--	<0.0502
SB3	11/12/03	15.5-16	0.0315	0.0043	0.0593	0.09	5.49	12	--	--	<0.002
SB3	11/12/03	16.5-17	1.83	0.529	8.13	14.8	932	178	--	--	<0.002
SB3	11/12/03	19.5-20	0.004	0.0042	0.0017	0.0037	<4.97	13.9	--	--	<0.002
SB4	11/12/03	Boring terminated at 2 feet bgs. No soil samples collected.									

TABLE 2 SOIL SAMPLE ANALYTICAL RESULTS, FORMER MOBIL STATION 04334, 2492 CASTRO VALLEY BOULEVARD, CASTRO VALLEY, CALIFORNIA

Boring Number	Date	Sample Depth (feet bgs)	Concentration (mg/kg)								
			Benzene	Toluene	Ethyl-benzene	Xylenes	TPH-g	TPH-d	TRPH	MTBE (8021B)	MTBE (8260B)
SB5	11/13/03	8.5-9	<0.001	<0.001	<0.001	<0.001	<4.95	<9.84	--	--	<0.002
SB5	11/13/03	11.5-12	0.0039	0.0174	0.0098	0.018	14.2	<10.1	--	--	<0.002
SB5	11/13/03	15.5-16	<0.001	<0.001	<0.001	<0.001	<5.02	<10.1	--	--	<0.002
SB5	11/13/03	16.5-17	0.0014	<0.001	<0.001	<0.001	<5.03	<10.2	--	--	<0.002
SB6	11/13/03	8.5-9	0.0015	<0.001	0.0011	0.0014	<5.01	<10	--	--	<0.002
SB6	11/13/03	11-11.5	0.0028	0.0016	<0.001	<0.001	<5.02	<9.84	--	--	<0.002
SB6	11/13/03	14.5-15	0.0019	0.0012	<0.001	<0.001	<4.96	<10	--	--	<0.002
SB7	11/13/03	6.5-7	<0.001	<0.001	<0.001	<0.001	<4.98	<10.1	--	--	<0.002
SB7	11/13/03	9-9.5	<0.001	<0.001	<0.001	<0.001	<5.07	<10	--	--	<0.002
SB7	11/13/03	16-16.5	<0.001	0.0011	<0.001	<0.001	<4.97	<9.65	--	--	<0.002
SB8	10/03/07	5-5.5	<1.0	<1.0	<1.0	<1.0	<100	13b	--	--	<5.0
SB8	10/04/07	9.5-10	<1.0	<1.0	<1.0	<1.0	<100	1.0b	--	--	<5.0
SB8	10/04/07	14.5-15	<1.0	<1.0	<1.0	<1.0	<100	4.6b	--	--	<5.0
SB9	10/03/07	5-5.5	<1.0	<1.0	<1.0	<1.0	<100	1.6 [b]	--	--	<5.0
SB9	10/03/07	9.5-10	<1.0	<1.0	<1.0	<1.0	<100	3.5 [b]	--	--	<5.0
SB10	10/02/07	5-5.5	<0.000984	<0.000984	0.00119	<0.00295	<0.0984	<4.00	--	--	<0.00190
SB10	10/04/07	9.5-10	<0.10	<0.10	<0.10	<0.10	25	5.6 [b]	--	--	<5.0
SB10	10/04/07	14.5-15	<1.0	<1.0	<1.0	<1.0	<100	2.9 [b]	--	--	<5.0
SB11	10/03/07	5-5.5	<1.0	<1.0	<1.0	<1.0	<100	<1.0	--	--	<5.0
SB11	10/04/07	9.5-10	<1.0	<1.0	<1.0	1.8	<100	1.1 [b]	--	--	<5.0
SB12	10/02/07	5-5.5	<0.000958	<0.000958	<0.000958	<0.00287	0.103	<4.00	--	--	<0.00197
SB12	10/03/07	9.5-10	<1.0	<1.0	<1.0	<1.0	<100	<1.0	--	<5.0	<5.0
SB13	10/02/07	5-5.5	<0.000982	<0.000982	<0.000982	<0.00295	<0.0982	<3.90	--	--	<0.00195
SB13	10/03/07	14.5-15	<1.0	<1.0	<1.0	<1.0	<100	1.3 [b]	--	--	<5.0
SB14	10/02/07	5-5.5	<0.000996	<0.000996	<0.000996	<0.00299	<0.0996	<3.90	--	--	<0.00193
SB14	10/04/07	9.5-10	--	--	--	--	--	--	--	--	--

TABLE 2 SOIL SAMPLE ANALYTICAL RESULTS, FORMER MOBIL STATION 04334, 2492 CASTRO VALLEY BOULEVARD, CASTRO VALLEY, CALIFORNIA

Boring Number	Date	Sample Depth (feet bgs)	Concentration (mg/kg)								
			Benzene	Toluene	Ethyl-benzene	Xylenes	TPH-g	TPH-d	TRPH	MTBE (8021B)	MTBE (8260B)
MW1	06/23/04	5-5.5	<0.001	<0.001	<0.001	<0.001	<4.97	<10	--	--	<0.002
MW1	06/24/04	8.5-9	<0.001	<0.001	<0.001	<0.001	<4.98	<10.2	--	--	<0.002
MW1	06/24/04	16.5-17	<0.001	<0.001	<0.001	<0.001	<4.96	<10.1	--	--	<0.002
MW1	06/24/04	19.5-20	<0.001	<0.001	<0.001	<0.001	<5.04	<10.1	--	--	<0.002
MW2	06/23/04	5-5.5	<0.001	0.0018	<0.001	0.0039	<4.96	<9.84	--	--	<0.002
MW2	06/25/04	9-9.5	<0.001	<0.001	<0.001	<0.001	<5.01	<10.2	--	--	<0.002
MW2	06/25/04	13-13.5	<0.001	<0.001	<0.001	<0.001	<5.05	<10	--	--	<0.002
MW2	06/25/04	16.5-17	<0.001	<0.001	<0.001	<0.001	<4.97	<9.8		--	<0.002
MW2	06/25/04	19.5-20	<0.001	<0.001	<0.001	<0.001	<5.04	<10	--	--	<0.002
MW3	06/23/04	5-5.5	0.0324	0.0184	3.11	2.22	12.7	18.1	--	--	<0.0996
MW3	06/25/04	8-8.5	2.21	1.48	27.4	5.49	1,400	<10	--	--	<0.002
MW3	06/25/04	10.5-11	0.003	0.0014	0.001	<0.001	<4.95	<9.88	--	--	<0.002
MW3	06/25/04	12-12.5	0.0061	0.0059	0.0122	0.0111	<4.96	<10.1	--	--	<0.002
MW3	06/25/04	17-17.5	0.0012	<0.001	<0.001	<0.001	<5	<10.1		--	<0.002
MW3	06/25/04	19-19.5	<0.001	<0.001	<0.001	<0.001	<5.03	<9.92	--	--	<0.002
MW4	06/24/04	11.5-12	<0.001	<0.001	<0.001	<0.001	<4.97	<9.88	--	--	0.0024
MW4	06/24/04	13-13.5	<0.001	<0.001	<0.001	<0.001	<4.99	<10	--	--	<0.002
MW4	06/24/04	14.5-15	<0.001	<0.001	<0.001	<0.001	<4.99	<10.1	--	--	0.0024
MW5	**01/29/09**	**5-5.5**	**<0.00050**	**0.0020 [c]**	**<0.0050**	**0.0024 [c,d]**	**<0.50**	--	--	--	**<0.0050**
MW5	**01/29/09**	**7.5-8**	**<0.00050**	**<0.00050**	**<0.00050**	**<0.010**	**<0.50**	--	--	--	**<0.0050**
MW5	**01/30/09**	**10.5-11**	**<0.00050**	**<0.00050**	**<0.00050**	**<0.010**	**<0.50**	--		--	**<0.0050**
MW5	**01/30/09**	**13.5-14**	**<0.00050**	**<0.00050**	**<0.00050**	**<0.010**	**<0.50**	--	--	--	**0.00028 [c]**
MW5	**01/30/09**	**15.5-16**	**<0.00050**	**0.0012 [c]**	**<0.00050**	**<0.010**	**<0.50**	--	--	--	**0.00038 [c]**

Notes:

a TRC's Initial Site Assessment report, dated 3 September 1999, states "Results were below preliminary remediation goals for residential soils as required by the USEPA Region 9."

b Does not match typical pattern.

c Analyte was detected at a concentration below the reportig limit and above the laboratory method detection limit. Reported value is estimated.

d Analyte presence was not confirmed by second column or GC/MS analysis.

TABLE 2 SOIL SAMPLE ANALYTICAL RESULTS, FORMER MOBIL STATION 04334, 2492 CASTRO VALLEY BOULEVARD, CASTRO VALLEY, CALIFORNIA

Boring Number	Date	Sample Depth (feet bgs)	Concentration (mg/kg)								
			Benzene	Toluene	Ethyl-benzene	Xylenes	TPH-g	TPH-d	TRPH	MTBE (8021B)	MTBE (8260B)

bgs Below ground surface.
mg/kg Milligrams per kilogram.
MTBE Methyl tertiary butyl ether.
ND Not detected.
TPH-d Total Petroleum Hydrocarbons as diesel.
TPH-g Total Petroleum Hydrocarbons as gasoline.
TRPH Total Recoverable Petroleum Hydrocarbons.

-- Not analyzed.

TABLE 3 SOIL SAMPLE ANALYTICAL RESULTS FOR OXYGENATES AND ADDITIVES, FORMER MOBIL STATION 04334,
2492 CASTRO VALLEY BOULEVARD, CASTRO VALLEY, CALIFORNIA

Boring Number	Date	Sample Depth (feet bgs)	Concentration (mg/kg) MTBE (8021B)	MTBE (8260B)	TBA	DIPE	ETBE	1,2-DCA	TAME	EDB	Ethanol	CAM-17 (200.7)	HVOC (8010)
AB1	03/04/99	4-5	ND	--	--	--	--	--	--	--	--	--	--
AB1	03/04/99	10-11	ND	--	--	--	--	--	--	--	--	--	--
AB1	03/04/99	15-16	ND	--	--	--	--	--	--	--	--	--	--
AB1	03/04/99	19-20	ND	--	--	--	--	--	--	--	--	--	--
AB2	03/04/99	4-5	ND	--	--	--	--	--	--	--	--	a	ND
AB2	03/04/99	10-11	ND	--	--	--	--	--	--	--	--	a	ND
AB2	03/04/99	15-16	ND	--	--	--	--	--	--	--	--	a	ND
AB3	03/04/99	4-5	0.4	--	--	--	--	--	--	--	--	--	--
AB3	03/04/99	10-11	ND	--	--	--	--	--	--	--	--	--	--
AB3	03/04/99	15-16	ND	--	--	--	--	--	--	--	--	--	--
AB4	03/04/99	4-5	ND	--	--	--	--	--	--	--	--	--	--
AB4	03/04/99	10-11	8	ND	--	--	--	--	--	--	--	--	--
AB4	03/04/99	15-16	ND	--	--	--	--	--	--	--	--	--	--
AB5	03/04/99	4-5	ND	--	--	--	--	--	--	--	--	--	--
AB5	03/04/99	10-11	ND	--	--	--	--	--	--	--	--	--	--
AB5	03/04/99	15-16	ND	--	--	--	--	--	--	--	--	--	--
SB1	11/12/03	5.5-6	--	<0.002	--	--	--	--	--	--	--	--	--
SB1	11/12/03	11-11.5	--	<0.002	--	--	--	--	--	--	--	--	--
SB1	11/12/03	14.5-15	--	<0.002	--	--	--	--	--	--	--	--	--
SB1	11/12/03	17.5-18	--	<0.002	--	--	--	--	--	--	--	--	--
SB2	11/12/03	5.5-6	--	<0.002	--	--	--	--	--	--	--	--	--
SB2	11/12/03	10-10.5	--	<0.002	--	--	--	--	--	--	--	--	--
SB3	11/12/03	5-5.5	--	<0.002	--	--	--	--	--	--	--	--	--
SB3	11/12/03	10.5-11	--	<0.0502	--	--	--	--	--	--	--	--	--
SB3	11/12/03	15.5-16	--	<0.002	--	--	--	--	--	--	--	--	--
SB3	11/12/03	16.5-17	--	<0.002	--	--	--	--	--	--	--	--	--
SB3	11/12/03	19.5-20	--	<0.002	--	--	--	--	--	--	--	--	--
SB4	11/12/03	Boring terminated at 2 feet bgs. No soil samples collected.											

TABLE 3 SOIL SAMPLE ANALYTICAL RESULTS FOR OXYGENATES AND ADDITIVES, FORMER MOBIL STATION 04334,
2492 CASTRO VALLEY BOULEVARD, CASTRO VALLEY, CALIFORNIA

Boring Number	Date	Sample Depth (feet bgs)	Concentration (mg/kg) MTBE (8021B)	MTBE (8260B)	TBA	DIPE	ETBE	1,2-DCA	TAME	EDB	Ethanol	CAM-17 (200.7)	HVOC (8010)
SB5	11/13/03	8.5-9	--	<0.002	--	--	--	--	--	--	--	--	--
SB5	11/13/03	11.5-12	--	<0.002	--	--	--	--	--	--	--	--	--
SB5	11/13/03	15.5-16	--	<0.002	--	--	--	--	--	--	--	--	--
SB5	11/13/03	16.5-17	--	<0.002	--	--	--	--	--	--	--	--	--
SB6	11/13/03	8.5-9	--	<0.002	--	--	--	--	--	--	--	--	--
SB6	11/13/03	11-11.5	--	<0.002	--	--	--	--	--	--	--	--	--
SB6	11/13/03	14.5-15	--	<0.002	--	--	--	--	--	--	--	--	--
SB7	11/13/03	6.5-7	--	<0.002	--	--	--	--	--	--	--	--	--
SB7	11/13/03	9-9.5	--	<0.002	--	--	--	--	--	--	--	--	--
SB7	11/13/03	16-16.5	--	<0.002	--	--	--	--	--	--	--	--	--
MW1	06/23/04	5-5.5	--	<0.002	--	--	--	--	--	--	--	--	--
MW1	06/24/04	8.5-9	--	<0.002	--	--	--	--	--	--	--	--	--
MW1	06/24/04	16.5-17	--	<0.002	--	--	--	--	--	--	--	--	--
MW1	06/24/04	19.5-20	--	<0.002	--	--	--	--	--	--	--	--	--
MW2	06/23/04	5-5.5	--	<0.002	--	--	--	--	--	--	--	--	--
MW2	06/25/04	9-9.5	--	<0.002	--	--	--	--	--	--	--	--	--
MW2	06/25/04	13-13.5	--	<0.002	--	--	--	--	--	--	--	--	--
MW2	06/25/04	16.5-17	--	<0.002	--	--	--	--	--	--	--	--	--
MW2	06/25/04	19.5-20	--	<0.002	--	--	--	--	--	--	--	--	--
MW3	06/23/04	5-5.5	--	<0.0996	--	--	--	--	--	--	--	--	--
MW3	06/25/04	8-8.5	--	<0.002	--	--	--	--	--	--	--	--	--
MW3	06/25/04	10.5-11	--	<0.002	--	--	--	--	--	--	--	--	--
MW3	06/25/04	12-12.5	--	<0.002	--	--	--	--	--	--	--	--	--
MW3	06/25/04	17-17.5	--	<0.002	--	--	--	--	--	--	--	--	--
MW3	06/25/04	19-19.5	--	<0.002	--	--	--	--	--	--	--	--	--
MW4	06/24/04	11.5-12	--	0.0024	--	--	--	--	--	--	--	--	--
MW4	06/24/04	13-13.5	--	<0.002	--	--	--	--	--	--	--	--	--
MW4	06/24/04	14.5-15	--	0.0024	--	--	--	--	--	--	--	--	--

TABLE 3 SOIL SAMPLE ANALYTICAL RESULTS FOR OXYGENATES AND ADDITIVES, FORMER MOBIL STATION 04334,
2492 CASTRO VALLEY BOULEVARD, CASTRO VALLEY, CALIFORNIA

Boring Number	Date	Sample Depth (feet bgs)	Concentration (mg/kg)										
			MTBE (8021B)	MTBE (8260B)	TBA	DIPE	ETBE	1,2-DCA	TAME	EDB	Ethanol	CAM-17 (200.7)	HVOC (8010)
MW5	**01/29/09**	**5-5.5**	--	**<0.0050**	**<0.050**	**<0.010**	**<0.010**	**<0.0050**	**<0.010**	**<0.0050**	**<0.25**	--	--
MW5	**01/29/09**	**7.5-8**	--	**<0.0050**	**<0.050**	**<0.010**	**<0.010**	**<0.0050**	**<0.010**	**<0.0050**	**<0.25**	--	--
MW5	**01/30/09**	**10.5-11**	--	**<0.0050**	**<0.050**	**<0.010**	**<0.010**	**<0.0050**	**<0.010**	**<0.0050**	**<0.25**	--	--
MW5	**01/30/09**	**13.5-14**	--	**0.00028** [b]	**<0.050**	**<0.010**	**<0.010**	**<0.0050**	**<0.010**	**<0.0050**	**<0.25**	--	--
MW5	**01/30/09**	**15.5-16**	--	**0.00038** [b]	**<0.050**	**<0.010**	**<0.010**	**<0.0050**	**<0.010**	**<0.0050**	**<0.25**	--	--
SB8	10/03/07	5-5.5	--	<5.0	<20	<5.0	<5.0	<5.0	<5.0	<5.0	--	--	--
SB8	10/04/07	9.5-10	--	<5.0	<20	<5.0	<5.0	<5.0	<5.0	<5.0	--	--	--
SB8	10/04/07	14.5-15	--	<5.0	<20	<5.0	<5.0	<5.0	<5.0	<5.0	--	--	--
SB9	10/03/07	5-5.5	--	<5.0	<20	<5.0	<5.0	<5.0	<5.0	<5.0	--	--	--
SB9	10/03/07	9.5-10	--	<5.0	<20	<5.0	<5.0	<5.0	<5.0	<5.0	--	--	--
SB10	10/02/07	5-5.5	--	<0.00190	<0.0476	<0.00190	<0.00476	<0.00190	<0.00190	<0.00190	--	--	--
SB10	10/04/07	9.5-10	--	<5.0	<20	<5.0	<5.0	<5.0	<5.0	<5.0	--	--	--
SB10	10/04/07	14.5-15	--	<5.0	<20	<5.0	<5.0	<5.0	<5.0	<5.0	--	--	--
											--		
SB11	10/03/07	5-5.5	--	<5.0	<20	<5.0	<5.0	<5.0	<5.0	<5.0	--	--	--
SB11	10/04/07	9.5-10	--	<5.0	<20	<5.0	<5.0	<5.0	<5.0	<5.0	--	--	--
SB12	10/02/07	5-5.5	--	<0.00197	<0.0492	<0.0197	<0.00492	<0.00197	<0.00197	<0.00197	--	--	--
SB12	10/03/07	9.5-10	<5.0	<5.0	<20	<5.0	<5.0	<5.0	<5.0	<5.0	--	--	--
SB13	10/02/07	5-5.5	--	<0.00195	<0.0487	<0.00195	<0.00487	<0.00195	<0.00195	<0.00195	--	--	--
SB13	10/03/07	14.5-15	--	<5.0	<20	<5.0	<5.0	<5.0	<5.0	<5.0	--	--	--
SB14	10/02/07	5-5.5	--	<0.00193	<0.0484	<0.00193	<0.00484	<0.00193	<0.00193	<0.00193	--	--	--
SB14	10/04/07	9.5-10	--	--	--	--	--	--	--	--	--	--	--

Notes:

a TRC's Initial Site Assessment report, dated 3 September 1999, states "Results were below preliminary remediation goals for residential soils as required by the USEPA Region 9."

b Analyte was detected at a concentration below the reportig limit and above the laboratory method detection limit. Reported value is estimated.

1,2-DCA 1,2-Dichloroethane.

TABLE 3 SOIL SAMPLE ANALYTICAL RESULTS FOR OXYGENATES AND ADDITIVES, FORMER MOBIL STATION 04334,
2492 CASTRO VALLEY BOULEVARD, CASTRO VALLEY, CALIFORNIA

Boring Number	Date	Sample Depth (feet bgs)	Concentration (mg/kg) MTBE (8021B)	MTBE (8260B)	TBA	DIPE	ETBE	1,2-DCA	TAME	EDB	Ethanol	CAM-17 (200.7)	HVOC (8010)

bgs Below ground surface.
DIPE Diisopropyl ether.
EDB 1,2-Dibromomethane.
ETBE Ethyl tertiary butyl ether.
HVOC Halogenated volatile organic compounds.
mg/kg Milligrams per kilogram.
MTBE Methyl tertiary butyl ether.
ND Not detected.
TAME Tertiary amyl methyl ether.
TBA Tertiary butyl alcohol.

-- Not analyzed.

TABLE 4 GROUNDWATER MONITORING DATA, FORMER MOBIL STATION 04334, 2492 CASTRO VALLEY BOULEVARD, CASTRO VALLEY, CALIFORNIA

Well ID		Date	Top of Casing Elevation (feet)	Depth to Water (feet)	Groundwater Elevation (feet)	Concentration (µg/L)							
						Benzene	Toluene	Ethyl-benzene	Total Xylenes	TPH-g	TPH-d	MTBE	Other Oxygenates
MW1	a	08/13/04	173.23	7.32	165.91	<0.5	0.7	<0.5	1.0	<50	71	1.20 [b]	--
MW1		11/09/04	173.23	6.96	166.27	<0.5	0.9	<0.5	0.9	<50	63	1.50 [b]	--
MW1		02/16/05	173.23	6.10	167.13	<0.5	1.0	<0.5	1.5	<50	78	1.30 [b]	--
MW1		05/16/05	173.23	5.81	167.42	<0.5	<0.5	<0.5	<0.5	<50	<50	1.40 [b]	--
MW1		08/17/05	173.23	6.70	166.53	<0.5	<0.5	<0.5	<0.5	<50	<50	1.19 [b]	--
MW1		11/15/05	173.23	7.55	165.68	<0.5	<0.5	<0.5	<0.5	<50	<50	1.13 [b]	--
MW1		02/06/06	173.23	6.40	166.83	<0.5	<0.5	<0.5	<0.5	<50	160	<0.5 [b]	--
MW1		05/03/06	173.23	6.95	166.28	<1.00	<1.00	<1.00	<3.00	<50.0	78	<0.50 [b]	--
MW1		08/04/06	173.23	7.71	165.52	<0.50	<0.50	<0.50	<0.50	<50.0	167	<0.500 [b]	--
MW1		11/06/06	173.23	7.57	165.66	<0.50	<0.50	<0.50	<0.50	<50.0	<47.2	0.880 [b]	--
MW1		02/21/07	173.23	7.19	166.04	<0.50	<0.50	<0.50	<0.50	<50.0	<46.9	2.42 [b]	--
MW1		08/01/07	173.23	8.00	165.23	3.02	4.18	0.89	3.96	90.8	<47	1.54 [b]	--
MW1		10/25/07	173.23	7.90	165.33	<0.50	<0.50	<0.50	<0.50	<50.0	<47.2	1.63 [b]	--
MW1		01/31/08	173.23	6.60	166.63	<0.50	<0.50	<0.50	<0.50	<50	<50	1.8 [b]	--
MW1		05/01/08	173.23	7.80	165.43	<1.00	<1.00	<1.00	<3.00	<50.0	<47.2	1.67 [b]	--
MW1		07/31/08	173.23	8.15	165.08	<0.50	<0.50	<0.50	<0.50	<50	<47	1.7 [b]	--
MW1		11/07/08	173.23	8.11	165.12	<0.50	<0.50	<0.50	<0.50	<50	<47	1.4 [b]	--
MW1		01/29/09	173.23	7.75	165.48	<0.50	0.21 [e,f]	<0.50	0.30 [e,f]	<50	<50	1.6 [b]	--
MW2	a	08/13/04	173.63	6.96	166.67	<0.5	0.8	<0.5	1.0	<50	57	<0.5 [b]	--
MW2		11/09/04	173.63	6.44	167.19	<0.5	1.1	<0.5	1.2	<50	<50	<0.5 [b]	--
MW2		02/16/05	173.63	5.21	168.42	<0.5	0.9	<0.5	1.4	<50	55	<0.5 [b]	--
MW2		05/16/05	173.63	5.86	167.77	<0.5	<0.5	<0.5	<0.5	<50	<50	<0.5 [b]	--
MW2		08/17/05	173.63	5.72	167.91	<0.5	<0.5	<0.5	<0.5	<50	<50	<0.5 [b]	--
MW2		11/15/05	173.63	7.65	165.98	<0.5	<0.5	<0.5	<0.5	<50	<50	<0.5 [b]	--
MW2		02/06/06	173.63	6.24	167.39	<0.5	<0.5	<0.5	<0.5	<50	<50	<0.5 [b]	--
MW2		05/03/06	173.63	6.53	167.10	<1.00	<1.00	<1.00	<3.00	<50.0	<50	<0.50 [b]	--

TABLE 4 GROUNDWATER MONITORING DATA, FORMER MOBIL STATION 04334, 2492 CASTRO VALLEY BOULEVARD, CASTRO VALLEY, CALIFORNIA

Well ID		Date	Top of Casing Elevation (feet)	Depth to Water (feet)	Groundwater Elevation (feet)	Concentration (µg/L)							
						Benzene	Toluene	Ethyl-benzene	Total Xylenes	TPH-g	TPH-d	MTBE	Other Oxygenates
MW2		08/04/06	173.63	7.65	165.98	<0.50	<0.50	<0.50	<0.50	<50.0	<47.2	<0.500 [b]	--
MW2		11/06/06	173.63	6.98	166.65	<0.50	<0.50	<0.50	<0.50	<50.0	<46.9	<0.500 [b]	--
MW2		02/21/07	173.63	6.36	167.27	<0.50	<0.50	<0.50	<0.50	<50.0	<46.9	1.70 [b]	--
MW2		05/01/07	173.63	7.51	166.12	<0.50	<0.50	<0.50	<0.50	<50.0	<46.9	<0.50 [b]	--
MW2		08/01/07	173.63	8.12	165.51	<0.50	<0.50	<0.50	<0.50	<50.0	<47	<0.500 [b]	--
MW2		10/25/07	173.63	7.79	165.84	<0.50	<0.50	<0.50	<0.50	<50.0	<47.2	<0.500 [b]	--
MW2		01/31/08	173.63	5.89	167.74	<0.50	<0.50	<0.50	<0.50	<50	<50	0.82 [b]	--
MW2		05/01/08	173.63	7.81	165.82	<1.00	<1.00	<1.00	<3.00	<50.0	<47.2	<0.500 [b]	--
MW2		07/31/08	173.63	8.30	165.33	<0.50	<0.50	<0.50	<0.50	<50	<47	<0.50 [b]	--
MW2		11/07/08	173.63	8.09	165.54	<0.50	<0.50	<0.50	<0.50	<50	<47	<0.50 [b]	--
MW2		01/29/09	173.63	7.65	165.98	<0.50	<0.50	<0.50	<1.0	<50	<50	<0.50 [b]	--
MW3	a	08/13/04	171.91	5.36	166.55	100	2.0	187	59.6	1,440	352	<0.5 [b]	--
MW3		11/09/04	171.91	4.80	167.11	188	3.6	242	20.0	1,690	461	<0.5 [b]	--
MW3		02/16/05	171.91	3.10	168.81	66.2	1.4	61.1	12.6	575	269	<0.5 [b]	--
MW3		05/16/05	171.91	3.86	168.05	74.2	1.4	61.0	9.0	592	92	<0.5 [b]	--
MW3		08/17/05	171.91	4.75	167.16	231 [c]	2.35	102	11.4	1,130	416	<0.5 [b]	--
MW3		11/15/05	171.91	6.56	165.35	57.4	0.95	62.4	10.5	452	193	<0.5 [b]	--
MW3		02/06/06	171.91	4.00	167.91	69	<5.0	64	10	830	165	<0.5 [b]	--
MW3		05/03/06	171.91	5.44	166.47	52.1	<1.00	37.0	4.81	605	140	<0.50 [b]	--
MW3		08/04/06	171.91	5.25	166.66	15.2	<0.50	5.34	1.25	262	108	<0.500 [b]	--
MW3		11/06/06	171.91	4.11	167.80	60.0	1.04	47.3	3.09	561	106	<0.500 [b]	--
MW3		02/21/07	171.91	4.94	166.97	35.1	<0.50	45.4	1.09	483	125	<0.500 [b]	--
MW3		05/01/07	171.91	5.86	166.05	32.5	1.63	28.7	1.53	539	120	<0.50 [b]	--
MW3		08/01/07	171.91	7.54	164.37	1.26	0.60	<0.50	<0.50	89.2	<47	<0.500 [b]	--
MW3		10/25/07	171.91	6.30	165.61	2.94	<0.50	<0.50	<0.50	50.4	<47.2	<0.500 [b]	--
MW3		01/31/08	171.91	3.75	168.16	10	<0.50	11	<0.50	120	51 [d]	<0.50 [b]	--
MW3		05/01/08	171.91	6.60	165.31	2.38	<1.00	<1.00	<3.00	<50.0	<47.2	<0.500 [b]	--

TABLE 4 GROUNDWATER MONITORING DATA, FORMER MOBIL STATION 04334, 2492 CASTRO VALLEY BOULEVARD, CASTRO VALLEY, CALIFORNIA

Well ID		Date	Top of Casing Elevation (feet)	Depth to Water (feet)	Groundwater Elevation (feet)	Concentration (µg/L)							
						Benzene	Toluene	Ethyl-benzene	Total Xylenes	TPH-g	TPH-d	MTBE	Other Oxygenates
MW3		07/31/08	171.91	7.77	164.14	<0.50	<0.50	<0.50	<0.50	<50	<47	<0.50 [b]	--
MW3		11/07/08	171.91	6.34	165.57	3.6	<0.50	1.4	<0.50	<50	<47	<0.50 [b]	--
MW3		01/29/09	171.91	5.86	166.05	13	0.33 [e]	13	0.52 [e,f]	92	<50	<0.50 [b]	--
MW4	a	08/13/04	170.48	6.10	164.38	<0.5	0.8	<0.5	1.1	<50	72	2.80 [b]	--
MW4		11/09/04	170.48	5.54	164.94	<0.5	2.3	0.7	1.5	<50	<50	2.10 [b]	--
MW4		02/16/05	170.48	5.11	165.37	<0.5	1.1	<0.5	1.7	<50	<50	<0.5 [b]	--
MW4		05/16/05	170.48	5.44	165.04	<0.5	<0.5	<0.5	<0.5	<50	<50	<0.5 [b]	--
MW4		08/17/05	170.48	5.71	164.77	<0.5	<0.5	<0.5	<0.5	<50	<50	1.03 [b]	--
MW4		11/15/05	170.48	5.80	164.68	<0.5	<0.5	<0.5	<0.5	<50	<50	0.730 [b]	--
MW4		02/06/06	170.48	5.10	165.38	<0.5	<0.5	<0.5	<0.5	<50	85.2	<0.5 [b]	--
MW4		05/03/06	170.48	5.54	164.94	<1.00	<1.00	<1.00	<3.00	<50.0	<47	<0.50 [b]	--
MW4		08/04/06	170.48	5.75	164.73	<0.50	<0.50	<0.50	<0.50	<50.0	52.7	<0.500 [b]	--
MW4		11/06/06	170.48	5.95	164.53	<0.50	<0.50	<0.50	<0.50	<50.0	<47.2	<0.500 [b]	--
MW4		02/21/07	170.48	5.56	164.92	<0.50	<0.50	<0.50	<0.50	<50.0	<46.9	<0.500 [b]	--
MW4		05/01/07	170.48	5.66	164.82	<0.50	<0.50	<0.50	<0.50	<50.0	<46.9	<0.50 [b]	--
MW4		08/01/07	170.48	6.06	164.42	0.85	<0.50	<0.50	0.97	<50.0	<47	<0.870 [b]	--
MW4		10/25/07	170.48	5.34	165.14	<0.50	<0.50	<0.50	<0.50	<50.0	<47.2	<0.500 [b]	--
MW4		01/31/08	170.48	5.05	165.43	<0.50	<0.50	<0.50	<0.50	<50	<47	<0.50 [b]	--
MW4		05/01/08	170.48	5.86	164.62	<1.00	<1.00	<1.00	<3.00	<50.0	<47.2	<0.500 [b]	--
MW4		07/31/08	170.48	6.10	164.38	<0.50	<0.50	<0.50	<0.50	<50	<47	<0.50 [b]	--
MW4		11/07/08	170.48	5.65	164.83	<0.50	<0.50	<0.50	<0.50	<50	<47	<0.50 [b]	--
MW4		01/29/09	170.48	5.80	164.68	<0.50	0.19 [e,f]	<0.50	<1.0	<50	<50	<0.50 [b]	--
MW5	**g**	**03/04/09**	**173.80**	**4.70**	**169.10**	**<0.50**	**<0.50**	**<0.50**	**<1.0**	**150**	**--**	**10 [b]**	**ND [b]**

Notes: Depth-to-water-level measurements in feet from top-of-casing.
Other oxyganates include 1,2-dibromoethane, 1,2-dichloroethane, tertiary butyl alcohol, diisopropyl ether, ethyl tertiary butyl ether, tertiary amyl methyl ether, and ethanol.

TABLE 4 GROUNDWATER MONITORING DATA, FORMER MOBIL STATION 04334, 2492 CASTRO VALLEY BOULEVARD, CASTRO VALLEY, CALIFORNIA

Well ID	Date	Top of Casing Elevation (feet)	Depth to Water (feet)	Groundwater Elevation (feet)	Concentration (µg/L)							
					Benzene	Toluene	Ethyl-benzene	Total Xylenes	TPH-g	TPH-d	MTBE	Other Oxygenates

a Top-of-casing elevation surveyed by Morrow Surveying on 12 July 2004.
b Analyzed by EPA Method 8260.
c Concentration estimated. Analyte exceeded calibration range. Reanalysis not performed due to holding time requirements.
d Does not match typical pattern.
e Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
f Analyte presence was not confirmed by second column or GC/MS analysis.
g Well surveyed on 10 February 2009 by Morrow Surveying.

-- Not analyzed. Not measured.
MTBE Methyl tertiary butyl ether.
ND Not detected.
TPH-d Total Petroleum Hydrocarbons as diesel.
TPH-g Total Petroleum Hydrocarbons as gasoline.

µg/L Micrograms per liter.

TABLE 5 GROUNDWATER SAMPLE ANALYTICAL RESULTS FOR TEMPORARY BORINGS, FORMER MOBIL STATION 04334,
2492 CASTRO VALLEY BOULEVARD, CASTRO VALLEY, CALIFORNIA

Boring Number	Date	Depth (feet)	Concentration (µg/L)															
			Benzene	Toluene	Ethyl-benzene	Xylenes	TPH-g	TPH-d	MTBE (8021B)	MTBE (8260B)	TBA	DIPE	ETBE	1,2-DCA	TAME	EDB	TRPH	HVOC (8010)
AB1	03/05/99	8.7 [a]	ND	ND	ND	ND	ND	450	ND	--	--	--	--	--	--	--	--	--
AB2	03/05/99	4.2 [a]	ND	ND	0.8	ND	ND	730	ND	--	--	--	--	--	--	--	1.0	ND
AB3	03/05/99	8.3 [a]	210	7.5	660	34	4,300	2,100	ND	--	--	--	--	--	--	--	--	--
AB4	03/05/99	3.2 [a]	100	43	170	260	2,900	5,500	ND	--	--	--	--	--	--	--	--	--
AB5	03/05/99	9.65 [a]	ND	ND	1.9	ND	ND	1,600	ND	--	--	--	--	--	--	--	--	--
SB1	11/12/03	Boring dry. No groundwater samples were collected.																
SB2	11/13/03	2-17 [b]	<0.5	<0.5	<0.5	<0.5	<50	127	--	2.1	--	--	--	--	--	--	<100	--
SB3	11/12/03	0-12 [b]	1,170	65.0	1,780	2,240	46,700	13,400	--	<0.5	--	--	--	--	--	--	--	--
SB4	11/12/03	Boring terminated at 2 feet bgs. No groundwater samples were collected.																
SB5	11/13/03	0-12 [b]	6.30	2.6	2.8	1.4	760	173	--	<0.5	--	--	--	--	--	--	--	--
SB6	11/13/03	0-12 [b]	1.90	6.3	3.6	4.3	1,650	816	--	<0.5	--	--	--	--	--	--	--	--
SB7	11/13/03	Boring dry. No groundwater samples were collected.																
SB8	10/04/07	0-12 [b]	<0.50	<0.50	<0.50	<0.50	<50	<51	--	0.71	<20	<0.50	<0.50	<0.50	<0.50	<0.50	--	--
SB9	10/03/07	0-10 [b]	Boring dry. No groundwater samples were collected.															
SB10	10/02/07	0-15 [b]	Boring dry. No groundwater samples were collected.															
SB11	10/04/07	0-12 [b]	<0.50	3.5	<0.50	4.9	1,100	--	--	0.52	<20	<0.50	<0.50	<0.50	<0.50	<0.50	--	--
SB12	10/04/07	0-12 [b]	<1.0	<1.0	260	2.9	2,500	1,800	--	1.6	<40	<1.0	<1.0	<1.0	<1.0	<1.0	--	--
SB13	10/03/07	0-15 [b]	<0.50	<0.50	<0.50	<0.50	<50	51	--	<0.50	<20	<0.50	<0.50	<0.50	<0.50	<0.50	--	--
SB14	10/03/07	0-10 [b]	Sample collected but not analyzed (analysis contingent on the results of other samples).															

TABLE 5 GROUNDWATER SAMPLE ANALYTICAL RESULTS FOR TEMPORARY BORINGS, FORMER MOBIL STATION 04334,
2492 CASTRO VALLEY BOULEVARD, CASTRO VALLEY, CALIFORNIA

Boring Number	Date	Depth (feet)	Concentration (µg/L)														
			Benzene	Toluene	Ethyl-benzene	Xylenes	TPH-g	TPH-d	MTBE (8021B)	MTBE (8260B)	TBA	DIPE	ETBE	1,2-DCA	TAME	EDB	TRPH	HVOC (8010)

Notes:

a Depth to water.
b Interval of screen placed in boring.

µg/L Micrograms per liter.
1,2-DCA 1,2-Dichloroethane.
bgs Below ground surface.
DIPE Diisopropyl ether.
EDB 1,2-Dibromomethane.
ETBE Ethyl tertiary butyl ether.
HVOC Halogenated volatile organic compounds.
MTBE Methyl tertiary butyl ether.
ND Not detected.
TAME Tertiary amyl methyl ether.
TBA Tertiary butyl alcohol.
TPH-d Total Petroleum Hydrocarbons as diesel.
TPH-g Total Petroleum Hydrocarbons as gasoline.
TRPH Total Recoverable Petroleum Hydrocarbons.

-- Not analyzed.

Appendix A

Regulatory Correspondence

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

RECEIVED
DEC 10 2008
ETIC ENGINEERING

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

December 5, 2008

Ms. Jennifer Sedlachek
Exxon Mobil Refining & Supply Company
4096 Piedmont Avenue #194
Oakland, CA 94611

Mr. William Slautterback
Cal Lube Real Estate Limited Partnership
PO Box 4369
Houston, TX 77210-4369

Subject: Fuel Leak Case No. RO0000386 and Geotracker Global ID T0600101278, Mobil #04-334/Jiffy Lube #606, 2492 Castro Valley Boulevard, Castro Valley, CA 94546

Dear Ms. Sedlachek and Mr. Slautterback:

Alameda County Environmental Health (ACEH) staff has reviewed the fuel leak case file for the above-referenced site including the document entitled, *Work Plan for Subsurface Investigation*, dated September 30, 2008 prepared by ETIC. The work plan recommends installing one monitoring well downgradient of borings SB-11 and SB-12 to further investigate the soil and groundwater conditions in this area. The work plan includes other requested information including cross-sections.

We request that you perform the proposed work and request that you address the following technical comments in the report requested below. Please provide 72-hour advance written notification to this office by e-mail (barbara.jakub@acgov.org) prior to the start of field activities.

TECHNICAL COMMENTS

1. **Groundwater Monitoring.** In addition to the proposed and existing list of analytes for your groundwater samples, please also analyze all groundwater samples for the following; ethyl tertiary butyl ether (ETBE), di-isopropyl ether (DIPE), tertiary amyl methyl ether (TAME), tert butyl alcohol (TBA), ethylene dibromide (EDB), ethylene dichloride (EDC) and ethanol by EPA Method 8260 for at least one round of sampling. Also, please evaluate the need for quarterly monitoring and submit a proposal for reducing sampling frequency if appropriate.

TECHNICAL REPORT REQUEST

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

- **March 26, 2009** – Site Conceptual Model with results of SWI

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

ELECTRONIC SUBMITTAL OF REPORTS

The Alameda County Environmental Cleanup Oversight Programs (LOP and SLIC) require submission of all reports in electronic form to the county's ftp site. Paper copies of reports will no longer be accepted. The electronic copy replaces the paper copy and will be used for all public information requests, regulatory review, and compliance/enforcement activities. Instructions for submission of electronic documents to the Alameda County Environmental Cleanup Oversight Program ftp site are provided on the attached "Electronic Report Upload (ftp) Instructions." Please do not submit reports as attachments to electronic mail.

Submission of reports to the Alameda County ftp site is an addition to existing requirements for electronic submittal of information to the State Water Resources Control Board (SWRCB) Geotracker website. Submission of reports to the Geotracker website does not fulfill the requirement to submit documents to the Alameda County ftp site. In September 2004, the SWRCB adopted regulations that require electronic submittal of information for groundwater cleanup programs. For several years, responsible parties for cleanup of leaks from underground storage tanks (USTs) have been required to submit groundwater analytical data, surveyed locations of monitor wells, and other data to the Geotracker database over the Internet. Beginning July 1, 2005, electronic submittal of a complete copy of all necessary reports was required in Geotracker (in PDF format). Please visit the SWRCB website for more information on these requirements (http://www.swrcb.ca.gov/ust/cleanup/electronic_reporting).

PERJURY STATEMENT

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

PROFESSIONAL CERTIFICATION & CONCLUSIONS/RECOMMENDATIONS

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

and statement of professional certification. Please ensure all that all technical reports submitted for this fuel leak case meet this requirement.

UNDERGROUND STORAGE TANK CLEANUP FUND

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

AGENCY OVERSIGHT

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

If you have any questions, please call me at (510) 639-1287 or send me an electronic mail message at barbara.jakub@acgov.org.

Sincerely,

Barbara Jakub

Barbara Jakub, P.G.
Hazardous Materials Specialist

Enclosure: ACEH Electronic Report Upload (ftp) Instructions

cc: Erik Appel, ETIC Engineering, Inc., 2285 Morello Avenue, Pleasant Hill, CA 94523
Donna Drogos, ACEH
Barbara Jakub, ACEH
File

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

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

REQUIREMENTS

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

Additional Recommendations

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

Submission Instructions

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

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

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

Appendix B

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: 01/21/2009 By jamesy

Permit Numbers: W2009-0037
Permits Valid from 01/29/2009 to 01/30/2009

Application Id:	1232050025565	**City of Project Site:** Castro Valley
Site Location:	2475 Castro Valley Blvd., Castro Valley, CA. Offsite of the former Mobil station 04334, 2492 Castro Valley Blvd., Castro Valley, CA.	
Project Start Date:	01/29/2009	**Completion Date:** 01/30/2009
Applicant:	ETIC Engineering, Inc. - Bryan Campbell 2285 Morello Avenue, Pleasant Hill, CA 94523	**Phone:** 925-602-4710 x24
Property Owner:	N/A Truman Food Services Five., Inc. 399 Taylor Blvd., #103, Pleasant Hill, CA 94523	**Phone:** --
Client:	N/A ExxonMobil Environmental Services Company 4096 Piedmont Ave. #194, Oakland, CA 94611	**Phone:** 510-547-8196
Contact:	Yuko Mamiya	**Phone:** 925-602-4710 x37 **Cell:** --

Total Due: $345.00
Receipt Number: WR2009-0021 **Total Amount Paid:** $345.00
Payer Name : ETIC Engineering, Inc. Paid By: VISA **PAID IN FULL**

Works Requesting Permits:

Well Construction-Monitoring-Monitoring - 1 Wells
Driller: Woodward Drilling Co., Inc. - Lic #: 710079 - Method: hstem **Work Total: $345.00**

Specifications

Permit #	Issued Date	Expire Date	Owner Well Id	Hole Diam.	Casing Diam.	Seal Depth	Max. Depth
W2009-0037	01/21/2009	04/29/2009	MW5	8.00 in.	2.00 in.	4.00 ft	15.00 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. Permitte, 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. Including 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.

Appendix C

Field Protocols

PROTOCOLS FOR WELL DRILLING, COMPLETION, AND DEVELOPMENT

SUBSURFACE CLEARANCE SURVEY PROCEDURES

Prior to drilling, the proposed locations of borings will be marked with white paint. Underground Service Alert (USA) will be contacted prior to subsurface activities and a "ticket" will be issued for this investigation. USA members will mark underground utilities in the delineated areas using standard color code identifiers.

Once USA has marked the site, all proposed borehole locations will be investigated by subsurface clearance surveys to identify possible buried hazards (pipelines, drums, tanks). Subsurface clearance surveys use several geophysical methods to locate shallow buried man-made objects. The geophysical methods include electromagnetic induction (EMI) profiling, ground penetrating radar (GPR), and/or magnetic surveying. The choice of methods depends on the target object and potential interference from surrounding features.

Prior to drilling, all boreholes will be cleared of underground utilities to a depth of at least 4 feet below ground surface (bgs) in "non-critical zones" and to 8 feet bgs in "critical zones." Critical zones are defined as locations that are within 10 feet from the furthest edge of any underground storage tank (UST), within 10 feet of the product dispenser islands, the entire area between the UST field and the product dispenser islands, and within 10 feet of any suspected underground line. An 8- to 12-inch-diameter circle will be cut in the surface cover at each boring location. A hole, greater than the diameter of the drilling tool being used, will then be cleared at each boring location, using a hand auger or vacuum excavation system. The vacuum system consists of an air or water lance, used to disturb native soil by injecting water into the soil, and a vacuum, used to remove the soil.

DRILLING

Boreholes are drilled with a truck-mounted rotary drill, using hollow-stem continuous-flight augers. The diameter of the augers is selected to provide an annular space between the boring wall and the well casing of no less than 2 inches.

All augers are pressure-washed or steam-cleaned before drilling begins and before each new borehole is drilled. All drill cuttings are either placed on and covered with plastic sheeting or contained in sealed 55-gallon drums. All fluids generated during cleaning of drilling equipment are contained in sealed 55-gallon drums. All waste generated during drilling activities is stored onsite until appropriate disposal is arranged. The drums are labeled with the site description (including owner's name) and date. The drill cuttings are disposed of at a proper facility based on results of soil sample analysis.

During drilling, an ETIC geologist generates a soil boring log for each borehole. The boring logs contain detailed geological information, including descriptions of the soils classified according to the Unified Soil Classification System (USCS), blow counts for soil sampling intervals, organic vapor analyzer (OVA) readings, relative moisture content of the soils, and initial and static water levels.

SOIL SAMPLING

Soil samples are collected using a 2-inch-diameter by 18- or 24-inch-long modified California split-spoon sampler containing three or four 6-inch-long brass or stainless steel liners. The sampler and liners are scrubbed in potable water and Alconox or equivalent detergent and rinsed with potable water after use at each sampling interval.

At each sample depth, the sampler is driven 18 or 24 inches ahead of the augers into undisturbed soil. When the sampler is retrieved, either the lowermost or the middle sample liner is removed and the ends of the tube are covered with aluminum foil or Teflon tape and sealed with plastic caps. The soil-filled liner is labeled with the borehole number, sample depth, site location, date, and time. The samples are placed in zip-lock bags and stored in a cooler containing ice.

Soil from one of the liners is removed and placed in a sealed plastic bag. The soil is scanned with an OVA equipped with a flame ionization detector (FID) or photoionization detector (PID), and the readings are noted on the soil boring logs. The soil from the remaining liner(s) is examined and classified according to the Unified Soil Classification System.

Soil samples are delivered, under chain of custody, to a laboratory certified by the California Department of Health Services (DHS) for analyses.

WELL INSTALLATION

The boreholes are completed as groundwater monitoring wells, vapor extraction wells, groundwater extraction wells, or air sparging wells. The wells are typically constructed by installing Schedule 40 PVC flush-threaded casing through the inner opening of the auger. The screened interval consists of slotted casing of the appropriate slot size and length placed at depths depending on soil conditions encountered during drilling and the depth to groundwater. A threaded end plug or a slip cap secured with a stainless steel screw is placed on the bottom of the well.

A filter pack of clean sand of appropriate size is placed in the annular space around the well screen to approximately 1 to 3 feet above the top of the screen. The sand is placed through the inner opening of the augers as they are slowly removed. A transitional seal is completed above the sand pack by adding 1 to 2 feet of bentonite pellets and hydrating them with water. A surface seal is then created by placing neat cement grout containing less than 5 percent bentonite from the top of the bentonite seal to just below the ground surface.

The well is finished at the surface with a slightly raised, traffic-rated, watertight steel traffic box set in concrete. The traffic box is secured with bolts and the casing is further secured with a locking well cap.

WELL DEVELOPMENT

The wells are developed no less than 72 hours after completion or prior to establishing the bentonite seal during the drilling activities. Development typically consists of surging the screened interval of the well with a flapper valve surge block of the same diameter as the well for approximately 10 minutes. The well is then purged with a vacuum truck and a dedicated PVC stinger or disposable tubing, an inertial pump, a submersible electric pump, a centrifugal pump,

an air-lift pump, or a PVC bailer until at least 3 casing volumes are removed and the water is free of silt and apparent turbidity.

A record of the purging methods and volumes of water purged is maintained. All purge water is contained on the site in properly labeled 55-gallon drums. Purged water is transported to an appropriate treatment facility.

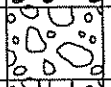
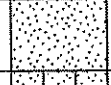
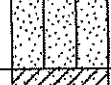
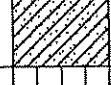
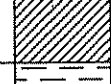
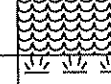
WELL SURVEY

The elevation of the top of the well casing is surveyed by a state licensed land surveyor. A small notch is cut in the top of the well casing to mark the survey point and establish the point used for all future water level measurements. A loop originating and ending at the datum is closed to ±0.01 feet according to standard methods.

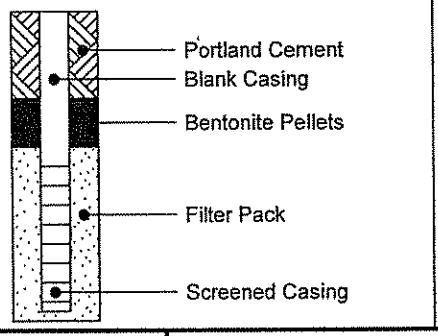
Appendix D

Soil Boring Logs and Well Completion Diagrams

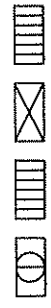
GrfcText\SOIL CLASSIFICATION 10/16/2002 12:25:06 PM

MAJOR DIVISIONS			TYPICAL NAMES		
COARSE-GRAINED SOILS More than half is coarser than No. 200 sieve	GRAVELS more than half coarse fraction is larger than No. 4 sieve size	Clean gravels with little or no fines	GW		Well graded gravels with or without sand, little or no fines.
			GP		Poorly graded gravels with or without sand, little or no fines.
		Gravels with over 12% fines	GM		Silty gravels, silty gravels with sand.
			GC		Clayey gravels, clayey gravels with sand.
	SANDS more than half coarse fraction is smaller than No. 4 sieve size	Clean sands with little or no fines	SW		Well graded sands with or without gravel, little or no fines.
			SP		Poorly graded sands with or without gravels, little or no fines.
		Sands with over 12% fines	SM		Silty sands with or without gravel.
			SC		Clayey sands with or without gravel.
FINE-GRAINED SOILS More than half is finer than No. 200 sieve	SILTS AND CLAYS liquid limit 50% or less		ML		Inorganic silts and very fine sands, rock flour, silts with sands and gravels.
			CL		Inorganic clays of low to medium plasticity, clays with sands and gravels, lean clays.
			OL		Organic silts or clays of low plasticity.
	SILTS AND CLAYS liquid limit greater than 50%		MH		Inorganic silts, micaceous or diatomaceous, fine sandy or silty soils, elastic silts.
			CH		Inorganic clays of high plasticity, fat clays
			OH		Organic clays or clays of medium to high plasticity.
HIGHLY ORGANIC SOILS			PT		Peat and other highly organic soils.

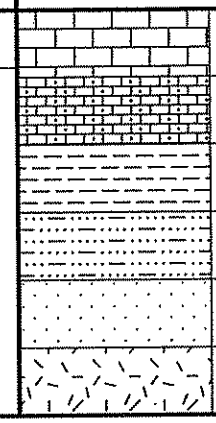
SYMBOLS



Samples



DRILL LOG ROCK TYPES



ETIC ENGINEERING

UNIFIED SOIL CLASSIFICATION SYSTEM DESCRIPTIONS AND SYMBOLS USED ON ETIC DRILL LOGS

ETIC ENGINEERING

LOG OF SOIL BORING: **MW5**

COORDINATES: N2077744.5 :E6100668.6
ELEVATION TOP OF CASING: 173.80
CASING BELOW SURFACE: 0.44

DRILLING COMPANY: Woodward Drilling
LICENSE NUMBER: C57-710079

CLIENT	SITE NUMBER	LOCATION
ExxonMobil	04334	2492 Castro Valley Blvd Castro Valley, CA

DRILLING AND SAMPLING METHODS: Vacuum cleared to 8 feet bgs. Hand sampled at 5 and 7.5 feet bgs. Drilled using a hollow stem auger rig with 8-inch augers. Sampled with a split spoon sampler.

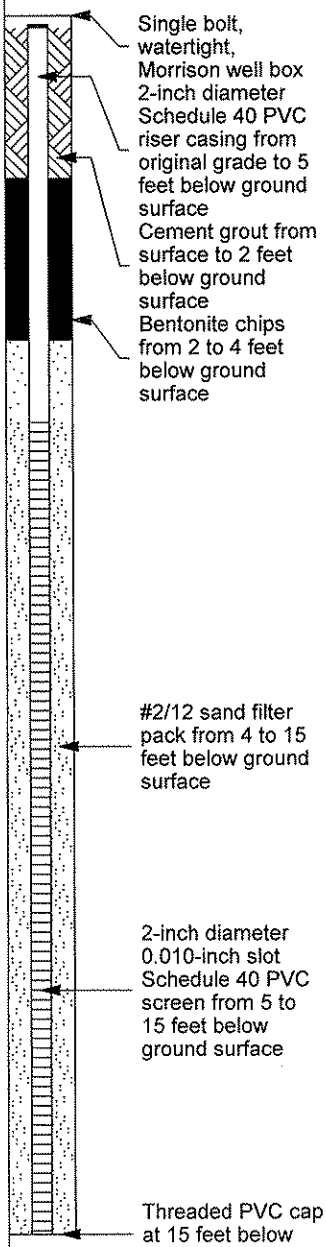
				START	FINISH
WATER LEVEL	▽ 15.2	▼ 14.36		TIME 0630	TIME 0915
TIME	0726	0840		DATE 1/29/09	DATE 1/30/09
DATE	1/30/09	1/30/09			
REFERENCE	GS	TOC			

SURFACE CONDITIONS: Asphalt

DESCRIPTION BY: Yuko Mamiya

INCHES DRIVEN	INCHES RECOVER	BLOWS / 6" SAMPLER	OVA READING	DEPTH (feet)	GRAPHIC LOG	DESCRIPTION
				0	AC/AB	**ASPHALT** - from 0 to 0.33 feet below ground surface. **AGGREGATE BASE** - from 0.33 to 1 foot below ground surface.
				1	GC	**CLAY AND GRAVEL** - mixture of gravels up to 1-inch in diameter, native clay and aggregate base.
				2	CL	**CLAY WITH SILT** - black (10YR 2/1), medium stiff, low plasticity, moist.
				3		
				4		- pervasive caliche.
	6			5	CL	**SILTY CLAY** - dark greenish gray (GLEY1 4/10GY), stiff, low plasticity, pervasive caliche, moist.
				6		- increasing sand content, becoming very moist.
	6			7	ML	**SANDY SILT WITH CLAY** - dark greenish gray (GLEY1 4/10GY), stiff, low plasticity, fine to medium grained sand, wet.
				8		
				9		
12	10	11 50/5"	0.5	10	ML	**SANDY SILT WITH GRAVEL** - dark yellowish brown (10YR 3/6), stiff, low plasticity, fine to coarse grained sand, gravels up to 0.5 inches in diameter, slightly moist.
				11		
				12		
18	14	17 20 26	0.6	13		**CLAYSTONE** - olive brown (2.5Y 4/4), highly weathered, friable, low plasticity.
				14	MUDSTONE	
				15		Boring terminated at 15 feet bgs.
12	12	28 50/5"	0.6	16		

DETAILS



LOG OF SOIL BORING 04-334 BORING LOGS.GPJ ETIC.GDT 3/26/09

Appendix E

Well Development and Sampling Forms

ETIC ENGINEERING

WELL DEVELOPMENT FORM

Project location: 2492 Castro Valley Boulevard, Castro Valley

Well No: MW5

Date: 3-4-09

Project No: UP04334.1.12

Personnel: ALEX

GAUGING DATA

Water Level Measuring Method: WATER LEVEL METER

Measuring Point Description: N

WELL PURGE VOLUME CALCULATION	Total Depth (feet)		Depth to Water (feet)		Water Column (feet)		Multiplier for Casing Diameter				Casing Volume (gal)		Total Purge Volume (gal)
							1	2 (circled)	4	6			
	15.30	−	4.70	=	10.6	×	0.04	0.16	0.64	1.44	1.69	=	14.90

PURGING DATA

Purge Method: WATERRA

Purge Depth: 15.31

Time	08/11	08/14	08:18	8:44								
Volume Purge (gal)	2	4	6	8	10	12	14	16	18	20		
Temperature ( )	17.3	18.3	18.7	18.2								
pH	6.76	7.32	7.31	7.62								
Conductivity (us/cm)	2084	2090	2030	19.15								
Color	BRN	BRN	Brown	Brown								
Turbidity	SILTY	SILTY	Silty	Silty								
Odor (Y/N)	N	N	N	N								
Casing Volumes	1	2	3	4	5	6	7	8	9	10		
Dewatered (Y/N)	N	N	N	N								

Comments/Observbations:

Well Dewatered aprox 7gal 08:22 – Heavy Turb – large amount Fine grain sand

Total Purge Volume: 8 *(gallons)*

Disposal:

Weather Conditions: OK

Condition of Well Box and Casing: OK

Well Head Conditions Requiring Correction: NONE

Problems Encountered During Purging: Y DEWATERED

Comments:

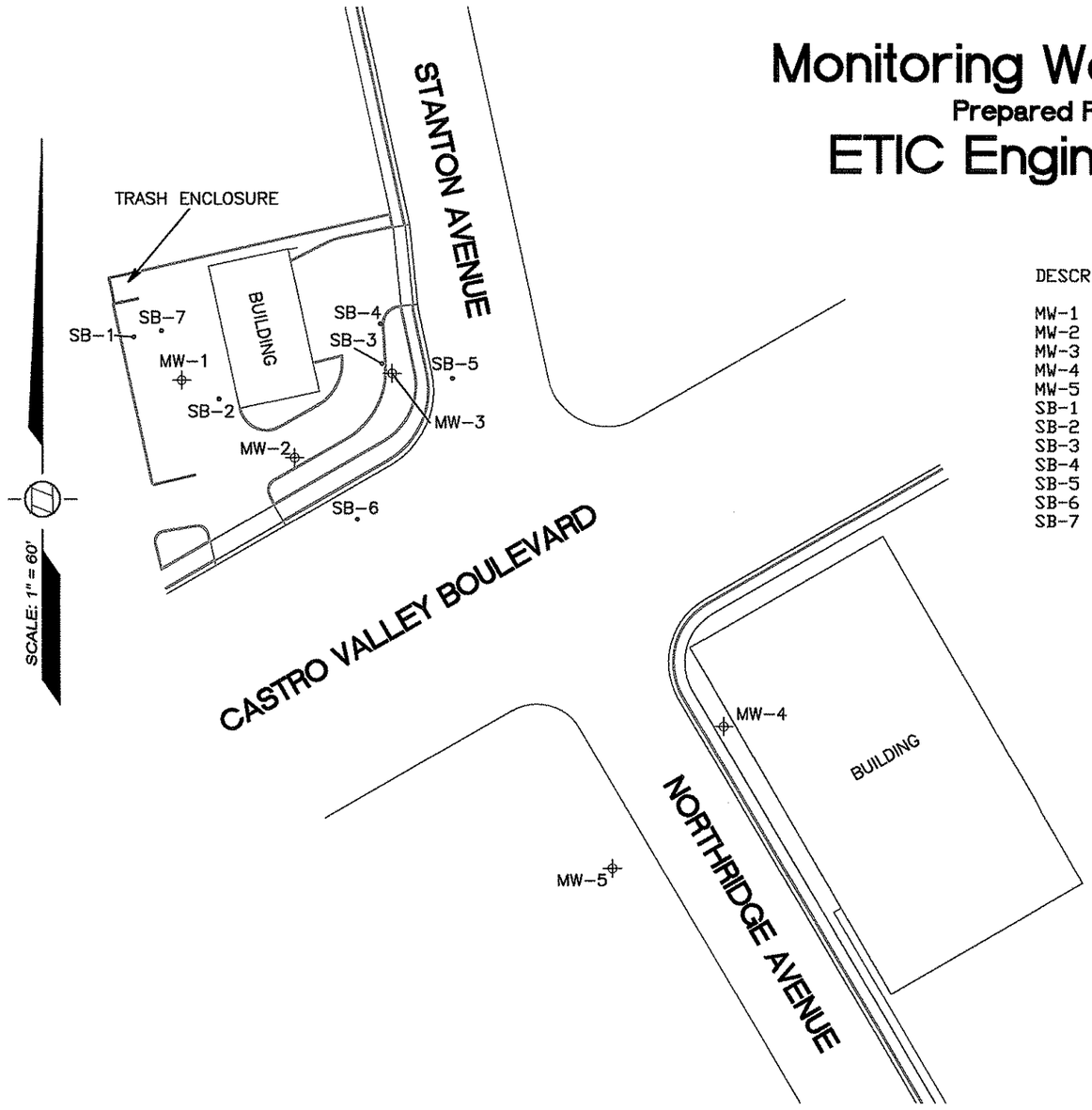
Appendix F

Survey Data

Monitoring Well Exhibit

Prepared For:

ETIC Engineering



DESCRIPTION	NORTHING	EASTING	LATITUDE	LONGITUDE	ELEV (PVC)	ELEV (BOX)
MW-1	2077950.9	6100487.0	37.6908693	-122.0939312	173.23	173.53
MW-2	2077918.0	6100534.5	37.6907814	-122.0937650	173.63	173.91
MW-3	2077953.8	6100575.7	37.6908814	-122.0936246	171.91	172.25
MW-4	2077804.5	6100715.6	37.6904782	-122.0931326	170.48	170.86
MW-5	2077744.5	6100668.6	37.6903110	-122.0932913	173.80	174.24
SB-1	2077969.2	6100466.9	37.6909186	-122.0940015		
SB-2	2077942.9	6100502.8	37.6908482	-122.0938758		
SB-3	2077957.9	6100571.6	37.6908925	-122.0936393		
SB-4	2077974.7	6100570.9	37.6909387	-122.0936424		
SB-5	2077951.6	6100601.3	37.6908768	-122.0935362		
SB-6	2077892.0	6100561.1	37.6907112	-122.0936716		
SB-7	2077971.7	6100478.5	37.6909261	-122.0939617		

BASIS OF COORDINATES AND ELEVATIONS:

COORDINATES ARE CALIFORNIA STATE PLANE ZONE 3 COORDINATES FROM GPS OBSERVATIONS USING UNIVERSITY OF CALIFORNIA BAY AREA DEFORMATION CORS STATION OBSERVATION FILES AND BASED ON THE CALIFORNIA SPATIAL REFERENCE CENTER DATUM, REFERENCE EPOCH 2000.35.

COORDINATE DATUM IS NAD 83(CORS).

DATUM ELLIPSOID IS GRS80.

REFERENCE GEOID IS GEOID99.

CORS STATIONS USED WERE FARB AND SODB.

VERTICAL DATUM IS NAVD 88 FROM GPS OBSERVATIONS.

0 30 60 120 180

SCALE IN FEET

Former Mobil Station No. 04-334
2492 Castro Valley Boulevard
Castro Valley
Contra Costa County
California

Morrow Surveying
LAND SURVEYORS

1255 Starboard Drive
West Sacramento
California 95691
(916) 372-8124
curt@morrowsurveying.com

Date: 7-12-04
Scale: 1" = 60'
Sheet 1 of 1
Revised: 2-20-09
Field Book: MW-15,42
Dwg. No. 1893-051 ct

Appendix G

Laboratory Analytical Reports and Chain-of-Custody Documentation

Calscience
Environmental
Laboratories, Inc.

February 09, 2009

Erik Appel
ETIC Engineering, Inc.
2285 Morello Avenue
Pleasant Hill, CA 94523-1850

Subject: **Calscience Work Order No.: 09-01-2685**
Client Reference: ExxonMobil 04334

Dear Client:

Enclosed is an analytical report for the above-referenced project. The samples included in this report were received 1/31/2009 and analyzed in accordance with the attached chain-of-custody.

Unless otherwise noted, all analytical testing was accomplished in accordance with the guidelines established in our Quality Systems Manual, applicable standard operating procedures, and other related documentation. The original report of subcontracted analysis, if any, is provided herein, and follows the standard Calscience data package. The results in this analytical report are limited to the samples tested and any reproduction thereof must be made in its entirety.

Note that the Chain-of-Custody Record and Sample Receipt Form are integral parts of this report.

If you have any questions regarding this report, please do not hesitate to contact the undersigned.

Sincerely,

Cecile L deGuia

Calscience Environmental
Laboratories, Inc.
Cecile deGuia
Project Manager

Calscience Environmental Laboratories, Inc.

Analytical Report

ACCREDITED IN ACCORDANCE WITH nelac

ETIC Engineering, Inc.		Date Received:	01/31/09
2285 Morello Avenue		Work Order No:	09-01-2685
Pleasant Hill, CA 94523-1850		Preparation:	EPA 5030B
		Method:	EPA 8015B (M)

Project: ExxonMobil 04334

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW5@5-5.5	**09-01-2685-1-A**	**01/29/09 07:30**	**Solid**	**GC 24**	**02/04/09**	**02/04/09 17:39**	**090204B01**

Comment(s): -Results were evaluated to the MDL, concentrations >= to the MDL but < RL, if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qual	Units
TPH as Gasoline	ND	0.50	0.42	1		mg/kg
Surrogates:	**REC (%)**	**Control Limits**			**Qual**	
1,4-Bromofluorobenzene - FID	79	42-126				

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW5@7.5-8	**09-01-2685-2-A**	**01/29/09 07:52**	**Solid**	**GC 24**	**02/04/09**	**02/04/09 18:12**	**090204B01**

Comment(s): -Results were evaluated to the MDL, concentrations >= to the MDL but < RL, if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qual	Units
TPH as Gasoline	ND	0.50	0.42	1		mg/kg
Surrogates:	**REC (%)**	**Control Limits**			**Qual**	
1,4-Bromofluorobenzene - FID	78	42-126				

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW5@10.5-11	**09-01-2685-3-A**	**01/30/09 07:05**	**Solid**	**GC 24**	**02/04/09**	**02/04/09 18:46**	**090204B01**

Comment(s): -Results were evaluated to the MDL, concentrations >= to the MDL but < RL, if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qual	Units
TPH as Gasoline	ND	0.50	0.42	1		mg/kg
Surrogates:	**REC (%)**	**Control Limits**			**Qual**	
1,4-Bromofluorobenzene - FID	77	42-126				

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW5@13.5-14	**09-01-2685-4-A**	**01/30/09 07:10**	**Solid**	**GC 24**	**02/04/09**	**02/04/09 19:20**	**090204B01**

Comment(s): -Results were evaluated to the MDL, concentrations >= to the MDL but < RL, if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qual	Units
TPH as Gasoline	ND	0.50	0.42	1		mg/kg
Surrogates:	**REC (%)**	**Control Limits**			**Qual**	
1,4-Bromofluorobenzene - FID	77	42-126				

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

ACCREDITED IN ACCORDANCE WITH nelac

ETIC Engineering, Inc.		Date Received:	01/31/09
2285 Morello Avenue		Work Order No:	09-01-2685
Pleasant Hill, CA 94523-1850		Preparation:	EPA 5030B
		Method:	EPA 8015B (M)

Project: ExxonMobil 04334

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW5@15.5-16	**09-01-2685-5-A**	**01/30/09 07:20**	**Solid**	**GC 24**	**02/04/09**	**02/04/09 19:53**	**090204B01**

Comment(s): -Results were evaluated to the MDL, concentrations >= to the MDL but < RL, if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qual	Units
TPH as Gasoline	ND	0.50	0.42	1		mg/kg
Surrogates:	**REC (%)**	**Control Limits**			**Qual**	
1,4-Bromofluorobenzene - FID	77	42-126				

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-12-279-2,639**	**N/A**	**Solid**	**GC 24**	**02/04/09**	**02/04/09 12:01**	**090204B01**

Comment(s): -Results were evaluated to the MDL, concentrations >= to the MDL but < RL, if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qual	Units
TPH as Gasoline	ND	0.50	0.42	1		mg/kg
Surrogates:	**REC (%)**	**Control Limits**			**Qual**	
1,4-Bromofluorobenzene - FID	84	42-126				

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

ETIC Engineering, Inc.		Date Received:	01/31/09
2285 Morello Avenue		Work Order No:	09-01-2685
Pleasant Hill, CA 94523-1850		Preparation:	EPA 5030B
		Method:	EPA 8021B
		Units:	mg/kg
Project: ExxonMobil 04334			Page 1 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW5@5-5.5	**09-01-2685-1-A**	**01/29/09 07:30**	**Solid**	**GC 8**	**02/02/09**	**02/03/09 07:03**	**090202B02**

Comment(s): -Results were evaluated to the MDL, concentrations >= to the MDL but < RL, if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qual	Parameter	Result	RL	MDL	DF	Qual
Benzene	ND	0.0050	0.0012	1		Ethylbenzene	ND	0.0050	0.0011	1	
Toluene	0.0020	0.0050	0.0012	1	J	Xylenes (total)	0.0024	0.010	0.0023	1	J,Z
Surrogates:	REC (%)	Control Limits			Qual						
1,4-Bromofluorobenzene	85	51-129									

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW5@7.5-8	**09-01-2685-2-A**	**01/29/09 07:52**	**Solid**	**GC 8**	**02/02/09**	**02/03/09 07:37**	**090202B02**

Comment(s): -Results were evaluated to the MDL, concentrations >= to the MDL but < RL, if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qual	Parameter	Result	RL	MDL	DF	Qual
Benzene	ND	0.0050	0.0012	1		Ethylbenzene	ND	0.0050	0.0011	1	
Toluene	ND	0.0050	0.0012	1		Xylenes (total)	ND	0.010	0.0023	1	
Surrogates:	REC (%)	Control Limits			Qual						
1,4-Bromofluorobenzene	81	51-129									

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW5@10.5-11	**09-01-2685-3-A**	**01/30/09 07:05**	**Solid**	**GC 8**	**02/02/09**	**02/03/09 08:12**	**090202B02**

Comment(s): -Results were evaluated to the MDL, concentrations >= to the MDL but < RL, if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qual	Parameter	Result	RL	MDL	DF	Qual
Benzene	ND	0.0050	0.0012	1		Ethylbenzene	ND	0.0050	0.0011	1	
Toluene	ND	0.0050	0.0012	1		Xylenes (total)	ND	0.010	0.0023	1	
Surrogates:	REC (%)	Control Limits			Qual						
1,4-Bromofluorobenzene	85	51-129									

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW5@13.5-14	**09-01-2685-4-A**	**01/30/09 07:10**	**Solid**	**GC 8**	**02/02/09**	**02/03/09 08:46**	**090202B02**

Comment(s): -Results were evaluated to the MDL, concentrations >= to the MDL but < RL, if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qual	Parameter	Result	RL	MDL	DF	Qual
Benzene	ND	0.0050	0.0012	1		Ethylbenzene	ND	0.0050	0.0011	1	
Toluene	ND	0.0050	0.0012	1		Xylenes (total)	ND	0.010	0.0023	1	
Surrogates:	REC (%)	Control Limits			Qual						
1,4-Bromofluorobenzene	86	51-129									

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

ACCREDITED IN ACCORDANCE WITH nelac

ETIC Engineering, Inc.	Date Received:	01/31/09
2285 Morello Avenue	Work Order No:	09-01-2685
Pleasant Hill, CA 94523-1850	Preparation:	EPA 5030B
	Method:	EPA 8021B
	Units:	mg/kg
Project: ExxonMobil 04334		Page 2 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW5@15.5-16	**09-01-2685-5-A**	**01/30/09 07:20**	**Solid**	**GC 8**	**02/02/09**	**02/03/09 09:20**	**090202B02**

Comment(s): -Results were evaluated to the MDL, concentrations >= to the MDL but < RL, if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qual	Parameter	Result	RL	MDL	DF	Qual
Benzene	ND	0.0050	0.0012	1		Ethylbenzene	ND	0.0050	0.0011	1	
Toluene	0.0012	0.0050	0.0012	1	J	Xylenes (total)	ND	0.010	0.0023	1	
Surrogates:	REC (%)	Control Limits			Qual						
1,4-Bromofluorobenzene	70	51-129									

Method Blank	099-12-657-229	N/A	Solid	GC 8	02/02/09	02/03/09 04:14	090202B02

Comment(s): -Results were evaluated to the MDL, concentrations >= to the MDL but < RL, if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qual	Parameter	Result	RL	MDL	DF	Qual
Benzene	ND	0.0050	0.0012	1		Ethylbenzene	ND	0.0050	0.0011	1	
Toluene	ND	0.0050	0.0012	1		Xylenes (total)	ND	0.010	0.0023	1	
Surrogates:	REC (%)	Control Limits			Qual						
1,4-Bromofluorobenzene	100	51-129									

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

ACCREDITED IN ACCORDANCE WITH nelac

ETIC Engineering, Inc.	Date Received:	01/31/09
2285 Morello Avenue	Work Order No:	09-01-2685
Pleasant Hill, CA 94523-1850	Preparation:	EPA 5030B
	Method:	EPA 8260B
	Units:	mg/kg
Project: ExxonMobil 04334		Page 1 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW5@5-5.5	**09-01-2685-1-A**	**01/29/09 07:30**	**Solid**	**GC/MS WW**	**02/04/09**	**02/04/09 17:42**	**090204L01**

Comment(s): -Results were evaluated to the MDL, concentrations >= to the MDL but < RL, if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qual	Parameter	Result	RL	MDL	DF	Qual
1,2-Dibromoethane	ND	0.0050	0.00025	1		Diisopropyl Ether (DIPE)	ND	0.010	0.00034	1	
1,2-Dichloroethane	ND	0.0050	0.00026	1		Ethyl-t-Butyl Ether (ETBE)	ND	0.010	0.00028	1	
Methyl-t-Butyl Ether (MTBE)	ND	0.0050	0.00025	1		Tert-Amyl-Methyl Ether (TAME)	ND	0.010	0.00026	1	
Tert-Butyl Alcohol (TBA)	ND	0.050	0.022	1		Ethanol	ND	0.25	0.048	1	
Surrogates:	REC (%)	Control Limits			Qual	Surrogates:	REC (%)	I Limits			Qual
Dibromofluoromethane	99	73-139				1,2-Dichloroethane-d4	93	73-145			
Toluene-d8	99	90-108				1,4-Bromofluorobenzene	94	71-113			

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW5@7.5-8	**09-01-2685-2-A**	**01/29/09 07:52**	**Solid**	**GC/MS WW**	**02/04/09**	**02/04/09 18:08**	**090204L01**

Comment(s): -Results were evaluated to the MDL, concentrations >= to the MDL but < RL, if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qual	Parameter	Result	RL	MDL	DF	Qual
1,2-Dibromoethane	ND	0.0050	0.00025	1		Diisopropyl Ether (DIPE)	ND	0.010	0.00034	1	
1,2-Dichloroethane	ND	0.0050	0.00026	1		Ethyl-t-Butyl Ether (ETBE)	ND	0.010	0.00028	1	
Methyl-t-Butyl Ether (MTBE)	ND	0.0050	0.00025	1		Tert-Amyl-Methyl Ether (TAME)	ND	0.010	0.00026	1	
Tert-Butyl Alcohol (TBA)	ND	0.050	0.022	1		Ethanol	ND	0.25	0.048	1	
Surrogates:	REC (%)	Control Limits			Qual	Surrogates:	REC (%)	I Limits			Qual
Dibromofluoromethane	97	73-139				1,2-Dichloroethane-d4	94	73-145			
Toluene-d8	99	90-108				1,4-Bromofluorobenzene	96	71-113			

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW5@10.5-11	**09-01-2685-3-A**	**01/30/09 07:05**	**Solid**	**GC/MS WW**	**02/04/09**	**02/04/09 18:34**	**090204L01**

Comment(s): -Results were evaluated to the MDL, concentrations >= to the MDL but < RL, if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qual	Parameter	Result	RL	MDL	DF	Qual
1,2-Dibromoethane	ND	0.0050	0.00025	1		Diisopropyl Ether (DIPE)	ND	0.010	0.00034	1	
1,2-Dichloroethane	ND	0.0050	0.00026	1		Ethyl-t-Butyl Ether (ETBE)	ND	0.010	0.00028	1	
Methyl-t-Butyl Ether (MTBE)	ND	0.0050	0.00025	1		Tert-Amyl-Methyl Ether (TAME)	ND	0.010	0.00026	1	
Tert-Butyl Alcohol (TBA)	ND	0.050	0.022	1		Ethanol	ND	0.25	0.048	1	
Surrogates:	REC (%)	Control Limits			Qual	Surrogates:	REC (%)	I Limits			Qual
Dibromofluoromethane	98	73-139				1,2-Dichloroethane-d4	95	73-145			
Toluene-d8	100	90-108				1,4-Bromofluorobenzene	92	71-113			

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

ACCREDITED IN ACCORDANCE WITH nelac

ETIC Engineering, Inc.
2285 Morello Avenue
Pleasant Hill, CA 94523-1850

Date Received: 01/31/09
Work Order No: 09-01-2685
Preparation: EPA 5030B
Method: EPA 8260B
Units: mg/kg

Project: ExxonMobil 04334

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW5@13.5-14	**09-01-2685-4-A**	**01/30/09 07:10**	**Solid**	**GC/MS WW**	**02/04/09**	**02/04/09 19:01**	**090204L01**

Comment(s): -Results were evaluated to the MDL, concentrations >= to the MDL but < RL, if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qual	Parameter	Result	RL	MDL	DF	Qual
1,2-Dibromoethane	ND	0.0050	0.00025	1		Diisopropyl Ether (DIPE)	ND	0.010	0.00034	1	
1,2-Dichloroethane	ND	0.0050	0.00026	1		Ethyl-t-Butyl Ether (ETBE)	ND	0.010	0.00028	1	
Methyl-t-Butyl Ether (MTBE)	0.00028	0.0050	0.00025	1	J	Tert-Amyl-Methyl Ether (TAME)	ND	0.010	0.00026	1	
Tert-Butyl Alcohol (TBA)	ND	0.050	0.022	1		Ethanol	ND	0.25	0.048	1	

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	I Limits	Qual
Dibromofluoromethane	103	73-139		1,2-Dichloroethane-d4	101	73-145	
Toluene-d8	99	90-108		1,4-Bromofluorobenzene	93	71-113	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW5@15.5-16	**09-01-2685-5-A**	**01/30/09 07:20**	**Solid**	**GC/MS WW**	**02/04/09**	**02/04/09 19:27**	**090204L01**

Comment(s): -Results were evaluated to the MDL, concentrations >= to the MDL but < RL, if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qual	Parameter	Result	RL	MDL	DF	Qual
1,2-Dibromoethane	ND	0.0050	0.00025	1		Diisopropyl Ether (DIPE)	ND	0.010	0.00034	1	
1,2-Dichloroethane	ND	0.0050	0.00026	1		Ethyl-t-Butyl Ether (ETBE)	ND	0.010	0.00028	1	
Methyl-t-Butyl Ether (MTBE)	0.00038	0.0050	0.00025	1	J	Tert-Amyl-Methyl Ether (TAME)	ND	0.010	0.00026	1	
Tert-Butyl Alcohol (TBA)	ND	0.050	0.022	1		Ethanol	ND	0.25	0.048	1	

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	I Limits	Qual
Dibromofluoromethane	100	73-139		1,2-Dichloroethane-d4	100	73-145	
Toluene-d8	99	90-108		1,4-Bromofluorobenzene	93	71-113	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-12-796-971**	**N/A**	**Solid**	**GC/MS WW**	**02/04/09**	**02/04/09 13:43**	**090204L01**

Comment(s): -Results were evaluated to the MDL, concentrations >= to the MDL but < RL, if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qual	Parameter	Result	RL	MDL	DF	Qual
1,2-Dibromoethane	ND	0.0050	0.00025	1		Diisopropyl Ether (DIPE)	ND	0.010	0.00034	1	
1,2-Dichloroethane	ND	0.0050	0.00026	1		Ethyl-t-Butyl Ether (ETBE)	ND	0.010	0.00028	1	
Methyl-t-Butyl Ether (MTBE)	ND	0.0050	0.00025	1		Tert-Amyl-Methyl Ether (TAME)	ND	0.010	0.00026	1	
Tert-Butyl Alcohol (TBA)	ND	0.050	0.022	1		Ethanol	ND	0.25	0.048	1	

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	I Limits	Qual
Dibromofluoromethane	102	73-139		1,2-Dichloroethane-d4	101	73-145	
Toluene-d8	99	90-108		1,4-Bromofluorobenzene	90	71-113	

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

ACCREDITED IN ACCORDANCE WITH nelac

ETIC Engineering, Inc.	Date Received:	01/31/09
2285 Morello Avenue	Work Order No:	09-01-2685
Pleasant Hill, CA 94523-1850	Preparation:	EPA 5030B
	Method:	EPA 8015B (M)

Project ExxonMobil 04334

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
09-01-2618-1	**Solid**	**GC 24**	**02/04/09**	**02/04/09**	**090204S01**

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
TPH as Gasoline	79	78	48-114	1	0-23	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

ACCREDITED IN ACCORDANCE WITH nelac

ETIC Engineering, Inc.	Date Received:	01/31/09
2285 Morello Avenue	Work Order No:	09-01-2685
Pleasant Hill, CA 94523-1850	Preparation:	EPA 5030B
	Method:	EPA 8021B

Project ExxonMobil 04334

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
09-01-2686-1	**Solid**	**GC 8**	**02/02/09**	**02/03/09**	**090202S02**

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	95	98	58-118	4	0-24	
Toluene	88	92	61-109	4	0-20	
Ethylbenzene	92	93	59-113	1	0-20	
p/m-Xylene	95	96	55-115	1	0-20	
o-Xylene	90	91	56-110	1	0-20	
Methyl-t-Butyl Ether (MTBE)	99	101	65-113	2	0-9	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

ACCREDITED IN ACCORDANCE WITH nelac

ETIC Engineering, Inc.
2285 Morello Avenue
Pleasant Hill, CA 94523-1850

Date Received: 01/31/09
Work Order No: 09-01-2685
Preparation: EPA 5030B
Method: EPA 8260B

Project ExxonMobil 04334

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
09-01-2276-10	Solid	GC/MS WW	02/04/09	02/04/09	090204S01

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	78	83	79-115	7	0-13	3
Carbon Tetrachloride	79	86	55-139	9	0-15	
Chlorobenzene	82	88	79-115	7	0-17	
1,2-Dibromoethane	84	92	70-130	10	0-30	
1,2-Dichlorobenzene	75	81	63-123	8	0-23	
1,1-Dichloroethene	70	76	69-123	8	0-16	
Ethylbenzene	75	81	70-130	7	0-30	
Toluene	79	85	79-115	7	0-15	
Trichloroethene	77	82	66-144	6	0-14	
Vinyl Chloride	76	82	60-126	7	0-14	
Methyl-t-Butyl Ether (MTBE)	87	94	68-128	7	0-14	
Tert-Butyl Alcohol (TBA)	75	82	44-134	8	0-37	
Diisopropyl Ether (DIPE)	72	78	75-123	8	0-12	3
Ethyl-t-Butyl Ether (ETBE)	67	72	75-117	7	0-12	3
Tert-Amyl-Methyl Ether (TAME)	86	93	79-115	7	0-12	
Ethanol	45	54	42-138	19	0-28	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

ACCREDITED IN ACCORDANCE WITH nelac

ETIC Engineering, Inc.	Date Received:	N/A
2285 Morello Avenue	Work Order No:	09-01-2685
Pleasant Hill, CA 94523-1850	Preparation:	EPA 5030B
	Method:	EPA 8015B (M)

Project: ExxonMobil 04334

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-279-2,639	Solid	GC 24	02/04/09	02/04/09	090204B01

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
TPH as Gasoline	89	86	70-124	3	0-18	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

ACCREDITED IN ACCORDANCE WITH nelac

ETIC Engineering, Inc.	Date Received:	N/A
2285 Morello Avenue	Work Order No:	09-01-2685
Pleasant Hill, CA 94523-1850	Preparation:	EPA 5030B
	Method:	EPA 8021B

Project: ExxonMobil 04334

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-657-229	Solid	GC 8	02/02/09	02/03/09	090202B02

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	100	98	70-118	1	0-7	
Toluene	93	93	71-107	0	0-8	
Ethylbenzene	96	95	66-120	1	0-7	
p/m-Xylene	101	99	66-120	2	0-8	
o-Xylene	95	94	66-114	2	0-9	
Methyl-t-Butyl Ether (MTBE)	102	103	70-112	1	0-12	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

ACCREDITED IN ACCORDANCE WITH nelac

ETIC Engineering, Inc.	Date Received:	N/A
2285 Morello Avenue	Work Order No:	09-01-2685
Pleasant Hill, CA 94523-1850	Preparation:	EPA 5030B
	Method:	EPA 8260B

Project: ExxonMobil 04334

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-796-971	Solid	GC/MS WW	02/04/09	02/04/09	090204L01

Parameter	LCS %REC	LCSD %REC	%REC CL	ME CL	RPD	RPD CL	Qualifiers
Benzene	87	85	84-114	79-119	3	0-7	
Carbon Tetrachloride	96	95	66-132	55-143	0	0-12	
Chlorobenzene	93	90	87-111	83-115	3	0-7	
1,2-Dibromoethane	90	91	80-120	73-127	0	0-20	
1,2-Dichlorobenzene	87	86	79-115	73-121	2	0-8	
1,1-Dichloroethene	89	83	73-121	65-129	6	0-12	
Ethylbenzene	86	84	80-120	73-127	3	0-20	
Toluene	88	87	78-114	72-120	1	0-7	
Trichloroethene	86	85	84-114	79-119	2	0-8	
Vinyl Chloride	92	98	63-129	52-140	6	0-15	
Methyl-t-Butyl Ether (MTBE)	90	92	77-125	69-133	2	0-11	
Tert-Butyl Alcohol (TBA)	84	88	47-137	32-152	5	0-27	
Diisopropyl Ether (DIPE)	78	83	76-130	67-139	6	0-8	
Ethyl-t-Butyl Ether (ETBE)	73	72	76-124	68-132	2	0-12	
Tert-Amyl-Methyl Ether (TAME)	93	93	82-118	76-124	1	0-11	
Ethanol	94	83	59-131	47-143	12	0-21	

Total number of LCS compounds : 16
Total number of ME compounds : 1
Total number of ME compounds allowed : 1
LCS ME CL validation result : Pass

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Glossary of Terms and Qualifiers

Work Order Number: 09-01-2685

Qualifier	Definition
*	See applicable analysis comment.
1	Surrogate compound recovery was out of control due to a required sample dilution, therefore, the sample data was reported without further clarification.
2	Surrogate compound recovery was out of control due to matrix interference. The associated method blank surrogate spike compound was in control and, therefore, the sample data was reported without further clarification.
3	Recovery of the Matrix Spike (MS) or Matrix Spike Duplicate (MSD) compound was out of control due to matrix interference. The associated LCS and/or LCSD was in control and, therefore, the sample data was reported without further clarification.
4	The MS/MSD RPD was out of control due to matrix interference. The LCS/LCSD RPD was in control and, therefore, the sample data was reported without further clarification.
5	The PDS/PDSD associated with this batch of samples was out of control due to a matrix interference effect. The associated batch LCS/LCSD was in control and, hence, the associated sample data was reported with no further corrective action required.
A	Result is the average of all dilutions, as defined by the method.
B	Analyte was present in the associated method blank.
C	Analyte presence was not confirmed on primary column.
E	Concentration exceeds the calibration range.
I	Compound did not meet method-described identification guidelines. Identification was based on additional GC/MS characteristics.
J	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
ND	Parameter not detected at the indicated reporting limit.
Q	Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration by a factor of four or greater.
X	% Recovery and/or RPD out-of-range.
Z	Analyte presence was not confirmed by second column or GC/MS analysis.

Calscience Environmental Laboratories, Inc.
7440 LINCOLN WAY
GARDEN GROVE, CA 92841-1432
TEL: (714) 895-5494 . FAX: (714) 894-7501

CHAIN OF CUSTODY RECORD

DATE: 01/30/09

PAGE: 1 OF 1

LABORATORY CLIENT: ExxonMobil c/o ETIC Engineering
ADDRESS: 2285 Morello Avenue
CITY: Pleasant Hill, CA 94523
TEL: 925-602-4710 x21 | FAX: 925-602-4720 | E-MAIL: see instructions

CLIENT PROJECT NAME / NUMBER: 04334, 2492 Castro Valley Blvd., Castro Valley, CA
PROJECT CONTACT: Erik Appel, ETIC Engineering
Project Number: TM04334.1.6
P.O. NO.: 4510815837
QUOTE NO.:
SAMPLER(S): (SIGNATURE)
LAB USE ONLY: 0 1 2 6 8 5

TURNAROUND TIME
☐ SAME DAY ☐ 24 HR ☐ 48HR ☐ 72 HR X 5 DAYS ☐ 10 DAYS

SPECIAL REQUIREMENTS (ADDITIONAL COSTS MAY APPLY)
☐ RWQCB REPORTING ☐ ARCHIVE SAMPLES UNTIL ___/___/___

SPECIAL INSTRUCTIONS
edf file required, Global ID #T0600101278
email report to eappel@eticeng.com & eticlabreports@eticeng.com

REQUESTED ANALYSIS

LAB USE ONLY	SAMPLE ID	LOCATION/ DESCRIPTION	SAMPLING DATE	SAMPLING TIME	Matrix	#Cont	TPH-g by EPA Method 8015B	BTEX by EPA Method 8021B (M)	MTBE, TBA, DIPE, TAME, ETBE, 1,2-EDB, 1,2-DCA, and ethanol by EPA Method 8260B
	MW5 @ 5 - 5.5		01/29/09	0730	Soil	1	X	X	X
	MW5 @ 7.5 - 8		01/29/09	0752	Soil	1	X	X	X
	MW5 @ 10.5 - 11		01/30/09	0705	Soil	1	X	X	X
	MW5 @ 13.5 - 14		01/30/09	0710	Soil	1	X	X	X
	MW5 @ 15.5 - 16		01/30/09	0720	Soil	1	X	X	X

Relinquished by: (Signature)	Received by: (Signature) Tom O'Malley CEL	Date: 1/30/09	Time: 1848
Relinquished by: (Signature) to GSO 1-30-09 1730	Received by: (Signature) W Boath CEL	Date: 1/31/09	Time: 0945
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:

TK # 511193101

Calscience Environmental Laboratories, Inc.

WORK ORDER #: 09-01-2685

SAMPLE RECEIPT FORM

Cooler 1 of 1

CLIENT: ETC

DATE: 1 / 31 / 09

TEMPERATURE: (Criteria: 0.0 °C – 6.0 °C, not frozen)

Temperature 3.7 °C - 0.2 °C (CF) = 3.5 °C ☐ Blank ☑ Sample

☐ Sample(s) outside temperature criteria (PM/APM contacted by:_____).

☐ Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling.

☐ **Received at ambient temperature, placed on ice for transport by Courier.**

Ambient Temperature: ☐ Air ☐ Filter ☐ Metals Only ☐ PCBs Only **Initial:** WB

CUSTODY SEALS INTACT:

☐ Cooler ☐_____ ☐ No (Not Intact) ☑ Not Present ☐ N/A **Initial:** WB

☐ Sample ☐_____ ☐ No (Not Intact) ☑ Not Present **Initial:** WB

SAMPLE CONDITION:	Yes	No	N/A
Chain-Of-Custody (COC) document(s) received with samples.....	☑	☐	☐
COC document(s) received complete.....	☑	☐	☐
Sampler's name indicated on COC.....	☑	☐	☐
Sample container label(s) consistent with COC.....	☑	☐	☐
Sample container(s) intact and good condition.....	☑	☐	☐
Correct containers and volume for analyses requested.....	☑	☐	☐
Analyses received within holding time.....	☑	☐	☐
Proper preservation noted on COC or sample container.....	☐	☐	☑
Volatile analysis container(s) free of headspace.....	☐	☐	☑
Tedlar bag(s) free of condensation.....	☐	☐	☑

CONTAINER TYPE:

Solid: ☐4ozCGJ ☐8ozCGJ ☐16ozCGJ ☑Sleeve ☐EnCores® ☐TerraCores® ☐_____

Water: ☐VOA ☐VOAh ☐VOAna_2 ☐125AGB ☐125AGBh ☐125AGBpo_4 ☐1AGB ☐1AGBna_2 ☐1AGBs ☐500AGB ☐500AGBs ☐250CGB ☐250CGBs ☐1PB ☐500PB ☐500PBna ☐250PB ☐250PBn ☐125PB ☐125PBznna ☐100PBsterile ☐100PBna_2 ☐_____ ☐_____ ☐_____

Air: ☐Tedlar® ☐Summa® ☐_____

Checked/Labeled by: WB

Reviewed by: W.S.C

Scanned by: WB

Container: C:Clear A:Amber P:Poly/Plastic G:Glass J:Jar B:Bottle

Preservative: h:HCL n:HNO_3 na_2:$Na_2S_2O_3$ na:NaOH po_4:H_3PO_4 s:H_2SO_4 znna:$ZnAc_2$+NaOH

Calscience
Environmental
Laboratories, Inc.

March 10, 2009

Erik Appel
ETIC Engineering, Inc.
2285 Morello Avenue
Pleasant Hill, CA 94523-1850

Subject: **Calscience Work Order No.: 09-03-0480**
Client Reference: ExxonMobil 04334 / 2492 Castro Valley, CA

Dear Client:

Enclosed is an analytical report for the above-referenced project. The samples included in this report were received 3/6/2009 and analyzed in accordance with the attached chain-of-custody.

Unless otherwise noted, all analytical testing was accomplished in accordance with the guidelines established in our Quality Systems Manual, applicable standard operating procedures, and other related documentation. The original report of subcontracted analysis, if any, is provided herein, and follows the standard Calscience data package. The results in this analytical report are limited to the samples tested and any reproduction thereof must be made in its entirety.

Note that the Chain-of-Custody Record and Sample Receipt Form are integral parts of this report.

If you have any questions regarding this report, please do not hesitate to contact the undersigned.

Sincerely,

Calscience Environmental
Laboratories, Inc.
Cecile deGuia
Project Manager

Calscience Environmental Laboratories, Inc.

Analytical Report

ACCREDITED IN ACCORDANCE WITH nelac

ETIC Engineering, Inc.		Date Received:	03/06/09
2285 Morello Avenue		Work Order No:	09-03-0480
Pleasant Hill, CA 94523-1850		Preparation:	EPA 5030B
		Method:	EPA 8015B (M)

Project: ExxonMobil 04334 / 2492 Castro Valley, CA

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW5	**09-03-0480-1-G**	**03/04/09 09:20**	**Aqueous**	**GC 22**	**03/06/09**	**03/06/09 18:00**	**090306B01**

Comment(s): -Results were evaluated to the MDL, concentrations >= to the MDL but < RL, if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qual	Units
TPH as Gasoline	150	50	48	1		ug/L
Surrogates:	**REC (%)**	**Control Limits**			**Qual**	
1,4-Bromofluorobenzene	71	38-134				

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-12-436-2,958**	**N/A**	**Aqueous**	**GC 22**	**03/06/09**	**03/06/09 13:44**	**090306B01**

Comment(s): -Results were evaluated to the MDL, concentrations >= to the MDL but < RL, if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qual	Units
TPH as Gasoline	ND	50	48	1		ug/L
Surrogates:	**REC (%)**	**Control Limits**			**Qual**	
1,4-Bromofluorobenzene	64	38-134				

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

ETIC Engineering, Inc.		Date Received:	03/06/09
2285 Morello Avenue		Work Order No:	09-03-0480
Pleasant Hill, CA 94523-1850		Preparation:	EPA 5030B
		Method:	EPA 8021B
		Units:	ug/L
Project: ExxonMobil 04334 / 2492 Castro Valley, CA			Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW5	**09-03-0480-1-H**	**03/04/09 09:20**	**Aqueous**	**GC 21**	**03/06/09**	**03/06/09 15:52**	**090306B02**

Comment(s): -Results were evaluated to the MDL, concentrations >= to the MDL but < RL, if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qual	Parameter	Result	RL	MDL	DF	Qual
Benzene	ND	0.50	0.14	1		Ethylbenzene	ND	0.50	0.17	1	
Toluene	ND	0.50	0.17	1		Xylenes (total)	ND	1.0	0.26	1	
Surrogates:	REC (%)	Control Limits			Qual						
1,4-Bromofluorobenzene	97	70-130									

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-12-667-371**	**N/A**	**Aqueous**	**GC 21**	**03/06/09**	**03/06/09 11:27**	**090306B02**

Comment(s): -Results were evaluated to the MDL, concentrations >= to the MDL but < RL, if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qual	Parameter	Result	RL	MDL	DF	Qual
Benzene	ND	0.50	0.14	1		Ethylbenzene	ND	0.50	0.17	1	
Toluene	ND	0.50	0.17	1		Xylenes (total)	ND	1.0	0.26	1	
Surrogates:	REC (%)	Control Limits			Qual						
1,4-Bromofluorobenzene	99	70-130									

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

ACCREDITED IN ACCORDANCE WITH nelac

ETIC Engineering, Inc.	Date Received:	03/06/09
2285 Morello Avenue	Work Order No:	09-03-0480
Pleasant Hill, CA 94523-1850	Preparation:	EPA 5030B
	Method:	EPA 8260B
	Units:	ug/L
Project: ExxonMobil 04334 / 2492 Castro Valley, CA		Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW5	**09-03-0480-1-A**	**03/04/09 09:20**	**Aqueous**	**GC/MS Q**	**03/09/09**	**03/10/09 09:51**	**090309L02**

Comment(s): -Results were evaluated to the MDL, concentrations >= to the MDL but < RL, if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qual	Parameter	Result	RL	MDL	DF	Qual
1,2-Dibromoethane	ND	0.50	0.12	1		Diisopropyl Ether (DIPE)	ND	0.50	0.028	1	
1,2-Dichloroethane	ND	0.50	0.080	1		Ethyl-t-Butyl Ether (ETBE)	ND	0.50	0.036	1	
Methyl-t-Butyl Ether (MTBE)	10	0.50	0.067	1		Tert-Amyl-Methyl Ether (TAME)	ND	0.50	0.030	1	
Tert-Butyl Alcohol (TBA)	ND	10	2.1	1		Ethanol	ND	50	15	1	

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
1,2-Dichloroethane-d4	109	73-145		Dibromofluoromethane	108	81-135	
Toluene-d8	97	83-119		1,4-Bromofluorobenzene	97	74-110	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-10-025-883**	**N/A**	**Aqueous**	**GC/MS Q**	**03/09/09**	**03/10/09 06:42**	**090309L02**

Comment(s): -Results were evaluated to the MDL, concentrations >= to the MDL but < RL, if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qual	Parameter	Result	RL	MDL	DF	Qual
1,2-Dibromoethane	ND	0.50	0.12	1		Diisopropyl Ether (DIPE)	ND	0.50	0.028	1	
1,2-Dichloroethane	ND	0.50	0.080	1		Ethyl-t-Butyl Ether (ETBE)	ND	0.50	0.036	1	
Methyl-t-Butyl Ether (MTBE)	ND	0.50	0.067	1		Tert-Amyl-Methyl Ether (TAME)	ND	0.50	0.030	1	
Tert-Butyl Alcohol (TBA)	ND	10	2.1	1		Ethanol	ND	50	15	1	

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
1,2-Dichloroethane-d4	104	73-145		Dibromofluoromethane	100	81-135	
Toluene-d8	100	83-119		1,4-Bromofluorobenzene	98	74-110	

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

ACCREDITED IN ACCORDANCE WITH nelac

ETIC Engineering, Inc.	Date Received:	03/06/09
2285 Morello Avenue	Work Order No:	09-03-0480
Pleasant Hill, CA 94523-1850	Preparation:	EPA 5030B
	Method:	EPA 8015B (M)

Project ExxonMobil 04334 / 2492 Castro Valley, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
09-03-0361-16	**Aqueous**	**GC 22**	**03/06/09**	**03/06/09**	**090306S01**

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
TPH as Gasoline	100	100	68-122	0	0-18	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

ACCREDITED IN ACCORDANCE WITH nelac

ETIC Engineering, Inc.	Date Received:	03/06/09
2285 Morello Avenue	Work Order No:	09-03-0480
Pleasant Hill, CA 94523-1850	Preparation:	EPA 5030B
	Method:	EPA 8015B / EPA 8021B

Project ExxonMobil 04334 / 2492 Castro Valley, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
09-03-0228-2	**Aqueous**	**GC 21**	**03/06/09**	**03/06/09**	**090306S01**

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	110	111	57-129	0	0-23	
Toluene	101	101	50-134	0	0-26	
Ethylbenzene	103	103	58-130	0	0-26	
p/m-Xylene	103	102	58-130	1	0-28	
o-Xylene	99	99	57-123	0	0-26	
Gasoline Range Organics	91	92	68-122	1	0-18	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

ACCREDITED IN ACCORDANCE WITH nelac

ETIC Engineering, Inc.	Date Received:	03/06/09
2285 Morello Avenue	Work Order No:	09-03-0480
Pleasant Hill, CA 94523-1850	Preparation:	EPA 5030B
	Method:	EPA 8260B

Project ExxonMobil 04334 / 2492 Castro Valley, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
09-03-0084-1	**Aqueous**	**GC/MS Q**	**03/09/09**	**03/09/09**	**090309S01**

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	101	101	86-122	0	0-8	
Toluene	101	100	85-127	1	0-12	
Ethylbenzene	102	102	70-130	0	0-30	
Methyl-t-Butyl Ether (MTBE)	86	82	64-136	4	0-28	
Tert-Butyl Alcohol (TBA)	87	97	27-183	11	0-60	
Diisopropyl Ether (DIPE)	97	98	78-126	0	0-16	
Ethyl-t-Butyl Ether (ETBE)	97	96	67-133	1	0-21	
Tert-Amyl-Methyl Ether (TAME)	98	96	63-141	2	0-21	
Ethanol	108	118	11-167	9	0-64	
1,1-Dichloroethene	98	99	52-142	1	0-23	
1,2-Dibromoethane	96	95	70-130	1	0-30	
1,2-Dichlorobenzene	95	96	89-119	1	0-10	
Carbon Tetrachloride	97	98	78-138	1	0-9	
Chlorobenzene	99	100	90-120	1	0-9	
Trichloroethene	94	94	78-126	0	0-10	
Vinyl Chloride	96	98	56-140	1	0-21	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

ACCREDITED IN ACCORDANCE WITH nelac

ETIC Engineering, Inc.	Date Received:	N/A
2285 Morello Avenue	Work Order No:	09-03-0480
Pleasant Hill, CA 94523-1850	Preparation:	EPA 5030B
	Method:	EPA 8015B (M)

Project: ExxonMobil 04334 / 2492 Castro Valley, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-436-2,958	Aqueous	GC 22	03/06/09	03/06/09	090306B01

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
TPH as Gasoline	99	99	78-120	1	0-10	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

ACCREDITED IN ACCORDANCE WITH NELAC

ETIC Engineering, Inc.	Date Received:	N/A
2285 Morello Avenue	Work Order No:	09-03-0480
Pleasant Hill, CA 94523-1850	Preparation:	EPA 5030B
	Method:	EPA 8021B

Project: ExxonMobil 04334 / 2492 Castro Valley, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-667-371	Aqueous	GC 21	03/06/09	03/06/09	090306B02

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	112	109	70-118	2	0-9	
Toluene	103	100	66-114	2	0-9	
Ethylbenzene	105	102	72-114	3	0-9	
p/m-Xylene	106	103	74-116	3	0-9	
o-Xylene	102	99	72-114	3	0-9	
Methyl-t-Butyl Ether (MTBE)	129	126	41-137	3	0-13	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

ACCREDITED IN ACCORDANCE WITH nelac

ETIC Engineering, Inc.	Date Received:	N/A
2285 Morello Avenue	Work Order No:	09-03-0480
Pleasant Hill, CA 94523-1850	Preparation:	EPA 5030B
	Method:	EPA 8260B

Project: ExxonMobil 04334 / 2492 Castro Valley, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-10-025-883	Aqueous	GC/MS Q	03/09/09	03/10/09	090309L02

Parameter	LCS %REC	LCSD %REC	%REC CL	ME CL	RPD	RPD CL	Qualifiers
Benzene	103	101	87-117	82-122	2	0-7	
Carbon Tetrachloride	98	98	78-132	69-141	1	0-8	
Chlorobenzene	100	100	88-118	83-123	1	0-8	
1,2-Dibromoethane	105	104	80-120	73-127	1	0-20	
1,2-Dichlorobenzene	97	97	88-118	83-123	0	0-8	
1,1-Dichloroethene	100	98	71-131	61-141	2	0-14	
Ethylbenzene	104	104	80-120	73-127	0	0-20	
Toluene	102	101	85-127	78-134	1	0-7	
Trichloroethene	115	110	85-121	79-127	4	0-11	
Vinyl Chloride	104	103	64-136	52-148	2	0-10	
Methyl-t-Butyl Ether (MTBE)	84	85	67-133	56-144	1	0-16	
Tert-Butyl Alcohol (TBA)	100	88	34-154	14-174	13	0-19	
Diisopropyl Ether (DIPE)	94	95	80-122	73-129	2	0-8	
Ethyl-t-Butyl Ether (ETBE)	93	93	73-127	64-136	0	0-11	
Tert-Amyl-Methyl Ether (TAME)	100	97	69-135	58-146	2	0-12	
Ethanol	123	102	34-124	19-139	19	0-44	

Total number of LCS compounds : 16
Total number of ME compounds : 0
Total number of ME compounds allowed : 1
LCS ME CL validation result : Pass

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Glossary of Terms and Qualifiers

Work Order Number: 09-03-0480

Qualifier	Definition
*	See applicable analysis comment.
1	Surrogate compound recovery was out of control due to a required sample dilution, therefore, the sample data was reported without further clarification.
2	Surrogate compound recovery was out of control due to matrix interference. The associated method blank surrogate spike compound was in control and, therefore, the sample data was reported without further clarification.
3	Recovery of the Matrix Spike (MS) or Matrix Spike Duplicate (MSD) compound was out of control due to matrix interference. The associated LCS and/or LCSD was in control and, therefore, the sample data was reported without further clarification.
4	The MS/MSD RPD was out of control due to matrix interference. The LCS/LCSD RPD was in control and, therefore, the sample data was reported without further clarification.
5	The PDS/PDSD associated with this batch of samples was out of control due to a matrix interference effect. The associated batch LCS/LCSD was in control and, hence, the associated sample data was reported with no further corrective action required.
A	Result is the average of all dilutions, as defined by the method.
B	Analyte was present in the associated method blank.
C	Analyte presence was not confirmed on primary column.
E	Concentration exceeds the calibration range.
I	Compound did not meet method-described identification guidelines. Identification was based on additional GC/MS characteristics.
J	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
ND	Parameter not detected at the indicated reporting limit.
Q	Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration by a factor of four or greater.
X	% Recovery and/or RPD out-of-range.
Z	Analyte presence was not confirmed by second column or GC/MS analysis.

Calscience Environmental Laboratories, Inc.
7440 LINCOLN WAY
GARDEN GROVE, CA 92841-1432
TEL: (714) 895-5494 . FAX: (714) 894-7501

CHAIN OF CUSTODY RECORD

DATE:

PAGE: 1 OF 1

LABORATORY CLIENT: ExxonMobil c/o ETIC Engineering
ADDRESS: 2285 Morello Avenue
CITY: Pleasant Hill, CA 94523
TEL: 925-602-4710 x21 | FAX: 925-602-4720 | E-MAIL: see instructions

CLIENT PROJECT NAME / NUMBER: 04334, 2492 Castro Valley Blvd., Castro Valley, CA
PROJECT CONTACT: Erik Appel, ETIC Engineering
Project Number: TM04334.1.12
P.O. NO.: 4510815837
QUOTE NO.:
SAMPLER(S): (SIGNATURE)
LAB USE ONLY: 03-04480

TURNAROUND TIME
☐ SAME DAY ☐ 24 HR ☒ 48HR ☐ 72 HR X 5 DAYS ☐ 10 DAYS

SPECIAL REQUIREMENTS (ADDITIONAL COSTS MAY APPLY)
☐ RWQCB REPORTING ☐ ARCHIVE SAMPLES UNTIL ___/___/___

SPECIAL INSTRUCTIONS
edf file required, Global ID #T0600101278
email report to eappel@eticeng.com & eticlabreports@eticeng.com

REQUESTED ANALYSIS

LAB USE ONLY	SAMPLE ID	LOCATION/ DESCRIPTION	SAMPLING DATE	SAMPLING TIME	Matrix	#Cont	TPH-g by EPA Method 8015B	BTEX by EPA Method 8021B (M)	MTBE, TBA, DIPE, TAME, ETBE, 1,2-EDB, 1,2-DCA, and ethanol by EPA Method 8260B
1	MW5		03-04-09	0920	Water	9	X	X	X

Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
[signature] 03-04-09 1630	[signature] CEL	3-5-09	1400
[signature] to GSO 3-5-09 1730	[signature] GSO	030609	1000
Relinquished by: (Signature) S114702905	Received by: (Signature)	Date:	Time:

Calscience Environmental Laboratories, Inc.

WORK ORDER #: 09-03-0480

SAMPLE RECEIPT FORM

Cooler 1 of 1

CLIENT: ETIC

DATE: 03/06/09

TEMPERATURE: (Criteria: 0.0 °C – 6.0 °C, not frozen)

Temperature 2.0 °C - 0.2 °C (CF) = 1.8 °C ☑ **Blank** ☐ **Sample**

☐ Sample(s) outside temperature criteria (PM/APM contacted by:_____).

☐ Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling.

☐ **Received at ambient temperature, placed on ice for transport by Courier.**

Ambient Temperature: ☐ Air ☐ Filter ☐ Metals Only ☐ PCBs Only **Initial:** NC

CUSTODY SEALS INTACT:

☐ Cooler ☐_____ ☐ No (Not Intact) ☑ Not Present ☐ N/A **Initial:** NC

☐ Sample ☐_____ ☐ No (Not Intact) ☒ Not Present **Initial:** WSC

SAMPLE CONDITION:	Yes	No	N/A
Chain-Of-Custody (COC) document(s) received with samples.....	☒	☐	☐
COC document(s) received complete.....	☒	☐	☐
Sampler's name indicated on COC.....	☒	☐	☐
Sample container label(s) consistent with COC.....	☒	☐	☐
Sample container(s) intact and good condition.....	☒	☐	☐
Correct containers and volume for analyses requested.....	☒	☐	☐
Analyses received within holding time.....	☒	☐	☐
Proper preservation noted on COC or sample container.....	☒	☐	☐
Volatile analysis container(s) free of headspace.....	☒	☐	☐
Tedlar bag(s) free of condensation.....	☐	☐	☒

CONTAINER TYPE:

Solid: ☐4ozCGJ ☐8ozCGJ ☐16ozCGJ ☐Sleeve ☐EnCores® ☐TerraCores® ☐_____

Water: ☐VOA ☒VOAh ☐$VOAna_2$ ☐125AGB ☐125AGBh ☐$125AGBpo_4$ ☐1AGB ☐$1AGBna_2$ ☐1AGBs ☐500AGB ☐500AGBs ☐250CGB ☐250CGBs ☐1PB ☐500PB ☐500PBna ☐250PB ☐250PBn ☐125PB ☐125PBznna ☐100PBsterile ☐$100PBna_2$ ☐_____ ☐_____ ☐_____

Air: ☐Tedlar® ☐Summa® ☐_____

Checked/Labeled by: WSC

Reviewed by: YL

Scanned by: WSC

Container: C:Clear A:Amber P:Poly/Plastic G:Glass J:Jar B:Bottle

Preservative: h:HCL n:HNO_3 na_2:$Na_2S_2O_3$ na:NaOH po_4:H_3PO_4 s:H_2SO_4 znna:$ZnAc_2$+NaOH

Calscience
Environmental
Laboratories, Inc.

February 09, 2009

Erik Appel
ETIC Engineering, Inc.
2285 Morello Avenue
Pleasant Hill, CA 94523-1850

Subject: **Calscience Work Order No.: 09-01-2686**
Client Reference: ExxonMobil 04334

Dear Client:

Enclosed is an analytical report for the above-referenced project. The samples included in this report were received 1/31/2009 and analyzed in accordance with the attached chain-of-custody.

Unless otherwise noted, all analytical testing was accomplished in accordance with the guidelines established in our Quality Systems Manual, applicable standard operating procedures, and other related documentation. The original report of subcontracted analysis, if any, is provided herein, and follows the standard Calscience data package. The results in this analytical report are limited to the samples tested and any reproduction thereof must be made in its entirety.

Note that the Chain-of-Custody Record and Sample Receipt Form are integral parts of this report.

If you have any questions regarding this report, please do not hesitate to contact the undersigned.

Sincerely,

Cecile L deGuia

Calscience Environmental
Laboratories, Inc.
Cecile deGuia
Project Manager

Calscience Environmental Laboratories, Inc.

Analytical Report

ACCREDITED IN ACCORDANCE WITH nelac

ETIC Engineering, Inc.		Date Received:	01/31/09
2285 Morello Avenue		Work Order No:	09-01-2686
Pleasant Hill, CA 94523-1850		Preparation:	EPA 3050B
		Method:	EPA 6010B

Project: ExxonMobil 04334

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Drum 1	**09-01-2686-1-A**	**01/30/09 07:10**	**Solid**	**ICP 5300**	**02/03/09**	**02/03/09 22:51**	**090203L01**

Comment(s): -Results were evaluated to the MDL, concentrations >= to the MDL but < RL, if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qual	Units
Lead	4.10	0.500	0.0527	1		mg/kg

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Drum 2	**09-01-2686-2-A**	**01/30/09 07:45**	**Solid**	**ICP 5300**	**02/03/09**	**02/04/09 20:02**	**090203L01**

Comment(s): -Results were evaluated to the MDL, concentrations >= to the MDL but < RL, if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qual	Units
Lead	5.29	0.500	0.0527	1		mg/kg

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**097-01-002-12,031**	**N/A**	**Solid**	**ICP 5300**	**02/03/09**	**02/03/09 17:42**	**090203L01**

Comment(s): -Results were evaluated to the MDL, concentrations >= to the MDL but < RL, if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qual	Units
Lead	ND	0.500	0.0527	1		mg/kg

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

ACCREDITED IN ACCORDANCE WITH nelac

ETIC Engineering, Inc.		Date Received:	01/31/09
2285 Morello Avenue		Work Order No:	09-01-2686
Pleasant Hill, CA 94523-1850		Preparation:	EPA 5030B
		Method:	EPA 8015B (M)

Project: ExxonMobil 04334

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Drum 1	**09-01-2686-1-A**	**01/30/09 07:10**	**Solid**	**GC 24**	**02/04/09**	**02/04/09 20:27**	**090204B01**

Comment(s): -Results were evaluated to the MDL, concentrations >= to the MDL but < RL, if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qual	Units
TPH as Gasoline	ND	0.50	0.42	1		mg/kg
Surrogates:	**REC (%)**	**Control Limits**			**Qual**	
1,4-Bromofluorobenzene - FID	78	42-126				

Drum 2	**09-01-2686-2-A**	**01/30/09 07:45**	**Solid**	**GC 24**	**02/04/09**	**02/04/09 21:33**	**090204B01**

Comment(s): -Results were evaluated to the MDL, concentrations >= to the MDL but < RL, if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qual	Units
TPH as Gasoline	ND	0.50	0.42	1		mg/kg
Surrogates:	**REC (%)**	**Control Limits**			**Qual**	
1,4-Bromofluorobenzene - FID	80	42-126				

Method Blank	**099-12-279-2,639**	**N/A**	**Solid**	**GC 24**	**02/04/09**	**02/04/09 12:01**	**090204B01**

Comment(s): -Results were evaluated to the MDL, concentrations >= to the MDL but < RL, if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qual	Units
TPH as Gasoline	ND	0.50	0.42	1		mg/kg
Surrogates:	**REC (%)**	**Control Limits**			**Qual**	
1,4-Bromofluorobenzene - FID	84	42-126				

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

ACCREDITED IN ACCORDANCE WITH nelac

ETIC Engineering, Inc.		Date Received:	01/31/09
2285 Morello Avenue		Work Order No:	09-01-2686
Pleasant Hill, CA 94523-1850		Preparation:	EPA 5030B
		Method:	EPA 8021B
		Units:	mg/kg
Project: ExxonMobil 04334			Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Drum 1	**09-01-2686-1-A**	**01/30/09 07:10**	**Solid**	**GC 8**	**02/02/09**	**02/03/09 05:56**	**090202B02**

Comment(s): -Results were evaluated to the MDL, concentrations >= to the MDL but < RL, if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qual	Parameter	Result	RL	MDL	DF	Qual
Benzene	ND	0.0050	0.0012	1		Ethylbenzene	ND	0.0050	0.0011	1	
Toluene	0.0025	0.0050	0.0012	1	J	Xylenes (total)	0.0046	0.010	0.0023	1	J,Z
Surrogates:	REC (%)	Control Limits			Qual						
1,4-Bromofluorobenzene	80	51-129									

Drum 2	**09-01-2686-2-A**	**01/30/09 07:45**	**Solid**	**GC 8**	**02/02/09**	**02/03/09 06:29**	**090202B02**

Comment(s): -Results were evaluated to the MDL, concentrations >= to the MDL but < RL, if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qual	Parameter	Result	RL	MDL	DF	Qual
Benzene	0.0042	0.0050	0.0012	1	J	Ethylbenzene	ND	0.0050	0.0011	1	
Toluene	0.0034	0.0050	0.0012	1	J,Z	Xylenes (total)	ND	0.010	0.0023	1	
Surrogates:	REC (%)	Control Limits			Qual						
1,4-Bromofluorobenzene	77	51-129									

Method Blank	**099-12-657-229**	**N/A**	**Solid**	**GC 8**	**02/02/09**	**02/03/09 04:14**	**090202B02**

Comment(s): -Results were evaluated to the MDL, concentrations >= to the MDL but < RL, if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qual	Parameter	Result	RL	MDL	DF	Qual
Benzene	ND	0.0050	0.0012	1		Ethylbenzene	ND	0.0050	0.0011	1	
Toluene	ND	0.0050	0.0012	1		Xylenes (total)	ND	0.010	0.0023	1	
Surrogates:	REC (%)	Control Limits			Qual						
1,4-Bromofluorobenzene	100	51-129									

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

ACCREDITED IN ACCORDANCE WITH nelac

ETIC Engineering, Inc.	Date Received:	01/31/09
2285 Morello Avenue	Work Order No:	09-01-2686
Pleasant Hill, CA 94523-1850	Preparation:	EPA 3050B
	Method:	EPA 6010B

Project ExxonMobil 04334

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
09-02-0089-5	**Solid**	**ICP 5300**	**02/03/09**	**02/03/09**	**090203S01**

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Lead	94	99	75-125	3	0-20	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - PDS / PDSD

ACCREDITED IN ACCORDANCE WITH nelac

ETIC Engineering, Inc.	Date Received	01/31/09
2285 Morello Avenue	Work Order No:	09-01-2686
Pleasant Hill, CA 94523-1850	Preparation:	EPA 3050B
	Method:	EPA 6010B

Project: ExxonMobil 04334

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	PDS/PDSD Batch Number
09-02-0089-5	Solid	ICP 5300	02/03/09	02/04/09	090203S01

Parameter	PDS %REC	PDSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Lead	90	91	75-125	1	0-20	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

ACCREDITED IN ACCORDANCE WITH nelac

ETIC Engineering, Inc.	Date Received:	01/31/09
2285 Morello Avenue	Work Order No:	09-01-2686
Pleasant Hill, CA 94523-1850	Preparation:	EPA 5030B
	Method:	EPA 8015B (M)

Project ExxonMobil 04334

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
09-01-2618-1	**Solid**	**GC 24**	**02/04/09**	**02/04/09**	**090204S01**

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
TPH as Gasoline	79	78	48-114	1	0-23	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

ACCREDITED IN ACCORDANCE WITH nelac

ETIC Engineering, Inc.	Date Received:	01/31/09
2285 Morello Avenue	Work Order No:	09-01-2686
Pleasant Hill, CA 94523-1850	Preparation:	EPA 5030B
	Method:	EPA 8021B

Project ExxonMobil 04334

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
Drum 1	**Solid**	**GC 8**	**02/02/09**	**02/03/09**	**090202S02**

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	95	98	58-118	4	0-24	
Toluene	88	92	61-109	4	0-20	
Ethylbenzene	92	93	59-113	1	0-20	
p/m-Xylene	95	96	55-115	1	0-20	
o-Xylene	90	91	56-110	1	0-20	
Methyl-t-Butyl Ether (MTBE)	99	101	65-113	2	0-9	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

ACCREDITED IN ACCORDANCE WITH ilac

ETIC Engineering, Inc.	Date Received:	N/A
2285 Morello Avenue	Work Order No:	09-01-2686
Pleasant Hill, CA 94523-1850	Preparation:	EPA 3050B
	Method:	EPA 6010B

Project: ExxonMobil 04334

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
097-01-002-12,031	Solid	ICP 5300	02/03/09	02/04/09	090203L01

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Lead	105	107	80-120	2	0-20	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

ACCREDITED IN ACCORDANCE WITH nelac

ETIC Engineering, Inc.	Date Received:	N/A
2285 Morello Avenue	Work Order No:	09-01-2686
Pleasant Hill, CA 94523-1850	Preparation:	EPA 5030B
	Method:	EPA 8015B (M)

Project: ExxonMobil 04334

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-279-2,639	Solid	GC 24	02/04/09	02/04/09	090204B01

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
TPH as Gasoline	89	86	70-124	3	0-18	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

ACCREDITED IN ACCORDANCE WITH nelac

ETIC Engineering, Inc.	Date Received:	N/A
2285 Morello Avenue	Work Order No:	09-01-2686
Pleasant Hill, CA 94523-1850	Preparation:	EPA 5030B
	Method:	EPA 8021B

Project: ExxonMobil 04334

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-657-229	Solid	GC 8	02/02/09	02/03/09	090202B02

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	100	98	70-118	1	0-7	
Toluene	93	93	71-107	0	0-8	
Ethylbenzene	96	95	66-120	1	0-7	
p/m-Xylene	101	99	66-120	2	0-8	
o-Xylene	95	94	66-114	2	0-9	
Methyl-t-Butyl Ether (MTBE)	102	103	70-112	1	0-12	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Glossary of Terms and Qualifiers

Work Order Number: 09-01-2686

Qualifier	Definition
*	See applicable analysis comment.
1	Surrogate compound recovery was out of control due to a required sample dilution, therefore, the sample data was reported without further clarification.
2	Surrogate compound recovery was out of control due to matrix interference. The associated method blank surrogate spike compound was in control and, therefore, the sample data was reported without further clarification.
3	Recovery of the Matrix Spike (MS) or Matrix Spike Duplicate (MSD) compound was out of control due to matrix interference. The associated LCS and/or LCSD was in control and, therefore, the sample data was reported without further clarification.
4	The MS/MSD RPD was out of control due to matrix interference. The LCS/LCSD RPD was in control and, therefore, the sample data was reported without further clarification.
5	The PDS/PDSD associated with this batch of samples was out of control due to a matrix interference effect. The associated batch LCS/LCSD was in control and, hence, the associated sample data was reported with no further corrective action required.
A	Result is the average of all dilutions, as defined by the method.
B	Analyte was present in the associated method blank.
C	Analyte presence was not confirmed on primary column.
E	Concentration exceeds the calibration range.
I	Compound did not meet method-described identification guidelines. Identification was based on additional GC/MS characteristics.
J	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
ND	Parameter not detected at the indicated reporting limit.
Q	Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration by a factor of four or greater.
X	% Recovery and/or RPD out-of-range.
Z	Analyte presence was not confirmed by second column or GC/MS analysis.

Cecile de Guia

From: Erik Appel [eappel@eticeng.com]
Sent: February 03, 2009 09:19
To: Cecile de Guia
Subject: Re: 04334 COC

Cecile,

That third column was supposed to be for **TOTAL LEAD by EPA Method 6010**.

Please find the revised COC attached.

Thanks,

--Erik

K. Erik Appel, PG
Senior Project Geologist
ETIC Engineering, Inc.
Office - 925-602-4710 ext. 21
Cell - 925-642-2545

>>> "Cecile de Guia" <CdeGuia@calscience.com> 2/3/2009 8:55 AM >>>
Please review the COC becasue the requrest for 8021 BTEX was requrested twice. Let me know if you need Oxygenates reported by 820B instead.

Cecile
<<09-01-2686.PDF>>

Cecile Rose L. de Guia
Project Manager
Calscience Environmental
Laboratories, Inc.
7440 Lincoln Way
Garden Grove, CA 92841-1427
Tel.: 714-895-5494 Ext. 221
Fax : 714-894-7501
cdeguia@calscience.com

PRIVACY NOTICE:
This email (and/or the documents attached to it) is intended only for the use of the individual or entity to which it is addressed and may contain information that is privileged, confidential, or exempt from disclosure under applicable Federal or State law. If the reader of this message is not the intended recipient or the employee or agent responsible for delivering the message to the intended recipient, you are hereby notified that any dissemination, distribution, or copying of this communication is strictly prohibited. If you have received this communication in error, please notify us immediately by telephone or else to arrange for the return of the documents
REPORT SECURITY NOTICE:
The client or recipient of any attached analytical report is specifically prohibited from making material changes to said report and, to the extent that such changes are made, Calscience Environmental Laboratories, Inc. is not

responsible, legally or otherwise. The client or recipient agrees to indemnify Calscience Environmental Laboratories, Inc. for any defense to any litigation which arises.

Calscience Environmental Laboratories, Inc.
7440 LINCOLN WAY
GARDEN GROVE, CA 92841-1432
TEL: (714) 895-5494 . FAX: (714) 894-7501

CHAIN OF CUSTODY RECORD

DATE: 01/30/09

PAGE: 1 OF 1

LABORATORY CLIENT: ExxonMobil c/o ETIC Engineering

ADDRESS: 2285 Morello Avenue

CITY: Pleasant Hill, CA 94523

TEL: 925-602-4710 x21 | FAX: 925-602-4720 | E-MAIL: see instructions

CLIENT PROJECT NAME / NUMBER: 04334, 2492 Castro Valley Blvd., Castro Valley, CA

PROJECT CONTACT: Erik Appel, ETIC Engineering

Project Number: TM04334.1.6

P.O. NO.: 4510815837

QUOTE NO.:

SAMPLER(S) SIGNATURE:

LAB USE ONLY

TURNAROUND TIME

☐ SAME DAY ☐ 24 HR ☐ 48HR ☐ 72 HR X 5 DAYS ☐ 10 DAYS

SPECIAL REQUIREMENTS (ADDITIONAL COSTS MAY APPLY)

☐ RWQCB REPORTING ☐ ARCHIVE SAMPLES UNTIL ____/____/____

SPECIAL INSTRUCTIONS

edf file required, Global ID #T0600101278

email report to eappel@eticeng.com & eticlabreports@eticeng.com

REQUESTED ANALYSIS

LAB USE ONLY	SAMPLE ID	LOCATION/ DESCRIPTION	SAMPLING DATE	SAMPLING TIME	Matrix	#Cont	TPH-g by EPA Method 8015B	BTEX by EPA Method 8021B (M)	Total Lead by EPA Method 6010
	Drum 1		01/30/09	0710	Soil		X	X	X
	Drum 2		01/30/09	0745	Soil		X	X	X

Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:

Calscience Environmental Laboratories, Inc.
7440 LINCOLN WAY
GARDEN GROVE, CA 92841-1432
TEL: (714) 895-5494 . FAX: (714) 894-7501

CHAIN OF CUSTODY RECORD

DATE: 01/30/09

PAGE: 1 OF 1

LABORATORY CLIENT: ExxonMobil c/o ETIC Engineering

ADDRESS: 2285 Morello Avenue

CITY: Pleasant Hill, CA 94523

TEL: 925-602-4710 x21 | FAX: 925-602-4720 | E-MAIL: see instructions

CLIENT PROJECT NAME / NUMBER: 04334, 2492 Castro Valley Blvd., Castro Valley, CA

P.O. NO.: 4510815837

PROJECT CONTACT: Erik Appel, ETIC Engineering

Project Number: TM04334.1.6

QUOTE NO.:

SAMPLER(S) (SIGNATURE):

LAB USE ONLY: 0 1 2 6 8 6

TURNAROUND TIME

☐ SAME DAY ☐ 24 HR ☐ 48HR ☐ 72 HR X 5 DAYS ☐ 10 DAYS

SPECIAL REQUIREMENTS (ADDITIONAL COSTS MAY APPLY)

☐ RWQCB REPORTING ☐ ARCHIVE SAMPLES UNTIL ____/____/____

SPECIAL INSTRUCTIONS

edf file required, Global ID #T0600101278

email report to eappel@eticeng.com & eticlabreports@eticeng.com

REQUESTED ANALYSIS

LAB USE ONLY	SAMPLE ID	LOCATION/ DESCRIPTION	SAMPLING DATE	SAMPLING TIME	Matrix	#Cont	TPH-g by EPA Method 8015B	BTEX by EPA Method 8021B (M)	BTEX by EPA Method 8021B (M)
1	Drum 1		01/30/09	0710	Soil	1	X	X	X
2	Drum 2		01/30/09	0745	Soil	1	X	X	X

Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
	Tom Malley CEL	1/30/09	1648
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
to GSO 1-30-09 1730	Wheaton CEL	1/31/09	0945
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:

TK#511193101

Cypress Environmental Laboratories, Inc.

WORK ORDER #: 09-01-2686

SAMPLE RECEIPT FORM

Cooler 1 of 1

CLIENT: ETIC

DATE: 1/31/09

TEMPERATURE: (Criteria: 0.0 °C – 6.0 °C, not frozen)

Temperature 3.7 °C - 0.2 °C (CF) = 3.5 °C ☐ Blank ☑ Sample

☐ Sample(s) outside temperature criteria (PM/APM contacted by:_____).

☐ Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling.

☐ **Received at ambient temperature, placed on ice for transport by Courier.**

Ambient Temperature: ☐ Air ☐ Filter ☐ Metals Only ☐ PCBs Only Initial: WB

CUSTODY SEALS INTACT:

☐ Cooler ☐_____ ☐ No (Not Intact) ☑ Not Present ☐ N/A Initial: WB

☐ Sample ☐_____ ☐ No (Not Intact) ☑ Not Present Initial: WB

SAMPLE CONDITION:	Yes	No	N/A
Chain-Of-Custody (COC) document(s) received with samples.....	☑	☐	☐
COC document(s) received complete.....	☑	☐	☐
Sampler's name indicated on COC.....	☑	☐	☐
Sample container label(s) consistent with COC.....	☑	☐	☐
Sample container(s) intact and good condition.....	☑	☐	☐
Correct containers and volume for analyses requested.....	☑	☐	☐
Analyses received within holding time.....	☑	☐	☐
Proper preservation noted on COC or sample container.....	☐	☐	☑
Volatile analysis container(s) free of headspace.....	☐	☐	☑
Tedlar bag(s) free of condensation.....	☐	☐	☑

CONTAINER TYPE:

Solid: ☐4ozCGJ ☐8ozCGJ ☐16ozCGJ ☑Sleeve ☐EnCores® ☐TerraCores® ☐_____

Water: ☐VOA ☐VOAh ☐VOAna_2 ☐125AGB ☐125AGBh ☐125AGBpo_4 ☐1AGB ☐1AGBna_2 ☐1AGBs ☐500AGB ☐500AGBs ☐250CGB ☐250CGBs ☐1PB ☐500PB ☐500PBna ☐250PB ☐250PBn ☐125PB ☐125PBznna ☐100PBsterile ☐100PBna_2 ☐_____ ☐_____ ☐_____

Air: ☐Tedlar® ☐Summa® ☐_____

Container: C:Clear A:Amber P:Poly/Plastic G:Glass J:Jar B:Bottle

Preservative: h:HCL n:HNO_3 na_2:$Na_2S_2O_3$ na:NaOH po_4:H_3PO_4 s:H_2SO_4 znna:$ZnAc_2$+NaOH

Checked/Labeled by: WB

Reviewed by: WJSC

Scanned by: WB

Appendix H

Waste Documentation

Waste Shipment Documentation Form

1. FILE IN PROJECT FILE, DO NOT MAIL!

2. Waste Shipment Information:

EM Employee Contact Name:		Jennifer Sedlachek		Telephone:	510.547.8196
EM Store/Plant ID Number:	04334/	EM Facility Name: *(e.g. Exxon brand, Mobil brand, Terminal, Refinery, etc)*	Mobil		
MMSV Tracking Number *(if Fuels Marketing MMSV dispatched):*			N/A		

EM waste generating facility operating status: ☐ Active ☐ Inactive ☒ Divested ☐ Orphan Site

EM waste generating activity: *(check one)* ☐ Operations ☐ Maintenance ☒ Remediation ☐ Construction

Check the waste/material being shipped on the manifest/bill-of-lading:

☐ Absorbent	☐ Soil, Contaminated
☐ Asbestos ***(friable)***	☐ Soil **below State 'action level'** to be used as daily cover at a licensed landfill **(AWSL exempt)**
☐ Asbestos ***(non-friable* -AWSL exempt)**	☒ Soil, UST Media **(40CFR261.4(b)(10) Exempt Non-hazardous Waste)**
☐ Carbon, Spent ***(USRR need not report US Filter spent carbon)***	☐ Tank Bottom Sludge, UST
☐ Debris, Construction **(Fuels Marketing AWSL exempt)**	☐ Tank Wash, Diesel/Water/Mirachem 500
☐ Debris, Contaminated	☐ ~~Tank Wash, Gasoline/Water/Mirachem 500~~
☐ ~~Debris, UST **(40CFR261.4(b)(10) Exempt Non-hazardous Waste)**~~	☒ Tank Wash, Used Oil/Water/Mirachem 500
☐ Groundwater, UST Media **(40CFR261.4(b)(10) Exempt Non-hazardous Waste)**	☐ Other Waste/Material **Describe here:** ☐
☐ Oil, Used	
☐ Product-Water Waste	

3. Cost Information: *(Note: If separate transportation and disposal costs are not available, list combined cost as "Disposal Cost".)*

Transportation Cost: $ 655	Disposal Cost: $ 173

4. Attachments:

Manifest or Bill-of-lading Number(s): 1004129
For hazardous waste shipments, was a Land Disposal Restriction (LDR) form prepared? **na** **If yes,** forward the LDR with the hazardous waste manifest copy.
Describe any other attached documents: Non-hazrdous waste manifest and invoice

5. Preparer's Information

Preparer's Name: Aileen Galve	Preparer's Signature: Date: 3/2/09
Preparer's Company Name & Job Title: ETIC Engineering, Inc., Waste Coordinator	Preparer's Telephone: 925.602.4710 ext.57

NON-HAZARDOUS MANIFEST QUESTIONS - CALL 281-654-8478
HAZARDOUS MANIFEST QUESTIONS - CALL 281-654-8470

Invoice

FEB 2 5 REC'D

ETIC ENGINEERING

Dillard Trucking, Inc. dba Dillard Environmental Services PO Box 579 Byron, CA 94514		Invoice ID: Invoice Date: Draw ID: Customer ID: Accty Date:	412871 02/24/09 1 911 02-18-2009
Client: Exxon/ETIC Attn: Accounts Payable 2285 Morello Avenue Pleasant Hill, CA 94523 Terms: Net 30 days. Customer agrees to a 1.5% finance per month charged on past due accounts.	Client PO/Contract: Exxon #04-334 DES Job # 911/028 Job Address: 2492 Casto Valley Castro Valley, CA Scope of Work: Transport and dispose of soil drums	PO#155353	

Item		Units	Units of Measure	Unit Price	Amount
1	2/18/2009				
	43877 (DES Tech - G.MacIntyre)	4.00	Hours	55.00	220.00
	43877 (DES #60 - P.Rondaris)	4.00	Hours	90.00	360.00
	Tag # A768340				
	Disposal				
	Ticket #A768340	2.00	Drums	75.00	150.00
	Markup	0.15	%	150.00	22.50

} 172.5

ETIC ENGINEERING
VENDOR: DILLARD
INVOICE #: _____ INVOICE DATE: 2/24/09
PROJECT #: TM04334,9
AMOUNT ($): 827.75
APPROVED BY: _____ DATE: 2/27/09
INPUT BY: _____ DATE: _____ TS#: _____

CALIFORNIA SMALL BUSINESS 21212

Any invoice disputes need to be faxed to us @ (925) 634-0874 within 10 days from invoice date. If notification is not received within that time, the invoice will be considered correct.

" All applicable California state and local sales or use taxes are included in this invoice total and have been paid to a third party or directly to the taxing authority as required by law".

* We now accept Visa and Mastercard payments!
Call now for instructions for credit card payments.

Total Amount Billed:	$	752.50
Fuel Surcharge 10%	$	75.25
Invoice Amount:	$	827.75
Date Due:		3/26/2009

655.2

REPUBLIC SERVICES, INC.

NON-HAZARDOUS WASTE MANIFEST

GENERATOR INFORMATION

Generator Name: EXXON MOBIL REFINERY & SUPPLY
Address: 3700 W. 190TH ST., TPT B-14
City: TORRANCE County: LOS ANGELES
State: CA Zip: 90504

CUSTOMER/BILLING INFORMATION

Billing Name: DILLARD ENVIRONMENTAL SERVICES
Address: P. O. BOX 579
City: BYRON County: CONTRA COSTA
State: CA Zip: 94514

Site Location (if different): EXXON #04-334 2492 CASTRO VALLEY BLVD. CASTRO VALLEY, CA

Republic Services Approval #	Description of Waste	Volume/Weight	Expiration Date	Container Type
1004129	SOIL DRUM	2 DRUMS	4/22/08	

*Attach Additional Sheet if necessary

I hereby certify that the above described materials are non-hazardous wastes as defined by 40 CFR 261 or any applicable state law. Further, that the above named materials are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation according to the applicable regulations of the Department of Transportation.

On behalf of Exxon Mobil Oil Corp
Glen Compton

Generator/Authorized Agent Name Signature Date Shipped

RECEIVED
FEB 2 3 2009

TRANSPORTER INFORMATION

Transporter Name: DES
Transporter Address: 3120 CAMINO DIABLO BYRON CA. 94514
DOT#
Truck Number: 60
Phone Number: 925 634-6850

I certify no hazardous waste or other regulated substance was knowingly introduced to the waste while in my custody. The waste transported in this vehicle is the waste identified above, to the best of my knowledge.

PAUL RONDARES 2-18-09

Name of Authorized Agent Signature Date Delivered

DISPOSAL SITE INFORMATION

Site Name: VASCO ROAD LANDFILL Phone No. 925.447.0491
Site Address: 4001 N. VASCO RD. LIVERMORE, CA 94551

I hereby acknowledge receipt of the above described materials.

FRANK E. SANCHEZ 2/18/09

Name (Print or Type) Signature Date Received

Form SW02 (2003)

SUSAN
(209-321-3190)