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1:34 pm, Jul 29, 2009

Alameda County Environmental Health



Sacramento, California 95818

July 21, 2009

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

Re:

Quarterly Summary Report (QSR)—Second Quarter 2009

76 Service Station # 6129 RO # 058

3420 35th 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

July 21, 2009

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

Re: Quarterly Summary Report - Second Quarter 2009 Fuel Leak Case No. R00000058

Dear Ms. Jakub:



On behalf of ConocoPhillips Company (COP), Delta Consultants (Delta) is submitting the Quarterly Summary Report – Second Quarter 2009 and forwarding a copy of TRC Solutions, Inc. (TRC's) Quarterly Monitoring Report, April through June 2009, dated July 6, 2009, for the following location:

Service Station

76 Service Station No. 6129

Location

3420 35th Avenue Oakland, California

FSSIONA

Sincerely, **DELTA CONSULTANTS**

James B. Barnard, P.G. Senior Project Manager

amo B. Baman

California Registered Professional Geologist No. 7478

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



QUARTERLY SUMMARY REPORT Second Quarter 2009 76 Service Station No. 6129 3420 35th Avenue Oakland, California

SITE DESCRIPTION

The site is currently an operating 76 Service Station that dispenses gasoline stored in two 12,000-gallon underground storage tanks (USTs) from two dispenser islands. An automotive repair facility is present at the site which contains three service bays. Additionally, there is one used-oil UST, three hydraulic lifts, and three groundwater monitoring wells (MW-1 through MW-3) present at the site. There was previously one used-oil UST, one clarifier beneath the central hydraulic lift, and two floor drains, all of which have been removed.

PREVIOUS ASSESSMENT

According to Kaprealian Engineering, Inc. (KEI), in 1989 two 10,000-gallon gasoline USTs and one 550-gallon waste oil UST were removed from the site. Analytical data from soil samples collected beneath the former gasoline USTs, used-oil UST, and product piping indicated low concentrations of petroleum hydrocarbons were present in each of the sampling areas. Three groundwater monitoring wells (MW-1 through MW-3) were installed in 1989 to depths of approximately 44 feet below ground surface (bgs).

In 1990, four soil borings (EB1 through EB4) were advanced at the site in the vicinity of MW-3 in an attempt to define the petroleum hydrocarbon impact to soil. Based on the analytical data from the soil sampling, approximately 230 cubic yards of soil were excavated from an area between the dispenser islands and around monitoring well MW-3 in 1991. The excavation was completed as to not destroy monitoring well MW-3. Analytical data from confirmation soil samples indicated the majority of the impacted soil had been removed.

On November 12 and 13, 2003, as part of a due diligence investigation, four soil borings (SB-1 and SB-3 through SB-5) were advanced to total depths of approximately 31.5 to 36.5 feet bgs. Proposed boring SB-2 was unable to be advanced due to the presence of subsurface utilities and/or structures. Groundwater was encountered in the borings at a depth of approximately 35 feet bgs. Methyl tertiary butyl ether (MTBE) was reported at concentrations ranging from 0.37 to 0.41 milligrams per kilogram (mg/kg) in the soil samples collected at depths ranging from 26 and 31 feet bgs. All other constituents were below the laboratory's indicated reporting limits for the soil samples analyzed. The three existing groundwater monitoring wells were sampled on November 13, 2003. Analytical data indicated MTBE was present at concentrations ranging from 240 and 3,700 micrograms per liter (μ g/L), with the most elevated concentrations found in monitoring wells MW-2 (2,100 μ g/L) and MW-3 (3,700 μ g/L).

On September 13, 2006, Delta observed the advancement of six boreholes by a licensed contractor using CPT technology. The CPT borings provided accurate continuous records of the subsurface lithology and stratigraphy and measured depth to

first groundwater. Groundwater and soil samples were not collected from the CPT borings.

On November 7 and 8, 2006, Delta observed the advancement of five soil borings (B-2, B-7, B-8, B-9, and B-14) by a licensed contractor using hollow stem auger technology. Four of these soil borings were advanced adjacent to the previously advanced CPT borings. On December 27, 2006, four soil borings (B-10, B-12, B-15, and B-16) were advanced using hollow stem auger technology. Soil samples were collected every five feet for lithologic descriptions, field hydrocarbon screening, and laboratory analysis. A description of this work is presented in the *Soil Boring Site Assessment Report* dated February 19, 2007.

SENSITIVE RECEPTORS

2004 - A 1,000-foot radius well search was completed by the request of the Alameda County Public Works Agency (ACPWA). The search indicated that a six-inch diameter irrigation well was located at 3397 Arkansas Street, approximately 800 feet west-northwest of the site. The well was installed in August 1977 to a total depth of 62 feet bgs with depth to water reported at 18 feet bgs. Alameda County Health Care Services update of July 30, 1984 reported the well owner as Arthur Smith.

2006 – A survey entailing a visit to the State of California Department of Water Resources (DWR) office in Sacramento was conducted to examine well log records and to identify domestic wells within the survey area. The DWR survey indicated three potential receptors were located within one mile of the site; two irrigation wells located 0.5 mile and 0.8 mile north (up-gradient) of the site and one domestic/irrigation well located 0.8 mile northeast (up-gradient) of the site. Two additional potential receptors were identified although the specific addresses could not be located. Based on groundwater gradient information and distance to the receptors from the site, identified receptors do not appear to be at risk due to gasoline constituents in groundwater at the site.

MONITORING AND SAMPLING

Groundwater monitoring and sampling activities were conducted at the site from January 1990 through May 1991. Sampling activities were re-initiated during the third quarter 2004. The monitoring well network is currently sampled on a quarterly basis. Samples collected from the monitoring wells are analyzed for total purgeable petroleum hydrocarbons (TPPH), benzene, toluene, ethyl-benzene, and total xylenes (BTEX), and MTBE, di-isopropyl ether (DIPE), tertiary butyl alcohol (TBA), tertiary amyl methyl ether (TAME), ethyl tertiary butyl ether (ETBE), 1,2-dichloroethane (1,2-DCA), ethylene dibromide (EDB), and ethanol by Environmental Protection Agency (EPA) Method 8260. TRC has been retained to perform the monitoring and sampling. A copy of TRC's *Quarterly Monitoring Report - April through June 2009*, dated July 6, 2009 has been forwarded with this report.

During the most recent groundwater monitoring event, conducted on May 28, 2009, the depth to groundwater ranged from 27.55 feet (MW-3) to 28.25 feet (MW-1) below top of casing (TOC). The groundwater flow direction was interpreted to be to the southwest with a gradient of 0.02 foot per foot (ft/ft). This is inconsistent with the

previous quarterly sampling event when the groundwater flow direction was interpreted to be to the northwest with a gradient of 0.022 ft/ft. Historic groundwater flow directions presented as a rose diagram included as Attachment A.

Contaminants of Concern:

- **TPPH:** TPPH was above the laboratory's indicated reporting limits in the groundwater samples collected and submitted for analysis from monitoring wells MW-2 and MW-3 at concentrations of 460 µg/L and 410 µg/L, respectively during the current sampling event.
- **Benzene:** Benzene was below the laboratory's indicated reporting limit in each of the groundwater samples collected and submitted for analysis from the monitoring wells monitored and sampled during the current sampling event.
- MTBE: MTBE was above the laboratory's indicated reporting limits in the groundwater samples collected and submitted for analysis from monitoring wells MW-1, MW-2, and MW-3 at concentrations of 17 μ g/L, 740 μ g/L, and 750 μ g/L, respectively during the current sampling event.
- **DIPE**: DIPE was above the laboratory's indicated reporting limits in the groundwater sample collected and submitted for analysis from monitoring well MW-2 at a concentration of 20 µg/L during the current sampling event.
- **TBA**: TBA was below the laboratory's indicated reporting limits in the groundwater sample collected and submitted for analysis from monitoring well all wells during the current sampling event.

With the exception of the constituents listed above, all other constituents tested were below the laboratory's indicated reporting limits the groundwater samples collected and submitted for analysis from the three monitoring wells during the second quarter 2009 sampling event.

REMEDIATION STATUS

Remediation has not been required by the lead regulatory agency for this site.

CHARACTERIZATION STATUS

A Site Assessment Work Plan, dated March 23, 2009, has been submitted to the agency for review. Delta is currently awaiting a response for Alameda County Health Care Services for the advancement of soil borings and installation of additional monitoring wells on-site. Groundwater monitoring is ongoing.

RECENT CORRESPONDENCE

No regulatory correspondence was received during the second quarter 2009.

WASTE DISPOSAL SUMMARY

In 1991, based on the analytical results of soil samples from borings EB1 through EB4, approximately 230 cubic yards of soil were excavated from the area between the dispensers and the pump islands in the area around MW-3.

Thirty three (33) drums of non-hazardous soil and water produced during recent field activities were transported off-site for disposal on 10/19/06 and 12/29/06.

THIS QUARTER ACTIVITIES (Second Quarter 2009)

1. TRC conducted the quarterly monitoring and sampling event at the site on May 28, 2009 and submitted *Quarterly Monitoring Report, April through June 2009*, dated July 6, 2009.

NEXT QUARTER ACTIVITIES (Third Quarter 2009)

- 1. TRC will conduct the quarterly groundwater monitoring and sampling event at the site
- 2. If approval of the submitted Site Assessment Work Plan (March 23, 2009) is received, Delta will initiate planned work and prepare a report.

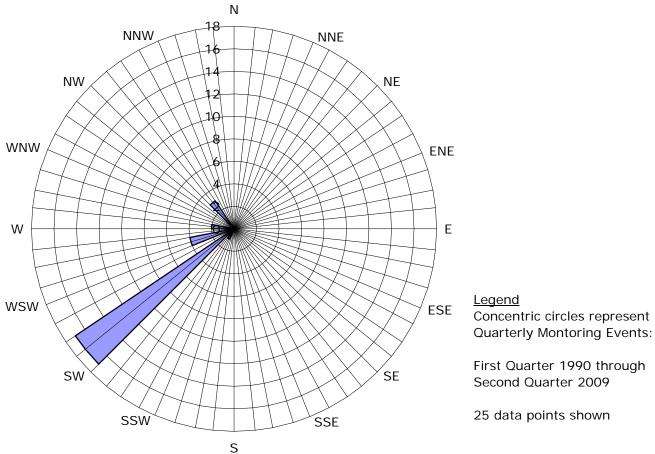
CONSULTANT: Delta Consultants

Attachment A – Historic Groundwater Flow Directions

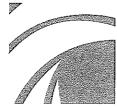
Attachment A Historic Groundwater Flow Directions

Historic Groundwater Flow Directions ConocoPhillips Site No. 6129

3420 35th Avenue Oakland, California







21 Technology Drive Irvine, CA 92618

949.727.9336 PHONE 949.727.7399 FAX

www.TRCsolutions.com

DATE:

July 6, 2009

TO:

ConocoPhillips Company

76 Broadway

Sacramento, CA 94563

ATTN:

MR TERRY GRAYSON

SITE:

76 STATION 6129

3420 35TH AVENUE

OAKLAND, CALIFORNIA

RE:

QUARTERLY MONITORING REPORT

APRIL THROUGH JUNE 2009

Dear Mr. Grayson,

Please find enclosed our Quarterly Monitoring Report for 76 Station 6129, located at 3420 35th Avenue, Oakland, California. If you have any questions regarding this report, please call us at (949) 727-9336.

Sincerely,

Anju Farfan

Groundwater Program Operations Manager

CC: Mr. James Barnard, Delta Consultants (1 copy)

Enclosures: 20-0400/6129R23 QMS

QUARTERLY MONITORING REPORT APRIL THROUGH JUNE 2009

76 STATION 6129 3420 35th Avenue Oakland, California

Prepared For:

Mr. Terry Grayson CONOCOPHILLIPS COMPANY 76 Broadway Sacramento, CA 94563

By:

Senior Project Geologist, Irvine Operations

Date: 7/6/09



	LIST OF ATTACHMENTS
Summary Sheet	Summary of Gauging and Sampling Activities
Tables	Table Key
	Contents of Tables
	Table 1: Current Fluid Levels and Selected Analytical Results
	Table 1a: Additional Current Analytical Results
	Table 1b: Additional Current Analytical Results
	Table 2: Historic Fluid Levels and Selected Analytical Results
	Table 2a: Additional Historic Analytical Results
	Table 2b: Additional Historic Analytical Results
	Table 2c: Additional Historic Analytical Results
Coordinated	Former Exxon Station 7-0234
Event Data	Table 1A: Cumulative Groundwater Monitoring and Sampling Data
	Table 1B: Additional Cumulative Groundwater Monitoring and Sampling
	Data
Figures	Figure 1: Vicinity Map
	Figure 2: Groundwater Elevation Contour Map
	Figure 3: Dissolved-Phase TPH-G (GC/MS) Concentration Map
	Figure 4: Dissolved-Phase Benzene Concentration Map
	Figure 5: Dissolved-Phase MTBE Concentration Map
Graphs	Groundwater Elevations vs. Time
,	Benzene Concentrations vs. Time
	MTBE 8260B Concentrations vs. Time
Field Activities	General Field Procedures
	Field Monitoring Data Sheet – 05/28/09
	Groundwater Sampling Field Notes – 05/28/09
Laboratory	Official Laboratory Reports
Reports	Quality Control Reports
	Chain of Custody Records
Statements	Purge Water Disposal
	Limitations

Summary of Gauging and Sampling Activities April 2009 through June 2009 76 Station 6129 3420 35th Ave. Oakland, CA

Project Coordinator: Terry Grayson Telephone: 916-558-7666	Water Sampling Contractor: <i>TRC</i> Compiled by: Christina Carrillo
Date(s) of Gauging/Sampling Event: 05/28/09	
Sample Points	
Groundwater wells: 3 onsite, 0 offsite Purging method: Submersible pump Purge water disposal: Veolia/Rodeo Unit 100 Other Sample Points: 0 Type:	Points gauged: 3 Points sampled: 3
Liquid Phase Hydrocarbons (LPH)	
Sample Points with LPH: 0 Maximum thickness LPH removal frequency: Treatment or disposal of water/LPH:	(feet): Method:
Hydrogeologic Parameters	
Depth to groundwater (below TOC): Minimum: Average groundwater elevation (relative to available Average change in groundwater elevation since presented groundwater gradient and flow direction Current event: 0.02 ft/ft, southwest Previous event: 0.022 ft/ft, northwest (03)	vious event: -1.57 feet n:
Selected Laboratory Results	
Sample Points with detected Benzene: 0 S Maximum reported benzene concentration:	ample Points above MCL (1.0 µg/l):
	Maximum: 460 μg/l (MW-2) Maximum: 750 μg/l (MW-3)
Notes:	

TABLES

TABLE KEY

STANDARD ABBREVIATIONS

-- e not analyzed, measured, or collected

LPH = liquid-phase hydrocarbons Trace = less than 0.01 foot of LPH in well

ug/l = micrograms per liter (approx e3quivalent to parts per billion, ppb)
mg/l = milligrams per liter (approx equivalent to parts per million, ppm)

ND
= not detected at or above laboratory detection limit
TOC = top of casing (surveyed reference elevation)

D = duplicate P = no-purge sample

ANALYTES

BTEX = benzene, toluene, ethylbenzene, and (total) xylenes

DIPE = di-isopropyl ether

ETBE = ethyl tertiary butyl ether

MTBE = methyl tertiary butyl ether

PCB = polychlorinated biphenyls

PCE = tetrachloroethene

TBA = tertiary butyl alcohol

TCA = trichloroethane
TCE = trichloroethene

IPH-G = total petroleum hydrocarbons with gasoline distinction

TPH-G (GC/MS) = total petroleum hydrocarbons with gasoline distinction utilizing EPA Method 8260B

TPH-D = total petroleum hydrocarbons with diesel distinction

TRPH = total recoverable petroleum hydrocarbons

TAME = tertiary amyl methyl ether 1,1-DCA = 1,1-dichloroethane

1,2-DCA = 1,2-dichloroethane (same as EDC, ethylene dichloride)

1,1-DCE = 1,1-dichloroethene

1,2-DCE = 1,2-dichloroethene (cis- and trans-)

NOTES

- Elevations are in feet above mean sea level. Depths are in feet below surveyed top-of-casing.
- 2. Groundwater elevations for wells with I PH are calculated as: Surface Elevation Measured Depth to Water + (Dp x LPH Thickness), where Dp is the density of the LPH, if known A value of 0.75 is used for gasoline and when the density is not known. A value of 0.83 is used for diesel
- 3. Wells with LPH are generally not sampled for laboratory analysis (see General Field Procedures).
- 4. Comments shown on tables are general Additional explanations may be included in field notes and laboratory reports, both of which are included as part of this report.
- 5 A "J" flag indicates that a reported analytical result is an estimated concentration value between the method detection limit (MDL) and the practical quantification limit (PQL) specified by the laboratory
- 6 Other laboratory flags (qualifiers) may have been reported. See the official laboratory report (attached) for a complete list of laboratory flags.
- 7. Concentration graphs based on tables (presented following Figures) show non-detect results prior to the Second Quarter 2000 plotted at fixed values for graphical display. Non-detect results reported since that time are plotted at reporting limits stated in the official laboratory report

REFERENCE

TRC began groundwater monitoring and sampling 76 Station 6129 in August 2004

Contents of Tables 1 and 2 Site: 76 Station 6129

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Table 1	Well/ Date	Depth to Water	LPH Thickness	Ground- water Elevation	Change in Elevation	TPH-G 8015	TPH-G (GC/MS)	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE (8021B)	MTBE (8260B)
Table 1a	Well/ Date	TBA	Ethanol (8260B)	Ethylene- dibromide (EDB)	1,2-DCA (EDC)	DIPE	ETBE	TAME	Carbon (organic, total)	Chromium VI	Chromium (total)	Chromium (dissolved)	lron Ferric
Table 1b	Well/ Date	Iron Ferrous	Iron (total)	Manganese (dissolved)	Manganese (total)	Nitrogen as Nitrate	Sulfate	Alkalinity (total)	Dissolved Oxygen (Lab)	Redox Potential (ORP-Lab)	Specific Con- ductance	Pre-purge Dissolved Oxygen	Pre-purge ORP
Historic	Data												
Table 2	Well/ Date	Depth to Water	LPH Thickness	Ground- water Elevation	Change in Elevation	TPH-G 8015	TPH-G (GC/MS)	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE (8021B)	MTBE (8260B)
Table 2a	Well/ Date	ТВА	Ethanol (8260B)	Ethylene- dibromide (EDB)	1,2-DCA (EDC)	DIPE	ЕТВЕ	TAME	Carbon (organic, total)	Chromium VI	Chromium (total)	Chromium (dissolved)	tron Ferric
Table 2b	Well/ Date	Iron Ferrous	Iron (total)	Manganese (dissolved)	Manganese (total)	Nitrogen as Nitrate	Sulfate	Alkalinity (total)	Dissolved Oxygen (Lab)	Redox Potential (ORP-Lab)	Specific Con- ductance	Post-purge Dissolved Oxygen	Pre-purge Dissolved Oxygen
Table 2c	Well/ Date	Pre-purge ORP	Post-purge ORP										

Table 1
CURRENT FLUID LEVELS AND SELECTED ANALYTICAL RESULTS
May 28, 2009
76 Station 6129

Date Sampled	TOC Elevation	Depth to Water	LPH Thickness		Change in Elevation	TPH-G 8015	TPH-G (GC/MS)	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE (8021B)	MTBE (8260B)	Comments
	(feet)	(feet)	(feet)	(feet)	(feet)	(µg/l)	(µg/l)	(µg/l)	(μg/l)	(μg/l)	(µg/l)	(µg/l)	(µg/l)	
MW-1 05/28/0	9 102,24	28.25	0.00	73.99	-0.75		ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0		17	
MW-2 05/28/0	9 102.16	27.71	0.00	74.45	-1.96		460	ND<0.50	ND<0.50	ND<0.50	ND<1.0		740	
MW-3 05/28/0	9 100.00	27.55	0.00	72.45	-1.99		410	ND<0.50	ND<0.50	ND<0.50	ND<1.0		750	



Table 1 a
ADDITIONAL CURRENT ANALYTICAL RESULTS
76 Station 6129

Date Sampled	TBA	Ethanol (8260B)	Ethylene- dibromide (EDB)	1,2-DCA	DIDE	ЕТВЕ	TAME	Carbon (organic,	Chromium	Chromium	Chromium	Iron
	1ΒΑ (μg/l)		, ,	(EDC)	DIPE		TAME	total)	VI	(total)	(dissolved)	Ferric
	(μg/1)	(μg/l)	(μg/l)	(µg/l)	(μg/l)	(µg/l)	(μg/l)	(mg/l)	(μg/l)	(μg/l)	(μg/l)	(μg/l)
MW-1 05/28/09	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	0.88	ND<2.0	21	ND<10	27000
MW-2 05/28/09	ND<10	ND<250	ND<0.50	ND<0.50	20	ND<0.50	ND<0.50	1.6	ND<2.0	49	ND<10	43000
MW-3 05/28/09	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	1.5	ND<2.0	23	ND<10	11000



Table 1 b
ADDITIONAL CURRENT ANALYTICAL RESULTS
76 Station 6129

Date Sampled	iron Ferrous (μg/l)	Iron (total) (µg/l)	Manganese (dissolved) (µg/l)	Manganese (total) (μg/l)	Nitrogen as Nitrate (mg/l)	Sulfate (mg/l)	Alkalinity (total) (mg/l)	Dissolved Oxygen (Lab) (mg O/)	Redox Potential (ORP-Lab) (mV)	Specific Con- ductance (µmhos)	Pre-purge Dissolved Oxygen (mg/l)	Pre-purge ORP (mV)
MW-1 05/28/09	ND<500	27000	10	680	2.9	43	310	7.7	126	798	4.05	70
MW-2 05/28/09	ND<1000	44000	4.3	500	1.6	40	370	7.1	138	813	1.54	80
MW-3 05/28/09	ND<500	12000	49	300	ND<0.44	39	300	7.5	125	667	0.91	66



Table 2
HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS
January 1990 Through May 2009
76 Station 6129

Date Sampled	TOC Elevation	Depth to Water	LPH Thickness	Ground- water Elevation	Change in Elevation	TPH-G 8015	TPH-G (GC/MS)	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE (8021B)	MTBE (8260B)	Comments
	(feet)	(feet)	(feet)	(feet)	(feet)	$(\mu g/l)$	(µg/l)	(μg/l)	(µg/l)	(µg/l)	(μg/l)	(µg/l)	(μg/l)	
MW-1														
01/05/9	00					ND		ND	ND	ND	ND			
05/11/9	90					ND		ND	7.1	ND	ND			
08/09/9	00		~~			ND		ND	ND	ND	ND			
11/14/9	90					ND		ND	ND	ND	ND			
02/12/9	91					ND		0.32	ND	ND	ND			
05/09/9)1					ND		ND	ND	, ND	ND			
11/13/0)3						180	ND<1.0	ND<1.0	ND<1.0	ND<2.0		240	
08/27/0	94 102.24	30.65	0.00	71.59			ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0		ND<0.50	
11/23/0	04 102.24	1 29.35	0.00	72.89	1.30		ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0		ND<0.50	
02/09/0	05 102.24	26.89	0.00	75.35	2,46		ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0		9.3	
05/17/0	05 102.24	1 26.56	0.00	75.68	0.33		ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0		1.9	
07/27/0	05 102.24	1 27.33	0.00	74.91	-0.77		ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0		ND<0.50	
12/06/0	5 102.24	1 29.59	0.00	72.65	-2.26		ND<50	ND<0.50	0.93	ND<0.50	1.8		ND<0.50	
02/21/0	06 102.24	1 28.27	0.00	73.97	1.32		ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0		2.6	
06/08/0	06 102.24	26.07	0.00	76.17	2.20	~-	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0		11	
09/15/0	06 102.24	28.86	0.00	73.38	-2.79		ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50		1.4	
12/14/0	06 102.24	1 29.49	0.00	72.75	-0.63		ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50		3.5	
03/28/0	7 102.24	27.24	0.00	75.00	2.25		ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50		0.64	
06/25/0	7 102.24	28.30	0.00	73.94	-1.06		ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50		ND<0.50	
09/22/0	7 102.24	30.61	0.00	71.63	-2.31		ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50		4.1	
12/14/0	7 102.24	30.30	0.00	71.94	0.31		ND<50	ND<0.50	ND<0.50	ND<0.50	ND <i.0< td=""><td></td><td>0.65</td><td></td></i.0<>		0.65	
03/17/0	08 102.24	27.22	0.00	75.02	3.08		ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0		14	

©TRC

Table 2
HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS
January 1990 Through May 2009
76 Station 6129

Date Sampled	TOC Elevation	Depth to Water	LPH Thickness	Ground- water Elevation	Change in Elevation	TPH-G 8015	TPH-G (GC/MS)	Benzene	Toluene	Ethyt- benzene	Total Xylenes	MTBE (8021B)	MTBE (8260B)	Comments
	(feet)	(feet)	(feet)	(feet)	(feet)	(μg/l)	(μg/l)	(μg/l)	(μg/l)	(μg/l)	Ayienes (μg/l)	(8021B) (μg/l)	(8200 Β) (μg/l)	
MW-1	continued						10. 11							***************************************
06/20/0			0.00	72.14	-2.88		ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0		11	
09/11/0	8 102,24	31.04	0.00	71.20	-0.94		ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0		1.3	
11/25/0	8 102.24	30.88	0.00	71.36	0.16		ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0		5.8	
03/09/0	9 102.24	27.50	0.00	74.74	3.38		ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0		25	
05/28/0	9 102.24	28.25	0.00	73.99	-0.75		ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0		17	
MW-2														
01/05/9	0					ND		ND	ND	ND	ND			
05/11/9	0					ND		ND	ND	ND	ND			
08/09/9	0					ND		ND	ND	ND	ND			
11/14/9			~~			ND		ND	ND	ND	ND			
02/12/9	1					ND		ND	0.42	ND	0.51			
05/09/9	1					ND		ND	ND	ND	ND			
11/13/0							ND<2000	ND<20	ND<20	ND<20	ND<40		2100	
08/27/0		30.28	0.00	71.88			950	ND<5.0	ND<5.0	ND<5.0	ND<10		1400	
11/23/0		28.75	0.00	73.41	1.53		53	ND<0.50	ND<0.50	ND<0.50	ND<1.0		4.2	
02/09/0		26.08	0.00	76.08	2.67		ND<500	ND<0.50	ND<0.50	ND<0.50	0.1>DN		400	
05/17/0		24.53	0.00	77.63	1.55		ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0		330	
07/27/0	5 102.16	27.51	0.00	74.65	-2.98		ND<500	ND<5.0	ND<5.0	ND<5.0	ND<10		580	
12/06/0	5 102.16	29.13	0.00	73.03	-1.62		340	ND<0.50	ND<0.50	ND<0.50	ND<1.0		780	
02/21/0	6 102.16	29.23	0.00	72.93	-0.10		190	ND<0.50	ND<0.50	ND<0.50	ND<1.0		340	
06/08/0	6 102.16	25.76	0.00	76.40	3.47		ND<500	ND<5.0	ND<5.0	ND<5.0	ND<10		440	
09/15/0		29.17	0.00	72.99	-3.41		ND<500	ND<5.0	ND<5.0	ND<5.0	ND<5.0		570	
12/14/0	6 102.16	29.11	0.00	73.05	0.06		520	ND<0.50	ND<0.50	ND<0.50	ND<0.50		770	
6129								Page 2	2 of 4					©TRC

Table 2
HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS
January 1990 Through May 2009
76 Station 6129

Date Sampled	TOC Elevation	Depth to Water	LPH Thickness		Change in Elevation	TPH-G 8015	TPH-G (GC/MS)	Benzene	Talvana	Ethyl-	Total	MTBE	MTBE	Comments
	(feet)	(feet)	(feet)	(feet)	(feet)	6013 (μg/l)	(GC/M3) (μg/l)	Belizelle (μg/l)	Toluene (μg/l)	benzene (μg/l)	Xylenes (μg/l)	(8021B) (μg/l)	(8260B) (µg/l)	
MW-2	continued					(1-8-5)	(1-8)	(F6:-7	(46.1)	(#8.7	(46/1)	(μ6/1)	(μg/1)	
03/28/0			0.00	75.48	2.43		290	ND<0.50	ND<0.50	ND<0.50	ND<0.50		460	
06/25/0	7 102.16	25.91	0.00	76.25	0.77	7.0	ND<50			ND<0.50			1.2	
09/22/0	7 102.16	30.18	0.00	71.98	-4.27		400			ND<0.50		74	530	
12/14/0	7 102.16	29.96	0.00	72.20	0.22		400			ND<0.50	ND<1.0		930	
03/17/0	8 102.16	26.74	0.00	75.42	3.22		570	ND<5.0	ND<5.0	ND<5.0	ND<10		630	
06/20/0	8 102.16	29.78	0.00	72.38	-3.04		580	ND<0.50	ND<0.50	ND<0.50	ND<1.0		1200	
09/11/0	8 102.16	30.62	0.00	71.54	-0.84		220	ND<0.50	ND<0.50	ND<0.50	ND<1.0		29	
11/25/0	8 102.16	30.48	0.00	71.68	0.14		500	ND<0.50	ND<0.50	ND<0.50	ND<1.0		1500	
03/09/0	9 102.16	25.75	0.00	76.41	4.73		910	ND<5.0	ND<5.0	ND<5.0	ND<10		1400	
05/28/0	9 102.16	27.71	0.00	74.45	-1.96		460	ND<0.50	ND<0.50	ND<0.50	ND<1.0		740	
MW-3														
01/05/9	0		0.00			ND		ND	ND	ND	ND			
05/11/9	0					ND		ND	ND	ND	ND			
08/09/9	0					ND		ND	ND	ND	ND			
11/14/9	0					ND		ND	ND	ND	ND			
02/12/9	1					ND		ND	ND	ND	ND			
05/09/9	1					ND		ND	ND	ND	ND			
11/13/0	3					~~	2600	ND<20	ND<20	ND<20	ND<40		3700	
08/27/0	4 100.00	29.61	0.00	70.39			1700	ND<10	ND<10	ND<10	ND<20		2600	
11/23/0	4 100.00	28.48	0.00	71.52	1.13		1500	ND<10	ND<10	ND<10	ND<20		1800	
02/09/0		26.45	0.00	73.55	2.03		ND<1000	ND<0.50	ND<0.50	ND<0.50	ND<1.0		2100	
05/17/0	5 100.00	25.61	0.00	74.39	0.84		ND<1000	ND<0.50	ND<0.50	ND<0.50	ND<1.0		1200	
07/27/0	5 100.00	27.35	0.00	72.65	-1.74		ND<1000	ND<10	ND<10	ND<10	ND<20		1400	
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Table 2
HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS
January 1990 Through May 2009
76 Station 6129

Date Sampled	Elevation	Depth to Water	LPH Thickness	Elevation	Change in Elevation	TPH-G 8015	TPH-G (GC/MS)	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE (8021B)	MTBE (8260B)	Comments
	(feet)	(feet)	(feet)	(feet)	(feet)	(μg/l)	(µg/l)	(µg/l)	(μg/l)	(μg/l)	(μg/l)	(μg/l)	(µg/l)	
MW-3	continued													
12/06/0	5 100.00	28.78	0.00	71.22	-1.43		430	ND<0.50	1.6	ND<0.50	3.6		1800	
02/21/0	6 100.00	28.91	0.00	71.09	-0.13		420	ND<0.50	ND<0.50	ND<0.50	ND<1.0		1100	
06/08/0	6 100.00	25.97	0.00	74.03	2.94		ND<1200	ND<12	ND<12	ND<12	ND<25		1000	
09/15/0	6 100.00	28.73	0.00	71.27	-2.76		ND<1200	ND<12	ND<12	ND<12	ND<12		1200	
12/14/0	6 100.00	28.62	0.00	71.38	0.11		ND<1000	ND<10	ND<10	ND<10	ND<10		1300	
03/28/0	7 100.00	26.69	0.00	73.31	1.93	~~	500	ND<1.0	ND<1.0	ND<1.0	ND<1.0		860	
06/25/0	7 100.00	26.74	0.00	73.26	-0.05		270	ND<0.50	ND<0.50	ND<0.50	ND<0.50		570	
09/22/0	7 100.00	29.57	0.00	70.43	-2.83		500	ND<0.50	ND<0.50	ND<0.50	ND<0.50		980	
12/14/0	7 100.00	29.30	0.00	70.70	0.27		270	ND<0.50	ND<0.50	ND<0.50	ND<1.0		570	
03/17/0	8 100.00	26.82	0.00	73.18	2.48		220	ND<0.50	ND<0.50	ND<0.50	ND<1.0		520	
06/20/0	8 100.00	29.10	0.00	70.90	-2.28		490	ND<0.50	ND<0.50	ND<0.50	ND<1.0		1300	
09/11/0	8 100.00	29.89	0.00	70.11	-0.79		630	ND<5.0	ND<5.0	ND<5.0	ND<10		1200	
11/25/0	8 100.00	29.74	0.00	70.26	0.15		380	ND<0.50	ND<0.50				870	
03/09/09	9 100.00	25.56	0.00	74.44	4.18		310				ND<1.0		720	
05/28/09	9 100.00	27.55	0.00	72.45	-1.99		410		ND<0.50				750	



Table 2 a
ADDITIONAL HISTORIC ANALYTICAL RESULTS
76 Station 6129

Date Sampled	TBA (µg/l)	Ethanol (8260Β) (μg/l)	Ethylene- dibromide (EDB) (µg/l)	1,2-DCA (EDC) (μg/l)	DIPE (μg/l)	ETBE (µg/l)	TAME (μg/l)	Carbon (organic, total) (mg/l)	Chromium VI (µg/l)	Chromium (total) (µg/l)	Chromium (dissolved)	Iron Ferric
	(10)	(1-8-5)	(1-0)	\r\6'-7	(46,1)	(48.1)	(μ6/1)	(mg/r)	(μg/ι)	(μg/1)	(µg/l)	(μg/l)
MW-1 11/13/03	ND<200	ND<1000	ND<4.0	ND<4.0	ND<4.0	ND<4.0	ND <4.0					
08/27/04	ND<5.0	ND<50	ND<0.50	ND<0.50	ND<4.0 ND<1.0	ND<4.0 ND<0.50	ND<4.0 ND<0.50					
11/23/04	ND<5.0	ND<50	ND<0.50	ND<0.50		ND<0.50						
02/09/05	ND<5.0	ND<50	ND<0.50	ND<0.50	ND<1.0 ND<0.50	ND<0.50	ND<0.50					
05/17/05	ND<5.0	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50					
07/27/05	ND<5.0	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50					
12/06/05	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50		ND<0.50					
02/21/06	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50					
06/08/06	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50 ND<0.50	ND<0.50					
09/15/06	ND<10 ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50 ND<0.50		ND<0.50					
12/14/06	ND<10 ND<10	ND<250 ND<250	ND<0.50	ND<0.50		ND<0.50	ND<0.50					
03/28/07	ND<10 ND<10				ND<0.50	ND<0.50	ND<0.50	***				
06/25/07		ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50					
09/22/07	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50					
	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50					
12/14/07	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50			-		
03/17/08	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0,50	ND<0.50					
06/20/08	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50					
09/11/08	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	uu				
11/25/08	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50				m to	
03/09/09	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	0.83				
05/28/09	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	0.88	ND<2.0	21	ND<10	27000
MW-2												
11/13/03	ND<4000	ND<20000	ND<80	ND<80	ND<80	ND<80	ND<80					
08/27/04	ND<50	ND<500	ND<5.0	ND<5.0	24	ND<5.0	ND<5.0			u <u>.</u>		
11/23/04	ND<5.0	ND<50	ND<0.50	ND<0.50	18	ND<0.50	ND<0.50					
6129						Page i of 3					C T	RC

Table 2 a
ADDITIONAL HISTORIC ANALYTICAL RESULTS
76 Station 6129

Date Sampled	TBA (μg/l)	Ethanol (8260B) (µg/l)	Ethylene- dibromide (EDB) (µg/l)	i,2-DCA (EDC) (µg/l)	DIPE (μg/l)	ETBE (µg/l)	TAME (µg/l)	Carbon (organic, total) (mg/l)	Chromium VI (µg/l)	Chromium (total) (µg/l)	Chromium (dissolved) (µg/I)	Iron Ferric (µg/l)
MW-2 co	ontinued		""					, <u>, , , , , , , , , , , , , , , , , , </u>				<u> </u>
02/09/05	ND<50	ND<500	ND<5.0	ND<5.0	19	ND<5.0	ND<5.0					
05/17/05	ND<5.0	ND<50	ND<0.50	ND<0.50	12	ND<0.50	ND<0.50					
07/27/05	140	ND<500	ND<5.0	ND<5.0	16	ND<5.0	ND<5.0					
12/06/05	61	ND<250	ND<0.50	ND<0.50	15	ND<0.50	ND<0.50					
02/21/06	ND<10	ND<250	ND<0.50	ND<0.50	18	ND<0.50	ND<0.50					
06/08/06	ND<100	ND<2500	ND<5.0	ND<5.0	14	ND<5.0	ND<5.0	n=				
09/15/06	ND<100	ND<2500	ND<5.0	ND<5.0	17	ND<5.0	ND<5.0					
12/14/06	27	ND<250	ND<0.50	ND<0.50	20	ND<0.50	ND<0.50					
03/28/07	260	ND<250	ND<0.50	ND<0.50	23	ND<0.50	ND<0.50					
06/25/07	ND<10	ND<250	ND<0.50	ND<0.50	23	ND<0.50	ND<0.50	·			77 FE	## W
09/22/07	ND<10	ND<250	ND<0.50	ND<0.50	35	ND<0.50	ND<0.50					
12/14/07	48	ND<250	ND<0.50	ND<0.50	24	ND<0.50	ND<0.50				77	
03/17/08	ND<100	ND<2500	ND<5.0	ND<5.0	18	ND<5.0	ND<5.0					
06/20/08	ND<10	ND<250	ND<0.50	ND<0.50	16	ND<0.50	ND<0.50					
09/11/08	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	==				~=
11/25/08	ND<10	ND<250	ND<0.50	ND<0.50	19	ND<0.50	ND<0.50			7.		
03/09/09	ND<100	ND<2500	ND<5.0	ND<5.0	15	ND<5.0	ND<5.0	1.4				
05/28/09	ND<10	ND<250	ND<0.50	ND<0.50	20	ND<0.50	ND<0.50	1.6	ND<2.0	49	ND<10	43000
MW-3												
11/13/03	ND<4000	ND<20000	ND<80	ND<80	ND<80	ND<80	ND<80			••		
08/27/04	ND<100	ND<1000	ND<10	ND<10	ND<20	ND<10	ND<10	<u> </u>		 		
11/23/04	ND<100	ND<1000	ND<10	ND<10	ND<20	ND<10	ND<10					
02/09/05	130	ND<1000	ND<10	ND<10	ND<10	ND<10	ND<10	 				
05/17/05	ND<100	ND<1000	ND<10	ND<10	ND<10	ND<10	ND<10				****	
07/27/05	360	ND<1000	ND<10	ND<10	ND<10	ND<10	ND<10					

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Table 2 a
ADDITIONAL HISTORIC ANALYTICAL RESULTS
76 Station 6129

Date Sampled		Ethanol	Ethylene- dibromide	1,2-DCA				Carbon (organic,	Chromium	Chromium	Chromium	iron
	TBA	(8260B)	(EDB)	(EDC)	DIPE	ETBE	TAME	total)	VI	(total)	(dissolved)	Ferric
	(μg/l)	(µg/l)	(μg/l)	(µg/l)	(μg/l)	(µg/l)	(µg/l)	(mg/l)	(μg/l)	(μg/l)	(μg/l)	(µg/l)
MW-3 co	ntinued											.,
12/06/05	160	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50					
02/21/06	88	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	0.58					
06/08/06	ND<250	ND<6200	ND<12	ND<12	ND<12	ND<12	ND<12					
09/15/06	ND<250	ND<6200	ND<12	ND<12	ND<12	ND<12	ND<12					
12/14/06	ND<200	ND<5000	ND<10	ND<10	ND<10	ND<10	ND<10					
03/28/07	500	ND<500	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0		-			
06/25/07	11	ND<250	ND<0.50	0.65	ND<0.50	ND<0.50	ND<0.50					
09/22/07	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	•••				
12/14/07	26	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50					
03/17/08	ND<10	ND<250	ND<0.50	0.65	ND<0.50	ND<0.50	ND<0.50					
06/20/08	49	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50					
09/11/08	ND<100	ND<2500	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0					
11/25/08	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50					
03/09/09	15	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	1.4				
05/28/09	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	1.5	ND<2.0	23	ND<10	11000



Table 2 b
ADDITIONAL HISTORIC ANALYTICAL RESULTS
76 Station 6129

Date					Nitrogen			Dissolved	Redox	Specific	Post-purge	Pre-purge
Sampled	Iron	Iron	Manganese	Manganese (total)	as		Alkalinity	Oxygen	Potential	Con-	Dissolved	Dissolved
	Ferrous	(total)	(dissolved)		Nitrate (mg/l)	Sulfate	(total) (mg/l)	(Lab) (mg O/)	(ORP-Lab)	ductance	Oxygen	Oxygen
	(μg/l)	(μg/l)	(µg/l)	(μg/l)		(mg/l)			(mV)	(µmhos)	(mg/l)	(mg/l)
MW-1												
03/09/09	ND<1000				2.0	46	310		~~		1.95	2.54
05/28/09	ND<500	27000	10	680	2.9	43	310	7.7	126	798		4.05
MW-2												
03/09/09	940				2.0	41	410			- -	0.85	1.32
05/28/09	ND<1000	44000	4.3	500	1.6	40	370	7.1	138	813		1.54
MW-3												
03/09/09	ND<500				ND<0.44	38	310				0.94	0.84
05/28/09	ND<500	12000	49	300	ND<0.44	39	300	7.5	125	667		0.91



Table 2 c
ADDITIONAL HISTORIC ANALYTICAL RESULTS
76 Station 6129

03/09/09 8 24 05/28/09 70 MW-2 03/09/09 39 56 05/28/09 80 MW-3 03/09/09 14 32	Date Sampled	Pre-purge ORP (mV)	Post-purge ORP (mV)
05/28/09 70 MW-2 03/09/09 39 56 05/28/09 80 MW-3 03/09/09 14 32	MW-1		
MW-2 03/09/09 39 56 05/28/09 80 MW-3 03/09/09 14 32	03/09/09	8	24
03/09/09 39 56 05/28/09 80 MW-3 03/09/09 14 32	05/28/09	70	
05/28/09 80 MW-3 03/09/09 14 32	MW-2		
MW-3 03/09/09 14 32	03/09/09	39	56
03/09/09 14 32	05/28/09	80	
	MW-3		
05/28/09 66	03/09/09	14	32
T T	05/28/09	66	



COORDINATED EVENT DATA

TABLE 1A CUMULATIVE GROUNDWATER MONITORING AND SAMPLING DATA

Former Exxon Service Station 70234 3450 35th Avenue Oakland, California

						Oakland, Ca	III OIT III G						
Well ID	Samplin g Date	TOC Elev. (feet)	DTW (feet)	GW Elev. (feet)	NAPL (feet)	TPHg (µg/L)	MTBE (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	Total Pb (μg/L)	Organic Pb (mg/L)
MW1	07/15/92	arata	Well installe	γd									
MW1	07/17/92	192.00	33.02	158.98	No	67	-	6.6	6.9	2.0	4.5	47	
MW1	10/22/92	192.00	34.07	157.93	No	<50		2.9	<0.5	<0.5	4.5 <0.5	17	
MW1	02/04/93	192.00	29,43	162,57	No	<50		0.8	<0.5 <0.5	<0.5 <0.5	<0.5	16 4	
/IW1	05/03/93	192.00	29,72	162.28	No	71		2.8	7.2	2.2	22	4 40	
/IW1	07/30/93	192.00	32.95	159.05	No	<50		<0.5	<0.5	<0.5	<0.5	4 0 5	
/IW1	10/19/93	192.00	34.34	157.66	No	<50		<0.5	<0.5	<0.5	<0.5	12	
/IW1	02/23/94	192.00	31.72	160,28	No	<50		<0.5	<0.5	<0.5	<0.5 <0.5	4	
/IW1	06/06/94	192.00	31.77	160.23	No	<50		<0.5	<0.5	<0.5	<0.5	-4 -<3	
/IVV1	08/18/94	192.00	33.76	158.24	No	<50		<0.5	<0.5	<0.5	<0.5	130	
/W1	11/15/94	192.00	34.08	157.92	No	<50		<0.5	<0.5	<0.5	<0.5	<3.0	
/IVV1	02/06/95	192.00	28.50	163.50	No	<50		<0.5	<0.5	<0.5	<0.5 <0.5		<100
/IW1	05/10/95	192.00	29.30	162.70	No	<50		<0.5	<0.5	<0.5	<0.5 <0.5		_
/IW1	09/20/99	192,00	33.30	158.70	No	<50	<0,5	<0.5	<0.5	<0.5 <0.5	<0.5 <0.5	 <75	
/W1		yed in June 200		100.75	140	100	10,0	\0.5	\0. 0	C.0	<0.5	<15	<50
/IW2	07/15/92		Well installe	d.									
/IW2	07/17/92	194.85	34.65	160.20	No	<50		<0.5	<0.5	<0.5	<0.5	<3	
1W2	10/22/92	194.85	35.64	159.21	No	<50	,	40.5	<0.5	<0.5	<0.5		
IW2	02/04/93	194.85	31.13	163.72	No	<50	!	<0.5	<0.5	<0.5	<0.5	<3	
/IW2	05/03/93	194.85	31.08	163.77	No	<50		<0.5	<0.5	<0.5	<0.5	3	
/IW2	07/30/93	194.85	34.34	160.51	No	<50		<0.5	<0.5	<0.5	<0.5	14	
/IW2	10/19/93	194.85	36.00	158.85	No	<50		<0.5	<0.5	<0.5	<0.5	<3	
/IW2	02/23/94	194.85	33.92	160.93	No	<50		<0.5	<0.5	<0.5	<0.5	<3	
1W2	06/06/94	194.85	33.50	161,35	No	<50		<0.5	<0.5	<0.5	<0.5	<3	
/IW2	08/18/94	194.85	35.38	159,47	No	<50		<0.5	<0.5	<0.5	<0.5	<3.0	Ni berai
NW2	11/15/94	194.85	35.93	158.92	No	<50		<0.5	<0.5	<0.5	<0.5	<3.0	<100
IW2	02/06/95	194.85	30.38	164.47	No	<50		<0.5	<0.5	<0.5	<0.5		-100
/IW2	05/10/95	194.85	30.77	164.08	No	<50		<0.5	<0.5	<0.5	<0.5		
IW2	09/20/99	194.85	35.15	159.70	No	<50	<0.5	<0,5	<0.5	<0.5	<0.5	<75	<0.5
1W2	Well destro	yed in June 200								0.0		-70	10.0
IW3	07/15/92	700	Well installe	d.									
I W3	07/17/92	196.90	37.24	159.66	No	<50		<0.5	< 0.5	< 0.5	<0.5	50	***
NV3	10/22/92	196.90	35.95	160.95	No	<50		<0.5	<0.5	<0.5	<0.5	9	
IW3	02/04/93	196.90	29.85	167.05	No	<50		<0.5	<0.5	<0.5	<0.5	<3	~~~
/IVV3	05/03/93	196.90	29.87	167.03	No	<50		<0.5	<0.5	<0.5	<0.5	3	
/IVV3	07/30/93	196.90	33.85	163.05	No	<50		<0.5	<0.5	<0.5	<0.5	22	

Page 1 of 3

TABLE 1A CUMULATIVE GROUNDWATER MONITORING AND SAMPLING DATA

Well ID	Samplin g Date	TOC Elev. (feet)	DTW (feet)	GW Elev, (feet)	NAPL (feet)	TPHg (µg/L)	MTBE (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	Χ (μg/L)	Total Pb (μg/L)	Organic Pb (mg/L)
WW3	10/19/93	196.90	35.89	161.01	No	<50		<0.5	<0.5	<0.5	<0.5	12	777
MW3	02/23/94	196.90	32.88	164.02	No	<50		< 0.5	<0.5	<0.5	<0.5	25	
MW3	06/06/94	196.90	32.40	164.50	No	<50	-	<0.5	< 0.5	< 0.5	<0.5	<3	
MW3	08/18/94	196.90	35.07	161.83	No	<50		<0.5	<0.5	<0.5	<0.5	<3.0	
MW3	11/15/94	196.90	35.97	160.93	No	<50		<0.5	<0.5	<0.5	< 0.5	<3.0	<100
MW3	02/06/95	196.90	28.39	168.51	No	<50	,	< 0.5	< 0.5	<0.5	<0.5		
MW3	05/10/95	196.90	28.90	168.00	No	<50		<0.5	< 0.5	<0.5	<0.5		
MW3	09/20/99	196.90	34.68	162.22	No	75.0	1.87	< 0.5	11.5	1.8	18.0	<75	<0.5
MW3	Well destro	yed in June 200									- '		
MW4	03/02/09		Well installed.										
MW4	03/30/09	197.62	30.94	166.68	No	<50	< 0.50	<0.50	< 0.50	< 0.50	<0.50		
MW4	04/02/09	197.62	Well surveyed.										
MW4	05/28/09	197.62	32.00	165.62	No	<50	<0.50	<0.50	<0.50	<0.50	<0.50		
MW5	03/06/09		Well installed.										
MW5	03/30/09	196.35	30.05	166.30	No	4,200	1,900	540	140	<12	310		
VIW5	04/02/09	196.35	Well surveyed.			·	,				0.0		
MW5	05/28/09	196.35	31.45	164.90	No	5,300	3,600	890	150	<25	140	-	Maria
MW6	03/09/09		Well installed.										
MW6	03/30/09	192.41	26.94	165.47	No	2,800	4,800	0.91	< 0.50	<0.50	< 0.50	Milens	
MW6	04/02/09	192.41	Well surveyed.			,	,		****		0.00		
MW6	05/28/09	192.41	28.04	164.37	No	2,800	6,000	<100	<100	<100	<100		
MW7	03/09/09		Well installed.										
VIW7	03/30/09	194.34	29.15	165.19	No	55	66	<0.50	< 0.50	<0.50	< 0.50		
VIVV7	04/02/09	194.34	Well surveyed.			-			-,00	00	0.00		
MW7	05/28/09	194.34	30.16	164.18	No	50	67	<1.0	<1.0	<1.0	<1.0	оли	
8WW	03/04/09		Well installed.										
MW8	03/30/09	192.96	27.35	165.61	No	<50	<0.50	<0.50	<0.50	<0.50	<0.50		****
MW8	04/02/09	192.96	Well surveyed.										
8WW	05/28/09	192.96	28.72	164.24	No	<50	<0.50	<0.50	<0.50	<0.50	<0.50		
NW9	03/05/09		Well installed.										
νW9	03/30/09	195.16	28.31	166.85	No	<50	<0.50	< 0.50	<0.50	<0.50	<0.50		-
MW9	04/02/09	195.16	Well surveyed.					**			-0.00		
VIVV9	05/28/09	195.16	29.69	165.47	No	<50	<0.50	<0.50	<0.50	<0.50	<0.50		

TABLE 1A CUMULATIVE GROUNDWATER MONITORING AND SAMPLING DATA

Notes:	Data prior to 1999 provided by EA Environmental Science and Engineering in previously submitted reports.
TOC Elev.	= Top of well casing elevation; datum is mean sea level.
DTW	= Depth to water.
GW Elev.	= Groundwater elevation; datum is mean sea level.
NAPL	= Non-aqueous phase liquid.
TPHg	 Total petroleum hydrocarbons as gasoline analyzed using EPA Method 8015.
MTBE	 Methyl tertiary butyl ether analyzed using EPA Method 8260.
BTEX	 Benzene, toluene, ethylbenzene, and total xylenes analyzed using EPA Method 8020.
Total Pb	= Total lead analyzed using EPA Method 6010.
Organic Pb	Organic lead analyzed using CA DHS LUFT method.
EDB	= 1,2-dibromoethane analyzed using EPA Method 8260B.
1,2-DCA	= 1,2-dicloroethane analyzed using EPA Method 8260B.
TAME	= Tertiary amyl methyl ether analyzed using EPA Method 8260B.
TBA	Tertiary butyl alcohol analyzed using EPA Method 8260B.
ETBE	= Ethyl tertiary butyl ether analyzed using EPA Method 8260B.
DIPE	= Di-isopropyl ehter analyzed using EPA Method 8260B.
μg/L.	= Micrograms per liter.
mg/L	= Milligrams per liter.
<	= Less than the stated laboratory reporting limit.
	 Not sampled/Not analyzed/Not measured/Not applicable.

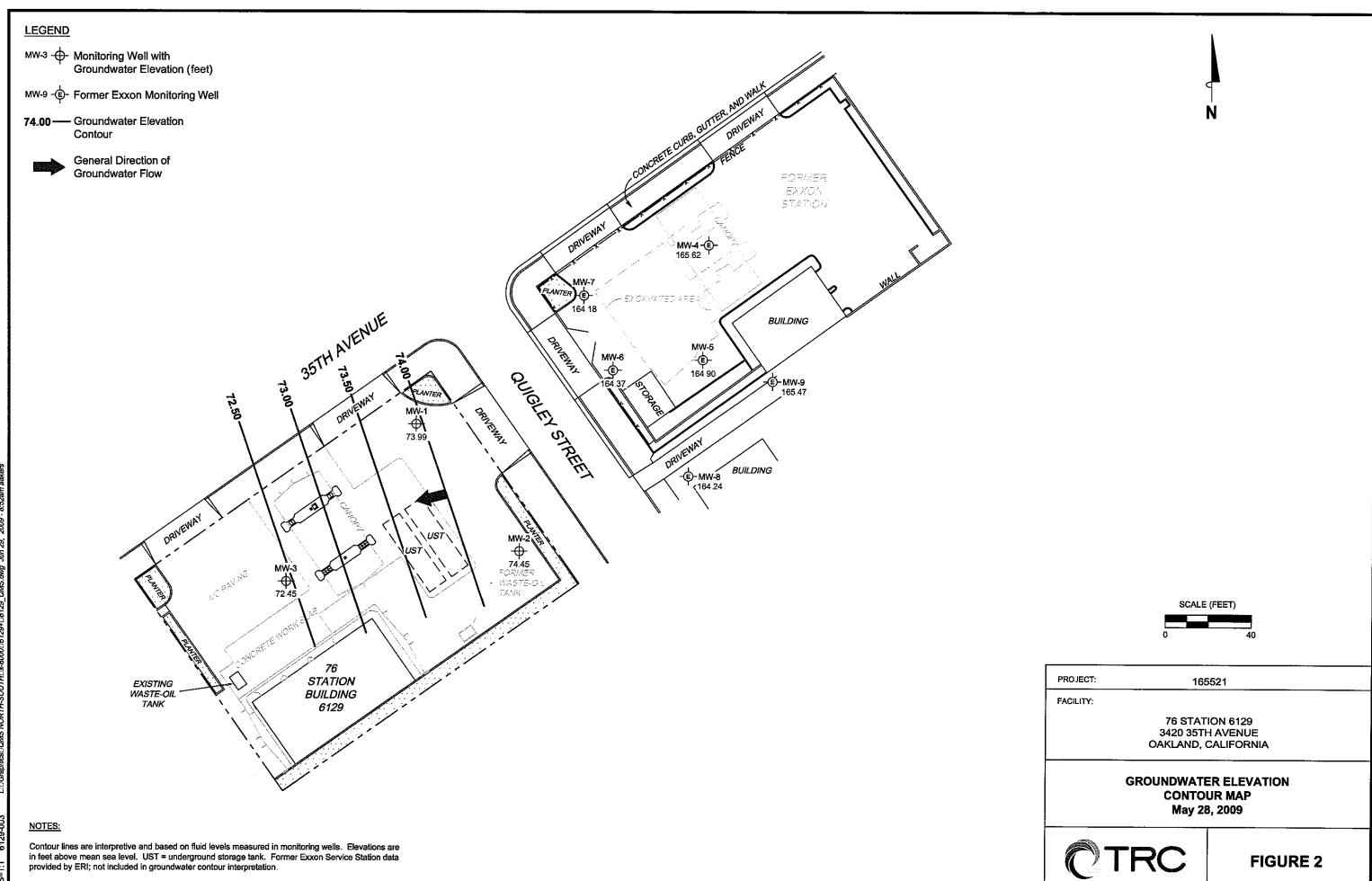
TABLE 1B ADDITIONAL CUMULATIVE GROUNDWATER MONITORING AND SAMPLING DATA

Well ID	Samplin	EDB	1,2-DCA	TAME	TBA	ETBE	DIPE
	g Date	(µg/L)	(μg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
MW1 MW1	07/17/92 - 09/20/99 Well destroyed in June 2000.	Not analyzed for t	hese analytes.				
MW2 MW2	07/17/92 - 09/20/99 Well destroyed in June 2000.	Not analyzed for t	hese analytes.				
MW3 MW3	07/17/92 - 09/20/99 Well destroyed in June 2000.	Not analyzed for t	hese analytes.				
MW4	03/30/09	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50
MW4	05/28/09	< 0.50	< 0.50	< 0.50	<5.0	<0.50	<0.50
MW5	03/30/09	<12	17	<12	450	<12	<12
MW5	05/28/09	<25	<25	<25	<250	<25	<25
MW6	03/30/09	<0.50	<0.50	1.3	410	<0.50	0.82
MW6	05/28/09	<100	<100	<100	<1,000	<100	<100
MW7	03/30/09	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50
MW7	05/28/09	<1.0	<1.0	<1.0	<10	<1.0	<1.0
MVV8	03/30/09	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50
MVV8	05/28/09	< 0.50	<0.50	< 0.50	< 5.0	<0.50	<0.50
MW9	03/30/09	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50
MW9	05/28/09	<0.50	<0.50	<0.50	<5.0	<0.50	<0.5 0

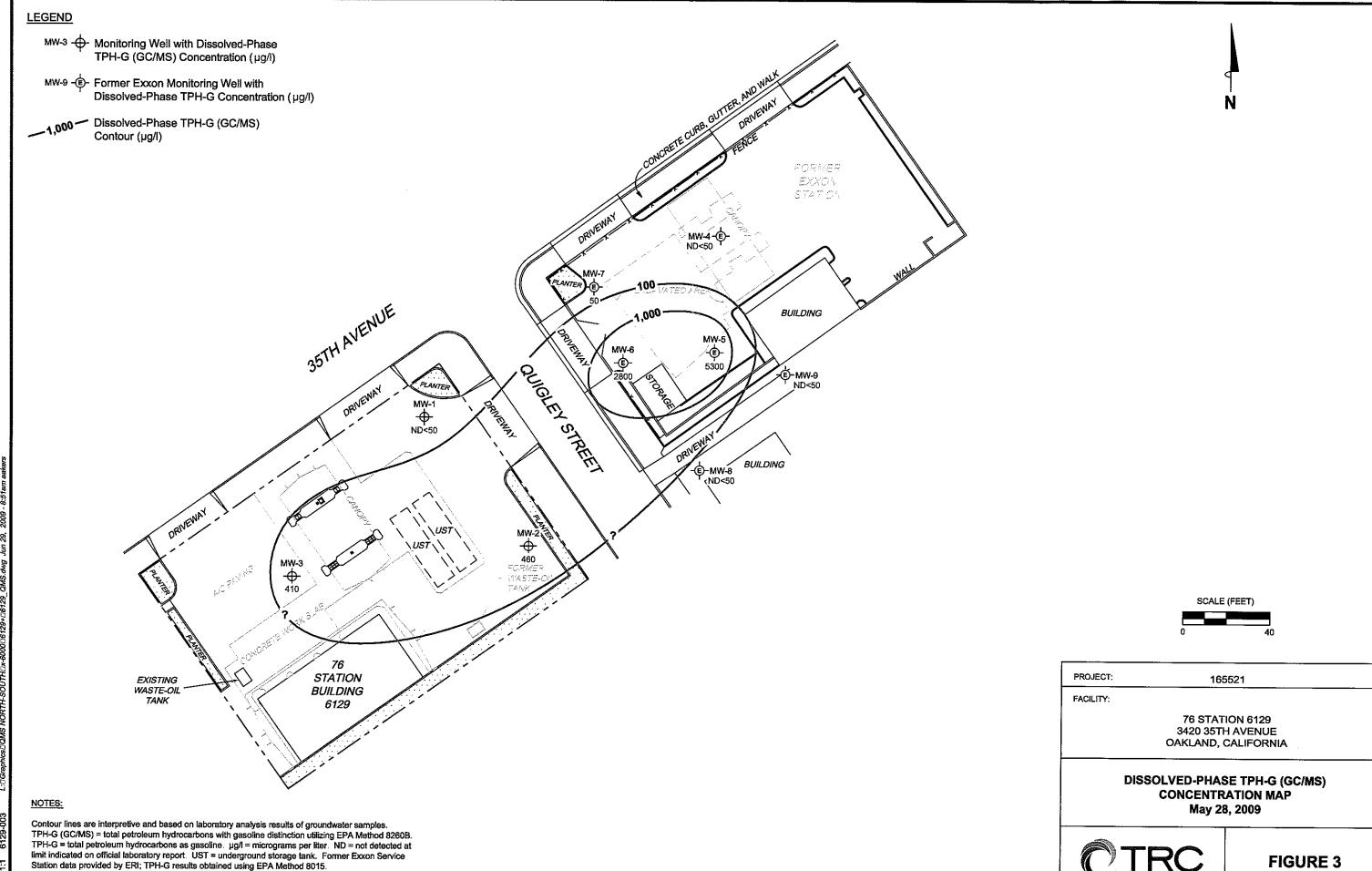
TABLE 1B ADDITIONAL CUMULATIVE GROUNDWATER MONITORING AND SAMPLING DATA

Notes:		Data prior to 1999 provided by EA Environmental Science and Engineering in previously submitted reports.
TOC Elev.	=	Top of well casing elevation; datum is mean sea level.
DTW	=	Depth to water.
GW Elev.	=	Groundwater elevation; datum is mean sea level.
NAPL	=	Non-aqueous phase liquid.
TPHg	=	Total petroleum hydrocarbons as gasoline analyzed using EPA Method 8015.
MTBE	=	Methyl tertiary butyl ether analyzed using EPA Method 8260.
BTEX	=	Benzene, toluene, ethylbenzene, and total xylenes analyzed using EPA Method 8020.
Total Pb	=	Total lead analyzed using EPA Method 6010.
Organic Pb	=	Organic lead analyzed using CA DHS LUFT method.
EDB	=	1,2-dibromoethane analyzed using EPA Method 8260B.
1,2-DCA	=	1,2-dicloroethane analyzed using EPA Method 8260B.
TAME	=	Tertiary amyl methyl ether analyzed using EPA Method 8260B.
TBA	=	Tertiary butyl alcohol analyzed using EPA Method 8260B.
ETBE	=	Ethyl tertiary butyl ether analyzed using EPA Method 8260B.
DIPE	=	Di-isopropyl ehter analyzed using EPA Method 8260B.
μg/L	=	Micrograms per liter,
mg/L.	=	Milligrams per liter.
<	=	Less than the stated laboratory reporting limit.
	=	Not sampled/Not analyzed/Not measured/Not applicable.

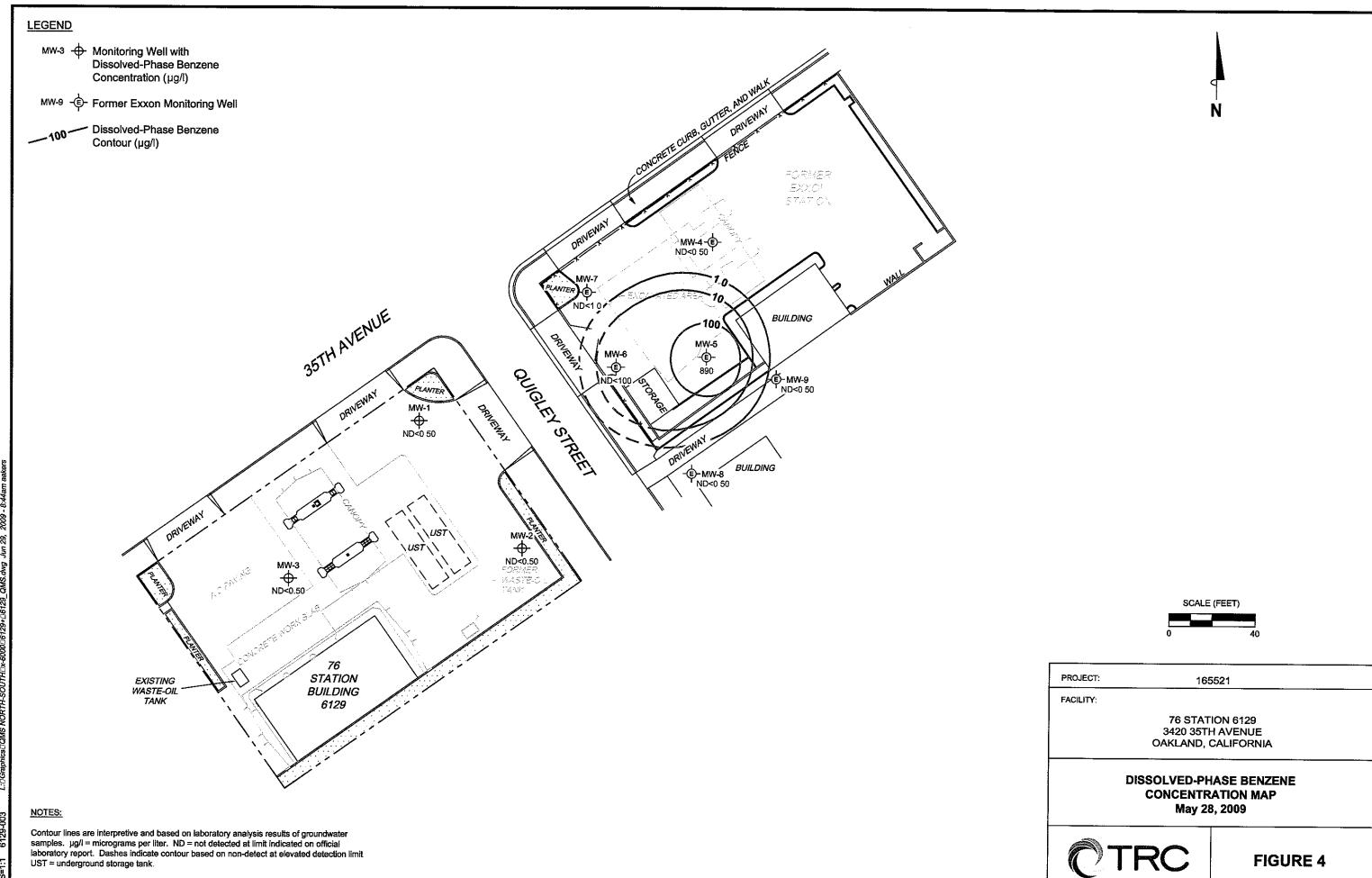
FIGURES

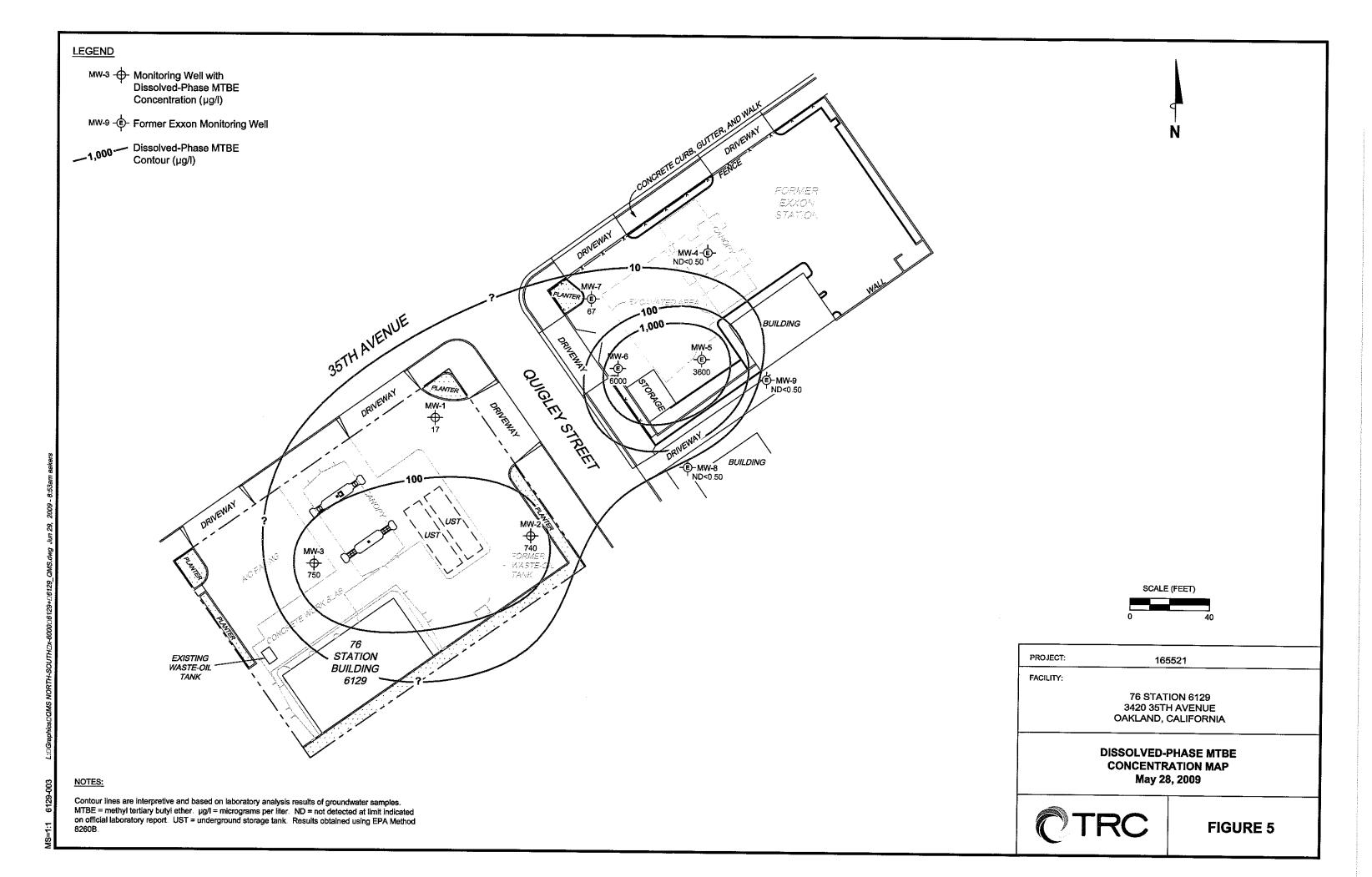


7.7.00



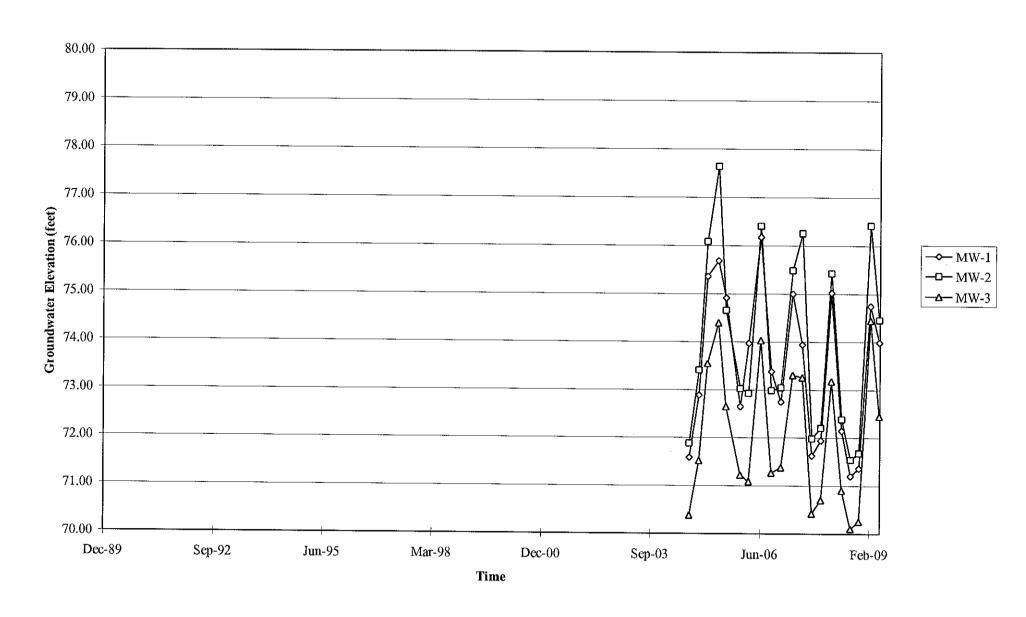
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GRAPHS

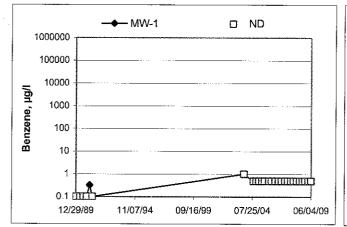
Groundwater Elevations vs. Time 76 Station 6129

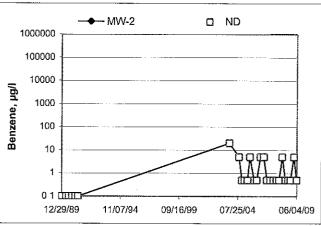


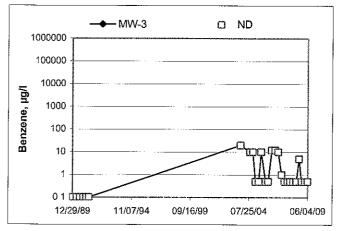
Elevations may have been corrected for apparent changes due to resurvey

Benzene Concentrations vs Time

76 Station 6129

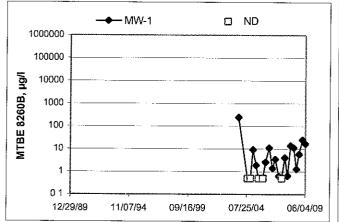


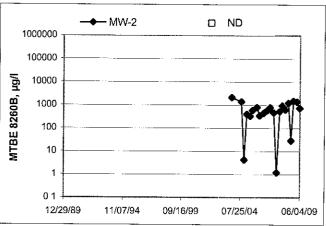


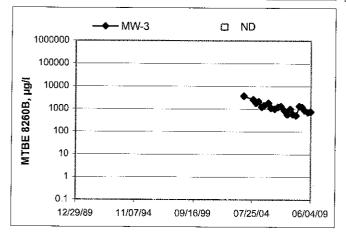


MTBE 8260B Concentrations vs Time

76 Station 6129







GENERAL FIELD PROCEDURES

Groundwater Monitoring and Sampling Assignments

For each site, TRC technicians are provided with a Technical Service Request (TSR) that specifies activities required to complete the groundwater monitoring and sampling assignment for the site TSRs are based on client directives, instructions from the primary environmental consultant for the site, regulatory requirements, and TRC's previous experience with the site.

Fluid Level Measurements

Initial site activities include determination of well locations based on a site map provided with the TSR Well boxes are opened and caps are removed Indications of well or well box damage or of pressure buildup in the well are noted.

Fluid levels in each well are measured using a coated cloth tape equipped with an electronic interface probe, which distinguishes between liquid phase hydrocarbon (LPH) and water. The depth to LPH (if it is present), to water, and to the bottom of the well are measured from the top of the well casing (surveyors mark or notch if present) to the nearest 0 01 foot. Unless otherwise instructed, a well with less than 0 67 foot between the measured top of water and the measured bottom of the well casing is considered dry, and is not sampled. If the well contains 0 67 foot or more of water, an attempt is made to bail and/or sample as specified on the TSR.

Wells that are found to contain LPH are not purged or sampled. Instead, one casing volume of fluid is bailed from the well and the well is re-sealed. Bailed fluids are placed in a container separate from normal purge water, and properly disposed.

Purging and Groundwater Parameter Measurement

TSR instructions may specify that a well not be purged (no-purge sampling), be purged using low-flow methods, or be purged using conventional pump and/or bail methods. Conventional purging generally consists of pumping or bailing until a minimum of three casing volumes of water have been removed or until the well has been pumped dry. Pumping is generally accomplished using submersible electric or pneumatic diaphragm pumps.

During conventional purging, three groundwater parameters (temperature, pH, and conductivity) are measured after removal of each casing volume. Stabilization of these parameters, to within 10 percent, confirm that sufficient purging has been completed. In some cases, the TSR indicates that other parameters are also to be measured during purging TRC commonly measures dissolved oxygen (DO), oxidation-reduction potential (ORP), and/or turbidity. Instruments used for groundwater parameter measurements are calibrated daily according to manufacturer's instructions

Low-flow purging utilizes a bladder or peristaltic pump to remove water from the well at a low rate. Groundwater parameters specified by the TSR are measured continuously until they become stable in general accordance with EPA guidelines.

Purge water is generally collected in labeled drums for disposal Drums may be left on site for disposal by others, or transported to a collection location for eventual transfer to a licensed treatment or recycling facility. In some cases, purge water may be collected directly from the site by a licensed vacuum truck company, or may be treated on site by an active remediation system, if so directed.

Groundwater Sample Collection

After wells are purged, or not purged, according to TSR instructions, samples are collected for laboratory analysis. For wells that have been purged using conventional pump or bail methods, sampling is conducted after the well has recovered to 80 percent of its original volume or after two hours if the well does not recover to at least 80 percent. If there is insufficient recharge of water in the well after two hours, the well is not sampled.

Samples are collected by lowering a new, disposable, ½-inch to 4-inch polyethylene bottom-fill bailer to just below the water level in the well. The bailer is retrieved and the water sample is carefully transferred to containers specified for the laboratory analytical methods indicated by the TSR. Particular care is given to containers for volatile organic analysis (VOAs) which require filling to zero headspace and fitting with Teflon-sealed caps.

After filling, all containers are labeled with project number (or site number), well designation, sample date, sample time, and the sampler's initials, and placed in an insulated chest with ice Samples remain chilled prior to and during transport to a state-certified laboratory for analysis Sample container descriptions and requested analyses are entered onto a chain-of-custody form in order to provide instructions to the laboratory. The chain-of-custody form accompanies the samples during transportation to provide a continuous record of possession from the field to the laboratory. If a freight or overnight carrier transports the samples, the carrier is noted on the form

For wells that have been purged using low-flow methods, sample containers are filled from the effluent stream of the bladder or peristaltic pump. In some cases, if so specified by the TSR, samples are taken from the sample ports of actively pumping remediation wells.

Sequence of Gauging, Purging and Sampling

The sequence in which monitoring activities are conducted is specified on the TSR. In general, wells are gauged beginning with the least affected well and ending with the well that has the highest concentration based on previous analytic results. After all gauging for the site is completed, wells are purged and/or sampled from the least-affected to the most-affected well.

Decontamination

In order to reduce the possibility of cross contamination between wells, strict isolation and decontamination procedures are observed. Portable pumps are not used in wells with IPH. Technicians wear nitrile gloves during all gauging, purging, and sampling activities. Gloves are changed between wells and more often if warranted. Any equipment that could come in contact with fluids are either dedicated a particular well, decontaminated prior to each use, or discarded after a single use. Decontamination consists of washing in a solution of Liqui-nox and water and rinsing twice. The final rinse is in deionized water.

Exceptions

Additional tasks or non-standard procedures, if any, that may be requested or required for a particular site, and noted on the site TSR, are documented in field notes on the following pages

3/7/08 version

FIELD MONITORING DATA SHEET

 Technician: JoE
 Job #/Task #: /65521/FA20
 Date: 05-28-09

 Site # 6129
 Project Manager A: Colling
 Page 1 of /

				Depth	Depth	Product		
Well#	TOC	Time Gauged	Total Depth	to Water	to Product	Thickness (feet)	Time Sampled	Mico Mall Nata
MW-1	X			28,25			1256	Misc. Well Notes
mw-3	X	1209		Z7.55			1337	z''
mw-2	X							2"
		[2.]	1320	21.11			1412	2'
					·			
				· · · · · · · · · · · · · · · · · · ·				
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			-					
								PAGE 1
TELD DATA C	OMPLE	TE	QA/QC		coc	WEJ	BOX CO	NDITION SHEETS
MANIFEST	<u> </u>	DRUM INV	ENTORY		RAFFIC CO	· · · · · · · · · · · · · · · · · · ·	······································	
				<u></u>	10/11/10/00	INOL		
								

GROUNDWATER SAMPLING FIELD NOTES

Technician: Site: 6129 Date:05-28-09 Project No : 165521 MW-Well No.____ Purge Method: 28,25 Depth to Water (feet): Depth to Product (feet): Total Depth (feet)_ LPH & Water Recovered (gallons):____ Water Column (feet): Casing Diameter (Inches):_Z" 80% Recharge Depth(feet): 31.29 1 Well Volume (gallons):

Time Start	Time Stop	Depth to Water (feet)	Volume Purged (gallons)	Conductivity (µS/cm)	Temperature (F(O)	рН	D.O (mg/L)	ORP	Turbidity
Pre-P	urge		er er skaller e				4.05	70	
1236			3	808,5	24.7	7.75	3,02	68	
			6	895.6	23.5	7.11	0.65	69	
	1242		9	860.7	23,3	7.11	0.64	70	
1243	1244		12	848.6	23,3	6.98	0.69	68	
Statio	c at Time Sa	impled	Tota	L al Gallons Pur	ged		 Sample	Time	
	31.29		12			l	256	12	
Comments:		•		,		· · · · · · · · · · · · · · · · · · ·			

Well No.
Purge Method:

Depth to Water (feet):
27,55

Depth to Product (feet):
Depth to Product (feet):

Total Depth (feet)
39.45

Water Column (feet):
11.90

Casing Diameter (Inches):
2"

80% Recharge Depth(feet):
29.93

1 Well Volume (gallons):
3

Time Start	Time Stop	Depth to Water (feet)	Volume Purged (gallons)	Conductivity (µS/cm)	Temperature	рН	D O (mg/L)	ORP	Turbidity
Pre-P	'urge	en arres de como de la como de la La como de la como dela como del					0.91	66	
312			3	616.7	24.9	8.70	0.49	63	
			6	686.2	23.3	8.25	0.89	64	
	1318		7	677.1	23.3	8.12	0.93	64	
Station	at Time Sa	ampled	Tota	al Gallons Pur	ged		Sample	Time	
	29.93		9			1	337		
mments:			,						



GROUNDWATER SAMPLING FIELD NOTES

		Ted	chnician: _	JOE	T TO SA OTTO ST	_			
Site: 61	29 MW-7	Proj	ect No : <u>/</u>	16552)			Date:	05-2	28-09
Well No	MW-Z	7 		Purge Metho	od: 5	uß			
Depth to W	ater (feet):	27.71		Depth to Pro	duct (feet):				
Total Depth	(feet)	43,56			r Recovered (g				
Water Colu	mn (feet):	15.45		Casing Diam	neter (Inches):_ ne (gallons):	<u>""</u>	**************************************		
80% Recha	rge Depth(fe	_{eet):} 30,89	<u>B</u>	1 Well Volun	ne (gallons):	3	· 		
Time Start	Time Stop	Depth to Water (feet)	Volume Purged (gallons)	Gonductivity (µS/cm)	Temperature (F(C)	pH	D O (mg/L)	ORP	Turbidity
	urge						1.54	80	ex N. A. Inning Laboration
1252			3	691.2		9.22	1.50	69	
	1401		\$	721-3	24.3 23.8	8,50	1.41	70	
	1 70 :		/	7-1-7	2010	0:5.	[470	* 6	
	c at Time S 29.09		Tot	 al Gallons Pur	ged	14	Sample	Time	
Comments	<u> </u>								
Well No			<u>.</u>	Purge Metho	d:				
Depth to Wa	ater (feet):			Depth to Pro	duct (feet):				
Total Depth	(feet)			LPH & Water	Recovered (ga	allons):		_	
Water Colur	nn (feet):			Casing Diam	eter (Inches):_				
80% Recha	rge Depth(fe	eet):		1 Well Volum	e (gallons):				
Time Start	Time Stop	Depth to Water (feet)	Volume Purged (gallons)	Conductivity (µS/cm)	Temperature (F;C)	рН	D.O (mg/L)	ORP	Turbidity
Pre-P	urge								
									i l

Time Start	Time Stop	Depth to Water (feet)	Volume Purged (gallons)	Conductivity (µS/cm)	Temperature (F,C)	рН	D.O (mg/L)	ORP	Turbidity
Pre-F	Purge						1000000		
Stati	c at Time Sa	 ampled	Tota	 al Gallons Pur	ged		 Sample	Time	
Comments		<u> </u>							
Comments									



Date of Report: 06/15/2009

Anju Farfan

TRC

21 Technology Drive Irvine, CA 92618

RE:

6129

BC Work Order:

0906997

invoice ID:

B063312

Enclosed are the results of analyses for samples received by the laboratory on 5/28/2009. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Contact Person: Molly Meyers

Client Service Rep

Authorized Signature

Authorized Signature

TRC 21 Technology Drive Irvine, CA 92618

Project: 6129

Project Number: 4510932381 Project Manager: Anju Fartan

Reported: 06/15/2009 15:27

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information	on .			
0906997-01	COC Number: Project Number: Sampling Location: Sampling Point: Sampled By:	 6129 MW-1 TRCI	Receive Date: Sampling Date: Sample Depth: Sample Matrix:	05/28/2009 21:50 05/28/2009 12:56 Water	Metal Analysis: 2-Lab Filtered and Acidified
0906997-02	COC Number: Project Number: Sampling Location: Sampling Point: Sampled By:	 6129 MW-3 TRCI	Receive Date: Sampling Date: Sample Depth: Sample Matrix:	05/28/2009 21:50 05/28/2009 13:37 Water	Metal Analysis: 2-Lab Filtered and Acidified
0906997-03	COC Number: Project Number: Sampling Location: Sampling Point: Sampled By:	 6129 MW-2 TRCI	Receive Date: Sampling Date: Sample Depth: Sample Matrix:	05/28/2009 21:50 05/28/2009 14:12 Water	Metal Analysis: 2-Lab Filtered and Acidified

TRC 21 Technology Drive

Irvine, CA 92618

Project: 6129

Project Number: 4510932381

Project Manager: Anju Farfan

Reported: 06/15/2009 15:27

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 0	906997-01	Client Sample	e Name:	6129, MW-1, 5/28	3/2009 12:56:00	PM						***	
Constituent		Result	Units	PQL MD	L Method	Prep Date	Run Date/Time	Analyst	Instru- ment ID	Dilution	QC Batch ID	MB	Lab
Benzene		ND	ug/L	0.50	EPA-8260	06/05/09	06/08/09 15:01	JCC	MS-V4	1	BSF0441	Bias ND	Quals
1,2-Dibromoethane		ND	ug/L	0.50	EPA-8260	06/05/09	06/08/09 15:01	JCC	MS-V4	1	BSF0441	ND	
1,2-Dichloroethane		ND	ug/L	0.50	EPA-8260	06/05/09	06/08/09 15:01	JCC	MS-V4	1	BSF0441	ND	
Ethylbenzene		ND	ug/L	0.50	EPA-8260	06/05/09	06/08/09 15:01	JCC	MS-V4	i	BSF0441	ND	
Methyl t-butyl ether		17	ug/L	0.50	EPA-8260	06/05/09	06/08/09 15:01	JCC	MS-V4	1	BSF0441	ND	
Toluene		ND	ug/L	0.50	EPA-8260	06/05/09	06/08/09 15:01	JCC	MS-V4	1	BSF0441	ND	
Total Xylenes		ND	ug/L	1.0	EPA-8260	06/05/09	06/08/09 15:01	JCC	MS-V4	í	BSF0441	ND	.,,
t-Amvl Methyl ether		ND	ug/L	0.50	EPA-8260	06/05/09	06/08/09 15:01	JCC	MS-V4	i	BSF0441	ND	
t-Butyl alcohol		ND	ug/L	10	EPA-8260	06/05/09	06/08/09 15:01	JCC	MS-V4	i	BSF0441	ND	
Diisopropyl ether		ND	ug/L	0.50	EPA-8260	06/05/09	06/08/09 15:01	JCC	MS-V4	1	BSF0441	ND	
Ethanol		ND	ug/L	250	EPA-8260	06/05/09	06/08/09 15:01	JCC	MS-V4	1	BSF0441	ND	
Ethyl t-butvl ether		ND	ug/L	0.50	EPA-8260	06/05/09	06/08/09 15:01	JCC	MS-V4	í	BSF0441	ND	
Total Purgeable Petroleum Hvdrocarbons		ND	ug/L	50	Luft-GC/MS	06/05/09	06/08/09 15:01	JCC	MS-V4	i	BSF0441	ND	
1,2-Dichloroethane-d4 (Surro	ogate)	88.6	%	76 - 114 (LCL - UCL)	EPA-8260	06/05/09	06/08/09 15:01	JCC	MS-V4	1	BSF0441		*******
Toluene-d8 (Surrogate)		100	%	88 - 110 (LCL - UCL)	EPA-8260	06/05/09	06/08/09 15:01	JCC	MS-V4	1	BSF0441		
1-Bromofluorobenzene (Surr	ogate)	94.9	%	86 - 115 (LCL - UCL)	EPA-8260	06/05/09	06/08/09 15:01	JCC	MS-V4	í	BSF0441		

TRC 21 Technology Drive Irvine, CA 92618

Project: 6129

Project Number: 4510932381 Project Manager: Anju Farfan

Reported: 06/15/2009 15:27

Water Analysis (General Chemistry)

BCL Sample ID: 0906997-01	Client Samp	le Name:	6129, MV	V-1, 5/28/20	09 12:56:00F	PM							
-						Prep	Run		Instru-		QC	MB	Lab
Constituent	Result	Units	PQL	MDL	Method	Date	Date/Time	Analyst	ment iD	Dilution	Batch ID	Bias	Quals
Total Alkalinity as CaCO3	310	mg/L	4.1		EPA-310.1	06/03/09	06/03/09 09:11	FM2	MET-1	1	BSF0294	ND	
Nitrate as NO3	2.9	mg/L	0.44	.,	EPA-300.0	05/28/09	05/29/09 01:53	CRR	IC2	1	BSE1782	ND	
Sulfate	43	mg/L	1.0		EPA-300.0	05/28/09	05/29/09 01:53	CRR	IC2	1	BSE1782	ND	
Electrical Conductivity @ 25 C	798	umhos/c m	1.00		EPA-120.1	06/01/09	06/01/09 11:55	FM2	MET-1	1	BSF0068		
Iron (III) Species	27000	ug/L	100		Calc	06/01/09	06/04/09 15:11	TMS	Calc	1	BSF0109	ND	
Iron (II) Species	ND	ug/L	500		SM-3500-FeL	05/29/09	05/29/09 00:30	MRM	SPEC05	5	BSE1750	ND	A10
Non-Volatile Organic Carbon	0.88	·mg/L	0.30		EPA-415.1	05/29/09	05/29/09 16:23	CDR	TOC2	1	BSF0052	ND	
Dissolved Oxygen	7.7	mg O/L	0.50		SM-4500OG	05/29/09	05/29/09 07:45	HPR	YSI-57	1	BSE1813	·	S05



21 Technology Drive Irvine, CA 92618

Project: 6129

Project Number: 4510932381 Project Manager: Anju Farfan

Reported: 06/15/2009 15:27

Water Analysis (Metals)

BCL Sample ID: 0906997-01	Client Samp	le Name:	6129, MV	V-1, 5/28/2	009 12:56:00	РM							
Constituent	Result	Units	PQL	MDL	Method	Prep Date	Run Date/Time	Analyst	Instru- ment ID	Dilution	QC Batch ID	MB Bias	Lab Quals
Hexavalent Chromium	ND	ug/L	2.0		EPA-7196	05/29/09	05/29/09 07:58	TDC	KONE-1	1	BSF0016	ND	
Chromium	ND	ug/L	10		EPA-6010B	05/29/09	05/29/09 15:30	PPS	PE-OP1	1	BSE1799	ND	
Manganese	10	ug/L	1.0		EPA-200.8	05/29/09	06/08/09 12:46	PRA	PE-EL1	1	BSF0312	ND	
Total Chromium	21	ug/L	10		EPA-6010B	06/01/09	06/02/09 15:13	PPS	PE-OP1	1	BSF0029	ND	
Total Iron	27000	ug/L	50		EPA-6010B	06/03/09	06/04/09 11:03	PPS	PE-OP1	1	BSF0194	ND	
Total Recoverable Manganese	680	ug/L	1.0		EPA-200.8	06/01/09	06/02/09 19:37	PPS	PE-EL1	1	BSF0026	ND ND	

TRC 21 Technology Drive Irvine, CA 92618

Project: 6129

Project Number: 4510932381 Project Manager: Anju Farfan

Reported: 06/15/2009 15:27

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 0906997-02	Client Sample	e Name:	6129, MW-3, 5/2	28/2009 1:37:00	PM					,		
					Prep	Run		Instru-		QC	MB	Lab
Constituent	Result	Units	PQL MI	DL Method	Date	Date/Time	Analyst	ment ID	Dilution	Batch ID	Bias	Quals
Benzene	ND	ug/L	0.50	EPA-8260	06/05/09	06/06/09 02:05	JCC	MS-V4	1	BSF0441	ND	
1,2-Dibromoethane	ND	ug/L	0.50	EPA-8260	06/05/09	06/06/09 02:05	JCC	MS-V4	1	BSF0441	ND	
1,2-Dichloroethane	ND	ug/L	0.50	EPA-8260	06/05/09	06/06/09 02:05	JCC	MS-V4	1	BSF0441	ND	
Ethylbenzene	ND	ug/L	0.50	EPA-8260	06/05/09	06/06/09 02:05	JCC	MS-V4	í	BSF0441	ND	
Methyl t-butyl ether	750	ug/L	5.0	EPA-8260	06/05/09	06/09/09 05:28	JCC	MS-V4	10	B\$F0441	ND	A01
Toluene	ND	ug/L	0,50	EPA-8260	06/05/09	06/06/09 02:05	JCC	MS-V4	1	BSF0441	ND	
Total Xylenes	ND	ug/L	1.0	EPA-8260	06/05/09	06/06/09 02:05	JCC	MS-V4	1	BSF0441	ND	
t-Amyl Methyl ether	ND	ug/L	0.50	EPA-8260	06/05/09	06/06/09 02:05	JCC	MS-V4	1	BSF0441	ND	
t-Butyl alcohol	ND	ug/L	10	EPA-8260	06/05/09	06/06/09 02:05	JCC	MS-V4	í	BSF0441	ND	
Disopropyl ether	ND	ug/L	0.50	EPA-8260	06/05/09	06/06/09 02:05	JCC	MS-V4	í	BSF0441	ND	
Ethanol	ND	ug/L	250	EPA-8260	06/05/09	06/06/09 02:05	JCC	MS-V4	1	BSF0441	ND	
Ethyl t-butvl ether	ND	ug/L	0.50	EPA-8260	06/05/09	06/06/09 02:05	JCC	MS-V4	1	BSF0441	ND	
Total Purgeable Petroleum Hydrocarbons	410	ug/L	50	Luft-GC/MS	06/05/09	06/06/09 02:05	JCC	MS-V4	1	BSF0441	ND	A90
1,2-Dichloroethane-d4 (Surrogate)	84.9	%	76 - 114 (LCL - UCL) EPA-8260	06/05/09	06/06/09 02:05	JCC	MS-V4	1	BSF0441	•	
1,2-Dichloroethane-d4 (Surrogate)	89.0	%	76 - 114 (LCL - UCL	.) EPA-8260	06/05/09	06/09/09 05:28	JCC	MS-V4	10	BSF0441		***********
Toluene-d8 (Surrogate)	98.3	%	88 - 110 (LCL - UCL	.) EPA-8260	06/05/09	06/09/09 05:28	JCC	MS-V4	10	BSF0441		
Toluene-d8 (Surrogate)	103	%	88 - 110 (LCL - UCL) EPA-8260	06/05/09	06/06/09 02:05	JCC	MS-V4	1	BSF0441		•
4-Bromofluorobenzene (Surrogate)	94.5	%	86 - 115 (LCL - UCL	.) EPA-8260	06/05/09	06/09/09 05:28	JCC	MS-V4	10	BSF0441		
4-Bromofluorobenzene (Surrogate)	94.7	%	86 - 115 (LCL - UCL) EPA-8260	06/05/09	06/06/09 02:05	JCC	MS-V4	1	BSF0441		

21 Technology Drive Irvine, CA 92618

Project: 6129

Project Number: 4510932381 Project Manager: Anju Fartan

Reported: 06/15/2009 15:27

Water Analysis (General Chemistry)

BCL Sample ID: 0906997-02	Client Samp	le Name:	6129, MV	V-3, 5/28/2009	1:37:00P	'M							
_						Prep	Run		Instru-		QC	MB	Lab
Constituent	Result	Units	PQL	MDL M	lethod	Date	Date/Time	Analyst	ment ID	Dilution	Batch ID	Bias	Quals
Total Alkalinity as CaCO3	300	mg/L	4.1	E	PA-310.1	06/03/09	06/03/09 09:17	FM2	MET-1	1	BSF0294	ND	
Nitrate as NO3	ND	mg/L	0.44	E	PA-300.0	05/28/09	05/29/09 02:07	CRR	IC2	i	BSE1782	ND	
Sulfate	39	mg/L	1.0	E	PA-300.0	05/28/09	05/29/09 02:07	CRR	IC2	1	BSE1782	ND	
Electrical Conductivity @ 25 C	667	umhos/c m	1.00	El	PA-120.1	06/01/09	06/01/09 11:58	FM2	MET-1	1	BSF0068		
Iron (III) Species	11000	ug/L	100	C	alc	06/01/09	06/04/09 15:11	TMS	Calc	1	BSF0109	ND	
Iron (II) Species	ND	ug/L	500	SI	M-3500-Feí	05/29/09	05/29/09 00:30	MRM	SPEC05	5	BSE1750	ND	A10
Non-Volatile Organic Carbon	1.5	mg/L	0.30	El	PA-415.1	05/29/09	05/29/09 16:40	CDR	TOC2	1	BSF0052	ND	
Dissolved Oxygen	7.5	mg O/L	0.50	SI	M-4500OG	05/29/09	05/29/09 07:45	HPR	YSI-57	1	BSE1813		S05



21 Technology Drive Irvine, CA 92618 Project: 6129

Project Number: 4510932381
Project Manager: Anju Farfan

Reported: 06/15/2009 15:27

Water Analysis (Metals)

BCL Sample ID: 0906997-02	Client Samp	le Name:	6129, MV	V-3, 5/28/2	009 1:37:00F	PM							
						Prep	Run		Instru-		QC	MB	Lab
Constituent	Result	Units	PQL	MDL	Method	Date	Date/Time	Analyst	ment ID	Dilution	Batch ID	Bias	Quals
Hexavalent Chromium	ND	ug/L	2.0		EPA-7196	05/29/09	05/29/09 07:58	TDC	KONE-i	i	BSF0016	ND	
Chromium	ND	ug/L	10		EPA-6010B	05/29/09	05/29/09 15:32	PPS	PE-OP1	1	BSE1799	ND	
Manganese	49	ug/L	1.0		EPA-200.8	05/29/09	06/08/09 12:49	PRA	PE-EL1	1	BSF0312	ND	
Total Chromium	23	ug/L	10		EPA-6010B	06/01/09	06/02/09 15:15	PPS	PE-OP1	1	BSF0029	ND	
Total Iron	12000	ug/L	50		EPA-6010B	06/03/09	06/04/09 11:04	PPS	PE-OP1	1	BSF0194	ND	
Total Recoverable Manganese	300	ug/L	1.0		EPA-200.8	06/01/09	06/02/09 19:40	PPS	PE-EL1	1	BSF0026	ND	

TRC 21 Technology Drive Irvine, CA 92618

Project: 6129

Project: 0129

Project Number: 4510932381
Project Manager: Anju Farfan

Reported: 06/15/2009 15:27

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 0906997-03	Client Sampl	e Name:	6129, MW-2, 5/2	28/2009 2:12:00	PM							
					Prep	Run		Instru-		QC	MB	Lab
Constituent	Result	Units	PQL MI		Date	Date/Time	Analyst	ment ID	Dilution	Batch ID	Bias	Quals
Benzene	ND	ug/L	0.50	EPA-8260	06/05/09	06/06/09 02:29	1CC	MS-V4	1	BSF0441	ND	
1,2-Dibromoethane	ND	ug/L	0.50	EPA-8260	06/05/09	06/06/09 02:29	JCC	MS-V4	1	BSF0441	ND	
1,2-Dichloroethane	ND	ug/L	0.50	EPA-8260	06/05/09	06/06/09 02:29	JCC	MS-V4	1	BSF0441	ND	***************************************
Ethylbenzene	ND	ug/L	0,50	EPA-8260	06/05/09	06/06/09 02:29	JCC	MS-V4	1	BSF0441	ND	
Methyl t-butyl ether	740	ug/L	5.0	EPA-8260	06/05/09	06/09/09 05:53	JCC	MS-V4	10	BSF0441	ND	A01
Toluene	ND	ug/L	0.50	EPA-8260	06/05/09	06/06/09 02:29	JCC	MS-V4	i	BSF0441	ND	
Total Xvlenes	ND	ug/L	1.0	EPA-8260	06/05/09	06/06/09 02:29	JCC	MS-V4	i	BSF0441	ND	
t-Amvl Methyl ether	ND	ug/L	0.50	EPA-8260	06/05/09	06/06/09 02:29	JCC	MS-V4	1	BSF0441	ND	
t-Butyl alcohol	ND	ug/L	10	EPA-8260	06/05/09	06/06/09 02:29	JCC	MS-V4	1	BSF0441	ND	
Diisopropyl ether	20	ug/L	0.50	EPA-8260	06/05/09	06/06/09 02:29	JCC	MS-V4	1	BSF0441	ND	
Ethanol	ND	ug/L	250	EPA-8260	06/05/09	06/06/09 02:29	JCC	MS-V4	1	BSF0441	ND	
Ethvl t-butyl ether	ND	ug/L	0.50	EPA-8260	06/05/09	06/06/09 02:29	JCC	MS-V4	1	BSF0441	ND	
Total Purgeable Petroleum Hydrocarbons	460	ug/L	50	Luft-GC/MS	06/05/09	06/06/09 02:29	JCC	MS-V4	1	BSF0441	ND	
1,2-Dichloroethane-d4 (Surrogate)	86.9	%	76 - 114 (LCL - UCL	.) EPA-8260	06/05/09	06/09/09 05:53	JCC	MS-V4	10	BSF0441		
1,2-Dichloroethane-d4 (Surrogate)	88.1	%	76 - 114 (LCL - UCL	.) EPA-8260	06/05/09	06/06/09 02:29	JCC	MS-V4	1	BSF0441		
Toluene-d8 (Surrogate)	100	%	88 - 110 (LCL - UCL	.) EPA-8260	06/05/09	06/06/09 02:29	JCC	MS-V4	i	BSF0441		
Toluene-d8 (Surrogate)	99,0	%	88 - 110 (LCL - UCL	.) EPA-8260	06/05/09	06/09/09 05:53	JCC	MS-V4	10	BSF0441		
4-Bromofluorobenzene (Surrogate)	94.7	%	86 - 115 (LCL - UCL	.) EPA-8260	06/05/09	06/09/09 05:53	JCC	MS-V4	10	BSF0441		
4-Bromofluorobenzene (Surrogate)	97.0	%	86 - 115 (LCL - UCL	.) EPA-8260	06/05/09	06/06/09 02:29	JCC	MS-V4	i	BSF0441		



21 Technology Drive Irvine, CA 92618

Project: 6129

Project Number: 4510932381

Project Manager: Anju Farfan

Reported: 06/15/2009 15:27

Water Analysis (General Chemistry)

BCL Sample ID: 0906997-03	Client Samp	le Name:	6129, MV	V-2, 5/28/2	009 2:12: 00P	M							
						Prep	Run		Instru-		QC	MB	Lab
Constituent	Result	Units	PQL	MDL	Method	Date	Date/Time	Analyst	ment ID	Dilution	Batch ID	Bias	Quals
Total Alkalinity as CaCO3	370	mg/L	4.1		EPA-310.1	06/03/09	06/03/09 09:23	FM2	MET-1	1	BSF0294	ND	
Nitrate as NO3	1.6	mg/L	0.44		EPA-300.0	05/28/09	05/29/09 02:21	CRR	IC2	1	BSE1782	ND	
Sulfate	40	mg/L	1.0		EPA-300.0	05/28/09	05/29/09 02:21	CRR	IC2	1	BSE1782	ND	
Electrical Conductivity @ 25 C	813	umhos/c m	1,00		EPA-120.1	06/01/09	06/01/09 12:00	FM2	MET-1	1	BSF0068		
Iron (III) Species	43000	ug/L	100		Calc	06/01/09	06/04/09 15:11	TMS	Calc	1	BSF0109	ND	
Iron (II) Species	ND	ug/L	1000		SM-3500-Fe[05/29/09	05/29/09 00:30	MRM	SPEC05	10	BSE1750	ND	A10
Non-Volatile Organic Carbon	1.6	mg/L	0.30		EPA-415.1	05/29/09	05/29/09 16:58	CDR	TOC2	1	BSF0052	ND	
Dissolved Oxygen	7.1	mg O/L	0.50	***	SM-4500OG	05/29/09	05/29/09 07:45	HPR	YSI-57	1	BSE1813		S05



21 Technology Drive Irvine, CA 92618

Project: 6129

Project Number: 4510932381

Project Manager: Anju Farfan

Reported: 06/15/2009 15:27

Water Analysis (Metals)

BCL Sample ID: 0906997-03	Client Samp	le Name:	6129, MV	<i>I</i> -2, 5/28/20	009 2:12:00F	PM							
Constituent	Result	Units	PQL	MDL	Method	Prep Date	Run Date/Time	Analyst	Instru- ment ID	Dilution	QC Batch ID	MB Bias	Lab Quals
Hexavalent Chromium	ND	ug/L	2.0		EPA-7196	05/29/09	05/29/09 07:58	TDC	KONE-1	1	BSF0016	ND	
Chromium	ND	ug/L	10		EPA-6010B	05/29/09	05/29/09 15:34	PPS	PE-OP1	í	BSE1799	ND	
Manganese	4.3	ug/L	1.0		EPA-200.8	05/29/09	06/08/09 13:08	PRA	PE-EL1	1	BSF0312	ND	
Total Chromium	49	ug/L	10		EPA-6010B	06/01/09	06/02/09 15:16	PPS	PE-OP1	1	BSF0029	ND	
Total Iron	44000	ug/L	50		EPA-6010B	06/03/09	06/04/09 11:06	PPS	PE-OP1	1	BSF0194	ND	
Total Recoverable Manganese	500	ug/L	1.0		EPA-200.8	06/01/09	06/02/09 19:43	PPS	PE-EL1	1	BSF0026	ND	

TRC 21 Technology Drive Irvine, CA 92618

Project: 6129

Project Number: 4510932381

Reported: 06/15/2009 15:27

Project Manager: Anju Fartan

Volatile Organic Analysis (EPA Method 8260)

Quality Control Report - Precision & Accuracy

										Contr	ol Limits
Constituent	Batch ID	QC Sample Type	Source Sample ID	Source Result	Result	Spike Added	11	DDD	Percent	DDD	Percent
							Units	RPD	Recovery	RPD	Recovery Lab Quais
Benzene	BSF0441	Matrix Spike	0906490-68	0	22.920	25.000	ug/L		91.7		70 - 130
		Matrix Spike Duplicate	0906490-68	0	23.980	25.000	ug/L	4.5	95.9	20	70 - 130
oluene BSF	BSF0441	Matrix Spike	0906490-68	0	23.520	25,000	ug/L		94,1		70 - 130
		Matrix Spike Duplicate	0906490-68	0	23.510	25,000	ug/L	0.1	94.0	20	70 - 130
1,2-Dichloroethane-d4 (Surrogate)	BSF0441	Matrix Spike	0906490-68	ND	9.8900	10.000	ug/L		98.9		76 - 114
		Matrix Spike Duplicate	0906490-68	ND	10.390	10.000	ug/L		104		76 - 114
Toluene-d8 (Surrogate)	BSF0441	Matrix Spike	0906490-68	ND	10,060	10.000	ug/L		101		88 - 110
		Matrix Spike Duplicate	0906490-68	ND	9,9600	10.000	ug/L		99.6		88 - 110
4-Bromofluorobenzene (Surrogate)	BSF0441	Matrix Spike	0906490-68	ND	9.9800	10.000	ug/L		99,8		86 - 115
		Matrix Spìke Duplicate	0906490-68	ND	9.9200	10.000	ug/L		99.2		86 - 115

21 Technology Drive Irvine, CA 92618

Project: 6129

Project Number: 4510932381 Project Manager: Anju Fartan

Reported: 06/15/2009 15:27

Water Analysis (General Chemistry)

Quality Control Report - Precision & Accuracy

							•				
									••	Contr	ol Limits
			Source	Source		Spike			Percent		Percent
Constituent	Batch ID	QC Sample Type	Sample ID	Result	Result	Added	Units	RPD	Recovery	RPD	Recovery Lab Quals
Iron (II) Species	BSE1750	Duplicate	0906992-01	41086	41175		ug/L	0.2		10	
Nitrate as NO3	BSE1782	Duplicate	0906927-01	15.773	15.436		mg/L	2.2		10	
		Matrix Spike	0906927-01	15.773	38.455	22,358	mg/L		101		80 - 120
		Matrix Spike Duplicate	0906927-01	15,773	37.927	22.358	mg/L	1.9	99.1	10	80 - 120
Sulfate	BSE1782	Duplicate	0906927-01	206.74	206.55		mg/L	0.1		10	
		Matrix Spike	0906927-01	206.74	309.98	101.01	mg/L		102		80 - 120
		Matrix Spike Duplicate	0906927-01	206.74	309.36	101.01	mg/L	0	102	10	80 - 120
Dissolved Oxygen	BSE1813	Duplicate	0906986-01	2.6000	2.6000		mg O/L	0		10	
Non-Volatile Organic Carbon	BSF0052	Duplicate	0906977-01	0.71100	0.68400		mg/L	3.9		10	
		Matrix Spike	0906977-01	0.71100	5.8724	5.0251	mg/L		103		80 - 120
		Matrix Spike Duplicate	0906977-01	0.71100	5.8211	5.0251	mg/L	1.0	102	10	80 - 120
Electrical Conductivity @ 25 C	BSF0068	Duplicate	0906997-01	797.50	799.00		umhos/cm	0,2	***	10	
Total Alkalinity as CaCO3	BSF0294	Duplicate	0907130-01	111.36	111.67		mg/L	0.3		10	

21 Technology Drive Irvine, CA 92618 Project: 6129

Project Number: 4510932381

Project Manager: Anju Farfan

Reported: 06/15/2009 15:27

Water Analysis (Metals)

Quality Control Report - Precision & Accuracy

										Contr	ol Limits	
			Source	Source		Spike			Percent		Percent	
Constituent	Batch ID	QC Sample Type	Sample ID	Result	Result	Added	Units	RPD	Recovery	RPD	Recover	/ Lab Quals
Chromium	BSE1799	Duplicate	0906923-01	3.8497	ND		ug/L			20		
		Matrix Spike	0906923-01	3.8497	185.26	204.08	ug/L		88.9		75 - 125	
		Matrix Spike Duplicate	0906923-01	3.8497	202.73	204.08	ug/L	9.2	97.5	20	75 - 125	
Hexavalent Chromium	BSF0016	Duplicate	0906997-01	1.1000	ND		ug/L			10		
		Matrix Spike	0906997-01	1.1000	53,853	52.632	ug/L		100		85 - 115	
		Matrix Spike Duplicate	0906997-01	1.1000	53.360	52,632	ug/L	0.7	99.3	10	85 - 115	
Total Recoverable Manganese	BSF0026	Duplicate	0906999-01	27.840	27.778		ug/L	0.2		20		
		Matrix Spike	0906999-01	27.840	127.21	100.00	ug/L,		99.4		70 - 130	
		Matrix Spike Duplicate	0906999-01	27.840	121.89	100.00	ug/L	5.6	94.0	20	70 - 130	
Total Chromium	BSF0029	Duplicate	0906944-01	27,729	18.041		ug/L	42,3		20		A02
		Matrix Spike	0906944-01	27,729	230.87	200.00	ug/L		102		75 - 125	
		Matrix Spike Duplicate	0906944-01	27.729	226,90	200.00	ug/L	2.4	99.6	20	75 - 125	
Total Iron	BSF0194	Duplicate	0906997-01RE1	27468	28485		ug/L	3.6		20		•
		Matrix Spike	0906997-01RE1	27468	32193	1000.0	ug/L		472		75 - 125	A03
		Matrix Spike Duplicate	0906997-01RE1	27468	34199	1000.0	ug/L	35.1	673	20	75 - 125	A03,Q02
Manganese	BSF0312	Duplicate	0907162-01	0.046000	ND		ug/L			20		
		Matrix Spike	0907162-01	0.046000	101.12	102.04	ug/L		99.1		70 - 130	
		Matrix Spike Duplicate	0907162-01	0.046000	105,51	102.04	ug/L	3.9	103	20	70 - 130	



21 Technology Drive Irvine, CA 92618

Project: 6129

Project Number: 4510932381 Project Manager: Anju Farfan

Reported: 06/15/2009 15:27

Volatile Organic Analysis (EPA Method 8260)

Quality Control Report - Laboratory Control Sample

										Control	<u>Limits</u>	
Constituent	Batch ID	QC Sample ID	QC Type	Result	Spike Level	PQL	Units	Percent Recovery	RPD	Percent Recovery	RPD	Lab Quals
Benzene	BSF0441	BSF0441-BS1	LCS	25.180	25.000	0.50	ug/L	101		70 - 130		,
Toluene	BSF0441	BSF0441-BS1	LCS	24.390	25.000	0.50	ug/L	97.6		70 - 130		
1,2-Dichloroethane-d4 (Surrogate)	BSF0441	BSF0441-BS1	LCS	9.8900	10.000		ug/L	98.9		76 - 114		
Toluene-d8 (Surrogate)	BSF0441	BSF0441-BS1	LCS	10.010	10.000		ug/L	100		88 - 110		
4-Bromofluorobenzene (Surrogate)	BSF0441	BSF0441-BS1	LCS	10,120	10.000		ug/L	101		86 - 115		



21 Technology Drive Irvine, CA 92618

Project: 6129

Project Number: 4510932381 Project Manager: Anju Farfan

Reported: 06/15/2009 15:27

Water Analysis (General Chemistry)

Quality Control Report - Laboratory Control Sample

				-		•		•			
									Contro	Limits	···
Constituent	Batch ID	QC Sample ID	QC Type	Result	Spike Level	PQL	Units	Percent Recovery	Percent RPD Recovery	RPD	Lab Quals
Iron (II) Species	BSE1750	BSE1750-BS1	LCS	2045.7	2000,0	100	ug/L	102	90 - 110		
Nitrate as NO3	BSE1782	BSE1782-BS1	LCS	22.400	22.134	0.44	mg/L	101	90 - 110	••	
Sulfate	BSE1782	BSE1782-BS1	LCS	100.24	100.00	1.0	mg/L	100	90 - 110		
Non-Volatile Organic Carbon	BSF0052	BSF0052-BS1	LCS	5,1840	5.0000	0.30	mg/L	104	85 - 115		
Electrical Conductivity @ 25 C	BSF0068	BSF0068-BS1	LCS	296.50	303.00	1.00	umhos/cm	97.9	90 - 110		
Total Alkalinity as CaCO3	BSF0294	BSF0294-BS3	LCS	100.41	100.00	4.1	mg/L	100	90 - 110		

21 Technology Drive Irvine, CA 92618 Project: 6129

Project Number: 4510932381

Project Manager: Anju Farfan

Reported: 06/15/2009 15:27

Water Analysis (Metals)

Quality Control Report - Laboratory Control Sample

										Control	Limits	
Constituent	Batch ID	QC Sample ID	QC Type	Result	Spike Level	PQL	Units	Percent Recovery	RPD	Percent Recovery	RPD	Lab Quais
Chromium	BSE1799	BSE1799-BS1	LCS	198.57	200.00	10	ug/L	99.3		85 - 115		
Hexavalent Chromium	BSF0016	BSF0016-BS1	LCS	51.097	50.000	2.0	ug/L	102		85 - 115		
Total Recoverable Manganese	BSF0026	BSF0026-BS1	LCS	95.105	100.00	1.0	ug/L	95.1		85 - 115		
Total Chromium	BSF0029	BSF0029-BS1	LCS	202.88	200.00	10	ug/L	101	•	85 - 115		·
Total Iron	BSF0194	BSF0194-BS1	LCS	1101,1	1000,0	50	ug/L	110		85 - 115		
Manganese	BSF0312	BSF0312-BS1	LCS	101.31	100.00	1.0	ug/L	101		85 - 115		

21 Technology Drive Irvine, CA 92618

Project: 6129

Project Number: 4510932381 Project Manager: Anju Farfan

Reported: 06/15/2009 15:27

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	BSF0441	BSF0441-BLK1	ND ND	ug/L	0.50	5	EGN GUUIS
1,2-Dibromoethane	BSF0441	BSF0441-BLK1	ND	ug/L	0.50		
1,2-Dichloroethane	BSF0441	BSF0441-BLK1	ND	ug/L	0.50		
Ethylbenzene	BSF0441	BSF0441-BLK1	ND	ug/L	0.50		
Methyl t-butyl ether	BSF0441	B\$F0441-BLK1	ND	ug/L	0.50		
Toluene	BSF0441	BSF0441-BLK1	ND	ug/L	0.50	***************************************	
Total Xvienes	BSF0441	BSF0441-BLK1	ND	ug/L	1.0		
t-Amyl Methyl ether	BSF0441	BSF0441-BLK1	ND	ug/L	0,50		
t-Butyl alcohol	BSF0441	BSF0441-BLK1	ND	ug/L	10		
Diisopropyl ether	BSF0441	B\$F0441-BLK1	ND	ug/L	0.50		
Ethanol	BSF0441	BSF0441-BLK1	ND	ug/L	250		
Ethyl t-butvl ether	BSF0441	BSF0441-BLK1	ND	ug/L	0.50		
Total Purgeable Petroleum Hydrocarbons	BSF0441	B\$F0441-BLK1	ND	ug/L	50		
1,2-Dichloroethane-d4 (Surrogate)	BSF0441	BSF0441-BLK1	97.5	%	76 - 114 (LCL - UCL)	
Toluene-d8 (Surrogate)	BSF0441	BSF0441-BLK1	101	%	88 - 110 (_CL - UCL)	
4-Bromofluorobenzene (Surrogate)	BSF0441	BSF0441-BLK1	92.9	%	86 - 115 (LCL - UCL)	



21 Technology Drive Irvine, CA 92618

Project: 6129

Project Number: 4510932381 Project Manager: Anju Farfan

Reported: 06/15/2009 15:27

Water Analysis (General Chemistry)

Quality Control Report - Method Blank Analysis

		-				
Batch ID	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
B\$E1750	BSE1750-BLK1	ND	ug/L	100		
BSE1782	BSE1782-BLK1	ND	mg/L	0.44		
BSE1782	B\$E1782-BLK1	ND.	mg/L	1.0		
BSF0052	BSF0052-BLK1	ND	mg/L	0.30		
BSF0109	BSF0109-BLK1	ND	ug/L,	100		
BSF0294	BSF0294-BLK1	ND	mg/L	4.1		
	BSE1750 BSE1782 BSE1782 BSF0052 BSF0109	BSE1750 BSE1750-BLK1 BSE1782 BSE1782-BLK1 BSE1782 BSE1782-BLK1 BSF0052 BSF0052-BLK1 BSF0109 BSF0109-BLK1	BSE1750 BSE1750-BLK1 ND BSE1782 BSE1782-BLK1 ND BSE1782 BSE1782-BLK1 ND BSF0052 BSF0052-BLK1 ND BSF0109 BSF0109-BLK1 ND	BSE1750 BSE1750-BLK1 ND ug/L BSE1782 BSE1782-BLK1 ND mg/L BSE1782 BSE1782-BLK1 ND mg/L BSF0052 BSF0052-BLK1 ND mg/L BSF0109 BSF0109-BLK1 ND ug/L	BSE1750 BSE1750-BLK1 ND ug/L 100 BSE1782 BSE1782-BLK1 ND mg/L 0.44 BSE1782 BSE1782-BLK1 ND mg/L 1.0 BSF0052 BSF0052-BLK1 ND mg/L 0.30 BSF0109 BSF0109-BLK1 ND ug/L 100	BSE1750 BSE1750-BLK1 ND ug/L 100 BSE1782 BSE1782-BLK1 ND mg/L 0.44 BSE1782 BSE1782-BLK1 ND mg/L 1.0 BSF0052 BSF0052-BLK1 ND mg/L 0.30 BSF0109 BSF0109-BLK1 ND ug/L 100



21 Technology Drive Irvine, CA 92618 Project: 6129

Project Number: 4510932381 Project Manager: Anju Farfan Reported: 06/15/2009 15:27

Water Analysis (Metals)

Quality Control Report - Method Blank Analysis

	=	= = = = = = = = = = = = = = = = = = = =					
Constituent	Batch ID	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
Chromium	BSE1799	BSE1799-BLK1	ND	ug/l.	10		
Hexavalent Chromium	BSF0016	BSF0016-BLK1	ND	ug/L	2.0		
Total Recoverable Manganese	BSF0026	BSF0026-BLK1	ND	ug/L	1.0		
Total Chromium	BSF0029	BSF0029-BLK1	ND	ug/L	10		
Total Iron	BSF0194	BSF0194-BLK1	ND	ug/L	50		
Manganese	BSF0312	BSF0312-BLK1	ND	ug/L	1.0		

Project: 6129 Reported: 06/15/2009 15:27

Project Number: 4510932381
Project Manager: Anju Farfan

Notes And Definitions

21 Technology Drive

Irvine, CA 92618

TRC

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,
A02	The difference between duplicate readings is less than the PQL.
A03	The sample concentration is more than 4 times the spike level.
A10	PQL's and MDL's were raised due to matrix interference.
A90	TPPH does not exhibit a "gasoline" pattern. TPPH is entirely due to MTBE.
Q02	Matrix spike precision is not within the control limits.
S05	The sample holding time was exceeded.

June 11, 2009

TRC 21 Technology Drive Irvine, CA 92618 Attn: Anju Farfan

Attached are the results from Zalco Laboratories, Inc.

BCL Sample ID	Client Sample ID	Sample Date/Time
0906997-01	MW-1	05/28/09 @ 12:56
0906997-02	MW-3	05/28/09 @ 13:37
090699703	MW-2	05/28/09 @ 14:12



Analytical & Consulting Services

4309 Armour Avenue Bakersfield, California 93308 (661) 395-0539 FAX (661) 395-3069

Thursday, June 04, 2009

Molly Meyers BC Laboratories Inc 4100 Atlas Court Bakersfield, CA 93308

TEL: (661) 327-4911 FAX (661) 327-1918

RE: 0906997

Dear Molly Meyers:

Order No: 0905379

Zalco Laboratories, Inc. received 3 sample(s) on 5/29/2009 for the analyses presented in the following report.

We appreciate your business and look forward to serving you in the future. Please feel free to call our office if you have any questions regarding these test results.

Sincerely,

Authorized Signature

Zalco Laboratories, Inc

(661) 395-0539



Analytical and Consulting Services

4309 Armour Avenue Bakersfield, California 93308

(661) 395-0539 FAX (661) 395-3069

Qual

CLIENT:

BC Laboratories Inc

Lab Order:

0905379

Project:

Analyses

0906997-01

Client Sample ID: Report Comment:

0906997

Report Date:

6/4/2009

Lab ID:

0905379-001A

Collection Date:

5/28/2009 12:56:00 PM

Matrix:

AQUEOUS

OXIDATION REDUCTION POTENTIAL BY ASTM D1498

Oxidation Reduction Potential

D1498

Method

Result

mν

Units

6/1/2009

Date Analyzed

Oualifiers / Abbreviations: ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

* - Value exceeds Maximum Contaminant Level

H - Hold Time Exceeded

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

DLR; Detection Limit for Reporting NSS - Non-Sufficient Sample Amount



Analytical and Consulting Services

4309 Armour Avenue Bakersfield, California 93308

(661) 395-0539 FAX (661) 395-3069

Qual.

CLIENT:

BC Laboratories Inc

Lab Order:

0905379

Project:

0906997

Client Sample ID: 0906997-02

Report Date:

6/4/2009

Lab ID:

0905379-002A

Collection Date:

5/28/2009 1:37:00 PM

Matrix:

AQUEOUS

Report Comment:

Analyses Method Units Result Date Analyzed **OXIDATION REDUCTION POTENTIAL BY ASTM D1498** Oxidation Reduction Potential D1498 mν 6/1/2009

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

^{* -} Value exceeds Maximum Contaminant Level

H - Hold Time Exceeded

DLR: Detection Limit for Reporting



D1498

Analytical and Consulting Services

4309 Armour Avenue Bakersfield, California 93308

(661) 395-0539 FAX (661) 395-3069

CLIENT:

BC Laboratories Inc

Lab Order:

0905379

Project:

0906997

Client Sample ID:

0906997-03

Report Comment:

Oxidation Reduction Potential

Report Date:

6/4/2009

Lab ID:

0905379-003A

6/1/2009

Collection Date:

5/28/2009 2:12:00 PM

Matrix:

AQUEOUS

Analyses	Method	Result	Units	Date Analyzed	Qual
OXIDATION REDUCTION POTEN	TIAL BY ASTM	I D1498			

mν

138

B - Analyte detected in the associated Method Blank

^{* -} Value exceeds Maximum Contaminant Level

SUBCONTRACT ORDER

BC Laboratories

0906997

0905379

SENDING LABORATORY:

BC Laboratories 4100 Atlas Ct Bakersfield, CA 93308

Phone: 661-327-4911 Fax: 661-327-1918

Project Manager: Molly Meyers

QHAMO

RECEIVING LABORATORY:

Zalco Laboratories \$ZLCLB

4309 Armour

Bakersfield, CA 93308

Phone :395-0539 Fax: 395-3069

Analysis	Due	Expires	Laboratory ID	Comments	21,7
Sample ID: 0906997-01	Water	Sampled:05/28/09 12:56			
oiA-D1498w ORP ZLCLB Containers Supplied	06/11/09 17:	00 05/27/10 12:56			
Ot Amb	Fire a riving and transfer				
Sample ID: 0906997-02	Water	Sampled:05/28/09 13:37			
oiA-D1498w ORP ZLCLB	06/11/09 17:	00 05/27/10 13:37			
Containers Supplied					
- OHAMB					
Sample ID: 0906997-03	Water	Sampled: 05/28/09 14:12			
oiA-D1498w ORP ZLCLB	06/11/09 17:	00 05/27/10 14:12			
Containers Supplied					

Released By

Date

Page 1 of 1

BC LABORATORIES INC.			E RECEI		A Re	v. No. 12	06/24/08	Page_	Of	
Submission#:070699		128 6	966	997						
SHIPPING INFO Federal Express □ UPS □ BC Lab Field Service □ Other	Hand Deli	ivery 🗆			Ice Cheşt Box			TAINER ne □ er □ (Spe	cify)	
Refrigerant: Ice.☑ Blue Ice i	□ None	Ot	her 🗆	Commer	ıts:					
Custody Seals Ice Chest □ Intact? Yes □ No □	Contain			Comm		··· <u> </u>				
All samples received? Yes 🗹 No 🗆	All samples	s container:	s intact? Y	es □ No		Descrip	tion(s) mat	ch COC? Y	 ′es ⊄ No [
	missivity: emperature	.98 c	ontainer:	ath	Thermome	ter ID: <u>1</u> 44		入 <i>/さの</i> Date/Tim	e <u>(15-28</u> -	-09
SAMPLE CONTAINERS		-2-	-6-	1 4	SAMPLE	NUMBERS 6	17-1	12)+	(3)=	
OT GENERAL MINERAL/ GENERAL PHYSICA				† 	† 	T T	 	<i>F</i>	1373°	10
PT PE UNPRESERVED							1			
OT INORGANIC CHEMICAL METALS										,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
PT INORGANIC CHEMICAL METALS							D	0	Ø	
PT CYANIDE								- (-		
PT NITROGEN FORMS										
PT TOTAL SULFIDE	<u> </u>									
20z. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON							В	13	B	
PT TOX								1		
PT CHEMICAL OXYGEN DEMAND	<u> </u>									
PtA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK	<u> </u>									
40ml VQA VIAL		():	()		()	+ 3	13	A 13	A31	()
QT EPA 413.1, 413.2, 418.1	<u> </u>									
PT ODOR	-									
RADIOLOGICAL	 									
BACTERIOLOGICAL	-									
40 ml VOA VIAL- 504	_		·		<u> </u>					
QT EPA 508/608/8080	·					•				
QT-EPA 515.1/8150	ļ									
OT EPA 525	 			<u> </u>	<u> </u>					
OT EPA 525 TRAVEL BLANK	-		· · · · · · · · · · · · · · · · · · ·							
100ml EPA 547										
100ml EPA 531.1								·		
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32 OZ. JAR SOIL SLEEVE	1									
PCB VIAL			<u> </u>							
PLASTIC BAG					<u> </u>					
FERROUS IRON	1			· · · · · · · · · · · · · · · · · · ·			Ċ	C	-	
ENCORE	 				 			<u>.</u>		
	<u> I</u>									

Comments:
Sample Numbering Completed By:
A = Actual / C = Corrected Date/Time: 05-28-04 2225 Mu

BC LABORATORIES,	INC.
0906997	
Bill to: Conoco Phillips/ TRO	Ç
Address: 34 20 35 T#	Ave.
city:0aKland	

4100 Atlas Court Bakersfield, CA 93308 (661) 327-4911 FAX (661) 327-1918

CHAIN OF CUSTODY

		(661) 327-4911	FAX (661) 327-1918	3		CHAI	VUF	CU.	3 I C	וטי	0,1	Š
0906	;997	0906995 Aun	5728			Analy	/sis	Red	lue	sted	<u> </u>	
Bill to: Co	noco Phillips/ TRC	Consultant Firm: TR	C	MATRIX	5					0	3 3	9
Address: 3	3420 35TH ANE.	21 Technology Drive Irvine, CA 92618-230 Attn: Anju Farfan		(GW) Ground- water (S) Soil	Gas by 8015	C bx 415.1	nates	8260B,		TPH-G by GC/MS, M) Tracte by 300.	Kd Chrom by Conduction	8 3500 FEF uested
city: oakland		4-digit site#: 6129 (Workorder #54532451093281		(WW) Waste- water	by 8021B,	015M 700 0 0 1847 3 801847	3260 full list w/ oxygenates	BTEX/MTBE/OXYS BY EDB/ EDC by 8260	3260B	GCIMS, MYTHOUS 300.0, AKALIMI	1,455010 1,455010 1,59ec.1Fix	Through they by 5m 18 3500 Turnaround Time Requested
State: CA	Zip:	Project #: /655 2		(SL)		97.8 27.8	sť w	3E/0	δ	, GC	87.8	Yen Ind Ti
Conoco Pl	nillips Mgr: Evryson	Sampler Name: J	D	Sludge	MTE	**************************************	il IIn	Z Z	NOL	G by	15 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	roun c
Lab#	Sample Description	Field Point Name	Date & Time Sampled		BTEX/MTBE		8260 f	BTEX E08/	ETHANOL by 8260B	TPH -	250000 Chrom 2	From Turnaro
	-(-7	MW-1	05-28-09 1256	Gw		XX	,	X	X	XX		57
	-2 - 8	Mw-3	1337	,								
	-3 -4	MW-Z	V 1412	V		YV	,	W	\mathbb{V}	VV		$V \setminus V$
	Pin					1						
	\$/28	\$10 T			AND THE PERSON NAMED OF		1516	7716.01-		<u> </u>		
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STATEMENTS

Purge Water Disposal

Non-hazardous groundwater produced during purging and sampling of monitoring was accumulated at TRC's groundwater monitoring facility at Concord, California, for transportation by a licensed carrier, to the ConocoPhillips Refinery at Rodeo, California Disposal at the Rodeo facility was authorized by ConocoPhillips in accordance with "ESD Standard Operating Procedures – Water Quality and Compliance", as revised on February 7, 2003. Documentation of compliance with ConocoPhillips requirements is provided by an ESD Form R-149, which is on file at TRC's Concord Office Purge water suspected of containing potentially hazardous material, such as liquid-phase hydrocarbons, was accumulated separately in a drum for transportation and disposal by others.

Limitations

The fluid level monitoring and groundwater sampling activities summarized in this report have been performed under the responsible charge of a California Registered Geologist or Registered Civil Engineer and have been conducted in accordance with current practice and the standard of care exercised by geologists and engineers performing similar tasks in this area. No warranty, express or implied, is made regarding the conclusions and professional opinions presented in this report. The conclusions are based solely upon an analysis of the observed conditions. If actual conditions differ from those described in this report, our office should be notified.