# SNOW CLEANERS INC.

EXPERT FINISHING • ALL LEATHER GOODS

MAIN OFFICE & PLANT

38 WEST SONORA ST.
STOCKTON, CA 95203
209 / 547-1454




May 31, 2013

Mr. Jerry Wickham
Alameda County Department of Environmental Health
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502

SUBJECT: GROUNDWATER MONITORING AND SAMPLING REPORT CERTIFICATION
ACEH Case # RO 0000367
Snow Cleaners
2678 Coolidge Avenue
Oakland, CA

Dear Mr. Wickham:

You will find enclosed one copy of the following document prepared by P&D Environmental, Inc.

- Groundwater Monitoring And Sampling Report dated May 31, 2013 (document 0298.R17).

I declare, under penalty of perjury, that the information and/or recommendations contained in the above-mentioned work plan for the subject site is true and correct to the best of my knowledge.

Should you have any questions, please do not hesitate to call me at (800) 818-7669.

Cordially,
Snow Cleaners, Inc.

Harold M Turner

Harold Turner
President

Cc: Mr. LeRoy Griffin, Oakland Fire Department, Emergency Services, 250 Frank Ogawa Plaza, Suite 3341, Oakland, CA 94612 (with enclosure)

0298.L88

# P&D ENVIRONMENTAL, INC.

**55 Santa Clara Ave, Suite 240**
**Oakland, CA 94610**
**(510) 658-6916**


May 31, 2013
Report 0298.R17

Mr. Harold Turner
Snow Cleaners, Inc.
2678 Coolidge Avenue
Oakland, CA

SUBJECT: GROUNDWATER MONITORING AND SAMPLING REPORT
(JANUARY THROUGH JUNE 2013)
ACDEH Case # RO 0000357
Snow Cleaners
2678 Coolidge Avenue
Oakland, CA

Dear Mr. Turner:

P&D Environmental Inc. (P&D) has prepared this report documenting the monitoring and sampling of four groundwater monitoring wells designated as MW1 through MW4 located near the subject site, and four groundwater extraction wells designated as DP1 through DP4 located at the subject site. All of the wells in the groundwater monitoring network were monitored and sampled on May 14, 2013. A Site Location Map is attached as Figure 1, and a Site Vicinity Map Detail showing all of the well locations is attached as Figure 2.

## BACKGROUND

Underground Storage Tanks (USTs) associated with the former dry cleaning facility were removed and associated limited excavation of the UST pit was performed by others in 1990. In January, 1994 two groundwater monitoring wells (MW1 and MW2) were installed by others at offsite locations in Davis Street approximately five feet south of the former UST pit. P&D subsequently oversaw the installation of groundwater monitoring wells MW3 and MW4 at offsite locations on September 9, 2008. A detailed discussion of the site background and historical monitoring, sampling, and investigation are provided in P&D's Subsurface Investigation Report dated August 19, 2009 (document 0298.R6). On September 27 through 29, 2010 P&D oversaw the installation of dual-phase extraction wells DP1 through DP4, and vapor extraction wells VE1 and VE2. A detailed discussion of well installation is provided in P&Ds Well Installation Report dated December 2, 2010 (document 0298.R11). The initial monitoring and sampling of the new wells was performed on October 15, 2010 in conjunction with the periodic monitoring and sampling of the existing offsite groundwater monitoring wells. Documentation of the October 15, 2010 sampling event is provided in P&D's Semi-Annual Groundwater Monitoring and Sampling Report (document 0298.R12) dated December 17, 2010.

In December 2010 a vapor extraction feasibility test was performed at well DP1. During 2011 a discharge permit was obtained from East Bay Municipal Utility District (EBMUD), a pump was

installed in well DP1, and groundwater extraction feasibility testing was performed. Documentation of the vapor extraction and groundwater extraction feasibility testing is provided in P&D's Vapor Extraction and Groundwater Extraction Feasibility Test Report (document 0298.R13) dated January 24, 2012.

A detailed discussion and recommendations regarding the current remedial efforts can be found in P&Ds Semi-Annual Groundwater Monitoring, Sampling and Remediation Status Report (document 0298.R16), dated March 25, 2013. Groundwater pumping from well DP1 was restarted on August 28, 2012. Between August 28, 2012 and March 21, 2013 a total of 82,242 gallons of water were treated using granular activated carbon and discharged to the sanitary sewer. On March 21, 2013 the groundwater treatment system was temporarily shut down for maintenance. The system was not restarted by May 14, 2013.

## FIELD ACTIVITIES

P&D personnel monitored offsite groundwater monitoring wells MW1, MW2, MW3, and MW4, and onsite extraction wells DP1, DP2, DP3, and DP4 for depth to water on May 14, 2013 to the nearest 0.01 foot using an electric water level indicator. A summary of the depth to water measurements is attached with this report as Table 1.

Due to the presence of the pump in well DP1 and a depth to water of greater than 20 feet below the top of the well casing, P&D personnel were unable to measure the depth to water and the depth to free product in well DP1 using a steel tape and water-finding and product-finding paste, and were only able to measure depth to water using an electronic water level indicator. Free product was not encountered during the purging or sampling of well DP1.

Following the measurement of depth to water on May 14, 2013 each of the groundwater monitoring and extraction wells were purged with a peristaltic pump for a minimum of 15 minutes prior to being sampled. Purging was performed at low flow rates to minimize turbulence and minimize the likelihood of sediments in the samples. During purging operations, the field parameters of electrical conductivity, temperature, pH, dissolved oxygen, oxidation reduction potential, turbidity, and depth to water were monitored and recorded on a groundwater monitoring/well purging data sheet. Petroleum hydrocarbon odors were detected on the purge water from wells MW2, DP1, DP2, DP3, and DP4, with the odors described as moderate, strong, moderate to strong, slight to moderate, and slight to moderate, respectively. Petroleum hydrocarbon sheen was not observed on the purge water from any of the wells, with the exception of well DP1. Records of the field parameters measured during well purging are included with this report.

Once the field parameters were observed to stabilize, and the wells had been purged for a minimum of 15 minutes, water samples were collected directly from the discharge tubing from the pump. The samples were transferred to 40-milliliter glass Volatile Organic Analysis (VOA) vials that were preserved with hydrochloric acid and sealed with Teflon-lined screw caps. The VOA vials were overturned and tapped to assure that no air bubbles were present. The VOA vials were then labeled and transferred to a cooler with ice, pending transport to the laboratory. Chain of custody procedures were observed for all sample handling.

GEOLOGY AND HYDROGEOLOGY

Review of Figure 1 shows that the site is located near the top of a northeasterly-trending interfluvial (ridge-like) structure. The topography in the area surrounding the site slopes to the east and south. Peralta Creek is located approximately 500 feet to the east and approximately 400 feet to the southeast of the subject site. The creek flows towards the southwest. Portions of the creek located directly to the east of the site are lined with concrete. Based on evaluation of the concrete channel for Peralta Creek that is located beneath Davis Street, the water that flows through Peralta Hacienda Historic Park is not the same water that flows in Peralta Creek on the north side of Davis Street.

The site geology and hydrogeology are complex, and a detailed discussion of the site geology and hydrogeology is provided in P&D's Subsurface Investigation Report dated August 19, 2009 (document 0298.R6). The interpreted groundwater flow direction in the vicinity of the site was developed using multiple lines of evidence (topography, lithology, soil discoloration, contaminant concentration distribution, and the measured depth to water in the different wells).

Groundwater is interpreted to generally move in an unconfined A-water-bearing zone in the immediate vicinity of the site northeastwards and eastwards in the vicinity of the former UST pit and then towards the southeast (towards Peralta Creek) to the north of the former UST pit, based on the elevations and slope of the surface of the fine-grained materials that are encountered beginning at a depth of approximately 25 feet below the ground surface (bgs) in the vicinity of the site. Based on the presence of coarse-grained materials at depths greater than 30 feet bgs that are located between borehole B6 and well MW3, groundwater is interpreted to move vertically in a southerly-trending paleo-channel from the unconfined A-water-bearing zone to a confined B-water-bearing zone in the area between the northeast side of well DP2 at the subject site and 34th Avenue, and then move horizontally in the B-water-bearing zone to the south towards Peralta Creek and Peralta Hacienda Historical Park.

Review of Table 1 and Figure 2 shows that historically there has been a difference in water table elevation of as much as approximately 4.5 to 5.0 feet between wells DP2 and DP1. The horizontal distance is approximately 18 feet between these two wells, and the location of this change in water table elevation corresponds with an increase in depth to fine-grained materials which are encountered at a depth of approximately 22 to 25 feet bgs between well DP2 and Davis Street to the southwest. Based on the depth of approximately 22 to 25 feet bgs to fine-grained materials between well DP2 and Davis Street to the southwest, the thickness of the water layer overlying the fine-grained materials to the southwest of DP2 ranges seasonally between approximately 1 and 4 feet. The depth to fine-grained materials and the saturated thickness of the water-bearing sediments to the northeast of DP2 is unknown. A discussion of geologic cross sections in P&Ds Well Installation Report dated December 2, 2010 (document 0298.R11) identifies a east-northeasterly-trending channel in the surface of the fine-grained materials that drains the area beneath the former UST pit towards the northeast and towards the change in water table elevation of approximately 4.5 to 5.0 feet that has historically been located between wells DP2 and DP1.

Based on water level information available (see Table 1) the historically measured depth to water in the offsite groundwater monitoring wells MW1 through MW4 has ranged from 11.49 to 18.83 feet in well MW2; 16.95 to 22.97 feet in well MW3 (after September 19, 2008); 19.07 to 23.92 feet in well

MW1; and 21.18 to 25.86 feet in well MW4. Review of historical groundwater monitoring well water levels shows that the water levels in wells MW2 and MW3 (screened in the A-water-bearing zone) have been consistently similar, and that the water levels in wells MW1 and MW4 (screened in the B-water-bearing zone) have been consistently similar, with a difference of approximately 6 to 7 feet in the elevations between the two sets of wells during dry season months and a difference of approximately 8 to 10 feet during wet season months. The water elevations in the wells that are screened in the A-water-bearing zone are higher than the water elevations in the wells that are screened in the B-water-bearing zone. Additionally, both the A-water-bearing zone and the B-water-bearing zone respond similarly to seasonal changes in water levels, with a seasonal vertical range of water elevations to date of approximately 7.0 feet in wells MW2 and MW3, and approximately 4.0 feet in wells MW1 and MW4. Historical well water levels are shown for August 2009 through June 2012 in Figure 3 to illustrate the relationships of water level changes for wells MW1 through MW4.

Figure 4 shows water level changes in all of the wells for October 2010 through June 2012 (wells DP1 through DP4 were not installed until September 2010). Review of Figure 4 shows the following.

- Water levels in wells MW2, DP2 and DP3 are similar.
- Water levels and changes in water levels in wells DP1 and DP4 are similar (the water level in well DP1 was depressed in June 2011 because of groundwater extraction in well DP1).
- Water levels and changes in water levels in wells MW1 and MW4 are similar.
- Changes in water levels in wells DP2 and DP3 are similar.

Water level monitoring was not performed in any of the wells between the beginning of December 2011 and the end of June 2012. For this reason elevated water levels historically measured in the wells during this time period were not recorded and are not shown on Figures 3 and 4.

## LABORATORY RESULTS

All of the groundwater samples were analyzed at McCampbell Analytical, Inc. (McCampbell) of Pacheco, California. McCampbell is a State-accredited hazardous waste testing laboratory. The samples were analyzed for Total Petroleum Hydrocarbons as Gasoline (TPH-G) and for Total Petroleum Hydrocarbons as Stoddard solvent (TPH-SS) by EPA Methods 5030B in conjunction with EPA Method 8021B, and modified EPA Method 8015B, and for Total Petroleum Hydrocarbons as Diesel (TPH-D) and for Total Petroleum Hydrocarbons as Bunker Oil (TPH-BO) by EPA Method 3510C in conjunction with EPA Method 8015B. In addition, all of the samples were analyzed for Volatile Organic Compounds (VOCs) including Methyl tert-Butyl Ether (MTBE); benzene, toluene, ethylbenzene, and total xylenes (BTEX); and halogenated volatile organic compounds (HVOCs) by EPA Method 8260B. The groundwater sample results are summarized in Table 2, and copies of the laboratory analytical reports and chain of custody documentation are attached with this report.

No analytes were detected in the groundwater sample collected from well MW3, and no analytes were detected in the groundwater samples collected from wells MW1, MW4, and DP4 with the exception of chloroform detected in all three wells at concentrations of 0.95, 1.6, and 1.5 micrograms

per Liter (µg/L), respectively, cis-1,2-Dichloroethene (cis-1,2-DCE) in well MW4 at a concentration of 15 µg/L, and tetrachloroethene in well DP4 at a concentration of 0.73 µg/L.

In the samples collected from wells MW2, DP1, DP2, and DP3, TPH-G was detected at concentrations of 760, 410, 420, and 590 ug/L, respectively; TPH-SS was detected at concentrations of 800, 290, 460, and 630 ug/L, respectively; TPH-D was detected at concentrations of 2,700, 530, 950, and 2,700 ug/L, respectively; and TPH-BO was detected at concentrations of 2,800, 780, 1,000, and 2,800 ug/L, respectively. Review of the laboratory report shows that the laboratory described the TPH-G and TPH-SS results for wells MW2, DP1, DP2, and DP3 as consisting of Stoddard solvent/mineral spirit-range compounds and also as having no recognizable pattern.

The TPH-D and TPH-BO results for wells MW2, DP2 and DP3 are described by the laboratory as consisting of both Stoddard solvent/mineral spirits-range compounds and kerosene or jet fuel-range compounds. The TPH-D and TPH-BO results for well MW2 are also described as consisting of oil-range compounds. The TPH-D and TPH-BO results for well DP1 are described as consisting of Stoddard solvent/mineral spirits-range compounds, oil-range compounds, and diesel-range compounds with no recognizable pattern.

PCE and associated decomposition products were detected in the wells as follows:

- PCE was detected in wells DP1 and DP4 at concentrations of 380 and 0.73 ug/L, respectively.
- Trichlorethene was detected in wells DP1 and DP3 at concentrations of 180 and 0.74 ug/L, respectively.
- Cis-1,2-DCE was detected in wells MW2, MW4, DP1, DP2, and DP3 at concentrations of 520, 15, 150, 11,000, and 22 ug/L, respectively.
- Trans-1,2-dichloroethene was detected in wells MW2 and DP3 at concentrations of 14 and 2.4 ug/L, respectively.
- Vinyl chloride was detected in wells MW2, DP2, and DP3 at concentrations of 60, 2,300, and 25 ug/L, respectively.

Additional petroleum-related volatile organic compounds and chloroform were also detected at various concentrations in different wells (see Table 2).

## DISCUSSION AND RECOMMENDATIONS

All of the groundwater monitoring wells and dual phase extraction wells were sampled on May 14, 2013. Petroleum hydrocarbon odors were detected on the purge water from wells MW2, DP1, DP2, DP3, and DP4, and petroleum hydrocarbon sheen was observed on the purge water from well DP1 only.

Although the depth to groundwater could not be measured in well DP1 during the current well sampling event, historically the groundwater surface elevation in well DP2 has been higher than in well DP1. This historical difference in water levels is attributed to the geology of the site. A detailed discussion of the similarities and relationships of water level changes in the different wells is provided above in the geology and hydrogeology section of this report. Based on the geology

identified in boreholes at and near these wells the groundwater drains from the vicinity of the former UST pit and the vicinity of wells DP2, DP3 and MW2 northeastwards towards well DP1. A detailed discussion of the extent of petroleum and HVOCs in groundwater with figures is provided in P&Ds Well Installation Report dated December 2, 2010 (document 0298.R11). A detailed discussion of observations regarding the extent of petroleum hydrocarbons and HVOCs in groundwater is also provided in P&D's December 17, 2010 Groundwater Monitoring and Sampling Report (document 0298.R12). Documentation of site remediation performed in accordance with recommendations set forth in P&D's Vapor Extraction and Groundwater Extraction Feasibility Test Report were also provided in P&D's semi-annual well sampling report (document 0298.R16) dated March 25, 2013.

Review of the most recent water quality results shows that all of the detected contaminant concentrations have decreased with the following exceptions TPH-D and TPH-BO in well MW2, chloroform in well MW4, vinyl chloride in well DP2, and naphthalene in well DP3, which increased. The decrease in TPH and VOC concentrations may be related to the groundwater extraction that was performed at well DP1 through March 21, 2013.

Based on the sample results, P&D recommends that all of the groundwater monitoring and extraction wells continue to be sampled on a semi-annual basis. P&D also recommends that the groundwater extraction system be re-started and that the soil vapor extraction system be started once permit approval is provided by the BAAQMD.

## DISTRIBUTION

A copy of this report will be uploaded to the ACDEH website, in accordance with ACDEH requirements. In addition, a copy of this report will be uploaded to the GeoTracker database, and one copy of this report will be mailed to LeRoy Griffin of the City of Oakland Fire Department

## LIMITATIONS

This report was prepared solely for the use of Snow Cleaners, Inc. The content and conclusions provided by P&D in this assessment are based on information collected during our investigation, which may include, but not be limited to, visual site inspections; interviews with the site owner, regulatory agencies and other pertinent individuals; review of available public documents; subsurface exploration and our professional judgment based on said information at the time of preparation of this document. Any subsurface sample results and observations presented herein are considered to be representative of the area of investigation; however, geological conditions may vary between borings and may not necessarily apply to the general site as a whole. If future subsurface or other conditions are revealed which vary from these findings, the newly revealed conditions must be evaluated and may invalidate the findings of this report.

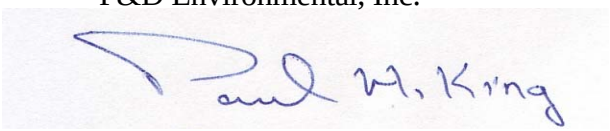
This report is issued with the understanding that it is the responsibility of the owner, or his representative, to ensure that the information contained herein is brought to the attention of the appropriate regulatory agencies, where required by law. Additionally, it is the sole responsibility of the owner to properly dispose of any hazardous materials or hazardous wastes left onsite, in accordance with existing laws and regulations.

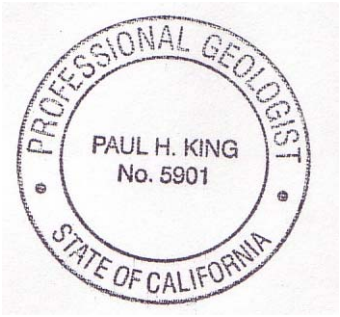
This report has been prepared in accordance with generally accepted practices using standards of care and diligence normally practiced by recognized consulting firms performing services of a similar nature. P&D is not responsible for the accuracy or completeness of information provided by other individuals or entities used in this report. This report presents our professional judgment based upon data and findings identified in this report and interpretation of such data based upon our experience and background, and no warranty, either express or implied, is made. The conclusions presented are based upon the current regulatory climate and may require revision if future regulatory changes occur.

Should you have any questions, please do not hesitate to contact us at (510) 658-6916.

Sincerely,

P&D Environmental, Inc.






Paul H. King
President
Professional Geologist #5901
Expires: 12/31/13

Attachments:

Table 1 – Summary of Groundwater Elevation Data
Table 2 - Summary of Groundwater Sample Results

Figure 1 - Site Location Map
Figure 2 – Site Vicinity Map Detail Showing Well Locations
Figure 3 – Graph of Water Levels in Site Groundwater Monitoring Network Wells for August 2009 Through June 2012
Figure 4 – Graph of Water Levels in Site Groundwater Monitoring Network Wells for October 2010 Through June 2012

Groundwater Monitoring/Well Purging Data Sheets
Laboratory Reports and Chain of Custody Documentation

PHK/sjc
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# TABLES

TABLE 1

SUMMARY OF GROUNDWATER ELEVATION DATA

| Well No | Date | Top Of Casing Elevation (ft)** | Depth To Water (ft) | Water Table Elevation (ft) | Change in Water Table Elevation |
|---|---|---|---|---|---|
| MW1 | 5/14/2013 | 132.78 | 22.27 | 110.51 | -0.89 |
| | 12/12/2012 | | 21.38 | 111.40 | 0.66 |
| | 6/28/2012 | | 22.04 | 110.74 | 0.51 |
| | 12/5/2011 | | car parked on well | could not measure | |
| | 9/2/2011 | | 22.55 | 110.23 | -1.62 |
| | 6/1/2011 | | 20.93 | 111.85 | -0.52 |
| | 5/20/2011 | | 20.41 | 112.37 | -0.95 |
| | 4/15/2011 | | 19.46 | 113.32 | -0.21 |
| | 3/18/2011 | | 19.25 | 113.53 | 2.65 |
| | 2/18/2011 | | 21.90 | 110.88 | -1.14 |
| | 1/21/2011 | | 20.76 | 112.02 | 2.39 |
| | 12/10/2010 | | 23.15 | 109.63 | 0.70 |
| | 11/19/2010 | | 23.85 | 108.93 | 0.07 |
| | 10/15/2010 | | 23.92 | 108.86 | -0.42 |
| | 9/22/2010 | | 23.50 | 109.28 | -0.63 |
| | 8/20/2010 | | 22.87 | 109.91 | -0.86 |
| | 7/16/2010 | | 22.01 | 110.77 | -0.95 |
| | 6/18/2010 | | 21.06 | 111.72 | -0.80 |
| | 5/21/2010 | | 20.26 | 112.52 | -1.02 |
| | 4/16/2010 | | 19.24 | 113.54 | -0.17 |
| | 3/19/2010 | | 19.07 | 113.71 | 1.49 |
| | 2/19/2010 | | 20.56 | 112.22 | 0.52 |
| | 1/27/2010 | | 21.08 | 111.70 | 2.28 |
| | 12/1/2009 | | 23.36 | 109.42 | 0.06 |
| | 11/30/2009 | | 23.42 | 109.36 | -0.32 |
| | 11/25/2009 | | car parked on well | could not measure | |
| | 10/29/2009 | | 23.10 | 109.68 | 0.30 |
| | 9/24/2009 | | 23.40 | 109.38 | -0.52 |
| | 8/20/2009 | | 22.88 | 109.90 | 0.12 |
| | 9/26/2008 | | 23.00 | 109.78 | 0.02 |
| | 9/18/2008 | | 23.02 | 109.76 | -2.37 |
| | 2/20/2003 | | 20.65 | 112.13 | -0.59 |
| | 1/18/2003 | 132.78 | 20.06 | 112.72 | |
| MW2 | 5/14/2013 | 133.59 | 16.84 | 116.75 | -3.13 |
| | 12/12/2012 | | 13.71 | 119.88 | 2.30 |
| | 6/28/2012 | | 16.01 | 117.58 | 2.09 |
| | 12/5/2011 | | 18.10 | 115.49 | -1.04 |
| | 9/2/2011 | | 17.06 | 116.53 | -1.99 |
| | 6/1/2011 | | 15.07 | 118.52 | -1.04 |
| | 5/20/2011 | | 14.03 | 119.56 | -2.99 |
| | 4/15/2011 | | 11.04 | 122.55 | 0.57 |
| | 3/18/2011 | | 11.61 | 121.98 | 2.09 |
| | 2/18/2011 | | 13.70 | 119.89 | 0.20 |
| | 1/21/2011 | | 13.90 | 119.69 | 1.88 |
| | 12/13/2010 | | 15.78 | 117.81 | -0.05 |
| | 12/10/2010 | | 15.73 | 117.86 | 0.96 |
| | 11/23/2010 | | 16.69 | 116.90 | 0.97 |
| | 11/19/2010 | | 17.66 | 115.93 | -0.07 |
| | 11/12/2010 | | 17.59 | 116.00 | 0.47 |
| | 10/15/2010 | | 18.06 | 115.53 | -0.34 |
| | 9/22/2010 | | 17.72 | 115.87 | -0.37 |
| | 8/20/2010 | | 17.35 | 116.24 | -0.60 |
| | 7/16/2010 | | 16.75 | 116.84 | -1.34 |
| | 6/18/2010 | | 15.41 | 118.18 | -1.37 |
| | 5/21/2010 | | 14.04 | 119.55 | -2.25 |
| | 4/16/2010 | | 11.79 | 121.80 | -0.30 |
| | 3/19/2010 | | 11.49 | 122.10 | 1.91 |
| | 2/19/2010 | | 13.40 | 120.19 | -0.65 |
| | 1/27/2010 | | 12.75 | 120.84 | 5.71 |
| | 12/1/2009 | | 18.46 | 115.13 | -1.00 |
| | 11/30/2009 | | car parked on well | could not measure | |
| | 11/25/2009 | | car parked on well | could not measure | |
| | 10/29/2009 | | 17.46 | 116.13 | 1.37 |
| | 9/24/2009 | | 18.83 | 114.76 | -0.37 |
| | 8/20/2009 | | 18.46 | 115.13 | 0.04 |
| | 9/18/2008 | | 18.50 | 115.09 | -5.41 |
| | 2/20/2003 | | 13.09 | 120.50 | -1.54 |
| | 1/18/2003 | 133.59 | 11.55# | 122.04 | |
| MW3 | 5/14/2013 | 136.35 | 20.43 | 115.92 | -2.56 |
| | 12/12/2012 | | 17.87 | 118.48 | 2.90 |
| | 6/28/2012 | | 20.77 | 115.58 | -0.26 |
| | 12/5/2011 | | 20.51 | 115.84 | 0.78 |
| | 9/2/2011 | | 21.29 | 115.06 | -1.34 |
| | 6/1/2011 | | 19.95 | 116.40 | -0.98 |
| | 5/20/2011 | | 18.97 | 117.38 | -2.45 |
| | 4/15/2011 | | 16.52 | 119.83 | 0.67 |
| | 3/18/2011 | | 17.19 | 119.16 | 1.40 |
| | 2/18/2011 | | 18.59 | 117.76 | -0.51 |
| | 1/21/2011 | | 18.08 | 118.27 | 1.20 |
| | 12/10/2010 | | 19.28 | 117.07 | 1.87 |
| | 11/19/2010 | | 21.15 | 115.20 | 1.82 |
| | 10/15/2010 | | 22.97 | 113.38 | -0.42 |
| | 9/22/2010 | | 22.55 | 113.80 | -0.93 |
| | 8/20/2010 | | 21.62 | 114.73 | -1.25 |
| | 7/16/2010 | | 20.37 | 115.98 | -1.05 |
| | 6/18/2010 | | 19.32 | 117.03 | -0.59 |
| | 5/21/2010 | | 18.73 | 117.62 | -1.34 |
| | 4/16/2010 | | 17.39 | 118.96 | -0.44 |
| | 3/19/2010 | | 16.95 | 119.40 | 1.01 |
| | 2/19/2010 | | 17.96 | 118.39 | -0.25 |
| | 1/27/2010 | | 17.71 | 118.64 | 3.45 |
| | 12/1/2009 | | 21.16 | 115.19 | -0.02 |
| | 11/30/2009 | | 21.14 | 115.21 | -0.12 |
| | 11/25/2009 | | 21.02 | 115.33 | -1.07 |
| | 10/29/2009 | | 19.95 | 116.40 | 1.72 |
| | 9/24/2009 | | 21.67 | 114.68 | -0.59 |
| | 8/20/2009 | | 21.08 | 115.27 | -0.17 |
| | 9/26/2008 | | 20.91 | 115.44 | 2.78 |
| | 9/19/2008 | | 23.69 | 112.66 | 4.37 |
| | 9/18/2008 | | 28.06 | 108.29 | 5.25 |
| | 9/15/2008 | | 33.31 | 103.04 | -6.51 |
| | 9/15/2008 | 136.35 | 26.80 | 109.55 | |

TABLE 1

SUMMARY OF GROUNDWATER ELEVATION DATA

| Well No | Date | Top Of Casing Elevation (ft)** | Depth To Water (ft) | Water Table Elevation (ft) | Change in Water Table Elevation |
|---|---|---|---|---|---|
| MW4 | 5/14/2013 | 134.09 | 24.32 | 109.77 | -0.93 |
| | 12/12/2012 | | 23.39 | 110.70 | 0.69 |
| | 6/28/2012 | | 24.08 | 110.01 | 1.12 |
| | 12/5/2011 | | 25.20 | 108.89 | -0.65 |
| | 9/2/2011 | | 24.55 | 109.54 | -1.57 |
| | 6/1/2011 | | 22.98 | 111.11 | -0.52 |
| | 5/20/2011 | | 22.46 | 111.63 | -1.87 |
| | 4/15/2011 | | 20.59 | 113.50 | 0.76 |
| | 3/18/2011 | | 21.35 | 112.74 | 1.59 |
| | 2/18/2011 | | 22.94 | 111.15 | -0.16 |
| | 1/21/2011 | | 22.78 | 111.31 | 2.32 |
| | 12/10/2010 | | 25.10 | 108.99 | 0.69 |
| | 11/19/2010 | | 25.79 | 108.30 | 0.07 |
| | 10/15/2010 | | 25.86 | 108.23 | -0.39 |
| | 9/22/2010 | | 25.47 | 108.62 | -0.62 |
| | 8/20/2010 | | 24.85 | 109.24 | -0.82 |
| | 7/16/2010 | | 24.03 | 110.06 | -0.92 |
| | 6/18/2010 | | 23.11 | 110.98 | -0.78 |
| | 5/21/2010 | | 22.33 | 111.76 | -0.97 |
| | 4/16/2010 | | 21.36 | 112.73 | -0.18 |
| | 3/19/2010 | | 21.18 | 112.91 | 1.41 |
| | 2/19/2010 | | 22.59 | 111.50 | 0.52 |
| | 1/27/2010 | | 23.11 | 110.98 | 2.20 |
| | 12/1/2009 | | 25.31 | 108.78 | 0.06 |
| | 11/30/2009 | | 25.37 | 108.72 | -0.11 |
| | 11/25/2009 | | 25.26 | 108.83 | -0.20 |
| | 10/29/2009 | | 25.06 | 109.03 | 0.31 |
| | 9/24/2009 | | 25.37 | 108.72 | -0.51 |
| | 8/20/2009 | | 24.86 | 109.23 | 0.14 |
| | 9/26/2008 | | 25.00 | 109.09 | 0.00 |
| | 9/19/2008 | | 25.00 | 109.09 | 0.02 |
| | 9/18/2008 | | 25.02 | 109.07 | 0.09 |
| | 9/15/2008 | | 25.11 | 108.98 | -0.08 |
| | 9/15/2008 | 134.09 | 25.03 | 109.06 | |
| DP1 | 5/14/2013 | 137.22 | 21.82 | 115.40 | 12.90 |
| | 12/12/2012 | | 34.72 | 102.50 | -13.79 |
| | 6/28/2012 | | 20.93 | 116.29 | 4.05 |
| | 12/5/2011 | | 25.17 (0.25) ## | 112.24 | -2.73 |
| | 9/2/2011 | | 22.25 | 114.97 | 1.44 |
| | 6/1/2011 | | 23.69 | 113.53 | |
| | 5/20/2011 | | Adjusting pump rates - water level fluctuating. | | |
| | 4/15/2011 | | 14.19 | 123.03 | 1.46 |
| | 3/18/2011 | | 15.65 | 121.57 | 3.26 |
| | 2/18/2011 | | 18.91 | 118.31 | -1.08 |
| | 1/21/2011 | | 17.83 | 119.39 | 7.08 |
| | 12/13/2010 | | 24.91 | 112.31 | 0.50 |
| | 12/10/2010 | | 25.41 | 111.81 | 1.06 |
| | 11/23/2010 | | 26.47 | 110.75 | 0.24 |
| | 11/19/2010 | | 26.71 | 110.51 | 0.13 |
| | 11/12/2010 | 137.22 | 26.84 | 110.38 | -0.33 |
| | 10/15/2010 | | 25.68 | 110.71 | -0.26 |
| | 10/5/2010* | | 25.42 | 110.97 | 0.33 |
| | 9/28/2010* | 136.39 | 25.75 | 110.64 | |
| DP2 | 5/14/2013 | 136.59 | 20.06 | 116.53 | -2.05 |
| | 12/12/2012 | | 18.01 | 118.58 | 1.14 |
| | 6/28/2012 | | 19.15 | 117.44 | 2.01 |
| | 12/5/2011 | | 21.16 | 115.43 | -0.79 |
| | 9/2/2011 | | 20.37 | 116.22 | -1.89 |
| | 6/1/2011 | | 18.48 | 118.11 | |
| | 5/20/2011 | | Not Measured | | |
| | 4/15/2011 | | 13.12 | 123.47 | 1.06 |
| | 3/18/2011 | | 14.18 | 122.41 | 2.73 |
| | 2/18/2011 | | 16.91 | 119.68 | -0.17 |
| | 1/21/2011 | | 16.74 | 119.85 | 3.40 |
| | 12/13/2010 | | 20.14 | 116.45 | -0.01 |
| | 12/10/2010 | | 20.13 | 116.46 | 0.81 |
| | 11/23/2010 | | 20.94 | 115.65 | 0.71 |
| | 11/19/2010 | | 21.65 | 114.94 | -0.07 |
| | 11/12/2010 | 136.59 | 21.58 | 115.01 | 0.35 |
| | 10/15/2010 | | 21.11 | 114.66 | -0.15 |
| | 10/5/2010* | | 20.96 | 114.81 | -1.39 |
| | 9/28/2010* | 135.77 | 19.57 | 116.20 | |
| DP3 | 5/14/2013 | 135.75 | 18.84 | 116.91 | -2.78 |
| | 12/12/2012 | | 16.06 | 119.69 | 1.92 |
| | 6/28/2012 | | 17.98 | 117.77 | 2.22 |
| | 12/5/2011 | | 20.20 | 115.55 | 0.33 |
| | 9/2/2011 | | 19.07 | 116.68 | 1.31 |
| | 6/1/2011 | | 17.09 | 118.66 | |
| | 5/20/2011 | | | Not Measured | |
| | 4/15/2011 | | 12.35 | 123.40 | 0.95 |
| | 3/18/2011 | | 13.30 | 122.45 | 2.60 |
| | 2/18/2011 | | 15.90 | 119.85 | -0.27 |
| | 1/21/2011 | | 15.63 | 120.12 | 2.61 |
| | 12/13/2010 | | 18.24 | 117.51 | 0.11 |
| | 12/10/2010 | | 18.35 | 117.40 | 0.91 |
| | 11/23/2010 | | 19.26 | 116.49 | 0.89 |
| | 11/19/2010 | | 20.15 | 115.60 | -0.09 |
| | 11/12/2010 | 135.75 | 20.06 | 115.69 | 0.47 |
| | 10/15/2010 | | 19.29 | 115.22 | -0.15 |
| | 10/5/2010* | | 19.14 | 115.37 | 0.28 |
| | 9/28/2010* | 134.51 | 19.42 | 115.09 | |
| DP4 | 5/14/2013 | 137.60 | 20.70 | 116.90 | -1.13 |
| | 12/12/2012 | | 19.57 | 118.03 | 0.09 |
| | 6/28/2012 | | 19.66 | 117.94 | 3.52 |
| | 12/5/2011 | | 23.18 | 114.42 | -2.00 |
| | 9/2/2011 | | 21.18 | 116.42 | -1.87 |
| | 6/1/2011 | | 19.31 | 118.29 | |
| | 5/20/2011 | | | Not Measured | |
| | 4/15/2011 | | 13.14 | 124.46 | 1.28 |
| | 3/18/2011 | | 14.42 | 123.18 | 3.13 |
| | 2/18/2011 | | 17.55 | 120.05 | -0.46 |
| | 1/21/2011 | | 17.09 | 120.51 | 6.76 |
| | 12/13/2010 | | 23.85 | 113.75 | 0.76 |
| | 12/10/2010 | | 24.61 | 112.99 | 1.63 |
| | 11/23/2010 | | 26.24 | 111.36 | 0.21 |
| | 11/19/2010 | | 26.45 | 111.15 | 0.16 |
| | 11/12/2010 | 137.60 | 26.61 | 110.99 | -0.38 |
| | 10/15/2010 | | 25.40 | 111.37 | -0.37 |
| | 10/5/2010* | | 25.03 | 111.74 | 0.79 |
| | 9/28/2010* | 136.77 | 25.82 | 110.95 | |

NOTES:
Top of well casing amended on 11/12/2010 in preparation for vapor extraction pilot test.
* = Prior to well development.
** = Wells MW3 and MW4 surveyed on September 22-23, 2008; wells DP1 through DP4 surveyed on October 5, 2010.
# = Depth to water not corrected for free product thickness; free product with thickness of 0.02 feet encountered.
## = Indicates free product thickness in feet. The water table elevation has been corrected for the presence of free product by assuming a specific gravity of 0.75.

TABLE 2

SUMMARY OF GROUNDWATER SAMPLE TPH, VOC, AND DISSOLVED GAS RESULTS

| Well Number | Sample Date | TPH-G | TPH-SS | TPH-D | TPH-MO | TPH-BO | VOCs by 8260B |
|---|---|---|---|---|---|---|---|
| MW1 | 5/14/2013 | ND<50 | ND<50 | ND<50 | NA | ND<100 | ND, except: Chloroform = 0.95 |
| | 12/12/2012 | ND<50 | ND<50 | ND<50 | NA | ND<100 | ND, except: Chloroform = 0.97 |
| | 6/29/2012 | ND<50 | ND<50 | ND<50 | NA | ND<100 | ND, except: Tetrachloroethene = 1.2, cis-1,2-Dichloroethene = 3.0, Chloroform = 1.2 |
| | 12/6/2011 | Well Inaccessible; car parked on top of well. | | | | | |
| | 10/15/2010 | ND<50 | ND<50 | ND<50 | NA | ND<100 | ND, except: Chloroform=0.85 |
| | 5/21/2010 | ND<50 | ND<50 | ND<50 | NA | ND<100 | ND, except: Chloroform=0.80 |
| | 12/1/2009 | ND<50 | ND<50 | ND<50 | NA | ND<100 | ND, except: Chloroform=0.71 |
| | 9/18/2008 | ND<50 | ND<50 | ND<50 | NA | ND<100 | ND, except: Chloroform=0.74 |
| | 10/27/2004 | ND<50 | ND<50 | ND<50 | ND<250 | NA | ND, except: Chloroform=0.78 |
| | 2/20/2003 | ND<50 | ND<50 | ND<50 | ND<250 | NA | ND, except: Chloroform=1.2, Xylenes = 0.61 |
| | 5/15/1995 | ND<50 | NA | NA | NA | NA | ** ND |
| | 12/22/1994 | ND<50 | NA | NA | NA | NA | ** ND |
| | 9/14/1994 | ND, a | NA | NA | NA | NA | ** ND |
| | 7/29/1994 | ND<50 | NA | NA | NA | NA | ** ND |
| | 5/31/1994 | ND<50 | NA | NA | NA | NA | ** ND |
| | 1/24/1994 | ND<50 | NA | ND | NA | NA | ** ND |
| MW2 | 5/14/2013 | **760, g,k** | **800, g,k** | **2,700, h,j,m** | NA | **2,800, h,j,m** | ND, except: Xylenes = **25,** cis-1,2-Dichloroethene = **520**, trans-1,2-Dichloroethene = **14**, Vinyl Chloride = **60**, 1,2,4-Trimethylbenzene = 47, 1,3,5-Trimethylbenzene = 14 |
| | 12/12/2012 | **1,100, a,n** | **1,200, a,n** | **2,300, l,m** | NA | **2,500, l,m** | ND, except: cis-1,2-Dichloroethene = **790**, 1,2,4-Trimethylbenzene = 59, Vinyl Chloride = **110** |
| | 6/29/2012 | **600, a,g** | **970, a,g** | **1,400, i,j,l** | NA | **1,600, i,j,l** | ND, except: Toluene = 7.6, Xylenes = 12, cis-1,2-Dichloroethene = **190**, trans-1,2-Dichloroethene = **18**, Vinyl Chloride = **82**, Carbon disulfide = 5.1, 1,2,4-Trimethylbenzene = 38, 1,3,5-Trimethylbenzene = 9.1 |
| | 12/5/2011 | **1,200, a,g** | **1,800, a,g** | **2,400, h,i** | NA | **2,700, h,i** | ND, except: Toluene = 15, Ethylbenzene = 18, Xylenes = **57**, cis-1,2-Dichloroethene = **310**, trans-1,2-Dichloroethene = **12**, Naphthalene = 9.8, Vinyl Chloride = **50**, n-Butyl benzene = 5.3, Isopropylbenzene = 12, sec-Butyl benzene = 8.4, n-Propyl benzene = 17, 1,2,4-Trimethylbenzene = 120, 1,3,5-Trimethylbenzene = 35, |
| | 10/15/2010 | **3,600, a,b,g** | **3,900, a,b,g** | **25,000, b,h,i,j** | NA | **22,000, b,h,i,j** | ND, except: cis-1,2-dichloroethene= **1,500**, Vinyl Chloride = **160**, 1,2,4-Trimethylbenzene = 100 |
| | 5/21/2010 | **2,400, g** | **2,500, g** | **3,900, h,i,j** | NA | **4,700, h,i,j** | ND, except: cis-1,2-dichloroethene= **1,700**, Vinyl Chloride = **180**, 1,2,4-Trimethylbenzene = 89 |
| | 12/1/2009 | **34,000, b,c** | **47,000, b,c** | **74,000, b,d,e,f** | NA | **91,000, b,d,e,f** | ND, except: cis-1,2-dichloroethene= **1,800**, Vinyl Chloride = **73**, 1,2,4-Trimethylbenzene = 140 |
| | 9/18/2008 | **11,000, c,b** | **14,000** | **28,000, b,d,e** | NA | **33,000** | ND, except: cis-1,2-dichloroethene= **880**, Vinyl Chloride = **44**, Xylenes = **46**, 1,2,4-Trimethylbenzene = 140, 1,3,5-Trimethylbenzene = 41 |
| | 10/27/2004 | **320,000, c** | **500,000** | **280,000 , b,d, f** | ND<50,000 | NA | *ND, except: cis-1,2-dichloroethene = **3,300** |
| | 2/20/2003 | **76,000, b,c** | **75,000** | **370,000, b,d,f** | **37,000** | NA | ND, except: Toluene = **47**, Ethylbenzene = **43**, Xylenes =**160**, cis-1,2-Dichloroethene = **360**, trans-1,2-Dichloroethene = **22**, n-Butyl benzene = 43, Isopropylbenzene = 35, sec-Butyl benzene = 48, n-Propyl benzene = 86, 4-Isopropyl toluene = 25, 1,3,5-Trimethylbenzene = 160, Naphthalene = **32**, Vinyl Chloride = **24** |
| | 5/15/1995 | **12,000, c** | NA | NA | NA | NA | **Benzene = **17**, **Toluene = **96**, **Ethylbenzene = **50**, **Xylenes = **200** |
| | 12/22/1994 | **20,000, a,c** | NA | NA | NA | NA | **Benzene = **22**, **Toluene = **170**, **Ethylbenzene = **89**, **Xylenes = **470** |

TABLE 2

SUMMARY OF GROUNDWATER SAMPLE TPH, VOC, AND DISSOLVED GAS RESULTS

| Well Number | Sample Date | TPH-G | TPH-SS | TPH-D | TPH-MO | TPH-BO | VOCs by 8260B |
|---|---|---|---|---|---|---|---|
| MW2 Continued | 12/22/1994 | -- | -- | -- | -- | -- | ND, except: +Benzene = **21**, +Toluene = **170**, +Ethylbenzene = **48**, +Xylenes = **180**, +cis-1,2-Dichloroethene = **1,100**, +trans-1,2-Dichloroethene = **15**, +1,1-Dichloroethane = 2.8, +Chloroethane = 6.7 |
| | 9/14/1994 | **200,000, b,c** | NA | NA | NA | NA | **Benzene = ND < 15 **Toluene = **170**, **Ethylbenzene = **400**, **Xylenes = **2,600** |
| | 9/14/1994 | -- | -- | -- | -- | -- | ND, except: +Benzene = **24**, +Toluene = **440**, +Ethylbenzene = **300**, +Xylenes = **830**, +cis-1,2-dichloroethene = **720**, +Chloroform = 25, +Acetone = 120 |
| | 7/29/1994 | **21,000, b, c** | NA | NA | NA | NA | **Benzene = **21**, **Toluene = **150**, **Ethylbenzene = **53**, **Xylenes = **150** |
| | 5/31/1994 | **6,400, c** | NA | NA | NA | NA | **Benzene = **15**, **Toluene = **100**, **Ethylbenzene = **43**, **Xylenes = 220 |
| | 1/28/1994 | **2,800, c** | NA | **12,000, d** | NA | NA | ND, except: **Xylenes = **43** |
| | 1/19/1994++ | **3,400, c** | NA | **20,000** | NA | NA | **Benzene = **15**, **Toluene = **180**, **Ethylbenzene = **39**, **Xylenes = **200** |
| MW3 | 5/14/2013 | ND<50 | ND<50 | ND<50 | NA | ND<100 | ND |
| | 12/12/2012 | ND<50 | ND<50 | ND<50 | NA | ND<100 | ND |
| | 6/29/2012 | ND<50 | ND<50 | ND<50 | NA | ND<100 | ND |
| | 12/5/2011 | ND<50 | ND<50 | ND<50 | NA | ND<100 | ND, except: Carbon disulfide = 1.9 |
| | 10/15/2010 | ND<50 | ND<50 | ND<50 | NA | ND<100 | ND |
| | 5/21/2010 | ND<50 | ND<50 | ND<50 | NA | ND<100 | ND |
| | 12/1/2009 | ND<50 | ND<50 | 63, e | NA | **120, e** | ND |
| | 9/18/2008 | ND<50 | ND<50 | ND<50 | NA | ND<100 | ND, except: Bromoform = 0.57, Chloroform = 1.3 |
| MW4 | 5/14/2013 | ND<50 | ND<50 | ND<50 | NA | ND<100 | ND, except: Cis-1,2-dichloroethene = **15**, Chloroform = 1.6 |
| | 12/12/2012 | ND<50 | ND<50 | ND<50 | NA | ND<100 | ND, except: Cis-1,2-dichloroethene = **15**, Chloroform = 1.5 |
| | 6/29/2012 | ND<50 | ND<50 | ND<50 | NA | ND<100 | ND, except: Cis-1,2-dichloroethene = **12**, Chloroform = 1.2 |
| | 12/5/2011 | ND<50 | ND<50 | ND<50 | NA | ND<100 | ND, except: Cis-1,2-dichloroethene = **12**, Chloroform = 1.2 |
| | 10/15/2010 | ND<50 | ND<50 | ND<50 | NA | ND<100 | ND, except: Cis-1,2-dichloroethene = **8.4**, Trans-1,2-dichloroethene = 0.84, Chloroform = 1.3 |
| | 5/21/2010 | ND<50 | ND<50 | ND<50 | NA | ND<100 | ND, except: Cis-1,2-dichloroethene = **8.7**, Chloroform = 1.3 |
| | 12/1/2009 | ND<50 | ND<50 | ND<50 | NA | ND<100 | ND, except: Cis-1,2-dichloroethene = 5.8, Chloroform = 0.97 |
| | 9/18/2008 | ND<50 | ND<50 | ND<50 | NA | ND<100 | ND, except: Cis-1,2-dichloroethene = 4.8, Chloroform = 0.96 |
| DP1 | 5/14/2013 | **410, g,k** | **290, g,k** | **530, h,i,j** | NA | **780, h,i,j** | ND, except: Tetrachloroethene = **380,** Trichloroethene = **180,** cis-1,2-Dichloroethene = **150** |
| | 12/12/2012 | **4,500, a,g** | **2,300, a,g** | **7,200, h,i,j** | NA | **9,400, h,i,j** | ND, except: Tetrachloroethene = **4,100,** Trichloroethene = **3,800,** cis-1,2-Dichloroethene = **5,200,** Vinyl Chloride = **290** |
| | 6/29/2012 | **1,100, a** | 73, a | 84, i | NA | **190, i** | ND, except: Tetrachloroethene = **2,400,** Trichloroethene = **650,** cis-1,2-Dichloroethene = **110** |
| | 12/6/2011 | **2,000, a,g** | **940, a,g** | **47,000, h,i,j** | NA | **59,000, h,i,j** | ND, except: Tetrachloroethene = **2,800,** Trichloroethene = **850,** cis-1,2-Dichloroethene = **260** |
| | 10/15/2010 | **10,000, b,g,k** | **5,100, b,g** | **9,000, b,h,j** | NA | **9,800, b,h,j** | ND, except: Cis-1,2-dichloroethene = **17,000,** Vinyl Chloride = **2,600** |
| DP2 | 5/14/2013 | **420, g,k** | **460, g,k** | **950, h,m** | NA | **1,000, h,m** | ND, except: Cis-1,2-dichloroethene = **11,000,** Vinyl Chloride = **2,300** |
| | 12/12/2012 | **670, a,n** | **640, a,n** | **1,500, m** | NA | **1,700, m** | ND, except: Cis-1,2-dichloroethene = **17,000,** Vinyl Chloride = **1,200** |
| | 6/29/2012 | **1,500, a,g** | **990, a,g** | **1,000, h,m** | NA | **1,200, h,m** | ND, except: Cis-1,2-dichloroethene = **14,000** |
| | 12/6/2011 | **1,300, a,g** | **480, a,g** | **670, i,l** | NA | **1,000, i,l** | ND, except: Cis-1,2-dichloroethene = **14,000** |

TABLE 2

SUMMARY OF GROUNDWATER SAMPLE TPH, VOC, AND DISSOLVED GAS RESULTS

| Well Number | Sample Date | TPH-G | TPH-SS | TPH-D | TPH-MO | TPH-BO | VOCs by 8260B |
|---|---|---|---|---|---|---|---|
| DP2 Continued | 10/15/2010 | **4,800, a,g** | **2,900, a,g** | **3,900, h,i** | NA | **2,900, h,i** | ND, except:<br>Cis-1,2-dichloroethene = **22,000** |
| DP3 | 5/14/2013 | **590, g,k** | **630, g,k** | **2,700, h,m** | NA | **2,800, h,m** | ND, except:<br>Benzene = 0.85,<br>Toluene = 0.74,<br>Xylenes = 2.5,<br>Trichloroethene = 0.74,<br>cis-1,2-Dichloroethene = **22**,<br>trans-1,2-Dichloroethene = 2.4,<br>Vinyl Chloride = **25**,<br>Naphthalene = 2.6,<br>n-Butyl benzene = 1.5,<br>1,2,4-Trimethylbenzene = 28,<br>1,3,5-Trimethylbenzene = 8.0,<br>sec-Butyl benzene = 1.7,<br>Isopropylbenzene = 1.5,<br>n-Propyl benzene = 1.7,<br>4-Isopropyl toluene = 1.0, |
| | 12/12/2012 | **830, n** | **900, n** | **5,200, m** | NA | **5,500, m** | ND, except:<br>Benzene = **2.1**,<br>Toluene = 1.8,<br>Ethylbenzene = 1.2,<br>Xylenes = 5.2,<br>cis-1,2-Dichloroethene = **36**,<br>trans-1,2-Dichloroethene = 3.1,<br>Vinyl Chloride = **47**,<br>Naphthalene = 1.7,<br>n-Butyl benzene = 1.5,<br>1,2,4-Trimethylbenzene = 208,<br>1,3,5-Trimethylbenzene = 4.6,<br>sec-Butyl benzene = 2.3,<br>Isopropylbenzene = 2.4,<br>n-Propyl benzene = 3.6,<br>4-Isopropyl toluene = 1.2, |
| | 6/29/2012 | **770, g** | **1,300, g** | **1,400, i,j,l** | NA | **1,600, i,j,l** | ND, except:<br>Benzene = 0.77,<br>Toluene = 1.6,<br>Ethylbenzene = 1.7,<br>Xylenes = 7.5,<br>Trichloroethene = 0.70,<br>cis-1,2-Dichloroethene = **27**,<br>trans-1,2-Dichloroethene = 3.3,<br>Vinyl Chloride = **25**,<br>Naphthalene = 5.6,<br>n-Butyl benzene = 2.4,<br>1,2,4-Trimethylbenzene = 38,<br>1,3,5-Trimethylbenzene = 9.4,<br>sec-Butyl benzene = 3.2,<br>Isopropylbenzene = 4.2,<br>n-Propyl benzene = 6.0,<br>4-Isopropyl toluene = 1.4,<br>Carbon disulfide = 0.73 |
| | 12/6/2011 | **480, g** | **630, g** | **3,600, m** | NA | **4,500, m** | ND, except:<br>Benzene = 0.97,<br>Toluene = 1.1,<br>Ethylbenzene = 1.7,<br>Xylenes = 3.1,<br>cis-1,2-Dichloroethene = **22**,<br>trans-1,2-Dichloroethene = 2.3,<br>Vinyl Chloride = **17**,<br>Naphthalene = 2.2,<br>n-Butyl benzene = 1.7,<br>1,2,4-Trimethylbenzene = 24,<br>1,3,5-Trimethylbenzene = 3.5,<br>sec-Butyl benzene = 2.5,<br>Isopropylbenzene = 2.8,<br>n-Propyl benzene = 4.2,<br>4-Isopropyl toluene = 0.99 |
| | 10/15/2010 | **5,700, g** | **8,000, g** | **10,000, h,i,j** | NA | **9,800, h,i,j** | ND, except:<br>Toluene = 2.7,<br>Ethylbenzene = 4.0,<br>Xylenes = **23**,<br>cis-1,2-Dichloroethene = **44**,<br>trans-1,2-Dichloroethene = 4.5,<br>Vinyl Chloride = **28**,<br>Naphthalene = 7.5,<br>n-Butyl benzene = 4.4,<br>1,2,4-Trimethylbenzene = 69,<br>1,3,5-Trimethylbenzene = 24,<br>sec-Butyl benzene = 6.0,<br>Isopropylbenzene = 7.2,<br>n-Propyl benzene = 10, |
| DP4 | 5/14/2013 | ND<50 | ND<50 | ND<50 | NA | ND<100 | ND, except:<br>Tetrachloroethene = 0.73,<br>Chloroform = 1.5 |
| | 12/12/2012 | ND<50 | ND<50 | ND<50 | NA | ND<100 | ND, except:<br>Tetrachloroethene = **20**,<br>Trichloroethene = **10**,<br>cis-1,2-Dichloroethene = 3.6,<br>Chloroform = 0.60 |
| | 6/29/2012 | 53, g | 68, g | ND<50 | NA | ND<100 | ND, except:<br>Tetrachloroethene = 2.1,<br>Trichloroethene = 1.3,<br>cis-1,2-Dichloroethene = 0.66,<br>Chloroform = 0.62 |
| | 12/5/2011 | ND<50 | ND<50 | ND<50 | NA | ND<100 | ND, except:<br>Chloroform = 0.96 |
| | 10/15/2010 | **1,800, g,k** | **1,500, g,k** | **1,200, h,i** | NA | **920, h,i** | ND, except:<br>Tetrachloroethene = **22**,<br>Trichloroethene = **40**,<br>cis-1,2-Dichloroethene = **80**,<br>trans-1,2-Dichloroethene = **33**,<br>Vinyl Chloride = **2.9**,<br>tert-Butyl benzene = 3.8,<br>4-Isopropyl toluene = 4.5 |

TABLE 2

SUMMARY OF GROUNDWATER SAMPLE TPH, VOC, AND DISSOLVED GAS RESULTS

| Well Number | Sample Date | TPH-G | TPH-SS | TPH-D | TPH-MO | TPH-BO | VOCs by 8260B |
|---|---|---|---|---|---|---|---|
| *ESL* | | *100* | *100* | *100* | *100* | *100* | Benzene = 1.0, Toluene = 40, Ethylbenzene = 30, Xylenes = 20, Tetrachloroethene = 5.0, Trichloroethene = 5.0, cis-1,2-Dichloroethene= 6.0, trans-1,2-Dichloroethene = 10, 1,1-Dichloroethane = 5.0, Chloroethane = 12, Vinyl Chloride = 0.5, Naphthalene = 17, Chloroform = 70, Bromoform = 100, Acetone = 6,300, n-Butyl benzene = None, 1,2,4-Trimethylbenzene = None, 1,3,5-Trimethylbenzene = None, sec-Butyl benzene = None, Isopropylbenzene = None, tert-Butyl benzene = None, n-Propyl benzene = None, Carbon disulfide = None. |

**Abbreviations and Notes:**
TPH-G = Total Petroleum Hydrocarbons as Gasoline
TPH-SS = Total Petroleum Hydrocarbons as Stoddard solvent
TPH-D = Total Petroleum Hydrocarbons as Diesel
TPH-MO = Total Petroleum Hydrocarbons as Motor Oil
TPH-BO = Total Petroleum Hydrocarbons as Bunker Oil
VOCs = Volatile Organic Compounds
ND = Not Detected.
NA = Not Analyzed.
-- = See TPH-G results in the line above.
a = Laboratory Note: one to a few isolated peaks present.
b = Laboratory Note: lighter than water immiscible sheen/product present.
c = Laboratory Note: results reported as gasoline consist of Stoddard Solvent/mineral spirit.
d = Laboratory Note: results reported as diesel consist of Stoddard Solvent/mineral spirit.
e = results reported as diesel consist of diesel range compounds; no recognizable pattern.
f = results reported as diesel consist of oil range compounds.
g = Laboratory Note: results reported as gasoline and Stoddard solvent consist of Stoddard Solvent/mineral spirit.
h = Laboratory Note: results reported as diesel and bunker oil consist of Stoddard Solvent/mineral spirit.
i = Laboratory Note: results reported as diesel and bunker oil consist of diesel range compounds; no recognizable pattern.
j = Laboratory Note: results reported as diesel and bunker oil consist of oil range compounds.
k = Laboratory Note: no recognizable pattern.
l = Laboratory Note: results reported as diesel and bunker oil consist of gasoline range compounds.
m = Laboratory Note: results reported as diesel and bunker oil consist of kerosene or jet fuel range compounds.
n = Laboratory Note: results reported as gasoline and Stoddard solvent consist of strongly aged gasoline or diesel range compounds.
* = MW2 VOC detection limits are all increased because of a sample dilution factor of 500.
** = Analysis by EPA Method 8020.
+ = Samples subcontracted to different lab for VOC analysisby EPA Method 8260..
++ = Well Development Water stored at site in drum; submitted to lab on January 28, 1994. '
*ESL=Environmental Screening Level, developed by San Francisco Bay - Regional Water Quality Control Board (SF-RWQCB) ) updated May 2008, from Table A – Shallow Soil Screening Levels, Groundwater is a current or potential source of drinking water.*
**Values in bold indicate concentrations that exceed their respective ESL values.**
Results are in micrograms per liter (µg/L), unless otherwise noted.

# FIGURES

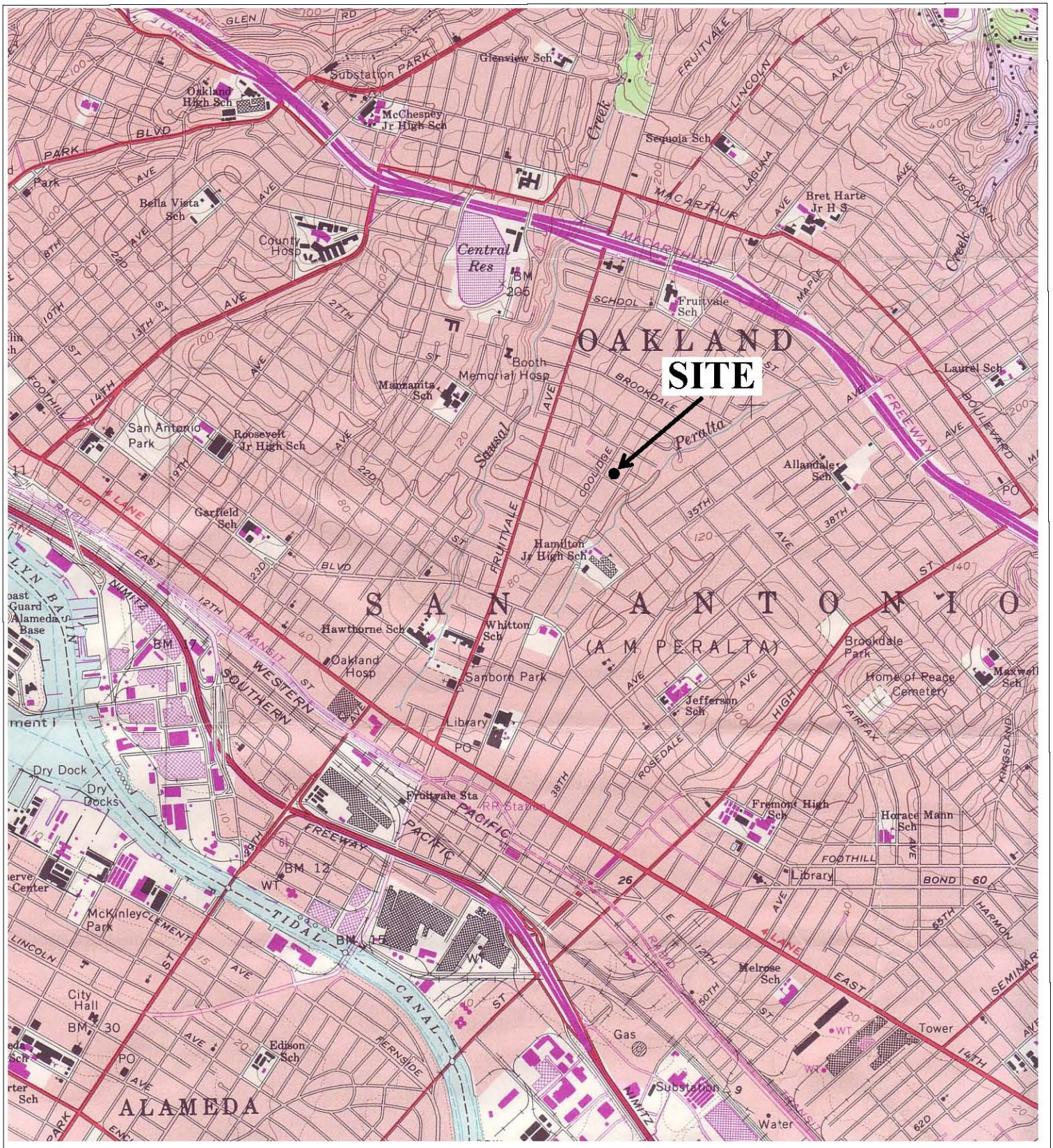


Figure 1
Site Location Map
Snow Cleaners
2678 Coolodge Avenue
Oakland, California

Base Map From:
U.S. Geological Survey
Oakland East, California
7.5-Minute Quadrangle
Photorevised 1980

P&D Environmental, Inc.
55 Santa Clara Ave., Suite 240
Oakland, CA 94610

0 1,000 2,000
Approximate Scale In Feet

N


Figure 2
Site Vicinity Map Detail Showing Well Locations
Snow Cleaners
2678 Coolidge Avenue
Oakland, California

Base Map from:
Kier & Wright Engineers Surveyors, Inc.
September 2008 Survey
and
Parcel Quest Assesor's Parcel Maps
Alameda County Map Disc, July 2001

P&D Environmental, Inc.
55 Santa Clara Ave., Suite 240
Oakland, CA 94610

0 30 60
Approximate Scale in Feet

N

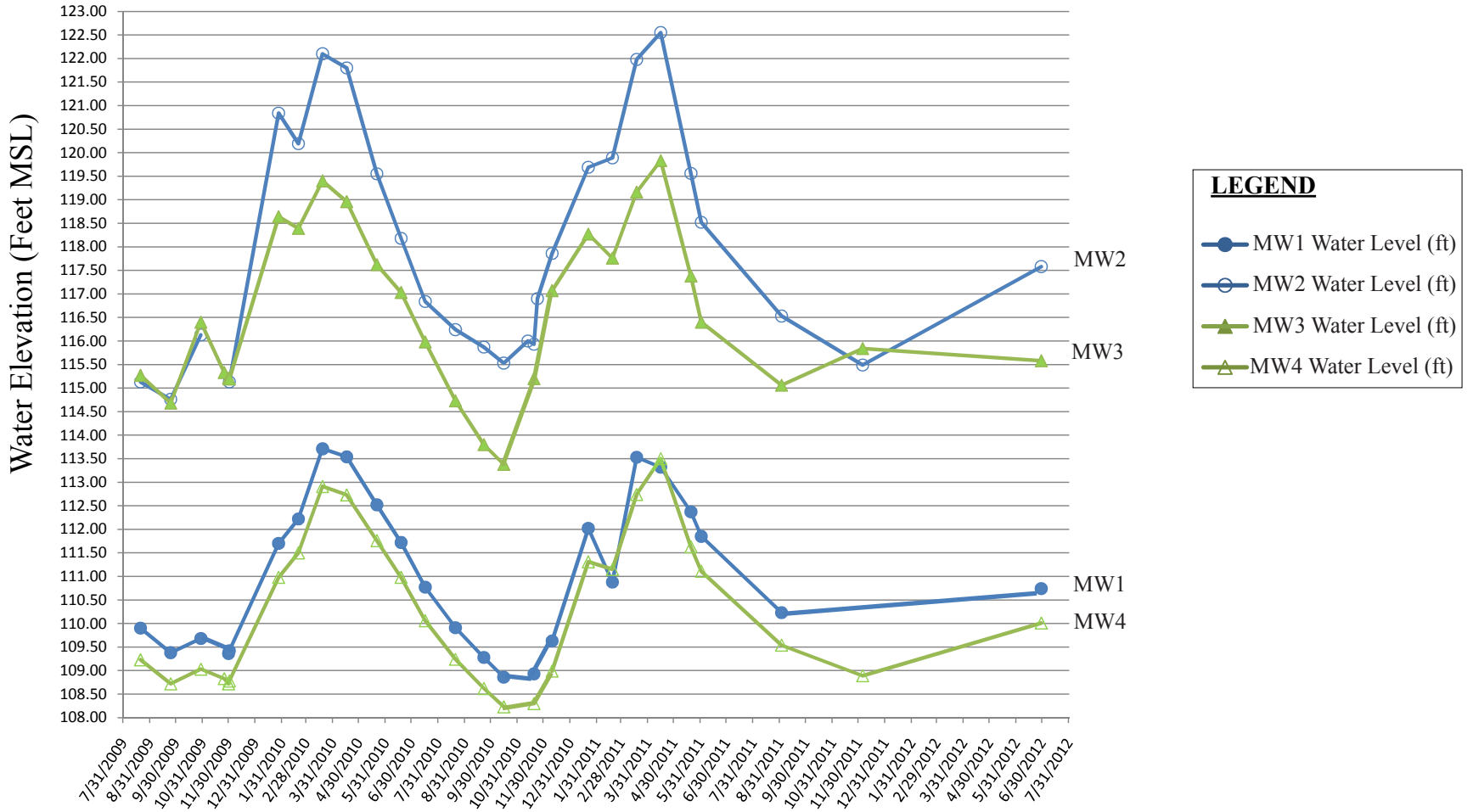


Figure 3
Graph of Water Levels in Site Groundwater Monitoring Network Wells
for August 2009 Through June 2012
Snow Cleaners
2678 Coolidge Avenue
Oakland, California

P&D Environmental, Inc.
55 Santa Clara Ave., Suite 240
Oakland, CA 94610

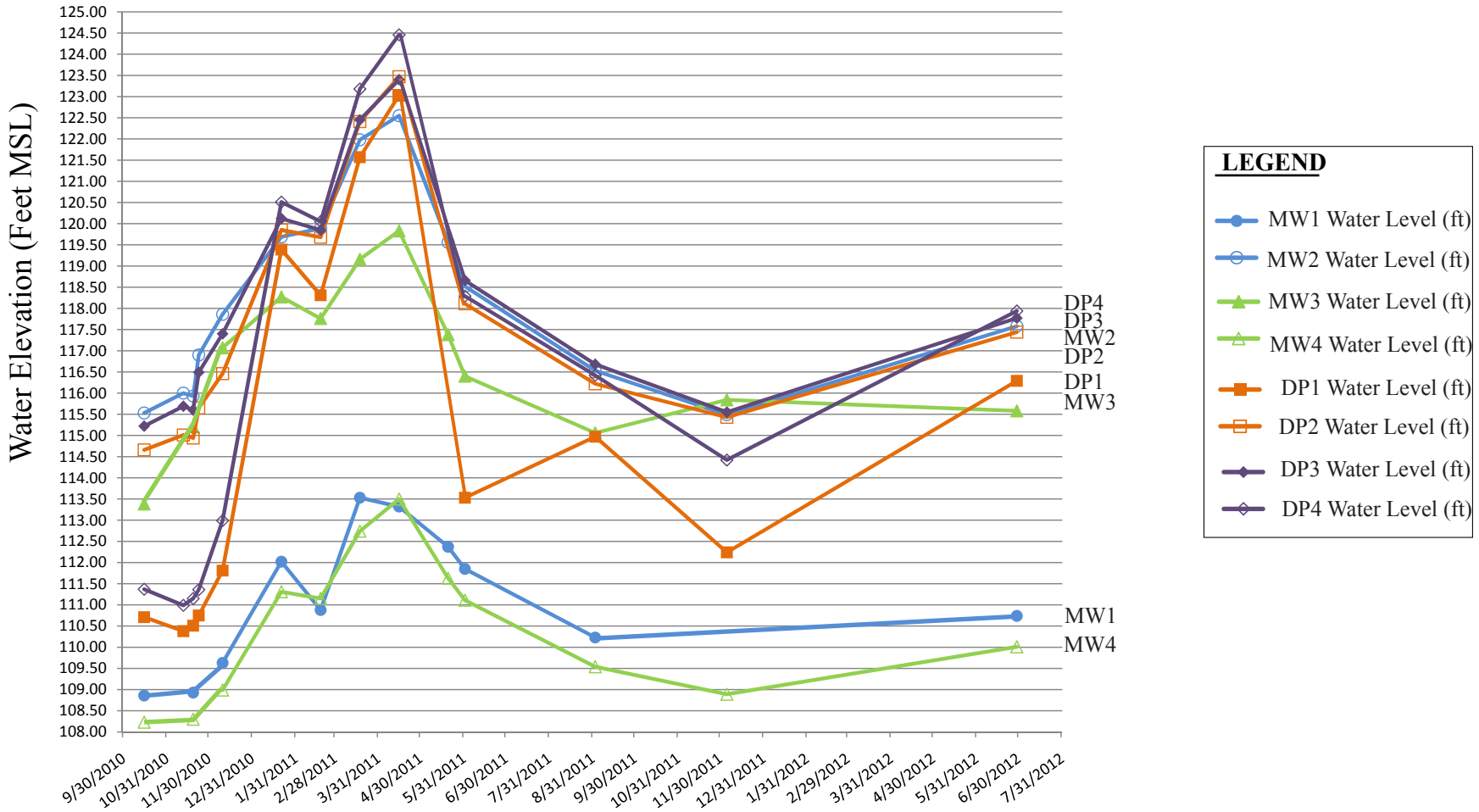


Figure 4
Graph of Water Levels in Site Groundwater Monitoring Network Wells
for October Through June 2012
Snow Cleaners
2678 Coolidge Avenue
Oakland, California

P&D Environmental, Inc.
55 Santa Clara Ave., Suite 240
Oakland, CA 94610

# GROUNDWATER MONITORING/WELL PURGING DATA SHEETS

**P&D Environmental, Inc.**
**Groundwater Monitoring/Well Purging Data Sheet**

Site Name 0298 - Snow Cleaners, Oakland
Well No. MW-1
Job Number 0298
Date 05/14/13
TOC to Water (ft.) 22.27
Sheen None
Well Depth (ft.) 44.5
Free Product Thickness 0
Well Diameter 2"
Sample Collection Method Peristaltic pump & new unused disp. PE tubing
Flow Rate (mL/minute) 250
Start Purge Time 1033

| Time | Vol. Purged (mL) | Depth to Water (ft.) | pH | Electrical Conductivity (µS/cm) | Temperature (C°) | Dissolved Oxygen (mg/L) | Oxidation/ Reduction Potential (mV) | Turbidity (NTU) |
|---|---|---|---|---|---|---|---|---|
| 1034 | 250 | 22.41 | 6.46 | 792 | 19.7 | 1.11 | 166.9 | 6.98 |
| 1037 | 1,000 | 22.44 | 6.49 | 783 | 19.5 | 0.78 | 160.2 | 23.85 |
| 1040 | 1,750 | 22.44 | 6.49 | 783 | 19.5 | 0.67 | 155.3 | 31.05 |
| 1043 | 2,500 | 22.44 | 6.50 | 782 | 19.5 | 0.63 | 152.4 | 26.28 |
| 1046 | 3,250 | 22.44 | 6.49 | 783 | 19.5 | 0.61 | 152.2 | 22.85 |
| 1049 | 4,000 | 22.45 | 6.50 | 782 | 19.5 | 0.59 | 149.1 | 18.61 |

NOTES

No Sheen/No odor
MW1 collected @ 1055

Stability Parameters
p.H. = +/- 0.1
Sp. Conductivity = +/-3%
Turbidity = +/- 10%
D.O. = +/- 10%

**P&D Environmental, Inc.**
**Groundwater Monitoring/Well Purging Data Sheet**

Site Name: Snow Cleaners, Oakland
Job Number: 0298
TOC to Water (ft.): 16.84
Well Depth (ft.): 24.6
Well Diameter: 4"
Flow Rate (mL/minute): 250
Start Purge Time: 1112

Well No.: MW-2
Date: 05/14/13
Sheen: None
Free Product Thickness: Ø
Sample Collection Method: Peristaltic pump & new unused PE tubing

| Time | Vol. Purged (mL) | Depth to Water (ft.) | pH | Electrical Conductivity (µS/cm) | Temperature (C°) | Dissolved Oxygen (mg/L) | Oxidation/ Reduction Potential (mV) | Turbidity (NTU) |
|---|---|---|---|---|---|---|---|---|
| 1113 | 250 | 16.91 | 6.64 | 800 | 19.4 | 0.42 | -66.0 | 2.80 |
| 1116 | 1,000 | 16.97 | 6.66 | 799 | 19.2 | 0.25 | -85.3 | 0.00 |
| 1119 | 1,750 | 17.00 | 6.67 | 799 | 19.2 | 0.22 | -90.3 | 0.00 |
| 1122 | 2,500 | 17.03 | 6.69 | 799 | 19.2 | 0.19 | -93.0 | 0.00 |
| 1125 | 3,250 | 17.06 | 6.71 | 798 | 19.2 | 0.15 | -96.3 | 0.00 |
| 1128 | 4,000 | 17.08 | 6.91 | 797 | 19.2 | 0.16 | -95.6 | 0.00 |

NOTES

moderate Stoddard solvent odor & no sheen
MW-2 collected @ 1135

Stability Parameters
p.H. = +/- 0.1
Sp. Conductivity = +/-3%
Turbidity = +/- 10%
D.O. = +/- 10%

**P&D Environmental, Inc.**
**Groundwater Monitoring/Well Purging Data Sheet**

Site Name Snow Cleaners - Oakland
Well No. MW-3
Job Number 0298
Date 05/14/13
TOC to Water (ft.) 20.43
Sheen None
Well Depth (ft.) 35.4
Free Product Thickness 0
Well Diameter 2"
Sample Collection Method Peristaltic pump & dedicated PE tubing
Flow Rate (mL/minute) 250
Start Purge Time 1151

| Time | Vol. Purged (mL) | Depth to Water (ft.) | pH | Electrical Conductivity (µS/cm) | Temperature (C°) | Dissolved Oxygen (mg/L) | Oxidation/ Reduction Potential (mV) | Turbidity (NTU) |
|---|---|---|---|---|---|---|---|---|
| 1152 | 250 | 21.52 | 7.28 | 532.7 | 19.3 | 0.46 | 38.0 | 0.00 |
| 1155 | 1,000 | 22.61 | 7.29 | 520.4 | 19.2 | 0.24 | 35.0 | 0.00 |
| 1158 | 1,750 | 23.98 | 7.48 | 324.1 | 19.2 | 1.48 | 22.3 | 0.00 |
| 1201 | 2,500 | 25.08 | 7.46 | 251.4 | 19.2 | 3.28 | 28.9 | 0.00 |
| 1204 | 3,250 | 26.31 | 7.42 | 236.1 | 19.2 | 4.01 | 37.3 | 0.00 |
| 1207 | 4,000 | 27.18 | 7.40 | 238.9 | 19.2 | 4.22 | 41.2 | 0.00 |

NOTES

No sheen + no odor
MW-3 collected @ 1215

Stability Parameters
p.H. = +/- 0.1
Sp. Conductivity = +/-3%
Turbidity = +/- 10%
D.O. = +/- 10%

**P&D Environmental, Inc.**
**Groundwater Monitoring/Well Purging Data Sheet**

Site Name Snow Cleaners - Oakland
Well No. MW-4
Job Number 0298
Date 05/14/13
TOC to Water (ft.) 24.32
Sheen None
Well Depth (ft.) 37.2
Free Product Thickness 0
Well Diameter 2"
Sample Collection Method Peristaltic pump + dedicated PE tubing
Flow Rate (mL/minute) ~~225~~ 250
Start Purge Time 1225

| Time | Vol. Purged (mL) | Depth to Water (ft.) | pH | Electrical Conductivity (µS/cm) | Temperature (C°) | Dissolved Oxygen (mg/L) | Oxidation/ Reduction Potential (mV) | Turbidity (NTU) |
|---|---|---|---|---|---|---|---|---|
| 1226 | 250 | 24.46 | 6.67 | 448.8 | 19.8 | 1.42 | 64.2 | 3.89 |
| 1229 | 1,000 | 24.48 | 6.65 | 525.7 | 19.3 | 1.01 | 64.5 | 7.25 |
| 1232 | 1,750 | 24.~~47~~ | 6.67 | 527.2 | 19.4 | 0.95 | 64.3 | 2.86 |
| 1235 | 2,500 | 24.49 | 6.65 | 529.6 | 19.3 | 0.96 | 65.5 | 0.48 |
| 1238 | 3,250 | 24.49 | 6.64 | 529.7 | 19.3 | 0.92 | 69.8 | 0.00 |
| 1241 | 4,000 | 24.49 | 6.63 | 529.9 | 19.3 | 0.91 | 70.7 | 0.00 |

**NOTES**

no sheen and no odor
Sample collected @ 1245

Stability Parameters
p.H. = +/- 0.1
Sp. Conductivity = +/-3%
Turbidity = +/- 10%
D.O. = +/- 10%

**P&D Environmental, Inc.**
**Groundwater Monitoring/Well Purging Data Sheet**

Site Name Snow Cleaners, Oakland
Well No. DP-1
Job Number 0298
Date 5/14/13
TOC to Water (ft.) 21.82
Sheen Yes
Well Depth (ft.) 37.0
Free Product Thickness could not measure
Well Diameter 4"
Sample Collection Method Peristaltic pump + new/unused ☒PE tubing
Flow Rate (mL/minute) 250
Start Purge Time 1406

| Time | Vol. Purged (mL) | Depth to Water (ft.) | pH | Electrical Conductivity (µS/cm) | Temperature (C°) | Dissolved Oxygen (mg/L) | Oxidation/ Reduction Potential (mV) | Turbidity (NTU) |
|---|---|---|---|---|---|---|---|---|
| 1407 | 750 | 22.01 | 6.79 | 500.0 | 19.2 | 1.23 | 102.1 | 11.49 |
| 1410 | 1,000 | 22.11 | 6.83 | 493.8 | 18.5 | 1.03 | 93.3 | 0.00 |
| 1413 | 1,750 | 22.11 | 6.86 | 493.1 | 18.4 | 0.95 | 87.1 | 0.00 |
| 1416 | 2,500 | 22.15 | 6.85 | 493.4 | 18.3 | 0.94 | 84.8 | 0.00 |
| 1419 | 3,250 | 22.17 | 6.90 | 493.6 | 18.4 | 0.95 | 79.8 | 0.00 |
| 1422 | 4,000 | 22.18 | 6.90 | 492.0 | 18.4 | 0.98 | 77.9 | 0.00 |

**NOTES**

Stability Parameters
p.H. = +/- 0.1
Sp. Conductivity = +/-3%
Turbidity = +/- 10%
D.O. = +/- 10%

Sheen on sample + strong stoddard solvent odor
DP-1 collected @ 1430

**P&D Environmental, Inc.**
**Groundwater Monitoring/Well Purging Data Sheet**

Site Name Snow Cleaners, Oakland
Job Number 0298
TOC to Water (ft.) 20.06
Well Depth (ft.) 25.0
Well Diameter 4"
Flow Rate (mL/minute) 250
Start Purge Time 1546

Well No. DP-2
Date 5/14/13
Sheen None
Free Product Thickness ϕ
Sample Collection Method Peristaltic pump & new unused PE tubing

| Time | Vol. Purged (mL) | Depth to Water (ft.) | pH | Electrical Conductivity (µS/cm) | Temperature (C°) | Dissolved Oxygen (mg/L) | Oxidation/ Reduction Potential (mV) | Turbidity (NTU) |
|---|---|---|---|---|---|---|---|---|
| 1547 | 250 | 20.31 | 6.79 | 738 | 18.8 | 1.23 | -16.6 | 0.00 |
| 1550 | 1,000 | 20.35 | 6.78 | 736 | 18.6 | 0.49 | -22.8 | 0.00 |
| 1553 | 1,750 | 20.40 | 6.78 | 734 | 18.6 | 0.37 | -25.2 | 0.00 |
| 1556 | 3,500 | 20.47 | 6.77 | 734 | 18.6 | 0.31 | -29.4 | 0.00 |
| 1559 | 3,750 | 20.52 | 6.73 | 733 | 18.5 | 0.25 | -36.4 | 0.00 |
| 1602 | 4,000 | 20.59 | 6.73 | 729 | 18.5 | 0.24 | -46.5 | 0.00 |

NOTES

Stability Parameters
p.H. = +/- 0.1
Sp. Conductivity = +/-3%
Turbidity = +/- 10%
D.O. = +/- 10%

Mod - Strong odor

DP-2 collected @ 1610

**P&D Environmental, Inc.**
**Groundwater Monitoring/Well Purging Data Sheet**

Site Name Snow Cleaners- Oakland
Well No. DP-3
Job Number 0298
Date 5/14/13
TOC to Water (ft.) 18.84
Sheen none
Well Depth (ft.) 27.0
Free Product Thickness Ø
Well Diameter 4"
Sample Collection Method peristaltic pump + new/unused PE tubing
Flow Rate (mL/minute) 250
Start Purge Time 1315

| Time | Vol Purged (mL) | Depth to Water (ft.) | pH | Electrical Conductivity (µS/cm) | Temperature (C°) | Dissolved Oxygen (mg/L) | Oxidation/ Reduction Potential (mV) | Turbidity (NTU) |
|---|---|---|---|---|---|---|---|---|
| 1316 | 750 | 18.95 | 6.68 | ~~8732~~ | 19.2 | 0.61 | -54.3 | 0.00 |
| 1319 | 1,000 | 19.03 | 6.73 | 729 | 19.0 | 0.40 | -62.1 | 0.00 |
| 1322 | 1,750 | 19.12 | 6.74 | 732 | 19.0 | 0.36 | -65.5 | 0.00 |
| 1325 | 2,500 | 19.22 | 6.74 | 732 | 19.0 | 0.28 | -67.0 | 0.00 |
| 1328 | 3,250 | 19.25 | 6.72 | 732 | 19.0 | 0.26 | -68.5 | 0.00 |
| 1331 | 4,000 | 19.27 | 6.72 | 733 | 19.0 | 0.25 | -70.2 | 0.00 |

**NOTES**

Stability Parameters
p.H. = +/- 0.1
Sp. Conductivity = +/-3%
Turbidity = +/- 10%
D.O. = +/- 10%

Light- moderated stoddard solvent odor, no sheen
DP-3 collected @ 1335

**P&D Environmental, Inc.**
**Groundwater Monitoring/Well Purging Data Sheet**

Site Name Snow Cleaners, Oakland
Job Number 0298
TOC to Water (ft.) 20.70
Well Depth (ft.) 38.0
Well Diameter 4"
Flow Rate (mL/minute) 250
Start Purge Time 1440

Well No. DP-4
Date 5/14/13
Sheen None
Free Product Thickness Ø
Sample Collection Method Peristaltic pump + new unused PE tubing

| Time | Vol. Purged (mL) | Depth to Water (ft.) | pH | Electrical Conductivity (µS/cm) | Temperature (C°) | Dissolved Oxygen (mg/L) | Oxidation/ Reduction Potential (mV) | Turbidity (NTU) |
|---|---|---|---|---|---|---|---|---|
| 1441 | 250 | 20.82 | 6.89 | 463.5 | 18.3 | 2.41 | -6.2 | 80.00 |
| 1444 | 1,000 | 20.84 | 6.81 | 448.6 | 17.9 | 4.99 | 8.3 | 44.00 |
| 1447 | 1,750 | 20.88 | 6.81 | 446.2 | 17.8 | 5.49 | 18.9 | 22.60 |
| 1450 | 2,500 | 20.88 | 6.80 | 447.2 | 17.8 | 5.23 | 30.8 | 27.80 |
| 1453 | 3,250 | 20.88 | 6.80 | 443.3 | 17.8 | 5.69 | 39.1 | 10.90 |
| 1456 | 4,000 | 20.88 | 6.80 | 444.0 | 17.8 | 6.15 | 44.7 | 4.04 |

**NOTES**

Stability Parameters
p.H. = +/- 0.1
Sp. Conductivity = +/-3%
Turbidity = +/- 10%
D.O. = +/- 10%

Light-moderate stoddard solvent odor.
No sheen.
DP-4 collected @ 1500

**P&D Environmental, Inc.**
**Groundwater Monitoring/Well Purging Data Sheet**

Site Name Snow Cleaners- Oakland
Job Number 0298
TOC to Water (ft.) No water encountered
Well Depth (ft.) 15.8
Well Diameter 4"
Flow Rate (mL/minute) N/A
Start Purge Time N/A

Well No. VE-1
Date 5/14/13
Sheen ~~⊖~~ N/A
Free Product Thickness Ø
Sample Collection Method N/A
Monitored only, no sample collected

| Time | Vol. Purged (mL) | Depth to Water (ft.) | pH | Electrical Conductivity (µS/cm) | Temperature (C°) | Dissolved Oxygen (mg/L) | Oxidation/ Reduction Potential (mV) | Turbidity (NTU) |
|---|---|---|---|---|---|---|---|---|
| | | | | | HO | | | |

NOTES

Monitored only; no sample collected.

Stability Parameters
p.H. = +/- 0.1
Sp. Conductivity = +/-3%
Turbidity = +/- 10%
D.O. = +/- 10%

**P&D Environmental, Inc.**
**Groundwater Monitoring/Well Purging Data Sheet**

Site Name Snow Cleaners - Oakland
Well No. VE-2
Job Number 0298
Date 5/14/13
TOC to Water (ft.) NO water encounter
Sheen N/A
Well Depth (ft.) 17.03
Free Product Thickness Ø
Well Diameter 4"
Sample Collection Method N/A
Flow Rate (mL/minute) N/A
Monitored only, NO Sample collected.
Start Purge Time N/A

| Time | Vol. Purged (mL) | Depth to Water (ft.) | pH | Electrical Conductivity (µS/cm) | Temperature (C°) | Dissolved Oxygen (mg/L) | Oxidation/ Reduction Potential (mV) | Turbidity (NTU) |
|---|---|---|---|---|---|---|---|---|
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**NOTES**

Monitored only; NO Sample collected.

Stability Parameters
p.H. = +/- 0.1
Sp. Conductivity = +/-3%
Turbidity = +/- 10%
D.O. = +/- 10%

# LABORATORY REPORTS AND CHAIN OF CUSTODY DOCUMENTATION

McCampbell Analytical, Inc.
*"When Quality Counts"*

1534 Willow Pass Road, Pittsburg, CA 94565-1701
Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269
http://www.mccampbell.com / E-mail: main@mccampbell.com

# Analytical Report

| | | |
|---|---|---|
| P & D Environmental | Client Project ID: #0298; Snow Cleaners | Date Sampled: 05/14/13 |
| | | Date Received: 05/15/13 |
| 55 Santa Clara, Ste.240 | Client Contact: Paul King | Date Reported: 05/21/13 |
| Oakland, CA 94610 | Client P.O.: | Date Completed: 05/21/13 |

**WorkOrder: 1305480**

May 22, 2013

Dear Paul:

Enclosed within are:

1) The results of the **8** analyzed samples from your project: **#0298; Snow Cleaners,**
2) QC data for the above samples, and
3) A copy of the chain of custody.

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

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

Best regards,

Angela Rydelius
Laboratory Manager
McCampbell Analytical, Inc.

***The analytical results relate only to the items tested.***

# CHAIN OF CUSTODY RECORD 1305486

PAGE 1 OF 1

**P&D ENVIRONMENTAL, INC.**
55 Santa Clara Ave., Suite 240
Oakland, CA 94610
(510) 658-6916

PROJECT NUMBER: 0298

PROJECT NAME: Snow Cleaners 2678 Coolidge Ave, Oakland, CA

SAMPLED BY: (PRINTED & SIGNATURE) Michael Deschenes

| SAMPLE NUMBER | DATE | TIME | TYPE | SAMPLE LOCATION | NUMBER OF CONTAINERS | ANALYSIS(ES): TPH - Multi Range (G, D, 55, 80) | VOCs by 8260B | PRESERVATIVE | REMARKS |
|---|---|---|---|---|---|---|---|---|---|
| MW-1 | 5/14/13 | 1055 | $H_2O$ | | 7 | X | X | ICE | Normal Turnaround Time |
| MW-2 | | 1136 | | | 7 | X | X | | |
| MW-3 | | 1215 | | | 7 | X | X | | |
| MW-4 | | 1245 | | | 7 | X | X | | |
| DP-1 | | 1430 | | | 7 | X | X | | |
| DP-2 | | 1610 | | | 7 | X | X | | |
| DP-3 | | 1535 | | | 7 | X | X | | |
| DP-4 | | 1500 | | | 7 | X | X | | |

CE/t° 1.6
GOOD CONDITION ____ APPROPRIATE CONTAINERS ____
HEAD SPACE ABSENT ____ PRESERVED IN LAB ____
DECHLORINATED IN LAB ____
PRESERVATION: VOAS | O&G | METALS | OTHER

| | | | | | |
|---|---|---|---|---|---|
| RELINQUISHED BY: (SIGNATURE) | DATE 5/15/13 | TIME 1457 | RECEIVED BY: (SIGNATURE) | Total No. of Samples (This Shipment) 8 | LABORATORY: McCampbell Analytical Inc. |
| RELINQUISHED BY: (SIGNATURE) | DATE 5/15/13 | TIME 1650 | RECEIVED BY: (SIGNATURE) | Total No. of Containers (This Shipment) 56 | LABORATORY CONTACT: Angela Rydelius |
| RELINQUISHED BY: (SIGNATURE) | DATE | TIME | RECEIVED FOR LABORATORY BY: (SIGNATURE) | | LABORATORY PHONE NUMBER: (877) 252-9262 |
| | | | | SAMPLE ANALYSIS REQUEST SHEET ATTACHED: ( ) YES (X) NO | |

Results and billing to:
P&D Environmental, Inc.
lab@pdenviro.com

REMARKS: All VOAs preserved w/ HCl.

McCampbell Analytical, Inc.
1534 Willow Pass Rd
Pittsburg, CA 94565-1701
(925) 252-9262

# CHAIN-OF-CUSTODY RECORD



**WorkOrder: 1305480** **ClientCode: PDEO**

☐ WaterTrax ☐ WriteOn ☐ EDF ☐ Excel ☐ EQuIS ☑ Email ☐ HardCopy ☐ ThirdParty ☐ J-flag

**Report to:**
Paul King
P & D Environmental
55 Santa Clara, Ste.240
Oakland, CA 94610
(510) 658-6916 FAX: 510-834-0152

Email: lab@pdenviro.com
cc:
PO:
ProjectNo: #0298; Snow Cleaners

**Bill to:**
Accounts Payable
P & D Environmental
55 Santa Clara, Ste.240
Oakland, CA 94610

**Requested TAT:** 5 days

***Date Received:*** **05/15/2013**
***Date Printed:*** **05/15/2013**

| Lab ID | Client ID | Matrix | Collection Date | Hold | Requested Tests (See legend below) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 1305480-001 | MW-1 | Water | 5/14/2013 10:55 | ☐ | B | A | A | | | | | | | | | |
| 1305480-002 | MW-2 | Water | 5/14/2013 11:36 | ☐ | B | A | A | | | | | | | | | |
| 1305480-003 | MW-3 | Water | 5/14/2013 12:15 | ☐ | B | A | A | | | | | | | | | |
| 1305480-004 | MW-4 | Water | 5/14/2013 12:45 | ☐ | B | A | A | | | | | | | | | |
| 1305480-005 | DP-1 | Water | 5/14/2013 14:30 | ☐ | B | A | A | | | | | | | | | |
| 1305480-006 | DP-2 | Water | 5/14/2013 16:10 | ☐ | B | A | A | | | | | | | | | |
| 1305480-007 | DP-3 | Water | 5/14/2013 15:35 | ☐ | B | A | A | | | | | | | | | |
| 1305480-008 | DP-4 | Water | 5/14/2013 15:00 | ☐ | B | A | A | | | | | | | | | |

**Test Legend:**

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 8260B_W | 2 | G-MBTEX_W | 3 | TPH(D)_W | 4 | | 5 | |
| 6 | | 7 | | 8 | | 9 | | 10 | |
| 11 | | 12 | | | | | | | |

The following SampIDs: 001A, 002A, 003A, 004A, 005A, 006A, 007A, 008A contain testgroup.

**Prepared by: Zoraida Cortez**

**Comments:**

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

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Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269
http://www.mccampbell.com / E-mail: main@mccampbell.com

# Sample Receipt Checklist

Client Name: **P & D Environmental**
Date and Time Received: **5/15/2013 9:29:41 PM**

Project Name: **#0298; Snow Cleaners**
LogIn Reviewed by: Zoraida Cortez

WorkOrder N°: **1305480** Matrix: Water
Carrier: Rob Pringle (MAI Courier)

## Chain of Custody (COC) Information

| | | |
|---|---|---|
| Chain of custody present? | Yes ☑ | No ☐ |
| Chain of custody signed when relinquished and received? | Yes ☑ | No ☐ |
| Chain of custody agrees with sample labels? | Yes ☑ | No ☐ |
| Sample IDs noted by Client on COC? | Yes ☑ | No ☐ |
| Date and Time of collection noted by Client on COC? | Yes ☑ | No ☐ |
| Sampler's name noted on COC? | Yes ☑ | No ☐ |

## Sample Receipt Information

| | | | |
|---|---|---|---|
| Custody seals intact on shipping container/cooler? | Yes ☐ | No ☐ | NA ☑ |
| Shipping container/cooler in good condition? | Yes ☑ | No ☐ | |
| Samples in proper containers/bottles? | Yes ☑ | No ☐ | |
| Sample containers intact? | Yes ☑ | No ☐ | |
| Sufficient sample volume for indicated test? | Yes ☑ | No ☐ | |

## Sample Preservation and Hold Time (HT) Information

| | | | |
|---|---|---|---|
| All samples received within holding time? | Yes ☑ | No ☐ | |
| Container/Temp Blank temperature | Cooler Temp: 1.6°C | | NA ☐ |
| Water - VOA vials have zero headspace / no bubbles? | Yes ☑ | No ☐ | No VOA vials submitted ☐ |
| Sample labels checked for correct preservation? | Yes ☑ | No ☐ | |
| Metal - pH acceptable upon receipt (pH<2)? | Yes ☐ | No ☐ | NA ☑ |
| Samples Received on Ice? | Yes ☑ | No ☐ | |

(Ice Type: WET ICE )

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

Comments:

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http://www.mccampbell.com / E-mail: main@mccampbell.com

| | | |
|---|---|---|
| P & D Environmental | Client Project ID: #0298; Snow Cleaners | Date Sampled: 05/14/13 |
| | | Date Received: 05/15/13 |
| 55 Santa Clara, Ste.240 | Client Contact: Paul King | Date Extracted: 05/16/13 |
| Oakland, CA 94610 | Client P.O.: | Date Analyzed: 05/16/13 |

## Volatile Organics by P&T and GC/MS (Basic Target List)*

Extraction Method: SW5030B | Analytical Method: SW8260B | Work Order: 1305480

| | |
|---|---|
| Lab ID | 1305480-001B |
| Client ID | MW-1 |
| Matrix | Water |

| Compound | Concentration * | DF | Reporting Limit | Compound | Concentration * | DF | Reporting Limit |
|---|---|---|---|---|---|---|---|
| Acetone | ND | 1.0 | 10 | tert-Amyl methyl ether (TAME) | ND | 1.0 | 0.5 |
| Benzene | ND | 1.0 | 0.5 | Bromobenzene | ND | 1.0 | 0.5 |
| Bromochloromethane | ND | 1.0 | 0.5 | Bromodichloromethane | ND | 1.0 | 0.5 |
| Bromoform | ND | 1.0 | 0.5 | Bromomethane | ND | 1.0 | 0.5 |
| 2-Butanone (MEK) | ND | 1.0 | 2.0 | t-Butyl alcohol (TBA) | ND | 1.0 | 2.0 |
| n-Butyl benzene | ND | 1.0 | 0.5 | sec-Butyl benzene | ND | 1.0 | 0.5 |
| tert-Butyl benzene | ND | 1.0 | 0.5 | Carbon Disulfide | ND | 1.0 | 0.5 |
| Carbon Tetrachloride | ND | 1.0 | 0.5 | Chlorobenzene | ND | 1.0 | 0.5 |
| Chloroethane | ND | 1.0 | 0.5 | Chloroform | 0.95 | 1.0 | 0.5 |
| Chloromethane | ND | 1.0 | 0.5 | 2-Chlorotoluene | ND | 1.0 | 0.5 |
| 4-Chlorotoluene | ND | 1.0 | 0.5 | Dibromochloromethane | ND | 1.0 | 0.5 |
| 1,2-Dibromo-3-chloropropane | ND | 1.0 | 0.2 | 1,2-Dibromoethane (EDB) | ND | 1.0 | 0.5 |
| Dibromomethane | ND | 1.0 | 0.5 | 1,2-Dichlorobenzene | ND | 1.0 | 0.5 |
| 1,3-Dichlorobenzene | ND | 1.0 | 0.5 | 1,4-Dichlorobenzene | ND | 1.0 | 0.5 |
| Dichlorodifluoromethane | ND | 1.0 | 0.5 | 1,1-Dichloroethane | ND | 1.0 | 0.5 |
| 1,2-Dichloroethane (1,2-DCA) | ND | 1.0 | 0.5 | 1,1-Dichloroethene | ND | 1.0 | 0.5 |
| cis-1,2-Dichloroethene | ND | 1.0 | 0.5 | trans-1,2-Dichloroethene | ND | 1.0 | 0.5 |
| 1,2-Dichloropropane | ND | 1.0 | 0.5 | 1,3-Dichloropropane | ND | 1.0 | 0.5 |
| 2,2-Dichloropropane | ND | 1.0 | 0.5 | 1,1-Dichloropropene | ND | 1.0 | 0.5 |
| cis-1,3-Dichloropropene | ND | 1.0 | 0.5 | trans-1,3-Dichloropropene | ND | 1.0 | 0.5 |
| Diisopropyl ether (DIPE) | ND | 1.0 | 0.5 | Ethylbenzene | ND | 1.0 | 0.5 |
| Ethyl tert-butyl ether (ETBE) | ND | 1.0 | 0.5 | Freon 113 | ND | 1.0 | 10 |
| Hexachlorobutadiene | ND | 1.0 | 0.5 | Hexachloroethane | ND | 1.0 | 0.5 |
| 2-Hexanone | ND | 1.0 | 0.5 | Isopropylbenzene | ND | 1.0 | 0.5 |
| 4-Isopropyl toluene | ND | 1.0 | 0.5 | Methyl-t-butyl ether (MTBE) | ND | 1.0 | 0.5 |
| Methylene chloride | ND | 1.0 | 0.5 | 4-Methyl-2-pentanone (MIBK) | ND | 1.0 | 0.5 |
| Naphthalene | ND | 1.0 | 0.5 | n-Propyl benzene | ND | 1.0 | 0.5 |
| Styrene | ND | 1.0 | 0.5 | 1,1,1,2-Tetrachloroethane | ND | 1.0 | 0.5 |
| 1,1,2,2-Tetrachloroethane | ND | 1.0 | 0.5 | Tetrachloroethene | ND | 1.0 | 0.5 |
| Toluene | ND | 1.0 | 0.5 | 1,2,3-Trichlorobenzene | ND | 1.0 | 0.5 |
| 1,2,4-Trichlorobenzene | ND | 1.0 | 0.5 | 1,1,1-Trichloroethane | ND | 1.0 | 0.5 |
| 1,1,2-Trichloroethane | ND | 1.0 | 0.5 | Trichloroethene | ND | 1.0 | 0.5 |
| Trichlorofluoromethane | ND | 1.0 | 0.5 | 1,2,3-Trichloropropane | ND | 1.0 | 0.5 |
| 1,2,4-Trimethylbenzene | ND | 1.0 | 0.5 | 1,3,5-Trimethylbenzene | ND | 1.0 | 0.5 |
| Vinyl Chloride | ND | 1.0 | 0.5 | Xylenes, Total | ND | 1.0 | 0.5 |

**Surrogate Recoveries (%)**

| | | | |
|---|---|---|---|
| %SS1: | 105 | %SS2: | 113 |
| %SS3: | 92 | | |

Comments:

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

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

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

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| | | |
|---|---|---|
| P & D Environmental | Client Project ID: #0298; Snow Cleaners | Date Sampled: 05/14/13 |
| | | Date Received: 05/15/13 |
| 55 Santa Clara, Ste.240 | Client Contact: Paul King | Date Extracted: 05/17/13 |
| Oakland, CA 94610 | Client P.O.: | Date Analyzed: 05/17/13 |

## Volatile Organics by P&T and GC/MS (Basic Target List)*

Extraction Method: SW5030B | Analytical Method: SW8260B | Work Order: 1305480

| | |
|---|---|
| Lab ID | 1305480-002B |
| Client ID | MW-2 |
| Matrix | Water |

| Compound | Concentration * | DF | Reporting Limit | Compound | Concentration * | DF | Reporting Limit |
|---|---|---|---|---|---|---|---|
| Acetone | ND<250 | 25 | 10 | tert-Amyl methyl ether (TAME) | ND<12 | 25 | 0.5 |
| Benzene | ND<12 | 25 | 0.5 | Bromobenzene | ND<12 | 25 | 0.5 |
| Bromochloromethane | ND<12 | 25 | 0.5 | Bromodichloromethane | ND<12 | 25 | 0.5 |
| Bromoform | ND<12 | 25 | 0.5 | Bromomethane | ND<12 | 25 | 0.5 |
| 2-Butanone (MEK) | ND<50 | 25 | 2.0 | t-Butyl alcohol (TBA) | ND<50 | 25 | 2.0 |
| n-Butyl benzene | ND<12 | 25 | 0.5 | sec-Butyl benzene | ND<12 | 25 | 0.5 |
| tert-Butyl benzene | ND<12 | 25 | 0.5 | Carbon Disulfide | ND<12 | 25 | 0.5 |
| Carbon Tetrachloride | ND<12 | 25 | 0.5 | Chlorobenzene | ND<12 | 25 | 0.5 |
| Chloroethane | ND<12 | 25 | 0.5 | Chloroform | ND<12 | 25 | 0.5 |
| Chloromethane | ND<12 | 25 | 0.5 | 2-Chlorotoluene | ND<12 | 25 | 0.5 |
| 4-Chlorotoluene | ND<12 | 25 | 0.5 | Dibromochloromethane | ND<12 | 25 | 0.5 |
| 1,2-Dibromo-3-chloropropane | ND<5.0 | 25 | 0.2 | 1,2-Dibromoethane (EDB) | ND<12 | 25 | 0.5 |
| Dibromomethane | ND<12 | 25 | 0.5 | 1,2-Dichlorobenzene | ND<12 | 25 | 0.5 |
| 1,3-Dichlorobenzene | ND<12 | 25 | 0.5 | 1,4-Dichlorobenzene | ND<12 | 25 | 0.5 |
| Dichlorodifluoromethane | ND<12 | 25 | 0.5 | 1,1-Dichloroethane | ND<12 | 25 | 0.5 |
| 1,2-Dichloroethane (1,2-DCA) | ND<12 | 25 | 0.5 | 1,1-Dichloroethene | ND<12 | 25 | 0.5 |
| cis-1,2-Dichloroethene | 520 | 25 | 0.5 | trans-1,2-Dichloroethene | 14 | 25 | 0.5 |
| 1,2-Dichloropropane | ND<12 | 25 | 0.5 | 1,3-Dichloropropane | ND<12 | 25 | 0.5 |
| 2,2-Dichloropropane | ND<12 | 25 | 0.5 | 1,1-Dichloropropene | ND<12 | 25 | 0.5 |
| cis-1,3-Dichloropropene | ND<12 | 25 | 0.5 | trans-1,3-Dichloropropene | ND<12 | 25 | 0.5 |
| Diisopropyl ether (DIPE) | ND<12 | 25 | 0.5 | Ethylbenzene | ND<12 | 25 | 0.5 |
| Ethyl tert-butyl ether (ETBE) | ND<12 | 25 | 0.5 | Freon 113 | ND<250 | 25 | 10 |
| Hexachlorobutadiene | ND<12 | 25 | 0.5 | Hexachloroethane | ND<12 | 25 | 0.5 |
| 2-Hexanone | ND<12 | 25 | 0.5 | Isopropylbenzene | ND<12 | 25 | 0.5 |
| 4-Isopropyl toluene | ND<12 | 25 | 0.5 | Methyl-t-butyl ether (MTBE) | ND<12 | 25 | 0.5 |
| Methylene chloride | ND<12 | 25 | 0.5 | 4-Methyl-2-pentanone (MIBK) | ND<12 | 25 | 0.5 |
| Naphthalene | ND<12 | 25 | 0.5 | n-Propyl benzene | ND<12 | 25 | 0.5 |
| Styrene | ND<12 | 25 | 0.5 | 1,1,1,2-Tetrachloroethane | ND<12 | 25 | 0.5 |
| 1,1,2,2-Tetrachloroethane | ND<12 | 25 | 0.5 | Tetrachloroethene | ND<12 | 25 | 0.5 |
| Toluene | ND<12 | 25 | 0.5 | 1,2,3-Trichlorobenzene | ND<12 | 25 | 0.5 |
| 1,2,4-Trichlorobenzene | ND<12 | 25 | 0.5 | 1,1,1-Trichloroethane | ND<12 | 25 | 0.5 |
| 1,1,2-Trichloroethane | ND<12 | 25 | 0.5 | Trichloroethene | ND<12 | 25 | 0.5 |
| Trichlorofluoromethane | ND<12 | 25 | 0.5 | 1,2,3-Trichloropropane | ND<12 | 25 | 0.5 |
| 1,2,4-Trimethylbenzene | 47 | 25 | 0.5 | 1,3,5-Trimethylbenzene | 14 | 25 | 0.5 |
| Vinyl Chloride | 60 | 25 | 0.5 | Xylenes, Total | 25 | 25 | 0.5 |

**Surrogate Recoveries (%)**

| | | | |
|---|---|---|---|
| %SS1: | 106 | %SS2: | 112 |
| %SS3: | 90 | | |

Comments:

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

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

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

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| | | |
|---|---|---|
| P & D Environmental | Client Project ID: #0298; Snow Cleaners | Date Sampled: 05/14/13 |
| | | Date Received: 05/15/13 |
| 55 Santa Clara, Ste.240 | Client Contact: Paul King | Date Extracted: 05/16/13 |
| Oakland, CA 94610 | Client P.O.: | Date Analyzed: 05/16/13 |

## Volatile Organics by P&T and GC/MS (Basic Target List)*

Extraction Method: SW5030B | Analytical Method: SW8260B | Work Order: 1305480

| | |
|---|---|
| Lab ID | 1305480-003B |
| Client ID | MW-3 |
| Matrix | Water |

| Compound | Concentration * | DF | Reporting Limit | Compound | Concentration * | DF | Reporting Limit |
|---|---|---|---|---|---|---|---|
| Acetone | ND | 1.0 | 10 | tert-Amyl methyl ether (TAME) | ND | 1.0 | 0.5 |
| Benzene | ND | 1.0 | 0.5 | Bromobenzene | ND | 1.0 | 0.5 |
| Bromochloromethane | ND | 1.0 | 0.5 | Bromodichloromethane | ND | 1.0 | 0.5 |
| Bromoform | ND | 1.0 | 0.5 | Bromomethane | ND | 1.0 | 0.5 |
| 2-Butanone (MEK) | ND | 1.0 | 2.0 | t-Butyl alcohol (TBA) | ND | 1.0 | 2.0 |
| n-Butyl benzene | ND | 1.0 | 0.5 | sec-Butyl benzene | ND | 1.0 | 0.5 |
| tert-Butyl benzene | ND | 1.0 | 0.5 | Carbon Disulfide | ND | 1.0 | 0.5 |
| Carbon Tetrachloride | ND | 1.0 | 0.5 | Chlorobenzene | ND | 1.0 | 0.5 |
| Chloroethane | ND | 1.0 | 0.5 | Chloroform | ND | 1.0 | 0.5 |
| Chloromethane | ND | 1.0 | 0.5 | 2-Chlorotoluene | ND | 1.0 | 0.5 |
| 4-Chlorotoluene | ND | 1.0 | 0.5 | Dibromochloromethane | ND | 1.0 | 0.5 |
| 1,2-Dibromo-3-chloropropane | ND | 1.0 | 0.2 | 1,2-Dibromoethane (EDB) | ND | 1.0 | 0.5 |
| Dibromomethane | ND | 1.0 | 0.5 | 1,2-Dichlorobenzene | ND | 1.0 | 0.5 |
| 1,3-Dichlorobenzene | ND | 1.0 | 0.5 | 1,4-Dichlorobenzene | ND | 1.0 | 0.5 |
| Dichlorodifluoromethane | ND | 1.0 | 0.5 | 1,1-Dichloroethane | ND | 1.0 | 0.5 |
| 1,2-Dichloroethane (1,2-DCA) | ND | 1.0 | 0.5 | 1,1-Dichloroethene | ND | 1.0 | 0.5 |
| cis-1,2-Dichloroethene | ND | 1.0 | 0.5 | trans-1,2-Dichloroethene | ND | 1.0 | 0.5 |
| 1,2-Dichloropropane | ND | 1.0 | 0.5 | 1,3-Dichloropropane | ND | 1.0 | 0.5 |
| 2,2-Dichloropropane | ND | 1.0 | 0.5 | 1,1-Dichloropropene | ND | 1.0 | 0.5 |
| cis-1,3-Dichloropropene | ND | 1.0 | 0.5 | trans-1,3-Dichloropropene | ND | 1.0 | 0.5 |
| Diisopropyl ether (DIPE) | ND | 1.0 | 0.5 | Ethylbenzene | ND | 1.0 | 0.5 |
| Ethyl tert-butyl ether (ETBE) | ND | 1.0 | 0.5 | Freon 113 | ND | 1.0 | 10 |
| Hexachlorobutadiene | ND | 1.0 | 0.5 | Hexachloroethane | ND | 1.0 | 0.5 |
| 2-Hexanone | ND | 1.0 | 0.5 | Isopropylbenzene | ND | 1.0 | 0.5 |
| 4-Isopropyl toluene | ND | 1.0 | 0.5 | Methyl-t-butyl ether (MTBE) | ND | 1.0 | 0.5 |
| Methylene chloride | ND | 1.0 | 0.5 | 4-Methyl-2-pentanone (MIBK) | ND | 1.0 | 0.5 |
| Naphthalene | ND | 1.0 | 0.5 | n-Propyl benzene | ND | 1.0 | 0.5 |
| Styrene | ND | 1.0 | 0.5 | 1,1,1,2-Tetrachloroethane | ND | 1.0 | 0.5 |
| 1,1,2,2-Tetrachloroethane | ND | 1.0 | 0.5 | Tetrachloroethene | ND | 1.0 | 0.5 |
| Toluene | ND | 1.0 | 0.5 | 1,2,3-Trichlorobenzene | ND | 1.0 | 0.5 |
| 1,2,4-Trichlorobenzene | ND | 1.0 | 0.5 | 1,1,1-Trichloroethane | ND | 1.0 | 0.5 |
| 1,1,2-Trichloroethane | ND | 1.0 | 0.5 | Trichloroethene | ND | 1.0 | 0.5 |
| Trichlorofluoromethane | ND | 1.0 | 0.5 | 1,2,3-Trichloropropane | ND | 1.0 | 0.5 |
| 1,2,4-Trimethylbenzene | ND | 1.0 | 0.5 | 1,3,5-Trimethylbenzene | ND | 1.0 | 0.5 |
| Vinyl Chloride | ND | 1.0 | 0.5 | Xylenes, Total | ND | 1.0 | 0.5 |

**Surrogate Recoveries (%)**

| | | | |
|---|---|---|---|
| %SS1: | 108 | %SS2: | 110 |
| %SS3: | 89 | | |

Comments:

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

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

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

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| | | |
|---|---|---|
| P & D Environmental | Client Project ID: #0298; Snow Cleaners | Date Sampled: 05/14/13 |
| | | Date Received: 05/15/13 |
| 55 Santa Clara, Ste.240 | Client Contact: Paul King | Date Extracted: 05/18/13 |
| Oakland, CA 94610 | Client P.O.: | Date Analyzed: 05/18/13 |

## Volatile Organics by P&T and GC/MS (Basic Target List)*

Extraction Method: SW5030B | Analytical Method: SW8260B | Work Order: 1305480

| | |
|---|---|
| Lab ID | 1305480-004B |
| Client ID | MW-4 |
| Matrix | Water |

| Compound | Concentration * | DF | Reporting Limit | Compound | Concentration * | DF | Reporting Limit |
|---|---|---|---|---|---|---|---|
| Acetone | ND | 1.0 | 10 | tert-Amyl methyl ether (TAME) | ND | 1.0 | 0.5 |
| Benzene | ND | 1.0 | 0.5 | Bromobenzene | ND | 1.0 | 0.5 |
| Bromochloromethane | ND | 1.0 | 0.5 | Bromodichloromethane | ND | 1.0 | 0.5 |
| Bromoform | ND | 1.0 | 0.5 | Bromomethane | ND | 1.0 | 0.5 |
| 2-Butanone (MEK) | ND | 1.0 | 2.0 | t-Butyl alcohol (TBA) | ND | 1.0 | 2.0 |
| n-Butyl benzene | ND | 1.0 | 0.5 | sec-Butyl benzene | ND | 1.0 | 0.5 |
| tert-Butyl benzene | ND | 1.0 | 0.5 | Carbon Disulfide | ND | 1.0 | 0.5 |
| Carbon Tetrachloride | ND | 1.0 | 0.5 | Chlorobenzene | ND | 1.0 | 0.5 |
| Chloroethane | ND | 1.0 | 0.5 | Chloroform | 1.6 | 1.0 | 0.5 |
| Chloromethane | ND | 1.0 | 0.5 | 2-Chlorotoluene | ND | 1.0 | 0.5 |
| 4-Chlorotoluene | ND | 1.0 | 0.5 | Dibromochloromethane | ND | 1.0 | 0.5 |
| 1,2-Dibromo-3-chloropropane | ND | 1.0 | 0.2 | 1,2-Dibromoethane (EDB) | ND | 1.0 | 0.5 |
| Dibromomethane | ND | 1.0 | 0.5 | 1,2-Dichlorobenzene | ND | 1.0 | 0.5 |
| 1,3-Dichlorobenzene | ND | 1.0 | 0.5 | 1,4-Dichlorobenzene | ND | 1.0 | 0.5 |
| Dichlorodifluoromethane | ND | 1.0 | 0.5 | 1,1-Dichloroethane | ND | 1.0 | 0.5 |
| 1,2-Dichloroethane (1,2-DCA) | ND | 1.0 | 0.5 | 1,1-Dichloroethene | ND | 1.0 | 0.5 |
| cis-1,2-Dichloroethene | 15 | 1.0 | 0.5 | trans-1,2-Dichloroethene | ND | 1.0 | 0.5 |
| 1,2-Dichloropropane | ND | 1.0 | 0.5 | 1,3-Dichloropropane | ND | 1.0 | 0.5 |
| 2,2-Dichloropropane | ND | 1.0 | 0.5 | 1,1-Dichloropropene | ND | 1.0 | 0.5 |
| cis-1,3-Dichloropropene | ND | 1.0 | 0.5 | trans-1,3-Dichloropropene | ND | 1.0 | 0.5 |
| Diisopropyl ether (DIPE) | ND | 1.0 | 0.5 | Ethylbenzene | ND | 1.0 | 0.5 |
| Ethyl tert-butyl ether (ETBE) | ND | 1.0 | 0.5 | Freon 113 | ND | 1.0 | 10 |
| Hexachlorobutadiene | ND | 1.0 | 0.5 | Hexachloroethane | ND | 1.0 | 0.5 |
| 2-Hexanone | ND | 1.0 | 0.5 | Isopropylbenzene | ND | 1.0 | 0.5 |
| 4-Isopropyl toluene | ND | 1.0 | 0.5 | Methyl-t-butyl ether (MTBE) | ND | 1.0 | 0.5 |
| Methylene chloride | ND | 1.0 | 0.5 | 4-Methyl-2-pentanone (MIBK) | ND | 1.0 | 0.5 |
| Naphthalene | ND | 1.0 | 0.5 | n-Propyl benzene | ND | 1.0 | 0.5 |
| Styrene | ND | 1.0 | 0.5 | 1,1,1,2-Tetrachloroethane | ND | 1.0 | 0.5 |
| 1,1,2,2-Tetrachloroethane | ND | 1.0 | 0.5 | Tetrachloroethene | ND | 1.0 | 0.5 |
| Toluene | ND | 1.0 | 0.5 | 1,2,3-Trichlorobenzene | ND | 1.0 | 0.5 |
| 1,2,4-Trichlorobenzene | ND | 1.0 | 0.5 | 1,1,1-Trichloroethane | ND | 1.0 | 0.5 |
| 1,1,2-Trichloroethane | ND | 1.0 | 0.5 | Trichloroethene | ND | 1.0 | 0.5 |
| Trichlorofluoromethane | ND | 1.0 | 0.5 | 1,2,3-Trichloropropane | ND | 1.0 | 0.5 |
| 1,2,4-Trimethylbenzene | ND | 1.0 | 0.5 | 1,3,5-Trimethylbenzene | ND | 1.0 | 0.5 |
| Vinyl Chloride | ND | 1.0 | 0.5 | Xylenes, Total | ND | 1.0 | 0.5 |

**Surrogate Recoveries (%)**

| | | | |
|---|---|---|---|
| %SS1: | 113 | %SS2: | 106 |
| %SS3: | 85 | | |

Comments:

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

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

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

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| | | |
|---|---|---|
| P & D Environmental | Client Project ID: #0298; Snow Cleaners | Date Sampled: 05/14/13 |
| | | Date Received: 05/15/13 |
| 55 Santa Clara, Ste.240 | Client Contact: Paul King | Date Extracted: 05/21/13 |
| Oakland, CA 94610 | Client P.O.: | Date Analyzed: 05/21/13 |

## Volatile Organics by P&T and GC/MS (Basic Target List)*

Extraction Method: SW5030B | Analytical Method: SW8260B | Work Order: 1305480

| | |
|---|---|
| Lab ID | 1305480-005B |
| Client ID | DP-1 |
| Matrix | Water |

| Compound | Concentration * | DF | Reporting Limit | Compound | Concentration * | DF | Reporting Limit |
|---|---|---|---|---|---|---|---|
| Acetone | ND<250 | 25 | 10 | tert-Amyl methyl ether (TAME) | ND<12 | 25 | 0.5 |
| Benzene | ND<12 | 25 | 0.5 | Bromobenzene | ND<12 | 25 | 0.5 |
| Bromochloromethane | ND<12 | 25 | 0.5 | Bromodichloromethane | ND<12 | 25 | 0.5 |
| Bromoform | ND<12 | 25 | 0.5 | Bromomethane | ND<12 | 25 | 0.5 |
| 2-Butanone (MEK) | ND<50 | 25 | 2.0 | t-Butyl alcohol (TBA) | ND<50 | 25 | 2.0 |
| n-Butyl benzene | ND<12 | 25 | 0.5 | sec-Butyl benzene | ND<12 | 25 | 0.5 |
| tert-Butyl benzene | ND<12 | 25 | 0.5 | Carbon Disulfide | ND<12 | 25 | 0.5 |
| Carbon Tetrachloride | ND<12 | 25 | 0.5 | Chlorobenzene | ND<12 | 25 | 0.5 |
| Chloroethane | ND<12 | 25 | 0.5 | Chloroform | ND<12 | 25 | 0.5 |
| Chloromethane | ND<12 | 25 | 0.5 | 2-Chlorotoluene | ND<12 | 25 | 0.5 |
| 4-Chlorotoluene | ND<12 | 25 | 0.5 | Dibromochloromethane | ND<12 | 25 | 0.5 |
| 1,2-Dibromo-3-chloropropane | ND<5.0 | 25 | 0.2 | 1,2-Dibromoethane (EDB) | ND<12 | 25 | 0.5 |
| Dibromomethane | ND<12 | 25 | 0.5 | 1,2-Dichlorobenzene | ND<12 | 25 | 0.5 |
| 1,3-Dichlorobenzene | ND<12 | 25 | 0.5 | 1,4-Dichlorobenzene | ND<12 | 25 | 0.5 |
| Dichlorodifluoromethane | ND<12 | 25 | 0.5 | 1,1-Dichloroethane | ND<12 | 25 | 0.5 |
| 1,2-Dichloroethane (1,2-DCA) | ND<12 | 25 | 0.5 | 1,1-Dichloroethene | ND<12 | 25 | 0.5 |
| cis-1,2-Dichloroethene | 150 | 25 | 0.5 | trans-1,2-Dichloroethene | ND<12 | 25 | 0.5 |
| 1,2-Dichloropropane | ND<12 | 25 | 0.5 | 1,3-Dichloropropane | ND<12 | 25 | 0.5 |
| 2,2-Dichloropropane | ND<12 | 25 | 0.5 | 1,1-Dichloropropene | ND<12 | 25 | 0.5 |
| cis-1,3-Dichloropropene | ND<12 | 25 | 0.5 | trans-1,3-Dichloropropene | ND<12 | 25 | 0.5 |
| Diisopropyl ether (DIPE) | ND<12 | 25 | 0.5 | Ethylbenzene | ND<12 | 25 | 0.5 |
| Ethyl tert-butyl ether (ETBE) | ND<12 | 25 | 0.5 | Freon 113 | ND<250 | 25 | 10 |
| Hexachlorobutadiene | ND<12 | 25 | 0.5 | Hexachloroethane | ND<12 | 25 | 0.5 |
| 2-Hexanone | ND<12 | 25 | 0.5 | Isopropylbenzene | ND<12 | 25 | 0.5 |
| 4-Isopropyl toluene | ND<12 | 25 | 0.5 | Methyl-t-butyl ether (MTBE) | ND<12 | 25 | 0.5 |
| Methylene chloride | ND<12 | 25 | 0.5 | 4-Methyl-2-pentanone (MIBK) | ND<12 | 25 | 0.5 |
| Naphthalene | ND<12 | 25 | 0.5 | n-Propyl benzene | ND<12 | 25 | 0.5 |
| Styrene | ND<12 | 25 | 0.5 | 1,1,1,2-Tetrachloroethane | ND<12 | 25 | 0.5 |
| 1,1,2,2-Tetrachloroethane | ND<12 | 25 | 0.5 | Tetrachloroethene | 380 | 25 | 0.5 |
| Toluene | ND<12 | 25 | 0.5 | 1,2,3-Trichlorobenzene | ND<12 | 25 | 0.5 |
| 1,2,4-Trichlorobenzene | ND<12 | 25 | 0.5 | 1,1,1-Trichloroethane | ND<12 | 25 | 0.5 |
| 1,1,2-Trichloroethane | ND<12 | 25 | 0.5 | Trichloroethene | 180 | 25 | 0.5 |
| Trichlorofluoromethane | ND<12 | 25 | 0.5 | 1,2,3-Trichloropropane | ND<12 | 25 | 0.5 |
| 1,2,4-Trimethylbenzene | ND<12 | 25 | 0.5 | 1,3,5-Trimethylbenzene | ND<12 | 25 | 0.5 |
| Vinyl Chloride | ND<12 | 25 | 0.5 | Xylenes, Total | ND<12 | 25 | 0.5 |

| Surrogate Recoveries (%) | | | |
|---|---|---|---|
| %SS1: | 106 | %SS2: | 113 |
| %SS3: | 91 | | |

Comments:

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

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

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

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| | | |
|---|---|---|
| P & D Environmental | Client Project ID: #0298; Snow Cleaners | Date Sampled: 05/14/13 |
| | | Date Received: 05/15/13 |
| 55 Santa Clara, Ste.240 | Client Contact: Paul King | Date Extracted: 05/21/13 |
| Oakland, CA 94610 | Client P.O.: | Date Analyzed: 05/21/13 |

## Volatile Organics by P&T and GC/MS (Basic Target List)*

Extraction Method: SW5030B | Analytical Method: SW8260B | Work Order: 1305480

| | |
|---|---|
| Lab ID | 1305480-006B |
| Client ID | DP-2 |
| Matrix | Water |

| Compound | Concentration * | DF | Reporting Limit | Compound | Concentration * | DF | Reporting Limit |
|---|---|---|---|---|---|---|---|
| Acetone | ND<5000 | 500 | 10 | tert-Amyl methyl ether (TAME) | ND<250 | 500 | 0.5 |
| Benzene | ND<250 | 500 | 0.5 | Bromobenzene | ND<250 | 500 | 0.5 |
| Bromochloromethane | ND<250 | 500 | 0.5 | Bromodichloromethane | ND<250 | 500 | 0.5 |
| Bromoform | ND<250 | 500 | 0.5 | Bromomethane | ND<250 | 500 | 0.5 |
| 2-Butanone (MEK) | ND<1000 | 500 | 2.0 | t-Butyl alcohol (TBA) | ND<1000 | 500 | 2.0 |
| n-Butyl benzene | ND<250 | 500 | 0.5 | sec-Butyl benzene | ND<250 | 500 | 0.5 |
| tert-Butyl benzene | ND<250 | 500 | 0.5 | Carbon Disulfide | ND<250 | 500 | 0.5 |
| Carbon Tetrachloride | ND<250 | 500 | 0.5 | Chlorobenzene | ND<250 | 500 | 0.5 |
| Chloroethane | ND<250 | 500 | 0.5 | Chloroform | ND<250 | 500 | 0.5 |
| Chloromethane | ND<250 | 500 | 0.5 | 2-Chlorotoluene | ND<250 | 500 | 0.5 |
| 4-Chlorotoluene | ND<250 | 500 | 0.5 | Dibromochloromethane | ND<250 | 500 | 0.5 |
| 1,2-Dibromo-3-chloropropane | ND<100 | 500 | 0.2 | 1,2-Dibromoethane (EDB) | ND<250 | 500 | 0.5 |
| Dibromomethane | ND<250 | 500 | 0.5 | 1,2-Dichlorobenzene | ND<250 | 500 | 0.5 |
| 1,3-Dichlorobenzene | ND<250 | 500 | 0.5 | 1,4-Dichlorobenzene | ND<250 | 500 | 0.5 |
| Dichlorodifluoromethane | ND<250 | 500 | 0.5 | 1,1-Dichloroethane | ND<250 | 500 | 0.5 |
| 1,2-Dichloroethane (1,2-DCA) | ND<250 | 500 | 0.5 | 1,1-Dichloroethene | ND<250 | 500 | 0.5 |
| cis-1,2-Dichloroethene | 11,000 | 500 | 0.5 | trans-1,2-Dichloroethene | ND<250 | 500 | 0.5 |
| 1,2-Dichloropropane | ND<250 | 500 | 0.5 | 1,3-Dichloropropane | ND<250 | 500 | 0.5 |
| 2,2-Dichloropropane | ND<250 | 500 | 0.5 | 1,1-Dichloropropene | ND<250 | 500 | 0.5 |
| cis-1,3-Dichloropropene | ND<250 | 500 | 0.5 | trans-1,3-Dichloropropene | ND<250 | 500 | 0.5 |
| Diisopropyl ether (DIPE) | ND<250 | 500 | 0.5 | Ethylbenzene | ND<250 | 500 | 0.5 |
| Ethyl tert-butyl ether (ETBE) | ND<250 | 500 | 0.5 | Freon 113 | ND<5000 | 500 | 10 |
| Hexachlorobutadiene | ND<250 | 500 | 0.5 | Hexachloroethane | ND<250 | 500 | 0.5 |
| 2-Hexanone | ND<250 | 500 | 0.5 | Isopropylbenzene | ND<250 | 500 | 0.5 |
| 4-Isopropyl toluene | ND<250 | 500 | 0.5 | Methyl-t-butyl ether (MTBE) | ND<250 | 500 | 0.5 |
| Methylene chloride | ND<250 | 500 | 0.5 | 4-Methyl-2-pentanone (MIBK) | ND<250 | 500 | 0.5 |
| Naphthalene | ND<250 | 500 | 0.5 | n-Propyl benzene | ND<250 | 500 | 0.5 |
| Styrene | ND<250 | 500 | 0.5 | 1,1,1,2-Tetrachloroethane | ND<250 | 500 | 0.5 |
| 1,1,2,2-Tetrachloroethane | ND<250 | 500 | 0.5 | Tetrachloroethene | ND<250 | 500 | 0.5 |
| Toluene | ND<250 | 500 | 0.5 | 1,2,3-Trichlorobenzene | ND<250 | 500 | 0.5 |
| 1,2,4-Trichlorobenzene | ND<250 | 500 | 0.5 | 1,1,1-Trichloroethane | ND<250 | 500 | 0.5 |
| 1,1,2-Trichloroethane | ND<250 | 500 | 0.5 | Trichloroethene | ND<250 | 500 | 0.5 |
| Trichlorofluoromethane | ND<250 | 500 | 0.5 | 1,2,3-Trichloropropane | ND<250 | 500 | 0.5 |
| 1,2,4-Trimethylbenzene | ND<250 | 500 | 0.5 | 1,3,5-Trimethylbenzene | ND<250 | 500 | 0.5 |
| Vinyl Chloride | 2300 | 500 | 0.5 | Xylenes, Total | ND<250 | 500 | 0.5 |

**Surrogate Recoveries (%)**

| | | | |
|---|---|---|---|
| %SS1: | 106 | %SS2: | 113 |
| %SS3: | 92 | | |

Comments:

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

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

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

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| | | |
|---|---|---|
| P & D Environmental | Client Project ID: #0298; Snow Cleaners | Date Sampled: 05/14/13 |
| | | Date Received: 05/15/13 |
| 55 Santa Clara, Ste.240 | Client Contact: Paul King | Date Extracted: 05/20/13 |
| Oakland, CA 94610 | Client P.O.: | Date Analyzed: 05/20/13 |

## Volatile Organics by P&T and GC/MS (Basic Target List)*

Extraction Method: SW5030B | Analytical Method: SW8260B | Work Order: 1305480

| | |
|---|---|
| Lab ID | 1305480-007B |
| Client ID | DP-3 |
| Matrix | Water |

| Compound | Concentration * | DF | Reporting Limit | Compound | Concentration * | DF | Reporting Limit |
|---|---|---|---|---|---|---|---|
| Acetone | ND | 1.0 | 10 | tert-Amyl methyl ether (TAME) | ND | 1.0 | 0.5 |
| Benzene | 0.85 | 1.0 | 0.5 | Bromobenzene | ND | 1.0 | 0.5 |
| Bromochloromethane | ND | 1.0 | 0.5 | Bromodichloromethane | ND | 1.0 | 0.5 |
| Bromoform | ND | 1.0 | 0.5 | Bromomethane | ND | 1.0 | 0.5 |
| 2-Butanone (MEK) | ND | 1.0 | 2.0 | t-Butyl alcohol (TBA) | ND | 1.0 | 2.0 |
| n-Butyl benzene | 1.5 | 1.0 | 0.5 | sec-Butyl benzene | 1.7 | 1.0 | 0.5 |
| tert-Butyl benzene | ND | 1.0 | 0.5 | Carbon Disulfide | ND | 1.0 | 0.5 |
| Carbon Tetrachloride | ND | 1.0 | 0.5 | Chlorobenzene | ND | 1.0 | 0.5 |
| Chloroethane | ND | 1.0 | 0.5 | Chloroform | ND | 1.0 | 0.5 |
| Chloromethane | ND | 1.0 | 0.5 | 2-Chlorotoluene | ND | 1.0 | 0.5 |
| 4-Chlorotoluene | ND | 1.0 | 0.5 | Dibromochloromethane | ND | 1.0 | 0.5 |
| 1,2-Dibromo-3-chloropropane | ND | 1.0 | 0.2 | 1,2-Dibromoethane (EDB) | ND | 1.0 | 0.5 |
| Dibromomethane | ND | 1.0 | 0.5 | 1,2-Dichlorobenzene | ND | 1.0 | 0.5 |
| 1,3-Dichlorobenzene | ND | 1.0 | 0.5 | 1,4-Dichlorobenzene | ND | 1.0 | 0.5 |
| Dichlorodifluoromethane | ND | 1.0 | 0.5 | 1,1-Dichloroethane | ND | 1.0 | 0.5 |
| 1,2-Dichloroethane (1,2-DCA) | ND | 1.0 | 0.5 | 1,1-Dichloroethene | ND | 1.0 | 0.5 |
| cis-1,2-Dichloroethene | 22 | 1.0 | 0.5 | trans-1,2-Dichloroethene | 2.4 | 1.0 | 0.5 |
| 1,2-Dichloropropane | ND | 1.0 | 0.5 | 1,3-Dichloropropane | ND | 1.0 | 0.5 |
| 2,2-Dichloropropane | ND | 1.0 | 0.5 | 1,1-Dichloropropene | ND | 1.0 | 0.5 |
| cis-1,3-Dichloropropene | ND | 1.0 | 0.5 | trans-1,3-Dichloropropene | ND | 1.0 | 0.5 |
| Diisopropyl ether (DIPE) | ND | 1.0 | 0.5 | Ethylbenzene | ND | 1.0 | 0.5 |
| Ethyl tert-butyl ether (ETBE) | ND | 1.0 | 0.5 | Freon 113 | ND | 1.0 | 10 |
| Hexachlorobutadiene | ND | 1.0 | 0.5 | Hexachloroethane | ND | 1.0 | 0.5 |
| 2-Hexanone | ND | 1.0 | 0.5 | Isopropylbenzene | 1.5 | 1.0 | 0.5 |
| 4-Isopropyl toluene | 1.0 | 1.0 | 0.5 | Methyl-t-butyl ether (MTBE) | ND | 1.0 | 0.5 |
| Methylene chloride | ND | 1.0 | 0.5 | 4-Methyl-2-pentanone (MIBK) | ND | 1.0 | 0.5 |
| Naphthalene | 2.6 | 1.0 | 0.5 | n-Propyl benzene | 1.7 | 1.0 | 0.5 |
| Styrene | ND | 1.0 | 0.5 | 1,1,1,2-Tetrachloroethane | ND | 1.0 | 0.5 |
| 1,1,2,2-Tetrachloroethane | ND | 1.0 | 0.5 | Tetrachloroethene | ND | 1.0 | 0.5 |
| Toluene | 0.74 | 1.0 | 0.5 | 1,2,3-Trichlorobenzene | ND | 1.0 | 0.5 |
| 1,2,4-Trichlorobenzene | ND | 1.0 | 0.5 | 1,1,1-Trichloroethane | ND | 1.0 | 0.5 |
| 1,1,2-Trichloroethane | ND | 1.0 | 0.5 | Trichloroethene | 0.74 | 1.0 | 0.5 |
| Trichlorofluoromethane | ND | 1.0 | 0.5 | 1,2,3-Trichloropropane | ND | 1.0 | 0.5 |
| 1,2,4-Trimethylbenzene | 28 | 1.0 | 0.5 | 1,3,5-Trimethylbenzene | 8.0 | 1.0 | 0.5 |
| Vinyl Chloride | 25 | 1.0 | 0.5 | Xylenes, Total | 2.5 | 1.0 | 0.5 |

**Surrogate Recoveries (%)**

| | | | |
|---|---|---|---|
| %SS1: | 118 | %SS2: | 100 |
| %SS3: | 86 | | |

Comments:

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

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

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

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| | | |
|---|---|---|
| P & D Environmental | Client Project ID: #0298; Snow Cleaners | Date Sampled: 05/14/13 |
| | | Date Received: 05/15/13 |
| 55 Santa Clara, Ste.240 | Client Contact: Paul King | Date Extracted: 05/20/13 |
| Oakland, CA 94610 | Client P.O.: | Date Analyzed: 05/20/13 |

## Volatile Organics by P&T and GC/MS (Basic Target List)*

Extraction Method: SW5030B | Analytical Method: SW8260B | Work Order: 1305480

| | |
|---|---|
| Lab ID | 1305480-008B |
| Client ID | DP-4 |
| Matrix | Water |

| Compound | Concentration * | DF | Reporting Limit | Compound | Concentration * | DF | Reporting Limit |
|---|---|---|---|---|---|---|---|
| Acetone | ND | 1.0 | 10 | tert-Amyl methyl ether (TAME) | ND | 1.0 | 0.5 |
| Benzene | ND | 1.0 | 0.5 | Bromobenzene | ND | 1.0 | 0.5 |
| Bromochloromethane | ND | 1.0 | 0.5 | Bromodichloromethane | ND | 1.0 | 0.5 |
| Bromoform | ND | 1.0 | 0.5 | Bromomethane | ND | 1.0 | 0.5 |
| 2-Butanone (MEK) | ND | 1.0 | 2.0 | t-Butyl alcohol (TBA) | ND | 1.0 | 2.0 |
| n-Butyl benzene | ND | 1.0 | 0.5 | sec-Butyl benzene | ND | 1.0 | 0.5 |
| tert-Butyl benzene | ND | 1.0 | 0.5 | Carbon Disulfide | ND | 1.0 | 0.5 |
| Carbon Tetrachloride | ND | 1.0 | 0.5 | Chlorobenzene | ND | 1.0 | 0.5 |
| Chloroethane | ND | 1.0 | 0.5 | Chloroform | 1.5 | 1.0 | 0.5 |
| Chloromethane | ND | 1.0 | 0.5 | 2-Chlorotoluene | ND | 1.0 | 0.5 |
| 4-Chlorotoluene | ND | 1.0 | 0.5 | Dibromochloromethane | ND | 1.0 | 0.5 |
| 1,2-Dibromo-3-chloropropane | ND | 1.0 | 0.2 | 1,2-Dibromoethane (EDB) | ND | 1.0 | 0.5 |
| Dibromomethane | ND | 1.0 | 0.5 | 1,2-Dichlorobenzene | ND | 1.0 | 0.5 |
| 1,3-Dichlorobenzene | ND | 1.0 | 0.5 | 1,4-Dichlorobenzene | ND | 1.0 | 0.5 |
| Dichlorodifluoromethane | ND | 1.0 | 0.5 | 1,1-Dichloroethane | ND | 1.0 | 0.5 |
| 1,2-Dichloroethane (1,2-DCA) | ND | 1.0 | 0.5 | 1,1-Dichloroethene | ND | 1.0 | 0.5 |
| cis-1,2-Dichloroethene | ND | 1.0 | 0.5 | trans-1,2-Dichloroethene | ND | 1.0 | 0.5 |
| 1,2-Dichloropropane | ND | 1.0 | 0.5 | 1,3-Dichloropropane | ND | 1.0 | 0.5 |
| 2,2-Dichloropropane | ND | 1.0 | 0.5 | 1,1-Dichloropropene | ND | 1.0 | 0.5 |
| cis-1,3-Dichloropropene | ND | 1.0 | 0.5 | trans-1,3-Dichloropropene | ND | 1.0 | 0.5 |
| Diisopropyl ether (DIPE) | ND | 1.0 | 0.5 | Ethylbenzene | ND | 1.0 | 0.5 |
| Ethyl tert-butyl ether (ETBE) | ND | 1.0 | 0.5 | Freon 113 | ND | 1.0 | 10 |
| Hexachlorobutadiene | ND | 1.0 | 0.5 | Hexachloroethane | ND | 1.0 | 0.5 |
| 2-Hexanone | ND | 1.0 | 0.5 | Isopropylbenzene | ND | 1.0 | 0.5 |
| 4-Isopropyl toluene | ND | 1.0 | 0.5 | Methyl-t-butyl ether (MTBE) | ND | 1.0 | 0.5 |
| Methylene chloride | ND | 1.0 | 0.5 | 4-Methyl-2-pentanone (MIBK) | ND | 1.0 | 0.5 |
| Naphthalene | ND | 1.0 | 0.5 | n-Propyl benzene | ND | 1.0 | 0.5 |
| Styrene | ND | 1.0 | 0.5 | 1,1,1,2-Tetrachloroethane | ND | 1.0 | 0.5 |
| 1,1,2,2-Tetrachloroethane | ND | 1.0 | 0.5 | Tetrachloroethene | 0.73 | 1.0 | 0.5 |
| Toluene | ND | 1.0 | 0.5 | 1,2,3-Trichlorobenzene | ND | 1.0 | 0.5 |
| 1,2,4-Trichlorobenzene | ND | 1.0 | 0.5 | 1,1,1-Trichloroethane | ND | 1.0 | 0.5 |
| 1,1,2-Trichloroethane | ND | 1.0 | 0.5 | Trichloroethene | ND | 1.0 | 0.5 |
| Trichlorofluoromethane | ND | 1.0 | 0.5 | 1,2,3-Trichloropropane | ND | 1.0 | 0.5 |
| 1,2,4-Trimethylbenzene | ND | 1.0 | 0.5 | 1,3,5-Trimethylbenzene | ND | 1.0 | 0.5 |
| Vinyl Chloride | ND | 1.0 | 0.5 | Xylenes, Total | ND | 1.0 | 0.5 |

**Surrogate Recoveries (%)**

| | | | |
|---|---|---|---|
| %SS1: | 120 | %SS2: | 105 |
| %SS3: | 85 | | |

Comments:

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

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

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

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| | | |
|---|---|---|
| P & D Environmental | Client Project ID: #0298; Snow Cleaners | Date Sampled: 05/14/13 |
| | | Date Received: 05/15/13 |
| 55 Santa Clara, Ste.240 | Client Contact: Paul King | Date Extracted: 05/16/13-05/17/13 |
| Oakland, CA 94610 | Client P.O.: | Date Analyzed: 05/16/13-05/17/13 |

**Gasoline (C6-C12) & Stoddard Solvent (C9-C12) Range Volatile Hydrocarbons as Gasoline & Stoddard Solvent***

Extraction method: SW5030B Analytical methods: SW8021B/8015Bm Work Order: 1305480

| Lab ID | Client ID | Matrix | TPH(g) | TPH(ss) | DF | % SS | Comments |
|---|---|---|---|---|---|---|---|
| 1305480-001A | MW-1 | W | ND | ND | 1 | 96 | |
| 1305480-002A | MW-2 | W | 760 | 800 | 1 | 102 | d5,d9 |
| 1305480-003A | MW-3 | W | ND | ND | 1 | 91 | |
| 1305480-004A | MW-4 | W | ND | ND | 1 | 92 | |
| 1305480-005A | DP-1 | W | 410 | 290 | 1 | ---# | d5,d9 |
| 1305480-006A | DP-2 | W | 420 | 460 | 1 | ---# | d5,d9 |
| 1305480-007A | DP-3 | W | 590 | 630 | 1 | 97 | d5,d9 |
| 1305480-008A | DP-4 | W | ND | ND | 1 | 102 | |
| | | | | | | | |
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|---|---|---|---|---|
| Reporting Limit for DF =1; ND means not detected at or above the reporting limit | W | 50 | 50 | µg/L |
| | S | NA | NA | mg/Kg |

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

# cluttered chromatogram; sample peak coelutes w/surrogate peak; low surrogate recovery due to matrix interference. %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation:
d5) TPH pattern that does not appear to be derived from gasoline (stoddard solvent / mineral spirit?)
d9) no recognizable pattern

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| | | |
|---|---|---|
| P & D Environmental | Client Project ID: #0298; Snow Cleaners | Date Sampled: 05/14/13 |
| | | Date Received: 05/15/13 |
| 55 Santa Clara, Ste.240 | Client Contact: Paul King | Date Extracted: 05/15/13 |
| Oakland, CA 94610 | Client P.O.: | Date Analyzed: 05/16/13-05/20/13 |

**Total Extractable Petroleum Hydrocarbons***

Extraction method: SW3510C Analytical methods: SW8015B Work Order: 1305480

| Lab ID | Client ID | Matrix | TPH-Diesel (C10-C23) | TPH-Bunker Oil (C10-C36) | DF | % SS | Comments |
|---|---|---|---|---|---|---|---|
| 1305480-001A | MW-1 | W | ND | ND | 1 | 89 | |
| 1305480-002A | MW-2 | W | 2700 | 2800 | 1 | 90 | e8,e11,e7 |
| 1305480-003A | MW-3 | W | ND | ND | 1 | 89 | |
| 1305480-004A | MW-4 | W | ND | ND | 1 | 84 | |
| 1305480-005A | DP-1 | W | 530 | 780 | 1 | 90 | e7,e11,e2 |
| 1305480-006A | DP-2 | W | 950 | 1000 | 1 | 91 | e8,e11 |
| 1305480-007A | DP-3 | W | 2700 | 2800 | 1 | 91 | e8,e11 |
| 1305480-008A | DP-4 | W | ND | ND | 1 | 89 | |
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|---|---|---|---|---|
| Reporting Limit for DF =1; ND means not detected at or above the reporting limit | W | 50 | 100 | µg/L |
| | S | NA | NA | mg/Kg |

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

# cluttered chromatogram resulting in coeluted surrogate and sample peaks, or; surrogate peak is on elevated baseline, or; surrogate has been diminished by dilution of original extract.

%SS = Percent Recovery of Surrogate Standard. DF = Dilution Factor

The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation:
e2) diesel range compounds are significant; no recognizable pattern
e7) oil range compounds are significant
e8) kerosene/kerosene range/jet fuel range
e11) stoddard solvent/mineral spirit (?)

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# QC SUMMARY REPORT FOR SW8260B

W.O. Sample Matrix: Water | QC Matrix: Water | BatchID: 77407 | WorkOrder: 1305480

**EPA Method: SW8260B** **Extraction: SW5030B** **Spiked Sample ID: 1305469-014B**

| Analyte | Sample | Spiked | MS | MSD | MS-MSD | LCS | Acceptance Criteria (%) | | |
|---|---|---|---|---|---|---|---|---|---|
| | µg/L | µg/L | % Rec. | % Rec. | % RPD | % Rec. | MS / MSD | RPD | LCS |
| tert-Amyl methyl ether (TAME) | ND | 10 | 94.7 | 90.4 | 4.50 | 93.4 | 70 - 130 | 20 | 70 - 130 |
| Benzene | ND | 10 | 98.7 | 91.4 | 7.63 | 104 | 70 - 130 | 20 | 70 - 130 |
| t-Butyl alcohol (TBA) | ND | 40 | 90.3 | 87.1 | 3.53 | 74 | 70 - 130 | 20 | 70 - 130 |
| Chlorobenzene | ND | 10 | 98.1 | 91.3 | 7.22 | 104 | 70 - 130 | 20 | 70 - 130 |
| 1,2-Dibromoethane (EDB) | ND | 10 | 102 | 96.7 | 5.47 | 101 | 70 - 130 | 20 | 70 - 130 |
| 1,2-Dichloroethane (1,2-DCA) | ND | 10 | 82.5 | 79.8 | 3.33 | 83.2 | 70 - 130 | 20 | 70 - 130 |
| 1,1-Dichloroethene | ND | 10 | 85.5 | 79 | 7.94 | 84.6 | 70 - 130 | 20 | 70 - 130 |
| Diisopropyl ether (DIPE) | ND | 10 | 96.6 | 90.6 | 6.42 | 94.7 | 70 - 130 | 20 | 70 - 130 |
| Ethyl tert-butyl ether (ETBE) | ND | 10 | 92.8 | 87.8 | 5.55 | 91.6 | 70 - 130 | 20 | 70 - 130 |
| Methyl-t-butyl ether (MTBE) | ND | 10 | 96.4 | 91.8 | 4.93 | 91.7 | 70 - 130 | 20 | 70 - 130 |
| Toluene | ND | 10 | 96.4 | 88.7 | 8.28 | 103 | 70 - 130 | 20 | 70 - 130 |
| Trichloroethene | ND | 10 | 92.5 | 83.1 | 10.7 | 103 | 70 - 130 | 20 | 70 - 130 |
| %SS1: | 106 | 25 | 106 | 105 | 0.474 | 107 | 70 - 130 | 20 | 70 - 130 |
| %SS2: | 114 | 25 | 113 | 111 | 1.86 | 113 | 70 - 130 | 20 | 70 - 130 |
| %SS3: | 94 | 2.5 | 93 | 95 | 1.73 | 95 | 70 - 130 | 20 | 70 - 130 |

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

BATCH 77407 SUMMARY

| Lab ID | Date Sampled | Date Extracted | Date Analyzed | Lab ID | Date Sampled | Date Extracted | Date Analyzed |
|---|---|---|---|---|---|---|---|
| 1305480-001B | 05/14/13 10:55 AM | 05/16/13 | 05/16/13 4:57 PM | 1305480-002B | 05/14/13 11:36 AM | 05/17/13 | 05/17/13 1:43 AM |
| 1305480-003B | 05/14/13 12:15 PM | 05/16/13 | 05/16/13 6:17 PM | | | | |

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

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

Laboratory extraction solvents such as methylene chloride and acetone may occasionally appear in the method blank at low levels.

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# QC SUMMARY REPORT FOR SW8260B

W.O. Sample Matrix: Water | QC Matrix: Water | BatchID: 77446 | WorkOrder: 1305480

**EPA Method: SW8260B** **Extraction: SW5030B** **Spiked Sample ID: 1305521-001A**

| Analyte | Sample | Spiked | MS | MSD | MS-MSD | LCS | Acceptance Criteria (%) | | |
|---|---|---|---|---|---|---|---|---|---|
| | µg/L | µg/L | % Rec. | % Rec. | % RPD | % Rec. | MS / MSD | RPD | LCS |
| tert-Amyl methyl ether (TAME) | ND | 10 | 74.9 | 80.8 | 7.21 | 95 | 70 - 130 | 20 | 70 - 130 |
| Benzene | ND | 10 | 82.9 | 87.8 | 5.79 | 99.1 | 70 - 130 | 20 | 70 - 130 |
| t-Butyl alcohol (TBA) | ND | 40 | 79 | 98.4 | 21.9, F1 | 87.1 | 70 - 130 | 20 | 70 - 130 |
| Chlorobenzene | ND | 10 | 82.1 | 87.1 | 5.98 | 97 | 70 - 130 | 20 | 70 - 130 |
| 1,2-Dibromoethane (EDB) | ND | 10 | 91.4 | 97.8 | 6.71 | 102 | 70 - 130 | 20 | 70 - 130 |
| 1,2-Dichloroethane (1,2-DCA) | ND | 10 | 91.9 | 98.7 | 7.06 | 111 | 70 - 130 | 20 | 70 - 130 |
| 1,1-Dichloroethene | ND | 10 | 75.8 | 80.1 | 5.42 | 88.2 | 70 - 130 | 20 | 70 - 130 |
| Diisopropyl ether (DIPE) | ND | 10 | 87.1 | 90.6 | 3.99 | 106 | 70 - 130 | 20 | 70 - 130 |
| Ethyl tert-butyl ether (ETBE) | ND | 10 | 86.9 | 90.4 | 3.96 | 105 | 70 - 130 | 20 | 70 - 130 |
| Methyl-t-butyl ether (MTBE) | ND | 10 | 88 | 92 | 4.52 | 104 | 70 - 130 | 20 | 70 - 130 |
| Toluene | ND | 10 | 81.4 | 84.5 | 3.65 | 97.4 | 70 - 130 | 20 | 70 - 130 |
| Trichloroethene | ND | 10 | 87 | 94.9 | 8.60 | 105 | 70 - 130 | 20 | 70 - 130 |
| %SS1: | 108 | 25 | 109 | 112 | 2.24 | 113 | 70 - 130 | 20 | 70 - 130 |
| %SS2: | 104 | 25 | 105 | 104 | 0.866 | 108 | 70 - 130 | 20 | 70 - 130 |
| %SS3: | 79 | 2.5 | 87 | 87 | 0 | 87 | 70 - 130 | 20 | 70 - 130 |

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

F1 = MS/MSD recovery was out of acceptance criteria; LCS validated the prep batch.

BATCH 77446 SUMMARY

| Lab ID | Date Sampled | Date Extracted | Date Analyzed | Lab ID | Date Sampled | Date Extracted | Date Analyzed |
|---|---|---|---|---|---|---|---|
| 1305480-004B | 05/14/13 12:45 PM | 05/18/13 | 05/18/13 1:46 AM | 1305480-005B | 05/14/13 2:30 PM | 05/21/13 | 05/21/13 1:56 AM |
| 1305480-006B | 05/14/13 4:10 PM | 05/21/13 | 05/21/13 2:35 AM | 1305480-007B | 05/14/13 3:35 PM | 05/20/13 | 05/20/13 10:03 PM |
| 1305480-008B | 05/14/13 3:00 PM | 05/20/13 | 05/20/13 10:45 PM | | | | |

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

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

Laboratory extraction solvents such as methylene chloride and acetone may occasionally appear in the method blank at low levels.

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# QC SUMMARY REPORT FOR SW8021B/8015Bm

W.O. Sample Matrix: Water | QC Matrix: Water | BatchID: 77441 | WorkOrder: 1305480

**EPA Method: SW8021B/8015Bm** **Extraction: SW5030B** **Spiked Sample ID: 1305479-002A**

| Analyte | Sample | Spiked | MS | MSD | MS-MSD | LCS | Acceptance Criteria (%) | | |
|---|---|---|---|---|---|---|---|---|---|
| | µg/L | µg/L | % Rec. | % Rec. | % RPD | % Rec. | MS / MSD | RPD | LCS |
| TPH(btex)£ | ND | 60 | 90.9 | 95.3 | 4.67 | 90 | 70 - 130 | 20 | 70 - 130 |
| MTBE | ND | 10 | 86.9 | 97.1 | 10.1 | 104 | 70 - 130 | 20 | 70 - 130 |
| Benzene | ND | 10 | 98.5 | 108 | 8.85 | 104 | 70 - 130 | 20 | 70 - 130 |
| Toluene | ND | 10 | 99.3 | 107 | 7.32 | 109 | 70 - 130 | 20 | 70 - 130 |
| Ethylbenzene | ND | 10 | 99.5 | 109 | 8.98 | 106 | 70 - 130 | 20 | 70 - 130 |
| Xylenes | ND | 30 | 102 | 110 | 7.76 | 108 | 70 - 130 | 20 | 70 - 130 |
| %SS: | 90 | 10 | 94 | 96 | 2.25 | 91 | 70 - 130 | 20 | 70 - 130 |

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

BATCH 77441 SUMMARY

| Lab ID | Date Sampled | Date Extracted | Date Analyzed | Lab ID | Date Sampled | Date Extracted | Date Analyzed |
|---|---|---|---|---|---|---|---|
| 1305480-001A | 05/14/13 10:55 AM | 05/16/13 | 05/16/13 10:31 PM | 1305480-002A | 05/14/13 11:36 AM | 05/16/13 | 05/16/13 11:01 PM |
| 1305480-003A | 05/14/13 12:15 PM | 05/16/13 | 05/16/13 11:31 PM | 1305480-004A | 05/14/13 12:45 PM | 05/17/13 | 05/17/13 12:01 AM |
| 1305480-005A | 05/14/13 2:30 PM | 05/17/13 | 05/17/13 12:31 AM | 1305480-006A | 05/14/13 4:10 PM | 05/17/13 | 05/17/13 1:01 AM |
| 1305480-007A | 05/14/13 3:35 PM | 05/17/13 | 05/17/13 1:31 AM | 1305480-008A | 05/14/13 3:00 PM | 05/17/13 | 05/17/13 11:40 PM |

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

£ TPH(btex) = sum of BTEX areas from the FID.

# cluttered chromatogram; sample peak coelutes with surrogate peak.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = matrix interference and/or analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content, or inconsistency in sample containers.

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# QC SUMMARY REPORT FOR SW8015B

W.O. Sample Matrix: Water | QC Matrix: Water | BatchID: 77375 | WorkOrder: 1305480

**EPA Method: SW8015B** **Extraction: SW3510C** **Spiked Sample ID: N/A**

| Analyte | Sample | Spiked | MS | MSD | MS-MSD | LCS | Acceptance Criteria (%) | | |
|---|---|---|---|---|---|---|---|---|---|
| | µg/L | µg/L | % Rec. | % Rec. | % RPD | % Rec. | MS / MSD | RPD | LCS |
| TPH-Diesel (C10-C23) | N/A | 1000 | N/A | N/A | N/A | 110 | N/A | N/A | 70 - 130 |
| %SS: | N/A | 625 | N/A | N/A | N/A | 93 | N/A | N/A | 70 - 130 |

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

BATCH 77375 SUMMARY

| Lab ID | Date Sampled | Date Extracted | Date Analyzed | Lab ID | Date Sampled | Date Extracted | Date Analyzed |
|---|---|---|---|---|---|---|---|
| 1305480-001A | 05/14/13 10:55 AM | 05/15/13 | 05/17/13 3:14 PM | 1305480-002A | 05/14/13 11:36 AM | 05/15/13 | 05/17/13 6:37 PM |
| 1305480-003A | 05/14/13 12:15 PM | 05/15/13 | 05/17/13 7:45 PM | 1305480-004A | 05/14/13 12:45 PM | 05/15/13 | 05/20/13 7:48 PM |
| 1305480-005A | 05/14/13 2:30 PM | 05/15/13 | 05/16/13 5:59 PM | 1305480-006A | 05/14/13 4:10 PM | 05/15/13 | 05/16/13 9:21 PM |
| 1305480-007A | 05/14/13 3:35 PM | 05/15/13 | 05/16/13 10:28 PM | 1305480-008A | 05/14/13 3:00 PM | 05/15/13 | 05/16/13 7:07 PM |

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

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CC for
_____ QA/QC Officer