

30 April 2007

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 First Quarter 2007 Groundwater Monitoring, Results of the March 2007 Grab Groundwater and Soil Gas Investigation, and Work Plan for Additional Monitoring Well Installation  
Hopyard Cleaners, 2771 Hopyard Road, Pleasanton, California  
Self-Monitoring Program No. R5-2006-0059

Dear Mr. Papler:

This report transmits the subject investigation results and work plan for Hopyard Cleaners, 2771 Hopyard Road, (the "Site") in Pleasanton, California. 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 (RWQCB) Monitoring and Reporting Program (MRP) No. R5-2006-0059.

The monitoring well network at the Site consists of 3 wells installed to 30 feet below ground surface (ft bgs). Well completion details are summarized in Table 1. Well locations relative to the site are shown in Figure 2.

## **WORK PERFORMED THIS QUARTER**

The 1<sup>st</sup> quarter groundwater monitoring event was performed on 9 February 2007. A soil gas and grab groundwater sampling investigation was conducted from 28 to 30 March 2007.

## **QUARTERLY GROUNDWATER MONITORING**

Quarterly groundwater monitoring was performed at the Site on 9 February 2007. Details are 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 sent to Severn Trent Laboratories, Inc. (STL) of Pleasanton, California for analysis. Groundwater samples from the Site monitoring wells were analyzed for volatile organic compounds (VOCs) by EPA method 8260B.

### **Groundwater Elevations and Flow Conditions**

Table 2 summarizes groundwater elevations measured during this sampling event. Groundwater beneath the Site was encountered between approximately 13 and 15 ft bgs. This depth corresponds to an elevation approximately between 311 and 313 ft above Mean Sea Level (MSL).

Water level measurements taken during the February 2007 event were used to construct groundwater elevation contours, presented as Figure 2. The water levels measured in the Site monitoring wells in 1<sup>st</sup> Quarter 2007 indicate a general flow to the north-northwest (Figure 2) with an average gradient of 0.001 ft/ft (5.28 ft/mile).

### **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. The results of the QA/QC review indicate that groundwater data are of acceptable quality.

### **Analytical results**

Laboratory analytical reports are provided in Attachment 2. Table 3 summarizes analytical results for groundwater samples collected during the 1<sup>st</sup> Quarter 2007 event. Analytical results for the current sampling event are also shown in Figure 2. Isoconcentration contour maps for tetrachloroethene (PCE) and trichloroethene (TCE) are shown in Figures 3 through 5. The isoconcentration contours were drawn using current data from monitoring wells along with grab groundwater sample results previously collected at the Site.

Analytical results from samples taken from the three monitoring wells showed the highest VOC concentrations at MW-2. The PCE and TCE concentrations at well MW-2 were 4,700 and 350 µg/L, respectively. These results are less than the results from the previous sampling event for this well. The results for the samples collected from MW-1 and MW-3 during the 1<sup>st</sup> Quarter 2007 event are also less than the results from the November 2006 monitoring event for these wells.

## **SOIL GAS INVESTIGATION**

On 28 March 2007, additional soil gas sampling was conducted at the Site in order to confirm the preliminary results and distribution of VOCs in soil gas, which was used to evaluate soil gas vapor intrusion. Eight locations were sampled at a depth of 5 ft bgs in accordance with the joint RWQCB/DTSC Guidance for Active Soil Gas Investigations (RWQCB/DTSC, 2003). Soil gas sampling locations are show in Figure 6.

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In preparation for the fieldwork, the proposed sampling locations were marked with white paint on 15 March 2007 and Underground Service Alert (USA) was notified of the fieldwork (USA Tickets #89779 and #89773). Subtronic Corporation, a private utility locating firm, cleared the proposed boring locations of underground utilities and other appurtenances before work began on 28 March 2007. Proposed soil gas sampling locations along the sidewalk of the building onsite (SG-1 through SG-4) were relocated approximately three to five feet away from the buildings due to overhead obstructions.

Soil gas samples were collected using a direct-push drilling rig, operated by TEG Northern California of Rancho Cordova, California (TEG). The 1-inch diameter rods were advanced to a target depth of 5 ft bgs. A stainless steel probe was then inserted into the boring through the rods. A new length of disposable 1/8-inch diameter nylon plastic tubing was inserted through the probe for each borehole. The probe was then retracted approximately 6 inches and hydrated bentonite was used to form a seal at ground surface in order to prevent intrusion of ambient air. Following probe installation, the subsurface conditions were allowed to equilibrate for a minimum period of 20 minutes.

A purge volume test was performed at SG-7 using 1, 3, and 7 purge volumes. Since the 1 purge volume sample has the highest detected concentrations, 1 purge volume was used to collect the remaining samples.

All downhole steel rods used for soil gas sampling were decontaminated prior to sampling at each location by TEG personnel. A leak test was performed at all soil gas probes using 1,1-Difluoroethane (1,1-DFA) prior to sample collection. TEG used an Agilent 6850 gas chromatograph (GC) and a 5973N mass spectrograph (MS) for soil gas analysis by EPA Method 8260B. 1,1-DFA was not detected in any sample analyzed by TEG.

In addition, one soil vapor sample was collected as a duplicate in a 6-liter Summa™ canister from SG-5. The sample was collected as a grab soil gas sample, without a flow

controller, and delivered to Columbia Analytical Services for analysis of VOCs by EPA Method TO-15. The duplicate was accompanied by a trip blank for analysis by EPA Method TO-15 modified. Vacuum gauge readings were recorded for all trip blanks upon receipt and prior to shipping.

### **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. The results of the trip blank had concentrations of PCE, TCE, and xylenes at 1.4, 1.3, and 1.3  $\mu\text{g}/\text{m}^3$ , respectively. These results indicate possible cross-contamination by the laboratory. However, as shown on Table 4, the detection limits are all greater than or equal to 100  $\mu\text{g}/\text{m}^3$ . Therefore, the cross-contamination would not significantly impact the soil gas data. The results of the QA/QC review indicate that soil gas data are of acceptable quality.

### **Soil Gas Analytical Results**

Soil gas samples analyzed by EPA Method 8260B using TEG's on-site lab detected petroleum related compounds (benzene, toluene, and xylenes) and site related compounds (TCE, PCE, and cis-1,2-dichloroethene (cis-1,2-DCE)). A summary of soil gas sampling results is provided in Table 4 and shown on Figure 6.

Benzene, toluene, and/or xylenes were detected at low levels in samples collected from seven of the eight locations sampled. Benzene concentrations ranged from non detect to 180  $\mu\text{g}/\text{m}^3$ , toluene concentrations ranged from non detect to 500  $\mu\text{g}/\text{m}^3$ , and xylene concentrations ranged from non detect to 280  $\mu\text{g}/\text{m}^3$ .

Detections of site related compounds were confined to these sampling locations closest to Hopyard Cleaners. TCE was only detected at two locations, SG-4 and SG-5, at concentrations of 200 and 7,500  $\mu\text{g}/\text{m}^3$ , respectively. PCE was detected at SG-1, SG-2, SG-3, SG-5, and SG-6 with detected concentrations ranging from 210 to 41,000  $\mu\text{g}/\text{m}^3$ .

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The highest concentration of PCE was detected at SG-5, the location adjacent to monitoring well MW-2, which has the highest PCE concentration in groundwater. Cis-1,2-DCE was only detected in the sample collected from SG-5 at a concentration of 1.2 µg/L. PCE, TCE and cis-1,2-DCE were not detected in samples collected at locations in the vicinity of the bookstore (SG-7 and SG-8). Analytical results from the duplicate sample at SG-5 sent to Columbia Analytical Services had similar detections of PCE and TCE as shown in Table 4.

### **Potential Vapor Intrusion Evaluation**

In the 4<sup>th</sup> Quarter 2006, potential vapor intrusion was evaluated using the Johnson and Ettinger (J&E) subsurface vapor intrusion model [Johnson and Ettinger, 1991 and USEPA, 2000]. The J&E Model was developed to predict the migration of volatile chemicals from soil, soil gas and groundwater into indoor air. The model accounts for both the diffusion of chemicals through the subsurface as well as advection due to pressure differentials between the soil and buildings.

Based on the site soil characterization, model defaults for clay soils were used in the model (bulk density, total soil porosity, and water-filled porosity). The J&E Model also considers several building-specific parameters, including building size (area and height), air exchange rate, and volumetric flow rate of soil gas into the building. The DTSC default building dimensions, air exchange rate, and volumetric flow rate of soil gas into the building for the commercial scenario were used in the model for the site [DTSC, 2005].

The J&E Model was initially run using the maximum PCE and TCE soil gas concentrations from the September 2006 soil gas sampling event (5,200 µg/m<sup>3</sup> and 22 µg/m<sup>3</sup>, respectively). The maximum soil gas concentrations were from the sample collected from 5 ft bgs at sampling location MW-1, which was located approximately 60 feet from the offsite commercial building and 160 feet from the onsite building (Figure 6). The J&E Model results predicted indoor air concentrations of PCE above the RWQCB Environmental Screening Level (ESL) for indoor air for the commercial

scenario [RWQCB, 2005; Table E-3]. The predicted indoor air concentrations of TCE were below the RWQCB ESL.

Based on this initial evaluation, Geosyntec recommend collecting additional soil gas samples adjacent to the offsite commercial building and onsite building. These soil gas samples were collected in March 2007 to further evaluate the distribution of PCE and TCE in soil gas and refine the J&E Model assessment for the site. A total of eight soil gas samples were collected: four adjacent to the onsite building (samples SG-1 through SG-4); two in the parking lot west of the onsite building (samples SG-5 and SG-6); and two adjacent to the offsite commercial building (samples SG-7 and SG-8). Of the samples collected adjacent to the onsite building, the highest PCE concentration was collected from sample location SG-2 at  $1,700 \mu\text{g}/\text{m}^3$  and the highest TCE concentration was collected from sample location SG-4 at  $200 \mu\text{g}/\text{m}^3$ . PCE and TCE were not detected in the samples from SG-7 and SG-8, adjacent to the offsite commercial building.

Because PCE and TCE were not detected at soil gas sampling locations adjacent to the offsite commercial building (SG-7 and SG-8) and BTEX was detected below the RWQCB ESLs for soil gas, no further evaluation of vapor intrusion is necessary for the offsite commercial building.

The soil gas-to-indoor air pathway was re-evaluated for the onsite building using the J&E Model, with the same input parameters used during the 4<sup>th</sup> Quarter of 2006, except that the maximum PCE and TCE concentrations detected in the March 2007 samples adjacent to the onsite building were used. The results of the re-evaluation (Table 5) indicate that the predicted indoor air concentrations of PCE and TCE are lower than the RWQCB ESLs for indoor air for the commercial scenario.

Although the predicted indoor air concentrations for PCE and TCE using the J&E Model are less than RWQCB ESLs for indoor air for the commercial scenario, based on the soil gas detections above RWQCB ESLs and the results of previous grab

groundwater investigations inside the building, future remedial actions should address potential elevated soil gas concentrations beneath the onsite building.

## **GRAB GROUNDWATER SAMPLING**

On 29 March 2007, Geosyntec supervised a field investigation that consisted of advancing borings at seven locations west and southwest of the Site and collecting groundwater samples from all seven locations. The sample locations for the March 2007 sampling event are shown on Figure 7. The objective of the grab groundwater investigation was to characterize the lateral and vertical extents of VOCs in the groundwater. Shallow groundwater (20 to 30 ft bgs) samples were collected from all seven borings. Deeper groundwater (40 to 60 ft bgs) samples were collected from five of the seven borings, as discussed below.

In preparation for the fieldwork, the proposed boring locations were marked with white paint on 15 March 2007 and Underground Service Alert (USA) was notified of the fieldwork (USA Tickets #89779 and #89773). Subtronic Corporation, a private utility locating firm, cleared the proposed boring locations of underground utilities and other appurtenances before work began on 29 March 2007. A permit to perform the work was obtained from the Alameda County Flood Control and Water Conservation District, Zone 7 (#27049). Because three of the proposed borings were located adjacent to a public sidewalk, an encroachment permit (ENCR 201599) was obtained from the City of Pleasanton.

Gregg Drilling of Martinez, California, drilled the seven borings with a Geoprobe Marl M-5 rig. The drilling equipment was cleaned prior to use and between each boring. The boring depths varied between 28 and 48 ft below ground surface (bgs). Two of the seven borings (B-38 and B-41) were continuously cored and a Geosyntec geologist logged the soil cores to characterize subsurface stratigraphy. The remaining five borings, B-36, B-37, B-39, B-40, and B-42, were sampled using a Hydropunch tool; therefore, no stratigraphy data was obtained.



In the two borings that were continuously cored, when groundwater was first encountered at depths of about 27 ft bgs, a 1-inch diameter temporary casing was placed in the boring to allow groundwater to collect and to stabilize the borehole. Once sufficient groundwater entered the casing, a groundwater sample was collected using a disposable bailer. Then a dual tube probing system was used to continuous core the borehole to about 47 ft bgs, allowing isolation from the previous water bearing zone and collection of soil cores and groundwater from the deeper zone.

Hydropunch rods remained in place to stabilize the borehole; therefore, a temporary casing was not used in this boring. These groundwater samples were collected using a stainless steel bailer, which was cleaned prior to use. The groundwater samples were poured into laboratory-supplied sample bottles, labeled, and stored on ice in a cooler during the fieldwork. The temporary casings were removed after sampling and the boreholes were grouted from the bottom to top and the ground surface was restored.

Upon completion of field activities, the groundwater samples were delivered to STL San Francisco in Pleasanton, California, under standard chain-of-custody procedures for analysis of VOCs using EPA Method 8260B. Investigation-derived waste generated during drilling and sampling was stored temporarily on site in three 5-gallon buckets, and has been removed by a licensed contractor for off site disposal.

### **Geology and Hydrogeology**

Borings B-38 and B-41 were continuously sampled to identify subsurface stratigraphy and first-encountered groundwater. The boring logs are included in Attachment 3. The stratigraphy observed in borings B-38 and B-41 was similar to the previous investigations at the Site. The soil type is predominantly silty clay, with layers of sand/clayey sand between approximately 5 to 13 ft bgs, underlain mainly by clay with some layers of sand/clayey sand. During drilling, groundwater was first observed at depths of approximately 9 to 24 feet bgs.

### **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. The results of the QA/QC review indicate that groundwater data are of acceptable quality.

### **Grab Groundwater Analytical Results**

The analytical results discussed below are summarized in Table 6 and on Figure 7. The analytical laboratory report is included in Attachment 2. Grab groundwater samples collected from seven borings were analyzed for VOCs using EPA Method 8260B (Table 6). VOCs were not detected above MCLs in any of the shallow groundwater zone (20 to 30 ft bgs) samples. PCE was detected in the deeper groundwater zone (40 to 60 ft bgs) at concentrations above the MCL of 5 µg/L in borings B-36, B-37, and B-42 at concentrations of 28, 9, and 6.8 µg/L, respectively. No other VOCs were detected in the deeper groundwater zone samples.

Figures 3, 4, and 5 show isoconcentration contour maps for PCE and TCE using results for all groundwater samples Geosyntec has collected to date (2004 to present). As shown in Figures 3, 4, and 5 the lateral extent of groundwater contamination has been sufficiently characterized.

## **WORK PLAN FOR ADDITIONAL MONITORING WELL INSTALLATION**

In order to monitor the vertical and lateral extent of groundwater contamination, the installation of additional monitoring wells is proposed in accordance with Task 4 of the RWQCB Site Cleanup Requirements Order No. R2-2006-0059.

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### **Proposed Well Locations**

Based on the results of the March 2007 grab groundwater samples described above, two additional monitoring wells are proposed. Of these two wells, one well, MW-4, will be installed to a depth of approximately 30 ft bgs with a screen from 20 to 30 ft bgs, similar to the three existing wells. The second well, MW-5, will be installed in the deeper zone to a depth of approximately 60 ft bgs and will be screened from 50 to 60 ft bgs.

The two proposed wells will be located along the sidewalk that runs down the southwest side of Hopyard Road, west and southwest of the site. The location of shallow well, MW-4, will be directly across Hopyard Road from southwest of MW-1 in order to monitor the lateral extent to the west of the site. The location of the deep well, MW-5, will be directly across Hopyard Road from the Site in an area with a lower detected concentration of PCE. This location was selected in order to monitor the vertical extent of contamination, while also avoiding cross-contamination between the shallow and deep zones that would be a concern if the well was installed on-site, in the area of the highest PCE concentrations. Proposed locations for MW-4 and MW-5 are shown on Figure 8.

### **Field Preparation**

Prior to monitoring well installation, the existing site Health and Safety Plan will be updated in accordance with Cal OSHA requirements. A monitoring well installation permit and encroachment permit will be obtained from Alameda County Flood Control and Water Conservation District, Zone 7 and the City of Pleasanton, respectively. Underground Service Alert (USA) will be notified 48-hours in advance of invasive subsurface work, and a private utility locator will be retained to perform a geophysical survey in the vicinity of each boring location to identify utilities, pipelines, or other subsurface obstructions.

### **Monitoring Well Installation**

Borehole drilling will be performed using hollow stem augers. Continuous soil samples will be collected from each boring via split-barrel continuous core sampler and a photoionization detector (PID) will be used to monitor for VOCs along the entire length of the sample run. A field geologist or engineer under the direct supervision of a California Certified Hydrogeologist will log core samples.

In the deeper well, MW-5, a conductor casing will be installed to minimize the potential for cross-communication between the shallow and deep groundwater. A pilot boring will be advanced into low permeability soil (clay or silt) to a depth below the adjacent shallow zone wells. The conductor casing will be installed and grouted in place prior to advancing the borehole to the deeper zone.

MW-4 and MW-5 will be 2-inch diameter wells with Schedule-40 PVC casings and 0.020-inch factory slotted well screens that are 10 ft in length. The tops of the well casings will be fitted with expandable-gasket lockable caps and the bottoms of the well will be fitted with a flush-threaded bottom cap.

Once installed, the wells will be allowed to recover for at least 48 hours prior to development. Well development will be performed under supervision of Geosyntec personnel and will serve to stabilize the filter pack and remove fines from the filter pack and well screen. Development will consist of a combination of bailing, surging, and pumping. Groundwater quality parameters (temperature, pH, specific conductance, and turbidity) will be measured during purging activities.

All investigation-derived waste materials will be contained and stored on-site pending appropriate disposal. Purge water and decontamination water will be contained in tanks or drums, labeled, and remain at the facility, pending appropriate disposal. The north side of each well box and PVC well casing will be surveyed for elevation and location by a licensed surveyor in accordance with Geotracker requirements.

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### Groundwater Sampling

Groundwater monitoring of the proposed wells, MW-4 and MW-5, will be conducted as part of the quarterly monitoring program.

### Schedule

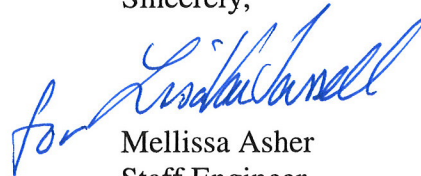
Monitoring well installation will be completed within six weeks of approval of this Work Plan by RWQCB and will be reported to RWQCB along with the Second Quarter 2007 Groundwater Monitoring Report by 30 July 2007.

### **FUTURE WORK**

The next quarterly groundwater monitoring event will be performed in May 2007. The results of the 2<sup>nd</sup> Quarter 2007 event, along with results of the additional monitoring well installation, will be discussed in the quarterly monitoring report due to the RWQCB on 30 July 2007.

If you have any questions, please call either of the undersigned at (510) 836-3034.

Sincerely,



Mellissa Asher  
Staff Engineer





D. Scott Felton, P.E.  
Project Engineer

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Copy w/attachments to:

Ms. Clare Leung, Hopyard Cleaners  
Ms. Joy Ricigliano, Zurich Insurance  
Mr. Wyman Hong, Zone 7 Water Agency  
Mr. William Henderlong, Town & Country Properties

Attachments:

- |              |  |
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# **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		
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

Notes:

MSL = mean sea level

TOC = Top of Casing

System - NAD 83, Zone IV

Elevations are based on NAVD 88 Datum



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

<b>Well I.D.</b>	<b>TOC Elevation (ft MSL)</b>	<b>Sample Date</b>	<b>Depth to Groundwater Below TOC (ft)</b>	<b>Groundwater Elevation (ft MSL)</b>
MW-1	325.77	2/9/2007	13.98	311.79
		11/20/2006	14.88	310.89
MW-2	325.69	2/9/2007	13.55	312.14
		11/20/2006	14.36	311.33
MW-3	326.27	2/9/2007	14.41	311.86
		11/20/2006	15.28	310.99

Notes:

ft MSL = feet above mean sea level

TOC = Top of Casing

Elevations are based on NAVD 88 Datum

**Table 3**  
**Groundwater Analytical Summary**  
**Hopyard Cleaners**  
**Pleasanton, California**

Well I.D.	Sample Date	Volatile Organic Compounds - EPA Method 8260B (ug/L)		
		cis-1,2-DCE	PCE	TCE
MW-1	2/9/2007	270 / 270	2400 / 2300	290 / 290
	11/20/2006	370	3100	370
MW-2	2/9/2007	760	4700	350
	11/20/2006	800 / 800	5700 / 5800	370 / 360
MW-3	2/9/2007	5.3	42	4.2
	11/20/2006	9.5	93	7.2

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

**Table 4**  
**March 2007 Soil Gas Analytical Results Summary<sup>2</sup>**  
**Hopyard Cleaners**  
**Pleasanton, California**

	Volatile Organic Compound - EPA Method 8260B (ug/m <sup>3</sup> )								
	Vinyl Chloride	trans-1,2-DCE	cis-1,2-DCE	1,1,1-TCA	Benzene	TCE	Toluene	PCE	m,p-Xylene
Soil Gas ESL (1)	110	41,000	20,000	1,300,000	290	4,100	180,000	1,400	410,000
<b>SG-1</b>	ND (100)	ND (100)	ND (100)	ND (100)	ND (100)	ND (100)	310	1,000	ND (200)
<b>SG-2</b>	ND (100)	ND (100)	ND (100)	ND (100)	140	ND (100)	300	<b>1,700</b>	250
<b>SG-3</b>	ND (100)	ND (100)	ND (100)	ND (100)	180	ND (100)	500	210	210
<b>SG-4</b>	ND (100)	ND (100)	ND (100)	ND (100)	ND (100)	200	330	ND (100)	ND (200)
<b>SG-5</b>	ND (100 / 820)	ND (100 / 820)	ND (100 / 820)	ND (100 / 820)	ND (100 / 820)	<b>7,500 / 6,500</b>	ND (200 / 820)	<b>41,000 / 64,000</b>	ND (200 / 820)
<b>SG-6</b>	ND (100)	ND (100)	ND (100)	ND (100)	ND (100)	ND (100)	360	<b>4,100</b>	280
<b>SG-7</b>	ND (100)	ND (100)	ND (100)	ND (100)	130	ND (100)	500	ND (100)	250
<b>SG-8</b>	ND (100)	ND (100)	ND (100)	ND (100)	ND (100)	ND (100)	380	ND (100)	220

## Notes:

"ND" - not detected above listed reporting limit

"-- / --" - result on right represents duplicate sample collected in 6 L. Summa canister and analyzed by Columbia

DCE = Dichloroethene

TCA = Trichloroethane

TCE = Trichloroethene

PCE = Tetrachloroethene

Results in **bold** exceed screening level

1) RWQCB, Environmental Screening Levels for shallow soil gas,

commercial land use, groundwater is a potential drinking water source, Interim Final, February 2005

2) Samples collected by TEG using direct push equipment and tested in mobile laboratory

**Table 5**  
**Comparison of Calculated Indoor Air Concentrations to ESLs**  
**Hopyard Cleaners**  
**Pleasanton, California**

<b>Compound</b>	<b>RWQCB Indoor Air ESLs for Commercial Land Use (ug/m<sup>3</sup>)</b>	<b>Indoor Air Modeled Concentrations (ug/m<sup>3</sup>)</b>
PCE	6.9E-01	3.8E-01
TCE	2.0E+00	4.7E-02

Notes:

Indoor air concentrations modeled using the Johnson & Ettinger model  
(Johnson and Ettinger, 1991 and USEPA, 2000)

ESL - Environmental Screening Level

PCE - tetrachloroethene

TCE - trichloroethene

**Table 6**  
**March 2007 Grab Groundwater Analytical Summary**  
**Hopyard Cleaners**  
**Pleasanton, California**

Location	Sample Date	Sample Depth (ft bgs)	Volatile Organic Compounds - EPA Method 8260B (ug/L)	
			PCE	1,1-DCA
B-36	3/29/2007	24-28'	ND (0.5)	ND (0.5)
B-36	3/29/2007	43-47'	<b>28</b>	ND (0.5)
B-37	3/29/2007	24-28'	ND (0.5)	ND (0.5)
B-37	3/29/2007	43-47'	<b>9</b>	ND (0.5)
B-38	3/29/2007	27-31'	ND (0.5)	ND (0.5)
B-38	3/29/2007	43-47'	ND (0.5)	ND (0.5)
B-39	3/29/2007	24-28'	ND (0.5)	ND (0.5)
B-40	3/30/2007	24-28'	ND (0.5)	ND (0.5)
B-41	3/30/2007	32-36'	ND (0.5)	ND (0.5)
B-41	3/30/2007	44-46'	1.4 / 1.5	ND (0.5 / 0.5)
B-42	3/30/2007	24-28'	ND (0.5)	1.2
B-42	3/30/2007	40-43'	<b>6.8</b>	ND (0.5)

Notes:

Table shows only compounds detected above the laboratory reporting limit

PCE - tetrachloroethene

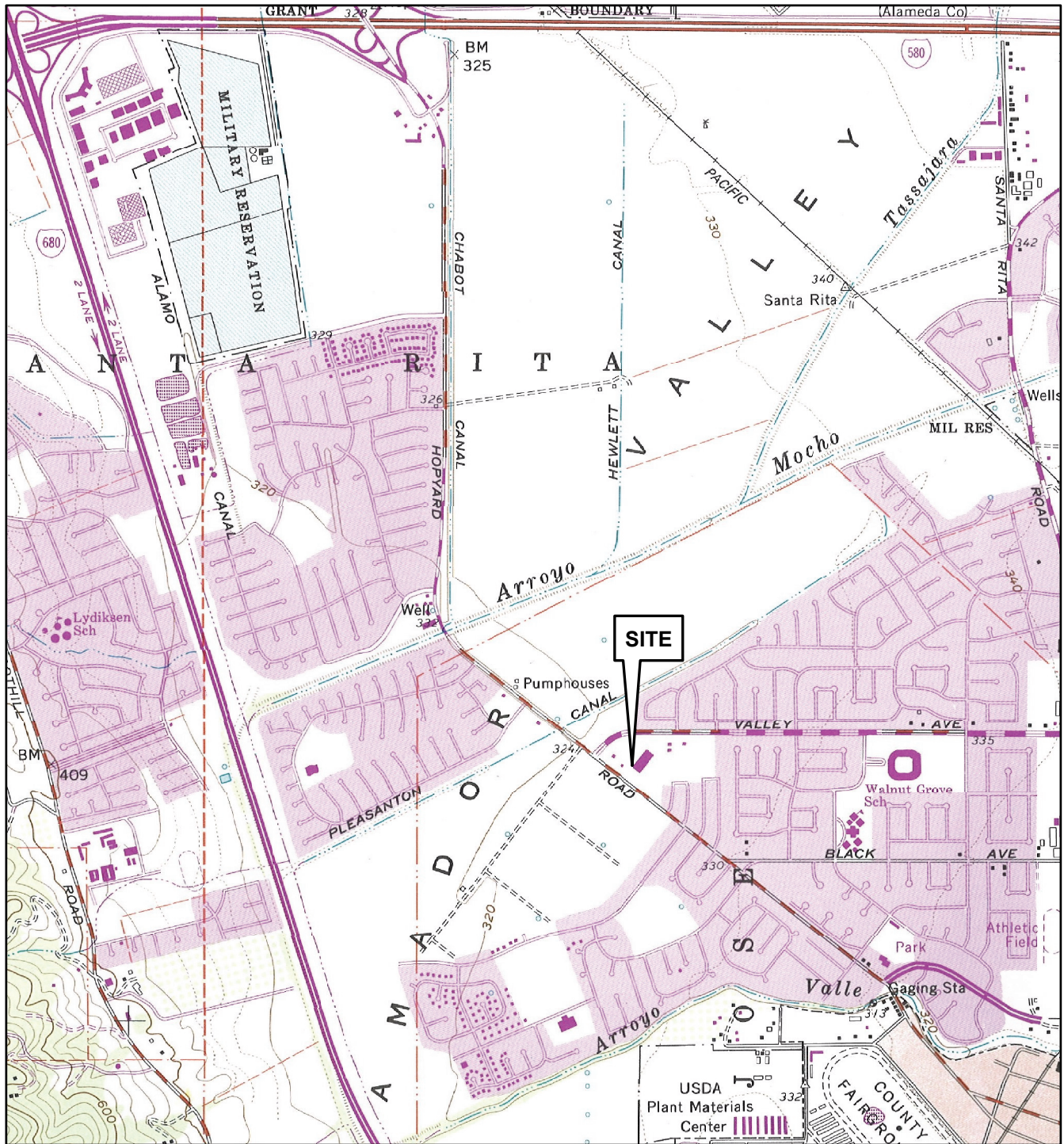
1,1-DCA - 1,1-dichloroethane

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

"ND" - not detected above listed reporting limit

Results in **bold** exceed MCL

# 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**



FIGURE NO.	1
PROJECT NO.	WR0574
DATE:	JANUARY 2007
FILE NO.	

P:\R020038EA\Hopyard Cleaners\Quarterly Monitoring Reports\2007\Figures\Figure 2 - GW Cont - Analytical.dwg 4-23-07

Screen Depth	20-30
PCE	2,400
TCE	290
c-1,2-DCE	270

311.8  
MW-1  
311.79

311.9

MW-3  
311.86

312.0

Screen Depth	20-30
PCE	42
TCE	4.2
c-1,2-DCE	5.3

312.1

MW-2  
312.14

Screen Depth	20-30
PCE	4,700
TCE	350
c-1,2-DCE	760



HOPYARD ROAD

Kavanagh  
Liquor  
Store

Hopyard  
Cleaners

Other  
Businesses

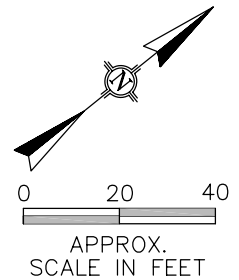
### LEGEND

-  MW-2 312.14 Monitoring Well Location and Water Elevation (msl)
-  312.1 Groundwater Elevation Contour

Analytical Results in parts per billion (ug/L).  
Depth in feet below ground surface (ft bgs).

Sample Depth	19-24
PCE	750
TCE	190
c-1,2-DCE	270

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

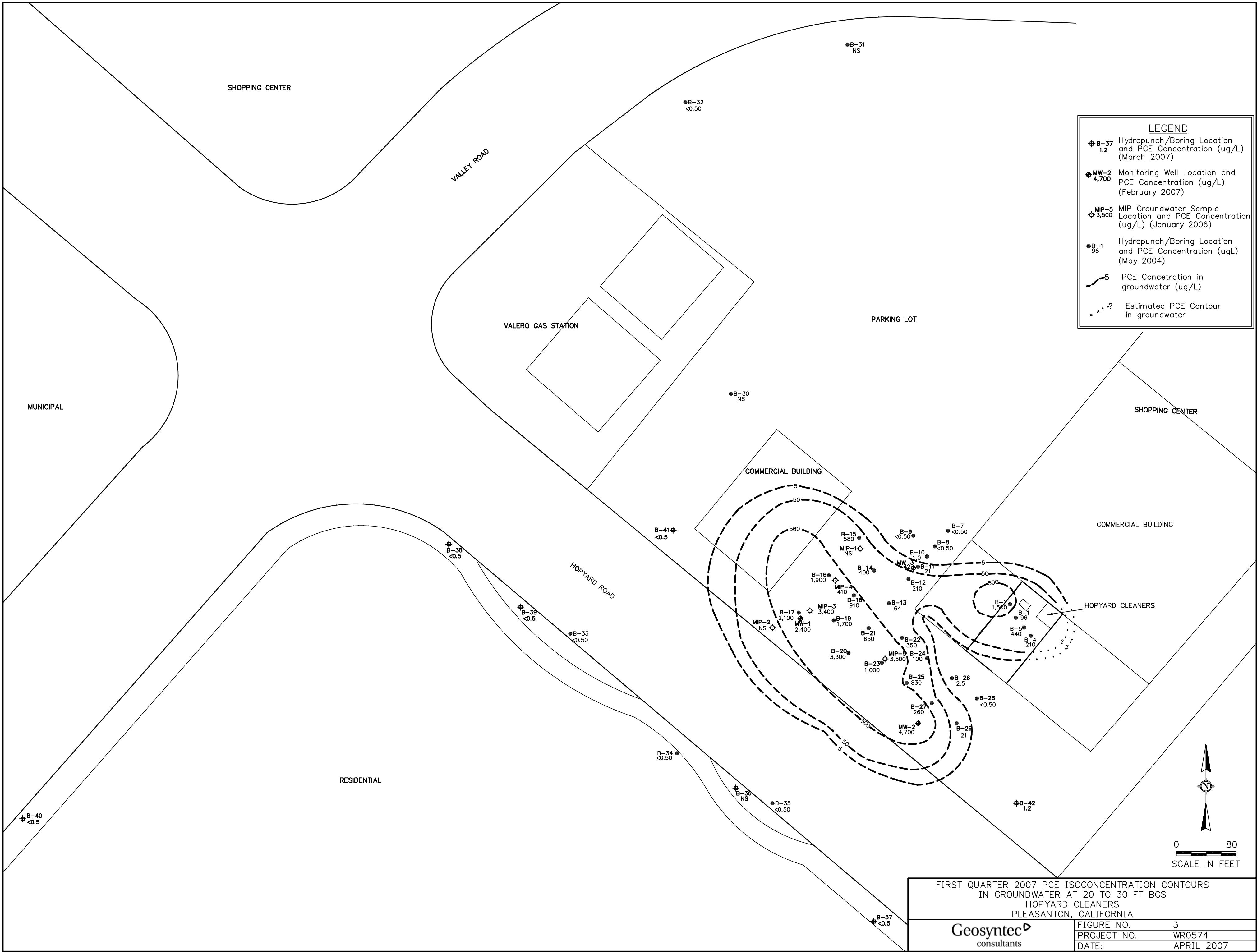


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consultants

FIRST QUARTER 2007 GROUNDWATER ELEVATION CONTOURS  
AND ANALYTICAL RESULTS  
HOPYARD CLEANERS, PLEASANTON, CALIFORNIA

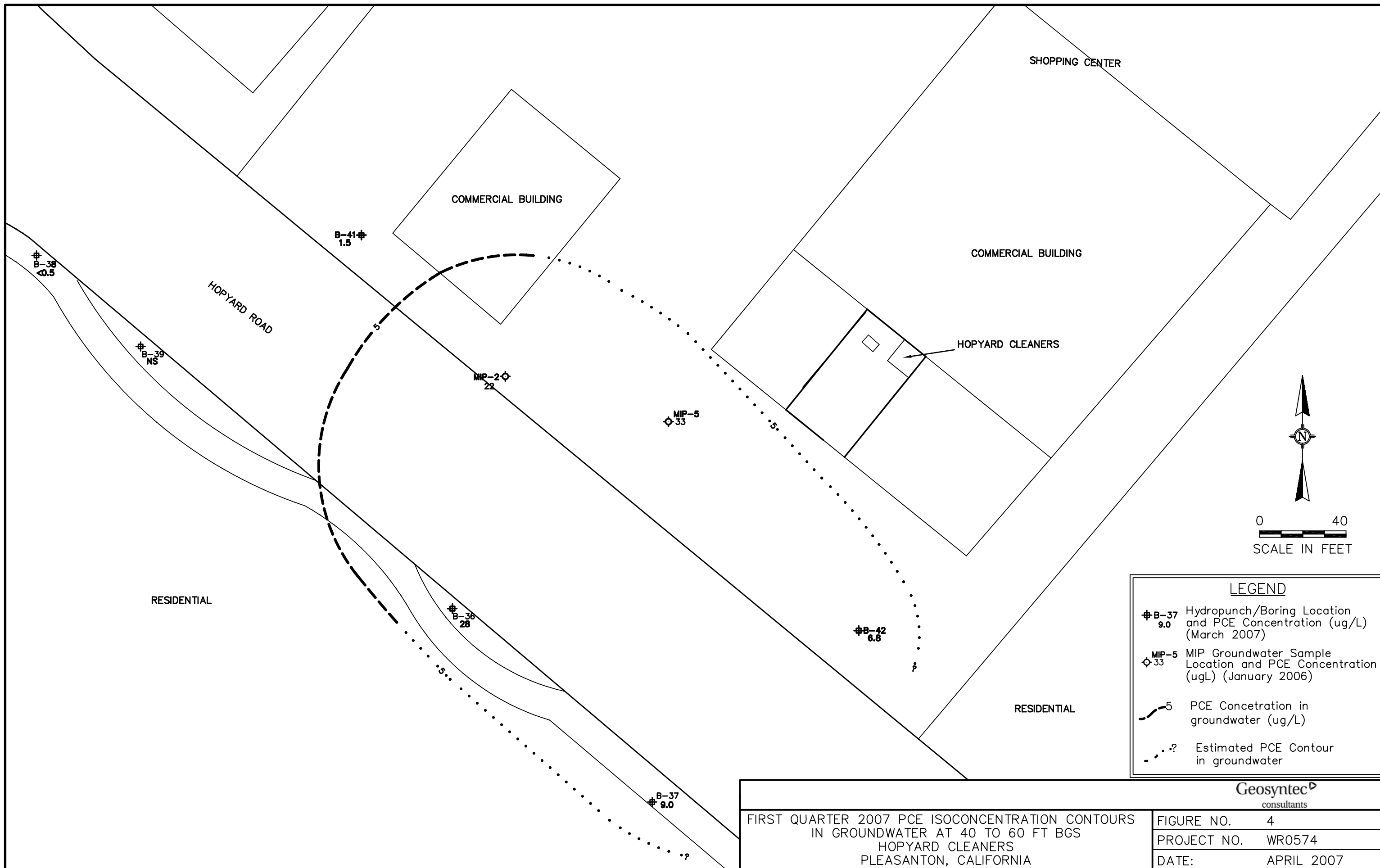
FIGURE NO.	2
PROJECT NO.	WR0574
DATE:	APRIL 2007





FIRST QUARTER 2007 PCE ISOCONCENTRATION CONTOURS  
 IN GROUNDWATER AT 20 TO 30 FT BGS  
 HOPYARD CLEANERS  
 PLEASANTON, CALIFORNIA

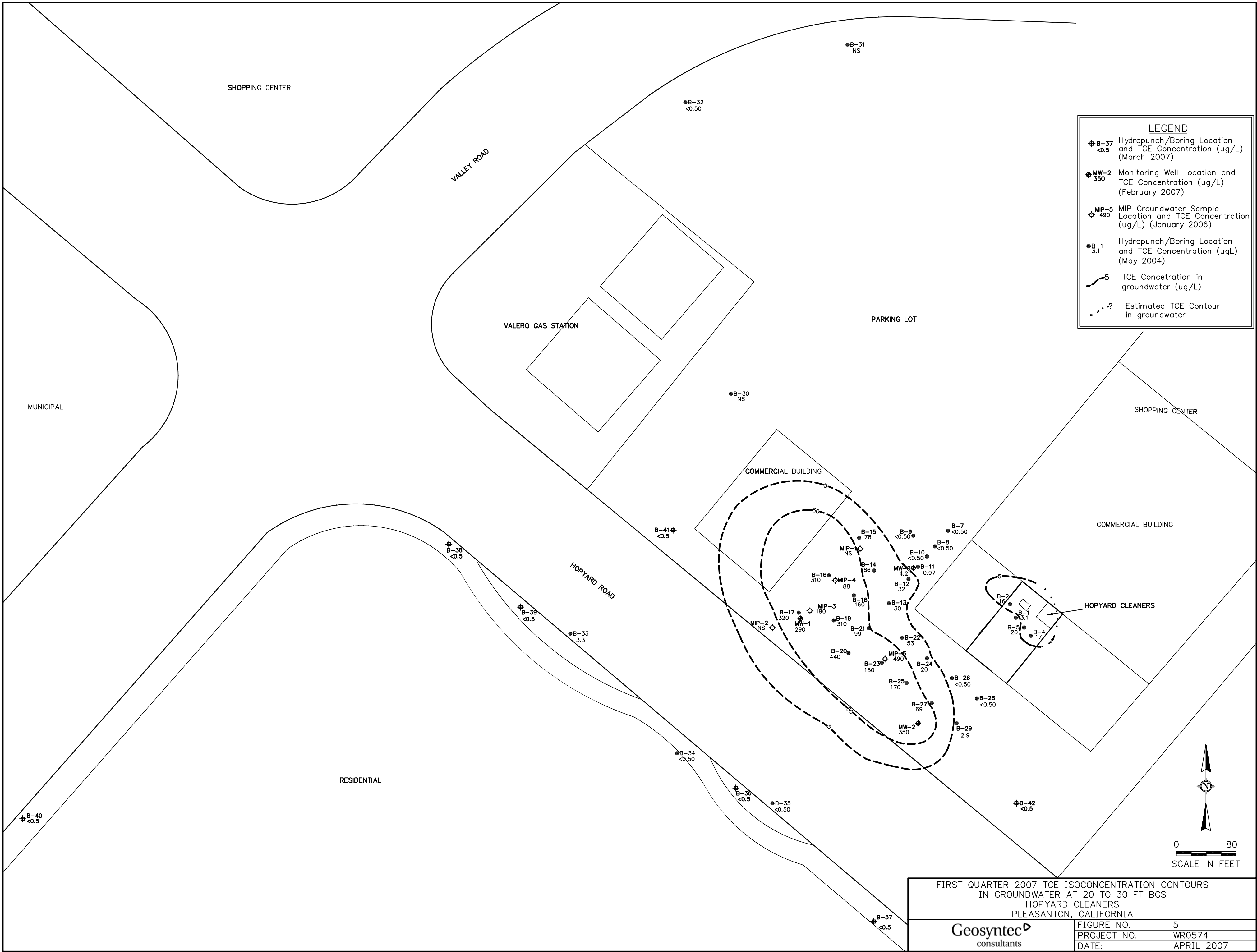
<b>Geosyntec</b> consultants	FIGURE NO.	3
	PROJECT NO.	WR0574
	DATE:	APRIL 2007



**LEGEND**

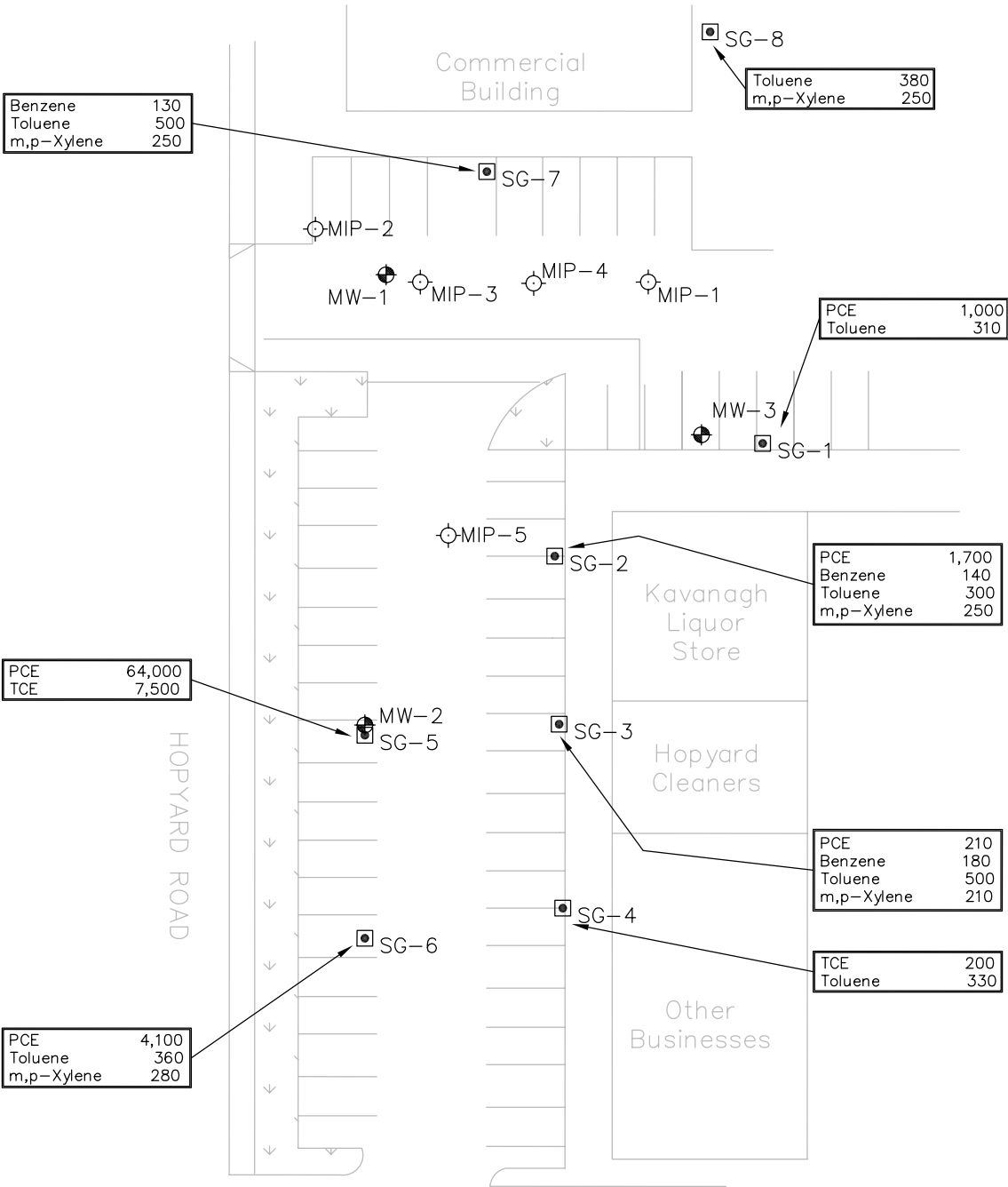
- #B-37 9.0 Hydropunch/Boring Location and PCE Concentration (ug/L) (March 2007)
- ◇MIP-5 33 MIP Groundwater Sample Location and PCE Concentration (ug/L) (January 2006)
- 5 PCE Concentration in groundwater (ug/L)
- · · ? Estimated PCE Contour in groundwater

<b>Geosyntec</b> consultants	
FIRST QUARTER 2007 PCE ISOCONCENTRATION CONTOURS IN GROUNDWATER AT 40 TO 60 FT BGS HOPYARD CLEANERS PLEASANTON, CALIFORNIA	FIGURE NO. 4
	PROJECT NO. WR0574
	DATE: APRIL 2007



FIRST QUARTER 2007 TCE ISOCONCENTRATION CONTOURS  
 IN GROUNDWATER AT 20 TO 30 FT BGS  
 HOPYARD CLEANERS  
 PLEASANTON, CALIFORNIA

Geosyntec consultants	FIGURE NO.	5
	PROJECT NO.	WR0574
	DATE:	APRIL 2007

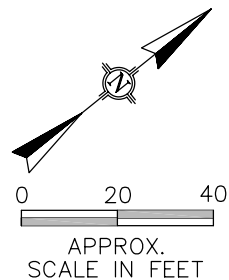


**LEGEND**

- SG-1 Soil Gas Sample Location
- MW-2 Monitoring Well Location
- MIP-3 January 2006 MIP Boring Location

PCE	64,000
TCE	7,500

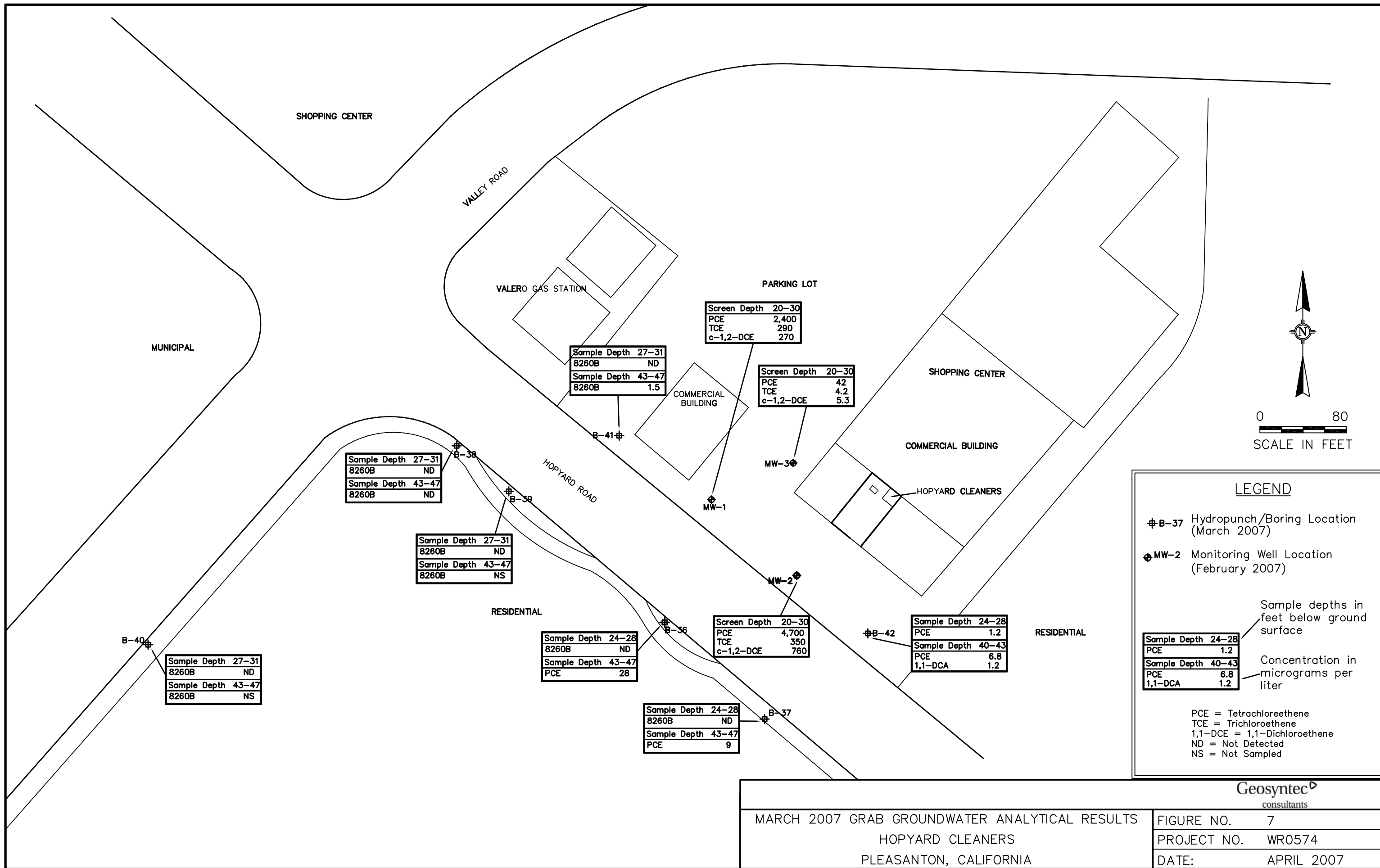
Analytical Results in micrograms per cubic meter (ug/m<sup>3</sup>).  
 Sample Depth is 5 feet below ground surface (ft bgs).  
 PCE - Tetrachloroethene  
 TCE - Trichloroethene



**Geosyntec**  
 consultants

MARCH 2007 SOIL GAS ANALYTICAL RESULTS  
 HOPYARD CLEANERS  
 PLEASANTON, CALIFORNIA

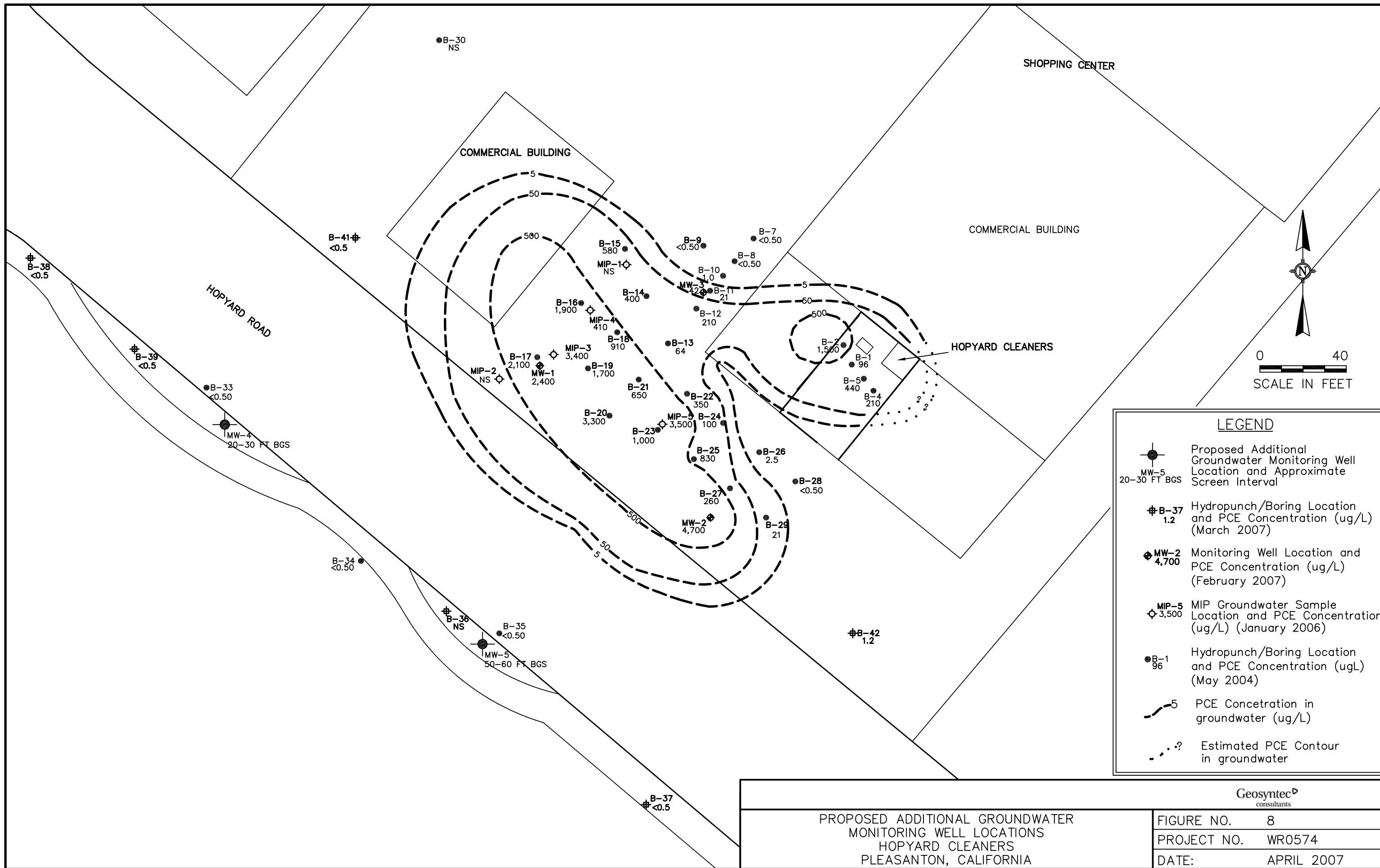
FIGURE NO.	6
PROJECT NO.	WR0574-04
DATE:	APRIL 2007










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MARCH 2007 GRAB GROUNDWATER ANALYTICAL RESULTS  
HOPYARD CLEANERS  
PLEASANTON, CALIFORNIA

FIGURE NO.	7
PROJECT NO.	WR0574
DATE:	APRIL 2007



**LEGEND**

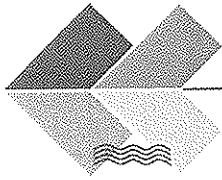
-  Proposed Additional Groundwater Monitoring Well Location and Approximate Screen Interval
-  Hydropunch/Boring Location and PCE Concentration (ug/L) (March 2007)
-  Monitoring Well Location and PCE Concentration (ug/L) (February 2007)
-  MIP Groundwater Sample Location and PCE Concentration (ug/L) (January 2006)
-  Hydropunch/Boring Location and PCE Concentration (ug/L) (May 2004)
-  PCE Concentration in groundwater (ug/L)
-  Estimated PCE Contour in groundwater

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PROPOSED ADDITIONAL GROUNDWATER MONITORING WELL LOCATIONS HOPYARD CLEANERS PLEASANTON, CALIFORNIA	FIGURE NO. 8
	PROJECT NO. WR0574
	DATE: APRIL 2007

**ATTACHMENT 1**

**ESS FIELD REPORT**



**FIELD ACTIVITY REPORT  
FOR**

**FEBRUARY 2007  
QUARTERLY GROUNDWATER  
SAMPLING EVENT**

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

Task: Quarterly Groundwater Sampling Event  
ESS Personnel: Stephen Penman  
Date of Activities: February 9, 2007

***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.

***Field Equipment Calibration***

A YSI® Multiparameter instrument with in-line flow through chamber and Turbidity meter was used to monitor water quality parameters during well purging. The meters were calibrated to standard solutions (see Daily Equipment Calibration Sheet).

***Groundwater Level Measurements***

Following atmospheric equilibration of approximately twenty minutes, depth to groundwater was measured and recorded for each monitoring well. All readings were performed with a Solinst® Water Level Meter, Serial Number 25083, and referenced to the surveyor's mark 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.

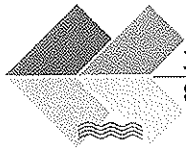
***Water Quality Parameters***

The following water quality parameters were monitored and recorded during well purging: 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).

***Well Purging & Sampling Procedures***

A peristaltic pump and new pump tubing was used for purging and sampling. Each monitoring well was purged at a rate no greater than 500-ml per minute until water quality parameters stabilized for three consecutive readings.





**Environmental  
Sampling Services**

EPA stabilization guidelines were used. The readings were within  $\pm 0.1$  for pH,  $\pm 3\%$  for Specific Conductivity,  $\pm 10$  mV for ORP,  $\pm 10$  NTUs for Turbidity, and  $\pm 10\%$  for Dissolved Oxygen.

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

Pump tubing was dedicated to each well for future sampling efforts.

***Chemical Analyses***

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

***Sample Containers***

Severn Trent Laboratories (STL-SF) of Pleasanton, California provided all sample containers.

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

***Sample Handling***

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

During decanting, 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.

***QA/QC***

A Trip Blank set, supplied by STL-SF, was stored in the cooler throughout the sampling event and submitted for analysis.

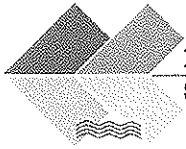
One blind duplicate set was collected from MW-1 and labeled "MW-DUP @ 11:50".

An equipment blank set was collected after sampling MW-3. Laboratory-supplied distilled water and a short section of new pump tubing was used. The equipment blank was labeled "ER-1 @ 13:25".

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, analysis request section.



**Environmental  
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***Shipment of Samples***

Samples were relinquished to STL-SF February 9, 2007.

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

Approximately 9 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.

Jacqueline Lee  
Partner

Enclosure

Table 1: Summary of Groundwater Sampling Event

Water Sample Log Sheets

Equipment Calibration Sheet

Chain of Custody



**Table 1: Summary of February 2007 Quarterly Groundwater Sampling Event**

**Project Name: Hopyard Cleaners**

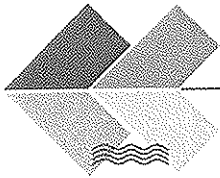
**Project Location: 2771 Hopyard Road, Pleasanton, California**

Well/Sample Identification	Date of Measurement	Time of Measurement	Depth to Groundwater (Ft., TOC)	Well Depth (Ft., TOC)	Sample Date	Sample Time	QA/QC Type	QA/QC Sample Identification
MW-1	2/9/2007	10:57	13.98	30.27	2/9/2007	11:28	Duplicate	MW-DUP
MW-2	2/9/2007	10:56	13.55	30.31	2/9/2007	12:33	None	NA
MW-3	2/9/2007	10:53	14.41	30.29	2/9/2007	13:17	Equipment Blank	ER-1

Legend:

TOC = Top of Well Casing

NA = Not Applicable



**Environmental  
Sampling Services**

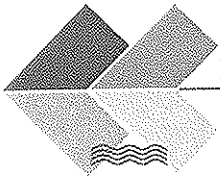
**WATER QUALITY SAMPLE LOG SHEET** WELL IDENTIFICATION: MW-1 DATE: 2/09/07

Project Name: Hopyard Cleaners Pleasanton, CA Project Task: Quarterly Monitoring Project/Task No. WR0574  
 Project Manager: Sergio Santos - Geosyntec Cons. Lab: STL San Francisco Weather Conditions: Overcast/Light Drizzle  
 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 @ 25.27 ft.(BTOC) Screen Interval: 20' to 30'  
 Purge Method: Teflon / PE Disposable Bailer Centrifugal Pump (Peristaltic Pump) Other: \_\_\_\_\_  
 Pump Lines: NA (New) Cleaned (Dedicated) Bailor Line: (NA) New / Cleaned / Dedicated  
 Method of Cleaning Pump: (NA) Alconox Liqui-nox Tap Water DI Rinse Other: \_\_\_\_\_  
 Method of Cleaning Bailor: (NA) Alconox Liqui-nox Tap Water DI Rinse Other: \_\_\_\_\_  
 Sampling Method: Disp. Teflon Bailor Disp. PE Bailor (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 Indicator Serial No.: (25083) 25742 P.I.D. Reading: NA ppm  
 Water Level at Start (DTW): 13.98 @ 10:57 (BTOC) Water Level Prior To Sampling: 14.16 (BTOC)  
 TD = 30.27' - 13.98 (DTW) = 16.29 (ft. of water) x "K" = 2.7 (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
<u>2/9/07</u>	<u>11:00</u>	<u>Initial</u>	<u>6.95</u>	<u>18.88</u>	<u>1085</u>	<u>1.51</u>	<u>95.7</u>	<u>2.02</u>	<u>14.15</u>	<u>Clear</u>
	<u>11:02</u>	<u>0.5</u>	<u>6.92</u>	<u>19.36</u>	<u>1087</u>	<u>1.64</u>	<u>92.3</u>	<u>1.90</u>	<u>14.15</u>	<u>"</u>
	<u>11:04</u>	<u>1.0</u>	<u>6.92</u>	<u>19.46</u>	<u>1090</u>	<u>1.41</u>	<u>93.3</u>	<u>1.82</u>	<u>14.16</u>	<u>"</u>
	<u>11:06</u>	<u>1.5</u>	<u>6.92</u>	<u>19.71</u>	<u>1089</u>	<u>1.34</u>	<u>95.3</u>	<u>1.55</u>	<u>14.16</u>	<u>"</u>
	<u>11:08</u>	<u>2.0</u>	<u>6.91</u>	<u>19.81</u>	<u>1089</u>	<u>0.94</u>	<u>91.3</u>	<u>1.39</u>	<u>14.16</u>	<u>"</u>
	<u>11:10</u>	<u>2.5</u>	<u>6.90</u>	<u>19.89</u>	<u>1088</u>	<u>1.05</u>	<u>91.3</u>	<u>1.24</u>	<u>14.16</u>	<u>"</u>
	<u>11:12</u>	<u>3.0</u>	<u>6.89</u>	<u>19.94</u>	<u>1088</u>	<u>0.93</u>	<u>87.4</u>	<u>1.14</u>	<u>14.16</u>	<u>"</u>
	<u>11:14</u>	<u>3.5</u>	<u>6.89</u>	<u>19.98</u>	<u>1088</u>	<u>0.82</u>	<u>90.6</u>	<u>1.01</u>	<u>14.16</u>	<u>"</u>
<u>✓</u>	<u>11:16</u>	<u>4.0</u>	<u>6.89</u>	<u>20.02</u>	<u>1088</u>	<u>0.77</u>	<u>92.0</u>	<u>0.92</u>	<u>14.16</u>	<u>"</u>

Total Discharge: 6.9 Liters Casing Volumes Removed: NA  
 Method of disposal of discharged water: (55 Gallon Drum) Poly Tank Treatment System Other: \_\_\_\_\_  
 Date/Time Sampled: 2/09/07 @ 11:28 Analysis: VOCs (8260B) - 3 VOAs w/HCl  
 QA/QC: MW-Dup @ 11:50 (Duplicate) MS/MSD Equipment Rinseate Field Blank Lab Split  
 Comments: \_\_\_\_\_



**Environmental  
Sampling Services**

WATER QUALITY SAMPLE LOG SHEET WELL IDENTIFICATION: MW-1 Page 2

Project Name: Hopyard Cleaners, Pleasanton, CA

FIELD WATER QUALITY PARAMETERS CONTINUED FROM PAGE 1

Date	Time	Discharge (Liters)	pH +/- 0.1	Temp. (°C)	Specific Conductance mS (µS) +/- 3%	Turbidity (NTUs) +/-10	Redox (mV) +/-10	Dissolved Oxygen (mg/L) 10%	Water Level (BTOC)	Color
2/9/07	11:18	4.5	6.88	20.04	1089	0.60	92.7	0.85	14.16	Clear
	11:20	5.0	6.88	20.04	1089	0.53	90.7	0.79	14.16	"
	11:22	5.5	6.87	20.04	1089	0.51	90.2	0.73	14.16	"
	11:24	6.0	6.87	19.93	1092	0.48	90.1	0.71	14.16	"
	11:26	6.5	6.87	19.79	1093	0.45	89.5	0.69	14.16	"
		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: 6.9 Liters Casing Volumes Removed: NA

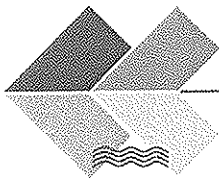
Comments: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Recorded by: Stephen Penman / Jacki Lee Signature: [Signature] Page 2 of 2



**Environmental  
Sampling Services**

**WATER QUALITY SAMPLE LOG SHEET**

WELL IDENTIFICATION: MW-2 DATE: 2/09/07

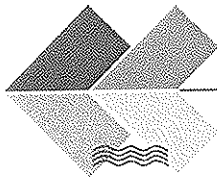
Project Name: Hopyard Cleaners Pleasanton, CA Project Task: Quarterly Monitoring Project/Task No. WR0574  
 Project Manager: Sergio Santos - Geosyntec Cons. Lab: STL San Francisco Weather Conditions: Light Rain + Cool  
 Well Description: 2" 3.5" 4" 5" 6" Other: \_\_\_\_\_ Well Type: PVC Stainless Steel Other: \_\_\_\_\_  
 Is Well Secured? Yes / No Bolt Size: 9/16" Type of lock / Lock number: Master  
 Observations / Comments: set pump intake @ 25.31 ft. (BTOC) Screen Interval: 20' to 30'  
 Purge Method: Teflon / PE Disposable Bailor Centrifugal Pump Peristaltic Pump Other: \_\_\_\_\_  
 Pump Lines: NA New / Cleaned Dedicated Bailor Line: NA New / Cleaned / Dedicated  
 Method of Cleaning Pump: NA Alconox Liqui-nox Tap Water DI Rinse Other: \_\_\_\_\_  
 Method of Cleaning Bailor: NA Alconox Liqui-nox Tap Water DI Rinse Other: \_\_\_\_\_  
 Sampling Method: Disp. Teflon Bailor Disp. PE Bailor 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 Indicator Serial No. 25083 / 25742 P.I.D. Reading: NA ppm  
 Water Level at Start (DTW): 13.55 @ 10:56 (BTOC) Water Level Prior To Sampling: 13.74 (BTOC)  
 TD = 30.31' - 13.55 (DTW) = 16.76 (ft. of water) x "K" = 2.7 (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>(uS)</u> +/- 3%	Turbidity (NTU's) +/- 10	Redox (mV) +/- 10	Dissolved Oxygen (mg/L) +/- 10%	Water Level (BTOC)	Color
2/9/07	12:11	Initial	6.98	18.10	1067	0.87	96.3	3.36	13.72	Clear
	12:13	0.5	6.95	18.47	1068	0.76	94.4	2.52	13.72	"
	12:15	1.0	6.92	18.79	1067	0.62	89.1	1.91	13.72	"
	12:17	1.5	6.92	18.93	1067	0.53	88.8	1.65	13.72	"
	12:19	2.0	6.92	18.97	1068	0.51	89.9	1.53	13.72	"
	12:21	2.5	6.90	19.01	1068	0.46	92.5	1.29	13.74	"
	12:23	3.0	6.91	19.06	1068	0.43	92.7	1.26	13.74	"
	12:25	3.5	6.91	19.09	1068	0.45	91.9	1.06	13.74	"
	12:27	4.0	6.90	19.13	1069	0.42	91.6	0.99	13.74	"

Total Discharge: 5.4 Liters Casing Volumes Removed: NA  
 Method of disposal of discharged water: 55 Gallon Drum(s) Poly Tank Treatment System Other: \_\_\_\_\_  
 Date/Time Sampled: 2/09/07 @ 12:33 Analysis: VOCs (8260B) - 3 VOAs w/HCl  
 QA/QC: None @ \_\_\_\_\_ Duplicate MS/MSD Equipment Rinseate Field Blank Lab Split  
 Comments: \_\_\_\_\_

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



**Environmental  
Sampling Services**

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

Project Name: Hopyard Cleaners, Pleasanton, CA

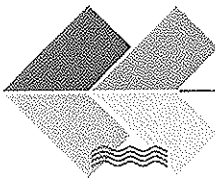
FIELD WATER QUALITY PARAMETERS CONTINUED FROM PAGE 1

Date	Time	Discharge (Liters)	pH +/- 0.1	Temp. (°C)	Specific Conductance mS (uS) +/- 3%	Turbidity (NTUs) +/- 10	Redox (mV) +/- 10	Dissolved Oxygen (mg/L) 10%	Water Level (BTOC)	Color
2/9/07	12:29	4.5	6.88	19.21	1069	0.37	93.1	0.95	13.74	Clear
L	12:31	5.0	6.85	19.26	1070	0.36	92.2	0.93	13.74	"
		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: 5.4 Liters Casing Volumes Removed: NA

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

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



**Environmental  
Sampling Services**

**WATER QUALITY SAMPLE LOG SHEET**

WELL IDENTIFICATION: MW-3 DATE: 2/9/07

Project Name: Hopyard Cleaners Pleasanton, CA Project Task: Quarterly Monitoring Project/Task No. WR0574  
 Project Manager: Sergio Santos - Geosyntec Cons. Lab: STL San Francisco Weather Conditions: Light Rain + cool  
 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 @ 25.29 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 Indicator Serial No.: (25083) / 25742 P.I.D. Reading: NA ppm  
 Water Level at Start (DTW): 14.41 @ 10:53 (BTOC) Water Level Prior To Sampling: 14.76 (BTOC)  
 TD = 30.29' - 14.41 (DTW) = 15.88 (ft. of water) x "K" = 2.6 (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)

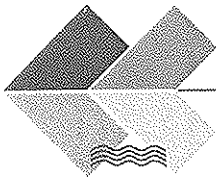
**FIELD WATER QUALITY PARAMETERS**

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
2/9/07	12:52	Initial	6.87	18.80	1331	0.72	117.5	2.69	14.73	clear
	12:54	0.5	6.86	18.93	1339	0.66	113.6	2.19	14.76	"
	12:56	1.0	6.85	19.14	1339	0.60	114.2	1.91	14.78	"
	12:58	1.5	6.85	19.21	1340	0.64	112.6	1.72	14.78	"
	13:00	2.0	6.83	19.26	1341	0.54	111.9	1.58	14.78	"
	13:03	2.5	6.82	19.34	1342	0.60	111.6	1.31	14.76	"
	13:06	3.0	6.80	19.38	1342	0.52	111.1	1.11	14.76	"
	13:09	3.5	6.80	19.31	1344	0.50	108.4	0.88	14.76	"
✓	13:12	4.0	6.80	19.35	1344	0.51	106.0	0.86	14.76	"

Total Discharge: 4.9 Liters Casing Volumes Removed: NA  
 Method of disposal of discharged water: (55 Gallon Drums) Poly Tank Treatment System Other: \_\_\_\_\_  
 Date/Time Sampled: 2/09/07 @ 13:17 Analysis: VOCs (8260B) - 3 VOAs w/HCl  
 QA/QC: ER-1 @ 13:25 Duplicate MS/MSD Equipment Rinseate Field Blank Lab Split  
 Comments: \_\_\_\_\_

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





**Environmental  
Sampling Services**

WATER QUALITY SAMPLE LOG SHEET WELL IDENTIFICATION: MW-3 Page 2

Project Name: Hopland Cleaners, Pleasanton, CA

FIELD WATER QUALITY PARAMETERS CONTINUED FROM PAGE 1

Date	Time	Discharge (Liters)	pH +/- 0.1	Temp. (°C)	Specific Conductance mS <u>US</u> +/- 3%	Turbidity (NTUs) +/-10	Redox (mV) +/-10	Dissolved Oxygen (mg/L) 10%	Water Level (BTOC)	Color
<u>2/9/07</u>	<u>13:15</u>	<u>4.5</u>	<u>6.80</u>	<u>19.36</u>	<u>1343</u>	<u>0.48</u>	<u>104.7</u>	<u>0.87</u>	<u>14.76</u>	<u>Clear</u>
		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: 4.9 Liters Casing Volumes Removed: NA

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

Recorded by: Stephen Penman / Jacki Lee Signature: [Signature] [Signature] Page 2 of 2



Report To						Analysis Request														Number of Containers								
Sample ID	Date	Time	Mat rix	Pres erv.		TPH EPA - <input type="checkbox"/> 8015/8021 <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 Oxymates <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 200.866020 (ICP-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>				
Trip Blank	2/9/07	10:00	H <sub>2</sub> O	HCl							X																	2
MW-1	2/9/07	11:28	H <sub>2</sub> O	HCl							X																	3
MW-DUP	2/9/07	11:50	H <sub>2</sub> O	HCl							X																	3
MW-2	2/9/07	12:33	H <sub>2</sub> O	HCl							X																	3
MW-3	2/9/07	13:17	H <sub>2</sub> O	HCl							X																	3
ER-1	2/9/07	13:25	H <sub>2</sub> O	HCl							X																	3

Project Info					Sample Receipt				
Project Name: <u>Hayward Cleaners</u>					# of Containers: _____				
Project#: <u>WR0574</u>					Head Space: _____				
PO#: _____					Temp: <u>60</u>				
Credit Card#: _____					Conforms to record: <input type="checkbox"/>				
T	A	<u>5</u> Day	72h	48h	24h	Other: _____			
Report: <input checked="" 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: _____					Global ID: _____				

1) Relinquished by: <u>Steph Penman</u> 1/1:08 Signature Time <u>Steph Penman</u> 2/9/07 Printed Name Date Environmental Sampling Services Company	2) Relinquished by: Signature _____ Time _____ Printed Name _____ Date _____ Company _____	3) Relinquished by: Signature _____ Time _____ Printed Name _____ Date _____ Company _____
1) Received by: <u>Jean Kuller</u> 1/408 Signature Time <u>Jean Kuller</u> 2-9-07 Printed Name Date STL SF Company	2) Received by: Signature _____ Time _____ Printed Name _____ Date _____ Company _____	3) Received by: Signature _____ Time _____ Printed Name _____ Date _____ Company _____

**ATTACHMENT 2**

**LABORATORY ANALYTICAL  
REPORT**



## ANALYTICAL REPORT

Job Number: 720-7680-1

Job Description: Hopyard Cleaners

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

Attention: Mr. Sergio Santos

A handwritten signature in black ink that reads "Melissa Brewer".

---

Melissa Brewer  
Project Manager I  
mbrewer@stl-inc.com  
02/15/2007

Project Manager: Melissa Brewer

## EXECUTIVE SUMMARY - Detections

Client: GeoSyntec Consultants

Job Number: 720-7680-1

Lab Sample ID Analyte	Client Sample ID	Result / Qualifier	Reporting Limit	Units	Method
<b>720-7680-2</b>	<b>MW-1</b>				
cis-1,2-Dichloroethene		270	20	ug/L	8260B
Tetrachloroethene		2400	20	ug/L	8260B
Trichloroethene		290	20	ug/L	8260B
<b>720-7680-3</b>	<b>MW-DUP</b>				
cis-1,2-Dichloroethene		270	20	ug/L	8260B
Tetrachloroethene		2300	20	ug/L	8260B
Trichloroethene		290	20	ug/L	8260B
<b>720-7680-4</b>	<b>MW-2</b>				
cis-1,2-Dichloroethene		760	50	ug/L	8260B
Tetrachloroethene		4700	50	ug/L	8260B
Trichloroethene		350	50	ug/L	8260B
<b>720-7680-5</b>	<b>MW-3</b>				
cis-1,2-Dichloroethene		5.3	0.50	ug/L	8260B
Tetrachloroethene		42	0.50	ug/L	8260B
Trichloroethene		4.2	0.50	ug/L	8260B

## METHOD SUMMARY

Client: GeoSyntec Consultants

Job Number: 720-7680-1

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

### LAB REFERENCES:

STL SF = STL San Francisco

### METHOD REFERENCES:

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

## SAMPLE SUMMARY

Client: GeoSyntec Consultants

Job Number: 720-7680-1

<b>Lab Sample ID</b>	<b>Client Sample ID</b>	<b>Client Matrix</b>	<b>Date/Time Sampled</b>	<b>Date/Time Received</b>
720-7680-1TB	TRIP BLANK	Water	02/09/2007 1000	02/09/2007 1408
720-7680-2	MW-1	Water	02/09/2007 1128	02/09/2007 1408
720-7680-3	MW-DUP	Water	02/09/2007 1150	02/09/2007 1408
720-7680-4	MW-2	Water	02/09/2007 1233	02/09/2007 1408
720-7680-5	MW-3	Water	02/09/2007 1317	02/09/2007 1408
720-7680-6	ER-1	Water	02/09/2007 1325	02/09/2007 1408



# Analytical Data

Client: GeoSyntec Consultants

Job Number: 720-7680-1

**Client Sample ID: TRIP BLANK**

Lab Sample ID: 720-7680-1TB  
Client Matrix: Water

Date Sampled: 02/09/2007 1000  
Date Received: 02/09/2007 1408

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

Method: 8260B Analysis Batch: 720-18242 Instrument ID: Varian 3900F  
Preparation: 5030B Lab File ID: c:\saturday\data\200702\02  
Dilution: 1.0 Initial Weight/Volume: 40 mL  
Date Analyzed: 02/13/2007 1220 Final Weight/Volume: 40 mL  
Date Prepared: 02/13/2007 1220

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
Methyl Ethyl Ketone	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

## Analytical Data

Client: GeoSyntec Consultants

Job Number: 720-7680-1

**Client Sample ID: TRIP BLANK**

Lab Sample ID: 720-7680-1TB  
 Client Matrix: Water

Date Sampled: 02/09/2007 1000  
 Date Received: 02/09/2007 1408

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

Method:	8260B	Analysis Batch: 720-18242	Instrument ID: Varian 3900F
Preparation:	5030B		Lab File ID: c:\satumws\data\200702\02
Dilution:	1.0		Initial Weight/Volume: 40 mL
Date Analyzed:	02/13/2007 1220		Final Weight/Volume: 40 mL
Date Prepared:	02/13/2007 1220		

Analyte	Result (ug/L)	Qualifier	RL
Methylene Chloride	ND		5.0
methyl isobutyl ketone	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	96	79 - 118	
1,2-Dichloroethane-d4 (Surr)	111	78 - 117	
Toluene-d8 (Surr)	108	77 - 121	

## Analytical Data

Client: GeoSyntec Consultants

Job Number: 720-7680-1

**Client Sample ID: MW-1**

Lab Sample ID: 720-7680-2  
Client Matrix: Water

Date Sampled: 02/09/2007 1128  
Date Received: 02/09/2007 1408

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

Method: 8260B	Analysis Batch: 720-18276	Instrument ID: Saturn 2K3	
Preparation: 5030B		Lab File ID: d:\data\200702\021407\sa-	
Dilution: 40		Initial Weight/Volume: 40 mL	
Date Analyzed: 02/14/2007 1200		Final Weight/Volume: 40 mL	
Date Prepared: 02/14/2007 1200			

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
Methyl Ethyl Ketone	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	270		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

## Analytical Data

Client: GeoSyntec Consultants

Job Number: 720-7680-1

**Client Sample ID: MW-1**

Lab Sample ID: 720-7680-2  
Client Matrix: Water

Date Sampled: 02/09/2007 1128  
Date Received: 02/09/2007 1408

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

Method:	8260B	Analysis Batch: 720-18276	Instrument ID: Saturn 2K3
Preparation:	5030B		Lab File ID: d:\data\200702\021407\sa-
Dilution:	40		Initial Weight/Volume: 40 mL
Date Analyzed:	02/14/2007 1200		Final Weight/Volume: 40 mL
Date Prepared:	02/14/2007 1200		

Analyte	Result (ug/L)	Qualifier	RL
Methylene Chloride	ND		200
methyl isobutyl ketone	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	2400		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	290		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		79 - 118
1,2-Dichloroethane-d4 (Surr)	105		78 - 117
Toluene-d8 (Surr)	100		77 - 121

# Analytical Data

Client: GeoSyntec Consultants

Job Number: 720-7680-1

**Client Sample ID: MW-DUP**

Lab Sample ID: 720-7680-3  
Client Matrix: Water

Date Sampled: 02/09/2007 1150  
Date Received: 02/09/2007 1408

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

Method: 8260B Analysis Batch: 720-18276 Instrument ID: Saturn 2K3  
Preparation: 5030B Lab File ID: d:\data\200702\021407\SA-  
Dilution: 40 Initial Weight/Volume: 40 mL  
Date Analyzed: 02/14/2007 1233 Final Weight/Volume: 40 mL  
Date Prepared: 02/14/2007 1233

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
Methyl Ethyl Ketone	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	270		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

## Analytical Data

Client: GeoSyntec Consultants

Job Number: 720-7680-1

**Client Sample ID: MW-DUP**

Lab Sample ID: 720-7680-3  
Client Matrix: Water

Date Sampled: 02/09/2007 1150  
Date Received: 02/09/2007 1408

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

Method:	8260B	Analysis Batch: 720-18276	Instrument ID: Saturn 2K3
Preparation:	5030B		Lab File ID: d:\data\200702\021407\SA-
Dilution:	40		Initial Weight/Volume: 40 mL
Date Analyzed:	02/14/2007 1233		Final Weight/Volume: 40 mL
Date Prepared:	02/14/2007 1233		

Analyte	Result (ug/L)	Qualifier	RL
Methylene Chloride	ND		200
methyl isobutyl ketone	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	2300		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	290		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	110	79 - 118	
1,2-Dichloroethane-d4 (Surr)	108	78 - 117	
Toluene-d8 (Surr)	104	77 - 121	

## Analytical Data

Client: GeoSyntec Consultants

Job Number: 720-7680-1

**Client Sample ID: MW-2**

Lab Sample ID: 720-7680-4  
Client Matrix: Water

Date Sampled: 02/09/2007 1233  
Date Received: 02/09/2007 1408

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

Method:	8260B	Analysis Batch: 720-18276	Instrument ID: Saturn 2K3
Preparation:	5030B		Lab File ID: d:\data\200702\021407\SA-
Dilution:	100		Initial Weight/Volume: 40 mL
Date Analyzed:	02/14/2007 1447		Final Weight/Volume: 40 mL
Date Prepared:	02/14/2007 1447		

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
Methyl Ethyl Ketone	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	760		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

## Analytical Data

Client: GeoSyntec Consultants

Job Number: 720-7680-1

**Client Sample ID: MW-2**

Lab Sample ID: 720-7680-4  
Client Matrix: Water

Date Sampled: 02/09/2007 1233  
Date Received: 02/09/2007 1408

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

Method:	8260B	Analysis Batch: 720-18276	Instrument ID: Saturn 2K3
Preparation:	5030B		Lab File ID: d:\data\200702\021407\SA-
Dilution:	100		Initial Weight/Volume: 40 mL
Date Analyzed:	02/14/2007 1447		Final Weight/Volume: 40 mL
Date Prepared:	02/14/2007 1447		

Analyte	Result (ug/L)	Qualifier	RL
Methylene Chloride	ND		500
methyl isobutyl ketone	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	4700		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	350		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	103		79 - 118
1,2-Dichloroethane-d4 (Surr)	107		78 - 117
Toluene-d8 (Surr)	101		77 - 121



## Analytical Data

Client: GeoSyntec Consultants

Job Number: 720-7680-1

**Client Sample ID: MW-3**

Lab Sample ID: 720-7680-5  
Client Matrix: Water

Date Sampled: 02/09/2007 1317  
Date Received: 02/09/2007 1408

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

Method:	8260B	Analysis Batch: 720-18276	Instrument ID: Saturn 2K3
Preparation:	5030B		Lab File ID: d:\data\200702\021407\SA-
Dilution:	1.0		Initial Weight/Volume: 40 mL
Date Analyzed:	02/14/2007 1520		Final Weight/Volume: 40 mL
Date Prepared:	02/14/2007 1520		

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
Methyl Ethyl Ketone	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	5.3		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

## Analytical Data

Client: GeoSyntec Consultants

Job Number: 720-7680-1

**Client Sample ID: MW-3**

Lab Sample ID: 720-7680-5  
Client Matrix: Water

Date Sampled: 02/09/2007 1317  
Date Received: 02/09/2007 1408

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

Method:	8260B	Analysis Batch: 720-18276	Instrument ID: Saturn 2K3
Preparation:	5030B		Lab File ID: d:\data\200702\021407\SA-
Dilution:	1.0		Initial Weight/Volume: 40 mL
Date Analyzed:	02/14/2007 1520		Final Weight/Volume: 40 mL
Date Prepared:	02/14/2007 1520		

Analyte	Result (ug/L)	Qualifier	RL
Methylene Chloride	ND		5.0
methyl isobutyl ketone	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	42		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	4.2		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		79 - 118
1,2-Dichloroethane-d4 (Surr)	105		78 - 117
Toluene-d8 (Surr)	102		77 - 121

## Analytical Data

Client: GeoSyntec Consultants

Job Number: 720-7680-1

**Client Sample ID: ER-1**

Lab Sample ID: 720-7680-6  
Client Matrix: Water

Date Sampled: 02/09/2007 1325  
Date Received: 02/09/2007 1408

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

Method: 8260B	Analysis Batch: 720-18276	Instrument ID: Saturn 2K3	
Preparation: 5030B		Lab File ID: d:\data\200702\021407\SA-	
Dilution: 1.0		Initial Weight/Volume: 40 mL	
Date Analyzed: 02/14/2007 1553		Final Weight/Volume: 40 mL	
Date Prepared: 02/14/2007 1553			

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
Methyl Ethyl Ketone	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

## Analytical Data

Client: GeoSyntec Consultants

Job Number: 720-7680-1

**Client Sample ID: ER-1**

Lab Sample ID: 720-7680-6  
Client Matrix: Water

Date Sampled: 02/09/2007 1325  
Date Received: 02/09/2007 1408

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

Method:	8260B	Analysis Batch: 720-18276	Instrument ID: Saturn 2K3
Preparation:	5030B		Lab File ID: d:\data\200702\021407\SA-
Dilution:	1.0		Initial Weight/Volume: 40 mL
Date Analyzed:	02/14/2007 1553		Final Weight/Volume: 40 mL
Date Prepared:	02/14/2007 1553		

Analyte	Result (ug/L)	Qualifier	RL
Methylene Chloride	ND		5.0
methyl isobutyl ketone	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		79 - 118
1,2-Dichloroethane-d4 (Surr)	107		78 - 117
Toluene-d8 (Surr)	100		77 - 121

## 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: 720-7680-1

### QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
<b>GC/MS VOA</b>					
<b>Analysis Batch:720-18242</b>					
LCS 720-18242/1	Lab Control Spike	T	Water	8260B	
MB 720-18242/2	Method Blank	T	Water	8260B	
720-7680-1TB	TRIP BLANK	T	Water	8260B	
720-7680-2MS	Matrix Spike	T	Water	8260B	
720-7680-2MSD	Matrix Spike Duplicate	T	Water	8260B	
<b>Analysis Batch:720-18276</b>					
LCS 720-18276/1	Lab Control Spike	T	Water	8260B	
MB 720-18276/2	Method Blank	T	Water	8260B	
720-7680-2	MW-1	T	Water	8260B	
720-7680-3	MW-DUP	T	Water	8260B	
720-7680-3MS	Matrix Spike	T	Water	8260B	
720-7680-3MSD	Matrix Spike Duplicate	T	Water	8260B	
720-7680-4	MW-2	T	Water	8260B	
720-7680-5	MW-3	T	Water	8260B	
720-7680-6	ER-1	T	Water	8260B	

#### Report Basis

T = Total

## Quality Control Results

Client: GeoSyntec Consultants

Job Number: 720-7680-1

### Method Blank - Batch: 720-18242

Method: 8260B

Preparation: 5030B

Lab Sample ID: MB 720-18242/2

Analysis Batch: 720-18242

Instrument ID: Varian 3900F

Client Matrix: Water

Prep Batch: N/A

Lab File ID: c:\saturnws\data\200702\02

Dilution: 1.0

Units: ug/L

Initial Weight/Volume: 40 mL

Date Analyzed: 02/13/2007 1113

Final Weight/Volume: 40 mL

Date Prepared: 02/13/2007 1113

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
Methyl Ethyl Ketone	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: 720-7680-1

**Method Blank - Batch: 720-18242**

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

Lab Sample ID: MB 720-18242/2  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 02/13/2007 1113  
Date Prepared: 02/13/2007 1113

Analysis Batch: 720-18242  
Prep Batch: N/A  
Units: ug/L

Instrument ID: Varian 3900F  
Lab File ID: c:\saturnws\data\200702\02  
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
methyl isobutyl ketone	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	92	79 - 118	
1,2-Dichloroethane-d4 (Surr)	110	78 - 117	
Toluene-d8 (Surr)	111	77 - 121	

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



## Quality Control Results

Client: GeoSyntec Consultants

Job Number: 720-7680-1

### Lab Control Spike - Batch: 720-18242

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

Lab Sample ID: LCS 720-18242/1  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 02/13/2007 1040  
Date Prepared: 02/13/2007 1040

Analysis Batch: 720-18242  
Prep Batch: N/A  
Units: ug/L

Instrument ID: Varian 3900F  
Lab File ID: c:\saturnws\data\200702\02  
Initial Weight/Volume: 40 mL  
Final Weight/Volume: 40 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Benzene	20.0	20.3	101	69 - 129	
Chlorobenzene	20.0	20.6	103	61 - 121	
1,1-Dichloroethene	20.0	22.6	113	65 - 125	
Toluene	20.0	20.7	103	70 - 130	
Trichloroethene	20.0	20.7	104	74 - 134	
Surrogate			% Rec	Acceptance Limits	
4-Bromofluorobenzene			94	79 - 118	
1,2-Dichloroethane-d4 (Surr)			105	78 - 117	
Toluene-d8 (Surr)			113	77 - 121	

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

## Quality Control Results

Client: GeoSyntec Consultants

Job Number: 720-7680-1

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 720-18242**

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

MS Lab Sample ID: 720-7680-2  
Client Matrix: Water  
Dilution: 100  
Date Analyzed: 02/13/2007 1327  
Date Prepared: 02/13/2007 1327

Analysis Batch: 720-18242  
Prep Batch: N/A

Instrument ID: Varian 3900F  
Lab File ID: c:\saturday\data\200702\02  
Initial Weight/Volume: 40 mL  
Final Weight/Volume: 40 mL

MSD Lab Sample ID: 720-7680-2  
Client Matrix: Water  
Dilution: 100  
Date Analyzed: 02/13/2007 1400  
Date Prepared: 02/13/2007 1400

Analysis Batch: 720-18242  
Prep Batch: N/A

Instrument ID: Varian 3900F  
Lab File ID: c:\saturday\data\200702\02  
Initial Weight/Volume: 40 mL  
Final Weight/Volume: 40 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
Benzene	95	103	69 - 129	8	20		
Chlorobenzene	95	101	61 - 121	7	20		
1,1-Dichloroethene	104	113	65 - 125	8	20		
Toluene	93	105	70 - 130	12	20		
Trichloroethene	92	100	74 - 134	7	20		
Surrogate		MS % Rec	MSD % Rec			Acceptance Limits	
4-Bromofluorobenzene		93	94			79 - 118	
1,2-Dichloroethane-d4 (Surr)		110	112			78 - 117	
Toluene-d8 (Surr)		106	112			77 - 121	

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

## Quality Control Results

Client: GeoSyntec Consultants

Job Number: 720-7680-1

### Method Blank - Batch: 720-18276

Method: 8260B

Preparation: 5030B

Lab Sample ID: MB 720-18276/2  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 02/14/2007 1053  
Date Prepared: 02/14/2007 1053

Analysis Batch: 720-18276  
Prep Batch: N/A  
Units: ug/L

Instrument ID: Saturn 2K3  
Lab File ID: d:\data\200702\021407\MB  
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
Methyl Ethyl Ketone	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: 720-7680-1

**Method Blank - Batch: 720-18276**

**Method: 8260B**

**Preparation: 5030B**

Lab Sample ID: MB 720-18276/2  
 Client Matrix: Water  
 Dilution: 1.0  
 Date Analyzed: 02/14/2007 1053  
 Date Prepared: 02/14/2007 1053

Analysis Batch: 720-18276  
 Prep Batch: N/A  
 Units: ug/L

Instrument ID: Saturn 2K3  
 Lab File ID: d:\data\200702\021407\MB  
 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
methyl isobutyl ketone	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	111	79 - 118	
1,2-Dichloroethane-d4 (Surr)	107	78 - 117	
Toluene-d8 (Surr)	101	77 - 121	

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

## Quality Control Results

Client: GeoSyntec Consultants

Job Number: 720-7680-1

### Lab Control Spike - Batch: 720-18276

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

Lab Sample ID: LCS 720-18276/1  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 02/14/2007 1019  
Date Prepared: 02/14/2007 1019

Analysis Batch: 720-18276  
Prep Batch: N/A  
Units: ug/L

Instrument ID: Saturn 2K3  
Lab File ID: d:\data\200702\021407\LS-  
Initial Weight/Volume: 40 mL  
Final Weight/Volume: 40 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Benzene	20.0	18.6	93	69 - 129	
Chlorobenzene	20.0	21.5	107	61 - 121	
1,1-Dichloroethene	20.0	19.4	97	65 - 125	
Toluene	20.0	19.8	99	70 - 130	
Trichloroethene	20.0	17.9	90	74 - 134	
Surrogate		% Rec		Acceptance Limits	
4-Bromofluorobenzene		113		79 - 118	
1,2-Dichloroethane-d4 (Surr)		106		78 - 117	
Toluene-d8 (Surr)		105		77 - 121	

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

## Quality Control Results

Client: GeoSyntec Consultants

Job Number: 720-7680-1

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 720-18276**

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

MS Lab Sample ID: 720-7680-3  
Client Matrix: Water  
Dilution: 40  
Date Analyzed: 02/14/2007 1306  
Date Prepared: 02/14/2007 1306

Analysis Batch: 720-18276  
Prep Batch: N/A

Instrument ID: Saturn 2K3  
Lab File ID: d:\data\200702\021407\SA-  
Initial Weight/Volume: 40 mL  
Final Weight/Volume: 40 mL

MSD Lab Sample ID: 720-7680-3  
Client Matrix: Water  
Dilution: 40  
Date Analyzed: 02/14/2007 1340  
Date Prepared: 02/14/2007 1340

Analysis Batch: 720-18276  
Prep Batch: N/A

Instrument ID: Saturn 2K3  
Lab File ID: d:\data\200702\021407\SA-  
Initial Weight/Volume: 40 mL  
Final Weight/Volume: 40 mL

Analyte	<u>% Rec.</u>		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
Benzene	87	93	69 - 129	6	20		
Chlorobenzene	104	107	61 - 121	3	20		
1,1-Dichloroethene	90	96	65 - 125	6	20		
Toluene	92	97	70 - 130	5	20		
Trichloroethene	80	88	74 - 134	6	20		
Surrogate		MS % Rec	MSD % Rec			Acceptance Limits	
4-Bromofluorobenzene		107	102			79 - 118	
1,2-Dichloroethane-d4 (Surr)		105	104			78 - 117	
Toluene-d8 (Surr)		100	98			77 - 121	

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



**STL San Francisco Chain of Custody**  
 1220 Quarry Lane • Pleasanton CA 94566-4756  
 Phone: (925) 428-1919 Fax: (925) 428-1096  
 Email: stl@stl.com

Reference #: 104003

Date February 9, 2007 Page 1 of 1

**720-7680**

Report To						Analysis Request																	Number of Containers														
Attn: <u>Sergio Santos</u> Company: <u>Geosyntec Consultants</u> Address: <u>475 14th Street, Suite 400</u> <u>Oakland, CA 94612</u> Phone: <u>(510) 832-3234</u> Email: _____ Bill To: <u>Same</u> Sampled By: <u>FSS</u> <u>Stephen Perman</u> Attn: _____ Phone: <u>(425) 372-8108</u>						<input type="checkbox"/> TPH EPA - 8015/8021 <input type="checkbox"/> 8260B	<input type="checkbox"/> Gas w/ <input type="checkbox"/> BTEX <input type="checkbox"/> MTBE	<input type="checkbox"/> Purgeable Aromatics	<input type="checkbox"/> BTEX EPA - 8021 <input type="checkbox"/> 8260B	<input type="checkbox"/> TEPH EPA 8015M* <input type="checkbox"/> Silica Gel	<input type="checkbox"/> Diesel <input type="checkbox"/> Motor Oil <input type="checkbox"/> Other _____	<input type="checkbox"/> Fuel Tests EPA 8260B: <input type="checkbox"/> Gas <input type="checkbox"/> BTEX	<input type="checkbox"/> Five Oxymates <input type="checkbox"/> DCA, EDB <input type="checkbox"/> Ethanol	<input type="checkbox"/> Purgeable Halocarbons (HVOCs)	<input type="checkbox"/> EPA 8021 by 8260B	<input checked="" type="checkbox"/> Volatile Organics GC/MS (VOCs)	<input type="checkbox"/> EPA 8260B <input type="checkbox"/> 624	<input type="checkbox"/> Semivolatiles GC/MS	<input type="checkbox"/> EPA 8270 <input type="checkbox"/> 625	<input type="checkbox"/> Oil and Grease <input type="checkbox"/> Petroleum (EPA 1664)	<input type="checkbox"/> Total	<input type="checkbox"/> Pesticides <input type="checkbox"/> EPA 8081 <input type="checkbox"/> 608		<input type="checkbox"/> PCBs <input type="checkbox"/> EPA 8082 <input type="checkbox"/> 608	<input type="checkbox"/> PNAs by <input type="checkbox"/> 8270 <input type="checkbox"/> 8310	<input type="checkbox"/> CAM17 Metals (EPA 6010/7470/7471)	<input type="checkbox"/> Metals: <input type="checkbox"/> Lead <input type="checkbox"/> LUFT <input type="checkbox"/> RCRA	<input type="checkbox"/> Other: _____	<input type="checkbox"/> Low Level Metals by EPA 200.856020 (ICP-MS): _____	<input type="checkbox"/> W.E.T. (STLC)	<input type="checkbox"/> TCLP	<input type="checkbox"/> Hexavalent Chromium pH (24h hold time for H <sub>2</sub> O)	<input type="checkbox"/> Spec Cond. <input type="checkbox"/> Alkalinity	<input type="checkbox"/> TSS <input type="checkbox"/> TDS <input type="checkbox"/>	<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>	
<u>Tip Blank</u>	<u>2/9/07</u>	<u>10:00</u>	<u>H2O</u>	<u>HCl</u>							<input checked="" type="checkbox"/>																										<u>2</u>
<u>MW-1</u>	<u>2/9/07</u>	<u>11:28</u>	<u>H2O</u>	<u>HCl</u>							<input checked="" type="checkbox"/>																										<u>3</u>
<u>MW-Dup</u>	<u>2/9/07</u>	<u>11:50</u>	<u>H2O</u>	<u>HCl</u>							<input checked="" type="checkbox"/>																										<u>3</u>
<u>MW-2</u>	<u>2/9/07</u>	<u>12:33</u>	<u>H2O</u>	<u>HCl</u>							<input checked="" type="checkbox"/>																									<u>3</u>	
<u>MW-3</u>	<u>2/9/07</u>	<u>13:17</u>	<u>H2O</u>	<u>HCl</u>							<input checked="" type="checkbox"/>																									<u>3</u>	
<u>ER-1</u>	<u>2/9/07</u>	<u>13:25</u>	<u>H2O</u>	<u>HCl</u>							<input checked="" type="checkbox"/>																									<u>3</u>	

Project Info.	Sample Receipt	1) Relinquished by:	2) Relinquished by:	3) Relinquished by:
Project Name: <u>Hayward Cleaners</u>	# of Containers: _____	<u>[Signature]</u> <u>11:08</u> Signature Time	_____ Signature Time	_____ Signature Time
Project#: <u>WR0574</u>	Head Space: _____	<u>Stephen Perman</u> <u>2/9/07</u> Printed Name Date	_____ Printed Name Date	_____ Printed Name Date
PO#: _____	Temp: <u>62</u>	<u>Environmental Supply Services</u> Company	_____ Company	_____ Company
Credit Card#: _____	Conforms to record: _____			

T A T	1) Received by:	2) Received by:	3) Received by:
<u>5 Day</u> 72h 48h 24h Other: _____	<u>[Signature]</u> <u>1408</u> Signature Time	_____ Signature Time	_____ Signature Time
Report: <input checked="" 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>Joan Mulken</u> <u>2-9-07</u> Printed Name Date	_____ Printed Name Date	_____ Printed Name Date
Special Instructions / Comments: _____	<u>STL SF</u> Company	_____ Company	_____ Company

\*STL SF reports 8015M from C<sub>9</sub>-C<sub>24</sub> (industry norm). Default for 8015B is C<sub>10</sub>-C<sub>28</sub>.

Rev 06/04

## LOGIN SAMPLE RECEIPT CHECK LIST

Client: GeoSyntec Consultants

Job Number: 720-7680-1

**Login Number: 7680**

<b>Question</b>	<b>T/F/NA</b>	<b>Comment</b>
Radioactivity either was not measured or, if measured, is at or below background	NA	
The cooler's custody seal, if present, is intact.	NA	
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	





## ANALYTICAL REPORT

Job Number: 720-8466-1

Job Description: Hopyard Cleaners

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

Attention: Mr. Scott Felton

A handwritten signature in black ink that reads "Melissa Brewer".

---

Melissa Brewer  
Project Manager I  
mbrewer@stl-inc.com  
04/06/2007

Project Manager: Melissa Brewer

**Case Narrative for job: 720-J8466-1**

Client: GeoSyntec Consultants
Date: 04/06/2007

**Volatiles MS**

Reporting Limit - VOA, Dilution, Foaming

Volatiles sample 720-8466-13 was diluted due to sediment in the vial. Elevated reporting limits are provided.

**Affected Items**

720-8466-A-13

Batch: 720-20025  
Method: 720-8260B\_LL

**Volatiles MS**

Reporting Limit - VOA, Dilution, Foaming

Volatiles sample 720-8466-7 was diluted due to sediment in the vial. Elevated reporting limits are provided.

**Affected Items**

720-8466-A-7

Batch: 720-20018  
Method: 720-8260B\_LL

**Volatiles MS**

Reporting Limit - VOA, Dilution, Foaming

Volatiles sample 8466-12 was diluted due to high level of Tetrachloroethene, 209 ug/kg at the time of purging during the original 5 grams extracted sample analysis. Elevated reporting limits are provided.

**Affected Items**

720-8466-B-12-A

Batch: 720-20154  
Method: 720-8260B\_LL

## EXECUTIVE SUMMARY - Detections

Client: GeoSyntec Consultants

Job Number: 720-8466-1

Lab Sample ID Analyte	Client Sample ID	Result / Qualifier	Reporting Limit	Units	Method
<b>720-8466-4</b> Tetrachloroethene	<b>B36-43-47'</b>	28	0.50	ug/L	8260B
<b>720-8466-5</b> Tetrachloroethene	<b>B37-42-46'</b>	9.0	0.50	ug/L	8260B
<b>720-8466-8</b> Tetrachloroethene	<b>B41-44-46'</b>	1.4	0.50	ug/L	8260B
<b>720-8466-9</b> Tetrachloroethene	<b>DUP1</b>	1.5	0.50	ug/L	8260B
<b>720-8466-10</b> 1,1-Dichloroethane	<b>B42-24-28'</b>	1.2	0.50	ug/L	8260B
<b>720-8466-11</b> Tetrachloroethene	<b>B42-40-43'</b>	6.8	0.50	ug/L	8260B

## METHOD SUMMARY

Client: GeoSyntec Consultants

Job Number: 720-8466-1

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

### LAB REFERENCES:

STL SF = STL San Francisco

### METHOD REFERENCES:

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

## SAMPLE SUMMARY

Client: GeoSyntec Consultants

Job Number: 720-8466-1

<b>Lab Sample ID</b>	<b>Client Sample ID</b>	<b>Client Matrix</b>	<b>Date/Time Sampled</b>	<b>Date/Time Received</b>
720-8466-1	B38-AZONE	Water	03/29/2007 1020	03/30/2007 1202
720-8466-2	B38-43-47'	Water	03/29/2007 1145	03/30/2007 1202
720-8466-3	B39-24-28'	Water	03/29/2007 1315	03/30/2007 1202
720-8466-4	B36-43-47'	Water	03/29/2007 1515	03/30/2007 1202
720-8466-5	B37-42-46'	Water	03/29/2007 1640	03/30/2007 1202
720-8466-6	B37-24-28'	Water	03/29/2007 1600	03/30/2007 1202
720-8466-7	B41-32-36'	Water	03/30/2007 0815	03/30/2007 1202
720-8466-8	B41-44-46'	Water	03/30/2007 0900	03/30/2007 1202
720-8466-9	DUP1	Water	03/30/2007 0905	03/30/2007 1202
720-8466-10	B42-24-28'	Water	03/30/2007 1000	03/30/2007 1202
720-8466-11	B42-40-43'	Water	03/30/2007 1030	03/30/2007 1202
720-8466-12	SG-5-5'	Solid	03/30/2007 1100	03/30/2007 1202
720-8466-13	B40-24-28'	Water	03/30/2007 1130	03/30/2007 1202
720-8466-14EB	QCEB1	Water	03/30/2007 1200	03/30/2007 1202
720-8466-15TB	TRIP BLANKS	Water	03/30/2007 0000	03/30/2007 1202

## Analytical Data

Client: GeoSyntec Consultants

Job Number: 720-8466-1

**Client Sample ID: B38-AZONE**

Lab Sample ID: 720-8466-1  
Client Matrix: Water

Date Sampled: 03/29/2007 1020  
Date Received: 03/30/2007 1202

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

Method:	8260B	Analysis Batch: 720-20029	Instrument ID: Varian 3900F
Preparation:	5030B		Lab File ID: c:\saturday\data\200704\04
Dilution:	1.0		Initial Weight/Volume: 40 mL
Date Analyzed:	04/03/2007 2145		Final Weight/Volume: 40 mL
Date Prepared:	04/03/2007 2145		

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
Methyl Ethyl Ketone	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

## Analytical Data

Client: GeoSyntec Consultants

Job Number: 720-8466-1

**Client Sample ID: B38-AZONE**

Lab Sample ID: 720-8466-1  
Client Matrix: Water

Date Sampled: 03/29/2007 1020  
Date Received: 03/30/2007 1202

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

Method:	8260B	Analysis Batch: 720-20029	Instrument ID: Varian 3900F
Preparation:	5030B		Lab File ID: c:\satumws\data\200704\04
Dilution:	1.0		Initial Weight/Volume: 40 mL
Date Analyzed:	04/03/2007 2145		Final Weight/Volume: 40 mL
Date Prepared:	04/03/2007 2145		

Analyte	Result (ug/L)	Qualifier	RL
Methylene Chloride	ND		5.0
methyl isobutyl ketone	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	98		83 - 127
1,2-Dichloroethane-d4 (Surr)	120		86 - 129
Toluene-d8 (Surr)	97		82 - 126

## Analytical Data

Client: GeoSyntec Consultants

Job Number: 720-8466-1

**Client Sample ID: B38-43-47'**

Lab Sample ID: 720-8466-2  
 Client Matrix: Water

Date Sampled: 03/29/2007 1145  
 Date Received: 03/30/2007 1202

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

Method:	8260B	Analysis Batch: 720-20018	Instrument ID: Varian 3900D
Preparation:	5030B		Lab File ID: c:\saturday\data\200704\04
Dilution:	1.0		Initial Weight/Volume: 40 mL
Date Analyzed:	04/03/2007 1649		Final Weight/Volume: 40 mL
Date Prepared:	04/03/2007 1649		

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
Methyl Ethyl Ketone	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



## Analytical Data

Client: GeoSyntec Consultants

Job Number: 720-8466-1

**Client Sample ID: B38-43-47'**

Lab Sample ID: 720-8466-2  
Client Matrix: Water

Date Sampled: 03/29/2007 1145  
Date Received: 03/30/2007 1202

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

Method:	8260B	Analysis Batch: 720-20018	Instrument ID: Varian 3900D
Preparation:	5030B		Lab File ID: c:\satumws\data\200704\04
Dilution:	1.0		Initial Weight/Volume: 40 mL
Date Analyzed:	04/03/2007 1649		Final Weight/Volume: 40 mL
Date Prepared:	04/03/2007 1649		

Analyte	Result (ug/L)	Qualifier	RL
Methylene Chloride	ND		5.0
methyl isobutyl ketone	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	124		83 - 127
1,2-Dichloroethane-d4 (Surr)	104		86 - 129
Toluene-d8 (Surr)	114		82 - 126

## Analytical Data

Client: GeoSyntec Consultants

Job Number: 720-8466-1

**Client Sample ID: B39-24-28'**

Lab Sample ID: 720-8466-3  
Client Matrix: Water

Date Sampled: 03/29/2007 1315  
Date Received: 03/30/2007 1202

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

Method:	8260B	Analysis Batch: 720-20024	Instrument ID: Varian 3900G
Preparation:	5030B		Lab File ID: c:\saturday\data\200704\04
Dilution:	1.0		Initial Weight/Volume: 40 mL
Date Analyzed:	04/03/2007 1923		Final Weight/Volume: 40 mL
Date Prepared:	04/03/2007 1923		

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
Methyl Ethyl Ketone	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

## Analytical Data

Client: GeoSyntec Consultants

Job Number: 720-8466-1

**Client Sample ID: B39-24-28'**

Lab Sample ID: 720-8466-3  
Client Matrix: Water

Date Sampled: 03/29/2007 1315  
Date Received: 03/30/2007 1202

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

Method: 8260B	Analysis Batch: 720-20024	Instrument ID: Varian 3900G
Preparation: 5030B		Lab File ID: c:\satumws\data\200704\04
Dilution: 1.0		Initial Weight/Volume: 40 mL
Date Analyzed: 04/03/2007 1923		Final Weight/Volume: 40 mL
Date Prepared: 04/03/2007 1923		

Analyte	Result (ug/L)	Qualifier	RL
Methylene Chloride	ND		5.0
methyl isobutyl ketone	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		83 - 127
1,2-Dichloroethane-d4 (Surr)	120		86 - 129
Toluene-d8 (Surr)	102		82 - 126

## Analytical Data

Client: GeoSyntec Consultants

Job Number: 720-8466-1

**Client Sample ID: B36-43-47'**

Lab Sample ID: 720-8466-4  
Client Matrix: Water

Date Sampled: 03/29/2007 1515  
Date Received: 03/30/2007 1202

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

Method:	8260B	Analysis Batch: 720-20024	Instrument ID: Varian 3900G
Preparation:	5030B		Lab File ID: c:\saturday\data\200704\04
Dilution:	1.0		Initial Weight/Volume: 40 mL
Date Analyzed:	04/03/2007 1956		Final Weight/Volume: 40 mL
Date Prepared:	04/03/2007 1956		

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
Methyl Ethyl Ketone	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

## Analytical Data

Client: GeoSyntec Consultants

Job Number: 720-8466-1

**Client Sample ID: B36-43-47'**

Lab Sample ID: 720-8466-4  
Client Matrix: Water

Date Sampled: 03/29/2007 1515  
Date Received: 03/30/2007 1202

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

Method:	8260B	Analysis Batch: 720-20024	Instrument ID: Varian 3900G
Preparation:	5030B		Lab File ID: c:\satumws\data\200704\04
Dilution:	1.0		Initial Weight/Volume: 40 mL
Date Analyzed:	04/03/2007 1956		Final Weight/Volume: 40 mL
Date Prepared:	04/03/2007 1956		

Analyte	Result (ug/L)	Qualifier	RL
Methylene Chloride	ND		5.0
methyl isobutyl ketone	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	28		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	113		83 - 127
1,2-Dichloroethane-d4 (Surr)	123		86 - 129
Toluene-d8 (Surr)	106		82 - 126

# Analytical Data

Client: GeoSyntec Consultants

Job Number: 720-8466-1

**Client Sample ID: B37-42-46'**

Lab Sample ID: 720-8466-5  
Client Matrix: Water

Date Sampled: 03/29/2007 1640  
Date Received: 03/30/2007 1202

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

Method: 8260B Analysis Batch: 720-20024 Instrument ID: Varian 3900G  
Preparation: 5030B Lab File ID: c:\saturday\data\200704\04  
Dilution: 1.0 Initial Weight/Volume: 40 mL  
Date Analyzed: 04/03/2007 2030 Final Weight/Volume: 40 mL  
Date Prepared: 04/03/2007 2030

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
Methyl Ethyl Ketone	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

## Analytical Data

Client: GeoSyntec Consultants

Job Number: 720-8466-1

**Client Sample ID: B37-42-46'**

Lab Sample ID: 720-8466-5  
 Client Matrix: Water

Date Sampled: 03/29/2007 1640  
 Date Received: 03/30/2007 1202

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

Method: 8260B	Analysis Batch: 720-20024	Instrument ID: Varian 3900G
Preparation: 5030B		Lab File ID: c:\satumws\data\200704\04
Dilution: 1.0		Initial Weight/Volume: 40 mL
Date Analyzed: 04/03/2007 2030		Final Weight/Volume: 40 mL
Date Prepared: 04/03/2007 2030		

Analyte	Result (ug/L)	Qualifier	RL
Methylene Chloride	ND		5.0
methyl isobutyl ketone	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	9.0		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		83 - 127
1,2-Dichloroethane-d4 (Surr)	118		86 - 129
Toluene-d8 (Surr)	100		82 - 126

## Analytical Data

Client: GeoSyntec Consultants

Job Number: 720-8466-1

**Client Sample ID: B37-24-28'**

Lab Sample ID: 720-8466-6  
Client Matrix: Water

Date Sampled: 03/29/2007 1600  
Date Received: 03/30/2007 1202

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

Method:	8260B	Analysis Batch: 720-20018	Instrument ID: Varian 3900D
Preparation:	5030B		Lab File ID: c:\saturday\data\200704\04
Dilution:	1.0		Initial Weight/Volume: 40 mL
Date Analyzed:	04/03/2007 1903		Final Weight/Volume: 40 mL
Date Prepared:	04/03/2007 1903		

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
Methyl Ethyl Ketone	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



## Analytical Data

Client: GeoSyntec Consultants

Job Number: 720-8466-1

**Client Sample ID: B37-24-28'**

Lab Sample ID: 720-8466-6  
Client Matrix: Water

Date Sampled: 03/29/2007 1600  
Date Received: 03/30/2007 1202

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

Method:	8260B	Analysis Batch: 720-20018	Instrument ID: Varian 3900D
Preparation:	5030B		Lab File ID: c:\satumws\data\200704\04
Dilution:	1.0		Initial Weight/Volume: 40 mL
Date Analyzed:	04/03/2007 1903		Final Weight/Volume: 40 mL
Date Prepared:	04/03/2007 1903		

Analyte	Result (ug/L)	Qualifier	RL
Methylene Chloride	ND		5.0
methyl isobutyl ketone	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		83 - 127
1,2-Dichloroethane-d4 (Surr)	91		86 - 129
Toluene-d8 (Surr)	93		82 - 126

## Analytical Data

Client: GeoSyntec Consultants

Job Number: 720-8466-1

**Client Sample ID: B41-32-36'**

Lab Sample ID: 720-8466-7  
 Client Matrix: Water

Date Sampled: 03/30/2007 0815  
 Date Received: 03/30/2007 1202

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

Method:	8260B	Analysis Batch: 720-20018	Instrument ID: Varian 3900D
Preparation:	5030B		Lab File ID: c:\saturnws\data\200704\04
Dilution:	2.0		Initial Weight/Volume: 40 mL
Date Analyzed:	04/03/2007 1937		Final Weight/Volume: 40 mL
Date Prepared:	04/03/2007 1937		

Analyte	Result (ug/L)	Qualifier	RL
Methyl tert-butyl ether	ND		10
Acetone	ND		100
Benzene	ND		1.0
Dichlorobromomethane	ND		1.0
Bromobenzene	ND		2.0
Chlorobromomethane	ND		2.0
Bromoform	ND		2.0
Bromomethane	ND		2.0
Methyl Ethyl Ketone	ND		100
n-Butylbenzene	ND		2.0
sec-Butylbenzene	ND		2.0
tert-Butylbenzene	ND		2.0
Carbon disulfide	ND		10
Carbon tetrachloride	ND		1.0
Chlorobenzene	ND		1.0
Chloroethane	ND		2.0
Chloroform	ND		2.0
Chloromethane	ND		2.0
2-Chlorotoluene	ND		1.0
4-Chlorotoluene	ND		1.0
Chlorodibromomethane	ND		1.0
1,2-Dichlorobenzene	ND		1.0
1,3-Dichlorobenzene	ND		1.0
1,4-Dichlorobenzene	ND		1.0
1,3-Dichloropropane	ND		2.0
1,1-Dichloropropene	ND		1.0
1,2-Dibromo-3-Chloropropane	ND		2.0
Ethylene Dibromide	ND		1.0
Dibromomethane	ND		1.0
Dichlorodifluoromethane	ND		1.0
1,1-Dichloroethane	ND		1.0
1,2-Dichloroethane	ND		1.0
1,1-Dichloroethene	ND		1.0
cis-1,2-Dichloroethene	ND		1.0
trans-1,2-Dichloroethene	ND		1.0
1,2-Dichloropropane	ND		1.0
cis-1,3-Dichloropropene	ND		1.0
trans-1,3-Dichloropropene	ND		1.0
Ethylbenzene	ND		1.0
Hexachlorobutadiene	ND		2.0
2-Hexanone	ND		100
Isopropylbenzene	ND		1.0
4-Isopropyltoluene	ND		2.0

## Analytical Data

Client: GeoSyntec Consultants

Job Number: 720-8466-1

**Client Sample ID: B41-32-36'**

Lab Sample ID: 720-8466-7  
Client Matrix: Water

Date Sampled: 03/30/2007 0815  
Date Received: 03/30/2007 1202

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

Method:	8260B	Analysis Batch: 720-20018	Instrument ID: Varian 3900D
Preparation:	5030B		Lab File ID: c:\satumws\data\200704\04
Dilution:	2.0		Initial Weight/Volume: 40 mL
Date Analyzed:	04/03/2007 1937		Final Weight/Volume: 40 mL
Date Prepared:	04/03/2007 1937		

Analyte	Result (ug/L)	Qualifier	RL
Methylene Chloride	ND		10
methyl isobutyl ketone	ND		100
Naphthalene	ND		2.0
N-Propylbenzene	ND		2.0
Styrene	ND		1.0
1,1,1,2-Tetrachloroethane	ND		1.0
1,1,2,2-Tetrachloroethane	ND		1.0
Tetrachloroethene	ND		1.0
Toluene	ND		1.0
1,2,3-Trichlorobenzene	ND		2.0
1,2,4-Trichlorobenzene	ND		2.0
1,1,1-Trichloroethane	ND		1.0
1,1,2-Trichloroethane	ND		1.0
Trichloroethene	ND		1.0
Trichlorofluoromethane	ND		2.0
1,2,3-Trichloropropane	ND		1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0
1,2,4-Trimethylbenzene	ND		1.0
1,3,5-Trimethylbenzene	ND		1.0
Vinyl acetate	ND		100
Vinyl chloride	ND		1.0
Xylenes, Total	ND		2.0
2,2-Dichloropropane	ND		1.0
Surrogate	%Rec		Acceptance Limits
4-Bromofluorobenzene	112		83 - 127
1,2-Dichloroethane-d4 (Surr)	101		86 - 129
Toluene-d8 (Surr)	97		82 - 126

## Analytical Data

Client: GeoSyntec Consultants

Job Number: 720-8466-1

**Client Sample ID: B41-44-46'**

Lab Sample ID: 720-8466-8  
 Client Matrix: Water

Date Sampled: 03/30/2007 0900  
 Date Received: 03/30/2007 1202

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

Method:	8260B	Analysis Batch: 720-20018	Instrument ID: Varian 3900D
Preparation:	5030B		Lab File ID: c:\saturday\data\200704\04
Dilution:	1.0		Initial Weight/Volume: 40 mL
Date Analyzed:	04/03/2007 2010		Final Weight/Volume: 40 mL
Date Prepared:	04/03/2007 2010		

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
Methyl Ethyl Ketone	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

## Analytical Data

Client: GeoSyntec Consultants

Job Number: 720-8466-1

**Client Sample ID: B41-44-46'**

Lab Sample ID: 720-8466-8  
Client Matrix: Water

Date Sampled: 03/30/2007 0900  
Date Received: 03/30/2007 1202

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

Method:	8260B	Analysis Batch: 720-20018	Instrument ID: Varian 3900D
Preparation:	5030B		Lab File ID: c:\satumws\data\200704\04
Dilution:	1.0		Initial Weight/Volume: 40 mL
Date Analyzed:	04/03/2007 2010		Final Weight/Volume: 40 mL
Date Prepared:	04/03/2007 2010		

Analyte	Result (ug/L)	Qualifier	RL
Methylene Chloride	ND		5.0
methyl isobutyl ketone	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	1.4		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	96		83 - 127
1,2-Dichloroethane-d4 (Surr)	93		86 - 129
Toluene-d8 (Surr)	92		82 - 126

# Analytical Data

Client: GeoSyntec Consultants

Job Number: 720-8466-1

**Client Sample ID: DUP1**

Lab Sample ID: 720-8466-9  
Client Matrix: Water

Date Sampled: 03/30/2007 0905  
Date Received: 03/30/2007 1202

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

Method: 8260B Analysis Batch: 720-20018 Instrument ID: Varian 3900D  
Preparation: 5030B Lab File ID: c:\saturday\data\200704\04  
Dilution: 1.0 Initial Weight/Volume: 40 mL  
Date Analyzed: 04/03/2007 2043 Final Weight/Volume: 40 mL  
Date Prepared: 04/03/2007 2043

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
Methyl Ethyl Ketone	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

## Analytical Data

Client: GeoSyntec Consultants

Job Number: 720-8466-1

**Client Sample ID: DUP1**

Lab Sample ID: 720-8466-9  
Client Matrix: Water

Date Sampled: 03/30/2007 0905  
Date Received: 03/30/2007 1202

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

Method:	8260B	Analysis Batch: 720-20018	Instrument ID: Varian 3900D
Preparation:	5030B		Lab File ID: c:\satumws\data\200704\04
Dilution:	1.0		Initial Weight/Volume: 40 mL
Date Analyzed:	04/03/2007 2043		Final Weight/Volume: 40 mL
Date Prepared:	04/03/2007 2043		

Analyte	Result (ug/L)	Qualifier	RL
Methylene Chloride	ND		5.0
methyl isobutyl ketone	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	1.5		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	99		83 - 127
1,2-Dichloroethane-d4 (Surr)	94		86 - 129
Toluene-d8 (Surr)	97		82 - 126

## Analytical Data

Client: GeoSyntec Consultants

Job Number: 720-8466-1

**Client Sample ID: B42-24-28'**

Lab Sample ID: 720-8466-10  
Client Matrix: Water

Date Sampled: 03/30/2007 1000  
Date Received: 03/30/2007 1202

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

Method:	8260B	Analysis Batch: 720-20018	Instrument ID: Varian 3900D
Preparation:	5030B		Lab File ID: c:\saturday\data\200704\04
Dilution:	1.0		Initial Weight/Volume: 40 mL
Date Analyzed:	04/03/2007 1723		Final Weight/Volume: 40 mL
Date Prepared:	04/03/2007 1723		

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
Methyl Ethyl Ketone	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	1.2		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



## Analytical Data

Client: GeoSyntec Consultants

Job Number: 720-8466-1

**Client Sample ID: B42-24-28'**

Lab Sample ID: 720-8466-10  
Client Matrix: Water

Date Sampled: 03/30/2007 1000  
Date Received: 03/30/2007 1202

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

Method:	8260B	Analysis Batch: 720-20018	Instrument ID: Varian 3900D
Preparation:	5030B		Lab File ID: c:\satumws\data\200704\04
Dilution:	1.0		Initial Weight/Volume: 40 mL
Date Analyzed:	04/03/2007 1723		Final Weight/Volume: 40 mL
Date Prepared:	04/03/2007 1723		

Analyte	Result (ug/L)	Qualifier	RL
Methylene Chloride	ND		5.0
methyl isobutyl ketone	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	121		83 - 127
1,2-Dichloroethane-d4 (Surr)	105		86 - 129
Toluene-d8 (Surr)	102		82 - 126

## Analytical Data

Client: GeoSyntec Consultants

Job Number: 720-8466-1

**Client Sample ID: B42-40-43'**

Lab Sample ID: 720-8466-11  
Client Matrix: Water

Date Sampled: 03/30/2007 1030  
Date Received: 03/30/2007 1202

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

Method:	8260B	Analysis Batch: 720-20025	Instrument ID: Saturn 2K3
Preparation:	5030B		Lab File ID: d:\data\200704\040307\SA-
Dilution:	1.0		Initial Weight/Volume: 40 mL
Date Analyzed:	04/03/2007 1728		Final Weight/Volume: 40 mL
Date Prepared:	04/03/2007 1728		

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
Methyl Ethyl Ketone	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

## Analytical Data

Client: GeoSyntec Consultants

Job Number: 720-8466-1

**Client Sample ID: B42-40-43'**

Lab Sample ID: 720-8466-11  
Client Matrix: Water

Date Sampled: 03/30/2007 1030  
Date Received: 03/30/2007 1202

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

Method: 8260B	Analysis Batch: 720-20025	Instrument ID: Saturn 2K3
Preparation: 5030B		Lab File ID: d:\data\200704\040307\SA-
Dilution: 1.0		Initial Weight/Volume: 40 mL
Date Analyzed: 04/03/2007 1728		Final Weight/Volume: 40 mL
Date Prepared: 04/03/2007 1728		

Analyte	Result (ug/L)	Qualifier	RL
Methylene Chloride	ND		5.0
methyl isobutyl ketone	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	6.8		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		83 - 127
1,2-Dichloroethane-d4 (Surr)	105		86 - 129
Toluene-d8 (Surr)	106		82 - 126

# Analytical Data

Client: GeoSyntec Consultants

Job Number: 720-8466-1

**Client Sample ID: SG-5-5'**

Lab Sample ID: 720-8466-12  
Client Matrix: Solid

Date Sampled: 03/30/2007 1100  
Date Received: 03/30/2007 1202

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

Method: 8260B Analysis Batch: 720-20154 Instrument ID: Varian 3900G  
Preparation: 5030B-Medium Prep Batch: 720-20157 Lab File ID: c:\saturday\data\200704\04  
Dilution: 200 Initial Weight/Volume: 5.52 g  
Date Analyzed: 04/06/2007 1214 Final Weight/Volume: 10 mL  
Date Prepared: 04/06/2007 0900

Analyte	DryWt Corrected: N	Result (ug/Kg)	Qualifier	RL
Methyl tert-butyl ether		ND		910
Acetone		ND		9100
Benzene		ND		910
Dichlorobromomethane		ND		910
Bromobenzene		ND		910
Chlorobromomethane		ND		3600
Bromoform		ND		910
Bromomethane		ND		1800
Methyl Ethyl Ketone		ND		9100
n-Butylbenzene		ND		910
sec-Butylbenzene		ND		910
tert-Butylbenzene		ND		910
Carbon disulfide		ND		910
Carbon tetrachloride		ND		910
Chlorobenzene		ND		910
Chloroethane		ND		1800
Chloroform		ND		910
Chloromethane		ND		1800
2-Chlorotoluene		ND		910
4-Chlorotoluene		ND		910
Chlorodibromomethane		ND		910
1,2-Dichlorobenzene		ND		910
1,3-Dichlorobenzene		ND		910
1,4-Dichlorobenzene		ND		910
1,3-Dichloropropane		ND		910
1,1-Dichloropropene		ND		910
1,2-Dibromo-3-Chloropropane		ND		9100
Ethylene Dibromide		ND		910
Dibromomethane		ND		1800
Dichlorodifluoromethane		ND		1800
1,1-Dichloroethane		ND		910
1,2-Dichloroethane		ND		910
1,1-Dichloroethene		ND		910
cis-1,2-Dichloroethene		ND		910
trans-1,2-Dichloroethene		ND		910
1,2-Dichloropropane		ND		910
cis-1,3-Dichloropropene		ND		910
trans-1,3-Dichloropropene		ND		910
Ethylbenzene		ND		910
2-Chloroethyl vinyl ether		ND		910
Hexachlorobutadiene		ND		910
2-Hexanone		ND		9100
Isopropylbenzene		ND		910

## Analytical Data

Client: GeoSyntec Consultants

Job Number: 720-8466-1

**Client Sample ID: SG-5-5'**

Lab Sample ID: 720-8466-12  
Client Matrix: Solid

Date Sampled: 03/30/2007 1100  
Date Received: 03/30/2007 1202

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

Method:	8260B	Analysis Batch: 720-20154	Instrument ID: Varian 3900G
Preparation:	5030B-Medium	Prep Batch: 720-20157	Lab File ID: c:\satumws\data\200704\04
Dilution:	200		Initial Weight/Volume: 5.52 g
Date Analyzed:	04/06/2007 1214		Final Weight/Volume: 10 mL
Date Prepared:	04/06/2007 0900		

Analyte	DryWt Corrected: N	Result (ug/Kg)	Qualifier	RL
4-Isopropyltoluene		ND		910
Methylene Chloride		ND		1800
methyl isobutyl ketone		ND		9100
Naphthalene		ND		1800
N-Propylbenzene		ND		910
Styrene		ND		910
1,1,1,2-Tetrachloroethane		ND		910
1,1,2,2-Tetrachloroethane		ND		910
Tetrachloroethene		ND		910
Toluene		ND		910
1,2,3-Trichlorobenzene		ND		910
1,2,4-Trichlorobenzene		ND		910
1,1,1-Trichloroethane		ND		910
1,1,2-Trichloroethane		ND		910
Trichloroethene		ND		910
Trichlorofluoromethane		ND		910
1,2,3-Trichloropropane		ND		910
1,1,2-Trichloro-1,2,2-trifluoroethane		ND		910
1,2,4-Trimethylbenzene		ND		910
1,3,5-Trimethylbenzene		ND		910
Vinyl acetate		ND		9100
Vinyl chloride		ND		910
Xylenes, Total		ND		1800
2,2-Dichloropropane		ND		910
Surrogate		%Rec		Acceptance Limits
4-Bromofluorobenzene		105		60 - 140
1,2-Dichloroethane-d4 (Surr)		108		60 - 140
Toluene-d8 (Surr)		98		70 - 130

## Analytical Data

Client: GeoSyntec Consultants

Job Number: 720-8466-1

**Client Sample ID: B40-24-28'**

Lab Sample ID: 720-8466-13  
Client Matrix: Water

Date Sampled: 03/30/2007 1130  
Date Received: 03/30/2007 1202

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

Method:	8260B	Analysis Batch: 720-20025	Instrument ID: Saturn 2K3
Preparation:	5030B		Lab File ID: d:\data\200704\040307\SA-
Dilution:	4.0		Initial Weight/Volume: 40 mL
Date Analyzed:	04/03/2007 1801		Final Weight/Volume: 40 mL
Date Prepared:	04/03/2007 1801		

Analyte	Result (ug/L)	Qualifier	RL
Methyl tert-butyl ether	ND		20
Acetone	ND		200
Benzene	ND		2.0
Dichlorobromomethane	ND		2.0
Bromobenzene	ND		4.0
Chlorobromomethane	ND		4.0
Bromoform	ND		4.0
Bromomethane	ND		4.0
Methyl Ethyl Ketone	ND		200
n-Butylbenzene	ND		4.0
sec-Butylbenzene	ND		4.0
tert-Butylbenzene	ND		4.0
Carbon disulfide	ND		20
Carbon tetrachloride	ND		2.0
Chlorobenzene	ND		2.0
Chloroethane	ND		4.0
Chloroform	ND		4.0
Chloromethane	ND		4.0
2-Chlorotoluene	ND		2.0
4-Chlorotoluene	ND		2.0
Chlorodibromomethane	ND		2.0
1,2-Dichlorobenzene	ND		2.0
1,3-Dichlorobenzene	ND		2.0
1,4-Dichlorobenzene	ND		2.0
1,3-Dichloropropane	ND		4.0
1,1-Dichloropropene	ND		2.0
1,2-Dibromo-3-Chloropropane	ND		4.0
Ethylene Dibromide	ND		2.0
Dibromomethane	ND		2.0
Dichlorodifluoromethane	ND		2.0
1,1-Dichloroethane	ND		2.0
1,2-Dichloroethane	ND		2.0
1,1-Dichloroethene	ND		2.0
cis-1,2-Dichloroethene	ND		2.0
trans-1,2-Dichloroethene	ND		2.0
1,2-Dichloropropane	ND		2.0
cis-1,3-Dichloropropene	ND		2.0
trans-1,3-Dichloropropene	ND		2.0
Ethylbenzene	ND		2.0
Hexachlorobutadiene	ND		4.0
2-Hexanone	ND		200
Isopropylbenzene	ND		2.0
4-Isopropyltoluene	ND		4.0

## Analytical Data

Client: GeoSyntec Consultants

Job Number: 720-8466-1

**Client Sample ID: B40-24-28'**

Lab Sample ID: 720-8466-13  
Client Matrix: Water

Date Sampled: 03/30/2007 1130  
Date Received: 03/30/2007 1202

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

Method:	8260B	Analysis Batch: 720-20025	Instrument ID: Saturn 2K3
Preparation:	5030B		Lab File ID: d:\data\200704\040307\SA-
Dilution:	4.0		Initial Weight/Volume: 40 mL
Date Analyzed:	04/03/2007 1801		Final Weight/Volume: 40 mL
Date Prepared:	04/03/2007 1801		

Analyte	Result (ug/L)	Qualifier	RL
Methylene Chloride	ND		20
methyl isobutyl ketone	ND		200
Naphthalene	ND		4.0
N-Propylbenzene	ND		4.0
Styrene	ND		2.0
1,1,1,2-Tetrachloroethane	ND		2.0
1,1,2,2-Tetrachloroethane	ND		2.0
Tetrachloroethene	ND		2.0
Toluene	ND		2.0
1,2,3-Trichlorobenzene	ND		4.0
1,2,4-Trichlorobenzene	ND		4.0
1,1,1-Trichloroethane	ND		2.0
1,1,2-Trichloroethane	ND		2.0
Trichloroethene	ND		2.0
Trichlorofluoromethane	ND		4.0
1,2,3-Trichloropropane	ND		2.0
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		2.0
1,2,4-Trimethylbenzene	ND		2.0
1,3,5-Trimethylbenzene	ND		2.0
Vinyl acetate	ND		200
Vinyl chloride	ND		2.0
Xylenes, Total	ND		4.0
2,2-Dichloropropane	ND		2.0
Surrogate	%Rec		Acceptance Limits
4-Bromofluorobenzene	105		83 - 127
1,2-Dichloroethane-d4 (Surr)	109		86 - 129
Toluene-d8 (Surr)	109		82 - 126

# Analytical Data

Client: GeoSyntec Consultants

Job Number: 720-8466-1

**Client Sample ID: QCEB1**

Lab Sample ID: 720-8466-14EB  
Client Matrix: Water

Date Sampled: 03/30/2007 1200  
Date Received: 03/30/2007 1202

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

Method: 8260B Analysis Batch: 720-20018 Instrument ID: Varian 3900D  
Preparation: 5030B Lab File ID: c:\saturday\data\200704\04  
Dilution: 1.0 Initial Weight/Volume: 40 mL  
Date Analyzed: 04/03/2007 1756 Final Weight/Volume: 40 mL  
Date Prepared: 04/03/2007 1756

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
Methyl Ethyl Ketone	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



## Analytical Data

Client: GeoSyntec Consultants

Job Number: 720-8466-1

**Client Sample ID: QCEB1**

Lab Sample ID: 720-8466-14EB  
 Client Matrix: Water

Date Sampled: 03/30/2007 1200  
 Date Received: 03/30/2007 1202

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

Method:	8260B	Analysis Batch: 720-20018	Instrument ID: Varian 3900D
Preparation:	5030B		Lab File ID: c:\satumws\data\200704\04
Dilution:	1.0		Initial Weight/Volume: 40 mL
Date Analyzed:	04/03/2007 1756		Final Weight/Volume: 40 mL
Date Prepared:	04/03/2007 1756		

Analyte	Result (ug/L)	Qualifier	RL
Methylene Chloride	ND		5.0
methyl isobutyl ketone	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	109		83 - 127
1,2-Dichloroethane-d4 (Surr)	94		86 - 129
Toluene-d8 (Surr)	100		82 - 126

## Analytical Data

Client: GeoSyntec Consultants

Job Number: 720-8466-1

**Client Sample ID: TRIP BLANKS**

Lab Sample ID: 720-8466-15TB  
 Client Matrix: Water

Date Sampled: 03/30/2007 0000  
 Date Received: 03/30/2007 1202

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

Method:	8260B	Analysis Batch: 720-20018	Instrument ID: Varian 3900D
Preparation:	5030B		Lab File ID: c:\saturday\data\200704\04
Dilution:	1.0		Initial Weight/Volume: 40 mL
Date Analyzed:	04/03/2007 1830		Final Weight/Volume: 40 mL
Date Prepared:	04/03/2007 1830		

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
Methyl Ethyl Ketone	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

## Analytical Data

Client: GeoSyntec Consultants

Job Number: 720-8466-1

**Client Sample ID: TRIP BLANKS**

Lab Sample ID: 720-8466-15TB  
 Client Matrix: Water

Date Sampled: 03/30/2007 0000  
 Date Received: 03/30/2007 1202

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

Method:	8260B	Analysis Batch: 720-20018	Instrument ID: Varian 3900D
Preparation:	5030B		Lab File ID: c:\satumws\data\200704\04
Dilution:	1.0		Initial Weight/Volume: 40 mL
Date Analyzed:	04/03/2007 1830		Final Weight/Volume: 40 mL
Date Prepared:	04/03/2007 1830		

Analyte	Result (ug/L)	Qualifier	RL
Methylene Chloride	ND		5.0
methyl isobutyl ketone	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		83 - 127
1,2-Dichloroethane-d4 (Surr)	92		86 - 129
Toluene-d8 (Surr)	92		82 - 126

## 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: 720-8466-1

### QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
<b>GC/MS VOA</b>					
<b>Analysis Batch:720-20018</b>					
LCS 720-20018/1	Lab Control Spike	T	Water	8260B	
MB 720-20018/2	Method Blank	T	Water	8260B	
720-8466-2	B38-43-47'	T	Water	8260B	
720-8466-6	B37-24-28'	T	Water	8260B	
720-8466-7	B41-32-36'	T	Water	8260B	
720-8466-8	B41-44-46'	T	Water	8260B	
720-8466-9	DUP1	T	Water	8260B	
720-8466-10	B42-24-28'	T	Water	8260B	
720-8466-14EB	QCEB1	T	Water	8260B	
720-8466-15TB	TRIP BLANKS	T	Water	8260B	
<b>Analysis Batch:720-20024</b>					
LCS 720-20024/1	Lab Control Spike	T	Water	8260B	
MB 720-20024/2	Method Blank	T	Water	8260B	
720-8466-3	B39-24-28'	T	Water	8260B	
720-8466-4	B36-43-47'	T	Water	8260B	
720-8466-5	B37-42-46'	T	Water	8260B	
<b>Analysis Batch:720-20025</b>					
LCS 720-20025/3	Lab Control Spike	T	Water	8260B	
MB 720-20025/4	Method Blank	T	Water	8260B	
720-8466-11	B42-40-43'	T	Water	8260B	
720-8466-13	B40-24-28'	T	Water	8260B	
<b>Analysis Batch:720-20029</b>					
LCS 720-20029/1	Lab Control Spike	T	Water	8260B	
MB 720-20029/2	Method Blank	T	Water	8260B	
720-8466-1	B38-AZONE	T	Water	8260B	
<b>Analysis Batch:720-20154</b>					
LCS 720-20157/2-AA	Lab Control Spike	T	Solid	8260B	720-20157
LCSD 720-20157/3-AA	Lab Control Spike Duplicate	T	Solid	8260B	720-20157
MB 720-20157/1-AA	Method Blank	T	Solid	8260B	720-20157
720-8466-12	SG-5-5'	T	Solid	8260B	720-20157
<b>Prep Batch: 720-20157</b>					
LCS 720-20157/2-AA	Lab Control Spike	T	Solid	5030B	
LCSD 720-20157/3-AA	Lab Control Spike Duplicate	T	Solid	5030B	
MB 720-20157/1-AA	Method Blank	T	Solid	5030B	
720-8466-12	SG-5-5'	T	Solid	5030B	

**Report Basis**

T = Total

**STL San Francisco**

## Quality Control Results

Client: GeoSyntec Consultants

Job Number: 720-8466-1

**Method Blank - Batch: 720-20018**

**Method: 8260B**

**Preparation: 5030B**

Lab Sample ID: MB 720-20018/2  
 Client Matrix: Water  
 Dilution: 1.0  
 Date Analyzed: 04/03/2007 1115  
 Date Prepared: 04/03/2007 1115

Analysis Batch: 720-20018  
 Prep Batch: N/A  
 Units: ug/L

Instrument ID: Varian 3900D  
 Lab File ID: c:\saturnws\data\200704\04  
 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
Methyl Ethyl Ketone	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: 720-8466-1

**Method Blank - Batch: 720-20018**

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

Lab Sample ID: MB 720-20018/2  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 04/03/2007 1115  
Date Prepared: 04/03/2007 1115

Analysis Batch: 720-20018  
Prep Batch: N/A  
Units: ug/L

Instrument ID: Varian 3900D  
Lab File ID: c:\saturnws\data\200704\04  
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
methyl isobutyl ketone	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	104	83 - 127	
1,2-Dichloroethane-d4 (Surr)	93	86 - 129	
Toluene-d8 (Surr)	102	82 - 126	

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

## Quality Control Results

Client: GeoSyntec Consultants

Job Number: 720-8466-1

### Lab Control Spike - Batch: 720-20018

Method: 8260B

Preparation: 5030B

Lab Sample ID: LCS 720-20018/1

Client Matrix: Water

Dilution: 1.0

Date Analyzed: 04/03/2007 1042

Date Prepared: 04/03/2007 1042

Analysis Batch: 720-20018

Prep Batch: N/A

Units: ug/L

Instrument ID: Varian 3900D

Lab File ID: c:\saturnws\data\200704\04

Initial Weight/Volume: 40 mL

Final Weight/Volume: 40 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Benzene	20.0	19.5	97	69 - 129	
Chlorobenzene	20.0	20.1	101	61 - 121	
1,1-Dichloroethene	20.0	17.5	88	65 - 125	
Toluene	20.0	17.0	85	70 - 130	
Trichloroethene	20.0	15.3	77	74 - 134	
Surrogate			% Rec	Acceptance Limits	
4-Bromofluorobenzene			101	83 - 127	
1,2-Dichloroethane-d4 (Surr)			87	86 - 129	
Toluene-d8 (Surr)			88	82 - 126	

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



## Quality Control Results

Client: GeoSyntec Consultants

Job Number: 720-8466-1

### Method Blank - Batch: 720-20024

Method: 8260B

Preparation: 5030B

Lab Sample ID: MB 720-20024/2  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 04/03/2007 1025  
Date Prepared: 04/03/2007 1025

Analysis Batch: 720-20024  
Prep Batch: N/A  
Units: ug/L

Instrument ID: Varian 3900G  
Lab File ID: c:\saturnws\data\200704\04  
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
Methyl Ethyl Ketone	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: 720-8466-1

### Method Blank - Batch: 720-20024

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

Lab Sample ID: MB 720-20024/2  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 04/03/2007 1025  
Date Prepared: 04/03/2007 1025

Analysis Batch: 720-20024  
Prep Batch: N/A  
Units: ug/L

Instrument ID: Varian 3900G  
Lab File ID: c:\saturnws\data\200704\04  
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
methyl isobutyl ketone	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	114	83 - 127	
1,2-Dichloroethane-d4 (Surr)	119	86 - 129	
Toluene-d8 (Surr)	107	82 - 126	

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

## Quality Control Results

Client: GeoSyntec Consultants

Job Number: 720-8466-1

### Lab Control Spike - Batch: 720-20024

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

Lab Sample ID: LCS 720-20024/1  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 04/03/2007 0952  
Date Prepared: 04/03/2007 0952

Analysis Batch: 720-20024  
Prep Batch: N/A  
Units: ug/L

Instrument ID: Varian 3900G  
Lab File ID: c:\saturnws\data\200704\04  
Initial Weight/Volume: 40 mL  
Final Weight/Volume: 40 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Benzene	20.0	19.8	99	69 - 129	
Chlorobenzene	20.0	21.2	106	61 - 121	
1,1-Dichloroethene	20.0	23.3	117	65 - 125	
Toluene	20.0	19.3	97	70 - 130	
Trichloroethene	20.0	18.1	91	74 - 134	
Surrogate			% Rec	Acceptance Limits	
4-Bromofluorobenzene			111	83 - 127	
1,2-Dichloroethane-d4 (Surr)			115	86 - 129	
Toluene-d8 (Surr)			105	82 - 126	

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

## Quality Control Results

Client: GeoSyntec Consultants

Job Number: 720-8466-1

### Method Blank - Batch: 720-20025

Method: 8260B

Preparation: 5030B

Lab Sample ID: MB 720-20025/4

Analysis Batch: 720-20025

Instrument ID: Saturn 2K3

Client Matrix: Water

Prep Batch: N/A

Lab File ID: d:\data\200704\040307\MB

Dilution: 1.0

Units: ug/L

Initial Weight/Volume: 40 mL

Date Analyzed: 04/03/2007 1301

Final Weight/Volume: 40 mL

Date Prepared: 04/03/2007 1301

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
Methyl Ethyl Ketone	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: 720-8466-1

**Method Blank - Batch: 720-20025**

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

Lab Sample ID: MB 720-20025/4  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 04/03/2007 1301  
Date Prepared: 04/03/2007 1301

Analysis Batch: 720-20025  
Prep Batch: N/A  
Units: ug/L

Instrument ID: Saturn 2K3  
Lab File ID: d:\data\200704\040307\MB  
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
methyl isobutyl ketone	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	102	83 - 127	
1,2-Dichloroethane-d4 (Surr)	100	86 - 129	
Toluene-d8 (Surr)	101	82 - 126	

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

## Quality Control Results

Client: GeoSyntec Consultants

Job Number: 720-8466-1

### Lab Control Spike - Batch: 720-20025

Method: 8260B

Preparation: 5030B

Lab Sample ID: LCS 720-20025/3

Client Matrix: Water

Dilution: 1.0

Date Analyzed: 04/03/2007 1227

Date Prepared: 04/03/2007 1227

Analysis Batch: 720-20025

Prep Batch: N/A

Units: ug/L

Instrument ID: Saturn 2K3

Lab File ID: d:\data\200704\040307\LS-

Initial Weight/Volume: 40 mL

Final Weight/Volume: 40 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Benzene	20.0	19.3	96	69 - 129	
Chlorobenzene	20.0	19.8	99	61 - 121	
1,1-Dichloroethene	20.0	19.7	99	65 - 125	
Toluene	20.0	19.2	96	70 - 130	
Trichloroethene	20.0	17.6	88	74 - 134	
Surrogate			% Rec	Acceptance Limits	
4-Bromofluorobenzene			105	83 - 127	
1,2-Dichloroethane-d4 (Surr)			101	86 - 129	
Toluene-d8 (Surr)			103	82 - 126	

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

## Quality Control Results

Client: GeoSyntec Consultants

Job Number: 720-8466-1

### Method Blank - Batch: 720-20029

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

Lab Sample ID: MB 720-20029/2  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 04/03/2007 1146  
Date Prepared: 04/03/2007 1146

Analysis Batch: 720-20029  
Prep Batch: N/A  
Units: ug/L

Instrument ID: Varian 3900F  
Lab File ID: c:\saturnws\data\200704\04  
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
Methyl Ethyl Ketone	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: 720-8466-1

### Method Blank - Batch: 720-20029

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

Lab Sample ID: MB 720-20029/2  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 04/03/2007 1146  
Date Prepared: 04/03/2007 1146

Analysis Batch: 720-20029  
Prep Batch: N/A  
Units: ug/L

Instrument ID: Varian 3900F  
Lab File ID: c:\saturnws\data\200704\04  
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
methyl isobutyl ketone	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	92	83 - 127	
1,2-Dichloroethane-d4 (Surr)	106	86 - 129	
Toluene-d8 (Surr)	100	82 - 126	

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



## Quality Control Results

Client: GeoSyntec Consultants

Job Number: 720-8466-1

### Lab Control Spike - Batch: 720-20029

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

Lab Sample ID: LCS 720-20029/1  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 04/03/2007 1113  
Date Prepared: 04/03/2007 1113

Analysis Batch: 720-20029  
Prep Batch: N/A  
Units: ug/L

Instrument ID: Varian 3900F  
Lab File ID: c:\saturnws\data\200704\04  
Initial Weight/Volume: 40 mL  
Final Weight/Volume: 40 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Benzene	20.0	19.3	96	69 - 129	
Chlorobenzene	20.0	20.3	101	61 - 121	
1,1-Dichloroethene	20.0	21.5	108	65 - 125	
Toluene	20.0	19.2	96	70 - 130	
Trichloroethene	20.0	18.5	93	74 - 134	
Surrogate			% Rec	Acceptance Limits	
4-Bromofluorobenzene			90	83 - 127	
1,2-Dichloroethane-d4 (Surr)			100	86 - 129	
Toluene-d8 (Surr)			98	82 - 126	

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

## Quality Control Results

Client: GeoSyntec Consultants

Job Number: 720-8466-1

**Method Blank - Batch: 720-20157**

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

Lab Sample ID: MB 720-20157/1-AA  
Client Matrix: Solid  
Dilution: 200  
Date Analyzed: 04/06/2007 0942  
Date Prepared: 04/06/2007 0900

Analysis Batch: 720-20154  
Prep Batch: 720-20157  
Units: ug/Kg

Instrument ID: Varian 3900G  
Lab File ID: c:\saturaws\data\200704\04  
Initial Weight/Volume: 5 g  
Final Weight/Volume: 10 mL

Analyte	Result	Qual	RL
Methyl tert-butyl ether	ND		1000
Acetone	ND		10000
Benzene	ND		1000
Dichlorobromomethane	ND		1000
Bromobenzene	ND		1000
Chlorobromomethane	ND		4000
Bromoform	ND		1000
Bromomethane	ND		2000
Methyl Ethyl Ketone	ND		10000
n-Butylbenzene	ND		1000
sec-Butylbenzene	ND		1000
tert-Butylbenzene	ND		1000
Carbon disulfide	ND		1000
Carbon tetrachloride	ND		1000
Chlorobenzene	ND		1000
Chloroethane	ND		2000
Chloroform	ND		1000
Chloromethane	ND		2000
2-Chlorotoluene	ND		1000
4-Chlorotoluene	ND		1000
Chlorodibromomethane	ND		1000
1,2-Dichlorobenzene	ND		1000
1,3-Dichlorobenzene	ND		1000
1,4-Dichlorobenzene	ND		1000
1,3-Dichloropropane	ND		1000
1,1-Dichloropropene	ND		1000
1,2-Dibromo-3-Chloropropane	ND		10000
Ethylene Dibromide	ND		1000
Dibromomethane	ND		2000
Dichlorodifluoromethane	ND		2000
1,1-Dichloroethane	ND		1000
1,2-Dichloroethane	ND		1000
1,1-Dichloroethene	ND		1000
cis-1,2-Dichloroethene	ND		1000
trans-1,2-Dichloroethene	ND		1000
1,2-Dichloropropane	ND		1000
cis-1,3-Dichloropropene	ND		1000
trans-1,3-Dichloropropene	ND		1000
Ethylbenzene	ND		1000
2-Chloroethyl vinyl ether	ND		1000
Hexachlorobutadiene	ND		1000

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

## Quality Control Results

Client: GeoSyntec Consultants

Job Number: 720-8466-1

**Method Blank - Batch: 720-20157**

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

Lab Sample ID: MB 720-20157/1-AA  
Client Matrix: Solid  
Dilution: 200  
Date Analyzed: 04/06/2007 0942  
Date Prepared: 04/06/2007 0900

Analysis Batch: 720-20154  
Prep Batch: 720-20157  
Units: ug/Kg

Instrument ID: Varian 3900G  
Lab File ID: c:\saturnws\data\200704\04  
Initial Weight/Volume: 5 g  
Final Weight/Volume: 10 mL

Analyte	Result	Qual	RL
2-Hexanone	ND		10000
Isopropylbenzene	ND		1000
4-Isopropyltoluene	ND		1000
Methylene Chloride	ND		2000
methyl isobutyl ketone	ND		10000
Naphthalene	ND		2000
N-Propylbenzene	ND		1000
Styrene	ND		1000
1,1,1,2-Tetrachloroethane	ND		1000
1,1,2,2-Tetrachloroethane	ND		1000
Tetrachloroethene	ND		1000
Toluene	ND		1000
1,2,3-Trichlorobenzene	ND		1000
1,2,4-Trichlorobenzene	ND		1000
1,1,1-Trichloroethane	ND		1000
1,1,2-Trichloroethane	ND		1000
Trichloroethene	ND		1000
Trichlorofluoromethane	ND		1000
1,2,3-Trichloropropane	ND		1000
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1000
1,2,4-Trimethylbenzene	ND		1000
1,3,5-Trimethylbenzene	ND		1000
Vinyl acetate	ND		10000
Vinyl chloride	ND		1000
Xylenes, Total	ND		2000
2,2-Dichloropropane	ND		1000
Surrogate	% Rec	Acceptance Limits	
4-Bromofluorobenzene	105	60 - 140	
1,2-Dichloroethane-d4 (Surr)	105	60 - 140	
Toluene-d8 (Surr)	99	70 - 130	

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

## Quality Control Results

Client: GeoSyntec Consultants

Job Number: 720-8466-1

**Lab Control Spike/  
Lab Control Spike Duplicate Recovery Report - Batch: 720-20157**

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

LCS Lab Sample ID: LCS 720-20157/2-AA  
Client Matrix: Solid  
Dilution: 200  
Date Analyzed: 04/06/2007 1140  
Date Prepared: 04/06/2007 0900

Analysis Batch: 720-20154  
Prep Batch: 720-20157  
Units: ug/Kg

Instrument ID: Varian 3900G  
Lab File ID: c:\satumws\data\200704\040  
Initial Weight/Volume: 5 g  
Final Weight/Volume: 10 mL

LCSD Lab Sample ID: LCSD 720-20157/3-AA  
Client Matrix: Solid  
Dilution: 200  
Date Analyzed: 04/06/2007 1016  
Date Prepared: 04/06/2007 0900

Analysis Batch: 720-20154  
Prep Batch: 720-20157  
Units: ug/Kg

Instrument ID: Varian 3900G  
Lab File ID: c:\satumws\data\200704\040  
Initial Weight/Volume: 5 g  
Final Weight/Volume: 10 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
Benzene	94	99	69 - 129	5	20		
Chlorobenzene	100	106	61 - 121	6	20		
1,1-Dichloroethene	110	117	65 - 125	6	20		
Toluene	94	101	70 - 130	7	20		
Trichloroethene	86	90	74 - 134	5	20		
Surrogate	LCS % Rec		LCSD % Rec		Acceptance Limits		
4-Bromofluorobenzene	109		107		60 - 140		
1,2-Dichloroethane-d4 (Surr)	111		109		60 - 140		
Toluene-d8 (Surr)	98		101		70 - 130		

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

**Brewer, Melissa**

---

**From:** SFelton@Geosyntec.com  
**Sent:** Monday, April 02, 2007 12:00 PM  
**To:** Brewer, Melissa  
**Subject:** RE: Sample Login Confirmation for 720-8466: Hopyard

The COC is incorrect, it should be B37-42-46. The last two digits on the sample ID are the depths the sample was collected at. Remove the apostrophe at the end. So sample SG-5-5' needs to be SG-5-5.

---

**From:** Brewer, Melissa [mailto:mbrewer@stl-inc.com]  
**Sent:** Monday, April 02, 2007 11:46 AM  
**To:** Scott Felton  
**Subject:** Sample Login Confirmation for 720-8466: Hopyard

Please see Receipt Checklist for labelling problem. (B37-42-45' COC and label do not match. We used ID from COC.)

Also, please let me know what to use for your Field IDs for Geotracker. I've logged them in as "B38" for example, "DUP1" for the duplicate, "QCEB1" and "QCTB1". I logged in SG-5-5' as just "SG". Can you please verify whether this will work with the way you registered them in Geotracker, so that your file will upload correctly?

Thanks.

**Melissa Brewer**  
STL San Francisco  
(925) 484-1919  
[mbrewer@stl-inc.com](mailto:mbrewer@stl-inc.com)  
[www.stl-inc.com](http://www.stl-inc.com)  
Leaders in Environmental Testing

Reference: [010129]  
Attachments: 4

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STL

720-8466

STL San Francisco Chain of Custody
1220 Quarry Lane • Pleasanton CA 94566-4756
Phone: (925) 484-1919 • Fax: (925) 484-1096
Email: sflogin@stl-inc.com

Reference #: 104790

Date 3/30/07 Page 1 of 2

Table with columns: Report To, Analysis Request, Sample ID, Date, Time, Mat. rx, Pres. env. Rows include sample IDs like B38-Azene, B38-43-47', B39-24-28', B36-43-47', B37-42-45', B37-24-28', B41-32-36', B41-44-46', DUP1, B42-24-28'.

1 Page 54 of 56 8 9 10

Number of Containers

3

Project Info, Sample Receipt, Relinquished by, Received by. Includes signatures of Nate Mullagh and Joan Mullen, dates, and company names.

04/06/2007



STL

720-8466

STL San Francisco Chain of Custody
1220 Quarry Lane • Pleasanton CA 94566-4756
Phone: (925) 484-1919 • Fax: (925) 484-1096
Email: sflogin@stl-inc.com

Reference #: 104790

Date 3/30/07 Page 2 of 2

Report To

Attn: Scott Felton
Company: Geosyntec
Address: 475 14th Street, Suite 400
Phone: 510-836-3034 Email: sfelton@geosyntec.com
Bill To: Happygard Sampled By: N Mullagh
Attn: Phone:

Analysis Request

- TPH EPA: [ ] 8015 [ ] 8080B [ ] Gas w/ [ ] BTEX [ ] MTBE
Purgeable Aromatics BTEX EPA: [ ] 8021 [ ] 8250B
TEPH EPA 8015M\* [ ] Silica Gel [ ] Diesel [ ] Motor Oil [ ] Other
Fuel Tests EPA 8260B: [ ] Gas [ ] BTEX [ ] Free Oxygenates [ ] OCA [ ] EOB [ ] Ethanol
Purgeable Halocarbons (HVOCS) EPA 8021 by 8260B
Volatile Organics GC/MS (VOCs) EPA 8260B [ ] 624
Semivolatiles GC/MS EPA 8270 [ ] 525
Oil and Grease [ ] Petroleum (EPA 1664) [ ] Total
Pesticides [ ] EPA 8081 [ ] 609 [ ] EPA 8082 [ ] 603
PHAs by [ ] 8570 [ ] 8310
CAM17 Metals (EPA 60107/707-71)
Metals [ ] Lead [ ] LUFT [ ] RCRA [ ] Other
Low Level Metals by EPA 200.86502 (ICP-MS)
WE T (STLC) TCLP
Hexavalent Chromium airt (24h hold time for H2O)
Spec Cond. [ ] Alkalinity [ ] TSS [ ] TDS [ ]
Anions: [ ] Cl [ ] SO4 [ ] NO3 [ ] F [ ] Br [ ] NO2 [ ] PO4

Table with columns: Sample ID, Date, Time, Mat rix, Pres erv. Rows include B42-40-43', SG-5-5', B40-24-28', RCEB, Trip blanks.

11 Page 55 of 56

Number of Containers

Project Info: Project Name: Happygard, Project#: WR0574, PO#: , Credit Card#:
Sample Receipt: # of Containers: , Head Space: , Temp: , Confirms to record:
T A T 5 Day 72h 48h 24h Other: Standard

1) Relinquished by: Nate Mullagh, Signature, Time, Printed Name, Date, Company: Geosyntec Consultants

2) Relinquished by: Signature, Time, Printed Name, Date, Company

3) Relinquished by: Signature, Time, Printed Name, Date, Company

Report: [ ] Routine [ ] Level 3 [ ] Level 4 [ ] EDD [ ] State Tank Fund EDF [ ] Global ID
Special Instructions / Comments: STL-SF TB:032107

1) Received by: Joan Mullen 1202, Signature, Time, Printed Name, Date, Company: STL-SF

2) Received by: Signature, Time, Printed Name, Date, Company

3) Received by: Signature, Time, Printed Name, Date, Company

04/06/2007

## LOGIN SAMPLE RECEIPT CHECK LIST

Client: GeoSyntec Consultants

Job Number: 720-8466-1

**Login Number: 8466**

Question	T/F/NA	Comment
Radioactivity either was not measured or, if measured, is at or below background	NA	
The cooler's custody seal, if present, is intact.	NA	
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.	False	B37-42-45 label ID: B37-42-46 NO TIME ON THE LABEL
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.	False	TRIP BLANKS NO DATE/TIME
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	





24 April 2007

Mr. Scott Felton  
GeoSyntec Consultants  
475 14<sup>th</sup> Street, Suite 400  
Oakland, CA 94612

**SUBJECT: DATA REPORT - GeoSyntec Consultants Project # WR0574/04**  
**Hopyard Cleaners / 2771 Hopyard Avenue, Pleasanton, California**

**TEG Project # 70328D**

Mr. Felton:

Please find enclosed a data report for the samples analyzed from the above referenced project for GeoSyntec Consultants. The samples were analyzed on site in TEG's mobile laboratory. TEG conducted a total of 11 analyses on 11 soil vapor samples.

-- 11 analyses on soil vapors for volatile organic hydrocarbons by EPA method 8260B.

The results of the analyses are summarized in the enclosed tables. Applicable detection limits and calibration data are included in the tables.

1,1 difluoroethane was used as a leak check compound around the probe rods during the soil vapor sampling. No leak check compound was detected in any of the vapor samples reported at or above the DTSC recommended leak check compound reporting limit of 10 ug/L of vapor.

TEG appreciates the opportunity to have provided analytical services to GeoSyntec Consultants on this project. If you have any further questions relating to these data or report, please do not hesitate to contact us.

Sincerely,

Mark Jerpbak  
Director, TEG-Northern California



Geosyntec Consultants # WR0574/04  
 Hopyard Cleaners  
 2771 Hopyard Avenue, Pleasanton, California

TEG Project #70328D

*EPA Method 8260B VOC Analyses of SOIL VAPOR in ug/L of Vapor*

SAMPLE NUMBER:	Probe	SG-1	SG-2	SG-3	SG-3	SG-4
	Blank				dup	
SAMPLE DEPTH (feet):		5.0	5.0	5.0	5.0	5.0
PURGE VOLUME:		1	1	1	1	1
COLLECTION DATE:	3/28/07	3/28/07	3/28/07	3/28/07	3/28/07	3/28/07
COLLECTION TIME:	08:55	10:33	12:45	10:50	11:24	11:06
DILUTION FACTOR (VOCs):	1	1	1	1	1	1
	RL					
Dichlorodifluoromethane	0.10	nd	nd	nd	nd	nd
Vinyl Chloride	0.10	nd	nd	nd	nd	nd
Chloroethane	0.10	nd	nd	nd	nd	nd
Trichlorofluoromethane	0.10	nd	nd	nd	nd	nd
1,1-Dichloroethene	0.10	nd	nd	nd	nd	nd
1,1,2-Trichloro-trifluoroethane	0.10	nd	nd	nd	nd	nd
Methylene Chloride	0.10	nd	nd	nd	nd	nd
trans-1,2-Dichloroethene	0.10	nd	nd	nd	nd	nd
1,1-Dichloroethane	0.10	nd	nd	nd	nd	nd
<b>cis-1,2-Dichloroethene</b>	0.10	nd	nd	nd	nd	nd
Chloroform	0.10	nd	nd	nd	nd	nd
1,1,1-Trichloroethane	0.10	nd	nd	nd	nd	nd
Carbon Tetrachloride	0.10	nd	nd	nd	nd	nd
1,2-Dichloroethane	0.10	nd	nd	nd	nd	nd
<b>Benzene</b>	0.10	nd	nd	0.14	0.18	0.11
<b>Trichloroethene</b>	0.10	nd	nd	nd	nd	0.20
<b>Toluene</b>	0.20	nd	0.31	0.30	0.50	0.41
1,1,2-Trichloroethane	0.10	nd	nd	nd	nd	nd
<b>Tetrachloroethene</b>	0.10	nd	1.0	1.7	0.21	0.14
Ethylbenzene	0.10	nd	nd	nd	nd	nd
1,1,1,2-Tetrachloroethane	0.10	nd	nd	nd	nd	nd
<b>m,p-Xylene</b>	0.20	nd	nd	0.25	0.21	nd
o-Xylene	0.10	nd	nd	nd	nd	nd
1,1,2,2-Tetrachloroethane	0.10	nd	nd	nd	nd	nd
1,1 Difluoroethane (leak check)	10	nd	nd	nd	nd	nd
Surrogate Recovery (DBFM)		88%	91%	93%	88%	92%
Surrogate Recovery (1,2-DCA-d4)		91%	95%	99%	92%	93%
Surrogate Recovery (Toluene-d8)		74%	74%	72%	74%	71%

'RL' Indicates reporting limit at a dilution factor of 1  
 'nd' Indicates not detected at listed reporting limits

Analyses performed in TEG-Northern California's lab  
 Analyses performed by: Mr. John Henkelman



Geosyntec Consultants # WR0574/04  
 Hopyard Cleaners  
 2771 Hopyard Avenue, Pleasanton, California

TEG Project #70328D

*EPA Method 8260B VOC Analyses of SOIL VAPOR in ug/L of Vapor*

SAMPLE NUMBER:		SG-5	SG-6	SG-7	SG-7	SG-7	SG-8
SAMPLE DEPTH (feet):		5.0	5.0	5.0	5.0	5.0	5.0
PURGE VOLUME:		1	1	1	3	7	1
COLLECTION DATE:		3/28/07	3/28/07	3/28/07	3/28/07	3/28/07	3/28/07
COLLECTION TIME:		13:47	11:38	09:13	09:31	09:50	10:13
DILUTION FACTOR (VOCs):		10	1	1	1	1	1
	RL						
Dichlorodifluoromethane	0.10	nd	nd	nd	nd	nd	nd
Vinyl Chloride	0.10	nd	nd	nd	nd	nd	nd
Chloroethane	0.10	nd	nd	nd	nd	nd	nd
Trichlorofluoromethane	0.10	nd	nd	nd	nd	nd	nd
1,1-Dichloroethene	0.10	nd	nd	nd	nd	nd	nd
1,1,2-Trichloro-trifluoroethane	0.10	nd	nd	nd	nd	nd	nd
Methylene Chloride	0.10	nd	nd	nd	nd	nd	nd
trans-1,2-Dichloroethene	0.10	nd	nd	nd	nd	nd	nd
1,1-Dichloroethane	0.10	nd	nd	nd	nd	nd	nd
<b>cis-1,2-Dichloroethene</b>	0.10	1.2	nd	nd	nd	nd	nd
Chloroform	0.10	nd	nd	nd	nd	nd	nd
1,1,1-Trichloroethane	0.10	nd	nd	nd	nd	nd	nd
Carbon Tetrachloride	0.10	nd	nd	nd	nd	nd	nd
1,2-Dichloroethane	0.10	nd	nd	nd	nd	nd	nd
<b>Benzene</b>	0.10	nd	nd	0.13	nd	nd	nd
<b>Trichloroethene</b>	0.10	7.5	nd	nd	nd	nd	nd
<b>Toluene</b>	0.20	nd	0.36	0.50	0.27	0.29	0.38
1,1,2-Trichloroethane	0.10	nd	nd	nd	nd	nd	nd
<b>Tetrachloroethene</b>	0.10	41	4.1	nd	nd	nd	nd
Ethylbenzene	0.10	nd	nd	nd	nd	nd	nd
1,1,1,2-Tetrachloroethane	0.10	nd	nd	nd	nd	nd	nd
<b>m,p-Xylene</b>	0.20	nd	0.28	0.25	nd	nd	0.22
o-Xylene	0.10	nd	nd	nd	nd	nd	nd
1,1,2,2-Tetrachloroethane	0.10	nd	nd	nd	nd	nd	nd
1,1 Difluoroethane (leak check)	10	nd	nd	nd	nd	nd	nd
Surrogate Recovery (DBFM)		93%	94%	86%	89%	91%	89%
Surrogate Recovery (1,2-DCA-d4)		99%	100%	95%	96%	95%	95%
Surrogate Recovery (Toluene-d8)		73%	72%	74%	72%	73%	73%

'RL' Indicates reporting limit at a dilution factor of 1  
 'nd' Indicates not detected at listed reporting limits

Analyses performed in TEG-Northern California's lab  
 Analyses performed by: Mr. John Henkelman



Geosyntec Consultants # WR0574/04  
Hopyard Cleaners  
2771 Hopyard Avenue, Pleasanton, California

TEG Project #70328D

CALIBRATION STANDARDS - Initial Calibration / LCS

Instrument: Agilent 5973N MSD

COMPOUND	INITIAL CALIBRATION		LCS	
	RF	%RSD	RF	%DIFF
Dichlorodifluoromethane*	0.327	12.3%	0.342	4.6%
Vinyl Chloride*	0.479	13.0%	0.502	4.8%
Chloroethane*	0.303	16.1%	0.329	8.6%
Trichlorofluoromethane*	0.807	13.6%	0.853	5.7%
1,1-Dichloroethene	0.444	11.2%	0.458	3.2%
1,1,2-Trichloro-trifluoroethane*	0.544	10.5%	0.533	2.0%
Methylene Chloride	0.403	13.8%	0.430	6.7%
trans-1,2-Dichloroethene	0.441	11.6%	0.489	10.9%
1,1-Dichloroethane	0.496	12.3%	0.506	2.0%
cis-1,2-Dichloroethene	0.346	17.6%	0.330	4.6%
Chloroform	0.503	10.3%	0.496	1.4%
1,1,1-Trichloroethane	0.499	16.9%	0.472	5.4%
Carbon Tetrachloride	0.511	10.5%	0.472	7.6%
1,2-Dichloroethane	0.327	11.6%	0.342	4.6%
Benzene	1.268	15.5%	1.254	1.1%
Trichloroethene	0.307	16.4%	0.295	3.9%
Toluene	0.831	18.5%	0.804	3.2%
1,1,2-Trichloroethane	0.168	11.5%	0.166	1.2%
Tetrachloroethene	0.441	14.6%	0.403	8.6%
Ethylbenzene	0.726	17.6%	0.666	8.3%
1,1,1,2-Tetrachloroethane	0.442	14.7%	0.420	5.0%
m,p-Xylene	0.951	18.9%	0.844	11.3%
o-Xylene	0.800	17.0%	0.768	4.0%
1,1,2,2-Tetrachloroethane	0.516	19.0%	0.553	7.2%

ACCEPTABLE LIMITS:

20.0%

15.0%

\*\*\* INDICATES RSD NOT TO EXCEED 30% & LCS NOT TO EXCEED 25%

April 17, 2007

Mr. Scott Felton  
GeoSyntec Consultants, Inc.  
475 14th Street, Suite 450  
Oakland, CA 94612

**RE: P2700859**  
**Hopyard/WR0574/04**

Dear Mr. Felton:

Enclosed are the results of the sample(s) submitted to our laboratory on March 30, 2007.  
For your reference, these analyses have been assigned our service request number P2700859.

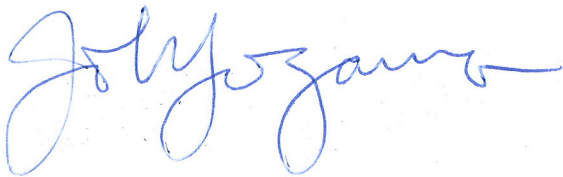
All analyses were performed in accordance with our laboratory's quality assurance program. Results are intended to be considered in their entirety and apply only to the samples analyzed. Columbia Analytical Services is not responsible for use of less than the complete report. Your report contains 13 pages.

Columbia Analytical Services is certified by the California Department of Health Services, Certificate No. 2380; Arizona Department of Health Services, Certificate No. AZ0694; New Jersey Department of Environmental Protection, NELAP Laboratory Certification ID #CA009; New York State Department of Health, NELAP NY Lab ID No: 11221; Oregon Environmental Laboratory Accreditation Program, NELAP ID: CA20007; The American Industrial Hygiene Association, Laboratory #101661. Please contact me for specific method(s) and analyte(s) corresponding to a particular certification.

If you have any questions, please call me at (805) 526-7161.

Respectfully submitted,

**Columbia Analytical Services, Inc.**



John Yokoyama  
Operations Manager

## LABORATORY REPORT

Client: GEOSYNTEC CONSULTANTS, INC. Date of Report: 04/17/07  
Address: 475 14th Street, Suite 450 Date Received: 03/30/07  
Oakland, CA 94612 CAS Project No: P2700859  
Contact: Mr. Scott Felton Purchase Order: Verbal  
Client Project ID: Hopyard/WR0574/04

Two (2) Stainless Steel Summa Canisters labeled: "SG-5-DUP" "FB-1"

The samples were received at the laboratory under chain of custody on March 30, 2007. The samples were received intact. Please refer to the sample acceptance check form for additional information. The results reported herein are applicable only to the condition of the samples at the time that they were received at the laboratory.

Volatile Organic Compound Analysis

The samples were analyzed by combined gas chromatography/mass spectrometry (GC/MS) for volatile organic compounds and 1,1-difluoroethane as tentatively identified compound. The analyses were performed according to the methodology outlined in EPA Method TO-15. The analyses were performed by gas chromatography/mass spectrometry, utilizing a direct cryogenic trapping technique. The analytical system used was comprised of an Agilent Model 5975 Binert GC/MS/DS interfaced to a Tekmar AutoCan Elite whole air inlet system/cryogenic concentrator. A 100% Dimethylpolysiloxane capillary column (RT<sub>x</sub>-1, Restek Corporation, Bellefonte, PA) was used to achieve chromatographic separation.

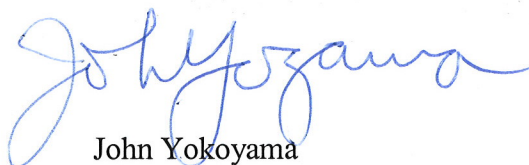
The results of analyses are given on the attached data sheets. All results are intended to be considered in their entirety, and Columbia Analytical Services, Inc. (CAS) is not responsible for utilization of less than the complete report.

Reviewed and Approved:

Reviewed and Approved:



Chris Parnell  
GCMS-VOA Team Leader  
Air Quality Laboratory



John Yokoyama  
Operations Manager  
Air Quality Laboratory

**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

Page 1 of 3

**Client:** GeoSyntec Consultants, Inc.  
**Client Sample ID:** SG-5-DUP  
**Client Project ID:** Hopyard/WR0574/04

CAS Project ID: P2700859  
 CAS Sample ID: P2700859-001

**Test Code:** EPA TO-15  
**Instrument ID:** Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13  
**Analyst:** Chris Parnell  
**Sampling Media:** Summa Canister  
**Test Notes:**  
**Container ID:** SC00699

**Date Collected:** 3/28/07  
**Date Received:** 3/30/07  
**Date(s) Analyzed:** 4/12/07  
**Volume(s) Analyzed:** 0.0015 Liter(s)

Pi 1 = 0.4      Pf 1 = 3.9

Can D.F. = 1.23

CAS #	Compound	Result µg/m <sup>3</sup>	MRL µg/m <sup>3</sup>	Result ppbV	MRL ppbV	Data Qualifier
74-87-3	Chloromethane	ND	820	ND	400	
75-01-4	Vinyl Chloride	ND	820	ND	320	
74-83-9	Bromomethane	ND	820	ND	210	
75-00-3	Chloroethane	ND	820	ND	310	
67-64-1	Acetone	ND	4,100	ND	1,700	
75-69-4	Trichlorofluoromethane	ND	820	ND	150	
75-35-4	1,1-Dichloroethene	ND	820	ND	210	
75-09-2	Methylene chloride	ND	820	ND	240	
76-13-1	Trichlorotrifluoroethane	ND	820	ND	110	
75-15-0	Carbon Disulfide	ND	820	ND	260	
156-60-5	trans-1,2-Dichloroethene	ND	820	ND	210	
75-34-3	1,1-Dichloroethane	ND	820	ND	200	
1634-04-4	Methyl tert-Butyl Ether	ND	820	ND	230	
108-05-4	Vinyl Acetate	ND	820	ND	230	
78-93-3	2-Butanone (MEK)	ND	820	ND	280	
156-59-2	cis-1,2-Dichloroethene	ND	820	ND	210	
67-66-3	Chloroform	ND	820	ND	170	
107-06-2	1,2-Dichloroethane	ND	820	ND	200	
71-55-6	1,1,1-Trichloroethane	ND	820	ND	150	
71-43-2	Benzene	ND	820	ND	260	
56-23-5	Carbon Tetrachloride	ND	820	ND	130	
78-87-5	1,2-Dichloropropane	ND	820	ND	180	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Verified By: RC      Date: 4/12/07

**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

Page 2 of 3

**Client:** GeoSyntec Consultants, Inc.  
**Client Sample ID:** SG-5-DUP  
**Client Project ID:** Hopyard/WR0574/04

CAS Project ID: P2700859  
 CAS Sample ID: P2700859-001

**Test Code:** EPA TO-15  
**Instrument ID:** Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13  
**Analyst:** Chris Parnell  
**Sampling Media:** Summa Canister  
**Test Notes:**  
**Container ID:** SC00699

**Date Collected:** 3/28/07  
**Date Received:** 3/30/07  
**Date(s) Analyzed:** 4/12/07  
**Volume(s) Analyzed:** 0.0015 Liter(s)

Pi 1 = 0.4

Pf 1 = 3.9

Can D.F. = 1.23

CAS #	Compound	Result µg/m <sup>3</sup>	MRL µg/m <sup>3</sup>	Result ppbV	MRL ppbV	Data Qualifier
75-27-4	Bromodichloromethane	ND	820	ND	120	
79-01-6	Trichloroethene	6,500	820	1,200	150	
10061-01-5	cis-1,3-Dichloropropene	ND	820	ND	180	
108-10-1	4-Methyl-2-pentanone	ND	820	ND	200	
10061-02-6	trans-1,3-Dichloropropene	ND	820	ND	180	
79-00-5	1,1,2-Trichloroethane	ND	820	ND	150	
108-88-3	Toluene	ND	820	ND	220	
591-78-6	2-Hexanone	ND	820	ND	200	
124-48-1	Dibromochloromethane	ND	820	ND	96	
106-93-4	1,2-Dibromoethane	ND	820	ND	110	
127-18-4	Tetrachloroethene	64,000	820	9,500	120	
108-90-7	Chlorobenzene	ND	820	ND	180	
100-41-4	Ethylbenzene	ND	820	ND	190	
179601-23-1	<i>m,p</i> -Xylenes	ND	820	ND	190	
75-25-2	Bromoform	ND	820	ND	79	
100-42-5	Styrene	ND	820	ND	190	
95-47-6	<i>o</i> -Xylene	ND	820	ND	190	
79-34-5	1,1,2,2-Tetrachloroethane	ND	820	ND	120	
541-73-1	1,3-Dichlorobenzene	ND	820	ND	140	
106-46-7	1,4-Dichlorobenzene	ND	820	ND	140	
95-50-1	1,2-Dichlorobenzene	ND	820	ND	140	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Verified By: RC Date: 4/13/07



COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Page 3 of 3

Client: GeoSyntec Consultants, Inc.  
Client Sample ID: SG-5-DUP  
Client Project ID: Hopyard/WR0574/04

CAS Project ID: P2700859  
CAS Sample ID: P2700859-001

Tentatively Identified Compounds

Test Code: EPA TO-15  
Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13  
Analyst: Chris Parnell  
Sampling Media: Summa Canister  
Test Notes:  
Container ID: SC00699

Date Collected: 3/28/07  
Date Received: 3/30/07  
Date Analyzed: 4/12/07  
Volume(s) Analyzed: 0.0015 Liter(s)

Pi 1 = 0.4      Pf 1 = 3.9  
Can D.F. = 1.23

GC / MS Ret. Time	Compound Identification	Concentration µg/m <sup>3</sup>	Data Qualifier
	1,1-Difluoroethane	NF	

NF = Compound was searched for, but not found.

**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

Page 1 of 3

**Client:** GeoSyntec Consultants, Inc.  
**Client Sample ID:** FB-1  
**Client Project ID:** Hopyard/WR0574/04

CAS Project ID: P2700859  
 CAS Sample ID: P2700859-002

**Test Code:** EPA TO-15  
**Instrument ID:** Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13  
**Analyst:** Chris Parnell  
**Sampling Media:** Summa Canister  
**Test Notes:**  
**Container ID:** SC00369

**Date Collected:** 3/28/07  
**Date Received:** 3/30/07  
**Date(s) Analyzed:** 4/12/07  
**Volume(s) Analyzed:** 1.00 Liter(s)

D.F. = 1.00

CAS #	Compound	Result µg/m <sup>3</sup>	MRL µg/m <sup>3</sup>	Result ppbV	MRL ppbV	Data Qualifier
74-87-3	Chloromethane	ND	1.0	ND	0.48	
75-01-4	Vinyl Chloride	ND	1.0	ND	0.39	
74-83-9	Bromomethane	ND	1.0	ND	0.26	
75-00-3	Chloroethane	ND	1.0	ND	0.38	
67-64-1	Acetone	ND	5.0	ND	2.1	
75-69-4	Trichlorofluoromethane	ND	1.0	ND	0.18	
75-35-4	1,1-Dichloroethene	ND	1.0	ND	0.25	
75-09-2	Methylene chloride	ND	1.0	ND	0.29	
76-13-1	Trichlorotrifluoroethane	ND	1.0	ND	0.13	
75-15-0	Carbon Disulfide	ND	1.0	ND	0.32	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ND	0.25	
75-34-3	1,1-Dichloroethane	ND	1.0	ND	0.25	
1634-04-4	Methyl tert-Butyl Ether	ND	1.0	ND	0.28	
108-05-4	Vinyl Acetate	ND	1.0	ND	0.28	
78-93-3	2-Butanone (MEK)	ND	1.0	ND	0.34	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	ND	0.25	
67-66-3	Chloroform	ND	1.0	ND	0.20	
107-06-2	1,2-Dichloroethane	ND	1.0	ND	0.25	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ND	0.18	
71-43-2	Benzene	ND	1.0	ND	0.31	
56-23-5	Carbon Tetrachloride	ND	1.0	ND	0.16	
78-87-5	1,2-Dichloropropane	ND	1.0	ND	0.22	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Verified By: RC Date: 4/13/07

**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

Page 2 of 3

**Client:** GeoSyntec Consultants, Inc.  
**Client Sample ID:** FB-1  
**Client Project ID:** Hopyard/WR0574/04

CAS Project ID: P2700859  
 CAS Sample ID: P2700859-002

**Test Code:** EPA TO-15  
**Instrument ID:** Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13  
**Analyst:** Chris Parnell  
**Sampling Media:** Summa Canister  
**Test Notes:**  
**Container ID:** SC00369

**Date Collected:** 3/28/07  
**Date Received:** 3/30/07  
**Date(s) Analyzed:** 4/12/07  
**Volume(s) Analyzed:** 1.00 Liter(s)

D.F. = 1.00

CAS #	Compound	Result µg/m <sup>3</sup>	MRL µg/m <sup>3</sup>	Result ppbV	MRL ppbV	Data Qualifier
75-27-4	Bromodichloromethane	ND	1.0	ND	0.15	
79-01-6	Trichloroethene	1.3	1.0	0.24	0.19	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	ND	0.22	
108-10-1	4-Methyl-2-pentanone	ND	1.0	ND	0.24	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	ND	0.22	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ND	0.18	
108-88-3	Toluene	ND	1.0	ND	0.27	
591-78-6	2-Hexanone	ND	1.0	ND	0.24	
124-48-1	Dibromochloromethane	ND	1.0	ND	0.12	
106-93-4	1,2-Dibromoethane	ND	1.0	ND	0.13	
127-18-4	Tetrachloroethene	1.4	1.0	0.20	0.15	
108-90-7	Chlorobenzene	ND	1.0	ND	0.22	
100-41-4	Ethylbenzene	ND	1.0	ND	0.23	
179601-23-1	<i>m,p</i> -Xylenes	1.3	1.0	0.30	0.23	
75-25-2	Bromoform	ND	1.0	ND	0.097	
100-42-5	Styrene	ND	1.0	ND	0.23	
95-47-6	<i>o</i> -Xylene	ND	1.0	ND	0.23	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ND	0.15	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ND	0.17	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ND	0.17	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ND	0.17	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Verified By: RG Date: 4/12/07

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Page 3 of 3

Client: **GeoSyntec Consultants, Inc.**  
Client Sample ID: **FB-1**  
Client Project ID: **Hopyard/WR0574/04**

CAS Project ID: P2700859  
CAS Sample ID: P2700859-002

**Tentatively Identified Compounds**

Test Code: EPA TO-15  
Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13  
Analyst: Chris Parnell  
Sampling Media: Summa Canister  
Test Notes:  
Container ID: SC00369

Date Collected: 3/28/07  
Date Received: 3/30/07  
Date Analyzed: 4/12/07  
Volume(s) Analyzed: 1.00 Liter(s)

D.F. = 1.00

GC / MS Ret. Time	Compound Identification	Concentration $\mu\text{g}/\text{m}^3$	Data Qualifier
	1,1-Difluoroethane	NF	

NF = Compound was searched for, but not found.

**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

Page 1 of 3

**Client:** GeoSyntec Consultants, Inc.  
**Client Sample ID:** Method Blank  
**Client Project ID:** Hopyard/WR0574/04

CAS Project ID: P2700859  
 CAS Sample ID: P070412-MB

**Test Code:** EPA TO-15  
**Instrument ID:** Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13  
**Analyst:** Chris Parnell  
**Sampling Media:** Summa Canister  
**Test Notes:**

**Date Collected:** NA  
**Date Received:** NA  
**Date(s) Analyzed:** 4/12/07  
**Volume(s) Analyzed:** 1.00 Liter(s)

D.F. = 1.00

CAS #	Compound	Result µg/m <sup>3</sup>	MRL µg/m <sup>3</sup>	Result ppbV	MRL ppbV	Data Qualifier
74-87-3	Chloromethane	ND	1.0	ND	0.48	
75-01-4	Vinyl Chloride	ND	1.0	ND	0.39	
74-83-9	Bromomethane	ND	1.0	ND	0.26	
75-00-3	Chloroethane	ND	1.0	ND	0.38	
67-64-1	Acetone	ND	5.0	ND	2.1	
75-69-4	Trichlorofluoromethane	ND	1.0	ND	0.18	
75-35-4	1,1-Dichloroethene	ND	1.0	ND	0.25	
75-09-2	Methylene chloride	ND	1.0	ND	0.29	
76-13-1	Trichlorotrifluoroethane	ND	1.0	ND	0.13	
75-15-0	Carbon Disulfide	ND	1.0	ND	0.32	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ND	0.25	
75-34-3	1,1-Dichloroethane	ND	1.0	ND	0.25	
1634-04-4	Methyl tert-Butyl Ether	ND	1.0	ND	0.28	
108-05-4	Vinyl Acetate	ND	1.0	ND	0.28	
78-93-3	2-Butanone (MEK)	ND	1.0	ND	0.34	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	ND	0.25	
67-66-3	Chloroform	ND	1.0	ND	0.20	
107-06-2	1,2-Dichloroethane	ND	1.0	ND	0.25	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ND	0.18	
71-43-2	Benzene	ND	1.0	ND	0.31	
56-23-5	Carbon Tetrachloride	ND	1.0	ND	0.16	
78-87-5	1,2-Dichloropropane	ND	1.0	ND	0.22	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Verified By:     Rc     Date: 4/13/07

**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

Page 2 of 3

**Client:** GeoSyntec Consultants, Inc.  
**Client Sample ID:** Method Blank  
**Client Project ID:** Hopyard/WR0574/04

CAS Project ID: P2700859  
 CAS Sample ID: P070412-MB

**Test Code:** EPA TO-15  
**Instrument ID:** Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13  
**Analyst:** Chris Parnell  
**Sampling Media:** Summa Canister  
**Test Notes:**

**Date Collected:** NA  
**Date Received:** NA  
**Date(s) Analyzed:** 4/12/07  
**Volume(s) Analyzed:** 1.00 Liter(s)

D.F. = 1.00

CAS #	Compound	Result µg/m <sup>3</sup>	MRL µg/m <sup>3</sup>	Result ppbV	MRL ppbV	Data Qualifier
75-27-4	Bromodichloromethane	ND	1.0	ND	0.15	
79-01-6	Trichloroethene	ND	1.0	ND	0.19	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	ND	0.22	
108-10-1	4-Methyl-2-pentanone	ND	1.0	ND	0.24	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	ND	0.22	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ND	0.18	
108-88-3	Toluene	ND	1.0	ND	0.27	
591-78-6	2-Hexanone	ND	1.0	ND	0.24	
124-48-1	Dibromochloromethane	ND	1.0	ND	0.12	
106-93-4	1,2-Dibromoethane	ND	1.0	ND	0.13	
127-18-4	Tetrachloroethene	ND	1.0	ND	0.15	
108-90-7	Chlorobenzene	ND	1.0	ND	0.22	
100-41-4	Ethylbenzene	ND	1.0	ND	0.23	
179601-23-1	<i>m,p</i> -Xylenes	ND	1.0	ND	0.23	
75-25-2	Bromoform	ND	1.0	ND	0.097	
100-42-5	Styrene	ND	1.0	ND	0.23	
95-47-6	<i>o</i> -Xylene	ND	1.0	ND	0.23	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ND	0.15	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ND	0.17	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ND	0.17	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ND	0.17	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Verified By:     Rc     Date:     4/12/07

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Page 3 of 3

Client: **GeoSyntec Consultants, Inc.**  
Client Sample ID: **Method Blank**  
Client Project ID: **Hopyard/WR0574/04**

CAS Project ID: P2700859  
CAS Sample ID: P070412-MB

**Tentatively Identified Compounds**

Test Code: EPA TO-15  
Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13  
Analyst: Chris Parnell  
Sampling Media: Summa Canister  
Test Notes:

Date Collected: NA  
Date Received: NA  
Date Analyzed: 4/12/07  
Volume(s) Analyzed: 1.00 Liter(s)

D.F. = 1.00

GC / MS Ret. Time	Compound Identification	Concentration µg/m <sup>3</sup>	Data Qualifier
	1,1-Difluoroethane	NF	

NF = Compound was searched for, but not found.

**Columbia Analytical Services, Inc.**  
**Sample Acceptance Check Form**

Client: GeoSyntec Consultants, Inc.

Work order: P2700859

Project: Hopyard/WR0574/04

Sample(s) received on: 3/30/07

Date opened: 3/30/07

by: LK

*Note:* This form is used for all samples received by CAS. The use of this form for custody seals is strictly meant to indicate presence/absence and not as an indication of compliance or nonconformity. Thermal preservation and pH will only be evaluated either at the request of the client or as required by the method/SOP.

- |   | <u>Yes</u>                          | <u>No</u>                | <u>N/A</u>                          |
|---|-------------------------------------|--------------------------|-------------------------------------|
| 1 Were <b>sample containers</b> properly marked with client sample ID?                                    | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            |
| 2 Did <b>sample containers</b> arrive in good condition?  | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            |
| 3 Were <b>chain-of-custody</b> papers used and filled out?  | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            |
| 4 Did <b>sample container labels</b> and/or tags agree with custody papers?                               | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            |
| 5 Was <b>sample volume</b> received adequate for analysis?  | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            |
| 6 Are samples within specified holding times?   | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            |
| 7 Was proper <b>temperature</b> (thermal preservation) of cooler at receipt adhered to?                   | <input type="checkbox"/>            | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| Cooler Temperature <u>NA</u> °C   |                                     |                          |                                     |
| Blank Temperature <u>NA</u> °C  |                                     |                          |                                     |
| 8 Were <b>custody seals</b> on outside of cooler/Box?   | <input type="checkbox"/>            | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| Location of seal(s)? _____ Sealing Lid?   | <input type="checkbox"/>            | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| Were signature and date included?   | <input type="checkbox"/>            | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| Were seals intact?  | <input type="checkbox"/>            | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| Were custody seals on outside of sample container?  | <input type="checkbox"/>            | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| Location of seal(s)? _____ Sealing Lid?   | <input type="checkbox"/>            | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| Were signature and date included?   | <input type="checkbox"/>            | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| Were seals intact?  | <input type="checkbox"/>            | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 9 Is pH (acid) <b>preservation</b> necessary, according to method/SOP or Client specified information?    | <input type="checkbox"/>            | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| Is there a client indication that the submitted samples are <b>pH</b> (acid) preserved?                   | <input type="checkbox"/>            | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| Were <b>VOA vials</b> checked for presence/absence of air bubbles?  | <input type="checkbox"/>            | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| Does the client/method/SOP require that the analyst check the sample pH and <u>if necessary</u> alter it? | <input type="checkbox"/>            | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 10 <b>Tubes:</b> Are the tubes capped and intact?   | <input type="checkbox"/>            | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| Do they contain moisture?   | <input type="checkbox"/>            | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 11 <b>Badges:</b> Are the badges properly capped and intact?  | <input type="checkbox"/>            | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| Are dual bed badges separated and individually capped and intact?   | <input type="checkbox"/>            | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Lab Sample ID	Required pH <small>(as received, if required)</small>	pH <small>(as received, if required)</small>	VOA Headspace <small>(Presence/Absence)</small>	Receipt / Preservation Comments
P2700859-001			NA	
P2700859-002			NA	

Explain any discrepancies: (include lab sample ID numbers): \_\_\_\_\_





# Air - Chain of Custody Record & Analytical Service Request

2655 Park Center Drive, Suite A  
Simi Valley, California 93065  
Phone (805) 526-7161  
Fax (805) 526-7270

Requested Turnaround Time in Business Days (Surcharges) please circle  
1 Day (100%) 2 Day (75%) 3 Day (50%) 4 Day (35%) 5 Day (25%) 10 Day - Standard

CAS Project No.  
P2700859

Company Name & Address (Reporting Information) <u>Geosyntec Consultants</u> <u>475 14th St Suite 400</u> <u>Oakland, CA 94612</u>		Project Name <u>Hopyard</u>		CAS Contact				Analysis Method and/or Analytes	Comments e.g. Actual Preservative or specific instructions
Project Manager <u>Scott Felton</u>		Project Number <u>WR0574/04</u>		TD-15 make reporting limit for 1,1-DCA 18 ug/L dup in flammethane 10mg/m3					
P.O. # / Billing Information <u>Geosyntec Consultants</u> <u>475 14th St Suite 400</u> <u>Oakland, CA 94612</u>		Sampler (Print & Sign) <u>Melissa Asher</u> <u>Melissa A. Asher</u>							
Phone <u>510-836-3534</u>	Fax <u>510-836-3536</u>	Email Address for Result Reporting <u>sfelton@geosyntec.com</u>							
Client Sample ID	Laboratory ID Number	Date Collected	Time Collected	Sample Type (Air/Tube/Solid)	Canister ID (Bar Code # - AC, SC, etc.)	Flow Controller (Bar Code - FC #)	Sample Volume		
<u>SG-5-Dup</u>	<u>1</u>	<u>3/28</u>	<u>12:35</u>	<u>Air</u>	<u>SC0067</u>	<u>---</u>	<u>6L</u>	<u>X</u>	
<u>FB-1</u>	<u>2</u>	<u>3/28</u>	<u>-</u>	<u>Air</u>	<u>SC0036</u>	<u>---</u>	<u>6L</u>	<u>X</u>	

**Report Tier Levels - please select**

Tier I - (Results/Default if not specified) \_\_\_\_\_  
Tier II - (Results + QC) \_\_\_\_\_  
Tier III - (Data Validation Package) 10% Surcharge \_\_\_\_\_  
Tier V - (client specified) \_\_\_\_\_

EDD required Yes / No \_\_\_\_\_  
Type: \_\_\_\_\_ EDD Units: \_\_\_\_\_

Relinquished by: (Signature) <u>Melissa Asher</u>	Date: <u>3/28/07</u>	Time: <u>14:30</u>	Received by: (Signature) <u>FEDEx</u>	Date: _____	Time: _____
Relinquished by: (Signature) <u>FEDEx</u>	Date: _____	Time: _____	Received by: (Signature) <u>James K... ..</u>	Date: <u>3/29/07</u>	Time: <u>0928</u>
Relinquished by: (Signature) <u>W</u>	Date: _____	Time: _____	Received by: (Signature) _____	Date: _____	Time: _____

Project Requirements (MRLs, QAPP)

11460

Cooler / Blank

Temperature \_\_\_\_\_ °C

# **ATTACHMENT 3**

## **BORING LOGS**

### Project: Hopyard Cleaners

Location: 2771 Hopyard Road, Pleasanton

Project Number: WR0574 / 04

#### EMPIRICAL CORRELATIONS WITH STANDARD PENETRATION RESISTANCE N VALUES \*

	N Value * (Blows/ft)	Consistency	Unconfined Compressive Strength (tons/sq ft)		N Value * (Blows/ft)	Relative Density
<b>FINE GRAINED SOILS</b>	0 - 2	Very Soft	<0.25	<b>COARSE GRAINED SOILS</b>	0 - 4	Very Loose
	3 - 4	Soft	0.25 - 0.50		5 - 10	Loose
	5 - 8	Medium Stiff	0.50 - 1.00		11 - 30	Medium Dense
	9 - 15	Stiff	1.00 - 2.00		31 - 50	Dense
	16 - 30	Very Stiff	2.00 - 4.00		>50	Very Dense
	>30	Hard	>4.00			

\* ASTM D 1586; number of blows of 140-pound hammer falling 30 inches to drive a 2-inch-O.D., 1.4-inch-I.D. sampler one foot.

#### UNIFIED SOIL CLASSIFICATION AND SYMBOL CHART

MAJOR DIVISIONS		SYMBOLS	DESCRIPTIONS	
COARSE GRAINED SOILS	GRAVEL AND GRAVELLY SOILS	GW	WELL-GRADED GRAVELS, GRAVEL-SAND MIXTURES, LITTLE OR NO FINES	
		GP	POORLY GRADED GRAVELS, GRAVEL-SAND MIXTURES, LITTLE OR NO FINES	
		GM	SILTY GRAVELS, GRAVEL-SAND-SILT MIXTURES	
	MORE THAN 50% OF COARSE FRACTION RETAINED ON NO.4 SIEVE	GRAVELS WITH FINES	GC	CLAYEY GRAVELS, GRAVEL-SAND-CLAY MIXTURES
			SW	WELL GRADED SANDS, GRAVELLY SANDS, LITTLE OR NO FINES
			SP	POORLY GRADED SANDS, GRAVELLY SANDS, LITTLE OR NO FINES
MORE THAN 50% OF MATERIAL COARSER THAN NO. 200 SIEVE SIZE	SAND AND SANDY SOILS	SM	SILTY SANDS, SAND-SILT MIXTURES	
		CLEAN SANDS	SC	CLAYEY SANDS, SAND-CLAY MIXTURES
			CL	INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, GRAVELLY CLAYS, SANDY CLAYS, SILTY CLAYS, LEAN CLAYS
FINE GRAINED SOILS	SILTS AND CLAYS	OL	ORGANIC SILTS AND ORGANIC SILTY CLAYS OF LOW PLASTICITY	
		MH	INORGANIC SILTS, MICACEOUS OR DIATOMACEOUS FINE SANDY OR SILTY SOILS, ELASTIC SILT	
		CH	INORGANIC CLAYS OF HIGH PLASTICITY, FAT CLAYS	
	MORE THAN 50% OF MATERIAL FINER THAN NO. 200 SIEVE SIZE	SILTS AND CLAYS	OH	ORGANIC CLAYS OF MEDIUM TO HIGH PLASTICITY, ORGANIC SILTS
			PT	PEAT, HUMUS, SWAMP SOILS WITH HIGH ORGANIC CONTENT
HIGHLY ORGANIC SOILS				

NOTE: DUAL SYMBOLS USED FOR BORDERLINE CLASSIFICATIONS

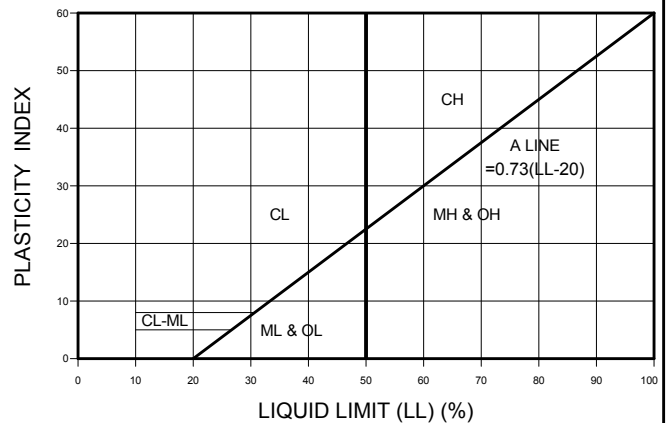
#### PARTICLE SIZE IDENTIFICATION

BOULDERS	>300 mm
COBBLES	75 - 300 mm
GRAVEL: COARSE	19.0 - 75 mm
GRAVEL: FINE	4.75 - 19 mm
SAND: COARSE	2.00 - 4.75 mm
SAND: MEDIUM	0.425 - 2.00 mm
SAND: FINE	0.075 - 0.425 mm
SILT	0.075 - 0.002 mm
CLAY	<0.002 mm

WELL GRADED - HAVING WIDE RANGE OF GRAIN SIZES AND APPRECIABLE AMOUNTS OF ALL INTERMEDIATE PARTICLE SIZES

POORLY GRADED - PREDOMINANTLY ONE GRAIN SIZE, OR HAVING A RANGE OF SIZES WITH SOME INTERMEDIATE SIZES MISSING

#### PLASTICITY CHART



#### SAMPLE SYMBOLS

- Geoprobe or dual-tube acetate liner
- Retained portion of direct push sample
- Hydropunch water sample
- 5-ft continuous dry soil core
- Grab sample
- SPT split spoon drive sampler

#### WELL SYMBOLS

- Neat cement
- Cement-bentonite
- Bentonite seal
- Filter sand
- Screen in filter sand
- Slough / soil backfill

#### WATER LEVEL SYMBOLS

- Water level at time of drilling
- Static water level measured at specified time after drilling/sampling or well completion

#### GENERAL NOTES

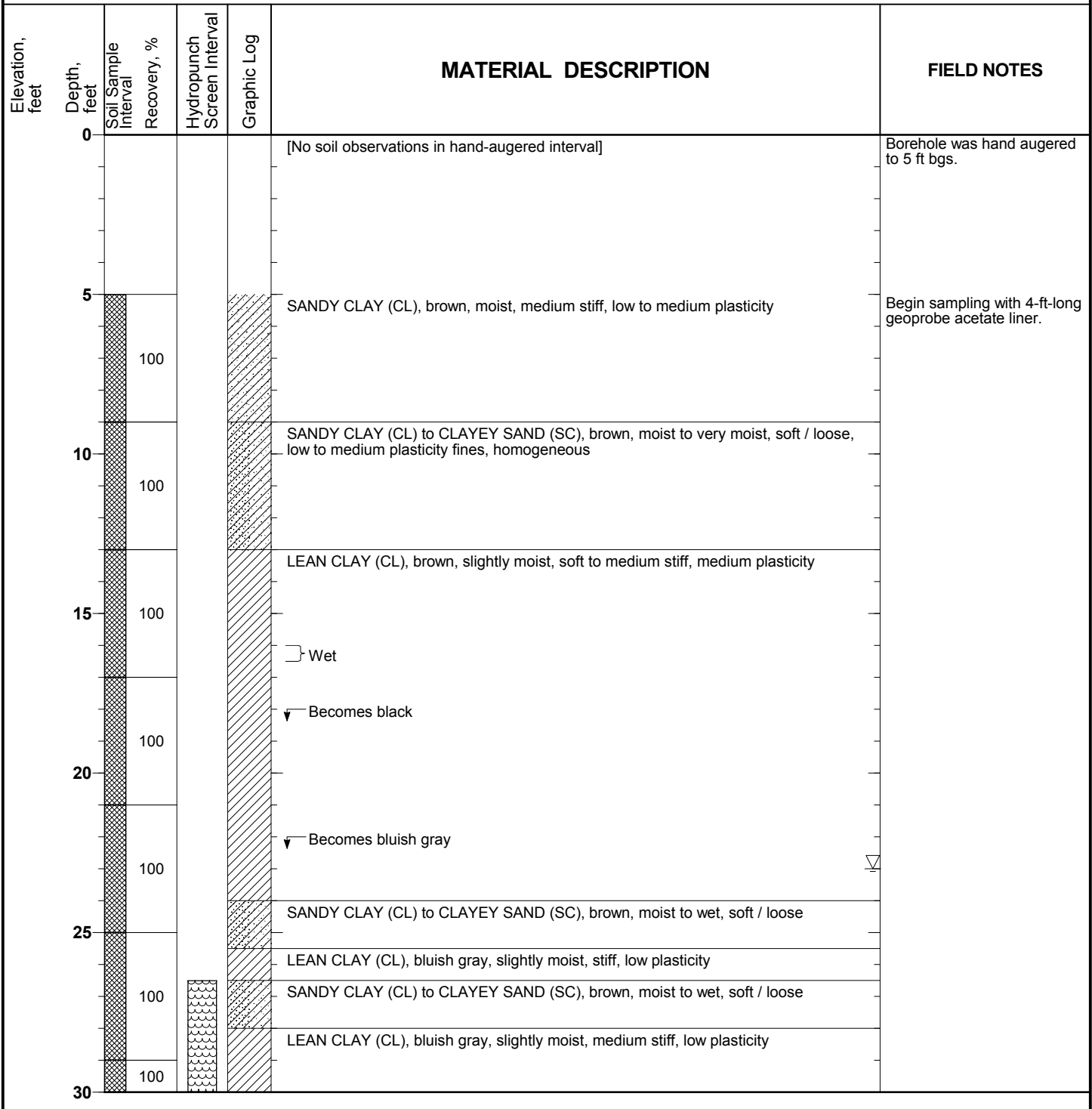
- Soil classifications are based on the Unified Soil Classification System. Soil descriptions and stratum lines are interpretive, and actual changes may be gradual. Field descriptions may have been modified to reflect results of laboratory tests.
- Descriptions on these logs apply only at the specific boring locations and at the time the borings were advanced. They are not warranted to be representative of subsurface conditions at other locations or times.

### Project: Hopyard Cleaners

Location: 2771 Hopyard Road, Pleasanton

Project Number: WR0574 / 04

Start Date	3/29/07	Finish Date	3/29/07	Total Depth Drilled (ft bgs)	48.5
Drilling Method	Geoprobe / Dual-Tube	Drilling Contractor	Gregg Drilling & Testing	Ground Surface Elevation (ft MSL)	Not surveyed
Drill Rig	Marl M-5 with 1-3/4-inch rod	Sampling Method	Acetate geoprobe liner to 32 ft, acetate dual-tube liner below	Groundwater Observations	Approx. 23 feet bgs ATD
Borehole Backfill	Portland Type I/II cement grout	Hammer Weight/Drop	Not applicable	Logger	N. Mullaugh
				Reviewer	S. Felton
Coordinates	Not surveyed		Remarks	No soil samples retained. Groundwater samples collected using Hydropunch with screen retracted at depth intervals indicated in water sampling column below.	



**Project: Hopyard Cleaners**

**Location: 2771 Hopyard Road, Pleasanton**

**Project Number: WR0574 / 04**

Elevation, feet	Depth, feet	Soil Sample Interval	Recovery, %	Hydropunch Screen Interval	Graphic Log	MATERIAL DESCRIPTION	FIELD NOTES
30			100			LEAN CLAY (CL), bluish gray, slightly moist, medium stiff, low plasticity (continued)	Begin using dual-tube system with 1-inch-dia. acetate liner.
			100				
			100			↓ Becomes brown	
35			100				
			100				
			100				
40			100				
			100				
			100			CLAYEY SAND (SC), brown, moist to wet, loose	
			100			LEAN CLAY (CL), brown, slightly moist, medium stiff, low plasticity	
45			100			WELL-GRADED SAND (SW), brown, wet, loose, fine- to medium-grained sand, homogeneous	
			100			SILT (ML), brown, moist, stiff	
			100			SILTY SAND (SM), brown, slightly moist to moist, loose to medium dense	
			100			Bottom of boring at 48.5 feet (refusal)	
50							
55							
60							
65							

### Project: Hopyard Cleaners

Location: 2771 Hopyard Road, Pleasanton

Project Number: WR0574 / 04

Start Date	3/30/07	Finish Date	3/30/07	Total Depth Drilled (ft bgs)	45.0
Drilling Method	Geoprobe / Dual-Tube	Drilling Contractor	Gregg Drilling & Testing	Ground Surface Elevation (ft MSL)	Not surveyed
Drill Rig	Marl M-5 with 1-3/4-inch rod	Sampling Method	Acetate geoprobe liner to 34 ft, acetate dual-tube liner below	Groundwater Observations	Approx. 32 feet bgs ATD
Borehole Backfill	Portland Type I/II cement grout	Hammer Weight/Drop	Not applicable	Logger	N. Mullaugh
				Reviewer	S. Felton
Coordinates	Not surveyed				
Remarks	No soil samples retained. Groundwater samples collected using Hydropunch with screen retracted at depth intervals indicated in water sampling column below.				

Elevation, feet	Depth, feet	Soil Sample Interval Recovery, %	Hydropunch Screen Interval	Graphic Log	MATERIAL DESCRIPTION	FIELD NOTES
0					[No soil observations in hand-augered interval]	Borehole was hand augered to 5 ft bgs.
5		100			SILTY CLAY (CL), light brown, moist, medium stiff, low to medium plasticity	Begin sampling with 4-ft-long geoprobe acetate liner.
					CLAYEY SAND (SC), brown, slightly moist, fine- to medium-grained sand	
10		100			SILTY CLAY (CL), light brown, moist, soft, low to medium plasticity	
15		100			LEAN CLAY (CL), light brown, moist, soft to medium stiff, meidum plasticity	
					↓ Becomes bluish gray, medium stiff	
20		100				
25		100				
30		100				

**Project: Hopyard Cleaners**

**Location: 2771 Hopyard Road, Pleasanton**

**Project Number: WR0574 / 04**

Elevation, feet	Depth, feet	Soil Sample Interval	Recovery, %	Hydropunch Screen Interval	Graphic Log	MATERIAL DESCRIPTION	FIELD NOTES
30						LEAN CLAY (CL), bluish gray, moist, medium stiff, medium plasticity (continued)	
	100						
	100					SILTY SAND (SM), light bluish gray, wet, fine-grained sand, ~40% silt, loose to medium dense	
35						SILTY CLAY (CL), light bluish gray, moist to very moist, soft, medium plasticity	Begin using dual-tube system with 1-inch-dia. acetate liner.
	100						
	100					↓ Becomes wet	
40						LEAN CLAY (CL), light brown, moist, stiff, low to medium plasticity	
	100						
	100					WELL-GRADED SAND (SW), light brown, wet, loose, fine- to coarse-grained sand	
45						Bottom of boring at 45.0 feet (refusal)	
	100						
50							
	100						
55							
	100						
60							
	100						
65							