SNOW CLEANERS INC.

**EXPERT FINISHING • ALL LEATHER GOODS** 

MAIN OFFICE & PLANT

38 WEST SONORA ST. STOCKTON, CA 95203



**RECEIVED** 

9:34 am, Jan 18, 2011 Alameda County

Environmental Health

208 6547-1454 17. 2010

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

SUBJECT: SEMI-ANNUAL GROUNDWATER MONITORING AND SAMPLING

REPORT CERTIFICATION ACEH Case # RO 0000357

m Tum

**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.

 Semi-Annual Groundwater Monitoring and Sampling Report (July Through December 2010, October 15, 2010 Sampling Event) dated December 17, 2010 (document 0298.R12).

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 Turner President

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

0298.L62

"SERVING THE CLEANING INDUSTRY FOR OVER 90 YEARS"

# P&D ENVIRONMENTAL, INC.

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

December 17, 2010 Report 0298.R12

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

SUBJECT: GROUNDWATER MONITORING AND SAMPLING REPORT

(JULY THROUGH DECEMBER 2010, OCTOBER 15, 2010 SAMPLING EVENT)

ACDEH Case # RO 0000357

**Snow Cleaners** 

2678 Coolidge Avenue

Oakland, CA

Dear Mr. Turner:

P&D Environmental Inc. (P&D) is pleased to present this report documenting the monitoring and sampling of four groundwater monitoring wells, designated as MW1 through MW4, near the subject site, and four groundwater extraction wells designated as DP1 through DP4, at the subject site. Wells DP1 through DP4 were installed between September 27 and 29, 2010. During the reporting period offsite wells MW1 through MW4 were monitored for depth to water on a monthly basis from July through December 2010; the onsite wells were monitored for depth to water on a monthly basis from October through December 2010; and all of the wells were sampled on October 15, 2010. 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.

The well sampling was performed in accordance with a letter from Mr. Jerry Wickham of the Alameda County Department of Environmental Health (ACDEH) dated September 24, 2009 which included the approval of recommendations set forth in P&D's August 19, 2009 Subsurface Investigation Report (document 0298.R6). The recommendations included monitoring the existing offsite groundwater monitoring wells on a monthly basis for water level fluctuations for one year and sampling the wells on a semi-annual basis for Total Petroleum Hydrocarbons (TPH) and Volatile Organic Compounds (VOCs). In addition, the well sampling for the offsite wells was performed in conjunction with the initial sampling of the newly installed dual-phase extraction wells DP1 through DP4.

### 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,

December 17, 2010 Report 0298.R12

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).

# FIELD ACTIVITIES

Since the previous monitoring and sampling event on May 21, 2010 and the last monitoring event for the previous monitoring period on June 18, 2010, P&D personnel monitored offsite wells MW1, MW2, MW3, and MW4 for depth to water on July 16, August 20, September 22, October 15, November 19, and December 17, 2010. P&D personnel also monitored onsite groundwater extraction wells DP1, DP2, DP3, and DP4 for depth to water on October 15, November 19, and December 17, 2010. The depth to water was measured 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.

On October 15, 2010 P&D personnel also monitored all of the wells for the presence of free product or sheen using a transparent bailer. No free product or sheen was observed in any of the groundwater monitoring wells.

Following the measurement of depth to water and monitoring for free product or sheen on October 15, 2010, each well was purged of a minimum of three casing volumes of water or until it was purged dry. During purging operations, the field parameters of electrical conductivity, temperature, and pH were monitored. No sheen, petroleum hydrocarbon odor, or solvent odor was detected on the purge water from any of offsite wells MW1 through MW4 with the exception of well MW2, which had observable sheen and a moderate to strong petroleum hydrocarbon odor that was described as a Stoddard solvent or mineral spirits odor. A sheen and petroleum odors were noted on the purge water from all of onsite wells DP1, DP2, DP3, and DP4, with the odor described as a Stoddard solvent or mineral spirits odor at DP1 and DP4, and as resembling shoe polish (Stoddard solvent) at DP2 and DP3). The odors were described as slight to very slight at DP4, moderate at DP2, and as moderate to strong at DP1 and DP3.

Once the field parameters were observed to stabilize during well purging and a minimum of three casing volumes had been purged, or the well was purged dry, water samples were collected from each of the wells using a clean disposable bailer. No separate phase layers of petroleum hydrocarbons with a measureable thickness were observed on the groundwater samples at the time of sampling from any of the wells, however a sheen was observed on the samples collected from wells MW2, DP1, DP2, DP3, and DP4. The water samples were transferred from the disposable bailers to 40-milliliter glass VOA vials and 1-liter amber glass bottles that were sealed with Teflon-lined screw caps. The VOA vials were overturned and tapped to assure that no air bubbles were present. The VOA vials and bottles were then transferred to a cooler with ice, pending transport to the laboratory. Chain of custody procedures were observed for all sample handling. Records of the field parameters measured during well purging are attached with this report.

# 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 is 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 there is a change in water table elevation of approximately 4.5 to 5.0 feet between wells DP2 and DP1. There is a horizontal distance of 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 is approximately 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 is located between wells DP2 and DP1.

Based on water level information available through December 17, 2010 (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 December 2010 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 through December 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.
- 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.
- Changes in water levels in wells MW2 and MW3 are similar in that the water levels in both of these wells increased at times when water levels in DP1 through DP4 decreased.
- The change in water level in well MW3 was greater than the change in water level in any other well.
- The change in water levels in wells DP2, DP3 and MW2 (located on the fine-grained material bench in the vicinity of Davis Street) was greater than in DP1 and DP4 between November 19 and 23, 2010 following more than one inch of precipitation.

# 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 8015C. 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. No analytes were detected in the groundwater samples collected from wells MW1 and MW4, with the exceptions of chloroform in MW1 at a concentration of 0.85 micrograms per liter (ug/L), and cis-1,2-dichloroethene, trans-1,2-dichloroethene, and chloroform in well MW4 at concentrations of 8.4, 0.84,

and 1.3 ug/L, respectively. In well MW2, TPH-G, TPH-SS, TPH-D, and TPH-BO, were detected at concentrations of 3,600, 3,900, 25,000, 22,000 ug/L, respectively. Review of the laboratory report shows that the laboratory observed sheen on the sample collected from MW2, and the TPH-G and TPH-SS results are both described as Stoddard solvent/mineral spirit-range compounds. The TPH-D and TPH-BO results are both described as Stoddard solvent/mineral spirit-range compounds, diesel-range compounds with no recognizable pattern, and oil-range compounds. Additionally, in well MW2 cis-1,2-dichloroethene, vinyl chloride, and 1,2,4-trimethylbenzene were detected at concentrations of 1,500, 160, and 100 ug/L, respectively.

In the samples collected from extraction wells DP1, DP2, DP3, and DP4 TPH-G was detected at concentrations of 10,000, 4,800, 5,700, and 1,800 ug/L, respectively; TPH-SS was detected at concentrations of 5,100, 2,900, 8,000, and 1,500 ug/L, respectively; TPH-D was detected at concentrations of 9,000, 3,900, 10,000, and 1,200 ug/L, respectively; and TPH-BO was detected at concentrations of 9,800, 2,900, 9,800, and 920 ug/L, respectively. Review of the laboratory report shows that the laboratory observed sheen on the sample collected from well DP1, and that the TPH-G and TPH-SS results are both described as Stoddard solvent/mineral spirit-range compounds for the samples collected from all four extraction wells. The laboratory report describes both the TPH-D and TPH-BO results as consisting of both Stoddard solvent/mineral spirit-range compounds and oil-range compounds for the groundwater sample collected from well DP1; as consisting of both Stoddard solvent/mineral spirit-range compounds and diesel-range compounds with no recognizable pattern for the samples collected from wells DP2 and DP4; and as consisting of Stoddard solvent/mineral spirit-range compounds, oil-range compounds, and diesel-range compounds with no recognizable pattern for the sample collected from well DP3.

The only additional analytes detected in the samples collected from wells DP1 and DP2 were cis-1,2-dichloroethene detected in both samples at concentrations of 17,000 and 22,000 ug/L, respectively, and vinyl chloride in the sample from well DP1 at a concentration of 2,600 ug/L. In well DP3 cis-1,2-dichloroethene, trans-1,2,-dichloroethene, and vinyl chloride were detected at concentrations of 44, 4.5, and 28 ug/L, respectively; toluene, ethylbenzene, total xylenes and naphthalene were detected at concentrations of 2.7, 4.0, 23, and 7.5 ug/L, respectively; and six other VOCs associated with petroleum hydrocarbons were detected in the groundwater sample collected from well DP3 at concentrations ranging from 4.4 to 69 ug/L. Tetrachloroethene (PCE), trichloroethene (TCE), cis-1,2-dichloroethene, trans-1,2-dichloroethene, and vinyl chloride were detected in the groundwater sample collected from well DP4 at concentrations of 22, 40, 80, 33, and 2.9 ug/L, respectively. Two other VOCs associated with petroleum hydrocarbons were detected in the groundwater sample collected from well DP4 at concentrations of 3.8 and 4.5 ug/L.

# DISCUSSION AND RECOMMENDATIONS

Sheen and petroleum hydrocarbon odor were encountered in the sample water for all of the new wells (DP1 through DP4) and for previously existing well MW2. Based on water level measurements in all of the wells, water level elevations in wells DP1 and DP4 are approximately 4.5 to 5.0 feet below the water level elevations in nearby wells DP2, DP3 and MW2. 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 wells DP1 and DP4. 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). Based on water quality data obtained during the October 15, 2010 sampling event (see Table 2), the following observations are made regarding the extent of petroleum and HVOCs in groundwater.

- The horizontal extent of petroleum in groundwater has not changed from previous interpretations with the exception of the vicinity of the area to the north of DP4, where the extent of petroleum in groundwater is presently not defined.
- PCE and TCE concentrations exceeding the May 2008 Table A RWQCB ESL were detected in DP4, indicating that PCE and TCE groundwater concentrations extend northward towards 2682 Coolidge Avenue and are presently not defined to the north.
- Cis-1,2-DCE concentrations exceeding 10,000 ug/L were encountered at DP1 and DP2, and concentrations exceeding 1,000 ug/L were encountered at MW2. These areas of cis-1,2-DCE concentrations exceeding 1,000 ug/L are identified as two separate areas of elevated cis-1,2-DCE concentrations. Concentrations of cis-1,2-DCE exceeding the May 2008 Table A RWQCB groundwater ESL were detected in all of the wells except for MW1 and MW3. Cis-1,2-DCE concentrations have also increased in wells MW2 and MW4 since the previous sampling event. The cis-1,2-DCE concentrations in DP4 indicate that cis-1,2-DCE groundwater concentrations exceeding the Table A groundwater ESL extend northward towards 2682 Coolidge Avenue and are presently not defined to the north.
- Vinyl chloride concentrations of 2,600 and 160 ug/L were encountered at DP1 and MW2, respectively. These two areas of vinyl chloride exceeding 100 ug/L are identified as two separate areas of elevated vinyl chloride concentrations. In addition to locations DP1 and MW2, concentrations of vinyl chloride exceeding the May 2008 Table A RWQCB groundwater ESL were also detected at locations DP3 and DP4 at concentrations of 28 and 2.9 ug/L, respectively. The vinyl chloride concentration in well MW2 has increased since the previous sampling event. The vinyl chloride concentration in DP4 indicates that vinyl chloride groundwater concentrations exceeding the Table A groundwater ESL extend northward towards 2682 Coolidge Avenue and are presently not defined to the north.

Based on the differences in water levels in wells DP1 and DP4 when compared with DP2, DP3 and MW2, P&D recommends that the monthly monitoring of all of the wells be continued. Based on the groundwater sample results, P&D recommends that the new wells DP1 through DP4 be sampled on a quarterly basis and that wells MW1, MW3 and MW4 continue to be sampled on a semi-annual basis.

# **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

December 17, 2010 Report 0298.R12

# **LIMITATIONS**

This report was prepared solely for the use of Snow Cleaners. 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.

December 17, 2010 Report 0298.R12

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: 12/31/11



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 December 2010

PAUL H. KING No. 5901

E OF CALIFO

Figure 4 – Graph of Water Levels in Site Groundwater Monitoring Network Wells for October Through December 2010

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

PHK/sjc 0298.R12

# **TABLES**

Well No	<u>Date</u>	Top Of Casing Elevation (ft)**	Depth To Water (ft)	Water Table Elevation (ft)	Change in Water Table Elevation
MWI	10/15/2010 9/22/2010 9/22/2010 7/16/2010 6/18/2010 5/21/2010 4/16/2010 3/19/2010 2/19/2010 12/1/2009 11/30/2009 9/24/2009 9/24/2009 9/26/2008 9/18/2008 2/20/2003 1/18/2003	132.78	23.92 23.50 22.87 22.01 21.06 20.26 19.24 19.07 20.56 21.08 23.36 23.42 car parked on well 23.10 23.80 23.00 23.00 23.00 23.02 20.65 20.06	108.86 109.28 109.91 110.77 111.72 112.52 113.54 113.71 112.22 111.70 109.42 109.36 could not measure 109.68 109.38 109.90 109.78 109.76 112.13 112.72	0.42 -0.63 -0.86 -0.95 -0.80 -1.02 -0.17 -1.49 -0.52 -2.28 -0.06 -0.32 -0.32 -0.52 -0.12 -0.02 -2.37 -0.59
MW2	10/15/2010 9/22/2010 8/20/2010 7/16/2010 6/18/2010 5/21/2010 4/16/2010 3/19/2010 2/19/2010 12/1/2009 11/30/2009 11/25/2009 9/24/2009 8/20/2009 9/18/2008 2/20/2003 1/18/2003	133.59	18.06 17.72 17.735 16.75 15.41 14.04 11.79 11.49 13.40 12.75 18.46 car parked on well car parked on well r7.46 18.83 18.46 18.50 13.09 11.55*	115.53 115.87 116.24 116.84 118.18 119.55 121.80 122.10 120.19 120.84 115.13 could not measure 116.13 114.76 115.13 115.09 120.50	-0.34 -0.37 -0.60 -1.34 -1.37 -2.25 -0.30 -1.91 -0.65 5.71 -1.00 
MW3	10/15/2010 9/22/2010 8/20/2010 7/16/2010 7/16/2010 6/18/2010 5/21/2010 4/16/2010 3/19/2010 2/19/2010 12/19/2010 12/1/2009 11/30/2009 9/24/2009 9/24/2009 8/20/2009 9/26/2008 9/18/2008 9/15/2008 9/15/2008 9/15/2008	136.35	22.97 22.55 21.62 20.37 19.32 18.73 17.39 16.95 17.76 21.14 21.02 19.95 21.67 21.08 20.91 23.69 28.06 33.31 26.80	113.38 113.80 114.73 115.98 117.03 117.62 118.96 119.40 118.39 118.64 115.19 115.21 115.33 116.40 114.68 115.27 115.44 112.66 108.29 103.04 109.55	-0.42 -0.93 -1.25 -1.05 -0.59 -1.34 -0.44 -1.01 -0.25 -3.45 -0.02 -0.12 -1.07 1.72 -0.59 -0.17 -2.78 4.37 5.25 -6.51
MW4	10/15/2010 9/22/2010 8/20/2010 8/20/2010 8/20/2010 6/18/2010 6/18/2010 5/21/2010 4/16/2010 3/19/2010 1/27/2010 1/27/2010 1/27/2009 11/30/2009 11/25/2009 9/24/2009 9/24/2009 9/26/2008 9/18/2008 9/18/2008 9/18/2008 9/15/2008	134.09	25.86 25.47 24.85 24.03 23.11 22.33 21.36 21.18 22.59 23.11 25.31 25.37 25.26 25.06 25.77 24.86 25.00 25.00 25.00 25.00 25.02 25.11 25.33	108.23 108.62 109.24 110.06 110.98 111.76 112.73 112.91 111.50 110.98 108.78 108.72 108.83 109.03 108.72 109.03 108.72 109.03 108.72 109.03	-0.39 -0.62 -0.82 -0.92 -0.78 -0.97 -0.18 1.41 0.52 2.20 0.06 -0.11 -0.20 0.31 -0.51 0.14 0.00 0.02 0.09 -0.09
DPI	10/15/2010 10/5/2010* 9/28/2010*	136.39	25.68 25.42 25.75	110.71 110.97 110.64	-0.26 0.33
DP2	10/15/2010 10/5/2010* 9/28/2010*	135.77	21.11 20.96 19.57	114.66 114.81 116.20	-0.15 -1.39
DP3	10/15/2010 10/5/2010* 9/28/2010*	134.51	19.29 19.14 19.42	115.22 115.37 115.09	-0.15 0.28
DP4	10/15/2010 10/5/2010* 9/28/2010*	136.77	25.40 25.03 25.82	111.37 111.74 110.95	-0.37 0.79

<sup>\* =</sup> 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.

Well Number	Sample Date	TPH-G	TPH-SS	TPH-D	TPH-MO	TPH-BO	VOCs by 8260B
MW1	10/15/2010	ND<50	ND<50	ND<50	NA	ND<99	ND, except: Chloroform=0.85
	5/21/2010 12/1/2009	ND<50	ND<50	ND<50	NA NA	ND<100	ND, except: Chloroform=0.80
	9/18/2008	ND<50 ND<50	ND<50 ND<50	ND<50 ND<50	NA	ND<100 ND<100	ND, except: Chloroform=0.71 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:
	2/20/2005		110.00		112 (250		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 7/29/1994	ND, a ND<50	NA NA	NA NA	NA NA	NA NA	** ND ** ND
	5/31/1994	ND<50	NA	NA	NA	NA	** ND
	1/24/1994	ND<50	NA	ND	NA	NA	** ND
MW2	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= <b>1,700</b> , Vinyl Chloride = <b>180</b> , 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= <b>1,800</b> , Vinyl Chloride = <b>73</b> , 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, с	500,000	280,000 , b,d, f	ND<50,000	NA	*ND, except: cis-1,2-dichloroethene = <b>3,300</b>
	2/20/2003	76,000, b,c	75,000	370,000, b,d,f	37,000	NA 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
	12/22/1994	-		-			ND, except: +Benzene = 21, +Toluene = 170, +Ethylbenzene = 18, +Xylenes = 180, +cis-1,2-Dichloroethene = 1,100, +trans-1,2-Dichloroethene = 15, +1,1-Dichloroethene = 28, +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

# SUMMARY OF GROUNDWATER SAMPLE RESULTS

Well Number	Sample Date	TPH-G	TPH-SS	TPH-D	TPH-MO	TPH-BO	VOCs by 8260B
MW2	7/29/1994	21,000, b, c	NA	NA	NA	NA NA	**Benzene = 21,
Continued							**Toluene = 150, **Ethylbenzene = 53, **Xylenes = 150
	5/31/1994	6,400, c	NA	NA	NA	NA	**Benzene = 15, **Toluene = 100, **Eithylbenzene = 43, **Xylenes = 220
	1/28/1994	2,800, c	NA	12,000, d	NA	NA	ND, except: ***Xylenes = 43
	1/19/1994++	3,400, с	NA	20,000	NA	NA	**Benzene = 15, **Toluene = 180, **Ethylbenzene = 39, **Xylenes = 200
MW3	10/15/2010 5/21/2010 12/1/2009 9/18/2008	ND<50 ND<50 ND<50 ND<50 ND<50	ND<50 ND<50 ND<50 ND<50	ND<50 ND<50 63, e ND<50	NA NA NA NA	ND<100 ND<100 <b>120</b> , e ND<100	ND ND ND ND, except: Bromoform = 0.57, Chloroform = 1.3
MW4	10/15/2010	ND<50	ND<50	ND<50	NA	ND<100	ND, except: Cis-1,2-dichloroethene = <b>8.4</b> , 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 = <b>8.7</b> , 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	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	10/15/2010	4,800, a,g	2,900, a,g	3,900, h,i	NA	2,900, h,i	ND, except: Cis-1,2-dichloroethene = <b>22,000</b> ,
DP3	10/15/2010	5,700, g	8,000, g	10,000, h,i,j	NA	9,800, h.i.j	ND, except: Toluene = 2.7, Ethylbenzene = 4.0, Xylenes = 23, cis-1,2-Dichloroethene = 44, trans-1,2-Dichloroethene = 44, trans-1,2-Dichloroethene = 4.5, Vinyl Chloride = 28, Naphthalene = 7.5, n-Buryl benzene = 4.4, 1,2.4-Trimethylbenzene = 69, 1,3.5-Trimethylbenzene = 60, Sopropylbenzene = 7.2, n-Propyl benzene = 10,
DP4	10/15/2010	1,800, g,k	1,500, g,k	1,200, h,i	NA	920, h,i	ND, except: Tetrachloroethene = 22, Trichloroethene = 40, cis-1,2-Dichloroethene = 80, trans-1,2-Dichloroethene = 33, Vinyl Chloride = 2.9, tert-Butyl benzene = 3.8, 4-Isopropyl toluene = 4.5
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-Dichloroethene = 10, 1,1-Dichloroethene = 12, Vinyl Chloride = 0.5, Naphthalene = 17, Chloroform = 70, Bromoform = 70, Bromoform = 100, Acetone = 6.300, n-Butyl benzene = None, 1,2,4-Trimethylbenzene = None, 1,3,5-Trimethylbenzene = None, seo-Butyl benzene = None, lsopropylbenzene = None, tert-Butyl benzene = None, tert-Butyl benzene = None, tert-Butyl benzene = None,

Report 0298.R12 TABLE 2

### SUMMARY OF GROUNDWATER SAMPLE RESULTS

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 Diesel

TPH-MO = Total Petroleum Hydrocarbons as Motor Oil

TPH-BO = 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: ilighter than water immiscible sheen/product present.

b = Laboratory Note: ilighter 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 gasoline consist of Stoddard Solvent/mineral spirit.

e = results reported as diesel consist of oil range compounds,

g = Laboratory Note: results reported as gasoline and Stoddard Solvent/mineral spirit.

b = Laboratory Note: results reported as gasoline and Stoddard solvent consist of Stoddard Solvent/mineral spirit.

b = 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 diesel range compounds, no recognizable pattern.

j = Laboratory Note: results reported as diesel and bunker oil consist of diesel range compounds, no recognizable pattern.

s = MW2 VOC detection limita are all increased because of a sample dilution factor of 500.

\*\*\* = Amalysis by EPA Method 8020.

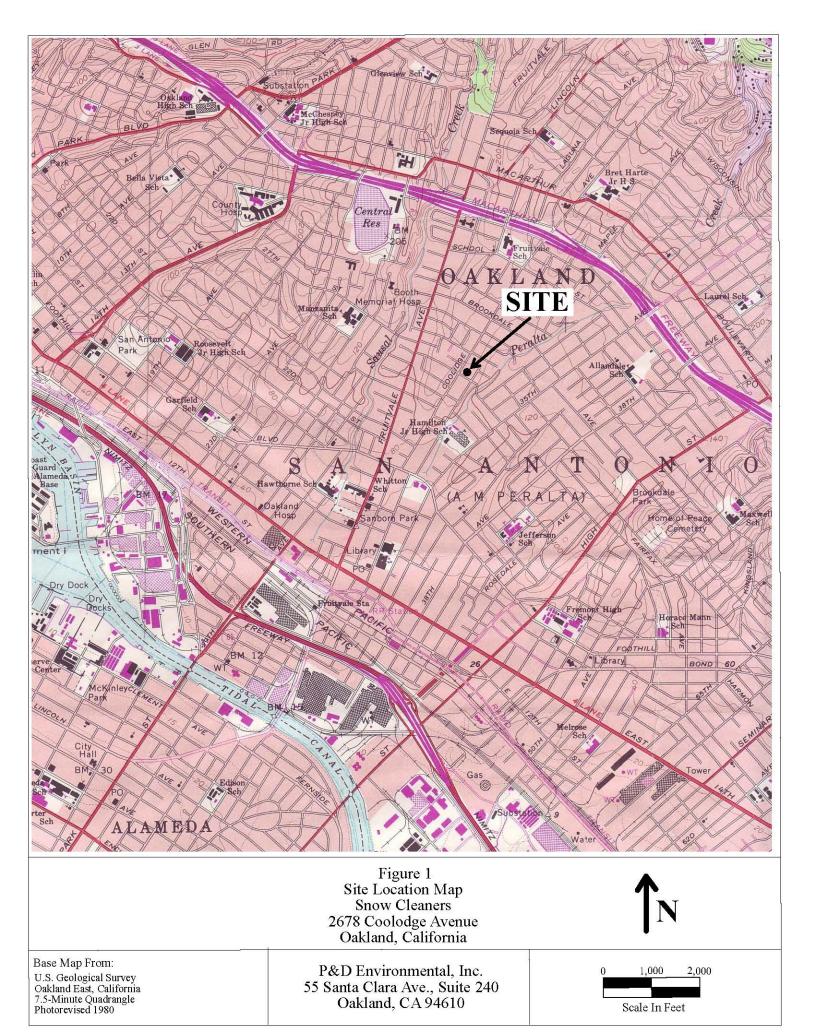
++ = Samples subcontracted to different lab for VOC analysisby EPA Method 8260.

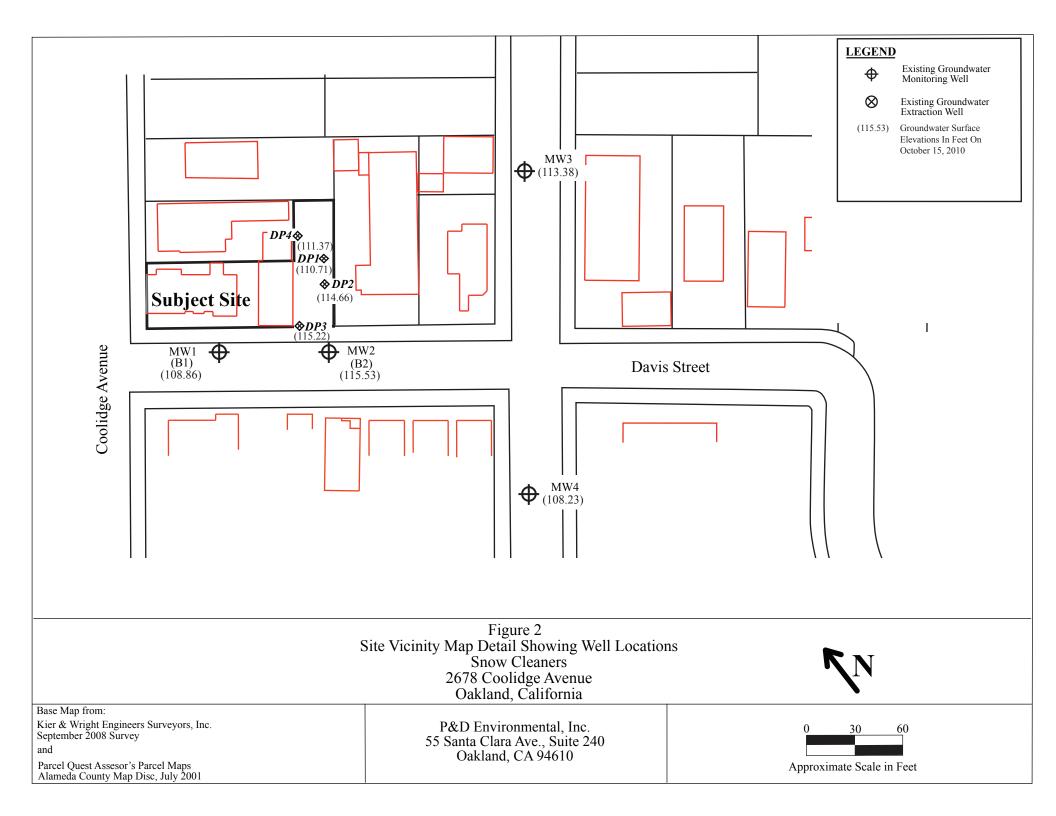
++ = Samples subcontracted to different lab for VOC analysisby EPA Method 8260.

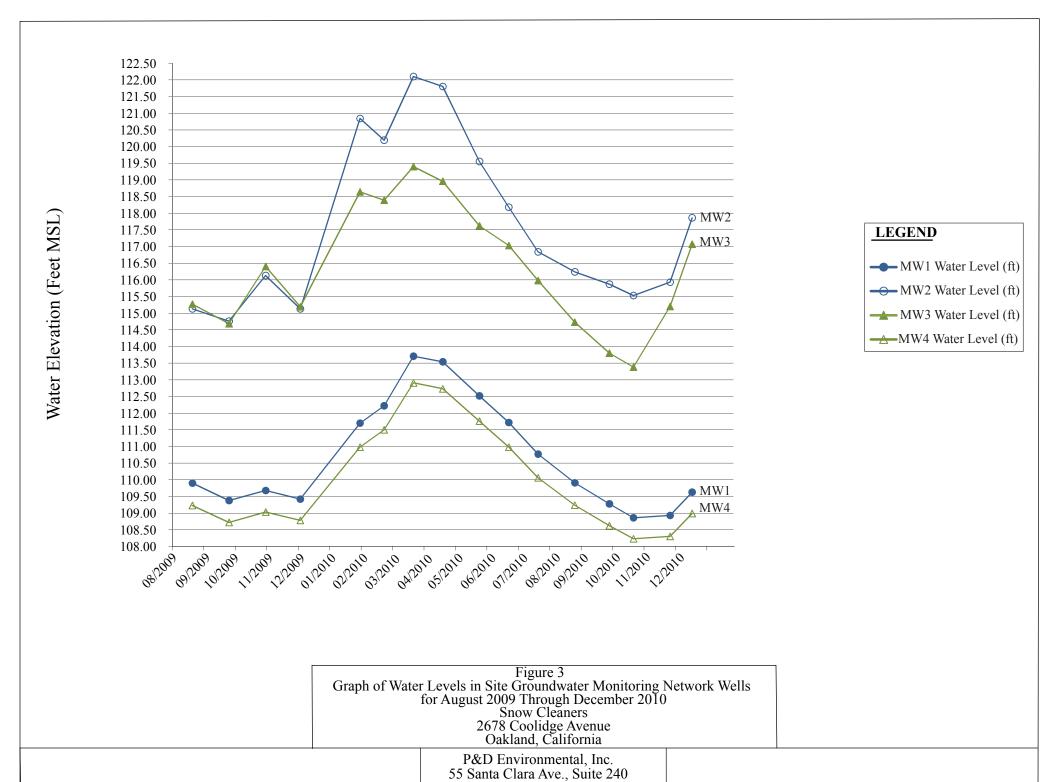
++ Samples subcontracted to different lab for VOC analysisby EPA Method 8260.

\*\*\* = Samples subcontracted to different lab for VOC analysisby EPA Method 8260.

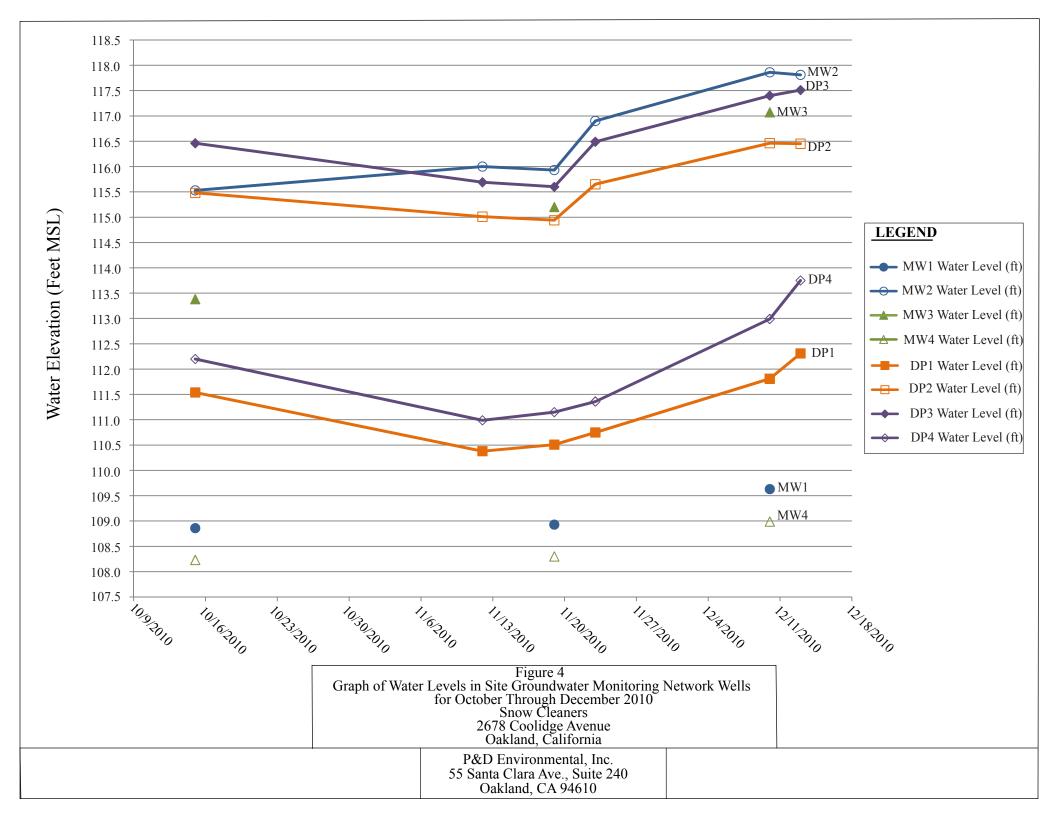
# **FIGURES**







Oakland, CA 94610



# GROUNDWATER MONITORING/WELL PURGING DATA SHEETS

## P&D ENVIRONMENTAL GROUNDWATER MONITORING/WELL PURGING DATA SHERT

	- al	DATA	SHEET	
Site Name	Snow Clean	ers	Well No	MW-1
Job No	0298	~	Date 10	115/10
TOC to Wate		2	Sheen $\bigwedge$	10
Well Depth	(ft.) 44.5		Pree Prod	uct Thickness Ø
Well Diamet	er 2" (0.16	)	Sample Co	llection Method
Gal./Casing	***************************************		Dispo	sable bailer
mr.un	3vol = 9	•	٥٥	BLECTRICAL Miles
TIME	GAL. PURGED	SICT, 6.79	D.6	CONDUCTIVITY / 5/2
1140	2.2	51 616 1 6 V	12 19.7	726
1143	3.3	50-61-5.95	19.5	724
1145	4.4	5,86	19,4	718
1148	5.5	5.74	19.4	711
1150	6.6	5,69	19.4	694
1157	7.7	5,66	19.3	673
1154	8.8	5.66	19.4	652
1156	9.9	5,66	19.4	636
				the Manday Mile Call Call of the Tab Tab Call of the C
		**************************************		
	APPARENT NEWSCOOL STATE OF THE			description of the second
-				
		1		• The first term or an extensive or a portion to the consequence of
NOTES:	Nochion	1 + No nde	) C :	
	, Johnson	· - 110 E)/VC	Savilitime=	1215
			ONLY TIME	1017

4

# P&D ENVIRONMENTAL GROUNDWATER MONITORING/WELL PURGING

	(	Data shi				
Site Name _	Snow Cleaners	-	Well :	NO/	1W-2	
Job No		_		10/15		
TOC to Wate	er (ft.) 18,06	***	Sheen	V	٥ {	
Well Depth	~ · /	•	Pree I	Product	Thickness	Ø
Well Diamet	er 4"(0.646)	)	Sample	. Colle	ction Method	
Gal./Casing	vol. Y.3		[	Pisposo	He bailer	
	3401=12.9		···· · · · · · · · · · · · · · · · · ·	Of	BLECTRICAL	Mika
TIME	GAL. PURGED	ĎĤ	TEMPERATURE		CONDUCTIVITY	$J^{\omega_{JCJ}}$
19.97	1.4	5.75	21-2	-	710	<del></del>
1227	2.9	5.70	20.6	-	<u>699</u>	
1231	4.3	5,63	20,4	_	697	
1233	5.7	5.62	20.4	-	701	
1735	7. a	5.62	20,4	•	703	<del></del>
1237	8.6	5,61	20.4	_	707	_
1239	10.0	5.59	20.3	•	704	<del></del> -
1241		5, 37 5.57		•	702	
1244	129	5,57	20,3	-	702	
19-11	17.1	3137	#01)	•	100	
				•		
<del></del>				• .		
<del></del>						
	***					<del></del>
					<u></u>	
			<u> </u>			
						<b></b>
	==					
NOTES:	To Stro	Sig col	·	- '		<del></del>
	sheen + modATh	H-JJ/MINEral	Spints odo	/ •		
	Sheen + Mod ATP		Sample	fine =	21255	
			, <i>b</i>	,		

PURGE10.92

NOTES:

 $\Lambda I = 2$ 

LLIGH SELAN



# P&D ENVIRONMENTAL GROUNDWATER MONITORING/WELL PURGING DATA SHEET

	- 1	DAIA	1000	
Site Name	Snow Cleaner	<u>s</u>	Well No	
Job No	0298		Date 10/1.	5/10
TOC to Wate	er (ft.) 22.97		Sheen/	lo
	(ft.) 35.4		Pree Produ	ct Thickness
Well Diamet	cer_ 2" (0.11	<u>, )                                     </u>	Sample Col	lection Method 5,
Gal./Casing	yo1. 2.0		Dispo	suble bailer
	3 vol = 6	.0	00	BLECTRICAL CONDUCTIVITY FUSICA
TIME	GAL. PURGED	<b>)</b> ( ) ( ) ( )	TEMPERATURE	CONDUCTIVITY POSICA
1317	0.6	<u>6.77</u>	20.9	-737
1316	1.3	6.19	17,9	<del>-730</del>
1318	<u> </u>	5.96	19.2	472
1330	2.6	5.77	19.2	473
1339	3.3	5.98	19.2	523
1334	4.0	6.00	19.2	558
1326	4.6	6.05	19.1	575
1329	5.3	6.08	18.9	568
1332	-6.0 S/C WE	Il <u>devatered</u>	@ ~5,69x/120	
		\		
<del></del>		**************************************	Constitution of the Consti	· · · · · · · · · · · · · · · · · · ·
-				
		·		
	A	4	TPHON Solvent	
NOTES:	<u> </u>	o Sheln & n	order (hight-no angle time =) 1	d Sultaroder)
		<u> </u>	ample time => 1	340hm

PURGE10.92

# P&D ENVIRONMENTAL GROUNDWATER MONITORING/WELL PURGING

		DATA SH		
Site Name _	Snow Cleaner	5		MW-4
Job No	0.398		Date	5/12
TOC to Water	r (ft.) 25.86		Sheen	)
Well Depth	(ft.) <u>37.7</u>		Free Produ	ct Thickness 8
Well Diamete	er 2" (0.16	<u>)</u>		lection Method
Gal./Casing			Visp	scaple kailer
MT149	34-1-5	·	TEMPERATURE OC	ELECTRICAL CONDUCTIVITY MICH
TIME 14 Ol	GAL. PURGED O. 7	6.66	20,8	495
1403	1.3	51-6-46,23	19.9	500
1405	1.9	5.83	19.5	519
1407	2.6	5.81	19.5	528
1409	3.2	5.78	19.3	5.35
1410	3.8	5.79	19.3	5 38
1912	7.5	5.79	19,2	5 36
1413	5-1	5,77	19,2	5 38
1415	5.7	5.76	19,4	577
		<u> </u>		
				**************************************
			<del></del>	
		<del>Colored to B. 10</del>		· · · · · · · · · · · · · · · · · · ·
· · · · · · · · · · · · · · · · · · ·			**************************************	
		<del></del>		
		<del></del>		
NOTES:		. 1		
		Vo Sheen.	+no odor Sample time	
			Sample time	≥ 1425

(2)

P&D ENVIRONMENTAL
GROUNDWATER MONITORING/WELL PURGING

		DATA	SHEET	316
Site Name	Snow Clean	<u>e75'</u>	Well No	0798 DP1
Job No	0298		Date_ 10/	15/10
TOC to Wate	er (ft.) 25 68	7		yes
	(ft.) 37.0		Pree Produ	oct Thickness
Well Diames	ter4"(0.64	<u>(6)</u>	Sample Col	lection Method
Gal./Casing	y vol. 714		Disp	usable bailer
	3001=7	7.3	۲ ک	BLECTRICAL 4.6/
TIME	GAL PURGED	DH C. C. (	TEMPERATURE C	CONDUCTIVITY MS/CA
1550	7.5	5.91	19.4	585
1553	4.9	5,82	18.9	605
1557	7.4	5.78	18.5	599
1600	9,4	5.73	18.5	578
1603	12.3	5,69	18.5	552
1607	:4 6	5.69	18.5	529
			10.5	277
1611	17.3	5,69	18,4	<u> </u>
1615	19.7	5.67	18.3	511
1621	73.7	5.70	18.3	528
				<u> </u>
<del></del>				
······································				
	***************************************			
		-		**************************************
		<del></del>		
		<del></del>		
			,	
NOTES: / 5	story			
<u></u>	-Mod TPH-SS/A		or Asheen.	
		Sand	ctime => 1630	

3

# P&D ENVIRONMENTAL GROUNDWATER MONITORING/WELL PURGING

		DATA S	HEBT	0.0	
	Snow Cleane	en	Well No	p.P.2	
Job No	0798	<del></del>	Date_10/	15/10	
	r (ft.) 31-11		Sheen Y	ies	
	(ft.) <u>25.0</u>		Pree Prod	uct Thickness	<u>Ø</u>
Well Diamet	er4"(0.64	(6)		llection Method_	<del> </del>
Gal./Casing	vo1. 2.6		Vispo	sable bailer	
TIME	300=7		TEMPERATURE	ELECTRICAL CONDUCTIVITY	us/ca
1640	GAL. PURGED	型 5.76	19,5	704	
1642	1.7	5. <b>8</b> 3	19, 1	736	<del>-</del>
1644	2.6	5.89	18,9	768	1
1647	2.4	5.83	18.8	724	
1649	4. 2	5,83	18.8	711	WCH
1654	5.2	5.82	18.8	664	- deveiter.
1656	6.0	465.85.74	18.8	659	
1700	6.9	5.80	18,7	654	-
1703	7.8	5.80	18.7	647	<del>-</del>
<del></del>					<del>-</del>
					<b>-</b>
					_
					_
					_
					_
					_
					_
		<del></del>		•	_
		100000000000000000000000000000000000000		***	<u></u>
NOTES:	nod phi odi-	( like short	ccisic )	Ci	
	The production	- THE SO WALK	Metime = 17	Sheen.	<del></del>
		<u> </u>	Mrs 11 Me 7 17	(U	

# P&D ENVIRONMENTAL GROUNDWATER MONITORING/WELL PURGING DATA SHEET



	<i>-</i> :	DAIN 3	1681	$\sim 0.3$	
Site Name	Snow Cleaners	<del></del>	Well No	DES	
Job No	6298		Date 10/1	5/10	
TOC to Wate	er (ft.) 19.29		Sheen <u>VC</u>	ſ	
	(ft.) 27.0'		Free Produc	ct Thickness $\underline{\mathscr{O}}$	
	cer 4"(0.646)		Sample Col	lection Method	<del></del>
	vol. 5.0	77.46		vakle bailer	
	3 V-1=15	.6	ى د	BLECTRICAL	ula Sla m
TIME	GAL. PURGED	5.78	TEMPERATURE	ELECTRICAL CONDUCTIVITY	projen
1730	1.6		19,8	753	
1733	3.3	5.78	19.7	774	
1735	5.0	5,79	19.6	790	
1737	6,6	5.79	<u>19, 5</u>	793	•
1739	8.3	5.29	19.5	787	
1741	10.0	5.80	19.5	776	
1744	11.6	5,80	19.4	769	
1746	13.3	5.80	19.4	755	•
1749	15.0	5.80	19.4	737	•
(/		9,00			•
					•
					•
4					•
- miles of the second					,
	**************************************	en e			•
					•
<del> </del>					•
				·	
		•		1-27-2	
NOTES:	Sheent modaph	s de Cl	ka chamidi		
	meeto manph	C 94.7 CM	1800	. 3	<b></b>
		Jangle T	715 (800		_
DIIRGELO 93		<i>IJ</i>			

PURGE10.92



# P&D ENVIRONMENTAL GROUNDWATER MONITORING/WELL PURGING DATA SHEET

	C (1	Data C	711461	ย D ป
	Jnow Cleaner	<u>)</u>	Well No	Vral
Job No	0258	_	Date 10/1	5/10
TOC to Wate	er (ft.) 25.40	<u> </u>	Sheen <u>y</u> a	25
	(ft.) 38,0	-	Pree Produ	ct Thickness
	er 4" (0.641	<u>.</u> )		lection Method
Gal./Casino	yo1. 8.2	<del></del>	Dispo	sable bailer
•	34-1=24.6	<del>-</del>	٥٢	
TIME	GAL PURGED	DH (	TEMPERATURE	CONDUCTIVITY MY KEN
1947	2.8	6,09	20,5	903
1452	_5.5	5.62	18,8	408
1456	8,2	5.62	18.5	412
1500	11.0	5.65	_ 18.4	411
1504	13.7	5.71	18.3	409
1507	16.4	5.71	18,3	407
1511	19.2	5.72	18.3	409
1514	20.4	5.76	18.3	411
1521	24.6	5.79	18.3	413
120		<u> </u>		
				<del></del>
**************************************		<del></del>		
- · · · · · · · · · · · · · · · · · · ·				<u></u>
<del></del>				
NOTES:	<u> </u>	1	1 1 0 000	
	Theen +	very light-	light phe (SS) od	0/,
			Soryle to	ne 2/530hrs

# LABORATORY REPORTS AND CHAIN OF CUSTODY DOCUMENTATION

# McCampbell Analytical, Inc.

1534 Willow Pass Road, Pittsburg, CA 94565-1701
Web: www.mccampbell.com E-mail: main@mccampbell.com
Telephone: 877-252-9262 Fax: 925-252-9269

P & D Environmental	Client Project ID: #0298; Snow Cleaners, Oakland	Date Sampled: 10/15/10
55 Santa Clara, Ste.240		Date Received: 10/18/10
50 Sama Sama, 510.2.10	Client Contact: Steve Carmack	Date Reported: 10/26/10
Oakland, CA 94610	Client P.O.:	Date Completed: 10/26/10

WorkOrder: 1010485

October 26, 2010

1	Door	Steve:
ı	Dear	oueve:

### Enclosed within are:

- 1) The results of the 4 analyzed samples from your project: #0298; Snow Cleaners, Oakland,
- 2) A QC report for the above samples,
- 3) A copy of the chain of custody, and
- 4) An invoice for analytical services.

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.

# P & D ENVIRONMENTAL, INC.

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

# 1010485 CHAIN OF CUSTODY RECORD PAGE L OF L

	(314) 639-0310		10-12-12-1	THE RESERVE		And in case of the last of the					-	E	100	and the same of the same of	Name and Address of the Owner, where	
	PROJECT NUMBER:			PROJECT						0		//	7	77	/	/
	.0298			3	Snow	J Clean Oakl	ers			56.55		/	//	///	/ /	/
						Oakl	and		AWAL YSIS/C-		1/	//	/	//	3/	
	STEVE CAM		SIGNA	TURE)	1			NUMBER OF CONTAINERS	WALTS	The state of the s	00	//	//	PRESCRALL	181	REMARKS
	SAMPLE NUMBER	DATE	TIME	TYPE		SAMPLE LO	CATION	NUMB	P		Bel	/	/	PRE		
X	MW-1	10/15/10	1215	Hao				7	X	)				ICE	Noral	Turnand
1	MW-2 MW-3	-	1340	1	-			7	X	-				-	-	
	MW - 4	V	1425	1				5	×		1			1		
			117						Î		1					
ı											I					
ı				-					Н	-	+					
1		/	10		-				Н	+	+	$\vdash$				
I		ICE/E_	ONIDITIO	-	-	PROPRIATE										
1		HEAD S	ACE AB	ENT_1	_ cc	ONTAINERS_	A.B.									
ŀ		PRESER	VALION	VQAS	0&G   N	METALS OTHER					1					
ŀ										1	+	$\vdash$	-			
1									H	+	+	H	-			
1									0		+	H				
	RELINQUISHED BY:	SICHATURE	:)	DATE 19/18/10	TIME	RECEIVED E	Y: (SIGNATURE)	R	TOTAL	MO. O	F SAMP PHENT) F CONTU	SION	4		Cample	ell Analytica
F	RELINQUISHED BY: (	SIGNATURE	)	DATE	TIME	RECEIVED	Y (SIGNATURE)	2			TORY	CON	TACT	E LABO	PRATORY I	PHONE NUMBER:
1	RETINQUISHED BY: (	SIGNATURE	19	BATE	1900	DECEMENT	OR LABORATORY	DV.	A	nge			1195		QUEST SI	1-9262
		- June 10 ME	/		1 marc	(SIGNATURE		61:		1					ON(X)	ILL I
	Results and billing to P&D Environmental, lab@pdenviro.com	o: Inc.				RFMARKS:	All &	soHle.	7	pro	Sep	*Jaga	14	H	4	

# McCampbell Analytical, Inc.

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

# CHAIN-OF-CUSTODY RECORD

ClientCode: PDEO

WorkOrder: 1010485

Page 1 of 1

Prepared by: Maria Venegas

		WaterTrax	WriteOn	EDF		Excel		Fax	5	✓ Email		HardC	ору	Thir	dParty	☐ J-f	lag
Report to: Steve Carman P & D Environ 55 Santa Cla Oakland, CA (510) 658-69	onmental ara, Ste.240 A 94610	cc: PO:	ab@pdenvird 0298; Snow	o.com Cleaners, Oaklar	nd		P 8 55	& D Env Santa	Payable vironme Clara, S CA 946	ntal Ste.240			Date	e Rece	ived:	5 c 10/18/2 10/18/2	
									Rea	uested	Tests	(See lege	nd be	elow)			
Lab ID	Client ID		Matrix	<b>Collection Date</b>	Hold	1	2	3	4	5	6	7	8	9	10	11	12
1010485-001	MW-1		Water	10/15/2010 12:15		В	Α	Α									
1010485-002	MW-2		Water	10/15/2010 12:55		В	Α	Α									
1010485-003	MW-3		Water	10/15/2010 13:40		В	Α	Α									
1010485-004	MW-4		Water	10/15/2010 14:25		В	Α	Α									
Test Legend:																	
1 8260	0B_W 2	G-MBTEX	_ <b>W</b>	3	TPH_	W		4						5			
6	7			8				9					1	0			
11	12	-											_				

### **Comments:**

The following SampIDs: 001A, 002A, 003A, 004A contain testgroup.

1534 Willow Pass Road, Pittsburg, CA 94565-1701 Web: www.mccampbell.com E-mail: main@mccampbell.com Telephone: 877-252-9262 Fax: 925-252-9269

# **Sample Receipt Checklist**

Client Name:	P & D Envir	onmental			Date a	and Time Received:	10/18/201	0 4:55:55 PM
Project Name:	#0298; Sno	w Cleaners, Oakland			Check	dist completed and r	eviewed by:	Maria Venegas
WorkOrder N°:	1010485	Matrix <u>Water</u>			Carrie	r: Rob Pringle (M	IAI Courier)	
		<u>Chai</u>	n of Cu	stody (C	COC) Informa	ation		
Chain of custody	/ present?		Yes	<b>V</b>	No 🗆			
Chain of custody	signed when r	elinquished and received?	Yes	<b>V</b>	No 🗆			
Chain of custody	agrees with sa	ample labels?	Yes	✓	No 🗌			
Sample IDs noted	d by Client on C	OC?	Yes	<b>V</b>	No 🗆			
Date and Time of	f collection note	d by Client on COC?	Yes	<b>✓</b>	No 🗆			
Sampler's name r	noted on COC?		Yes	✓	No 🗆			
		<u>s</u>	Sample	Receipt	t Information	<u> </u>		
Custody seals in	tact on shipping	g container/cooler?	Yes		No 🗆		NA 🔽	
Shipping contain	er/cooler in goo	d condition?	Yes	<b>V</b>	No 🗆			
Samples in prope	er containers/b	ottles?	Yes	<b>~</b>	No 🗆			
Sample containe	ers intact?		Yes	<b>✓</b>	No 🗆			
Sufficient sample	e volume for inc	licated test?	Yes	<b>✓</b>	No 🗌			
		Sample Prese	rvatio	n and Ho	old Time (HT	) Information		
All samples recei	ived within hold	ing time?	Yes	<b>✓</b>	No 🗌			
Container/Temp I	Blank temperati	ure	Coole	er Temp:	4°C		NA 🗆	
Water - VOA via	ls have zero he	eadspace / no bubbles?	Yes	✓	No 🗆	No VOA vials subm	itted	
Sample labels ch	necked for corre	ect preservation?	Yes	<b>~</b>	No 🗌			
Metal - pH accep	table upon rece	eipt (pH<2)?	Yes		No 🗆		NA 🔽	
Samples Receive	ed on Ice?		Yes	<b>✓</b>	No 🗆			
		(Ice Typ	oe: WE	T ICE	)			
* NOTE: If the "N	No" box is chec	ked, see comments below.						
		=======	===					======
Client contacted:		Date contac	cted:			Contacted	by:	
Comments:								

# McCampbell Analytical, Inc. "When Quality Counts"

1534 Willow Pass Road, Pittsburg, CA 94565-1701 Web: www.mccampbell.com E-mail: main@mccampbell.com Telephone: 877-252-9262 Fax: 925-252-9269

P & D Environmental	Client Project ID: #0298; Snow	Date Sampled: 10/15/10
55 Santa Clara, Ste.240	Cleaners, Oakland	Date Received: 10/18/10
33 Santa Ciara, Stc.240	Client Contact: Steve Carmack	Date Extracted: 10/23/10
Oakland, CA 94610	Client P.O.:	Date Analyzed: 10/23/10

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

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 1010485

I I ID		7 mary	ai metil	1010405 001P	Work Order. 1010							
Lab ID		1010485-001B										
Client ID				MW-1								
Matrix			Reporting	Water			Reporting					
Compound	Concentration *	DF	Limit	Compound	Concentration *	DF	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	0.85	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					
Vinvl Chloride	ND	1.0	0.5	Xvlenes	ND	1.0	0.5					
		Surr	ogate Re	ecoveries (%)								
%SS1:	9	1		%SS2:	10	01						
%SS3:	8											
Comments:					<u> </u>							

Comments:

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis.

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

%SS = Percent Recovery of Surrogate Standard

DF = Dilution Factor

b1) aqueous sample that contains greater than ~1 vol. % sediment

b6) lighter than water immiscible sheen/product is present

<sup>\*</sup> water and vapor samples are reported in  $\mu g/L$ , 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  $\mu g/kg$ .

# McCampbell Analytical, Inc. "When Quality Counts"

1534 Willow Pass Road, Pittsburg, CA 94565-1701 Web: www.mccampbell.com E-mail: main@mccampbell.com Telephone: 877-252-9262 Fax: 925-252-9269

P & D Environmental	Client Project ID: #0298; Snow	Date Sampled: 10/15/10
55 Santa Clara, Ste.240	Cleaners, Oakland	Date Received: 10/18/10
33 Santa Ciara, Ste.240	Client Contact: Steve Carmack	Date Extracted: 10/23/10
Oakland, CA 94610	Client P.O.:	Date Analyzed: 10/23/10

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

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 1010485

Extraction Method: SW 5030B		Anaryt	icai Metiic	0d: SW8200B	work Order: 1010	1463						
Lab ID		1010485-002B										
Client ID		MW-2										
Matrix				Water								
Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reportir Limit					
Acetone	ND<1000	100	10	tert-Amyl methyl ether (TAME)	ND<50	100	0.5					
Benzene	ND<50	100	0.5	Bromobenzene	ND<50	100	0.5					
Bromochloromethane	ND<50	100	0.5	Bromodichloromethane	ND<50	100	0.5					
Bromoform	ND<50	100	0.5	Bromomethane	ND<50	100	0.5					
2-Butanone (MEK)	ND<200	100	2.0	t-Butyl alcohol (TBA)	ND<200	100	2.0					
n-Butyl benzene	ND<50	100	0.5	sec-Butyl benzene	ND<50	100	0.5					
tert-Butyl benzene	ND<50	100	0.5	Carbon Disulfide	ND<50	100	0.5					
Carbon Tetrachloride	ND<50	100	0.5	Chlorobenzene	ND<50	100	0.5					
Chloroethane	ND<50	100	0.5	Chloroform	ND<50	100	0.5					
Chloromethane	ND<50	100	0.5	2-Chlorotoluene	ND<50	100	0.5					
4-Chlorotoluene	ND<50	100	0.5	Dibromochloromethane	ND<50	100	0.5					
1,2-Dibromo-3-chloropropane	ND<20	100	0.2	1,2-Dibromoethane (EDB)	ND<50	100	0.5					
Dibromomethane	ND<50	100	0.5	1,2-Dichlorobenzene	ND<50	100	0.5					
1,3-Dichlorobenzene	ND<50	100	0.5	1,4-Dichlorobenzene	ND<50	100	0.5					
Dichlorodifluoromethane	ND<50	100	0.5	1,1-Dichloroethane	ND<50	100	0.5					
1,2-Dichloroethane (1,2-DCA)	ND<50	100	0.5	1,1-Dichloroethene	ND<50	100	0.5					
cis-1,2-Dichloroethene	1500	100	0.5	trans-1,2-Dichloroethene	ND<50	100	0.5					
1,2-Dichloropropane	ND<50	100	0.5	1,3-Dichloropropane	ND<50	100	0.5					
2,2-Dichloropropane	ND<50	100	0.5	1,1-Dichloropropene	ND<50	100	0.5					
cis-1,3-Dichloropropene	ND<50	100	0.5	trans-1,3-Dichloropropene	ND<50	100	0.5					
Diisopropyl ether (DIPE)	ND<50	100	0.5	Ethylbenzene	ND<50	100	0.5					
Ethyl tert-butyl ether (ETBE)	ND<50	100	0.5	Freon 113	ND<1000	100	10					
Hexachlorobutadiene	ND<50	100	0.5	Hexachloroethane	ND<50	100	0.5					
2-Hexanone	ND<50	100	0.5	Isopropylbenzene	ND<50	100	0.5					
4-Isopropyl toluene	ND<50	100	0.5	Methyl-t-butyl ether (MTBE)	ND<50	100	0.5					
Methylene chloride	ND<50	100	0.5	4-Methyl-2-pentanone (MIBK)	ND<50	100	0.5					
Naphthalene	ND<50	100	0.5	n-Propyl benzene	ND<50	100	0.5					
Styrene	ND<50	100	0.5	1,1,1,2-Tetrachloroethane	ND<50	100	0.5					
1,1,2,2-Tetrachloroethane	ND<50	100	0.5	Tetrachloroethene	ND<50	100	0.5					
Toluene	ND<50	100	0.5	1,2,3-Trichlorobenzene	ND<50	100	0.5					
1,2,4-Trichlorobenzene	ND<50	100	0.5	1,1,1-Trichloroethane	ND<50	100	0.5					
1,1,2-Trichloroethane	ND<50	100	0.5	Trichloroethene	ND<50	100	0.5					
Trichlorofluoromethane	ND<50	100	0.5	1,2,3-Trichloropropane	ND<50	100	0.5					
1,2,4-Trimethylbenzene	100	100	0.5	1,3,5-Trimethylbenzene	ND<50	100	0.5					
Vinvl Chloride	160	100	0.5	Xvlenes	ND<50	100	0.5					
		Surr	ogate Re	ecoveries (%)								
%SS1:	90		9	%SS2:	10	)3						
%SS3:	8:			/0552.	1 10	, ,						
Comments: b6	O.			<u>'</u>								

Comments: b6

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis.

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

%SS = Percent Recovery of Surrogate Standard

DF = Dilution Factor

b1) aqueous sample that contains greater than ~1 vol. % sediment

b6) lighter than water immiscible sheen/product is present

<sup>\*</sup> water and vapor samples are reported in  $\mu g/L$ , 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  $\mu g/L$  wipe.

# McCampbell Analytical, Inc. "When Quality Counts"

1534 Willow Pass Road, Pittsburg, CA 94565-1701 Web: www.mccampbell.com E-mail: main@mccampbell.com Telephone: 877-252-9262 Fax: 925-252-9269

P & D Environmental	Client Project ID: #0298; Snow	Date Sampled: 10/15/10
55 Santa Clara, Ste.240	Cleaners, Oakland	Date Received: 10/18/10
33 Santa Ciara, Stc.240	Client Contact: Steve Carmack	Date Extracted: 10/26/10
Oakland, CA 94610	Client P.O.:	Date Analyzed: 10/26/10

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

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 1010485

Extraction Method: SW5030B		Anaiyt	icai Metno	0d: SW8200B	work Order: 1010	485	
Lab ID				1010485-003B			
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	Xvlenes	ND	1.0	0.5
		Surr	ogate Re	ecoveries (%)			
%SS1:	1.0	00		%SS2:	10	17	
%SS3:		15		/0002.	10	1	
Comments: h1	1						

Comments: bl

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis.

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

%SS = Percent Recovery of Surrogate Standard

DF = Dilution Factor

b1) aqueous sample that contains greater than ~1 vol. % sediment

b6) lighter than water immiscible sheen/product is present

<sup>\*</sup> water and vapor samples are reported in  $\mu g/L$ , 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  $\mu g/L$  wipe.

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

1534 Willow Pass Road, Pittsburg, CA 94565-1701 Web: www.mccampbell.com E-mail: main@mccampbell.com Telephone: 877-252-9262 Fax: 925-252-9269

P & D Environmental	Client Project ID: #0298; Snow	Date Sampled: 10/15/10
55 Santa Clara, Ste.240	Cleaners, Oakland	Date Received: 10/18/10
33 Santa Ciara, Stc.240	Client Contact: Steve Carmack	Date Extracted: 10/26/10
Oakland, CA 94610	Client P.O.:	Date Analyzed: 10/26/10

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

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 1010485

Extraction Method: SW5030B		Analyti	ical Metho	od: SW8260B	Work Order: 1010	485						
Lab ID		1010485-004B										
Client ID				MW-4								
Matrix		Water										
Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reportir 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	1.3	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	8.4	1.0	0.5	trans-1.2-Dichloroethene	0.84	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 ND	1.0	0.5	4-Methyl-2-pentanone (MIBK)	ND ND	1.0	0.5					
Naphthalene	ND	1.0	0.5	n-Propyl benzene	ND ND	1.0	0.5					
Styrene	ND ND	1.0	0.5	1,1,1,2-Tetrachloroethane	ND ND	1.0	0.5					
1,1,2,2-Tetrachloroethane	ND	1.0	0.5	Tetrachloroethene	ND ND	1.0	0.5					
Toluene	ND ND	1.0	0.5	1.2.3-Trichlorobenzene	ND 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 ND	1.0	0.5	Trichloroethene	ND ND	1.0	0.5					
Trichlorofluoromethane	ND ND	1.0	0.5	1,2,3-Trichloropropane	ND 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 ND	1.0	0.5	Xvlenes	ND ND	1.0	0.5					
THE CHIOING	1112			coveries (%)	1112	1.0	. 0.0					
0/ 001.			gait Kt	i '	10	2						
%SS1:	90			%SS2:	10	3						
%SS3:	1	12										

#### Comments

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis.

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

%SS = Percent Recovery of Surrogate Standard

DF = Dilution Factor

b1) aqueous sample that contains greater than ~1 vol. % sediment

b6) lighter than water immiscible sheen/product is present

<sup>\*</sup> water and vapor samples are reported in  $\mu g/L$ , 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  $\mu g/kg$ .



P & D Environmental	Client Project ID: #0298; Snow Cleaners,	Date Sampled:	10/15/10
55 Santa Clara, Ste.240	Oakland	Date Received:	10/18/10
	Client Contact: Steve Carmack	Date Extracted:	10/18/10
Oakland, CA 94610	Client P.O.:	Date Analyzed:	10/22/10-10/23/10

#### **Total Extractable Petroleum Hydrocarbons\***

Extraction method: SW3510C Analytical methods: SW8015B Work Order: 1010485

Extraction method:	3W3310C	Anarytic	al methods: SW8015B		VV (	ork Order:	1010485
Lab ID	Client ID	Matrix	TPH-Diesel (C10-C23)	TPH-Bunker Oil (C10-C36)	DF	% SS	Comments
1010485-001A	MW-1	W	ND	ND	1	89	
1010485-002A	MW-2	W	25,000	22,000	10	93	e11,e7,e2,b6
1010485-003A	MW-3	W	ND	ND	1	90	b1
1010485-004A	MW-4	W	ND	ND	1	87	

Reporting Limit for DF =1;	W	50	100	μg/L
ND means not detected at or above the reporting limit	S	NA	NA	mg/Kg

<sup>\*</sup> water samples are reported in  $\mu$ g/L, wipe samples in  $\mu$ g/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  $\mu$ g/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:
- b1) aqueous sample that contains greater than ~1 vol. % sediment
- b6) lighter than water immiscible sheen/product is present
- e2) diesel range compounds are significant; no recognizable pattern
- e7) oil range compounds are significant
- e11) stoddard solvent/mineral spirit (?)

OC for	
	Angela Rydelius, Lab Manager

P & D Environmental	Client Project ID: #0298; Snow Cleaners, Oakland	Date Sampled: 10/15/10
55 Santa Clara, Ste.240	Cleaners, Oakianu	Date Received: 10/18/10
	Client Contact: Steve Carmack	Date Extracted: 10/20/10
Oakland, CA 94610	Client P.O.:	Date Analyzed: 10/20/10

#### Gasoline Range (C6-C12) and Stoddard Solvent Range (C9-C12) Volatile Hydrocarbons as Gasoline and Stoddard Solvent\*

Extraction method:	e Range (C6-C12) and Stodda SW5030B	_	alytical methods: SW8015Bm			Order: 10	
Lab ID	Client ID	Matrix	TPH(g)	TPH(ss)	DF	% SS	Comment
001A	MW-1	W	ND	ND	1	105	
002A	MW-2	W	3600	3900	10	103	d5,d6,b6
003A	MW-3	W	ND	ND	1	105	b1
004A	MW-4	W	ND	ND	1	102	
	porting Limit for DF =1; ans not detected at or above	W	50	50		μg/L	
TTD IIIC	the reporting limit	S	NA	NA		NA	

* 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:

- b1) aqueous sample that contains greater than ~1 vol. % sediment
- b6) lighter than water immiscible sheen/product is present
- d5) TPH pattern that does not appear to be derived from gasoline (stoddard solvent / mineral spirit?)
- d6) one to a few isolated non-target peaks present in the TPH(g) chromatogram



QC SUMMARY REPORT FOR SW8021B/8015Bm

W.O. Sample Matrix: Water QC Matrix: Water BatchID: 53878 WorkOrder 1010485

EPA Method SW8021B/8015Bm Extraction SW5030B Spiked Sample ID: 101047										: 1010472-0	)12A	
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acce	eptance	Criteria (%)	1
mayte	μg/L	μg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
TPH(btexf	ND	60	91.1	105	13.7	92.9	81.9	12.5	70 - 130	20	70 - 130	20
МТВЕ	ND	10	110	115	4.20	114	117	2.17	70 - 130	20	70 - 130	20
Benzene	ND	10	103	107	4.14	111	111	0	70 - 130	20	70 - 130	20
Toluene	ND	10	92.5	103	10.4	99.9	101	0.664	70 - 130	20	70 - 130	20
Ethylbenzene	ND	10	92.5	96	3.69	99.1	98.7	0.377	70 - 130	20	70 - 130	20
Xylenes	ND	30	105	109	4.03	111	112	0.505	70 - 130	20	70 - 130	20
%SS:	99	10	100	106	6.09	106	105	0.818	70 - 130	20	70 - 130	20

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

#### BATCH 53878 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1010485-001A	10/15/10 12:15 PM	10/20/10	10/20/10 3:39 AM	1010485-002A	10/15/10 12:55 PM	10/20/10	10/20/10 4:09 AM
1010485-003A	10/15/10 1:40 PM	10/20/10	10/20/10 5:08 AM	1010485-004A	10/15/10 2:25 PM	10/20/10	10/20/10 5:38 AM

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).

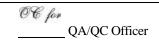
MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the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



QC SUMMARY REPORT FOR SW8260B

W.O. Sample Matrix: Water QC Matrix: Water BatchID: 53879 WorkOrder 1010485

EPA Method SW8260B Extraction SW5030B Spiked Sample ID: 1010472-012											)12B	
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acce	eptance	Criteria (%)	)
, many to	μg/L	μg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
tert-Amyl methyl ether (TAME)	ND	10	82.4	83.1	0.820	99.4	112	11.9	70 - 130	30	70 - 130	30
Benzene	ND	10	105	104	0.926	113	111	1.83	70 - 130	30	70 - 130	30
t-Butyl alcohol (TBA)	ND	50	75.3	78.7	4.20	90.1	86.2	4.43	70 - 130	30	70 - 130	30
Chlorobenzene	ND	10	107	105	1.32	120	121	0.703	70 - 130	30	70 - 130	30
1,2-Dibromoethane (EDB)	ND	10	96	97	1.03	110	110	0	70 - 130	30	70 - 130	30
1,2-Dichloroethane (1,2-DCA)	ND	10	103	100	2.57	109	103	5.95	70 - 130	30	70 - 130	30
1,1-Dichloroethene	ND	10	104	102	1.25	108	103	4.58	70 - 130	30	70 - 130	30
Diisopropyl ether (DIPE)	ND	10	108	107	1.36	121	118	2.68	70 - 130	30	70 - 130	30
Ethyl tert-butyl ether (ETBE)	ND	10	97.4	96.9	0.528	102	99.3	2.71	70 - 130	30	70 - 130	30
Methyl-t-butyl ether (MTBE)	ND	10	104	105	0.590	121	122	0.664	70 - 130	30	70 - 130	30
Toluene	ND	10	106	105	0.977	112	112	0	70 - 130	30	70 - 130	30
Trichloroethene	ND	10	110	108	2.21	121	119	1.04	70 - 130	30	70 - 130	30
%SS1:	101	25	93	92	1.11	99	95	4.25	70 - 130	30	70 - 130	30
%SS2:	100	25	104	104	0	102	101	0.451	70 - 130	30	70 - 130	30
%SS3:	97	2.5	98	99	0.912	99	99	0	70 - 130	30	70 - 130	30

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

#### BATCH 53879 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1010485-001B	10/15/10 12:15 PM	10/23/10	10/23/10 12:55 AM	1010485-002B	10/15/10 12:55 PM	10/23/10	10/23/10 2:20 AM
1010485-003B	10/15/10 1:40 PM	10/26/10	10/26/10 3:26 PM	1010485-004B	10/15/10 2:25 PM	10/26/10	10/26/10 4:24 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.

QA/QC Officer



QC SUMMARY REPORT FOR SW8015B

### W.O. Sample Matrix: Water QC Matrix: Water BatchID: 53890 WorkOrder 1010485

EPA Method SW8015B	DC Spiked Sample ID: N/A											
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acce	eptance	Criteria (%)	
Analyte	μg/L	μg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
TPH-Diesel (C10-C23)	N/A	1000	N/A	N/A	N/A	124	125	1.03	N/A	N/A	70 - 130	30
%SS:	N/A	625	N/A	N/A	N/A	110	108	1.68	N/A	N/A	70 - 130	30

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

#### BATCH 53890 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1010485-001A	10/15/10 12:15 PM	10/18/10	10/23/10 2:46 AM	1010485-002A	10/15/10 12:55 PM	10/18/10	10/23/10 4:56 AM
1010485-003A	10/15/10 1:40 PM	10/18/10	10/22/10 10:27 PM	1010485-004A	10/15/10 2:25 PM	10/18/10	10/22/10 9:22 PM

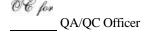
MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% 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.



## McCampbell Analytical, Inc.

1534 Willow Pass Road, Pittsburg, CA 94565-1701
Web: www.mccampbell.com E-mail: main@mccampbell.com
Telephone: 877-252-9262 Fax: 925-252-9269

P & D Environmental	Client Project ID: #0298; Snow Cleaners, Oakland	Date Sampled: 10/15/10
55 Santa Clara, Ste.240		Date Received: 10/18/10
56 Sama Sama, 500.2.10	Client Contact: Steve Carmack	Date Reported: 10/25/10
Oakland, CA 94610	Client P.O.:	Date Completed: 10/25/10

WorkOrder: 1010484

October 25, 2010

1	Dear	C.	tes	<i>τ</i> ρ•

#### Enclosed within are:

- 1) The results of the 4 analyzed samples from your project: #0298; Snow Cleaners, Oakland,
- 2) A QC report for the above samples,
- 3) A copy of the chain of custody, and
- 4) An invoice for analytical services.

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.

# P & D ENVIRONMENTAL, INC. 55 Santa Clara Ave, Suite 240 Oakland, CA 94610

CHAIN OF CUSTODY RECORD

PAGE \_ OF L

-	(510) 658-6916.												
	PROJECT NUMBER:		PROJECT						6	7	///		/
	.0798		5	) now	Cleaners, Oakland				7	//		/ /	
					Oakland		AWAL YSISCE		1/	//	[]]	THA THE	
	SAMPLED BY: (PRINTED /	AND SIGNA	ATURE)	h		ERS	5	Jam J	Pa	//	///	2 /	REMARKS
	Steve Carmack		Wye			TAIN	\$	7	100	/	/ / 8	7	REMARKS
	SAMPLE NUMBER DAT	TE TIME	ETYPE		SAMPLE LOCATION	NUMBER OF CONTAINERS	P	11	7	//	1		
+	DW DP-1/10/15	10/163				7	X	×			ICE	Normal	Turnround
4	SICON 2 DP-2	1716				7	X	X	-				
1	21 2P-3	180				7	X	У	_	+	1		
M	VI DE-4	135				7	X	X		+	10	4	K
-		-					H	+	+	+	+-		
-							H	+		+	1		
- (							П	$\top$		1			
-				1	•			I					
1		-	-	ODCON	DITIONAPPROPRIATE		Н	+	$\perp$	-	+-		
1			Di	AD SPAC	E ABSENT CONTAINERS NATED IN LAB PRESERVED IN	LAB	Н	+	+-	-	-		
ł		+	PE	ESERVA'	TION VOAS ORG METALS OTH	in .	H	+	-	+	+		
ı							Н	+	+	+	+	-	
1		$\top$					H	+	++	+	+-		
								$\top$	$\forall$	+	1		
	RELINQUISHED BY (SIGNAT	-	DATE Ic/18/Lo	TIME	RECEIVED BY: (SIGNATURE)		-	HOS SHO	SAMPLE NEDIT) -CONTUN			e Canple	ell Analytical
1	RELINCUISHED BY: (SIGNAT	10	BATE	1900	REGEIVED BY: (SIGNATURE)	6		orat	-	conta	1	ORATORY P	HONE NUMBER:
	RELINQUISHED BY: (SIGNAT	URE)	DATE	TIME	RECEIVED FOR LABORATORY (SIGNATURE)	BY:			SAMP			EQUEST SH	EE1
	Results and billing to: P&D Environmental, Inc. lob@pdenviro.com				RFMARKS:	AI	1	bott	les	pre.	Servia	wit	ACL.

#### McCampbell Analytical, Inc.

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

## CHAIN-OF-CUSTODY RECORD

ClientCode: PDEO

WorkOrder: 1010484

Page 1 of 1

Prepared by: Maria Venegas

		WaterTrax	WriteOn	EDF		Excel	[	Fax	[	<b>✓</b> Email		Hard	Сору	Thir	dParty	☐ J-1	flag
Report to: Steve Carma	ack	Email: la	ab@pdenviro	o.com			Bill to:	counts	Payabl	e			Requ	uested	TAT:	5 c	days
P & D Enviro 55 Santa Cla Oakland, CA	ara, Ste.240	cc: PO:		Cleaners, Oaklan	d		P 8 55	& D Env	ironme Clara, S	ental Ste.240				e Rece e Print		10/18/2 10/18/2	
(510) 658-691	6 FAX 510-834-0152				Г												
Lab ID	Client ID		Matrix	Collection Date	Hold	1	2	3	Req 4	uested 5	Tests 6	(See le	gend be	elow) 9	10	11	12
Lab ib	One it		Matrix	- Conconon Date	11014	•											
1010484-001	DP-1		Water	10/15/2010 16:30		В	Α	Α									
1010484-002	DP-2		Water	10/15/2010 17:10		В	Α	Α									
1010484-003	DP-3		Water	10/15/2010 18:00		В	Α	Α									
1010484-004	DP-4		Water	10/15/2010 18:30		В	Α	Α									
Test Legend:		O MOTEV	· · · · ·		<b>TD</b>				-				Г	- I			

#### **Comments:**

7 12

The following SampIDs: 001A, 002A, 003A, 004A contain testgroup.

6

#### **Sample Receipt Checklist**

Client Name:	P & D Envi	ronmental			Date a	and Time Received:	10/18/2010	0 5:00:57 PM
Project Name:	#0298; Sn	ow Cleaners, Oakland			Check	klist completed and r	eviewed by:	Maria Venegas
WorkOrder N°:	1010484	Matrix Water			Carrie	er: Rob Pringle (M	IAI Courier)	
		<u>Cha</u>	in of Cu	ıstody (C	COC) Informa	ation		
Chain of custody	present?		Yes	<b>V</b>	No 🗆			
Chain of custody	signed when	relinquished and received?	Yes	<b>V</b>	No 🗆			
Chain of custody	agrees with	sample labels?	Yes	<b>✓</b>	No 🗌			
Sample IDs noted	d by Client on C	COC?	Yes	<b>V</b>	No 🗆			
Date and Time of	collection note	ed by Client on COC?	Yes	<b>V</b>	No 🗆			
Sampler's name r	noted on COC	?	Yes	✓	No $\square$			
			Sample	Receip	t Information	<u>1</u>		
Custody seals in	tact on shippir	ng container/cooler?	Yes		No 🗆		NA 🔽	
Shipping contain	er/cooler in go	od condition?	Yes	<b>V</b>	No 🗆			
Samples in prope	er containers/b	pottles?	Yes	<b>V</b>	No 🗆			
Sample containe	rs intact?		Yes	<b>✓</b>	No 🗆			
Sufficient sample	e volume for in	dicated test?	Yes	<b>✓</b>	No 🗌			
		Sample Pres	ervatio	n and He	old Time (HT	) Information		
All samples recei	ived within hol	ding time?	Yes	<b>✓</b>	No 🗆			
Container/Temp I	Blank tempera	ture	Coole	er Temp:	4°C		NA 🗆	
Water - VOA via	ls have zero h	eadspace / no bubbles?	Yes	<b>~</b>	No 🗆	No VOA vials subm	itted	
Sample labels ch	necked for cor	rect preservation?	Yes	<b>V</b>	No 🗌			
Metal - pH accep	table upon red	eipt (pH<2)?	Yes		No 🗆		NA 🔽	
Samples Receive	ed on Ice?		Yes	<b>✓</b>	No 🗆			
		(Ice T	ype: WE	ET ICE	)			
* NOTE: If the "N	No" box is che	cked, see comments below	<i>/</i> .					
=====		=======			====	======		======
Client contacted:		Date conta	acted:			Contacted	by:	
Comments:								

P & D Environmental	Client Project ID: #0298; Snow	Date Sampled: 10/15/10
55 Santa Clara, Ste.240	Cleaners, Oakland	Date Received: 10/18/10
33 Santa Ciara, Stc.240	Client Contact: Steve Carmack	Date Extracted: 10/22/10
Oakland, CA 94610	Client P.O.:	Date Analyzed: 10/22/10

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

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 1010484

Extraction Method: SW5030B		Anaiyt	icai Metno	0d: SW8200B	work Order: 1010	1404	
Lab ID				1010484-001B			
Client ID				DP-1			
Matrix				Water			
Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acetone	ND<10,000	1000	10	tert-Amyl methyl ether (TAME)	ND<500	1000	0.5
Benzene	ND<500	1000	0.5	Bromobenzene	ND<500	1000	0.5
Bromochloromethane	ND<500	1000	0.5	Bromodichloromethane	ND<500	1000	0.5
Bromoform	ND<500	1000	0.5	Bromomethane	ND<500	1000	0.5
2-Butanone (MEK)	ND<2000	1000	2.0	t-Butyl alcohol (TBA)	ND<2000	1000	2.0
n-Butyl benzene	ND<500	1000	0.5	sec-Butyl benzene	ND<500	1000	0.5
tert-Butyl benzene	ND<500	1000	0.5	Carbon Disulfide	ND<500	1000	0.5
Carbon Tetrachloride	ND<500	1000	0.5	Chlorobenzene	ND<500	1000	0.5
Chloroethane	ND<500	1000	0.5	Chloroform	ND<500	1000	0.5
Chloromethane	ND<500	1000	0.5	2-Chlorotoluene	ND<500	1000	0.5
4-Chlorotoluene	ND<500	1000	0.5	Dibromochloromethane	ND<500	1000	0.5
1,2-Dibromo-3-chloropropane	ND<200	1000	0.2	1,2-Dibromoethane (EDB)	ND<500	1000	0.5
Dibromomethane	ND<500	1000	0.5	1,2-Dichlorobenzene	ND<500	1000	0.5
1,3-Dichlorobenzene	ND<500	1000	0.5	1,4-Dichlorobenzene	ND<500	1000	0.5
Dichlorodifluoromethane	ND<500	1000	0.5	1,1-Dichloroethane	ND<500	1000	0.5
1,2-Dichloroethane (1,2-DCA)	ND<500	1000	0.5	1,1-Dichloroethene	ND<500	1000	0.5
cis-1,2-Dichloroethene	17,000	1000	0.5	trans-1,2-Dichloroethene	ND<500	1000	0.5
1,2-Dichloropropane	ND<500	1000	0.5	1,3-Dichloropropane	ND<500	1000	0.5
2,2-Dichloropropane	ND<500	1000	0.5	1,1-Dichloropropene	ND<500	1000	0.5
cis-1,3-Dichloropropene	ND<500	1000	0.5	trans-1,3-Dichloropropene	ND<500	1000	0.5
Diisopropyl ether (DIPE)	ND<500	1000	0.5	Ethylbenzene	ND<500	1000	0.5
Ethyl tert-butyl ether (ETBE)	ND<500	1000	0.5	Freon 113	ND<10,000	1000	10
Hexachlorobutadiene	ND<500	1000	0.5	Hexachloroethane	ND<500	1000	0.5
2-Hexanone	ND<500	1000	0.5	Isopropylbenzene	ND<500	1000	0.5
4-Isopropyl toluene	ND<500	1000	0.5	Methyl-t-butyl ether (MTBE)	ND<500	1000	0.5
Methylene chloride	ND<500	1000	0.5	4-Methyl-2-pentanone (MIBK)	ND<500	1000	0.5
Naphthalene	ND<500	1000	0.5	n-Propyl benzene	ND<500	1000	0.5
Styrene	ND<500	1000	0.5	1,1,1,2-Tetrachloroethane	ND<500	1000	0.5
1,1,2,2-Tetrachloroethane	ND<500	1000	0.5	Tetrachloroethene	ND<500	1000	0.5
Toluene	ND<500	1000	0.5	1,2,3-Trichlorobenzene	ND<500	1000	0.5
1,2,4-Trichlorobenzene	ND<500	1000	0.5	1,1,1-Trichloroethane	ND<500	1000	0.5
1,1,2-Trichloroethane	ND<500	1000	0.5	Trichloroethene	ND<500	1000	0.5
Trichlorofluoromethane	ND<500	1000	0.5	1,2,3-Trichloropropane	ND<500	1000	0.5
1,2,4-Trimethylbenzene	ND<500	1000	0.5	1,3,5-Trimethylbenzene	ND<500	1000	0.5
Vinvl Chloride	2600	1000	0.5	Xvlenes	ND<500	1000	0.5
		Surre	ogate Re	ecoveries (%)			
%SS1:	8	9		%SS2:	10	)2.	
%SS3:	7			, to and had the t	. 10		
Comments:	•						

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis.

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

%SS = Percent Recovery of Surrogate Standard

DF = Dilution Factor



<sup>\*</sup> 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  $\mu g/\text{wipe}$ .

P & D Environmental	Client Project ID: #0298; Snow	Date Sampled: 10/15/10
55 Santa Clara, Ste.240	Cleaners, Oakland	Date Received: 10/18/10
33 Santa Ciara, Stc.240	Client Contact: Steve Carmack	Date Extracted: 10/22/10
Oakland, CA 94610	Client P.O.:	Date Analyzed: 10/22/10

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

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 1010484

Extraction Method. BW 3030B		7 thary	ticai Mictin	54. 5110200B	WORK Order. 101	0-10-1	
Lab ID				1010484-002B			
Client ID				DP-2			
Matrix				Water			
Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acetone	ND<20,000	2000	10	tert-Amyl methyl ether (TAME)	ND<1000	2000	0.5
Benzene	ND<1000	2000	0.5	Bromobenzene	ND<1000	2000	0.5
Bromochloromethane	ND<1000	2000	0.5	Bromodichloromethane	ND<1000	2000	0.5
Bromoform	ND<1000	2000	0.5	Bromomethane	ND<1000	2000	0.5
2-Butanone (MEK)	ND<4000	2000	2.0	t-Butyl alcohol (TBA)	ND<4000	2000	2.0
n-Butyl benzene	ND<1000	2000	0.5	sec-Butyl benzene	ND<1000	2000	0.5
tert-Butyl benzene	ND<1000	2000	0.5	Carbon Disulfide	ND<1000	2000	0.5
Carbon Tetrachloride	ND<1000	2000	0.5	Chlorobenzene	ND<1000	2000	0.5
Chloroethane	ND<1000	2000	0.5	Chloroform	ND<1000	2000	0.5
Chloromethane	ND<1000	2000	0.5	2-Chlorotoluene	ND<1000	2000	0.5
4-Chlorotoluene	ND<1000	2000	0.5	Dibromochloromethane	ND<1000	2000	0.5
1,2-Dibromo-3-chloropropane	ND<400	2000	0.2	1,2-Dibromoethane (EDB)	ND<1000	2000	0.5
Dibromomethane	ND<1000	2000	0.5	1,2-Dichlorobenzene	ND<1000	2000	0.5
1,3-Dichlorobenzene	ND<1000	2000	0.5	1,4-Dichlorobenzene	ND<1000	2000	0.5
Dichlorodifluoromethane	ND<1000	2000	0.5	1,1-Dichloroethane	ND<1000	2000	0.5
1,2-Dichloroethane (1,2-DCA)	ND<1000	2000	0.5	1,1-Dichloroethene	ND<1000	2000	0.5
cis-1,2-Dichloroethene	22,000	2000	0.5	trans-1,2-Dichloroethene	ND<1000	2000	0.5
1,2-Dichloropropane	ND<1000	2000	0.5	1,3-Dichloropropane	ND<1000	2000	0.5
2,2-Dichloropropane	ND<1000	2000	0.5	1,1-Dichloropropene	ND<1000	2000	0.5
cis-1,3-Dichloropropene	ND<1000	2000	0.5	trans-1,3-Dichloropropene	ND<1000	2000	0.5
Diisopropyl ether (DIPE)	ND<1000	2000	0.5	Ethylbenzene	ND<1000	2000	0.5
Ethyl tert-butyl ether (ETBE)	ND<1000	2000	0.5	Freon 113	ND<20,000	2000	10
Hexachlorobutadiene	ND<1000	2000	0.5	Hexachloroethane	ND<1000	2000	0.5
2-Hexanone	ND<1000	2000	0.5	Isopropylbenzene	ND<1000	2000	0.5
4-Isopropyl toluene	ND<1000	2000	0.5	Methyl-t-butyl ether (MTBE)	ND<1000	2000	0.5
Methylene chloride	ND<1000	2000	0.5	4-Methyl-2-pentanone (MIBK)	ND<1000	2000	0.5
Naphthalene	ND<1000	2000	0.5	n-Propyl benzene	ND<1000	2000	0.5
Styrene	ND<1000	2000	0.5	1,1,1,2-Tetrachloroethane	ND<1000	2000	0.5
1,1,2,2-Tetrachloroethane	ND<1000	2000	0.5	Tetrachloroethene	ND<1000	2000	0.5
Toluene	ND<1000	2000	0.5	1,2,3-Trichlorobenzene	ND<1000	2000	0.5
1,2,4-Trichlorobenzene	ND<1000	2000	0.5	1.1.1-Trichloroethane	ND<1000	2000	0.5
1,1,2-Trichloroethane	ND<1000	2000	0.5	Trichloroethene	ND<1000	2000	0.5
Trichlorofluoromethane	ND<1000	2000	0.5	1,2,3-Trichloropropane	ND<1000	2000	0.5
1,2,4-Trimethylbenzene	ND<1000	2000	0.5	1,3,5-Trimethylbenzene	ND<1000	2000	0.5
Vinvl Chloride	ND<1000	2000	0.5	Xvlenes	ND<1000	2000	0.5
		Surr	ogate Re	ecoveries (%)			
%SS1:	9			%SS2:	1	03	
%SS3:				70002.		· ·	
Comments: h1				•			
A JOHN DEATHS. DI							

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis.

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

%SS = Percent Recovery of Surrogate Standard

DF = Dilution Factor



<sup>\*</sup> 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  $\mu g/\text{wipe}$ .

P & D Environmental	Client Project ID: #0298; Snow	Date Sampled: 10/15/10
55 Santa Clara, Ste.240	Cleaners, Oakland	Date Received: 10/18/10
33 Santa Ciara, Stc.240	Client Contact: Steve Carmack	Date Extracted: 10/22/10
Oakland, CA 94610	Client P.O.:	Date Analyzed: 10/22/10

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

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 1010484

Commound   Concentration*   DF   Limit   Commound   Commound	Extraction Method: 5 W 3030B		rinary	tical Metiic	5d. 5W6200B	Work Order: 1010	7707	
Matrix   Mater   Compound   Concentration * DF   Proposition   DF   Compound   Concentration * DF   Proposition   Concentration * DF   Proposition   Compound   Concentration * DF   Proposition   Concentration * DF   Concentration * DF	Lab ID				1010484-003B			
Compound   Concentration   DF   Reporting	Client ID				DP-3			
Compound   Concentration * DF   Limit	Matrix				Water			
Benzene	Compound	Concentration *	DF		Compound	Concentration *	DF	Reporting Limit
Bromochloromethane	Acetone	ND<33	3.3	10	tert-Amyl methyl ether (TAME)	ND<1.7	3.3	0.5
Bromoform	Benzene	ND<1.7	3.3	0.5	Bromobenzene	ND<1.7	3.3	0.5
2-Butanone (MEK)         ND<6.7         3.3         2.0         t-Butvl alcohol (TBA)         ND<6.7         3.3         2.           n-Butvl benzene         4.4         3.3         0.5         sec-Butvl benzene         6.0         3.3         0.           tert-Butvl benzene         ND<1.7         3.3         0.5         Carbon Disulfide         ND<1.7         3.3         0.5           Carbon Tetrachloride         ND<1.7         3.3         0.5         Chlorobenzene         ND<1.7         3.3         0.5           Chlorotethane         ND<1.7         3.3         0.5         Chloroform         ND<1.7         3.3         0.5           Chlorotoluene         ND<1.7         3.3         0.5         2-Chlorotoluene         ND<1.7         3.3         0.5           Loromoenthane         ND<1.7         3.3         0.5         Dibromoenthane         ND<1.7         3.3         0.5         Dibromoenthane         ND<1.7         3.3         0.5         1.2-Dichlorotoluene         ND<1.7         3.3         0.5         1.2-Dichlorobenzene         ND<1.7         3.3         0.5         1.2-Dichlorobenzene         ND<1.7         3.3         0.5         1.2-Dichlorobenzene         ND<1.7         3.3         0.5         1.2-Dichlorobenz	Bromochloromethane	ND<1.7	3.3	0.5	Bromodichloromethane	ND<1.7	3.3	0.5
n-Butyl benzene         4.4         3.3         0.5         sec-Butyl benzene         6.0         3.3         0.           tert-Butyl benzene         ND<1.7	Bromoform	ND<1.7	3.3	0.5	Bromomethane	ND<1.7	3.3	0.5
tert-Butyl benzene	2-Butanone (MEK)	ND<6.7	3.3	2.0	t-Butyl alcohol (TBA)	ND<6.7	3.3	2.0
Carbon Tetrachloride         ND<1.7         3.3         0.5         Chlorobenzene         ND<1.7         3.3         0.5           Chloroethane         ND<1.7	n-Butyl benzene	4.4	3.3	0.5	sec-Butyl benzene	6.0	3.3	0.5
Chloroethane	tert-Butyl benzene	ND<1.7	3.3	0.5	Carbon Disulfide	ND<1.7	3.3	0.5
Chloromethane	Carbon Tetrachloride	ND<1.7	3.3	0.5	Chlorobenzene	ND<1.7	3.3	0.5
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	Chloroethane	ND<1.7	3.3	0.5	Chloroform	ND<1.7	3.3	0.5
1,2-Dibromo-3-chloropropane	Chloromethane	ND<1.7	3.3	0.5	2-Chlorotoluene	ND<1.7	3.3	0.5
Dibromomethane	4-Chlorotoluene	ND<1.7	3.3	0.5	Dibromochloromethane	ND<1.7	3.3	0.5
Dibromomethane	1,2-Dibromo-3-chloropropane	ND<0.67	3.3	0.2	1,2-Dibromoethane (EDB)	ND<1.7	3.3	0.5
Dichlorodifluoromethane         ND<1.7         3.3         0.5         1,1-Dichloroethane         ND<1.7         3.3         0.5           1,2-Dichloroethane (1,2-DCA)         ND<1.7		ND<1.7	3.3	0.5	1,2-Dichlorobenzene	ND<1.7	3.3	0.5
Dichlorodifluoromethane   ND<1.7   3.3   0.5   1,1-Dichloroethane   ND<1.7   3.3   0.5     1,2-Dichloroethane (1,2-DCA)   ND<1.7   3.3   0.5     1,2-Dichloroethane (1,2-DCA)   ND<1.7   3.3   0.5     1,2-Dichloroethene   4.5   3.3   0.5     1,2-Dichloroethene   ND<1.7   3.3   0.5     1,2-Dichloropthane   ND<1.7   3.3   0.5     1,2-Dichloropthane   ND<1.7   3.3   0.5     1,2-Dichloropthane   ND<1.7   3.3   0.5     2,2-Dichloropthane   ND<1.7   3.3   0.5     1,1-Dichloropthane   ND<1.7   3.3   0.5     2,2-Dichloropthane   ND<1.7   3.3   0.5     1,1-Dichloropthane   ND<1.7   3.3   0.5     0,5   Itans-1,3-Dichloropthane   ND<1.7   3.3   0.5     0,5   Ethylbenzene   ND<1.7   3.3   0.5     0,5   Ethylbenzene   4.0   3.3   0.5     0,5   Ethylbenzene   4.0   3.3   0.5     0,5   Ethylbenzene   ND<1.7   3.3   0.5     0,6   Ethylbenzene   ND<1.7   3.3   0.5     0,7   Ethylbenzene   ND<1.7   3.3   0.5     0,8   Ethylbenzene   ND<1.7   3.3   0.5     0,9   Ethylbenzene   ND<1.7   3.3   0.5     0,1   Ethylbenzene   ND<1.7   3.3   0.	1,3-Dichlorobenzene	ND<1.7	3.3	0.5	1,4-Dichlorobenzene	ND<1.7	3.3	0.5
cis-1,2-Dichloroethene         44         3,3         0.5         trans-1,2-Dichloroethene         4.5         3,3         0.           1,2-Dichloropropane         ND<1.7	·			0.5	·			0.5
cis-1,2-Dichloroethene         44         3,3         0.5         trans-1,2-Dichloroethene         4.5         3,3         0.           1,2-Dichloropropane         ND<1.7	1.2-Dichloroethane (1.2-DCA)	ND<1.7	3.3	0.5	1.1-Dichloroethene	ND<1.7	3.3	0.5
ND<1.7   3.3   0.5   1,1-Dichloropropene   ND<1.7   3.3   0.5		44	3.3	0.5			3.3	0.5
cis-1,3-Dichloropropene         ND<1.7         3.3         0.5         trans-1,3-Dichloropropene         ND<1.7         3.3         0.0           Diisopropyl ether (DIPE)         ND<1.7	1,2-Dichloropropane	ND<1.7	3.3	0.5	1,3-Dichloropropane	ND<1.7	3.3	0.5
Diisopropyl ether (DIPE)   ND<1.7   3.3   0.5   Ethylbenzene   4.0   3.3   0.5	2,2-Dichloropropane	ND<1.7	3.3	0.5	1,1-Dichloropropene	ND<1.7	3.3	0.5
Ethyl tert-butyl ether (ETBE)         ND<1.7         3.3         0.5         Freon 113         ND<33         3.3         1           Hexachlorobutadiene         ND<1.7	cis-1,3-Dichloropropene	ND<1.7	3.3	0.5	trans-1,3-Dichloropropene	ND<1.7	3.3	0.5
Hexachlorobutadiene	Diisopropyl ether (DIPE)	ND<1.7	3.3	0.5	Ethylbenzene	4.0	3.3	0.5
2-Hexanone	Ethyl tert-butyl ether (ETBE)	ND<1.7	3.3	0.5	Freon 113	ND<33	3.3	10
2-Hexanone         ND<1.7         3.3         0.5         Isopropylbenzene         7.2         3.3         0.5           4-Isopropyl toluene         ND<1.7	Hexachlorobutadiene	ND<1.7	3.3	0.5	Hexachloroethane	ND<1.7	3.3	0.5
Methylene chloride         ND<1.7         3.3         0.5         4-Methyl-2-pentanone (MIBK)         ND<1.7         3.3         0.5           Naphthalene         7.5         3.3         0.5         n-Propyl benzene         10         3.3         0.5           Styrene         ND<1.7		ND<1.7	3.3	0.5	Isopropylbenzene	7.2	3.3	0.5
Methylene chloride         ND<1.7         3.3         0.5         4-Methyl-2-pentanone (MIBK)         ND<1.7         3.3         0.5           Naphthalene         7.5         3.3         0.5         n-Propyl benzene         10         3.3         0.5           Styrene         ND<1.7	4-Isopropyl toluene	ND<1.7	3.3	0.5	Methyl-t-butyl ether (MTBE)	ND<1.7	3.3	0.5
Naphthalene         7.5         3.3         0.5         n-Propyl benzene         10         3.3         0.5           Styrene         ND<1.7	Methylene chloride	ND<1.7	3.3	0.5	4-Methyl-2-pentanone (MIBK)	ND<1.7	3.3	0.5
1,1,2,2-Tetrachloroethane         ND<1.7         3.3         0.5         Tetrachloroethene         ND<1.7         3.3         0.0           Toluene         2.7         3.3         0.5         1,2,3-Trichlorobenzene         ND<1.7	Naphthalene	7.5	3.3	0.5		10	3.3	0.5
Toluene         2.7         3.3         0.5         1,2,3-Trichlorobenzene         ND<1.7         3.3         0.5           1,2,4-Trichlorobenzene         ND<1.7	Styrene	ND<1.7	3.3	0.5	1,1,1,2-Tetrachloroethane	ND<1.7	3.3	0.5
1,2,4-Trichlorobenzene         ND<1.7         3.3         0.5         1,1,1-Trichloroethane         ND<1.7         3.3         0.5           1,1,2-Trichloroethane         ND<1.7	1,1,2,2-Tetrachloroethane	ND<1.7	3.3	0.5	Tetrachloroethene	ND<1.7	3.3	0.5
1,1,2-Trichloroethane         ND<1.7         3.3         0.5         Trichloroethene         ND<1.7         3.3         0.5           Trichlorofluoromethane         ND<1.7								0.5
1,1,2-Trichloroethane         ND<1.7         3.3         0.5         Trichloroethene         ND<1.7         3.3         0.5           Trichlorofluoromethane         ND<1.7	1,2,4-Trichlorobenzene	ND<1.7	3.3	0.5	1,1,1-Trichloroethane	ND<1.7	3.3	0.5
1,2,4-Trimethylbenzene       69       3.3       0.5       1,3,5-Trimethylbenzene       24       3.3       0.5         Vinvl Chloride       28       3.3       0.5       Xvlenes       23       3.3       0.5         Surrogate Recoveries (%)         %SS1:       89       %SS2:       98	1,1,2-Trichloroethane	ND<1.7	3.3	0.5	Trichloroethene	ND<1.7	3.3	0.5
Vinvl Chloride         28         3.3         0.5         Xylenes         23         3.3         0.5           Surrogate Recoveries (%)           %SS1:         89         %SS2:         98	Trichlorofluoromethane	ND<1.7	3.3	0.5	1,2,3-Trichloropropane	ND<1.7	3.3	0.5
Surrogate Recoveries (%)           %SS1:         89         %SS2:         98	1,2,4-Trimethylbenzene	69	3.3	0.5	1,3,5-Trimethylbenzene	24	3.3	0.5
%SS1: 89 %SS2: 98	Vinvl Chloride	28	3.3	0.5	Xvlenes	23	3.3	0.5
%SS1: 89 %SS2: 98			Suri	rogate Re	ecoveries (%)			
	%SS1:	80				9	8	
%SS3: 83	%SS3:	83						
Comments:								

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis.

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

%SS = Percent Recovery of Surrogate Standard

DF = Dilution Factor



<sup>\*</sup> 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  $\mu g/\text{wipe}$ .

P & D Environmental	Client Project ID: #0298; Snow	Date Sampled: 10/15/10
55 Santa Clara, Ste.240	Cleaners, Oakland	Date Received: 10/18/10
55 Santa Ciara, Stc.240	Client Contact: Steve Carmack	Date Extracted: 10/23/10
Oakland, CA 94610	Client P.O.:	Date Analyzed: 10/23/10

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

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 1010484

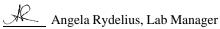
Lab ID				1010484-004B	Work Grader To To		
Client ID  Matrix				DP-4 Water			
Matrix			Reporting	water I			Reportin
Compound	Concentration *	DF	Limit	Compound	Concentration *	DF	Limit
Acetone	ND<33	3.3	10	tert-Amyl methyl ether (TAME)	ND<1.7	3.3	0.5
Benzene	ND<1.7	3.3	0.5	Bromobenzene	ND<1.7	3.3	0.5
Bromochloromethane	ND<1.7	3.3	0.5	Bromodichloromethane	ND<1.7	3.3	0.5
Bromoform	ND<1.7	3.3	0.5	Bromomethane	ND<1.7	3.3	0.5
2-Butanone (MEK)	ND<6.7	3.3	2.0	t-Butyl alcohol (TBA)	ND<6.7	3.3	2.0
n-Butyl benzene	ND<1.7	3.3	0.5	sec-Butyl benzene	ND<1.7	3.3	0.5
tert-Butyl benzene	3.8	3.3	0.5	Carbon Disulfide	ND<1.7	3.3	0.5
Carbon Tetrachloride	ND<1.7	3.3	0.5	Chlorobenzene	ND<1.7	3.3	0.5
Chloroethane	ND<1.7	3.3	0.5	Chloroform	ND<1.7	3.3	0.5
Chloromethane	ND<1.7	3.3	0.5	2-Chlorotoluene	ND<1.7	3.3	0.5
4-Chlorotoluene	ND<1.7	3.3	0.5	Dibromochloromethane	ND<1.7	3.3	0.5
1.2-Dibromo-3-chloropropane	ND<0.67	3.3	0.2	1.2-Dibromoethane (EDB)	ND<1.7	3.3	0.5
Dibromomethane	ND<1.7	3.3	0.5	1,2-Dichlorobenzene	ND<1.7	3.3	0.5
1,3-Dichlorobenzene	ND<1.7	3.3	0.5	1,4-Dichlorobenzene	ND<1.7	3.3	0.5
Dichlorodifluoromethane	ND<1.7	3.3	0.5	1,1-Dichloroethane	ND<1.7	3.3	0.5
1,2-Dichloroethane (1,2-DCA)	ND<1.7	3.3	0.5	1.1-Dichloroethene	ND<1.7	3.3	0.5
cis-1.2-Dichloroethene	80	3.3	0.5	trans-1.2-Dichloroethene	33	3.3	0.5
1,2-Dichloropropane	ND<1.7	3.3	0.5	1,3-Dichloropropane	ND<1.7	3.3	0.5
2,2-Dichloropropane	ND<1.7	3.3	0.5	1,1-Dichloropropene	ND<1.7	3.3	0.5
cis-1,3-Dichloropropene	ND<1.7	3.3	0.5	trans-1,3-Dichloropropene	ND<1.7	3.3	0.5
Diisopropyl ether (DIPE)	ND<1.7	3.3	0.5	Ethylbenzene	ND<1.7	3.3	0.5
Ethyl tert-butyl ether (ETBE)	ND<1.7	3.3	0.5	Freon 113	ND<33	3.3	10
Hexachlorobutadiene	ND<1.7	3.3	0.5	Hexachloroethane	ND<1.7	3.3	0.5
2-Hexanone	ND<1.7	3.3	0.5	Isopropylbenzene	ND<1.7	3.3	0.5
4-Isopropyl toluene	4.5	3.3	0.5	Methyl-t-butyl ether (MTBE)	ND<1.7	3.3	0.5
Methylene chloride	ND<1.7	3.3	0.5	4-Methyl-2-pentanone (MIBK)	ND<1.7	3.3	0.5
Naphthalene	ND<1.7	3.3	0.5	n-Propyl benzene	ND<1.7	3.3	0.5
Styrene	ND<1.7	3.3	0.5	1,1,1,2-Tetrachloroethane	ND<1.7	3.3	0.5
1,1,2,2-Tetrachloroethane	ND<1.7	3.3	0.5	Tetrachloroethene	22	3.3	0.5
Toluene	ND<1.7	3.3	0.5	1,2,3-Trichlorobenzene	ND<1.7	3.3	0.5
1,2,4-Trichlorobenzene	ND<1.7	3.3	0.5	1.1.1-Trichloroethane	ND<1.7	3.3	0.5
1.1.2-Trichloroethane	ND<1.7	3.3	0.5	Trichloroethene	ND<1.7	3.3	0.5
Trichlorofluoromethane	ND<1.7	3.3	0.5	1,2,3-Trichloropropane	ND<1.7	3.3	0.5
1,2,4-Trimethylbenzene	ND<1.7	3.3	0.5	1,3,5-Trimethylbenzene	ND<1.7	3.3	0.5
Vinyl Chloride	ND<1.7	3.3	0.5	Xvlenes	ND<1.7	3.3	0.5
vinvi Cinoride	4.9	J.J		ecoveries (%)	ND\$1./	ر. ی	0.3
%SS1:	8		Sate III	%SS2:	94	1	
%SS3:	9			,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	<u>, ,</u>	•	
Comments: b1				•			

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis.

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

%SS = Percent Recovery of Surrogate Standard

DF = Dilution Factor



<sup>\*</sup> 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  $\mu g/\text{wipe}$ .

## McCampbell Analytical, Inc.

1534 Willow Pass Road, Pittsburg, CA 94565-1701 Telephone: 877-252-9262 Fax: 925-252-9269

	,	Date Sampled:	10/15/10
55 Santa Clara, Ste.240	Oakland	Date Received:	10/18/10
	Client Contact: Steve Carmack	Date Extracted:	10/18/10
Oakland, CA 94610	Client P.O.:	Date Analyzed:	10/23/10

#### Total Extractable Petroleum Hydrocarbons\*

Analytical methods: SW8015B Work Order: 1010484 Extraction method: SW3510C

Extraction method.	B 11 33 10 C	rinarytic	ai inclinus. Sw6013B		WOIR Older. 1010484				
Lab ID	Client ID	Matrix	TPH-Diesel (C10-C23)	TPH-Bunker Oil (C10-C36)	DF % SS		Comments		
1010484-001A	DP-1	W	9000	9800	10	91	e11,e7,b6		
1010484-002A	DP-2	W	3900	2900	1	81	e11,e2,b1		
1010484-003A	DP-3	W	10,000	9800	1	83	e11,e2,e7		
1010484-004A	DP-4	W	1200	920	1	90	e11,e2,b1		

Reporting Limit for DF =1;	W	50	100	μg/L
ND means not detected at or above the reporting limit	S	NA	NA	mg/Kg

<sup>\*</sup> water samples are reported in µg/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:
- b1) aqueous sample that contains greater than ~1 vol. % sediment
- b6) lighter than water immiscible sheen/product is present
- e2) diesel range compounds are significant; no recognizable pattern
- e7) oil range compounds are significant
- e11) stoddard solvent/mineral spirit (?)



Total Control of the			
P & D Environmental	Client Project ID: #0298; Snow Cleaners, Oakland	Date Sampled:	10/15/10
55 Santa Clara, Ste.240	Cleaners, Oakianu	Date Received:	10/18/10
	Client Contact: Steve Carmack	Date Extracted:	10/20/10-10/21/10
Oakland, CA 94610	Client P.O.:	Date Analyzed:	10/20/10-10/21/10

#### Gasoline Range (C6-C12) and Stoddard Solvent Range (C9-C12) Volatile Hydrocarbons as Gasoline and Stoddard Solvent\*

Extraction	method: SW5030B		Analytical methods: SW8015Bm		Work Order: 1010484  DF % SS Comme			
Lab ID	Client ID	Matrix	TPH(g)	TPH(ss)	DF	% SS	Comments	
001A	DP-1	W	10,000	5100	33	106	d5,d9,b6	
002A	DP-2	W	4800	2900	1	101	d5,d6,b1	
003A	DP-3	W	5700	8000	10	97	d5	
004A	DP-4	W	1800	1500	1	108	d5,d9,b1	
	Reporting Limit for DF =1;	W	50	50	μg/L			
	ND means not detected at or above the reporting limit	S	NA	NA		NA		

\* water and vapor samples are reported in ug/L, soil/sludge/solid samples in mg/kg, wipe samples in  $\mu$ g/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:

- b1) aqueous sample that contains greater than ~1 vol. % sediment
- b6) lighter than water immiscible sheen/product is present
- d5) TPH pattern that does not appear to be derived from gasoline (stoddard solvent / mineral spirit?)
- d6) one to a few isolated non-target peaks present in the TPH(g) chromatogram
- d9) no recognizable pattern

1534 Willow Pass Road, Pittsburg, CA 94565-1701 

Telephone: 877-252-9262 Fax: 925-252-9269

#### QC SUMMARY REPORT FOR SW8260B

W.O. Sample Matrix: Water QC Matrix: Water BatchID: 53879 WorkOrder: 1010484

EPA Method: SW8260B	Extra	ction SW	5030B					5	Spiked Sar	nple ID	: 1010472-0	)12B
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acc	eptance	e Criteria (%	)
7 mary to	μg/L	μg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
tert-Amyl methyl ether (TAME)	ND	10	82.4	83.1	0.820	99.4	112	11.9	70 - 130	30	70 - 130	30
Benzene	ND	10	105	104	0.926	113	111	1.83	70 - 130	30	70 - 130	30
t-Butyl alcohol (TBA)	ND	50	75.3	78.7	4.20	90.1	86.2	4.43	70 - 130	30	70 - 130	30
Chlorobenzene	ND	10	107	105	1.32	120	121	0.703	70 - 130	30	70 - 130	30
1,2-Dibromoethane (EDB)	ND	10	96	97	1.03	110	110	0	70 - 130	30	70 - 130	30
1,2-Dichloroethane (1,2-DCA)	ND	10	103	100	2.57	109	103	5.95	70 - 130	30	70 - 130	30
1,1-Dichloroethene	ND	10	104	102	1.25	108	103	4.58	70 - 130	30	70 - 130	30
Diisopropyl ether (DIPE)	ND	10	108	107	1.36	121	118	2.68	70 - 130	30	70 - 130	30
Ethyl tert-butyl ether (ETBE)	ND	10	97.4	96.9	0.528	102	99.3	2.71	70 - 130	30	70 - 130	30
Methyl-t-butyl ether (MTBE)	ND	10	104	105	0.590	121	122	0.664	70 - 130	30	70 - 130	30
Toluene	ND	10	106	105	0.977	112	112	0	70 - 130	30	70 - 130	30
Trichloroethene	ND	10	110	108	2.21	121	119	1.04	70 - 130	30	70 - 130	30
%SS1:	101	25	93	92	1.11	99	95	4.25	70 - 130	30	70 - 130	30
%SS2:	100	25	104	104	0	102	101	0.451	70 - 130	30	70 - 130	30
%SS3:	97	2.5	98	99	0.912	99	99	0	70 - 130	30	70 - 130	30

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

#### BATCH 53879 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1010484-001B	10/15/10 4:30 PI	N 10/22/10	10/22/10 10:03 PM	1010484-002B	10/15/10 5:10 P	N 10/22/10	10/22/10 10:47 PM
1010484-003B	10/15/10 6:00 PI	N 10/22/10	10/22/10 11:29 PM	1010484-004B	10/15/10 6:30 P	N 10/23/10	10/23/10 12:12 AN

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).

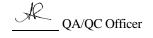
MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contractive forms of the following reasons: a) the sample is inhomogenous and forms of the following reasons: a) the sample is inhomogenous and forms of the following reasons: a) the sample is inhomogenous and forms of the following reasons: a) the sample is inhomogenous and forms of the following reasons: a) the sample is inhomogenous and forms of the following reasons: a) the sample is inhomogenous and forms of the following reasons: a) the sample is inhomogenous and forms of the following reasons: a) the sample is inhomogenous and forms of the following reasons: a) the sample is inhomogenous and forms of the following reasons: a) the sample is inhomogenous and forms of the following reasons: a) the sample is inhomogenous and forms of the following reasons: a) the followi 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.



1534 Willow Pass Road, Pittsburg, CA 94565-1701 

Telephone: 877-252-9262 Fax: 925-252-9269

#### QC SUMMARY REPORT FOR SW8015B

W.O. Sample Matrix: Water QC Matrix: Water BatchID: 53890 WorkOrder: 1010484

EPA Method: SW8015B		8	Spiked San	nple ID:	: N/A							
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)			)
	μg/L	μg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
TPH-Diesel (C10-C23)	N/A	1000	N/A	N/A	N/A	124	125	1.03	N/A	N/A	70 - 130	30
%SS:	N/A	625	N/A	N/A	N/A	110	108	1.68	N/A	N/A	70 - 130	30

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

#### BATCH 53890 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1010484-001A	10/15/10 4:30 P	N 10/18/10	10/23/10 8:10 AN	1010484-002A	10/15/10 5:10 PI	10/18/10	10/23/10 10:20 AM
1010484-003A	10/15/10 6:00 P	N 10/18/10	10/23/10 7:05 AN	1010484-004A	10/15/10 6:30 PI	10/18/10	10/23/10 3:51 AM

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 contractive forms of the following reasons: a) the sample is inhomogenous and forms of the following reasons: a) the sample is inhomogenous and forms of the following reasons: a) the sample is inhomogenous and forms of the following reasons: a) the sample is inhomogenous and forms of the following reasons: a) the sample is inhomogenous and forms of the following reasons: a) the sample is inhomogenous and forms of the following reasons: a) the sample is inhomogenous and forms of the following reasons: a) the sample is inhomogenous and forms of the following reasons: a) the sample is inhomogenous and forms of the following reasons: a) the sample is inhomogenous and forms of the following reasons: a) the sample is inhomogenous and forms of the following reasons: a) the followi 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.

QA/QC Officer

1534 Willow Pass Road, Pittsburg, CA 94565-1701 

Telephone: 877-252-9262 Fax: 925-252-9269

#### QC SUMMARY REPORT FOR SW8021B/8015Bm

W.O. Sample Matrix: Water QC Matrix: Water BatchID: 53878 WorkOrder: 1010484

EPA Method: SW8015Bm Extraction SW5030B Spiked Sample ID: 1010472-0							)12A					
Analyte	Sample Spiked MS MSD MS-MSI				MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)			
7 mary to	μg/L	μg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
TPH(btex)	ND	60	91.1	105	13.7	92.9	81.9	12.5	70 - 130	20	70 - 130	20
MTBE	ND	10	110	115	4.20	114	117	2.17	70 - 130	20	70 - 130	20
Benzene	ND	10	103	107	4.14	111	111	0	70 - 130	20	70 - 130	20
Toluene	ND	10	92.5	103	10.4	99.9	101	0.664	70 - 130	20	70 - 130	20
Ethylbenzene	ND	10	92.5	96	3.69	99.1	98.7	0.377	70 - 130	20	70 - 130	20
Xylenes	ND	30	105	109	4.03	111	112	0.505	70 - 130	20	70 - 130	20
%SS:	99	10	100	106	6.09	106	105	0.818	70 - 130	20	70 - 130	20

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

#### BATCH 53878 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1010484-001A	10/15/10 4:30 P	10/21/10	10/21/10 7:54 PM	1010484-002A	10/15/10 5:10 PM	10/20/10	10/20/10 1:10 AM
1010484-002A	10/15/10 5:10 P	10/20/10	10/20/10 10:23 PN	1010484-003A	10/15/10 6:00 PI	10/20/10	10/20/10 2:10 AN
1010484-004A	10/15/10 6:30 P	10/20/10	10/20/10 3:09 AN				

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 contractive forms of the following reasons: a) the sample is inhomogenous and forms of the following reasons: a) the sample is inhomogenous and forms of the following reasons: a) the sample is inhomogenous and forms of the following reasons: a) the sample is inhomogenous and forms of the following reasons: a) the sample is inhomogenous and forms of the following reasons: a) the sample is inhomogenous and forms of the following reasons: a) the sample is inhomogenous and forms of the following reasons: a) the sample is inhomogenous and forms of the following reasons: a) the sample is inhomogenous and forms of the following reasons: a) the sample is inhomogenous and forms of the following reasons: a) the sample is inhomogenous and forms of the following reasons: a) the followi 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 ma or analyte content, or inconsistency in sample containers.

