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Alameda County
Environmental Health

ConocoPhillips

76 Broadway
Sacramento, California

February 4, 2009

Barbara Jakub
Alameda County Health Agency
1131 Harbor Bay parkway, Suite250
Alameda, California 94502-577

Re: ***Work Plan for Delineation of Dissolved Contamination Plume in Deeper/Lower Water Zone***
76 Service Station # 4625 RO # 0298
3070 Fruitvale Ave.
Oakland, CA

Dear Ms. Jakub:

I declare under penalty of perjury that to the best of my knowledge the information and/or recommendations contained in the attached report is/are true and correct.

If you have any questions or need additional information, please call me at (916) 558-7666.

Sincerely,



Terry L. Grayson
Site Manager
Risk Management & Remediation

MS. BARBARA JAKUB
Alameda County Health Agency
Department of Environmental Health
1131 Harbor Bay Parkway
Alameda, CA 94502-6577

cc: Mr. Terry Grayson, ConocoPhillips (electronic copy)



WORK PLAN
FOR DELINEATION OF DISSOLVED CONTAMINATION PLUME IN
DEEPER WATER ZONE

76 SERVICE STATION NO. 4625, AOC# 01285
3070 FRUITVALE AVE
OAKLAND, CA

DELTA PROJECT C104625
January 8, 2009

Prepared for:

ConocoPhillips Company
76 Broadway
Sacramento, CA 95818

Prepared by:

Delta Consultants

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FIGURES

- Figure 1 – Site Location Map
- Figure 2 – Site Plan w/ Proposed Monitoring Well Locations
- Figure 3 – Site Plan w/ Groundwater Elevation Contours
- Figure 4 – Monitoring Well Construction Detail

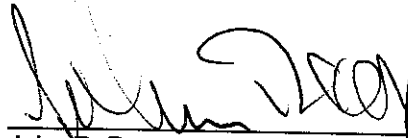
APPENDICIES

- Appendix A – Gettler-Ryan 2003 *Soil Boring and Groundwater Monitoring Well Installation Report*
- Appendix B – TRC 2006 *HydroPunch Groundwater Investigation Report*
- Appendix C – TRC 2007 *Monitoring Well Installation Report*

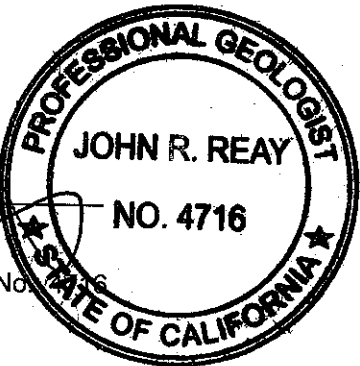
1.0 CERTIFICATION

This report was prepared under the supervision and direction of the undersigned California Professional Geologist.

Delta Consultants



John R. Reay, P.G.
Project Manager
California Professional Geologist No. 4716



2.0 DECLARATION

On behalf of ConocoPhillips Company (COP), Delta Consultants (Delta) has prepared this *Work Plan for Delineation of Dissolved Contaminant Plume in Deeper Water Zone* for 76 Station 4625, 3070 Fruitvale Ave, Oakland, California (Figure 1).

3.0 PROJECT OBJECTIVES AND SCOPE OF WORK

Previous assessments done by Gettler-Ryan and TRC have delineated the contaminant plume on this site in the higher of 2 water-bearing zones. At present, however, the deeper water-bearing zone remains undefined. The objective of this scope of work is to delineate the contaminant plume in this deeper water zone with the installation of 3 monitoring wells, (MW-10, MW-11, MW-12). Based on CPT data from the April 14, 2006 TRC *Hydropunch Groundwater Investigation Report*, the September 25, 2007 TRC *Monitoring Well Installation Well Installation Report*, and the May 14, 2003 Gettler-Ryan *Soil Boring and Groundwater Monitoring Well Installation Report*, casing will be installed to 30 feet bgs to seal off upper contaminated zoned then drilled and continuously cored to 50 feet bgs. The screened interval will be selected based on real-time core analysis.

4.0 SITE DESCRIPTION AND BACKGROUND

4.1 SITE DESCRIPTION

The site is an operating service station located on the southeast corner of Fruitvale Avenue and School Street in Oakland, California (Figure 2). The current site facilities include a station building with two automotive service bays equipped with hydraulic lifts, four dispenser islands with two canopies, two 12,000-gallon double-wall fiberglass gasoline underground storage tanks (USTs), and one above ground waste-oil tank.

4.2 SITE BACKGROUND

April/May 1998: The gasoline underground storage tanks (USTs), product piping and dispensers were removed and replaced. Concentrations of total petroleum hydrocarbons as gasoline (TPH-g), benzene, and methyl tertiary butyl ether (MTBE) ranged from non-detect to moderate.

May 1998: A waste oil UST and associated piping was removed. Concentrations of TPH-g, benzene, total petroleum hydrocarbons as diesel (TPH-d), total oil and grease (TOG), volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs) and metals ranged from non-detect to moderate. A total of approximately 1,166 tons of soil were excavated and transported from the site to Allied Waste's Forward Landfill in Manteca, California. Additionally, 40,000 gallons of groundwater were pumped from the UST excavation and transported to the Tosco Refinery in Rodeo, California for disposal. A conductor casing was installed in the backfill during installation of the replacement gasoline USTs. The waste oil tank was replaced with an aboveground tank.

April 2000: Four monitoring wells were installed at the site.

May 2003: Two monitoring wells were installed to a depth of 25 feet below grade (bg) and two exploratory borings were advanced to approximately 15 feet bg. Soil samples contained concentrations of benzene, MTBE, and tertiary butyl alcohol (TBA), and TPH-g. Grab groundwater samples collected from the two soil borings were reported to contain elevated concentrations of petroleum hydrocarbons in both samples.

October 2003: Site environmental consulting responsibilities were transferred to TRC.

February/March 2006: A Cone Penetrometer Test (CPT) Hydropunch groundwater investigation was completed at the site. A total of 10 hydropunch groundwater samples were collected from 7 boring locations onsite and offsite. Total purgeable petroleum hydrocarbons (TPPH) and MTBE were detected at maximum concentrations of 4,700 micrograms per liter ($\mu\text{g/L}$) and 160 $\mu\text{g/L}$ respectively.

4.3 HYDROGEOLOGIC SITE CONDITIONS

The site is located on the western flank of the Oakland Hills in an area underlain by Holocene age alluvium. The alluvial deposits are composed of unconsolidated, moderately sorted, permeable silt with coarse sand and gravel. The northwest trending Hayward fault is located approximately 1,500 feet northeast of the site (Helley, 1979). The nearest surface waters are Sausal Creek, located approximately 500 feet west of the site, and Peralta Creek, located 2,300 feet southeast of the site. Additionally, East Bay Municipal Utility District's Central Reservoir is located approximately 1,300 feet west of the site. In general, subsurface soils are composed of clay and silt to depths of approximately 9 to 19 feet below ground grade (tbg), underlain by gravel with varying amounts of clay and sand to depths of approximately 15 to 22 feet bg, which in turn is underlain by clay and silt to 55 feet bg, the maximum depth explored. In the vicinity of monitoring well MW-1, only clay was encountered to 25 feet bg (Gettler-Ryan Inc., 2003). Based on the fourth quarter 2008 monitoring data, groundwater flows toward the west at a calculated hydraulic gradient of 0.02 feet per foot (ft/ft). The groundwater flow direction during the fourth quarter 2008 is consistent with previously observed flow directions (TRC 2007).

5.0 PRE-FIELD ACTIVITIES, PERMITTING AND UTILITY LOCATION

5.1 PRE-FIELD ACTIVITIES

Prior to initiation of field activities, Delta will prepare a HASP specific to the site and work being performed in accordance with Title 8, Section 5192 of the California Code of Regulations. The will contain a list of emergency contacts, as well as a hospital route map to the nearest emergency facility, and was reviewed daily by field personnel.

5.2 PERMITTING

Drilling permits will be obtained for the boring and the monitoring wells as necessary from the appropriate parties prior to commencing field work. Delta will prepare a HASP specific to the site and work being performed in accordance with Title 8, Section 5192 of the California Code of Regulations. The HASP will contain a list of emergency contacts, as well as a hospital route map to the nearest emergency facility, and was reviewed daily by field personnel.

5.3 UNDERGROUND UTILITY LOCATION

The proposed boring locations will be marked in the field prior to drilling, and Underground Services Alert (USA) will be contacted at least 48 hours prior to initiating drilling to minimize the risk of damaging underground utilities. A private utility locator will also be retained to survey the locations and further minimize the risk of damaging underground utilities. Additionally, an air-knife vacuum truck will be used to clear the proposed boring and monitoring well locations to a depth of at least 5 feet bgs prior to drilling.

6.0 MONITORING WELL CONSTRUCTION

Borings will be advanced via hollow stem auger and cased to seal upper contaminated zones from surface to 30 feet bg.

6.1 Monitoring Construction Detail

Ten inch steel casing will be emplaced to a depth of 30 feet bg to seal off upper contaminated zones (Figure 3). Borings will be advanced below the casing point via hollow stem auger and continuously cored with acetate sleeve in order to identify stratigraphy as well as to delineate potential water-bearing sand zones to 50 feet bg or refusal. Wells will be constructed in and 8 inch boring of 2 inch ID PVC with 0.010 inch slotted screen with end cap and Loanstar #2/12 gravel pack (or equivalent) extending a minimum of 1 foot above the top of the screen. The gravel pack will be emplaced via tremie pipe or equivalent emplacement technique. Approximately one foot granular bentonite seal will be placed on top of the gravel pack. The bentonite seal will be hydrated with a minimum of one gallon of clean potable water prior to installation of the neat cement seal if it extends above groundwater. The well will be completed by installation of a neat cement seal to ground surface, a concrete sanitary seal, locking cap, and traffic rated water-resistant well-head vault.

6.2 SOIL SAMPLING AND LABORATORY ANALYSIS

No soil or groundwater samples will be collected above the proposed casing depth of 30 feet bg. Soil samples will be collected from 30 feet bg to 50 feet bg, or refusal, for laboratory analysis at 5 foot intervals or at major changes in lithology based on core analysis. A pre-calibrated photo-ionization detector (PID) will be used to field screen soil samples for the presence of organic vapors. Lithology will be logged utilizing the Unified Soil Classification System. Discrete soil samples retained for analysis will be capped with Teflon sheeting and tight-fitting plastic end caps, properly labeled with a unique identification number, placed in an ice-chilled cooler, and transported to a California-certified analytical laboratory with chain of custody documentation. Soil samples will be analyzed for TPHg, TPHd by EPA Method 8015M, benzene, toluene, ethylbenzene, toluene, xylenes, methyl tertiary butyl ether (MTBE), 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. In addition selected soil samples will be analyzed for bulk density, porosity, and total carbon to help in the evaluation of natural attenuation and fate and transport processes.

6.3 GROUNDWATER SAMPLING AND LABORATORY ANALYSIS

Groundwater grab samples will be collected from borings from selected depth intervals via direct push. The groundwater samples will be placed into laboratory supplied sample bottles labeled with a unique identification number. The samples will then be placed into an ice-chilled cooler and transported to a California-certified analytical laboratory with chain of custody documentation. Groundwater samples will be analyzed for TPHg, TPHd by EPA Method 8015M, benzene, toluene, ethylbenzene, toluene, xylenes, methyl tertiary butyl ether (MTBE), 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.

6.4 SAMPLE POINT SURVEY

Following the completion of the sampling event, a California licensed surveyor will survey the northing and easting of the CPT boring locations using Datum NGVD29 or NAD 88. A global positioning system (GPS) will also be used to survey in the latitude and longitude of the wells to be uploaded into California's GeoTracker database system. The survey of the well locations will be to sub-meter accuracy.

6.5 DISPOSAL OF DRILL CUTTINGS AND WASTEWATER

Drill cuttings and decontamination water generated during the sampling event will be placed into properly labeled 55-gallon Department of Transportation (DOT) approved steel drums and temporarily stored on the property. Samples of the drill cuttings and wastewater will be collected, properly labeled and placed on ice for submittal to a California-certified laboratory and analyzed for TPHg by EPA Test Method 8015M, BTEX and MTBE by EPA Method 8260B, and total lead by EPA Method 6010B. A chain-of-custody will accompany the samples during transportation to the laboratory. Subsequent to receiving the laboratory analytical results, the drummed drill cuttings and wastewater will be profiled, transported, and disposed of at a COP approved facility.

7.0 REPORTING

Anticipated schedule of work includes:

- 1st Q 09: Workplan submitted to ACEH
- 2nd Q 09: Comments to workplan received from ACEH
- Proceed with field work within 90 days of receipt of ACEH comments

Following completion of the field work and receipt of analytical results, a site investigation report will be prepared and submitted within 60 days. The report will present the details of the boring activities, including copies of boring permits, and details of disposal activities and copies of disposal documents. Required electronic submittals will be uploaded to the State Geotracker and Alameda County databases.

8.0 REMARKS

The recommendations contained in this report represent Delta's professional opinions based upon the currently available information and are arrived at in accordance with currently acceptable professional standards. This report is based upon a specific scope of work requested by the client. The Contract between Delta and its client outlines the scope of work, and only those tasks specifically authorized by that contract or outlined in this report will be performed. This report is intended only for the use of Delta's Client and anyone else specifically listed on this report. Delta will not and cannot be liable for unauthorized reliance by any other third party. Other than as contained in this paragraph, Delta makes no express or implied warranty as to the contents of this report.

If you have questions regarding this report, please contact John Reay at (916) 503-1260 or Terry Grayson at 916-558-7666.

Sincerely,

DELTA CONSULTANTS

FIGURES

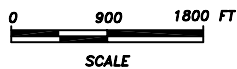
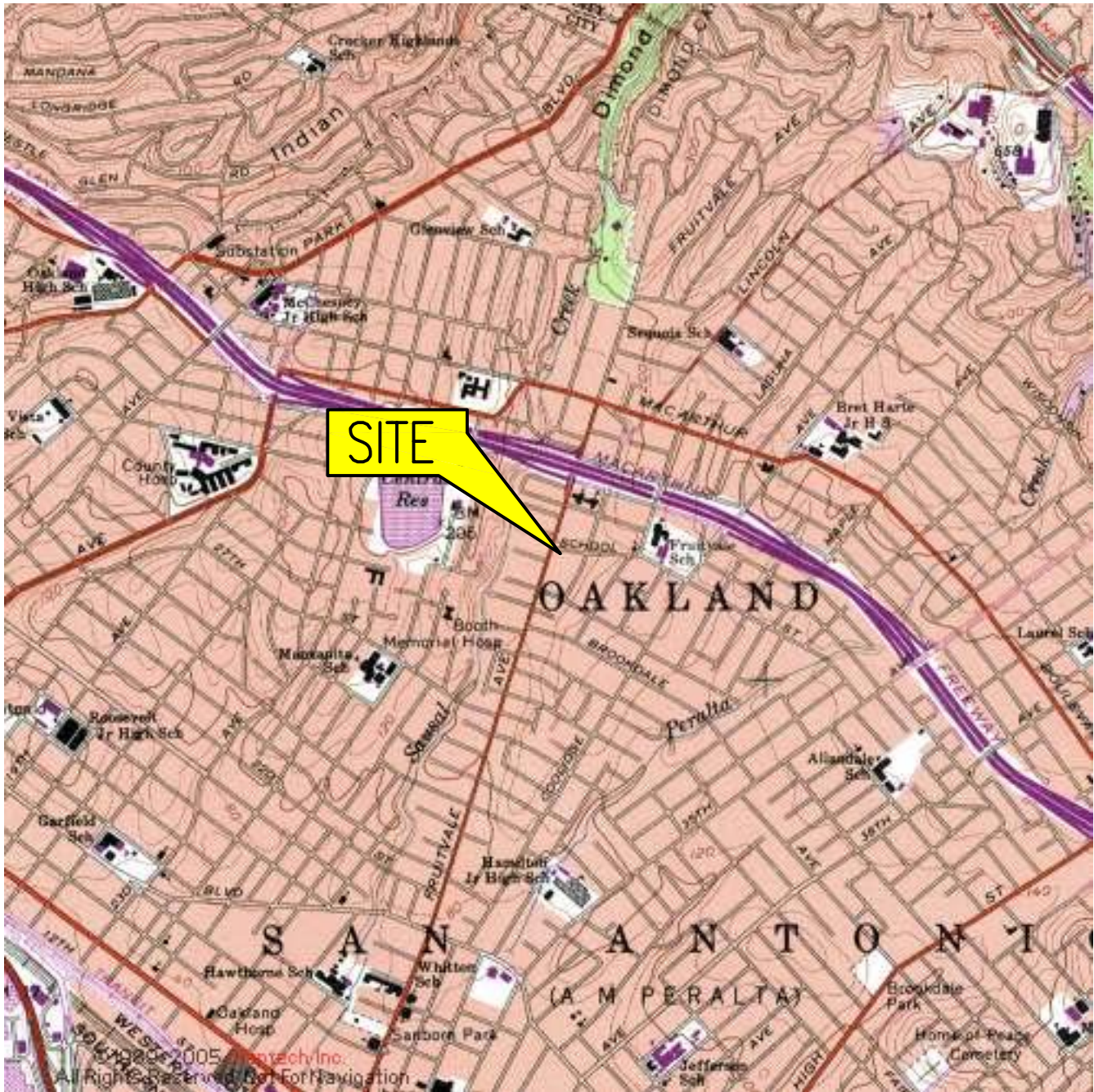


FIGURE 1

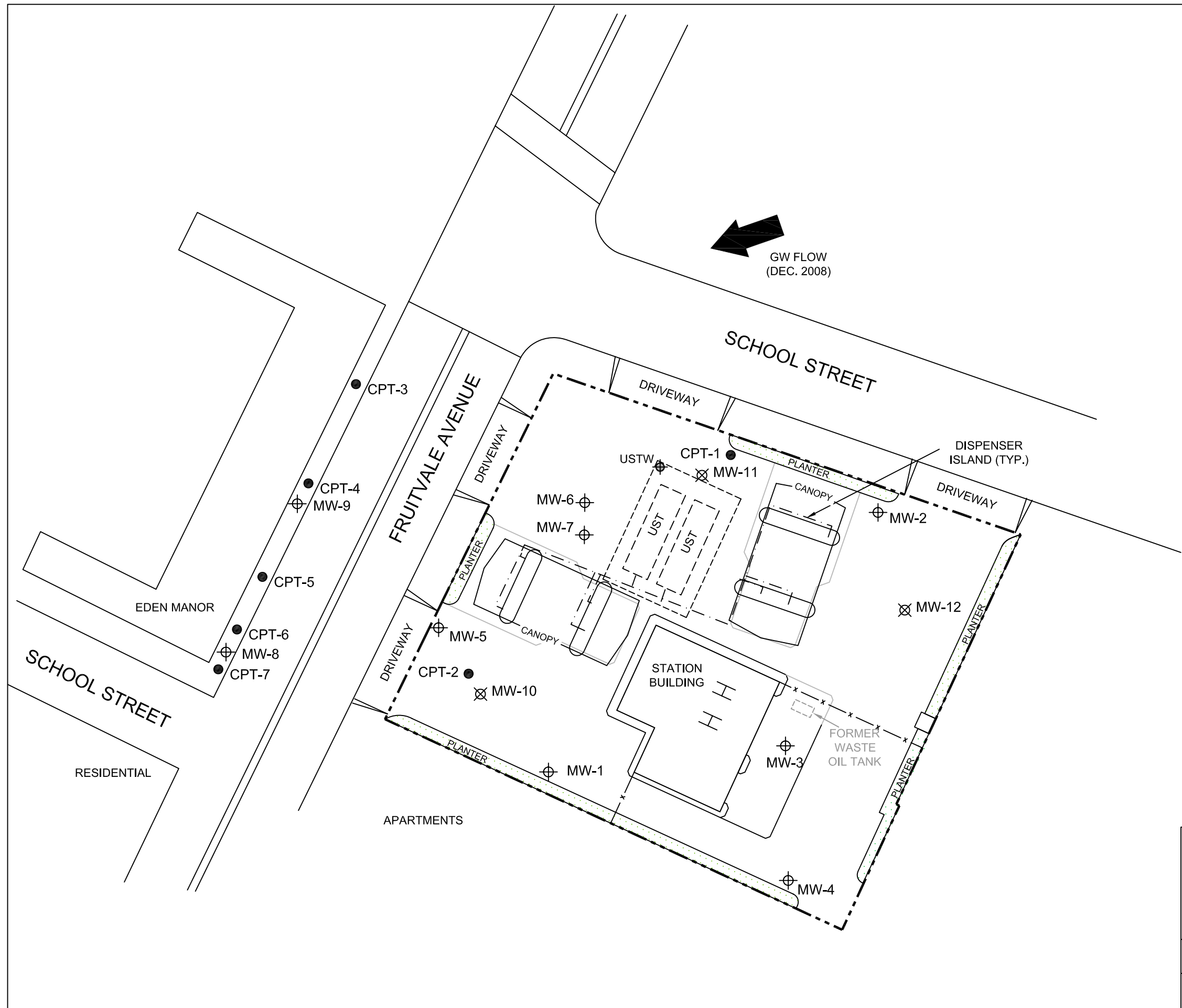
SITE LOCATION MAP

76 SERVICE STATION NO.4625
 3070 FRUITVALE AVENUE
 OAKLAND, CALIFORNIA

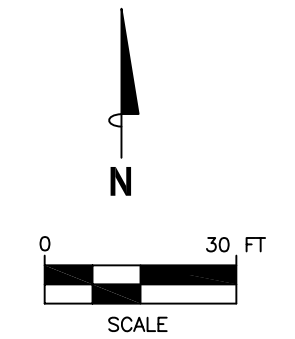
PROJECT NO. C104625	DRAWN BY JH 01/20/09
FILE NO. 4625-SiteLocator	PREPARED BY AB
REVISION NO.	REVIEWED BY JR



SOURCE: USGS 7.5 MINUTE TOPOGRAPHIC MAP, OAKLAND EAST QUADRANGLE (1973)



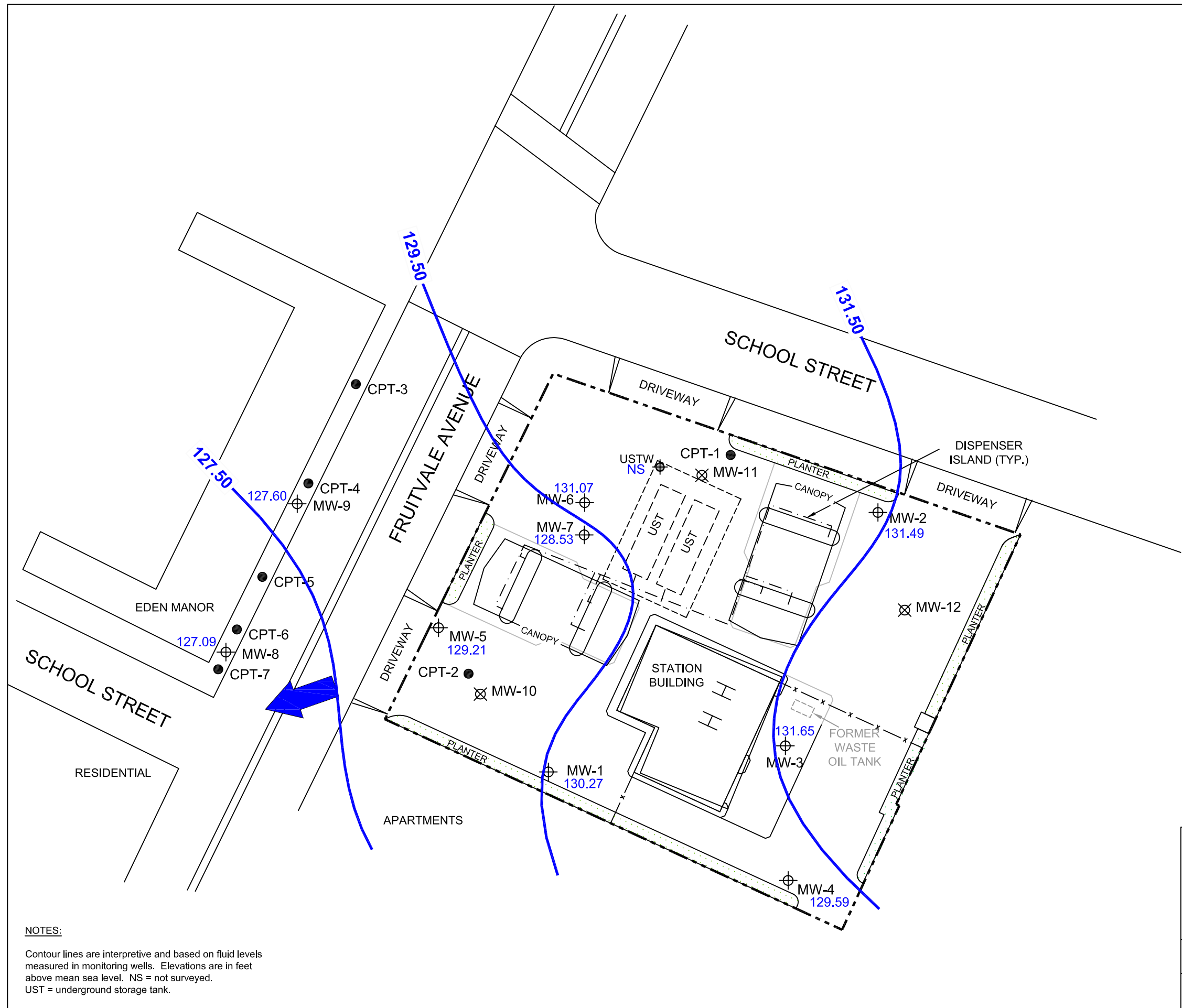
- LEGEND:**
- APPROXIMATE PROPERTY LINE
 - x — FENCE
 - - - - PRODUCT LINE
 - MW-1 ⊕ MONITORING WELL
 - USTW ⊕ UST OBSERVATION WELL
 - CPT-1 ● CPT BORING LOCATION
 - MW-10 ⊗ PROPOSED MONITORING WELL



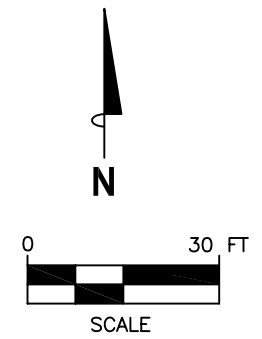
**FIGURE 2
SITE PLAN**

76 SERVICE STATION NO. 4625
3070 FRUITVALE AVENUE
OAKLAND, CALIFORNIA

PROJECT NO. C104625	PREPARED BY AB	DRAWN BY JH	
DATE 01/21/09	REVIEWED BY JR	FILE NAME 76-4625	



- LEGEND:**
- APPROXIMATE PROPERTY LINE
 - x — FENCE
 - - - - PRODUCT LINE
 - MW-1 ⊕ MONITORING WELL
 - USTW ⊕ UST OBSERVATION WELL
 - CPT-1 ● CPT BORING LOCATION
 - MW-10 ⊗ PROPOSED MONITORING WELL
 - 131.60 GROUNDWATER CONCENTRATION (ft.)
 - 131.50 GROUNDWATER ELEVATION CONTOUR (ft.)
 - ➔ GENERAL DIRECTION OF GROUNDWATER FLOW



MAP ADAPTED FROM A MAP DATED 1/20/09 BY TRC WITH THE SAME TITLE.

FIGURE 3
GROUNDWATER ELEVATION CONTOUR MAP
 DECEMBER 30, 2008
 76 SERVICE STATION NO. 4625
 3070 FRUITVALE AVENUE
 OAKLAND, CALIFORNIA

NOTES:
 Contour lines are interpretive and based on fluid levels measured in monitoring wells. Elevations are in feet above mean sea level. NS = not surveyed.
 UST = underground storage tank.

PROJECT NO. C104625	PREPARED BY AB	DRAWN BY JH
DATE 01/21/09	REVIEWED BY JR	FILE NAME 76-4625



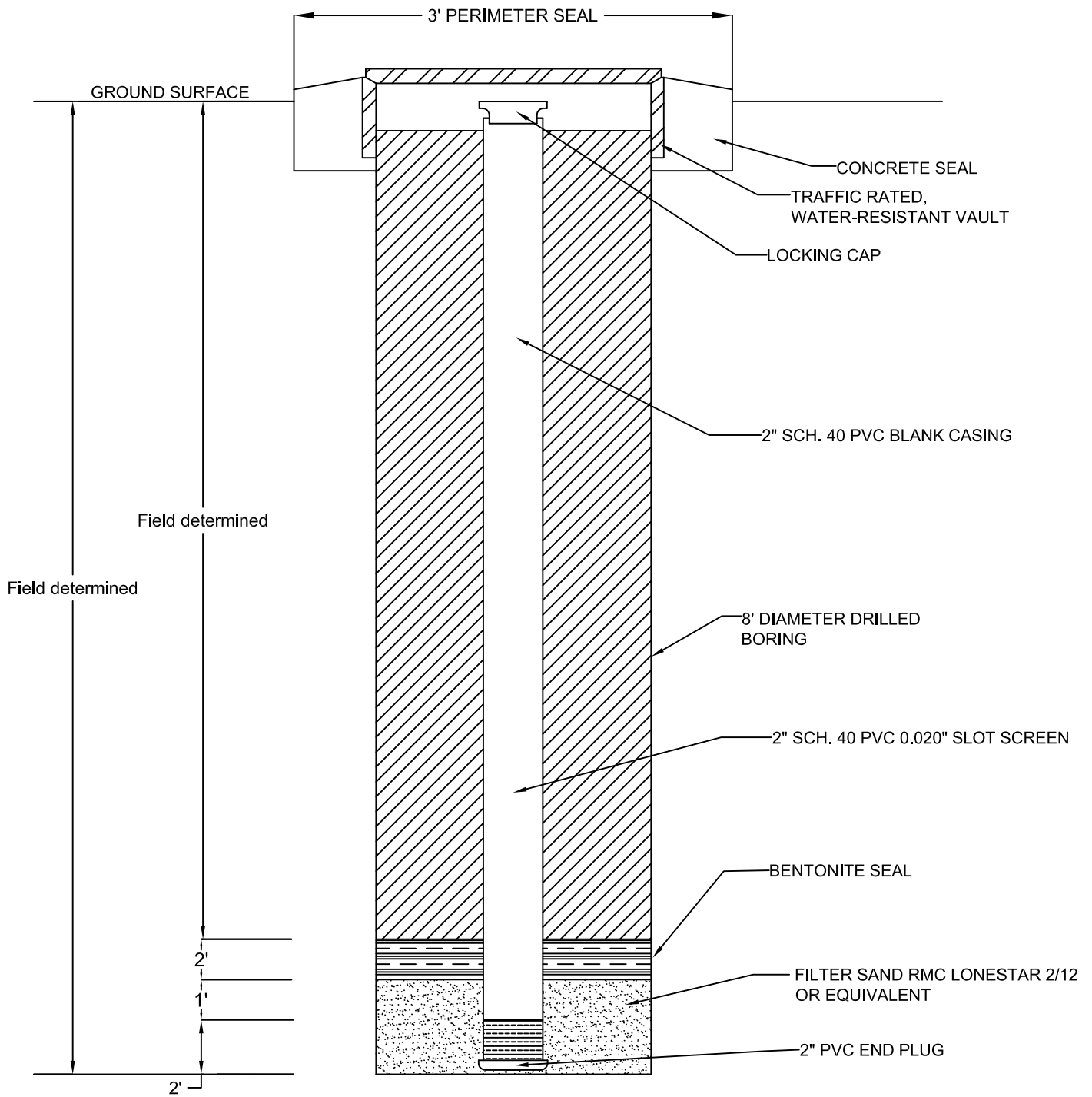



FIGURE 4
PROPOSED GROUNDWATER MONITORING
WELL CONSTRUCTION DETAIL
 76 STATION NO. 4625
 3070 Fruitvale Avenue
 Oakland, California

PROJECT NO. C103072	DRAWN BY JH 12/11/08
FILE NO. 1156-WELLDDETAIL	PREPARED BY DD
REVISION NO.	REVIEWED BY



APPENDIX A

Gettler-Ryan 2003 Soil Boring and Groundwater Monitoring Well Installation Report

GETTLER-RYAN INC.

1364 North McDowell Blvd. Suite B2
Petaluma, CA 94954
Phone (707) 789-3255, Fax (707) 789-3218

TRANSMITTAL

TO: Dave DeWitt
ConocoPhillips
76 Broadway
Sacramento, CA 95818

DATE: May 16, 2003
PROJECT NO. 140158.5
SUBJECT: Tosco Station No. 4625,
Oakland

FROM: Jed Douglas

WE ARE SENDING YOU:

COPIES	DATED	DESCRIPTION
1	5/14/03	Soil Boring and Groundwater Monitoring Well Installation Report

THESE ARE TRANSMITTED as checked below:

- | | | |
|--|---|--|
| <input type="checkbox"/> For review and comment | <input type="checkbox"/> Approved as submitted | <input type="checkbox"/> For your files |
| <input checked="" type="checkbox"/> As Requested | <input type="checkbox"/> Approved as noted | <input checked="" type="checkbox"/> For your use |
| <input type="checkbox"/> For Approval | <input type="checkbox"/> Returned for corrections | <input type="checkbox"/> As noted below |

COMMENTS:

Signed: 

COPIES TO: Don Hwang - Alameda County Environmental Health Services
1131 Harbor Bay Parkway, Suite 250, Alameda, CA 94502-6577

CA & HI BOX:

009382

Store #	254625	Date:	5/16/03
Unit #	4625	Code:	SE Color 1
Description:	Soil Boring GWM Well		

INSTALL RPT
2 SIDED



76 Broadway
Sacramento, CA 95818
phone 916.558.7678
fax 916.558.7639

May 14, 2003

Mr. Don Hwang
Alameda County Environmental Health Services
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502-6577

Subject: Perjury Statement for the Monitoring Well Installation Report at Tosco
Service Station No. 4625, 3070 Fruitvale Avenue, Oakland, California.

Mr. Hwang:

I declare, under penalty of perjury, that the information and/or recommendation contained in the Gettler-Ryan Inc. Monitoring Well Installation Report dated May 14, 2003, are true and correct to the best of my knowledge.

Sincerely,
ConocoPhillips

A handwritten signature in cursive script that reads "David B. DeWitt".

David B. DeWitt
Environmental Project Manager



GETTLER-RYAN INC.

SOIL BORING AND MONITORING WELL INSTALLATION REPORT

for

Tosco (76) Service Station No. 4625
3070 Fruitvale Avenue
Oakland, California

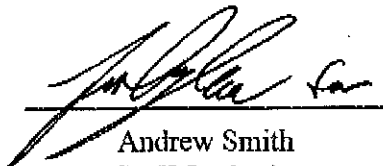
Report No. 140158.05

Prepared for:

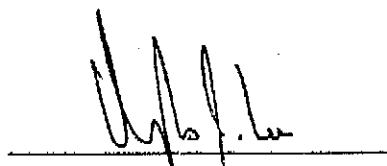
Mr. David B. De Witt
ConocoPhillips
76 Broadway
Sacramento, California 95818

Prepared by:

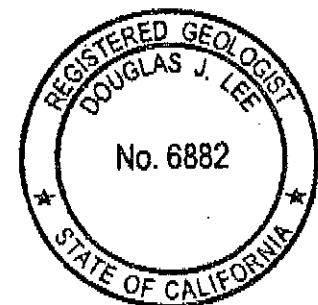
Gettler-Ryan Inc.
6747 Sierra Court, Suite J
Dublin, California 94568



Andrew Smith
Staff Geologist



Douglas J. Lee
Senior Geologist
R.G. No. 6882



May14, 2003

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Table 2:	Soil Chemical Analytical Data
Table 3:	Groundwater Chemical Analytical Data

FIGURES

Figure 1:	Vicinity Map
Figure 2:	Site Plan
Figure 3:	Potentiometric Map

APPENDICES

Appendix A:	GR Field Methods and Procedures
Appendix B:	Permits and Boring Logs
Appendix C:	Well Development and Groundwater Sampling Field Data Sheets
Appendix D:	Surveyor's Report and Landfill Acceptance Letter
Appendix E:	Laboratory Analytical Reports and Chain-of-Custody Forms

SOIL BORING AND MONITORING WELL INSTALLATION REPORT

for

Tosco (76) Service Station No. 4625
3070 Fruitvale Avenue
Oakland, California

Report No. 140158.05

1.0 INTRODUCTION

At the request of ConocoPhillips, Gettler-Ryan Inc. (GR) has prepared this report presenting the observations associated with the installation of two on-site groundwater monitoring wells and the advancement of two on-site soil borings. The purpose of this investigation was to further evaluate soil and groundwater conditions at subject site. This work was originally proposed in GR report # 140158.05, *Work Plan For limited Subsurface Investigation*, dated May 24, 2002 and amended in the *Work Plan Addendum* dated October 14, 2002. The Work Plan was approved by the Alameda County Health Care Services Agency (ACHCSA) in a letter to Tosco dated September 4, 2002.

The scope of work performed included: updating the site safety plan; obtaining the required drilling permits; installing two on-site groundwater monitoring wells and advancing two on-site soil borings; developing the wells; collecting and submitting selected soil and groundwater samples for chemical analyses; surveying the well head elevations; arranging for ConocoPhillips' contractors to dispose of the waste materials and preparing a report presenting the findings of this investigation.

2.0 SITE DESCRIPTION

2.1 General

The site is currently an active service station located on the southeast corner of Fruitvale Avenue and School Street in Oakland, California (Figure 1). Local topography is southwestern sloping at an elevation of approximately 136 to 139 feet above mean sea level (MSL). The current site facilities include a station building with two automotive service bays equipped with hydraulic lifts, four dispenser islands and two canopies, two 12,000-gallon double-wall fiberglass gasoline underground storage tanks (USTs), and one above ground waste-oil tank. Six groundwater monitoring wells are currently present at the site. Locations of the pertinent site features are shown on Figure 2.

2.2 Geology and Hydrogeology

The site is located on the western flank of the Oakland Hills in an area underlain by Holocene age alluvium. The alluvial deposits are composed of unconsolidated, moderately sorted, permeable silt with coarse sand and gravel. The northwest trending Hayward fault is located approximately 1,500 feet northeast of the site (Tolley, 1979). The nearest surface waters are Sausal Creek, located approximately 500 feet west of the site, and Peralta Creek, located 2,300 feet southeast of the site. Additionally, East Bay Municipal Utility District's Central Reservoir is located approximately 1,300 feet west of the site.

In general, subsurface soils are composed of clay to depths of approximately 9 to 15 feet below ground surface (bgs), underlain by gravel with varying amounts of clay and sand to depths of approximately 18 to 20 feet bgs, which in turn is underlain by clay and clayey sand to 25 feet bgs, the total depth of the borings. The exception was well boring MW-1, in which only clay was encountered to 25 feet bgs. During drilling, groundwater was typically encountered at approximately 10.5 feet bgs, except for well boring MW-1, where groundwater was not encountered. Groundwater typically first occurred in a gravel or clayey gravel which ranged in depth from approximately 9 to 15 feet bgs, except in well boring MW-2 where groundwater was encountered in the clay several feet above the gravel zone.

The most recent monitoring and sampling event occurred at the site on November 26, 2002. Depth to water in the monitoring wells on that date ranged from 7.78 to 9.89 feet below the top of well casings (TOC). Groundwater during this event was reported to flow toward the west/southwest, at a calculated gradient of 0.007 to 0.04 ft/ft. A potentiometric map is included as Figure 3.

2.3 Previous Environmental Work

In April and May of 1998, the gasoline USTs, product piping and dispensers were removed and replaced. Four soil samples were collected from the sidewalls of the former gasoline UST pit at a depth of approximately 8.5 feet bgs. Concentrations of Total Petroleum Hydrocarbons as gasoline (TPHg) in the soil samples ranged from 44 to 1,700 parts per million (ppm); benzene concentrations ranged from 0.16 to 17 ppm; and methyl tertiary butyl ether (MTBE) concentrations ranged from not detected (ND) to 16 ppm. Eight soil samples were collected from the beneath the former product dispensers at a depth of approximately 4 feet bgs. Concentrations of TPHg in the soil samples ranged from ND to 660 ppm; benzene concentrations ranged from ND to 5.1 ppm; and MTBE concentrations ranged from ND to 150 ppm.

A 550-gallon waste oil UST and associated piping was also removed in May 1998. One soil sample was collected from beneath the former waste oil UST at a depth of approximately 8.5 feet bgs. TPHg were detected in the soil sample at 820 ppm; benzene was detected at 2.7 ppm, Total Petroleum Hydrocarbons as diesel (TPHd) were detected at 200 ppm; Total Oil and Grease (TOG) was detected at 56 ppm; elevated concentrations of volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs) and metals were also reported. One soil sample was also collected from beneath the piping at a depth of approximately 2 feet bgs. The sample was reported as all ND except for TPHd at 1.5 ppm, and background concentrations of metals.

A total of approximately 1,166 tons of soil were overexcavated and transported from the site to Allied Waste's Forward Landfill in Manteca, California. Additionally, 40,000 gallons of groundwater were pumped from the UST pit and transported to the Tosco Refinery in Rodeo, California for disposal. A conductor casing was installed in the backfill during installation of the replacement gasoline USTs. The waste oil tank was replaced with an above ground tank.

In April of 2000, four groundwater monitoring wells were installed at the site. MTBE was not detected in any of the soil samples analyzed from the four well borings. TPHg and Benzene, Toluene, Ethylbenzene and xylenes (BTEX) were not detected in any of the soil samples analyzed from well borings MW-1 or MW-4. However, TPHg and BTEX were detected in shallow soil samples collected from well borings MW-2 and MW-3 at the following concentrations: MW-2 contained TPHg at 1,600 ppm and benzene at 5.1 ppm; MW-3 contained TPHg at 79 ppm and benzene at 0.031 ppm. Low concentrations of TPHd were detected in the soil samples analyzed from boring MW-3 at concentrations ranging from 1.3 to 8.4 ppm.

Groundwater samples from wells MW-3 and MW-4 have been ND for TPHg, BTEX and MTBE since quarterly sampling began in May of 2000. Groundwater samples from MW-1 have only contained low concentrations of MTBE ranging from 3.9 to 26 parts per billion (ppb). MW-2 initially contained high concentrations of TPHg and benzene, both of which have recently decreased by up to two orders of magnitude. MTBE has not been identified in MW-2. It is GR's understanding that as of January of 2001, Tosco no longer delivers fuel containing MTBE to service stations in northern California.

3.0 FIELD WORK

Field work was conducted in accordance with GR's Field Methods and Procedures (Appendix A), and the Site Safety Plan dated April 10, 2002. The soil borings were advanced under drilling permit numbers W02-1032, W02-1033 and W02-1034, issued on October 24, 2002 by the Alameda County Public Works Agency (ACPWA). Copies of the drilling permits are included in Appendix B.

Underground Service Alert (USA) was notified at least 48 hours prior to drilling at the site (confirmation #470654). As a precautionary measure, a private subsurface utility locator was contracted to identify utilities near the proposed boring locations. The borings were hand excavated for the first five feet bgs to further insure that no utilities were disturbed.

3.1 Soil Boring and Monitoring Well Installation

On November 20, 2002, a GR geologist observed Cascade Drilling Incorporated, of Rancho Cordova, California (C57 #717510), advance four on-site soil borings (B-1, B-2, MW-5, and MW-6) at the locations shown on Figure 2. The well borings were drilled to 25 feet bgs and the soil borings were drilled to 12 feet bgs (B-1) and 15 feet bgs (B-2), using 8-inch diameter hollow-stem augers driven by a truck mounted drill rig. Soil samples were collected at approximately 5-foot intervals beginning at 5 feet bgs. The GR geologist prepared logs of the borings and screened the soil samples in the field for the presence of volatile organic compounds (VOC). Screening data are presented on the boring logs (Appendix B).

Groundwater monitoring wells were constructed in two of the borings using 5-feet of two-inch diameter Schedule 40 PVC blank casing and 20-feet of 0.020-inch machine-slotted well screen. Lonestar #3 graded sand was placed in the annular space of the wells across the entire screened interval and extending one foot above the top of the screen. The wells were then sealed with one foot of hydrated bentonite followed by neat cement grout. The top of each well is protected by a traffic-rated water-resistant, vault box, locking well cap, and lock. Well construction details are presented on the boring logs in Appendix B. Borings B-1 and B-2 were backfilled with neat cement grout to approximately one half a foot bgs and finished to surface with cold asphalt patch. Mr. James Yoo of the ACPWA approved the grouting procedures.

Soil cuttings generated during drilling activities were placed on and covered with plastic, and stored at the site pending disposal options. A composite disposal confirmation sample [Comp-1 (A,B,C,D)] was collected from the stockpiled soil cuttings. Stockpile sampling procedures are presented in Appendix A.

3.2 Hydropunch Groundwater Sampling

Depth discrete groundwater sampling was attempted at borings B-1 and B-2 with the use of a hydropunch sampling tool advanced ahead of the drilling auger. After the hydropunch was driven to the target depth, the body of the tool was opened to expose the hydropunch screen. In boring B-1, a depth discrete hydropunch sample was attempted between 8.5 and 10 feet bgs but was unsuccessful due to insufficient groundwater present at this depth interval. Consequently, the boring was advanced to 12 feet bgs and groundwater sample B-1-W(12) was collected directly from the boring without the use of a hydropunch sampling tool. In boring B-2, the boring was advanced to 14.5 feet bgs where grab groundwater sample B-2-W(14.5) was collected directly from the boring.

Water samples were collected with the use of a cleaned teflon bailer placed through the auger. GR sample handling methods are presented in the GR Field Methods and Procedures in Appendix A.

3.3 Well Monitoring Development and Sampling

On November 26, 2002, static groundwater levels were measured in the new and preexisting wells. All wells were checked for the presence of separate-phase hydrocarbons. Separate-phase hydrocarbons were not present in any of the wells. Static water level data and groundwater elevations are summarized in Table 1.

After the static water levels were measured, the new monitoring wells (MW-5 and MW-6) were developed using a 2-inch diameter stainless steel bailer and a submersible pump. Wells MW-1, through MW-4 were sampled in accordance with the quarterly monitoring and sampling program. Copies of the GR Well Development and Groundwater Sampling Field Data Sheets are included in Appendix C. A Potentiometric Map is included with this report on Figure 2.

After development, groundwater samples were collected from the new monitoring wells as specified by GR's Field Methods and Procedures (Appendix A). Water purged during well development and sampling was transported to the ConocoPhillips Refinery in Rodco, California, for treatment and disposal.

3.4 Wellhead Survey

Following installation, the well casing elevations and horizontal coordinates of the new wells were surveyed by Virgil Chavez Land Surveying of Vallejo, California (Licensed California Land Surveyor No. 6323). Top of casing (TOC) elevations were measured relative to MSL, and the horizontal locations of the wells were measured using the Global Positioning System (GPS). Well casing elevation data are presented in Table 1. A copy of the surveyor's report is included in Appendix D.

3.5 Waste Disposal

Drill cuttings were placed on and covered with plastic sheeting and stored at the site pending disposal. After completion of drilling, one four-point composite disposal characterization sample was collected from the drill cuttings and submitted to the laboratory for compositing and analysis. The analytical results from the composite soil sample were submitted to Allied Waste's Forward Landfill in Manteca, California, for disposal.

On December 20, 2002, 5.54 tons of soil (drill cuttings) were removed from the site and transported to the Allied Waste Inc. (Allied) Forward Landfill in Manteca, California, by Tim Manley Trucking of Sacramento, California, under disposal approval No. 2736. A copy of the Allied soil acceptance letter is included in Appendix D.

3.6 Laboratory Analysis

Selected soil samples were submitted to Sequoia Analytical in Walnut Creek, California (ELAP #1271) and groundwater samples were sent to Severn Trent Services in Pleasanton California (ELAP #2496), for analysis. Soil and groundwater samples were analyzed for TPHg, Benzene, Toluene, Ethyl-Benzene, Total xylenes (BTEX), Ethanol, tert-Butyl alcohol (TBA), MtBE, Di-isopropyl Ether (DIPE), Ethyl tert-butyl ether (ETBE), 1,2-Dichloroethane (DCA), tert-Amyl methyl ether (TAME) and Ethylene dibromide (EDB) by EPA Method 8260B. The drill cuttings composite sample was analyzed for TPHg, BTEX, and MtBE by EPA Methods 8015/8021, and for total lead by EPA Method 6010B. Copies of the laboratory analytical reports and chain-of-custody forms are included in Appendix E.

4.0 RESULTS

4.1 Subsurface Conditions

Groundwater was encountered in the borings during drilling at depths ranging from approximately 11.5 to 19 feet bgs. Soil encountered during drilling consisted primarily of silt and clay from approximately 0.5 feet bgs to approximately 17 feet bgs. In well borings MW-5 and MW-6, clayey gravel and gravelly clay was observed at approximately 17 feet bgs to approximately 22 feet bgs (MW-5) and approximately 13 to 19 feet bgs (MW-6). In boring B-1, silt with sand was observed from approximately 0.5 feet bgs to the total depth of the boring (14 feet bgs). Silt with sand was observed in boring B-2 from approximately 0.5 feet bgs to approximately 4 feet bgs underlain by clay to the total depth of the boring (12 feet bgs). Detailed descriptions of the soil encountered during drilling are presented in the boring logs in Appendix B.

4.2 Soil Analytical Results

Soil sample B-1-S(8), collected from boring B-1 at 8 feet bgs, contained concentrations of benzene at 0.22 ppm, MtBE at 0.93 ppm and TBA at 0.42 ppm. Soil samples B-2-S(11), MW-5-S(10) and MW-6-S(10) contained TPHg and benzene at concentrations ranging from 190 to 1,300 ppm, and 4.2 to 11 ppm, respectively. Soil sample MW-6-S(10) contained MtBE at 0.39 ppm.

The stockpile soil sample, Comp-1 (A,B,C,D), contained concentrations of BTEX and MtBE that were acceptable for disposal at Allied Waste's Forward Landfill. The chemical analytical results for the soil samples are summarized in Table 2.

4.3 Groundwater Analytical Results

Groundwater samples collected from well MW-5 were reported to contain TPHg at 2,500 ppb, benzene at 350 ppb, and MTBE at 470 ppb. Groundwater collected from well MW-6 contained TPHg at 11,000 ppb, Benzene at 1,200 ppb, and MTBE at 490 ppb. Grab groundwater samples collected from the two soil borings were reported to contain elevated concentrations of petroleum hydrocarbons in both samples. In borings B-1 and B-2, respective concentrations of TPHg were reported at 190,000 and 17,000 ppb, benzene at 19,000 and 1,600 ppb, and MTBE at 57,000 and 240 ppb. Groundwater analytical data are summarized in Table 3.

5.0 CONCLUSIONS AND RECOMMENDATIONS

Elevated concentrations of dissolved petroleum hydrocarbons were detected in grab groundwater samples from the two soil borings. Boring B-1, located approximately 12 feet south of monitoring well MW-2, had the highest reported concentrations. Historical groundwater concentrations in well MW-2 have been three orders of magnitude lower than the reported results for grab groundwater from boring B-1. GR requested that the laboratory re-check the results for the samples from B-1, and the laboratory reported that their results were confirmed. It is GR's experience that hydrocarbon concentrations in grab groundwater samples are typically one order of magnitude higher than concentrations in samples collected from monitoring wells at a given site. Grab groundwater results from boring B-2, located near the UST pit, are one order of magnitude lower than results from B-1, and therefore appear to be more representative of actual groundwater conditions at the site.

The two new groundwater monitoring wells are located in the downgradient groundwater flow direction from the UST pit and dispenser islands. Both new wells were reported to contain detectable concentrations of petroleum hydrocarbons. GR recommends that wells MW-5 and MW-6 be added to the quarterly monitoring and sampling program to further assess groundwater conditions at the site. Once additional groundwater data has been received and interpreted, GR will make recommendations for additional subsurface investigation at the site, as warranted.

6.0 REFERENCES

- Gettler - Ryan Inc., 2003, Groundwater Monitoring and Sampling Report, Fourth Quarter - Event of November 26, 2002, dated January 14, 2003.
- Gettler - Ryan Inc., 2002, Work Plan Addendum, Tosco (76) Service Station No. 4625, 3070 Fruitvale Avenue, Oakland, California dated October 14, 2002.
- Gettler - Ryan Inc., 2002, Work Plan For limited Subsurface Investigation, Tosco (76) Service Station No. 4625, 3070 Fruitvale Avenue, Oakland, California dated May 24, 2002.
- Gettler-Ryan Inc., 2002, Groundwater Monitoring and Sampling Report, First Quarter - Event of February 6, 2002, Tosco (76) Service Station #4625, 3070 Fruitvale Avenue, Oakland, California, dated March 18, 2002.
- Gettler-Ryan Inc., 2000, Limited Subsurface Investigation Report, Tosco (76) Service Station No. 4625, 3070 Fruitvale Avenue, Oakland, California, dated August 16, 2000.
- Gettler-Ryan Inc., 1998, Underground Storage Tank and Product Line Replacement Report for Tosco (Unocal) Service Station No. 4625, 3070 Fruitvale Avenue, Oakland, California, dated August 10, 1998.

Soil Boring and Monitoring Well Installation Report – Tosco (76) Service Station No. 4625, Oakland CA
May 14, 2003

Helley, E. J. and K. R. Lajoie, 1979, Flatland Deposits of the San Francisco Bay Region, California - Their Geology and Engineering Properties, and Their Importance to Comprehensive Planning: U.S. Geological Survey Professional Paper 943.

TABLES

TABLE 1- GROUNDWATER MONITORING DATA

Tosco (76) Service Station No. 4625

3070 Fruitvale Avenue

Oakland, California

Sample No.	Sample Date	Total Well Depth (ft.)	Well ¹ Elev. (ft. MSL)	Depth to Water (ft.)	Floating Product (ft.)	Ground Water Elev. (ft. MSL)
MW-1	11/26/2002	25.10	137.57	7.78	0.00	129.79
MW-2	11/26/2002	19.80	139.85	9.81	0.00	130.04
MW-3	11/26/2002	24.70	138.89	8.79	0.00	130.10
MW-4	11/26/2002	24.65	137.81	8.08	0.00	129.73
MW-5	11/26/2002	24.40	137.66	9.89	0.00	127.77
MW-6	11/26/2002	23.60	138.88	9.19	0.00	129.69

EXPLANATION:

ft. = feet

ft. MSL = feet above to Mean Sea Level

¹ = Well elevations reported as top of casing (TOC) surveyed by Virgil Chavez, Licensed California Land Surveyor No. 6323

TABLE 2- SOIL CHEMICAL ANALYTICAL DATA
 Tosco (76) Service Station No. 4625
 3070 Fruitvale Avenue
 Oakland, California

Sample Location and ID	Date Sampled	Sample Depth (feet)	TPHg (ppm)	Benzene (ppm)	Toluene (ppm)	Ethylbenzene (ppm)	Xylenes (ppm)	MtBE (ppm)	TBA (ppm)	DIPE (ppm)	ETBE (ppm)	TAME (ppm)	1,2-DCA (ppm)	EDB (ppm)	Ethanol (ppm)	Lead (ppm)
Soil Borings																
B-1																
B-1-S(8)	11/20/02	8	<2.5	0.022	<0.012	<0.012	<0.012	0.93 ¹	0.42	<0.012	<0.012	<0.012	<0.012	<0.012	<0.50	NA
B-2																
B-2-S(11)	11/20/02	11	1,300	11	81	45	220	<1.2	<12	<1.2	<1.2	<1.2	<1.2	<1.2	<50	NA
Monitoring Wells																
MW-5																
MW-5-S(10)	11/20/02	10	740	2.8	18 ²	32 ²	160 ²	<0.50	<5.0	<0.50	<0.50	<0.50	<0.50	<0.50	<20	NA
MW-6																
MW-6-S(10)	11/20/02	10	190	4.2	26	5.3	41	0.39	<2.5	<0.25	<0.25	<0.25	<0.25	<0.25	<10	NA
Stockpile Sample																
Comp- (A,B,C,D)	11/20/02	--	<2.5	0.025	0.031	0.044	0.20	0.072	NA	NA	NA	NA	NA	NA	NA	<10

EXPLANATION:

feet = feet below ground surface

ppm = parts per million

<1.0 = analyte not detected at or above the laboratories listed reported limit.

¹ = The concentration indicated for this analyte is an estimated value above the calibration range of the instrument.

² = This sample was originally analyzed within the EPA recommended hold time. Re-analysis for confirmation or dilution was performed past the recommended hold time.

The results may still be useful for their intended purpose.

-- = not applicable

NA = not analyzed

ANALYTICAL METHODS:

TPHg = Total Petroleum Hydrocarbons as gasoline according to EPA Method 8260B

Benzene, Toluene, Ethylbenzene and Xylenes according to EPA Method 8260B

MtBE = methyl tert-butyl ether according to EPA Method 8260B

TBA = tert-butyl alcohol according to EPA Method 8260B

DIPE = di-isopropyl ether according to EPA Method 8260B

1,2-DCA = 1,2-Dichloroethane according to EPA Method 8260B

TAME = tert-amyl methyl ether according to EPA Method 8260B

EDB = ethylene dibromide or 1,2-dibromoethane according to EPA Method 8260B

ETBE = ethyl tert-butyl ether according to EPA Method 8260B

Ethanol according to EPA Method 8260B

Lead according to EPA Method 6010

ANALYTICAL LABORATORY:

Sequoia Analytical Sacramento, CA (ELAP #1624)

TABLE 3 - GROUNDWATER CHEMICAL ANALYTICAL DATA

Former Tosco (76) Service Station No. 4625

3070 Fruitvale Avenue

Oakland, California

Sample No.	Sample Date	Sample Depth (feet)	TPHg (ppb)	Benzene (ppb)	Toluene (ppb)	Ethylbenzene (ppb)	Total Xylenes (ppb)	TBA (ppb)	MTBE (ppb)	DIPE (ppb)	ETBE (ppb)	TAME (ppb)	1,2-DCA (ppb)	EDB (ppb)	Ethanol (ppb)
Monitoring Wells															
MW-5	11/26/2002	--	2,500	350	39	32	640	<1,000	470	<20	<20	<20	<20	<20	<5,000
MW-6	11/26/2002	--	11,000	1,200	2,000	400	2,300	<2,000	490	<40	<40	<40	<40	<40	<10,000
Soil Borings															
B-1-W (12)	11/20/2002	12.0	190,000	19,000	38,000	5,900	30,000	<5,000	57,000	<500	<500	<500	<500	<500	<50,000
B-2-W (14.5) ¹	11/20/2002	14.5	17,000	1,600	2,800	590	2,500	<100	240	<10	<10	<10	<10	<10	<1,000

EXPLANATIONS:

feet = feet below ground surface

ppb = parts per billion

-- = not applicable

<50 = analyte not detected at or above laboratories reporting limit

¹ = This sample was originally analyzed with the EPA recommended holding time. Re-analysis for confirmation or dilution was performed past the recommended hold time. The results may still be useful for their intended purpose.

ANALYTICAL LABORATORY:

Severn Trent Laboratories Pleasanton, CA (ELAP # 2496)
Sequoia Analytical Sacramento, CA (ELAP #1624)

ANALYTICAL METHODS:

TPHg = Total Petroleum Hydrocarbons as gasoline according to EPA Method 8260B

Benzene, Toluene, Ethylbenzene and Xylenes according to EPA Method 8260B

TBA = tert-Butyl alcohol by EPA Method 8260B

MTBE = Methyl tert-butyl ether by EPA Method 8260B

DIPE = Di-isopropyl ether by EPA Method 8260B

ETBE = Ethyl tert-butyl ether by EPA Method 8260B

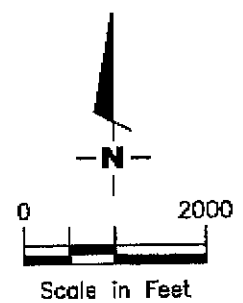
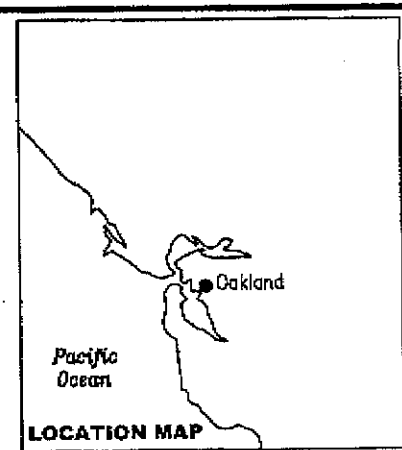
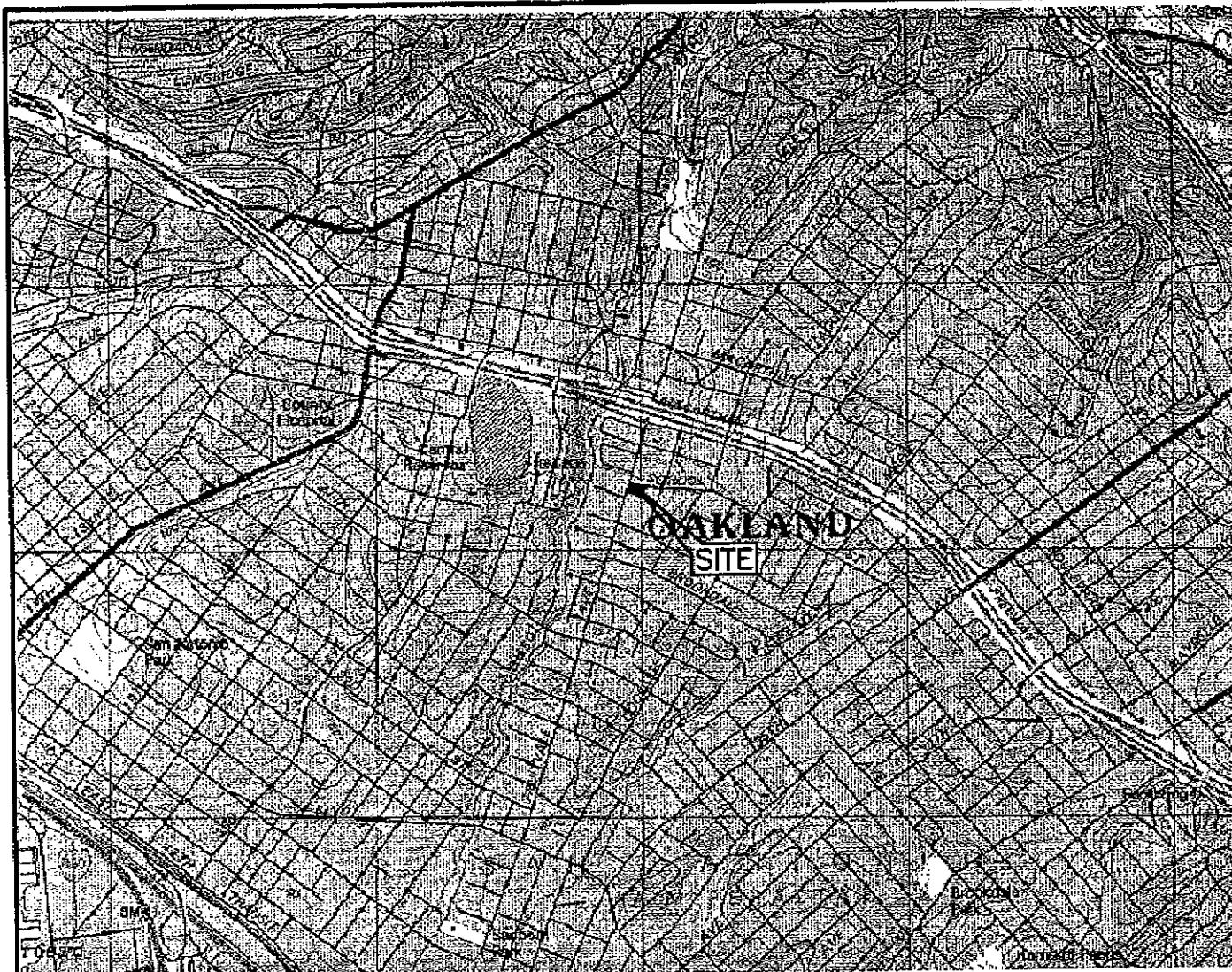
TAME = tert-Amyl methyl ether by EPA Method 8260B

1,2-DCA = 1,2-Dichloroethane by EPA Method 8260B

Ethanol by EPA Method 8260B

EDB = Ethylene dibromide by EPA Method 8260B

FIGURES



Source: National Geographic California Seamless USGS Topographic Maps on CD-ROM.

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 Dublin, CA 94568 (925) 551-7555

VICINITY MAP
 Tosco (76) Service Station No. 4625
 3070 Fruitvale Avenue
 Oakland, California

FIGURE

1

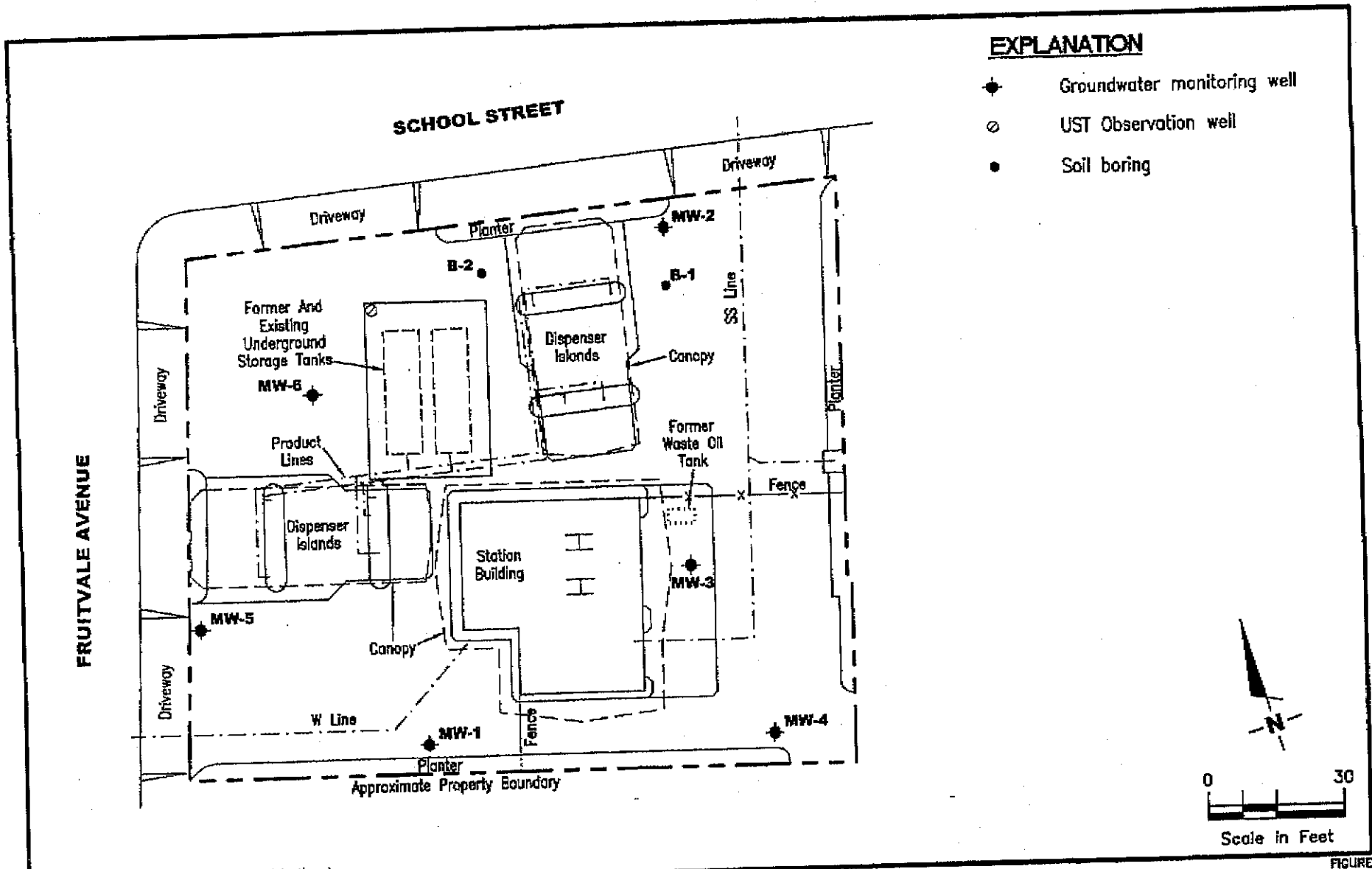
PROJECT NUMBER
 140158

REVIEWED BY

DATE
 12/02

REVISED DATE

FILE NAME: P:\EMVIR0\TOSCO\4625\VIC-4625.DWG | Layout Tab: Vic Map



EXPLANATION

- ◆ Groundwater monitoring well
- UST Observation well
- Soil boring

Source: Figure modified from drawing provided by Unocak.

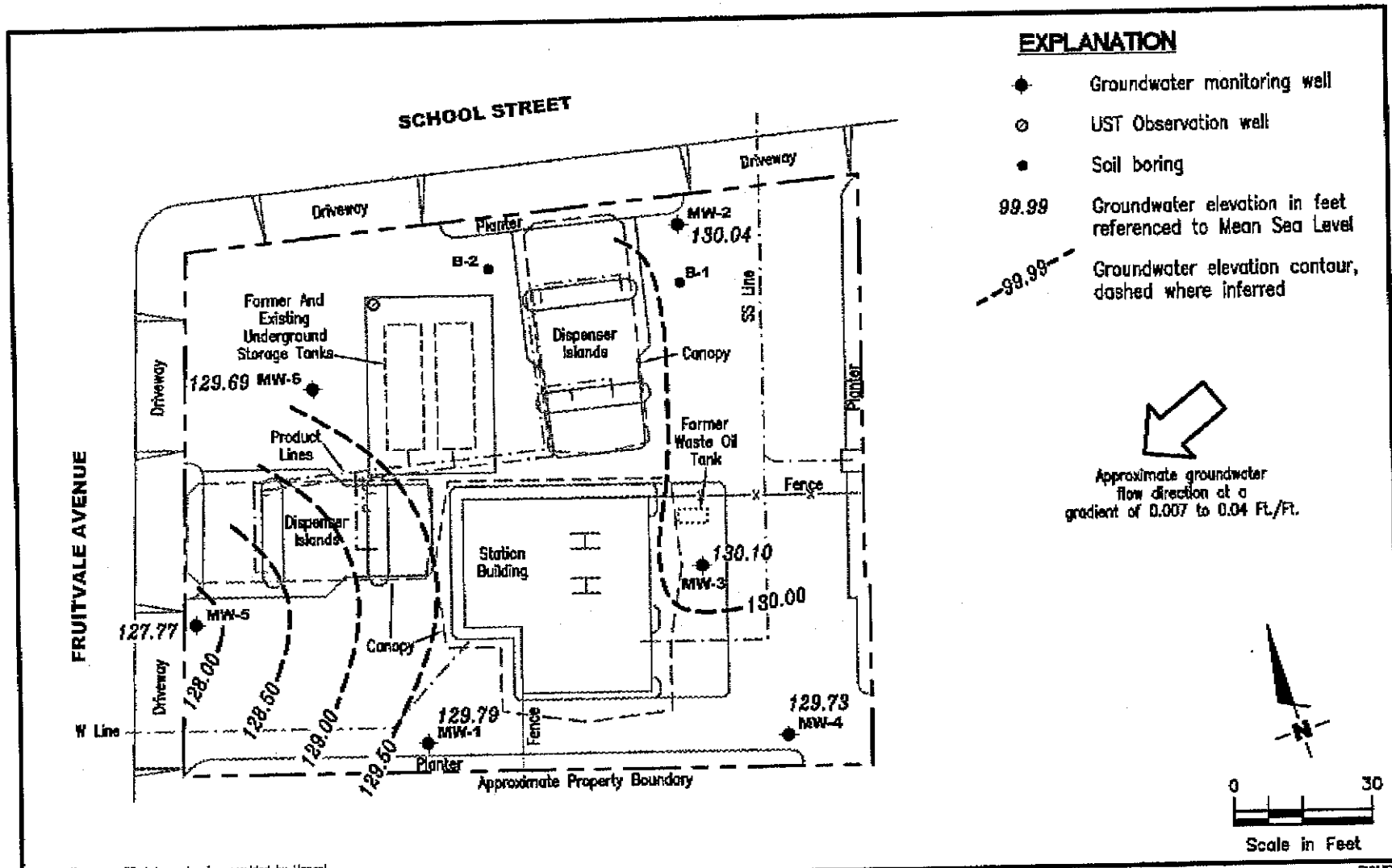
FIGURE

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SITE PLAN
 Tosco (76) Service Station No. 4625
 3070 Fruitvale Avenue
 Oakland, California

2

PROJECT NUMBER	REVIEWED BY	DATE	REVISED DATE
140158.05		12/02	



Source: Figure modified from drawing provided by Unocal.

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POTENTIOMETRIC MAP
 Tosco (76) Service Station No. 4625
 3070 Fruitvale Avenue
 Oakland, California

FIGURE

3

PROJECT NUMBER
 14Q158.05

REVIEWED BY

DATE
 November 26, 2002

REVISED DATE

APPENDIX A

GR FIELD METHODS AND PROCEDURES

GETTLER-RYAN INC.
FIELD METHODS AND PROCEDURES

Site Safety Plan

Field work performed by Gettler-Ryan Inc. (GR) is conducted in accordance with GR's Health and Safety Plan and the Site Safety Plan. GR personnel and subcontractors who perform work at the site are briefed on the of these plans contents prior to initiating site work. The GR geologist or engineer at the site when the work is performed acts as the Site Safety Officer. GR utilizes a photoionization detector (PID) to monitor ambient conditions as part of the Health and Safety Plan.

Collection of Soil Samples

Exploratory soil borings are drilled by a California-licensed well driller. A GR geologist is present to observe the drilling, collect soil samples for description, physical testing, and chemical analysis, and prepare a log of the exploratory soil boring. Soil samples are collected from the exploratory soil boring with a split-barrel sampler or other appropriate sampling device fitted with clean brass or stainless steel liners. The sampling device is driven approximately 18 inches with a 140-pound hammer falling 30 inches. The number of blows required to advance the sampler each successive 6 inches is recorded on the boring log. The encountered soil is described using the Unified Soil Classification System (ASTM 2488-84) and the Munsell Soil Color Chart.

After removal from the sampling device, soil samples for chemical analysis are covered on both ends with Teflon sheeting or aluminum foil, capped, labeled, and placed in a cooler with blue ice for preservation. A chain-of-custody form is initiated in the field and accompanies the selected soil samples to the analytical laboratory. Samples are selected for chemical analysis based on:

- a. depth relative to underground storage tanks and existing ground surface
- b. depth relative to known or suspected groundwater
- c. presence or absence of contaminant migration pathways
- d. presence or absence of discoloration or staining
- e. presence or absence of obvious gasoline hydrocarbon odors
- f. presence or absence of organic vapors detected by headspace analysis

Field Screening of Soil Samples

A PID is used to perform head-space analysis in the field for the presence of organic vapors from the soil sample. This test procedure involves removing some soil from one of the sample tubes not retained for chemical analysis and immediately covering the end of the tube with a plastic cap. The PID probe is inserted into the headspace inside the tube through a hole in the plastic cap. Head-space screening results are recorded on the boring log. Head-space screening procedures are performed and results recorded as reconnaissance data. GR does not consider field screening techniques to be verification of the presence or absence of hydrocarbons.

Stockpile Sampling

Stockpile samples consist of four individual sample liners collected from each 100 cubic yards (yd^3) of stockpiled soil material. Four arbitrary points on the stockpiled material are chosen, and discrete soil sample is collected at each of these points. Each discrete stockpile sample is collected by removing the upper 3 to 6 inches of soil, and then driving the stainless steel or brass tube into the stockpiled material with a wooden mallet or hand driven soil sampling device. The sample tubes are then covered on both ends with Teflon sheeting, capped, labeled, placed in the cooler with blue ice for preservation. A chain-of-custody form is initiated in the field and accompanies the selected soil samples to the analytical laboratory. Stockpiled soils are covered with plastic sheeting after completion of sampling.

Construction of Monitoring Wells

Monitoring wells are constructed in the exploratory borings with Schedule 40 polyvinyl Chloride (PVC) casing. All joints are thread-joined; no glues, cements, or solvents are used in well construction. The screened interval is constructed of machine-slotted PVC well screen which generally extends from the total well depth to a point above the groundwater. An appropriately-sized sorted sand is placed in the annular space adjacent to the entire screened interval. A bentonite transition seal is placed in the annular space above the sand, and the remaining annular space is sealed with neat cement or cement grout.

Wellheads are protected with water-resistant traffic rated vault boxes placed flush with the ground surface. The top of the well casing is sealed with a locking cap. A lock is placed on the well cap to prevent vandalism and unintentional introduction of materials into the well.

Storing and Sampling of Drill Cuttings

Drill cuttings are stockpiled on plastic sheeting or stored in drums depending on site conditions and regulatory requirements. Stockpile samples are collected and analyzed on the basis of one composite sample per 50 cubic yards of soil. Stockpile samples are composed of four discrete soil samples, each collected from an arbitrary location on the stockpile. The four discrete samples are then composited in the laboratory prior to analysis.

Each discrete stockpile sample is collected by removing the upper 3 to 6 inches of soil, and then driving the stainless or brass sample tube into the stockpiled material with a hand, mallet, or drive sampler. The sample tubes are then covered on both ends with Teflon sheeting, capped, labeled, and placed in a cooler with blue ice for preservation. A chain-of-custody form is initiated in the field and accompanies the selected soil samples to the analytical laboratory. Stockpiled soils are covered with plastic sheeting after completion of sampling.

Wellhead Survey

The top of the newly-installed well casing is surveyed by a California-licensed Land Surveyor to mean sea level (MSL).

Well Development

The purpose of well development is to improve hydraulic communication between the well and surrounding aquifer. Prior to development, each well is monitored for the presence of separate-phase hydrocarbons and the depth-to-water is recorded. Wells are then developed by alternately surging the well with the bailer, then purging the well with a pump to remove accumulated sediments and draw groundwater into the well. Development continues until the groundwater parameters (temperature, pH, and conductivity) have stabilized.

Groundwater Monitoring and Sampling

Decontamination Procedures

All physical parameter measuring and sampling equipment are decontaminated prior to sample collection using Alconox or equivalent detergent followed by steam cleaning with deionized water. During field sampling, equipment placed in a well are decontaminated before purging or sampling the next well by cleaning with Alconox or equivalent detergent followed by steam cleaning with deionized water.

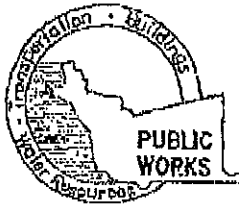
Water-Level Measurements

Prior to sampling each well, the static water level is measured using an electric sounder and/or calibrated portable oil-water interface probe. Both static water-level and separate-phase product thickness are measured to the nearest ± 0.01 foot. The presence of separate-phase product is confirmed using a clean, acrylic or polyvinylchloride (PVC) bailer, measured to the nearest ± 0.01 foot with a decimal scale tape. The monofilament line used to lower the bailer is replaced between borings with new line to preclude the possibility of cross-contamination. Field observations (e.g. product color, turbidity, water color, odors, etc.) are noted. Water-levels are measured in wells with known or suspected lowest dissolved chemical concentrations to the highest dissolved concentrations.

Sample Collection and Labeling

A temporary PVC screen is installed in the boring to facilitate a grab groundwater sample collection. Samples of groundwater are collected from the surface of the water in each well or boring using the Teflon bailer or a pump. The water samples are then gently poured into laboratory-cleaned containers and sealed with Teflon-lined caps, and inspected for air bubbles to check for headspace. The samples are then labeled by an adhesive label, noted in permanent ink, and promptly placed in an ice storage. A Chain-of-Custody Record is initiated and updated throughout handling of the samples, and accompanies the samples to the laboratory certified by the State of California for analyses requested.

APPENDIX B
PERMITS AND BORING LOGS



ALAMEDA COUNTY PUBLIC WORKS AGENCY

WATER RESOURCES SECTION

309 ELMHURST ST. HAYWARD CA. 94544-1395
PHONE (510) 570-6633 ~~ALAMEDA COUNTY WATER RESOURCES SECTION (510) 570-6633~~
FAX (510) 782-1939 *Since you 510-670-6633*

DRILLING PERMIT APPLICATION

FOR APPLICANT TO COMPLETE

FOR OFFICE USE

LOCATION OF PROJECT Tosco station no. 4625
3070 Fruitvale Ave
Oakland, CA

PERMIT NUMBER W02-1032
WELL NUMBER _____
APN _____

PERMIT CONDITIONS

Circled Permit Requirements Apply

CLIENT Tosco Corporation
Name _____
Address 3000 Crow Canyon Pl. Phone 925-277-2384
City San Ramon Zip 94583

- A. GENERAL**
1. A permit application should be submitted so as to arrive at the ACPWA office five days prior to proposed starting date.
 2. Submit to ACPWA within 60 days after completion of permitted work the original Department of Water Resources- Well Completion Report.
 3. Permit is void if project not begun within 90 days of approval date.

APPLICANT Gettin Ryan
Name _____
Address 164 N. Mc Dowell St Phone 707-789-3255
City Petaluma Zip 94954

- B. WATER SUPPLY WELLS**
1. Minimum surface seal thickness is two inches of cement grout placed by tremie.
 2. Minimum seal depth is 50 feet for municipal and industrial wells or 20 feet for domestic and irrigation wells unless a lesser depth is specially approved.

TYPE OF PROJECT

Well Construction	<input type="checkbox"/>	Geotechnical Investigation	<input type="checkbox"/>
Cathodic Protection	<input type="checkbox"/>	General	<input checked="" type="checkbox"/>
Water Supply	<input type="checkbox"/>	Contamination	<input checked="" type="checkbox"/>
Monitoring	<input type="checkbox"/>	Well Destruction	<input type="checkbox"/>

- C. GROUNDWATER MONITORING WELLS INCLUDING PIEZOMETERS**
1. Minimum surface seal thickness is two inches of cement grout placed by tremie.
 2. Minimum seal depth for monitoring wells is the maximum depth practicable or 20 feet.

PROPOSED WATER SUPPLY WELL USE

New Domestic	<input type="checkbox"/>	Replacement Domestic	<input type="checkbox"/>
Municipal	<input type="checkbox"/>	Irrigation	<input type="checkbox"/>
Industrial	<input type="checkbox"/>	Other _____	<input type="checkbox"/>

- D. GEOTECHNICAL**
- Backfill bore hole by tremie with cement grout or cement grout/sand mixture. Upper two-thirds feet replaced in kind or with compacted castings.

DRILLING METHOD:

Mud Rotary	<input type="checkbox"/>	Air Rotary	<input type="checkbox"/>	Auger	<input checked="" type="checkbox"/>
Cable	<input type="checkbox"/>	Other	<input type="checkbox"/>		

- E. CATHODIC**
Fill hole above anode zone with concrete placed by tremie.
- F. WELL DESTRUCTION**
See attached.
- G. SPECIAL CONDITIONS**

DRILLER'S LICENSE NO. 717510

WELL PROJECTS

Drill Hole Diameter	_____ in.	Maximum	
Casing Diameter	_____ in.	Depth	_____ ft.
Surface Seal Depth	_____ ft.	Number	_____

GEOTECHNICAL PROJECTS

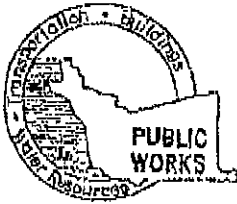
Number of Borings	<u>2</u>	Maximum	
Hole Diameter	<u>8</u> in.	Depth	<u>10</u> ft.

ESTIMATED STARTING DATE 11-20-02
ESTIMATED COMPLETION DATE 11-21-02

APPROVED _____ DATE 10-24-02

I hereby agree to comply with all requirements of this permit and Alameda County Ordinance No. 73-68

APPLICANT'S SIGNATURE _____ DATE 10-22-02



ALAMEDA COUNTY PUBLIC WORKS AGENCY

WATER RESOURCES SECTION

399 ELMHURST ST. HAYWARD CA. 94544-1395

PHONE (510) 670-4300 ~~MARK MAGALLANES PERMIT CODE (510) 470-5783~~

FAX (510) 782-1939 *Save you 510-670-6633*

DRILLING PERMIT APPLICATION

FOR APPLICANT TO COMPLETE

FOR OFFICE USE

LOCATION OF PROJECT Tosco Station No. 4625
3070 Fruitvale Ave
Oakland, CA

PERMIT NUMBER WD2-1033
WELL NUMBER _____
APN _____

CLIENT Name Tosco Corporation
Address 2000 Cow Canyon Pl. Phone 925-277-2384
City San Ramon Zip 94583

APPLICANT Name Gertner-Ryan
Sec Manager Fax 925-277-3218
Address 1364 McArthur Blvd Phone 925-277-3255
City Petaluma Zip 94954

TYPE OF PROJECT
Well Construction Geotechnical Investigation
Cathodic Protection General
Water Supply Contamination
Monitoring Well Destruction

PROPOSED WATER SUPPLY WELL USE
New Domestic Replacement Domestic
Municipal Irrigation
Industrial Other _____

DRILLING METHOD:
Mud Rotary Air Rotary Auger
Cable Other

DRILLER'S LICENSE NO. 717510

WELL PROJECTS
Drill Hole Diameter 8 in. Maximum Depth 25 ft.
Casing Diameter 2 in. Number MW-5
Surface Seal Depth 4.5 ft.

GEOTECHNICAL PROJECTS
Number of Borings _____ Maximum Hole Diameter _____ in. Depth _____ ft.

ESTIMATED STARTING DATE 11-20-02
ESTIMATED COMPLETION DATE 11-21-02

I hereby agree to comply with all requirements of this permit and Alameda County Ordinance No. 73-68

APPLICANT'S SIGNATURE [Signature] DATE 10-22-02

PERMIT CONDITIONS

Circled Permit Requirements Apply

A. GENERAL

1. A permit application should be submitted to us to arrive at the ACPWA office five days prior to proposed starting date.
2. Submit to ACPWA within 60 days after completion of permitted work the original Department of Water Resources- Well Completion Report.
3. Permit is void if project not begun within 90 days of approval date.

B. WATER SUPPLY WELLS

1. Minimum surface seal thickness is two inches of cement grout placed by tremie.
2. Minimum seal depth is 50 feet for municipal and industrial wells or 20 feet for domestic and irrigation wells unless a lesser depth is specially approved.

C. GROUNDWATER MONITORING WELLS INCLUDING PIEZOMETERS

1. Minimum surface seal thickness is two inches of cement grout placed by tremie.
2. Minimum seal depth for monitoring wells is the maximum depth practicable or 20 feet.

D. GEOTECHNICAL

Backfill bare hole by tremie with cement grout or cement grout/sand mixture. Upper two-three feet replaced in kind or with compacted fillings.

E. CATHODIC

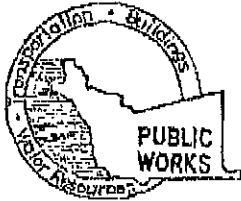
Fill hole above anode zone with concrete placed by tremie.

F. WELL DESTRUCTION

See attached.

G. SPECIAL CONDITIONS

APPROVED [Signature] DATE 10-24-02



ALAMEDA COUNTY PUBLIC WORKS AGENCY

WATER RESOURCES SECTION

399 ELMHURST ST. HAYWARD CA. 94544-1396

PHONE (510) 670-5141 FAX (510) 670-5783

FAX (510) 782-1939

Saves via 510-670-6633

DRILLING PERMIT APPLICATION

FOR APPLICANT TO COMPLETE

FOR OFFICE USE

LOCATION OF PROJECT Tosco station No. 4625
3070 Fruitvale Ave
Oakland, CA

PERMIT NUMBER W02-1034
WELL NUMBER _____
APN _____

PERMIT CONDITIONS
Circled Permit Requirements Apply

CLIENT Tosco Corporation
Name _____
Address 2000 Crow Canyon Pl. Phone 925-237-2384
City San Ramon Zip 94583

A. GENERAL

1. A permit application should be submitted so as to arrive at the ACPWA office five days prior to proposed starting date.
2. Submit to ACPWA within 60 days after completion of permitted work the original Department of Water Resources- Well Completion Report.
3. Permit is void if project not begun within 90 days of approval date.

APPLICANT Getman Ryan
Name _____
Address 528 Dwight Fax 707-289-3318
Address 169 N. McDonald #22 Phone 707-289-3255
City Petaluma Zip 94954

B. WATER SUPPLY WELLS

1. Minimum surface seal thickness is two inches of cement grout placed by tremie.
2. Minimum seal depth is 50 feet for municipal and industrial wells or 20 feet for domestic and irrigation wells unless a lesser depth is specially approved.

TYPE OF PROJECT

Well Construction	<input type="checkbox"/>	Geotechnical Investigation	<input type="checkbox"/>
Cathodic Protection	<input type="checkbox"/>	General	<input checked="" type="checkbox"/>
Water Supply	<input type="checkbox"/>	Contamination	<input checked="" type="checkbox"/>
Monitoring	<input checked="" type="checkbox"/>	Well Destruction	<input type="checkbox"/>

C. GROUNDWATER MONITORING WELLS INCLUDING PIEZOMETERS

1. Minimum surface seal thickness is two inches of cement grout placed by tremie.
2. Minimum seal depth for monitoring wells is the maximum depth practicable or 20 feet.

PROPOSED WATER SUPPLY WELL USE

New Domestic	<input type="checkbox"/>	Replacement Domestic	<input type="checkbox"/>
Municipal	<input type="checkbox"/>	Irrigation	<input type="checkbox"/>
Industrial	<input type="checkbox"/>	Other	<input type="checkbox"/>

D. GEOTECHNICAL

Backfill bore hole by tremie with cement grout or cement grout/sand mixture. Upper two-three feet replaced in kind or with compacted cuttings.

DRILLING METHOD:

Mud Rotary	<input type="checkbox"/>	Air Rotary	<input type="checkbox"/>	Auger	<input checked="" type="checkbox"/>
Cable	<input type="checkbox"/>	Other	<input type="checkbox"/>		

E. CATHODIC

Fill hole above anode zone with concrete placed by tremie.

DRILLER'S LICENSE NO. 717510

F. WELL DESTRUCTION

See attached.

WELL PROJECTS

Drill Hole Diameter	<u>8</u> in.	Maximum	
Casing Diameter	<u>2</u> in.	Depth	<u>25</u> ft.
Surface Seal Depth	<u>4.5</u> ft.	Number	

G. SPECIAL CONDITIONS

GEOTECHNICAL PROJECTS

Number of Borings		Maximum	
Hole Diameter		Depth	<u>10'6"</u>

ESTIMATED STARTING DATE 11-20-02
ESTIMATED COMPLETION DATE 11-21-02

APPROVED _____

DATE 10-24-02

I hereby agree to comply with all requirements of this permit and Alameda County Ordinance No. 73-68

APPLICANT'S SIGNATURE _____
Rev. 4-4-00

DATE 10-22-02

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 15% 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 gravel, little or no fines
		SANDS WITH OVER 15% 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 silts or clays of medium to high plasticity	
HIGHLY ORGANIC SOILS	PT Peat and other highly organic soils		

PID Volatile vapors in ppm
 bgs below ground surface
 (2.5YR 6/2) Soil color according to Munsell Soil Color Charts (1993 Edition)
 BLOWS/FT. Sample drive hammer weight - 140 pounds falling 30 inches. Blows required to drive sampler 1 foot are indicated on the logs.

— Observed contact
 - - - Inferred contact
 ☐ No soil sample recovered
 ■ "Undisturbed" sample
 ▽ First encountered groundwater level
 ▼ Static groundwater level

GETTLER - RYAN INC.
 6747 Sierra Ct., Suite J
 Dublin, CA 94568 (925) 551-7555

UNIFIED SOIL CLASSIFICATION
 ASTM D 2488-85
 AND
 KEY TO SAMPLING DATA

Gettler-Ryan, Inc.

Log of Boring B-1

PROJECT: *Tosco (76) Service Station No. 4625*

LOCATION: *3070 Fruitvale Avenue, Oakland, California*

GR PROJECT NO.: *140158.05*

SURFACE ELEVATION:

DATE STARTED: *11/20/02*

WL (ft. bgs): *11.5* DATE: *11/20/02* TIME: *12:00*

DATE FINISHED: *11/20/02*

WL (ft. bgs): DATE: TIME:

DRILLING METHOD: *8 in. Hollow Stem Auger*

TOTAL DEPTH: *12 feet*

DRILLING COMPANY: *Cascade Drilling*

GEOLOGIST: *Andrew Smith*

DEPTH (feet)	PID (ppm)	BLOWS/FT. *	SAMPLE NUMBER	SAMPLE INT.	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	REMARKS
0						ML	Asphalt and baserock. SILT WITH SAND (ML) - dark brown (7.5YR 3/3), moist, medium stiff; 70% silt, 20% fine sand, 10% gravel.	Boring backfilled with neat cement to ground surface
4						CL	CLAY (CL) - dark brown (7.5YR 3/3), moist, stiff; 85-90% clay, 10-15% silt, trace gravel.	
8		13	B-1-S (8)				Color changes to grayish green (5G 4/2).	Hydropunch from 8.5 to 10 feet. No water encountered.
12		28	B-1-W (12)				Bottom of boring at 12 feet bgs. (* = Converted to equivalent standard penetration blows/foot.)	Grab groundwater sample B-1-W (12).
16								
20								
24								
28								

Gettler-Ryan, Inc.

Log of Boring B-2

PROJECT: *Tosco (76) Service Station No. 4825*

LOCATION: *3070 Fruitvale Avenue, Oakland, California*

GR PROJECT NO.: *140158.05*

SURFACE ELEVATION:

DATE STARTED: *11/20/02*

WL (ft. bgs): *14.5* DATE: *11/20/02* TIME: *13:20*

DATE FINISHED: *11/20/02*

WL (ft. bgs): DATE: TIME:

DRILLING METHOD: *8 in. Hollow Stem Auger*

TOTAL DEPTH: *15 feet*

DRILLING COMPANY: *Cascade Drilling*

GEOLOGIST: *Andrew Smith*

DEPTH (feet)	PID (ppm)	BLOWS/FT. *	SAMPLE NUMBER	SAMPLE INT.	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	REMARKS
1.8						CL	Asphalt and baserock.	Boring backfilled with neat cement to ground surface.
3.3							CLAY (CL) - dark gray (10YR 4/1), moist, very stiff; 95% clay, 5% silt, trace gravel.	
20							Color changes to greenish gray (5G 5/1), becomes hard; 85-90% clay, 10-15% silt.	
78		53						
8								
21		18	B-2-S (11)				Becomes very stiff; 95% clay, 5% silt.	
12		17	30				Color changes to brown (7.5YR 4/3), becomes hard.	
68			B-2-W (14.5)			∇		Grab groundwater sample B-2-W (14.5).
16							Bottom of boring at 15 feet bgs.	
20							(* = Converted to equivalent standard penetration blows/foot.)	
24								
28								

Gettler-Ryan, Inc.		Log of Boring MW-5	
PROJECT: <i>Tosco (78) Service Station No. 4625</i>		LOCATION: <i>3070 Fruitvale Avenue, Oakland, California</i>	
GR PROJECT NO.: <i>140158.05</i>		CASING ELEVATION:	
DATE STARTED: <i>11/20/02</i>		WL (ft. bgs): <i>19.0</i>	DATE: <i>11/20/02</i> TIME: <i>14:40</i>
DATE FINISHED: <i>11/20/02</i>		WL (ft. bgs): <i>9.5</i>	DATE: <i>11/20/02</i> TIME: <i>17:00</i>
DRILLING METHOD: <i>8 in. Hollow Stem Auger</i>		TOTAL DEPTH: <i>25 feet</i>	
DRILLING COMPANY: <i>Cascade Drilling</i>		GEOLOGIST: <i>Andrew Smith</i>	

DEPTH (feet)	PID (ppm)	BLOWS/FT. *	SAMPLE NUMBER	SAMPLE INT.	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	WELL DIAGRAM
0						CL	Asphalt and baserock. CLAY (CL) - dark greenish gray (7.5YR 2.5/1), moist, medium stiff; 100% clay, trace silt and gravel.	<p>The well diagram shows a vertical cross-section of the boring. At the top, there is a casing with a 'nest of cement' around it. Below the casing, the soil is shown with various patterns representing different soil types: dark greenish gray clay (0-4 ft), grayish green silt (4-8.5 ft), dark brown silt (8.5-12 ft), grayish green silt (12-16 ft), gravelly clay (16-20 ft), and strong brown silt (20-24 ft). The casing is labeled '2" blank schedule 40 PVC' and '2" machine sanded PVC (0.020 inch)'. The soil layers are labeled '#3 Longstar sand' and 'benicote'. The bottom of the boring is at 25 feet bgs.</p>
4	0					ML	Color changes to dark greenish gray (5G 4/1), becomes stiff; 95% clay, 5% silt, trace plant roots. SILT (ML) - grayish green (5G 4/2), moist, hard; 80% clay, 20% silt, trace gravel.	
8.5		49	MW-5-S (5.5)				Color changes to dark brown (7.5YR 3/3), becomes medium stiff; 90-95% silt, 5-10% fine sand.	
12		488	MW-5-S (10)				Color changes to grayish green (5G 4/2), becomes 80-90% silt, 10-20% fine sand. Becomes 75-80% silt, 10-25% fine sand. Becomes hard.	
16		17	MW-5-S (15)					
20		3.8	>100			CL	GRAVELLY CLAY (CL) - grayish green (5G 4/2), wet, hard; 80% clay, 40% gravel.	
24		0	>100			ML	SILT (ML) - strong brown (7.5YR 4/6), moist, hard; 80-90% silt, 10-20% clay.	
28							Bottom of boring at 25 feet bgs. (* = Converted to equivalent standard penetration blows/foot.)	

Gettler-Ryan, Inc.

Log of Boring MW-6

PROJECT: *Tosco (76) Service Station No. 4625*

LOCATION: *3070 Fruitvale Avenue, Oakland, California*

OR PROJECT NO.: *140158.05*

CASING ELEVATION:

DATE STARTED: *11/20/02*

WL (ft. bgs): *15.0* DATE: *11/20/02* TIME: *11:20*

DATE FINISHED: *11/20/02*

WL (ft. bgs): *8.8* DATE: *11/20/02* TIME: *16:00*

DRILLING METHOD: *8 in. Hollow Stem Auger*

TOTAL DEPTH: *25 feet*

DRILLING COMPANY: *Cascade Drilling*

GEOLOGIST: *Andrew Smith*

DEPTH (feet)	PID (ppm)	BLOWS/FT. *	SAMPLE NUMBER	SAMPLE INT.	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	WELL DIAGRAM
1.7						CL	Asphalt and baserock. CLAY (CL) - black (10YR 2/1), moist, medium stiff; 95% clay, 5% silt, trace gravel.	
4	107	63				CL	trace roots. Color changes to dark brown (7.5YR 3/2), becomes hard; 90-95% clay, 5-10% silt.	
8	111	17	MW-6-S (10)			ML	SILT (ML) - grayish brown (7.5YR 4/3), moist, very stiff; 85-90% silt, 10-15% clay.	
12						GC	CLAYEY GRAVEL (GC) - light brown (7.5YR 6/3), wet, very dense; 80% medium to coarse gravel, 30% clay, 10% fine sand.	
16	8.7	>100	MW-6-S (15)			CL	CLAY (CL) - strong brown (7.5YR 5/6), wet, hard; 85-90% clay, 10-15% silt.	
20	2.0	>100				CL	CLAY (CL) - strong brown (7.5YR 5/6), wet, hard; 85-90% clay, 10-15% silt.	
24							Bottom of boring at 25 feet bgs.	
28							(* = Converted to equivalent standard penetration blows/foot.)	

APPENDIX C

WELL DEVELOPMENT AND GROUNDWATER SAMPLING FIELD DATA SHEETS



GETTLER-RYAN INC.

GROUNDWATER MONITORING SUMMARY SHEET

CLIENT/
FACILITY: Tosco #4625
ADDRESS: 3070 Fruitvale Avenue
CITY: Oakland, CA

JOB #: 180255
DATE: 11-26-07 (inclusive)
SAMPLER: G.D.

Well ID	Total Well Depth	Depth to Water	Product Thickness (ft)	List Item IN Well	Additional Comments ^{Per} Vol
MW-1	<u>25.10</u>	<u>7.78</u>	<u>0</u>		<u>9</u>
MW-2	<u>19.80</u>	<u>9.81</u>	↓		<u>5</u>
MW-3	<u>24.70</u>	<u>8.79</u>		<u>8.5</u>	
MW-4	<u>24.65</u>	<u>8.08</u>		<u>8.5</u>	
MW-5	<u>24.40</u>	<u>9.89</u>		<u>29</u>	
MW-6	<u>23.60</u>	<u>9.19</u>		<u>21</u>	
USTW	<u>15.20</u>	<u>9.16</u>		<u>m. only</u>	

Comments: New well depths

WELL MONITORING/DEVELOPMENT FIELD DATA SHEET

Client/Facility #: Tosco #4625 Job Number: 180255
 Site Address: 3070 Fruitvale Avenue Event Date: 11-26-07
 City: Oakland, CA Sampler: G.R.

Well ID: MW-5 Well Condition: OK
 Well Diameter: 2 in.
 Initial Total Depth: 24.00 ft.
 Final Total Depth: 24.40 ft.
 Depth to Water: 9.89 ft.
14.11 x VF 0.17 = 2.39¹⁰ (case volume) = Estimated Purge Volume: 24 gal.

Volume Factor (VF)	3/4" = 0.02	1" = 0.04	2" = 0.17	3" = 0.38
	4" = 0.66	5" = 1.02	6" = 1.50	12" = 5.80

Purge Equipment:
 Disposable Bailer _____
 Stainless Steel Bailer ✓
 Stack Pump _____
 Suction Pump _____
 Grundfos _____
 Other: _____

Sampling Equipment:
 Disposable Bailer ✓
 Pressure Bailer _____
 Discrete Bailer _____
 Other: _____

Time Started: _____ (2400 hrs)
 Time Bailed: _____ (2400 hrs)
 Depth to Product: _____ ft
 Depth to Water: _____ ft
 Hydrocarbon Thickness: 0 ft
 Visual Confirmation/Description: _____
 Skimmer / Absorbent Sock (circle one)
 Amt Removed from Skimmer: _____ gal
 Amt Removed from Well: _____ gal
 Product Transferred to: _____

Start Time (purge): 0840 Weather Conditions: Clear
 Sample Time/Date: 0930 / 11-26-07 Water Color: light brown Odor: NO
 Purging Flow Rate: _____ gpm. Sediment Description: _____
 Did well de-water? NO If yes, Time: _____ Volume: _____ gal.

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (umhos/cm)	Temperature (°F)	D.O. (mg/L)	ORP (mV)
	<u>2</u>					
<u>0850</u>	<u>4</u>	<u>7.56</u>	<u>285</u>	<u>29.8</u>		
	<u>6</u>					
<u>0855</u>	<u>8</u>	<u>7.36</u>	<u>517</u>	<u>29.7</u>		
	<u>10</u>					
<u>0900</u>	<u>12</u>	<u>7.38</u>	<u>511</u>	<u>29.8</u>		
	<u>14</u>					
<u>0905</u>	<u>16</u>	<u>7.35</u>	<u>514</u>	<u>29.7</u>		
	<u>18</u>					
<u>0910</u>	<u>24</u>	<u>7.38</u>	<u>516</u>	<u>30.0</u>		

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-5</u>	<u>5 x voa vial</u>	<u>YES</u>	<u>HCl</u>	<u>STL Pleasanton</u>	<u>TPH-G/BTEX/MTBE/8 Oxy's(8260)</u>

COMMENTS: _____

Add/Replaced Lock: _____ Add/Replaced Plug: _____ Size: _____

**WELL MONITORING/DEVELOPMENT
FIELD DATA SHEET**

Client/Facility #: Tosco #4625 Job Number: 180255
 Site Address: 3070 Fruitvale Avenue Event Date: 11-26-07
 City: Oakland, CA Sampler: GR

Well ID: MW-6 Well Condition: OK
 Well Diameter: 2 in.
 Initial Total Depth: 21.60 ft.
 Final Total Depth: 23.60 ft.
 Depth to Water: 9.19 ft.
12.41' xVF 0.17 = 2.11 gal. (case volume) = Estimated Purge Volume: 21 gal.

Volume	3/4" = 0.02	1" = 0.04	2" = 0.17	3" = 0.38
Factor (VF)	4" = 0.66	5" = 1.02	6" = 1.50	12" = 5.80

Purge Equipment:
 Disposable Bailer _____
 Stainless Steel Bailer
 Stack Pump _____
 Suction Pump _____
 Grundfos _____
 Other: _____

Sampling Equipment:
 Disposable Bailer
 Pressure Bailer _____
 Discrete Bailer _____
 Other: _____

Time Started: _____ (2400 hrs)
 Time Bailed: _____ (2400 hrs)
 Depth to Product: _____ ft.
 Depth to Water: _____ ft.
 Hydrocarbon Thickness: 0 ft.
 Visual Confirmation/Description: _____
 Skimmer / Absorbent Sock (circle one)
 Amt Removed from Skimmer: _____ gal
 Amt Removed from Well: _____ gal
 Product Transferred to: _____

Start Time (purge): 0730 Weather Conditions: Clear
 Sample Time/Date: 0825 11-26-07 Water Color: Brown Odor: NO
 Purging Flow Rate: _____ gpm. Sediment Description: _____
 Did well de-water? NO If yes, Time: _____ Volume: _____ gal.

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (umhos/cm)	Temperature (C/F)	D.O. (mg/L)	ORP (mV)
	<u>2</u>					
<u>0740</u>	<u>4</u>	<u>7.25</u>	<u>544</u>	<u>29.3</u>		
	<u>6</u>					
<u>0745</u>	<u>8</u>	<u>7.18</u>	<u>503</u>	<u>30.4</u>		
	<u>10</u>					
<u>0750</u>	<u>12</u>	<u>7.26</u>	<u>499</u>	<u>28.9</u>		
	<u>14</u>					
<u>0755</u>	<u>16</u>	<u>7.35</u>	<u>440</u>	<u>29.7</u>		
	<u>18</u>					
<u>0800</u>	<u>21</u>	<u>7.31</u>	<u>436</u>	<u>29.9</u>		

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-6</u>	<u>5</u> x voa vial	<u>YES</u>	<u>HCL</u>	<u>STL Pleasanton</u>	<u>TPH-G/BTEX/MTBE/8 Oxy's (8260)</u>

COMMENTS: _____

Add/Replaced Lock: X Add/Replaced Plug: _____ Size: _____

APPENDIX D

SURVEYOR'S REPORT AND LANDFILL ACCEPTANCE LETTER

Virgil Chavez Land Surveying

312 Georgia Street, Suite 225
Vallejo, California 94590-5907
(707) 553-2476 • Fax (707) 553-8698

January 13, 2003
Project No.: 1824-08

Jed Douglas
Gottler-Ryan Inc.
1364 N. McDowell Blvd., Suite B2
Petaluma, CA 94954

RECEIVED
JAN 16 2003

Subject: Monitoring Well Survey
Tosco Service Station No. 4625
3070 Fruitvale Avenue
Oakland, CA

GETTLER-RYAN, INC.
GENERAL CONTRACTOR

Dear Jed:

This is to confirm that we have proceeded at your request to survey the ground water monitoring wells located at the above referenced location. The survey was completed on January 6, 2003. The benchmark for this survey was a City of Oakland Benchmark, being a disk monument at approximate centerline of easterly southwest of Fruitvale and Montana Streets. The latitude, longitude and coordinates are for top of casings and are based on the California State Coordinate System, Zone III (NAD83).
Benchmark Elevation = 157.127 feet (NGVD 29).

<u>Latitude</u>	<u>Longitude</u>	<u>Northing</u>	<u>Easting</u>	<u>Elev.</u>	<u>Desc.</u>
				137.84	RIM MW-1
37.7953954	-122.2177974	2116638.52	6065350.61	137.57	TOC MW-1
				140.15	RIM MW-2
37.7956463	-122.2175145	2116728.36	6065434.01	139.85	TOC MW-2
				139.14	RIM MW-3
37.7954345	-122.2175787	2116651.61	6065414.05	138.89	TOC MW-3
				138.13	RIM MW-4
37.7953361	-122.2175613	2116615.70	6065418.43	137.81	TOC MW-4
				138.01	RIM MW-5
37.7955058	-122.2179381	2116679.46	6065310.69	137.66	TOC MW-5
				139.31	RIM MW-6
37.7956132	-122.2178094	2116717.89	6065348.61	138.88	TOC MW-6



Sincerely,

Virgil D. Chavez
Virgil D. Chavez, PLS 6323



NORTHERN CALIFORNIA SALES OFFICE • SPECIAL WASTE

Forward • Keller Canyon • Newby Island • Ox Mountain



ALLIED WASTE COMPANIES



June 10, 2003

Gentler-Ryan
1364 N. McDowell Blvd #B2
Petaluma, CA 94954

Attn: Mr. Smith

Re: Approval No. 2736
Gasoline Contaminated Soil
3070 Fruitvale Ave. / Station# 4625, OAKLAND

Dear Mr. Smith:

FORWARD INC. is pleased to inform you that the approximately 1 tons of Gasoline Contaminated Soil from the referenced site has been approved for acceptance at our Manteca, California Landfill as a Class 2 waste. This approval has been based on the information provided in the waste profile and associated materials submitted on behalf of Tosco Marketing Company (Generator). Acceptance of the waste is subject to regulatory requirements, and is also subject to the "Terms and Conditions" agreed to and signed by Generator in the waste profile.

Your approval number for this project will be 2736. This number should be used in all scheduling and correspondence with *FORWARD, INC.* regarding this waste profile.

This profile shall remain in effect until December 10, 2002, or until any significant changes in the waste stream occur. At that time, *FORWARD, INC.* will re-evaluate the profile, and current analytical data and requirements will be reviewed.

Please schedule all waste shipments with the Landfill (209-982-4298) at least 24 hours in advance. The landfills hours of operation are Monday through Friday 6:00 am to 6:00 pm for soil, 6:00 am to 3:00 pm for asbestos, 6:00 am to 5:00 pm for all other waste types.

Thank you for the opportunity to be of service. Should you have any questions, please do not hesitate to contact me or our Customer Service at (800) 204-4242.

Sincerely,

Allied Waste Industries

Brad J. Bonner
Special Waste Sales Manager
Northern, CA

BJB/ss

F:\FORWARD\MERGE\FORMS\ACCEPT.DOC

1145 West Charter Way, Stockton, CA 95206 Phone 800.204.4242 Fax 209.466.1067

TIM A. MANLEY TRUCKING, INC.
9151 GERBER ROAD
SACRAMENTO, CA 95829
916-689-4464 Fax 681-0924

SOIL CONFIRMATION

LOCATION	# 4625 3070 FRUITVALE AVE - OAKLAND, CA
DATE OF PICK UP	12/20/2002
ESTIMATED YARDAGE	2 YARDS
ACTUAL YARDAGE	5.54 TONS
DISPOSAL FACILITY	FORWARD LANDFILL
CONSULTANT \ CONTACT	JED DOUGLAS \ GETTLER-RYAN
PHONE \ FAX	707-789-3255 707-789-3216

APPENDIX E

LABORATORY ANALYTICAL REPORTS AND CHAIN-OF-CUSTODY RECORDS



Sequoia
Analytical

819 Striber Ave Ste 8
Sacramento, CA 95834
(916) 921-9600
FAX (916) 921-0100
www.sequoialabs.com

9 December, 2002

Jed Douglas
Gettler-Ryan - Petaluma
1364 N McDowell Blvd. Ste B2
Petaluma, CA 94954

RE: Tosco 4625, Oakland, CA
Sequoia Work Order: S211629

Enclosed are the results of analyses for samples received by the laboratory on 11/22/02 12:45. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Ron Chew
Client Services Representative

CA ELAP Certificate #1624



Guttler-Ryan - Petaluma
1364 N McDowell Blvd. Ste B2
Petaluma CA, 94954

Project: Tosco 4625, Oakland, CA
Project Number: N/A
Project Manager: Jed Douglas

S211629
Reported:
12/09/02 18:50

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
B-1-S(8)	S211629-01	Soil	11/20/02 09:50	11/22/02 12:45
B-2-S(11)	S211629-02	Soil	11/20/02 13:10	11/22/02 12:45
MW-5-S(10)	S211629-03	Soil	11/20/02 14:30	11/22/02 12:45
MW-6-S(10)	S211629-04	Soil	11/20/02 11:20	11/22/02 12:45



Center-Ryan - Petaluma
1364 N McDowell Blvd. Ste B2
Petaluma CA, 94954

Project: Tosco 4625, Oakland, CA
Project Number: N/A
Project Manager: Jed Douglas

S211629
Reported:
12/09/02 18:50

Gasoline\BTEX\Oxygenates by EPA method 8260B
Sequoia Analytical - Sacramento

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B-1-S(8) (S211629-01) Soil Sampled: 11/20/02 09:50 Received: 11/22/02 12:45									
Ethanol	ND	0.50	mg/kg	2.5	2120040	12/03/02	12/03/02	EPA 8260B	
Tert-butyl alcohol	0.42	0.12	"	"	"	"	"	"	E
Methyl tert-butyl ether	0.93	0.012	"	"	"	"	"	"	
Di-isopropyl ether	ND	0.012	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	0.012	"	"	"	"	"	"	
Tert-amyl methyl ether	ND	0.012	"	"	"	"	"	"	
1,2-Dichloroethane	ND	0.012	"	"	"	"	"	"	
1,2-Dibromochloroethane (EDB)	0.022	0.012	"	"	"	"	"	"	
Benzene	ND	0.012	"	"	"	"	"	"	
Ethylbenzene	ND	0.012	"	"	"	"	"	"	
Toluene	ND	0.012	"	"	"	"	"	"	
Xylenes (total)	ND	2.5	"	"	"	"	"	"	
Gasoline (C6-C10)									
Surrogate: 1,2-DCA-d4		103 %		60-140					
Surrogate: Toluene-d8		104 %		60-140					
Surrogate: 4-BFB		113 %		60-140					
B-2-S(11) (S211629-02) Soil Sampled: 11/20/02 13:10 Received: 11/22/02 12:45									
Ethanol	ND	50	mg/kg	5	2120041	12/03/02	12/04/02	EPA 8260B	
Tert-butyl alcohol	ND	12	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	1.2	"	"	"	"	"	"	
Di-isopropyl ether	ND	1.2	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	1.2	"	"	"	"	"	"	
Tert-amyl methyl ether	ND	1.2	"	"	"	"	"	"	
1,2-Dichloroethane	ND	1.2	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	11	1.2	"	"	"	"	"	"	
Benzene	1300	250	"	"	"	"	"	"	
Gasoline (C6-C10)									
Surrogate: 1,2-DCA-d4		97 %		60-140					
Surrogate: Toluene-d8		103 %		60-140					
Surrogate: 4-BFB		102 %		60-140					



Gettler-Ryan - Petaluma 1364 N McDowell Blvd. Ste B2 Petaluma, CA, 94954	Project: Tosco 4625, Oakland, CA Project Number: N/A Project Manager: Jed Douglas	S211629 Reported: 12/09/02 18:50
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**Gasoline\BTEX\Oxygenates by EPA method 8260B
Sequoia Analytical - Sacramento**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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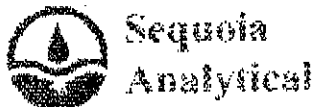
B-2-S(11) (S211629-02RE1) Soil Sampled: 11/20/02 13:10 Received: 11/22/02 12:45									
Ethylbenzene	45	12	mg/kg	50	2120041	12/03/02	12/04/02	EPA 8260B	
Toluene	81	12	"	"	"	"	"	"	
Xylenes (total)	220	12	"	"	"	"	"	"	
Surrogate: 1,2-DCA-d4		103 %	60-140		"	"	"	"	
Surrogate: Toluene-d8		109 %	60-140		"	"	"	"	
Surrogate: 4-BFB		118 %	60-140		"	"	"	"	

MW-5-S(10) (S211629-03) Soil Sampled: 11/20/02 14:30 Received: 11/22/02 12:45									
Ethanol	ND	20	mg/kg	2	2120041	12/03/02	12/04/02	EPA 8260B	
Tert-butyl alcohol	ND	5.0	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	0.50	"	"	"	"	"	"	
Di-isopropyl ether	ND	0.50	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	0.50	"	"	"	"	"	"	
Tert-amyl methyl ether	ND	0.50	"	"	"	"	"	"	
1,2-Dichloroethane	ND	0.50	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.50	"	"	"	"	"	"	
Benzene	2.8	0.50	"	"	"	"	"	"	
Gasoline (C6-C10)	740	100	"	"	"	"	"	"	
Surrogate: 1,2-DCA-d4		92 %	60-140		"	"	"	"	
Surrogate: Toluene-d8		102 %	60-140		"	"	"	"	
Surrogate: 4-BFB		98 %	60-140		"	"	"	"	

MW-5-S(10) (S211629-03RE1) Soil Sampled: 11/20/02 14:30 Received: 11/22/02 12:45									
Ethylbenzene	32	5.0	mg/kg	20	2120041	12/03/02	12/05/02	EPA 8260B	
Toluene	18	5.0	"	"	"	"	"	"	
Xylenes (total)	160	5.0	"	"	"	"	"	"	
Surrogate: 1,2-DCA-d4		122 %	60-140		"	"	"	"	
Surrogate: Toluene-d8		136 %	60-140		"	"	"	"	
Surrogate: 4-BFB		166 %	60-140		"	"	"	"	

BT-RS

S-01



**Sequoia
Analytical**

819 Striker Ave Ste 8
Sacramento, CA 95834
(916) 921-9690
FAX (916) 921-0100
www.sequoiabts.com

Gettler-Ryan - Petaluma
1364 N McDowell Blvd. Ste B2
Petaluma CA, 94954

Project: Tosco 4625, Oakland, CA
Project Number: N/A
Project Manager: Jed Douglas

S211629
Reported:
12/09/02 18:50

**Gasoline\BTEX\Oxygenates by EPA method 8260B
Sequoia Analytical - Sacramento**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-6-S(10) (S211629-04) Soil Sampled: 11/20/02 11:20 Received: 11/22/02 12:45									
Ethanol	ND	10	mg/kg	1	2120041	12/03/02	12/04/02	EPA 8260B	
Tert-butyl alcohol	ND	2.5	"	"	"	"	"	"	
Methyl tert-butyl ether	0.39	0.25	"	"	"	"	"	"	
Di-isopropyl ether	ND	0.25	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	0.25	"	"	"	"	"	"	
Tert-amyl methyl ether	ND	0.25	"	"	"	"	"	"	
1,2-Dichloroethane	ND	0.25	"	"	"	"	"	"	
1,2-Dibromoethane (LDB)	ND	0.25	"	"	"	"	"	"	
Benzene	4.2	0.25	"	"	"	"	"	"	
Ethylbenzene	5.3	0.25	"	"	"	"	"	"	
Gasoline (C6-C10)	190	50	"	"	"	"	"	"	
Surrogate: 1,2-DCA-d4		98 %	60-140		"	"	"	"	
Surrogate: Toluene-d8		107 %	60-140		"	"	"	"	
Surrogate: 4-BFB		103 %	60-140		"	"	"	"	

MW-6-S(10) (S211629-04RE1) Soil Sampled: 11/20/02 11:20 Received: 11/22/02 12:45									
Toluene	26	2.5	mg/kg	10	2120041	12/03/02	12/04/02	EPA 8260B	
Xylenes (total)	41	2.5	"	"	"	"	"	"	
Surrogate: 1,2-DCA-d4		117 %	60-140		"	"	"	"	
Surrogate: Toluene-d8		117 %	60-140		"	"	"	"	
Surrogate: 4-BFB		130 %	60-140		"	"	"	"	

Sequoia Analytical - Sacramento

The results in this report apply to the samples analyzed in accordance with the chain of custody document. Unless otherwise stated, results are reported on a wet weight basis. This analytical report must be reproduced in its entirety.



Giattler-Ryan - Petaluma
1364 N McDowell Blvd. Ste B2
Petaluma CA, 94954

Project: Tosco 4625, Oakland, CA
Project Number: N/A
Project Manager: Jed Douglas

S211629
Reported:
12/09/02 18:50

**Gasoline\BTEX\Oxygenates by EPA method 8260B - Quality Control
Sequoia Analytical - Sacramento**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 2120040 - EPA 5030B [P/L]

Prepared & Analyzed: 12/03/02

Blank (2120040-BL.K1)

Ethanol	ND	0.20	mg/kg							
Tert-butyl alcohol	ND	0.050	"							
Methyl tert-butyl ether	ND	0.0050	"							
Di-isopropyl ether	ND	0.0050	"							
Ethyl tert-butyl ether	ND	0.0050	"							
Tert-amyl methyl ether	ND	0.0050	"							
1,2-Dichloroethane	ND	0.0050	"							
1,2-Dibromoethane (EDB)	ND	0.0050	"							
Benzene	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Toluene	ND	0.0050	"							
Xylenes (total)	ND	0.0050	"							
Gasoline (C6-C10)	ND	1.0	"							
<i>Surrogate: 1,2-DCA-d4</i>	0.0520		"	0.0500		104	60-140			
<i>Surrogate: Toluene-d8</i>	0.0538		"	0.0500		108	60-140			
<i>Surrogate: 4-BFB</i>	0.0567		"	0.0500		113	60-140			

Prepared & Analyzed: 12/03/02

Laboratory Control Sample (2120040-BS1)

Methyl tert-butyl ether	0.0438	0.0050	mg/kg	0.0436	ND	100	60-140			
Benzene	0.0280	0.0050	"	0.0268	ND	104	70-130			
Toluene	0.168	0.0050	"	0.162	ND	104	70-130			
Gasoline (C6-C10)	1.82	1.0	"	2.20	ND	83	70-130			
<i>Surrogate: 1,2-DCA-d4</i>	0.0511		"	0.0500		102	60-140			
<i>Surrogate: Toluene-d8</i>	0.0514		"	0.0500		103	60-140			
<i>Surrogate: 4-BFB</i>	0.0539		"	0.0500		108	60-140			

Matrix Spike (2120040-MS1)

Source: S211705-15

Prepared & Analyzed: 12/03/02

Methyl tert-butyl ether	0.0501	0.0050	mg/kg	0.0436	ND	114	60-140			
Benzene	0.0285	0.0050	"	0.0268	ND	106	60-140			
Toluene	0.152	0.0050	"	0.162	ND	93	60-140			
Gasoline (C6-C10)	1.64	1.0	"	2.20	ND	75	60-140			
<i>Surrogate: 1,2-DCA-d4</i>	0.0608		"	0.0500		122	60-140			

Sequoia Analytical - Sacramento

The results in this report apply to the samples analyzed in accordance with the chain of custody document. Unless otherwise stated, results are reported on a wet weight basis. This analytical report must be reproduced in its entirety.



Citler-Ryan - Petaluma 1364 N McDowell Blvd. Ste B2 Petaluma CA, 94954	Project: Tesco 4625, Oakland, CA Project Number: N/A Project Manager: Jed Douglas	S211629 Reported: 12/09/02 18:50
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**Gasoline\BTEX\Oxygenates by EPA method 8260B - Quality Control
Sequoia Analytical - Sacramento**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	REC Limits	RPD	RPD Limit	Notes
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Batch 2120040 - EPA 5030B [P/T]

Matrix Spike (2120040-MS1)	Source: S211705-15			Prepared & Analyzed: 12/03/02						
Surrogate: Toluene-d8	0.0496		mg/kg	0.0500		99	60-140			
Surrogate: 4-BFB	0.0534		"	0.0500		107	60-140			

Matrix Spike Dup (2120040-MSD1)	Source: S211705-15			Prepared & Analyzed: 12/03/02						
Methyl tert-butyl ether	0.0423	0.0050	mg/kg	0.0436	ND	96	60-140	17	25	
Benzene	0.0256	0.0050	"	0.0268	ND	96	60-140	11	25	
Toluene	0.154	0.0050	"	0.162	ND	95	60-140	1	25	
Gasoline (C6-C10)	1.70	1.0	"	2.20	ND	77	60-140	4	25	
Surrogate: 1,2-DCA-d4	0.0570		"	0.0500		114	60-140			
Surrogate: Toluene-d8	0.0542		"	0.0500		108	60-140			
Surrogate: 4-BFB	0.0552		"	0.0500		110	60-140			

Batch 2120041 - EPA 5030B [MeOH]

Blank (2120041-BLK1)	Prepared: 12/03/02 Analyzed: 12/04/02									
Ethanol	ND	10	mg/kg							
Tert-butyl alcohol	ND	2.5	"							
Methyl tert-butyl ether	ND	0.25	"							
Di-isopropyl ether	ND	0.25	"							
Ethyl tert-butyl ether	ND	0.25	"							
Tert-amyl methyl ether	ND	0.25	"							
1,2-Dichloroethane	ND	0.25	"							
1,2-Dibromoethane (EDB)	ND	0.25	"							
Benzene	ND	0.25	"							
Ethylbenzene	ND	0.25	"							
Toluene	ND	0.25	"							
Xylenes (total)	ND	0.25	"							
Gasoline (C6-C10)	ND	50	"							
Surrogate: 1,2-DCA-d4	1.24		"	1.25		99	60-140			
Surrogate: Toluene-d8	1.35		"	1.25		108	60-140			
Surrogate: 4-BFB	1.28		"	1.25		102	60-140			



Guttler-Ryan - Petaluma 1364 N McDowell Blvd. Ste B2 Petaluma CA, 94954	Project: Tosco 4625, Oakland, CA Project Number: N/A Project Manager: Jed Douglas	S211629 Reported: 12/09/02 18:50
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Gasoline\BTEX\Oxygenates by EPA method 8260B - Quality Control
Sequoia Analytical - Sacramento

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 2120041 - EPA 5030B [MeOH]

Prepared: 12/03/02 Analyzed: 12/04/02

Blank (2120041-BLK2)

Ethanol	ND	10	mg/kg							
Tert-butyl alcohol	ND	2.5	"							
Methyl tert-butyl ether	ND	0.25	"							
Di-isopropyl ether	ND	0.25	"							
Ethyl tert-butyl ether	ND	0.25	"							
Tert-amyl methyl ether	ND	0.25	"							
1,2-Dichloroethane	ND	0.25	"							
1,2-Dibromoethane (EDB)	ND	0.25	"							
Benzene	ND	0.25	"							
Ethylbenzene	ND	0.25	"							
Toluene	ND	0.25	"							
Xylenes (total)	ND	0.25	"							
Gasoline (C6-C10)	ND	50	"							
<hr/>										
Surrogate: 1,2-DCA-d4	1.28		"	1.25		102	60-140			
Surrogate: Toluene-d8	1.34		"	1.25		107	60-140			
Surrogate: 4-BFB	1.47		"	1.25		118	60-140			

Prepared: 12/04/02 Analyzed: 12/05/02

Blank (2120041-BLK3)

Ethanol	ND	10	mg/kg							
Tert-butyl alcohol	ND	2.5	"							
Methyl tert-butyl ether	ND	0.25	"							
Di-isopropyl ether	ND	0.25	"							
Ethyl tert-butyl ether	ND	0.25	"							
Tert-amyl methyl ether	ND	0.25	"							
1,2-Dichloroethane	ND	0.25	"							
1,2-Dibromoethane (EDB)	ND	0.25	"							
Benzene	ND	0.25	"							
Ethylbenzene	ND	0.25	"							
Toluene	ND	0.25	"							
Xylenes (total)	ND	0.25	"							
Gasoline (C6-C10)	ND	50	"							
<hr/>										
Surrogate: 1,2-DCA d4	1.25		"	1.25		100	60-140			
Surrogate: Toluene-d8	1.27		"	1.25		102	60-140			
Surrogate: 4-BFB	1.42		"	1.25		114	60-140			

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The results in this report apply to the samples analyzed in accordance with the chain of custody document. Unless otherwise stated, results are reported on a wet weight basis. This analytical report must be reproduced in its entirety.



Gettler-Ryan - Petaluma 1364 N McDowell Blvd. Ste B2 Petaluma CA, 94954	Project: Tosco 4625, Oakland, CA Project Number: N/A Project Manager: Jed Douglas	S211629 Reported: 12/09/02 18:50
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Gasoline\BTEX\Oxygenates by EPA method 8260B - Quality Control
Sequoia Analytical - Sacramento

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

Batch 2120041 - EPA 5030B [MeOH]

Blank (2120041-BLK3) Prepared: 12/04/02 Analyzed: 12/05/02

Prepared & Analyzed: 12/03/02

Laboratory Control Sample (2120041-BS1)										
Methyl tert-butyl ether	1.55	0.25	mg/kg	1.64		95	60-140			
Benzene	1.08	0.25	"	1.00		108	70-130			
Toluene	6.07	0.25	"	6.08		100	70-130			
Gasoline (C6-C10)	60.7	50	"	82.5		74	70-130			
Surrogate: 1,2-DCA-d4	1.26		"	1.25		101	60-140			
Surrogate: Toluene-d8	1.36		"	1.25		109	60-140			
Surrogate: 4-BFB	1.31		"	1.25		105	60-140			

Prepared: 12/03/02 Analyzed: 12/04/02

Laboratory Control Sample (2120041-BS2)										
Methyl tert-butyl ether	0.552	0.25	mg/kg	0.545		101	60-140			
Benzene	0.366	0.25	"	0.335		109	70-130			
Toluene	1.96	0.25	"	2.02		97	70-130			
Surrogate: 1,2-DCA-d4	1.26		"	1.25		101	60-140			
Surrogate: Toluene-d8	1.31		"	1.25		105	60-140			
Surrogate: 4-BFB	1.43		"	1.25		114	60-140			

Prepared: 12/04/02 Analyzed: 12/05/02

Laboratory Control Sample (2120041-BS3)										
Methyl tert-butyl ether	1.57	0.25	mg/kg	1.64		96	60-140			
Benzene	1.19	0.25	"	1.00		119	70-130			
Toluene	5.94	0.25	"	6.08		98	70-130			
Gasoline (C6-C10)	61.1	50	"	82.5		74	70-130			
Surrogate: 1,2-DCA-d4	1.29		"	1.25		103	60-140			
Surrogate: Toluene-d8	1.32		"	1.25		106	60-140			
Surrogate: 4-BFB	1.49		"	1.25		119	60-140			

Prepared & Analyzed: 12/03/02

Laboratory Control Sample Dup (2120041-BSD1)										
Methyl tert-butyl ether	1.57	0.25	mg/kg	1.64		96	60-140	1	25	
Benzene	1.09	0.25	"	1.00		109	70-130	0.9	25	
Toluene	6.40	0.25	"	6.08		105	70-130	5	25	
Gasoline (C6-C10)	64.5	50	"	82.5		78	70-130	6	25	

Sequoia Analytical - Sacramento

The results in this report apply to the samples analyzed in accordance with the chain of custody document. Unless otherwise stated, results are reported on a wet weight basis. This analytical report must be reproduced in its entirety.



Gettler-Ryan - Petaluma 1364 N McDowell Blvd. Ste B2 Petaluma CA, 94954	Project: Tosco 4625, Oakland, CA Project Number: N/A Project Manager: Jed Douglas	S211629 Reported: 12/09/02 18:50
---	---	--

**Gasoline\BTEX\Oxygenates by EPA method 8260B - Quality Control
Sequoia Analytical - Sacramento**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	--------------------	-------	----------------	------------------	------	----------------	-----	--------------	-------

Batch 2120041 - EPA 5030B [MeOH]

Laboratory Control Sample Dup (2120041-BSD1)

Prepared & Analyzed: 12/03/02

Surrogate: 1,2-DCA-d4	1.26		mg/kg	1.25		101	60-140			
Surrogate: Toluene-d8	1.41		"	1.25		113	60-140			
Surrogate: 4-BFB	1.32		"	1.25		106	60-140			

No 007647
TOSCO

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 1551 Industrial Road • San Carlos, CA 94070 • (650) 232-8600 • FAX (650) 232-9612

Consultant Company: Geller-Ryan Inc. 140158.05 Tosco Engineer: David B. De Witt
 Address: 1364 North McDowell Blvd, Suite B2 Site #: 4625 GID T0600102156
 City: Petaluma State: CA Zip Code: 94954 Site Address: 3070 Fruitvale Ave.
 Telephone: 707-789-3255 Fax #: 707-789-3210 City, State: Oakland, CA
 Report To: Jed Douglas Sampler: Andrew Smith QC Data: Level D (Standard) Level C Level B Level A

Turnaround 10 Work Days 5 Work Days 3 Work Days
 Time: 2 Work Days 1 Work Day 2-8 Hours

Analyses Requested
 Drinking Water
 Waste Water
 Other
 TPH (M) EXM (P) *
 TPH Diesel (M) (P)
 TOE (M) (P)
 Organics (M) (P)
 Detergents (M) (P)
 1,2-DCA (M) (P)

Client Sample I.D.	Date/Time Sampled	Matrix Desc.	# of Cont.	Cont. Type	Sequoia's Sample #	TPH (M) EXM (P) *	TPH Diesel (M) (P)	TOE (M) (P)	Organics (M) (P)	Detergents (M) (P)	1,2-DCA (M) (P)	Comments
1. B-1-S(8)	11/20/02 9:50	Soil	1	6 th can	11629-01	X			X			TPHs & BTEX by EPA Method 8260B.
2. B-2-S(11)	11/20/02 1:10		1		02	X			X			
3. MW-5-S(10)	11/20/02 1:40		1		03	X			X			
4. MW-6-S(10)	11/20/02 1:20		1		04	X			X			
5.												
6.												
7.												
8.												
9.												
10.												

Relinquished By: [Signature] Date: 11/21/02 Time: 1710 Received By: Michael Cowin Date: 11/21/02 Time: 1710
 Relinquished By: [Signature] Date: 11-22-02 Time: 1100 Received By: [Signature] Date: 11-22-02 Time: 1100
 Relinquished By: [Signature] Date: 11-22-02 Time: 1245 Received By: [Signature] Date: 11/22/02 Time: 1245

Were Samples Received in Good Condition? Yes No Samples on Ice? Yes No Method of Shipment _____ Page _____ of _____

To be completed upon receipt of report:
 1) Were the analyses requested on the Chain of Custody reported? Yes No If no, what analyses are still needed? _____
 2) Was the report issued within the requested turnaround time? Yes No If no, what was the turnaround time? _____
 Approved by: _____ Signature: _____ Company: _____ Date: _____

Pink - Client
Yellow - Sequoia
White - Sequoia

SEQUOIA ANALYTICAL SAMPLE RECEIPT LOG

CLIENT NAME: Gibbler Ryan
 REC. BY (PRINT) msmcca
 WORKORDER: SA11629

DATE Received at Lab: 11/22/02
 TIME Received at Lab: 12:45
 LOG IN DATE: 11/22/02

(Drinking water) for regulatory purposes: YES/NO NO
 (Wastewater) for regulatory purposes: YES/NO NO

CIRCLE THE APPROPRIATE RESPONSE		LAB SAMPLE #	#	CLIENT ID	DESCRIPTION	SAMPLE MATRIX	DATE SAMPLED	CONDITION (ETC.)
1. Custody Seal(s)	Present / <u>Absent</u> Intact / Broken*							
2. Chain-of-Custody	<u>Present</u> / Absent*							
3. Traffic Reports or Packing List:	Present / <u>Absent</u>							
4. Airbill:	Airbill / Sticker Present / <u>Absent</u>							
5. Airbill #:								
6. Sample Labels:	<u>Present</u> / Absent							
7. Sample IDs:	<u>Listed</u> / Not Listed on Chain-of-Custody							
8. Sample Condition:	<u>Intact</u> / Broken* / Leaking*							
9. Does information on custody reports, traffic reports and sample labels agree?	<u>Yes</u> / No*							
10. Sample received within hold time:	<u>Yes</u> / No*							
11. Proper Preservatives used:	<u>Yes</u> / No*							
12. Temp Rec. at Lab: (Acceptance range for samples requiring thermal pres.: 4+-2°C)	<u>11/12</u> Yes / No*							

see cex

***If Circled, contact Project Manager and attach record of resolution.**



Sequoia Analytical

819 Striker Avenue, Suite B
Sacramento, CA 95834
(916) 921-9600
FAX (916) 921-0100
www.sequiolabs.com

December 16, 2002

Jed Douglas
Gettler-Ryan - Petaluma
1384 N McDowell Blvd. Ste. B2
Petaluma, CA 94954

RE: S211785 / Tosco 4625

Enclosed are the results of analyses for sample(s) received by the laboratory on 11/20/02.

Please note the analysis requested for the samples were performed at ETS.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Ron Chew
Project Manager

CA ELAP Certificate Number 1624





Gettler-Ryan Petaluma 1364 N McDowell Blvd. Ste B2 Petaluma, CA 94954	Project: Tosco 4625 Project Number: n/a Project Manager: Jed Douglas	Reported: 12/16/02
---	--	--------------------

ANALYTICAL REPORT FOR SAMPLES:

Sample Description	Laboratory Sample Number	Sample Matrix	Date Sampled
MW - 5 - S (5.5)	S211785 -01	Soil	11/20/02
MW - 5 - S (15)	S211785 -02	Soil	11/20/02
MW - 6 - S (15)	S211785 -03	Soil	11/20/02





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CLIENT: Sequoia Analytical, 918 Striker Avenue, Suite 8, Sacramento	ANALYST(S) G. Hundt W. Zuo	SUPERVISOR D. Jacobson LAB DIRECTOR G. Conrad PhD
ATTN: Ron Chew	DATE COLLECTED 11/20/02	DATE RECEIVED 12/2/02
JOB/SITE: Tosco, Oakland, California	DATE of COMPLETION 12/12/02	
PROJ. NO.: S211785		

LAB SAMPLE NUMBER	SAMPLE ID	AREA/TYPE of SAMPLE	MOISTURE CONTENT %	DRY BULK DENSITY lbs/cuft	SPECIFIC GRAVITY gm/cc	POROSITY (Volume) %	AIR/WATER (Vol/Vol) %/%	GROSS (USGS) SOIL/SED TEXTURE
02-12-0001	211785-01	MW-5-S(5.5)	24.2	99	2.76	42.6	18.4/24.2	Sandy Mud
02-12-0002	211785-02	MW-5-S(15)	21.3	104	2.70	38.2	16.9/21.3	Sandy Mud
02-12-0003	211785-03	MW-6-S(15)	20.6	109	2.78	37.0	16.4/20.6	Sandy Mud (w/ gravel)

LAB SAMPLE NUMBER	SAMPLE ID	AREA/TYPE of SAMPLE	GRAVEL TOTAL %	SAND TOTAL %	FINES TOTAL %	SOLUTE DIFFUSIVITY sqcm/sec	INFILTRATION RATE cm/sec	HYDRAULIC CONDUCTIVITY cm/sec
02-12-0001	211785-01	MW-5-S(5.5)	<1	17.0	83.0	-	-	-
02-12-0002	211785-02	MW-5-S(15)	0	38.0	62.0	-	-	-
02-12-0003	211785-03	MW-6-S(15)	19.5	39.0	41.5	-	-	-

COMMENTS

These soils are mostly silt and clay, however there is some considerable variability in actual percentages of each major textural component present. Fines content varies from 40 to 85% with sand being the balance in two of the samples. However, in one sample (-03) gravel content is significant; in the other two gravel was zero to less than 1%; (in the -01 sample gravel was one stone in the measured portion of sample). Due to minimal material, one sample (-03) was done as a -200 test with gravel so that all analyses could be completed. In any event, all materials classify as clays. Porosities are accordingly high to very high as a result of the high clay content. But also consistent with the percentages of clay (and densities, silt, etc.) are their very low permeabilities. Specific gravities are above average (i.e., 2.65), but bulk densities are pretty typical and do correlate nicely with depth.

\\ NOTES: Samples are prepared according to appropriate methods as required, requested, and/or found in one of the following references: American Society for Testing and Materials (ASTM), and/or Methods of Soil Analysis (ASA/SSSA), c 1986, 2nd ed., or other appropriate and/or acceptable methodologies (eg. USGS, EPA, USDA, etc.); density - ASTM D 2937; specific Gravity - ASTM D 854; Capillary Moisture - ASTM D 3152/D 2325; Hydraulic Conductivity - ASTM D 5084; Sand Equivalent - ASTM D 2419; Fines Total - ASTM D 422; fluid penetration measures - Methods of Soil Analysis



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CLIENT: Sequoia Analytical, 918 Striker Avenue, Suite 8, Sacramento	ANALYST(S) G. Hundt R. Conrad S. Banwait	SUPERVISOR D. Jacobson LAB DIRECTOR G. Conrad PhD
ATTN: Ron Chew	DATE COLLECTED 11/20/02	DATE RECEIVED 12/2/02
JOB/SITE: Tosco, Oakland, California	DATE of COMPLETION 12/13/02	
PROJ. NO.: S211785		

LAB SAMPLE NUMBER	SAMPLE ID	AREA/TYPE of SAMPLE	PARTICLE SIZE ANALYSIS				ASTM SOIL & SEDIMENT CLASS
			% SAND	% SILT	% CLAY	% GRAVEL	
02-12-0001	211785-01	MW-5-S(5.5)	17.0	35.8	47.2	<1	Brown Fat Clay (CH)
02-12-0002	211785-02	MW-5-S(15)	38.0	33.8	28.2	Ø	Brown Sandy Lean Clay (CL)
02-12-0003	211785-03	MW-6-S(15)	-	-	-	-	Grey Brown Sandy Fat Clay w/ Gravel (CH)

LAB SAMPLE NUMBER	SAMPLE ID	AREA/TYPE of SAMPLE	MOISTURE CONTENT %	FINES TOTAL (-200) %	SAND CONTENT %	GRAVEL CONTENT %	SOIL pH -log[H+]	FRACTION ORG. CAR. mg/kg
02-12-0001	211785-01	MW-5-S(5.5)	24.2	83.0	17.0	<1	7.16	3053
02-12-0002	211785-02	MW-5-S(15)	21.3	62.0	38.0	Ø	7.08	2316
02-12-0003	211785-03	MW-6-S(15)	20.6	41.5	39.0	19.5	7.15	1579

COMMENTS

The ASTM classification of these three samples is based on the permeability data, results & observations, and were not analytically determined (i.e., from Atterbergs). As a result, it is possible for there to be some differences. For example, the middle sample (-02) could be a CL-ML, i.e., a sandy silty clay. Nevertheless, the estimated classifications seem to be the best "fit" for now. Considering sample size and all the testing requesting, sieving was not practical, especially for the third sample (-03). But more than that, it would be unnecessary especially for the first two samples (-01 & -02) which were well accommodated as PSAs by hydrometer. In any event, fines are in the 40-85% range with clay in the 25-50% range. Clay content is analytically determined for two samples at about 28% and 47%; the third (-03) is most likely to be in the 20-30% range which would be similar to the middle sample (-02). This sample (-03) was run as a -200 w/ gravel test due to its especially small size. Despite this, it is clear from perm & other data (as well as general observations), this is a clay dominated material; this is also despite its significant gravel content as well. By observation, in the first two samples (-01 & -02), sand content was mostly fine and to very fine with very little medium and virtually no coarse sand. By contrast, the coarse sand fraction in the third sample (-03) was minor but obvious; all gravel was in the fine category.

\\\\\\ NOTES: Sample are dried, disaggregated, and screen through a nested set of sieves. The standard set for sand fractions is #10, #20, #40, #60, #140, and #200, or #10, #20, #35, #60, #120 and #230 plus the pan. Fines are analyzed by hydrometer; 2 to 12 point depending on requirement as per ASTM D 422, D 1140, etc. The various physical methods represented above are done mostly according to ASTM or CalTrans protocols, although other appropriate methodologies are used rarely.



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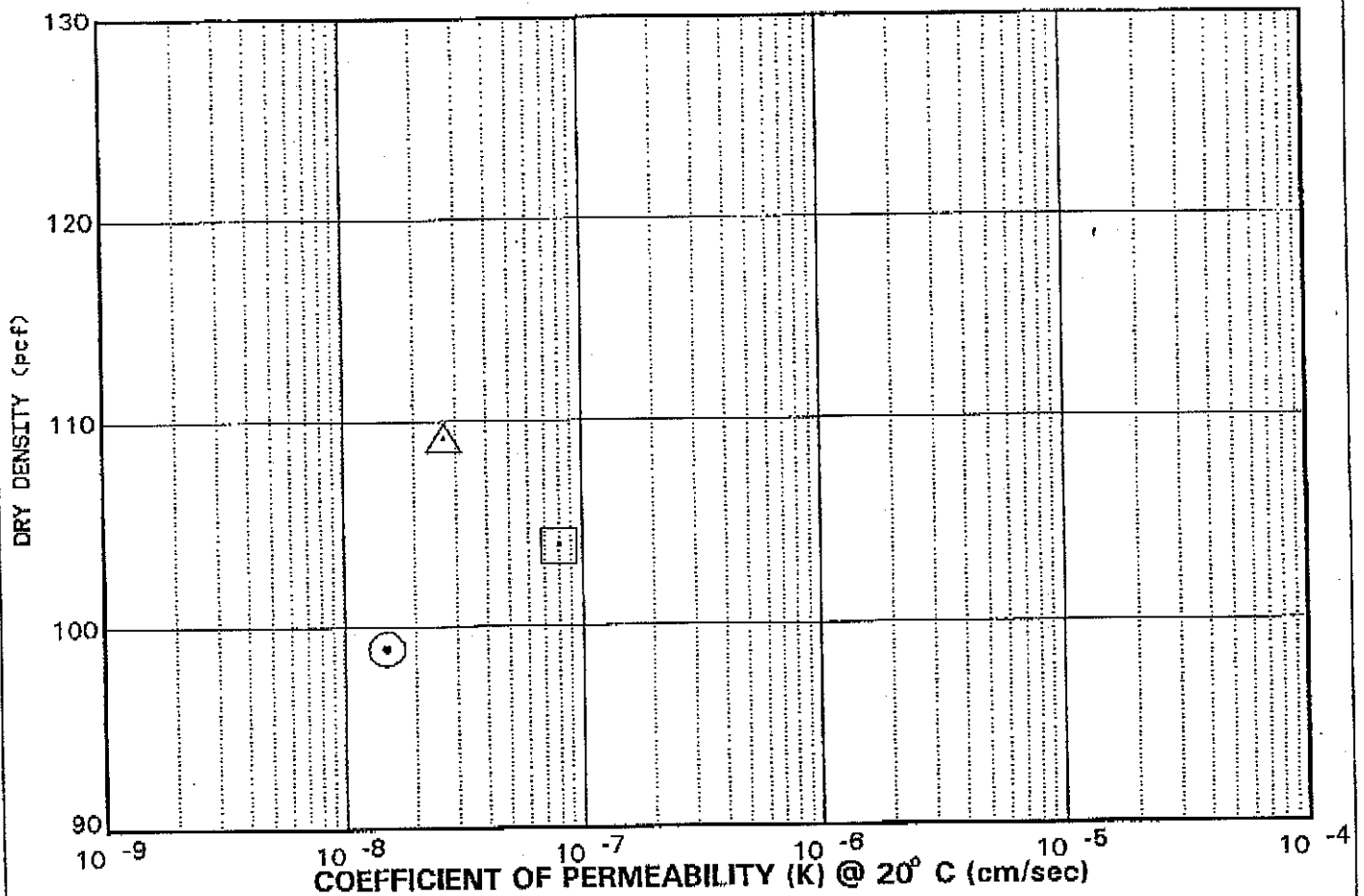
CLIENT: Sequola Analytical, 918 Striker Avenue, Suite 8, Sacramento	DATE COLLECTED: 11/20/02	DATE RECEIVED: 12/2/02	DATE of REPORT: 12/12/02
ATTN: Ron Chew			
PROJECT NO.: S211785	JOB/SITE: Tosco, Oakland, California		

PERMEABILITY AND HYDRAULIC CONDUCTIVITY TEST RESULTS									
SAMPLE ID	SAMPLE ID	AREA/TYPE of SAMPLE	DRY DENSITY lbs/cuft	PERCENT WATER CONTENT	SPECIFIC GRAVITY gm/cc	CONSOLIDATION PRESSURE lbs/sqin	PERMEABILITY (triax/falling head) cm/sec	VOID RATIO (initial)	SATURATION PERCENT (initial)
02-12-0001	211785-01	MW-5-S(5.5)	99	24.2	2.76	4.0	1.5 x E-08	0.743	90
02-12-0002	211785-02	MW-5-S(15)	104	21.3	2.70	4.0	8.0 x E-08	0.622	92
02-12-0003	211785-03	MW-6-S(15)	109	20.6	2.78	4.0	2.7 x E-08	0.589	97

COMMENTS/NOTES:

Notice that all three samples have very low permeabilities. These low rates are a consequence of the high silt and clay content with some sand (and a smaller but significant percentage of gravel in one sample [-03]). While there was more than adequate column to run perms on two of these samples, one (-03) was barely enough (considering other testing). As result, it was felt that there would not be enough ("unaltered") sample to execute all other tests, thus the textural analysis was confined to a -200 test with gravel separation (since significant gravel was present in this particular sample). Nevertheless, all three samples "behave" as clay materials do despite a 20-25% difference in clay content.

\\\\\\ NOTES: Testing follows methodology as per the Association of Testing Materials (ASTM) protocols as follows: ASTM D-2434 Test Method for Permeability of Granular Soils (Constant Head); or ASTM D-5084 Standard Test Method for Measuring Hydraulic Conductivity of Saturated Porous Materials Using a Flexible Wall Permeameter.



Test Type: *FALLING HEAD*

Saturation Method: *BACKPRESSURE*

Symbol	⊙	□	△
INITIAL			
Diameter (mm)	48.90	48.90	48.90
Height (mm)	57.15	67.31	41.28
Moisture Content (%)	24.2	21.3	20.6
Dry Density (pcf)	99	104	109
Void Ratio	0.743	0.622	0.689
Saturation (%)	90	92	97
FINAL			
Consol. Pressure (psi)	4.00	4.00	4.00
Water Content (%)	27.5	20.8	17.8
Dry Density (pcf)	98	108	116
Void Ratio	0.768	0.560	0.495
Saturation (%)	100	100	100
Permeability (cm/sec)	1.5E-08	8.0E-08	2.7E-08
Sample Source:	01A @ 5.5'	02A @ 15.0'	03A @ 15.0'
Classification:	Brown Fat Clay (CH)	Brown Sandy Lean Clay (CL)	Grey Brown Sandy Fat Clay W/Gravel (CH)
Specimen Type:	Undisturbed	Undisturbed	Undisturbed

Permeability Test Results

PLATE



Environmental LOCATION: Oakland, Calif.
 Technical PROJECT: Tosco (S211785)
 Services DATE: December 2002

SAMPLE IDs
 01A = MW-5-S(5.5)
 02A = MW-5-S(15)
 03A = MW-6-S(15)

1

SUBCONTRACT ORDER

Printed: 11/28/02 7:10:45PM

Sequoia Analytical - Sacramento
S211785

SENDING LABORATORY:

Sequoia Analytical - Sacramento
819 Striker Avenue, Ste. 8
Sacramento, CA 95834
Phone: (916) 921-9600
Fax: (916) 921-0100
Project Manager: Ron Chew
Sending lab received dat 11/26/02 12:50

RECEIVING LABORATORY:

ETS
1343 Redwood Road
Petaluma, CA 94954
Phone: 707-795-9605
Fax: 707-795-9384

- Drinking Water
- Waste Water
- Other

Please use standard TAT unless specific due date is requested -> Due date: Initials:

Analysis	SLD Date	Expires	Laboratory ID	Comments
Sample ID: S211785-01 (Soil sampled on 11/20/02 00:00)				
Frac. Org. Content	12/05/02 16:00	12/18/02 00:00		ETS - Fractional Organic Carbon
Misc. Subcontract	12/05/02 16:00	05/19/03 00:00		ETS - Permeability, Porosity and Sieve Analysis
pH-9045C	12/05/02 16:00	11/21/02 00:00		ETS
<i>Containers Supplied:</i>				
Metal Core (A)				
Sample ID: S211785-02 (Soil sampled on 11/20/02 00:00)				
Frac. Org. Content	12/05/02 16:00	12/18/02 00:00		ETS - Fractional Organic Carbon
Misc. Subcontract	12/05/02 16:00	05/19/03 00:00		ETS - Permeability, Porosity and Sieve Analysis
pH-9045C	12/05/02 16:00	11/21/02 00:00		ETS
<i>Containers Supplied:</i>				
Metal Core (A)				
Sample ID: S211785-03 (Soil sampled on 11/20/02 00:00)				
May not be sufficient sample for all analyses				
Frac. Org. Content	12/05/02 16:00	12/18/02 00:00		ETS - Fractional Organic Carbon
Misc. Subcontract	12/05/02 16:00	05/19/03 00:00		ETS - Permeability, Porosity and Sieve Analysis
pH-9045C	12/05/02 16:00	11/21/02 00:00		ETS
<i>Containers Supplied:</i>				
Metal Core (A)				

COOLER CUSTODY SEALS INTACT
 NOT INTACT
 COOLER TEMPERATURE 4.8 °C

Released By Michael Gavin Date 12/02/02 Time 12:00 Received By [Signature] Date 12-2-02 Time 1200
 Released By [Signature] Date 12-02-02 Time 1330 Received By [Signature] Date 12/2/02 Time 1330
 Released By [Signature] Date 12/2/02 Time 2:55 Received By David R. Johnson Date 12-02-02 Time 2:55

No 007660 TOSCO

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- 1551 Industrial Road • San Carlos, CA 94070 • (650) 232-9600 • FAX (650) 232-9612

Consultant Company: <u>Gettler-Ryan Inc. 140158.05</u>		Tosco Engineer: <u>David B. DeWitt</u>	
Address: <u>1364 North McDowell Boulevard, Suite B2</u>		Site #: <u>4625, GID T0600102156</u>	
City: <u>Petaluma</u>	State: <u>CA</u>	Zip Code: <u>94454</u>	Site Address: <u>3070 Fruitvale Ave</u>
Telephone: <u>707-789-3255</u> Fax #: <u>707-789-3218</u>		City, State: <u>Oakland, CA</u>	
Report To: <u>Sed Douglas</u>	Sampler: <u>Andrew Smith</u>		
QC Data: <input checked="" type="checkbox"/> Level D (Standard) <input type="checkbox"/> Level C <input type="checkbox"/> Level B <input type="checkbox"/> Level A			

Turnaround Time: <input checked="" type="checkbox"/> 10 Work Days <input checked="" type="checkbox"/> 5 Work Days <input type="checkbox"/> 3 Work Days <input type="checkbox"/> 2 Work Days <input type="checkbox"/> 1 Work Day <input type="checkbox"/> 2-8 Hours	<input type="checkbox"/> Drinking Water <input type="checkbox"/> Waste Water <input checked="" type="checkbox"/> Other	Analyses Requested: <u>S211785</u> TPH/g (TEX) MTBE TPH Diesel (80/15) TOG (418.1) Oxygenates (0) 8280 Oxygenates (6) + ED8 1,2,4-CA (8280) Sulfide analysis pH Fraction Organic Carbon Permeability Porosity
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Project Coding:						Analyses Requested										Comments		
Client Sample I.D.	Date/Time Sampled	Matrix Desc.	# of Cont.	Cont. Type	Sequoia's Sample #	TPH/g (TEX)	MTBE	TPH Diesel (80/15)	TOG (418.1)	Oxygenates (0) 8280	Oxygenates (6) + ED8	1,2,4-CA (8280)	Sulfide analysis	pH	Fraction Organic Carbon		Permeability	Porosity
1. MW-55(55)	11/20/02	Soil	1	6" core	01										X	X	X	X
2. MW-5-S(15)	11/20/02	↓	1	6" core	02										X	X	X	X
3. MW-6-S(15)	11/20/02	↓	1	2" core	03										X	X	X	X
4.																		
5.																		
6.																		
7.																		
8.																		
9.																		
10.																		

Relinquished By: <u>Andrew Smith</u>	Date: <u>11/20/02</u>	Time: <u>12:50</u>	Received By: <u>Michael Gamin</u>	Date: <u>11/20/02</u>	Time: <u>12:50</u>
Relinquished By: _____	Date: _____	Time: _____	Received By: _____	Date: _____	Time: _____
Relinquished By: _____	Date: _____	Time: _____	Received By: _____	Date: _____	Time: _____

Were Samples Received in Good Condition? Yes No Samples on Ice? Yes No Method of Shipment _____ Page _____ of _____

To be completed upon receipt of report:

1) Were the analyses requested on the Chain of Custody reported? Yes No If no, what analyses are still needed? _____

2) Was the report issued within the requested turnaround time? Yes No If no, what was the turnaround time? _____

Approved by: _____ Signature: _____ Company: _____ Date: _____

Pink - Client
Yellow - Sequoia
White - Sequoia



Sequoia
Analytical

819 Striker Ave Ste 8
Sacramento, CA 95834
(916) 921-9600
FAX (916) 921-0100
www.sequoialabs.com

3 December, 2002

Jed Douglas
Gettler-Ryan - Petaluma
1364 N McDowell Blvd. Ste B2
Petaluma, CA 94954

RE: Tosco 4625, Oakland, CA
Sequoia Work Order: S211627

Enclosed are the results of analyses for samples received by the laboratory on 11/22/02 12:45. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Ron Chew
Client Services Representative

CA ELAP Certificate #1624



Gettler-Ryan - Petaluma
1364 N McDowell Blvd. Ste B2
Petaluma CA, 94954

Project: Tosco 4625, Oakland, CA
Project Number: N/A
Project Manager: Jed Douglas

S211627
Reported:
12/03/02 17:02

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Comp-1 (A,B,C,D)	S211627-01	Soil	11/20/02 16:20	11/22/02 12:45



Cientler-Ryan - Petaluma 1364 N McDowell Blvd, Ste B2 Petaluma CA, 94954	Project: Tosco 4625, Oakland, CA Project Number: N/A Project Manager: Jed Douglas	S211627 Reported: 12/03/02 17:02
--	---	--

Total Purgeable Hydrocarbon, BTEX and MTBE by DHS LUFT
Sequoia Analytical - Sacramento

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Comp-I (A,B,C,D) (S211627-01) Soil Sampled: 11/20/02 16:20 Received: 11/22/02 12:45									
Purgeable Hydrocarbons	ND	2.5	mg/kg	1	2110395	11/25/02	11/25/02	DHS LUFT	
Benzene	0.025	0.025	"	"	"	"	"	"	
Toluene	0.031	0.025	"	"	"	"	"	"	
Ethylbenzene	0.044	0.025	"	"	"	"	"	"	
Xylenes (total)	0.20	0.025	"	"	"	"	"	"	
Methyl tert-butyl ether	0.072	0.025	"	"	"	"	"	"	
Surrogate: <i>a,a,a</i> -Trifluorotoluene		96 %		60-140					



Gettler-Ryan - Petaluma 1364 N McDowell Blvd. Ste B2 Petaluma CA, 94954	Project: TOSCO 4625, Oakland, CA Project Number: N/A Project Manager: Jod Douglas	S211627 Reported: 12/03/02 17:02
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**Total Metals by EPA 6000/7000 Series Methods
Sequoia Analytical - Sacramento**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Comp-1 (A,B,C,D) (S211627-01) Soil Sampled: 11/20/02 16:20 Received: 11/22/02 12:45									
Lead	ND	10	mg/kg	4	2110371	11/25/02	11/25/02	EPA 6010B	



Gettler-Ryan - Petaluma
1364 N McDowell Blvd. Ste B2
Petaluma CA, 94954

Project: Tosco 4625, Oakland, CA
Project Number: N/A
Project Manager: Jed Douglas

S211627
Reported:
12/03/02 17:02

**Total Purgeable Hydrocarbon, BTEX and MTBE by DIIS LUFT - Quality Control
Sequoia Analytical - Sacramento**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 2110395 - EPA 5030B (MeOH)

Blank (2110395-BLK1)

Prepared & Analyzed: 11/25/02

Purgeable Hydrocarbons	ND	0.50	mg/kg							
Benzene	ND	0.0050	"							
Toluene	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Xylenes (total)	ND	0.0050	"							
Methyl tert-butyl ether	ND	0.0050	"							
<i>Surrogate: a, a, a-Trifluorotoluene</i>	<i>0.0201</i>		"	<i>0.0200</i>		<i>100</i>	<i>60-140</i>			

Laboratory Control Sample (2110395-BS1)

Prepared & Analyzed: 11/25/02

Benzene	0.0144	0.0050	mg/kg	0.0200		72	70-130			
Toluene	0.0182	0.0050	"	0.0200		91	70-130			
Ethylbenzene	0.0207	0.0050	"	0.0200		104	70-130			
Xylenes (total)	0.0639	0.0050	"	0.0600		106	70-130			
Methyl tert-butyl ether	0.0153	0.0050	"	0.0200		76	70-130			
<i>Surrogate: a, a, a-Trifluorotoluene</i>	<i>0.0206</i>		"	<i>0.0200</i>		<i>103</i>	<i>60-140</i>			



Gettler-Ryan - Petaluma
1364 N McDowell Blvd. Ste 112
Petaluma CA, 94954

Project: Tosco 4625, Oakland, CA
Project Number: N/A
Project Manager: Jodi Douglas

S211627
Reported:
12/03/02 17:02

**Total Metals by EPA 6000/7000 Series Methods - Quality Control
Sequoia Analytical - Sacramento**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 2110371 - EPA 3050B										
Blank (2110371-BLK1)										
Prepared & Analyzed: 11/25/02										
Lead	ND	10	mg/kg							
Laboratory Control Sample (2110371-BS1)										
Prepared & Analyzed: 11/25/02										
Lead	44.0	10	mg/kg	50.0		88	80-120			
Matrix Spike (2110371-MS1)										
Source: S211656-01 Prepared & Analyzed: 11/25/02										
Lead	45.5	10	mg/kg	50.0	ND	91	80-120			
Matrix Spike Dup (2110371-MSD1)										
Source: S211656-01 Prepared & Analyzed: 11/25/02										
Lead	46.3	10	mg/kg	50.0	ND	93	80-120	2	20	



Gettler-Ryan - Petaluma
1364 N McDowell Blvd. Ste B2
Petaluma CA, 94954

Project: Tosco 4625, Oakland, CA
Project Number: N/A
Project Manager: Joel Douglas

S211627
Reported:
12/03/02 17:02

Notes and Definitions

DFT Analyte DETECTED
ND Analyte NOT DETECTED at or above the reporting limit
NR Not Reported
dry Sample results reported on a dry weight basis
RPD Relative Percent Difference

Nº 007643
TOSCO

- 885 Jarvis Drive • Morgan Hill, CA 95037 • (408) 776-9600 • FAX (408) 782-6308
- 819 Striker Ave., Suite 8 • Sacramento, CA 95834 • (916) 921-9800 • FAX (916) 921-0100
- 404 N. Wiget Lane • Walnut Creek, CA 94598 • (925) 988-9600 • FAX (925) 988-9873
- 1455 McDowell Blvd. North, Suite D • Petaluma, CA 94954 • (707) 792-1865 • FAX (707) 792-0342
- 1551 Industrial Road • San Carlos, CA 94070 • (650) 232-9600 • FAX (650) 232-9612

Consultant Company: <u>Gutter-Ryan Inc. 146158.05</u>		Tosco Engineer: <u>David B. De Witt</u>	
Address: <u>1364 N. McDowell Blvd, Suite B2</u>		Site #: <u>GED T0600102156 4625</u>	
City: <u>Petaluma</u>	State: <u>CA</u>	Zip Code: <u>94954</u>	Site Address: <u>3070 Fruitvale Ave</u>
Telephone: <u>(707) 789-3255</u> Fax #: <u>(707) 789-3218</u>		City, State: <u>Oakland, CA</u>	
Report To: <u>Jed Douglas</u>	Sampler: <u>Andrew Smith</u>	QC Data: <input checked="" type="checkbox"/> Level D (Standard) <input type="checkbox"/> Level C <input type="checkbox"/> Level B <input type="checkbox"/> Level A	

Pink - Client

Turnaround <input checked="" type="checkbox"/> 10 Work Days A.B	<input checked="" type="checkbox"/> 5 Work Days	<input type="checkbox"/> 3 Work Days	<input type="checkbox"/> Drinking Water
Time: <input type="checkbox"/> 2 Work Days	<input type="checkbox"/> 1 Work Day	<input type="checkbox"/> 2-8 Hours	<input type="checkbox"/> Wastewater
			<input checked="" type="checkbox"/> Other

Client Sample I.D.	Date/Time Sampled	Matrix Desc.	# of Cont.	Cont. Type	Sequolia's Sample #	Analyses Requested							Comments			
						TPH Light (8016)	TPH Diesel (8016)	TOG (418.5)	Organics (9) 2080	Distillates (9) 2080	TPH 1 Lead	TPH 2 Lead		TPH 3 Lead		
1. Comp-1 (A/B/C)	11/29/02	Soil	4	6" Core	SAL1607-01	X										
2.																
3.																
4.																
5.																
6.																
7.																
8.																
9.																
10.																

Yellow - Sequoia
White - Sequoia

Relinquished By: <u>[Signature]</u>	Date: <u>11/4/02</u>	Time: <u>17:10</u>	Received By: <u>Michael Garin</u>	Date: <u>11/21/02</u>	Time: <u>17:10</u>
Relinquished By: <u>[Signature]</u>	Date: <u>11/22/02</u>	Time: <u>11:00</u>	Received By: <u>[Signature]</u>	Date: <u>11/21/02</u>	Time: <u>11:00</u>
Relinquished By: <u>[Signature]</u>	Date: <u>11/22/02</u>	Time: <u>12:45</u>	Received By: <u>Monica Gregson</u>	Date: <u>11/21/02</u>	Time: <u>12:45</u>

Were Samples Received in Good Condition? Yes No Samples on Ice? Yes No Method of Shipment _____ Page _____ of _____

To be completed upon receipt of report:

1) Were the analyses requested on the Chain of Custody reported? Yes No If no, what analyses are still needed? _____

2) Was the report issued within the requested turnaround time? Yes No If no, what was the turnaround time? _____

Approved by: _____ Signature: _____ Company: _____ Date: _____

SEQUOIA ANALYTICAL SAMPLE RECEIPT LOG

CLIENT NAME: Gottler Pump DATE Received at Lab: 11/22/02 (Drinking water) for regulatory purposes: YES/NO NO
 REC. BY (PRINT) M. Garcia TIME Received at Lab: 12:45 (Wastewater) for regulatory purposes: YES/NO NO
 WORKORDER: 5211627 LOGIN DATE: 11/22/02

CIRCLE THE APPROPRIATE RESPONSE	LAB SAMPLE #	#	CLIENT ID	DESCRIPTION	SAMPLE MATRIX	DATE SAMPLED	CONDITION (ETC.)
1. Custody Seal(s) Present / Absent Intact / Broken*							/
2. Chain-of-Custody Present / Absent*							
3. Traffic Reports or Packing List: Present / Absent*							
4. Airbill: Airbill / Sticker Present / Absent*							
5. Airbill #:				SEE COC			
6. Sample Labels: Present / Absent							
7. Sample IDs: Listed / Not Listed on Chain-of-Custody							
8. Sample Condition: Intact / Broken* / Leaking*							
9. Does information on custody reports, traffic reports and sample labels agree? Yes / No*							
10. Sample received within hold time: Yes / No*							
11. Proper Preservatives used: Yes / No*							
12. Temp Rec. at Lab: <u>H.C.</u> (Acceptance range for samples requiring thermal pres: 4+-2°C) Yes / No*							

*If Circled, contact Project Manager and attach record of resolution.



Sequoia
Analytical

819 Striker Ave Ste 8
Sacramento, CA 95834
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10 December, 2002

Jed Douglas
Gettler-Ryan - Petaluma
1364 N McDowell Blvd. Ste B2
Petaluma, CA 94954

RE: Tosco 4625, Oakland, CA
Sequoia Work Order: S211628

Enclosed are the results of analyses for samples received by the laboratory on 11/22/02 12:45. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Ron Chew
Client Services Representative

CA ELAP Certificate #1624



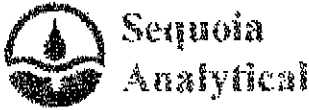
Gettler-Ryan - Petaluma
1364 N McDowell Blvd. Ste B2
Petaluma CA, 94954

Project: Tosco 4625, Oakland, CA
Project Number: N/A
Project Manager: Jed Douglas

S211628
Reported:
12/10/02 18:43

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
B-1-W (12)	S211628-01	Water	11/20/02 12:00	11/22/02 12:45
B-2-W (14.5)	S211628-02	Water	11/20/02 13:20	11/22/02 12:45



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 Sacramento, CA 95834
 (916) 921 9600
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Gettler-Ryan - Petaluma
 1364 N McDowell Blvd. Ste B2
 Petaluma CA, 94954

Project: Tosco 4625, Oakland, CA
 Project Number: N/A
 Project Manager: Jed Douglas

S211628
 Reported:
 12/10/02 18:43

BTEX by EPA Method 8260B
Sequoia Analytical - Sacramento

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B-1-W (12) (S211628-01) Water Sampled: 11/20/02 12:00 Received: 11/22/02 12:45									
Ethanol	ND	50000	ug/l	1000	2120057	12/04/02	12/04/02	EPA 8260B	
Tert-butyl alcohol	ND	5000	"	"	"	"	"	"	
Methyl tert-butyl ether	57000	500	"	"	"	"	"	"	
Di-isopropyl ether	ND	500	"	"	"	"	"	"	
lithyl tert-butyl ether	ND	500	"	"	"	"	"	"	
Tert-amyl methyl ether	ND	500	"	"	"	"	"	"	
1,2-Dichloroethane	ND	500	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	500	"	"	"	"	"	"	
Benzene	19000	500	"	"	"	"	"	"	
Ethylbenzene	5900	500	"	"	"	"	"	"	
Toluene	38000	500	"	"	"	"	"	"	
Xylenes (total)	30000	500	"	"	"	"	"	"	
Gasoline (C6-C10)	190000	50000	"	"	"	"	"	"	
Surrogate: Toluene-d8		105 %	60-140	"	"	"	"	"	
Surrogate: 4-BFB		102 %	60-140	"	"	"	"	"	
Surrogate: 1,2-DCA-d4		123 %	60-140	"	"	"	"	"	
B-2-W (14.5) (S211628-02) Water Sampled: 11/20/02 13:20 Received: 11/22/02 12:45									
Ethanol	ND	1000	ug/l	20	2120135	12/09/02	12/09/02	EPA 8260B	IIT-RS
Tert-butyl alcohol	ND	100	"	"	"	"	"	"	HT-RS
Methyl tert-butyl ether	240	10	"	"	"	"	"	"	HT-RS
Di-isopropyl ether	ND	10	"	"	"	"	"	"	HT-RS
lithyl tert-butyl ether	ND	10	"	"	"	"	"	"	HT-RS
Tert-amyl methyl ether	ND	10	"	"	"	"	"	"	HT-RS
1,2-Dichloroethane	ND	10	"	"	"	"	"	"	IIT-RS
1,2-Dibromoethane (EDB)	ND	10	"	"	"	"	"	"	HT-RS
Benzene	1600	10	"	"	"	"	"	"	HT-RS
Ethylbenzene	590	10	"	"	"	"	"	"	IIT-RS
Toluene	2800	10	"	"	"	"	"	"	IIT-RS
Xylenes (total)	2500	20	"	"	"	"	"	"	HT-RS
Gasoline (C6-C10)	17000	1000	"	"	"	"	"	"	HT-RS
Surrogate: Toluene-d8		104 %	60-140	"	"	"	"	"	IIT-RS
Surrogate: 4-BFB		108 %	60-140	"	"	"	"	"	HT-RS
Surrogate: 1,2-DCA-d4		128 %	60-140	"	"	"	"	"	HT-RS



Gottler-Ryan - Petaluma 1364 N McDowell Blvd. Ste 112 Petaluma CA, 94954	Project: Tosco 4625, Oakland, CA Project Number: N/A Project Manager: Jed Douglas	S211628 Reported: 12/10/02 18:43
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**BTEX by EPA Method 8260B - Quality Control
Sequoia Analytical - Sacramento**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 2120057 - EPA 5030B [P/T]

Blank (2120057-BLK1)										
Prepared & Analyzed: 12/04/02										
Ethanol	ND	50	ug/l							
Tert-butyl alcohol	ND	5.0	"							
Methyl tert-butyl ether	ND	0.50	"							
Di-isopropyl ether	ND	0.50	"							
Ethyl tert-butyl ether	ND	0.50	"							
Tert-amyl methyl ether	ND	0.50	"							
1,2-Dichloroethane	ND	0.50	"							
1,2-Dibromoethane (EDB)	ND	0.50	"							
Benzene	ND	0.50	"							
Ethylbenzene	ND	0.50	"							
Toluene	ND	0.50	"							
Xylenes (total)	ND	0.50	"							
Gasoline (C6-C10)	ND	50	"							
<hr/>										
Surrogate: Toluene-d8	25.8		"	25.0		103	60-140			
Surrogate: 4-BFB	25.9		"	25.0		104	60-140			
Surrogate: 1,2-DCA-d4	30.5		"	25.0		122	60-140			

Laboratory Control Sample (2120057-BS1)

Prepared & Analyzed: 12/04/02										
Methyl tert-butyl ether	21.0	0.50	ug/l	21.8		96	60-140			
Benzene	12.2	0.50	"	13.4		91	70-130			
Toluene	76.4	0.50	"	81.0		94	70-130			
Gasoline (C6-C10)	816	50	"	1100		74	70-130			
<hr/>										
Surrogate: Toluene-d8	26.1		"	25.0		104	60-140			
Surrogate: 4-BFB	26.7		"	25.0		107	60-140			
Surrogate: 1,2-DCA-d4	31.3		"	25.0		125	60-140			

Batch 2120135 - EPA 5030B [P/T]

Prepared & Analyzed: 12/09/02										
Blank (2120135-BLK1)										
Ethanol	ND	50	ug/l							
Tert-butyl alcohol	ND	5.0	"							
Methyl tert-butyl ether	ND	0.50	"							
Di-isopropyl ether	ND	0.50	"							
Ethyl tert-butyl ether	ND	0.50	"							

Sequoia Analytical - Sacramento

The results in this report apply to the samples analyzed in accordance with the chain of custody document. Unless otherwise stated, results are reported on a wet weight basis. This analytical report must be reproduced in its entirety.



Gettler-Ryan - Petaluma
1364 N McDowell Blvd. Ste B2
Petaluma CA, 94954

Project: Tosco 4625, Oakland, CA
Project Number: N/A
Project Manager: Jed Douglas

S211628
Reported:
12/10/02 18:43

BTEX by EPA Method 8260B - Quality Control
Sequoia Analytical - Sacramento

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%RHC Limits	RPD	RPD Limit	Notes
Batch 2120135 - EPA 5030B (P/T)										
Blank (2120135-BLK1)										
Prepared & Analyzed: 12/09/02										
Tert-amyl methyl ether	ND	0.50	ug/l							
1,2-Dichloroethane	ND	0.50	"							
1,2-Dibromothane (EDB)	ND	0.50	"							
Benzene	ND	0.50	"							
Ethylbenzene	ND	0.50	"							
Toluene	ND	0.50	"							
Xylenes (total)	ND	1.0	"							
Gasoline (C6-C10)	ND	50	"							
<hr/>										
Surrogate: Toluene-d8	25.4		"	25.0		102	60-140			
Surrogate: 4-BFB	25.6		"	25.0		102	60-140			
Surrogate: 1,2-DCA-d4	28.2		"	25.0		113	60-140			
<hr/>										
Laboratory Control Sample (2120135-BS1)										
Prepared & Analyzed: 12/09/02										
Methyl tert-butyl ether	18.0	0.50	ug/l	21.8		83	60-140			
Benzene	12.6	0.50	"	13.4		94	70-130			
Toluene	70.8	0.50	"	81.0		87	70-130			
Gasoline (C6-C10)	825	50	"	1100		75	70-130			
<hr/>										
Surrogate: Toluene-d8	26.9		"	25.0		108	60-140			
Surrogate: 4-BFB	27.9		"	25.0		112	60-140			
Surrogate: 1,2-DCA-d4	31.7		"	25.0		127	60-140			
<hr/>										
Matrix Spike (2120135-MS1)										
Source: S211772-03 Prepared & Analyzed: 12/09/02										
Methyl tert-butyl ether	16.0	0.50	ug/l	21.8	ND	73	60-140			
Benzene	11.2	0.50	"	13.4	ND	80	70-130			
Toluene	64.1	0.50	"	81.0	0.51	79	70-130			
Gasoline (C6-C10)	857	50	"	1100	240	56	60-140			QM-07
<hr/>										
Surrogate: Toluene-d8	26.0		"	25.0		104	60-140			
Surrogate: 4-BFB	27.3		"	25.0		109	60-140			
Surrogate: 1,2-DCA-d4	31.5		"	25.0		126	60-140			



Geller-Ryan - Petaluma
1364 N McDowell Blvd. Ste B2
Petaluma CA, 94954

Project: Tosco 4625, Oakland, CA
Project Number: N/A
Project Manager: Jed Douglas

S211628
Reported:
12/10/02 18:43

**BTEX by EPA Method 8260B - Quality Control
Sequoia Analytical - Sacramento**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 2120135 - EPA 5030B [P/T]										
Matrix Spike Dup (2120135-MSD1)										
Source: S211772-03 Prepared & Analyzed: 12/09/02										
Methyl tert-butyl ether	18.7	0.50	ug/l	21.8	ND	86	60-140	16	25	
Benzene	12.4	0.50	"	13.4	ND	89	70-130	10	25	
Toluene	74.7	0.50	"	81.0	0.51	92	70-130	15	25	
Gasoline (C6-C10)	994	50	"	1100	240	69	60-140	15	25	
Surrogate: Toluene-d8	25.7		"	25.0		103	60-140			
Surrogate: 4-BFB	26.6		"	25.0		106	60-140			
Surrogate: 1,2 DCA-d4	31.2		"	25.0		125	60-140			



Geitler-Ryan - Petaluma
1364 N McDowell Blvd. Ste B2
Petaluma CA, 94954

Project: Tosco 4625, Oakland, CA
Project Number: N/A
Project Manager: Jed Douglas

S211628
Reported:
12/10/02 18:43

Notes and Definitions

- HT-RS This sample was originally analyzed within the EPA recommended hold time. Re-analysis for confirmation or dilution was performed past the recommended hold time. The results may still be useful for their intended purpose.
- QM-07 The spike recovery was outside control limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
- DET Analyte DETECTED
- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- dry Sample results reported on a dry weight basis
- RPD Relative Percent Difference

N^o 007649
TOSCO

- 885 Jarvis Drive • Morgan Hill, CA 95037 • (408) 778-9600 • FAX (408) 782-6308
- 819 Striker Ave., Suite 8 • Sacramento, CA 95834 • (916) 921-9600 • FAX (916) 921-0100
- 404 N. Wiget Lane • Walnut Creek, CA 94598 • (925) 988-9600 • FAX (925) 988-9673
- 1455 McDowell Blvd. North, Suite D • Petaluma, CA 94954 • (707) 792-1865 • FAX (707) 792-0342
- 1551 Industrial Road • San Carlos, CA 94070 • (650) 232-9600 • FAX (650) 232-9612

Consultant Company: <u>Goffler-Kyab Inc. 140158.05</u>		Tosco Engineer: <u>David B. De Witt</u>	
Address: <u>1364 N. Mc Dowell BLVD, Suite B2</u>		Site #: <u>4625, GID T0600102156</u>	
City: <u>Petaluma</u>	State: <u>CA</u>	Zip Code: <u>94954</u>	Site Address: <u>3070 Fruitvale Ave.</u>
Telephone: <u>707-789-3255</u>		Fax #: <u>707-789-3218</u>	
Report To: <u>John Douglas</u>		QC Data: <input checked="" type="checkbox"/> Level D (Standard) <input type="checkbox"/> Level C <input type="checkbox"/> Level B <input type="checkbox"/> Level A	
Turnaround Time: <input checked="" type="checkbox"/> 5 Work Days <input type="checkbox"/> 3 Work Days <input type="checkbox"/> 2-8 Hours		Analyses Requested	
Sampler: <u>Andrew Smith</u>		<input type="checkbox"/> Drinking Water	
		<input type="checkbox"/> Waste Water	
		<input checked="" type="checkbox"/> Other	

Client Sample I.D.	Date/Time Sampled	Matrix Desc.	# of Cont.	Cont. Type	Sequoia's Sample #	Analyses Requested						Comments	
						TPH (BTEX) (M1)	TPH Diesel (M15)	TOC (M18.1)	Oxyanions (M 8260)	Oxyanions (M 8260) (M 8260)			
1. B-1-W (12)	11/20/02/1200	H ₂ O	6	VOAS	22116280	X			X				* TPHg
2. B-2-W (14.9)	4/20/02/1320	H ₂ O	6	VOAS	-08	X			X				* BTEX by EPA Method 8260B
3.													
4.													
5.													
6.													
7.													
8.													
9.													rad 1.9K
10.													

Relinquished By: <u>Andrew Smith</u>	Date: <u>11/21/02</u>	Time: <u>1710</u>	Received By: <u>Michael Garcia</u>	Date: <u>11/21/02</u>	Time: <u>1710</u>
Relinquished By: <u>[Signature]</u>	Date: <u>11/22/02</u>	Time: <u>1100</u>	Received By: <u>[Signature]</u>	Date: <u>11/22/02</u>	Time: <u>1100</u>
Relinquished By: <u>[Signature]</u>	Date: <u>11/22/02</u>	Time: <u>1248</u>	Received By: <u>[Signature]</u>	Date: <u>11/22/02</u>	Time: <u>1248</u>

Were Samples Received in Good Condition? Yes No Samples on Ice? Yes No Method of Shipment _____ Page ____ of ____

To be completed upon receipt of report:

1) Were the analyses requested on the Chain of Custody reported? Yes No If no, what analyses are still needed? _____

2) Was the report issued within the requested turnaround time? Yes No If no, what was the turnaround time? _____

Approved by: _____ Signature: _____ Company: _____ Date: _____

Pink - Client
Yellow - Sequoia
White - Sequoia

SEQUOIA ANALYTICAL SAMPLE RECEIPT LOG

CLIENT NAME: Reffler Ryan
REC. BY (PRINT): Monroe
WORKORDER: SA11628

DATE Received at Lab: 11/23/02
TIME Received at Lab: 1248
LOG IN DATE: 11/23/02

(Drinking water) for
 regulatory purposes: YES/NO
 (Wastewater) for
 regulatory purposes: YES/NO

CIRCLE THE APPROPRIATE RESPONSE	LAB SAMPLER #	#	CLIENT ID	DESCRIPTION	SAMPLE MATRIX	DATE SAMPLED	CONDITION (ETC.)
1. Custody Seal(s) Present / Absent Intact / Broken*							
2. Chain-of-Custody Present / Absent*							
3. Traffic Reports or Packing List: Present / Absent							
4. Airbill: Airbill / Sticker Present / Absent							
5. Airbill #:							
6. Sample Labels: Present / Absent							
7. Sample IDs: Listed / Not Listed on Chain-of-Custody							
8. Sample Condition: Intact / Broken* / Leaking*							
9. Docs-information on custody reports, traffic reports and sample labels agree? Yes / No*							
10. Sample received within hold time: Yes / No*							
11. Proper Preservatives used: Yes / No*							
12. Temp Rec. at Lab: (Acceptance range for samples requiring thermal pres.: 4+-2°C) Yes / No*							

See COC

*If Circled, contact Project Manager and attach record of resolution.

No 007649
TOSCO

- 885 Jarvis Drive • Morgan Hill, CA 95037 • (408) 776-9600 • FAX (408) 782-6308
- 819 Striker Ave., Suite 8 • Sacramento, CA 95834 • (916) 921-9600 • FAX (916) 921-0100
- 404 N. Wiget Lane • Walnut Creek, CA 94598 • (925) 988-9600 • FAX (925) 988-9673
- 1455 McDowell Blvd. North, Suite D • Petaluma, CA 94954 • (707) 792-1865 • FAX (707) 792-0342
- 1551 Industrial Road • San Carlos, CA 94070 • (650) 232-9600 • FAX (650) 232-9612

Consultant Company: Gaffler-Ryan Inc. 140158.05 Tosco Engineer: David B. De Witt
 Address: 1364 N. Mc Donnell Blvd, Suite B2 Site #: 4625, GID T0600102156
 City: Petaluma State: CA Zip Code: 94954 Site Address: 3070 Fruitvale Ave.
 Telephone: 707-709-3255 Fax #: 707-709-3218 City, State: Oakland, CA
 Report To: Jed Douglas Sampler: Andrew Smith QC Data: Level D (Standard) Level C Level B Level A

Pink - Client

Turnaround Time: 5 Work Days 3 Work Days 2-8 Hours
 2 Work Days 1 Work Day

Drinking Water
 Waste Water
 Other

Analyses Requested

TPH (EPA 8015)	TPH Diesel (8015)	TOB (418.1)	Oxyorganics (9) (2280)	Oxyorganics (9) + (2280) + (2) DCA (8280)

Project Coding:

Client Sample I.D.	Date/Time Sampled	Matrix Desc.	# of Cont.	Cont. Type	Sequoia's Sample #	TPH (EPA 8015)	TPH Diesel (8015)	TOB (418.1)	Oxyorganics (9) (2280)	Oxyorganics (9) + (2280) + (2) DCA (8280)	Comments
1. B-1-W (12)	11/21/02/1200	H ₂ O	6	VOAS	521168301	X			X		* Tella
2. B-2-W (14)	11/21/02/1320	H ₂ O	6	VOAS	-08	X			X		# BTEX By EPA Method 8260B
3.											
4.											
5.											
6.											
7.											
8.											
9.											rod 1194
10.											

Yellow - Sequoia

White - Sequoia

Relinquished By: [Signature] Date: 11/21/02 Time: 1710 Received By: Michael Quinn Date: 11/21/02 Time: 1710
 Relinquished By: [Signature] Date: 11/22/02 Time: 1100 Received By: Jed Douglas Date: 11/22/02 Time: 1100
 Relinquished By: [Signature] Date: 11/22/02 Time: 1245 Received By: Terrence Engstrom Date: 11/22/02 Time: 1245

Were Samples Received in Good Condition? Yes No Samples on Ice? Yes No Method of Shipment _____ Page _____ of _____

To be completed upon receipt of report:
 1) Were the analyses requested on the Chain of Custody reported? Yes No If no, what analyses are still needed? _____
 2) Was the report issued within the requested turnaround time? Yes No If no, what was the turnaround time? _____
 Approved by: _____ Signature: _____ Company: _____ Date: _____

SEQUOIA ANALYTICAL SAMPLE RECEIPT LOG

CLIENT NAME: <u>Bettler Ryan</u> REC. BY (PRINT): <u>Morise</u> WORKORDER: <u>521628</u>	DATE Received at Lab: <u>11/20/02</u> TIME Received at Lab: <u>1248</u> LOG IN DATE: <u>11/20/02</u>	(Drinking water) for regulatory purposes: <u>YES/NO</u> (Wastewater) for regulatory purposes: <u>YES/NO</u>
---	---	--

CIRCLE THE APPROPRIATE RESPONSE	LAB SAMPLE #	#	CLIENT ID	DESCRIPTION	SAMPLE MATRIX	DATE SAMPLED	CONDITION (ETC.)
1. Custody Seal(s) Present / <u>Absent</u> Intact / Broken*							
2. Chain-of-Custody <u>Present</u> / Absent*							
3. Traffic Reports or Packing List Present / <u>Absent</u>							
4. Airbill: Airbill / <u>Tracker</u> Present / <u>Absent</u>							
5. Airbill #:							
6. Sample Labels: <u>Present</u> / Absent							
7. Sample IDs: <u>Listed</u> / Not Listed or Chain-of-Custody							
8. Sample Condition: <u>Intact</u> / Broken* / Leaking*							
9. Does information on custody reports, traffic reports and sample labels agree? <u>Yes</u> / No*							
10. Sample received within hold time: <u>Yes</u> / No*							
11. Proper Preservatives used: <u>Yes</u> / No*							
12. Temp Rec. at Lab: <u>7.8°C</u> (Acceptance range for samples requiring thermal pres. 34±4.2°C)							

*If Circled, contact Project Manager and attach record of resolution.

Gettler Ryan

December 19, 2002

6747 Sierra Court Suite J
Dublin, CA 94568

Attn.: Deanna Harding

Project#: 180255.80

Project: Tosco #4625

Site: 3070 Fruitvale Ave.
Oakland, CA

Dear Ms. Harding,

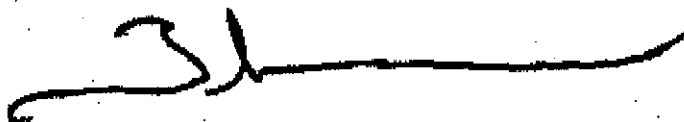
Attached is our report for your samples received on 11/27/2002 13:25
This report has been reviewed and approved for release. Reproduction of this report
is permitted only in its entirety.

Please note that any unused portion of the samples will be discarded after
01/11/2003 unless you have requested otherwise.

We appreciate the opportunity to be of service to you. If you have any questions,
please call me at (925) 484-1919.

You can also contact me via email. My email address is: tgranicher@stl-inc.com

Sincerely,



Tod Granicher
Project Manager

Gas/BTEX Fuel Oxygenates by 8260B

Gettler Ryan

Attn.: Deanna Harding

6747 Sierra Court Suite J

Dublin, CA 94568

Phone: (925) 551-7444 Fax: (925) 551-7899

Project: 180255.80

Tosco #4625

Received: 11/27/2002 13:25

Site: 3070 Fruitvale Ave.
Oakland, CA

Samples Reported

Sample Name	Date Sampled	Matrix	Lab #
QA	11/26/2002	Water	1
MW-1	11/26/2002 06:35	Water	2
MW-2	11/26/2002 07:20	Water	3
MW-3	11/26/2002 11:10	Water	4
MW-4	11/26/2002 10:25	Water	5
MW-5	11/26/2002 09:30	Water	6
MW-6	11/26/2002 08:25	Water	7

Severn Trent Laboratories, Inc.

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12/10/2002 17:50

Page 1 of 15

Gas/BTEX Fuel Oxygenates by 8260B

Gettler Ryan
Attn.: Deanna Harding

6747 Sierra Court Suite J
Dublin, CA 94568
Phone: (925) 551-7444 Fax: (925) 551-7899

Project: 180255.80
Tosco #4625

Received: 11/27/2002 13:25

Site: 3070 Fruitvale Ave.
Oakland, CA

Prep(s): 5030B Test(s): 8260FAB
Sample ID: QA Lab ID: 2002-11-0628-1
Sampled: 11/26/2002 Extracted: 12/6/2002 20:42
Matrix: Water QC Batch#: 2002/12/06-01.27

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	50	ug/L	1.00	12/06/2002 20:42	
Benzene	ND	0.50	ug/L	1.00	12/06/2002 20:42	
Toluene	ND	0.50	ug/L	1.00	12/06/2002 20:42	
Ethylbenzene	ND	0.50	ug/L	1.00	12/06/2002 20:42	
Total xylenes	ND	1.0	ug/L	1.00	12/06/2002 20:42	
Methyl tert-butyl ether (MTBE)	ND	2.0	ug/L	1.00	12/06/2002 20:42	
<i>Surrogates(s)</i>						
1,2-Dichloroethane-d4	92.4	76-114	%	1.00	12/06/2002 20:42	
Toluene-d8	96.8	88-110	%	1.00	12/06/2002 20:42	

Gas/BTEX Fuel Oxygenates by 8260B

Gettler Ryan
Attn.: Deanna Harding

6747 Sierra Court Suite J
Dublin, CA 94568
Phone: (925) 551-7444 Fax: (925) 551-7899

Project: 180255.80
Tosco #4625

Received: 11/27/2002 13:25

Site: 3070 Fruitvale Ave.
Oakland, CA

Prep(s): 5030B
Sample ID: MW-1
Sampled: 11/26/2002 06:35
Matrix: Water
Test(s): 8260FAB
Lab ID: 2002-11-0628-2
Extracted: 12/6/2002 21:03
QC Batch#: 2002/12/06-01.27

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	50	ug/L	1.00	12/06/2002 21:03	
Benzene	ND	0.50	ug/L	1.00	12/06/2002 21:03	
Toluene	ND	0.50	ug/L	1.00	12/06/2002 21:03	
Ethylbenzene	ND	0.50	ug/L	1.00	12/06/2002 21:03	
Total xylenes	ND	1.0	ug/L	1.00	12/06/2002 21:03	
tert-Butyl alcohol (TBA)	ND	100	ug/L	1.00	12/06/2002 21:03	
Methyl tert-butyl ether (MTBE)	23	2.0	ug/L	1.00	12/06/2002 21:03	
Di-isopropyl Ether (DIPE)	ND	2.0	ug/L	1.00	12/06/2002 21:03	
Ethyl tert-butyl ether (ETBE)	ND	2.0	ug/L	1.00	12/06/2002 21:03	
tert-Amyl methyl ether (TAME)	ND	2.0	ug/L	1.00	12/06/2002 21:03	
1,2-DCA	ND	2.0	ug/L	1.00	12/06/2002 21:03	
EDB	ND	2.0	ug/L	1.00	12/06/2002 21:03	
Ethanol	ND	500	ug/L	1.00	12/06/2002 21:03	
Surrogates(s)						
1,2-Dichloroethane-d4	93.7	76-114	%	1.00	12/06/2002 21:03	
Toluene-d8	100.1	88-110	%	1.00	12/06/2002 21:03	

12/10/2002 17:50

Gas/BTEX Fuel Oxygenates by 8260B

Gettler Ryan

Attn.: Deanna Harding

6747 Sierra Court Suite J
Dublin, CA 94568
Phone: (925) 551-7444 Fax: (925) 551-7899

Project: 180255.80
Tosco #4625

Received: 11/27/2002 13:25

Site: 3070 Fruitvale Ave.
Oakland, CA

Prep(s):	5030B	Test(s):	8260FAB
Sample ID:	MW-2	Lab ID:	2002-11-0628-3
Sampled:	11/26/2002 07:20	Extracted:	12/9/2002 13:51
Matrix:	Water	QC Batch#:	2002/12/09-01-27

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	340	50	ug/L	1.00	12/09/2002 13:51	
Benzene	87	0.50	ug/L	1.00	12/09/2002 13:51	
Toluene	ND	0.50	ug/L	1.00	12/09/2002 13:51	
Ethylbenzene	33	0.50	ug/L	1.00	12/09/2002 13:51	
Total xylenes	23	1.0	ug/L	1.00	12/09/2002 13:51	
Methyl tert-butyl ether (MTBE)	ND	2.0	ug/L	1.00	12/09/2002 13:51	
Surrogates(s)						
1,2-Dichloroethane-d4	89.9	76-114	%	1.00	12/09/2002 13:51	
Toluene-d8	99.0	88-110	%	1.00	12/09/2002 13:51	

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12/10/2002 17:50

Gas/BTEX Fuel Oxygenates by 8260B

Gettler Ryan
Attn.: Deanna Harding

6747 Sierra Court Suite J
Dublin, CA 94568
Phone: (925) 551-7444 Fax: (925) 551-7899

Project: 180255.80
Tosco #4625

Received: 11/27/2002 13:25

Site: 3070 Fruitvale Ave.
Oakland, CA

Prep(s): 5030B Test(s): 8260FAB
Sample ID: MW-3 Lab ID: 2002-11-0628-4
Sampled: 11/26/2002 11:40 Extracted: 12/9/2002 14:13
Matrix: Water QC Batch#: 2002/12/09-01-27

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	50	ug/L	1.00	12/09/2002 14:13	
Benzene	ND	0.50	ug/L	1.00	12/09/2002 14:13	
Toluene	ND	0.50	ug/L	1.00	12/09/2002 14:13	
Ethylbenzene	ND	0.50	ug/L	1.00	12/09/2002 14:13	
Total xylenes	ND	1.0	ug/L	1.00	12/09/2002 14:13	
Methyl tert-butyl ether (MTBE)	ND	2.0	ug/L	1.00	12/09/2002 14:13	
Surrogates(s)						
1,2-Dichloroethane-d4	90.3	76-114	%	1.00	12/09/2002 14:13	
Toluene-d8	99.9	88-110	%	1.00	12/09/2002 14:13	

Gas/BTEX Fuel Oxygenates by 8260B

Gettler Ryan

Attn.: Deanna Harding

6747 Sierra Court Suite J

Dublin, CA 94568

Phone: (925) 551-7444 Fax: (925) 551-7899

Project: 180255.80

Tosco #4625

Received: 11/27/2002 13:25

Site: 3070 Fruitvale Ave.
Oakland, CA

Prep(s):	5030B	Test(s):	8260FAB
Sample ID:	MW-4	Lab ID:	2002-11-0628 - 5
Sampled:	11/26/2002 10:25	Extracted:	12/9/2002 14:35
Matrix:	Water	QC Batch#:	2002/12/09-01-27

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	50	ug/L	1.00	12/09/2002 14:35	
Benzene	ND	0.50	ug/L	1.00	12/09/2002 14:35	
Toluene	ND	0.50	ug/L	1.00	12/09/2002 14:35	
Ethylbenzene	ND	0.50	ug/L	1.00	12/09/2002 14:35	
Total xylenes	ND	1.0	ug/L	1.00	12/09/2002 14:35	
Methyl tert-butyl ether (MTBE)	ND	2.0	ug/L	1.00	12/09/2002 14:35	
Surrogates(s)						
1,2-Dichloroethane-d4	89.0	76-114	%	1.00	12/09/2002 14:35	
Toluene-d8	99.2	88-110	%	1.00	12/09/2002 14:35	

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12/10/2002 17:50

Gas/BTEX Fuel Oxygenates by 8260B

Gettler Ryan
Attn.: Deanna Harding

6747 Sierra Court Suite J
Dublin, CA 94568
Phone: (925) 551-7444 Fax: (925) 551-7899
Project: 180255.80
Tosco #4625

Received: 11/27/2002 13:25

Site: 3070 Fruitvale Ave.
Oakland, CA

Prep(s): 5030B Test(s): 8260FAB
Sample ID: MW-5 Lab ID: 2002-11-0628-6
Sampled: 11/26/2002 09:30 Extracted: 12/10/2002 13:21
Matrix: Water QC Batch#: 2002/12/10-01-27

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	2500	500	ug/L	10.00	12/10/2002 13:21	
Benzene	350	5.0	ug/L	10.00	12/10/2002 13:21	
Toluene	39	5.0	ug/L	10.00	12/10/2002 13:21	
Ethylbenzene	32	5.0	ug/L	10.00	12/10/2002 13:21	
Total xylenes	640	10	ug/L	10.00	12/10/2002 13:21	
tert-Butyl alcohol (TBA)	ND	1000	ug/L	10.00	12/10/2002 13:21	
Methyl tert-butyl ether (MTBE)	470	20	ug/L	10.00	12/10/2002 13:21	
Di-isopropyl Ether (DIPE)	ND	20	ug/L	10.00	12/10/2002 13:21	
Ethyl tert-butyl ether (ETBE)	ND	20	ug/L	10.00	12/10/2002 13:21	
tert-Amyl methyl ether (TAME)	ND	20	ug/L	10.00	12/10/2002 13:21	
1,2-DCA	ND	20	ug/L	10.00	12/10/2002 13:21	
EDB	ND	20	ug/L	10.00	12/10/2002 13:21	
Ethanol	ND	5000	ug/L	10.00	12/10/2002 13:21	
Surrogates(s)						
1,2-Dichloroethane-d4	85.1	76-114	%	10.00	12/10/2002 13:21	
Toluene-d8	95.8	88-110	%	10.00	12/10/2002 13:21	

12/10/2002 17:50

Gas/BTEX Fuel Oxygenates by 8260B

Gettler Ryan

Attn.: Deanna Harding

6747 Sierra Court Suite J
Dublin, CA 94568
Phone: (925) 551-7444 Fax: (925) 551-7899

Project: 180255.80
Tosco #4625

Received: 11/27/2002 13:25

Site: 3070 Fruitvale Ave.
Oakland, CA

Prep(s):	5030B	Test(s):	8260FAB
Sample ID:	MW-6	Lab ID:	2002-11-0628-7
Sampled:	11/26/2002 08:25	Extracted:	12/10/2002 13:48
Matrix:	Water	QC Batch#:	2002/12/10-01:27

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	11000	1000	ug/L	20.00	12/10/2002 13:48	
Benzene	1200	10	ug/L	20.00	12/10/2002 13:48	
Toluene	2000	10	ug/L	20.00	12/10/2002 13:48	
Ethylbenzene	400	10	ug/L	20.00	12/10/2002 13:48	
Total xylenes	2300	20	ug/L	20.00	12/10/2002 13:48	
tert-Butyl alcohol (TBA)	ND	2000	ug/L	20.00	12/10/2002 13:48	
Methyl tert-butyl ether (MTBE)	490	40	ug/L	20.00	12/10/2002 13:48	
Di-isopropyl Ether (DIPE)	ND	40	ug/L	20.00	12/10/2002 13:48	
Ethyl tert-butyl ether (ETBE)	ND	40	ug/L	20.00	12/10/2002 13:48	
tert-Amyl methyl ether (TAME)	ND	40	ug/L	20.00	12/10/2002 13:48	
1,2-DCA	ND	40	ug/L	20.00	12/10/2002 13:48	
EDB	ND	40	ug/L	20.00	12/10/2002 13:48	
Ethanol	ND	10000	ug/L	20.00	12/10/2002 13:48	
Surrogates(s)						
1,2-Dichloroethane-d4	87.0	76-114	%	20.00	12/10/2002 13:48	
Toluene-d8	99.4	88-110	%	20.00	12/10/2002 13:48	

Sewern Trent Laboratories, Inc.

STL San Francisco * 1220 Quarry Lane, Pleasanton, CA 94566

Tel 925 484 1919 Fax 925 484 1096 * www.stl-inc.com * CA DHS ELAP# 2496

12/10/2002 17:50

Gas/BTEX Fuel Oxygenates by 8260B

Gettler Ryan

Attn.: Deanna Harding

6747 Sierra Court Suite J
Dublin, CA 94568
Phone: (925) 551-7444 Fax: (925) 551-7899

Project: 180255.80
Tosco #4625

Received: 11/27/2002 13:25

Site: 3070 Fruitvale Ave.
Oakland, CA

Batch QC Report

Prep(s): 5030B Test(s): 8260FAB
Method Blank: Water QC Batch #: 2002/12/06-01-27
MB: 2002/12/06-01-27-008 Date Extracted: 12/06/2002 11:53

Compound	Conc.	RL	Unit	Analyzed	Flag
Gasoline	ND	50	ug/L	12/06/2002 11:53	
Benzene	ND	0.5	ug/L	12/06/2002 11:53	
Toluene	ND	0.5	ug/L	12/06/2002 11:53	
Ethylbenzene	ND	0.5	ug/L	12/06/2002 11:53	
Total xylenes	ND	1.0	ug/L	12/06/2002 11:53	
tert-Butyl alcohol (TBA)	ND	100	ug/L	12/06/2002 11:53	
Methyl tert-butyl ether (MTBE)	ND	2.0	ug/L	12/06/2002 11:53	
Di-isopropyl Ether (DIPE)	ND	2.0	ug/L	12/06/2002 11:53	
Ethyl tert-butyl ether (ETBE)	ND	2.0	ug/L	12/06/2002 11:53	
tert-Amyl methyl ether (TAME)	ND	2.0	ug/L	12/06/2002 11:53	
1,2-DCA	ND	2.0	ug/L	12/06/2002 11:53	
EDB	ND	2.0	ug/L	12/06/2002 11:53	
Ethanol	ND	500	ug/L	12/06/2002 11:53	
Surrogates(s)					
1,2-Dichloroethane-d4	86.0	76-114	%	12/06/2002 11:53	
Toluene-d8	98.8	88-110	%	12/06/2002 11:53	

12/10/2002 17:50

Gas/BTEX Fuel Oxygenates by 8260B

Gettler Ryan
Attn.: Deanna Harding

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Dublin, CA 94568
Phone: (925) 551-7444 Fax: (925) 551-7899

Project: 180255.80
Tosco #4625

Received: 11/27/2002 13:25

Site: 3070 Fruitvale Ave.
Oakland, CA

Batch QC Report

Prep(s): 5030B
Method Blank
MB: 2002/12/09-01.27-017
Test(s): 8260FAB
Water
QC Batch # 2002/12/09-01.27
Date Extracted: 12/09/2002 12:15

Compound	Conc.	RL	Unit	Analyzed	Flag
Gasoline	ND	50	ug/L	12/09/2002 12:15	
Benzene	ND	0.5	ug/L	12/09/2002 12:15	
Toluene	ND	0.5	ug/L	12/09/2002 12:15	
Ethylbenzene	ND	0.5	ug/L	12/09/2002 12:15	
Total xylenes	ND	1.0	ug/L	12/09/2002 12:15	
tert-Butyl alcohol (TBA)	ND	100	ug/L	12/09/2002 12:15	
Methyl tert-butyl ether (MTBE)	ND	2.0	ug/L	12/09/2002 12:15	
Di-isopropyl Ether (DIPE)	ND	2.0	ug/L	12/09/2002 12:15	
Ethyl tert-butyl ether (ETBE)	ND	2.0	ug/L	12/09/2002 12:15	
tert-Amyl methyl ether (TAME)	ND	2.0	ug/L	12/09/2002 12:15	
1,2-DCA	ND	2.0	ug/L	12/09/2002 12:15	
EDB	ND	2.0	ug/L	12/09/2002 12:15	
Ethanol	ND	500	ug/L	12/09/2002 12:15	
Surrogates(s)					
1,2-Dichloroethane-d4	83.4	76-114	%	12/09/2002 12:15	
Toluene-d8	98.0	88-110	%	12/09/2002 12:15	

12/10/2002 17:50

Gas/BTEX Fuel Oxygenates by 8260B

Gettler Ryan
Attn.: Deanna Harding

6747 Sierra Court Suite J
Dublin, CA 94568
Phone: (925) 551-7444 Fax: (925) 551-7899

Project: 180255.80
Tosco #4625

Received: 11/27/2002 13:25

Site: 3070 Fruitvale Ave.
Oakland, CA

Batch QC Report

Prep(s): 5030B
Method Blank
MB: 2002/12/10-01.27-006
Water
QC Batch # 2002/12/10-01.27
Date Extracted: 12/10/2002 12:54
Test(s): 8260FAB

Compound	Conc.	RL	Unit	Analyzed	Flag
Gasoline	ND	50	ug/L	12/10/2002 12:54	
Benzene	ND	0.5	ug/L	12/10/2002 12:54	
Toluene	ND	0.5	ug/L	12/10/2002 12:54	
Ethylbenzene	ND	0.5	ug/L	12/10/2002 12:54	
Total xylenes	ND	1.0	ug/L	12/10/2002 12:54	
tert-Butyl alcohol (TBA)	ND	100	ug/L	12/10/2002 12:54	
Methyl tert-butyl ether (MTBE)	ND	2.0	ug/L	12/10/2002 12:54	
Di-isopropyl Ether (DIPE)	ND	2.0	ug/L	12/10/2002 12:54	
Ethyl tert-butyl ether (ETBE)	ND	2.0	ug/L	12/10/2002 12:54	
tert-Amyl methyl ether (TAME)	ND	2.0	ug/L	12/10/2002 12:54	
1,2-DCA	ND	2.0	ug/L	12/10/2002 12:54	
EDB	ND	2.0	ug/L	12/10/2002 12:54	
Ethanol	ND	500	ug/L	12/10/2002 12:54	
Surrogates(s)					
1,2-Dichloroethane-d4	85.4	76-114	%	12/10/2002 12:54	
Toluene-d8	96.9	88-110	%	12/10/2002 12:54	

12/10/2002 17:50

Gas/BTEX Fuel Oxygenates by 8260B

Gettler Ryan

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Phone: (925) 551-7444 Fax: (925) 551-7899

Project: 180255.80
Tosco #4625

Received: 11/27/2002 13:25

Site: 3070 Fruitvale Ave.
Oakland, CA

Batch QC Report

Prep(s): 5030B

Test(s): 8260FAB

Laboratory Control Spike

Water

QC Batch # 2002/12/06-01-27

LCS: 2002/12/06-01-27-004

Extracted: 12/06/2002

Analyzed: 12/06/2002 11:04

LCSD: 2002/12/06-01-27-005

Extracted: 12/06/2002

Analyzed: 12/06/2002 11:30

Compound	Conc. ug/L		Exp. Conc.	Recovery		RPD %	Ctrl. Limits %		Flags	
	LCS	LCSD		LCS	LCSD		Rec.	RPD	LCS	LCSD
Benzene	25.4	25.3	25.0	101.6	101.2	0.4	69-129	20		
Toluene	24.8	25.1	25.0	99.2	100.4	1.2	70-130	20		
Methyl tert-butyl ether (MTBE)	23.3	24.4	25.0	93.2	97.6	4.6	65-165	20		
Surrogates(s)										
1,2-Dichloroethane-d4	428	420	500	85.6	84.0		76-114			
Toluene-d8	501	504	500	100.2	100.8		88-110			

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12/10/2002 17:50

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Gas/BTEX Fuel Oxygenates by 8260B

Gettler Ryan
Attn.: Deanna Harding

6747 Sierra Court Suite J
Dublin, CA 94568
Phone: (925) 551-7444 Fax: (925) 551-7899
Project: 180255.80
Tosco #4625

Received: 11/27/2002 13:25

Site: 3070 Fruitvale Ave.
Oakland, CA

Batch QC Report

Prep(s): 5030B Test(s): 8260FAB
Laboratory Control Spike Water QC Batch # 2002/12/09-01:27
LCS: 2002/12/09-01:27-004 Extracted: 12/09/2002 Analyzed: 12/09/2002 11:25
LCSD: 2002/12/09-01:27-005 Extracted: 12/09/2002 Analyzed: 12/09/2002 11:54

Compound	Conc. ug/L		Exp. Conc.	Recovery		RPD	Ctrl. Limits %		Flags	
	LCS	LCSD		LCS	LCSD		%	Rec	RPD	LCS
Benzene	24.9	25.4	25.0	99.6	101.6	2.0	69-129	20		
Toluene	24.5	24.7	25.0	98.0	98.8	0.8	70-130	20		
Methyl tert-butyl ether (MTBE)	23.9	27.3	25.0	95.6	109.2	13.3	65-165	20		
Surrogates(s)										
1,2-Dichloroethane-d4	424	431	500	84.8	86.2		76-114			
Toluene-d8	481	476	500	96.2	95.2		88-110			

Gas/BTEX Fuel Oxygenates by 8260B

Gettler Ryan

Attn.: Deanna Harding

6747 Sierra Court Suite J
Dublin, CA 94568
Phone: (925) 551-7444 Fax: (925) 551-7899

Project: 180255.80
Tosco #4625

Received: 11/27/2002 13:25

Site: 3070 Fruitvale Ave.
Oakland, CA

Batch QC Report

Prep(s): 5030B

Test(s): 8260FAB

Laboratory Control Spike

Water

QC Batch # 2002/12/10-01.27

LCS: 2002/12/10-01.27-004

Extracted: 12/10/2002

Analyzed: 12/10/2002 12:11

LCSD: 2002/12/10-01.27-005

Extracted: 12/10/2002

Analyzed: 12/10/2002 12:37

Compound	Conc. ug/L		Exp. Conc.	Recovery		RPD %	Ctrl. Limits %		Flags	
	LCS	LCSD		LCS	LCSD		Rec.	RPD	LOS	LCSD
Benzene	25.1	26.0	25.0	100.4	104.0	3.5	69-129	20		
Toluene	24.4	25.0	25.0	97.6	100.0	2.4	70-130	20		
Methyl tert-butyl ether (MTBE)	26.0	29.1	25.0	104.0	116.4	11.3	65-165	20		
Surrogates(s)										
1,2-Dichloroethane-d4	446	454	500	89.2	90.8		76-114			
Toluene-d8	481	492	500	96.2	98.4		88-110			

Gas/BTEX Fuel Oxygenates by 8260B

Gettler Ryan

Attn.: Deanna Harding

6747 Sierra Court Suite J

Dublin, CA 94568

Phone: (925) 551-7444 Fax: (925) 551-7899

Project: 180255.80

Tosco #4625

Received: 11/27/2002 13:25

Site: 3070 Fruitvale Ave.
Oakland, CA

Batch QC Report

Prep(s): 5030B Test(s): 8260FAB
 Matrix Spike (MS / MSD) Water QC Batch # 2002/12/09-01-27
 MW-6 -> MS Lab ID: 2002-11-0628-007
 MS: 2002/12/09-01-27-015 Extracted: 12/09/2002 Analyzed: 12/09/2002 15:39
 Dilution: 1.00
 MSD: 2002/12/09-01-27-016 Extracted: 12/09/2002 Analyzed: 12/09/2002 16:01
 Dilution: 1.00

Compound	Conc. ug/L		Spk Level ug/L	Recovery			Limits %		Flags		
	MS	MSD		Sample	MS	MSD	RPD	Rec.	RPD	MS	MSD
Benzene	31000	0.1	ND	25.0	12400	0.4	200.	69-129	20	msl	msl
Toluene	ND		0.500	25.0	*			70-130	20	msl	
Methyl tert-butyl ether	442	38.7	403	25.0	156.0	-1457.	-248	65-165	20		msl
Surrogate(s)				500	82.1	82.7		76-114			
1,2-Dichloroethane-d4	410	413		500	97.8	97.3		88-110			
Toluene-d8	469	487									

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Tel 925 484 1919 Fax 925 484 1096 * www.stl-inc.com * CA DHS ELAP# 2496

12/10/2002 17:50

Page 15 of 15

2002-11-0628

7050
 Gettler-Ryan Inc., Chain-of-Custod

Tosca Corp./ Phillips 66 Co. 2000 Crow Canyon Place Suite 400 San Ramon, CA 94583	Facility Number	#4625	Laboratory Name	STL - PLEASANTON, CA
	Facility Address	3070 FRUITVALE AVE., OAKLAND, CA	Consultant	GETTLER-RYAN, INC. DEANNA L. HARDING
	Global ID	TD60D102156	Project	180255.80
	Client Contact	MR. DAVID B. DEWITT	Address	6747 SIERRA CT., SUITE J, DUBLIN CA 94568
	Phone	(925) 277-2384	Phone	(925) 551-7555 Fax (925) 551-7899
			Sample Collected by	G. Rogev

SAMPLE ID	Number of Containers Matrix	S - Soil W - Water A - Air C - Charcoal	Sample Preservation	Date/Time (2400 Hrs)	TPH-GAS/ETEX/MTBE EPA 8015/8021B	TPH-DIESEL EPA 8015	TPH-DIESEL w/SILICO gm EPA 8015	TPH-GAS EPA 8015	TPH-GAS/ETEX/MTBE EPA 8260	OXYGENATES EPA 8260	METHANOL EPA 8015	TOTAL OIL & GREASE EPA 8620	METALS Cd, Cr, Pb, Zn, Ni	NITRATE/SULFATE/ALKALINITY EPA 300 SERIES	HYDROCS (8010) EPA 8021B	VOC'S (8240) EPA 8260	SVOC'S EPA 8270	Total Chromium	Remarks
QA	1	W	HCL	11-26-02					✓										Run 8 Oxy's by 8260 on all 8260 MTBE hits. When not
MW-1	3	W	HCL	0635					✓										Remaining Oxy's
MW-2	3	W	HCL	0720					✓										
MW-3	11	W		1110		✓			✓		✓					✓	✓	✓	
MW-4	3	W	HCL	1025					✓										
MW-5	3	W	HCL	0930					✓	✓									
MW-6	3	W	HCL	0835					✓	✓									

- OXYGENATES 8260
- 1 - MTBE
 - 2 - TBA
 - 3 - TAME
 - 4 - OIPE
 - 5 - ETBE
 - 6 - 1,2-DCA
 - 7 - EDB
 - 8 - ETHANOL

Relinquished By (Signature)	Organization	Date/Time	Received By (Signature)	Organization	Date/Time	Ised Y/N	Turn Around Time (Circle Choice) 24 Hrs. 48 Hrs. 72 Hrs. 5 Days 10 Days AS Contracted
<i>[Signature]</i>	Gettler-Ryan	11/26/02 1330	<i>[Signature]</i>				
Relinquished By (Signature)	Organization	Date/Time	Received By (Signature)	Organization	Date/Time	Ised Y/N	
Relinquished By (Signature)	Organization	Date/Time	Received For Laboratory By (Signature)		Date/Time	Ised Y/N	
			<i>[Signature]</i>		11-27-02	1325	

APPENDIX B

TRC 2006 *HydroPunch Groundwater Investigation Report*



76 Broadway
Sacramento, California 95818

April 14, 2006

Mr. Don Hwang
Alameda County Health Agency
1131 Harbor Bay Parkway
Alameda, California 94502

Re: **Report Transmittal**
Hydropunch Groundwater Investigation Report
76 Service Station# 4625
3070 Fruitvale
Oakland, CA

Dear Mr. Hwang:

I declare under penalty of perjury that to the best of my knowledge the information and/or recommendations contained in the attached report is/are true and correct.

If you have any questions or need additional information, please contact

Shelby S. Lathrop (Contractor)
ConocoPhillips
Risk Management & Remediation
76 Broadway
Sacramento, CA 95818
Phone: 916-558-7609
Fax: 916-558-7639

Sincerely,

A handwritten signature in black ink that reads "Thomas H. Kosel".

Thomas Kosel
Risk Management & Remediation

Attachment

TRC
Customer-Focused Solutions

April 14, 2006

TRC Project No. 42014506

Mr. Don Hwang
Hazardous Materials Specialist
Alameda County Health Care Services Agency
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502-6577

SITE: 76 SERVICE STATION NO. 4625
3070 FRUITVALE AVENUE
OAKLAND, CALIFORNIA

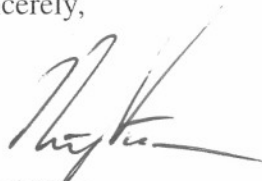
RE: HYDROPUNCH GROUNDWATER INVESTIGATION REPORT

Dear Ms. Hwang:

On behalf of ConocoPhillips, TRC submits this report for additional site assessment at 76 Service Station No. 4625, located at 3070 Fruitvale Avenue in Oakland, California (Figure 1). This work was performed in accordance to a request by Alameda County Health Care Services (ACHCS) to ConocoPhillips.

Please call Keith Woodburne at (925) 688-2488 if you have any questions regarding this report.

Sincerely,



Niraj Vora
Staff Engineer



Keith Woodburne, R.G.
Senior Project Geologist

Enclosure

cc: Shelby Lathrop, ConocoPhillips (electronic upload only)

HYDOPUNCH GROUNDWATER INVESTIGATION REPORT

April 14, 2006
76 Service Station No. 4625
3070 Fruitvale Avenue
Oakland, California

TRC Project No. 42-0145-06

Prepared For:

ConocoPhillips Company
57 Broadway
Sacramento, California 94818

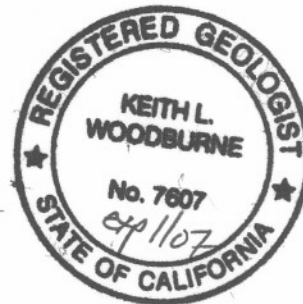
By:



Niraj Vora
Staff Engineer



Keith Woodburne P.G.
Senior Project Geologist



TRC
1590 Solano Way
Concord, California
(925) 688-1200

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2.0 SITE DESCRIPTION	2
2.1 GEOLOGY AND HYDROGEOLOGY	3
3.0 SITE BACKGROUND	3
4.0 SITE INVESTIGATION ACTIVITIES.....	4
4.1 PRE-FIELD ACTIVITIES	4
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4.3 ANALYTICAL RESULTS.....	5
5.0 CONCLUSIONS AND RECOMMENDATIONS	5

Figures

- 1 Vicinity Map
- 2 Site Plan Showing CPT Borings and Proposed Well Locations

Tables

- 1 Grab Groundwater Analytical Results

Appendices

- A CPT Site Investigation Report (Gregg Drilling)
- B Laboratory Reports and Chains of Custody

Hydropunch Groundwater Investigation Report

76 Service Station 4625

April 14, 2005

1.0 INTRODUCTION

On behalf of ConocoPhillips, TRC submits this report for additional site assessment at 76 Service Station No. 4625, located at 3070 Fruitvale Avenue in Oakland, California (Figure 1). This work was performed in accordance with the Additional Groundwater Investigation Work Plan approved by the Alameda County Health Care Services Agency (ACHCS) on December 16, 2005.

The objective of this assessment was 1) to characterize the downgradient extent of dissolved-phase hydrocarbons in the shallow water-bearing zone and 2) to assess the potential impacts to deeper water-bearing zones beneath and downgradient from the site, if present.

The scope of work for this assessment involved the following:

- Advancement of onsite exploratory borings at two locations to evaluate the presence of deeper water-bearing zones and collect depth-discrete grab groundwater samples using a Cone Penetrometer Testing (CPT) rig equipped with a hydropunch sampling device.
- Advancement of offsite exploratory borings at five locations to evaluate the presence of any shallow and/or deep water-bearing zones and collect depth-discrete grab groundwater samples using a CPT rig equipped with a hydropunch sampling device.
- Submittal of depth-discrete grab groundwater samples for analysis at a state-certified laboratory for analysis.
- Evaluate groundwater data to determine the lateral and vertical extent of groundwater impacts and determine if additional monitoring wells are required to better define the dissolved-phase hydrocarbon plume.

This report documents the hydropunch groundwater investigation completed between February 28 and March 3, 2006.

2.0 SITE DESCRIPTION

The site is an operating service station located on the southeast corner of Fruitvale Avenue and School Street in Oakland, California (Figure 2). The current site facilities include a station building with two automotive service bays equipped with hydraulic lifts, four dispenser islands and two canopies, two 12,000-gallon double-wall fiberglass gasoline underground storage tanks (USTs), and one above ground waste-oil tank.

Six groundwater monitoring wells and one UST observation well are present at the site.

Hydropunch Groundwater Investigation Report

76 Service Station 4625

April 14, 2005

2.1 Geology and Hydrogeology

The site is located on the western flank of the Oakland Hills in an area underlain by Holocene age alluvium. The alluvial deposits are composed of unconsolidated, moderately sorted, permeable silt with coarse sand and gravel. The northwest trending Hayward fault is located approximately 1,500 feet northeast of the site (Helley, 1979). The nearest surface waters are Sausal Creek, located approximately 500 feet west of the site, and Peralta Creek, located 2,300 feet southeast of the site. Additionally, East Bay Municipal Utility District's Central Reservoir is located approximately 1,300 feet west of the site.

In general, subsurface soils are composed of clay and silt to depths of approximately 9 to 19 feet below ground surface (fbg), underlain by gravel with varying amounts of clay and sand to depths of approximately 18 to 22 fbg, which in turn is underlain by clay and silt to 25 fbg, the maximum depth explored. The exception was well boring MW-1, in which only clay was encountered to 25 fbg (Gettler-Ryan Inc., 2003).

3.0 SITE BACKGROUND

The site is currently an active service station located on the southeast corner of Fruitvale Avenue and School Street in Oakland, California.

April/May 1998: The gasoline underground storage tanks (USTs), product piping and dispensers were removed and replaced. Concentrations of total petroleum hydrocarbons as gasoline (TPH-g), benzene, and methyl tertiary butyl ether (MTBE) ranged from non-detect to moderate.

May 1998: A waste oil UST and associated piping was removed. Concentrations of TPH-g, benzene, total petroleum hydrocarbons as diesel (TPH-d), total oil and grease (TOG), volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs) and metals ranged from non-detect to moderate.

A total of approximately 1,166 tons of soil were over excavated and transported from the site to Allied Waste's Forward Landfill in Manteca, California. Additionally, 40,000 gallons of groundwater were pumped from the UST pit and transported to the Tosco Refinery in Rodeo, California for disposal. A conductor casing was installed in the backfill during installation of the replacement gasoline USTs. The waste oil tank was replaced with an aboveground tank.

April 2000: Four monitoring wells were installed at the site.

May 2003: Two monitoring wells were installed to a depth of 25 feet below grade (fbg) and two exploratory borings were advanced to approximately 15 fbg. Soil samples contained concentrations of benzene, MTBE, and tertiary butyl alcohol (TBA), and TPH-g. Grab

Hydropunch Groundwater Investigation Report

76 Service Station 4625

April 14, 2005

groundwater samples collected from the two soil borings were reported to contain elevated concentrations of petroleum hydrocarbons in both samples.

October 2003: Site environmental consulting responsibilities were transferred to TRC.

4.0 SITE INVESTIGATION ACTIVITIES

TRC contracted Gregg In Situ, Inc. of Martinez, California (Gregg) to advance exploratory borings at two onsite and five offsite locations using a CPT rig for the purpose of assessing the lateral and downgradient extent of dissolved-phase hydrocarbons, as well as benzene, toluene, ethyl benzene, and total xylenes (BTEX), methyl tertiary butyl ether (MTBE), and other selected VOCs in groundwater. Boring locations are shown in Figure 2.

4.1 Pre-Field Activities

Underground Services Alert (USA) was notified at least two days prior to field activities to mark underground utilities near proposed boring locations. In addition, a private utility locating service was contracted to check and clear proposed boring locations prior to drilling. Drilling permits were obtained from Alameda County Public Works and an Excavation permit was obtained from the City of Oakland for drilling offsite borings along the sidewalk, west of Fruitvale Avenue (Figure 2).

A site and job specific health and safety plan was prepared for the site that promotes personnel safety and preparedness during the planned field activities. Prior to beginning field activities each day, a "tailgate" safety meeting was conducted with all exclusion zone workers to discuss the health and safety issues and concerns related to the specific scope of work. A copy of the health and safety plan was maintained onsite throughout the field investigation.

4.2 Hydropunch Groundwater Investigation

Three onsite and seven offsite grab groundwater samples were collected during this investigation using the CPT rig. At each of the boring locations three separate co-located borings were advanced. The first boring at each location was advanced to total depth of 50 fbg to determine soil behavior type using the integrated electronic cone system of the CPT rig. Data obtained from the initial logging run was then used to identify potential shallow and deep water-bearing zones for subsequent hydropunch groundwater sampling. The second and third co-located borings were advanced to the desired depths determined from analysis of the stratigraphic soil behavior logs (Appendix A). The use of separate co-located borings for each depth-discrete groundwater sample prevents the potential for cross-contamination during boring advancement.

Hydropunch Groundwater Investigation Report

76 Service Station 4625

April 14, 2005

Hydropunch groundwater samples were attempted at two potential water-bearing zones identified at depths of between 15 and 23 fbg (shallow zone) and 35 and 46 fbg (deeper zone). Hydropunch groundwater samples were obtained from the shallow zone at each of the seven boring location (CPT-1 through CPT-7); however, groundwater samples were only obtained from the deeper zone at three boring locations (onsite boring CPT-1 and offsite borings CPT-3 and CPT-5).

Three onsite and seven offsite grab groundwater samples were submitted to a State-certified laboratory for analysis. Groundwater samples were analyzed for total purgeable petroleum hydrocarbons (TPPH), BTEX, and fuel oxygenates including MTBE and ethanol by Method 8260B.

4.3 Analytical Results

TPPH, BTEX compounds and MTBE were detected in both the shallow (17-20 fbg) and deep (41-46 fbg) zones at boring location CPT-1. TPPH, benzene, and MTBE were detected in the shallow zone at concentrations of 4,700 µg/L, 29 µg/L, and 160 µg/L, respectively. TPPH, benzene, and MTBE were also detected in the deeper zone at concentrations of 1,800 µg/L, 52 µg/L, and 25 µg/L, respectively. MTBE was also detected in the shallow zone at boring location CPT-2 (19-22 fbg) at a concentration of 850 µg/L.

No petroleum hydrocarbons or fuel oxygenates were detected in hydropunch groundwater samples from the shallow or deep zone in any of the offsite borings (CPT-3 through CPT-7).

Analytical results of the depth-discrete grab groundwater samples are presented in Table 1. Copies of the laboratory analytical reports and chains of custody are provided in Appendix B.

5.0 CONCLUSIONS AND RECOMMENDATIONS

The concentrations of TPPH, BTEX compounds, and MTBE in the shallow hydropunch groundwater samples collected in onsite boring CPT-1 and CPT-2 are higher than concentrations observed historically in onsite monitoring wells. Higher concentrations are often reported in grab groundwater samples than would typically be reported from fully developed monitoring well samples. However, the presence of groundwater impacts at the two onsite boring locations is consistent with the overall plume as defined by the current monitoring well network.

The absence of petroleum hydrocarbons or fuel oxygenates in the shallow and deeper groundwater in offsite borings along the west side of Fruitvale Avenue indicate impacted groundwater onsite has not migrated offsite and is localized within the current onsite monitoring well network.

Hydropunch Groundwater Investigation Report

76 Service Station 4625

April 14, 2005

Although hydropunch groundwater samples were collected from the deeper zone at three separate locations, groundwater recovery in the deeper zone was very slow. At onsite boring location CPT-1, the sample required the hydropunch screen to remain open for over two hours, increasing the potential for downward migration of shallow groundwater along the drill rods. In addition, no groundwater was recovered from the second onsite hydropunch sample attempted at CPT-2, even after a lengthy waiting period. Groundwater samples were obtained from the deep zone in offsite borings CPT-3 and CPT-5; however, both samples required a recharge period of two hours in order to obtain sufficient sample volume. No petroleum hydrocarbons or fuel oxygenates were detected in either deep sample from the offsite borings, indicating that groundwater impacts to the deeper zone are localized onsite and do not likely extend offsite, especially given the extremely low recharge rate observed in all deep hydropunch borings.

In order to confirm the presence of groundwater impacts to the deeper zone onsite, and to provide future downgradient monitoring within the shallow water-bearing zone, TRC recommends that one onsite well be installed into the deeper zone and two offsite monitoring wells be installed on the sidewalk along the east side of Fruitvale Avenue within the shallow water-bearing zone. The onsite deep well will provide additional data on possible groundwater impacts to the deeper zone beneath the site identified between approximately 40 to 46 fbg. The two shallow offsite wells will allow for future downgradient groundwater monitoring within the shallow water-bearing zone beneath the site. The proposed well locations are shown on Figure 2.

FIGURES



1 MILE 3/4 1/2 1/4 0 1 MILE



SCALE 1 : 24,000



SOURCE:

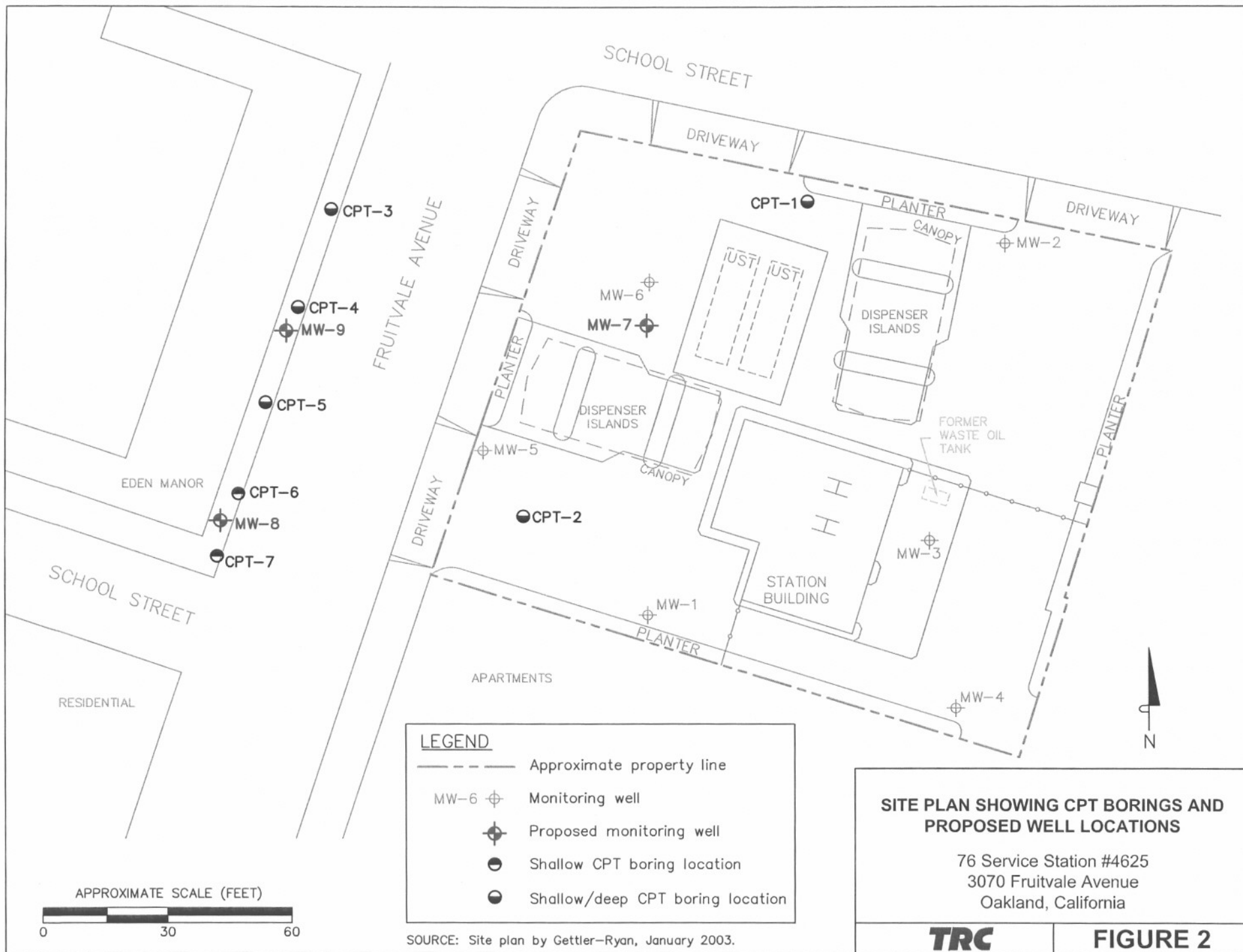
United States Geological Survey
7.5 Minute Topographic Maps:
Oakland East Quadrangle
California

VICINITY MAP

76 Service Station #4625
3070 Fruitvale Avenue
Oakland, California

TRC

FIGURE 1



SOURCE: Site plan by Gettler-Ryan, January 2003.

TABLES

Table 1
GRAB GROUNDWATER ANALYTICAL RESULTS*
76 Station #4625
3070 Fruitvale Avenue, Oakland, CA

Sample ID	Date Sampled	Sample Interval (fbg)	TPPH (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	TAME (µg/L)	TBA (µg/L)	DIPE (µg/L)	EDB (µg/L)	ETBE (µg/L)	1,2-DCA (µg/L)	Ethanol (µg/L)
CPT-1 @ 17'	2/28/2006	17-20	4,700	29	140	110	470	160	<2.5	<25	<5.0	<2.5	2.5	<2.5	<500
CPT-1 @ 41'	2/28/2006	41-46	1,800	52	170	64	320	25	<0.50	<0.50	<1.0	<0.50	<0.50	<0.50	<100
CPT-2 @ 19'	2/28/2006	19-22	<500	<0.50	0.82	<0.50	2.1	850	<0.50	<1.0	<0.50	<0.50	<0.50	<0.50	<100
CPT-3 @ 17'	3/1/2006	17-20	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<0.50	<5.0	<1.0	<0.50	<0.50	<0.50	<100
CPT-3 @ 36'	3/1/2006	36-41	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<0.50	<5.0	<1.0	<0.50	<0.50	<0.50	<100
CPT-4 @ 18'	3/1/2006	18-19	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<0.50	<5.0	<1.0	<0.50	<0.50	<0.50	<100
CPT-5 @ 16'	3/2/2006	16-17	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<0.50	<5.0	<1.0	<0.50	<0.50	<0.50	<100
CPT-5 @ 35'	3/2/2006	35-40	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<0.50	<5.0	<1.0	<0.50	<0.50	<0.50	<100
CPT-6 @ 18'	3/2/2006	18-20	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<0.50	<5.0	<1.0	<0.50	<0.50	<0.50	<100
CPT-7 @ 19'	3/3/2006	19-21	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<0.50	<5.0	<1.0	<0.50	<0.50	<0.50	<100

Notes:

* = all constituents analyzed by EPA method 8260B
 TPPH = total purgable petroleum hydrocarbons (C6-C12)
 MTBE = methyl tertiary butyl ether
 TAME = tertiary amyl methyl ether
 ETBE = ethyl tertiary butyl ether
 TBA = tertiary butyl alcohol

DIPE = di-isopropyl ether
 EDB = ethylene dibromide
 1,2-DCA = 1,2-dichloroethane
 (µg/L) = micrograms per liter
 fbg = feet below grade

APPENDIX A

**CPT SITE INVESTIGATION REPORT
(GREGG DRILLING)**



GREGG DRILLING AND TESTING, INC.

ENVIRONMENTAL AND GEOTECHNICAL INVESTIGATION SERVICES

March 7, 2006

TRC

Attn: Niraj Vora
1590 Solano Way, Suite A
Concord, California 94520

Subject: CPT Site Investigation
76 Station #4625
Oakland, California
GREGG Project Number: 06-076MA

Dear Mr. Vora:

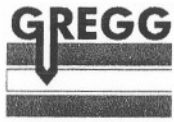
The following report presents the results of GREGG Drilling & Testing's Cone Penetration Test investigation for the above referenced site. The following testing services were performed:

1	Cone Penetration Tests	(CPTU)	<input checked="" type="checkbox"/>
2	Pore Pressure Dissipation Tests	(PPD)	<input checked="" type="checkbox"/>
3	Seismic Cone Penetration Tests	(SCPTU)	<input type="checkbox"/>
4	Resistivity Cone Penetration Tests	(RCPTU)	<input type="checkbox"/>
5	UVIF Cone Penetration Tests	(UVIFCPTU)	<input type="checkbox"/>
6	Groundwater Sampling	(GWS)	<input checked="" type="checkbox"/>
7	Soil Sampling	(SS)	<input type="checkbox"/>
8	Vapor Sampling	(VS)	<input type="checkbox"/>
9	Vane Shear Testing	(VST)	<input type="checkbox"/>
10	SPT Energy Calibration	(SPTC)	<input type="checkbox"/>

A list of reference papers providing additional background on the specific tests conducted is provided in the bibliography following the text of the report. If you would like a copy of any of these publications or should you have any questions or comments regarding the contents of this report, please do not hesitate to contact our office at (925) 313-5800.

Sincerely,
GREGG Drilling & Testing, Inc.

Mary Walden
Operations Manager



GREGG DRILLING AND TESTING, INC.

ENVIRONMENTAL AND GEOTECHNICAL INVESTIGATION SERVICES

Cone Penetration Test Sounding Summary

-Table 1-

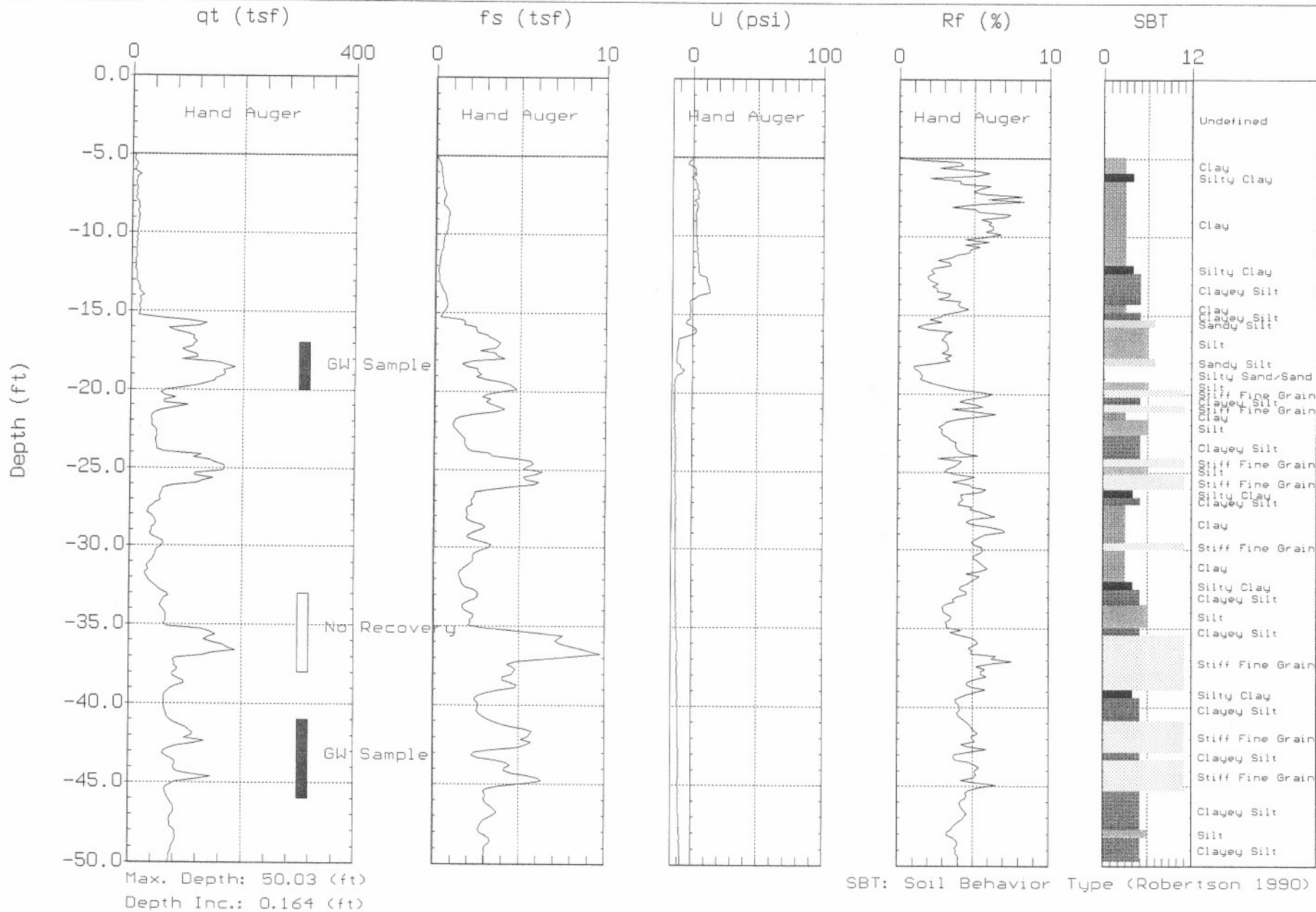
CPT Sounding Identification	Date	Termination Depth (Feet)	Depth of Groundwater Samples (Feet)	Depth of Soil Samples (Feet)	Depth of Pore Pressure Dissipation Tests (Feet)
CPT-01	2/28/06	50	20, 38NR, 46NR	-	15.6
CPT-02	2/28/06	50	22, 32NR, 42NR	-	40.0
CPT-03	3/01/06	50	20, 41	-	-
CPT-04	3/01/06	50	19, 42NR	-	-
CPT-05	3/01/06	50	17, 40	-	-
CPT-06	3/02/06	50	21, 45NR	-	-
CPT-07	3/03/06	50	21, 45NR	-	-
			19, 40NR	-	-



TRC

Site: 76 STATION #4625
Location: CPT-1

Engineer: N. UORA
Date: 02:28:06 10:17

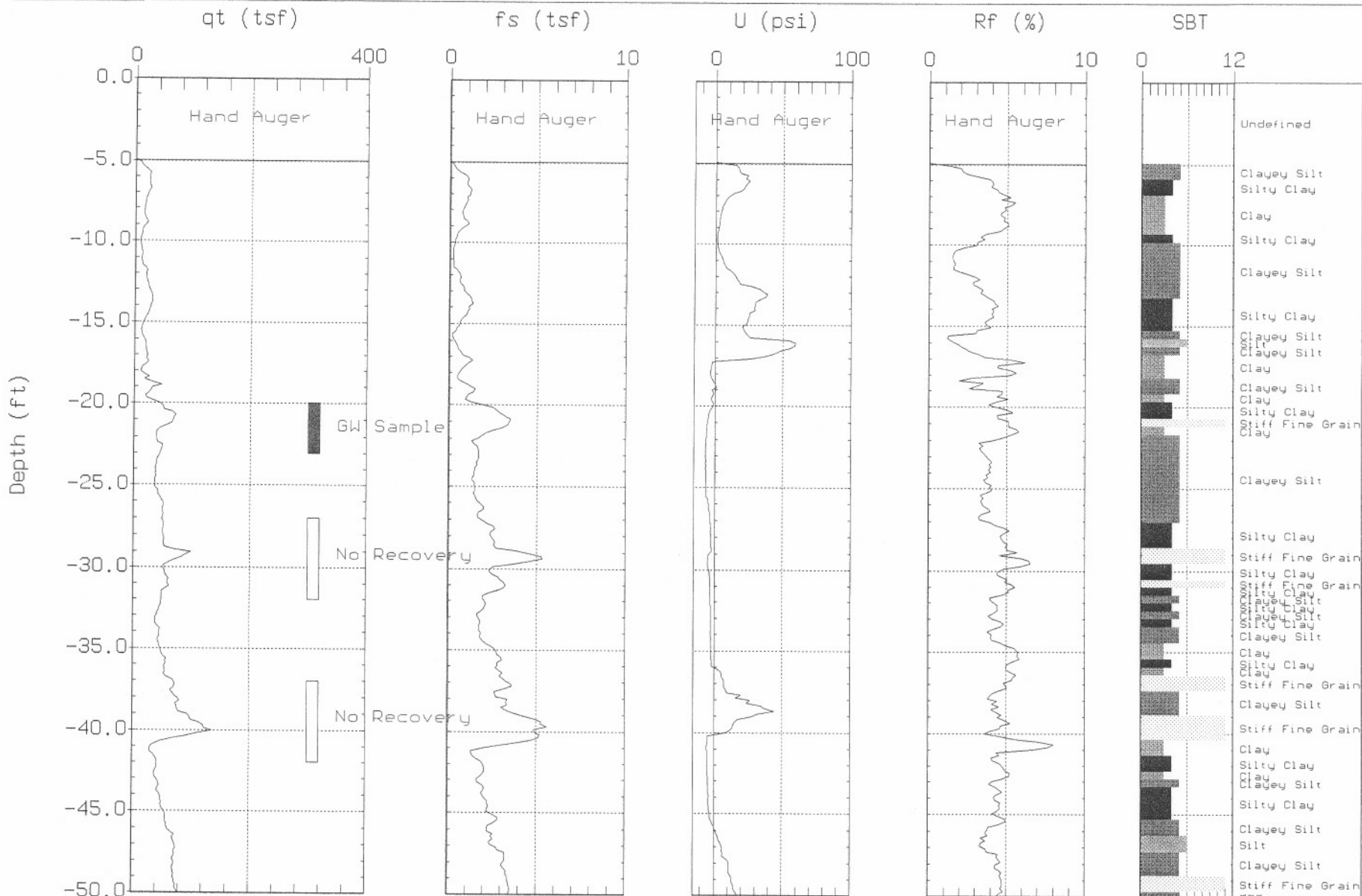




TRC

Site: 76 STATION #4625
Location: CPT-2

Engineer: N. VORA
Date: 02:28:06 14:38



Max. Depth: 50.20 (ft)
Depth Inc.: 0.164 (ft)

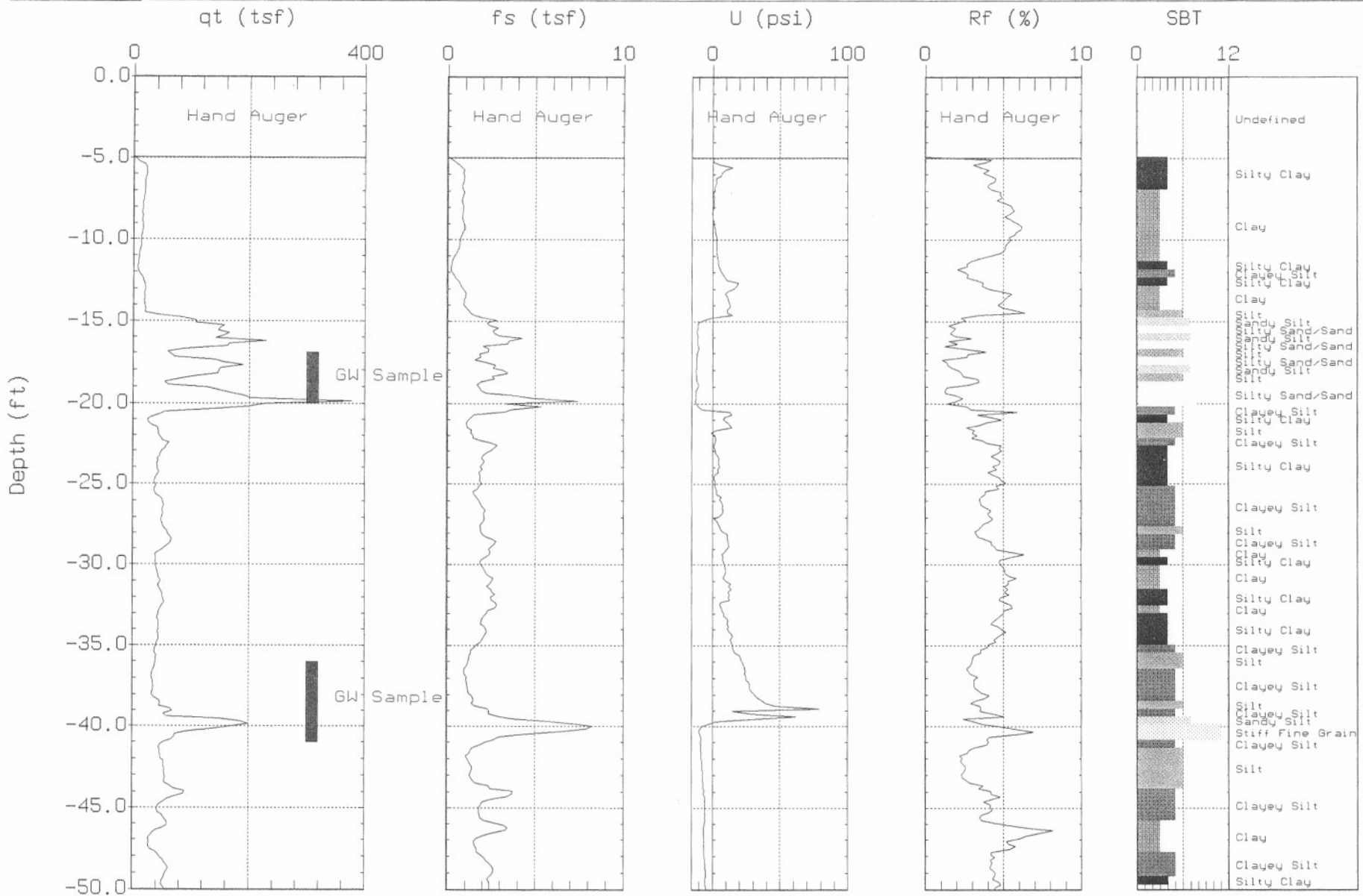
SBT: Soil Behavior Type (Robertson 1990)



TRC

Site: 76 STATION #4625
Location: CPT-3

Engineer: N.VORA
Date: 03:01:06 10:38



Max. Depth: 50.03 (ft)
Depth Inc.: 0.164 (ft)

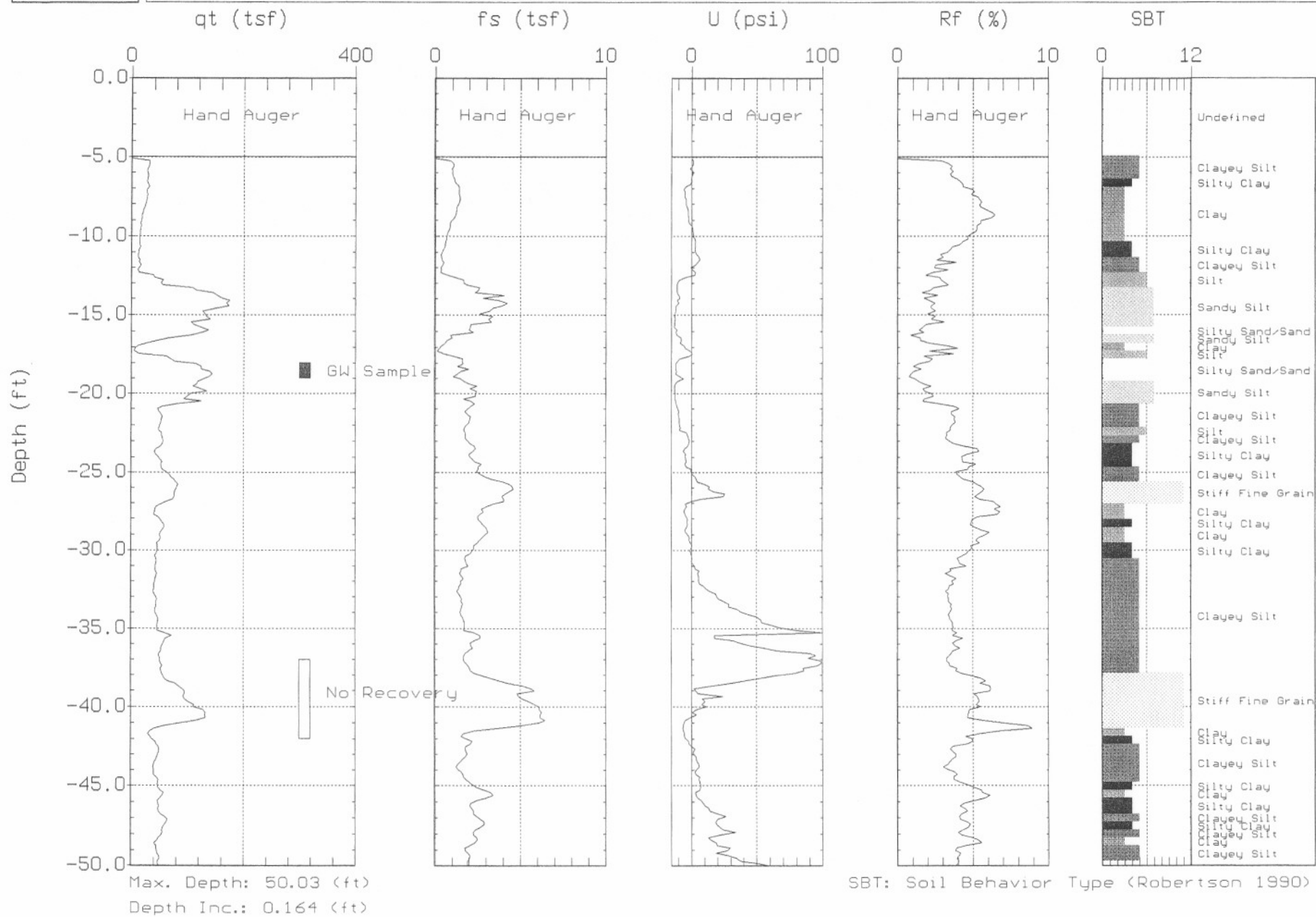
SBT: Soil Behavior Type (Robertson 1990)



TRC

Site: 76 STATION #4625
Location: CPT-4

Engineer: N.UORA
Date: 03:01:06 13:27

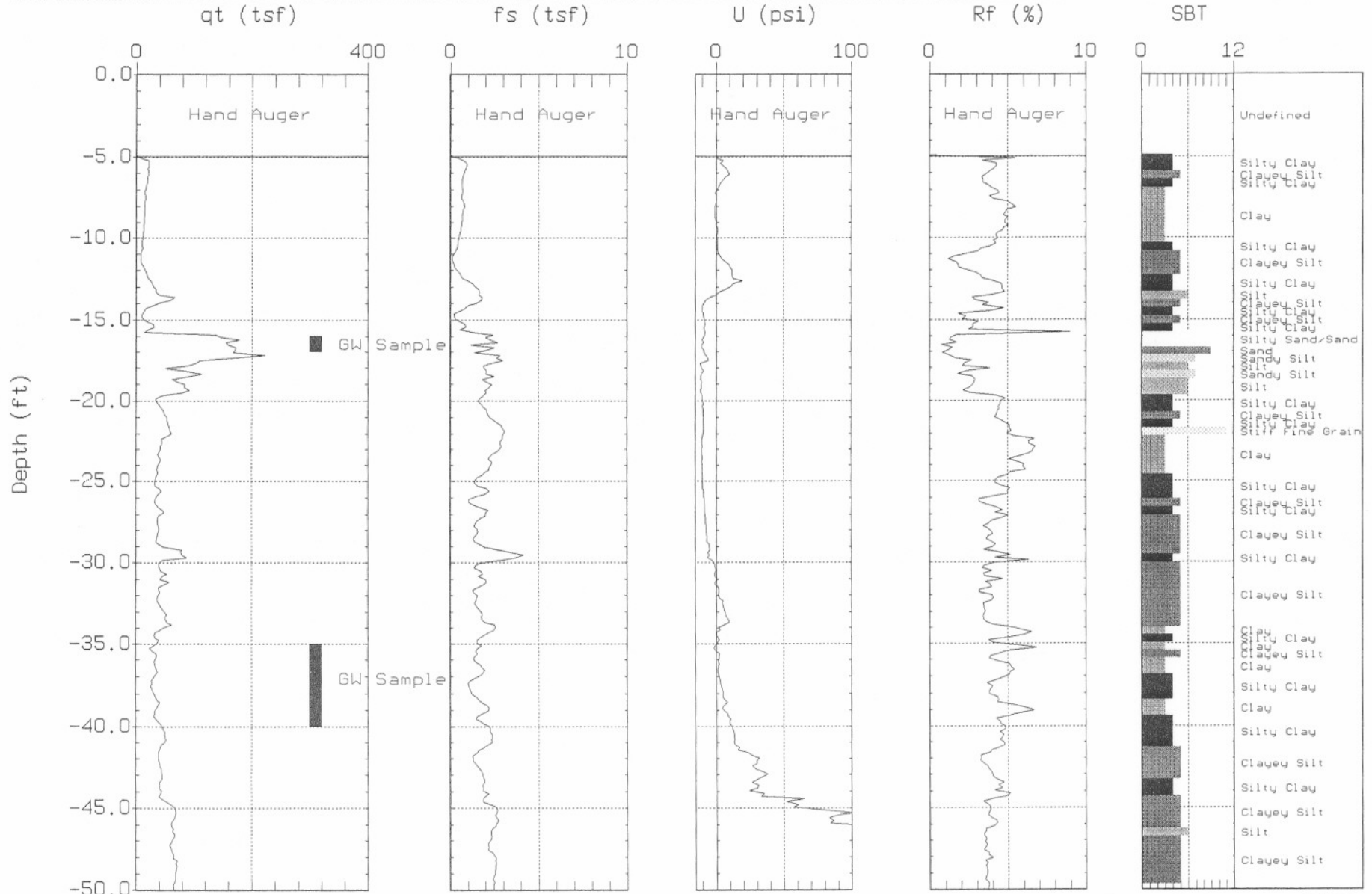




TRC

Site: 76 STATION #4625
Location: CPT-5

Engineer: N.UORA
Date: 03:01:06 16:39



Max. Depth: 50.03 (ft)
Depth Inc.: 0.164 (ft)

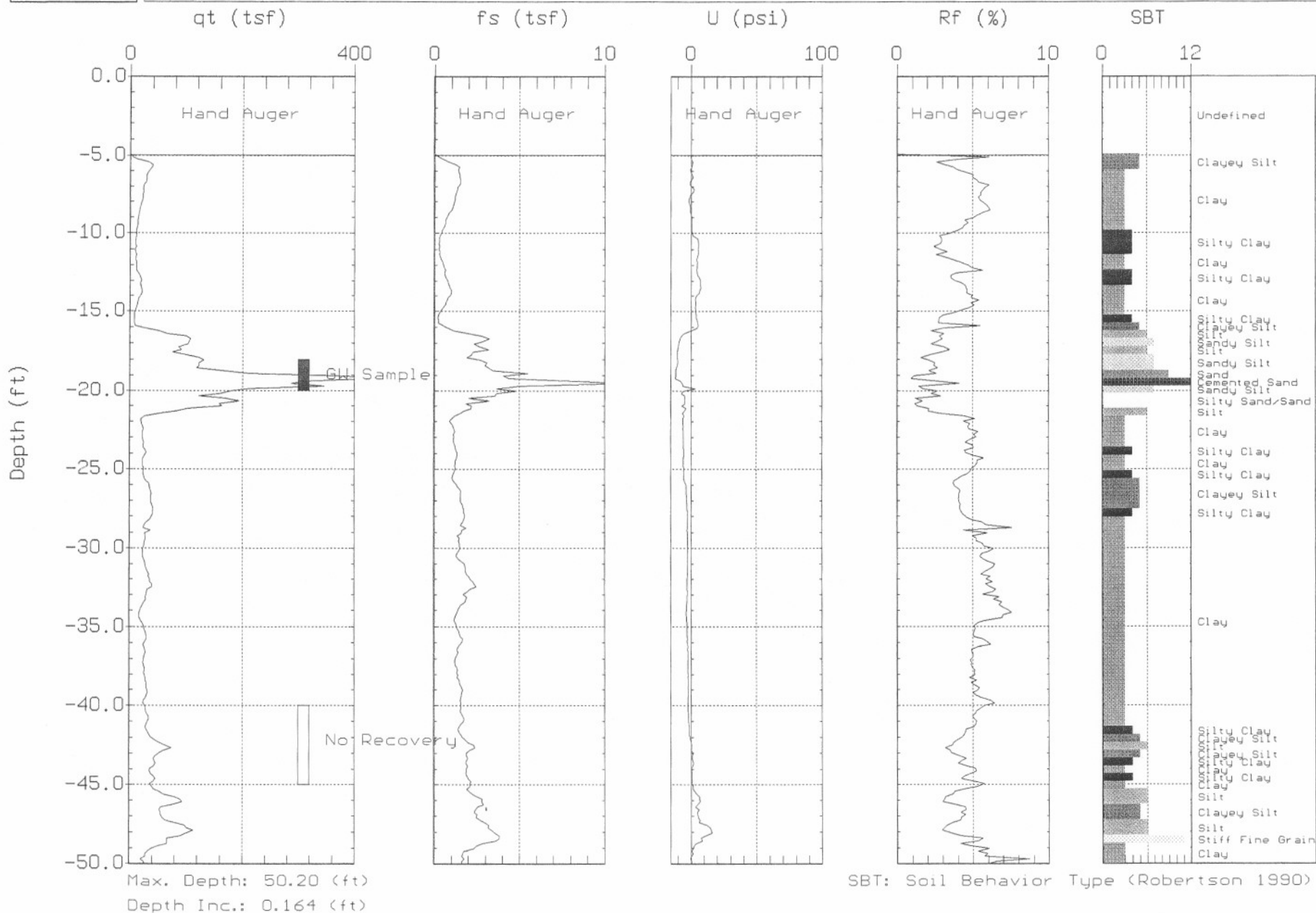
SBT: Soil Behavior Type (Robertson 1990)



TRC

Site: 76 STATION #4625
Location: CPT-06

Engineer: N.VORA
Date: 03/02/06 13:01

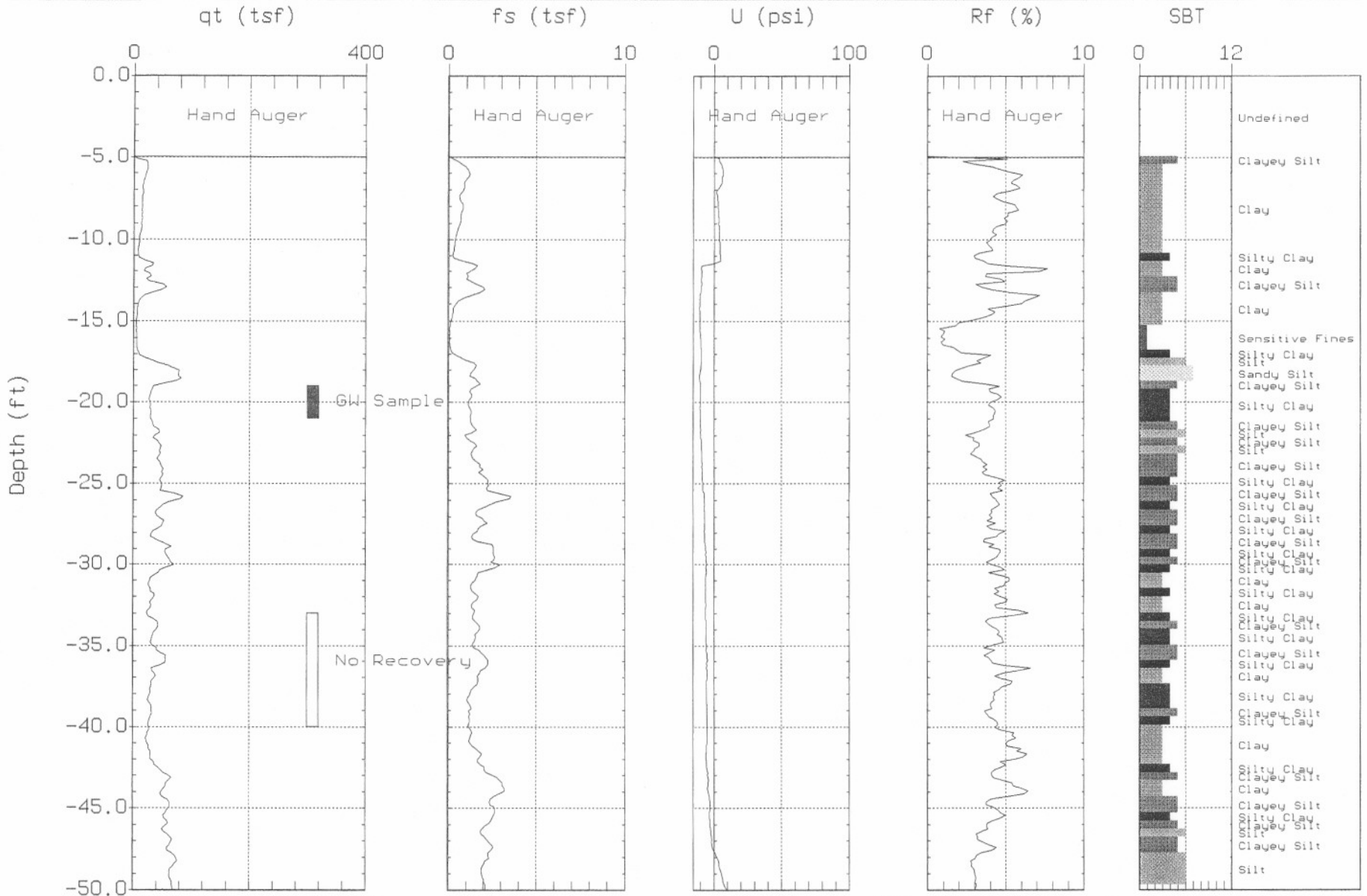




TRC

Site: 76 STATION #4625
Location: CPT-7

Engineer: N. VORA
Date: 03:03:06 09:20



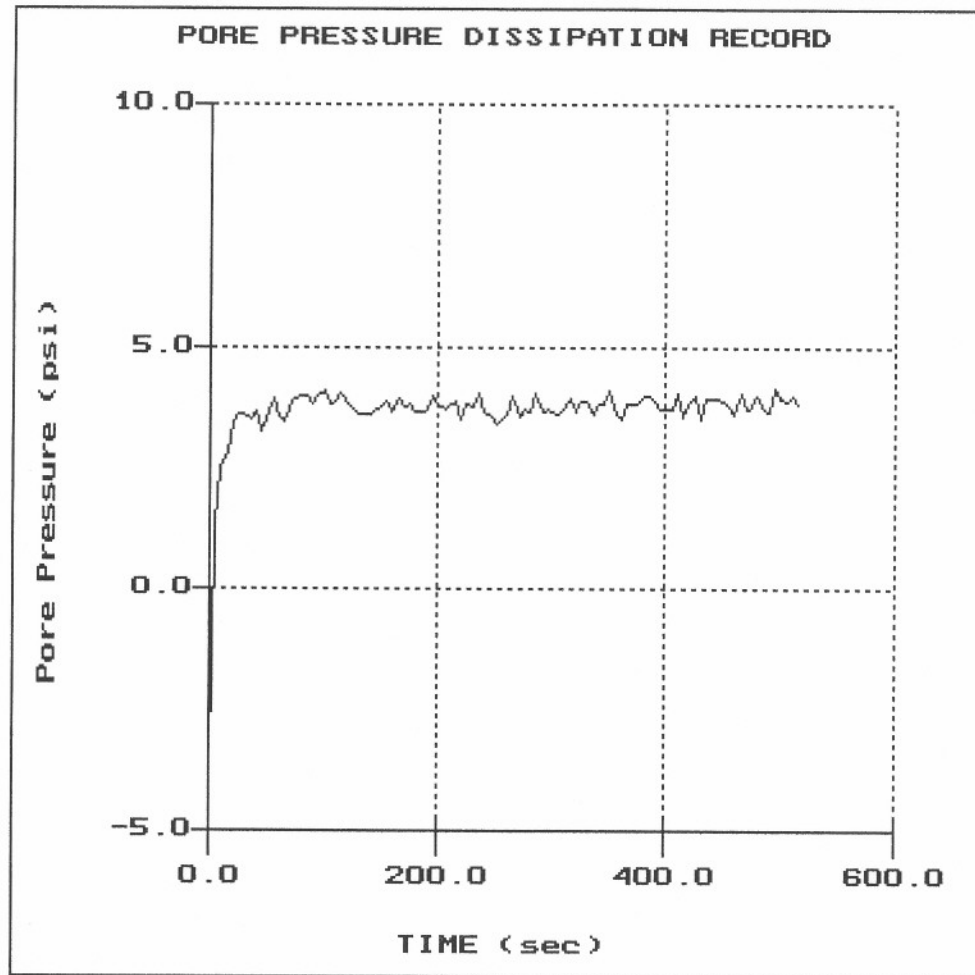
Max. Depth: 50.03 (ft)
Depth Inc.: 0.164 (ft)

SBT: Soil Behavior Type (Robertson 1990)

TRC

Site: 76 STATION #4625
Location: CPT-1

Engineer: N. UORA
Date: 02:28:06 10:17

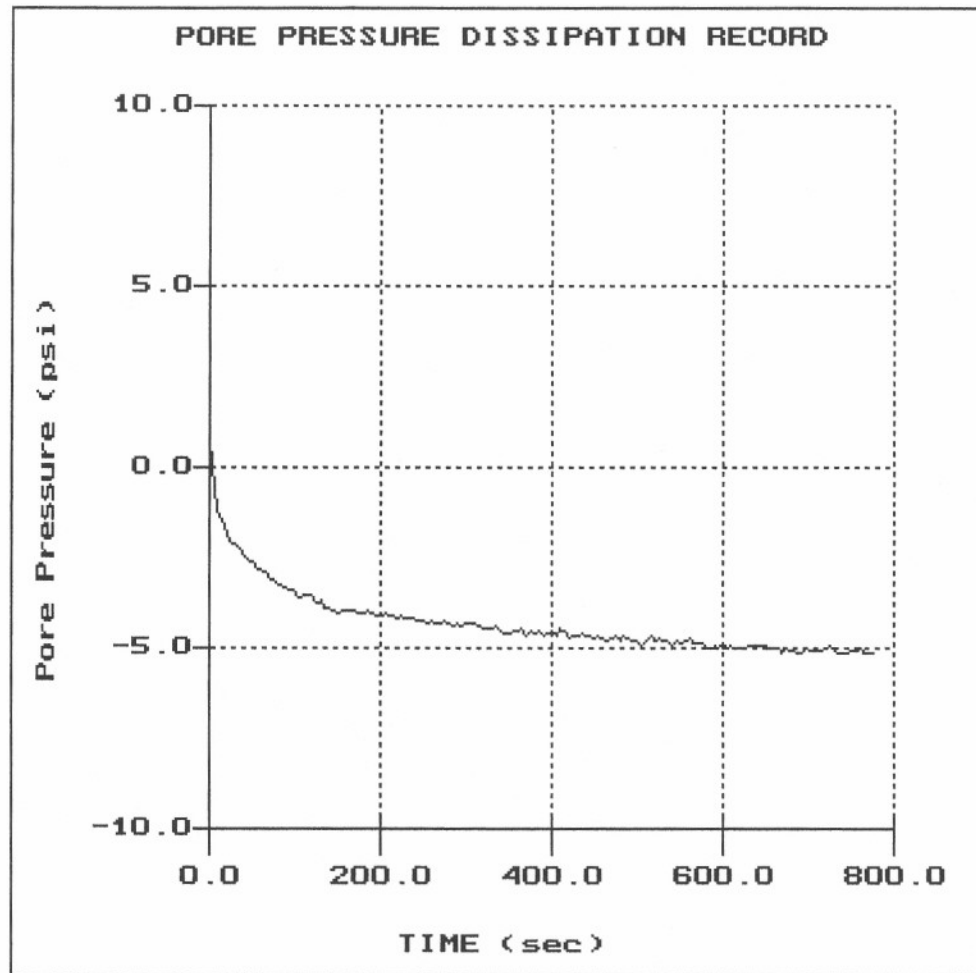


File: 076C01.PPC
Depth (m): 4.75
(ft): 15.58
Duration : 515.0s
U-min: -3.93 0.0s
U-max: 4.15 495.0s

TRC

Site: 76 STATION #4625
Location: CPT-2

Engineer: N. VOORA
Date: 02:28:06 14:38



File: 076002.PPC
Depth (m): 12.20
 (ft): 40.03
Duration : 775.0s
U-min: -5.15 735.0s
U-max: 0.79 0.0s



Bibliography

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Mayne, P.W., "NHI (2002) Manual on Subsurface Investigations: Geotechnical Site Characterization", available through www.ce.gatech.edu/~geosys/Faculty/Mayne/papers/index.html, Section 5.3, pp. 107-112.

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Robertson, P.K., Sully, J., Woeller, D.J., Lunne, T., Powell, J.J.M., and Gillespie, D.J., "Guidelines for Estimating Consolidation Parameters in Soils from Piezocone Tests", Canadian Geotechnical Journal, Vol. 29, No. 4, August 1992, pp. 539-550.

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DeGroot, D.J. and A.J. Lutenegeger, "Reliability of Soil Gas Sampling and Characterization Techniques", International Site Characterization Conference - Atlanta, 1998.

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Zemo, D.A., T.A. Delfino, J.D. Gallinatti, V.A. Baker and L.R. Hilpert, "Field Comparison of Analytical Results from Discrete-Depth Groundwater Samplers" BAT EnviroProbe and QED HydroPunch, Sixth national Outdoor Action Conference, Las Vegas, Nevada Proceedings, 1992, pp 299-312.

Copies of ASTM Standards are available through www.astm.org

APPENDIX B

LABORATORY REPORTS AND CHAINS OF CUSTODY



STL

ANALYTICAL REPORT

Job Number: 720-2434-1

Job Description: Conoco Phillips # 4625, Oakland

For:
TRC Solutions
1590 Solano Way, Suite A
Concord, CA 94520

Attention: Mr. Keith Woodburne

A handwritten signature in cursive script that reads "D Sharma".

Dimple Sharma
Project Manager I
dsharma@stl-inc.com
03/21/2006

Project Manager: Dimple Sharma

Severn Trent Laboratories, Inc.

STL San Francisco 1220 Quarry Lane, Pleasanton, CA 94566
Tel (925) 484-1919 Fax (925) 484-1096 www.stl-inc.com

METHOD SUMMARY

Client: TRC Solutions

Job Number: 720-2434-1

Description	Lab Location	Method	Preparation Method
Matrix: Water			
Volatile Organic Compounds by GC/MS	STL-SF	SW846 8260B	
Purge-and-Trap	STL-SF		SW846 5030B

LAB REFERENCES:

STL-SF = STL-San Francisco

METHOD REFERENCES:

SW846 - "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986
And Its Updates.

SAMPLE SUMMARY

Client: TRC Solutions

Job Number: 720-2434-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
720-2434-1	CPT-1@17'	Water	02/28/2006 1130	03/03/2006 1620
720-2434-2	CPT-1@41'	Water	02/28/2006 1720	03/03/2006 1620
720-2434-3	CPT-2@19'	Water	02/28/2006 1610	03/03/2006 1620
720-2434-4	CPT-3@17'	Water	03/01/2006 0000	03/03/2006 1620
720-2434-5	CPT-3@36'	Water	03/01/2006 1245	03/03/2006 1620
720-2434-6	CPT-4@18'	Water	03/01/2006 1430	03/03/2006 1620
720-2434-7	CPT-5@16'	Water	03/02/2006 0945	03/03/2006 1620
720-2434-8	CPT-5@35'	Water	03/02/2006 1200	03/03/2006 1620
720-2434-9	CPT-6@18'	Water	03/02/2006 1400	03/03/2006 1620
720-2434-10	CPT-7@19'	Water	03/03/2006 1030	03/03/2006 1620

Analytical Data

Client: TRC Solutions

Job Number: 720-2434-1

Client Sample ID: CPT-1@17'

Lab Sample ID: 720-2434-1

Date Sampled: 02/28/2006 1130

Client Matrix: Water

Date Received: 03/03/2006 1620

8260B Volatile Organic Compounds by GC/MS

Method: 8260B Analysis Batch: 720-6611 Instrument ID: Varian 3900E
Preparation: 5030B Lab File ID: c:\varianws\data\200603\03
Dilution: 5.0 Initial Weight/Volume: 10 mL
Date Analyzed: 03/13/2006 1859 Final Weight/Volume: 10 mL
Date Prepared: 03/13/2006 1859

Analyte	Result (ug/L)	Qualifier	RL
1,2-Dichloroethane	ND		2.5
Benzene	29		2.5
Ethanol	ND		500
Ethylbenzene	110		2.5
MTBE	160		2.5
TAME	ND		2.5
Toluene	140		2.5
Xylenes, Total	470		5.0
TBA	ND		25
DIPE	ND		5.0
EDB	ND		2.5
Gasoline Range Organics (GRO)-C6-C12	4700		250
Ethyl tert-butyl ether	ND		2.5
Surrogate	%Rec		Acceptance Limits
Toluene-d8	101		77 - 121
1,2-Dichloroethane-d4	112		73 - 130

Analytical Data

Client: TRC Solutions

Job Number: 720-2434-1

Client Sample ID: CPT-1@41'

Lab Sample ID: 720-2434-2

Date Sampled: 02/28/2006 1720

Client Matrix: Water

Date Received: 03/03/2006 1620

8260B Volatile Organic Compounds by GC/MS

Method: 8260B

Analysis Batch: 720-6611

Instrument ID: Varian 3900E

Preparation: 5030B

Lab File ID: c:\varianws\data\200603\03

Dilution: 1.0

Initial Weight/Volume: 10 mL

Date Analyzed: 03/13/2006 1920

Final Weight/Volume: 10 mL

Date Prepared: 03/13/2006 1920

Analyte	Result (ug/L)	Qualifier	RL
1,2-Dichloroethane	ND		0.50
Benzene	52		0.50
Ethanol	ND		100
Ethylbenzene	64		0.50
MTBE	25		0.50
TAME	ND		0.50
Xylenes, Total	320		1.0
TBA	ND		5.0
DIPE	ND		1.0
EDB	ND		0.50
Gasoline Range Organics (GRO)-C6-C12	1800		50
Ethyl tert-butyl ether	ND		0.50
Surrogate	%Rec		Acceptance Limits
Toluene-d8	103		77 - 121
1,2-Dichloroethane-d4	112		73 - 130

Analytical Data

Client: TRC Solutions

Job Number: 720-2434-1

Client Sample ID: CPT-1@41'

Lab Sample ID: 720-2434-2

Date Sampled: 02/28/2006 1720

Client Matrix: Water

Date Received: 03/03/2006 1620

8260B Volatile Organic Compounds by GC/MS

Method: 8260B

Analysis Batch: 720-6513

Instrument ID: Varian 3900C

Preparation: 5030B

Lab File ID: c:\saturmws\data\200603\03

Dilution: 2.0

Initial Weight/Volume: 10 mL

Date Analyzed: 03/14/2006 1321

Final Weight/Volume: 10 mL

Date Prepared: 03/14/2006 1321

Analyte	Result (ug/L)	Qualifier	RL
Toluene	170		1.0

Analytical Data

Client: TRC Solutions

Job Number: 720-2434-1

Client Sample ID: CPT-2@19'

Lab Sample ID: 720-2434-3

Date Sampled: 02/28/2006 1610

Client Matrix: Water

Date Received: 03/03/2006 1620

8260B Volatile Organic Compounds by GC/MS

Method: 8260B

Analysis Batch: 720-6490

Instrument ID: Saturn 2100

Preparation: 5030B

Lab File ID: c:\saturnws\data\200603\03

Dilution: 1.0

Initial Weight/Volume: 10 mL

Date Analyzed: 03/11/2006 2323

Final Weight/Volume: 10 mL

Date Prepared: 03/11/2006 2323

Analyte	Result (ug/L)	Qualifier	RL
1,2-Dichloroethane	ND		0.50
Benzene	ND		0.50
Ethanol	ND		100
Ethylbenzene	ND		0.50
TAME	ND		0.50
Toluene	0.82		0.50
Xylenes, Total	2.1		1.0
TBA	ND		5.0
DIPE	ND		1.0
EDB	ND		0.50
Ethyl tert-butyl ether	ND		0.50
Surrogate	%Rec		Acceptance Limits
Toluene-d8	98		77 - 121
1,2-Dichloroethane-d4	125		73 - 130

Analytical Data

Client: TRC Solutions

Job Number: 720-2434-1

Client Sample ID: CPT-2@19'

Lab Sample ID: 720-2434-3

Date Sampled: 02/28/2006 1610

Client Matrix: Water

Date Received: 03/03/2006 1620

8260B Volatile Organic Compounds by GC/MS

Method: 8260B

Analysis Batch: 720-6601

Instrument ID: Varian 3900D

Preparation: 5030B

Lab File ID: c:\saturaws\data\200603\03

Dilution: 10

Initial Weight/Volume: 40 mL

Date Analyzed: 03/13/2006 1934

Final Weight/Volume: 40 mL

Date Prepared: 03/13/2006 1934

Analyte	Result (ug/L)	Qualifier	RL
MTBE	850		5.0
Gasoline Range Organics (GRO)-C6-C12	ND		500

Analytical Data

Client: TRC Solutions

Job Number: 720-2434-1

Client Sample ID: CPT-3@17'

Lab Sample ID: 720-2434-4

Date Sampled: 03/01/2006 0000

Client Matrix: Water

Date Received: 03/03/2006 1620

8260B Volatile Organic Compounds by GC/MS

Method: 8260B

Analysis Batch: 720-6573

Instrument ID: Varian 3900E

Preparation: 5030B

Lab File ID: c:\varianws\data\200603\03

Dilution: 1.0

Initial Weight/Volume: 10 mL

Date Analyzed: 03/14/2006 2039

Final Weight/Volume: 10 mL

Date Prepared: 03/14/2006 2039

Analyte	Result (ug/L)	Qualifier	RL
1,2-Dichloroethane	ND		0.50
Benzene	ND		0.50
Ethanol	ND		100
Ethylbenzene	ND		0.50
MTBE	ND		0.50
TAME	ND		0.50
Toluene	ND		0.50
Xylenes, Total	ND		1.0
TBA	ND		5.0
DIPE	ND		1.0
EDB	ND		0.50
Gasoline Range Organics (GRO)-C6-C12	ND		50
Ethyl tert-butyl ether	ND		0.50
Surrogate	%Rec		Acceptance Limits
Toluene-d8	95		77 - 121
1,2-Dichloroethane-d4	113		73 - 130

Analytical Data

Client: TRC Solutions

Job Number: 720-2434-1

Client Sample ID: CPT-3@36'

Lab Sample ID: 720-2434-5

Date Sampled: 03/01/2006 1245

Client Matrix: Water

Date Received: 03/03/2006 1620

8260B Volatile Organic Compounds by GC/MS

Method:	8260B	Analysis Batch: 720-6573	Instrument ID: Varian 3900E
Preparation:	5030B		Lab File ID: c:\varianws\data\200603\03
Dilution:	1.0		Initial Weight/Volume: 10 mL
Date Analyzed:	03/14/2006 2101		Final Weight/Volume: 10 mL
Date Prepared:	03/14/2006 2101		

Analyte	Result (ug/L)	Qualifier	RL
1,2-Dichloroethane	ND		0.50
Benzene	ND		0.50
Ethanol	ND		100
Ethylbenzene	ND		0.50
MTBE	ND		0.50
TAME	ND		0.50
Toluene	ND		0.50
Xylenes, Total	ND		1.0
TBA	ND		5.0
DIPE	ND		1.0
EDB	ND		0.50
Gasoline Range Organics (GRO)-C6-C12	ND		50
Ethyl tert-butyl ether	ND		0.50
Surrogate	%Rec		Acceptance Limits
Toluene-d8	96		77 - 121
1,2-Dichloroethane-d4	111		73 - 130

Analytical Data

Client: TRC Solutions

Job Number: 720-2434-1

Client Sample ID: CPT-4@18'

Lab Sample ID: 720-2434-6

Date Sampled: 03/01/2006 1430

Client Matrix: Water

Date Received: 03/03/2006 1620

8260B Volatile Organic Compounds by GC/MS

Method: 8260B

Analysis Batch: 720-6573

Instrument ID: Varian 3900E

Preparation: 5030B

Lab File ID: c:\varianws\data\200603\03

Dilution: 1.0

Initial Weight/Volume: 10 mL

Date Analyzed: 03/14/2006 2122

Final Weight/Volume: 10 mL

Date Prepared: 03/14/2006 2122

Analyte	Result (ug/L)	Qualifier	RL
1,2-Dichloroethane	ND		0.50
Benzene	ND		0.50
Ethanol	ND		100
Ethylbenzene	ND		0.50
MTBE	ND		0.50
TAME	ND		0.50
Toluene	ND		0.50
Xylenes, Total	ND		1.0
TBA	ND		5.0
DIPE	ND		1.0
EDB	ND		0.50
Gasoline Range Organics (GRO)-C6-C12	ND		50
Ethyl tert-butyl ether	ND		0.50
Surrogate	%Rec		Acceptance Limits
Toluene-d8	95		77 - 121
1,2-Dichloroethane-d4	111		73 - 130

Analytical Data

Client: TRC Solutions

Job Number: 720-2434-1

Client Sample ID: CPT-5@16'

Lab Sample ID: 720-2434-7

Date Sampled: 03/02/2006 0945

Client Matrix: Water

Date Received: 03/03/2006 1620

8260B Volatile Organic Compounds by GC/MS

Method: 8260B

Analysis Batch: 720-6619

Instrument ID: Varian 3900E

Preparation: 5030B

Lab File ID: c:\varianws\data\200603\03

Dilution: 1.0

Initial Weight/Volume: 10 mL

Date Analyzed: 03/15/2006 1349

Final Weight/Volume: 10 mL

Date Prepared: 03/15/2006 1349

Analyte	Result (ug/L)	Qualifier	RL
1,2-Dichloroethane	ND		0.50
Benzene	ND		0.50
Ethanol	ND		100
Ethylbenzene	ND		0.50
MTBE	ND		0.50
TAME	ND		0.50
Toluene	ND		0.50
Xylenes, Total	ND		1.0
TBA	ND		5.0
DIPE	ND		1.0
EDB	ND		0.50
Gasoline Range Organics (GRO)-C6-C12	ND		50
Ethyl tert-butyl ether	ND		0.50
Surrogate	%Rec		Acceptance Limits
Toluene-d8	93		77 - 121
1,2-Dichloroethane-d4	108		73 - 130

Analytical Data

Client: TRC Solutions

Job Number: 720-2434-1

Client Sample ID: CPT-5@35'

Lab Sample ID: 720-2434-8

Date Sampled: 03/02/2006 1200

Client Matrix: Water

Date Received: 03/03/2006 1620

8260B Volatile Organic Compounds by GC/MS

Method: 8260B

Analysis Batch: 720-6619

Instrument ID: Varian 3900E

Preparation: 5030B

Lab File ID: c:\varianws\data\200603\03

Dilution: 1.0

Initial Weight/Volume: 10 mL

Date Analyzed: 03/15/2006 1411

Final Weight/Volume: 10 mL

Date Prepared: 03/15/2006 1411

Analyte	Result (ug/L)	Qualifier	RL
1,2-Dichloroethane	ND		0.50
Benzene	ND		0.50
Ethanol	ND		100
Ethylbenzene	ND		0.50
MTBE	ND		0.50
TAME	ND		0.50
Toluene	ND		0.50
Xylenes, Total	ND		1.0
TBA	ND		5.0
DIPE	ND		1.0
EDB	ND		0.50
Gasoline Range Organics (GRO)-C6-C12	ND		50
Ethyl tert-butyl ether	ND		0.50
Surrogate	%Rec		Acceptance Limits
Toluene-d8	93		77 - 121
1,2-Dichloroethane-d4	104		73 - 130

Analytical Data

Client: TRC Solutions

Job Number: 720-2434-1

Client Sample ID: CPT-6@18'

Lab Sample ID: 720-2434-9

Date Sampled: 03/02/2006 1400

Client Matrix: Water

Date Received: 03/03/2006 1620

8260B Volatile Organic Compounds by GC/MS

Method: 8260B

Analysis Batch: 720-6619

Instrument ID: Varian 3900E

Preparation: 5030B

Lab File ID: c:\varianws\data\200603\03

Dilution: 1.0

Initial Weight/Volume: 10 mL

Date Analyzed: 03/15/2006 1432

Final Weight/Volume: 10 mL

Date Prepared: 03/15/2006 1432

Analyte	Result (ug/L)	Qualifier	RL
1,2-Dichloroethane	ND		0.50
Benzene	ND		0.50
Ethanol	ND		100
Ethylbenzene	ND		0.50
MTBE	ND		0.50
TAME	ND		0.50
Toluene	ND		0.50
Xylenes, Total	ND		1.0
TBA	ND		5.0
DIPE	ND		1.0
EDB	ND		0.50
Gasoline Range Organics (GRO)-C6-C12	ND		50
Ethyl tert-butyl ether	ND		0.50
Surrogate	%Rec		Acceptance Limits
Toluene-d8	95		77 - 121
1,2-Dichloroethane-d4	104		73 - 130

Analytical Data

Client: TRC Solutions

Job Number: 720-2434-1

Client Sample ID: CPT-7@19'

Lab Sample ID: 720-2434-10

Date Sampled: 03/03/2006 1030

Client Matrix: Water

Date Received: 03/03/2006 1620

8260B Volatile Organic Compounds by GC/MS

Method: 8260B

Analysis Batch: 720-6656

Instrument ID: Varian 3900E

Preparation: 5030B

Lab File ID: c:\varianws\data\200603\03

Dilution: 1.0

Initial Weight/Volume: 10 mL

Date Analyzed: 03/16/2006 1515

Final Weight/Volume: 10 mL

Date Prepared: 03/16/2006 1515

Analyte	Result (ug/L)	Qualifier	RL
1,2-Dichloroethane	ND		0.50
Benzene	ND		0.50
Ethanol	ND		100
Ethylbenzene	ND		0.50
MTBE	ND		0.50
TAME	ND		0.50
Toluene	ND		0.50
Xylenes, Total	ND		1.0
TBA	ND		5.0
DIPE	ND		1.0
EDB	ND		0.50
Gasoline Range Organics (GRO)-C6-C12	ND		50
Ethyl tert-butyl ether	ND		0.50
Surrogate	%Rec		Acceptance Limits
Toluene-d8	95		77 - 121
1,2-Dichloroethane-d4	116		73 - 130

DATA REPORTING QUALIFIERS

Client: TRC Solutions

Job Number: 720-2434-1

Lab Section	Qualifier	Description
GC/MS VOA	B	Compound was found in the blank and sample.
	*	LCS, LCSD, MS, MSD, MD, or Surrogate exceeds the control limits

Quality Control Results

Client: TRC Solutions

Job Number: 720-2434-1

QC Association Summary

Lab Sample ID	Client Sample ID	Client Matrix	Method	Prep Batch
GC/MS VOA				
Analysis Batch:720-6490				
LCS 720-6490/8	Lab Control Spike	Water	8260B	
LCSD 720-6490/7	Lab Control Spike Duplicate	Water	8260B	
MB 720-6490/9	Method Blank	Water	8260B	
720-2375-A-2 MS	Matrix Spike	Water	8260B	
720-2375-A-2 MSD	Matrix Spike Duplicate	Water	8260B	
720-2434-3	CPT-2@19'	Water	8260B	
Analysis Batch:720-6513				
LCS 720-6513/3	Lab Control Spike	Water	8260B	
LCSD 720-6513/2	Lab Control Spike Duplicate	Water	8260B	
MB 720-6513/4	Method Blank	Water	8260B	
720-2434-2	CPT-1@41'	Water	8260B	
720-2480-B-7 MS	Matrix Spike	Water	8260B	
720-2480-B-7 MSD	Matrix Spike Duplicate	Water	8260B	
Analysis Batch:720-6573				
LCS 720-6573/4	Lab Control Spike	Water	8260B	
LCSD 720-6573/3	Lab Control Spike Duplicate	Water	8260B	
MB 720-6573/5	Method Blank	Water	8260B	
720-2402-A-1 MS	Matrix Spike	Water	8260B	
720-2402-A-1 MSD	Matrix Spike Duplicate	Water	8260B	
720-2434-4	CPT-3@17'	Water	8260B	
720-2434-5	CPT-3@36'	Water	8260B	
720-2434-6	CPT-4@18'	Water	8260B	
Analysis Batch:720-6601				
LCS 720-6601/20	Lab Control Spike	Water	8260B	
LCSD 720-6601/19	Lab Control Spike Duplicate	Water	8260B	
MB 720-6601/21	Method Blank	Water	8260B	
720-2434-3	CPT-2@19'	Water	8260B	
720-2434-3MS	Matrix Spike	Water	8260B	
720-2434-3MSD	Matrix Spike Duplicate	Water	8260B	
Analysis Batch:720-6611				
LCS 720-6611/20	Lab Control Spike	Water	8260B	
LCSD 720-6611/19	Lab Control Spike Duplicate	Water	8260B	
MB 720-6611/21	Method Blank	Water	8260B	
720-2417-A-2 MS	Matrix Spike	Water	8260B	
720-2417-A-2 MSD	Matrix Spike Duplicate	Water	8260B	
720-2434-1	CPT-1@17'	Water	8260B	
720-2434-2	CPT-1@41'	Water	8260B	

Quality Control Results

Client: TRC Solutions

Job Number: 720-2434-1

QC Association Summary

Lab Sample ID	Client Sample ID	Client Matrix	Method	Prep Batch
GC/MS VOA				
Analysis Batch:720-6619				
LCS 720-6619/13	Lab Control Spike	Water	8260B	
LCSD 720-6619/12	Lab Control Spike Duplicate	Water	8260B	
MB 720-6619/14	Method Blank	Water	8260B	
720-2434-7	CPT-5@16'	Water	8260B	
720-2434-8	CPT-5@35'	Water	8260B	
720-2434-9	CPT-6@18'	Water	8260B	
Analysis Batch:720-6656				
LCS 720-6656/18	Lab Control Spike	Water	8260B	
LCSD 720-6656/17	Lab Control Spike Duplicate	Water	8260B	
MB 720-6656/20	Method Blank	Water	8260B	
720-2434-10	CPT-7@19'	Water	8260B	
720-2469-C-1 MS	Matrix Spike	Water	8260B	
720-2469-C-1 MSD	Matrix Spike Duplicate	Water	8260B	

Quality Control Results

Client: TRC Solutions

Job Number: 720-2434-1

Method Blank - Batch: 720-6490

Method: 8260B
Preparation: 5030B

Lab Sample ID: MB 720-6490/9
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 03/11/2006 2046
Date Prepared: 03/11/2006 2046

Analysis Batch: 720-6490
Prep Batch: N/A
Units: ug/L

Instrument ID: Saturn 2100
Lab File ID: c:\saturaws\data\200603\03
Initial Weight/Volume: 10 mL
Final Weight/Volume: 10 mL

Analyte	Result	Qual	RL
1,2-Dichloroethane	ND		0.50
Benzene	ND		0.50
Ethanol	ND		100
Ethylbenzene	ND		0.50
MTBE	ND		0.50
TAME	ND		0.50
Toluene	ND		0.50
Xylenes, Total	ND		1.0
TBA	ND		5.0
DIPE	ND		1.0
EDB	ND		0.50
Gasoline Range Organics (GRO)-C6-C12	ND		50
Ethyl tert-butyl ether	ND		0.50
Surrogate	% Rec	Acceptance Limits	
Toluene-d8	101	77 - 121	
1,2-Dichloroethane-d4	93	73 - 130	

Calculations are performed before rounding to avoid round-off errors in calculated results.

Quality Control Results

Client: TRC Solutions

Job Number: 720-2434-1

**Laboratory Control/
Laboratory Control Duplicate Recovery Report - Batch: 720-6490**

**Method: 8260B
Preparation: 5030B**

LCS Lab Sample ID: LCS 720-6490/8
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 03/11/2006 1954
Date Prepared: 03/11/2006 1954

Analysis Batch: 720-6490
Prep Batch: N/A
Units: ug/L

Instrument ID: Saturn 2100
Lab File ID: c:\saturnws\data\200603\031
Initial Weight/Volume: 10 mL
Final Weight/Volume: 10 mL

LCSD Lab Sample ID: LCSD 720-6490/7
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 03/11/2006 2020
Date Prepared: 03/11/2006 2020

Analysis Batch: 720-6490
Prep Batch: N/A
Units: ug/L

Instrument ID: Saturn 2100
Lab File ID: c:\saturnws\data\200603\031
Initial Weight/Volume: 10 mL
Final Weight/Volume: 10 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
Benzene	95	94	69 - 129	1	25		
MTBE	102	94	65 - 165	8	25		
Toluene	110	104	70 - 130	6	25		
Surrogate	LCS % Rec		LCSD % Rec		Acceptance Limits		
Toluene-d8	99		102		77 - 121		
1,2-Dichloroethane-d4	97		92		73 - 130		

Calculations are performed before rounding to avoid round-off errors in calculated results.

Quality Control Results

Client: TRC Solutions

Job Number: 720-2434-1

**Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 720-6490**

**Method: 8260B
Preparation: 5030B**

MS Lab Sample ID: 720-2375-A-2 MS
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 03/11/2006 2204
Date Prepared: 03/11/2006 2204

Analysis Batch: 720-6490
Prep Batch: N/A

Instrument ID: Saturn 2100
Lab File ID: c:\saturaws\data\200603\03
Initial Weight/Volume: 10 mL
Final Weight/Volume: 10 mL

MSD Lab Sample ID: 720-2375-A-2 MSD
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 03/11/2006 2231
Date Prepared: 03/11/2006 2231

Analysis Batch: 720-6490
Prep Batch: N/A

Instrument ID: Saturn 2100
Lab File ID: c:\saturaws\data\200603\03
Initial Weight/Volume: 10 mL
Final Weight/Volume: 10 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
Benzene	81	76	69 - 129	6	20		
MTBE	77	78	65 - 165	1	20		
Toluene	89	84	70 - 130	6	20		
Surrogate	MS % Rec		MSD % Rec		Acceptance Limits		
Toluene-d8	94		93		77 - 121		
1,2-Dichloroethane-d4	95		95		73 - 130		

Calculations are performed before rounding to avoid round-off errors in calculated results.

Quality Control Results

Client: TRC Solutions

Job Number: 720-2434-1

Method Blank - Batch: 720-6513

Method: 8260B
Preparation: 5030B

Lab Sample ID: MB 720-6513/4
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 03/14/2006 1041
Date Prepared: 03/14/2006 1041

Analysis Batch: 720-6513
Prep Batch: N/A
Units: ug/L

Instrument ID: Varian 3900C
Lab File ID: c:\saturmws\data\200603\03
Initial Weight/Volume: 10 mL
Final Weight/Volume: 10 mL

Analyte	Result	Qual	RL
1,2-Dichloroethane	ND		0.50
Benzene	ND		0.50
Ethanol	ND		100
Ethylbenzene	ND		0.50
MTBE	ND		0.50
TAME	ND		0.50
Toluene	ND		0.50
Xylenes, Total	ND		1.0
TBA	ND		5.0
DIPE	ND		1.0
EDB	ND		0.50
Gasoline Range Organics (GRO)-C6-C12	ND		50
Ethyl tert-butyl ether	ND		0.50
Surrogate	% Rec	Acceptance Limits	
Toluene-d8	94	77 - 121	
1,2-Dichloroethane-d4	99	73 - 130	

Calculations are performed before rounding to avoid round-off errors in calculated results.

Quality Control Results

Client: TRC Solutions

Job Number: 720-2434-1

**Laboratory Control/
Laboratory Control Duplicate Recovery Report - Batch: 720-6513**

**Method: 8260B
Preparation: 5030B**

LCS Lab Sample ID: LCS 720-6513/3
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 03/14/2006 0932
Date Prepared: 03/14/2006 0932

Analysis Batch: 720-6513
Prep Batch: N/A
Units: ug/L

Instrument ID: Varian 3900C
Lab File ID: c:\saturnws\data\200603\0:
Initial Weight/Volume: 10 mL
Final Weight/Volume: 10 mL

LCSD Lab Sample ID: LCSD 720-6513/2
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 03/14/2006 0955
Date Prepared: 03/14/2006 0955

Analysis Batch: 720-6513
Prep Batch: N/A
Units: ug/L

Instrument ID: Varian 3900C
Lab File ID: c:\saturnws\data\200603\031
Initial Weight/Volume: 10 mL
Final Weight/Volume: 10 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
Benzene	83	84	69 - 129	1	25		
MTBE	97	94	65 - 165	3	25		
Toluene	93	96	70 - 130	4	25		
Surrogate	LCS % Rec		LCSD % Rec		Acceptance Limits		
Toluene-d8	97		98		77 - 121		
1,2-Dichloroethane-d4	100		94		73 - 130		

Calculations are performed before rounding to avoid round-off errors in calculated results.

Quality Control Results

Client: TRC Solutions

Job Number: 720-2434-1

**Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 720-6513**

**Method: 8260B
Preparation: 5030B**

MS Lab Sample ID: 720-2480-B-7 MS
Client Matrix: Water
Dilution: 10
Date Analyzed: 03/14/2006 1541
Date Prepared: 03/14/2006 1541

Analysis Batch: 720-6513
Prep Batch: N/A

Instrument ID: Varian 3900C
Lab File ID: c:\saturnws\data\200603\03
Initial Weight/Volume: 10 mL
Final Weight/Volume: 10 mL

MSD Lab Sample ID: 720-2480-B-7 MSD
Client Matrix: Water
Dilution: 10
Date Analyzed: 03/14/2006 1603
Date Prepared: 03/14/2006 1603

Analysis Batch: 720-6513
Prep Batch: N/A

Instrument ID: Varian 3900C
Lab File ID: c:\saturnws\data\200603\03
Initial Weight/Volume: 10 mL
Final Weight/Volume: 10 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
Benzene	76	95	69 - 129	23	20		*
MTBE	57	122	65 - 165	24	20	*	*
Toluene	88	97	70 - 130	10	20		
Surrogate	MS % Rec		MSD % Rec		Acceptance Limits		
Toluene-d8	97		98		77 - 121		
1,2-Dichloroethane-d4	101		104		73 - 130		

Calculations are performed before rounding to avoid round-off errors in calculated results.

Quality Control Results

Client: TRC Solutions

Job Number: 720-2434-1

Method Blank - Batch: 720-6573

Method: 8260B
Preparation: 5030B

Lab Sample ID: MB 720-6573/5
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 03/14/2006 1936
Date Prepared: 03/14/2006 1936

Analysis Batch: 720-6573
Prep Batch: N/A
Units: ug/L

Instrument ID: Varian 3900E
Lab File ID: c:\varianws\data\200603\03
Initial Weight/Volume: 10 mL
Final Weight/Volume: 10 mL

Analyte	Result	Qual	RL
1,2-Dichloroethane	ND		0.50
Benzene	ND		0.50
Ethanol	ND		100
Ethylbenzene	ND		0.50
MTBE	ND		0.50
TAME	ND		0.50
Toluene	ND		0.50
Xylenes, Total	ND		1.0
TBA	ND		5.0
DIPE	ND		1.0
EDB	ND		0.50
Gasoline Range Organics (GRO)-C6-C12	ND		50
Ethyl tert-butyl ether	ND		0.50
Surrogate	% Rec		Acceptance Limits
Toluene-d8	94		77 - 121
1,2-Dichloroethane-d4	101		73 - 130

Calculations are performed before rounding to avoid round-off errors in calculated results.

Quality Control Results

Client: TRC Solutions

Job Number: 720-2434-1

**Laboratory Control/
Laboratory Control Duplicate Recovery Report - Batch: 720-6573**

**Method: 8260B
Preparation: 5030B**

LCS Lab Sample ID: LCS 720-6573/4
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 03/14/2006 1853
Date Prepared: 03/14/2006 1853

Analysis Batch: 720-6573
Prep Batch: N/A
Units: ug/L

Instrument ID: Varian 3900E
Lab File ID: c:\varianws\data\200603\031
Initial Weight/Volume: 10 mL
Final Weight/Volume: 10 mL

LCSD Lab Sample ID: LCSD 720-6573/3
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 03/14/2006 1914
Date Prepared: 03/14/2006 1914

Analysis Batch: 720-6573
Prep Batch: N/A
Units: ug/L

Instrument ID: Varian 3900E
Lab File ID: c:\varianws\data\200603\031
Initial Weight/Volume: 10 mL
Final Weight/Volume: 10 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
Benzene	95	100	69 - 129	5	25		
MTBE	94	100	65 - 165	7	25		
Toluene	96	103	70 - 130	7	25		
Surrogate	LCS % Rec		LCSD % Rec		Acceptance Limits		
Toluene-d8	95		95		77 - 121		
1,2-Dichloroethane-d4	99		101		73 - 130		

Calculations are performed before rounding to avoid round-off errors in calculated results.

Quality Control Results

Client: TRC Solutions

Job Number: 720-2434-1

**Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 720-6573**

**Method: 8260B
Preparation: 5030B**

MS Lab Sample ID: 720-2402-A-1 MS
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 03/15/2006 0219
Date Prepared: 03/15/2006 0219

Analysis Batch: 720-6573
Prep Batch: N/A

Instrument ID: Varian 3900E
Lab File ID: c:\varianws\data\200603\03
Initial Weight/Volume: 10 mL
Final Weight/Volume: 10 mL

MSD Lab Sample ID: 720-2402-A-1 MSD
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 03/15/2006 0240
Date Prepared: 03/15/2006 0240

Analysis Batch: 720-6573
Prep Batch: N/A

Instrument ID: Varian 3900E
Lab File ID: c:\varianws\data\200603\03
Initial Weight/Volume: 10 mL
Final Weight/Volume: 10 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
Benzene	93	99	69 - 129	5	20		
MTBE	100	102	65 - 165	2	20		
Toluene	94	99	70 - 130	5	20		
Surrogate	MS % Rec		MSD % Rec		Acceptance Limits		
Toluene-d8	99		95		77 - 121		
1,2-Dichloroethane-d4	114		112		73 - 130		

Calculations are performed before rounding to avoid round-off errors in calculated results.

Quality Control Results

Client: TRC Solutions

Job Number: 720-2434-1

Method Blank - Batch: 720-6601

**Method: 8260B
Preparation: 5030B**

Lab Sample ID: MB 720-6601/21
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 03/13/2006 1247
Date Prepared: 03/13/2006 1247

Analysis Batch: 720-6601
Prep Batch: N/A
Units: ug/L

Instrument ID: Varian 3900D
Lab File ID: c:\saturday\data\200603\03
Initial Weight/Volume: 40 mL
Final Weight/Volume: 40 mL

Analyte	Result	Qual	RL
1,2-Dichloroethane	ND		0.50
Benzene	ND		0.50
Ethanol	ND		100
Ethylbenzene	ND		0.50
MTBE	ND		0.50
TAME	ND		0.50
Toluene	ND		0.50
Xylenes, Total	ND		1.0
TBA	6.5		5.0
DIPE	ND		1.0
EDB	ND		0.50
Gasoline Range Organics (GRO)-C6-C12	ND		50
Ethyl tert-butyl ether	ND		0.50
Surrogate	% Rec	Acceptance Limits	
Toluene-d8	103	77 - 121	
1,2-Dichloroethane-d4	101	73 - 130	

Calculations are performed before rounding to avoid round-off errors in calculated results.

Quality Control Results

Client: TRC Solutions

Job Number: 720-2434-1

**Laboratory Control/
Laboratory Control Duplicate Recovery Report - Batch: 720-6601**

**Method: 8260B
Preparation: 5030B**

LCS Lab Sample ID: LCS 720-6601/20
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 03/13/2006 1152
Date Prepared: 03/13/2006 1152

Analysis Batch: 720-6601
Prep Batch: N/A
Units: ug/L

Instrument ID: Varian 3900D
Lab File ID: c:\saturaws\data\200603\031
Initial Weight/Volume: 40 mL
Final Weight/Volume: 40 mL

LCSD Lab Sample ID: LCSD 720-6601/19
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 03/13/2006 1220
Date Prepared: 03/13/2006 1220

Analysis Batch: 720-6601
Prep Batch: N/A
Units: ug/L

Instrument ID: Varian 3900D
Lab File ID: c:\saturaws\data\200603\031
Initial Weight/Volume: 40 mL
Final Weight/Volume: 40 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
Benzene	99	102	69 - 129	3	25		
MTBE	84	85	65 - 165	1	25		
Toluene	96	105	70 - 130	9	25		
Surrogate	LCS % Rec		LCSD % Rec		Acceptance Limits		
Toluene-d8	99		103		77 - 121		
1,2-Dichloroethane-d4	90		93		73 - 130		

Calculations are performed before rounding to avoid round-off errors in calculated results.

Quality Control Results

Client: TRC Solutions

Job Number: 720-2434-1

**Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 720-6601**

**Method: 8260B
Preparation: 5030B**

MS Lab Sample ID: 720-2434-3
Client Matrix: Water
Dilution: 10
Date Analyzed: 03/13/2006 2002
Date Prepared: 03/13/2006 2002

Analysis Batch: 720-6601
Prep Batch: N/A

Instrument ID: Varian 3900D
Lab File ID: c:\saturaws\data\200603\06
Initial Weight/Volume: 40 mL
Final Weight/Volume: 40 mL

MSD Lab Sample ID: 720-2434-3
Client Matrix: Water
Dilution: 10
Date Analyzed: 03/13/2006 2029
Date Prepared: 03/13/2006 2029

Analysis Batch: 720-6601
Prep Batch: N/A

Instrument ID: Varian 3900D
Lab File ID: c:\saturaws\data\200603\06
Initial Weight/Volume: 40 mL
Final Weight/Volume: 40 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
Benzene	94	104	69 - 129	11	20		
MTBE	156	168	65 - 165	2	20		*
Toluene	108	103	70 - 130	5	20		
Surrogate	MS % Rec		MSD % Rec	Acceptance Limits			
Toluene-d8	108		95	77 - 121			
1,2-Dichloroethane-d4	95		99	73 - 130			

Calculations are performed before rounding to avoid round-off errors in calculated results.

Quality Control Results

Client: TRC Solutions

Job Number: 720-2434-1

Method Blank - Batch: 720-6611

Method: 8260B
Preparation: 5030B

Lab Sample ID: MB 720-6611/21
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 03/13/2006 1035
Date Prepared: 03/13/2006 1035

Analysis Batch: 720-6611
Prep Batch: N/A
Units: ug/L

Instrument ID: Varian 3900E
Lab File ID: c:\varianws\data\200603\03
Initial Weight/Volume: 5 g
Final Weight/Volume: 10 mL

Analyte	Result	Qual	RL
1,2-Dichloroethane	ND		1.0
Benzene	ND		1.0
Ethanol	ND		200
Ethylbenzene	ND		1.0
MTBE	ND		1.0
TAME	ND		1.0
Toluene	ND		1.0
Xylenes, Total	ND		2.0
TBA	ND		10
DIPE	ND		2.0
EDB	ND		1.0
Gasoline Range Organics (GRO)-C6-C12	ND		100
Ethyl tert-butyl ether	ND		1.0
Surrogate	% Rec		Acceptance Limits
Toluene-d8	96		77 - 121
1,2-Dichloroethane-d4	101		73 - 130

Calculations are performed before rounding to avoid round-off errors in calculated results.

Quality Control Results

Client: TRC Solutions

Job Number: 720-2434-1

**Laboratory Control/
Laboratory Control Duplicate Recovery Report - Batch: 720-6611**

**Method: 8260B
Preparation: 5030B**

LCS Lab Sample ID: LCS 720-6611/20
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 03/13/2006 0950
Date Prepared: 03/13/2006 0950

Analysis Batch: 720-6611
Prep Batch: N/A
Units: ug/L

Instrument ID: Varian 3900E
Lab File ID: c:\varianws\data\200603\031
Initial Weight/Volume: 5 g
Final Weight/Volume: 10 mL

LCSD Lab Sample ID: LCSD 720-6611/19
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 03/13/2006 1011
Date Prepared: 03/13/2006 1011

Analysis Batch: 720-6611
Prep Batch: N/A
Units: ug/L

Instrument ID: Varian 3900E
Lab File ID: c:\varianws\data\200603\031
Initial Weight/Volume: 5 g
Final Weight/Volume: 10 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
Benzene	98	99	69 - 129	0	25		
MTBE	101	101	65 - 165	0	25		
Toluene	102	102	70 - 130	0	25		
Surrogate	LCS % Rec		LCSD % Rec		Acceptance Limits		
Toluene-d8	97		98		77 - 121		
1,2-Dichloroethane-d4	104		106		73 - 130		

Calculations are performed before rounding to avoid round-off errors in calculated results.

Quality Control Results

Client: TRC Solutions

Job Number: 720-2434-1

**Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 720-6611**

**Method: 8260B
Preparation: 5030B**

MS Lab Sample ID: 720-2417-A-2 MS
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 03/13/2006 1118
Date Prepared: 03/13/2006 1118

Analysis Batch: 720-6611
Prep Batch: N/A

Instrument ID: Varian 3900E
Lab File ID: c:\varianws\data\200603\03
Initial Weight/Volume: 5.23 g
Final Weight/Volume: 10 mL

MSD Lab Sample ID: 720-2417-A-2 MSD
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 03/13/2006 1139
Date Prepared: 03/13/2006 1139

Analysis Batch: 720-6611
Prep Batch: N/A

Instrument ID: Varian 3900E
Lab File ID: c:\varianws\data\200603\03
Initial Weight/Volume: 5.09 g
Final Weight/Volume: 10 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
Benzene	91	103	69 - 129	15	20		
MTBE	97	105	65 - 165	11	20		
Toluene	93	104	70 - 130	14	20		
Surrogate	MS % Rec		MSD % Rec	Acceptance Limits			
Toluene-d8	104		106	77 - 121			
1,2-Dichloroethane-d4	114		110	73 - 130			

Calculations are performed before rounding to avoid round-off errors in calculated results.

Quality Control Results

Client: TRC Solutions

Job Number: 720-2434-1

Method Blank - Batch: 720-6619

Method: 8260B
Preparation: 5030B

Lab Sample ID: MB 720-6619/14
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 03/15/2006 1041
Date Prepared: 03/15/2006 1041

Analysis Batch: 720-6619
Prep Batch: N/A
Units: ug/L

Instrument ID: Varian 3900E
Lab File ID: c:\varianws\data\200603\03
Initial Weight/Volume: 10 mL
Final Weight/Volume: 10 mL

Analyte	Result	Qual	RL
1,2-Dichloroethane	ND		0.50
Benzene	ND		0.50
Ethanol	ND		100
Ethylbenzene	ND		0.50
MTBE	ND		0.50
TAME	ND		0.50
Toluene	ND		0.50
Xylenes, Total	ND		1.0
TBA	ND		5.0
DIPE	ND		1.0
EDB	ND		0.50
Gasoline Range Organics (GRO)-C6-C12	ND		50
Ethyl tert-butyl ether	ND		0.50
Surrogate	% Rec	Acceptance Limits	
Toluene-d8	95	77 - 121	
1,2-Dichloroethane-d4	102	73 - 130	

Calculations are performed before rounding to avoid round-off errors in calculated results.

Quality Control Results

Client: TRC Solutions

Job Number: 720-2434-1

**Laboratory Control/
Laboratory Control Duplicate Recovery Report - Batch: 720-6619**

**Method: 8260B
Preparation: 5030B**

LCS Lab Sample ID: LCS 720-6619/13
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 03/15/2006 0958
Date Prepared: 03/15/2006 0958

Analysis Batch: 720-6619
Prep Batch: N/A
Units: ug/L

Instrument ID: Varian 3900E
Lab File ID: c:\varianws\data\200603\031
Initial Weight/Volume: 10 mL
Final Weight/Volume: 10 mL

LCSD Lab Sample ID: LCSD 720-6619/12
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 03/15/2006 1019
Date Prepared: 03/15/2006 1019

Analysis Batch: 720-6619
Prep Batch: N/A
Units: ug/L

Instrument ID: Varian 3900E
Lab File ID: c:\varianws\data\200603\031
Initial Weight/Volume: 10 mL
Final Weight/Volume: 10 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
Benzene	92	93	69 - 129	2	25		
MTBE	92	94	65 - 165	2	25		
Toluene	93	96	70 - 130	2	25		
Surrogate	LCS % Rec		LCSD % Rec		Acceptance Limits		
Toluene-d8	97		97		77 - 121		
1,2-Dichloroethane-d4	102		102		73 - 130		

Calculations are performed before rounding to avoid round-off errors in calculated results.

Quality Control Results

Client: TRC Solutions

Job Number: 720-2434-1

Method Blank - Batch: 720-6656

**Method: 8260B
Preparation: 5030B**

Lab Sample ID: MB 720-6656/20
 Client Matrix: Water
 Dilution: 1.0
 Date Analyzed: 03/16/2006 1120
 Date Prepared: 03/16/2006 1120

Analysis Batch: 720-6656
 Prep Batch: N/A
 Units: ug/L

Instrument ID: Varian 3900E
 Lab File ID: c:\varianws\data\200603\03
 Initial Weight/Volume: 10 mL
 Final Weight/Volume: 10 mL

Analyte	Result	Qual	RL
1,2-Dichloroethane	ND		0.50
Benzene	ND		0.50
Ethanol	ND		100
Ethylbenzene	ND		0.50
MTBE	ND		0.50
TAME	ND		0.50
Toluene	ND		0.50
Xylenes, Total	ND		1.0
TBA	ND		5.0
DIPE	ND		1.0
EDB	ND		0.50
Gasoline Range Organics (GRO)-C6-C12	ND		50
Ethyl tert-butyl ether	ND		0.50
Surrogate	% Rec	Acceptance Limits	
Toluene-d8	96	77 - 121	
1,2-Dichloroethane-d4	100	73 - 130	

Calculations are performed before rounding to avoid round-off errors in calculated results.

Quality Control Results

Client: TRC Solutions

Job Number: 720-2434-1

**Laboratory Control/
Laboratory Control Duplicate Recovery Report - Batch: 720-6656**

**Method: 8260B
Preparation: 5030B**

LCS Lab Sample ID: LCS 720-6656/18
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 03/16/2006 1006
Date Prepared: 03/16/2006 1006

Analysis Batch: 720-6656
Prep Batch: N/A
Units: ug/L

Instrument ID: Varian 3900E
Lab File ID: c:\varianws\data\200603\001
Initial Weight/Volume: 10 mL
Final Weight/Volume: 10 mL

LCSD Lab Sample ID: LCSD 720-6656/17
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 03/16/2006 1246
Date Prepared: 03/16/2006 1246

Analysis Batch: 720-6656
Prep Batch: N/A
Units: ug/L

Instrument ID: Varian 3900E
Lab File ID: c:\varianws\data\200603\031
Initial Weight/Volume: 10 mL
Final Weight/Volume: 10 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
Benzene	98	99	69 - 129	1	25		
MTBE	101	109	65 - 165	7	25		
Toluene	97	100	70 - 130	3	25		
Surrogate	LCS % Rec		LCSD % Rec		Acceptance Limits		
Toluene-d8	99		101		77 - 121		
1,2-Dichloroethane-d4	109		109		73 - 130		

Calculations are performed before rounding to avoid round-off errors in calculated results.

Quality Control Results

Client: TRC Solutions

Job Number: 720-2434-1

**Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 720-6656**

**Method: 8260B
Preparation: 5030B**

MS Lab Sample ID: 720-2469-C-1 MS
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 03/16/2006 1557
Date Prepared: 03/16/2006 1557

Analysis Batch: 720-6656
Prep Batch: N/A

Instrument ID: Varian 3900E
Lab File ID: c:\varianws\data\200603\03
Initial Weight/Volume: 10 mL
Final Weight/Volume: 10 mL

MSD Lab Sample ID: 720-2469-C-1 MSD
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 03/16/2006 1619
Date Prepared: 03/16/2006 1619

Analysis Batch: 720-6656
Prep Batch: N/A

Instrument ID: Varian 3900E
Lab File ID: c:\varianws\data\200603\03
Initial Weight/Volume: 10 mL
Final Weight/Volume: 10 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
Benzene	107	103	69 - 129	4	20		
MTBE	111	108	65 - 165	2	20		
Toluene	106	103	70 - 130	3	20		
Surrogate	MS % Rec		MSD % Rec		Acceptance Limits		
Toluene-d8	96		95		77 - 121		
1,2-Dichloroethane-d4	106		105		73 - 130		

Calculations are performed before rounding to avoid round-off errors in calculated results.

STL-San Francisco

1220 Quarry Lane
Pleasanton, CA 94566

(925) 484-1919 (925) 484-1096 fax

ConocoPhillips Chain Of Custody Record

34677

ConocoPhillips Site Manager: INVOICE REMITTANCE ADDRESS: 720-2434	CONOCOPHILLIPS Attn: Dee Hutchinson 3611 South Harbor, Suite 200 Santa Ana, CA. 92704	ConocoPhillips Work Order Number 1285TRC004	DATE: <u>3/3/06</u>
		ConocoPhillips Cost Object	PAGE: <u>1</u> of <u>1</u>
		WNO. 1285	

SAMPLING COMPANY: TRC	Valid Value ID: TRCC	CONOCOPHILLIPS SITE NUMBER 4625	GLOBAL ID NO.: TO600102156
ADDRESS: 1590 Solano Way, Suite A Concord, CA 94520		CONOCOPHILLIPS SITE MANAGER: Shelby Lathrop	
PROJECT CONTACT (Hardcopy or PDF Report to): Keith Woodburne		EDF DELIVERABLE TO (RP or Designee): Keith Woodburne	
TELEPHONE: (925)688-2488	FAX: (925)688-0388	E-MAIL: kwoodburne@trcsolutions.com	PHONE NO.: (925) 688-2488
SAMPLER NAME(S) (Print): Niraj Vora		CONSULTANT PROJECT NUMBER: 42014506	

TURNAROUND TIME (CALENDAR DAYS):
 14 DAYS 7 DAYS 72 HOURS 48 HOURS 24 HOURS LESS THAN 24 HOURS
 5 Day turn around time

SPECIAL INSTRUCTIONS OR NOTES: CHECK BOX IF EDD IS NEEDED
 Please CC: nvora@trcsolutions on all pdf and edf emails.

* Field Point name only required if different from Sample ID

LAB USE ONLY	Sample Identification/Field Point Name*	SAMPLING		MATRIX	NO. OF CONT.	8015m - TPHd Extractable	8260B - TPHg	8260B - BTEX	8260B - 8 oxygenates	8260B-MTBE	8260B - VOCs	8270C - Semi-VOC's	1664 - Total Oil and Grease	8015 - Hydraulic Oil	8270C - PCBs	6010 - LUFT 5 Metals	8260 - TPPH	Total Lead	TEMPERATURE ON RECEIPT C°	
		DATE	TIME																	
	CPT-1 @ 17'	2/28	1130	W	3			X	X										X	4
	CPT-1 @ 41'	2/28	1720	W	6															
	CPT-2 @ 19'	2/28	1610	W	6															
	CPT-3 @ 17'	3/1		W	4															
	CPT-3 @ 36'	3/1	1245	W	4															
	CPT-4 @ 18'	3/1	1430	W	4															
	CPT-5 @ 16'	3/2	0945	W	4															
	CPT-5 @ 35'	3/2	12	W	1															* -> Do Not Scan
	CPT-6 @ 18'	3/2	1400	W	4															
	CPT-7 @ 19'	3/3	1030	W	4															

Relinquished by: (Signature) <i>[Signature]</i>	Received by: (Signature) <i>[Signature]</i>	Date: 3.3.06	Time: 1545
Relinquished by: (Signature) <i>[Signature]</i>	Received by: (Signature) Juan Muller STC SF	Date: 3.3.06	Time: 1620
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:

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Appropriate sample containers are used. True
 Sample bottles are completely filled. True
 There is sufficient vol. for all requested analyses, incl. any requested MS/MSDS True
 VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter. True
 If necessary, staff have been informed of any short hold time or quick TAT needs True
 Multiphasic samples are not present. True
 Samples do not require splitting or compositing. True

APPENDIX C

TRC 2007 Monitoring Well Installation Report



76 Broadway
Sacramento, California 95818

September 27, 2007

Ms. Donna Drogos
Alameda County Health Agency
1131 Harbor Bay Parkway
Alameda, California 94502

Re: MONITORING WELL INSTALLATION REPORT
76 SERVICE STATION #4625
3070 FRUITVALE AVENUE
OAKLAND, CALIFORNIA

Dear Ms. Drogos:

I declare under penalty of perjury that to the best of my knowledge the information and/or recommendations contained in the attached report is/are true and correct.

If you have any questions or need additional information, please contact me at (916) 558-7612.

Sincerely,

A handwritten signature in black ink that reads "Bill Borgh".

Bill Borgh
Site Manager – Risk Management and Remediation

Attachment



1590 Solano Way
#A
Concord, CA 94520

925.688.1200 PHONE
925.688.0388 FAX

www.TRCSolutions.com

September 25, 2007

TRC Project.No. 125936

Ms. Donna Drogos
Supervising Hazardous Materials Specialist
Alameda County Health Care Services
1131 Harbor Bay Parkway
Alameda, CA 94502-6577

SITE: 76 SERVICE STATION #4625
3070 FRUITVALE AVENUE
OAKLAND, CALIFORNIA


Re: MONITORING WELL INSTALLATION REPORT


Dear Ms. Drogos:

On behalf of ConocoPhillips Company (ConocoPhillips), TRC submits this *Monitoring Well Installation Report* for 76 Service Station No. 4625, located at 3070 Fruitvale Avenue in Oakland, California.

If you have any questions regarding this report, please contact Keith Woodburne at (925) 688-2488.

Sincerely,
TRC


for
Kristin Bolen
Staff Scientist


Keith Woodburne, P.G.
Senior Project Manager

cc: William Borgh, ConocoPhillips (electronic upload)

MONITORING WELL INSTALLATION REPORT

76 Service Station #4625
3070 Fruitvale Avenue
Oakland, California

TRC Project No. 125936

Prepared For:

ConocoPhillips
76 Broadway
Sacramento, CA

Prepared By:

*Maria Kuper
for*

Kristin Bolen
Staff Scientist

Keith Woodburne

Keith Woodburne, P.G.
Senior Project Manager



TRC
1590 Solano Way, Suite A
Concord, California
(925) 688-1200

September 25, 2007



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- B Monitoring Well Installation Logs
- C Well Development Field Sheets
- D Surveyor's Report
- E Laboratory Analytical Reports and Chain of Custody Records
- F Waste Disposal Manifest

Monitoring Well Installation Report

76 Service Station No. 4625

August 24, 2007

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1.0 INTRODUCTION

On behalf of ConocoPhillips, TRC submits this monitoring well installation report documenting additional site assessment activities performed at 76 Service Station No. 4625, located at 3070 Fruitvale Avenue in Oakland, California (the Site, Figure 1). This work was completed as proposed in the April 14, 2005 Hydropunch Groundwater Investigation Report and in accordance with the scope of work outlined in the Additional Soil and Groundwater Investigation Work Plan – Revised submitted to the Alameda County Health Care Services Agency (ACHCS) on November 3, 2005.

The objective of this second phase of groundwater assessment was to install monitoring wells for long-term plume monitoring within the shallow water-bearing zone offsite (downgradient of the Site) and within the deeper water-bearing zone onsite based on data obtained during the hydropunch groundwater investigation.

The scope of work for this assessment included the following:

- Installation of three groundwater monitoring wells.
- Collection of soil and groundwater samples for analysis at a state-certified laboratory.
- Evaluation of groundwater data to better define the lateral and vertical extent of groundwater impacts within the shallow and deeper water-bearing zones.

This report documents the well installations that were completed between July 25 through 27, 2007.

2.0 SITE DESCRIPTION

The site is an operating service station located on the southeast corner of Fruitvale Avenue and School Street in Oakland, California (Figure 2). The current site facilities include a station building with two automotive service bays equipped with hydraulic lifts, four dispenser islands with two canopies, two 12,000-gallon double-wall fiberglass gasoline underground storage tanks (USTs), and one above ground waste-oil tank.

3.0 GEOLOGY AND HYDROGEOLOGY

The site is located on the western flank of the Oakland Hills in an area underlain by Holocene age alluvium. The alluvial deposits are composed of unconsolidated, moderately sorted, permeable silt with coarse sand and gravel. The northwest trending Hayward fault is located approximately 1,500 feet northeast of the site (Helley, 1979). The nearest surface waters are Sausal Creek, located approximately 500 feet west of the site, and Peralta Creek, located 2,300 feet southeast of the site. Additionally, East Bay Municipal Utility District's Central Reservoir is located approximately 1,300 feet west of the site.

In general, subsurface soils are composed of clay and silt to depths of approximately 9 to 19 feet below ground grade (fbg), underlain by gravel with varying amounts of clay and sand to depths of approximately 15 to 22 fbg, which in turn is underlain by clay and silt to 55 fbg, the maximum depth explored. In the vicinity of monitoring well MW-1, only clay was encountered to 25 fbg (Gettler-Ryan Inc., 2003).



Monitoring Well Installation Report

76 Service Station No. 4625

September 25, 2007

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Based on the second quarter 2007 monitoring data, groundwater flows toward the west at a calculated hydraulic gradient of 0.01 feet per foot (ft/ft). The groundwater flow direction during the second quarter 2007 is consistent with previously observed flow directions (TRC 2007).

4.0 SITE BACKGROUND

April/May 1998: The gasoline underground storage tanks (USTs), product piping and dispensers were removed and replaced. Concentrations of total petroleum hydrocarbons as gasoline (TPH-g), benzene, and methyl tertiary butyl ether (MTBE) ranged from non-detect to moderate.

May 1998: A waste oil UST and associated piping was removed. Concentrations of TPH-g, benzene, total petroleum hydrocarbons as diesel (TPH-d), total oil and grease (TOG), volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs) and metals ranged from non-detect to moderate.

A total of approximately 1,166 tons of soil were excavated and transported from the site to Allied Waste's Forward Landfill in Manteca, California. Additionally, 40,000 gallons of groundwater were pumped from the UST excavation and transported to the Tosco Refinery in Rodeo, California for disposal. A conductor casing was installed in the backfill during installation of the replacement gasoline USTs. The waste oil tank was replaced with an aboveground tank.

April 2000: Four monitoring wells were installed at the site.

May 2003: Two monitoring wells were installed to a depth of 25 feet below grade (fbg) and two exploratory borings were advanced to approximately 15 fbg. Soil samples contained concentrations of benzene, MTBE, and tertiary butyl alcohol (TBA), and TPH-g. Grab groundwater samples collected from the two soil borings were reported to contain elevated concentrations of petroleum hydrocarbons in both samples.

October 2003: Site environmental consulting responsibilities were transferred to TRC.

February/March 2006: A Cone Penetrometer Test (CPT) Hydropunch groundwater investigation was completed at the Site. A total of 10 hydropunch groundwater samples were collected from 7 boring locations onsite and offsite. Total purgeable petroleum hydrocarbons (TPPH) and MTBE were detected at maximum concentrations of 4,700 micrograms per liter ($\mu\text{g/L}$) and 160 $\mu\text{g/L}$, respectively.

5.0 ADDITIONAL SITE ASSESSMENT ACTIVITIES

TRC installed one deep onsite and two shallow offsite groundwater monitoring wells to provide additional, long-term groundwater monitoring data and to better define the dissolved-phase plume. The newly installed onsite well is located in the vicinity of the USTs on the western side of the Site. The newly installed offsite wells were installed on the western side of Fruitvale Avenue across from the site (Figure 2).



Monitoring Well Installation Report

76 Service Station No. 4625

September 25, 2007

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5.1 PRE-FIELD ACTIVITIES

Prior to commencing well installation activities permits were acquired from Alameda County Public Works and encroachment permits were acquired from the City of Oakland. Copies of drilling and encroachment permits are included in Appendix A. Underground Service Alert (USA) was notified two days prior to field activities to mark underground utilities at the property boundaries. In addition, a private utility locator was contracted to confirm the absence of buried utilities at each proposed boring and well location. Prior to drilling each boring, a pilot hole was advanced using a water-knife to approximately 5 fbg to safely verify the absence of buried utilities.

A site and job specific health and safety plan that promotes personnel safety and preparedness during the planned activities was developed and available at the work site throughout the duration of the work. On the morning of the day that the field activities commenced, a “tailgate” meeting was conducted with all exclusion zone workers to discuss the health and safety issues and concerns related to the specific work.

5.2 MONITORING WELL INSTALLATION

Between July 25 through July 27, 2007, under the direct supervision of a TRC field geologist, Gregg Drilling and Testing, Inc. (Gregg) installed one onsite groundwater monitoring well (MW-7) and two offsite groundwater monitoring wells (MW-8 and MW-9) using a hollow-stem auger drilling rig. The one onsite monitoring well was installed into the deeper water-bearing zone to a total depth of 55 fbg. The two offsite monitoring wells were installed in the shallow water-bearing zone to a total depth of 20 fbg. Monitoring well locations are shown on Figure 2.

Soil samples were collected from the monitoring well pilot borings continuously using a split-spoon sampler. Samples were collected for soil description in accordance with the Unified Soil Classification System (ASTM D-2487). In addition, soil samples were field screened using a hand-held photo-ionization detector (PID). Soil samples were submitted for laboratory analysis only if hydrocarbon impacts were observed. Thus only two soil samples (from well MW-7) were submitted for analysis.

Soil samples were submitted to a state-certified laboratory for analysis. The soil samples were properly preserved and transported to the laboratory under appropriate chain-of-custody protocol. The soil samples were analyzed for total purgeable petroleum hydrocarbons (TPPH), benzene, toluene, ethyl benzene, total xylenes (BTEX), MTBE, fuel oxygenates, and ethanol by EPA method 8260B. The monitoring well installation and construction logs are included in Appendix B.

The wells were developed (surged and bailed) to improve hydraulic communication between the geologic formation and the well. The wells were surveyed relative to the surrounding site wells and the nearest benchmark on August 9, 2007. Future depth to groundwater measurements will be made from the wellhead reference point. The well development field sheets are included in Appendix C and the surveyors report is included in Appendix D.



Monitoring Well Installation Report

76 Service Station No. 4625

September 25, 2007

Page 4

5.3 SOIL AND GROUNDWATER ANALYTICAL RESULTS

Soil and groundwater samples were submitted to a state-certified laboratory for analysis. The samples were properly preserved and transported to the laboratory under appropriate chain-of-custody protocol. The soil and groundwater samples were analyzed for, total purgeable petroleum hydrocarbons (TPPH), benzene, toluene, ethyl benzene, ethanol, total xylenes (BTEX), and MTBE and fuel oxygenates by EPA method 8260B. The composite soil sample was additionally analyzed for lead by EPA method 6010. Analytical results of the soil and groundwater samples are presented in Table 1 and 2. Soil and groundwater analytical reports and chain-of-custody records are included in Appendix E.

TPPH, and benzene, toluene, ethyl-benzene, and total xylenes (BTEX constituents) were detected in both of the soil samples collected from well MW-7 with the maximum concentrations observed in the soil sample collected at a depth of 11 fbg. TPPH and benzene were detected at maximum concentrations of 380 milligrams per kilogram (mg/kg) and 3.6 mg/kg, respectively. Toluene, ethyl benzene and total xylenes were detected at concentrations of 24 mg/kg, 9.2 mg/kg, and 48 mg/kg respectively. MTBE was only detected in the soil sample collected from MW-7 at a depth of 5 fbg, at a concentration of 0.13 mg/kg. All other analytes were below laboratory reporting limits.

Laboratory analyses indicated that only one of the three groundwater samples collected from the recently installed monitoring wells contained detectable concentrations of hydrocarbons. The post-installation groundwater sample collected from monitoring well MW-7 contained concentrations of TPPH and MTBE at 680 micrograms per liter ($\mu\text{g/L}$) and 20 $\mu\text{g/L}$, respectively. BTEX constituents were also detected in the groundwater sample from MW-7. All other analytes tested were below their laboratory reporting limits.

6.0 WASTE DISPOSAL

Soil cuttings, purge and rinsate water, and construction debris generated during the well installation and development activities were placed in California Department of Transportation (DOT) approved 55-gallon drums and temporarily stored on site pending profiling and disposal. A total of eight drums of soil cuttings, 7 drums of purge/rinsate water, and one drum of construction debris were transported by Filter Recycling Services, Inc. to their Rialto, California facility for disposal. A copy of the non-hazardous waste manifest is included in Appendix F.

7.0 CONCLUSIONS AND RECOMMENDATIONS

TPPH and BTEX constituents were detected in both soil samples collected from well MW-7. In addition, TPPH, BTEX and MTBE were detected in the post-installation groundwater sample collected of onsite well MW-7. Although the dissolved-phase concentrations reported from MW-7 are slightly lower than those reported from the deep grab groundwater sampled collected from the nearest hydropunch boring CPT-1 (TRC, 2006), the concentrations are consistent with those results and indicated groundwater impacts onsite have migrated downward into the deeper water-bearing zone onsite. The depth to groundwater measured in the deeper water-bearing zone well MW-7 is significantly lower than the average depth to water measured in the onsite and offsite shallow water-bearing zone wells, indicating a downward hydraulic gradient exists between the two water-bearing zones.



Monitoring Well Installation Report

76 Service Station No. 4625

September 25, 2007

Page 5

Analysis of post-installation groundwater samples collected from the two shallow zone offsite wells (MW-8 and MW-9) did identify any analytes above their laboratory reported limits. Based on these results, groundwater impacts in the shallow water-bearing zone are fully defined onsite and have not migrated offsite as far as the west side of Fruitvale Avenue.

Based on these soil and groundwater analytical results, TRC recommends that wells MW-7 through MW-9 be incorporated into the quarterly monitoring and sampling program to further assess the presence and distribution of impacted groundwater within the shallow and deeper water-bearing zones onsite. Based on the current groundwater impacts identified within the deeper water-bearing zone onsite, additional deep zone groundwater assessment may be necessary.

8.0 REFERENCES

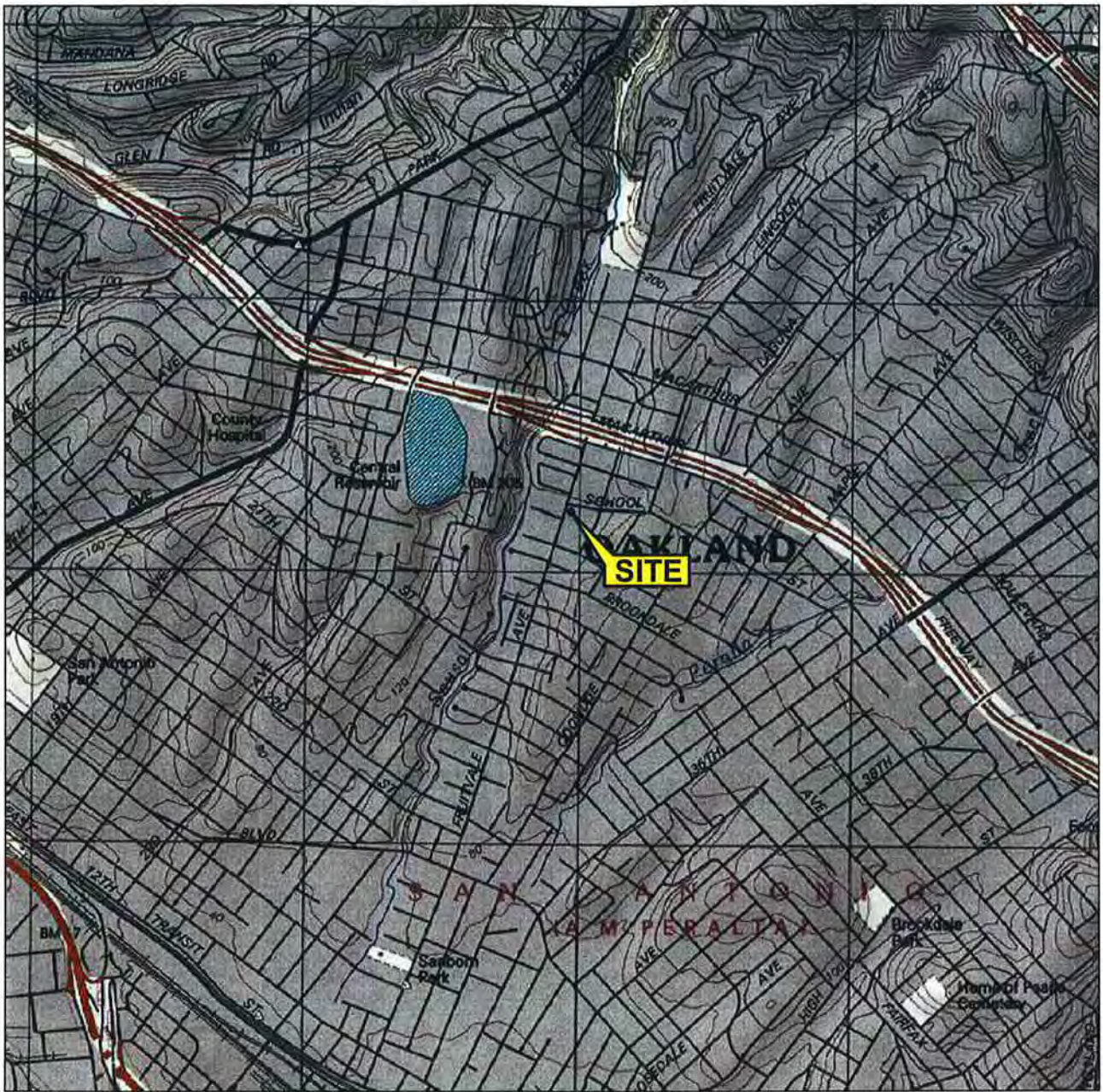
Helley, E. J. and K. R. Lajoie, 1979, Flatland Deposits of the San Francisco Bay Region, California - Their Geology and Engineering Properties, and Their Importance to Comprehensive Planning: U.S. Geological Survey Professional Paper 943.

TRC, 2006, Hydropunch Groundwater Investigation Report, 76 Station 4625, 3070 Fruitvale Avenue, Oakland, California, April 14, 2006.

TRC, 2007, Quarterly Monitoring Report, April through June 2007, 76 Station 4625, 3070 Fruitvale Avenue, Oakland, California, July 20, 2007.



FIGURES



1 MILE 3/4 1/2 1/4 0 1 MILE



SCALE 1 : 24,000



QUADRANGLE
LOCATION

SOURCE:

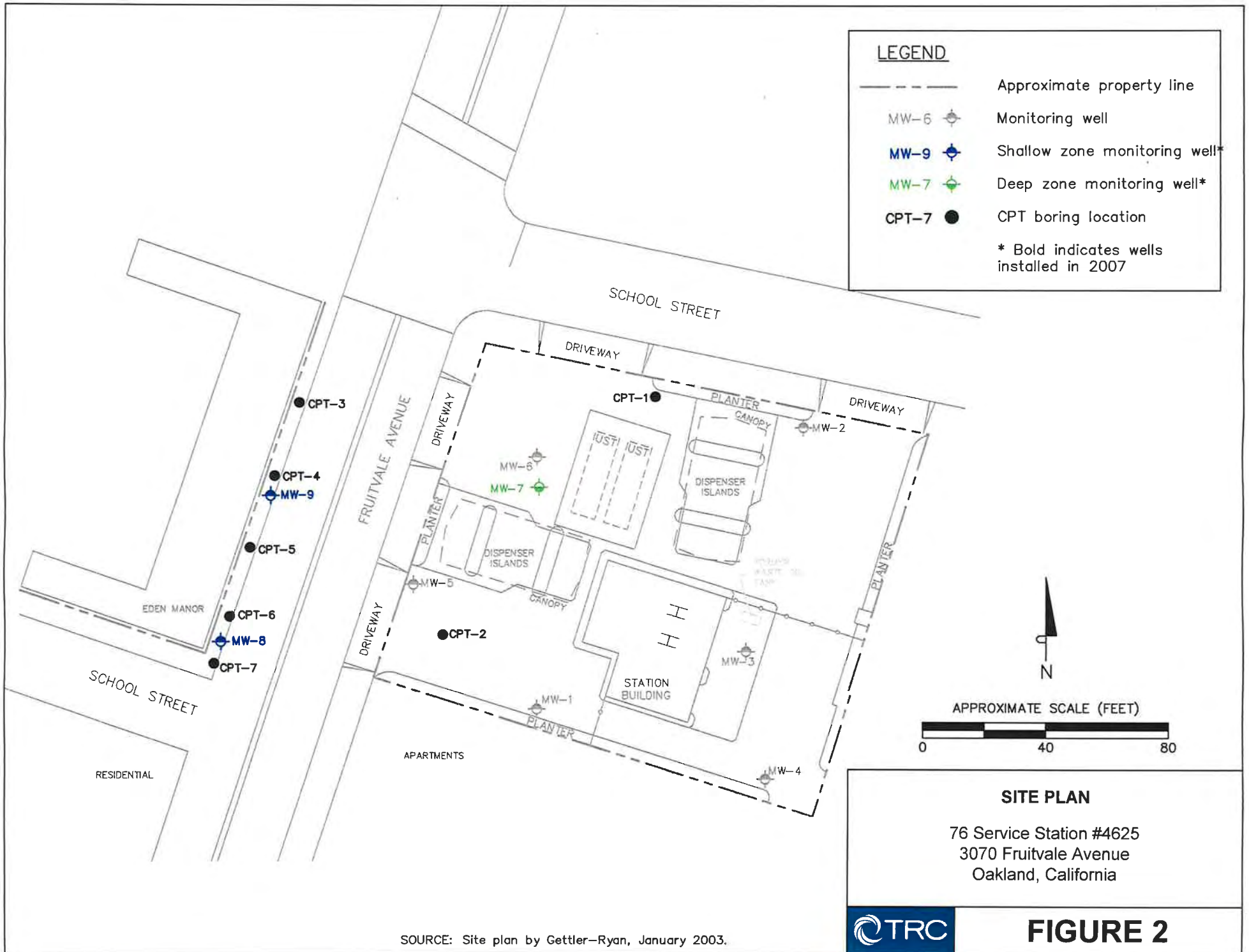
United States Geological Survey
7.5 Minute Topographic Maps:
Oakland East Quadrangle
California

VICINITY MAP

76 Service Station #4625
3070 Fruitvale Avenue
Oakland, California



FIGURE 1



TABLES

Table 1

RESULTS OF LABORATORY ANALYSIS OF SOIL SAMPLES
76 Service Station 4625
3070 Fruitvale Avenue
Oakland, California

Sample Number	Sample Date	Depth (fbg)	TPPH	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE	TBA	TAME	DIPE	ETBE	Ethanol	Lead
			Concentration in milligrams per kilogram (mg/kg)											6010B
EPA Method 8260														
MW-7 @ 5	7/27/2007	5	150	0.39	2.8	3.1	17	0.13	<1.2	<0.025	<0.12	<0.025	<25	--
MW-7 @ 11	7/27/2007	11	380	3.6	24	9.2	48	<1.2	<12	<0.25	<1.2	<0.25	<250	--
Composite	7/27/2007	N/A	17	0.21	0.86	0.35	0.83	0.089	<0.050	<0.0010	<0.0050	<0.0010	<1.0	6.0

Notes:

- | | | | | | |
|------|---|--|-------|---|----------------------------|
| TPPH | = | total purgeable petroleum hydrocarbons | ETBE | = | ethyl tertiary butyl ether |
| MTBE | = | methyl tertiary butyl ether | fbg | = | feet below grade |
| TBA | = | tertiary butyl alcohol | mg/kg | = | milligrams per kilogram |
| TAME | = | tertiary amyl methyl ether | -- | = | not analyzed |
| DIPE | = | di-isopropyl ether | N/A | = | not applicable |

Table 2

RESULTS OF LABORATORY ANALYSIS OF GROUNDWATER SAMPLES
76 Service Station 4625
3070 Fruitvale Avenue
Oakland, California

Well ID	Sample Date	Depth to Water (fbg)	TPPH	Benzene	Ethyl-benzene	Toluene	Total Xylenes	MTBE	TBA	TAME	DIPE	ETBE	Ethanol
			Concentrations in micrograms per liter ($\mu\text{g/L}$) EPA Method 8260										
MW-7	8/7/2007	17.92	680	13	24	57	140	20	<10	<0.50	<0.50	<0.50	<250
MW-8	8/7/2007	9.92	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<10	<0.50	<0.50	<0.50	<250
MW-9	8/7/2007	10.47	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<10	<0.50	<0.50	<0.50	<250

Notes:

TPPH = total purgable petroleum hydrocarbons
 MTBE = methyl tertiary butyl ether
 TBA = tertiary butyl alcohol
 TAME = tertiary amyl methyl ether
 DIPE = di-isopropyl ether

ETBE = ethyl tertiary butyl ether
 fbg = feet below grade
 $\mu\text{g/L}$ = micrograms per liter
 -- = not analyzed

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: 02/27/2007 By jamesy

**Permit Numbers: W2007-0229 to W2007-0231
Permits Valid from 07/25/2007 to 07/27/2007**

Application Id: 1171325220265	City of Project Site: Oakland
Site Location: 3070 Fruitvale Avenue and sidewalk across from 3070 Fruitvale Avenue across Fruitvale Avenue	Completion Date: 03/30/2007
Project Start Date: 03/29/2007	Extension End Date: 07/27/2007
Extension Start Date: 07/25/2007	Extended By: vickyh1
Extension Count: 2	

Applicant: TRC - Rachele Dunn 1590 Solano Way, Suite A, Concord, CA 94520	Phone: 925-688-2464
Property Owner: Thai Kham 3066 Fruitvale Avenue, Oakland, CA 94602	Phone: 510-390-5988
Client: ConocoPhillips Corporation 76 Broadway, Sacramento, CA 95818	Phone: --
Contact: Same	Phone: -- Cell: 925-260-6722

Receipt Number: WR2007-0096	Total Due: \$900.00	
Payer Name : TRC	Total Amount Paid: \$900.00	
	Paid By: CHECK	PAID IN FULL

Works Requesting Permits:

Well Construction-Monitoring-Monitoring - 3 Wells
Driller: Gregg Drilling - Lic #: 485165 - Method: hstem

Work Total: \$900.00

Specifications

Permit #	Issued Date	Expire Date	Owner Well Id	Hole Diam.	Casing Diam.	Seal Depth	Max. Depth
W2007-0229	02/27/2007	06/04/2007	MW-7	8.00 in.	2.00 in.	25.00 ft	45.00 ft
W2007-0230	02/27/2007	06/04/2007	MW-8	8.00 in.	2.00 in.	6.00 ft	25.00 ft
W2007-0231	02/27/2007	06/04/2007	MW-9	8.00 in.	2.00 in.	6.00 ft	25.00 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

Alameda County Public Works Agency - Water Resources Well Permit

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 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 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.
 6. 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.
 7. Minimum surface seal thickness is two inches of cement grout placed by tremie
 8. Minimum seal (Neat Cement seal) depth for monitoring wells is 5 feet below ground surface(BGS) or the maximum depth practicable or 20 feet.
 9. 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.
-

Applications for which no permit is issued within 180 days shall expire by limitation.

Job Site 3066 FRUITVALE AV Parcel# 027 -0860-026-03 Appl# X0700679

Descr to allow monitoring wells [2 each] on Fruitvale Ave Permit Issued 07/18/07
for 76 service station

Work Type EXCAVATION-PRIVATE P

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

Owner TOSCO CORPORATION Applcmt Phone# Lic# --License Classes--
Contractor GREGG DRILLING & TESTING, INC. X (925)688-2488 (925)313-5800 485165 C57
Arch/Engr Agent TRC/R DUNN (925)688-2464
Applic Addr 950 HOWE RD, MARTINEZ, CA., 94553

\$416.55 TOTAL FEES PAID AT ISSUANCE
\$63.00 Applic \$300.00 Permit
\$.00 Process \$34.49 Rec Mgmt
\$.00 Gen Plan \$.00 Invstg
\$.00 Other \$19.06 Tech Enh

JOB SITE

CITY OF OAKLAND

ADDRESS:

DIST:

Job Site 3066 FRUITVALE AV Parcel# 027 -0860-026-03 Appl# ENMI07058

Descr to allow monitoring wells [2 each] on Fruitvale Ave
for 76 service station Filed 01/22/07

Work Type OTHER MINOR ENCROACH

Insurance Required? YES Carrier Expires

Owner TOSCO CORPORATION Applc# Phone# Lic# --License Classes--
(925) 688-2488

Contractor

Arch/Engr

Agent KEITH WOODBURNE X (925) 688-2488

Applic Addr 1590 SOLANO WY #A, CONCORD CA, 94520

\$937.51 TOTAL FEES PAID AT FILING

\$.00 TOTAL FEES PAID AT ISSUANCE

\$61.00 Applic	\$.00 Permit
\$756.00 Process	\$77.62 Rec Mgmt
\$.00 Gen Plan	\$.00 Invstg
\$.00 Other	\$42.89 Tech Enh

ADDRESS:

DIST:

CITY OF OAKLAND

CITY OF OAKLAND • Community and Economic Development Agency
250 Frank H. Ogawa Plaza, 2nd Floor, Oakland, CA 94612 • Phone (510) 238-3443 • Fax (510) 238-2263

Applications for which no permit is issued within 180 days shall expire by limitation.

Job Site 3066 FRUITVALE AV Parcel# 027 -0860-026-03 Appl# OB070489

Reserve parking for construction on Fruitvale Ave Permit Issued 07/18/07
to allow monitoring wells [2 each] on Fruitvale Ave
for 76 service station One space NO FEE with X0700679

Nbr of days: 2 Linear feet: 75
Effective: 07/25/07 Expiration: 07/26/07

SHORT TERM NON-METERED

	Applnt	Phone#	Lic#	--License Classes--
Owner	TOSCO CORPORATION	(925) 688-2488		
Contractor	GREGG DRILLING & TESTING, INC.	X (925) 313-5800	485165	C57
Arch/Engr				
Agent	TRC/R DUNN	(925) 688-2464		
Applic Addr	950 HOWE RD, MARTINEZ, CA., 94553			

\$179.59 TOTAL FEES PAID AT ISSUANCE	
\$63.00 Applic	\$93.50 Permit
\$.00 Process	\$14.87 Rec Mgmt
\$.00 Gen Plan	\$.00 Invstg
\$.00 Other	\$8.22 Tech Enh

JOB SITE

CITY OF OAKLAND

JOB SITE

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

Applicant: Rachel [Signature] 7/18/07
Issued by: [Signature] [Signature]

DIST: ADDRESS:

Applications for which no permit is issued within 180 days shall expire by limitation.

Job Site 3066 FRUITVALE AV Parcel# 027 -0860-026-03 Appl# OB070532

Reserve parking for construction on Fruitvale Ave Permit Issued 08/02/07
for well development [2 each] on Fruitvale Ave
for 76 service station. One space NO FEE with X0700749

Nbr of days: 1 Linear feet: 75
Effective: 08/07/07 Expiration: 08/07/07

SHORT TERM NON-METERED

	Applcnt	Phone#	Lic#	--License Classes--
Owner	TOSCO CORPORATION	(925)688-2488		
Contractor	GREGG DRILLING & TESTING, INC. X	(925)313-5800	485165	C57
Arch/Engr				
Agent	TRC/K BOLEN	(925)688-2464		
Applic Addr	950 HOWE RD, MARTINEZ, CA., 94553			

\$125.08 TOTAL FEES PAID AT ISSUANCE	
\$63.00 Applic	\$46.00 Permit
\$.00 Process	\$10.36 Rec Mgmt
\$.00 Gen Plan	\$.00 Invstg
\$.00 Other	\$5.72 Tech Enh

CITY OF OAKLAND
JOB SITE

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

Applicant: *Justin Bolen* 8/2/07
Issued by: *CB* 8-2-07

ADDRESS:

DIST:

APPENDIX B
MONITORING WELL INSTALLATION LOGS

PROJECT NO.: 125936	DATE DRILLED: 7/27/07	NORTHING: 2116709.91
LOCATION: 76 Station #4625	LOGGED BY: R.Dunn & K. Bolen	EASTING: 6065351.96
3070 Friutvale Ave.	APPROVED BY: K. Woodburne, PG	TOP OF CASING ELEVATION: 138.74
Oakland, California	DRILLING CO.: Woodward	GROUND SURFACE ELEVATION: 139.15

PID/FID (ppm)	BLOWS PER 6 INCHES	RECOVERY	SAMPLE	DEPTH (feet below grade)	DRILLING METHOD: 8-inch Hollow-Stem Auger	USCS	LITHOLOGY	WELL CONSTRUCTION DETAIL
					SAMPLER TYPE: 2-inch Split Spoon			
DESCRIPTION								
				0	Water knife hole clearance to 5'.			0
402	7 10 14	1.5/1.5		5	CLAY (CL): Dark brown (10YR 3/3), 95% moist medium plastic fines, 5% very fine grained sand, strong hydrocarbon odor, stiff, dry.	CL		5
	8 14 17	1.5/1.5			- @ 8': Mottled with dark yellowish brown (10YR 4/4).			
	7 8 11	1.5/1.5			- @ 10': Mottled with dark yellowish brown (10YR 4/4) and gray (10YR 5/1)..			
25.0	5 6 9	1.0/1.5		10	- @ 12': Wet.			10
	5 7 10	1.5/1.5			- @ 13': Moist.			
	8 14 18	1.5/1.5			- @ 13.5': SILTY SAND (SM): Gray (10YR 5/1), 40% fines, 50% well graded sand, 10% gravel 1", subrounded, loose, wet, no odor.	SM		15
0.0	5 13 15	1.0/1.5		15	- @ 14': Color change, dark gray (10YR 4/1), mottled with brown (10YR 4/3).			15
	8 13 15	1.5/1.5			CLAY (CL): Grayish brown (10YR 4/1), 95% fines, 5% very fine grained sand, dry, stiff, mottled with gray (5/1).	CL		20
	6 16 17	1.5/1.5						
	7 13 15	1.5/1.5						
1.7	5 8 15	1.5/1.5		20	SILT (ML): Yellowish brown (10YR 5/4), 95% fines, 5% low plastic sand, mottled with gray (10YR 6/1), dry, stiff.	ML		20
	2 3 6	1.0/1.5			CLAY (CL): Grayish brown (10YR 4/1), 95% fines, 5% very fine grained sand, dry, stiff, mottled with gray (5/1).	CL		25
1.7	2 3 6	1.0/1.5		25				25
	2 3 6	1.5/1.5						
	2 3 6	1.5/1.5						
1.7	2 3 6	1.5/1.5		30	- @ 30.5': Sand grains becomes fine to coarse.			30
	2 3 6	1.5/1.5						
	2 3 6	1.5/1.5						
1.7	2 3 6	1.0/1.5		35				35
	2 3 6	1.0/1.5						
	2 3 6	1.0/1.5						
	2 3 6	1.5/1.5			No recovery.			
	2 3 6	1.5/1.5			1" Poorly graded sand.			
	2 3 6	1.0/1.5		40	CLAY (CL): Grayish brown (10YR 4/1), 95% fines, 5% very fine grained sand, dry, stiff, mottled with gray (5/1).	CL		40



MONITORING WELL INSTALLATION LOG

MW-7

PAGE 1 of 2

PROJECT NO.: 125936
 LOCATION: 76 Station #4625
 3070 Fruitvale Ave.
 Oakland, California

DATE DRILLED: 7/27/07
 LOGGED BY: R. Dunn & K. Bolen
 APPROVED BY: K. Woodburne, PG
 DRILLING CO.: Gregg

NORTHING: 2116709.91
 EASTING: 6065351.96
 TOP OF CASING ELEVATION: 138.74
 GROUND SURFACE ELEVATION: 139.15

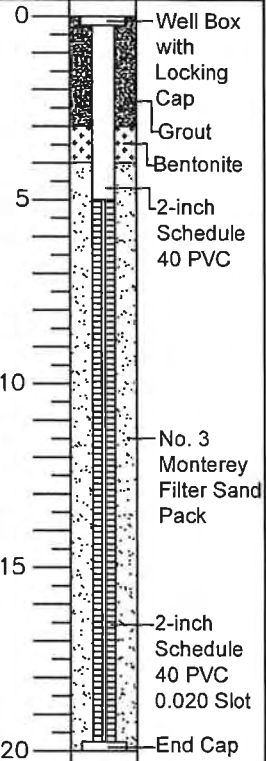
PID/FID (ppm)	BLOWS PER 6 INCHES	RECOVERY	SAMPLE	DEPTH (feet below grade)	DRILLING METHOD: 8-inch Hollow-Stem Auger SAMPLER TYPE: 2-inch Split Spoon TOTAL DEPTH: Boring - 55.0 feet; Well - 55.0 feet DEPTH TO WATER: 12.0 feet		USCS	LITHOLOGY	WELL CONSTRUCTION DETAIL	
					DESCRIPTION					
0.0	18 29 18 18 %	1.0/ 1.5		40	Same	CL		40	<p>No. 3 Monterey Filter Sand Pack</p> <p>2-inch Schedule 40 PVC 0.020 Slot</p> <p>End Cap</p>	
	25 50 %	1.0/ 1.5			SANDY SILT (ML): Brown (10YR 4/3) 85% non plastic fines, 15% fine to coarse grained sand, dry, stiff. -@ 42.5': Becomes moist.	ML		45		
0.2	20 28 34 22 24 26 18 18 %	1.0/ 1.5		45	-@ 45.5': 95% fines, 5% fine grained sand, dry. -@ 47': Mottled with gray (10YR 6/1).	ML		50		
2.9	4 6 5 20 33 30 %	0.5/ 1.5		50	CLAY (CL): Brown (10YR 4/3) mottled with black (10YR 2/1)m 95% medium plastic fines, 5% very fine grained sand, moist, stiff.	CL		55		
	31 30 %	0.5/ 1.5			-@ 51.5': Fine gravel. No recovery.			60		
2.3	19 22 29 %	1.5/ 1.5		55	-@ 53': Fine gravel. SILT (ML): Brown (10YR 4/3), 95% low plastic fines, 5% very fine grained sand, moist, stiff.	ML		55		
				60				60		
				65				65		
				70				70		
				75				75		
				80				80		



MONITORING WELL INSTALLATION LOG

PROJECT NO.: 125936	DATE DRILLED: 7/26/07	NORTHING: 2116666.23
LOCATION: 76 Station #4625	LOGGED BY: R. Dunn & K. Bolen	EASTING: 6065242.33
3070 Fruitvale Avenue	APPROVED BY: K. Woodburne, PG	TOP OF CASING ELEVATION: 136.22
Oakland, California	DRILLING CO.: Woodward	GROUND SURFACE ELEVATION: 136.58

PID/FID (ppm)	BLOWS PER 6 INCHES	RECOVERY	SAMPLE	DEPTH (feet below grade)	DRILLING METHOD: 8-inch Hollow-Stem Auger	USCS	LITHOLOGY	WELL CONSTRUCTION DETAIL
					SAMPLER TYPE: 2-inch Split Spoon			
					TOTAL DEPTH: Boring - 20.0 feet; Well - 20.0 feet			
					DEPTH TO WATER: 10.5 feet			
DESCRIPTION								
				0	Water knife hole clearance to 5'.			0
				5	CLAY (CL): Dark brown (10YR 3/3), 95% medium plastic fines, 5% very fine grained sand, stiff, dry. - @ 7': Color becomes mottled with dark yellowish brown (10YR 4/6). - @ 8': Becomes moist.	CL		5
0	4 9 13	1.5/ 1.5		10	- @ 10.5': Wet, soft, sand site becomes fine to medium grained. - @ 12': Becomes moist, sand site decreases to fine.			10
	5 5 10	1.5/ 1.5		15	SILT (ML): Dark yellowish brown (10YR 4/4), 95% low plastic fines, 5% fine grained sand, soft, wet.	ML		15
0	4 4 8	1.5/ 1.5		20	WELL GRADED GRAVEL (GW): Brown(10YR 4/3), 15% fines, 10% fine to well graded sand, 75% well graded gravel, upto 1" diameter, both subrounded & subangular, wet, loose.	GW		20
	3 6 7	1.5/ 1.5			CLAY (CL): Strong brown (7.5YR 4/6), 95% low plastic fines, 5% fine grained sand, stiff, dry.	CL		
0	4 7 9	1.5/ 1.5						
	5 10 12	1.5/ 1.5						
1.8	3 7 11	1.0/ 1.0						
	10 19 24	1.5/ 1.5						
0.7	3 7 14	1.5/ 1.5						
				20				20
				25				25
				30				30
				35				35
				40				40



MONITORING WELL INSTALLATION LOG

PROJECT NO.: 125936	DATE DRILLED: 7/26/07	NORTHING: 2116711.72
LOCATION: 76 Station #4625	LOGGED BY: R. Dunn & K. Bolen	EASTING: 6065257.59
3070 Fruitvale Avenue	APPROVED BY: K. Woodburne, PG	TOP OF CASING ELEVATION: 137.11
Oakland, California	DRILLING CO.: Woodward	GROUND SURFACE ELEVATION: 137.51

PID/FID (ppm)	BLOWS PER 6 INCHES	RECOVERY	SAMPLE	DEPTH (feet below grade)	DRILLING METHOD: 8-inch Hollow-Stem Auger	USCS	LITHOLOGY	WELL CONSTRUCTION DETAIL
					SAMPLER TYPE: 2-inch Split Spoon			
DESCRIPTION								
				0	Water knife hole clearance to 5'.			0 Well Box with Locking Cap
				5	CLAY (CL): Dark brown (10YR 3/3), 95% dry medium plastic fines, 5% very fine grained sand, stiff. - @ 7': Color becomes mottled with dark yellowish brown (10YR 4/6). - @ 8': Moist and roots.	CL		Grout Bentonite 2-inch Schedule 40 PVC
0.0	4 11 13	1.5/1.5		10	SILT (ML): Dark yellowish (10YR 4/4), mottled with gray (10YR 5/1), 95% low plastic fines, 5% fine grained sand, soft, wet. - @ 13': Dry.	ML		No. 3 Monterey Filter Sand Pack
0.0	5 10 11	1.5/1.5		15	GRAVEL (GW): Brown (10YR 4/8), 15% fines, well graded sand to well graded gravel up to 1" diameter, subrounded and sub angle, loose, wet.	GW		2-inch Schedule 40 PVC
0.0	4 6 7	1.5/1.5		20	POORLY GRADED SAND (SP): Dark brown (10yr 3/3), 5% fines, 95% medium grained sand, wet, loose.	SP		0.020 Slot
0.0	5 7 10	1.5/1.5		20	GRAVEL (GW): Brown (10YR 4/8), 15% fines, well graded sand to well graded gravel up to 1" diameter, subrounded and sub angle, loose, wet.	GW		End Cap
0.2	10 20 26 13 19	1.0/1.5						



MONITORING WELL INSTALLATION LOG

MW-9
PAGE 1 of 1

APPENDIX C
WELL DEVELOPMENT FIELD SHEETS

WELL NUMBER MW7

PROJECT NUMBER COP# 4625

DEPTH TO BOTTOM (DB):

DATE 8/7/07

INITIAL 54.11

DATE(S) INSTALLED 8/7/07

FINAL 54.85

DATE(S) DEVELOPED 8/7/07

STATIC WATER LEVEL:

PUMP TYPE 2" pump

INITIAL 17.92

PUMP CAPACITY _____

FINAL 46.65

BAILER TYPE SS Bailer

MEASURING POINT Top of Castings

BAILER CAPACITY _____

FIELD PERSONNEL _____

WELL MEASUREMENT:

2-INCH I.D. = 0.16 gal/ft.

4-INCH I.D. = 0.65 gal/ft.

6-INCH I.D. = 1.47 gal/ft.

8-INCH I.D. = 2.51 gal/ft.

MEASURED DEPTH TO BOTTOM (DB) _____

DEPTH TO FLUID (DTW) _____

HEIGHT OF WATER COLUMN (H) = DB-DTW _____

ONE CASING VOLUME (CV) = X gal/ft. x H _____

TIME	VOLUME REMOVED	pH	CONDUCTIVITY	TEMP (F)	TURBIDITY	OTHER PHYSICAL CHARACTERISTICS
1215	30	7.20	1.10	20.7	>999	
1230	35	7.38	1.06	20.3	>999	
1256	40	7.34	1.01	21.1	>999	
1325	45	7.29	1.09	21.2	>999	

TOTAL VOLUME REMOVED _____ DRUMS _____

COMMENTS _____

WELL NUMBER MW-8
 DEPTH TO BOTTOM (DB):
 INITIAL 19.72
 FINAL 19.75
 STATIC WATER LEVEL:
 INITIAL ↔
 FINAL 9.92, 10.03
 MEASURING POINT Top of casing
 FIELD PERSONNEL ~~B. J.~~

PROJECT NUMBER COP #4625
 DATE 8/7/07
 DATE(S) INSTALLED _____
 DATE(S) DEVELOPED 8/7/07
 PUMP TYPE 2" pump
 PUMP CAPACITY _____
 BAILER TYPE SS Bailer
 BAILER CAPACITY _____

WELL MEASUREMENT:
 2-INCH I.D. = 0.16 gal/ft.
 4-INCH I.D. = 0.65 gal/ft.
 6-INCH I.D. = 1.47 gal/ft.
 8-INCH I.D. = 2.51 gal/ft.

MEASURED DEPTH TO BOTTOM (DB) 28.24
 DEPTH TO FLUID (DTW) _____
 HEIGHT OF WATER COLUMN (H) = DB-DTW _____
 ONE CASING VOLUME (CV) = X gal/ft. x H _____

TIME	VOLUME REMOVED	pH	CONDUCTIVITY	TEMP (F)	TURBIDITY	OTHER PHYSICAL CHARACTERISTICS
0817	14	6.32	0.740	18.8	> 999	
0819	16	6.35	0.641	19.2	> 999	
0821	18	6.30	0.614	19.3	↓	
0823	20	6.27	0.610	19.4		
0825	22	6.25	0.608	19.4		
0827	24	6.24	0.606	19.5		
0829	26	6.25	0.603	19.4		
0831	28	6.23	0.599	19.3	335	
0833	30	6.22	0.596	19.4	386	
0835	32	6.23	0.594	19.4	6261	

TOTAL VOLUME REMOVED 40 DRUMS 1 1/2

COMMENTS _____

WELL NUMBER MW-8 PROJECT NUMBER COP# 4625
 DEPTH TO BOTTOM (DB): DATE 8/7/07
 INITIAL _____ DATE(S) INSTALLED _____
 FINAL _____ DATE(S) DEVELOPED _____
 STATIC WATER LEVEL: PUMP TYPE _____
 INITIAL _____ PUMP CAPACITY _____
 FINAL _____ BAILER TYPE _____
 MEASURING POINT _____ BAILER CAPACITY _____
 FIELD PERSONNEL _____

WELL MEASUREMENT:

2-INCH I.D. = 0.16 gal/ft.
 4-INCH I.D. = 0.65 gal/ft.
 6-INCH I.D. = 1.47 gal/ft.
 8-INCH I.D. = 2.51 gal/ft.

MEASURED DEPTH TO BOTTOM (DB) _____
 DEPTH TO FLUID (DTW) _____
 HEIGHT OF WATER COLUMN (H) = DB-DTW _____
 ONE CASING VOLUME (CV) = X gal/ft. x H _____

TIME	VOLUME REMOVED	pH	CONDUCTIVITY	TEMP (F)	TURBIDITY	OTHER PHYSICAL CHARACTERISTICS
0937	34	6.21	0.59	19.4	156	
0837	40	6.22	0.585	19.5	88	

TOTAL VOLUME REMOVED 40 DRUMS 1 1/2

COMMENTS _____

WELL NUMBER MW-9
 DEPTH TO BOTTOM (DB):
 INITIAL 19.71 ff
 FINAL 19.72
 STATIC WATER LEVEL:
 INITIAL ↻
 FINAL 10.47, 10.55
 MEASURING POINT Top of Casing
 FIELD PERSONNEL _____

PROJECT NUMBER CoP # 4625
 DATE 8/7/07
 DATE(S) INSTALLED _____
 DATE(S) DEVELOPED 8/7/07
 PUMP TYPE 2" Pump
 PUMP CAPACITY _____
 BAILER TYPE SS Bailer
 BAILER CAPACITY _____

WELL MEASUREMENT:
 2-INCH I.D. = 0.16 gal/ft.
 4-INCH I.D. = 0.65 gal/ft.
 6-INCH I.D. = 1.47 gal/ft.
 8-INCH I.D. = 2.51 gal/ft.

MEASURED DEPTH TO BOTTOM (DB) _____
 DEPTH TO FLUID (DTW) _____
 HEIGHT OF WATER COLUMN (H) = DB-DTW _____
 ONE CASING VOLUME (CV) = X gal/ft. x H _____

TIME	VOLUME REMOVED	pH	CONDUCTIVITY	TEMP (F)	TURBIDITY	OTHER PHYSICAL CHARACTERISTICS
0955	12	6.36	0.594	19.2	>999	
0957	14	6.45	0.575	18.9	>999	
1005	22"	6.32	0.563	19.3	>999	
1009	26	6.31	0.556	19.3	870	
1011	28	6.36	0.550	19.4	730	
1015	37	6.37	0.549	19.4	426	
1019	36	6.36	0.545	19.4	121	
1023	40	6.34	0.544	19.5	48	

TOTAL VOLUME REMOVED 40 DRUMS 1

COMMENTS _____

APPENDIX D
SURVEYOR'S REPORT

Virgil Chavez Land Surveying

721 Tuolumne Street
Vallejo, California 94590
(707) 553-2476 • Fax (707) 553-8698

August 10, 2007
Project No.: 1824-08A

Kristin Bolen
TRC Solutions
1590 Solano Way, Suite A
Concord, CA 94520

Subject: Monitoring Well Survey
76 Service Station No. 4625
3070 Fruitvale Avenue
Oakland, CA

Dear Kristin:

This is to confirm that we have proceeded at your request to survey the ground water monitoring wells located at the above referenced location. The survey was completed on August 8, 2007. The benchmark for this survey was a City of Oakland Benchmark, being a disk monument at approximate centerline of easterly southwest of Fruitvale and Montana Streets. The latitude, longitude and coordinates are for top of casings and are based on the California State Coordinate System, Zone III (NAD83). Benchmark Elevation =157.127 feet (NGVD 29).

<u>Latitude</u>	<u>Longitude</u>	<u>Northing</u>	<u>Easting</u>	<u>Elev.</u>	<u>Desc.</u>
37.7955058	-122.2179381	2116679.46	6065310.69	137.70 137.35	RIM MW-5 TOC MW-5
37.7956132	-122.2178094	2116717.89	6065348.61	139.12 138.69	RIM MW-6 TOC MW-6
37.7955915	-122.2177973	2116709.91	6065351.96	139.15 138.74	RIM MW-7 TOC MW-7
37.7954660	-122.2181738	2116666.23	6065242.33	136.58 136.22	RIM MW-8 TOC MW-8
37.7955917	-122.2181239	2116711.72	6065257.59	137.51 137.11	RIM MW-9 TOC MW-9



Sincerely,

Virgil D. Chavez

 Virgil D. Chavez, PLS 6323

APPENDIX E
LABORATORY ANALYTICAL REPORTS
AND
CHAIN OF CUSTODY RECORDS

Date of Report: 08/13/2007

Keith Woodburne

TRC

1590 Solano Way, Suite A
Concord, CA 94520

RE: 4625

BC Work Order: 0708669

Enclosed are the results of analyses for samples received by the laboratory on 07/30/2007 20:45. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Contact Person: Vanessa Hooker
Client Service Rep.

Authorized Signature

TRC
1590 Solano Way, Suite A
Concord, CA 94520

Project: 4625
Project Number: [none]
Project Manager: Keith Woodburne

Reported: 08/13/2007 13:22

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information																														
0708669-01	<table><tr><td>COC Number:</td><td>---</td><td>Receive Date:</td><td>07/30/2007 20:45</td><td>Delivery Work Order:</td><td></td></tr><tr><td>Project Number:</td><td>4625</td><td>Sampling Date:</td><td>07/27/2007 07:51</td><td>Global ID:</td><td></td></tr><tr><td>Sampling Location:</td><td>MW-7</td><td>Sample Depth:</td><td>---</td><td>Matrix:</td><td>SO</td></tr><tr><td>Sampling Point:</td><td>MW-7@5</td><td>Sample Matrix:</td><td>Solids</td><td>Samle QC Type (SACode):</td><td>CS</td></tr><tr><td>Sampled By:</td><td>Rachelle Dunn of TRCC</td><td></td><td></td><td>Cooler ID:</td><td></td></tr></table>	COC Number:	---	Receive Date:	07/30/2007 20:45	Delivery Work Order:		Project Number:	4625	Sampling Date:	07/27/2007 07:51	Global ID:		Sampling Location:	MW-7	Sample Depth:	---	Matrix:	SO	Sampling Point:	MW-7@5	Sample Matrix:	Solids	Samle QC Type (SACode):	CS	Sampled By:	Rachelle Dunn of TRCC			Cooler ID:	
COC Number:	---	Receive Date:	07/30/2007 20:45	Delivery Work Order:																											
Project Number:	4625	Sampling Date:	07/27/2007 07:51	Global ID:																											
Sampling Location:	MW-7	Sample Depth:	---	Matrix:	SO																										
Sampling Point:	MW-7@5	Sample Matrix:	Solids	Samle QC Type (SACode):	CS																										
Sampled By:	Rachelle Dunn of TRCC			Cooler ID:																											
0708669-02	<table><tr><td>COC Number:</td><td>---</td><td>Receive Date:</td><td>07/30/2007 20:45</td><td>Delivery Work Order:</td><td></td></tr><tr><td>Project Number:</td><td>4625</td><td>Sampling Date:</td><td>07/27/2007 08:05</td><td>Global ID:</td><td></td></tr><tr><td>Sampling Location:</td><td>MW-7</td><td>Sample Depth:</td><td>---</td><td>Matrix:</td><td>SO</td></tr><tr><td>Sampling Point:</td><td>MW-7@11</td><td>Sample Matrix:</td><td>Solids</td><td>Samle QC Type (SACode):</td><td>CS</td></tr><tr><td>Sampled By:</td><td>Rachelle Dunn of TRCC</td><td></td><td></td><td>Cooler ID:</td><td></td></tr></table>	COC Number:	---	Receive Date:	07/30/2007 20:45	Delivery Work Order:		Project Number:	4625	Sampling Date:	07/27/2007 08:05	Global ID:		Sampling Location:	MW-7	Sample Depth:	---	Matrix:	SO	Sampling Point:	MW-7@11	Sample Matrix:	Solids	Samle QC Type (SACode):	CS	Sampled By:	Rachelle Dunn of TRCC			Cooler ID:	
COC Number:	---	Receive Date:	07/30/2007 20:45	Delivery Work Order:																											
Project Number:	4625	Sampling Date:	07/27/2007 08:05	Global ID:																											
Sampling Location:	MW-7	Sample Depth:	---	Matrix:	SO																										
Sampling Point:	MW-7@11	Sample Matrix:	Solids	Samle QC Type (SACode):	CS																										
Sampled By:	Rachelle Dunn of TRCC			Cooler ID:																											
0708669-03	<table><tr><td>COC Number:</td><td>---</td><td>Receive Date:</td><td>07/30/2007 20:45</td><td>Delivery Work Order:</td><td></td></tr><tr><td>Project Number:</td><td>4625</td><td>Sampling Date:</td><td>07/27/2007 11:30</td><td>Global ID:</td><td></td></tr><tr><td>Sampling Location:</td><td>COMPOSITE</td><td>Sample Depth:</td><td>---</td><td>Matrix:</td><td>SO</td></tr><tr><td>Sampling Point:</td><td>COMPOSITE</td><td>Sample Matrix:</td><td>Solids</td><td>Samle QC Type (SACode):</td><td>CS</td></tr><tr><td>Sampled By:</td><td>Rachelle Dunn of TRCC</td><td></td><td></td><td>Cooler ID:</td><td></td></tr></table>	COC Number:	---	Receive Date:	07/30/2007 20:45	Delivery Work Order:		Project Number:	4625	Sampling Date:	07/27/2007 11:30	Global ID:		Sampling Location:	COMPOSITE	Sample Depth:	---	Matrix:	SO	Sampling Point:	COMPOSITE	Sample Matrix:	Solids	Samle QC Type (SACode):	CS	Sampled By:	Rachelle Dunn of TRCC			Cooler ID:	
COC Number:	---	Receive Date:	07/30/2007 20:45	Delivery Work Order:																											
Project Number:	4625	Sampling Date:	07/27/2007 11:30	Global ID:																											
Sampling Location:	COMPOSITE	Sample Depth:	---	Matrix:	SO																										
Sampling Point:	COMPOSITE	Sample Matrix:	Solids	Samle QC Type (SACode):	CS																										
Sampled By:	Rachelle Dunn of TRCC			Cooler ID:																											

TRC
1590 Solano Way, Suite A
Concord, CA 94520

Project: 4625
Project Number: [none]
Project Manager: Keith Woodburne

Reported: 08/13/2007 13:22

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID:	0708669-01		Client Sample Name:	4625, MW-7, MW-7@5, 7/27/2007 7:51:00AM, Rachele Dunn										
Constituent	Result	Units	PQL	MDL	Method	Prep Date	Run Date/Time	Analyst	Instru-ment ID	Dilution	QC Batch ID	MB Bias	Lab Quals	
Benzene	0.39	mg/kg	0.12		EPA-8260	07/31/07	07/31/07 14:48	JSK	MS-V2	25	BQG1443	ND	A01	
Ethylbenzene	3.1	mg/kg	0.12		EPA-8260	07/31/07	07/31/07 14:48	JSK	MS-V2	25	BQG1443	ND	A01	
Methyl t-butyl ether	0.13	mg/kg	0.12		EPA-8260	07/31/07	07/31/07 14:48	JSK	MS-V2	25	BQG1443	ND	A01	
Toluene	2.8	mg/kg	0.12		EPA-8260	07/31/07	07/31/07 14:48	JSK	MS-V2	25	BQG1443	ND	A01	
Total Xylenes	17	mg/kg	0.25		EPA-8260	07/31/07	07/31/07 14:48	JSK	MS-V2	25	BQG1443	ND	A01	
t-Amyl Methyl ether	ND	mg/kg	0.025		EPA-8260	07/31/07	07/31/07 14:48	JSK	MS-V2	25	BQG1443	ND	A01	
t-Butyl alcohol	ND	mg/kg	1.2		EPA-8260	07/31/07	07/31/07 14:48	JSK	MS-V2	25	BQG1443	ND	A01	
Diisopropyl ether	ND	mg/kg	0.12		EPA-8260	07/31/07	07/31/07 14:48	JSK	MS-V2	25	BQG1443	ND	A01	
Ethanol	ND	mg/kg	25		EPA-8260	07/31/07	07/31/07 14:48	JSK	MS-V2	25	BQG1443	ND	A01	
Ethyl t-butyl ether	ND	mg/kg	0.025		EPA-8260	07/31/07	07/31/07 14:48	JSK	MS-V2	25	BQG1443	ND	A01	
Total Purgeable Petroleum Hydrocarbons	150	mg/kg	20		EPA-8260	07/31/07	07/31/07 18:21	JSK	MS-V2	100	BQG1443	ND	A01	
1,2-Dichloroethane-d4 (Surrogate)	97.8	%	70 - 121 (LCL - UCL)		EPA-8260	07/31/07	07/31/07 14:48	JSK	MS-V2	25	BQG1443			
1,2-Dichloroethane-d4 (Surrogate)	83.4	%	70 - 121 (LCL - UCL)		EPA-8260	07/31/07	07/31/07 18:21	JSK	MS-V2	100	BQG1443			
Toluene-d8 (Surrogate)	99.3	%	81 - 117 (LCL - UCL)		EPA-8260	07/31/07	07/31/07 18:21	JSK	MS-V2	100	BQG1443			
Toluene-d8 (Surrogate)	117	%	81 - 117 (LCL - UCL)		EPA-8260	07/31/07	07/31/07 14:48	JSK	MS-V2	25	BQG1443			
4-Bromofluorobenzene (Surrogate)	96.8	%	74 - 121 (LCL - UCL)		EPA-8260	07/31/07	07/31/07 14:48	JSK	MS-V2	25	BQG1443			
4-Bromofluorobenzene (Surrogate)	89.5	%	74 - 121 (LCL - UCL)		EPA-8260	07/31/07	07/31/07 18:21	JSK	MS-V2	100	BQG1443			

TRC
1590 Solano Way, Suite A
Concord, CA 94520

Project: 4625
Project Number: [none]
Project Manager: Keith Woodburne

Reported: 08/13/2007 13:22

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID:	0708669-02												
Client Sample Name:	4625, MW-7, MW-7@11, 7/27/2007 8:05:00AM, Rachele Dunn												
Constituent	Result	Units	PQL	MDL	Method	Prep Date	Run Date/Time	Analyst	Instru-ment ID	Dilution	QC Batch ID	MB Bias	Lab Quals
Benzene	3.6	mg/kg	1.2		EPA-8260	07/31/07	07/31/07 19:41	JSK	MS-V2	250	BQG1443	ND	A01
Ethylbenzene	9.2	mg/kg	1.2		EPA-8260	07/31/07	07/31/07 19:41	JSK	MS-V2	250	BQG1443	ND	A01
Methyl t-butyl ether	ND	mg/kg	1.2		EPA-8260	07/31/07	07/31/07 19:41	JSK	MS-V2	250	BQG1443	ND	A01
Toluene	24	mg/kg	1.2		EPA-8260	07/31/07	07/31/07 19:41	JSK	MS-V2	250	BQG1443	ND	A01
Total Xylenes	48	mg/kg	2.5		EPA-8260	07/31/07	07/31/07 19:41	JSK	MS-V2	250	BQG1443	ND	A01
t-Amyl Methyl ether	ND	mg/kg	0.25		EPA-8260	07/31/07	07/31/07 19:41	JSK	MS-V2	250	BQG1443	ND	A01
t-Butyl alcohol	ND	mg/kg	12		EPA-8260	07/31/07	07/31/07 19:41	JSK	MS-V2	250	BQG1443	ND	A01
Diisopropyl ether	ND	mg/kg	1.2		EPA-8260	07/31/07	07/31/07 19:41	JSK	MS-V2	250	BQG1443	ND	A01
Ethanol	ND	mg/kg	250		EPA-8260	07/31/07	07/31/07 19:41	JSK	MS-V2	250	BQG1443	ND	A01
Ethyl t-butyl ether	ND	mg/kg	0.25		EPA-8260	07/31/07	07/31/07 19:41	JSK	MS-V2	250	BQG1443	ND	A01
Total Purgeable Petroleum Hydrocarbons	380	mg/kg	50		EPA-8260	07/31/07	07/31/07 19:41	JSK	MS-V2	250	BQG1443	ND	A01
1,2-Dichloroethane-d4 (Surrogate)	97.8	%	70 - 121 (LCL - UCL)		EPA-8260	07/31/07	07/31/07 19:41	JSK	MS-V2	250	BQG1443		
Toluene-d8 (Surrogate)	97.8	%	81 - 117 (LCL - UCL)		EPA-8260	07/31/07	07/31/07 19:41	JSK	MS-V2	250	BQG1443		
4-Bromofluorobenzene (Surrogate)	89.1	%	74 - 121 (LCL - UCL)		EPA-8260	07/31/07	07/31/07 19:41	JSK	MS-V2	250	BQG1443		

TRC
1590 Solano Way, Suite A
Concord, CA 94520

Project: 4625
Project Number: [none]
Project Manager: Keith Woodburne

Reported: 08/13/2007 13:22

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 0708669-03		Client Sample Name: 4625, COMPOSITE, COMPOSITE, 7/27/2007 11:30:00AM, Rachele Dunn											
Constituent	Result	Units	PQL	MDL	Method	Prep Date	Run Date/Time	Analyst	Instru-ment ID	Dilution	QC Batch ID	MB Bias	Lab Quals
Benzene	0.21	mg/kg	0.0050		EPA-8260	08/01/07	08/02/07 00:36	DKC	MS-V3	1	BQG1085	ND	
Ethylbenzene	0.35	mg/kg	0.12		EPA-8260	08/01/07	08/01/07 23:32	DKC	MS-V3	25	BQG1085	ND	A01
Methyl t-butyl ether	0.089	mg/kg	0.0050		EPA-8260	08/01/07	08/02/07 00:36	DKC	MS-V3	1	BQG1085	ND	
Toluene	0.86	mg/kg	0.12		EPA-8260	08/01/07	08/01/07 23:32	DKC	MS-V3	25	BQG1085	ND	A01
Total Xylenes	0.83	mg/kg	0.010		EPA-8260	08/01/07	08/02/07 00:36	DKC	MS-V3	1	BQG1085	ND	
t-Amyl Methyl ether	ND	mg/kg	0.0010		EPA-8260	08/01/07	08/02/07 00:36	DKC	MS-V3	1	BQG1085	ND	
t-Butyl alcohol	ND	mg/kg	0.050		EPA-8260	08/01/07	08/02/07 00:36	DKC	MS-V3	1	BQG1085	ND	
Diisopropyl ether	ND	mg/kg	0.0050		EPA-8260	08/01/07	08/02/07 00:36	DKC	MS-V3	1	BQG1085	ND	
Ethanol	ND	mg/kg	1.0		EPA-8260	08/01/07	08/02/07 00:36	DKC	MS-V3	1	BQG1085	ND	
Ethyl t-butyl ether	ND	mg/kg	0.0010		EPA-8260	08/01/07	08/02/07 00:36	DKC	MS-V3	1	BQG1085	ND	
Total Purgeable Petroleum Hydrocarbons	17	mg/kg	5.0		EPA-8260	08/01/07	08/01/07 23:32	DKC	MS-V3	25	BQG1085	ND	A01
1,2-Dichloroethane-d4 (Surrogate)	89.5	%	70 - 121 (LCL - UCL)		EPA-8260	08/01/07	08/02/07 00:36	DKC	MS-V3	1	BQG1085		
1,2-Dichloroethane-d4 (Surrogate)	87.4	%	70 - 121 (LCL - UCL)		EPA-8260	08/01/07	08/01/07 23:32	DKC	MS-V3	25	BQG1085		
Toluene-d8 (Surrogate)	97.4	%	81 - 117 (LCL - UCL)		EPA-8260	08/01/07	08/01/07 23:32	DKC	MS-V3	25	BQG1085		
Toluene-d8 (Surrogate)	102	%	81 - 117 (LCL - UCL)		EPA-8260	08/01/07	08/02/07 00:36	DKC	MS-V3	1	BQG1085		
4-Bromofluorobenzene (Surrogate)	105	%	74 - 121 (LCL - UCL)		EPA-8260	08/01/07	08/02/07 00:36	DKC	MS-V3	1	BQG1085		
4-Bromofluorobenzene (Surrogate)	98.3	%	74 - 121 (LCL - UCL)		EPA-8260	08/01/07	08/01/07 23:32	DKC	MS-V3	25	BQG1085		

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Project: 4625
Project Number: [none]
Project Manager: Keith Woodburne

Reported: 08/13/2007 13:22

Total Concentrations (TTLC)

BCL Sample ID: 0708669-03	Client Sample Name: 4625, COMPOSITE, COMPOSITE, 7/27/2007 11:30:00AM, Rachelle Dunn												
Constituent	Result	Units	PQL	MDL	Method	Prep Date	Run Date/Time	Analyst	Instru-ment ID	Dilution	QC Batch ID	MB Bias	Lab Quals
Lead	6.0	mg/kg	2.5		EPA-6010B	08/07/07	08/10/07 12:13	ARD	TJA61E	0.952	BQH0345	ND	

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Project: 4625
Project Number: [none]
Project Manager: Keith Woodburne

Reported: 08/13/2007 13:22

Volatile Organic Analysis (EPA Method 8260)

Quality Control Report - Precision & Accuracy

Constituent	Batch ID	QC Sample Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery	Control Limits	
										RPD	Percent Recovery
Benzene	BQG1085	Matrix Spike	0708243-13	0	0.12305	0.12500	mg/kg		98.4		70 - 130
		Matrix Spike Duplicate	0708243-13	0	0.11867	0.12500	mg/kg	3.6	94.9	20	70 - 130
Toluene	BQG1085	Matrix Spike	0708243-13	0	0.13584	0.12500	mg/kg		109		70 - 130
		Matrix Spike Duplicate	0708243-13	0	0.13586	0.12500	mg/kg	0	109	20	70 - 130
1,2-Dichloroethane-d4 (Surrogate)	BQG1085	Matrix Spike	0708243-13	ND	0.045250	0.050000	mg/kg		90.5		70 - 121
		Matrix Spike Duplicate	0708243-13	ND	0.046370	0.050000	mg/kg		92.7		70 - 121
Toluene-d8 (Surrogate)	BQG1085	Matrix Spike	0708243-13	ND	0.049130	0.050000	mg/kg		98.3		81 - 117
		Matrix Spike Duplicate	0708243-13	ND	0.051600	0.050000	mg/kg		103		81 - 117
4-Bromofluorobenzene (Surrogate)	BQG1085	Matrix Spike	0708243-13	ND	0.050860	0.050000	mg/kg		102		74 - 121
		Matrix Spike Duplicate	0708243-13	ND	0.050380	0.050000	mg/kg		101		74 - 121
Benzene	BQG1443	Matrix Spike	0708243-20	0	0.15468	0.12500	mg/kg		124		70 - 130
		Matrix Spike Duplicate	0708243-20	0	0.13161	0.12500	mg/kg	16.6	105	20	70 - 130
Toluene	BQG1443	Matrix Spike	0708243-20	0	0.14440	0.12500	mg/kg		116		70 - 130
		Matrix Spike Duplicate	0708243-20	0	0.12473	0.12500	mg/kg	15.0	99.8	20	70 - 130
1,2-Dichloroethane-d4 (Surrogate)	BQG1443	Matrix Spike	0708243-20	ND	0.047680	0.050000	mg/kg		95.4		70 - 121
		Matrix Spike Duplicate	0708243-20	ND	0.046430	0.050000	mg/kg		92.9		70 - 121
Toluene-d8 (Surrogate)	BQG1443	Matrix Spike	0708243-20	ND	0.050380	0.050000	mg/kg		101		81 - 117
		Matrix Spike Duplicate	0708243-20	ND	0.049250	0.050000	mg/kg		98.5		81 - 117
4-Bromofluorobenzene (Surrogate)	BQG1443	Matrix Spike	0708243-20	ND	0.047220	0.050000	mg/kg		94.4		74 - 121
		Matrix Spike Duplicate	0708243-20	ND	0.047350	0.050000	mg/kg		94.7		74 - 121

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Total Concentrations (TTLC)

Quality Control Report - Precision & Accuracy

Constituent	Batch ID	QC Sample Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery	Control Limits		Lab Quals
										RPD	Percent Recovery	
Lead	BQH0345	Duplicate	0708797-28	14.703	15.594		mg/kg	5.9		20		A01
		Matrix Spike	0708797-28	14.703	103.39	99.010	mg/kg		89.6		75 - 125	A01
		Matrix Spike Duplicate	0708797-28	14.703	108.89	99.010	mg/kg	6.0	95.1	20	75 - 125	A01

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Reported: 08/13/2007 13:22

Volatile Organic Analysis (EPA Method 8260)

Quality Control Report - Laboratory Control Sample

Constituent	Batch ID	QC Sample ID	QC Type	Result	Spike Level	PQL	Units	Percent Recovery	RPD	Control Limits		Lab Quals
										Percent Recovery	RPD	
Benzene	BQG1085	BQG1085-BS1	LCS	0.099420	0.12500	0.0050	mg/kg	79.5		70 - 130		
Toluene	BQG1085	BQG1085-BS1	LCS	0.099680	0.12500	0.0050	mg/kg	79.7		70 - 130		
1,2-Dichloroethane-d4 (Surrogate)	BQG1085	BQG1085-BS1	LCS	0.046250	0.050000		mg/kg	92.5		70 - 121		
Toluene-d8 (Surrogate)	BQG1085	BQG1085-BS1	LCS	0.049920	0.050000		mg/kg	99.8		81 - 117		
4-Bromofluorobenzene (Surrogate)	BQG1085	BQG1085-BS1	LCS	0.047990	0.050000		mg/kg	96.0		74 - 121		
Benzene	BQG1443	BQG1443-BS1	LCS	0.13389	0.12500	0.0050	mg/kg	107		70 - 130		
Toluene	BQG1443	BQG1443-BS1	LCS	0.12334	0.12500	0.0050	mg/kg	98.7		70 - 130		
1,2-Dichloroethane-d4 (Surrogate)	BQG1443	BQG1443-BS1	LCS	0.045600	0.050000		mg/kg	91.2		70 - 121		
Toluene-d8 (Surrogate)	BQG1443	BQG1443-BS1	LCS	0.049990	0.050000		mg/kg	100		81 - 117		
4-Bromofluorobenzene (Surrogate)	BQG1443	BQG1443-BS1	LCS	0.050210	0.050000		mg/kg	100		74 - 121		

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Project Manager: Keith Woodburne

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Total Concentrations (TTLC)

Quality Control Report - Laboratory Control Sample

Constituent	Batch ID	QC Sample ID	QC Type	Result	Spike Level	PQL	Units	Control Limits			Lab Quals
								Percent Recovery	RPD	Percent Recovery	
Lead	BQH0345	BQH0345-BS1	LCS	99.950	100.00	2.0	mg/kg	100		75 - 125	

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Volatile Organic Analysis (EPA Method 8260)

Quality Control Report - Method Blank Analysis

Constituent	Batch ID	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
Benzene	BQG1085	BQG1085-BLK1	ND	mg/kg	0.0050		
Ethylbenzene	BQG1085	BQG1085-BLK1	ND	mg/kg	0.0050		
Methyl t-butyl ether	BQG1085	BQG1085-BLK1	ND	mg/kg	0.0050		
Toluene	BQG1085	BQG1085-BLK1	ND	mg/kg	0.0050		
Total Xylenes	BQG1085	BQG1085-BLK1	ND	mg/kg	0.010		
t-Amyl Methyl ether	BQG1085	BQG1085-BLK1	ND	mg/kg	0.0010		
t-Butyl alcohol	BQG1085	BQG1085-BLK1	ND	mg/kg	0.20		
Diisopropyl ether	BQG1085	BQG1085-BLK1	ND	mg/kg	0.0050		
Ethanol	BQG1085	BQG1085-BLK1	ND	mg/kg	1.0		
Ethyl t-butyl ether	BQG1085	BQG1085-BLK1	ND	mg/kg	0.0010		
Total Purgeable Petroleum Hydrocarbons	BQG1085	BQG1085-BLK1	ND	mg/kg	0.20		
1,2-Dichloroethane-d4 (Surrogate)	BQG1085	BQG1085-BLK1	88.5	%	70 - 121 (LCL - UCL)		
Toluene-d8 (Surrogate)	BQG1085	BQG1085-BLK1	94.7	%	81 - 117 (LCL - UCL)		
4-Bromofluorobenzene (Surrogate)	BQG1085	BQG1085-BLK1	95.7	%	74 - 121 (LCL - UCL)		
Benzene	BQG1443	BQG1443-BLK1	ND	mg/kg	0.0050		
Ethylbenzene	BQG1443	BQG1443-BLK1	ND	mg/kg	0.0050		
Methyl t-butyl ether	BQG1443	BQG1443-BLK1	ND	mg/kg	0.0050		
Toluene	BQG1443	BQG1443-BLK1	ND	mg/kg	0.0050		
Total Xylenes	BQG1443	BQG1443-BLK1	ND	mg/kg	0.010		
t-Amyl Methyl ether	BQG1443	BQG1443-BLK1	ND	mg/kg	0.0010		
t-Butyl alcohol	BQG1443	BQG1443-BLK1	ND	mg/kg	0.050		
Diisopropyl ether	BQG1443	BQG1443-BLK1	ND	mg/kg	0.0050		
Ethanol	BQG1443	BQG1443-BLK1	ND	mg/kg	1.0		
Ethyl t-butyl ether	BQG1443	BQG1443-BLK1	ND	mg/kg	0.0010		

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Project: 4625
Project Number: [none]
Project Manager: Keith Woodburne

Reported: 08/13/2007 13:22

Volatile Organic Analysis (EPA Method 8260)

Quality Control Report - Method Blank Analysis

Constituent	Batch ID	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
Total Purgeable Petroleum Hydrocarbons	BQG1443	BQG1443-BLK1	ND	mg/kg	0.20		
1,2-Dichloroethane-d4 (Surrogate)	BQG1443	BQG1443-BLK1	102	%	70 - 121	(LCL - UCL)	
Toluene-d8 (Surrogate)	BQG1443	BQG1443-BLK1	102	%	81 - 117	(LCL - UCL)	
4-Bromofluorobenzene (Surrogate)	BQG1443	BQG1443-BLK1	92.8	%	74 - 121	(LCL - UCL)	

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Reported: 08/13/2007 13:22

Total Concentrations (TTLC)

Quality Control Report - Method Blank Analysis

Constituent	Batch ID	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
Lead	BQH0345	BQH0345-BLK1	ND	mg/kg	2.0		

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Project: 4625
Project Number: [none]
Project Manager: Keith Woodburne

Reported: 08/13/2007 13:22

Notes And Definitions

MDL Method Detection Limit
ND Analyte Not Detected at or above the reporting limit
PQL Practical Quantitation Limit
RPD Relative Percent Difference
A01 PQL's and MDL's are raised due to sample dilution.

Date of Report: 08/17/2007

Keith Woodburne

TRC

1590 Solano Way, Suite A
Concord, CA 94520

RE: 4625

BC Work Order: 0709169

Enclosed are the results of analyses for samples received by the laboratory on 08/08/2007 20:55. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Contact Person: Molly Meyers
Client Service Rep

Authorized Signature

TRC
1590 Solano Way, Suite A
Concord, CA 94520

Project: 4625
Project Number: [none]
Project Manager: Keith Woodburne

Reported: 08/17/2007 11:02

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information				
0709169-01	COC Number:	---	Receive Date:	08/08/2007 20:55	Delivery Work Order:
	Project Number:	4625	Sampling Date:	08/07/2007 08:38	Global ID:
	Sampling Location:	MW-8	Sample Depth:	---	Matrix: W
	Sampling Point:	MW-8	Sample Matrix:	Water	Sample QC Type (SACode): CS
	Sampled By:	TRCC			Cooler ID:
0709169-02	COC Number:	---	Receive Date:	08/08/2007 20:55	Delivery Work Order:
	Project Number:	4625	Sampling Date:	08/07/2007 10:14	Global ID:
	Sampling Location:	MW-9	Sample Depth:	---	Matrix: W
	Sampling Point:	MW-9	Sample Matrix:	Water	Sample QC Type (SACode): CS
	Sampled By:	TRCC			Cooler ID:
0709169-03	COC Number:	---	Receive Date:	08/08/2007 20:55	Delivery Work Order:
	Project Number:	4625	Sampling Date:	08/07/2007 00:00	Global ID:
	Sampling Location:	MW-7	Sample Depth:	---	Matrix: W
	Sampling Point:	MW-7	Sample Matrix:	Water	Sample QC Type (SACode): CS
	Sampled By:	TRCC			Cooler ID:

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Project: 4625
 Project Number: [none]
 Project Manager: Keith Woodburne

Reported: 08/17/2007 11:02

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID:	0709169-01		Client Sample Name:	4625, MW-8, MW-8, 8/7/2007 8:38:00AM									
Constituent	Result	Units	PQL	MDL	Method	Prep Date	Run Date/Time	Analyst	Instru-ment ID	Dilution	QC Batch ID	MB Bias	Lab Quals
Benzene	ND	ug/L	0.50		EPA-8260	08/14/07	08/15/07 02:01	MRR	MS-V12	1	BQH0828	ND	
Ethylbenzene	ND	ug/L	0.50		EPA-8260	08/14/07	08/15/07 02:01	MRR	MS-V12	1	BQH0828	ND	
Methyl t-butyl ether	ND	ug/L	0.50		EPA-8260	08/14/07	08/15/07 02:01	MRR	MS-V12	1	BQH0828	ND	
Toluene	ND	ug/L	0.50		EPA-8260	08/14/07	08/15/07 02:01	MRR	MS-V12	1	BQH0828	ND	
Total Xylenes	ND	ug/L	0.50		EPA-8260	08/14/07	08/15/07 02:01	MRR	MS-V12	1	BQH0828	ND	
t-Amyl Methyl ether	ND	ug/L	0.50		EPA-8260	08/14/07	08/15/07 02:01	MRR	MS-V12	1	BQH0828	ND	
t-Butyl alcohol	ND	ug/L	10		EPA-8260	08/14/07	08/15/07 02:01	MRR	MS-V12	1	BQH0828	ND	
Diisopropyl ether	ND	ug/L	0.50		EPA-8260	08/14/07	08/15/07 02:01	MRR	MS-V12	1	BQH0828	ND	
Ethanol	ND	ug/L	250		EPA-8260	08/14/07	08/15/07 02:01	MRR	MS-V12	1	BQH0828	ND	
Ethyl t-butyl ether	ND	ug/L	0.50		EPA-8260	08/14/07	08/15/07 02:01	MRR	MS-V12	1	BQH0828	ND	
Total Purgeable Petroleum Hydrocarbons	ND	ug/L	50		EPA-8260	08/14/07	08/15/07 02:01	MRR	MS-V12	1	BQH0828	ND	
1,2-Dichloroethane-d4 (Surrogate)	111	%	76 - 114 (LCL - UCL)		EPA-8260	08/14/07	08/15/07 02:01	MRR	MS-V12	1	BQH0828		
Toluene-d8 (Surrogate)	98.4	%	88 - 110 (LCL - UCL)		EPA-8260	08/14/07	08/15/07 02:01	MRR	MS-V12	1	BQH0828		
4-Bromofluorobenzene (Surrogate)	95.6	%	86 - 115 (LCL - UCL)		EPA-8260	08/14/07	08/15/07 02:01	MRR	MS-V12	1	BQH0828		

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Project: 4625
Project Number: [none]
Project Manager: Keith Woodburne

Reported: 08/17/2007 11:02

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID:	0709169-02		Client Sample Name:	4625, MW-9, MW-9, 8/7/2007 10:14:00AM									
Constituent	Result	Units	PQL	MDL	Method	Prep Date	Run Date/Time	Analyst	Instru-ment ID	Dilution	QC Batch ID	MB Bias	Lab Quals
Benzene	ND	ug/L	0.50		EPA-8260	08/14/07	08/15/07 01:37	MRR	MS-V12	1	BQH0828	ND	
Ethylbenzene	ND	ug/L	0.50		EPA-8260	08/14/07	08/15/07 01:37	MRR	MS-V12	1	BQH0828	ND	
Methyl t-butyl ether	ND	ug/L	0.50		EPA-8260	08/14/07	08/15/07 01:37	MRR	MS-V12	1	BQH0828	ND	
Toluene	ND	ug/L	0.50		EPA-8260	08/14/07	08/15/07 01:37	MRR	MS-V12	1	BQH0828	ND	
Total Xylenes	ND	ug/L	0.50		EPA-8260	08/14/07	08/15/07 01:37	MRR	MS-V12	1	BQH0828	ND	
t-Amyl Methyl ether	ND	ug/L	0.50		EPA-8260	08/14/07	08/15/07 01:37	MRR	MS-V12	1	BQH0828	ND	
t-Butyl alcohol	ND	ug/L	10		EPA-8260	08/14/07	08/15/07 01:37	MRR	MS-V12	1	BQH0828	ND	
Diisopropyl ether	ND	ug/L	0.50		EPA-8260	08/14/07	08/15/07 01:37	MRR	MS-V12	1	BQH0828	ND	
Ethanol	ND	ug/L	250		EPA-8260	08/14/07	08/15/07 01:37	MRR	MS-V12	1	BQH0828	ND	
Ethyl t-butyl ether	ND	ug/L	0.50		EPA-8260	08/14/07	08/15/07 01:37	MRR	MS-V12	1	BQH0828	ND	
Total Purgeable Petroleum Hydrocarbons	ND	ug/L	50		EPA-8260	08/14/07	08/15/07 01:37	MRR	MS-V12	1	BQH0828	ND	
1,2-Dichloroethane-d4 (Surrogate)	107	%	76 - 114 (LCL - UCL)		EPA-8260	08/14/07	08/15/07 01:37	MRR	MS-V12	1	BQH0828		
Toluene-d8 (Surrogate)	97.1	%	88 - 110 (LCL - UCL)		EPA-8260	08/14/07	08/15/07 01:37	MRR	MS-V12	1	BQH0828		
4-Bromofluorobenzene (Surrogate)	95.8	%	86 - 115 (LCL - UCL)		EPA-8260	08/14/07	08/15/07 01:37	MRR	MS-V12	1	BQH0828		

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Project: 4625
Project Number: [none]
Project Manager: Keith Woodburne

Reported: 08/17/2007 11:02

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 0709169-03		Client Sample Name: 4625, MWV-7, MWV-7, 8/7/2007 12:00:00AM											
Constituent	Result	Units	PQL	MDL	Method	Prep Date	Run Date/Time	Analyst	Instru-ment ID	Dilution	QC Batch ID	MB Bias	Lab Quals
Benzene	13	ug/L	0.50		EPA-8260	08/14/07	08/15/07 01:13	MRR	MS-V12	1	BQH0828	ND	
Ethylbenzene	24	ug/L	0.50		EPA-8260	08/14/07	08/15/07 01:13	MRR	MS-V12	1	BQH0828	ND	
Methyl t-butyl ether	20	ug/L	0.50		EPA-8260	08/14/07	08/15/07 01:13	MRR	MS-V12	1	BQH0828	ND	
Toluene	57	ug/L	0.50		EPA-8260	08/14/07	08/15/07 01:13	MRR	MS-V12	1	BQH0828	ND	
Total Xylenes	140	ug/L	0.50		EPA-8260	08/14/07	08/15/07 01:13	MRR	MS-V12	1	BQH0828	ND	
t-Amyl Methyl ether	ND	ug/L	0.50		EPA-8260	08/14/07	08/15/07 01:13	MRR	MS-V12	1	BQH0828	ND	
t-Butyl alcohol	ND	ug/L	10		EPA-8260	08/14/07	08/15/07 01:13	MRR	MS-V12	1	BQH0828	ND	
Diisopropyl ether	ND	ug/L	0.50		EPA-8260	08/14/07	08/15/07 01:13	MRR	MS-V12	1	BQH0828	ND	
Ethanol	ND	ug/L	250		EPA-8260	08/14/07	08/15/07 01:13	MRR	MS-V12	1	BQH0828	ND	
Ethyl t-butyl ether	ND	ug/L	0.50		EPA-8260	08/14/07	08/15/07 01:13	MRR	MS-V12	1	BQH0828	ND	
Total Purgeable Petroleum Hydrocarbons	680	ug/L	50		EPA-8260	08/14/07	08/15/07 01:13	MRR	MS-V12	1	BQH0828	ND	
1,2-Dichloroethane-d4 (Surrogate)	111	%	76 - 114 (LCL - UCL)		EPA-8260	08/14/07	08/15/07 01:13	MRR	MS-V12	1	BQH0828		
Toluene-d8 (Surrogate)	99.0	%	88 - 110 (LCL - UCL)		EPA-8260	08/14/07	08/15/07 01:13	MRR	MS-V12	1	BQH0828		
4-Bromofluorobenzene (Surrogate)	100	%	86 - 115 (LCL - UCL)		EPA-8260	08/14/07	08/15/07 01:13	MRR	MS-V12	1	BQH0828		

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Project: 4625
 Project Number: [none]
 Project Manager: Keith Woodburne

Reported: 08/17/2007 11:02

Volatile Organic Analysis (EPA Method 8260)

Quality Control Report - Precision & Accuracy

Constituent	Batch ID	QC Sample Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Control Limits		Lab Quals
									Percent Recovery	RPD	
Benzene	BQH0828	Matrix Spike	0708364-42	0	29.080	25.000	ug/L		116		70 - 130
		Matrix Spike Duplicate	0708364-42	0	24.350	25.000	ug/L	17.4	97.4	20	70 - 130
Toluene	BQH0828	Matrix Spike	0708364-42	0	29.090	25.000	ug/L		116		70 - 130
		Matrix Spike Duplicate	0708364-42	0	24.340	25.000	ug/L	17.4	97.4	20	70 - 130
1,2-Dichloroethane-d4 (Surrogate)	BQH0828	Matrix Spike	0708364-42	ND	10.870	10.000	ug/L		109		76 - 114
		Matrix Spike Duplicate	0708364-42	ND	11.050	10.000	ug/L		110		76 - 114
Toluene-d8 (Surrogate)	BQH0828	Matrix Spike	0708364-42	ND	9.8500	10.000	ug/L		98.5		88 - 110
		Matrix Spike Duplicate	0708364-42	ND	9.9200	10.000	ug/L		99.2		88 - 110
4-Bromofluorobenzene (Surrogate)	BQH0828	Matrix Spike	0708364-42	ND	9.8600	10.000	ug/L		98.6		86 - 115
		Matrix Spike Duplicate	0708364-42	ND	9.7200	10.000	ug/L		97.2		86 - 115

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Concord, CA 94520

Project: 4625
Project Number: [none]
Project Manager: Keith Woodburne

Reported: 08/17/2007 11:02

Volatile Organic Analysis (EPA Method 8260)

Quality Control Report - Laboratory Control Sample

Constituent	Batch ID	QC Sample ID	QC Type	Result	Spike Level	PQL	Units	Control Limits			Lab Quals
								Percent Recovery	RPD	Percent Recovery	
Benzene	BQH0828	BQH0828-BS1	LCS	27.400	25.000	0.50	ug/L	110		70 - 130	
Toluene	BQH0828	BQH0828-BS1	LCS	26.940	25.000	0.50	ug/L	108		70 - 130	
1,2-Dichloroethane-d4 (Surrogate)	BQH0828	BQH0828-BS1	LCS	10.960	10.000		ug/L	110		76 - 114	
Toluene-d8 (Surrogate)	BQH0828	BQH0828-BS1	LCS	9.7600	10.000		ug/L	97.6		88 - 110	
4-Bromofluorobenzene (Surrogate)	BQH0828	BQH0828-BS1	LCS	10.240	10.000		ug/L	102		86 - 115	

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Project Manager: Keith Woodburne

Reported: 08/17/2007 11:02

Volatile Organic Analysis (EPA Method 8260)

Quality Control Report - Method Blank Analysis

Constituent	Batch ID	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
Benzene	BQH0828	BQH0828-BLK1	ND	ug/L	0.50		
Ethylbenzene	BQH0828	BQH0828-BLK1	ND	ug/L	0.50		
Methyl t-butyl ether	BQH0828	BQH0828-BLK1	ND	ug/L	0.50		
Toluene	BQH0828	BQH0828-BLK1	ND	ug/L	0.50		
Total Xylenes	BQH0828	BQH0828-BLK1	ND	ug/L	0.50		
t-Amyl Methyl ether	BQH0828	BQH0828-BLK1	ND	ug/L	0.50		
t-Butyl alcohol	BQH0828	BQH0828-BLK1	ND	ug/L	10		
Diisopropyl ether	BQH0828	BQH0828-BLK1	ND	ug/L	0.50		
Ethanol	BQH0828	BQH0828-BLK1	ND	ug/L	250		
Ethyl t-butyl ether	BQH0828	BQH0828-BLK1	ND	ug/L	0.50		
Total Purgeable Petroleum Hydrocarbons	BQH0828	BQH0828-BLK1	ND	ug/L	50		
1,2-Dichloroethane-d4 (Surrogate)	BQH0828	BQH0828-BLK1	113	%	76 - 114 (LCL - UCL)		
Toluene-d8 (Surrogate)	BQH0828	BQH0828-BLK1	96.3	%	88 - 110 (LCL - UCL)		
4-Bromofluorobenzene (Surrogate)	BQH0828	BQH0828-BLK1	93.4	%	86 - 115 (LCL - UCL)		

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Notes And Definitions

MDL Method Detection Limit
ND Analyte Not Detected at or above the reporting limit
PQL Practical Quantitation Limit
RPD Relative Percent Difference



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Concord, CA 94520
Telephone 925.688.1200

Edition: April 2007
Supersede Previous Edition

CHAIN OF CUSTODY RECORD

PROJECT NO.		PROJECT NAME / LOCATION <i>cop 4625 Oakland</i>										PARAMETERS										REMARKS			
SHIP TO: <i>BC Labs</i>		FIELD SAMPLE NUMBER	DATE	TIME	COMP.	GRAB	MATRIX	PRES.	NO. OF CONTAINERS																
										TPPH 826013	BTEX 826013	VOCs 826013	including 4 parameters	Ethanol MITEL	Lead 826013	Lead 6010									
<i>MW-7@5'</i>		<i>7/27/07</i>	<i>0759</i>			<i>S</i>			<i>1</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>												
<i>MW-7@11'</i>		<i>7/27/07</i>	<i>0805</i>			<i>S</i>			<i>1</i>	<i>↓</i>	<i>↓</i>	<i>↓</i>	<i>↓</i>												
<i>Composite</i>		<i>7/27/07</i>	<i>1130</i>	<i>X</i>		<i>S</i>			<i>4</i>	<i>↓</i>	<i>↓</i>	<i>↓</i>	<i>↓</i>	<i>X</i>											<i>Please combine steps to form a composite</i>
Relinquished by: (Signature) <i>[Signature]</i>		Date / Time <i>7/27/07 1700</i>		Received by: (Signature) <i>[Signature]</i>				Relinquished by: (Signature) <i>[Signature]</i>				Date / Time <i>7/30/07 1350</i>		Received by: (Signature) <i>Ross Dickey</i>											
(Printed)				(Printed)				(Printed)						(Printed)											
Relinquished by: (Signature)		Date / Time		Received for Laboratory by: (Signature)				Remarks <i>Standard Turn around</i>																	
(Printed)				(Printed)				<i>Sent Results to Kwoodburne@trc-solutions.com</i>																	
								<i>cop Ref # 000010117401-00003</i>																	
								<i>cop # 4508497453</i>																	



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Concord, CA 94520
Telephone 925.688.1200

Edition: April 2007
Supersede Previous Edition

CHAIN OF CUSTODY RECORD

PROJECT NO.		PROJECT NAME / LOCATION Cop 41625 3070 Latitude Ave, Oakland							PARAMETERS										REMARKS				
SHIP TO: BC Labs		FIELD SAMPLE NUMBER	DATE	TIME	COMP.	GRAB	MATRIX	PRES.	NO. OF CONTAINERS														
		MW 8	7/7/07	0838			GW	HCL	3	7	X	X	X										
		MW 9	7/7/07	1014					3	↓	↓	↓											
		MW 7	7/7/07						3	↓	↓	↓											
Relinquished by: (Signature) <i>Kristin Bolan</i>		Date / Time 7/7/07 3:15		Received by: (Signature) <i>Anthony Hannett</i>				Relinquished by: (Signature) <i>Anthony Hannett</i>		Date / Time 8/13/07 1440		Received by: (Signature) <i>Ross Dickey</i>											
(Printed) Kristin Bolan				(Printed)				(Printed) Anthony Hannett				(Printed) Ross Dickey											
Relinquished by: (Signature)		Date / Time		Received for Laboratory by: (Signature)				Remarks Cop 1244 # 0600/0117401-00004 cop # 4508526569 STA sent Report to Woodburn@licsolutions.com															
(Printed)				(Printed)																			

APPENDIX F
WASTE DISPOSAL MANIFEST

NON-HAZARDOUS WASTE MANIFEST		1. Generator ID Number	2. Page 1 of 1	3. Emergency Response Phone 909-721-2038	4. Waste Tracking Number NH39885
5. Generator's Name and Mailing Address TRC SOLUTIONS 1590 SOLANO WAY, STE A CONCORD, CA 94520 Generator's Phone: 925-688-2484			Generator's Site Address (if different than mailing address) 78 STATION # 4625, 3070 FRUITVALE AVE OAKLAND, CA		
6. Transporter 1 Company Name FILTER RECYCLING SERVICES, INC.			U.S. EPA ID Number CAD982444481		
7. Transporter 2 Company Name			U.S. EPA ID Number		
8. Designated Facility Name and Site Address FILTER RECYCLING SERVICES, INC. 180 W. MONTE AVE RIALTO, CA 92316 Facility's Phone: 909-421-2012			U.S. EPA ID Number CAD982444481		
9. Waste Shipping Name and Description		10. Containers		11. Total Quantity	12. Unit WL/Vol.
		No.	Type		
1. NON HAZARDOUS WASTE SOLID		8	DM	2400	P
2. NON HAZARDOUS WASTE LIQUID		7	DM	325	G
3. NON HAZARDOUS WASTE SOLID		1	DM	150	P
4.					
13. Special Handling Instructions and Additional Information 9.1) SOIL # 01062536 WEAR APPROPRIATE PPE INV # 39885 9.2) WATER #01062537 9.3) DEBRIS					
14. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste. Generator's/Officer's Printed/Typed Name: <i>[Signature]</i> Signature: <i>[Signature]</i> Month: 8 Day: 27 Year: 07					
15. International Shipments <input type="checkbox"/> Import to U.S. <input type="checkbox"/> Export from U.S. Port of entry/exit: Date leaving U.S.:					
16. Transporter Acknowledgment of Receipt of Materials Transporter 1 Printed/Typed Name: <i>Larry Ford</i> Signature: <i>[Signature]</i> Month: 8 Day: 27 Year: 07 Transporter 2 Printed/Typed Name: Signature: <i>[Signature]</i> Month: Day: Year:					
17. Discrepancy 17a. Discrepancy Indication Space <input type="checkbox"/> Quantity <input type="checkbox"/> Type <input type="checkbox"/> Residue <input type="checkbox"/> Partial Rejection <input type="checkbox"/> Full Rejection 17b. Alternate Facility (or Generator) Manifest Reference Number: U.S. EPA ID Number: Facility's Phone: 17c. Signature of Alternate Facility (or Generator) Month: Day: Year:					
18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a Printed/Typed Name: Signature: Month: Day: Year:					

GENERATOR

INTL

TRANSPORTER

DESIGNATED FACILITY