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**Alameda County
Environmental Health**

April 27, 2012

Jerry Wickham, CEG
Senior Hazardous Materials Specialist
Alameda County Environmental Health
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577

**Subject: Sunol Tree Gas
3004 Andrade Road, Sunol
Fuel Leak Case No. RO0002448**

Dear Mr. Wickham:

Enclosed is the *Quarterly Groundwater Monitoring Report – First Quarter 2012* for the subject LUFT site. In compliance with state and local regulations, electronic submittals of this report have been uploaded to the Geotracker database and the Alameda County ftp website.

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

Please call Tim Cook at Cook Environmental Services at (925) 478-8390 if you have questions or comments in regards to the technical content of this report.

Very truly yours,

Khan Petroleum, Inc.



Obaid Abdullah
President

cc: Jennifer Rice, Esq
Tim Cook, Cook Environmental Services, Inc.



Quarterly Groundwater Monitoring Report
First Quarter 2012

PROJECT SITE:

**Sunol Tree Gas Station
3004 Andrade Rd.
Sunol, California 94586-9453
Fuel Leak Case No. RO0002448**

PREPARED FOR:

**Khan Petroleum Inc.
3004 Andrade Road
Sunol, California 94586-9453**

SUBMITTED TO:

**Alameda County Department of Environmental Health
Environmental Health Services,
Environmental Protection
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502-6577**

PREPARED BY:

**Cook Environmental Services, Inc.
1485 Treat Blvd, Suite 203A
Walnut Creek, California 94597**

Project No. 1024

April 27, 2012

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PROFESSIONAL CERTIFICATION

Quarterly Groundwater Monitoring Report First Quarter 2012

Sunol Tree Gas Station
3004 Andrade Rd.
Sunol, California 94586-9453
Fuel Leak Case No. RO0002448

By: Cook Environmental Services, Inc.

Project No. 1024

April 27, 2012

Cook Environmental Services, Inc. prepared this document under the professional supervision of the person whose seal and signature appears hereon. No warranty, either expressed or implied, is made as to the professional advice presented herein. The analysis, conclusions and recommendations contained in this document are based upon site conditions at the time of the investigation, which are subject to change.

The conclusions presented in this document are professional opinions based solely upon visual observations of the site and vicinity, and interpretation of available information as described in this report. The limited scope of services performed in execution of this investigation may not be appropriate to satisfy the needs, or requirements of other regulatory agencies, or of other users. Any use or reuse of this document or its findings, conclusions or recommendations presented herein is at the sole risk of said user.



Tim Cook, P.E.
Principle Engineer



INTRODUCTION

This report is part of an ongoing environmental investigation related to the release of hydrocarbons at the Sunol Tree Gas Station (Site) located at 3004 Andrade Road in Sunol, California. The owner, Kahn Petroleum, Inc., authorized Cook Environmental Services, Inc. (CES) to conduct this investigation. Alameda County Environmental Health (ACEH) is the local oversight program (LOP) agency for this investigation.

Background

A detailed Site background related to the hydrocarbon release is provided in **Appendix A**. This description is summarized from *Status of Active Fuel Leak Investigation*, dated May 6, 2009 (Weber Hayes & Associates). The Site location is shown on **Figure 1**. An annotated aerial photo of the Site is shown on **Figure 2**. A detailed site map, including the downgradient T Bear Ranch, is shown on **Figure 3**.

In a letter to the owner dated July 28, 2009, ACEH reduced the groundwater monitoring requirements to quarterly sampling of the wellhead carbon treatment system at the T Bear Water Supply Well.

CES conducted sampling at the Site on April 19, 2010 and submitted the results in the Quarterly Groundwater Monitoring Report, Second Quarter 2010, dated May 19, 2010. In that report CES proposed reducing the groundwater monitoring schedule to semi-annual sampling of wells CMT-1, CMT-3, CMT-6, CMT-10 and PZ-2 and annual sampling of wells CMT-2, CMT-4, CMT-5 and CMT-12. In a letter to the owner dated July 15, 2010, ACEH concurred with this reduced sampling schedule for the October 2010 monitoring event only and requested the submittal of a Draft Corrective Action Plan (CAP) meeting the requirements of section 2725 of the UST regulations. The Draft CAP was submitted to ACEH on December 15, 2010. The ACEH responded with comments to the Draft CAP in a letter to the owner dated January 26, 2011.

In response, CES prepared an Interim Remedial Action Plan (IRAP) dated March 15, 2011 proposing a pilot test to evaluate the effectiveness of ozone sparging. Ozone will be injected into the intermediate water-bearing zone using two new sparge wells. Two multi-chamber groundwater monitoring wells are to be installed downgradient of the sparge wells to monitor the progress of the pilot test. On March 30, 2011 ACEH conditionally approved the IRAP provided that monitoring of the two new wells includes potential toxic oxidized chemical species (e.g., hexavalent chromium and bromate) due to ozone sparging. Three cone penetrometer borings (CPT-1 through CPT-3) were advanced in the vicinity of the proposed ozone sparge wells on July 25, 2011. Water samples were collected from the shallow, intermediate and deep water bearing zones. MtBE was not detected in any of these water samples. After conferring with

ACEH, CES proposed to install the two ozone sparge wells approximately fifteen feet upgradient of the monitoring well transect on the T Bear Ranch. An Addendum to the Interim Remedial Action Plan, dated October 14, 2011 was submitted to ACEH. ACEH approved the addendum in a letter dated November 7, 2011 and requested submittal of the Pilot Test Report by March 10, 2012. CES obtained well permits and contacted the owners of the T Bear Ranch to obtain site access for the sparge well installations. The owners did not grant site access due to previous problems installing wells on their site during the wet winter months. They requested that the work be delayed until after the rainy season. Tim Cook of CES notified Jerry Wickham of ACEH of this situation in an email dated January 19, 2012. Mr. Wickham responded that an indefinite delay with installing the sparge wells was not an acceptable outcome. We are scheduled to meet with representatives of T-Bear Ranch on May 4, 2012 to discuss site access issues related to the ozone pilot test.

SCOPE OF WORK

The scope of work performed this quarter included the following:

- Measured the static water levels in wells PZ-1a, PZ-1b, PZ-2-a, PZ-2b, PZ-3a and PZ-3b;
- Collected water samples from sampling points CMT-1-C1, CMT-1-C2, CMT-1-C3, CMT-3-C1, CMT-3-C2, CMT-3-C3, CMT-6-C1, CMT-6-C2, CMT-6-C3, CMT-7-C1, CMT-7-C2, CMT-7-C3, CMT-10-C1, CMT-10-C2, CMT-10-C3, PZ-2a, and PZ-2b;
- Groundwater samples were analyzed for total petroleum hydrocarbons as gasoline (TPHg) and benzene, toluene, ethylbenzene, and xylenes (collectively referred to as BTEX), methyl-tertiary butyl ether (MTBE), tert-amyl methyl ether (TAME), t-butyl alcohol (TBA), 1,2-dibromoethane (EDB), 1,2-dichloroethane (1,2-DCA), di-isopropyl ether (DIPE), ethanol, ethyl tert-butyl ether (ETBE), and methanol by EPA Method 8260B/5030B
- Completed data tables, plots of MtBE results maps by zone and MtBE results in cross-section;
- Prepared this groundwater monitoring report; and
- Updated the California State Water Resources Control Board (SWRCB) GeoTracker database and the Alameda County ftp website.

FIELD PROCEDURES

The following discussion describes field methods used to prepare for sampling and sampling techniques used to collect groundwater samples.

Each CMT well is a multiple completion well, consisting of three 0.375-inch diameter wells, denoted generally as CMT-X-C1 (shallow), CMT-X-C2 (medium) and CMT-X-C3 (deep). The purpose of the CMT well clusters is to sample the aquifer at three discrete depths. Each PZ well

is a multiple completion well, consisting of two 0.75-inch diameter wells, denoted generally as PZ-X-a (shallow) and PZ-X-b (deep). The purpose of the PZ well cluster is to sample the aquifer at two discrete depths.

The depth to water was measured and the total volume of each PZ well was calculated to determine the appropriate purge volume for these wells. Due to the small diameter of the CMT wells, it is not possible to measure water levels in these wells. Well sampling field procedures are described in **Appendix B**. Field data sheets are included in **Appendix C**.

CES collected 17 water samples from the sampling points described above on April 4, 2012. A peristaltic pump with clean silicone tubing for each well was used for purging and sample collection from each sampling point.

Depth to water and top of casing elevations from the three PZ wells were used to triangulate the shallow and deep groundwater flow direction and gradient. The shallow groundwater flow direction and gradient was N22⁰E at 0.015. The intermediate/deep groundwater flow direction and gradient was N87⁰W at 0.0011. The shallow groundwater gradient is depicted on **Figure 4A** and the deeper groundwater gradient is depicted on **Figure 4B**. Groundwater elevation data is summarized in **Table 1**. Depths to water measurements were recorded on field logs included in **Appendix C**.

GROUNDWATER SAMPLE RESULTS

Groundwater samples were analyzed for total petroleum hydrocarbons as gasoline (TPHg) and benzene, toluene, ethylbenzene, and xylenes (collectively referred to as BTEX), methyl-tertiary butyl ether (MtBE), tert-amyl methyl ether (TAME), t-butyl alcohol (tBA), 1,2-dibromoethane (EDB), 1,2-dichloroethane (1,2-DCA), di-isopropyl ether (DIPE), ethanol, ethyl tert-butyl ether (ETBE) and methanol by EPA Method 8260B/5030B. Results are summarized in **Table 2**. Results were compared with environmental screening levels (ESLs) established by the San Francisco Bay RWQCB. Laboratory analytical reports are included in **Appendix D**.

Twelve groundwater samples were collected from the multi-chamber (CMT) wells located along Transect A-A'. This transect is located approximately 150 feet downgradient (east) of the former USTs. Groundwater samples were also collected from CMT-10, located on the golf driving range property immediately south of the Sunol Tree Gas, and from piezometers PZ-2a and PZ-2b, which are located in close proximity to the T Bear Ranch water supply well.

MtBE and toluene were the only hydrocarbon constituents detected in groundwater samples this quarter.

Shallow Water Bearing Zone Groundwater Results

MtBE was detected in the shallow water-bearing zone at sampling points CMT-6-C1, CMT-7-C1 and PZ-2A at 64, 11, and 3.9 µg/L, respectively. MtBE concentrations in the shallow water-bearing zone are shown on **Figure 4A**. tBA was not detected in any shallow sampling point.

Sampling point PZ-2a is located approximately 43 feet upgradient (west) of the T Bear Ranch water supply well and is considered to be a sentinel well for this water supply well. The MtBE concentration in this well (3.9 µg/L) is below the ESL this quarter. In order to fully investigate the risk to the T Bear Ranch water supply well, refer to the wellhead sampling results for this well below.

Intermediate Water Bearing Zone Groundwater Results

MtBE was detected in the intermediate water-bearing zone in CMT-1-C2, CMT-3-C2, CMT-6-C2 and CMT-7-C2 at 0.54, 8.3, 18 and 130 µg/L, respectively. MtBE was most widespread in the intermediate water-bearing zone and likely represents the preferred pathway for MtBE contamination. CMT-7-C2 yielded the highest MtBE concentration this quarter. MtBE concentrations in the intermediate water-bearing zone are shown on **Figure 4B**. tBA was detected in CMT-1-C2 and CMT-3-C2 at 4.4 and 2.5 µg/L, respectively.

Deep Water Bearing Zone Groundwater Results

MtBE was detected in the deep water-bearing zone in CMT-3-C3, CMT-6-C3, CMT-7-C3 at 1.1, 21 and 10 µg/L, respectively. MtBE concentrations in the deep water-bearing zone are shown on **Figure 4c**. tBA was detected in the deep water-bearing zone in CMT-7-C3 at 2.5 µg/L.

Sampling point PZ-2b is located approximately 30 feet upgradient (west) of the T Bear Ranch water supply well and is considered to be a sentinel well for this water supply well. MtBE was not detected in this well this quarter. In order to fully investigate the risk to the T Bear Ranch water supply well, refer to the wellhead sampling results for this well below.

Treatment System Groundwater Results

MtBE was not detected above the laboratory detection (5 µg/L) in the influent to the treatment system on the T-Bear Ranch water supply well on January 12, 2012, (Weber, Hayes & Associates, February 2011). MtBE was detected in the influent at 1.7 µg/L during the previous sampling event on September 15, 2011.

The location of Transect A-A' which contains a line of sampling points downgradient of the source area is shown on **Figure 5**. The vertical cross-section of MtBE concentrations across Transect A-A' this quarter is shown on **Figure 6**.

CONCLUSIONS

There is a fairly well defined plume of dissolved MtBE migrating from the Site that remains at relatively low concentrations. MtBE concentrations have decreased in all sampling point except one when compared to the last time these wells were sampled on December 19, 2011. MtBE and tBA were the only constituents detected in groundwater samples this quarter and MtBE was the only constituent that exceeded its ESL. The highest MtBE concentration this quarter was 130 µg/L in CMT-7-C2. Historically, this sampling point has yielded the highest MtBE concentration.

MtBE was detected in 10 of the 17 sampling points. MtBE concentrations decreased in 7 of these sampling points when compared to the previous sampling event. MtBE concentrations increased in CMT-3-C3 (from <0.5 to 1.1 µg/L); CMT-6-C3 (from 16 to 21 µg/L); and CMT-7-C3 (from <0.5 to 10 µg/L).

tBA was detected in 4 of the 17 sampling points (CMT-1-C1, CMT-1-C2, CMT-3-C2 and CMT-7-C3). tBA concentrations increased in all 4 sampling points when compared to the previous sampling event. MtBE concentration also decreased in CMT-1-C2 and CMT-3-C2, which may be the result of natural attenuation. However, both MtBE and tBA concentrations increased in CMT-7-C3.

The decrease in MtBE concentrations this quarter may be caused by natural attenuation or dilution from recent groundwater recharge due to precipitation and infiltration during the wet winter months.

The MtBE plume is not delineated on the north by since MtBE was detected in CMT-7 and CMT-8 and CMT-9 were not sampled. The plume is delineated to the south since CMT-1, most southerly well, yielded only 0.54 µg/L in CMT-1-C2 and was below detection limits in the shallow and deep sampling points at this location. The plume is delineated on the west by wells CMT-11 and CMT-12. Although they were not sampled this quarter, MtBE was below detection limits for five consecutive sampling events prior to eliminating these points from the sampling plan. The plume is delineated to the east since by the most easterly well, PZ-2b (deep water-bearing zone).

The water quality risk posed to the T-Bear Ranch water supply well is very low as MtBE was below detection limits in the influent to the treatment system on the most recent sampling event (January 12, 2012). In addition, MtBE was below detection limits in PZ-2B and was 3.9 µg/L in PZ-2A. PZ-2B is approximately 30 feet upgradient and PZ-2A is approximately 43 feet upgradient of the T Bear water supply well. The ESL for MtBE is 5.0 µg/L.

RECOMMENDATIONS

In general, MtBE concentrations decreased when compared to previous sampling results. We are currently planning to implement a pilot test to evaluate the effectiveness of an ozone sparge system. Two ozone sparge wells will be constructed in the intermediate zone, upgradient of the monitoring well transect, and a pilot test will be run for a period of three months. This scope of work is included in the IRAP, dated March 15, 2011, as amended in the October 14, 2011 Addendum to IRAP (CES). The pilot test will be implemented as soon as site access can be negotiated with the owners of the T Bear Ranch.

We recommend cessation of groundwater monitoring at the T-Bear Ranch wellhead treatment system based on the very low human health risk posed by dissolved MtBE in the proximity of the water supply well.

TABLES

**Table 1 Groundwater Elevations
Sunol Tree Gas Station
3004 Andrade Road, Sunol, California**

Well ID	PZ-1a		PZ-1b		PZ-2a		PZ-2b		PZ-3a		PZ-3b	
TOC Elev	274.50		274.62		267.94		267.94		271.40		271.16	
Date	DTW	Elev	DTW	Elev	DTW	Elev	DTW	Elev	DTW	Elev	DTW	Elev
07/25/04	10.22	264.28	14.84	259.78	6.10	261.84	8.25	259.69	6.57	264.83	11.02	260.14
08/02/04	10.41	264.09	14.56	260.06	6.05	261.89	7.82	260.12	7.69	263.71	10.99	260.17
08/05/04	10.65	263.85	14.68	259.94	6.21	261.73	7.95	259.99	8.00	263.40	11.18	259.98
08/13/04	10.95	263.55	14.79	259.83	6.53	261.41	7.95	259.99	8.64	262.76	11.31	259.85
09/08/04	11.93	262.57	15.69	258.93	7.58	260.36	8.95	258.99	9.64	261.76	12.25	258.91
12/03/04	10.41	264.09	14.31	260.31	6.65	261.29	7.79	260.15	9.04	262.36	11.09	260.07
01/18/05	4.96	269.54	10.37	264.25	2.91	265.03	3.52	264.42	5.94	265.46	6.87	264.29
03/21/05	3.69	270.81	9.26	265.36	1.88	266.06	2.38	265.56	3.11	268.29	5.74	265.42
07/12/05	6.28	268.22	11.71	262.91	0.94	267.00	5.53	262.41	4.27	267.13	8.14	263.02
08/15/06	6.59	267.91	12.47	262.15	0.49	267.45	5.52	262.42	4.75	266.65	8.81	262.35
10/27/06	8.72	265.78	13.68	260.94	5.07	262.87	6.96	260.98	6.66	264.74	10.32	260.84
04/23/10	4.86	269.64	9.50	265.12	0.98	266.96	2.94	265.00	6.38	265.02	6.38	264.78
03/29/11	2.54	271.96	7.76	266.86	1.16	266.78	0.97	266.97	3.08	268.32	4.31	266.85
06/06/11	6.13	268.37	10.62	264.00	5.74	262.20	3.39	264.55	4.22	267.18	NM	NM
09/28/11	NM	NM	NM	NM	6.18	261.76	NM*	NM*	NM	NM	NM	NM
12/19/11	9.03	265.47	12.80	261.82	4.65	263.29	5.94	262.00	6.69	264.71	9.25	261.91
04/03/12	5.40	269.10	10.82	263.80	3.05	264.89	3.75	264.19	5.58	265.82	7.20	263.96
Δ		3.63		1.98		1.60		2.19		1.11		2.05
Maximum	11.93	271.96	15.69	266.86	7.58	267.45	8.95	266.97	9.64	268.32	12.25	266.85
Minimum	2.54	262.57	7.76	258.93	0.49	260.36	0.97	258.99	3.08	261.76	4.31	258.91

Notes: All measurements are in feet.

DTW = Depth to water below TOC Elevations are based on NAVD 88 datum

NM = Not measured this quarter

Δ = The change in water level for the current quarter

TOC = Top of casing

Elev = Elevation above mean sea level

* Sounder probe hit obstruction in well and wouldn't reach water level

Table 2. Groundwater Results - Multi-Level Wells
Sunol Tree Gas Station
3004 Andrade Road, Sunol, CA

Well- ID	Date	Depth (feet, bgs)	TPH-g	benzene	toluene	ethyl- benzene	xylenes	MtBE	TBA	ETBE	DIPE	TAME	Ethanol	Comments
CMT-1-1	12/29/04	21	< 25	< 0.5	< 0.5	< 0.5	< 0.5	15 /14	< 10	< 5.0	< 5.0	< 5.0	< 100	Shallow
	07/13/05		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
	08/15/06		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
	10/26/06		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
	04/19/10		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5	<50	
	10/16/10		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5	<50	
	03/30/11		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5	<50	
	06/06/11		<50	<0.5	<0.5	<0.5	<0.5	<0.5	8.7	<0.5	<0.5	<0.5	<50	
	09/28/11		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<50	
	12/19/11		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<50	
04/03/12	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	29	<0.5	<0.5	<0.5	<50		
CMT-1-2	12/29/04	41	< 25	< 0.5	< 0.5	< 0.5	< 0.5	1.2	< 10	< 5.0	< 5.0	< 5.0	< 100	Intermediate
	07/13/05		ND	ND	ND	ND	ND	ND	2.7	ND	ND	ND	ND	
	08/15/06		ND	ND	ND	ND	ND	ND	6.5	ND	ND	ND	ND	
	10/26/06		ND	ND	ND	ND	ND	ND	7.9	ND	ND	ND	ND	
	04/19/10		<50	<0.5	<0.5	<0.5	<0.5	<0.5	12	<2.0	<0.5	<0.5	<50	
	10/16/10		<50	<0.5	<0.5	<0.5	<0.5	<0.5	14	<2.0	<0.5	<0.5	<50	
	03/30/11		<50	<0.5	<0.5	<0.5	<0.5	<0.5	12	<2.0	<0.5	<0.5	<50	
	06/06/11		<50	<0.5	<0.5	<0.5	<0.5	<0.5	17	6.9	<0.5	<0.5	<50	
	09/28/11		<50	<0.5	<0.5	<0.5	<0.5	<0.5	14	<2.0	<0.5	<0.5	<50	
	12/19/11		<50	<0.5	<0.5	<0.5	<0.5	<0.5	11	<0.5	<0.5	<0.5	<50	
04/03/12	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.54	4.4	<0.5	<0.5	<50			
CMT-1-3	12/29/04	51	< 25	< 0.5	< 0.5	< 0.5	< 0.5	< 1.0	< 10	< 5.0	< 5.0	< 5.0	< 100	Deep
	07/13/05		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
	08/15/06		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
	10/26/06		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
	04/19/10		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<50	
	10/16/10		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<50	
	03/30/11		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<50	
	06/06/11		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	2.8	<0.5	<0.5	<50	
	09/28/11		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<50	
	12/19/11		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<50	
04/03/12	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<50			
Environmental Screening Levels (ESLs)			100	1.0	40	30	20	5.0	12	NE	NE	NE	NE	

Table 2. Groundwater Results - Multi-Level Wells
Sunol Tree Gas Station
3004 Andrade Road, Sunol, CA

Well- ID	Date	Depth (feet, bgs)	TPH-g	benzene	toluene	ethyl- benzene	xylenes	MtBE	TBA	ETBE	DIPE	TAME	Ethanol	Comments	
CMT-2-1	12/29/04	22	< 25	< 0.5	0.58 /<0.5	< 0.5	< 0.5	13/14	< 10	< 5.0	< 5.0	< 5.0	< 100	Shallow	
	07/13/05		ND	ND	ND	ND	ND	13	ND	ND	ND	ND	ND		
	08/15/06		ND	ND	ND	ND	ND	2.3	ND	ND	ND	ND	ND		
	10/26/06		ND	ND	ND	ND	ND	2.7	ND	ND	ND	ND	ND		
	04/19/10		<50	<0.5	<0.5	<0.5	<0.5	0.61	<2.0	<0.5	<0.5	<0.5	<50		
	10/16/10		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM		NM
	03/30/11		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM		NM
	06/06/11		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM		NM
	09/28/11		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM		NM
	12/19/11		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM		NM
CMT-2-2	12/29/04	42	< 25	< 0.5	< 0.5	< 0.5	< 0.5	< 1.0	< 10	< 5.0	< 5.0	< 5.0	< 100	Intermediate	
	07/13/05		ND	ND	ND	ND	ND	4.6	ND	ND	ND	ND	ND		
	08/15/06		ND	ND	ND	ND	ND	14	ND	ND	ND	ND	ND		
	10/26/06		56	ND	0.70	ND	1.1	14	ND	ND	ND	ND	ND		
	04/19/10		<50	<0.5	<0.5	<0.5	<0.5	19	<2.0	<0.5	<0.5	<0.5	<50		
	10/16/10		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM		NM
	03/30/11		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM		NM
	06/06/11		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM		NM
	09/28/11		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM		NM
	12/19/11		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM		NM
CMT-2-3	12/29/04	52	< 25	< 0.5	< 0.5	< 0.5	< 0.5	< 1.0	< 10	< 5.0	< 5.0	< 5.0	< 100	Deep	
	07/13/05		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		
	08/15/06		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		
	10/26/06		39	ND	0.52	ND	0.96	ND	ND	ND	ND	ND	ND		
	04/19/10		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5	<50		
	10/16/10		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM		NM
	03/30/11		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM		NM
	06/06/11		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM		NM
	09/28/11		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM		NM
	12/19/11		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM		NM
Environmental Screening Levels (ESLs)			100	1.0	40	30	20	5.0	12	NE	NE	NE	NE		

Table 2. Groundwater Results - Multi-Level Wells
Sunol Tree Gas Station
3004 Andrade Road, Sunol, CA

Well- ID	Date	Depth (feet, bgs)	TPH-g	benzene	toluene	ethyl- benzene	xylenes	MtBE	TBA	ETBE	DIPE	TAME	Ethanol	Comments	
CMT-3-1	01/18/05	22	< 25	< 0.5	< 0.5	< 0.5	< 0.5	15	< 10	< 5.0	< 5.0	< 5.0	< 100	Shallow	
	07/13/05		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		
	08/16/06		ND	ND	ND	ND	ND	ND	1.2	ND	ND	ND	ND		ND
	10/27/06		37	ND	1.2	0.53	2.9	1.5	ND	ND	ND	ND	ND		ND
	04/19/10		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5	<0.5		<50
	10/16/10		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	3.1	<0.5	<0.5	<0.5		<50
	03/30/11		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.52	ND	<0.5	<0.5	<0.5		<50
	06/06/11		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	2.7	<0.5	<0.5	<0.5		<50
	09/28/11		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5		<50
	12/19/11		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5		<50
	04/03/12		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5		<50
CMT-3-2	01/18/05	42	190	< 2.5	< 2.5	< 2.5	< 2.5	190	< 50	< 25	< 25	< 25	< 500	Intermediate	
	07/13/05		55	ND	ND	ND	ND	69	ND	ND	ND	ND	ND		
	08/16/06		36	ND	ND	ND	ND	27	ND	ND	ND	ND	ND		
	10/27/06		39	ND	0.90	ND	2.4	28	ND	ND	ND	ND	ND		
	04/19/10		<50	<0.5	<0.5	<0.5	<0.5	<0.5	19	<2.0	<0.5	<0.5	<0.5		<50
	10/16/10		<50	<0.5	<0.5	<0.5	<0.5	<0.5	23	2.8	<0.5	<0.5	<0.5		<50
	03/30/11		<50	<0.5	<0.5	<0.5	<0.5	<0.5	18	ND	<0.5	<0.5	<0.5		<50
	06/06/11		<50	<0.5	<0.5	<0.5	<0.5	<0.5	15	3.8	<0.5	<0.5	<0.5		<50
	09/28/11		<50	<0.5	<0.5	<0.5	<0.5	<0.5	16	<2.0	<0.5	<0.5	<0.5		<50
	12/19/11		<50	<0.5	<0.5	<0.5	<0.5	<0.5	15	<2.0	<0.5	<0.5	<0.5		<50
	04/03/12		<50	<0.5	<0.5	<0.5	<0.5	<0.5	8.3	2.5	<0.5	<0.5	<0.5		<50
CMT-3-3	01/18/05	52	< 25	< 0.5	< 0.5	< 0.5	< 0.5	4.9	< 10	< 5.0	< 5.0	< 5.0	< 100	Deep	
	07/13/05		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		
	08/16/06		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		
	10/27/06		ND	ND	ND	ND	1.8	ND	ND	ND	ND	ND	ND		
	04/19/10		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5	<50		
	10/16/10		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5	<50		
	03/30/11		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5	<50		
	06/06/11		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.73	<2.0	<0.5	<0.5	<0.5		<50
	09/28/11		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5		<50
	12/19/11		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5		<50
	04/03/12		<50	<0.5	<0.5	<0.5	<0.5	<0.5	1.1	<2.0	<0.5	<0.5	<0.5		<50
Environmental Screening Levels (ESLs)			100	1.0	40	30	20	5.0	12	NE	NE	NE	NE		

Table 2. Groundwater Results - Multi-Level Wells
Sunol Tree Gas Station
3004 Andrade Road, Sunol, CA

Well- ID	Date	Depth (feet, bgs)	TPH-g	benzene	toluene	ethyl- benzene	xylenes	MtBE	TBA	ETBE	DIPE	TAME	Ethanol	Comments	
CMT-4-1	01/11/05	13.5	< 25	< 0.5	< 0.5	< 0.5	< 0.5	15	< 10	< 5.0	< 5.0	< 5.0	< 100	Shallow	
	07/12/05		ND	ND	ND	ND	ND	5.3	ND	ND	ND	ND	ND		
	08/16/06		ND	ND	ND	ND	ND	2.0	ND	ND	ND	ND	ND		
	10/27/06		ND	ND	ND	ND	0.76	2.1	ND	ND	ND	ND	ND		
	04/19/10		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.54	<2.0	<0.5	<0.5	<0.5		<50
	10/16/10		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM		NM
	03/30/11		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM		NM
	06/06/11		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM		NM
	09/28/11		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM		NM
	12/19/11		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM		NM
CMT-4-2	01/11/05	42	< 25	< 0.5	< 0.5	< 0.5	< 0.5	29	< 10	< 5.0	< 5.0	< 5.0	< 100	Intermediate	
	07/12/05		ND	ND	ND	ND	ND	66	ND	ND	ND	ND	ND		
	08/16/06		ND	ND	ND	ND	ND	110	ND	ND	ND	ND	ND		
	10/27/06		ND	< 1.0	< 1.0	< 1.0	< 1.0	140	< 20	< 10	< 10	< 10	< 200		
	04/19/10		<50	<5.0	<5.0	<5.0	<5.0	180	<20	<5.0	<5.0	<5.0	<500		
	10/16/10		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM		NM
	03/30/11		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM		NM
	06/06/11		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM		NM
	09/28/11		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM		NM
	12/19/11		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM		NM
CMT-4-3	01/11/05	52	29	< 0.5	< 0.5	< 0.5	< 0.5	27	< 10	< 5.0	< 5.0	< 5.0	< 100	Deep	
	07/12/05		ND	ND	ND	ND	ND	11	ND	ND	ND	ND	ND		
	08/16/06		ND	ND	ND	ND	ND	11	ND	ND	ND	ND	ND		
	10/27/06		ND	ND	ND	ND	0.53	16	ND	ND	ND	ND	ND		
	04/19/10		<50	<1.0	<1.0	<1.0	<1.0	40	<4.0	<1.0	<1.0	<1.0	<100		
	10/16/10		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM		NM
	03/30/11		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM		NM
	06/06/11		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM		NM
	09/28/11		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM		NM
	12/19/11		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM		NM
Environmental Screening Levels (ESLs)			100	1.0	40	30	20	5.0	12	NE	NE	NE	NE		

Table 2. Groundwater Results - Multi-Level Wells
Sunol Tree Gas Station
3004 Andrade Road, Sunol, CA

Well- ID	Date	Depth (feet, bgs)	TPH-g	benzene	toluene	ethyl-benzene	xylenes	MtBE	TBA	ETBE	DIPE	TAME	Ethanol	Comments	
CMT-5-1	12/29/04	21	< 25	< 0.5	0.7	< 0.5	< 0.5	19	< 10	< 5.0	< 5.0	< 5.0	< 100	Shallow	
	07/12/05		ND	ND	ND	ND	ND	12	ND	ND	ND	ND	ND		
	08/16/06		ND	ND	ND	ND	ND	4.7	ND	ND	ND	ND	ND		
	10/27/06		46	ND	ND	ND	0.87	3.6	ND	ND	ND	ND	ND		
	04/19/10		<50	<0.5	<0.5	<0.5	<0.5	<0.5	11	<2.0	<0.5	<0.5	<0.5		<50
	10/16/10		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM		NM
	03/30/11		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM		NM
	06/06/11		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM		NM
	09/28/11		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM		NM
	12/19/11		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM		NM
CMT-5-2	12/29/04	42	< 25	< 0.5	0.54	< 0.5	< 0.5	3.5	< 10	< 5.0	< 5.0	< 5.0	< 100	Intermediate	
	07/12/05		31	ND	ND	ND	ND	37	ND	ND	ND	ND	ND		
	08/16/06		88	ND	ND	ND	ND	89	ND	ND	ND	ND	ND		
	10/27/06		130	< 1.0	< 1.0	< 1.0	< 1.0	92	< 20	< 10	< 10	< 10	< 200		
	04/19/10		<50	<5.0	<5.0	<5.0	<5.0	<5.0	140	<20	<5.0	<5.0	<5.0		<500
	10/16/10		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM		NM
	03/30/11		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM		NM
	06/06/11		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM		NM
	09/28/11		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM		NM
	12/19/11		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM		NM
CMT-5-3	12/29/04	52	< 25	< 0.5	0.52	< 0.5	< 0.5	< 1.0	< 10	< 5.0	< 5.0	< 5.0	< 100	Deep	
	07/12/05		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		
	08/16/06		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		
	10/27/06		ND	ND	ND	ND	0.67	ND	ND	ND	ND	ND	ND		
	04/19/10		<50	<0.5	<0.5	<0.5	<0.5	0.57	<2.0	<0.5	<0.5	<0.5	<50		
	10/16/10		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM		NM
	03/30/11		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM		NM
	06/06/11		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM		NM
	09/28/11		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM		NM
	12/19/11		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM		NM
Environmental Screening Levels (ESLs)			100	1.0	40	30	20	5.0	12	NE	NE	NE	NE		

Table 2. Groundwater Results - Multi-Level Wells
Sunol Tree Gas Station
3004 Andrade Road, Sunol, CA

Well- ID	Date	Depth (feet, bgs)	TPH-g	benzene	toluene	ethyl-benzene	xylenes	MtBE	TBA	ETBE	DIPE	TAME	Ethanol	Comments
CMT-6-1	01/11/05	22	40	< 0.5	< 0.5	< 0.5	< 0.5	41	< 10	< 5.0	< 5.0	< 5.0	< 100	Shallow
	07/12/05		64	ND	ND	ND	ND	79	ND	ND	ND	ND	ND	
	08/16/06		71	ND	ND	ND	ND	71	ND	ND	ND	ND	ND	
	10/27/06		110	< 1.0	< 1.0	< 1.0	1.3	84	< 20	< 10	< 10	< 10	< 200	
	04/19/10		<50	<2.5	<2.5	<2.5	<2.5	88	<10	<2.5	<2.5	<2.5	<250	
	10/16/10		<50	<0.5	<0.5	<0.5	<0.5	95	16	<1.7	<1.7	<1.7	<170	
	03/30/11		<50	<0.5	<0.5	<0.5	<0.5	79	<6.7	<1.7	<1.7	<1.7	<170	
	06/06/11		<50	<1.2	<1.2	<1.2	<1.2	79	<5.0	<1.2	<1.2	<1.2	<120	
	09/28/11		<50	<1.7	<1.7	<1.7	<1.7	71	<6.7	<1.7	<1.7	<1.7	<170	
	12/19/11		<50	<1.7	<1.7	<1.7	<1.7	85	<6.7	<1.7	<1.7	<1.7	<170	
	04/03/12		<50	<1.2	<1.2	<1.2	<1.2	64	<5.0	<1.2	<1.2	<1.2	<120	
CMT-6-2	01/11/05	43	< 25	< 0.5	< 0.5	< 0.5	< 0.5	8.7	< 10	< 5.0	< 5.0	< 5.0	< 100	Intermediate
	07/12/05		ND	ND	ND	ND	ND	15	ND	ND	ND	ND	ND	
	08/16/06		ND	ND	ND	ND	ND	12	ND	ND	ND	ND	ND	
	10/27/06		40	ND	ND	ND	0.76	19	ND	ND	ND	ND	ND	
	04/19/10		<50	<0.5	<0.5	<0.5	<0.5	18	<2.0	<0.5	<0.5	<0.5	<50	
	10/16/10		<50	<0.5	<0.5	<0.5	<0.5	28	2.3	<0.5	<0.5	<0.5	<50	
	03/30/11		<50	<0.5	<0.5	<0.5	<0.5	24	<2.0	<0.5	<0.5	<0.5	<50	
	06/06/11		<50	<0.5	<0.5	<0.5	<0.5	18	<2.0	<0.5	<0.5	<0.5	<50	
	09/28/11		<50	<0.5	<0.5	<0.5	<0.5	21	<2.0	<0.5	<0.5	<0.5	<50	
	12/19/11		<50	<0.5	<0.5	<0.5	<0.5	27	<2.0	<0.5	<0.5	<0.5	<50	
	04/03/12		<50	<0.5	<0.5	<0.5	<0.5	18	<2.0	<0.5	<0.5	<0.5	<50	
CMT-6-3	01/11/05	57	< 25	< 0.5	< 0.5	< 0.5	< 0.5	4.5	< 10	< 5.0	< 5.0	< 5.0	< 100	Deep
	07/12/05		ND	ND	ND	ND	ND	4.7	ND	ND	ND	ND	ND	
	08/16/06		25	ND	0.77	ND	ND	5.5	ND	ND	ND	ND	ND	
	10/27/06		38	ND	ND	ND	0.68	7.7	ND	ND	ND	ND	ND	
	04/19/10		<50	<0.5	<0.5	<0.5	<0.5	25	<2.0	<0.5	<0.5	<0.5	<50	
	10/16/10		<50	<0.5	<0.5	<0.5	<0.5	20	<2.0	<0.5	<0.5	<0.5	<50	
	03/30/11		<50	<0.5	<0.5	<0.5	<0.5	16	<2.0	<0.5	<0.5	<0.5	<50	
	06/06/11		<50	<0.5	<0.5	<0.5	<0.5	23	<2.0	<0.5	<0.5	<0.5	<50	
	09/28/11		<50	<0.5	<0.5	<0.5	<0.5	23	3.1	<0.5	<0.5	<0.5	<50	
	12/19/11		<50	<0.5	<0.5	<0.5	<0.5	16	<2.0	<0.5	<0.5	<0.5	<50	
	04/03/12		<50	<0.5	<0.5	<0.5	<0.5	21	<2.0	<0.5	<0.5	<0.5	<50	
Environmental Screening Levels (ESLs)			100	1.0	40	30	20	5.0	12	NE	NE	NE	NE	

Table 2. Groundwater Results - Multi-Level Wells
Sunol Tree Gas Station
3004 Andrade Road, Sunol, CA

Well- ID	Date	Depth (feet, bgs)	TPH-g	benzene	toluene	ethyl- benzene	xylenes	MtBE	TBA	ETBE	DIPE	TAME	Ethanol	Comments	
CMT-7-1	01/11/05	13.5	< 25	< 0.5	0.52	< 0.5	< 0.5	2.5	< 10	< 5.0	< 5.0	< 5.0	< 100	Shallow	
	07/13/05		ND	ND	ND	ND	ND	3.7	ND	ND	ND	ND	ND		
	08/16/06		42	ND	ND	ND	ND	27	ND	ND	ND	ND	ND		
	10/27/06		50	ND	2.2	ND	2.7	37	ND	ND	ND	ND	ND		
	04/19/10		<50	<0.5	<0.5	<0.5	<0.5	<0.5	13	<2.0	<0.5	<0.5	<0.5		<50
	10/16/10		<50	<0.5	<0.5	<0.5	<0.5	<0.5	11	2.6	<0.5	<0.5	<0.5		<50
	03/30/11		<50	<0.5	<0.5	<0.5	<0.5	<0.5	9	<2.0	<0.5	<0.5	<0.5		<50
	06/06/11		<50	<0.5	<0.5	<0.5	<0.5	<0.5	7.6	<2.0	<0.5	<0.5	<0.5		<50
	09/28/11		<50	<0.5	<0.5	<0.5	<0.5	<0.5	10	<2.0	<0.5	<0.5	<0.5		<50
	12/19/11		<50	<0.5	<0.5	<0.5	<0.5	<0.5	13	<2.0	<0.5	<0.5	<0.5		<50
	04/03/12		<50	<0.5	<0.5	<0.5	<0.5	<0.5	11	<2.0	<0.5	<0.5	<0.5		<50
CMT-7-2	01/10/05	43	< 25	< 0.5	< 0.5	< 0.5	< 0.5	7.4	< 10	< 5.0	< 5.0	< 5.0	< 100	Intermediate	
	07/13/05		230	< 2.5	< 2.5	< 2.5	< 2.5	320	< 50	< 25	< 25	< 25	< 500		
	08/16/06		400	< 2.5	< 2.5	< 2.5	< 2.5	390	< 50	< 25	< 25	< 25	< 500		
	10/27/06		490	< 5.0	< 5.0	< 5.0	< 5.0	400	< 100	< 50	< 50	< 50	< 1,000		
	04/19/10		<50	<2.5	<2.5	<2.5	<2.5	170	<10	<2.5	<2.5	<2.5	<250		
	10/16/10		<50	<0.5	<0.5	<0.5	<0.5	180	<20	<5.0	<5.0	<5.0	<500		
	03/30/11		<50	<0.5	<0.5	<0.5	<0.5	140	<20	<5.0	<5.0	<5.0	<500		
	06/06/11		<50	<0.5	<0.5	<0.5	<0.5	140	<10	<5.0	<5.0	<5.0	<500		
	09/28/11		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM		NM
	12/19/11		<50	<2.5	<2.5	<2.5	<2.5	140	<10	<2.5	<2.5	<2.5	<250		
	04/03/12		<50	<2.5	<2.5	<2.5	<2.5	130	<10	<2.5	<2.5	<2.5	<250		
CMT-7-3	01/10/05	57	< 25	< 0.5	< 0.5	< 0.5	< 0.5	< 1.0	< 10	< 5.0	< 5.0	< 5.0	< 100	Deep	
	07/13/05		ND	ND	ND	ND	ND	1.1	ND	ND	ND	ND	ND		
	08/16/06		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		
	10/27/06		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		
	04/19/10		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5	<50		
	10/16/10		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5	<50		
	03/30/11		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5	<50		
	06/06/11		<50	<0.5	<0.5	<0.5	<0.5	8.2	<2.0	<0.5	<0.5	<0.5	<50		
	09/28/11		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM		NM
	12/19/11		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5	<50		
	04/03/12		<50	<0.5	<0.5	<0.5	<0.5	<0.5	10	2.5	<0.5	<0.5	<0.5		<50
Environmental Screening Levels (ESLs)			100	1.0	40	30	20	5.0	12	NE	NE	NE	NE		

Table 2. Groundwater Results - Multi-Level Wells
Sunol Tree Gas Station
3004 Andrade Road, Sunol, CA

Well- ID	Date	Depth (feet, bgs)	TPH-g	benzene	toluene	ethyl-benzene	xylenes	MtBE	TBA	ETBE	DIPE	TAME	Ethanol	Comments
CMT-8-1	01/14/05	22	< 25	< 0.5	< 0.5	< 0.5	< 0.5	< 1.0	< 10	< 5.0	< 5.0	< 5.0	< 100	Shallow
	08/16/06		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
	10/26/06		26	ND	0.78	ND	1.4	ND	ND	ND	ND	ND	ND	
	04/19/10		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5	<0.5	
	10/16/10		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	
	03/30/11		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	
	06/06/11		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	
	09/28/11		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	
12/19/11	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM		
CMT-8-2	01/14/05	43.5	< 25	< 0.5	< 0.5	< 0.5	< 0.5	< 1.0	< 10	< 5.0	< 5.0	< 5.0	< 100	Intermediate
	08/16/06		ND	ND	ND	ND	ND	ND	80	ND	ND	ND	ND	
	10/26/06		ND	ND	0.81	ND	1.2	ND	80	ND	ND	ND	ND	
	04/19/10		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5	<0.5	
	10/16/10		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	
	03/30/11		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	
	06/06/11		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	
	09/28/11		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	
12/19/11	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM			
CMT-8-3	01/14/05	52	< 25	< 0.5	< 0.5	< 0.5	< 0.5	< 1.0	< 10	< 5.0	< 5.0	< 5.0	< 100	Deep
	08/16/06		ND	ND	ND	ND	ND	< 1.0	80	ND	ND	ND	ND	
	10/26/06		ND	ND	0.70	ND	1.1	ND	80	ND	ND	ND	ND	
	04/19/10		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5	<0.5	
	10/16/10		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	
	03/30/11		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	
	06/06/11		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	
	09/28/11		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	
12/19/11	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM			
CMT-9-1	01/14/05	22	< 25	< 0.5	< 0.5	< 0.5	< 0.5	< 1.0	< 10	< 5.0	< 5.0	< 5.0	< 100	Shallow
	08/16/06		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
	10/26/06		ND	ND	0.72	ND	1.0	ND	ND	ND	ND	ND	ND	
	04/19/10		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5	<0.5	
	10/16/10		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	
	03/30/11		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	
	06/06/11		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	
	09/28/11		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	
12/19/11	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM			
Environmental Screening Levels (ESLs)			100	1.0	40	30	20	5.0	12	NE	NE	NE	NE	

**Table 2. Groundwater Results - Multi-Level Wells
Sunol Tree Gas Station
3004 Andrade Road, Sunol, CA**

Well- ID	Date	Depth (feet, bgs)	TPH-g	benzene	toluene	ethyl- benzene	xylenes	MtBE	TBA	ETBE	DIPE	TAME	Ethanol	Comments	
CMT-9-2	01/14/05	43.5	< 25	< 0.5	< 0.5	< 0.5	< 0.5	< 1.0	< 10	< 5.0	< 5.0	< 5.0	< 100	Intermediate	
	08/16/06		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		
	10/26/06		ND	ND	0.77	ND	1.2	ND	ND	ND	ND	ND	ND		ND
	04/19/10		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5	<0.5		<50
	10/16/10		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM		NM
	03/30/11		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM		NM
	06/06/11		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM		NM
	09/28/11		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM		NM
12/19/11	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM		
CMT-9-3	01/14/05	52	< 25	< 0.5	< 0.5	< 0.5	< 0.5	< 1.0	< 10	< 5.0	< 5.0	< 5.0	< 100	Deep	
	08/16/06		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		ND
	10/26/06		ND	ND	0.57	ND	0.94	ND	ND	ND	ND	ND	ND		ND
	04/19/10		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5	<0.5		<50
	10/16/10		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM		NM
	03/30/11		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM		NM
	06/06/11		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM		NM
	09/28/11		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM		NM
12/19/11	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM		
CMT-10-1	01/14/05	22	< 25	< 0.5	< 0.5	< 0.5	< 0.5	< 1.0	< 10	< 5.0	< 5.0	< 5.0	< 100	Shallow	
	07/13/05		ND	ND	ND	ND	ND	3.8	ND	ND	ND	ND	ND		
	08/15/06		ND	ND	ND	ND	ND	1.6	ND	ND	ND	ND	ND		
	10/26/06		ND	ND	0.8	ND	1.5	2.4	ND	ND	ND	ND	ND		
	04/19/10		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM		NM
	10/16/10		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM		NM
	03/30/11		< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 2.0	< 0.5	< 0.5	< 0.5	< 0.5		< 50
	06/06/11		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM		NM
	09/28/11		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM		NM
	12/19/11		< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 2.0	< 0.5	< 0.5	< 0.5	< 0.5		< 50
04/03/12	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 2.0	< 0.5	< 0.5	< 0.5	< 0.5	< 50			
CMT-10-2	01/14/05	42	< 25	< 0.5	< 0.5	< 0.5	< 0.5	2.6	< 10	< 5.0	< 5.0	< 5.0	< 100	Intermediate	
	07/13/05		ND	ND	ND	ND	ND	4.8	ND	ND	ND	ND	ND		
	08/15/06		ND	ND	ND	ND	ND	1.6	ND	ND	ND	ND	ND		
	10/26/06		35	ND	1.2	ND	2.3	4.9	ND	ND	ND	ND	ND		
	04/19/10		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM		NM
	10/16/10		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM		NM
	03/30/11		< 50	< 0.5	< 0.5	< 0.5	< 0.5	1	< 2.0	< 0.5	< 0.5	< 0.5	< 0.5		< 50
	06/06/11		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM		NM
	09/28/11		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM		NM
	12/19/11		< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 2.0	< 0.5	< 0.5	< 0.5	< 0.5		< 50
04/03/12	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 2.0	< 0.5	< 0.5	< 0.5	< 0.5	< 50			
Environmental Screening Levels (ESLs)			100	1.0	40	30	20	5.0	12	NE	NE	NE	NE		

Table 2. Groundwater Results - Multi-Level Wells
Sunol Tree Gas Station
3004 Andrade Road, Sunol, CA

Well- ID	Date	Depth (feet, bgs)	TPH-g	benzene	toluene	ethyl-benzene	xylenes	MtBE	TBA	ETBE	DIPE	TAME	Ethanol	Comments		
CMT-10-3	01/14/05	52	< 25	< 0.5	< 0.5	< 0.5	< 0.5	< 1.0	< 10	< 5.0	< 5.0	< 5.0	< 100	Deep		
	07/13/05		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND			
	08/15/06		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		ND	
	10/26/06		ND	ND	0.9	ND	1.6	ND	ND	ND	ND	ND	ND		ND	
	04/19/10		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM		NM	
	10/16/10		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM		NM	
	03/30/11		< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	0.9	< 2.0	< 0.5	< 0.5	< 0.5		< 50	
	06/06/11		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM		NM	NM
	09/28/11		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM		NM	NM
	12/19/11		< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	0.85	< 2.0	< 0.5	< 0.5	< 0.5		< 50	
04/03/12	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 2.0	< 0.5	< 0.5	< 0.5	< 50				
CMT-11-1	01/10/05	22.5	< 25	< 0.5	< 0.5	< 0.5	< 0.5	< 1.0	< 10	< 5.0	< 5.0	< 5.0	< 100	Shallow		
	08/15/06		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND			
	10/26/06		25	ND	1.2	ND	1.8	ND	ND	ND	ND	ND	ND			
	04/19/10		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5	<50			
	10/16/10		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM		NM	
	03/30/11		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM		NM	
	06/06/11		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM		NM	
	09/28/11		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM		NM	
12/19/11	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM				
CMT-11-2	01/10/05	32	< 25	< 0.5	< 0.5	< 0.5	< 0.5	1.3	< 10	< 5.0	< 5.0	< 5.0	< 100	Intermediate		
	08/15/06		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND			
	10/26/06		31	ND	0.83	ND	1.6	ND	ND	ND	ND	ND	ND			
	04/19/10		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5	<50			
	10/16/10		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM		NM	
	03/30/11		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM		NM	
	06/06/11		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM		NM	
	09/28/11		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM		NM	
12/19/11	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM				
CMT-11-3	01/10/05	53	< 25	< 0.5	< 0.5	< 0.5	< 0.5	< 1.0	< 10	< 5.0	< 5.0	< 5.0	< 100	Deep		
	08/15/06		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND			
	10/26/06		26	ND	0.64	ND	1.2	ND	ND	ND	ND	ND	ND			
	04/19/10		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5	<50			
	10/16/10		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM		NM	
	03/30/11		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM		NM	
	06/06/11		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM		NM	
	09/28/11		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM		NM	
12/19/11	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM				
Environmental Screening Levels (ESLs)			100	1.0	40	30	20	5.0	12	NE	NE	NE	NE			

Table 2. Groundwater Results - Multi-Level Wells
Sunol Tree Gas Station
3004 Andrade Road, Sunol, CA

Well- ID	Date	Depth (feet, bgs)	TPH-g	benzene	toluene	ethyl-benzene	xylenes	MtBE	TBA	ETBE	DIPE	TAME	Ethanol	Comments	
CMT-12-1	01/10/05	22.75	< 25	< 0.5	< 0.5	< 0.5	< 0.5	< 1.0	< 10	< 5.0	< 5.0	< 5.0	< 100	Shallow	
	08/15/06		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		
	10/26/06		ND	ND	0.56	ND	0.93	ND	ND	ND	ND	ND	ND		ND
	04/19/10		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5		<50
	10/16/10		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM		NM
	03/30/11		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM		NM
	06/06/11		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM		NM
	09/28/11		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM		NM
12/19/11	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM		
CMT-12-2	01/10/05	38.25	< 25	< 0.5	< 0.5	< 0.5	< 0.5	1.4	< 10	< 5.0	< 5.0	< 5.0	< 100	Intermediate	
	08/15/06		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		ND
	10/26/06		ND	ND	1.0	ND	1.9	ND	ND	ND	ND	ND	ND		ND
	04/19/10		<50	<0.5	<0.5	<0.5	<0.5	<0.5	23	<2.0	<0.5	<0.5	<0.5		<50
	10/16/10		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM		NM
	03/30/11		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM		NM
	06/06/11		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM		NM
	09/28/11		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM		NM
12/19/11	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM		
CMT-12-3	01/10/05	57.25	< 25	< 0.5	< 0.5	< 0.5	< 0.5	1.7	< 10	< 5.0	< 5.0	< 5.0	< 100	Deep	
	08/15/06		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		ND
	10/26/06		NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS		NS
	04/19/10		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5		<50
	10/16/10		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM		NM
	03/30/11		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM		NM
	06/06/11		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM		NM
	09/28/11		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM		NM
12/19/11	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM		
PZ-1a	12/03/04	17	180	< 1.0	< 1.0	< 1.0	< 2	190	< 20	< 10	< 10	< 10	< 200	Shallow	
	08/16/06		440	ND	ND	ND	ND	57	ND	ND	ND	ND	ND		
	10/27/06		130	ND	ND	ND	ND	52	ND	ND	ND	ND	ND		
	04/19/10		<50	<0.5	<0.5	<0.5	<0.5	<0.5	23	<2.0	<0.5	<0.5	<0.5		<50
	10/16/10		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM		NM
	03/30/11		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM		NM
	06/06/11		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM		NM
	09/28/11		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM		NM
12/19/11	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM		
Environmental Screening Levels (ESLs)			100	1.0	40	30	20	5.0	12	NE	NE	NE	NE		

Table 2. Groundwater Results - Multi-Level Wells
Sunol Tree Gas Station
3004 Andrade Road, Sunol, CA

Well- ID	Date	Depth (feet, bgs)	TPH-g	benzene	toluene	ethyl-benzene	xylenes	MtBE	TBA	ETBE	DIPE	TAME	Ethanol	Comments	
PZ-1b	12/03/04	46.5	38	< 0.5	< 0.5	< 0.5	< 1	28	< 10	< 5.0	< 5.0	< 5.0	< 100	Deep	
	08/16/06		51	ND	ND	ND	ND	38	ND	ND	ND	ND	ND		
	10/27/06		58	ND	ND	ND	0.79	50	ND	ND	ND	ND	ND		
	04/19/10		<50	<2.5	<2.5	<2.5	<2.5	<2.5	63	<10	<2.5	<2.5	<2.5		<250
	10/16/10		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM		NM
	03/30/11		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM		NM
	06/06/11		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM		NM
	09/28/11		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM		NM
	12/19/11		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM		NM
PZ-2a	12/03/04	29	270	< 2.5	< 2.5	< 2.5	< 5	280	< 50	< 25	< 25	< 25	< 500	Shallow	
	07/12/05		120	< 1.0	< 1.0	< 1.0	< 1.0	110	< 20	< 10	< 10	< 10	< 200		
	08/15/06		100	ND	ND	ND	ND	92	ND	ND	ND	ND	ND		
	10/26/06		68	ND	ND	ND	ND	56	ND	ND	ND	ND	ND		
	04/19/10		<50	<0.5	<0.5	<0.5	<0.5	<0.5	22	<2.0	<0.5	<0.5	<0.5		<50
	10/16/10		<50	<0.5	<0.5	<0.5	<0.5	<0.5	18	3.0	<0.5	<0.5	<0.5		<50
	03/30/11		<50	<0.5	<0.5	<0.5	<0.5	<0.5	7.5	2.9	<0.5	<0.5	<0.5		<50
	06/06/11		<50	<0.5	<0.5	<0.5	<0.5	<0.5	3.4	2.9	<0.5	<0.5	<0.5		<50
	09/28/11		<50	<0.5	<0.5	<0.5	<0.5	<0.5	5.5	<2.0	<0.5	<0.5	<0.5		<50
	12/19/11		<50	<0.5	0.94	<0.5	<0.5	<0.5	5.8	<2.0	<0.5	<0.5	<0.5		<50
04/03/12	<50	<0.5	<0.5	<0.5	<0.5	<0.5	3.9	<2.0	<0.5	<0.5	<0.5	<50			
PZ-2b	12/03/04	49	160	< 1.0	< 1.0	< 1.0	< 2	150	< 20	< 10	< 10	< 10	< 200	Deep	
	07/12/05		ND	ND	ND	< 1.0	ND	15	ND	ND	ND	ND	ND		
	08/15/06		ND	ND	ND	ND	ND	17	ND	ND	ND	ND	ND		
	10/26/06		43	ND	ND	ND	ND	17	ND	ND	ND	ND	ND		
	04/19/10		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5	<50		
	10/16/10		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM		
	03/30/11		<50	<0.5	<0.5	<0.5	<0.5	<0.5	3	<2.0	<0.5	<0.5	<0.5		<50
	06/06/11		<50	<0.5	<0.5	<0.5	<0.5	<0.5	3.8	<2.0	<0.5	<0.5	<0.5		<50
	09/28/11		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5		<50
	12/19/11		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5		<50
04/03/12	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5	<50			
Environmental Screening Levels (ESLs)			100	1.0	40	30	20	5.0	12	NE	NE	NE	NE		

Table 2. Groundwater Results - Multi-Level Wells
Sunol Tree Gas Station
3004 Andrade Road, Sunol, CA

Well- ID	Date	Depth (feet, bgs)	TPH-g	benzene	toluene	ethyl-benzene	xylenes	MtBE	TBA	ETBE	DIPE	TAME	Ethanol	Comments	
PZ-3a	12/03/04	21	29	< 0.5	< 0.5	< 0.5	< 1.0	< 1.0	< 10	< 5.0	< 5.0	< 5.0	< 100	Shallow	
	08/16/06		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		
	10/26/06		27	< 0.5	1.8	< 0.5	2.9	ND	ND	ND	ND	ND	ND		
	04/19/10		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5	<50		
	10/16/10		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM		
	03/30/11		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM		
	06/06/11		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM		
	09/28/11		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM		
	12/19/11		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM		
PZ-3b	12/03/04	49	< 25	< 0.5	< 0.5	< 0.5	< 1.0	< 1.0	< 10	< 5.0	< 5.0	< 5.0	< 100	Deep	
	08/16/06		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		
	10/26/06		ND	ND	0.54	ND	0.88	ND	ND	ND	ND	ND	ND		
	04/19/10		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5		<50
	10/16/10		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM		
	03/30/11		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM		
	06/06/11		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM		
	09/28/11		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM		
	12/19/11		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM		
Sunol Tree	03/30/11	153?	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	Deep	
Environmental Screening Levels (ESLs)			100	1.0	40	30	20	5.0	12	NE	NE	NE	NE		

Notes:

BOLD = Bold Print indicates concentrations are above ESLs.

< # = Detection limit elevated due to sample dilution.

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

NS = Not sampled

MtBE detections are confirmed by EPA Method #8260.

MTBE = Methyl-tert-Butyl ether

TAME = Tert-amyl methyl ether

ETBE = Ethyl tert-butyl ether

DIPE = Di-isopropyl ether

tBA - tert butyl alcohol

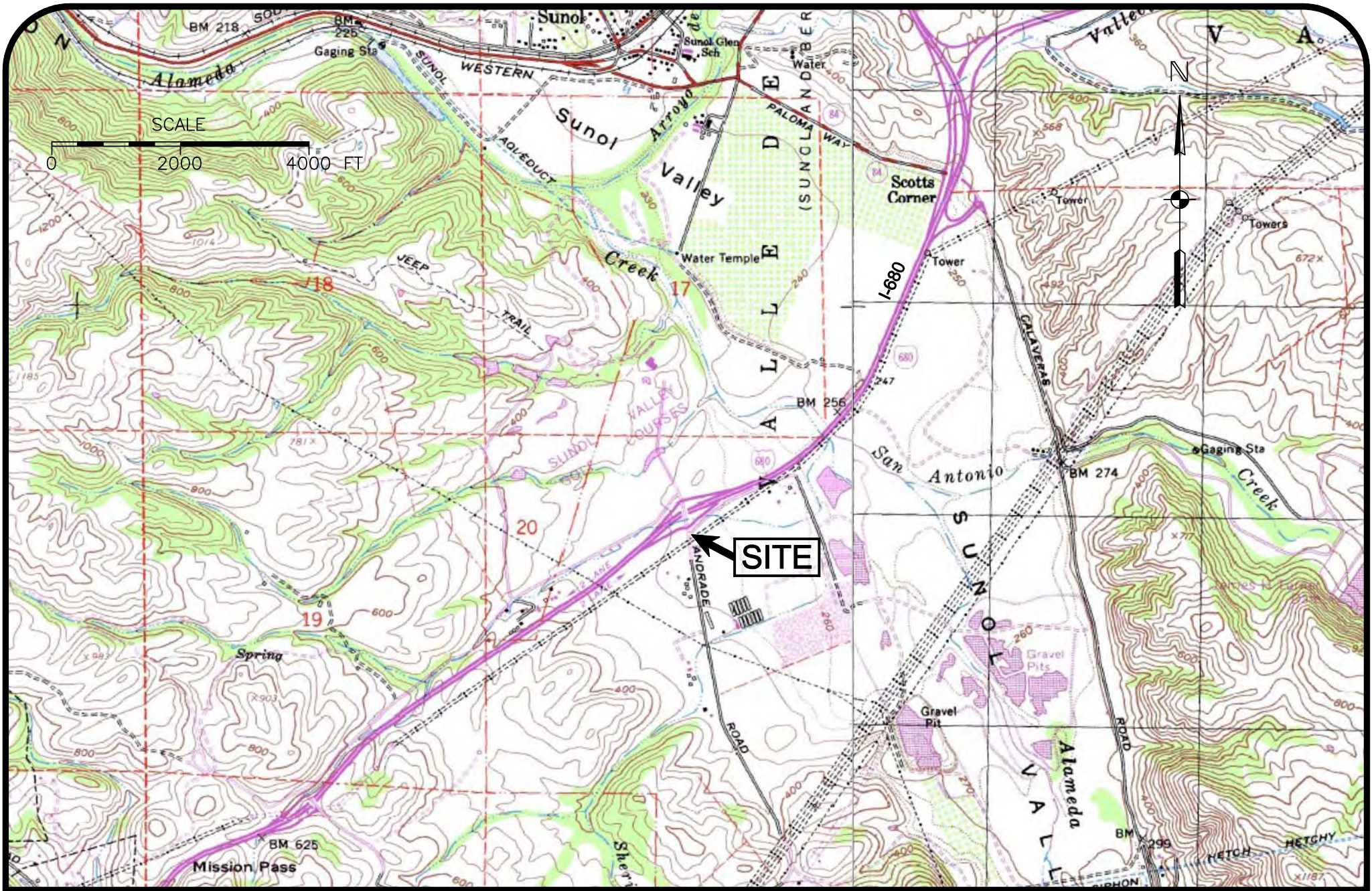
TPH-g - total petroleum hydrocarbons as gasoline

concentrations: micrograms per liter (ug/L)

ESLs are from San Francisco Bay RWQCB where groundwater is a drinking water resource.

13/14 = duplicate sample results

FIGURES



Cook Environmental Services, Inc.

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**Sunol Tree Gas Station
 Site Location Map
 3004 Andrade Road
 Sunol, CA 94586**

Project: 1024

Date: 4/30/12

Scale: 1" = 2000'

Figure:

1



SCALE
0 50 100 FT

Cook Environmental Services, Inc.
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**Sunol Tree Gas Station
Site Aerial Photograph**
3400 Andrade Road
Sunol, CA 94586

Project : 1024
Date: 4/30/12
Scale: 1" = 50'

Figure:
2



Residential Well # G1

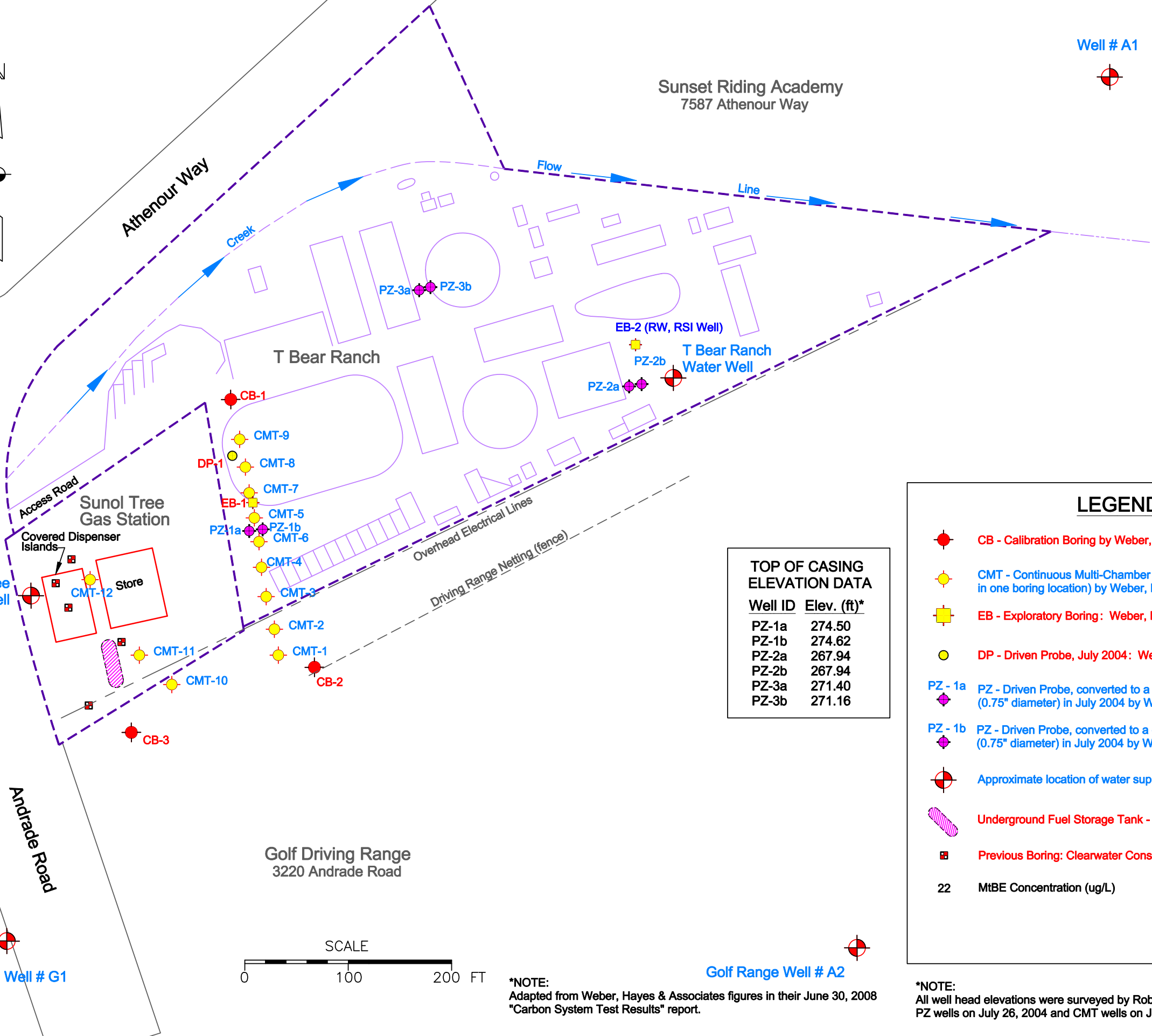
Sunol Tree Water Well

Sunol Tree Gas Station

Golf Driving Range
3220 Andrade Road

Sunset Riding Academy
7587 Athenour Way

Well # A1

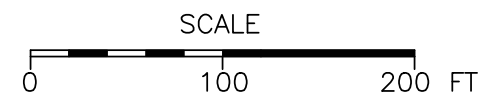


TOP OF CASING ELEVATION DATA

Well ID	Elev. (ft)*
PZ-1a	274.50
PZ-1b	274.62
PZ-2a	267.94
PZ-2b	267.94
PZ-3a	271.40
PZ-3b	271.16

LEGEND

- CB - Calibration Boring by Weber, Hayes & Associates
- CMT - Continuous Multi-Chamber Tubing Well (3 - 0.375" wells in one boring location) by Weber, Hayes & Associates
- EB - Exploratory Boring: Weber, Hayes & Associates
- DP - Driven Probe, July 2004: Weber, Hayes & Associates
- PZ - 1a PZ - Driven Probe, converted to a shallow Piezometer Well (0.75" diameter) in July 2004 by Weber, Hayes & Associates
- PZ - 1b PZ - Driven Probe, converted to a deep Piezometer Well (0.75" diameter) in July 2004 by Weber, Hayes & Associates
- Approximate location of water supply well
- Underground Fuel Storage Tank - source of release
- Previous Boring: Clearwater Consultants, 2002
- 22 MtBE Concentration (ug/L)



*NOTE:
Adapted from Weber, Hayes & Associates figures in their June 30, 2008 "Carbon System Test Results" report.

*NOTE:
All well head elevations were surveyed by Robert McGregor (Lic. #5946); PZ wells on July 26, 2004 and CMT wells on January 21, 2005.

Project : 1024
Date: 4/30/12
Scale: 1" = 100'

Figure: **3**

**Sunol Tree Gas Station
Monitoring Well and Soil Boring
Locations**

3004 Andrade Road
Sunol, CA 94586

Cook Environmental Services, Inc.
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Sunset Riding Academy
7587 Athenour Way

Well # A1



Athenour Way

Creek

Flow

Line

PZ-3a
264.71

PZ-3b

EB-2 (RW, RSI Well)

PZ-2b

T Bear Ranch
Water Well

PZ-2a
264.89

265.0

266.0

267.0

268.0

269.0

268.0

269.0

T Bear Ranch

CB-1

CMT-9

DP-1

CMT-8

CMT-7

EB-1

CMT-5

PZ-1a
269.10

PZ-1b

CMT-6

CMT-4

CMT-3

CMT-2

CMT-1

CB-2

Sunol Tree
Water Well

Covered
Dispenser
Islands

Sunol Tree
Gas Station

Store

CMT-12

CMT-11

CMT-10

CB-3

Andrade Road

Golf Driving Range
3220 Andrade Road

Overhead Electrical Lines










Driving Range Netting (fence)

N22 E @ D015

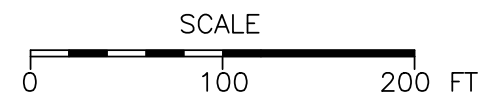
TOP OF CASING ELEVATION DATA

Well ID	Elev. (ft)*
PZ-1a	274.50
PZ-1b	274.62
PZ-2a	267.94
PZ-2b	267.94
PZ-3a	271.40
PZ-3b	271.16

LEGEND

-  CB - Calibration Boring by Weber, Hayes & Associates
-  CMT - Continuous Multi-Chamber Tubing Well (3 - 0.375" wells in one boring location) by Weber, Hayes & Associates
-  EB - Exploratory Boring: Weber, Hayes & Associates
-  DP - Driven Probe, July 2004: Weber, Hayes & Associates
-  PZ - 1a PZ - Driven Probe, converted to a shallow Piezometer Well (0.75" diameter) in July 2004 by Weber, Hayes & Associates
-  PZ - 1b PZ - Driven Probe, converted to a deep Piezometer Well (0.75" diameter) in July 2004 by Weber, Hayes & Associates
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-  Underground Fuel Storage Tank - source of release
-  Previous Boring: Clearwater Consultants, 2002
- 22 MtBE Concentration (ug/L)

Residential Well # G1



Golf Range Well # A2

*NOTE:
Adapted from Weber, Hayes & Associates figures in their June 30, 2008
"Carbon System Test Results" report.

*NOTE:
All well head elevations were surveyed by Robert McGregor (Lic. #5946);
PZ wells on February 18, 2005 and CMT wells on January 21, 2005.

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Sunol Tree Gas Station
Shallow Groundwater Gradient Map
3004 Andrade Road
Sunol, CA 94586

Project : 1024

Date: 4/30/12

Scale: 1" = 100'

Figure:

4A



Sunset Riding Academy
7587 Athenour Way

Well # A1



Athenour Way

Creek

Flow

Line

PZ-3a PZ-3b
263.96

EB-2 (RW, RSI Well)

PZ-2b
264.19

T Bear Ranch Water Well

PZ-2a

S87W @ 0.0011

264.1

T Bear Ranch

CB-1

CMT-9

DP-1

CMT-8

CMT-7

EB-1

PZ-1a

CMT-5

PZ-1b 263.80

CMT-6

CMT-4

CMT-3

263.9

CMT-2

263.8

CMT-1

CB-2

Overhead Electrical Lines

Driving Range Netting (fence)

Access Road

Sunol Tree Gas Station

Covered Dispenser Islands

Store

Sunol Tree Water Well

CMT-12

CMT-11

CMT-10

CB-3

Andrade Road

Golf Driving Range
3220 Andrade Road

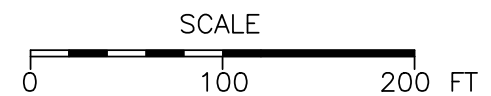
Residential Well # G1

TOP OF CASING ELEVATION DATA

Well ID	Elev. (ft)*
PZ-1a	274.50
PZ-1b	274.62
PZ-2a	267.94
PZ-2b	267.94
PZ-3a	271.40
PZ-3b	271.16

LEGEND

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- 22 MtBE Concentration (ug/L)



*NOTE:
Adapted from Weber, Hayes & Associates figures in their June 30, 2008 "Carbon System Test Results" report.

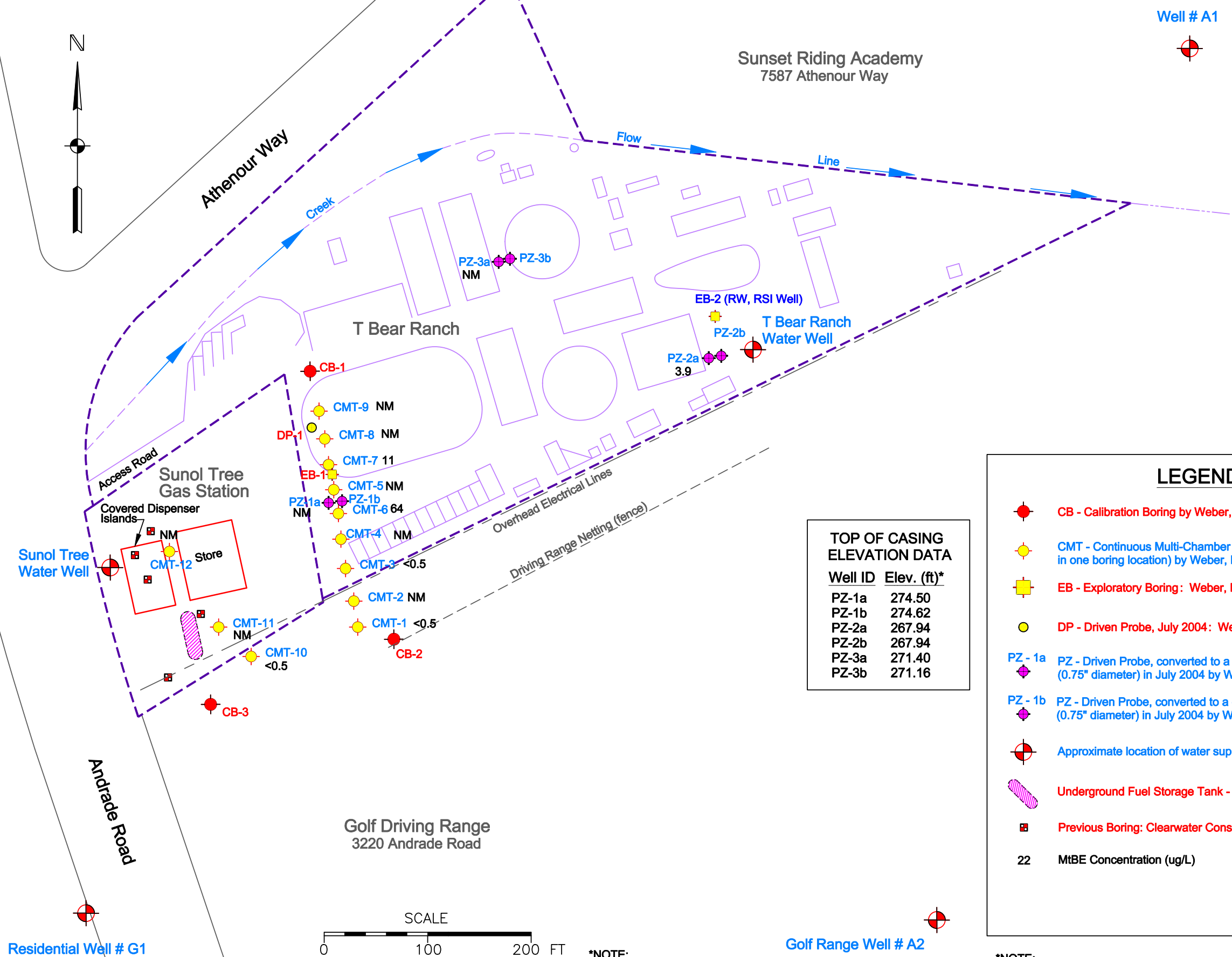
Golf Range Well # A2

*NOTE:
All well head elevations were surveyed by Robert McGregor (Lic. #5946); PZ wells on February 18, 2005 and CMT wells on January 21, 2005.

**Sunol Tree Gas Station
Intermediate/Deep Groundwater
Gradient Map**
3004 Andrade Road
Sunol, CA 94586

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Project : 1024
Date: 4/30/12
Scale: 1" = 100'
Figure:
4B



TOP OF CASING ELEVATION DATA

Well ID	Elev. (ft)*
PZ-1a	274.50
PZ-1b	274.62
PZ-2a	267.94
PZ-2b	267.94
PZ-3a	271.40
PZ-3b	271.16

LEGEND

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- CMT - Continuous Multi-Chamber Tubing Well (3 - 0.375" wells in one boring location) by Weber, Hayes & Associates
- EB - Exploratory Boring: Weber, Hayes & Associates
- DP - Driven Probe, July 2004: Weber, Hayes & Associates
- PZ - 1a PZ - Driven Probe, converted to a shallow Piezometer Well (0.75" diameter) in July 2004 by Weber, Hayes & Associates
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- Previous Boring: Clearwater Consultants, 2002
- 22 MtBE Concentration (ug/L)

***NOTE:**
Adapted from Weber, Hayes & Associates figures in their June 30, 2008 "Carbon System Test Results" report.

***NOTE:**
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Project : 1024
Date: 4/30/12
Scale: 1" = 100'

Figure:
5A

**Sunol Tree Gas Station
MtBE Concentrations
Shallow Water-Bearing Zone**
3004 Andrade Road
Sunol, CA 94586

Cook Environmental Services, Inc.
1485 Treat Blvd, Ste. 203A
Walnut Creek, CA 94597
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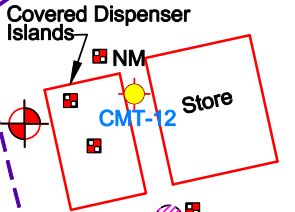


Residential Well # G1

Sunol Tree Water Well

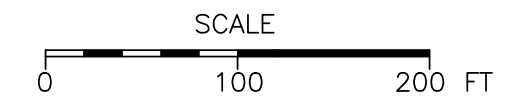
Andrade Road

Sunol Tree Gas Station



Access Road

Athenour Way



Golf Driving Range
3220 Andrade Road

Overhead Electrical Lines
Driving Range Netting (fence)

- CB-1
- DP-1
- CMT-9 NM
- CMT-8 NM
- CMT-7 130
- EB-1
- CMT-5 NM
- PZ-1a
- PZ-1b
- CMT-6 18
- CMT-4 NM
- CMT-3 8.3
- CMT-2 NM
- CMT-1 0.54
- CB-2
- CMT-10 <0.5
- CMT-11 NM
- CMT-12 NM
- CB-3

T Bear Ranch

- PZ-3a
- PZ-3b
- EB-2 (RW, RSI Well)
- PZ-2b
- T Bear Ranch Water Well
- PZ-2a

Sunset Riding Academy
7587 Athenour Way

Flow Line

TOP OF CASING ELEVATION DATA	
Well ID	Elev. (ft)*
PZ-1a	274.50
PZ-1b	274.62
PZ-2a	267.94
PZ-2b	267.94
PZ-3a	271.40
PZ-3b	271.16

Golf Range Well # A2

Well # A1



LEGEND

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- Approximate location of water supply well
- Underground Fuel Storage Tank - source of release
- Previous Boring: Clearwater Consultants, 2002
- 22 MtBE Concentration (ug/L)

*NOTE:
All well head elevations were surveyed by Robert McGregor (Lic. #5946); PZ wells on July 26, 2004 and CMT wells on January 21, 2005.

*NOTE:
Adapted from Weber, Hayes & Associates figures in their June 30, 2008 "Carbon System Test Results" report.

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Sunol Tree Gas Station
MtBE Concentrations
Intermediate Water-Bearing Zone
3004 Andrade Road
Sunol, CA 94586

Project : 1024

Date: 4/30/12

Scale: 1" = 100'

Figure:

5B



Residential Well # G1

Sunol Tree Water Well

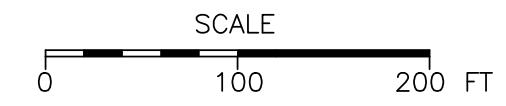
Andrade Road

Sunol Tree Gas Station

Covered Dispenser Islands

Access Road

Athenour Way



Golf Driving Range
3220 Andrade Road

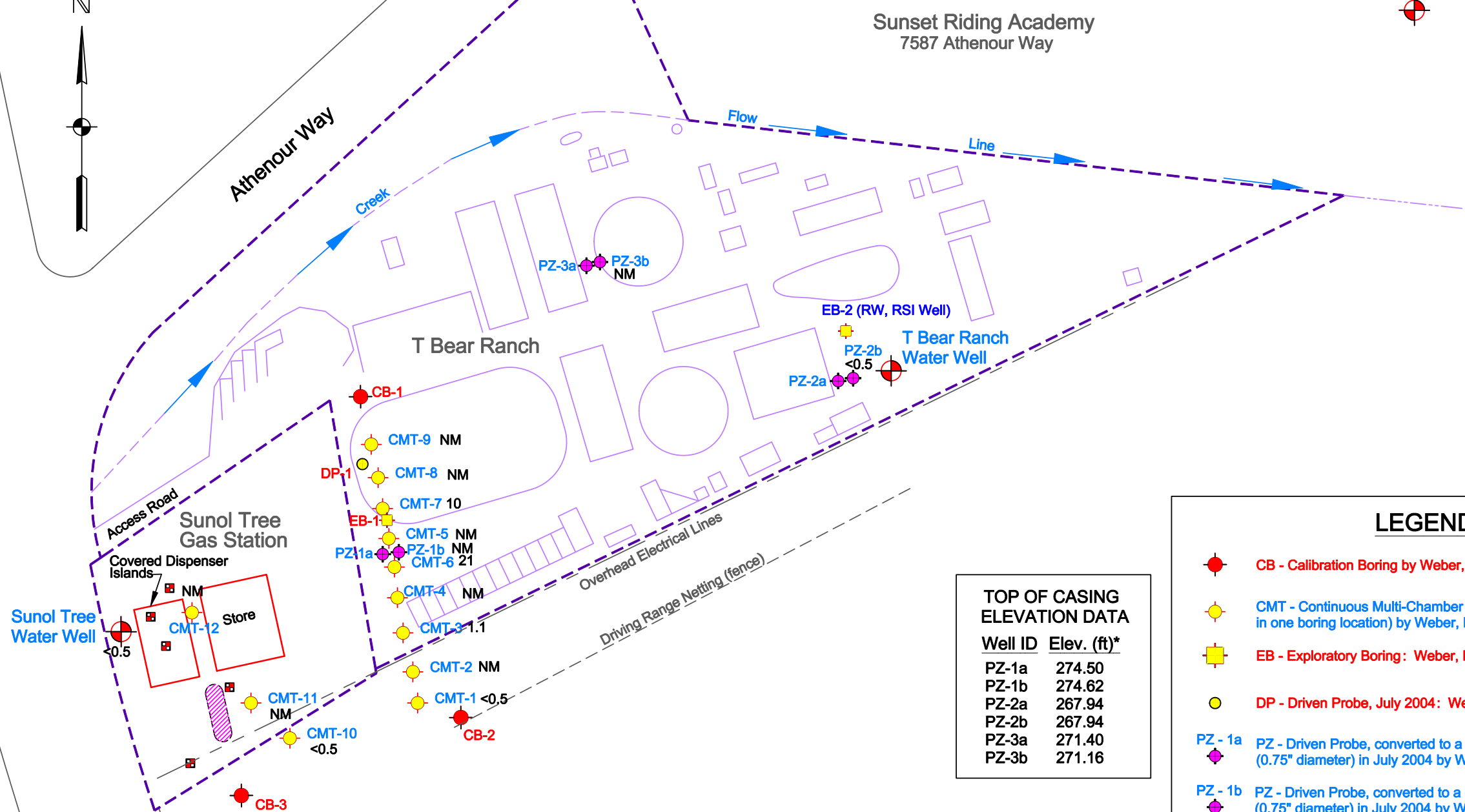
Overhead Electrical Lines

Driving Range Netting (fence)

T Bear Ranch

Sunset Riding Academy
7587 Athenour Way

Well # A1



TOP OF CASING ELEVATION DATA

Well ID	Elev. (ft)*
PZ-1a	274.50
PZ-1b	274.62
PZ-2a	267.94
PZ-2b	267.94
PZ-3a	271.40
PZ-3b	271.16

LEGEND

- CB - Calibration Boring by Weber, Hayes & Associates
- CMT - Continuous Multi-Chamber Tubing Well (3 - 0.375" wells in one boring location) by Weber, Hayes & Associates
- EB - Exploratory Boring: Weber, Hayes & Associates
- DP - Driven Probe, July 2004: Weber, Hayes & Associates
- PZ - 1a PZ - Driven Probe, converted to a shallow Piezometer Well (0.75" diameter) in July 2004 by Weber, Hayes & Associates
- PZ - 1b PZ - Driven Probe, converted to a deep Piezometer Well (0.75" diameter) in July 2004 by Weber, Hayes & Associates
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- 22 MtBE Concentration (ug/L)

*NOTE:
Adapted from Weber, Hayes & Associates figures in their June 30, 2008 "Carbon System Test Results" report.

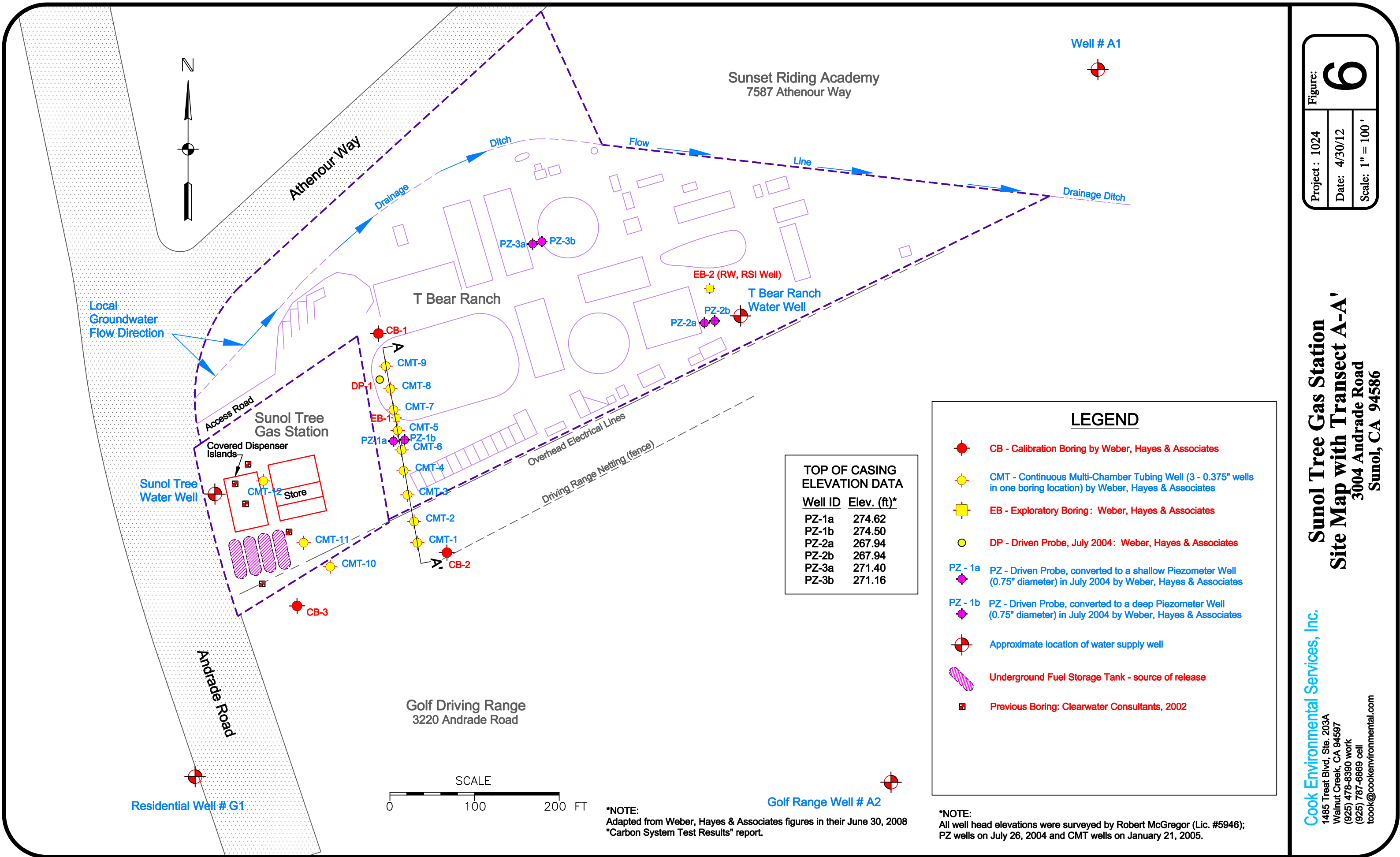
*NOTE:
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Project : 1024
Date: 4/30/12
Scale: 1" = 100'

Figure:
5C

**Sunol Tree Gas Station
MtBE Concentrations
Deep Water-Bearing Zone**
3004 Andrade Road
Sunol, CA 94586

Cook Environmental Services, Inc.
1485 Treat Blvd, Ste. 203A
Walnut Creek, CA 94597
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Well # A1



Sunset Riding Academy
7587 Athenour Way

Athenour Way

Drainage

Ditch

Flow

Line

Drainage Ditch

PZ-3a PZ-3b

EB-2 (RW, RSI Well)

T Bear Ranch Water Well

PZ-2a PZ-2b

T Bear Ranch

CB-1

CMT-9

CMT-8

CMT-7

CMT-5

PZ-1a

CMT-6

CMT-4

CMT-3

CMT-2

CMT-1

CB-2

DP-1

EB-1

Sunol Tree Water Well

Sunol Tree Gas Station

Covered Dispenser Islands

Store

CMT-11

CMT-10

CB-3

Overhead Electrical Lines

Driving Range Netting (fence)

Golf Driving Range
3220 Andrade Road

Andrade Road

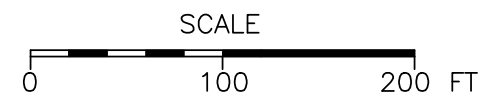
Residential Well # G1

TOP OF CASING ELEVATION DATA

Well ID	Elev. (ft)*
PZ-1a	274.62
PZ-1b	274.50
PZ-2a	267.94
PZ-2b	267.94
PZ-3a	271.40
PZ-3b	271.16

LEGEND

- CB - Calibration Boring by Weber, Hayes & Associates
- CMT - Continuous Multi-Chamber Tubing Well (3 - 0.375" wells in one boring location) by Weber, Hayes & Associates
- EB - Exploratory Boring: Weber, Hayes & Associates
- DP - Driven Probe, July 2004: Weber, Hayes & Associates
- PZ - 1a PZ - Driven Probe, converted to a shallow Piezometer Well (0.75" diameter) in July 2004 by Weber, Hayes & Associates
- PZ - 1b PZ - Driven Probe, converted to a deep Piezometer Well (0.75" diameter) in July 2004 by Weber, Hayes & Associates
- Approximate location of water supply well
- Underground Fuel Storage Tank - source of release
- Previous Boring: Clearwater Consultants, 2002



*NOTE:
Adapted from Weber, Hayes & Associates figures in their June 30, 2008 "Carbon System Test Results" report.

*NOTE:
All well head elevations were surveyed by Robert McGregor (Lic. #5946); PZ wells on July 26, 2004 and CMT wells on January 21, 2005.

Project : 1024
Date: 4/30/12
Scale: 1" = 100'

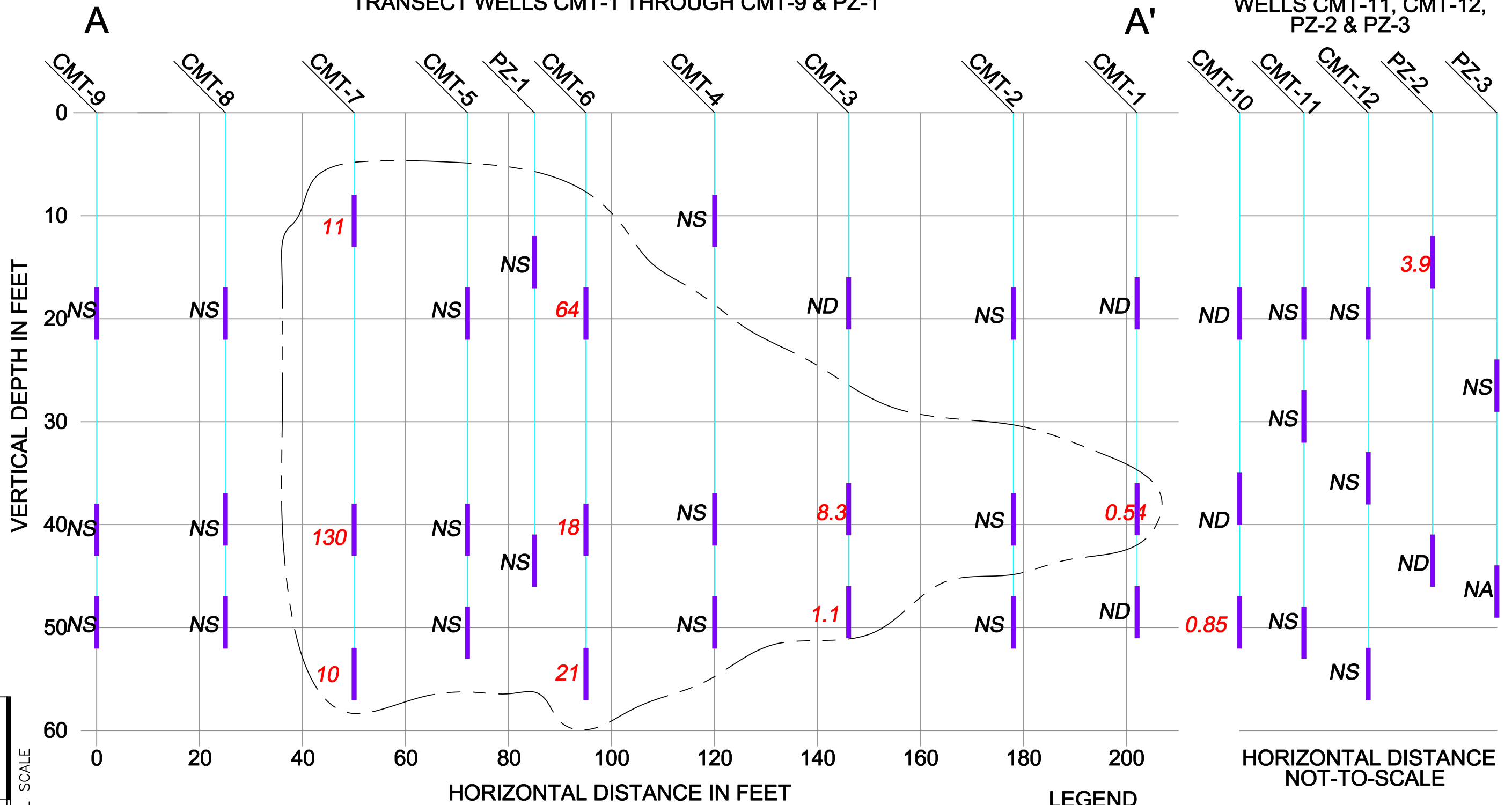
Figure: **6**

Sunol Tree Gas Station
Site Map with Transect A-A'
3004 Andrade Road
Sunol, CA 94586

Cook Environmental Services, Inc.
1485 Treat Blvd, Ste. 203A
Walnut Creek, CA 94597
(925) 478-8390 work
(925) 787-6869 cell
tcook@cookenvironmental.com

TRANSECT WELLS CMT-1 THROUGH CMT-9 & PZ-1

NON-TRANSECT WELLS CMT-11, CMT-12, PZ-2 & PZ-3



- 63** MtBE in parts per billion, ug/L
ND Non-detectable
NA Not found
NS Not sampled

Project : 1024
 Date: 4/30/12
 Scale: as shown

Sunol Tree Gas Station
MtBE Concentrations on Transect A-A'
 3004 Andrade Road
 Sunol, CA 94586

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 1485 Treat Blvd, Ste. 203A
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APPENDIX A
Site Background

Regional Setting: The subject site is situated in the southwestern portion of the Sunol groundwater Basin (in a “subbasin” identified as the Sunol subbasin, see <http://aceh.intranets.com/~docs/GroupDocuments/FIGURES/2-Topograph-3D.pdf?id=28390&ord=040200> Figure 1)). The Sunol Valley is a structural trough surrounded by Diablo Range hills. Unconsolidated surface soils at the subject site have previously been mapped as water-bearing, alluvium deposits (Qal). Underlying the shallow alluvial deposits is the Livermore Formation (Tlo), significant water-bearing strata for the region. Non-water bearing, marine shale and sandstone deposits (JK) underlie the Livermore Formation. The Livermore and Sunol region is offset by a number of faults including the nearby Sinbad fault, which is buried beneath Alameda Creek-deposited alluvium, approximately 2,000 feet northwest of the site.

The general direction of regional groundwater movement is from the upland areas toward Alameda Creek and then westward toward the outlet of the basin (see Figure 1). The main surface water drainage in the Sunol subbasin is the northwest-flowing Alameda Creek located approximately 2,000 feet north of the subject site. Locally, groundwater is reported to be both confined and unconfined and generally flows to the northwest. Recharge occurs by infiltration of the surface water along Alameda Creek. The northwest trending Sinbad fault is likely to act as a barrier to the lateral movement of groundwater. Regional geologic cross-sections indicate the subject site is on the up-gradient side of the Sinbad fault where groundwater levels reportedly stand higher

The Sunol Valley contains two water-bearing geologic formations that are documented to yield adequate to large quantities of groundwater from production wells. They include Plio-Pleistocene sediments of the Livermore Formation (Tlo) and more recent Quaternary alluvium (Qal). These aquifer sediments are composed largely of sand and gravel with discontinuous layers of clay, and are underlain at a shallow depth by nonwater-bearing rocks that are exposed in the bordering highlands. Specifically, the total thickness of these water-bearing sediments is reported to be less than 200 feet in the vicinity of the site. Drillers logs completed during the drilling of two nearby water production wells indicate non-water bearing shale was logged at a depth of approximately 140’ although, given soil descriptions of other borings in the area suggest it is likely to be blue clay.

Logs of local water wells installed in the vicinity of the fuel leak site suggests some continuity in the shallow aquifer containing upwards of 50 feet of sand and gravel with limited clay. The stratigraphy underlying the shallow aquifer is less consistent due to the logged description of shale in two well logs but discontinuous sand and gravel lenses appearing at varying depths could indicate aquifer connectivity by river channel deposition.

- Drinking Water Well Testing: Testing was completed on the Sunol Tree Gas Station well and the 5 downgradient/sidegradient water wells in May 2003 following the discovery of MTBE in the T-Bear Ranch well. Off-site water production wells were located between approximately 550-1,700 feet downgradient from the former underground fuel storage tanks (USTs). Additional sampling was also completed on two upgradient water production wells (July 2004). The results indicate the T Bear Ranch was the only well that was significantly impacted (130 ppb MTBE).

- **Drinking Water Well Testing:** Testing was completed on the Sunol Tree Gas Station well and the 5 downgradient/sidegradient water wells in May 2003 following the discovery of MTBE in the T-Bear Ranch well. Off-site water production wells were located between approximately 550-1,700 feet downgradient from the former underground fuel storage tanks (USTs). Additional sampling was also completed on two upgradient water production wells (July 2004). The results indicate: The T-Bear Ranch was the only well that was significantly impacted (130 ppb MTBE). No driller's log is available for this well although a video log is scheduled for June 29, 2004.

Preferential Pathways

Active/Abandoned Wells: A water well survey appears to have been completed based on DWR drilling logs and maps provided by Zone 7 Water District but it is unclear whether a detailed site reconnaissance was completed. A follow-up testing program included collection of water samples from a number of local wells but accurate mapping and sampling protocols have not been documented.

On-Site Water Well: The Sunol Tree Gas Station has a production well on the premises and the well construction is unclear, as no log exists. A video log was completed which has cryptic information on the well screen. Specifically, first screens appear at 60 feet, and "water movement was noted at 62', 67', 101', & 103') At this point we assume the well is perforated from 60' to 153' below ground surface.

T Bear Well: The MTBE-impacted T Bear Ranch well was fully characterized using video logging, geophysical & discrete testing. However, recent communication from a local driller indicates the PVC casing may be an insert to a deeper cable tool drilled well (metal cased), so unusual preferential flow paths may exist.

Utility Survey: No utility survey has yet been completed in the immediate vicinity of the fuel release site (i.e., utility trenches with gas, sewer, water, storm drain, telephone, and electric lines).

Site Setting: The fuel release occurred at Sunol Tree Gas Station, an operating facility selling gasoline and diesel. The site located at 3004 Andrade Road, in Sunol, California, near the northbound exit ramp of Highway 680. The relatively flat-lying site contains 6 USTs.

The fuel release was discovered on April 12, 2002, during the removal of five, 15,000-gallon underground fuel tanks (USTs) and piping at the Sunol Tree Gas Station. The USTs were reported to be in good condition having no observable holes or corrosion. The consultant on-site noted hydrocarbon odor and soil staining in excavated soils. Ten sidewall samples and a water sample were obtained from the tank pit. Trace to non-detectable levels of TPH(gas-diesel)+BTEX-MTBE were found in the sidewall samples (ND-to-0.25 mg/kg MTBE). The pit water sample contained 84 ug/L MTBE. Sampling beneath the dispensers (12 samples) and piping trenches (3 samples) revealed generally low concentrations of gas and BTEX. A single elevated diesel hit was detected beneath dispenser #7 (1,300 mg/kg) and trace to elevated MTBE concentrations were detected in nine of the 14 samples (0.0058 to 5.9 mg/kg).

Approximately 3-500-4,000 cubic yards of soil was excavated, stockpiled on-site, and covered with plastic sheeting. Stockpile screening (four composite samples) revealed only trace

concentrations of diesel/motor oil and no detections of gas-BTEX-MTBE. In addition, 160,000 gallons of contaminated water were pumped out during installation of replacement tanks. The containerized water samples had MTBE detections ranging from 73 to 190 ug/L.

- **Source Area:** TPH and MTBE were detected in soil sidewalls during the UST closure operations in May 2002 when five, 15,000-gallon USTs were replaced. Pit sidewall and dispenser samples generally contained low concentrations of fuel contaminants (gas/diesel) and volatile constituent compounds. Specifically, soil concentrations ranged from non-detect to 150 ppm for gasoline, nondetect to 5.9 ppm for MTBE, trace TBA, and no DIPE, ETBE or TAME.

Groundwater samples were subsequently obtained from driven probe borings cored at 5 locations targeting the dispensers and USTs. Groundwater samples contained up to 17,000 ppb gasoline and 43 ppb MTBE (Nov-2002).

- **Dissolved plume:** The dissolved plume appears to be fully characterized. During the May 2002 UST Closure Operations, collected pit water contained no detectable gasoline concentrations but did contain 84 ppb MTBE. Disposal acceptance testing of 160,000 gallons of fuel-impacted groundwater pumped from the open pit containerized in storage tanks contained up to 170 ppb gasoline and 190 ppb MTBE.

Chronology of the Sunol Tree Gas Station Fuel Release + Impact to the T-Bear Ranch Well

2002

- April 12, 2002: Contamination discovered during removal of 5 underground fuel tanks at the Sunol Tree Gas Station
 - 4,000 cubic yards of contaminated removed and stockpiled on-site.
 - 160,000 gallons of contaminated water were pumped out during installation of new tanks
- June 27, 2002: AC-HCSA directive requiring workplan.
- Aug-20, 2002: Clearwater Consultants sampled water from a faucet on the Kelso property- results came back clean.
- Aug-23, 2002: *PRELIMINARY SITE ASSESSMENT (PSA) WORKPLAN* submitted by Clearwater Consultants. PSA work tasks were completed in Aug-Dec, including:
 - Nov-27, 2002: Five borings were drilled on-site. Groundwater encountered at depths between 16-19' (approx). Relatively low soil contamination but elevated groundwater contamination.
 - Dec-12, 2002: Video log of Kelso well showed total depth to be 153 feet and "Mils Knife" perforations located at 60', 62', 67', 101', & 103'. The well pump was located at a depth 100'. Depth to water was at 20 feet. Apparently no discrete samples were obtained from within the well.
 - Mar-14, 2003: Summary Report concluded more delineation was necessary including placement of wells.
 - Aug-27, 2002: AC-HCSA approval of workplan.

2003

- Feb-12, 2003: T-Bear property refinance rejected by Washington Mutual Bank due to perceived financial liability associated with the Kelsoe gasoline contamination. Washington termed the T-Bear Ranch "Unacceptable Collateral at the present time". The bank's environmental appraisal statement included the following rationale for rejection of the bank financing:

"The subject parcel (T-Bear Ranch) adjoins a chevron gas station. The underground tanks at the station have been identified as leaking per the EPA (really - AC-HCSA). The tanks and a significant amount of adjoining earth and soil have been removed.The subject parcel (T-Bear Ranch) derives it's water from two wells - obvious concerns regarding this.....This could cost multiple thousands of dollars and dictate that the Owner of the parcel (i.e.. Hayes, Tovani, lender) clean and dispose of any contaminated soil. Phase II report might lead to a Phase III report if sufficient contaminants are found to be present....."

- Feb-13, 2003: T-Bear Ranch well water sampled and tested by RJ Lee Group, Inc (Pennsylvania). MTBE detected at a concentration of 73 parts per billion (ppb).
- Feb-27, 2003: T-Bear Ranch well water sampled from "Kitchen Sink" and tested by Cerco Analytical (Pleasanton). MTBE detected at a concentration of 87.3 ppb
- Mar-3, 2003: T-Bear Ranch well water re-sampled and tested by Zone 7 Water District. MTBE detected at a concentration of 130 ppb.
- Mar-14, 2003: Clearwater Consultants submitted *PRELIMINARY SITE ASSESSMENT (PSA) SUMMARY REPORT* to AC-HCSA. As noted above, the report summarized field work completed in Aug-Dec, 2002, and concluded that more delineation was necessary including placement of wells.
- Mar-20, 2003: AC-HCSA 1) response to the *PSA Summary Report*, and 2) directive requiring further expedited work. AC-HCSA directed Mr. Kelso to submit a *Soil and Water Investigation (SWI) Workplan* by April 4, 2002 for completing an intensive subsurface investigation, which included the following tasks:
 - Collecting and testing water from domestic/commercial water wells in the vicinity of the Kelose gas station.
 - Removal of the 4,000 cubic yard stockpile at the Kelose gas station
 - Developing a full understanding of site conditions ("site conceptual model") by completing investigative work tasks including: on-site soil logging to at least 60 feet, installation of wells to characterize the full, 3-dimensional extent of contamination, survey of utilities and wells in the vicinity, video logging of the T-Bear well, and reporting.
- Apr-4, 2003: Request for extension of *SWI Workplan* submittal due date.
- Apr-7, 2003: AC-HCSA granted extension for the submittal of the of *SWI Workplan* to April 25th.
- Apr-11, 2003: T-Bear Ranch well water re-sampled by Clearwater Consultants. MTBE detected at a concentration of 120 ppb.
- May-6, 2003: *WELL SAMPLING REPORT* submitted by Clearwater Consultants. The report documents the sampling of 5 production wells located downgradient of the station, including the T-Bear Ranch well. Two of the wells had detections of MTBE including T-Bear Ranch well (120 ppb) and the adjacent golf driving range well (at the detection limit of 0.5 ppb, tested by Zone 7

on 3-4-02). The adjacent golf range well was resampled on April 11, 2003 by Clearwater Consultants and no MTBE was detected by their lab.

- May-8, 2003: *WORK PLAN FOR SOIL AND WATER INVESTIGATION (SWI)* submitted by Clearwater Consultants.
- May-12, 2003: State Underground Storage Tank Fund (State FUND) rejected Murray Kelsoe's application for acceptance on the grounds that he failed to comply with permit requirements. If accepted to the State FUND, Mr. Kelsoe would have been eligible for up to \$1.5 million dollars toward characterization and cleanup of the fuel release.
- Jun-13, 2003: AC-HCSA 1) rejection of the May-8 *SWI Workplan* (above) due to "substantial deficiencies" and required immediate re-submittal of an amended workplan.
 - AC-HCSA rejected the proposal to provide water to the T-Bear Ranch via the Kelsoe well, located at the gas station due to concerns of pulling the fuel release downward to the well screens.
 - Deficiencies noted by AC-HCSA included:
 - inadequate presentation of site-specific subsurface conditions (i.e.. "Site Conceptual Model") which is the rationale for initial installation of piezometers and subsequent installation of monitoring wells.
 - nested wells construction problems;
 - removal of the stockpile.
- Jul-3, 2003: Mr. Kelsoe's attorney submitted a letter appealing the State FUND's rejection.
- Aug-2003: State FUND rejected the appeal.
- Nov-6, 2003: A non-standard, carbon filtration system was installed to remove MTBE from groundwater pumped at the T Bear Ranch well.
 - initial breakthrough of first set of carbon vessels occurred after 89 days (Jan-27th) = 0.63 ppb MTBE.
 - initial breakthrough of second set of carbon vessels occurred after 202 days (May-5th) @ 1.6 ppb.
 - Carbon Change-out of all vessels occurred after 221 days (May-25th).
- 2003 to present: Ongoing Carbon System Monitoring (trace MTBE influent into the system does not require significant carbon change outs – see table for details).

APPENDIX B
Field Procedures

APPENDIX B

FIELD SAMPLING METHODOLOGY AND ELECTRONIC DATA DELIVERY

Cook Environmental Services, Inc. (CES) groundwater sampling methodology is based on procedures specified in the California State Water Resource Control Board *LUFT Field Manual*. Monitoring wells are exposed to atmospheric conditions for approximately 30 minutes prior to measurements to equalize barometric pressure in the well. If the well appears to be pressurized, or the groundwater level is fluctuating, measurements are collected until the level stabilizes.

CES uses an electronic well sounder to measure the static water levels in piezometer wells (e.g. PZ-1, PZ-2, PZ-3) to the nearest hundredth (0.01) of a foot. Depth-to-water measurements are subtracted from the top of casing elevations to obtain static water elevations.

Dedicated plastic tubing is stored in each sampling point is used to purge and sample each sampling point. During purging, physical parameters such as temperature, conductivity, pH and dissolved oxygen (DO) are monitored with field instruments to ensure that these parameters have stabilized to within a variation of fifteen percent prior to sampling. Field instruments are calibrated at the beginning of each sampling event. Purging is complete when field parameters have stabilized or after three well volumes are removed, whichever is greater.

A groundwater sample is collected from each well using the dedicated plastic tubing attached to a short length of clean silicone tubing. The silicone tubing is run through a peristaltic pump. The samples are collected from the effluent end of the silicone tubing after it passes through the peristaltic pump. Samples are collected directly into 40 milliliter volatile organic analysis (VOA) vials preserved with concentrated hydrochloric acid such that the pH of the sample drops to below 2.0. Samples are immediately placed in a cooler and chilled to 4 degrees Celsius until delivered to the laboratory. The samples are typically delivered to the lab the same day they are collected. Observations of groundwater conditions during purging, such as odor, volume of water purged, temperature, pH, specific conductivity, DO, and turbidity are recorded in the sampling logs. Groundwater samples are labeled with the project number, sample ID, and date collected. The same information is recorded on a chain-of-custody form. The samples are placed in an ice chest pending delivery to the ELAP certified laboratory.

Chemical analysis data are submitted electronically to the SWRCB Geographical Environmental Information Management System (GeoTracker) database, as required by AB2886 (Water Code Sections 13195-13198). The Alameda County Environmental Cleanup Oversight Programs (LOP and SLIC) also require submission of reports in electronic form to the Alameda County FTP site. Electronic analytical reports (EDF files) are prepared and formatted by the laboratory and submitted to GeoTracker by CES. Along with the analytical results, well latitudes, longitudes (GEO_XY files), and elevations (GEO_Z files) are submitted to the database, as necessary. Submittal of a well status and usage report (GEO_WELL file) is required for each monitoring event. Current maps (GEO_MAP files) are also submitted when Site features are added or changed. Each report is submitted in pdf format (GEO_REPORT file) as they are completed.

APPENDIX C
Well Sampling Logs

COOK ENVIRONMENTAL SERVICES MONITORING WELL SAMPLING LOG

Site Name: Sunol Tree Gas

Job # 1024

Date: 4/3/2012

Sampler: T. Cook

Well ID: CMT-1-1

Well Diameter 0.375"

Column _____ ft

Well Depth 21.15

Depth to Water _____ ft

Casing Volume _____ oz. 3 Casing Volumes _____ oz.
(0.375" well = col height * 0.49 oz/ft, 0.75" well = 2.7 oz/ft)

Purge Method: peristaltic pump

Sample Method peristaltic pump

Time	Ounces Purged	Temp C	pH	SC (uS)	TDS (mg/L)	DO (mg/L)	Purge Comments
							micropurge, no readings taken

Well ID: CMT-1-2

Well Diameter 0.375"

Column _____ ft

Well Depth 41.27

Depth to Water _____ ft

Casing Volume _____ oz. 3 Casing Volumes _____ oz.
(0.375" well = col height * 0.49 oz/ft, 0.75" well = 2.7 oz/ft)

Purge Method: peristaltic pump

Sample Method peristaltic pump

Time	Ounces Purged	Temp C	pH	SC (uS)	TDS (mg/L)	DO (mg/L)	Purge Comments
							micropurge, no readings taken

Well ID: CMT-1-3

Well Diameter 0.375"

Column _____ ft

Well Depth 51.37

Depth to Water _____ ft

Casing Volume _____ oz. 3 Casing Volumes _____ oz.
(0.375" well = col height * 0.49 oz/ft, 0.75" well = 2.7 oz/ft)

Purge Method: peristaltic pump

Sample Method peristaltic pump

Time	Ounces Purged	Temp C	pH	SC (uS)	TDS (mg/L)	DO (mg/L)	Purge Comments
							micropurge, no readings taken

**COOK ENVIRONMENTAL SERVICES
MONITORING WELL SAMPLING LOG**

Site Name: Sunol Tree Gas

Job # 1024

Date: 4/3/2012

Sampler: T. Cook

Well ID: CMT-3-1

Well Diameter 0.375"

Column _____ ft

Well Depth 20.92

Depth to Water _____ ft

Casing Volume _____ oz. 3 Casing Volumes _____ oz.
(0.375" well = col height * 0.49 oz/ft, 0.75" well = 2.7 oz/ft)

Purge Method: peristaltic pump

Sample Method peristaltic pump

Time	Ounces Purged	Temp C	pH	SC (uS)	TDS (mg/L)	DO (mg/L)	Purge Comments
							micropurge, no readings taken

Well ID: CMT-3-2

Well Diameter 0.375"

Column _____ ft

Well Depth 40.91

Depth to Water _____ ft

Casing Volume _____ oz. 3 Casing Volumes _____ oz.
(0.375" well = col height * 0.49 oz/ft, 0.75" well = 2.7 oz/ft)

Purge Method: peristaltic pump

Sample Method peristaltic pump

Time	Ounces Purged	Temp C	pH	SC (uS)	TDS (mg/L)	DO (mg/L)	Purge Comments
							micropurge, no readings taken

Well ID: CMT-3-3

Well Diameter 0.375"

Column _____ ft

Well Depth 50.93

Depth to Water _____ ft

Casing Volume _____ oz. 3 Casing Volumes _____ oz.
(0.375" well = col height * 0.49 oz/ft, 0.75" well = 2.7 oz/ft)

Purge Method: peristaltic pump

Sample Method peristaltic pump

Time	Ounces Purged	Temp C	pH	SC (uS)	TDS (mg/L)	DO (mg/L)	Purge Comments
							micropurge, no readings taken

COOK ENVIRONMENTAL SERVICES MONITORING WELL SAMPLING LOG

Site Name: Sunol Tree Gas

Job # 1024

Date: 4/3/2012

Sampler: T. Cook

Well ID: CMT-6-1

Well Diameter 0.375"

Column _____ ft

Well Depth 21.66

Depth to Water _____ ft

Casing Volume _____ oz. 3 Casing Volumes _____ oz.
(0.375" well = col height * 0.49 oz/ft, 0.75" well = 2.7 oz/ft)

Purge Method: peristaltic pump

Sample Method peristaltic pump

Time	Ounces Purged	Temp C	pH	SC (uS)	TDS (mg/L)	DO (mg/L)	Purge Comments
							micropurge, no readings taken

Well ID: CMT-6-2

Well Diameter 0.375"

Column _____ ft

Well Depth 42.68

Depth to Water _____ ft

Casing Volume _____ oz. 3 Casing Volumes _____ oz.
(0.375" well = col height * 0.49 oz/ft, 0.75" well = 2.7 oz/ft)

Purge Method: peristaltic pump

Sample Method peristaltic pump

Time	Ounces Purged	Temp C	pH	SC (uS)	TDS (mg/L)	DO (mg/L)	Purge Comments
							micropurge, no readings taken

Well ID: CMT-6-3

Well Diameter 0.375"

Column _____ ft

Well Depth 56.67

Depth to Water _____ ft

Casing Volume _____ oz. 3 Casing Volumes _____ oz.
(0.375" well = col height * 0.49 oz/ft, 0.75" well = 2.7 oz/ft)

Purge Method: peristaltic pump

Sample Method peristaltic pump

Time	Ounces Purged	Temp C	pH	SC (uS)	TDS (mg/L)	DO (mg/L)	Purge Comments
							micropurge, no readings taken

COOK ENVIRONMENTAL SERVICES MONITORING WELL SAMPLING LOG

Site Name: Sunol Tree Gas

Job # 1024

Date: 4/3/2012

Sampler: T. Cook

Well ID: CMT-7-1

Well Diameter 0.375"

Column _____ ft

Well Depth 13.14 ft

Depth to Water _____ ft

Casing Volume _____ oz. 3 Casing Volumes _____ oz.
(0.375" well = col height * 0.49 oz/ft, 0.75" well = 2.7 oz/ft)

Purge Method: peristaltic pump

Sample Method peristaltic pump

Time	Ounces Purged	Temp C	pH	SC (uS)	TDS (mg/L)	DO (mg/L)	Purge Comments
							micropurge, no readings taken

Well ID: CMT-7-2

Well Diameter 0.375"

Column _____ ft

Well Depth 42.72 .ft

Depth to Water _____ ft

Casing Volume _____ oz. 3 Casing Volumes _____ oz.
(0.375" well = col height * 0.49 oz/ft, 0.75" well = 2.7 oz/ft)

Purge Method: peristaltic pump

Sample Method peristaltic pump

Time	Ounces Purged	Temp C	pH	SC (uS)	TDS (mg/L)	DO (mg/L)	Purge Comments
							micropurge, no readings taken

Well ID: CMT-7-3

Well Diameter 0.375"

Column _____ ft

Well Depth 56.72 ft

Depth to Water _____ ft

Casing Volume _____ oz 3 Casing Volumes _____ oz
(0.375" well = col height * 0.49 oz/ft, 0.75" well = 2.7 oz/ft)

Purge Method: peristaltic pump

Sample Method peristaltic pump

Time	Ounces Purged	Temp C	pH	SC (uS)	TDS (mg/L)	DO (mg/L)	Purge Comments
							micropurge, no readings taken

**COOK ENVIRONMENTAL SERVICES
MONITORING WELL SAMPLING LOG**

Site Name: Sunol Tree Gas

Job # 1024

Date: 4/3/2012

Sampler: T. Cook

Well ID: CMT-10-1

Well Diameter 0.375"

Column _____ ft

Well Depth 21.72 ft

Depth to Water _____ ft

Casing Volume _____ oz. 3 Casing Volumes _____ oz.
(0.375" well = col height * 0.49 oz/ft, 0.75" well = 2.7 oz/ft)

Purge Method: peristaltic pump

Sample Method peristaltic pump

Time	Ounces Purged	Temp C	pH	SC (uS)	TDS (mg/L)	DO (mg/L)	Purge Comments
							micropurge, no readings taken

Well ID: CMT-10-2

Well Diameter 0.375"

Column _____ ft

Well Depth 41.72 ft

Depth to Water _____ ft

Casing Volume _____ oz. 3 Casing Volumes _____ oz.
(0.375" well = col height * 0.49 oz/ft, 0.75" well = 2.7 oz/ft)

Purge Method: peristaltic pump

Sample Method peristaltic pump

Time	Ounces Purged	Temp C	pH	SC (uS)	TDS (mg/L)	DO (mg/L)	Purge Comments
							micropurge, no readings taken

Well ID: CMT-10-3

Well Diameter 0.375"

Column _____ ft

Well Depth 51.74 ft

Depth to Water _____ ft

Casing Volume _____ oz. 3 Casing Volumes _____ oz.
(0.375" well = col height * 0.49 oz/ft, 0.75" well = 2.7 oz/ft)

Purge Method: peristaltic pump

Sample Method peristaltic pump

Time	Ounces Purged	Temp C	pH	SC (uS)	TDS (mg/L)	DO (mg/L)	Purge Comments
							micropurge, no readings taken

COOK ENVIRONMENTAL SERVICES MONITORING WELL SAMPLING LOG

Site Name: Sunol Tree Gas

Job # 1024

Date: 4/3/2012

Sampler: T. Cook

Well ID: PZ-2-a

Well Diameter 0.75"

Column _____ft

Well Depth 29.0 ft

Depth to Water _____ft

Casing Volume _____oz. 3 Casing Volumes _____oz.
(0.375" well = col height * 0.49 oz/ft, 0.75" well = 2.7 oz/ft)

Purge Method: peristaltic pump

Sample Method peristaltic pump

Time	Ounces Purged	Temp C	pH	SC (uS)	TDS (mg/L)	DO (mg/L)	Purge Comments
							micropurge, no readings taken

Well ID: PZ-2-b

Well Diameter 0.75"

Column _____ft

Well Depth 48.77 ft

Depth to Water _____ft

Casing Volume _____oz. 3 Casing Volumes _____oz.
(0.375" well = col height * 0.49 oz/ft, 0.75" well = 2.7 oz/ft)

Purge Method: peristaltic pump

Sample Method peristaltic pump

Time	Ounces Purged	Temp C	pH	SC (uS)	TDS (mg/L)	DO (mg/L)	Purge Comments
							micropurge, no readings taken

DEPTH TO WATER IN PEIZOMETERS

Well ID: PZ-1-a Depth to Water _____ft

Well ID: PZ-1-b Depth to Water _____ft

Well ID: PZ-3-a Depth to Water _____ft

Well ID: PZ-3-b Depth to Water _____ft

COOK ENVIRONMENTAL SERVICES MONITORING WELL SAMPLING LOG

Site Name: Sunol Tree Gas

Job # 1024

Date: 4/3/2012

Sampler: T. Cook

Well ID: PZ-2-a

Well Diameter 0.75"

Column 25.95 ft

Well Depth 29.0 ft

Depth to Water 3.05 ft

Casing Volume 70.06 oz.

3 Casing Volumes 210 oz.

(0.375" well = col height * 0.49 oz/ft, 0.75" well = 2.7 oz/ft)

Purge Method: peristaltic pump

Sample Method peristaltic pump

Time	Gallons Purged	Temp C	pH	SC (uS)	TDS (mg/L)	DO (mg/L)	Purge Comments
<u>1:17</u>	<u>70</u>	<u>16.8</u>	<u>6.97</u>	<u>913</u>	<u>≠</u>	<u>1.15</u>	
	<u>140</u>	<u>16.3</u>	<u>7.19</u>	<u>890</u>		<u>1.93</u>	
	<u>210</u>	<u>16.7</u>	<u>7.22</u>	<u>916</u>		<u>1.30</u>	

Well ID: PZ-2-b

Well Diameter 0.75"

Column 45.02 ft

Well Depth 48.77 ft

Depth to Water 3.75 ft

Casing Volume 121.55 oz.

3 Casing Volumes 364 oz.

(0.375" well = col height * 0.49 oz/ft, 0.75" well = 2.7 oz/ft)

Purge Method: peristaltic pump

Sample Method peristaltic pump

Time	Gallons Purged	Temp C	pH	SC (uS)	TDS (mg/L)	DO (mg/L)	Purge Comments
<u>1:44</u>	<u>120</u>	<u>16.6</u>	<u>7.15</u>	<u>1067</u>		<u>0.99</u>	
	<u>240</u>	<u>16.5</u>	<u>6.98</u>	<u>1119</u>		<u>1.45</u>	
	<u>360</u>	<u>16.5</u>	<u>7.04</u>	<u>1124</u>		<u>1.07</u>	

DEPTH TO WATER IN PEIZOMETERS

Well ID: PZ-1-a Depth to Water 5.40 ft

Well ID: PZ-1-b Depth to Water 10.82 ft

Well ID: PZ-3-a Depth to Water 5.58 ft

Well ID: PZ-3-b Depth to Water 7.20 ft

APPENDIX D
Laboratory Analytical Reports



Analytical Report

Cook Environmental Services, Inc. 1485 Treat Blvd, Ste. 203A Walnut Creek, CA 94597	Client Project ID: #1024; Kahn Petroleum	Date Sampled: 04/03/12
		Date Received: 04/04/12
	Client Contact: Tim Cook	Date Reported: 04/10/12
	Client P.O.:	Date Completed: 04/09/12

WorkOrder: 1204088

April 10, 2012

Dear Tim:

Enclosed within are:

- 1) The results of the **17** analyzed samples from your project: **#1024; Kahn Petroleum,**
- 2) QC data for the above samples, and
- 3) A copy of the chain of custody.

All analyses were completed satisfactorily and all QC samples were found to be within our control limits.

If you have any questions or concerns, please feel free to give me a call. Thank you for choosing McC Campbell Analytical Laboratories for your analytical needs.

Best regards,

Angela Rydelius
 Laboratory Manager
 McC Campbell Analytical, Inc.

The analytical results relate only to the items tested.

1204088

McCAMPBELL ANALYTICAL, INC.
1534 Willow Pass Rd.
Pittsburg, CA 94565

Website: www.mccampbell.com
Telephone: (877) 252-9262

Email: main@mccampbell.com
Fax: (925) 252-9269

CHAIN OF CUSTODY RECORD

TURN AROUND TIME

RUSH 24 HR 48 HR 72 HR 5 DAY

EDF Required? Coelt (Normal) Yes Write On (DW) No

Report To: Tim Cook Bill To: same
Company: Cook Environmental Services, Inc.
1485 Treat Blvd, Suite 203A
Walnut Creek, CA 94597 E-Mail: tcook@cookenvironmental.com
Tele: (925) 478-8390 Fax: (925) 478-8394
Project #: 1024 Project Name: Kahn Petroleum
Project Location: 3004 Andrade Road, Sunol, CA
Sampler Name: T. Cook

Analysis Request										Other	Comments
											Filter Samples for Metals analysis: Yes / No

SAMPLE ID (Field Point Name)	LOCATION	SAMPLING		# Containers	Type Containers	MATRIX					METHOD PRESERVED								
		Date	Time			Water	Soil	Air	Sludge	Other	ICE	HCL	HNO ₃	Other					
CMT-1-C1		4/3/12		4	VOA	X					X				X				
CMT-1-C2		4/3/12		4	VOA	X					X				X				
CMT-1-C3		4/3/12		4	VOA	X					X				X				
CMT-3-C1		4/3/12		4	VOA	X					X				X				
CMT-3-C2		4/3/12		4	VOA	X					X				X				
CMT-3-C3		4/3/12		4	VOA	X					X				X				
CMT-6-C1		4/3/12		4	VOA	X					X				X				
CMT-6-C2		4/3/12		4	VOA	X					X				X				
CMT-6-C3		4/3/12		4	VOA	X					X				X				
CMT-7-C1		4/3/12		4	VOA	X					X				X				
CMT-7-C2		4/3/12		4	VOA	X					X				X				
CMT-7-C3		4/3/12		4	VOA	X					X				X				

Relinquished By: *Tim Cook* Date: *4/4* Time: *350p* Received By: *the V&O*

Relinquished By: _____ Date: _____ Time: _____ Received By: _____

Relinquished By: _____ Date: _____ Time: _____ Received By: _____

COMMENTS:
ICE @ *2.0°C*
GOOD CONDITION ✓
HEAD SPACE ABSENT ✓
DECHLORINATED IN LAB
APPROPRIATE CONTAINERS
PRESERVED IN LAB

PRESERVATION VOAS | O&G | METALS | OTHER
pH-2

1204088

McCAMPBELL ANALYTICAL, INC.

1534 Willow Pass Rd.
Pittsburg, CA 94565

Website: www.mccampbell.com
Telephone: (877) 252-9262

Email: main@mccampbell.com
Fax: (925) 252-9269

CHAIN OF CUSTODY RECORD

TURN AROUND TIME

RUSH 24 HR 48 HR 72 HR 5 DAY

EDF Required? Coelt (Normal) Yes Write On (DW) No

Report To: Tim Cook Bill To: same
Company: Cook Environmental Services, Inc.
1485 Treat Blvd, Suite 203A
Walnut Creek, CA 94597 E-Mail: tcook@cookenvironmental.com
Tele: (925) 478-8390 Fax: (925) 478-8394
Project #: 1024 Project Name: Kahn Petroleum
Project Location: 3004 Andrade Road, Sunol, CA
Sampler Name: T. Cook

Analysis Request											Other	Comments						
TPH-g, BTEX & 9 Olys by 8260	TPH as Diesel (8015) & TPHmo	EPA 8260 - Full Scan	8310 Pluse 2-methyl naphthalene	EPA 601 / 8010 / 8021	BTEX ONLY (EPA 602 / 8020)	EPA 608 / 8081	EPA 608 / 8082 PCB's ONLY	EPA 8140 / 8141	EPA 8150 / 8151	EPA 8260 (9 olys only)	EPA 525 / 625 / 8270	PAH's / PNA's by EPA 625 / 8270 / 8310	CAM-17 Metals (6010 / 6020)	LUFT 5 Metals (6010 / 6020)	Lead (200.8 / 200.9 / 6010)	SPLC Leach	TTLIC Leach	
X																		Filter Samples for Metals analysis: Yes / No
X																		
X																		
X																		
X																		

SAMPLE ID (Field Point Name)	LOCATION	SAMPLING		# Containers	Type Containers	MATRIX					METHOD PRESERVED							
		Date	Time			Water	Soil	Air	Sludge	Other	ICE	HCL	HNO ₃	Other				
CMT-10-C1		4/3/12		4	VOA	X								X				
CMT-10-C2		4/3/12		4	VOA	X								X				
CMT-10-C3		4/3/12		4	VOA	X								X				
PZ-2A		4/3/12		4	VOA	X								X				
PZ-2B		4/3/12		4	VOA	X								X				

Relinquished By: Date: 4/4 Time: 350p Received By:

Relinquished By: _____ Date: _____ Time: _____ Received By: _____

Relinquished By: _____ Date: _____ Time: _____ Received By: _____

ICE/r 20°C
GOOD CONDITION ✓
HEAD SPACE ABSENT ✓
DECHLORINATED IN LAB
APPROPRIATE CONTAINERS
PRESERVED IN LAB
VOAS | O&G | METALS | OTHER
PRESERVATION | pH<2



1534 Willow Pass Rd
Pittsburg, CA 94565-1701
(925) 252-9262

CHAIN-OF-CUSTODY RECORD

WorkOrder: 1204088

ClientCode: CESW

WaterTrax
 WriteOn
 EDF
 Excel
 Fax
 Email
 HardCopy
 ThirdParty
 J-flag

Report to:

Tim Cook
Cook Environmental Services, Inc.
1485 Treat Blvd, Ste. 203A
Walnut Creek, CA 94597
925-937-1759 FAX: 925-937-1759

Email: tcook@cookenvironmental.com
cc:
PO:
ProjectNo: #1024; Kahn Petroleum

Bill to:

Tim Cook
Cook Environmental Services, Inc.
1485 Treat Blvd, Ste. 203A
Walnut Creek, CA 94597

Requested TAT:

5 days

Date Received: 04/04/2012

Date Printed: 04/04/2012

Lab ID	Client ID	Matrix	Collection Date	Hold	Requested Tests (See legend below)												
					1	2	3	4	5	6	7	8	9	10	11	12	
1204088-001	CMT-1-C1	Water	4/3/2012	<input type="checkbox"/>	A	A											
1204088-002	CMT-1-C2	Water	4/3/2012	<input type="checkbox"/>	A												
1204088-003	CMT-1-C3	Water	4/3/2012	<input type="checkbox"/>	A												
1204088-004	CMT-3-C1	Water	4/3/2012	<input type="checkbox"/>	A												
1204088-005	CMT-3-C2	Water	4/3/2012	<input type="checkbox"/>	A												
1204088-006	CMT-3-C3	Water	4/3/2012	<input type="checkbox"/>	A												
1204088-007	CMT-6-C1	Water	4/3/2012	<input type="checkbox"/>	A												
1204088-008	CMT-6-C2	Water	4/3/2012	<input type="checkbox"/>	A												
1204088-009	CMT-6-C3	Water	4/3/2012	<input type="checkbox"/>	A												
1204088-010	CMT-7-C1	Water	4/3/2012	<input type="checkbox"/>	A												
1204088-011	CMT-7-C2	Water	4/3/2012	<input type="checkbox"/>	A												
1204088-012	CMT-7-C3	Water	4/3/2012	<input type="checkbox"/>	A												
1204088-013	CMT-10-C1	Water	4/3/2012	<input type="checkbox"/>	A												
1204088-014	CMT-10-C2	Water	4/3/2012	<input type="checkbox"/>	A												

Test Legend:

1	90XYBTEX-8260B_W	2	PREFD REPORT	3		4		5	
6		7		8		9		10	
11		12							

The following SampIDs: 001A, 002A, 003A, 004A, 005A, 006A, 007A, 008A, 009A, 010A, 011A, 012A, 013A, 014A, 015A, 016A, 017A contain testgroup.

Prepared by: Gabrielle Walker

Comments:

NOTE: Soil samples are discarded 60 days after results are reported unless other arrangements are made (Water samples are 30 days). Hazardous samples will be returned to client or disposed of at client expense.

McC Campbell Analytical, Inc.



1534 Willow Pass Rd
 Pittsburg, CA 94565-1701
 (925) 252-9262

CHAIN-OF-CUSTODY RECORD

WorkOrder: 1204088

ClientCode: CESW

WaterTrax WriteOn EDF Excel Fax Email HardCopy ThirdParty J-flag

Report to:

Tim Cook
 Cook Environmental Services, Inc.
 1485 Treat Blvd, Ste. 203A
 Walnut Creek, CA 94597
 925-937-1759 FAX: 925-937-1759

Email: tcook@cookenvironmental.com
 cc:
 PO:
 ProjectNo: #1024; Kahn Petroleum

Bill to:

Tim Cook
 Cook Environmental Services, Inc.
 1485 Treat Blvd, Ste. 203A
 Walnut Creek, CA 94597

Requested TAT: 5 days

Date Received: 04/04/2012

Date Printed: 04/04/2012

Lab ID	Client ID	Matrix	Collection Date	Hold	Requested Tests (See legend below)												
					1	2	3	4	5	6	7	8	9	10	11	12	
1204088-015	CMT-10-C3	Water	4/3/2012	<input type="checkbox"/>	A												
1204088-016	PZ-2A	Water	4/3/2012	<input type="checkbox"/>	A												
1204088-017	PZ-2B	Water	4/3/2012	<input type="checkbox"/>	A												

Test Legend:

1	90XYBTEX-8260B_W	2	PREFD REPORT	3		4		5	
6		7		8		9		10	
11		12							

The following SampIDs: 001A, 002A, 003A, 004A, 005A, 006A, 007A, 008A, 009A, 010A, 011A, 012A, 013A, 014A, 015A, 016A, 017A contain testgroup.

Prepared by: Gabrielle Walker

Comments:

NOTE: Soil samples are discarded 60 days after results are reported unless other arrangements are made (Water samples are 30 days). Hazardous samples will be returned to client or disposed of at client expense.



Sample Receipt Checklist

Client Name: **Cook Environmental Services, Inc.**

Date and Time Received: **4/4/2012 6:31:16 PM**

Project Name: **#1024; Kahn Petroleum**

Checklist completed and reviewed by: **Melissa Valles**

WorkOrder N°: **1204088** Matrix: Water

Carrier: Client Drop-In

Chain of Custody (COC) Information

Chain of custody present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Chain of custody signed when relinquished and received?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Chain of custody agrees with sample labels?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Sample IDs noted by Client on COC?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Date and Time of collection noted by Client on COC?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Sampler's name noted on COC?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>

Sample Receipt Information

Custody seals intact on shipping container/cooler?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>
Shipping container/cooler in good condition?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Samples in proper containers/bottles?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sample containers intact?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sufficient sample volume for indicated test?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	

Sample Preservation and Hold Time (HT) Information

All samples received within holding time?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Container/Temp Blank temperature	Cooler Temp: 2°C		NA <input type="checkbox"/>
Water - VOA vials have zero headspace / no bubbles?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	No VOA vials submitted <input type="checkbox"/>
Sample labels checked for correct preservation?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Metal - pH acceptable upon receipt (pH<2)?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>
Samples Received on Ice?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	

(Ice Type: WET ICE)

* NOTE: If the "No" box is checked, see comments below.

 Comments:



Cook Environmental Services, Inc. 1485 Treat Blvd, Ste. 203A Walnut Creek, CA 94597	Client Project ID: #1024; Kahn Petroleum	Date Sampled: 04/03/12
	Client Contact: Tim Cook	Date Received: 04/04/12
	Client P.O.:	Date Extracted: 04/05/12-04/07/12
		Date Analyzed: 04/05/12-04/07/12

Oxygenates and BTEX by GC/MS*

Extraction Method: SW5030B

Analytical Method: SW8260B

Work Order: 1204088

Lab ID	1204088-001A	1204088-002A	1204088-003A	1204088-004A	Reporting Limit for DF = 1	
Client ID	CMT-1-C1	CMT-1-C2	CMT-1-C3	CMT-3-C1		
Matrix	W	W	W	W		
DF	1	1	1	1		
					S	W

Compound	Concentration				ug/kg	µg/L
tert-Amyl methyl ether (TAME)	ND	ND	ND	ND	NA	0.5
Benzene	ND	ND	ND	ND	NA	0.5
t-Butyl alcohol (TBA)	29	4.4	ND	ND	NA	2.0
1,2-Dibromoethane (EDB)	ND	ND	ND	ND	NA	0.5
1,2-Dichloroethane (1,2-DCA)	ND	ND	ND	ND	NA	0.5
Diisopropyl ether (DIPE)	ND	ND	ND	ND	NA	0.5
Ethanol	ND	ND	ND	ND	NA	50
Ethylbenzene	ND	ND	ND	ND	NA	0.5
Ethyl tert-butyl ether (ETBE)	ND	ND	ND	ND	NA	0.5
Methanol	ND	ND	ND	ND	NA	500
Methyl-t-butyl ether (MTBE)	ND	0.54	ND	ND	NA	0.5
Toluene	ND	ND	ND	ND	NA	0.5
Xylenes, Total	ND	ND	ND	ND	NA	0.5

Surrogate Recoveries (%)

%SS1:	101	100	101	103
%SS2:	100	99	100	99
Comments				

* water and vapor samples are reported in µg/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in µg/wipe.

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

surrogate diluted out of range or surrogate coelutes with another peak.



Cook Environmental Services, Inc. 1485 Treat Blvd, Ste. 203A Walnut Creek, CA 94597	Client Project ID: #1024; Kahn Petroleum	Date Sampled: 04/03/12
	Client Contact: Tim Cook	Date Received: 04/04/12
	Client P.O.:	Date Extracted: 04/05/12-04/07/12
		Date Analyzed: 04/05/12-04/07/12

Oxygenates and BTEX by GC/MS*

Extraction Method: SW5030B

Analytical Method: SW8260B

Work Order: 1204088

Lab ID	1204088-005A	1204088-006A	1204088-007A	1204088-008A	Reporting Limit for DF=1
Client ID	CMT-3-C2	CMT-3-C3	CMT-6-C1	CMT-6-C2	
Matrix	W	W	W	W	
DF	1	1	2.5	1	

Compound	Concentration				ug/kg	µg/L
tert-Amyl methyl ether (TAME)	ND	ND	ND<1.2	ND	NA	0.5
Benzene	ND	ND	ND<1.2	ND	NA	0.5
t-Butyl alcohol (TBA)	2.5	ND	ND<5.0	ND	NA	2.0
1,2-Dibromoethane (EDB)	ND	ND	ND<1.2	ND	NA	0.5
1,2-Dichloroethane (1,2-DCA)	ND	ND	ND<1.2	ND	NA	0.5
Diisopropyl ether (DIPE)	ND	ND	ND<1.2	ND	NA	0.5
Ethanol	ND	ND	ND<120	ND	NA	50
Ethylbenzene	ND	ND	ND<1.2	ND	NA	0.5
Ethyl tert-butyl ether (ETBE)	ND	ND	ND<1.2	ND	NA	0.5
Methanol	ND	ND	ND<1200	ND	NA	500
Methyl-t-butyl ether (MTBE)	8.3	1.1	64	18	NA	0.5
Toluene	ND	ND	ND<1.2	ND	NA	0.5
Xylenes, Total	ND	ND	ND<1.2	ND	NA	0.5

Surrogate Recoveries (%)

%SS1:	102	102	98	103
%SS2:	99	98	95	98
Comments				

* water and vapor samples are reported in µg/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in µg/wipe.

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

surrogate diluted out of range or surrogate coelutes with another peak.



Cook Environmental Services, Inc. 1485 Treat Blvd, Ste. 203A Walnut Creek, CA 94597	Client Project ID: #1024; Kahn Petroleum	Date Sampled: 04/03/12
	Client Contact: Tim Cook	Date Received: 04/04/12
	Client P.O.:	Date Extracted: 04/05/12-04/07/12
		Date Analyzed: 04/05/12-04/07/12

Oxygenates and BTEX by GC/MS*

Extraction Method: SW5030B

Analytical Method: SW8260B

Work Order: 1204088

Lab ID	1204088-009A	1204088-010A	1204088-011A	1204088-012A	Reporting Limit for DF = 1	
Client ID	CMT-6-C3	CMT-7-C1	CMT-7-C2	CMT-7-C3		
Matrix	W	W	W	W		
DF	1	1	5	1		

Compound	Concentration				ug/kg	µg/L
tert-Amyl methyl ether (TAME)	ND	ND	ND<2.5	ND	NA	0.5
Benzene	ND	ND	ND<2.5	ND	NA	0.5
t-Butyl alcohol (TBA)	ND	ND	ND<10	2.5	NA	2.0
1,2-Dibromoethane (EDB)	ND	ND	ND<2.5	ND	NA	0.5
1,2-Dichloroethane (1,2-DCA)	ND	ND	ND<2.5	ND	NA	0.5
Diisopropyl ether (DIPE)	ND	ND	ND<2.5	ND	NA	0.5
Ethanol	ND	ND	ND<250	ND	NA	50
Ethylbenzene	ND	ND	ND<2.5	ND	NA	0.5
Ethyl tert-butyl ether (ETBE)	ND	ND	ND<2.5	ND	NA	0.5
Methanol	ND	ND	ND<2500	ND	NA	500
Methyl-t-butyl ether (MTBE)	21	11	130	10	NA	0.5
Toluene	ND	ND	ND<2.5	ND	NA	0.5
Xylenes, Total	ND	ND	ND<2.5	ND	NA	0.5

Surrogate Recoveries (%)

%SS1:	102	101	96	101	
%SS2:	98	98	95	100	
Comments					

* water and vapor samples are reported in µg/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in µg/wipe.

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

surrogate diluted out of range or surrogate coelutes with another peak.



Cook Environmental Services, Inc. 1485 Treat Blvd, Ste. 203A Walnut Creek, CA 94597	Client Project ID: #1024; Kahn Petroleum	Date Sampled: 04/03/12
	Client Contact: Tim Cook	Date Received: 04/04/12
	Client P.O.:	Date Extracted: 04/05/12-04/07/12
		Date Analyzed: 04/05/12-04/07/12

Oxygenates and BTEX by GC/MS*

Extraction Method: SW5030B

Analytical Method: SW8260B

Work Order: 1204088

Lab ID	1204088-013A	1204088-014A	1204088-015A	1204088-016A	Reporting Limit for DF=1	
Client ID	CMT-10-C1	CMT-10-C2	CMT-10-C3	PZ-2A		
Matrix	W	W	W	W		
DF	1	1	1	1	S	W

Compound	Concentration				ug/kg	µg/L
tert-Amyl methyl ether (TAME)	ND	ND	ND	ND	NA	0.5
Benzene	ND	ND	ND	ND	NA	0.5
t-Butyl alcohol (TBA)	ND	ND	ND	ND	NA	2.0
1,2-Dibromoethane (EDB)	ND	ND	ND	ND	NA	0.5
1,2-Dichloroethane (1,2-DCA)	ND	ND	ND	ND	NA	0.5
Diisopropyl ether (DIPE)	ND	ND	ND	ND	NA	0.5
Ethanol	ND	ND	ND	ND	NA	50
Ethylbenzene	ND	ND	ND	ND	NA	0.5
Ethyl tert-butyl ether (ETBE)	ND	ND	ND	ND	NA	0.5
Methanol	ND	ND	ND	ND	NA	500
Methyl-t-butyl ether (MTBE)	ND	ND	ND	3.9	NA	0.5
Toluene	ND	ND	ND	ND	NA	0.5
Xylenes, Total	ND	ND	ND	ND	NA	0.5

Surrogate Recoveries (%)

%SS1:	100	101	101	101	
%SS2:	98	100	97	97	
Comments					

* water and vapor samples are reported in µg/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in µg/wipe.

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

surrogate diluted out of range or surrogate coelutes with another peak.



Cook Environmental Services, Inc. 1485 Treat Blvd, Ste. 203A Walnut Creek, CA 94597	Client Project ID: #1024; Kahn Petroleum	Date Sampled: 04/03/12
	Client Contact: Tim Cook	Date Received: 04/04/12
	Client P.O.:	Date Extracted: 04/05/12-04/07/12
		Date Analyzed: 04/05/12-04/07/12

Oxygenates and BTEX by GC/MS*

Extraction Method: SW5030B

Analytical Method: SW8260B

Work Order: 1204088

Lab ID	1204088-017A				Reporting Limit for DF = 1
Client ID	PZ-2B				
Matrix	W				
DF	1				

Compound	Concentration				ug/kg	µg/L
tert-Amyl methyl ether (TAME)	ND				NA	0.5
Benzene	ND				NA	0.5
t-Butyl alcohol (TBA)	ND				NA	2.0
1,2-Dibromoethane (EDB)	ND				NA	0.5
1,2-Dichloroethane (1,2-DCA)	ND				NA	0.5
Diisopropyl ether (DIPE)	ND				NA	0.5
Ethanol	ND				NA	50
Ethylbenzene	ND				NA	0.5
Ethyl tert-butyl ether (ETBE)	ND				NA	0.5
Methanol	ND				NA	500
Methyl-t-butyl ether (MTBE)	ND				NA	0.5
Toluene	ND				NA	0.5
Xylenes, Total	ND				NA	0.5

Surrogate Recoveries (%)

%SS1:	100			
%SS2:	97			
Comments				

* water and vapor samples are reported in µg/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in µg/wipe.

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

surrogate diluted out of range or surrogate coelutes with another peak.



McC Campbell Analytical, Inc.

"When Quality Counts"

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Cook Environmental Services, Inc. 1485 Treat Blvd, Ste. 203A Walnut Creek, CA 94597	Client Project ID: #1024; Kahn Petroleum	Date Sampled: 04/03/12
	Client Contact: Tim Cook	Date Received: 04/04/12
	Client P.O.:	Date Extracted 04/05/12-04/06/12
		Date Analyzed 04/05/12-04/06/12

TPH(g) by Purge & Trap and GC/MS*

Extraction method: SW5030B

Analytical methods: SW8260B

Work Order: 1204088

Lab ID	Client ID	Matrix	TPH(g)	DF	% SS	Comments
001A	CMT-1-C1	W	ND	1	104	
002A	CMT-1-C2	W	ND	1	103	
003A	CMT-1-C3	W	ND	1	104	
004A	CMT-3-C1	W	ND	1	103	
005A	CMT-3-C2	W	ND	1	103	
006A	CMT-3-C3	W	ND	1	102	
007A	CMT-6-C1	W	ND	1	102	
008A	CMT-6-C2	W	ND	1	102	
009A	CMT-6-C3	W	ND	1	102	
010A	CMT-7-C1	W	ND	1	101	
011A	CMT-7-C2	W	ND	1	102	
012A	CMT-7-C3	W	ND	1	103	
013A	CMT-10-C1	W	ND	1	102	
014A	CMT-10-C2	W	ND	1	103	
015A	CMT-10-C3	W	ND	1	101	
016A	PZ-2A	W	ND	1	101	

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	50	µg/L
	S	NA	NA

* water and vapor samples are reported in µg/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in µg/wipe.

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

surrogate diluted out of range or coelutes with another peak; &) low surrogate due to matrix interference.



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Cook Environmental Services, Inc. 1485 Treat Blvd, Ste. 203A Walnut Creek, CA 94597	Client Project ID: #1024; Kahn Petroleum	Date Sampled: 04/03/12
	Client Contact: Tim Cook	Date Received: 04/04/12
	Client P.O.:	Date Extracted 04/05/12-04/06/12
		Date Analyzed 04/05/12-04/06/12

TPH(g) by Purge & Trap and GC/MS*

Extraction method: SW5030B

Analytical methods: SW8260B

Work Order: 1204088

Lab ID	Client ID	Matrix	TPH(g)	DF	% SS	Comments
017A	PZ-2B	W	ND	1	101	

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	50	µg/L
	S	NA	NA

* water and vapor samples are reported in µg/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in µg/wipe.

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

surrogate diluted out of range or coelutes with another peak; &) low surrogate due to matrix interference.



QC SUMMARY REPORT FOR SW8260B

W.O. Sample Matrix: Water

QC Matrix: Water

BatchID: 66429

WorkOrder: 1204088

EPA Method: SW8260B		Extraction: SW5030B					Spiked Sample ID: 1204088-002A			
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	Acceptance Criteria (%)			
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS	
tert-Amyl methyl ether (TAME)	ND	10	110	108	1.88	109	70 - 130	20	70 - 130	
Benzene	ND	10	109	107	1.80	107	70 - 130	20	70 - 130	
t-Butyl alcohol (TBA)	4.4	40	117	118	0.998	94.8	70 - 130	20	70 - 130	
1,2-Dibromoethane (EDB)	ND	10	109	109	0	105	70 - 130	20	70 - 130	
1,2-Dichloroethane (1,2-DCA)	ND	10	111	110	1.09	106	70 - 130	20	70 - 130	
Diisopropyl ether (DIPE)	ND	10	104	104	0	103	70 - 130	20	70 - 130	
Ethyl tert-butyl ether (ETBE)	ND	10	108	108	0	107	70 - 130	20	70 - 130	
Methyl-t-butyl ether (MTBE)	0.54	10	112	112	0	104	70 - 130	20	70 - 130	
Toluene	ND	10	101	100	0.955	106	70 - 130	20	70 - 130	
%SS1:	100	25	104	106	2.25	103	70 - 130	20	70 - 130	
%SS2:	99	25	104	105	0.988	100	70 - 130	20	70 - 130	
%SS3:	87	2.5	91	90	1.17	90	70 - 130	20	70 - 130	

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:
 NONE

BATCH 66429 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1204088-001A	04/03/12	04/05/12	04/05/12 2:37 PM	1204088-002A	04/03/12	04/05/12	04/05/12 3:18 PM
1204088-003A	04/03/12	04/05/12	04/05/12 9:22 PM	1204088-004A	04/03/12	04/05/12	04/05/12 10:03 PM
1204088-005A	04/03/12	04/05/12	04/05/12 10:43 PM	1204088-006A	04/03/12	04/05/12	04/05/12 11:23 PM
1204088-007A	04/03/12	04/07/12	04/07/12 1:12 AM	1204088-008A	04/03/12	04/06/12	04/06/12 12:42 AM
1204088-009A	04/03/12	04/06/12	04/06/12 1:22 AM	1204088-010A	04/03/12	04/06/12	04/06/12 2:02 AM
1204088-011A	04/03/12	04/07/12	04/07/12 1:53 AM	1204088-012A	04/03/12	04/06/12	04/06/12 3:22 AM
1204088-013A	04/03/12	04/06/12	04/06/12 4:02 AM	1204088-014A	04/03/12	04/06/12	04/06/12 4:41 AM
1204088-015A	04/03/12	04/06/12	04/06/12 5:20 AM	1204088-016A	04/03/12	04/06/12	04/06/12 6:00 AM
1204088-017A	04/03/12	04/06/12	04/06/12 6:40 AM				

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.
 $\% \text{ Recovery} = 100 * (\text{MS} - \text{Sample}) / (\text{Amount Spiked})$; $\text{RPD} = 100 * (\text{MS} - \text{MSD}) / ((\text{MS} + \text{MSD}) / 2)$.
 MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.
 N/A = not enough sample to perform matrix spike and matrix spike duplicate.
 NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.
 Laboratory extraction solvents such as methylene chloride and acetone may occasionally appear in the method blank at low levels.