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Alameda County  
Environmental Health

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22 July 2008

Mr. Roger Papler, P.G.  
California Regional Water Quality Control Board  
San Francisco Bay Region  
1515 Clay Street, Suite 1400  
Oakland, California 94612

**Subject: Results of Second Quarter 2008 Groundwater Monitoring  
Hopyard Cleaners, 2771 Hopyard Road, Pleasanton, California  
Self-Monitoring Program No. R2-2006-0059**

Dear Mr. Papler:

On behalf of the property owner, Ms. Clare Leung, Geosyntec Consultants (Geosyntec) prepared this second quarter 2008 groundwater monitoring report for Hopyard Cleaners located at 2771 Hopyard Road, in Pleasanton, California (the "Site"). A site location map is provided in Figure 1. The work described in this report was performed in compliance with the California Regional Water Quality Control Board, San Francisco Bay Region (RWQCB) Order No. R2-2008-0032, issued on 29 May 2008.

The Site monitoring well network consists of five wells (MW-1 through MW-5). For discussion purposes, the uppermost groundwater zone beneath the Site, which occurs from about 20 to 35 feet below ground surface (ft bgs), is referred to as the A Zone, while the deep groundwater from about 40 to 60 ft bgs is referred to as the B Zone. Wells MW-1 through MW-4 monitoring groundwater in the A Zone beneath the Site. Monitoring well MW-5 monitors groundwater in the B Zone. Well completion details are summarized in Table 1. Well locations relative to the Site are shown on Figure 2. Wells MW-1 through MW-3 were installed in September 2006. Wells MW-4 and MW-5 were installed in July 2007.

## **WORK PERFORMED THIS QUARTER**

The following work was performed during the second quarter 2008:

- The second quarter groundwater monitoring event was performed on 16 May 2008 and included the second passive diffusion bag (PDB) sampler comparison study. This work is discussed in detail in the following sections.
- A report repository was established at the City of Pleasanton Public Library located at 400 Old Bernal Avenue in Pleasanton, California.
- The *Fact Sheet – Proposed Cleanup Plan* and the *Tentative Order – Final Site Cleanup Requirements* prepared by the RWQCB were mailed to residents within 500 feet of the Site, and they were submitted to the repository at the City of Pleasanton Public Library during the week of 21 April 2008.
- Additional characterization of the deeper groundwater downgradient of the Site was conducted on 28 and 29 April 2008, as outlined in the *Revised Groundwater Characterization Work Plan – Deeper Zone* submitted to the RWQCB on 29 February 2008<sup>1</sup>. The results of the deeper zone characterization and a work plan for additional deep zone monitoring well installation were reported to the RWQCB in the *Deeper Zone Groundwater Characterization Results and Monitoring Well Installation Work Plan* on 23 June 2008.

## QUARTERLY GROUNDWATER MONITORING

Quarterly groundwater monitoring was performed at the Site on 16 May 2008, as described below.

### Sampling and Analytical Procedures

The groundwater sampling fieldwork was performed by Environmental Sampling Services, Inc. (ESS), of Martinez, California. ESS's report, including field procedures and sampling logs, is provided in Attachment 1. Samples were hand-delivered to Test America of Pleasanton, California for analysis. Groundwater samples from the Site monitoring wells were analyzed for volatile organic compounds (VOCs) by EPA Method 8260B.

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<sup>1</sup> Geosyntec Consultants, 2008. *Revised Groundwater Characterization Work Plan – Deeper Zone, Hopyard Cleaners, 2771 Hopyard Road, Pleasanton, California*, 29 February 2008.

## **Groundwater Elevations and Flow Conditions**

Table 2 summarizes groundwater elevations measured during this and previous sampling events. Groundwater in the A Zone (MW-1 through MW-4) beneath the Site was encountered between 11.30 and 12.18 feet bgs. These depths correspond to groundwater elevations between 314.07 and 314.39 feet above Mean Sea Level (MSL). Groundwater in the B Zone monitored by MW-5 was encountered at 23.06 feet bgs, which corresponds to an elevation of 304.13 feet MSL.

Water levels measured in the A Zone wells taken during the second quarter 2008 event were used to construct groundwater elevation contours, as shown in Figure 2. The second quarter 2008 groundwater contours indicate a general groundwater flow to the north-northwest with an average gradient of 0.0031 feet per foot (ft/ft) (16.5 feet per mile (ft/mi)). This gradient and flow direction is consistent with previous monitoring events, as shown on Table 3.

## **Data QA/QC**

Geosyntec performed a quality assurance/quality control (QA/QC) review of the analytical data. Data were reviewed for completeness, accuracy, precision, sample contamination, conformance with holding times, and detection limits within acceptable ranges. Based on this review, the data are acceptable.

## **Analytical Results**

Laboratory analytical reports are provided in Attachment 2. Table 4 summarizes analytical results for groundwater samples collected during the second quarter 2008 event together with historical results. Analytical results for the current sampling event are also shown on Figure 2. Isoconcentration contour maps for tetrachloroethene (PCE) and trichloroethene (TCE) are shown on Figures 3 through 5. The isoconcentration contours were drawn using current data from monitoring wells along with results from grab groundwater samples previously collected at the Site.

This is the seventh monitoring event since wells MW-1 through MW-3 were installed in September 2006 and the fourth monitoring event for wells MW-4 and MW-5. Analytical results for samples taken from the five monitoring wells showed the highest VOC concentrations at MW-2. The PCE and TCE concentrations at well MW-2 were 5,800 and 460 micrograms per liter ( $\mu\text{g/L}$ ), respectively. These results are within the historical concentrations, which have ranged from 4,700 to 8,200  $\mu\text{g/L}$  and 350 to 590  $\mu\text{g/L}$  for PCE and TCE, respectively.

## **PASSIVE DIFFUSION BAG SAMPLER STUDY**

The PDB sampler study was proposed in the *Results of Forth Quarter 2007 Groundwater Monitoring* report submitted to the RWQCB on 31 January 2008<sup>2</sup> and was verbally approved by the RWQCB in a conference call on 12 March 2008. Part one of the PDB study was completed in the first quarter 2008, and part two was conducted during this second quarter 2008 monitoring event.

PDB samplers have been shown to provide data of comparable quality to conventional purging and sampling with a peristaltic pump. The use of PDB samplers reduces the volume of groundwater produced during purging prior to sample collection and reduces the amount of time required for sampling. Also, this Site is located in a heavily trafficked area, and the use of PDBs would significantly reduce traffic disruption and the need for traffic control.

### **General Information on PDBs**

The PDB technique employs a diffusive-membrane bag that is filled by the manufacturer with analyte-free, deionized water, sealed, mounted to a weighted line, and suspended at a specified depth within a monitoring well. Over a relatively short period of time (within a week or two), VOCs in the groundwater diffuse across the membrane and VOC concentrations within the bag attain equilibrium with the groundwater flowing through the screen of the monitoring well. At any time after equilibration, the bag is retrieved, opened, and the contents are poured into a sample container (e.g. VOA vial) in a manner similar to the use of a bailer. The technique eliminates the need for purging, which helps to minimize the influence of turbidity on the sample integrity and reduces purge water waste. Passive diffusion samplers are disposable and thus reduce the risk of cross-contamination that results from incomplete decontamination of traditional samplers.

### **Deployment and Sampling Procedures**

Comparison sampling at the Site was proposed to be conducted for two monitoring events, during the first and second quarter 2008. Sampling procedures for the second quarter 2008 are described below.

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<sup>2</sup> Geosyntec Consultants, 2008. *Results of the Fourth Quarter 2007 Groundwater Monitoring, Hopyard Cleaners, 2771 Hopyard Road, Pleasanton, California, Self-Monitoring Program No. R2-2006-0059*, 31 January 2008.

During the second quarter 2008 sampling event, the PDBs were deployed in all five monitoring wells on 28 and 29 April 2008. The PDB samplers were deployed at a specific depth in each well depending on the location of the water-bearing zone, as logged during well installation and previous investigations. Table 5 provides the PDB deployment depth(s) for each well during the second quarter 2008 sampling event. During the first quarter 2008 monitoring, detected VOC concentrations in PDB samples collected from the shallow (52.5 ft bgs) and deep (57.5 ft bgs) PDBs in MW-5 were similar with the relative percent difference in PCE concentration less than 30%. This indicates that there is little to no stratification in MW-5; therefore PDBs were deployed in the center of the MW-5 well screen (at 55 ft bgs) for the second quarter 2008 PDB comparison study.

The PDBs remained in the wells for a period of at least two weeks. ESS removed the PDBs and immediately sampled them on 16 May 2008 prior to sampling the wells via peristaltic pump. All samples were hand delivered to the analytical laboratory under standard chain of custody procedures and analyzed for VOCs by EPA Method 8260B. The field report and laboratory analytical results of the second quarter 2008 PDB comparison sampling are provided in Attachments 1 and 2, respectively.

### **Results of PDB Comparison Study**

A summary of analytical results for the first and second quarter 2008 PDB sampling in comparison to the first and second quarter 2008 groundwater sampling results via peristaltic pump are provided on Table 6. In general, cis-1,2-DCE, PCE, and TCE concentrations were slightly higher in samples collected from PDBs. Sample results reported as non detect using the conventional sampling method were also non detect using the PDB sampling method. These results indicate that PDB samplers are an appropriate and reliable method of monitoring VOCs at this Site. Therefore, PDBs will now replace sampling via peristaltic pump beginning in the third quarter 2008.

### **FUTURE WORK**

The following work will be completed during the third quarter 2008:

- The *Soil Vapor Extraction System Design and Operation Plan* will be submitted to the RWQCB by 15 July 2008 with implementation of the SVE system by 1 September 2008.

- A technical report documenting the procedures to be used to minimize human exposure to soil and groundwater prior to meeting cleanup standards at the Site will be submitted by 31 July 2008.
- The *Revised Remedial Action Plan*, including a human health risk assessment will be submitted to the RWQCB on 29 August 2008 (anticipated submittal date).
- Deep zone monitoring well installation, as detailed in the *Deeper Zone Groundwater Characterization Results and Monitoring Well Installation Work Plan*, will be completed during the third quarter 2008 and will be reported to the RWQCB by 15 September 2008.
- The next quarterly groundwater monitoring event will be performed in the third quarter 2008. New PDBs were deployed in the wells for the third quarter 2008 sampling event on 16 May 2008 after second quarter 2008 monitoring was complete. The results of the quarterly monitoring will be discussed in the third quarter 2008 monitoring report due to the RWQCB on 31 October 2008.

If you have any questions, please call Angela Liang at (510) 285-2700.

Sincerely,



Melissa Asher  
Senior Staff Engineer



Hanchih (Angela) Liang, Ph.D., P.E.  
Senior Engineer

Attachments:	Table 1	Well Construction Summary
	Table 2	Groundwater Elevations
	Table 3	Groundwater Gradient Summary – A Zone
	Table 4	Groundwater Analytical Summary

Table 5	PDB Deployment Information – PDB Study
Table 6	PDB Study Analytical Summary
Figure 1	Site Location
Figure 2	Second Quarter 2008 Groundwater Elevation Contours and Analytical Results
Figure 3	Second Quarter 2008 PCE Isoconcentration Contours in A Zone Groundwater (20 to 35 ft bgs)
Figure 4	Second Quarter 2008 PCE Isoconcentration Contours in B Zone Groundwater (40 to 60 ft bgs)
Figure 5	Second Quarter 2008 TCE Isoconcentration Contours in A Zone Groundwater (20 to 35 ft bgs)
Attachment 1	Environmental Sampling Services Field Report
Attachment 2	Laboratory Analytical Report

Copy with Attachments:

- Ms. Clare Leung, Hopyard Cleaners
- Ms. Joy Ricigliano, Zurich Insurance
- Mr. Mark Peterson, GES
- Mr. Wyman Hong, Zone 7 Water Agency
- Mr. Jerry Wickham, Alameda County Environmental Health
- Ms. Danielle Stefani, City of Pleasanton Fire Department
- Mr. William Henderlong, Town & Country Properties

## **TABLES**



**Table 1**  
**Monitoring Well Construction Summary**  
**Hopyard Cleaners**  
**Pleasanton, California**

Well I.D.	Date of Completion	Northing	Easting	TOC Elevation (MSL)	Total Depth (ft bgs)		Screen Interval Depth (ft bgs)		Well Casing Material	Well Diameter (inches)
					Borehole	Well	Top	Bottom		
<b>A Zone Monitoring Wells</b>										
MW-1	9/29/2006	2071427.29	6157712.24	325.77	30	30	20.00	30.00	SCH 40 PVC	2
MW-2	9/26/2006	2071357.03	6157791.18	325.69	30	30	20.00	30.00	SCH 40 PVC	2
MW-3	9/27/2006	2071461.21	6157787.94	326.27	30	30	20.00	30.00	SCH 40 PVC	2
MW-4	7/20/2007	2071382.30	6157557.57	326.27	36.5	35	25.00	35.00	SCH 40 PVC	2
<b>B Zone Monitoring Wells</b>										
MW-5*	7/19/2007	2071292.25	6157654.24	327.19	60	60	50.00	60.00	SCH 40 PVC	2

Notes:

ft bgs = feet below ground surface

MSL = mean sea level

TOC = Top of Casing

Elevations are based on NAVD 88 Datum

\* Conductor casing was installed from 0 to 40 ft bgs at MW-5.

**Table 2**  
**Groundwater Elevations**  
**Hopyard Cleaners**  
**Pleasanton, California**

Well I.D. (Screen Interval)	TOC Elevation (ft MSL)	Sample Date	Depth to Groundwater Below TOC (ft)	Groundwater Elevation (ft MSL)
<b>A Zone Monitoring Wells</b>				
MW-1 (20-30 ft bgs)	325.77	5/16/2008	11.70	314.07
		2/15/2008	11.38	314.39
		1/3/2008	13.63	312.14
		8/3/2007	14.40	311.37
		5/11/2007	12.27	313.50
		2/9/2007	13.98	311.79
		11/20/2006	14.88	310.89
MW-2 (20-30 ft bgs)	325.69	5/16/2008	11.30	314.39
		2/15/2008	10.87	314.82
		1/3/2008	13.21	312.48
		8/3/2007	13.72	311.97
		5/11/2007	11.87	313.82
		2/9/2007	13.55	312.14
		11/20/2006	14.36	311.33
MW-3 (20-30 ft bgs)	326.27	5/16/2008	12.18	314.09
		2/15/2008	11.68	314.59
		1/3/2008	14.02	312.25
		8/3/2007	14.68	311.59
		5/11/2007	12.72	313.55
		2/9/2007	14.41	311.86
		11/20/2006	15.28	310.99
MW-4 (25-35 ft bgs)	326.27	5/16/2008	12.12	314.15
		2/15/2008	12.05	314.22
		1/3/2008	14.73	311.54
		8/3/2007	15.85	310.42
<b>B Zone Monitoring Wells</b>				
MW-5 (50-60 ft bgs)	327.19	5/16/2008	23.06	304.13
		2/15/2008	19.74	307.45
		1/3/2008	22.65	304.54
		8/3/2007	30.51	296.68

Notes:

ft MSL = feet above mean sea level

TOC = Top of Casing

ft bgs = feet below ground surface

Elevations are based on NAVD 88 Datum

**Table 3**  
**Groundwater Gradient Summary - A Zone**  
**Hopyard Cleaners**  
**Pleasanton, California**

Date	Gradient		Flow Direction
	ft/ft	ft/mi	
5/16/2008	0.0031	16.5	North-Northwest
2/15/2008	0.0038	20.5	Northwest
1/3/2008	0.0025	13.2	Northwest
8/3/2007	0.0070	37.0	West-Northwest
5/11/2007	0.0030	15.8	North-Northwest
2/9/2007	0.0010	5.3	North-Northwest
11/20/2006	0.0040	22.0	Northwest

Notes:

ft/ft = feet per foot

ft/mi = feet per mile

**Table 4**  
**Groundwater Analytical Summary**  
**Hopyard Cleaners**  
**Pleasanton, California**

Well I.D. (Screen Interval)	Sample Date	Sampling Method	Volatile Organic Compounds -		
			cis-1,2-DCE	PCE	TCE
<b>A Zone Monitoring Wells</b>					
MW-1 (20-30 ft bgs)	5/16/2008	Purge and Sample	250	1,600	280
	2/15/2008	Purge and Sample	230	1,400	250
	1/2/2008	Purge and Sample	230	1,600	270
	8/3/2007	Purge and Sample	260	1,600	270
	5/11/2007	Purge and Sample	310	2,500	310
	2/9/2007	Purge and Sample	270 / 270	2,400 / 2,300	290 / 290
	11/20/2006	Purge and Sample	370	3,100	370
MW-2 (20-30 ft bgs)	5/16/2008	Purge and Sample	900 / 930	5,800 / 5,900	460 / 450
	2/15/2008	Purge and Sample	690 / 690	4,100 / 4,000	320 / 300
	1/2/2008	Purge and Sample	940 / 890	8,200 / 8,200	560 / 580
	8/3/2007	Purge and Sample	1,200 / 1,100	8,000 / 8,100	590 / 570
	5/11/2007	Purge and Sample	1,000 / 980	7,200 / 7,300	490 / 450
	2/9/2007	Purge and Sample	760	4,700	350
	11/20/2006	Purge and Sample	800 / 800	5,700 / 5,800	370 / 360
MW-3 (20-30 ft bgs)	5/16/2008	Purge and Sample	5.0	39	4.3
	2/15/2008	Purge and Sample	6.2	44	5.1
	1/2/2008	Purge and Sample	5.2	46	4.6
	8/3/2007	Purge and Sample	4.7	37	4.2
	5/11/2007	Purge and Sample	5.5	43	4.4
	2/9/2007	Purge and Sample	5.3	42	4.2
	11/20/2006	Purge and Sample	10	93	7.2
MW-4 (25-35 ft bgs)	5/16/2008	Purge and Sample	3.7	<0.50	2.6
	2/15/2008	Purge and Sample	4.2	<0.50	4.0
	1/3/2008	Purge and Sample	4.2	<0.50	3.5
	8/3/2007	Purge and Sample	4.6	<0.50	3.5
<b>B Zone Monitoring Wells</b>					
MW-5 (50-60 ft bgs)	5/16/2008	Purge and Sample	<0.50	24	<0.50
	2/15/2008	Purge and Sample	<0.50	26	<0.50
	1/3/2008	Purge and Sample	<0.50	38	<0.50
	8/3/2007	Purge and Sample	<0.50	37	<0.50

**Notes:**

Table shows only compounds detected above the laboratory reporting limit  
 cis-1,2-DCE - cis-1,2-dichloroethene

PCE - tetrachloroethene

TCE - trichloroethene

"-- / --" - result on right represents duplicate sample

ft bgs = feet below ground surface

**Table 6**  
**PDB Study Analytical Summary**  
**Hopyard Cleaners**  
**Pleasanton, California**

Well I.D.	Sample Date	Sampling Method	EPA Method 8260B (ug/L)		
			cis-1,2-DCE	PCE	TCE
<b>A Zone Monitoring Wells</b>					
MW-1	5/16/2008	PDB (25.0 ft bgs)	260	1,900	310
	5/16/2008	Purge and Sample	250	1,600	280
	2/29/2008	PDB (25.0 ft bgs)	330	2,000	330
	2/15/2008	Purge and Sample	230	1,400	250
MW-2	5/16/2008	PDB (25.5 ft bgs)	940	6,700	480
	5/16/2008	Purge and Sample	900 / 930	5,800 / 5,900	460 / 450
	2/29/2008	PDB (25.5 ft bgs)	780	5,300	360
	2/15/2008	Purge and Sample	690 / 690	4,100 / 4,000	320 / 300
MW-3	5/16/2008	PDB (25.0 ft bgs)	5.4	46	4.4
	5/16/2008	Purge and Sample	5.0	39	4.3
	2/29/2008	PDB (25.0 ft bgs)	6.9	58	5.9
	2/15/2008	Purge and Sample	6.2	44	5.1
MW-4	5/16/2008	PDB (27.5 ft bgs)	3.6	<0.50	2.7
	5/16/2008	Purge and Sample	3.7	<0.50	2.6
	2/29/2008	PDB (27.5 ft bgs)	3.4	<0.50	3.0
	2/15/2008	Purge and Sample	4.2	<0.50	4.0
<b>B Zone Monitoring Wells</b>					
MW-5	5/16/2008	PDB (55 ft bgs)	<0.50	34	<0.50
	5/16/2008	Purge and Sample	<0.50	24	<0.50
	2/29/2008	PDB (52.5 ft bgs)	<0.50	41	<0.50
	2/29/2008	PDB (57.5 ft bgs)	<0.50	33	<0.50
	2/15/2008	Purge and Sample	<0.50	26	<0.50

Notes:

Table shows only compounds detected above the laboratory reporting limit

cis-1,2-DCE - cis-1,2-dichloroethene

PCE - tetrachloroethene

TCE - trichloroethene

**Table 5**  
**PDB Deployment Information - PDB Study**  
**Hopyard Cleaners**  
**Pleasanton, California**

<b>Well ID</b>	<b>Screen Interval (ft bgs)</b>	<b>Water-bearing Zone (ft bgs)</b>	<b>PDB Deployment Depth (ft bgs)<sup>1</sup></b>	<b>Comments</b>
MW-1	20 - 30	24 - 26 <sup>2</sup>	25.0	PDB deployed in center of 2 ft thick water-bearing zone
MW-2	20 - 30	23 - 28	25.5	PDB deployed in center of 5 ft thick water-bearing zone
MW-3	20 - 30	24 - 26 <sup>2</sup>	25.0	PDB deployed in center of 2 ft thick water-bearing zone
MW-4	25 - 35	25 - 30	27.5	PDB deployed in center of 5 ft thick water-bearing zone
MW-5	50 - 60	50 - 60	55 <sup>3</sup>	PDB deployed in center of 10 ft thick water-bearing zone

1 Depth provided is depth below ground surface of the center of the 24-inch PDB

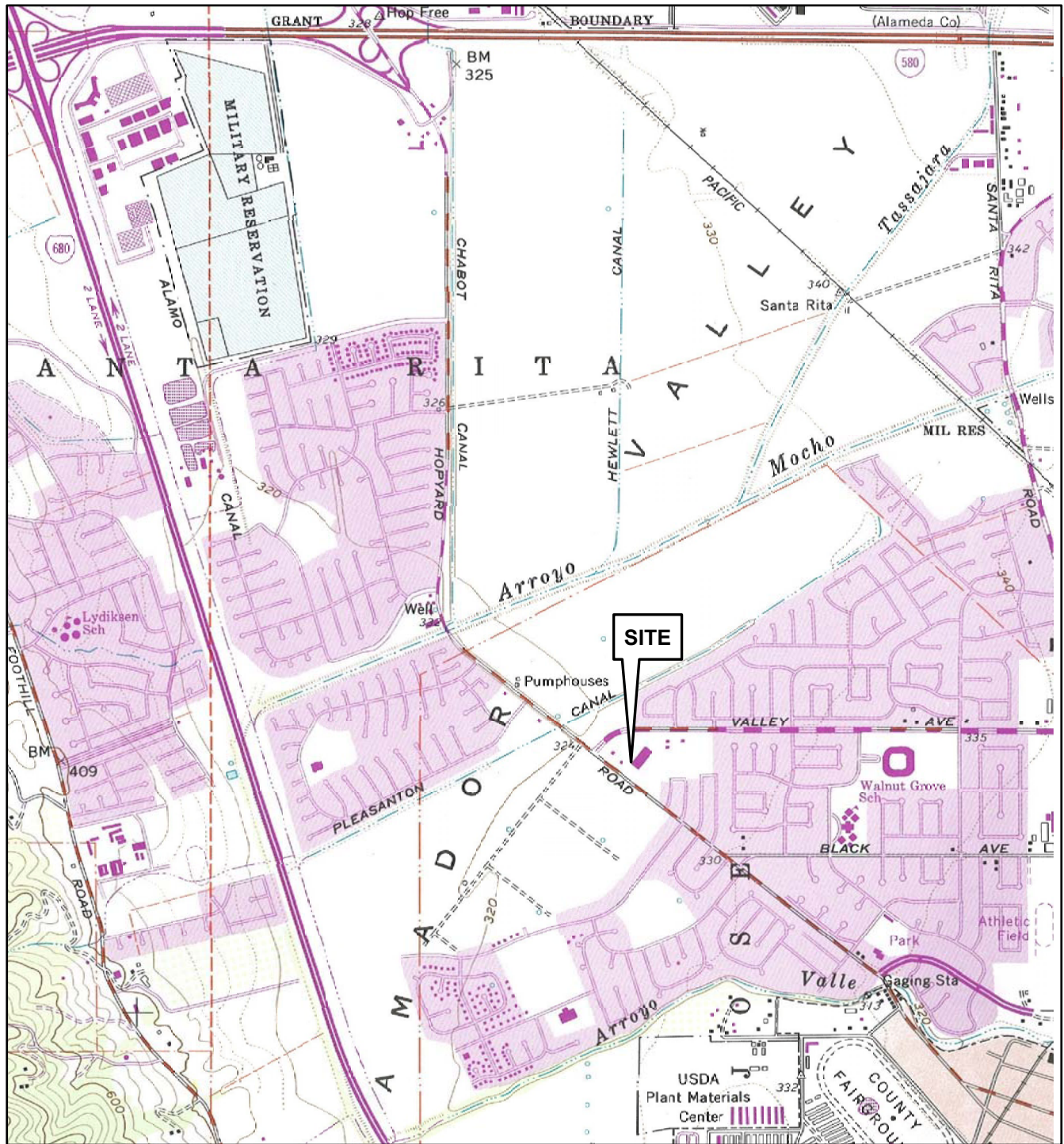
2 Stratigraphy based on soil electrical conductivity responses at MIP borings near well

3 The MW-5 water-bearing zone spans 10 feet. Two PDBs were deployed for 1st Quarter 2008: one for 50-55 ft bgs and one for 55-60 ft bgs. No stratification was observed. Therefore, one PDB was deployed at 55 ft bgs for the 2nd Quarter 2008

ft bgs - feet below ground surface

PDB - Passive Diffusion Bag

## **FIGURES**



Topo Source: U.S.G.S 7.5 Minute Series,  
Dublin, CA Quadrangle (1980)  
Contour Interval = 40 Feet

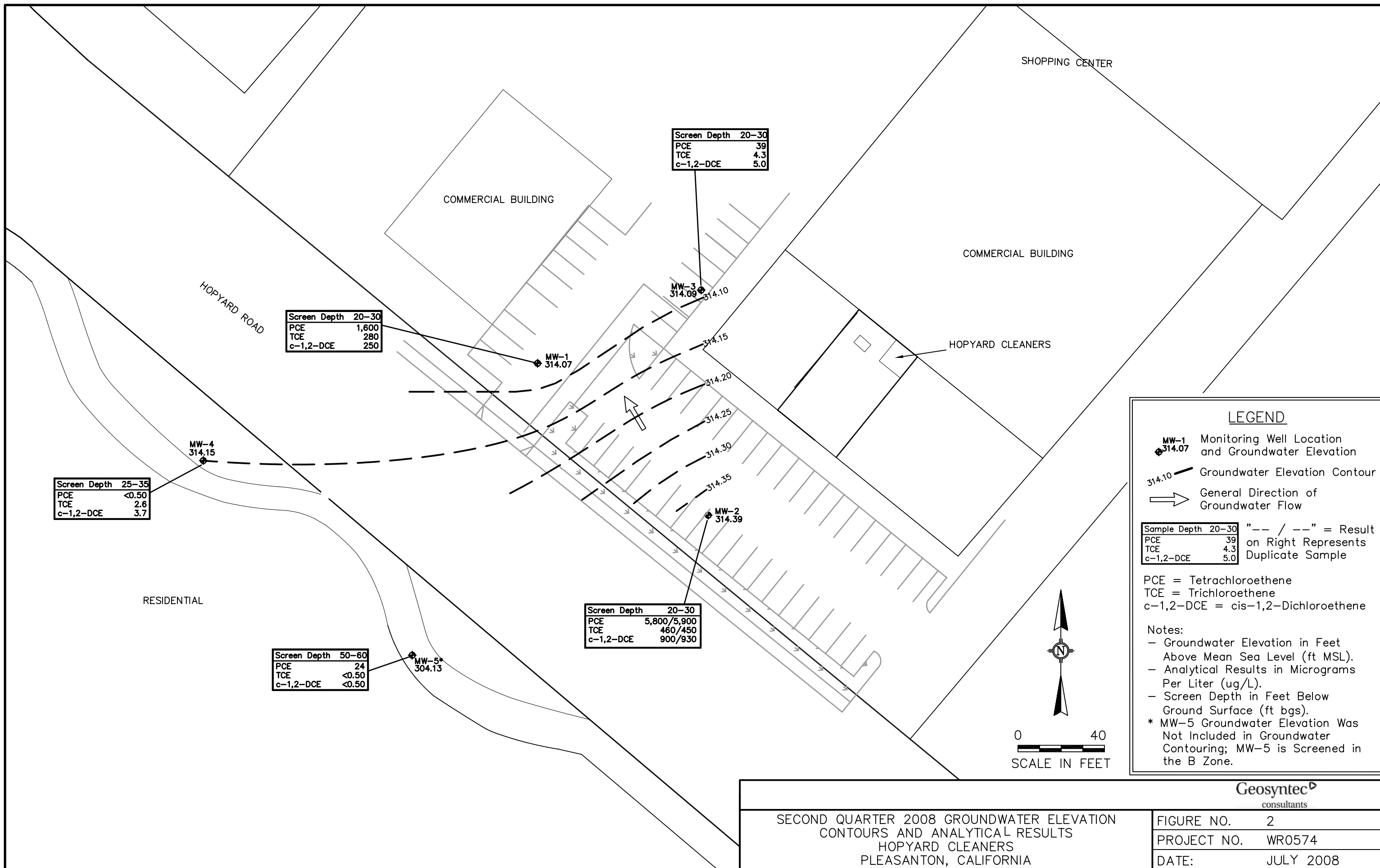
**SITE LOCATION MAP  
HOPYARD CLEANERS  
2771 HOPYARD ROAD  
PLEASANTON, CALIFORNIA**



**Geosyntec**  
consultants

FIGURE NO.	1
PROJECT NO.	WR0574
DATE:	JULY 2008





Screen Depth	20-30
PCE	1,600
TCE	280
c-1,2-DCE	250

Screen Depth	20-30
PCE	39
TCE	4.3
c-1,2-DCE	5.0

Screen Depth	25-35
PCE	<0.50
TCE	2.6
c-1,2-DCE	3.7

Screen Depth	20-30
PCE	5,800/5,900
TCE	460/450
c-1,2-DCE	900/930

Screen Depth	50-60
PCE	24
TCE	<0.50
c-1,2-DCE	<0.50

**LEGEND**

**MW-1** 314.07 Monitoring Well Location and Groundwater Elevation

314.10 Groundwater Elevation Contour

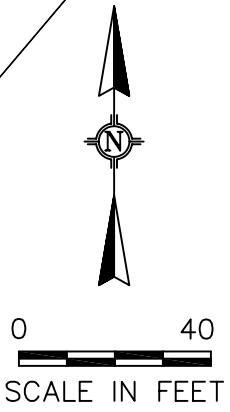
→ General Direction of Groundwater Flow

Sample Depth	20-30	"-- / --" = Result on Right Represents Duplicate Sample
PCE	39	
TCE	4.3	
c-1,2-DCE	5.0	

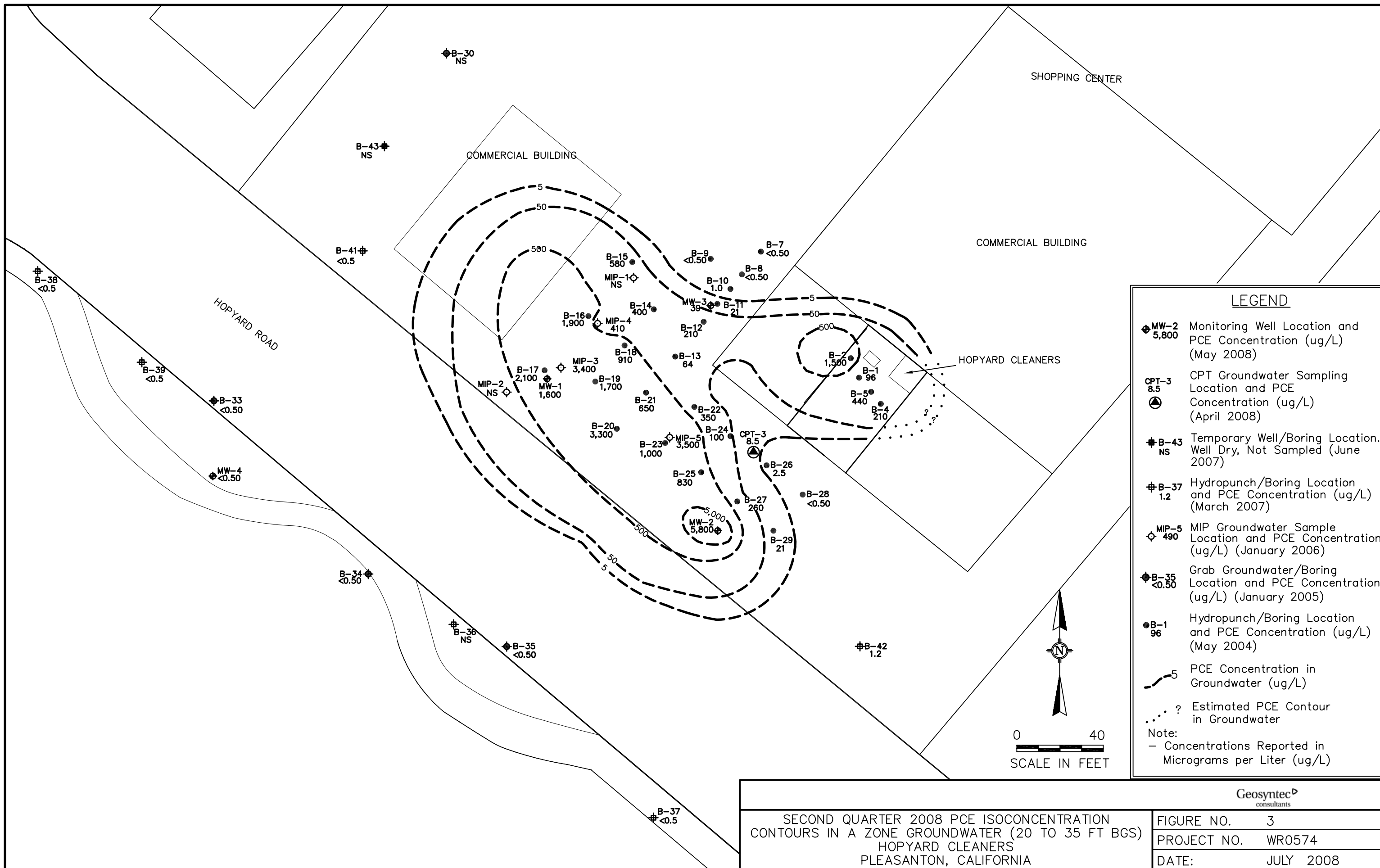
PCE = Tetrachloroethene  
TCE = Trichloroethene  
c-1,2-DCE = cis-1,2-Dichloroethene

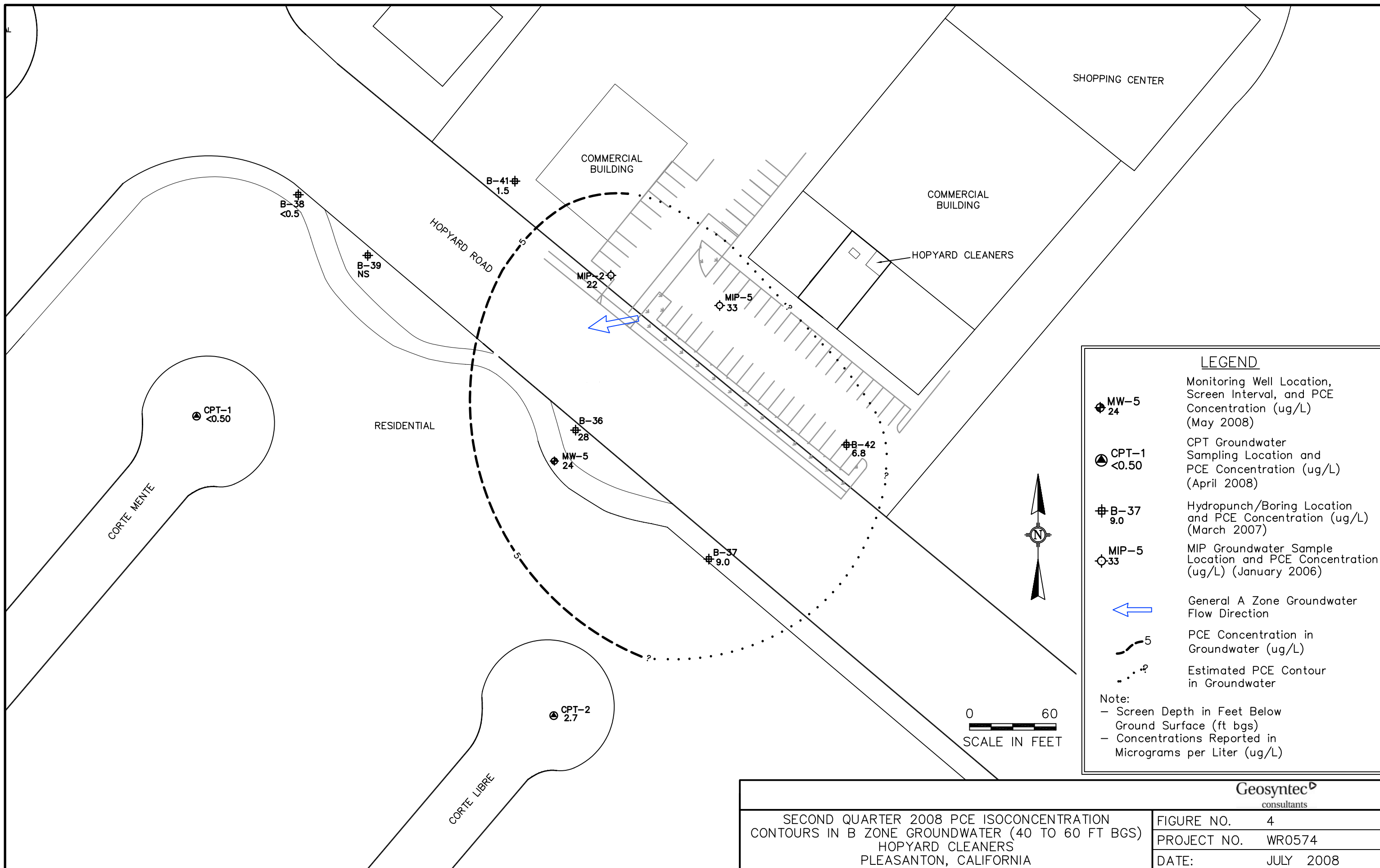
Notes:

- Groundwater Elevation in Feet Above Mean Sea Level (ft MSL).
- Analytical Results in Micrograms Per Liter (ug/L).
- Screen Depth in Feet Below Ground Surface (ft bgs).
- \* MW-5 Groundwater Elevation Was Not Included in Groundwater Contouring; MW-5 is Screened in the B Zone.



<b>Geosyntec</b> consultants	
SECOND QUARTER 2008 GROUNDWATER ELEVATION CONTOURS AND ANALYTICAL RESULTS HOPYARD CLEANERS PLEASANTON, CALIFORNIA	FIGURE NO. 2
	PROJECT NO. WR0574
	DATE: JULY 2008



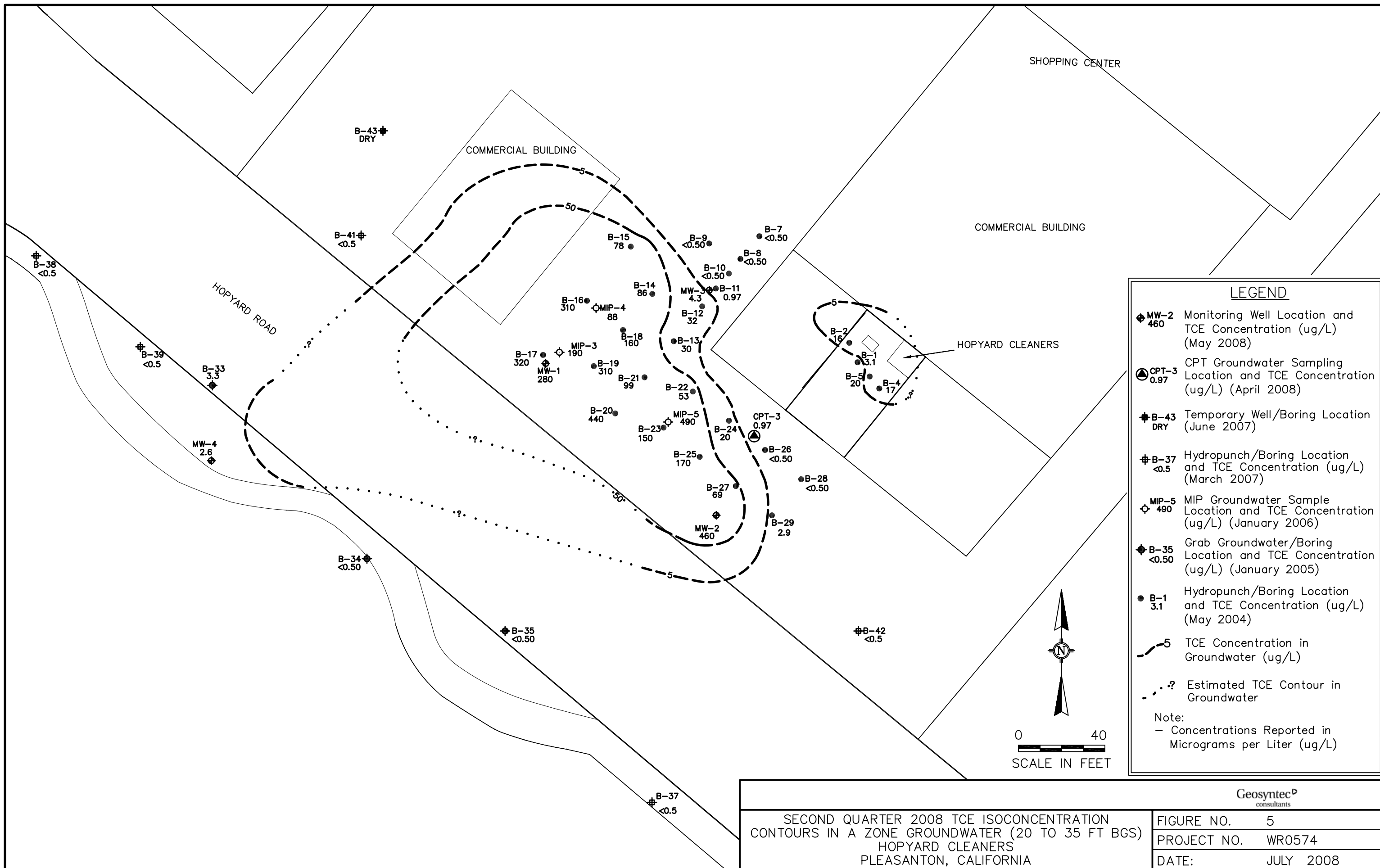


**LEGEND**

- MW-5  
 Monitoring Well Location, Screen Interval, and PCE Concentration (ug/L) (May 2008)
- CPT-1  
 CPT Groundwater Sampling Location and PCE Concentration (ug/L) (April 2008)
- B-37  
 Hydropunch/Boring Location and PCE Concentration (ug/L) (March 2007)
- MIP-5  
 MIP Groundwater Sample Location and PCE Concentration (ug/L) (January 2006)
- General A Zone Groundwater Flow Direction
- 5  
 PCE Concentration in Groundwater (ug/L)
- ?  
 Estimated PCE Contour in Groundwater

Note:  
 - Screen Depth in Feet Below Ground Surface (ft bgs)  
 - Concentrations Reported in Micrograms per Liter (ug/L)

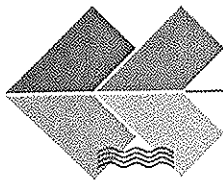
<b>Geosyntec</b> consultants	
SECOND QUARTER 2008 PCE ISOCONCENTRATION CONTOURS IN B ZONE GROUNDWATER (40 TO 60 FT BGS) HOPYARD CLEANERS PLEASANTON, CALIFORNIA	FIGURE NO. 4
	PROJECT NO. WR0574
	DATE: JULY 2008



SECOND QUARTER 2008 TCE ISOCONCENTRATION  
 CONTOURS IN A ZONE GROUNDWATER (20 TO 35 FT BGS)  
 HOPYARD CLEANERS  
 PLEASANTON, CALIFORNIA

Geosyntec <sup>®</sup> consultants	
FIGURE NO.	5
PROJECT NO.	WR0574
DATE:	JULY 2008

**ATTACHMENT 1**  
**ESS FIELD REPORT**



**Environmental  
Sampling Services**

May 19, 2008

Ms. Melissa Asher  
Senior Staff Engineer  
GeoSyntec Consultants  
475-14<sup>th</sup> Street, Suite 450  
Oakland, California 94612

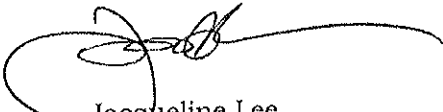
**SUBJECT: May 2008 Quarterly Groundwater Monitoring Event for Hopyard Cleaners, Pleasanton, California**

Dear Ms. Asher,

Please find enclosed the Field Activity Report for the quarterly groundwater monitoring event at 2771 Hopyard Road that occurred May 16, 2008.

If you have any questions or concerns regarding this Field Activity Report, please do not hesitate to call me.

Sincerely,  
**Environmental Sampling Services, LLC**



Jacqueline Lee  
Manager

Enclosure

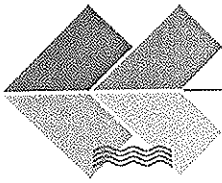
**FIELD ACTIVITY REPORT  
FOR**

**MAY 2008  
QUARTER GROUNDWATER  
MONITORING EVENT**

**HOPYARD CLEANERS  
2771 HOPYARD ROAD  
PLEASANTON, CALIFORNIA**

Prepared for: GeoSyntec Consultants  
475-14<sup>th</sup> Street, Suite 450  
Oakland, California 94612

Date Prepared: May 19, 2008



**FIELD ACTIVITY REPORT  
FOR**

**MAY 2008  
QUARTERLY GROUNDWATER  
MONITORING EVENT**

**HOPYARD CLEANERS  
2771 HOPYARD ROAD  
PLEASANTON, CALIFORNIA**

Task: Quarterly Groundwater Sampling Event  
ESS Personnel: Jacqueline Lee  
Date of Activities: May 16, 2008

***Decontamination Procedures***

All downhole equipment was cleaned with Liqui-Nox® laboratory-grade soap, potable water, and rinsed with distilled water prior to use and between each monitoring well.

***Groundwater Level Measurements***

Depth to groundwater for five monitoring wells were measured and recorded following atmospheric equilibration of approximately thirty minutes. All readings were performed with a Slope® Water Level Meter, Serial Number 25742, and referenced to the surveyor's mark or north rim at the top of PVC well casing (Table 1). Three successive readings that agreed to within one-hundredth of a foot determined depth to groundwater.

Organic vapor readings were not required.

***Field Equipment and Calibration***

pH, Specific Conductance, Temperature, Dissolved Oxygen, and Oxidation Reduction Potential (ORP) were monitored with a YSI® Multi-parameter meter equipped with an in-line flow through cell. Turbidity readings were measured with a HF Scientific® Turbidity meter.

Equipment calibration was performed in accordance with the instrument's calibration and operating procedures. Calibration was performed prior to any monitoring activities (see Daily Equipment Calibration Sheet).

Solution standards: pH 4, 7, and 10, Specific Conductance @ 1,000 uS/cm, and Zobell for ORP were used for calibration purposes. Dissolved Oxygen was calibrated to air. Turbidity was checked against a 0.02 NTU standard. All equipment calibrated and functioned properly during monitoring activities.





### ***Passive Diffusion Bag Sampling***

Each Passive Diffusion bag was attached with nylon ties to a weighted stainless steel hanging assembly. The well plug with a brass ring supports the entire system. After completion of groundwater level gauging and before installation of new pump tubing, Passive Diffusion Bag Sampler (PDBs) samples were collected. Each PDB sample was contained in three, 40-ml clear VOAs preserved with hydrochloric acid. Each PDB sample is identified by well identification followed by suffix, "PDB".

### ***Water Quality Parameters***

During low-flow purging activities, pH, Specific Conductance (uS), Temperature (Celsius), Dissolved Oxygen (mg/L), Oxidation/Reduction Potential (mV), and physical characteristics such as pumping water level, color, and odor (see Water Quality Sample Log Sheets) were monitored and recorded (see Water Quality Log Sheets).

### ***Low-Flow Well Purging & Sampling Procedures***

A peristaltic pump with new pump tubing was used to purge and sample MW-1 through MW-5. Each monitoring well was purged at a rate no greater than 500-ml per minute until water quality parameters stabilized for three consecutive readings.

EPA stabilization guidelines for low-flow sampling were used. The following criteria were used:  $\pm 0.1$  for pH,  $\pm 3\%$  for Specific Conductivity,  $\pm 10\%$  for Dissolved Oxygen,  $\pm 10$  mV for ORP, and  $\pm 10\%$  NTUs for Turbidity, if more than 10 NTUs.

Groundwater samples were collected immediately following stabilization of water quality parameters by disconnecting the tubing from the flow through chamber.

All sample labels were completed with waterproof ink and affixed to sample containers.

During sample collection, all 40-ml VOA sample containers were slightly tilted to avoid aeration or degassing. Each sample container was inverted and tapped lightly to check for air bubbles. The absence of air bubbles indicated a successful seal.

All sample containers were wiped dry, sealed in Ziploc® bags, and placed in a chilled cooler for storage and shipment to the laboratory.

Following completion of low-flow groundwater sampling, a new Passive Diffusion Bag was installed. Bags for MW-1 through MW-4 were attached to the bottom deployment position. MW-5 bag was attached to the middle deployment position.

### ***Laboratory***

TestAmerica of Pleasanton, California provided Trip Blank, sample containers with appropriate preservative, deionized water for QA/QC purposes, and conducted all laboratory analyses.

All wells were sampled for Volatile Organic Compounds (VOC) by EPA Method 8260B.

### ***Sample Containers***

Each VOC sample set was contained in three, 40-ml VOA clear glass containers preserved with hydrochloric acid.



### ***Quality Assurance /Quality Control Samples***

All QA/QC samples were submitted to TestAmerica for analysis.

One Trip Blank set was stored in the cooler throughout the sampling event.

One blind duplicate set was collected from MW-2 and labeled "MW-DUP @ 08:00".

An equipment blank set was collected. Laboratory supplied deionized water and a short section of downhole and silicon tubing was used. The deionized water was pumped directly into the sample containers. The equipment blank was labeled "EB-1 @ 12:50". It was collected at well location, MW-3.

No other QA/QC samples were requested.

### ***Chain of Custody (COC) Form***

All sample handling was conducted under standard chain of custody procedures. The COC included: sampler's name and signature, sample identification, sample date and time, and analysis request section.

### ***Shipment of Samples***

All groundwater samples were relinquished to TestAmerica May 16, 2008.


### ***Storage of Investigative Derived Wastewater (IDW)***

Approximately 30 gallons of purged groundwater and decontamination water generated from this sampling event were stored a new, labeled 55-gallon drum. The drum is stored along the southeast corner of the property.

### ***Comments***

United Rentals Highway Technologies arrived at 9:00 and began set up at 09:30. Lane closure was from 10:00 to 13:00 hours.

All work was performed in accordance with Geosyntec's directive for Hopyard Cleaners, dated February 26, 2008 and subsequent directives.



**Environmental Sampling Services, LLC**

Jacqueline Lee  
Manager

### **Attachments:**

Table 1: Summary of Groundwater Monitoring Event  
Water Sample Log Sheets  
Equipment Calibration Sheet  
Chain of Custody  
Highway Technologies Delivery Receipt



**Table 1: Summary of May 2008 Quarterly Groundwater Sampling Event**  
**Project Name: Hopyard Cleaners**  
**Project Location: 2771 Hopyard Road, Pleasanton, California**

**Passive Diffusion Bags:**

Well/Sample Identification	PDB Sample Date	PDB Sample Time
MW-1/MW-1PDB	5/16/2008	9:00
MW-2/MW-2 PDB	5/16/2008	7:55
MW-3/MW-3 PDB	5/16/2008	12:30
MW-4/MW-4 PDB	5/16/2008	11:15
MW-5/MW-5 PDB	5/16/2008	10:15

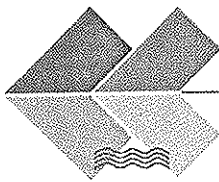
**Low-Flow Sampling:**

Well/Sample Identification	Date of Measurement	Time of Measurement	Depth to Groundwater (Ft., below TOC)	Well Depth (Ft., below TOC)	Sample Date	Sample Time	QA/QC Type	Sample Identification
MW-1	5/16/2008	7:22	11.70	30.27	5/16/2008	9:29	None	NA
MW-2	5/16/2008	7:15	11.30	30.31	5/16/2008	8:31	Duplicate	MW-DUP
MW-3	5/16/2008	7:19	12.18	30.29	5/16/2008	13:30	Equipment Blank	EB-1
MW-4	5/16/2008	7:30	12.12	34.56	5/16/2008	11:57	None	NA
MW-5	5/16/2008	7:25	23.06	59.96	5/16/2008	10:43	None	NA

Legend:

TOC = Top of Well Casing

NA = Not Applicable



**Environmental  
Sampling Services**

**WATER QUALITY SAMPLE LOG SHEET** WELL IDENTIFICATION: MW-1 DATE: 5/16/08

Project Name: Hopyard Cleaners Pleasanton, CA Project Task: Quarterly Monitoring Project/Task No. WR0574  
 Project Manager: Melissa Asher - Geosyntec Cons. Lab: TestAmerica Weather Conditions: Hot  
 Well Description: 2" 3.5" 4" 5" 6" Other: \_\_\_\_\_ Well Type: PVC Stainless Steel Other: \_\_\_\_\_  
 Is Well Secured? Yes No Bolt Size: 9/16"\* Type of lock / Lock number: Master P288  
 Observations / Comments: set pump intake @ 25 ft.(BTOC) Screen Interval: 20' to 30'  
 Purge Method: Teflon / PE Disposable Bailer Centrifugal Pump Peristaltic Pump Other: \_\_\_\_\_  
 Pump Lines: NA New / Cleaned / Dedicated Bailer Line: NA New / Cleaned / Dedicated  
 Method of Cleaning Pump: NA Alconox Liqui-nox Tap Water DI Rinse Other: \_\_\_\_\_  
 Method of Cleaning Bailer: NA Alconox Liqui-nox Tap Water DI Rinse Other: \_\_\_\_\_  
 Sampling Method: Disp. Teflon Bailer Disp. PE Bailer Peristaltic Pump Other: \_\_\_\_\_  
 YSI Multi-Parameter Meter/Probe Serial No.: 556 MPS - 05F1258AH / 600XL 319340R - 00C1522  
 Equipment Calibration: See Daily Equipment Calibration Sheet  
 Method to Measure Water Level: Slope Solinst Indicator Serial No.: 21758 / 25742 P.I.D. Reading: NA ppm  
 Water Level at Start (DTW): 11.70 @ 7:22 (BTOC) Water Level Prior To Sampling: 11.92 (BTOC)  
 TD = 30.27' - 11.70' (DTW) = 18.57' (ft. of water) x "K" = 3.02 (Gals./CV) x NA (No. of CV) = NA (Gals.)  
 "K" = 0.163 (2" well) "K" = 0.50 (3.5" well) "K" = .653 (4" well) "K" = 1.02 (5" well) "K" = 1.46 (6" well)

**FIELD WATER QUALITY PARAMETERS**

Date	Time	Discharge (Liters)	pH +/- 0.1	Temp. (°C)	Specific Conductance mS (US) +/- 3%	Turbidity (NTU's) +/- 10	Redox (mV) +/- 10	Dissolved Oxygen (mg/L) +/- 10%	Water Level (BTOC)	Color
5/16/08	9:11	Initial	6.92	21.45	1614	6.4	270.0	3.31	11.70	clear
	9:13	0.5	6.57	20.89	1604	2.9	289.1	1.45	11.85	"
	9:15	1.0	6.54	20.70	1595	3.7	293.5	1.24	11.86	"
	9:17	1.5	6.54	20.65	1589	3.1	295.9	1.12	11.89	"
	9:18	2.0	6.54	20.63	1585	2.6	297.4	1.00	11.90	"
	9:20	2.5	6.54	20.71	1583	3.5	298.4	0.92	11.90	"
	9:22	3.0	6.54	20.63	1581	2.5	299.8	0.87	11.90	"
	9:24	3.5	6.54	20.79	1578	4.9	300.5	0.80	11.90	"
	9:26	4.0	6.54	20.63	1573	2.6	301.4	0.77	11.91	"

Total Discharge: 4.8 Liters Casing Volumes Removed: NA  
 Method of disposal of discharged water: 55 Gallon Drum(s) Poly Tank Treatment System Other: \_\_\_\_\_  
 Date/Time Sampled: 5/16/08 @ 9:29 Analysis: VOCs (8260B) - 3 VOAs w/HCl  
 QA/QC: None @ \_\_\_\_\_ Duplicate MS/MSD Equipment Rinseate Field Blank Lab Split  
 Comments: MW-5 PDB sampled @ 9:00  
\* Installed 2 new bolts (9/16" head)

Recorded by: Stephen Penman / Jacki Lee Signature: \_\_\_\_\_ Page 1 of 2



**WATER QUALITY SAMPLE LOG SHEET**

WELL IDENTIFICATION: MW-1

Project Name: Hopyard

**FIELD WATER QUALITY PARAMETERS CONTINUED FROM PAGE 1**

Date	Time	Discharge (Liters)	pH (± 0.1)	Temp. (°C) (± 1°C)	Specific Conductance mS (uS) (± 3%)	Turbidity (NTU's) (±10% NTUs)	Redox (mV) (±10 mV)	Dissolved Oxygen (mg/L) (±10%)	Water Level (BTOC)	Color
5/16/08	9:27	4.5	6.54 6.54	20.70	1573	3.4	301.6	0.74	11.92	clear
		5.0								
		5.5								
		6.0								
		6.5								
		7.0								
		7.5								
		8.0								
		8.5								
		9.0								
		9.5								
		10.0								
		10.5								
		11.0								
		11.5								
		12.0								
		12.5								
		13.0								
		13.5								
		14.0								

Total Discharge: 4.8 Liters

Casing Volumes Removed: NA

Comments: \_\_\_\_\_

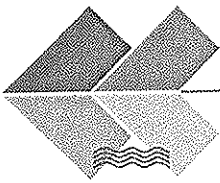
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\_\_\_\_\_

Recorded by: Jacqueline Lee Stephen Penman Signature:



**Environmental  
Sampling Services**

**WATER QUALITY SAMPLE LOG SHEET** WELL IDENTIFICATION: MW-2 DATE: 5/16/08

Project Name: Hopyard Cleaners Pleasanton, CA Project Task: Quarterly Monitoring Project/Task No. WR0574  
 Project Manager: Melissa Asher - Geosyntec Cons. Lab: TestAmerica Weather Conditions: Hot, 70-80°F  
 Well Description: 2" 3.5" 4" 5" 6" Other: \_\_\_\_\_ Well Type: PVC Stainless Steel Other: \_\_\_\_\_  
 Is Well Secured? Yes / No Bolt Size: 9/16" Type of lock / Lock number: Master  
 Observations / Comments: set pump intake @ 25 ft.(BTOC) Screen Interval: 20' to 30'  
 Purge Method: Teflon / PE Disposable Bailer Centrifugal Pump Peristaltic Pump Other: \_\_\_\_\_  
 Pump Lines: NA New / Cleaned / Dedicated Bailer Line: NA New / Cleaned / Dedicated  
 Method of Cleaning Pump: NA Alconox Liqui-nox Tap Water DI Rinse Other: \_\_\_\_\_  
 Method of Cleaning Bailer: NA Alconox Liqui-nox Tap Water DI Rinse Other: \_\_\_\_\_  
 Sampling Method: Disp. Teflon Bailer Disp. PE Bailer Peristaltic Pump Other: \_\_\_\_\_  
 YSI Multi-Parameter Meter/Probe Serial No.: 556 MPS - 05F1258AH / 600XL 319340R - 00C1522  
 Equipment Calibration: See Daily Equipment Calibration Sheet  
 Method to Measure Water Level: Slope Solinst Indicator Serial No.: 21758 / 25742 P.I.D. Reading: NA ppm  
 Water Level at Start (DTW): 11.30 @ 7:15 (BTOC) Water Level Prior To Sampling: 11.49 (BTOC)  
 TD = 30.31' - 11.30 (DTW) = 19.01 (ft. of water) x "K" = 3.09 (Gals./CV) x NA (No. of CV) = NA (Gals.)  
 "K" = 0.163 (2" well) "K" = 0.50 (3.5" well) "K" = .653 (4" well) "K" = 1.02 (5" well) "K" = 1.46 (6" well)

**FIELD WATER QUALITY PARAMETERS**

Date	Time	Discharge (Liters)	pH +/- 0.1	Temp. (°C)	Specific Conductance mS <u>µS</u> +/- 3%	Turbidity (NTU's) +/- 10	Redox (mV) +/- 10	Dissolved Oxygen (mg/L) +/- 10%	Water Level (BTOC)	Color
5/16/08	8:12	Initial	6.98	20.24	2042	11.57	285.0	3.11	11.30 11.41	clear
	8:15	0.5	6.46	19.92	2049	7.16	298.2	1.38	11.44	"
	8:17	1.0	6.44	19.85	2053	5.87	302.2	1.22	11.45	"
	8:19	1.5	6.44	19.59	2075	9.68	304.5	1.15	11.47	"
	8:21	2.0	6.43	19.86	2082	10.50	307.2	1.08	11.48	"
	8:23	2.5	6.42	19.95	2089	13.80	309.9	1.05	11.48	"
	8:25	3.0	6.43	19.91	2087	13.7	312.0	1.01	11.48	"
	8:27	3.5	6.42	19.84	2093	11.9	314.8	0.98	11.49	"
	8:29	4.0	6.42	19.99	2106	11.7	317.2	0.92	11.49	"

Total Discharge: 4.7 Liters Casing Volumes Removed: NA  
 Method of disposal of discharged water: 55 Gallon Drum(s) Poly Tank Treatment System Other: \_\_\_\_\_  
 Date/Time Sampled: 5/16/08 @ 8:31 Analysis: VOCs (8260B) - 3 VOAs w/HCl  
 QA/QC: MW-DUP @ 8:00 Duplicate MS/MSD Equipment Rinseate Field Blank Lab Split  
 Comments: MW-R- PDB sampled @ 7:55

Recorded by: Stephen Penman Jacki Lee Signature: \_\_\_\_\_ Page 1 of 2



WATER QUALITY SAMPLE LOG SHEET

WELL IDENTIFICATION: MW-2

Project Name: Hopyard

FIELD WATER QUALITY PARAMETERS CONTINUED FROM PAGE 1

Date	Time	Discharge (Liters)	pH (± 0.1)	Temp. (°C) (± 1°C)	Specific Conductance mS (µS) (± 3%)	Turbidity (NTU's) (±10% NTUs)	Redox (mV) (±10 mV)	Dissolved Oxygen (mg/L) (±10%)	Water Level (BTOC)	Color
5/16/08	8:31	4.5	6.42	19.94	2110	12.6	319.1	0.91	11.49	clear
		5.0								
		5.5								
		6.0								
		6.5								
		7.0								
		7.5								
		8.0								
		8.5								
		9.0								
		9.5								
		10.0								
		10.5								
		11.0								
		11.5								
		12.0								
		12.5								
		13.0								
		13.5								
		14.0								

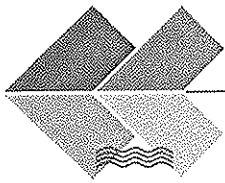
Total Discharge: 4.7 Liters

Casing Volumes Removed: NA

Comments: \_\_\_\_\_

Recorded by: Jacqueline Lee / Stephen Penman

Signature:



**Environmental  
Sampling Services**

**WATER QUALITY SAMPLE LOG SHEET** WELL IDENTIFICATION: MW-3 DATE: 5/16/08

Project Name: Hopyard Cleaners Pleasanton, CA Project Task: Quarterly Monitoring Project/Task No. WR0574  
 Project Manager: Melissa Asher - Geosyntec Cons. Lab: TestAmerica Weather Conditions: Hot  
 Well Description: 2" 3.5" 4" 5" 6" Other: \_\_\_\_\_ Well Type: PVC Stainless Steel Other: \_\_\_\_\_  
 Is Well Secured? Yes/ No Bolt Size: 9/16" Type of lock / Lock number: Master  
 Observations / Comments: set pump intake @ 25 ft.(BTOC) Screen Interval: 20' to 30'  
 Purge Method: Teflon / PE Disposable Bailer Centrifugal Pump Peristaltic Pump Other: \_\_\_\_\_  
 Pump Lines: NA New Cleaned / Dedicated Bailer Line: NA New / Cleaned / Dedicated  
 Method of Cleaning Pump: NA Alconox Liqui-nox Tap Water DI Rinse Other: \_\_\_\_\_  
 Method of Cleaning Bailer: NA Alconox Liqui-nox Tap Water DI Rinse Other: \_\_\_\_\_  
 Sampling Method: Disp. Teflon Bailer Disp. PE Bailer Peristaltic Pump Other: \_\_\_\_\_  
 YSI Multi-Parameter Meter/Probe Serial No.: 556 MPS - 05F1258AH / 600XL 319340R - 00C1522  
 Equipment Calibration: See Daily Equipment Calibration Sheet  
 Method to Measure Water Level: Slope/Solinst Indicator Serial No.: 21758 25742 P.I.D. Reading: NA ppm  
 Water Level at Start (DTW): 12.18 @ 7:19 (BTOC) Water Level Prior To Sampling: 12.50 (BTOC)  
 TD = 30.29' - 12.18 (DTW) = 18.11 (ft.of water) x "K" = 2.95 (Gals./CV) x NA (No. of CV) = NA (Gals.)  
 "K" = 0.163 (2" well) "K" = 0.50 (3.5" well) "K" = .653 (4" well) "K" = 1.02 (5" well) "k" = 1.46 (6" well)

**FIELD WATER QUALITY PARAMETERS**

Date	Time	Discharge (Liters)	pH +/- 0.1	Temp. (°C)	Specific Conductance mS <u>µS</u> +/- 3%	Turbidity (NTU's) +/- 10	Redox (mV) +/- 10	Dissolved Oxygen (mg/L) +/- 10%	Water Level (BTOC)	Color
5/16/08	12:58	Initial	6.92	22.46	2174	3.9	249.0	4.34	12.1200 12.32	White clear
	13:00	0.5	6.51	22.11	2153	2.2	263.0	2.70	12.50	"
	13:02	1.0	6.49	22.52	2133	2.9	270.3	2.23	12.50	"
	13:04	1.5	6.47	22.72	2129	2.8	273.6	2.03	12.50	"
	13:07	2.0	6.46	22.22	2095	3.2	281.1	1.63	12.50	"
	13:10	2.5	6.46	22.63	2093	3.7	285.1	1.42	12.50	"
	13:12	3.0	6.46	22.38	2088	2.7	288.4	1.35	12.50	"
	13:14	3.5	6.45	22.19	2080	3.0	291.5	1.27	12.50	"
	13:17	4.0	6.48	22.26	2083	2.9	294.8	1.19	12.50	"

Total Discharge: 7.0 Liters Casing Volumes Removed: NA  
 Method of disposal of discharged water: 55 Gallon Drum(s) Poly Tank Treatment System Other: \_\_\_\_\_  
 Date/Time Sampled: 5/16/08 @ 13:30 Analysis: VOCs (8260B) - 3 VOAs w/HCl  
 QA/QC: EB-1 @ 12:50 Duplicate MS/MSD Equipment Rinseate Field Blank Lab Split  
 Comments: MW-3 FDI PDB sampled @ 12:30

Recorded by: Stephen Penman / Jacki Lee Signature: \_\_\_\_\_ Page 1 of 2





**WATER QUALITY SAMPLE LOG SHEET**

WELL IDENTIFICATION: **MW-3**

Project Name: **Hopyard**

**FIELD WATER QUALITY PARAMETERS CONTINUED FROM PAGE 1**

Date	Time	Discharge (Liters)	pH (± 0.1)	Temp. (°C) (± 1°C)	Specific Conductance mS (S) (± 3%)	Turbidity (NTU's) (±10% NTUs)	Redox (mV) (±10 mV)	Dissolved Oxygen (mg/L) (±10%)	Water Level (BTOC)	Color
5/16/08	13:19	4.5	6.45	22.08	2079	2.3	297.6	1.37	12.50	clear
	13:21	5.0	6.45	22.52	2078	2.3	299.6	1.20	12.50	"
	13:23	5.5	6.46	22.27	2077	2.4	302.2	1.05	12.50	"
	13:25	6.0	6.46	22.20	2076	2.4	304.2	1.00	12.50	"
	13:28	6.5	6.45	22.14	2084	2.3	306.5	1.00	12.50	"
		7.0								
		7.5								
		8.0								
		8.5								
		9.0								
		9.5								
		10.0								
		10.5								
		11.0								
		11.5								
		12.0								
		12.5								
		13.0								
		13.5								
		14.0								

Total Discharge: 7.0 Liters

Casing Volumes Removed: NA

Comments: \_\_\_\_\_

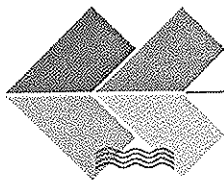
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Recorded by: Jacqueline Lee / Stephen Penman Signature:



**Environmental  
Sampling Services**

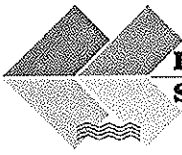
**WATER QUALITY SAMPLE LOG SHEET** WELL IDENTIFICATION: MW-4 DATE: 5/16/08

Project Name: Hopyard Cleaners Pleasanton, CA Project Task: Quarterly Monitoring Project/Task No. WR0574  
 Project Manager: Melissa Asher - Geosyntec Cons. Lab: TestAmerica Weather Conditions: Hor 80's/90's  
 Well Description: 2" 3.5" 4" 5" 6" Other: \_\_\_\_\_ Well Type: PVC Stainless Steel Other: \_\_\_\_\_  
 Is Well Secured? Yes / No Bolt Size: 9/16" Type of lock / Lock number: Master P288  
 Observations / Comments: set pump intake @ 22.5 ft.(BTOC) Screen Interval: 20' to 30'  
 Purge Method: Teflon / PE Disposable Bailer Centrifugal Pump Peristaltic Pump Other: \_\_\_\_\_  
 Pump Lines: NA New / Cleaned / Dedicated Bailer Line: NA New / Cleaned / Dedicated  
 Method of Cleaning Pump: NA Alconox Liqui-nox Tap Water DI Rinse Other: \_\_\_\_\_  
 Method of Cleaning Bailer: NA Alconox Liqui-nox Tap Water DI Rinse Other: \_\_\_\_\_  
 Sampling Method: Disp. Teflon Bailer Disp. PE Bailer Peristaltic Pump Other: \_\_\_\_\_  
 YSI Multi-Parameter Meter/Probe Serial No.: 556 MPS - 05F1258AH / 600XL 319340R - 00C1522  
 Equipment Calibration: See Daily Equipment Calibration Sheet  
 Method to Measure Water Level: Slope/Solinst Indicator Serial No.: 21758 / 25742 P.I.D. Reading: NA ppm  
 Water Level at Start (DTW): 12.12 @ 7:30 (BTOC) Water Level Prior To Sampling: 12.93 (BTOC)  
 TD = 34.56' - 12.12 (DTW) = 22.44 ( ft. of water) x "K" = 3.65 (Gals./CV) x NA (No. of CV) = NA (Gals.)  
 "K" = 0.163 (2" well) "K" = 0.50 (3.5" well) "K" = .653 (4" well) "K" = 1.02 (5" well) "K" = 1.46 (6" well)

**FIELD WATER QUALITY PARAMETERS**

Date	Time	Discharge (Liters)	pH +/- 0.1	Temp. (°C)	Specific Conductance mS <u>(S)</u> +/- 3%	Turbidity (NTU's) +/- 10	Redox (mV) +/- 10	Dissolved Oxygen (mg/L) +/- 10%	Water Level (BTOC)	Color
5/16/08	11:25	Initial	6.55	17.94	2564	15.1	321.2	3.13	12.12 @ 7:30 12.41	400 he sat clear
	11:27	0.5	6.33	17.76	2559	12.4	324.0	2.19	12.62	"
	11:29	1.0	6.32	18.31	2552	8.7	324.9	2.01	12.63	"
	11:31	1.5	6.33	17.96	2543	12.0	327.0	1.64 1.64	12.89	"
	11:35	2.0	6.32	18.34	2539	8.0	328.6	1.45	12.89	"
	11:37	2.5	6.32	18.39	2535	9.2	330.2	1.40	12.90	"
	11:41	3.0	6.32	18.50	2539	12.0	332.3	1.29	12.90	"
	11:45	3.5	6.30	18.63	2528	12.9	334.4	1.21	12.90	"
	11:49	4.0	6.30	18.77	2523	5.5	334.3	1.05	12.90	"

Total Discharge: 5.5 Liters Casing Volumes Removed: NA  
 Method of disposal of discharged water: 55 Gallon Drum(s) Poly Tank Treatment System Other: \_\_\_\_\_  
 Date/Time Sampled: 5/16/08 @ 11:57 Analysis: VOCs (8260B) - 3 VOAs w/HCl  
 QA/QC: None @ \_\_\_\_\_ Duplicate MS/MSD Equipment Rinseate Field Blank Lab Split  
 Comments: MW-4 PDB sampled @ 11:15



WATER QUALITY SAMPLE LOG SHEET      WELL IDENTIFICATION: **MW-4**      Page 2

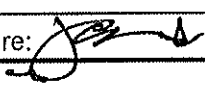
Project Name: **Hopyard**

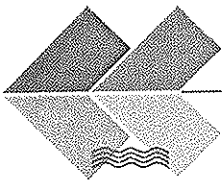
FIELD WATER QUALITY PARAMETERS CONTINUED FROM PAGE 1

Date	Time	Discharge (Liters)	pH (± 0.1)	Temp. (°C) (± 1°C)	Specific Conductance mS (μS) (± 3%)	Turbidity (NTU's) (±10% NTUs)	Redox (mV) (±10 mV)	Dissolved Oxygen (mg/L) (±10%)	Water Level (BTOC)	Color
5/16/08	11:51	4.5	6.30	18.81 <del>18.87</del>	2522	5.4	333.5	1.04	12.92	clear
↓	11:55	5.0	6.27	18.81	2518	6.3	329.2	1.00	12.93	"
		5.5								
		6.0								
		6.5								
		7.0								
		7.5								
		8.0								
		8.5								
		9.0								
		9.5								
		10.0								
		10.5								
		11.0								
		11.5								
		12.0								
		12.5								
		13.0								
		13.5								
		14.0								

Total Discharge: 5.5 Liters      Casing Volumes Removed: NA

Comments: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Recorded by: Jacqueline Lee / Stephen Penman      Signature: 



**Environmental  
Sampling Services**

WATER QUALITY SAMPLE LOG SHEET WELL IDENTIFICATION: MW-5 DATE: 5/16/08

Project Name: Hopyard Cleaners Pleasanton, CA Project Task: Quarterly Monitoring Project/Task No. WR0574  
 Project Manager: Melissa Asher - Geosyntec Cons. Lab: TestAmerica Weather Conditions: Expected 90's°F  
 Well Description: (2") 3.5" 4" 5" 6" Other: \_\_\_\_\_ Well Type: (PVC) Stainless Steel Other: \_\_\_\_\_  
 Is Well Secured? (Yes) No Bolt Size: 15/16" Type of lock / Lock number: Master P288  
 Observations / Comments: set pump intake @ 55 ft.(BTOC) Screen Interval: 50' to 60'  
 Purge Method: Teflon / PE Disposable Bailer Centrifugal Pump (Peristaltic Pump) Other: \_\_\_\_\_  
 Pump Lines: NA (New) / Cleaned / Dedicated Bailer Line: (NA) New / Cleaned / Dedicated  
 Method of Cleaning Pump: (NA) Alconox Liqui-nox Tap Water DI Rinse Other: \_\_\_\_\_  
 Method of Cleaning Bailer: (NA) Alconox Liqui-nox Tap Water DI Rinse Other: \_\_\_\_\_  
 Sampling Method: Disp. Teflon Bailer Disp. PE Bailer (Peristaltic Pump) Other: \_\_\_\_\_  
 YSI Multi-Parameter Meter/Probe Serial No.: 556 MPS - 05F1258AH / (600XL 319340R - 00C1522)  
 Equipment Calibration: See Daily Equipment Calibration Sheet  
 Method to Measure Water Level: (Slope) Solinst Indicator Serial No.: 21758 / (25742) P.I.D. Reading: NA ppm  
 Water Level at Start (DTW): 23.06 @ 7:25 (BTOC) Water Level Prior To Sampling: 23.17 (BTOC)  
 TD = 59.96' - 23.06 (DTW) = \_\_\_\_\_ ( ft. of water) x "K" = \_\_\_\_\_ (Gals./CV) x NA (No. of CV) = NA (Gals.)  
"K" = 0.163 (2" well) "K" = 0.50 (3.5" well) "K" = .653 (4" well) "K" = 1.02 (5" well) "K" = 1.46 (6" well)

**FIELD WATER QUALITY PARAMETERS**

Date	Time	Discharge (Liters)	pH +/- 0.1	Temp. (°C)	Specific Conductance mS <u>(µS)</u> +/- 3%	Turbidity (NTU's) +/- 10	Redox (mV) +/- 10	Dissolved Oxygen (mg/L) +/- 10%	Water Level (BTOC)	Color
<u>5/16/08</u>	<u>10:26</u>	<u>Initial</u>	<u>6.65</u>	<u>18.60</u>	<u>2117</u>	<u>20.1</u>	<u>294.3</u>	<u>4.93</u>	<u>23.17</u> <u>with set</u>	<u>clear</u>
	<u>10:26</u>	<u>0.5</u>	<u>6.55</u>	<u>18.56</u>	<u>2112</u>	<u>24.5</u>	<u>297.3</u>	<u>4.19</u>	<u>"</u>	<u>"</u>
	<u>10:27</u>	<u>1.0</u>	<u>6.58</u>	<u>18.53</u>	<u>2115</u>	<u>32.9</u>	<u>299.8</u>	<u>3.74</u>	<u>"</u>	<u>"</u>
	<u>10:28</u>	<u>1.5</u>	<u>6.50</u>	<u>18.52</u>	<u>2105</u>	<u>22.9</u>	<u>301.8</u>	<u>3.53</u>	<u>"</u>	<u>"</u>
	<u>10:30</u>	<u>2.0</u>	<u>6.54</u>	<u>18.50</u>	<u>2100</u>	<u>20.5</u>	<u>303.7</u>	<u>3.42</u>	<u>"</u>	<u>"</u>
	<u>10:31</u>	<u>2.5</u>	<u>6.50</u>	<u>18.49</u>	<u>2104</u>	<u>22.7</u>	<u>305.5</u>	<u>3.30</u>	<u>"</u>	<u>"</u>
	<u>10:32</u>	<u>3.0</u>	<u>6.53</u>	<u>18.55</u>	<u>2106</u>	<u>29.1</u>	<u>306.6</u>	<u>3.18</u>	<u>"</u>	<u>"</u>
	<u>10:33</u>	<u>3.5</u>	<u>6.52</u>	<u>18.52</u>	<u>2106</u>	<u>28.0</u>	<u>308.5</u>	<u>3.24</u>	<u>"</u>	<u>"</u>
<u>↓</u>	<u>10:34</u>	<u>4.0</u>	<u>6.49</u>	<u>18.59</u>	<u>2100</u>	<u>29.0</u>	<u>308.6</u>	<u>3.16</u>	<u>"</u>	<u>"</u>

Total Discharge: 7.3 Liters Casing Volumes Removed: NA  
 Method of disposal of discharged water: (55 Gallon Drum)(s) Poly Tank Treatment System Other: \_\_\_\_\_  
 Date/Time Sampled: 5/16/08 @ 10:43 Analysis: VOCs (8260B) - 3 VOAs w/HCl  
 QA/QC: None @ - Duplicate MS/MSD Equipment Rinseate Field Blank Lab Split  
 Comments: MW-5 PDB sampled @ 10:15

Recorded by: Stephen Penman (Jacki Lee) Signature: [Signature] Page 1 of 2



Project Name: **Hopyana**

FIELD WATER QUALITY PARAMETERS CONTINUED FROM PAGE 1

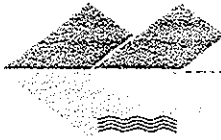
Date	Time	Discharge (Liters)	pH (± 0.1)	Temp. (°C) (± 1°C)	Specific Conductance mS (µS) (± 3%)	Turbidity (NTU's) (±10% NTUs)	Redox (mV) (±10 mV)	Dissolved Oxygen (mg/L) (±10%)	Water Level (BTOC)	Color
5/16/09	10:35	4.5	6.46	18.52	2106	27.3	309.9	3.11	23.17	clear
	10:37	5.0	6.51	18.63	2096	33.6	310.6	3.06	"	"
	10:38	5.5	6.52	18.64	2103	36.1	311.1	3.06	"	"
	10:39	6.0	6.51	18.67	2104	32.3	312.2	3.07	"	"
	10:41	6.5	6.51	18.65	2104	33.0	312.6	3.04	"	"
	10:42	7.0	6.51	18.73	2102	35.1	314.0	3.04	"	"
		7.5								
		8.0								
		8.5								
		9.0								
		9.5								
		10.0								
		10.5								
		11.0								
		11.5								
		12.0								
		12.5								
		13.0								
		13.5								
		14.0								

Total Discharge: **7.3** Liters      Casing Volumes Removed: **NA**

Comments: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Recorded by: Jacqueline Lee / Stephen Penman      Signature:





**Environmental  
Sampling Services**

6680 Alhambra Avenue, #102 • Martinez, California 94553-6105  
 Telephone: (925) 372-8108 Fax: (925) 372-6705  
 www.envsamplng.com Log Code: ESSM

**CHAIN OF CUSTODY RECORD**

TURN AROUND TIME  24 HR  48 HR  72 HR  STD.

Reporting Format: EDF  EDD/Excel  PDF

GeoTracker Site Identification: \_\_\_\_\_

FedEx  UPS  Tracking Number: \_\_\_\_\_

Laboratory: Test America Lab Code: STCL

Send Report To: Melissa Asher Bill To: SAME  
 Company: GeoSyntec Consultants Company:  
 Address: 475 14th Street, Suite 450 Address:  
Oakland, CA 94612  
 E-Mail: masher@geosyntec.com  
 Tel: (510) 285-2782 Fax: ( )  
 Fax: (510) 836-3036  
 Project Name: Hopyard Cleaners Project Number: WR0574  
 Sampler's Name: Jacqueline Lee  Stephen Penman

Analysis Request Other Comments

SAMPLE ID	Field Point Name	SAMPLING		# Containers	Container Type*	MATRIX CODE				METHOD PRESERVED				VOCs (EPA 8260B)
		Date	Time			WG	SO	GS	Water	Ice	HCl	HNO <sub>3</sub>	H <sub>2</sub> SO <sub>4</sub>	
Trip Blank		5/16/08	7:00	3	1				X	X	X			X
MW-2 PDB		5/16/08	7:55	3	1	X				X	X			X
MW-DUP		5/16/08	8:00	3	1	X				X	X			X
MW-2		5/16/08	8:31	3	1	X				X	X			X
MW-1 PDB		5/16/08	9:00	3	1	X				X	X			X
MW-1		5/16/08	9:29	3	1	X				X	X			X
MW-5 PDB		5/16/08	10:15	3	1	X				X	X			X
MW-5		5/16/08	10:43	3	1	X				X	X			X
MW-4 PDB		5/16/08	11:15	3	1	X				X	X			X
MW-4		5/16/08	11:57	3	1	X				X	X			X

Relinquished By: [Signature] Date: 5/16/08 Time: 16:00 Received By: [Signature]  
 Relinquished By: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_ Received By: \_\_\_\_\_  
 Relinquished By: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_ Received By: \_\_\_\_\_

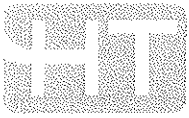
ICE/°C 2.3 HEAD SPACE ABSENT: Yes No  
 Received in Good Condition: Yes No  
 Metals sample(s) Field Filtered: Yes No NA  
 Questions regarding COC: Call ESS  
 COMMENTS :  
 FIELD POINT: MW=Monitoring Well QCFD=Field Duplicate QCFB=Field Blank  
 CONTAINER TYPES:  
 1=VOAs 2=Glass 3=Poly 4=Liner 5=Air Canister 6=Tedlar Bag

Report To					Analysis Request																		
Attn: <u>Melissa Asher</u>																							
Company: <u>Geosyntec Consultants</u>																							
Address: <u>475-14th St., Suite 450 Oakland 94612</u>																							
Phone: <u>510-285-2782</u> Email: <u>mashere@geosyntec.com</u>																							
Bill To: <u>SAME</u>		Sampled By: <u>ESS(JL)</u>																					
Attn:		Phone:																					
Sample ID	Date	Time	Mat rix	Pres erv.	TPH EPA - <input type="checkbox"/> 80158021 <input type="checkbox"/> 8260B <input type="checkbox"/> Gas w/ <input type="checkbox"/> BTEX <input type="checkbox"/> MTBE	Purgeable Aromatics BTEX EPA - <input type="checkbox"/> 8021 <input type="checkbox"/> 8260B	TEPH EPA 8015M* <input type="checkbox"/> Silica Gel <input type="checkbox"/> Diesel <input type="checkbox"/> Motor Oil <input type="checkbox"/> Other _____	Fuel Tests EPA 8260B: <input type="checkbox"/> Gas <input type="checkbox"/> BTEX <input type="checkbox"/> Five Oxygenates <input type="checkbox"/> DCA, EDB <input type="checkbox"/> <small>Subtotal</small>	Purgeable Halocarbons (HVOCs) EPA 8021 by 8260B	Volatile Organics GC/MS (VOCs) EPA 8260B <input type="checkbox"/> 624	Semivolatiles GC/MS <input type="checkbox"/> EPA 8270 <input type="checkbox"/> 625	Oil and Grease <input type="checkbox"/> Petroleum (EPA 1664) <input type="checkbox"/> Total	Pesticides <input type="checkbox"/> EPA 8081 <input type="checkbox"/> 608 PCBs <input type="checkbox"/> EPA 8082 <input type="checkbox"/> 608	PNAs by <input type="checkbox"/> 8270 <input type="checkbox"/> 8310	CAM17 Metals (EPA 6010/7470/7471)	Metals: <input type="checkbox"/> Lead <input type="checkbox"/> LUFT <input type="checkbox"/> RCRA <input type="checkbox"/> Other: _____	Low Level Metals by EPA 200.8/6020 (ICP-MS):	<input type="checkbox"/> W.E.T (STLO) <input type="checkbox"/> <input type="checkbox"/> TCLP	Hexavalent Chromium pH (24h hold time for H <sub>2</sub> O)	Spec Cond. <input type="checkbox"/> Alkalinity TSS <input type="checkbox"/> TDS <input type="checkbox"/>	Anions: <input type="checkbox"/> Cl <input type="checkbox"/> SO <sub>4</sub> <input type="checkbox"/> NO <sub>3</sub> <input type="checkbox"/> F <input type="checkbox"/> Br <input type="checkbox"/> NO <sub>2</sub> <input type="checkbox"/> PO <sub>4</sub>	Number of Containers	
MW-3PDB	5/16/08	12:30	WG	HCl						X													
EB-1	5/16/08	12:50	W	HCl						X													3
MW-3	5/16/08	13:30	WG	HCl						X													3

Project Info.		Sample Receipt		1) Relinquished by:		2) Relinquished by:		3) Relinquished by:			
Project Name: <u>Hopyard</u>	# of Containers:			<u>[Signature]</u>	<u>16:00</u>						
Project#: <u>WR0574</u>	Head Space:			<u>Jacki Lee</u>	<u>5/16/08</u>						
PO#:	Temp:			<u>Env. Sampling Services</u>							
Credit Card#:	Conforms to record:			<u>Company</u>							
T A T	<u>5</u> Day	72h	48h	24h	Other:	1) Received by:		2) Received by:		3) Received by:	
Report: <input type="checkbox"/> Routine <input type="checkbox"/> Level 3 <input type="checkbox"/> Level 4 <input type="checkbox"/> EDD <input type="checkbox"/> State Tank Fund EDF						<u>[Signature]</u>	<u>16:00</u>				
Special Instructions / Comments: <u>Temp. Blank provided to verify refrigeration</u>						<u>T Bullock</u>	<u>5/16/08</u>				
						<u>TALS</u>					
						<u>Company</u>					

See Terms and Conditions on reverse  
 \*TestAmerica SF reports 8015M from C<sub>9</sub>-C<sub>24</sub> (industry norm). Default for 8015B is C<sub>10</sub>-C<sub>24</sub>





# HIGHWAY TECHNOLOGIES

R 00556

1277 OLD BAYSHORE HIGHWAY  
SAN JOSE, CA 95112-2800

## TRAFFIC CONTROL RENTAL

408-295-8210  
1-800-479-8210  
FAX: 408-998-5939

TO Geosyn

J  
O  
B  
S  
I  
T  
E  
2771 Hopy rd  
Pleasanton

DATE CALLED		ORDERED BY		PHONE	JOB NO.	
DATE OUT/IN		BRANCH	SALESMAN	PURCHASE ORDER NO.		
<input type="checkbox"/> RENTAL OUT	<input type="checkbox"/> RENTAL IN	<input type="checkbox"/> MISSING UNITS	DESCRIPTION		RATE	TOTAL
			1 Piece ...		7.50	
			4 Hr Min		40.50	
		SWR	930A			
		SWR	100 P			

**RENTAL POLICIES:**

- Minimum rental rate \$75.00
- The customer is responsible for all equipment rented.
- It is the customer's responsibility to notify this office within 15 days after receiving rental invoices, where their charges are in question
- All calls for deliveries after 4 P.M. on weekdays are subject to \$47.50 per hour late charge.
- All weekend and holiday deliveries are subject to a \$65.00 per hour charge.
- All accounts are due and payable 30 days after receiving invoices.
- LESSEE AGREES:** To pay the specified rent for use of said equipment - To not release this equipment from Lessee's control without prior authorization from Lessor - To not move said equipment to any other job without prior consent of Lessor - To assume sole responsibility for proper placing of said equipment on the job location - To indemnify Lessor against all loss, damage, expense and penalty arising from any action or claim on account of any injury to person or property of any character whatsoever occasioned by the operation, handling, transportation and/or use of any of the barricades and/or warning lights during rental period, and while said barricades are in possession or under the custody of Lessee. To pay the Lessor reasonable attorney's fees and collection costs incurred by Lessor in enforcing the terms of this agreement, in the event Lessee breaches any of the terms of this agreement, or Lessee fails to pay rent or to pay for damages to said equipment while in Lessee's possession.

RECEIVED BY [Signature] DELIVERED BY ERIC R WEAVER DATE 5-16-08

**DELIVERY RECEIPT** THIS IS NOT AN INVOICE  
INVOICE TO FOLLOW

**ATTACHMENT 2**  
**LABORATORY ANALYTICAL REPORT**

## ANALYTICAL REPORT

Job Number: 720-14379-1

Job Description: Hopyard Cleaners

For:

GeoSyntec Consultants  
475 14th Street, Suite 450  
Oakland, CA 94612

Attention: Ms. Melissa Asher



---

Melissa Brewer  
Project Manager I  
melissa.brewer@testamericainc.com  
05/28/2008

cc: Ms. Angela Liang

**Job Narrative**  
**720-J14379-1**

**Comments**

No additional comments.

**Receipt**

All samples were received in good condition within temperature requirements.

**GC/MS VOA**

No analytical or quality issues were noted.

## EXECUTIVE SUMMARY - Detections

Client: GeoSyntec Consultants

Job Number: 720-14379-1

Lab Sample ID Analyte	Client Sample ID	Result / Qualifier	Reporting Limit	Units	Method
<b>720-14379-2</b>	<b>MW-2 PDB</b>				
cis-1,2-Dichloroethene		940	50	ug/L	8260B
Tetrachloroethene		6700	50	ug/L	8260B
Trichloroethene		480	50	ug/L	8260B
<b>720-14379-3</b>	<b>MW-DUP</b>				
cis-1,2-Dichloroethene		930	50	ug/L	8260B
Tetrachloroethene		5900	50	ug/L	8260B
Trichloroethene		450	50	ug/L	8260B
<b>720-14379-4</b>	<b>MW-2</b>				
cis-1,2-Dichloroethene		900	50	ug/L	8260B
Tetrachloroethene		5800	50	ug/L	8260B
Trichloroethene		460	50	ug/L	8260B
<b>720-14379-5</b>	<b>MW-1 PDB</b>				
cis-1,2-Dichloroethene		260	20	ug/L	8260B
Tetrachloroethene		1900	20	ug/L	8260B
Trichloroethene		310	20	ug/L	8260B
<b>720-14379-6</b>	<b>MW-1</b>				
cis-1,2-Dichloroethene		250	20	ug/L	8260B
Tetrachloroethene		1600	20	ug/L	8260B
Trichloroethene		280	20	ug/L	8260B
<b>720-14379-7</b>	<b>MW-5 PDB</b>				
Tetrachloroethene		34	0.50	ug/L	8260B
<b>720-14379-8</b>	<b>MW-5</b>				
Tetrachloroethene		24	0.50	ug/L	8260B
<b>720-14379-9</b>	<b>MW-4 PDB</b>				
cis-1,2-Dichloroethene		3.6	0.50	ug/L	8260B
Trichloroethene		2.7	0.50	ug/L	8260B

## EXECUTIVE SUMMARY - Detections

Client: GeoSyntec Consultants

Job Number: 720-14379-1

Lab Sample ID	Client Sample ID	Result / Qualifier	Reporting Limit	Units	Method
<b>720-14379-10</b>	<b>MW-4</b>				
cis-1,2-Dichloroethene		3.7	0.50	ug/L	8260B
Trichloroethene		2.6	0.50	ug/L	8260B
<b>720-14379-11</b>	<b>MW-3 PDB</b>				
cis-1,2-Dichloroethene		5.4	0.50	ug/L	8260B
Tetrachloroethene		46	0.50	ug/L	8260B
Trichloroethene		4.4	0.50	ug/L	8260B
<b>720-14379-13</b>	<b>MW-3</b>				
cis-1,2-Dichloroethene		5.0	0.50	ug/L	8260B
Tetrachloroethene		39	0.50	ug/L	8260B
Trichloroethene		4.3	0.50	ug/L	8260B

## METHOD SUMMARY

Client: GeoSyntec Consultants

Job Number: 720-14379-1

<b>Description</b>	<b>Lab Location</b>	<b>Method</b>	<b>Preparation Method</b>
<b>Matrix: Water</b>			
Volatile Organic Compounds by GC/MS (Low Level)	TAL SF	SW846 8260B	
Purge-and-Trap	TAL SF		SW846 5030B

### Lab References:

TAL SF = TestAmerica San Francisco

### Method References:

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

## SAMPLE SUMMARY

Client: GeoSyntec Consultants

Job Number: 720-14379-1

<b>Lab Sample ID</b>	<b>Client Sample ID</b>	<b>Client Matrix</b>	<b>Date/Time Sampled</b>	<b>Date/Time Received</b>
720-14379-1TB	TRIP BLANK	Water	05/16/2008 0700	05/16/2008 1600
720-14379-2	MW-2 PDB	Water	05/16/2008 0755	05/16/2008 1600
720-14379-3	MW-DUP	Water	05/16/2008 0800	05/16/2008 1600
720-14379-4	MW-2	Water	05/16/2008 0831	05/16/2008 1600
720-14379-5	MW-1 PDB	Water	05/16/2008 0900	05/16/2008 1600
720-14379-6	MW-1	Water	05/16/2008 0929	05/16/2008 1600
720-14379-7	MW-5 PDB	Water	05/16/2008 1015	05/16/2008 1600
720-14379-8	MW-5	Water	05/16/2008 1043	05/16/2008 1600
720-14379-9	MW-4 PDB	Water	05/16/2008 1115	05/16/2008 1600
720-14379-10	MW-4	Water	05/16/2008 1157	05/16/2008 1600
720-14379-11	MW-3 PDB	Water	05/16/2008 1230	05/16/2008 1600
720-14379-12	EB-1	Water	05/16/2008 1250	05/16/2008 1600
720-14379-13	MW-3	Water	05/16/2008 1330	05/16/2008 1600



# Analytical Data

Client: GeoSyntec Consultants

Job Number: 720-14379-1

Client Sample ID: TRIP BLANK

Lab Sample ID: 720-14379-1TB  
Client Matrix: Water

Date Sampled: 05/16/2008 0700  
Date Received: 05/16/2008 1600

## 8260B Volatile Organic Compounds by GC/MS (Low Level)

Method: 8260B Analysis Batch: 720-36038 Instrument ID: Varian 3900G  
Preparation: 5030B Lab File ID: c:\saturnws\data\200805\05  
Dilution: 1.0 Initial Weight/Volume: 40 mL  
Date Analyzed: 05/27/2008 1124 Final Weight/Volume: 40 mL  
Date Prepared: 05/27/2008 1124

Analyte	Result (ug/L)	Qualifier	RL
Methyl tert-butyl ether	ND		5.0
Acetone	ND		50
Benzene	ND		0.50
Dichlorobromomethane	ND		0.50
Bromobenzene	ND		1.0
Chlorobromomethane	ND		1.0
Bromoform	ND		1.0
Bromomethane	ND		1.0
2-Butanone (MEK)	ND		50
n-Butylbenzene	ND		1.0
sec-Butylbenzene	ND		1.0
tert-Butylbenzene	ND		1.0
Carbon disulfide	ND		5.0
Carbon tetrachloride	ND		0.50
Chlorobenzene	ND		0.50
Chloroethane	ND		1.0
Chloroform	ND		1.0
Chloromethane	ND		1.0
2-Chlorotoluene	ND		0.50
4-Chlorotoluene	ND		0.50
Chlorodibromomethane	ND		0.50
1,2-Dichlorobenzene	ND		0.50
1,3-Dichlorobenzene	ND		0.50
1,4-Dichlorobenzene	ND		0.50
1,3-Dichloropropane	ND		1.0
1,1-Dichloropropene	ND		0.50
1,2-Dibromo-3-Chloropropane	ND		1.0
Ethylene Dibromide	ND		0.50
Dibromomethane	ND		0.50
Dichlorodifluoromethane	ND		0.50
1,1-Dichloroethane	ND		0.50
1,2-Dichloroethane	ND		0.50
1,1-Dichloroethene	ND		0.50
cis-1,2-Dichloroethene	ND		0.50
trans-1,2-Dichloroethene	ND		0.50
1,2-Dichloropropane	ND		0.50
cis-1,3-Dichloropropene	ND		0.50
trans-1,3-Dichloropropene	ND		0.50
Ethylbenzene	ND		0.50
Hexachlorobutadiene	ND		1.0
2-Hexanone	ND		50
Isopropylbenzene	ND		0.50
4-Isopropyltoluene	ND		1.0
Methylene Chloride	ND		5.0

# Analytical Data

Client: GeoSyntec Consultants

Job Number: 720-14379-1

Client Sample ID: TRIP BLANK

Lab Sample ID: 720-14379-1TB  
Client Matrix: Water

Date Sampled: 05/16/2008 0700  
Date Received: 05/16/2008 1600

## 8260B Volatile Organic Compounds by GC/MS (Low Level)

Method: 8260B Analysis Batch: 720-36038 Instrument ID: Varian 3900G  
Preparation: 5030B Lab File ID: c:\saturnws\data\200805\05  
Dilution: 1.0 Initial Weight/Volume: 40 mL  
Date Analyzed: 05/27/2008 1124 Final Weight/Volume: 40 mL  
Date Prepared: 05/27/2008 1124

Analyte	Result (ug/L)	Qualifier	RL
4-Methyl-2-pentanone (MIBK)	ND		50
Naphthalene	ND		1.0
N-Propylbenzene	ND		1.0
Styrene	ND		0.50
1,1,1,2-Tetrachloroethane	ND		0.50
1,1,2,2-Tetrachloroethane	ND		0.50
Tetrachloroethene	ND		0.50
Toluene	ND		0.50
1,2,3-Trichlorobenzene	ND		1.0
1,2,4-Trichlorobenzene	ND		1.0
1,1,1-Trichloroethane	ND		0.50
1,1,2-Trichloroethane	ND		0.50
Trichloroethene	ND		0.50
Trichlorofluoromethane	ND		1.0
1,2,3-Trichloropropane	ND		0.50
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.50
1,2,4-Trimethylbenzene	ND		0.50
1,3,5-Trimethylbenzene	ND		0.50
Vinyl acetate	ND		50
Vinyl chloride	ND		0.50
Xylenes, Total	ND		1.0
2,2-Dichloropropane	ND		0.50

Surrogate	%Rec	Acceptance Limits
4-Bromofluorobenzene	106	71 - 139
1,2-Dichloroethane-d4 (Surr)	101	62 - 118
Toluene-d8 (Surr)	97	73 - 117

## Analytical Data

Client: GeoSyntec Consultants

Job Number: 720-14379-1

**Client Sample ID: MW-2 PDB**

Lab Sample ID: 720-14379-2

Date Sampled: 05/16/2008 0755

Client Matrix: Water

Date Received: 05/16/2008 1600

### 8260B Volatile Organic Compounds by GC/MS (Low Level)

Method: 8260B Analysis Batch: 720-36000 Instrument ID: Varian 3900F  
Preparation: 5030B Lab File ID: c:\saturnws\data\200805\05  
Dilution: 100 Initial Weight/Volume: 40 mL  
Date Analyzed: 05/25/2008 2002 Final Weight/Volume: 40 mL  
Date Prepared: 05/25/2008 2002

Analyte	Result (ug/L)	Qualifier	RL
Methyl tert-butyl ether	ND		500
Acetone	ND		5000
Benzene	ND		50
Dichlorobromomethane	ND		50
Bromobenzene	ND		100
Chlorobromomethane	ND		100
Bromoform	ND		100
Bromomethane	ND		100
2-Butanone (MEK)	ND		5000
n-Butylbenzene	ND		100
sec-Butylbenzene	ND		100
tert-Butylbenzene	ND		100
Carbon disulfide	ND		500
Carbon tetrachloride	ND		50
Chlorobenzene	ND		50
Chloroethane	ND		100
Chloroform	ND		100
Chloromethane	ND		100
2-Chlorotoluene	ND		50
4-Chlorotoluene	ND		50
Chlorodibromomethane	ND		50
1,2-Dichlorobenzene	ND		50
1,3-Dichlorobenzene	ND		50
1,4-Dichlorobenzene	ND		50
1,3-Dichloropropane	ND		100
1,1-Dichloropropene	ND		50
1,2-Dibromo-3-Chloropropane	ND		100
Ethylene Dibromide	ND		50
Dibromomethane	ND		50
Dichlorodifluoromethane	ND		50
1,1-Dichloroethane	ND		50
1,2-Dichloroethane	ND		50
1,1-Dichloroethene	ND		50
cis-1,2-Dichloroethene	940		50
trans-1,2-Dichloroethene	ND		50
1,2-Dichloropropane	ND		50
cis-1,3-Dichloropropene	ND		50
trans-1,3-Dichloropropene	ND		50
Ethylbenzene	ND		50
Hexachlorobutadiene	ND		100
2-Hexanone	ND		5000
Isopropylbenzene	ND		50
4-Isopropyltoluene	ND		100
Methylene Chloride	ND		500

# Analytical Data

Client: GeoSyntec Consultants

Job Number: 720-14379-1

Client Sample ID: MW-2 PDB

Lab Sample ID: 720-14379-2

Date Sampled: 05/16/2008 0755

Client Matrix: Water

Date Received: 05/16/2008 1600

## 8260B Volatile Organic Compounds by GC/MS (Low Level)

Method: 8260B Analysis Batch: 720-36000 Instrument ID: Varian 3900F  
Preparation: 5030B Lab File ID: c:\saturnws\data\200805\05  
Dilution: 100 Initial Weight/Volume: 40 mL  
Date Analyzed: 05/25/2008 2002 Final Weight/Volume: 40 mL  
Date Prepared: 05/25/2008 2002

Analyte	Result (ug/L)	Qualifier	RL
4-Methyl-2-pentanone (MIBK)	ND		5000
Naphthalene	ND		100
N-Propylbenzene	ND		100
Styrene	ND		50
1,1,1,2-Tetrachloroethane	ND		50
1,1,2,2-Tetrachloroethane	ND		50
Tetrachloroethene	6700		50
Toluene	ND		50
1,2,3-Trichlorobenzene	ND		100
1,2,4-Trichlorobenzene	ND		100
1,1,1-Trichloroethane	ND		50
1,1,2-Trichloroethane	ND		50
Trichloroethene	480		50
Trichlorofluoromethane	ND		100
1,2,3-Trichloropropane	ND		50
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		50
1,2,4-Trimethylbenzene	ND		50
1,3,5-Trimethylbenzene	ND		50
Vinyl acetate	ND		5000
Vinyl chloride	ND		50
Xylenes, Total	ND		100
2,2-Dichloropropane	ND		50
Surrogate	%Rec		Acceptance Limits
4-Bromofluorobenzene	105		71 - 139
1,2-Dichloroethane-d4 (Surr)	105		62 - 118
Toluene-d8 (Surr)	107		73 - 117

# Analytical Data

Client: GeoSyntec Consultants

Job Number: 720-14379-1

Client Sample ID: MW-DUP

Lab Sample ID: 720-14379-3

Date Sampled: 05/16/2008 0800

Client Matrix: Water

Date Received: 05/16/2008 1600

## 8260B Volatile Organic Compounds by GC/MS (Low Level)

Method: 8260B Analysis Batch: 720-36000 Instrument ID: Varian 3900F  
Preparation: 5030B Lab File ID: c:\saturnws\data\200805\05  
Dilution: 100 Initial Weight/Volume: 40 mL  
Date Analyzed: 05/25/2008 2035 Final Weight/Volume: 40 mL  
Date Prepared: 05/25/2008 2035

Analyte	Result (ug/L)	Qualifier	RL
Methyl tert-butyl ether	ND		500
Acetone	ND		5000
Benzene	ND		50
Dichlorobromomethane	ND		50
Bromobenzene	ND		100
Chlorobromomethane	ND		100
Bromoform	ND		100
Bromomethane	ND		100
2-Butanone (MEK)	ND		5000
n-Butylbenzene	ND		100
sec-Butylbenzene	ND		100
tert-Butylbenzene	ND		100
Carbon disulfide	ND		500
Carbon tetrachloride	ND		50
Chlorobenzene	ND		50
Chloroethane	ND		100
Chloroform	ND		100
Chloromethane	ND		100
2-Chlorotoluene	ND		50
4-Chlorotoluene	ND		50
Chlorodibromomethane	ND		50
1,2-Dichlorobenzene	ND		50
1,3-Dichlorobenzene	ND		50
1,4-Dichlorobenzene	ND		50
1,3-Dichloropropane	ND		100
1,1-Dichloropropene	ND		50
1,2-Dibromo-3-Chloropropane	ND		100
Ethylene Dibromide	ND		50
Dibromomethane	ND		50
Dichlorodifluoromethane	ND		50
1,1-Dichloroethane	ND		50
1,2-Dichloroethane	ND		50
1,1-Dichloroethene	ND		50
cis-1,2-Dichloroethene	930		50
trans-1,2-Dichloroethene	ND		50
1,2-Dichloropropane	ND		50
cis-1,3-Dichloropropene	ND		50
trans-1,3-Dichloropropene	ND		50
Ethylbenzene	ND		50
Hexachlorobutadiene	ND		100
2-Hexanone	ND		5000
Isopropylbenzene	ND		50
4-Isopropyltoluene	ND		100
Methylene Chloride	ND		500

## Analytical Data

Client: GeoSyntec Consultants

Job Number: 720-14379-1

**Client Sample ID: MW-DUP**

Lab Sample ID: 720-14379-3  
Client Matrix: Water

Date Sampled: 05/16/2008 0800  
Date Received: 05/16/2008 1600

### 8260B Volatile Organic Compounds by GC/MS (Low Level)

Method:	8260B	Analysis Batch: 720-36000	Instrument ID: Varian 3900F
Preparation:	5030B		Lab File ID: c:\saturnws\data\200805\05
Dilution:	100		Initial Weight/Volume: 40 mL
Date Analyzed:	05/25/2008 2035		Final Weight/Volume: 40 mL
Date Prepared:	05/25/2008 2035		

Analyte	Result (ug/L)	Qualifier	RL
4-Methyl-2-pentanone (MIBK)	ND		5000
Naphthalene	ND		100
N-Propylbenzene	ND		100
Styrene	ND		50
1,1,1,2-Tetrachloroethane	ND		50
1,1,2,2-Tetrachloroethane	ND		50
Tetrachloroethene	5900		50
Toluene	ND		50
1,2,3-Trichlorobenzene	ND		100
1,2,4-Trichlorobenzene	ND		100
1,1,1-Trichloroethane	ND		50
1,1,2-Trichloroethane	ND		50
Trichloroethene	450		50
Trichlorofluoromethane	ND		100
1,2,3-Trichloropropane	ND		50
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		50
1,2,4-Trimethylbenzene	ND		50
1,3,5-Trimethylbenzene	ND		50
Vinyl acetate	ND		5000
Vinyl chloride	ND		50
Xylenes, Total	ND		100
2,2-Dichloropropane	ND		50
Surrogate	%Rec		Acceptance Limits
4-Bromofluorobenzene	100		71 - 139
1,2-Dichloroethane-d4 (Surr)	106		62 - 118
Toluene-d8 (Surr)	105		73 - 117

# Analytical Data

Client: GeoSyntec Consultants

Job Number: 720-14379-1

Client Sample ID: MW-2

Lab Sample ID: 720-14379-4

Client Matrix: Water

Date Sampled: 05/16/2008 0831

Date Received: 05/16/2008 1600

## 8260B Volatile Organic Compounds by GC/MS (Low Level)

Method: 8260B Analysis Batch: 720-36000 Instrument ID: Varian 3900F  
Preparation: 5030B Lab File ID: c:\saturnws\data\200805\05  
Dilution: 100 Initial Weight/Volume: 40 mL  
Date Analyzed: 05/25/2008 2109 Final Weight/Volume: 40 mL  
Date Prepared: 05/25/2008 2109

Analyte	Result (ug/L)	Qualifier	RL
Methyl tert-butyl ether	ND		500
Acetone	ND		5000
Benzene	ND		50
Dichlorobromomethane	ND		50
Bromobenzene	ND		100
Chlorobromomethane	ND		100
Bromoform	ND		100
Bromomethane	ND		100
2-Butanone (MEK)	ND		5000
n-Butylbenzene	ND		100
sec-Butylbenzene	ND		100
tert-Butylbenzene	ND		100
Carbon disulfide	ND		500
Carbon tetrachloride	ND		50
Chlorobenzene	ND		50
Chloroethane	ND		100
Chloroform	ND		100
Chloromethane	ND		100
2-Chlorotoluene	ND		50
4-Chlorotoluene	ND		50
Chlorodibromomethane	ND		50
1,2-Dichlorobenzene	ND		50
1,3-Dichlorobenzene	ND		50
1,4-Dichlorobenzene	ND		50
1,3-Dichloropropane	ND		100
1,1-Dichloropropene	ND		50
1,2-Dibromo-3-Chloropropane	ND		100
Ethylene Dibromide	ND		50
Dibromomethane	ND		50
Dichlorodifluoromethane	ND		50
1,1-Dichloroethane	ND		50
1,2-Dichloroethane	ND		50
1,1-Dichloroethene	ND		50
cis-1,2-Dichloroethene	900		50
trans-1,2-Dichloroethene	ND		50
1,2-Dichloropropane	ND		50
cis-1,3-Dichloropropene	ND		50
trans-1,3-Dichloropropene	ND		50
Ethylbenzene	ND		50
Hexachlorobutadiene	ND		100
2-Hexanone	ND		5000
Isopropylbenzene	ND		50
4-Isopropyltoluene	ND		100
Methylene Chloride	ND		500

## Analytical Data

Client: GeoSyntec Consultants

Job Number: 720-14379-1

**Client Sample ID: MW-2**

Lab Sample ID: 720-14379-4  
Client Matrix: Water

Date Sampled: 05/16/2008 0831  
Date Received: 05/16/2008 1600

### 8260B Volatile Organic Compounds by GC/MS (Low Level)

Method:	8260B	Analysis Batch: 720-36000	Instrument ID: Varian 3900F
Preparation:	5030B		Lab File ID: c:\saturnws\data\200805\05
Dilution:	100		Initial Weight/Volume: 40 mL
Date Analyzed:	05/25/2008 2109		Final Weight/Volume: 40 mL
Date Prepared:	05/25/2008 2109		

Analyte	Result (ug/L)	Qualifier	RL
4-Methyl-2-pentanone (MIBK)	ND		5000
Naphthalene	ND		100
N-Propylbenzene	ND		100
Styrene	ND		50
1,1,1,2-Tetrachloroethane	ND		50
1,1,2,2-Tetrachloroethane	ND		50
Tetrachloroethene	5800		50
Toluene	ND		50
1,2,3-Trichlorobenzene	ND		100
1,2,4-Trichlorobenzene	ND		100
1,1,1-Trichloroethane	ND		50
1,1,2-Trichloroethane	ND		50
Trichloroethene	460		50
Trichlorofluoromethane	ND		100
1,2,3-Trichloropropane	ND		50
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		50
1,2,4-Trimethylbenzene	ND		50
1,3,5-Trimethylbenzene	ND		50
Vinyl acetate	ND		5000
Vinyl chloride	ND		50
Xylenes, Total	ND		100
2,2-Dichloropropane	ND		50
Surrogate	%Rec		Acceptance Limits
4-Bromofluorobenzene	101		71 - 139
1,2-Dichloroethane-d4 (Surr)	99		62 - 118
Toluene-d8 (Surr)	103		73 - 117



## Analytical Data

Client: GeoSyntec Consultants

Job Number: 720-14379-1

**Client Sample ID: MW-1 PDB**

Lab Sample ID: 720-14379-5  
Client Matrix: Water

Date Sampled: 05/16/2008 0900  
Date Received: 05/16/2008 1600

### 8260B Volatile Organic Compounds by GC/MS (Low Level)

Method:	8260B	Analysis Batch: 720-36000	Instrument ID: Varian 3900F
Preparation:	5030B		Lab File ID: c:\saturnws\data\200805\05
Dilution:	40		Initial Weight/Volume: 40 mL
Date Analyzed:	05/25/2008 2142		Final Weight/Volume: 40 mL
Date Prepared:	05/25/2008 2142		

Analyte	Result (ug/L)	Qualifier	RL
Methyl tert-butyl ether	ND		200
Acetone	ND		2000
Benzene	ND		20
Dichlorobromomethane	ND		20
Bromobenzene	ND		40
Chlorobromomethane	ND		40
Bromoform	ND		40
Bromomethane	ND		40
2-Butanone (MEK)	ND		2000
n-Butylbenzene	ND		40
sec-Butylbenzene	ND		40
tert-Butylbenzene	ND		40
Carbon disulfide	ND		200
Carbon tetrachloride	ND		20
Chlorobenzene	ND		20
Chloroethane	ND		40
Chloroform	ND		40
Chloromethane	ND		40
2-Chlorotoluene	ND		20
4-Chlorotoluene	ND		20
Chlorodibromomethane	ND		20
1,2-Dichlorobenzene	ND		20
1,3-Dichlorobenzene	ND		20
1,4-Dichlorobenzene	ND		20
1,3-Dichloropropane	ND		40
1,1-Dichloropropene	ND		20
1,2-Dibromo-3-Chloropropane	ND		40
Ethylene Dibromide	ND		20
Dibromomethane	ND		20
Dichlorodifluoromethane	ND		20
1,1-Dichloroethane	ND		20
1,2-Dichloroethane	ND		20
1,1-Dichloroethene	ND		20
cis-1,2-Dichloroethene	260		20
trans-1,2-Dichloroethene	ND		20
1,2-Dichloropropane	ND		20
cis-1,3-Dichloropropene	ND		20
trans-1,3-Dichloropropene	ND		20
Ethylbenzene	ND		20
Hexachlorobutadiene	ND		40
2-Hexanone	ND		2000
Isopropylbenzene	ND		20
4-Isopropyltoluene	ND		40
Methylene Chloride	ND		200

# Analytical Data

Client: GeoSyntec Consultants

Job Number: 720-14379-1

Client Sample ID: MW-1 PDB

Lab Sample ID: 720-14379-5

Date Sampled: 05/16/2008 0900

Client Matrix: Water

Date Received: 05/16/2008 1600

## 8260B Volatile Organic Compounds by GC/MS (Low Level)

Method: 8260B Analysis Batch: 720-36000 Instrument ID: Varian 3900F  
Preparation: 5030B Lab File ID: c:\saturnws\data\200805\05  
Dilution: 40 Initial Weight/Volume: 40 mL  
Date Analyzed: 05/25/2008 2142 Final Weight/Volume: 40 mL  
Date Prepared: 05/25/2008 2142

Analyte	Result (ug/L)	Qualifier	RL
4-Methyl-2-pentanone (MIBK)	ND		2000
Naphthalene	ND		40
N-Propylbenzene	ND		40
Styrene	ND		20
1,1,1,2-Tetrachloroethane	ND		20
1,1,2,2-Tetrachloroethane	ND		20
Tetrachloroethene	1900		20
Toluene	ND		20
1,2,3-Trichlorobenzene	ND		40
1,2,4-Trichlorobenzene	ND		40
1,1,1-Trichloroethane	ND		20
1,1,2-Trichloroethane	ND		20
Trichloroethene	310		20
Trichlorofluoromethane	ND		40
1,2,3-Trichloropropane	ND		20
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		20
1,2,4-Trimethylbenzene	ND		20
1,3,5-Trimethylbenzene	ND		20
Vinyl acetate	ND		2000
Vinyl chloride	ND		20
Xylenes, Total	ND		40
2,2-Dichloropropane	ND		20

Surrogate	%Rec	Acceptance Limits
4-Bromofluorobenzene	104	71 - 139
1,2-Dichloroethane-d4 (Surr)	107	62 - 118
Toluene-d8 (Surr)	106	73 - 117

## Analytical Data

Client: GeoSyntec Consultants

Job Number: 720-14379-1

**Client Sample ID: MW-1**

Lab Sample ID: 720-14379-6  
Client Matrix: Water

Date Sampled: 05/16/2008 0929  
Date Received: 05/16/2008 1600

### 8260B Volatile Organic Compounds by GC/MS (Low Level)

Method:	8260B	Analysis Batch: 720-36000	Instrument ID: Varian 3900F
Preparation:	5030B		Lab File ID: c:\saturnws\data\200805\05
Dilution:	40		Initial Weight/Volume: 40 mL
Date Analyzed:	05/25/2008 2215		Final Weight/Volume: 40 mL
Date Prepared:	05/25/2008 2215		

Analyte	Result (ug/L)	Qualifier	RL
Methyl tert-butyl ether	ND		200
Acetone	ND		2000
Benzene	ND		20
Dichlorobromomethane	ND		20
Bromobenzene	ND		40
Chlorobromomethane	ND		40
Bromoform	ND		40
Bromomethane	ND		40
2-Butanone (MEK)	ND		2000
n-Butylbenzene	ND		40
sec-Butylbenzene	ND		40
tert-Butylbenzene	ND		40
Carbon disulfide	ND		200
Carbon tetrachloride	ND		20
Chlorobenzene	ND		20
Chloroethane	ND		40
Chloroform	ND		40
Chloromethane	ND		40
2-Chlorotoluene	ND		20
4-Chlorotoluene	ND		20
Chlorodibromomethane	ND		20
1,2-Dichlorobenzene	ND		20
1,3-Dichlorobenzene	ND		20
1,4-Dichlorobenzene	ND		20
1,3-Dichloropropane	ND		40
1,1-Dichloropropene	ND		20
1,2-Dibromo-3-Chloropropane	ND		40
Ethylene Dibromide	ND		20
Dibromomethane	ND		20
Dichlorodifluoromethane	ND		20
1,1-Dichloroethane	ND		20
1,2-Dichloroethane	ND		20
1,1-Dichloroethene	ND		20
cis-1,2-Dichloroethene	250		20
trans-1,2-Dichloroethene	ND		20
1,2-Dichloropropane	ND		20
cis-1,3-Dichloropropene	ND		20
trans-1,3-Dichloropropene	ND		20
Ethylbenzene	ND		20
Hexachlorobutadiene	ND		40
2-Hexanone	ND		2000
Isopropylbenzene	ND		20
4-Isopropyltoluene	ND		40
Methylene Chloride	ND		200

## Analytical Data

Client: GeoSyntec Consultants

Job Number: 720-14379-1

**Client Sample ID: MW-1**

Lab Sample ID: 720-14379-6  
Client Matrix: Water

Date Sampled: 05/16/2008 0929  
Date Received: 05/16/2008 1600

### 8260B Volatile Organic Compounds by GC/MS (Low Level)

Method:	8260B	Analysis Batch: 720-36000	Instrument ID: Varian 3900F
Preparation:	5030B		Lab File ID: c:\saturnws\data\200805\05
Dilution:	40		Initial Weight/Volume: 40 mL
Date Analyzed:	05/25/2008 2215		Final Weight/Volume: 40 mL
Date Prepared:	05/25/2008 2215		

Analyte	Result (ug/L)	Qualifier	RL
4-Methyl-2-pentanone (MIBK)	ND		2000
Naphthalene	ND		40
N-Propylbenzene	ND		40
Styrene	ND		20
1,1,1,2-Tetrachloroethane	ND		20
1,1,2,2-Tetrachloroethane	ND		20
Tetrachloroethene	1600		20
Toluene	ND		20
1,2,3-Trichlorobenzene	ND		40
1,2,4-Trichlorobenzene	ND		40
1,1,1-Trichloroethane	ND		20
1,1,2-Trichloroethane	ND		20
Trichloroethene	280		20
Trichlorofluoromethane	ND		40
1,2,3-Trichloropropane	ND		20
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		20
1,2,4-Trimethylbenzene	ND		20
1,3,5-Trimethylbenzene	ND		20
Vinyl acetate	ND		2000
Vinyl chloride	ND		20
Xylenes, Total	ND		40
2,2-Dichloropropane	ND		20

Surrogate	%Rec	Acceptance Limits
4-Bromofluorobenzene	107	71 - 139
1,2-Dichloroethane-d4 (Surr)	108	62 - 118
Toluene-d8 (Surr)	110	73 - 117

# Analytical Data

Client: GeoSyntec Consultants

Job Number: 720-14379-1

Client Sample ID: MW-5 PDB

Lab Sample ID: 720-14379-7

Date Sampled: 05/16/2008 1015

Client Matrix: Water

Date Received: 05/16/2008 1600

## 8260B Volatile Organic Compounds by GC/MS (Low Level)

Method: 8260B Analysis Batch: 720-36038 Instrument ID: Varian 3900G  
Preparation: 5030B Lab File ID: c:\saturnws\data\200805\05  
Dilution: 1.0 Initial Weight/Volume: 40 mL  
Date Analyzed: 05/27/2008 1158 Final Weight/Volume: 40 mL  
Date Prepared: 05/27/2008 1158

Analyte	Result (ug/L)	Qualifier	RL
Methyl tert-butyl ether	ND		5.0
Acetone	ND		50
Benzene	ND		0.50
Dichlorobromomethane	ND		0.50
Bromobenzene	ND		1.0
Chlorobromomethane	ND		1.0
Bromoform	ND		1.0
Bromomethane	ND		1.0
2-Butanone (MEK)	ND		50
n-Butylbenzene	ND		1.0
sec-Butylbenzene	ND		1.0
tert-Butylbenzene	ND		1.0
Carbon disulfide	ND		5.0
Carbon tetrachloride	ND		0.50
Chlorobenzene	ND		0.50
Chloroethane	ND		1.0
Chloroform	ND		1.0
Chloromethane	ND		1.0
2-Chlorotoluene	ND		0.50
4-Chlorotoluene	ND		0.50
Chlorodibromomethane	ND		0.50
1,2-Dichlorobenzene	ND		0.50
1,3-Dichlorobenzene	ND		0.50
1,4-Dichlorobenzene	ND		0.50
1,3-Dichloropropane	ND		1.0
1,1-Dichloropropene	ND		0.50
1,2-Dibromo-3-Chloropropane	ND		1.0
Ethylene Dibromide	ND		0.50
Dibromomethane	ND		0.50
Dichlorodifluoromethane	ND		0.50
1,1-Dichloroethane	ND		0.50
1,2-Dichloroethane	ND		0.50
1,1-Dichloroethene	ND		0.50
cis-1,2-Dichloroethene	ND		0.50
trans-1,2-Dichloroethene	ND		0.50
1,2-Dichloropropane	ND		0.50
cis-1,3-Dichloropropene	ND		0.50
trans-1,3-Dichloropropene	ND		0.50
Ethylbenzene	ND		0.50
Hexachlorobutadiene	ND		1.0
2-Hexanone	ND		50
Isopropylbenzene	ND		0.50
4-Isopropyltoluene	ND		1.0
Methylene Chloride	ND		5.0

## Analytical Data

Client: GeoSyntec Consultants

Job Number: 720-14379-1

**Client Sample ID: MW-5 PDB**

Lab Sample ID: 720-14379-7  
Client Matrix: Water

Date Sampled: 05/16/2008 1015  
Date Received: 05/16/2008 1600

### 8260B Volatile Organic Compounds by GC/MS (Low Level)

Method:	8260B	Analysis Batch: 720-36038	Instrument ID: Varian 3900G
Preparation:	5030B		Lab File ID: c:\saturnws\data\200805\05
Dilution:	1.0		Initial Weight/Volume: 40 mL
Date Analyzed:	05/27/2008 1158		Final Weight/Volume: 40 mL
Date Prepared:	05/27/2008 1158		

Analyte	Result (ug/L)	Qualifier	RL
4-Methyl-2-pentanone (MIBK)	ND		50
Naphthalene	ND		1.0
N-Propylbenzene	ND		1.0
Styrene	ND		0.50
1,1,1,2-Tetrachloroethane	ND		0.50
1,1,2,2-Tetrachloroethane	ND		0.50
Tetrachloroethene	34		0.50
Toluene	ND		0.50
1,2,3-Trichlorobenzene	ND		1.0
1,2,4-Trichlorobenzene	ND		1.0
1,1,1-Trichloroethane	ND		0.50
1,1,2-Trichloroethane	ND		0.50
Trichloroethene	ND		0.50
Trichlorofluoromethane	ND		1.0
1,2,3-Trichloropropane	ND		0.50
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.50
1,2,4-Trimethylbenzene	ND		0.50
1,3,5-Trimethylbenzene	ND		0.50
Vinyl acetate	ND		50
Vinyl chloride	ND		0.50
Xylenes, Total	ND		1.0
2,2-Dichloropropane	ND		0.50

Surrogate	%Rec	Acceptance Limits
4-Bromofluorobenzene	107	71 - 139
1,2-Dichloroethane-d4 (Surr)	101	62 - 118
Toluene-d8 (Surr)	97	73 - 117

## Analytical Data

Client: GeoSyntec Consultants

Job Number: 720-14379-1

**Client Sample ID: MW-5**

Lab Sample ID: 720-14379-8  
Client Matrix: Water

Date Sampled: 05/16/2008 1043  
Date Received: 05/16/2008 1600

### 8260B Volatile Organic Compounds by GC/MS (Low Level)

Method:	8260B	Analysis Batch: 720-36038	Instrument ID: Varian 3900G
Preparation:	5030B		Lab File ID: c:\saturnws\data\200805\05
Dilution:	1.0		Initial Weight/Volume: 40 mL
Date Analyzed:	05/27/2008 1231		Final Weight/Volume: 40 mL
Date Prepared:	05/27/2008 1231		

Analyte	Result (ug/L)	Qualifier	RL
Methyl tert-butyl ether	ND		5.0
Acetone	ND		50
Benzene	ND		0.50
Dichlorobromomethane	ND		0.50
Bromobenzene	ND		1.0
Chlorobromomethane	ND		1.0
Bromoform	ND		1.0
Bromomethane	ND		1.0
2-Butanone (MEK)	ND		50
n-Butylbenzene	ND		1.0
sec-Butylbenzene	ND		1.0
tert-Butylbenzene	ND		1.0
Carbon disulfide	ND		5.0
Carbon tetrachloride	ND		0.50
Chlorobenzene	ND		0.50
Chloroethane	ND		1.0
Chloroform	ND		1.0
Chloromethane	ND		1.0
2-Chlorotoluene	ND		0.50
4-Chlorotoluene	ND		0.50
Chlorodibromomethane	ND		0.50
1,2-Dichlorobenzene	ND		0.50
1,3-Dichlorobenzene	ND		0.50
1,4-Dichlorobenzene	ND		0.50
1,3-Dichloropropane	ND		1.0
1,1-Dichloropropene	ND		0.50
1,2-Dibromo-3-Chloropropane	ND		1.0
Ethylene Dibromide	ND		0.50
Dibromomethane	ND		0.50
Dichlorodifluoromethane	ND		0.50
1,1-Dichloroethane	ND		0.50
1,2-Dichloroethane	ND		0.50
1,1-Dichloroethene	ND		0.50
cis-1,2-Dichloroethene	ND		0.50
trans-1,2-Dichloroethene	ND		0.50
1,2-Dichloropropane	ND		0.50
cis-1,3-Dichloropropene	ND		0.50
trans-1,3-Dichloropropene	ND		0.50
Ethylbenzene	ND		0.50
Hexachlorobutadiene	ND		1.0
2-Hexanone	ND		50
Isopropylbenzene	ND		0.50
4-Isopropyltoluene	ND		1.0
Methylene Chloride	ND		5.0

## Analytical Data

Client: GeoSyntec Consultants

Job Number: 720-14379-1

**Client Sample ID: MW-5**

Lab Sample ID: 720-14379-8  
Client Matrix: Water

Date Sampled: 05/16/2008 1043  
Date Received: 05/16/2008 1600

### 8260B Volatile Organic Compounds by GC/MS (Low Level)

Method: 8260B	Analysis Batch: 720-36038	Instrument ID: Varian 3900G
Preparation: 5030B		Lab File ID: c:\saturnws\data\200805\05
Dilution: 1.0		Initial Weight/Volume: 40 mL
Date Analyzed: 05/27/2008 1231		Final Weight/Volume: 40 mL
Date Prepared: 05/27/2008 1231		

Analyte	Result (ug/L)	Qualifier	RL
4-Methyl-2-pentanone (MIBK)	ND		50
Naphthalene	ND		1.0
N-Propylbenzene	ND		1.0
Styrene	ND		0.50
1,1,1,2-Tetrachloroethane	ND		0.50
1,1,2,2-Tetrachloroethane	ND		0.50
Tetrachloroethene	24		0.50
Toluene	ND		0.50
1,2,3-Trichlorobenzene	ND		1.0
1,2,4-Trichlorobenzene	ND		1.0
1,1,1-Trichloroethane	ND		0.50
1,1,2-Trichloroethane	ND		0.50
Trichloroethene	ND		0.50
Trichlorofluoromethane	ND		1.0
1,2,3-Trichloropropane	ND		0.50
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.50
1,2,4-Trimethylbenzene	ND		0.50
1,3,5-Trimethylbenzene	ND		0.50
Vinyl acetate	ND		50
Vinyl chloride	ND		0.50
Xylenes, Total	ND		1.0
2,2-Dichloropropane	ND		0.50

Surrogate	%Rec	Acceptance Limits
4-Bromofluorobenzene	100	71 - 139
1,2-Dichloroethane-d4 (Surr)	98	62 - 118
Toluene-d8 (Surr)	94	73 - 117



## Analytical Data

Client: GeoSyntec Consultants

Job Number: 720-14379-1

**Client Sample ID: MW-4 PDB**

Lab Sample ID: 720-14379-9  
Client Matrix: Water

Date Sampled: 05/16/2008 1115  
Date Received: 05/16/2008 1600

### 8260B Volatile Organic Compounds by GC/MS (Low Level)

Method:	8260B	Analysis Batch: 720-36038	Instrument ID: Varian 3900G
Preparation:	5030B		Lab File ID: c:\saturnws\data\200805\05
Dilution:	1.0		Initial Weight/Volume: 40 mL
Date Analyzed:	05/27/2008 1305		Final Weight/Volume: 40 mL
Date Prepared:	05/27/2008 1305		

Analyte	Result (ug/L)	Qualifier	RL
Methyl tert-butyl ether	ND		5.0
Acetone	ND		50
Benzene	ND		0.50
Dichlorobromomethane	ND		0.50
Bromobenzene	ND		1.0
Chlorobromomethane	ND		1.0
Bromoform	ND		1.0
Bromomethane	ND		1.0
2-Butanone (MEK)	ND		50
n-Butylbenzene	ND		1.0
sec-Butylbenzene	ND		1.0
tert-Butylbenzene	ND		1.0
Carbon disulfide	ND		5.0
Carbon tetrachloride	ND		0.50
Chlorobenzene	ND		0.50
Chloroethane	ND		1.0
Chloroform	ND		1.0
Chloromethane	ND		1.0
2-Chlorotoluene	ND		0.50
4-Chlorotoluene	ND		0.50
Chlorodibromomethane	ND		0.50
1,2-Dichlorobenzene	ND		0.50
1,3-Dichlorobenzene	ND		0.50
1,4-Dichlorobenzene	ND		0.50
1,3-Dichloropropane	ND		1.0
1,1-Dichloropropene	ND		0.50
1,2-Dibromo-3-Chloropropane	ND		1.0
Ethylene Dibromide	ND		0.50
Dibromomethane	ND		0.50
Dichlorodifluoromethane	ND		0.50
1,1-Dichloroethane	ND		0.50
1,2-Dichloroethane	ND		0.50
1,1-Dichloroethene	ND		0.50
cis-1,2-Dichloroethene	3.6		0.50
trans-1,2-Dichloroethene	ND		0.50
1,2-Dichloropropane	ND		0.50
cis-1,3-Dichloropropene	ND		0.50
trans-1,3-Dichloropropene	ND		0.50
Ethylbenzene	ND		0.50
Hexachlorobutadiene	ND		1.0
2-Hexanone	ND		50
Isopropylbenzene	ND		0.50
4-Isopropyltoluene	ND		1.0
Methylene Chloride	ND		5.0

## Analytical Data

Client: GeoSyntec Consultants

Job Number: 720-14379-1

**Client Sample ID: MW-4 PDB**

Lab Sample ID: 720-14379-9  
Client Matrix: Water

Date Sampled: 05/16/2008 1115  
Date Received: 05/16/2008 1600

### 8260B Volatile Organic Compounds by GC/MS (Low Level)

Method:	8260B	Analysis Batch: 720-36038	Instrument ID: Varian 3900G
Preparation:	5030B		Lab File ID: c:\saturnws\data\200805\05
Dilution:	1.0		Initial Weight/Volume: 40 mL
Date Analyzed:	05/27/2008 1305		Final Weight/Volume: 40 mL
Date Prepared:	05/27/2008 1305		

Analyte	Result (ug/L)	Qualifier	RL
4-Methyl-2-pentanone (MIBK)	ND		50
Naphthalene	ND		1.0
N-Propylbenzene	ND		1.0
Styrene	ND		0.50
1,1,1,2-Tetrachloroethane	ND		0.50
1,1,2,2-Tetrachloroethane	ND		0.50
Tetrachloroethene	ND		0.50
Toluene	ND		0.50
1,2,3-Trichlorobenzene	ND		1.0
1,2,4-Trichlorobenzene	ND		1.0
1,1,1-Trichloroethane	ND		0.50
1,1,2-Trichloroethane	ND		0.50
Trichloroethene	2.7		0.50
Trichlorofluoromethane	ND		1.0
1,2,3-Trichloropropane	ND		0.50
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.50
1,2,4-Trimethylbenzene	ND		0.50
1,3,5-Trimethylbenzene	ND		0.50
Vinyl acetate	ND		50
Vinyl chloride	ND		0.50
Xylenes, Total	ND		1.0
2,2-Dichloropropane	ND		0.50

Surrogate	%Rec	Acceptance Limits
4-Bromofluorobenzene	105	71 - 139
1,2-Dichloroethane-d4 (Surr)	100	62 - 118
Toluene-d8 (Surr)	95	73 - 117

## Analytical Data

Client: GeoSyntec Consultants

Job Number: 720-14379-1

**Client Sample ID: MW-4**

Lab Sample ID: 720-14379-10  
Client Matrix: Water

Date Sampled: 05/16/2008 1157  
Date Received: 05/16/2008 1600

### 8260B Volatile Organic Compounds by GC/MS (Low Level)

Method:	8260B	Analysis Batch: 720-36038	Instrument ID: Varian 3900G
Preparation:	5030B		Lab File ID: c:\saturaws\data\200805\05
Dilution:	1.0		Initial Weight/Volume: 40 mL
Date Analyzed:	05/27/2008 1338		Final Weight/Volume: 40 mL
Date Prepared:	05/27/2008 1338		

Analyte	Result (ug/L)	Qualifier	RL
Methyl tert-butyl ether	ND		5.0
Acetone	ND		50
Benzene	ND		0.50
Dichlorobromomethane	ND		0.50
Bromobenzene	ND		1.0
Chlorobromomethane	ND		1.0
Bromoform	ND		1.0
Bromomethane	ND		1.0
2-Butanone (MEK)	ND		50
n-Butylbenzene	ND		1.0
sec-Butylbenzene	ND		1.0
tert-Butylbenzene	ND		1.0
Carbon disulfide	ND		5.0
Carbon tetrachloride	ND		0.50
Chlorobenzene	ND		0.50
Chloroethane	ND		1.0
Chloroform	ND		1.0
Chloromethane	ND		1.0
2-Chlorotoluene	ND		0.50
4-Chlorotoluene	ND		0.50
Chlorodibromomethane	ND		0.50
1,2-Dichlorobenzene	ND		0.50
1,3-Dichlorobenzene	ND		0.50
1,4-Dichlorobenzene	ND		0.50
1,3-Dichloropropane	ND		1.0
1,1-Dichloropropene	ND		0.50
1,2-Dibromo-3-Chloropropane	ND		1.0
Ethylene Dibromide	ND		0.50
Dibromomethane	ND		0.50
Dichlorodifluoromethane	ND		0.50
1,1-Dichloroethane	ND		0.50
1,2-Dichloroethane	ND		0.50
1,1-Dichloroethene	ND		0.50
cis-1,2-Dichloroethene	3.7		0.50
trans-1,2-Dichloroethene	ND		0.50
1,2-Dichloropropane	ND		0.50
cis-1,3-Dichloropropene	ND		0.50
trans-1,3-Dichloropropene	ND		0.50
Ethylbenzene	ND		0.50
Hexachlorobutadiene	ND		1.0
2-Hexanone	ND		50
Isopropylbenzene	ND		0.50
4-Isopropyltoluene	ND		1.0
Methylene Chloride	ND		5.0

# Analytical Data

Client: GeoSyntec Consultants

Job Number: 720-14379-1

Client Sample ID: MW-4

Lab Sample ID: 720-14379-10

Date Sampled: 05/16/2008 1157

Client Matrix: Water

Date Received: 05/16/2008 1600

## 8260B Volatile Organic Compounds by GC/MS (Low Level)

Method: 8260B Analysis Batch: 720-36038 Instrument ID: Varian 3900G  
Preparation: 5030B Lab File ID: c:\saturnws\data\200805\05  
Dilution: 1.0 Initial Weight/Volume: 40 mL  
Date Analyzed: 05/27/2008 1338 Final Weight/Volume: 40 mL  
Date Prepared: 05/27/2008 1338

Analyte	Result (ug/L)	Qualifier	RL
4-Methyl-2-pentanone (MIBK)	ND		50
Naphthalene	ND		1.0
N-Propylbenzene	ND		1.0
Styrene	ND		0.50
1,1,1,2-Tetrachloroethane	ND		0.50
1,1,2,2-Tetrachloroethane	ND		0.50
Tetrachloroethene	ND		0.50
Toluene	ND		0.50
1,2,3-Trichlorobenzene	ND		1.0
1,2,4-Trichlorobenzene	ND		1.0
1,1,1-Trichloroethane	ND		0.50
1,1,2-Trichloroethane	ND		0.50
Trichloroethene	2.6		0.50
Trichlorofluoromethane	ND		1.0
1,2,3-Trichloropropane	ND		0.50
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.50
1,2,4-Trimethylbenzene	ND		0.50
1,3,5-Trimethylbenzene	ND		0.50
Vinyl acetate	ND		50
Vinyl chloride	ND		0.50
Xylenes, Total	ND		1.0
2,2-Dichloropropane	ND		0.50

Surrogate	%Rec	Acceptance Limits
4-Bromofluorobenzene	100	71 - 139
1,2-Dichloroethane-d4 (Surr)	100	62 - 118
Toluene-d8 (Surr)	92	73 - 117

# Analytical Data

Client: GeoSyntec Consultants

Job Number: 720-14379-1

Client Sample ID: MW-3 PDB

Lab Sample ID: 720-14379-11

Client Matrix: Water

Date Sampled: 05/16/2008 1230

Date Received: 05/16/2008 1600

## 8260B Volatile Organic Compounds by GC/MS (Low Level)

Method: 8260B Analysis Batch: 720-36038 Instrument ID: Varian 3900G  
Preparation: 5030B Lab File ID: c:\saturaws\data\200805\05  
Dilution: 1.0 Initial Weight/Volume: 40 mL  
Date Analyzed: 05/27/2008 1412 Final Weight/Volume: 40 mL  
Date Prepared: 05/27/2008 1412

Analyte	Result (ug/L)	Qualifier	RL
Methyl tert-butyl ether	ND		5.0
Acetone	ND		50
Benzene	ND		0.50
Dichlorobromomethane	ND		0.50
Bromobenzene	ND		1.0
Chlorobromomethane	ND		1.0
Bromoform	ND		1.0
Bromomethane	ND		1.0
2-Butanone (MEK)	ND		50
n-Butylbenzene	ND		1.0
sec-Butylbenzene	ND		1.0
tert-Butylbenzene	ND		1.0
Carbon disulfide	ND		5.0
Carbon tetrachloride	ND		0.50
Chlorobenzene	ND		0.50
Chloroethane	ND		1.0
Chloroform	ND		1.0
Chloromethane	ND		1.0
2-Chlorotoluene	ND		0.50
4-Chlorotoluene	ND		0.50
Chlorodibromomethane	ND		0.50
1,2-Dichlorobenzene	ND		0.50
1,3-Dichlorobenzene	ND		0.50
1,4-Dichlorobenzene	ND		0.50
1,3-Dichloropropane	ND		1.0
1,1-Dichloropropene	ND		0.50
1,2-Dibromo-3-Chloropropane	ND		1.0
Ethylene Dibromide	ND		0.50
Dibromomethane	ND		0.50
Dichlorodifluoromethane	ND		0.50
1,1-Dichloroethane	ND		0.50
1,2-Dichloroethane	ND		0.50
1,1-Dichloroethene	ND		0.50
cis-1,2-Dichloroethene	5.4		0.50
trans-1,2-Dichloroethene	ND		0.50
1,2-Dichloropropane	ND		0.50
cis-1,3-Dichloropropene	ND		0.50
trans-1,3-Dichloropropene	ND		0.50
Ethylbenzene	ND		0.50
Hexachlorobutadiene	ND		1.0
2-Hexanone	ND		50
Isopropylbenzene	ND		0.50
4-Isopropyltoluene	ND		1.0
Methylene Chloride	ND		5.0

## Analytical Data

Client: GeoSyntec Consultants

Job Number: 720-14379-1

**Client Sample ID: MW-3 PDB**

Lab Sample ID: 720-14379-11  
Client Matrix: Water

Date Sampled: 05/16/2008 1230  
Date Received: 05/16/2008 1600

### 8260B Volatile Organic Compounds by GC/MS (Low Level)

Method: 8260B	Analysis Batch: 720-36038	Instrument ID: Varian 3900G
Preparation: 5030B		Lab File ID: c:\saturnws\data\200805\05
Dilution: 1.0		Initial Weight/Volume: 40 mL
Date Analyzed: 05/27/2008 1412		Final Weight/Volume: 40 mL
Date Prepared: 05/27/2008 1412		

Analyte	Result (ug/L)	Qualifier	RL
4-Methyl-2-pentanone (MIBK)	ND		50
Naphthalene	ND		1.0
N-Propylbenzene	ND		1.0
Styrene	ND		0.50
1,1,1,2-Tetrachloroethane	ND		0.50
1,1,2,2-Tetrachloroethane	ND		0.50
Tetrachloroethene	46		0.50
Toluene	ND		0.50
1,2,3-Trichlorobenzene	ND		1.0
1,2,4-Trichlorobenzene	ND		1.0
1,1,1-Trichloroethane	ND		0.50
1,1,2-Trichloroethane	ND		0.50
Trichloroethene	4.4		0.50
Trichlorofluoromethane	ND		1.0
1,2,3-Trichloropropane	ND		0.50
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.50
1,2,4-Trimethylbenzene	ND		0.50
1,3,5-Trimethylbenzene	ND		0.50
Vinyl acetate	ND		50
Vinyl chloride	ND		0.50
Xylenes, Total	ND		1.0
2,2-Dichloropropane	ND		0.50

Surrogate	%Rec	Acceptance Limits
4-Bromofluorobenzene	106	71 - 139
1,2-Dichloroethane-d4 (Surr)	101	62 - 118
Toluene-d8 (Surr)	96	73 - 117

# Analytical Data

Client: GeoSyntec Consultants

Job Number: 720-14379-1

Client Sample ID: EB-1

Lab Sample ID: 720-14379-12

Date Sampled: 05/16/2008 1250

Client Matrix: Water

Date Received: 05/16/2008 1600

## 8260B Volatile Organic Compounds by GC/MS (Low Level)

Method: 8260B Analysis Batch: 720-36035 Instrument ID: Varian 3900F  
Preparation: 5030B Lab File ID: c:\saturnws\data\200805\05  
Dilution: 1.0 Initial Weight/Volume: 40 mL  
Date Analyzed: 05/27/2008 1409 Final Weight/Volume: 40 mL  
Date Prepared: 05/27/2008 1409

Analyte	Result (ug/L)	Qualifier	RL
Methyl tert-butyl ether	ND		5.0
Acetone	ND		50
Benzene	ND		0.50
Dichlorobromomethane	ND		0.50
Bromobenzene	ND		1.0
Chlorobromomethane	ND		1.0
Bromoform	ND		1.0
Bromomethane	ND		1.0
2-Butanone (MEK)	ND		50
n-Butylbenzene	ND		1.0
sec-Butylbenzene	ND		1.0
tert-Butylbenzene	ND		1.0
Carbon disulfide	ND		5.0
Carbon tetrachloride	ND		0.50
Chlorobenzene	ND		0.50
Chloroethane	ND		1.0
Chloroform	ND		1.0
Chloromethane	ND		1.0
2-Chlorotoluene	ND		0.50
4-Chlorotoluene	ND		0.50
Chlorodibromomethane	ND		0.50
1,2-Dichlorobenzene	ND		0.50
1,3-Dichlorobenzene	ND		0.50
1,4-Dichlorobenzene	ND		0.50
1,3-Dichloropropane	ND		1.0
1,1-Dichloropropene	ND		0.50
1,2-Dibromo-3-Chloropropane	ND		1.0
Ethylene Dibromide	ND		0.50
Dibromomethane	ND		0.50
Dichlorodifluoromethane	ND		0.50
1,1-Dichloroethane	ND		0.50
1,2-Dichloroethane	ND		0.50
1,1-Dichloroethene	ND		0.50
cis-1,2-Dichloroethene	ND		0.50
trans-1,2-Dichloroethene	ND		0.50
1,2-Dichloropropane	ND		0.50
cis-1,3-Dichloropropene	ND		0.50
trans-1,3-Dichloropropene	ND		0.50
Ethylbenzene	ND		0.50
Hexachlorobutadiene	ND		1.0
2-Hexanone	ND		50
Isopropylbenzene	ND		0.50
4-Isopropyltoluene	ND		1.0
Methylene Chloride	ND		5.0

## Analytical Data

Client: GeoSyntec Consultants

Job Number: 720-14379-1

**Client Sample ID: EB-1**

Lab Sample ID: 720-14379-12  
Client Matrix: Water

Date Sampled: 05/16/2008 1250  
Date Received: 05/16/2008 1600

### 8260B Volatile Organic Compounds by GC/MS (Low Level)

Method:	8260B	Analysis Batch: 720-36035	Instrument ID: Varian 3900F
Preparation:	5030B		Lab File ID: c:\saturnws\data\200805\05
Dilution:	1.0		Initial Weight/Volume: 40 mL
Date Analyzed:	05/27/2008 1409		Final Weight/Volume: 40 mL
Date Prepared:	05/27/2008 1409		

Analyte	Result (ug/L)	Qualifier	RL
4-Methyl-2-pentanone (MIBK)	ND		50
Naphthalene	ND		1.0
N-Propylbenzene	ND		1.0
Styrene	ND		0.50
1,1,1,2-Tetrachloroethane	ND		0.50
1,1,2,2-Tetrachloroethane	ND		0.50
Tetrachloroethene	ND		0.50
Toluene	ND		0.50
1,2,3-Trichlorobenzene	ND		1.0
1,2,4-Trichlorobenzene	ND		1.0
1,1,1-Trichloroethane	ND		0.50
1,1,2-Trichloroethane	ND		0.50
Trichloroethene	ND		0.50
Trichlorofluoromethane	ND		1.0
1,2,3-Trichloropropane	ND		0.50
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.50
1,2,4-Trimethylbenzene	ND		0.50
1,3,5-Trimethylbenzene	ND		0.50
Vinyl acetate	ND		50
Vinyl chloride	ND		0.50
Xylenes, Total	ND		1.0
2,2-Dichloropropane	ND		0.50

Surrogate	%Rec	Acceptance Limits
4-Bromofluorobenzene	101	71 - 139
1,2-Dichloroethane-d4 (Surr)	94	62 - 118
Toluene-d8 (Surr)	96	73 - 117



## Analytical Data

Client: GeoSyntec Consultants

Job Number: 720-14379-1

**Client Sample ID: MW-3**

Lab Sample ID: 720-14379-13  
Client Matrix: Water

Date Sampled: 05/16/2008 1330  
Date Received: 05/16/2008 1600

### 8260B Volatile Organic Compounds by GC/MS (Low Level)

Method:	8260B	Analysis Batch: 720-36035	Instrument ID: Varian 3900F
Preparation:	5030B		Lab File ID: c:\saturnws\data\200805\05
Dilution:	1.0		Initial Weight/Volume: 40 mL
Date Analyzed:	05/27/2008 1442		Final Weight/Volume: 40 mL
Date Prepared:	05/27/2008 1442		

Analyte	Result (ug/L)	Qualifier	RL
Methyl tert-butyl ether	ND		5.0
Acetone	ND		50
Benzene	ND		0.50
Dichlorobromomethane	ND		0.50
Bromobenzene	ND		1.0
Chlorobromomethane	ND		1.0
Bromoform	ND		1.0
Bromomethane	ND		1.0
2-Butanone (MEK)	ND		50
n-Butylbenzene	ND		1.0
sec-Butylbenzene	ND		1.0
tert-Butylbenzene	ND		1.0
Carbon disulfide	ND		5.0
Carbon tetrachloride	ND		0.50
Chlorobenzene	ND		0.50
Chloroethane	ND		1.0
Chloroform	ND		1.0
Chloromethane	ND		1.0
2-Chlorotoluene	ND		0.50
4-Chlorotoluene	ND		0.50
Chlorodibromomethane	ND		0.50
1,2-Dichlorobenzene	ND		0.50
1,3-Dichlorobenzene	ND		0.50
1,4-Dichlorobenzene	ND		0.50
1,3-Dichloropropane	ND		1.0
1,1-Dichloropropene	ND		0.50
1,2-Dibromo-3-Chloropropane	ND		1.0
Ethylene Dibromide	ND		0.50
Dibromomethane	ND		0.50
Dichlorodifluoromethane	ND		0.50
1,1-Dichloroethane	ND		0.50
1,2-Dichloroethane	ND		0.50
1,1-Dichloroethene	ND		0.50
cis-1,2-Dichloroethene	5.0		0.50
trans-1,2-Dichloroethene	ND		0.50
1,2-Dichloropropane	ND		0.50
cis-1,3-Dichloropropene	ND		0.50
trans-1,3-Dichloropropene	ND		0.50
Ethylbenzene	ND		0.50
Hexachlorobutadiene	ND		1.0
2-Hexanone	ND		50
Isopropylbenzene	ND		0.50
4-Isopropyltoluene	ND		1.0
Methylene Chloride	ND		5.0

## Analytical Data

Client: GeoSyntec Consultants

Job Number: 720-14379-1

**Client Sample ID: MW-3**

Lab Sample ID: 720-14379-13  
Client Matrix: Water

Date Sampled: 05/16/2008 1330  
Date Received: 05/16/2008 1600

### 8260B Volatile Organic Compounds by GC/MS (Low Level)

Method:	8260B	Analysis Batch: 720-36035	Instrument ID: Varian 3900F
Preparation:	5030B		Lab File ID: c:\saturnws\data\200805\05
Dilution:	1.0		Initial Weight/Volume: 40 mL
Date Analyzed:	05/27/2008 1442		Final Weight/Volume: 40 mL
Date Prepared:	05/27/2008 1442		

Analyte	Result (ug/L)	Qualifier	RL
4-Methyl-2-pentanone (MIBK)	ND		50
Naphthalene	ND		1.0
N-Propylbenzene	ND		1.0
Styrene	ND		0.50
1,1,1,2-Tetrachloroethane	ND		0.50
1,1,2,2-Tetrachloroethane	ND		0.50
Tetrachloroethene	39		0.50
Toluene	ND		0.50
1,2,3-Trichlorobenzene	ND		1.0
1,2,4-Trichlorobenzene	ND		1.0
1,1,1-Trichloroethane	ND		0.50
1,1,2-Trichloroethane	ND		0.50
Trichloroethene	4.3		0.50
Trichlorofluoromethane	ND		1.0
1,2,3-Trichloropropane	ND		0.50
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.50
1,2,4-Trimethylbenzene	ND		0.50
1,3,5-Trimethylbenzene	ND		0.50
Vinyl acetate	ND		50
Vinyl chloride	ND		0.50
Xylenes, Total	ND		1.0
2,2-Dichloropropane	ND		0.50

Surrogate	%Rec	Acceptance Limits
4-Bromofluorobenzene	103	71 - 139
1,2-Dichloroethane-d4 (Surr)	99	62 - 118
Toluene-d8 (Surr)	95	73 - 117

## DATA REPORTING QUALIFIERS

<b>Lab Section</b>	<b>Qualifier</b>	<b>Description</b>
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## Quality Control Results

Client: GeoSyntec Consultants

Job Number: 720-14379-1

### QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
<b>GC/MS VOA</b>					
<b>Analysis Batch:720-36000</b>					
LCS 720-36000/2	Lab Control Spike	T	Water	8260B	
LCSD 720-36000/1	Lab Control Spike Duplicate	T	Water	8260B	
MB 720-36000/3	Method Blank	T	Water	8260B	
720-14379-2	MW-2 PDB	T	Water	8260B	
720-14379-3	MW-DUP	T	Water	8260B	
720-14379-4	MW-2	T	Water	8260B	
720-14379-5	MW-1 PDB	T	Water	8260B	
720-14379-6	MW-1	T	Water	8260B	
<b>Analysis Batch:720-36035</b>					
LCS 720-36035/2	Lab Control Spike	T	Water	8260B	
LCSD 720-36035/1	Lab Control Spike Duplicate	T	Water	8260B	
MB 720-36035/3	Method Blank	T	Water	8260B	
720-14379-12	EB-1	T	Water	8260B	
720-14379-13	MW-3	T	Water	8260B	
<b>Analysis Batch:720-36038</b>					
LCS 720-36038/2	Lab Control Spike	T	Water	8260B	
LCSD 720-36038/1	Lab Control Spike Duplicate	T	Water	8260B	
MB 720-36038/3	Method Blank	T	Water	8260B	
720-14379-1TB	TRIP BLANK	T	Water	8260B	
720-14379-7	MW-5 PDB	T	Water	8260B	
720-14379-7MS	Matrix Spike	T	Water	8260B	
720-14379-7MSD	Matrix Spike Duplicate	T	Water	8260B	
720-14379-8	MW-5	T	Water	8260B	
720-14379-9	MW-4 PDB	T	Water	8260B	
720-14379-10	MW-4	T	Water	8260B	
720-14379-11	MW-3 PDB	T	Water	8260B	

**Report Basis**

T = Total

# Quality Control Results

Client: GeoSyntec Consultants

Job Number: 720-14379-1

## Method Blank - Batch: 720-36000

Lab Sample ID: MB 720-36000/3  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 05/25/2008 1251  
Date Prepared: 05/25/2008 1251

Analysis Batch: 720-36000  
Prep Batch: N/A  
Units: ug/L

## Method: 8260B Preparation: 5030B

Instrument ID: Varian 3900F  
Lab File ID: c:\saturnws\data\200805\05  
Initial Weight/Volume: 40 mL  
Final Weight/Volume: 40 mL

Analyte	Result	Qual	RL
Methyl tert-butyl ether	ND		5.0
Acetone	ND		50
Benzene	ND		0.50
Dichlorobromomethane	ND		0.50
Bromobenzene	ND		1.0
Chlorobromomethane	ND		1.0
Bromoform	ND		1.0
Bromomethane	ND		1.0
2-Butanone (MEK)	ND		50
n-Butylbenzene	ND		1.0
sec-Butylbenzene	ND		1.0
tert-Butylbenzene	ND		1.0
Carbon disulfide	ND		5.0
Carbon tetrachloride	ND		0.50
Chlorobenzene	ND		0.50
Chloroethane	ND		1.0
Chloroform	ND		1.0
Chloromethane	ND		1.0
2-Chlorotoluene	ND		0.50
4-Chlorotoluene	ND		0.50
Chlorodibromomethane	ND		0.50
1,2-Dichlorobenzene	ND		0.50
1,3-Dichlorobenzene	ND		0.50
1,4-Dichlorobenzene	ND		0.50
1,3-Dichloropropane	ND		1.0
1,1-Dichloropropene	ND		0.50
1,2-Dibromo-3-Chloropropane	ND		1.0
Ethylene Dibromide	ND		0.50
Dibromomethane	ND		0.50
Dichlorodifluoromethane	ND		0.50
1,1-Dichloroethane	ND		0.50
1,2-Dichloroethane	ND		0.50
1,1-Dichloroethene	ND		0.50
cis-1,2-Dichloroethene	ND		0.50
trans-1,2-Dichloroethene	ND		0.50
1,2-Dichloropropane	ND		0.50
cis-1,3-Dichloropropene	ND		0.50
trans-1,3-Dichloropropene	ND		0.50
Ethylbenzene	ND		0.50
Hexachlorobutadiene	ND		1.0
2-Hexanone	ND		50

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

## Quality Control Results

Client: GeoSyntec Consultants

Job Number: 720-14379-1

**Method Blank - Batch: 720-36000**

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

Lab Sample ID: MB 720-36000/3  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 05/25/2008 1251  
Date Prepared: 05/25/2008 1251

Analysis Batch: 720-36000  
Prep Batch: N/A  
Units: ug/L

Instrument ID: Varian 3900F  
Lab File ID: c:\saturnws\data\200805\08  
Initial Weight/Volume: 40 mL  
Final Weight/Volume: 40 mL

Analyte	Result	Qual	RL
Isopropylbenzene	ND		0.50
4-Isopropyltoluene	ND		1.0
Methylene Chloride	ND		5.0
4-Methyl-2-pentanone (MIBK)	ND		50
Naphthalene	ND		1.0
N-Propylbenzene	ND		1.0
Styrene	ND		0.50
1,1,1,2-Tetrachloroethane	ND		0.50
1,1,2,2-Tetrachloroethane	ND		0.50
Tetrachloroethene	ND		0.50
Toluene	ND		0.50
1,2,3-Trichlorobenzene	ND		1.0
1,2,4-Trichlorobenzene	ND		1.0
1,1,1-Trichloroethane	ND		0.50
1,1,2-Trichloroethane	ND		0.50
Trichloroethene	ND		0.50
Trichlorofluoromethane	ND		1.0
1,2,3-Trichloropropane	ND		0.50
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.50
1,2,4-Trimethylbenzene	ND		0.50
1,3,5-Trimethylbenzene	ND		0.50
Vinyl acetate	ND		50
Vinyl chloride	ND		0.50
Xylenes, Total	ND		1.0
2,2-Dichloropropane	ND		0.50
Surrogate	% Rec	Acceptance Limits	
4-Bromofluorobenzene	105	71 - 139	
1,2-Dichloroethane-d4 (Surr)	106	62 - 118	
Toluene-d8 (Surr)	110	73 - 117	

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

## Quality Control Results

Client: GeoSyntec Consultants

Job Number: 720-14379-1

**Lab Control Spike/  
Lab Control Spike Duplicate Recovery Report - Batch: 720-36000**

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

LCS Lab Sample ID: LCS 720-36000/2  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 05/25/2008 1144  
Date Prepared: 05/25/2008 1144

Analysis Batch: 720-36000  
Prep Batch: N/A  
Units: ug/L

Instrument ID: Varian 3900F  
Lab File ID: c:\satumws\data\200805\052  
Initial Weight/Volume: 40 mL  
Final Weight/Volume: 40 mL

LCSD Lab Sample ID: LCSD 720-36000/1  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 05/25/2008 1218  
Date Prepared: 05/25/2008 1218

Analysis Batch: 720-36000  
Prep Batch: N/A  
Units: ug/L

Instrument ID: Varian 3900F  
Lab File ID: c:\satumws\data\200805\052  
Initial Weight/Volume: 40 mL  
Final Weight/Volume: 40 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
Benzene	87	89	69 - 129	2	20		
Chlorobenzene	96	97	61 - 121	1	20		
1,1-Dichloroethene	89	91	65 - 125	2	20		
Toluene	94	96	70 - 130	2	20		
Trichloroethene	86	89	74 - 134	3	20		
Surrogate	LCS % Rec		LCSD % Rec		Acceptance Limits		
4-Bromofluorobenzene	100		98		71 - 139		
1,2-Dichloroethane-d4 (Surr)	99		93		62 - 118		
Toluene-d8 (Surr)	100		96		73 - 117		

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

## Quality Control Results

Client: GeoSyntec Consultants

Job Number: 720-14379-1

### Method Blank - Batch: 720-36035

**Method: 8260B**

**Preparation: 5030B**

Lab Sample ID: MB 720-36035/3

Analysis Batch: 720-36035

Instrument ID: Varian 3900F

Client Matrix: Water

Prep Batch: N/A

Lab File ID: c:\saturnws\data\200805\05

Dilution: 1.0

Units: ug/L

Initial Weight/Volume: 40 mL

Date Analyzed: 05/27/2008 1049

Final Weight/Volume: 40 mL

Date Prepared: 05/27/2008 1049

Analyte	Result	Qual	RL
Methyl tert-butyl ether	ND		5.0
Acetone	ND		50
Benzene	ND		0.50
Dichlorobromomethane	ND		0.50
Bromobenzene	ND		1.0
Chlorobromomethane	ND		1.0
Bromoform	ND		1.0
Bromomethane	ND		1.0
2-Butanone (MEK)	ND		50
n-Butylbenzene	ND		1.0
sec-Butylbenzene	ND		1.0
tert-Butylbenzene	ND		1.0
Carbon disulfide	ND		5.0
Carbon tetrachloride	ND		0.50
Chlorobenzene	ND		0.50
Chloroethane	ND		1.0
Chloroform	ND		1.0
Chloromethane	ND		1.0
2-Chlorotoluene	ND		0.50
4-Chlorotoluene	ND		0.50
Chlorodibromomethane	ND		0.50
1,2-Dichlorobenzene	ND		0.50
1,3-Dichlorobenzene	ND		0.50
1,4-Dichlorobenzene	ND		0.50
1,3-Dichloropropane	ND		1.0
1,1-Dichloropropene	ND		0.50
1,2-Dibromo-3-Chloropropane	ND		1.0
Ethylene Dibromide	ND		0.50
Dibromomethane	ND		0.50
Dichlorodifluoromethane	ND		0.50
1,1-Dichloroethane	ND		0.50
1,2-Dichloroethane	ND		0.50
1,1-Dichloroethene	ND		0.50
cis-1,2-Dichloroethene	ND		0.50
trans-1,2-Dichloroethene	ND		0.50
1,2-Dichloropropane	ND		0.50
cis-1,3-Dichloropropene	ND		0.50
trans-1,3-Dichloropropene	ND		0.50
Ethylbenzene	ND		0.50
Hexachlorobutadiene	ND		1.0
2-Hexanone	ND		50

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



## Quality Control Results

Client: GeoSyntec Consultants

Job Number: 720-14379-1

**Method Blank - Batch: 720-36035**

**Method: 8260B**

**Preparation: 5030B**

Lab Sample ID: MB 720-36035/3  
 Client Matrix: Water  
 Dilution: 1.0  
 Date Analyzed: 05/27/2008 1049  
 Date Prepared: 05/27/2008 1049

Analysis Batch: 720-36035  
 Prep Batch: N/A  
 Units: ug/L

Instrument ID: Varian 3900F  
 Lab File ID: c:\saturnws\data\200805\08  
 Initial Weight/Volume: 40 mL  
 Final Weight/Volume: 40 mL

Analyte	Result	Qual	RL
Isopropylbenzene	ND		0.50
4-Isopropyltoluene	ND		1.0
Methylene Chloride	ND		5.0
4-Methyl-2-pentanone (MIBK)	ND		50
Naphthalene	ND		1.0
N-Propylbenzene	ND		1.0
Styrene	ND		0.50
1,1,1,2-Tetrachloroethane	ND		0.50
1,1,2,2-Tetrachloroethane	ND		0.50
Tetrachloroethene	ND		0.50
Toluene	ND		0.50
1,2,3-Trichlorobenzene	ND		1.0
1,2,4-Trichlorobenzene	ND		1.0
1,1,1-Trichloroethane	ND		0.50
1,1,2-Trichloroethane	ND		0.50
Trichloroethene	ND		0.50
Trichlorofluoromethane	ND		1.0
1,2,3-Trichloropropane	ND		0.50
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.50
1,2,4-Trimethylbenzene	ND		0.50
1,3,5-Trimethylbenzene	ND		0.50
Vinyl acetate	ND		50
Vinyl chloride	ND		0.50
Xylenes, Total	ND		1.0
2,2-Dichloropropane	ND		0.50
Surrogate	% Rec	Acceptance Limits	
4-Bromofluorobenzene	107	71 - 139	
1,2-Dichloroethane-d4 (Surr)	96	62 - 118	
Toluene-d8 (Surr)	98	73 - 117	

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

## Quality Control Results

Client: GeoSyntec Consultants

Job Number: 720-14379-1

**Lab Control Spike/  
Lab Control Spike Duplicate Recovery Report - Batch: 720-36035**

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

LCS Lab Sample ID: LCS 720-36035/2  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 05/27/2008 0942  
Date Prepared: 05/27/2008 0942

Analysis Batch: 720-36035  
Prep Batch: N/A  
Units: ug/L

Instrument ID: Varian 3900F  
Lab File ID: c:\satumws\data\200805\052  
Initial Weight/Volume: 40 mL  
Final Weight/Volume: 40 mL

LCSD Lab Sample ID: LCSD 720-36035/1  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 05/27/2008 1015  
Date Prepared: 05/27/2008 1015

Analysis Batch: 720-36035  
Prep Batch: N/A  
Units: ug/L

Instrument ID: Varian 3900F  
Lab File ID: c:\satumws\data\200805\052  
Initial Weight/Volume: 40 mL  
Final Weight/Volume: 40 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
Benzene	86	81	69 - 129	6	20		
Chlorobenzene	102	96	61 - 121	6	20		
1,1-Dichloroethene	85	83	65 - 125	2	20		
Toluene	91	86	70 - 130	6	20		
Trichloroethene	87	86	74 - 134	1	20		
Surrogate	LCS % Rec		LCSD % Rec		Acceptance Limits		
4-Bromofluorobenzene	103		107		71 - 139		
1,2-Dichloroethane-d4 (Surr)	91		95		62 - 118		
Toluene-d8 (Surr)	97		97		73 - 117		

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

## Quality Control Results

Client: GeoSyntec Consultants

Job Number: 720-14379-1

### Method Blank - Batch: 720-36038

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

Lab Sample ID: MB 720-36038/3  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 05/27/2008 1050  
Date Prepared: 05/27/2008 1050

Analysis Batch: 720-36038  
Prep Batch: N/A  
Units: ug/L

Instrument ID: Varian 3900G  
Lab File ID: c:\saturnws\data\200805\05  
Initial Weight/Volume: 40 mL  
Final Weight/Volume: 40 mL

Analyte	Result	Qual	RL
Methyl tert-butyl ether	ND		5.0
Acetone	ND		50
Benzene	ND		0.50
Dichlorobromomethane	ND		0.50
Bromobenzene	ND		1.0
Chlorobromomethane	ND		1.0
Bromoform	ND		1.0
Bromomethane	ND		1.0
2-Butanone (MEK)	ND		50
n-Butylbenzene	ND		1.0
sec-Butylbenzene	ND		1.0
tert-Butylbenzene	ND		1.0
Carbon disulfide	ND		5.0
Carbon tetrachloride	ND		0.50
Chlorobenzene	ND		0.50
Chloroethane	ND		1.0
Chloroform	ND		1.0
Chloromethane	ND		1.0
2-Chlorotoluene	ND		0.50
4-Chlorotoluene	ND		0.50
Chlorodibromomethane	ND		0.50
1,2-Dichlorobenzene	ND		0.50
1,3-Dichlorobenzene	ND		0.50
1,4-Dichlorobenzene	ND		0.50
1,3-Dichloropropane	ND		1.0
1,1-Dichloropropene	ND		0.50
1,2-Dibromo-3-Chloropropane	ND		1.0
Ethylene Dibromide	ND		0.50
Dibromomethane	ND		0.50
Dichlorodifluoromethane	ND		0.50
1,1-Dichloroethane	ND		0.50
1,2-Dichloroethane	ND		0.50
1,1-Dichloroethene	ND		0.50
cis-1,2-Dichloroethene	ND		0.50
trans-1,2-Dichloroethene	ND		0.50
1,2-Dichloropropane	ND		0.50
cis-1,3-Dichloropropene	ND		0.50
trans-1,3-Dichloropropene	ND		0.50
Ethylbenzene	ND		0.50
Hexachlorobutadiene	ND		1.0
2-Hexanone	ND		50

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

## Quality Control Results

Client: GeoSyntec Consultants

Job Number: 720-14379-1

**Method Blank - Batch: 720-36038**

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

Lab Sample ID: MB 720-36038/3  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 05/27/2008 1050  
Date Prepared: 05/27/2008 1050

Analysis Batch: 720-36038  
Prep Batch: N/A  
Units: ug/L

Instrument ID: Varian 3900G  
Lab File ID: c:\saturnws\data\200805\08  
Initial Weight/Volume: 40 mL  
Final Weight/Volume: 40 mL

Analyte	Result	Qual	RL
Isopropylbenzene	ND		0.50
4-Isopropyltoluene	ND		1.0
Methylene Chloride	ND		5.0
4-Methyl-2-pentanone (MIBK)	ND		50
Naphthalene	ND		1.0
N-Propylbenzene	ND		1.0
Styrene	ND		0.50
1,1,1,2-Tetrachloroethane	ND		0.50
1,1,2,2-Tetrachloroethane	ND		0.50
Tetrachloroethene	ND		0.50
Toluene	ND		0.50
1,2,3-Trichlorobenzene	ND		1.0
1,2,4-Trichlorobenzene	ND		1.0
1,1,1-Trichloroethane	ND		0.50
1,1,2-Trichloroethane	ND		0.50
Trichloroethene	ND		0.50
Trichlorofluoromethane	ND		1.0
1,2,3-Trichloropropane	ND		0.50
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.50
1,2,4-Trimethylbenzene	ND		0.50
1,3,5-Trimethylbenzene	ND		0.50
Vinyl acetate	ND		50
Vinyl chloride	ND		0.50
Xylenes, Total	ND		1.0
2,2-Dichloropropane	ND		0.50
Surrogate	% Rec	Acceptance Limits	
4-Bromofluorobenzene	108	71 - 139	
1,2-Dichloroethane-d4 (Surr)	100	62 - 118	
Toluene-d8 (Surr)	96	73 - 117	

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

## Quality Control Results

Client: GeoSyntec Consultants

Job Number: 720-14379-1

**Lab Control Spike/  
Lab Control Spike Duplicate Recovery Report - Batch: 720-36038**

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

LCS Lab Sample ID: LCS 720-36038/2  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 05/27/2008 0943  
Date Prepared: 05/27/2008 0943

Analysis Batch: 720-36038  
Prep Batch: N/A  
Units: ug/L

Instrument ID: Varian 3900G  
Lab File ID: c:\satumws\data\200805\052  
Initial Weight/Volume: 40 mL  
Final Weight/Volume: 40 mL

LCSD Lab Sample ID: LCSD 720-36038/1  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 05/27/2008 1017  
Date Prepared: 05/27/2008 1017

Analysis Batch: 720-36038  
Prep Batch: N/A  
Units: ug/L

Instrument ID: Varian 3900G  
Lab File ID: c:\satumws\data\200805\052  
Initial Weight/Volume: 40 mL  
Final Weight/Volume: 40 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
Benzene	88	87	69 - 129	1	20		
Chlorobenzene	100	98	61 - 121	2	20		
1,1-Dichloroethene	92	90	65 - 125	1	20		
Toluene	89	90	70 - 130	1	20		
Trichloroethene	85	84	74 - 134	2	20		
Surrogate	LCS % Rec		LCSD % Rec		Acceptance Limits		
4-Bromofluorobenzene	101		101		71 - 139		
1,2-Dichloroethane-d4 (Surr)	94		97		62 - 118		
Toluene-d8 (Surr)	92		94		73 - 117		

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

## Quality Control Results

Client: GeoSyntec Consultants

Job Number: 720-14379-1

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 720-36038**

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

MS Lab Sample ID: 720-14379-7  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 05/27/2008 1445  
Date Prepared: 05/27/2008 1445

Analysis Batch: 720-36038  
Prep Batch: N/A

Instrument ID: Varian 3900G  
Lab File ID: c:\saturnws\data\200805\05  
Initial Weight/Volume: 40 mL  
Final Weight/Volume: 40 mL

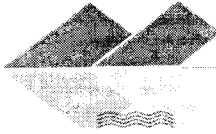
MSD Lab Sample ID: 720-14379-7  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 05/27/2008 1519  
Date Prepared: 05/27/2008 1519

Analysis Batch: 720-36038  
Prep Batch: N/A

Instrument ID: Varian 3900G  
Lab File ID: c:\saturnws\data\200805\05  
Initial Weight/Volume: 40 mL  
Final Weight/Volume: 40 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
Benzene	83	88	69 - 129	6	20		
Chlorobenzene	94	101	61 - 121	8	20		
1,1-Dichloroethene	82	92	65 - 125	12	20		
Toluene	86	90	70 - 130	4	20		
Trichloroethene	79	83	74 - 134	6	20		
Surrogate	MS % Rec		MSD % Rec		Acceptance Limits		
4-Bromofluorobenzene	104		102		71 - 139		
1,2-Dichloroethane-d4 (Surr)	99		97		62 - 118		
Toluene-d8 (Surr)	94		91		73 - 117		

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



**Environmental  
Sampling Services**

6680 Alhambra Avenue, #102 • Martinez, California 94553-6105  
 Telephone: (925) 372-8108 Fax: (925) 372-6705  
 www.envsampling.com Log Code: ESSM

**720-14379**

110790

**CHAIN OF CUSTODY RECORD**

TURN AROUND TIME

24 HR 48 HR 72 HR STD. \_\_\_\_\_

Reporting Format: EDF  EDD/Excel  PDF

GeoTracker Site Identification: \_\_\_\_\_

FedEx  UPS  Tracking Number: \_\_\_\_\_

Laboratory: Test America

Lab Code: STCL

Send Report To: Melissa Asher Bill To: SAME  
 Company: GeoSyntec Consultants Company:  
 Address: 475 14th Street, Suite 450 Address:  
Oakland, CA 94612  
 E-Mail: masher@geosyntec.com  
 Tel: (510) 285-2782 Fax: ( )  
 Fax: (510) 836-3036  
 Project Name: Hopyard Cleaners Project Number: WR0574  
 Sampler's Name: Jacqueline Lee  Stephen Penman

Analysis Request Other Comments

SAMPLE ID	Field Point Name	SAMPLING		# Containers	Container Type*	MATRIX CODE				METHOD PRESERVED				VOCs (EPA 8260B)
		Date	Time			WG	SO	GS	Water	Ice	HCl	HNO <sub>3</sub>	H <sub>2</sub> SO <sub>4</sub>	
1 Trip Blank		5/16/08	7:00	3	1				X	X	X			X
2 MW-2 PDB		5/16/08	7:55	3	1	X				X	X			X
3 MW-DUP		5/16/08	8:00	3	1	X				X	X			X
4 MW-2		5/16/08	8:31	3	1	X				X	X			X
5 MW-1 PDB		5/16/08	9:00	3	1	X				X	X			X
6 MW-1		5/16/08	9:29	3	1	X				X	X			X
7 MW-5 PDB		5/16/08	10:15	3	1	X				X	X			X
8 MW-5		5/16/08	10:43	3	1	X				X	X			X
9 MW-4 PDB		5/16/08	11:15	3	1	X				X	X			X
10 MW-4		5/16/08	11:57	3	1	X				X	X			X

Relinquished By: [Signature] Date: 5/16/08 Time: 16:00  
 Received By: [Signature]  
 Relinquished By: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_  
 Received By: \_\_\_\_\_  
 Relinquished By: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_  
 Received By: \_\_\_\_\_

ICE/°C 2.3 HEAD SPACE ABSENT: Yes No  
 Received in Good Condition: Yes No  
 Metals sample(s) Field Filtered: Yes No NA  
 Questions regarding COC: Call ESS  
 COMMENTS :  
 FIELD POINT: MW=Monitoring Well QCFD=Field Duplicate QCFB=Field Blank  
 CONTAINER TYPES:  
 1=VOAs 2=Glass 3=Poly 4=Liner 5=Air Canister 6=Tedlar Bag  
 PAGE 1 of 2

MATRIX CODE: WG=Grdwtr. SO=Soil GS=Soil Gas

Report To					Analysis Request																			
Attn: <u>Melissa Asher</u>																								
Company: <u>GeoSynTec Consultants</u>																								
Address: <u>475-14th St, Suite 450</u>																								
Phone: <u>925-285-2782</u> Email: <u>mashere@geosynotec.com</u>																								
Bill To: <u>SAME</u> Sampled By: <u>ESS(JC)</u>																								
Attn: _____ Phone: _____																								
Sample ID	Date	Time	Matrix	Preserv.	TPH EPA - <input type="checkbox"/> 8015M <input type="checkbox"/> 8260B <input type="checkbox"/> Gas w/ <input type="checkbox"/> BTEX <input type="checkbox"/> MTBE	Purgeable Aromatics BTEX EPA - <input type="checkbox"/> 8021 <input type="checkbox"/> 8260B	TEPH EPA 8015M* <input type="checkbox"/> Silica Gel <input type="checkbox"/> Diesel <input type="checkbox"/> Motor Oil <input type="checkbox"/> Other _____	Fuel Tests EPA 8260B: <input type="checkbox"/> Gas <input type="checkbox"/> BTEX <input type="checkbox"/> Five Oxynates <input type="checkbox"/> DCA, EDB <input type="checkbox"/> Ethanol	Purgeable Halocarbons (HVOCS) EPA 8021 by 8260B	Volatile Organics GC/MS (VOCs) <input checked="" type="checkbox"/> EPA 8260B <input type="checkbox"/> 624	Semivolatiles GC/MS <input type="checkbox"/> EPA 8270 <input type="checkbox"/> 625	Oil and Grease <input type="checkbox"/> Petroleum (EPA 1664) <input type="checkbox"/> Total	Pesticides <input type="checkbox"/> EPA 8081 <input type="checkbox"/> 608 <input type="checkbox"/> EPA 8082 <input type="checkbox"/> 608	PCBs	PNAs by <input type="checkbox"/> 8270 <input type="checkbox"/> 8310	CAM17 Metals (EPA 6010/7470/7471)	Metals: <input type="checkbox"/> Lead <input type="checkbox"/> LUFT <input type="checkbox"/> RCRA <input type="checkbox"/> Other: _____	Low Level Metals by EPA 200.8/6020 (CP-MS): _____	<input type="checkbox"/> W.E.T (STLC) <input type="checkbox"/> TCLP	Hexavalent Chromium pH (24h hold time for H <sub>2</sub> O)	Spec Cond. <input type="checkbox"/> Alkalinity TSS <input type="checkbox"/> TDS <input type="checkbox"/>	Anions: <input type="checkbox"/> Cl <input type="checkbox"/> SO <sub>4</sub> <input type="checkbox"/> NO <sub>3</sub> <input type="checkbox"/> F <input type="checkbox"/> Br <input type="checkbox"/> NO <sub>2</sub> <input type="checkbox"/> PO <sub>4</sub>	Number of Containers	
11 MW-3PDB	5/16/08	12:30	WG	HCl						X														3
12 EB-1	5/16/08	12:50	W	HCl						X														3
13 MW-3	5/16/08	13:30	WG	HCl						X														3

Project Info.		Sample Receipt	
Project Name: <u>Hopyard</u>	# of Containers:	Report: <input type="checkbox"/> Routine <input type="checkbox"/> Level 3 <input type="checkbox"/> Level 4 <input type="checkbox"/> EDD <input type="checkbox"/> State Tank Fund EDF	Special Instructions / Comments: <input type="checkbox"/> Global ID _____
Project#: <u>WR0574</u>	Head Space:	Temp. Blank provided to verify refrigeration	
PO#:	Temp:		
Credit Card#:	Conforms to record:		
TA 5 Day	72h 48h 24h Other:		

1) Relinquished by:

[Signature] 16:00  
Signature Time

Jack Lee 5/16/08  
Printed Name Date

Env. Sampling Services  
Company

1) Received by:

[Signature] 16:00  
Signature Time

T Bullock 5/16/08  
Printed Name Date

TAL-S  
Company

2) Relinquished by:

Signature Time

Printed Name Date

Company

2) Received by:

Signature Time

Printed Name Date

Company

3) Relinquished by:

Signature Time

Printed Name Date

Company

3) Received by:

Signature Time

Printed Name Date

Company



## Login Sample Receipt Check List

Client: GeoSyntec Consultants

Job Number: 720-14379-1

**Login Number: 14379**  
**Creator: Bullock, Tracy**  
**List Number: 1**

**List Source: TestAmerica San Francisco**

<b>Question</b>	<b>T / F / NA</b>	<b>Comment</b>
Radioactivity either was not measured or, if measured, is at or below background	N/A	
The cooler's custody seal, if present, is intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	