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31 January 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 Fourth Quarter 2006 Groundwater Monitoring and Response to RWQCB Comments to the Monitoring Well Installation Report
Hopyard Cleaners, 2771 Hopyard Road, Pleasanton, California
Self-Monitoring Program No. R5-2006-0059

Dear Mr. Papler:

This report transmits results of the Fourth Quarter 2006 Groundwater Monitoring at the Hopyard Cleaners site (the "Site") in Pleasanton, California and also addresses the RWQCB comments on the Monitoring Well Installation Report submitted on 31 October 2006. 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 (bgs). Well completion details are summarized in Table 1. Well locations relative to the site are shown in Figure 2. A soil gas vapor intrusion evaluation was also performed using the Johnson and Ettinger (J&E) subsurface vapor intrusion model [Johnson and Ettinger, 1991 and USEPA, 2000]. Results from this evaluation are presented in this report.

WORK PERFORMED THIS QUARTER

The three groundwater monitoring wells were installed on 26, 27 and 29 September 2006 and developed on 3 October 2006. A report documenting well installation and development activities was submitted to the RWQCB on 31 October 2006. This is the first quarterly monitoring report for these wells.

The Site monitoring wells were surveyed on 25 October 2006 by Kier & Wright, Civil Engineers and Surveyors, Inc. (Kier & Wright) of Pleasanton, California. The horizontal and vertical position of the top of casing of each monitoring well was surveyed using NAD83 as the horizontal datum and NAVD88 for the vertical datum. Horizontal state plane coordinates and top of casing elevations for the wells are presented in Table 1.

The quarterly groundwater monitoring event was performed on 20 November 2006. During this event, monitoring well MW-3 was developed further since during the first round of development the well dewatered and additional development was believed to be beneficial. The well was bailed, surged and then 20 casing volumes of water were purged. The development log for MW-3 is presented in Attachment 1.

QUARTERLY GROUNDWATER MONITORING

Quarterly groundwater monitoring was performed at the Site on 20 November 2006. 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 14 and 16 ft bgs. This depth corresponds to an elevation approximately between 310 and 312 ft above Mean Sea Level (MSL).

Water level measurements taken during the November 2006 event were used to construct groundwater elevation contours, presented as Figure 2. The water levels measured in the Site monitoring wells in November 2006 indicate a general flow to the northwest (Figure 2) with an average gradient of 0.004 ft/ft (22 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 November 2006 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 and 4.

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 5,700 and 370 μg/L, respectively. These concentrations are higher than previous results from hydropunch groundwater samples collected in the vicinity of MW-2. Based on this result, additional groundwater samples to characterize the lateral extent of contamination are proposed in the Future Work section of this report. The samples collected from MW-1 and MW-3 had concentrations consistent with previous results from hydropunch groundwater samples collected near those wells.

RESULTS OF SOIL GAS VAPOR INTRUSION EVALUATION USING J&E MODEL

In accordance with the Order, vapor intrusion concerns were assessed by evaluating the potential for VOCs to volatilize from the subsurface. This pathway was evaluated using the Johnson and Ettinger (J&E) subsurface vapor intrusion model [Johnson and Ettinger, 1991 and USEPA, 2000] to estimate potential migration of subsurface vapors into indoor air. The J&E model spreadsheets were only used to calculate indoor air concentrations and not to calculate risk.

For the soil gas-to-indoor air pathway, the maximum soil gas concentration of PCE from the September 2006 data (5,200 $\mu g/m^3$) and a sampling depth of 5 feet were used in the J&E model. For the groundwater-to-indoor air pathway, the maximum groundwater concentration from the November 2006 (5,700 $\mu g/L$), along with the average depth to groundwater of 15 feet bgs, were used in the J&E model. 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 vapor intrusion model requires the characterization of several building-specific parameters including building size (area and floor height), ventilation 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.

The results of the J&E model (Table 4) show calculated indoor air concentrations for PCE greater than RWQCB Environmental Screening Level (ESL) for both the soil gas-to-indoor air and groundwater-to-indoor air pathways. The calculated indoor air concentrations for TCE were less than the RWQCB ESL. To confirm the preliminary results and distribution of soil gas, additional soil gas samples will be collected along the sidewalk in front of the buildings and in the vicinity of MW-2. Sample locations are shown on Figure 6 and summarized in Table 5. At each location, soil gas samples will be collected at a depth of approximately 5 ft. Soil gas samples will be retrieved using

direct-push drilling methods (e.g., Geoprobe® sampling system) and will be performed in accordance with the joint RWQCB/DTSC Guidance for Active Soil-Gas Investigations (RWQCB/DTSC, 2003).

Following collection, samples will be delivered to an on-site State-certified mobile laboratory for analysis of VOCs by EPA Method 8260B.

RESPONSE TO RWQCB COMMENTS ON MONITORING WELL INSTALLATION REPORT

This section is organized with the RWQCB comment in *italics* followed by Geosyntec's response to each comment:

Comment 1: Workplan should specify collection of soil-vapor samples adjacent to nearby buildings.

Response: We agree that the soil vapor intrusion pathway should be further investigated. However, using the results from the soil gas samples collected in September 2006 and reported in the Monitoring Well Installation Report [Geosyntec 2006] a preliminary evaluation using the J&E model was performed as described above. The results of the evaluation indicate that modeled indoor air concentrations are greater than RWQCB ESLs for PCE and below RWQCB ESLs for TCE. Therefore, additional soil gas samples will be collected at the locations shown in Figure 6 and summarized in Table 5 to confirm the preliminary J&E results.

Comment 2: J&E model should use highest soil gas result after additional samples are collected.

Response: A preliminary evaluation of soil gas vapor intrusion was performed using the J&E model. Based on these results, additional soil gas samples will be collected at the locations shown in Figure 6. If soil gas sample results are greater than the soil gas sample results collected in September 2006, then the modeled indoor air concentration

for the soil gas-to-indoor air pathway will be recalculated using the highest soil gas concentration.

Comment 3: Deeper zone sampling closer to source using dual wall DPT to fully evaluate impact.

Response: We agree that the vertical extent of contamination should be characterized in order to implement remedial measures. To that end, we are using a phased approach to direct data gathering due to site logistical limitations. As discussed above, some additional horizontal delineation is required. Vertical extent samples were collected close to the source during the January 2006 MIP Investigation [Geosyntec 2006]. MIP-5 was sampled between 42-46 ft bgs and the result was substantially lower than the sample taken from 16-20 ft bgs (Figure 5) indicating that downward migration of the contaminants has been limited. Figure 5 shows results for the hydropunch groundwater samples collected during the MIP Investigation. We recommend delineating the horizontal extents of the plume before taking deeper samples to delineate the vertical extent. A schedule for collection of additional groundwater samples is presented in the Future Work section.

Comment 4: Evaluate the need for deeper zone wells based on deeper zone groundwater analytical.

Response: Based on analytical groundwater results from deeper intervals (40 – 60 ft bgs), at least one deeper groundwater monitoring well is necessary to monitor vertical migration of the plume. We recommend delineating the vertical and horizontal extents of the plume before installing deeper monitoring wells. Also, we recommend confirming the groundwater flow direction through at least two more quarterly groundwater level measurements. Fully understanding the fluctuations in groundwater flow direction are essential in determining an appropriate location for a deeper well.

Comment 5: Schedule of additional groundwater sampling should be specified.

Response: The schedule for additional groundwater sampling is presented in the Future Work section of this report.

Comment 6: Delete draft artifacts from the Table of Contents (i.e. "Error! Bookmark not defined").

Response: These errors will be corrected in the report and uploaded to Geotracker.

Comment 6: Remove specific individual references to Water Board staff.

Response: From now on no references will be made to specific individuals of the Water Board staff.

FUTURE WORK

The next quarterly groundwater monitoring event will be performed in early February 2007. If the results from MW-2 are confirmed, Geosyntec proposes three additional groundwater sampling locations. Two of the locations will be to the southwest of the Site in order to characterize the horizontal extent of the plume in that direction and to confirm results from the January 2005 Investigation [Geosyntec 2005]. The third sample location will be upgradient of MW-2. These locations are in addition to the four groundwater sampling locations proposed in the Monitoring Well Installation Report. Two groundwater samples, one shallow and one intermediate, will be collected from each location. The additional proposed locations are shown in Figure 7 and summarized in Table 5. These groundwater samples, the groundwater samples proposed in the Monitoring Well Installation Report, and the proposed soil gas samples will be collected in March 2007 and the results will be discussed in the quarterly monitoring report due to the RWQCB on 31 April 2007.

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

Sincerely,

Sergio A. Santos, P.E.
Staff Engineer

D. Scott Felton, P.E.
Project Engineer

Copy w/attachments to:
Ms. Clare Leung, Hopyard Cleaners
Ms. Joy Ricigliano, Zurich Insurance
Mr. Wyman Hong, Zone 7 Water Agency

Attachments:

Table 1	Well Construction Summary
Table 2	Groundwater Elevations
Table 3	Groundwater Analytical Summary
Table 4	Summary of Calculated Indoor Air Concentrations
Table 5	Summary of Proposed Sample Locations
Figure 1	Site Location
Figure 2	November 2006 Groundwater Elevation Contours and Analytical Results
Figure 3	November 2006 PCE Isoconcentration Contours
Figure 4	November 2006 TCE Isoconcentration Contours
Figure 5	Monitoring Well and MIP Analytical Results

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Figure 6 Proposed Additional Soil Gas Sampling Locations
Figure 7 Proposed Additional Groundwater Sampling Locations

Attachment 1 Environmental Sampling Services Field Report
Attachment 2 Laboratory Analytical Report

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

Well I.D.	TOC Elevation (ft MSL)	Sample Date	Depth to Groundwater Below TOC (ft)	Groundwater Elevation (ft MSL)
MW-1	325.77	11/20/2006	14.88	310.89
MW-2	325.69	11/20/2006	14.36	311.33
MW-3	326.27	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	11/20/2006	370	3100	370
MW-2	11/20/2006	800 / 800	5700 / 5800	370 / 360
MW-3	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
Summary of Calculated Indoor Air Concentrations
Hopyard Cleaners
Pleasanton, California

Compound	RWQCB ESLs for Commercial Land Use (ug/m3)	Soil Gas-to-Indoor Air Modeled Concentrations (ug/m3)	Groundwater-to-Indoor Air Modeled Concentrations (ug/m3)
PCE	6.9E-01	1.1E+00	7.3E+00
TCE	2.0E+00	5.2E-03	3.5E-01

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

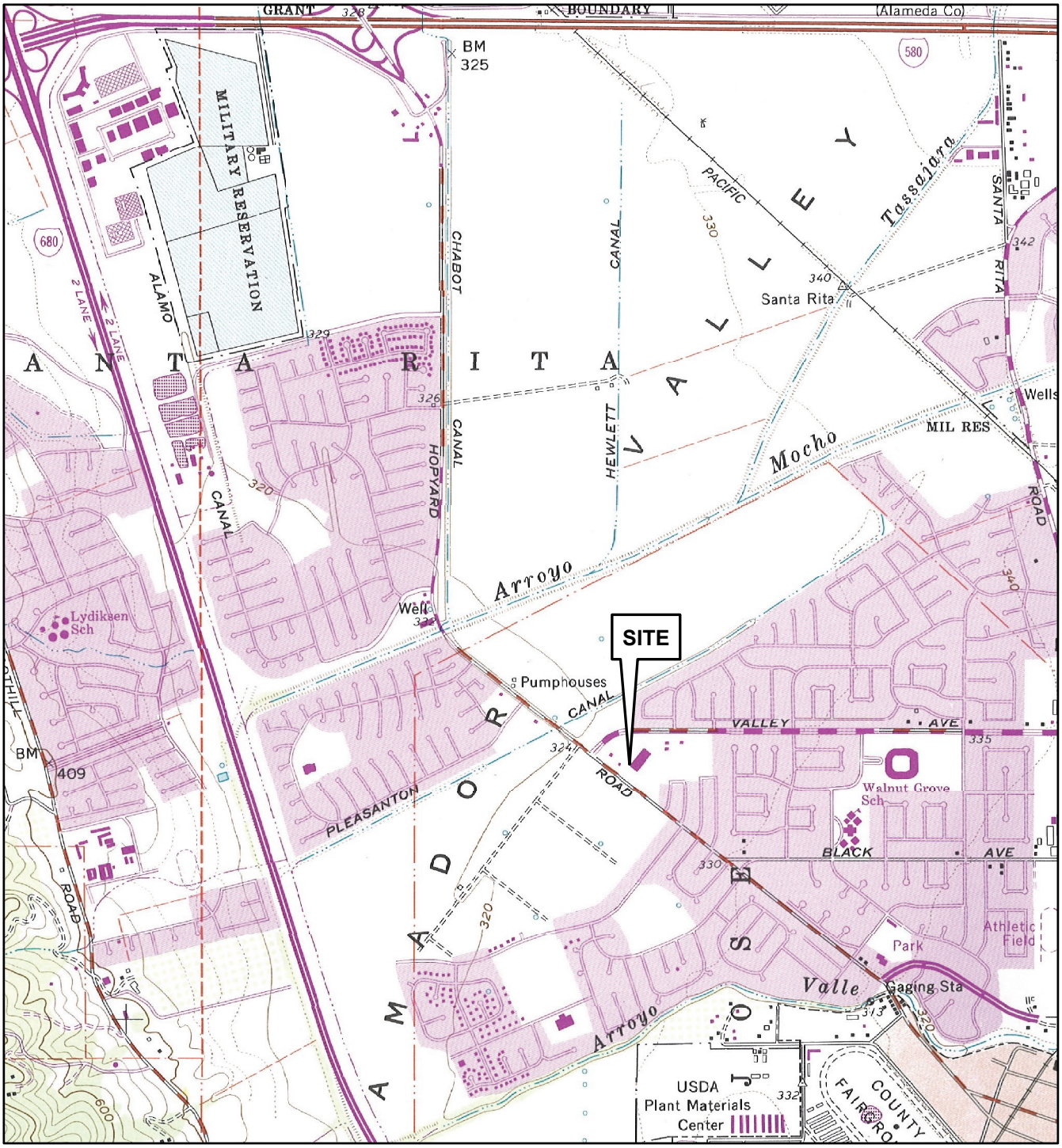
Table 5
Summary of Proposed Sampling Locations
Hopyard Cleaners
Pleasanton, California

Proposed Sample I.D.	Sample Type	Rationale
SG-1	Soil Gas	Soil gas sample located adjacent to commercial building to define soil gas distribution.
SG-2	Soil Gas	Soil gas sample located adjacent to commercial building to define soil gas distribution.
SG-3	Soil Gas	Soil gas sample located adjacent to commercial building to define soil gas distribution.
SG-4	Soil Gas	Soil gas sample located adjacent to commercial building to define soil gas distribution.
SG-5	Soil Gas	Soil gas sample located adjacent to monitoring well with highest PCE concentration to define soil gas distribution.
SG-6	Soil Gas	Soil gas sample located upgradient of monitoring well with highest PCE concentration to define soil gas distribution.

Table 5
Summary of Proposed Sampling Locations
Hopyard Cleaners
Pleasanton, California

Proposed Sample I.D.	Sample Type	Rationale
B-36	Groundwater	Groundwater sample located cross-gradient from the Site to define the horizontal extent and to confirm results from the January 2005 Investigation
B-37	Groundwater	Groundwater sample located cross-gradient from the Site to define the horizontal extent and to confirm results from the January 2005 Investigation
B-38	Groundwater	Groundater sample located upgradient of monitoring well with highest PCE concentraion to define upgradient extent.
Southeast of Valero Gas Station	Groundwater	Groundwater sample located downgradient of Site to define downgradient extent.
South Corner of Hopyard and Valley Roads	Groundwater	Groundwater sample located downgradient of Site to define downgradient extent.

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

N

0 1,000 2,000 Feet

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

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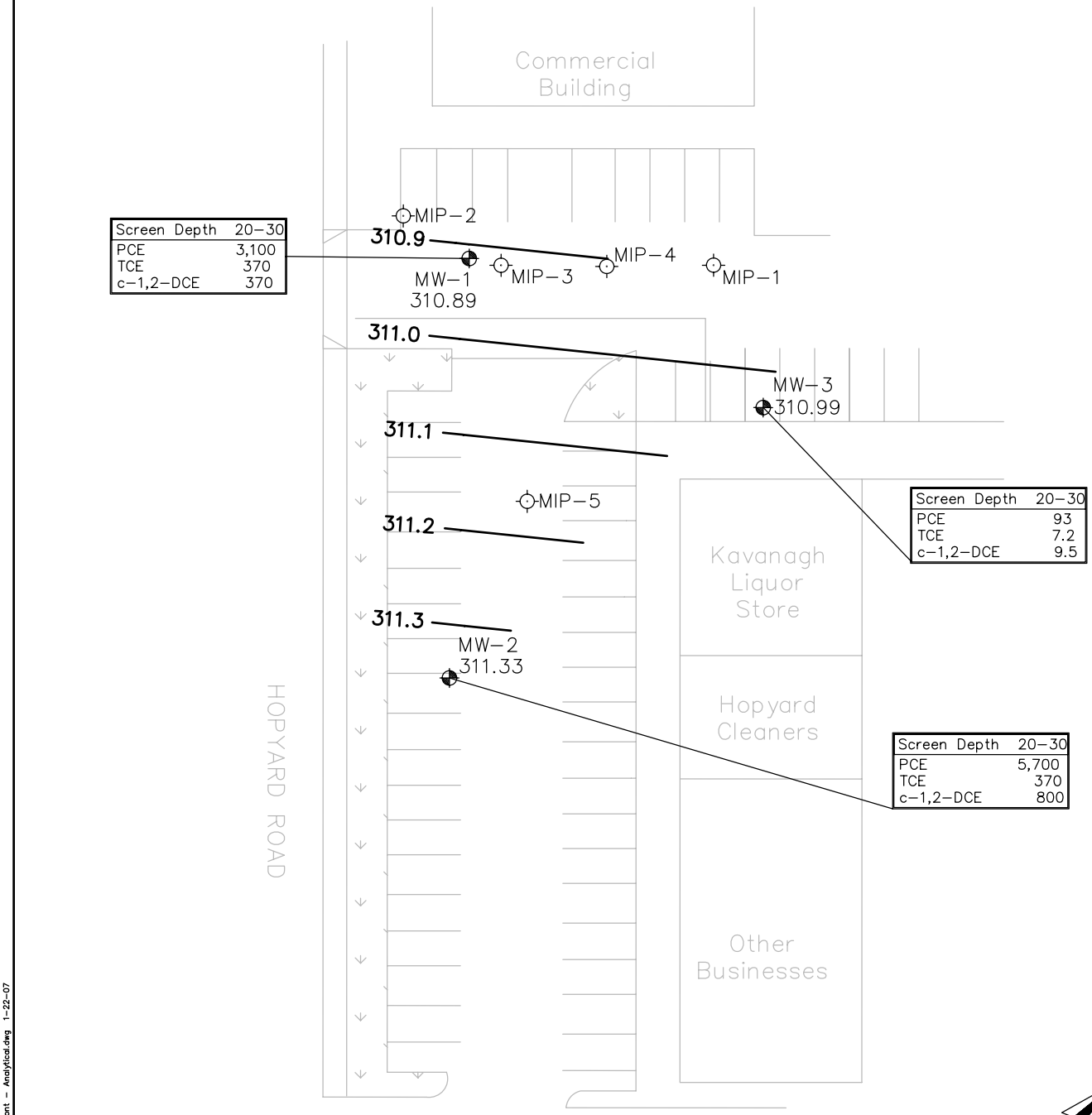

LEGEND

MW-2 311.33 — Monitoring Well Location and Water Elevation (msl)

311.3 — 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

0 20 40
APPROX. SCALE IN FEET

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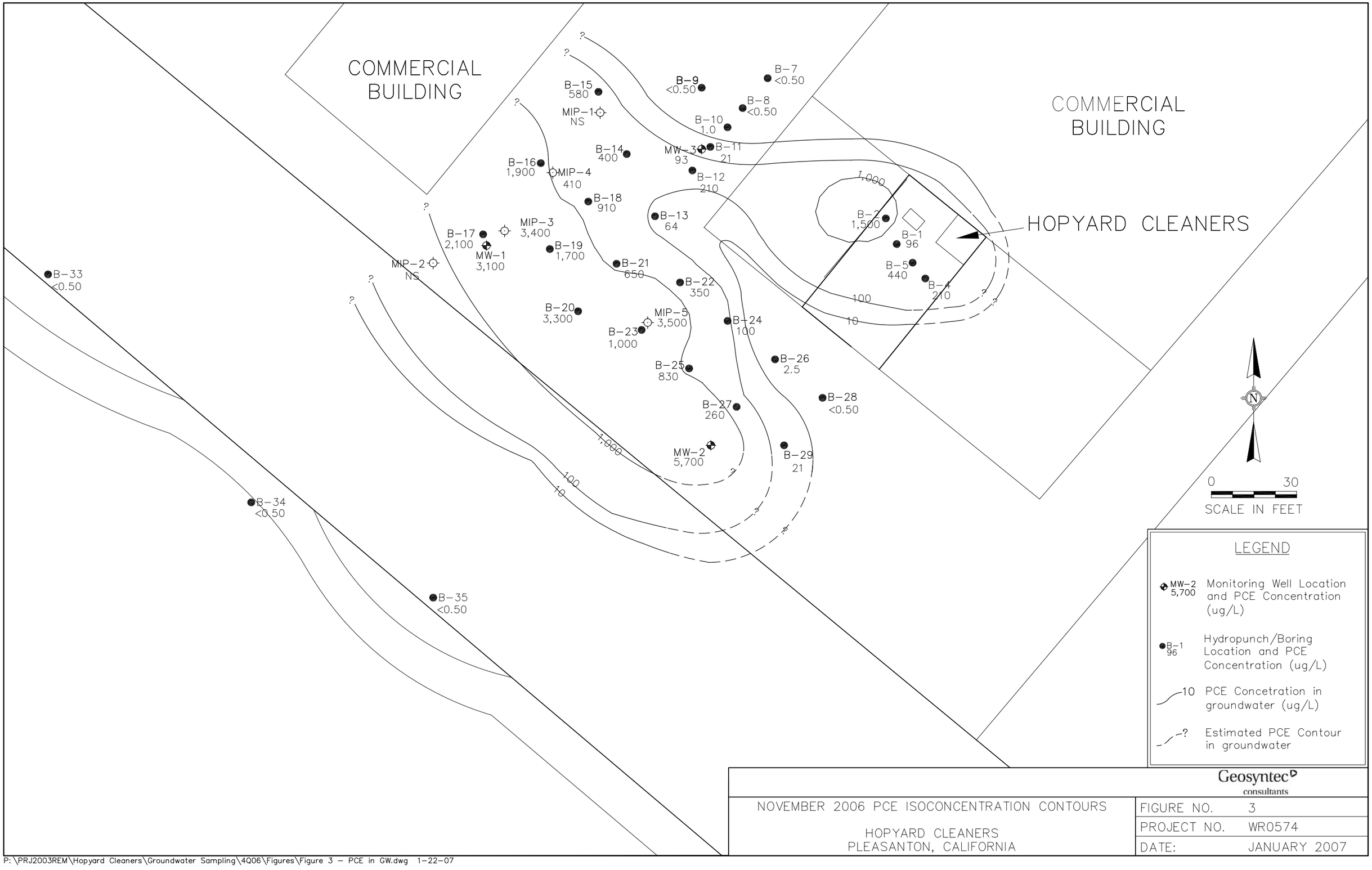
NOVEMBER 2006 GROUNDWATER ELEVATION CONTOURS AND ANALYTICAL RESULTS
HOPYARD CLEANERS, PLEASANTON, CALIFORNIA

FIGURE NO.	2
PROJECT NO.	WR0574-03
DATE:	JANUARY 2007

P:\PR\2003\EIA\Hopyard Cleaners\Groundwater Sampling\4Q06\Figures\Figure 2 - GW Cont - Analytical.dwg 1-22-07



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NOVEMBER 2006 PCE ISOCONCENTRATION CONTOURS

HOPYARD CLEANERS
PLEASANTON, CALIFORNIA

FIGURE NO.	3
PROJECT NO.	WR0574
DATE:	JANUARY 2007

P:\PRJ2003REM\Hopyard Cleaners\Groundwater Sampling\4Q06\Figures\Figure 3 – PCE in GW.dwg 1-22-07

COMMERCIAL BUILDING

COMMERCIAL BUILDING

HOPYARD CLEANERS

B-33 3.3

B-15 78

B-9 <0.50

B-7 <0.50

B-8 <0.50

MIP-1 NS

B-10 <0.50

B-14 86

MW-3 7.2

B-11 0.97

B-16 310

MIP-4 88

B-12 32

B-18 160

B-13 30

B-17 320

MIP-3 190

MW-1 370

B-19 310

MIP-2 NS

B-21 99

B-22 53

B-20 440

MIP-5 490

B-24 20

B-23 150

B-25 170

B-26 <0.50

B-28 <0.50

B-27 69

MW-2 370

B-29 2.9

B-2 16

B-1 3.1

B-5 20

B-4 17

10

100

10

2

?

B-34 <0.50

B-35 <0.50

N

0 30

SCALE IN FEET

LEGEND

- MW-2 370 — Monitoring Well Location and TCE Concentration (ug/L)
- B-1 3.1 — Hydropunch/Boring Location and TCE Concentration (ug/L)
- 10 — TCE Concetration in groundwater (ug/L)
- ? — Estimated TCE Contour in groundwater

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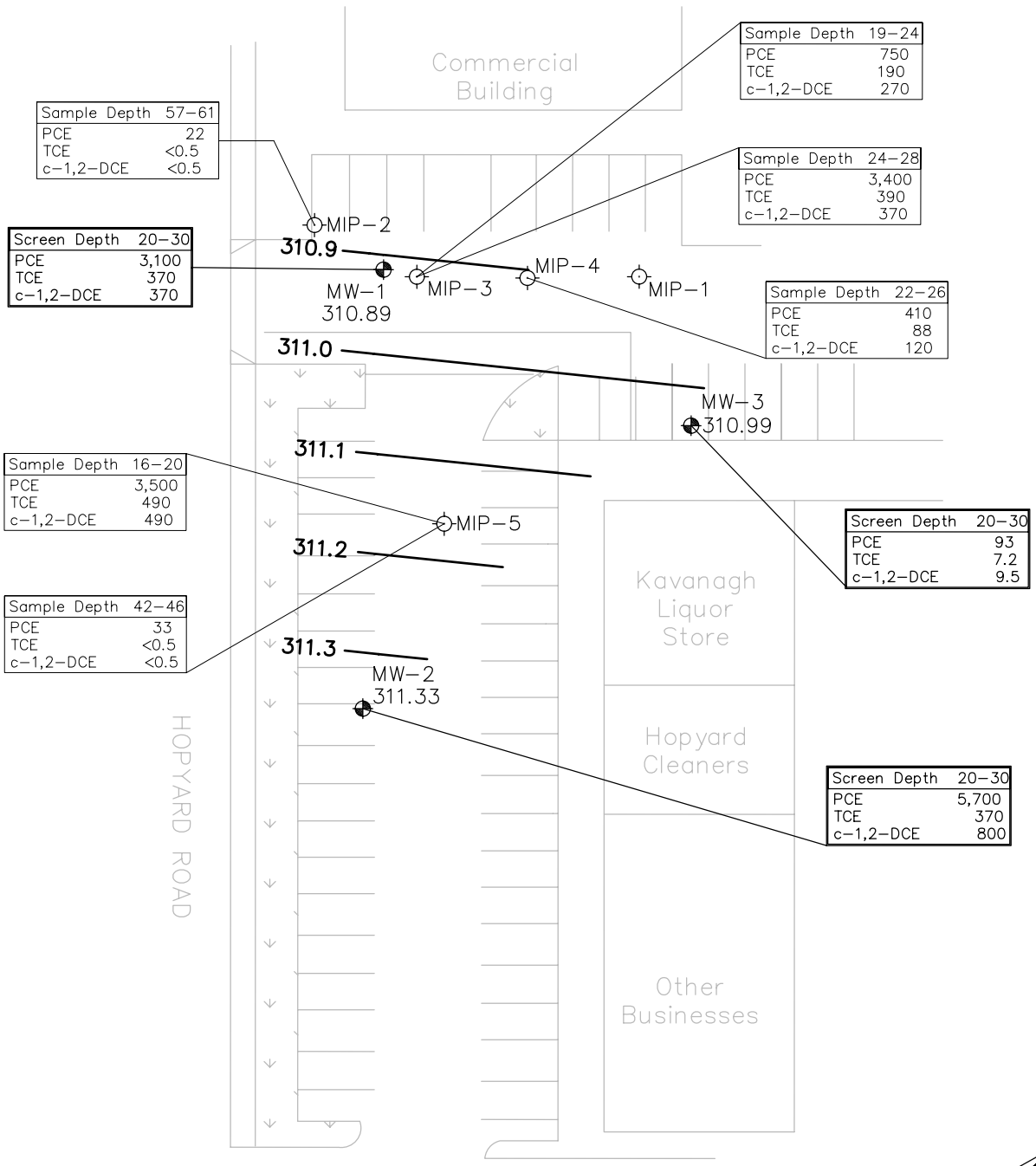
NOVEMBER 2006 TCE ISOCONCENTRATION CONTOURS

HOPYARD CLEANERS
PLEASANTON, CALIFORNIA

FIGURE NO.	4
PROJECT NO.	WR0574
DATE:	JANUARY 2007

P:\PRJ2003REM\Hopyard Cleaners\Groundwater Sampling\4Q06\Figures\Figure 4 – TCE in GW.dwg 1-22-07



LEGEND

MW–2 311.33 — Monitoring Well Location and Water Elevation (msl)

311.3 — Groundwater Elevation Contour

MIP–3 — January 2006 MIP Boring Location

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

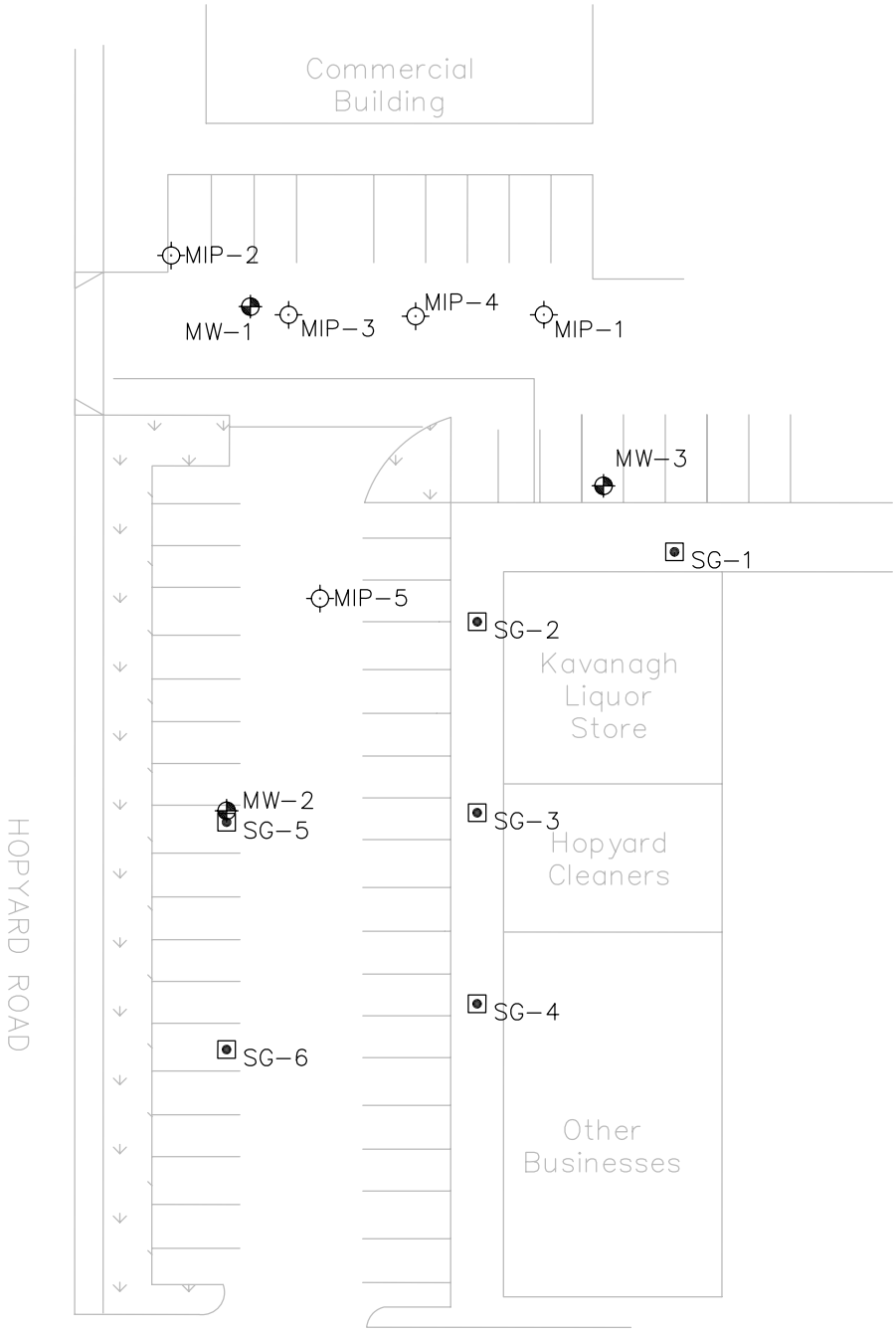
0 20 40
APPROX. SCALE IN FEET

Geosyntec consultants

MONITORING WELL AND JANUARY 2006 MIP ANALYTICAL RESULTS
HOPYARD CLEANERS, PLEASANTON, CALIFORNIA

FIGURE NO.	5
PROJECT NO.	WR0574–03
DATE:	JANUARY 2007

P:\PR\2003\RETA\Hopyard Cleaners\Groundwater Sampling\4Q06\Figures\Figure 5 – MW and MIP Results.dwg 1–22–07



LEGEND

SG-1 Proposed Soil Gas Sample Location

MW-2 Monitoring Well Location

MIP-3 January 2006 MIP Boring Location

0 20 40

APPROX. SCALE IN FEET

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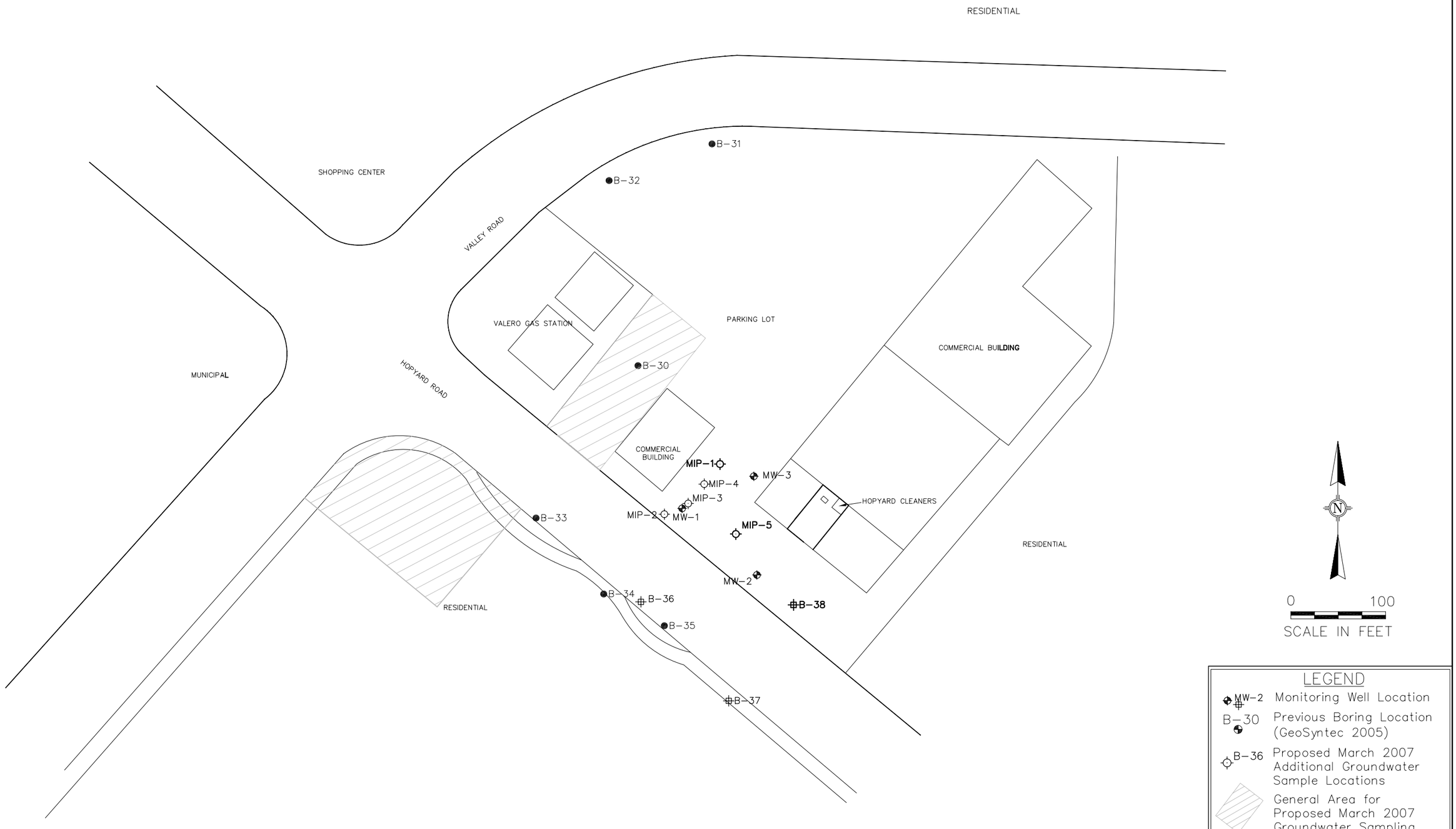
PROPOSED SOIL GAS SAMPLE LOCATIONS AND EXISTING MONITORING WELL AND MIP LOCATIONS HOPYARD CLEANERS, PLEASANTON, CALIFORNIA

FIGURE NO.	6
PROJECT NO.	WR0574-03
DATE:	JANUARY 2007

P:\PR\2003\EIA\Hopyard Cleaners\Groundwater Sampling\4006\Figures\Figure 6 - Proposed Soil Gas Locations.dwg 1-22-07



LEGEND

- MW-2 — Monitoring Well Location
- B-30 — Previous Boring Location (GeoSyntec 2005)
- B-36 — Proposed March 2007 Additional Groundwater Sample Locations
- General Area for Proposed March 2007 Groundwater Sampling

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JANUARY 2005 BORING LOCATIONS AND PROPOSED MARCH 2007 GRAB GROUNDWATER SAMPLING LOCATIONS
HOPYARD CLEANERS
PLEASANTON, CALIFORNIA

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

P:\PRJ2003REM\Hopyard Cleaners\Groundwater Sampling\4Q06\Figures\Figure 7 – Proposed GGW Jan 2007.dwg 1-22-07

ATTACHMENT 1

ESS FIELD REPORT

Environmental
Sampling Services

FIELD ACTIVITY REPORT
FOR

NOVEMBER 2006
WELL DEVELOPMENT & QUARTERLY
GROUNDWATER SAMPLING EVENT

HOPYARD CLEANERS
2771 HOPYARD ROAD
PLEASANTON, CALIFORNIA

Task: Well Development and Quarterly Groundwater Sampling Event
ESS Personnel: Jacqueline Lee
Date of Activities: November 20, 2006

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

Both individual field meters and a YSI® multiparameter meter with an in-line flow through chamber were used to monitor water quality parameters during well development and purging. The instruments were calibrated with solution standards (see MW-3 Water Sample Log Sheet).

Groundwater Level Measurements

Following atmospheric equilibration of approximately twenty minutes, depth to groundwater and well depth were measured and recorded for each monitoring well. All readings were performed with a Solinst® electrical water level indicator 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 and well depth.

Well Development

Mechanical surging for 10 minutes with a 2-inch PVC surge block and removal of 20 casing volumes with a centrifugal pump was used for well development. New pump

tubing was used. Standard field measurements (pH, Specific Conductance, Temperature and Turbidity) were recorded during the removal of the first ten casing volumes. ORP readings were requested during the second half of development; therefore, a YSI Multiparameter was calibrated and used. The amount of fine silt was reduced to a minimum following removal of twenty casing volumes. The criterion of 10 NTUs for turbidity was not achieved. Well depth was confirmed after development. After completion of well development, the well was sampled.

Water Quality Field Parameters

Water quality parameters were monitored and recorded throughout well purging. Field measurements included: pH, Specific Conductance (uS), Temperature (Celsius), ORP (mV), Turbidity (NTUs) and physical characteristics such as color (see Water Quality Sample Log Sheets).

Well Purging & Sampling Procedures

The minimum removal of three well casing volumes and stabilization of water quality parameters were required prior to sampling. If stabilization did not occur within three casing volumes, purging continued until stabilization was achieved or until five casing volumes were removed.

Stabilization was achieved after three successive readings were within the following criteria: ± 0.1 for pH, ± 10 % for Specific Conductivity, and ± 10 mV for ORP.

A centrifugal pump and new tubing were used for purging all wells. The pump intake was set just below the pumping water level. Following stabilization or the removal of required casing volumes, each well was allowed to recharge to 80% of the static water level prior to sampling.

New disposable polyethylene bailers with VOC bottom emptying devices were used for sample collection.

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.

Environmental
Sampling Services

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 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 was collected from MW-2 and was labeled "MW-DUP @ 10:30".

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.

Shipment of Samples

Samples were relinquished to STL-SF November 20, 2006.

Storage of Investigative Derived Wastewater (IDW)

Approximately 90 gallons of purged groundwater and decontamination water generated from this sampling event were stored two, labeled 55-gallon drums. The drums are stored along with six other drums along the southeast corner of the property.

Comments

During sample collection of MW-3, the sample did not contain any sedimentation, the other wells did.

One 9/16" bolt is missing from the well monument cover at MW-1.

Jacqueline Lee
Partner

Enclosure
Table 1: Summary of Well Development & Groundwater Sampling
Water Sample Log Sheets
Chain of Custody

Environmental Sampling Services

Table 1: Summary of November 2006 Well Development and Quarterly Groundwater Sampling Event
Project Name: Hopyard Cleaners
Project Location: 2771 Hopyard Road, Pleasanton, California

Well Development:

Well/Sample Identification	Date of Measurement	Time of Measurement	Depth to Groundwater (Ft., TOC)	Well Depth (Ft., TOC) Before Development	Well Depth (Ft., TOC) After Development	Gallons Removed	Equivalent Casing Volumes
MW-3	11/20/2006	10:30	15.28	30.29	30.29	51	20.90

Well Sampling:

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	11/20/2006	10:15	14.88	30.27	11/20/2006	15:15	None	NA
MW-2	11/20/2006	10:12	14.36	30.31	11/20/2006	14:40	Duplicate	MW-DUP
MW-3	11/20/2006	10:30	15.28	30.29	11/20/2006	13:10	None	NA

Legend:

TOC = Top of Well Casing
NA = Not Applicable

Environmental Sampling Services

WATER QUALITY SAMPLE LOG SHEET	WELL IDENTIFICATION MW-1 DATE 11/20/06

Project Name: Hopyard Cleaners - Pleasanton, CA Project Task: Quarterly Groundwater Monitoring

Laboratory: STL San Francisco (Pleasanton) Weather Conditions: Overcast

Well Description: (2") 3" 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, Key Code=Unknown

Observations / Comments: Missing bolt

Purge Method: PE Disp. Bailer Peristaltic Pump Grundfos Pump (Centrifugal 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: well water Rinse

Sampling Method: Disp. Teflon Bailer (Disp. PE Bailer) Grundfos Redi-flow Pump Peristaltic Pump

~~pH~~ YSI Meter Serial No.: ~~217254~~ 330089 ~~95T319340~~ Sonde Spec. Cond. Meter Serial No.: 96H0203AB / (AE) 00E1522

Date/Time Calibrated: ~~11/20/06 0900~~ 4 7 10 @ 25°C Spec.Cond. Meter Calibration: Self Test Other: _____

Method to Measure Water Level: Solinst / Slope Serial No.: 21758 P.I.D. Reading: NA ppm

Beginning Water Level (BTOC): 14.88 @ 10:15 Ending Water Level (BTOC): 18.30↑

TD = 30.27 - 14.88 (DTW) = 15.39 (ft.of water) x "K" = 2.50 (Gals./CV) x 3 (No. of CV) = 7.25 (Gals.)

("K"= 0.163(2" well) "K" = 0.653(4" well) "K" = 1.02(5" well) "K" = 1.46(6" well) "k" = 2.61(8" well)

FIELD WATER QUALITY PARAMETERS

Date	Time	Discharge (Gallons)	pH	Temp. (°C)	Specific Conductance mS (uS)	Turbidity (NTU's)	Color	Comments
11/20/06	15:04	1.0	7.04	22.06	1539	108	Lt tan	ORP = 120.2 mV
	15:07	3.0	7.05	22.52	1586	506	"	" = 116.3 mV
	15:08	5.0	7.00	22.11	1568	362	"	" = 105.1 mV
	15:09	8.0	7.00	21.90	1589	730	MED BRN	" = 99.3 mV
	15:10	10.0	7.01	21.91	1578	936	"	ORP = 95.1 mV
	15:12	12.0	7.01	23.40	1594	71000	"	ORP = 90.8 mV

Total Discharge: 13.0 Gallons Casing Volumes Removed: 5.20

Method of disposal of discharged water: (55 Gallon Drum(s)) Poly Tank Treatment System Other: _____

Date/Time Sampled: 11/20/06 @ 15:15 Analysis EPA 8260 - 3 VOAs w/HCl

QA/QC: None @ — as an Equipment Blank Duplicate MS/MSD Lab Split Field Blank

Comments: _____

Recorded By: (Jacki Lee / Stephen Penman Signature: _____

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WATER QUALITY SAMPLE LOG SHEET	WELL IDENTIFICATION MW-2 DATE 11/20/06

Project Name: Hopyard Cleaners - Pleasanton, CA Project Task: Quarterly Groundwater Monitoring

Laboratory: STL San Francisco (Pleasanton) Weather Conditions: Over cast

Well Description: (2") 3" 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 key code unknown

Observations / Comments: _____

Purge Method: PE Disp. Bailer Peristaltic Pump Grundfos Pump (Centrifugal 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: Well Water Rinse

Sampling Method: Disp. Teflon Bailer (Disp. PE Bailer) GrundFos Redi-flow Pump Peristaltic Pump

YSI pH Meter Serial No.: ~~917254~~ / 330089 (319340R) YSI Spec. Cond. Meter Serial No.: 96H0203AB / (AE) (00C1522) Sonde

Date/Time Calibrated: 11/20/06 @ 10:23 (7) 10 @ 25°C Spec.Cond. Meter Calibration: Self Test Other: _____

Method to Measure Water Level: Solinst / Slope Serial No.: 21758 P.I.D. Reading: NA ppm

Beginning Water Level (BTOC): 13.74 11:20 14.36 @ 10:12 Ending Water Level (BTOC): 15.23↑

TD = 30.31 - 14.36 (DTW) = 15.95 (ft.of water) x "K" = 2.56 2.59 (Gals./CV) x 3 (No. of CV) = 7.39 (Gals.)

("K"= 0.163(2" well)) "K" = 0.653(4" well) "K" = 1.02(5" well) "K" = 1.46(6" well) "K" = 2.61(8" well)

FIELD WATER QUALITY PARAMETERS

Date	Time	Discharge (Gallons)	pH	Temp. (°C)	Specific Conductance mS (uS)	Turbidity (NTU's)	Color	Comments
11/20/2006	14:26	1.0	7.01	21.80	1374	>1000	DK BRN	ORP = 128.5
	14:27	3.0	7.09	21.43	1379	715	"	130.9
	14:28	5.0	7.04	21.24	1389	373	MED BRN	129.1
	14:30	7.0	7.06	21.31	1389	159	"	128.0
	14:32	10.0	7.07	22.22	1395	836	"	114.8
↓	14:34	12.0	7.08	22.02	1390	269	"	118.5

Total Discharge: 13.5 Gallons Casing Volumes Removed: 5.21

Method of disposal of discharged water: (55 Gallon Drum(s)) Poly Tank Treatment System Other: _____

Date/Time Sampled: 11/20/06 @ 14:40 Analysis EPA 8260 - 3 VOAs w/HCl

QA/QC: MW-DUP 11/20/06 @ 12:30 as an Equipment Blank (Duplicate) MS/MSD Lab Split Field Blank

Comments: Per Geosyntec - next time, do this well first since bookstore does not open until 11:00AM.

Recorded By: (Jacki Lee) / Stephen Penman Signature: _____

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WATER QUALITY SAMPLE LOG SHEET	WELL IDENTIFICATION MW-3 DATE 11/20/2006

Project Name: Hopyard Cleaners - Pleasanton, CA Project Task: Well Development & Qtrly. GW Monitoring

Laboratory: STL San Francisco (Pleasanton) Weather Conditions: Overcast, foggy am

Well Description: (2") 3" 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 key code unknown

Observations / Comments: swabbed well (screen interval) from 10:34 - 10:44

Purge Method: PE Disp. Bailer Peristaltic Pump Grundfos Pump (Centrifugal 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: Well Water Rinse

Sampling Method: Disp. Teflon Bailer (Disp. PE Bailer) GrundFos Redi-flow Pump Peristaltic Pump

pH Meter Serial No.: (217254) / 330089 Spec. Cond. Meter Serial No.: 96H0203AB (AE)

Date/Time Calibrated: 11/20c 10:23 (4) 7 10 @ 25°C Spec.Cond. Meter Calibration: Self Test Other: ____

Method to Measure Water Level: Solinst / Slope Serial No.: 21758 P.I.D. Reading: NA ppm

Beginning Water Level (BTOC): 15.28@ 10:30 Ending Water Level (BTOC): 18.30↑ @ 13:06

TD = 30.29' - 15.28 (DTW) = 15.01 (ft.of water) x "K" = 2.44 (Gals./CV) x 10 (No. of CV) = 24.46 (Gals.)

("K"= 0.163(2" well)) "K" = 0.653(4" well) "K" = 1.02(5" well) "K" = 1.46(6" well) "k" = 2.61(8" well)

FIELD WATER QUALITY PARAMETERS

Date	Time	Discharge (Gallons)	pH	Temp. (°C)	Specific Conductance mS (uS)	Turbidity (NTU's)	Color	Comments
11/20/06	11:10	5.0	6.95	21.1	1280.5	>1000	olive BRN	fine silt (~50 ml settled)
↓	11:15	10.0	7.05	21.8	1465.2	>1000	"	∇=28'; letting it recover
	11:34	15.0	6.93	20.7	1538.2	>1000	"	
	11:39	20.0	7.05	22.2	1696	>1000	"	letting it recover again
↓	11:54	25.0	6.91	20.8	1616	617	MED BRN	
←			YSI	Readings:				v. little silt →
11/20/06	12:20	30.0	7.02	20.58	1781	615	"	ORP = 173.0 mV
↓	12:29	35.0	7.09	21.93	1806	>1000	"	ORP = 123.3 mV minute amt. silt
	12:31	37.5 ~~40.0~~	7.05	21.65	1803	792	"	ORP = 119.4 mV minute amt. silt
↓	12:33	40.0	7.02	22.42	1811	>1000	"	ORP = 108.9 mV

Total Discharge: 51 Gallons Casing Volumes Removed: 20.90

Method of disposal of discharged water: (55 Gallon Drum(s)) Poly Tank Treatment System Other: ____

Date/Time Sampled: 11/20/06 @ 13:10 Analysis: EPA 8260 - 6 VOAs w/HCl

QA/QC: None @ — as an Equipment Blank Duplicate MS/MSD Lab Split Field Blank

Comments: Before Dev. TD = 30.29 10 cv = 24.46. GeoSynTec wants ORP readings.

YSI 319340R/00C1522 Calib @ 12:19: pH4 = 4.00; pH7 = 7.00 pH 10 = 10.00, Sp. Cond. = 1,000 µ

ORP = 237.5 mV) 80% Recovery = 18.29' SEE PAGE 2 FOR MORE READINGS!

Recorded By: (Jacki Lee) / Stephen Penman Signature: ____

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WATER QUALITY SAMPLE LOG SHEET					WELL IDENTIFICATION: MW-3				Page 2	
FIELD WATER QUALITY PARAMETERS CONTINUED										
Date	Time	Discharge (Gallons)	pH	Temp. (ºC)	Specific Conductance mS uS	Turbidity (NTUs)	Redox (mV)	Dissolved Oxygen (mg/L)	Water Level (BTOC)	Color
11/20/06	12:44	45	7.00	21.81	1805	400	102.2	NA	—	MED BRN
↓	12:53	50	7.01	23.53	1834	7 1000	94.3	"	—	"

Total Discharge: 51 Gallons   Casing Volumes Removed: 20.90

Comments: Sample Turbidity ≙ slightly cloudy, no sedimentation.

Project: Hopyard Cleaners/ GeoSyntec

"Do not do any work on MW-2 (in front of bookstore) per Property owner (925)820-5670)
Prop. Bill (Town + Country) / Gerry Jerry (Via Lisa w/Bookstore). Called GeoSyntec to resolve.
~~GeoSyntec: In future, do three~~

Sampled by: Jacqueline Lee / Stephen Penman   Recorded by: [signature]

SEVERN TRENT **STL**

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 #: _____

Date Nov. 20, 2006 Page 1 of 1

Report To

Attn: Sergio Santos
Company: GeoSyntec Consultants
Address: 475 - 14th St, Ste 400 Oakland, CA 94612
Phone: (510)836-3034 Email:
Bill To: Same
Sampled By: ESS Jacki Lee
Attn: Phone:

Analysis Request

Sample ID	Date	Time	Matrix	Preserv.
Trip Blank	11/20/06	9:00	W	HCl
MW-DUP	11/20/06	10:30	WG	HCl
MW-3	11/20/06	13:10	WG	HCl
MW-2	11/20/06	14:40	WG	HCl
MW-1	11/20/06	15:15	WG	HCl

Sample ID	TPH EPA - ☐ 8015/8021 ☐ 8260B ☐ Gas w/ ☐ BTEX ☐ MTBE	Purgeable Aromatics BTEX EPA - ☐ 8021 ☐ 8260B	TEPH EPA 8015M* ☐ Silica Gel ☐ Diesel ☐ Motor Oil ☐ Other ___	Fuel Tests EPA 8260B: ☐ Gas ☐ BTEX ☐ Five Oxygenates ☐ DCA, EDB ☐ Ethanol	Purgeable Halocarbons (HVOCs) EPA 8021 by 8260B	Volatile Organics GC/MS (VOCs) ☒ EPA 8260B ☐ 624	Semivolatiles GC/MS ☐ EPA 8270 ☐ 625	Oil and Grease ☐ Petroleum (EPA 1664) ☐ Total	Pesticides ☐ EPA 8081 ☐ 608 PCBs ☐ EPA 8082 ☐ 608	PNAs by ☐ 8270 ☐ 8310	CAM17 Metals (EPA 6010/7470/7471)	Metals: ☐ Lead ☐ LUFT ☐ RCRA ☐ Other: ___	Low Level Metals by EPA 200.8/6020 (ICP-MS): ___	W.E.T (STLC) ☐ TCLP	Hexavalent Chromium pH (24h hold time for H_2O)	Spec Cond. ☐ Alkalinity ☐ TDS ☐ TSS	Anions: ☐ Cl ☐ SO_4 ☐ NO_3 ☐ F ☐ Br ☐ NO_2 ☐ PO_4				Number of Containers
Trip Blank						X																2
MW-DUP						X																3
MW-3						X																3
MW-2						X																3
MW-1						X																3

Project Info

Project Name: Hayward Cleaners
Project#: WR0574
PO#:
Credit Card#:

Sample Receipt

of Containers:
Head Space:
Temp: 2°C
Conforms to record:

TAT: 5 Day | 72h | 48h | 24h | Other:

Report: ☐ Routine ☐ Level 3 ☐ Level 4 ☐ EDD ☐ State Tank Fund EDF ☐ Global ID ___

Special Instructions / Comments:
Questions: call Jacki Lee @ 925-260-7999

See Terms and Conditions on reverse

1) Relinquished by:	2) Relinquished by:	3) Relinquished by:
Signature: [signature] Time: 16:30	Signature: Time:	Signature: Time:
Printed Name: Jacqueline Lee Date: 11/20/06	Printed Name: Date:	Printed Name: Date:
Company: Environmental Sampl. Svcs.	Company:	Company:

1) Received by:	2) Received by:	3) Received by:
Signature: [signature] Time: 16:30	Signature: Time:	Signature: Time:
Printed Name: T. Bullock Date: 11/20/06	Printed Name: Date:	Printed Name: Date:
Company: STL-SF	Company:	Company:

ATTACHMENT 2

LABORATORY ANALYTICAL REPORT

ANALYTICAL REPORT

Job Number: 720-6597-1

Job Description: Hopyard Cleaners

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

Attention: Mr. Sergio Santos

Melissa Brewer
Project Manager I
mbrewer@stl-inc.com
11/29/2006

Project Manager: Melissa Brewer

EXECUTIVE SUMMARY - Detections

Client: GeoSyntec Consultants Job Number: 720-6597-1

Lab Sample ID / Analyte	Client Sample ID	Result / Qualifier	Reporting Limit	Units	Method
720-6597-2	**MW-DUP**				
cis-1,2-Dichloroethene		800	40	ug/L	8260B
Tetrachloroethene		5800	40	ug/L	8260B
Trichloroethene		360	40	ug/L	8260B
720-6597-3	**MW-3**				
cis-1,2-Dichloroethene		9.5	1.0	ug/L	8260B
Tetrachloroethene		93	1.0	ug/L	8260B
Trichloroethene		7.2	1.0	ug/L	8260B
720-6597-4	**MW-2**				
cis-1,2-Dichloroethene		800	50	ug/L	8260B
Tetrachloroethene		5700	50	ug/L	8260B
Trichloroethene		370	50	ug/L	8260B
720-6597-5	**MW-1**				
cis-1,2-Dichloroethene		370	50	ug/L	8260B
Tetrachloroethene		3100	50	ug/L	8260B
Trichloroethene		370	50	ug/L	8260B

METHOD SUMMARY

Client: GeoSyntec Consultants Job Number: 720-6597-1

Description	Lab Location	Method	Preparation Method
Matrix: Water			
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: 720-6597-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
720-6597-1TB	TRIP BLANK	Water	11/20/2006 0900	11/20/2006 1630
720-6597-2	MW-DUP	Water	11/20/2006 1030	11/20/2006 1630
720-6597-3	MW-3	Water	11/20/2006 1310	11/20/2006 1630
720-6597-4	MW-2	Water	11/20/2006 1440	11/20/2006 1630
720-6597-5	MW-1	Water	11/20/2006 1515	11/20/2006 1630

Client: GeoSyntec Consultants | Job Number: 720-6597-1

Client Sample ID: **TRIP BLANK**

Lab Sample ID: 720-6597-1TB | Date Sampled: 11/20/2006 0900
Client Matrix: Water | Date Received: 11/20/2006 1630

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

Method: 8260B | Analysis Batch: 720-15777 | Instrument ID: Varian 3900G
Preparation: 5030B | Lab File ID: c:\saturnws\data\200611\11
Dilution: 1.0 | Initial Weight/Volume: 40 mL
Date Analyzed: 11/27/2006 2152 | Final Weight/Volume: 40 mL
Date Prepared: 11/27/2006 2152

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
Isopropylbenzene	ND		0.50
4-Isopropyltoluene	ND		1.0
Methylene Chloride	ND		5.0

Client: GeoSyntec Consultants | Job Number: 720-6597-1

Client Sample ID: **TRIP BLANK**

Lab Sample ID: 720-6597-1TB | Date Sampled: 11/20/2006 0900
Client Matrix: Water | Date Received: 11/20/2006 1630

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

Method: 8260B | Analysis Batch: 720-15777 | Instrument ID: Varian 3900G
Preparation: 5030B | Lab File ID: c:\saturnws\data\200611\11
Dilution: 1.0 | Initial Weight/Volume: 40 mL
Date Analyzed: 11/27/2006 2152 | Final Weight/Volume: 40 mL
Date Prepared: 11/27/2006 2152

Analyte	Result (ug/L)	Qualifier	RL
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)	116	78 - 117
Toluene-d8 (Surr)	109	77 - 121

Client: GeoSyntec Consultants | Job Number: 720-6597-1

Client Sample ID: **MW-DUP**

Lab Sample ID: 720-6597-2 | Date Sampled: 11/20/2006 1030
Client Matrix: Water | Date Received: 11/20/2006 1630

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

Method: 8260B | Analysis Batch: 720-15825 | Instrument ID: Saturn 2K3
Preparation: 5030B | Lab File ID: d:\data\200611\112806\SA-
Dilution: 80 | Initial Weight/Volume: 40 mL
Date Analyzed: 11/28/2006 1636 | Final Weight/Volume: 40 mL
Date Prepared: 11/28/2006 1636

Analyte	Result (ug/L)	Qualifier	RL
Methyl tert-butyl ether	ND		400
Acetone	ND		4000
Benzene	ND		40
Dichlorobromomethane	ND		40
Bromobenzene	ND		80
Chlorobromomethane	ND		80
Bromoform	ND		80
Bromomethane	ND		80
Methyl Ethyl Ketone	ND		4000
n-Butylbenzene	ND		80
sec-Butylbenzene	ND		80
tert-Butylbenzene	ND		80
Carbon disulfide	ND		400
Carbon tetrachloride	ND		40
Chlorobenzene	ND		40
Chloroethane	ND		80
Chloroform	ND		80
Chloromethane	ND		80
2-Chlorotoluene	ND		40
4-Chlorotoluene	ND		40
Chlorodibromomethane	ND		40
1,2-Dichlorobenzene	ND		40
1,3-Dichlorobenzene	ND		40
1,4-Dichlorobenzene	ND		40
1,3-Dichloropropane	ND		80
1,1-Dichloropropene	ND		40
1,2-Dibromo-3-Chloropropane	ND		80
Ethylene Dibromide	ND		40
Dibromomethane	ND		40
Dichlorodifluoromethane	ND		40
1,1-Dichloroethane	ND		40
1,2-Dichloroethane	ND		40
1,1-Dichloroethene	ND		40
cis-1,2-Dichloroethene	800		40
trans-1,2-Dichloroethene	ND		40
1,2-Dichloropropane	ND		40
cis-1,3-Dichloropropene	ND		40
trans-1,3-Dichloropropene	ND		40
Ethylbenzene	ND		40
Hexachlorobutadiene	ND		80
Isopropylbenzene	ND		40
4-Isopropyltoluene	ND		80
Methylene Chloride	ND		400

Client: GeoSyntec Consultants Job Number: 720-6597-1

Client Sample ID: MW-DUP

Lab Sample ID: 720-6597-2 Date Sampled: 11/20/2006 1030
Client Matrix: Water Date Received: 11/20/2006 1630

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

Method: 8260B Analysis Batch: 720-15825 Instrument ID: Saturn 2K3
Preparation: 5030B Lab File ID: d:\data\200611\112806\SA-
Dilution: 80 Initial Weight/Volume: 40 mL
Date Analyzed: 11/28/2006 1636 Final Weight/Volume: 40 mL
Date Prepared: 11/28/2006 1636

Analyte	Result (ug/L)	Qualifier	RL
methyl isobutyl ketone	ND		4000
Naphthalene	ND		80
N-Propylbenzene	ND		80
Styrene	ND		40
1,1,1,2-Tetrachloroethane	ND		40
1,1,2,2-Tetrachloroethane	ND		40
Tetrachloroethene	5800		40
Toluene	ND		40
1,2,3-Trichlorobenzene	ND		80
1,2,4-Trichlorobenzene	ND		80
1,1,1-Trichloroethane	ND		40
1,1,2-Trichloroethane	ND		40
Trichloroethene	360		40
Trichlorofluoromethane	ND		80
1,2,3-Trichloropropane	ND		40
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		40
1,2,4-Trimethylbenzene	ND		40
1,3,5-Trimethylbenzene	ND		40
Vinyl acetate	ND		4000
Vinyl chloride	ND		40
Xylenes, Total	ND		80
2,2-Dichloropropane	ND		40

Surrogate	%Rec	Acceptance Limits
4-Bromofluorobenzene	108	79 - 118
1,2-Dichloroethane-d4 (Surr)	104	78 - 117
Toluene-d8 (Surr)	97	77 - 121

Client: GeoSyntec Consultants | Job Number: 720-6597-1

Client Sample ID: **MW-3**

Lab Sample ID: 720-6597-3 | Date Sampled: 11/20/2006 1310
Client Matrix: Water | Date Received: 11/20/2006 1630

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

Method: 8260B | Analysis Batch: 720-15825 | Instrument ID: Saturn 2K3
Preparation: 5030B | Lab File ID: d:\data\200611\112806\SA-
Dilution: 2.0 | Initial Weight/Volume: 40 mL
Date Analyzed: 11/28/2006 1922 | Final Weight/Volume: 40 mL
Date Prepared: 11/28/2006 1922

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	9.5		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
Isopropylbenzene	ND		1.0
4-Isopropyltoluene	ND		2.0
Methylene Chloride	ND		10

Client: GeoSyntec Consultants | Job Number: 720-6597-1

Client Sample ID: **MW-3**

Lab Sample ID: 720-6597-3 | Date Sampled: 11/20/2006 1310
Client Matrix: Water | Date Received: 11/20/2006 1630

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

Method: 8260B | Analysis Batch: 720-15825 | Instrument ID: Saturn 2K3
Preparation: 5030B | Lab File ID: d:\data\200611\112806\SA-
Dilution: 2.0 | Initial Weight/Volume: 40 mL
Date Analyzed: 11/28/2006 1922 | Final Weight/Volume: 40 mL
Date Prepared: 11/28/2006 1922

Analyte	Result (ug/L)	Qualifier	RL
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	93		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	7.2		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	105	79 - 118
1,2-Dichloroethane-d4 (Surr)	100	78 - 117
Toluene-d8 (Surr)	98	77 - 121

Client: GeoSyntec Consultants Job Number: 720-6597-1

Client Sample ID: MW-2

Lab Sample ID: 720-6597-4
Client Matrix: Water

Date Sampled: 11/20/2006 1440
Date Received: 11/20/2006 1630

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

Method: 8260B
Preparation: 5030B
Dilution: 100
Date Analyzed: 11/28/2006 2208
Date Prepared: 11/28/2006 2208

Analysis Batch: 720-15825

Instrument ID: Saturn 2K3
Lab File ID: d:\data\200611\112806\SA-
Initial Weight/Volume: 40 mL
Final Weight/Volume: 40 mL

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	800		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
Isopropylbenzene	ND		50
4-Isopropyltoluene	ND		100
Methylene Chloride	ND		500

Client: GeoSyntec Consultants | Job Number: 720-6597-1

Client Sample ID: **MW-2**

Lab Sample ID: 720-6597-4 | Date Sampled: 11/20/2006 1440
Client Matrix: Water | Date Received: 11/20/2006 1630

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

Method: 8260B | Analysis Batch: 720-15825 | Instrument ID: Saturn 2K3
Preparation: 5030B | Lab File ID: d:\data\200611\112806\SA-
Dilution: 100 | Initial Weight/Volume: 40 mL
Date Analyzed: 11/28/2006 2208 | Final Weight/Volume: 40 mL
Date Prepared: 11/28/2006 2208

Analyte	Result (ug/L)	Qualifier	RL
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	5700		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	370		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	112	79 - 118
1,2-Dichloroethane-d4 (Surr)	99	78 - 117
Toluene-d8 (Surr)	98	77 - 121

Client: GeoSyntec Consultants | Job Number: 720-6597-1

Client Sample ID: **MW-1**

Lab Sample ID: 720-6597-5 | Date Sampled: 11/20/2006 1515
Client Matrix: Water | Date Received: 11/20/2006 1630

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

Method: 8260B | Analysis Batch: 720-15792 | Instrument ID: Saturn 2K3
Preparation: 5030B | Lab File ID: d:\data\200611\112706\SA-
Dilution: 100 | Initial Weight/Volume: 40 mL
Date Analyzed: 11/27/2006 2051 | Final Weight/Volume: 40 mL
Date Prepared: 11/27/2006 2051

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	370		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
Isopropylbenzene	ND		50
4-Isopropyltoluene	ND		100
Methylene Chloride	ND		500

Client: GeoSyntec Consultants | Job Number: 720-6597-1

Client Sample ID: **MW-1**

Lab Sample ID: 720-6597-5 | Date Sampled: 11/20/2006 1515
Client Matrix: Water | Date Received: 11/20/2006 1630

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

Method: 8260B | Analysis Batch: 720-15792 | Instrument ID: Saturn 2K3
Preparation: 5030B | Lab File ID: d:\data\200611\112706\SA-
Dilution: 100 | Initial Weight/Volume: 40 mL
Date Analyzed: 11/27/2006 2051 | Final Weight/Volume: 40 mL
Date Prepared: 11/27/2006 2051

Analyte	Result (ug/L)	Qualifier	RL
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	3100		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	370		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	106	79 - 118
1,2-Dichloroethane-d4 (Surr)	103	78 - 117
Toluene-d8 (Surr)	101	77 - 121

DATA REPORTING QUALIFIERS

Lab Section	Qualifier	Description

Client: GeoSyntec Consultants Job Number: 720-6597-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC/MS VOA					
Analysis Batch:720-15777					
LCS 720-15777/1	Lab Control Spike	T	Water	8260B	
MB 720-15777/2	Method Blank	T	Water	8260B	
720-6597-1TB	TRIP BLANK	T	Water	8260B	
Analysis Batch:720-15792					
LCS 720-15792/3	Lab Control Spike	T	Water	8260B	
MB 720-15792/4	Method Blank	T	Water	8260B	
720-6597-5	MW-1	T	Water	8260B	
720-6597-5MS	Matrix Spike	T	Water	8260B	
720-6597-5MSD	Matrix Spike Duplicate	T	Water	8260B	
Analysis Batch:720-15825					
LCS 720-15825/1	Lab Control Spike	T	Water	8260B	
MB 720-15825/2	Method Blank	T	Water	8260B	
720-6597-2	MW-DUP	T	Water	8260B	
720-6597-2MS	Matrix Spike	T	Water	8260B	
720-6597-2MSD	Matrix Spike Duplicate	T	Water	8260B	
720-6597-3	MW-3	T	Water	8260B	
720-6597-4	MW-2	T	Water	8260B	

Report Basis
T = Total

Client: GeoSyntec Consultants

Job Number: 720-6597-1

Method Blank - Batch: 720-15777

Method: 8260B
Preparation: 5030B

Lab Sample ID: MB 720-15777/2
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 11/27/2006 1434
Date Prepared: 11/27/2006 1434

Analysis Batch: 720-15777
Prep Batch: N/A
Units: ug/L

Instrument ID: Varian 3900G
Lab File ID: c:\saturnws\data\200611\11
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
Isopropylbenzene	ND		0.50

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

Client: GeoSyntec Consultants

Job Number: 720-6597-1

Method Blank - Batch: 720-15777

Method: 8260B
Preparation: 5030B

Lab Sample ID: MB 720-15777/2
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 11/27/2006 1434
Date Prepared: 11/27/2006 1434

Analysis Batch: 720-15777
Prep Batch: N/A
Units: ug/L

Instrument ID: Varian 3900G
Lab File ID: c:\saturnws\data\200611\11
Initial Weight/Volume: 40 mL
Final Weight/Volume: 40 mL

Analyte	Result	Qual	RL
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	108	79 - 118
1,2-Dichloroethane-d4 (Surr)	113	78 - 117
Toluene-d8 (Surr)	111	77 - 121

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

Client: GeoSyntec Consultants

Job Number: 720-6597-1

Lab Control Spike - Batch: 720-15777

Method: 8260B
Preparation: 5030B

Lab Sample ID: LCS 720-15777/1
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 11/27/2006 1400
Date Prepared: 11/27/2006 1400

Analysis Batch: 720-15777
Prep Batch: N/A
Units: ug/L

Instrument ID: Varian 3900G
Lab File ID: c:\saturnws\data\200611\11
Initial Weight/Volume: 40 mL
Final Weight/Volume: 40 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Benzene	20.0	18.7	93	69 - 129	
Chlorobenzene	20.0	20.6	103	61 - 121	
1,1-Dichloroethene	20.0	19.5	97	65 - 125	
Toluene	20.0	19.4	97	70 - 130	
Trichloroethene	20.0	17.4	87	74 - 134	

Surrogate	% Rec	Acceptance Limits
4-Bromofluorobenzene	109	79 - 118
1,2-Dichloroethane-d4 (Surr)	112	78 - 117
Toluene-d8 (Surr)	105	77 - 121

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

Client: GeoSyntec Consultants

Job Number: 720-6597-1

Method Blank - Batch: 720-15792

Method: 8260B
Preparation: 5030B

Lab Sample ID: MB 720-15792/4
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 11/27/2006 1304
Date Prepared: 11/27/2006 1304

Analysis Batch: 720-15792
Prep Batch: N/A
Units: ug/L

Instrument ID: Saturn 2K3
Lab File ID: d:\data\200611\112706\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
Isopropylbenzene	ND		0.50

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

Client: GeoSyntec Consultants

Job Number: 720-6597-1

Method Blank - Batch: 720-15792

Method: 8260B
Preparation: 5030B

Lab Sample ID: MB 720-15792/4
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 11/27/2006 1304
Date Prepared: 11/27/2006 1304

Analysis Batch: 720-15792
Prep Batch: N/A
Units: ug/L

Instrument ID: Saturn 2K3
Lab File ID: d:\data\200611\112706\MB
Initial Weight/Volume: 40 mL
Final Weight/Volume: 40 mL

Analyte	Result	Qual	RL
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)	105	78 - 117
Toluene-d8 (Surr)	98	77 - 121

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

Client: GeoSyntec Consultants

Job Number: 720-6597-1

Lab Control Spike - Batch: 720-15792

Method: 8260B
Preparation: 5030B

Lab Sample ID: LCS 720-15792/3
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 11/27/2006 1231
Date Prepared: 11/27/2006 1231

Analysis Batch: 720-15792
Prep Batch: N/A
Units: ug/L

Instrument ID: Saturn 2K3
Lab File ID: d:\data\200611\112706\LS-
Initial Weight/Volume: 40 mL
Final Weight/Volume: 40 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Benzene	20.0	20.1	100	69 - 129	
Chlorobenzene	20.0	21.9	110	61 - 121	
1,1-Dichloroethene	20.0	21.0	105	65 - 125	
Toluene	20.0	20.2	101	70 - 130	
Trichloroethene	20.0	18.6	93	74 - 134	

Surrogate	% Rec	Acceptance Limits
4-Bromofluorobenzene	111	79 - 118
1,2-Dichloroethane-d4 (Surr)	99	78 - 117
Toluene-d8 (Surr)	96	77 - 121

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

Client: GeoSyntec Consultants

Job Number: 720-6597-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 720-15792

Method: 8260B
Preparation: 5030B

MS Lab Sample ID:	720-6597-5	Analysis Batch:	720-15792	Instrument ID:	Saturn 2K3
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	d:\data\200611\112706\S
Dilution:	100			Initial Weight/Volume:	40 mL
Date Analyzed:	11/27/2006 2124			Final Weight/Volume:	40 mL
Date Prepared:	11/27/2006 2124				

MSD Lab Sample ID:	720-6597-5	Analysis Batch:	720-15792	Instrument ID:	Saturn 2K3
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	d:\data\200611\112706\SA
Dilution:	100			Initial Weight/Volume:	40 mL
Date Analyzed:	11/27/2006 2157			Final Weight/Volume:	40 mL
Date Prepared:	11/27/2006 2157				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Benzene	102	101	69 - 129	1	20		
Chlorobenzene	110	108	61 - 121	1	20		
1,1-Dichloroethene	102	102	65 - 125	0	20		
Toluene	102	101	70 - 130	1	20		
Trichloroethene	92	92	74 - 134	0	20		

Surrogate	MS % Rec	MSD % Rec	Acceptance Limits
4-Bromofluorobenzene	107	108	79 - 118
1,2-Dichloroethane-d4 (Surr)	99	99	78 - 117
Toluene-d8 (Surr)	98	100	77 - 121

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

Client: GeoSyntec Consultants

Job Number: 720-6597-1

Method Blank - Batch: 720-15825

Method: 8260B
Preparation: 5030B

Lab Sample ID: MB 720-15825/2
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 11/28/2006 1243
Date Prepared: 11/28/2006 1243

Analysis Batch: 720-15825
Prep Batch: N/A
Units: ug/L

Instrument ID: Saturn 2K3
Lab File ID: d:\data\200611\112806\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
Isopropylbenzene	ND		0.50

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

Client: GeoSyntec Consultants

Job Number: 720-6597-1

Method Blank - Batch: 720-15825

Method: 8260B
Preparation: 5030B

Lab Sample ID: MB 720-15825/2
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 11/28/2006 1243
Date Prepared: 11/28/2006 1243

Analysis Batch: 720-15825
Prep Batch: N/A
Units: ug/L

Instrument ID: Saturn 2K3
Lab File ID: d:\data\200611\112806\MB
Initial Weight/Volume: 40 mL
Final Weight/Volume: 40 mL

Analyte	Result	Qual	RL
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	110	79 - 118
1,2-Dichloroethane-d4 (Surr)	102	78 - 117
Toluene-d8 (Surr)	98	77 - 121

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

Client: GeoSyntec Consultants

Job Number: 720-6597-1

Lab Control Spike - Batch: 720-15825

Method: 8260B
Preparation: 5030B

Lab Sample ID: LCS 720-15825/1
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 11/28/2006 1210
Date Prepared: 11/28/2006 1210

Analysis Batch: 720-15825
Prep Batch: N/A
Units: ug/L

Instrument ID: Saturn 2K3
Lab File ID: d:\data\200611\112806\LS-
Initial Weight/Volume: 40 mL
Final Weight/Volume: 40 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Benzene	20.0	20.6	103	69 - 129	
Chlorobenzene	20.0	21.9	109	61 - 121	
1,1-Dichloroethene	20.0	20.8	104	65 - 125	
Toluene	20.0	20.4	102	70 - 130	
Trichloroethene	20.0	18.2	91	74 - 134	

Surrogate	% Rec	Acceptance Limits
4-Bromofluorobenzene	109	79 - 118
1,2-Dichloroethane-d4 (Surr)	94	78 - 117
Toluene-d8 (Surr)	100	77 - 121

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

Client: GeoSyntec Consultants

Job Number: 720-6597-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 720-15825

Method: 8260B
Preparation: 5030B

MS Lab Sample ID:	720-6597-2	Analysis Batch:	720-15825	Instrument ID:	Saturn 2K3
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	d:\data\200611\112806\S
Dilution:	80			Initial Weight/Volume:	40 mL
Date Analyzed:	11/28/2006 1709			Final Weight/Volume:	40 mL
Date Prepared:	11/28/2006 1709				

MSD Lab Sample ID:	720-6597-2	Analysis Batch:	720-15825	Instrument ID:	Saturn 2K3
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	d:\data\200611\112806\SA
Dilution:	80			Initial Weight/Volume:	40 mL
Date Analyzed:	11/28/2006 1742			Final Weight/Volume:	40 mL
Date Prepared:	11/28/2006 1742				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Benzene	99	106	69 - 129	7	20		
Chlorobenzene	113	111	61 - 121	2	20		
1,1-Dichloroethene	103	105	65 - 125	2	20		
Toluene	99	105	70 - 130	5	20		
Trichloroethene	89	94	74 - 134	5	20		

Surrogate	MS % Rec	MSD % Rec	Acceptance Limits
4-Bromofluorobenzene	108	111	79 - 118
1,2-Dichloroethane-d4 (Surr)	100	101	78 - 117
Toluene-d8 (Surr)	97	101	77 - 121

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

720-6597

SEVERN TRENT STL

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 #: 102892

Date Nov. 20, 2006 Page 1 of 1

Report To

Attn: Sergio Santos
Company: GeoSyntec Consultants
Address: 475-14th St., Ste 400
Phone: (510)836-3034 Email: Oakland, CA 94612
Bill To: Same
Sampled By: ESS Jacki Lee
Attn:
Phone:

Analysis Request

Sample ID	Date	Time	Matrix	Preserv.	TPH EPA - ☐ 8015/8021 ☐ 8260B ☐ Gas w/ ☐ BTEX ☐ MTBE	Purgeable Aromatics BTEX EPA - ☐ 8021 ☐ 8260B	TEPH EPA 801 5M* ☐ Silica Gel ☐ Diesel ☐ Motor Oil ☐ Other ___	Fuel Tests EPA 8260B: ☐ Gas ☐ BTEX ☐ Five Oxyenates ☐ DCA, EDB ☐ Ethanol	Purgeable Halocarbons (HVOCs) EPA 8021 by 8260B	Volatile Organics GC/MS (VOCs) ☒ EPA 8260B ☐ 624	Semivolatiles GC/MS ☐ EPA 8270 ☐ 625	Oil and Grease ☐ Petroleum (EPA 1664) ☐ Total	Pesticides ☐ EPA 8081 ☐ 608 PCBs ☐ EPA 8082 ☐ 608	PNAs by ☐ 8270 ☐ 8310	CAM17 Metals (EPA 6010/7470/7471)	Metals: ☐ Lead ☐ LUFT ☐ RCRA ☐ Other: ___	Low Level Metals by EPA 200.8/6020 (ICP-MS): ___	☐ W.E.T (STLC) ☐ TCLP	☐ Hexavalent Chromium ☐ pH (24h hold time for H_2O)	☐ Spec Cond. ☐ Alkalinity ☐ TSS ☐ TDS ☐	Anions: ☐ Cl ☐ SO_4 ☐ NO_3 ☐ F ☐ Br ☐ NO_2 ☐ PO_4				Number of Containers
Trip Blank	11/20/06	9:00	W	HCl						X																2
MW-DUP	11/20/06	10:30	WG	HCl						X																3
MW-3	11/20/06	13:10	WG	HCl						X																3
MW-2	11/20/06	14:40	WG	HCl						X																3
MW-1	11/20/06	15:15	WG	HCl						X																3

Project Info.

Project Name: Hopyard Cleaners
Project#: WR0574
PO#:
Credit Card#:

Sample Receipt

of Containers:
Head Space:
Temp: 2°C
Conforms to record:

TAT: 5 Day | 72h | 48h | 24h | Other:

Report: ☐ Routine ☐ Level 3 ☐ Level 4 ☐ EDD ☐ State Tank Fund EDF
Special Instructions / Comments: ☐ Global ID ___
Questions: call Jacki Lee @ 925-260-7999

1) Relinquished by: [signature] 16:30
Signature Time
Jacqueline Lee 11/20/06
Printed Name Date
Environmental Sampl. Svcs.
Company

2) Relinquished by:
Signature Time
Printed Name Date
Company

3) Relinquished by:
Signature Time
Printed Name Date
Company

1) Received by: [signature] 16:30
Signature Time
T. Bullock 11/20/06
Printed Name Date
STL-SF
Company

2) Received by:
Signature Time
Printed Name Date
Company

3) Received by:
Signature Time
Printed Name Date
Company

See Terms and Conditions on reverse

LOGIN SAMPLE RECEIPT CHECK LIST

Client: GeoSyntec Consultants Job Number: 720-6597-1

Login Number: 6597

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.	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	