

  
76 Broadway  
Sacramento, California 95818

RECEIVED

10:24 am, Nov 03, 2008

Alameda County  
Environmental Health

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,



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:*

*Marilyn Kuyper*  
*for*

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Kristin Bolen  
Staff Scientist

*Keith Woodburne*

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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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## 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

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### 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

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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**

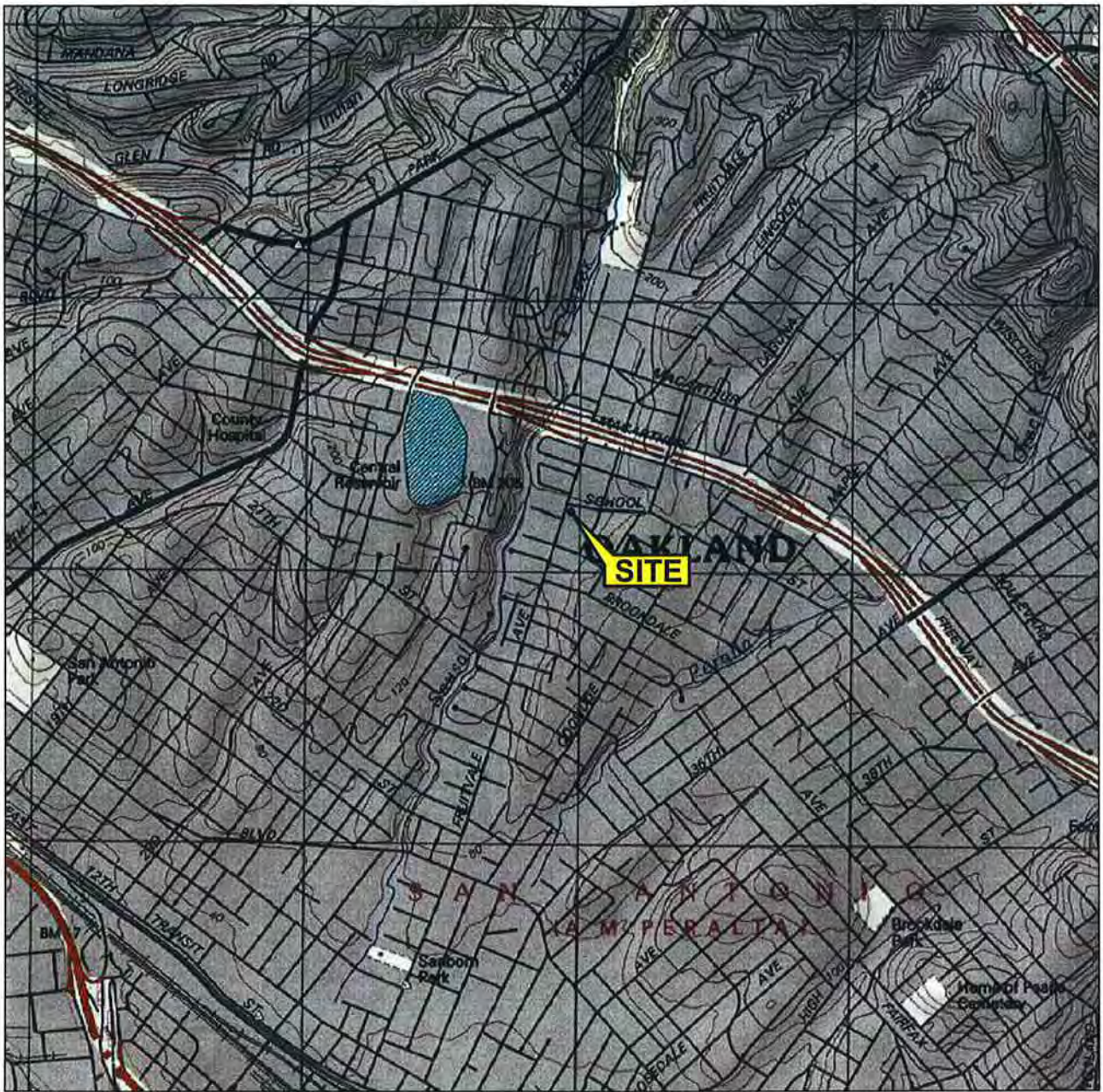
Helley, E. J. and K. R. Lajoie, 1979, Flatland Deposits of the San Francisco Bay Region, California - Their Geology and Engineering Properties, and Their Importance to Comprehensive Planning: U.S. Geological Survey Professional Paper 943.

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:

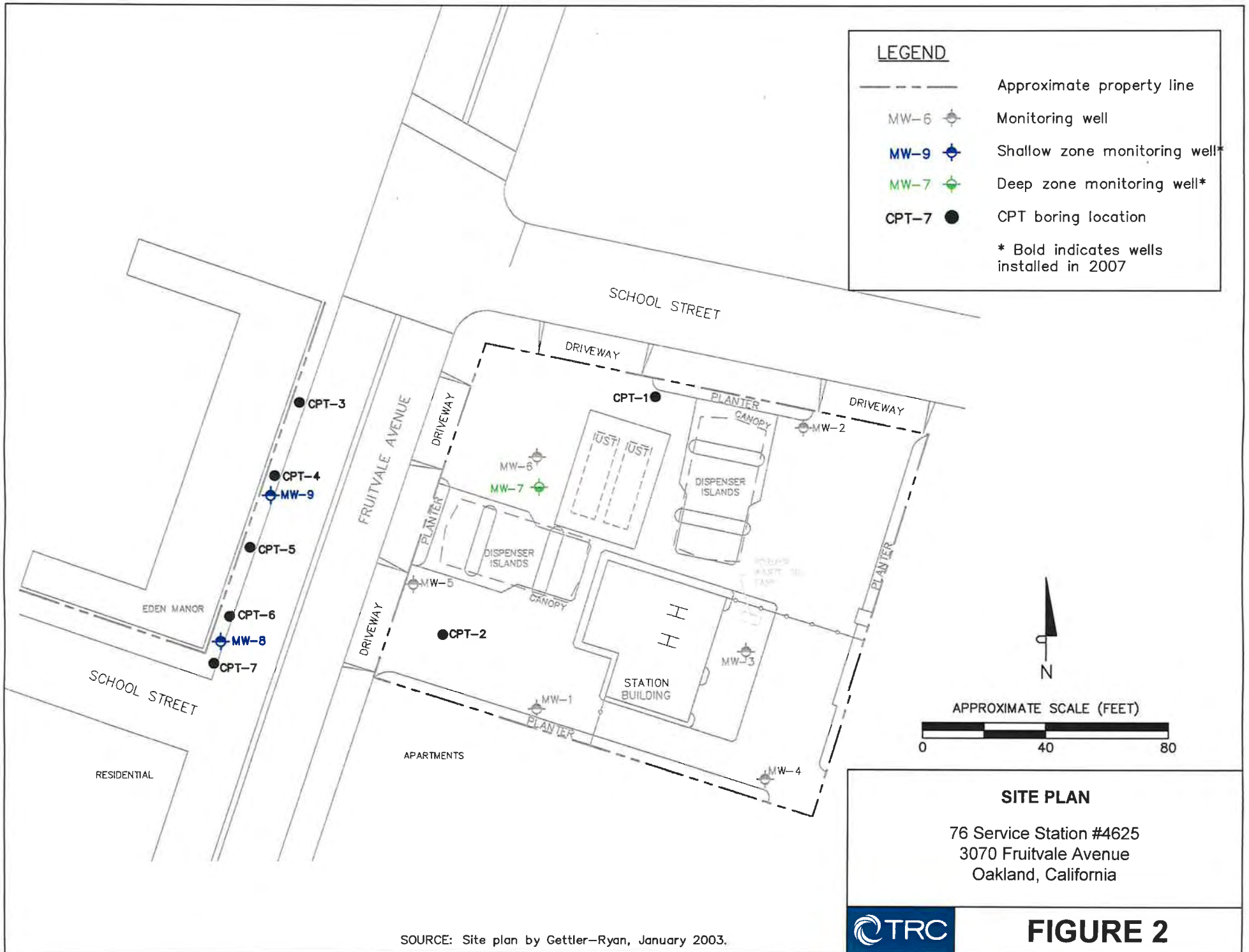
United States Geological Survey  
7.5 Minute Topographic Maps:  
Oakland East Quadrangle  
California

**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	ETBE = ethyl tertiary butyl ether
MTBE = methyl tertiary butyl ether	fbg = feet below grade
TBA = tertiary butyl alcohol	$\mu\text{g/L}$ = micrograms per liter
TAME = tertiary amyl methyl ether	-- = not analyzed
DIPE = di-isopropyl ether	

# 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**

<b>Application Id:</b> 1171325220265	<b>City of Project Site:</b> Oakland
<b>Site Location:</b> 3070 Fruitvale Avenue and sidewalk across from 3070 Fruitvale Avenue across Fruitvale Avenue	<b>Completion Date:</b> 03/30/2007
<b>Project Start Date:</b> 03/29/2007	<b>Extension End Date:</b> 07/27/2007
<b>Extension Start Date:</b> 07/25/2007	<b>Extended By:</b> vickyh1
<b>Extension Count:</b> 2	

<b>Applicant:</b> TRC - Rachele Dunn 1590 Solano Way, Suite A, Concord, CA 94520	<b>Phone:</b> 925-688-2464
<b>Property Owner:</b> Thai Kham 3066 Fruitvale Avenue, Oakland, CA 94602	<b>Phone:</b> 510-390-5988
<b>Client:</b> ConocoPhillips Corporation 76 Broadway, Sacramento, CA 95818	<b>Phone:</b> --
<b>Contact:</b> Same	<b>Phone:</b> -- <b>Cell:</b> 925-260-6722

<b>Receipt Number: WR2007-0096</b>	<b>Total Due:</b> \$900.00	
<b>Payer Name : TRC</b>	<b>Total Amount Paid:</b> \$900.00	
	<b>Paid By: CHECK</b>	<b>PAID IN FULL</b>

**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

DIST. ADDRESS

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 Applcmt 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]

Date: 07/18/07 Amt Paid: \$596.14  
By: BKJ Register R03 Receipt# 128636

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.	CL		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**

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		45		
	4 6 5 20 33 %	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		50		
2.9	31 31 %	0.5/ 1.5		50	-@ 51.5': Fine gravel. No recovery.	ML		50		
	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		
2.3				55				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
					DESCRIPTION				
				0	Water knife hole clearance to 5'.			0	Well Box with Locking Cap
				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	Grout Bentonite 2-inch Schedule 40 PVC
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	No. 3 Monterey Filter Sand Pack
	4 4 8	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	3 6 7	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. CLAY (CL): Strong brown (7.5YR 4/6), 95% low plastic fines, 5% fine grained sand, stiff, dry.	GW CL		20	2-inch Schedule 40 PVC 0.020 Slot End Cap
	4 7 9	1.5/ 1.5		25				25	
	5 10 12	1.5/ 1.5		30				30	
1.8	3 7 11	1.5/ 1.5		35				35	
	10 19 24	1.5/ 1.5		40				40	
0.7	3 7 14	1.5/ 1.5							



**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	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	Sample QC Type (SACode): CS
	Sampled By:	Rachelle Dunn of TRCC			Cooler ID:
0708669-02	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	Sample QC Type (SACode): CS
	Sampled By:	Rachelle Dunn of TRCC			Cooler ID:
0708669-03	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	Sample 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			

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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)

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		

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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)

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	Instrument 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 Manager: Keith Woodburne

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## Total Concentrations (TTLC)

<b>BCL Sample ID:</b> 0708669-03	<b>Client Sample Name:</b> 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 Number: [none]  
Project Manager: Keith Woodburne

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## 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		Lab Quals
										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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## 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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Project: 4625  
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Project Manager: Keith Woodburne

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

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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  
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,

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Contact Person: Molly Meyers  
Client Service Rep

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Authorized Signature

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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, MW-7, MW-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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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			
								Percent Recovery	RPD	Percent Recovery RPD	Lab Quals
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: 4625  
Project Number: [none]  
Project Manager: Keith Woodburne

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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	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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Project: 4625  
Project Number: [none]  
Project Manager: Keith Woodburne

**Reported:** 08/17/2007 11:02

**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



**CHAIN OF CUSTODY RECORD**

<b>PROJECT NO.</b>		<b>PROJECT NAME / LOCATION</b> Cop 4625 Oakland																												
<b>SHIP TO:</b> BCL Labs		<b>PARAMETERS</b>																												
<b>FIELD SAMPLE NUMBER</b>		<b>DATE</b>	<b>TIME</b>	<b>COMP.</b>	<b>GRAB</b>	<b>MATRIX</b>	<b>PRES.</b>	<b>NO. OF CONTAINERS</b>	TPPH 826013	BTX 826013	4-way smelter including MTRC	Ethanol 826013	Lead 6010																<b>REMARKS</b>	
MW-7@5'		7/27/07	0759			S		1	X	X	X	X																		
MW-7@11'		7/27/07	0805			S		1	↓	↓	↓	↓																		
Composite		7/27/07	1130	X		S		4	↓	↓	↓	↓	X																	Please combine samples to form a composite
<b>Relinquished by: (Signature)</b>		<b>Date / Time</b>		<b>Received by: (Signature)</b>				<b>Relinquished by: (Signature)</b>		<b>Date / Time</b>		<b>Received by: (Signature)</b>																		
		7/27/07 1700								7/30/07 1350																				
<b>(Printed)</b>				<b>(Printed)</b>				<b>(Printed)</b>				<b>(Printed)</b>																		
<b>Relinquished by: (Signature)</b>		<b>Date / Time</b>		<b>Received for Laboratory by: (Signature)</b>				<b>Remarks</b>																						
								Standard Turn around Send Results to kwoodburne@trcsolutions.com Cop Ref # 000010117401-00003 Cop Ref # 4508497453																						
<b>(Printed)</b>				<b>(Printed)</b>																										



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Concord, CA 94520  
Telephone 925.688.1200

Edition: April 2007  
Supersede Previous Edition

### CHAIN OF CUSTODY RECORD

<b>PROJECT NO.</b>		<b>PROJECT NAME / LOCATION</b> Cop 41625 3070 Latitude Ave, Oakland										<b>PARAMETERS</b>				<b>REMARKS</b>
<b>SHIP TO:</b> BC Labs																
<b>FIELD SAMPLE NUMBER</b>	<b>DATE</b>	<b>TIME</b>	<b>COMP.</b>	<b>GRAB</b>	<b>MATRIX</b>	<b>PRES.</b>	<b>NO. OF CONTAINERS</b>	<b>TPPH</b>	<b>BTEX</b>	<b>Heavy Metals</b>	<b>VOCs</b>	<b>Semivol</b>	<b>PCBs</b>	<b>PAHs</b>	<b>Other</b>	<b>Remarks</b>
MW8	7/7/07	10:38			GW HCL		3	X	X	X						
MW9	7/7/07	10:14			↓	↓	3	↓	↓	↓						
MW7	7/7/07				↓	↓	3	↓	↓	↓						
<b>Relinquished by: (Signature)</b>	<b>Date / Time</b>	<b>Received by: (Signature)</b>					<b>Relinquished by: (Signature)</b>	<b>Date / Time</b>	<b>Received by: (Signature)</b>							
<i>[Signature]</i>	7/7/07 3:15	<i>[Signature]</i>					<i>[Signature]</i>	8/13/07 14:40	<i>[Signature]</i>							
<b>(Printed)</b>		<b>(Printed)</b>					<b>(Printed)</b>		<b>(Printed)</b>							
Kristin Bolan							Anthony Hannett		Ross Dickey							
<b>Relinquished by: (Signature)</b>	<b>Date / Time</b>	<b>Received for Laboratory by: (Signature)</b>					<b>Remarks</b> Cop 41625 # 0600/0117401-00004 cop # 4508526569 STA sent Report to Woodburner@licsolutions.com									
<b>(Printed)</b>		<b>(Printed)</b>														

**APPENDIX F**  
**WASTE DISPOSAL MANIFEST**

<b>NON-HAZARDOUS WASTE MANIFEST</b>		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) 76 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: 29 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