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Alameda County
Environmental Health

J.W. SILVEIRA CO.

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Real Estate

July 7, 2009

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

SUBJECT:

SUBSURFACE INVESTIGATION REPORT CERTIFICATION

County File # RO 387 Mel Senna Brake Service 2301 East 12<sup>th</sup> Street

Oakland, CA

Dear Mr. Wickham:

P&D Environmental, Inc. has prepared the following document:

 Subsurface Investigation Report (SB7 Through SB13 and SG1 Through SG6) dated July 7, 2009 (document 0404.R4).

I declare under penalty of perjury that the contents and conclusions in the document are true and correct to the best of my knowledge.

Should you have any questions, please do not hesitate to contact me at (510) 834-9811.

Sincerely,

W W

J.W. Silveira Realty

0404.L12

# P&D ENVIRONMENTAL, INC.

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

July 7, 2009 Report 0404.R4

Mr. J.W. Silveira J.W. Silveira Realty 499 Embarcadero Oakland, CA 94606

SUBJECT: SUBSURFACE INVESTIGATION REPORT

(SB7 THROUGH SB13 AND SG1 THROUGH SG6)

County File #RO 387 Mel Senna Brake Service 2301 East 12<sup>th</sup> Street Oakland, California

Dear Mr. Silveira:

P&D Environmental (P&D) is pleased to present this report on the drilling of soil borings at a total of 7 locations, designated as SB7 through SB13, and the collection of six soil gas samples designated as SG1 through SG6 to further characterize subsurface conditions at and near the subject site. The groundwater grab samples were collected to evaluate the horizontal and vertical extent of petroleum hydrocarbon and Halogenated Volatile Organic Compound (HVOC)-impacted groundwater in the vicinity of the subject site, and the soil gas samples were collected to evaluate risk posed by petroleum hydrocarbon and HVOC soil vapor at the subject site.

This work was performed in accordance with P&D's Subsurface Investigation Work Plan dated December 15, 2008 and a letter from Mr. Jerry Wickham at the Alameda County Environmental Health Department (ACDEH) dated January 23, 2009 which provided comments on the work plan. A Site Location Map (Figure 1) and Site Vicinity Map showing soil boring and soil gas sample collection locations (Figure 2) are attached with this report.

All work was performed under the direct supervision of an appropriately registered professional. This work plan is prepared in accordance with guidelines set forth in the document "Tri-Regional Board Staff Recommendations for Preliminary Evaluation and Investigation of Underground Tank Sites" dated August 10, 1990 and "Appendix A - Workplan for Initial Subsurface Investigation" dated August 20, 1991 and the Department of Toxic Substances Control (DTSC) January 13, 2003 "Advisory – Active Soil Gas Investigations" which was developed as a coordinated effort with the Los Angeles Regional Water Quality Control Board.

### BACKGROUND

The subject site was previously a gas station and vehicle repair facility, and is currently a tire and brake repair facility. The subject site is located in an industrially zoned area and bordered to the northeast by East 12<sup>th</sup> Street, to the southeast by railroad property, to the northwest by 23<sup>rd</sup> Avenue and a public park, and to the southwest by a furniture restoration facility. A detailed discussion of historic subsurface investigations at the site is provided in P&D's December 15, 2008 Work Plan.

# **FIELD ACTIVITIES**

Prior to drilling, Alameda County Public Works Agency drilling permit # W2009-0171 was obtained for the drilling locations designated as SB7 through SB13 and SG1 through SG6. Excavation permits X0900214 and X0900213 were obtained from the City of Oakland for soil borings SB7 through SB13 that were located in the public right-of-way. In addition, the drilling locations were marked with white paint, Underground Safety Alert was notified for buried utility location, and a health and safety plan was prepared.

P&D personnel oversaw the drilling of soil borings at a total of seven locations, designated as SB7 through SB13 on March 5, 10, and 11, 2009. Boreholes were hand augered at locations SB7, SB8, and SB11 to depths of 8.2, 7.0, and 12.5 feet below the ground surface (bgs), respectively. At locations SB9, SB10, and SB12, boreholes were continuously cored to a total depth of 20.0 feet bgs, and at location SB13 a borehole was continuously cored to a total depth of 60.0 feet bgs. One groundwater grab sample was collected at each location from first encountered groundwater. In addition, at locations adjacent to the continuously cored boreholes at SB12 and SB13, soil conductivity probes were pushed to a total depth of approximately 60.0 feet to identify higher permeability zones below first encountered groundwater. Based on the continuous core at location SB13 and the soil conductivity probes at locations SB12 and SB13, groundwater samples were collected at locations SB12 and SB13 using a Hydropunch at depths below first encountered groundwater to evaluate the vertical extent of impact to groundwater. The Hydropunch samples were collected between the depths of 45.0 and 49.0 feet bgs at SB12, and 48.0 to 52.0 feet bgs at SB13.

A total of six soil gas samples, designated as SG-1 through SG-6, were collected on March 9, 10, and 11, 2009. Based on the measured depth to groundwater in groundwater monitoring wells at the site, all of the soil gas samples were collected at depths of 3 feet bgs with the exception of SG6, which was collected at a depth of 5 feet bgs.

# Borehole Drilling and Soil and Groundwater Sample Collection

Four of the seven drilling locations (SB9, SB10, SB12, and SB13) were continuously cored using Geoprobe Macrocore barrel samplers lined with transparent PVC sleeves. Three of the drilling locations (SB7, SB8 and SB11) were hand augered using a 3.5 inch outside diameter stainless steel auger. The soil from the boreholes was logged in the field in accordance with standard geologic field techniques and the Unified Soil Classification System. The soil from the boreholes was evaluated with a Photoionization Detector (PID) equipped with a 10.6 eV bulb and calibrated with a 100 ppm isobutylene standard, and PID values were recorded on the boring logs. The soil was also evaluated for other evidence of petroleum hydrocarbon contamination such as odors, staining, and discoloration. No elevated PID values, odors, staining, or discoloration were detected in any of

the boreholes with the following exceptions. Elevated PID values were encountered at drilling locations SB11, SB12 and SB13, with maximum PID values of 1014, 243 and 145 ppm, respectively. No PID values were detected in any of the other boreholes. Odors, staining and discoloration were encountered at drilling locations SB10, SB11, SB12 and SB13 as follows.

- SB10: 7.0 to 11.0 feet bgs blue green discoloration but no odor.
- SB11: 7.5 to 12.0 feet bgs gray discoloration with moderate to strong petroleum odor, and 12.0 to 12.5 gray discoloration but no odor.
- SB12: 8.0 to 18.0 feet bgs blue green discoloration with strong petroleum odor.
- SB13: 8.0 to 19.0 feet bgs blue green discoloration with strong petroleum odor, and 19.0 to 25.5 feet bgs gray discoloration with slight petroleum odor.

Soil samples were retained for laboratory analysis from continuously cored boreholes SB11, SB12 and SB13 at intervals where elevated PID values were encountered in the following manner. Soil samples were collected from the boreholes drilled using GeoProbe technology by continuously coring the boreholes using a 5-foot long 2.0-inch outside diameter macrocore barrel sampler lined with transparent PVC tubes. Following removal of the PVC liner from the GeoProbe macrocore barrel sampler, the liner was evaluated for the amount of sample recovery in the liner, and a 6-inch long section of the liner was then cut at the depth corresponding to the desired sample collection depth. Following collection of the 6-inch sample, the ends of the sample were evaluated with the PID, and then sequentially covered with aluminum foil and plastic endcaps. The sample was then labeled and placed into a cooler with ice pending delivery to the laboratory. Chain of custody procedures were observed for all sample handling. The sample collection intervals were recorded on the boring logs. Copies of the boring logs are attached with this report as Appendix A.

Although efforts were made to excavate at several of the drilling locations using air knife drilling methods, the wet clayey materials at these locations made use of the method ineffective and hand augering was performed instead. Despite expectation that groundwater would be encountered at a depth ranging approximately 5 to 9 feet bgs, groundwater was not encountered during drilling at locations SB10 and SB12. At locations SB7, SB8, SB9, B11, and SB13 groundwater was encountered while drilling at depths of 8.0, 7.0, 14.5, 10.0, and 21.0 feet bgs, respectively. At location SB13, continuous coring was temporarily stopped at a depth of 25.0 feet and depth to groundwater measurements were recorded until a groundwater sample was collected.

Following completion of drilling, water was subsequently measured in boreholes SB7 through SB10 at depths of 7.0, 6.5, 8.6 and 18.3 feet bgs, respectively, and in boreholes SB12 and SB13 at depths of 8.7 and 15.7 feet bgs, respectively. Borehole SB10 was left open overnight, at which point groundwater was encountered at a depth of 18.3 feet bgs the following day. The depth to

water was not measured in borehole B10 after groundwater was initially encountered. Depth to water information was recorded on the boring logs.

One groundwater grab sample was collected from first encountered groundwater in each of the boreholes that was continuously cored using GeoProbe technology in the following manner. A temporary 1-inch diameter slotted PVC pipe was placed into the borehole. The groundwater grab samples were collected from the temporary PVC pipe in the boreholes using a polyethylene tube with a stainless steel check valve. The groundwater grab sample from hand augered boreholes SB7, SB8 and SB11 were collected using a new polyethylene disposable bailer.

Following review of subsurface conditions identified in the soil conductivity logs, groundwater grab samples were also collected at drilling locations SB12 and SB13 by driving a Hydropunch at a location approximately two feet away from the soil conductivity log borehole. The Hydropunch was driven at locations SB12 and SB13 to total depths of 49.0 and 52.0 feet bgs, respectively. After driving the Hydropunch to the desired depth and prior to retracting the drilling rods to expose the Hydropunch screen, the interior of the drilling rods were evaluated to determine if water was present inside the drilling rods. No water was measured in the drilling rods prior to retracting the drilling rods to expose the Hydropunch screen. The drilling rods were then retracted at each location to expose a four-foot long section of Hydropunch screen. Following retraction of the drilling rods to expose the Hydropunch screen at each of locations SB12 and SB13, the depth to water was measured inside the drilling rods immediately prior to sample collection at depths of 42.6 and 46.7 feet fbg, respectively. A groundwater grab sample was then collected from each of the boreholes using polyethylene tubing and a stainless steel foot valve.

All of the water samples were transferred to 40-milliliter glass VOA vials and 1-liter amber glass bottles containing hydrochloric acid preservative, which were sealed with Teflon-lined screw caps. The VOA vials were overturned and tapped to ensure that air bubbles were not present. The samples were labeled and then placed into a cooler with ice pending delivery to the laboratory. Chain of custody procedures were observed for all sample handling.

All drilling and sampling equipment was cleaned with an Alconox solution followed by a clean water rinse prior to use in each borehole. New polyethylene tubing and new disposable bailers were used at each location where these materials were used. Following completion of sample collection activities, the boreholes were filled with neat cement grout. Soil generated during drilling was stored in labeled drums at the site pending characterization and disposal.

# Soil Conductivity Logging

Soil conductivity logging was performed at locations SB12 and SB13 to a depth of approximately 60.0 feet fbg. Soil conductivity values were continuously measured and recorded and printed as a

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log. Copies of the soil conductivity logs for boreholes SB12 and SB13 are attached with this report as Appendix B. Please note that the vertical and horizontal scales for the SB12 log are the same as for the SB13 log.

Increased conductivity values indicate finer grained materials. Correlation of the log values with actual earth materials is performed by evaluation and comparison of the conductivity logs with the lithology recorded of continuous cores obtained at locations SB12 and SB13. GeoProbe has suggested the following correlation between soil type and soil conductivity.

Coarse Sand = 75 ms/m (Milli-Siemens per meter)

Silty Sand = 76-150 ms/m (Milli-Siemens per meter)

Silty Clay = 151-200 ms/m (Milli-Siemens per meter)

Clay = 200 and greater ms/m (Milli-Siemens per meter)

Comparison of the suggested soil types and associated soil conductivity values with the conductivity logs shows that the majority of the soil types consist of coarse sand or silty sand. However, review of the visually logged boring logs shows that the subsurface materials were described predominantly as silty clay, with layers of clayey sand present at location SB13. This suggests that an x-axis shift would be appropriate in adjusting suggested soil conductivity values to correlate better with observed soil types.

Comparison of the soil conductivity logs with the visually logged portions of the corresponding boreholes shows that lower conductivity values correlate with some of the clayey sand intervals described in the visual logs. Comparison of the two soil conductivity logs shows that a noticeable increase in conductivity for a layer measuring approximately five feet thick is observed in both of the logs at a depth of approximately 40 feet bgs. Both of the Hydropunch samples were collected below this zone of increased soil conductivity.

# Soil Gas Sample Collection

A total of six soil gas samples, designated as SG-1 through SG-6, were collected on March 9, 10, and 11, 2009. Based on the measured depth to groundwater in groundwater monitoring wells at the site, all of the soil gas samples were collected at depths of 3 feet bgs with the exception of SG6, which was collected at a depth of 5 feet bgs. Samples SG1 through SG5 were collected around the building perimeter at 2301 East 12<sup>th</sup> Street, and sample SG6 was collected in the vacant unsurfaced lot located north of 23<sup>rd</sup> Avenue. The ground surface surrounding the building is covered with

asphalt at sampling locations SG1 through SG5. The sample collection locations are shown in Figure 2.

Prior to soil gas sample collection, the depth to groundwater was measured on March 9, 2009 in wells MW2, MW3, MW4, MW5 and MW6 using a steel tape and water finding paste. The measured depth to groundwater was 4.5, 5.5, 4.8, 6.6 and 5.3 feet, respectively. Based on the shallow depth to groundwater near the building in wells MW2, MW3 and MW6, soil gas samples SG1 through SG5 (located adjacent to the building) were all collected at a depth of 3 feet bgs. Based on the measured depth to groundwater in wells MW4 and MW5 (located in the street to the north of the subject site) and the presence of soil gas sample collection location SG6 in an area that did not have ground surface cover of asphalt or concrete, soil gas sample SG6 was collected at a depth of 5 feet bgs.

All of the soil gas samples were collected using temporary soil gas sampling wells. The temporary wells were constructed by driving a hollow 1-inch diameter Geoprobe rod with an expendable tip to a depth of 3 feet at locations SG1 through SG5 and to a depth of 5 feet at location SG6, dislodging the expendable tip, and then inserting a 0.250-inch outside diameter (0.187-inch inside diameter) Teflon tube to the bottom of the hollow rod.

A 4-foot length of Teflon tubing was used for locations where the Geoprobe rod had been driven to a depth of 3 feet, and a 7-foot length of Teflon tubing was used for locations where the Geoprobe rod had been driven to a depth of 5 feet. Prior to inserting the Teflon tubing the lowermost 6 inches of the Teflon tube was perforated at several locations by notching the sides of the tube with a clean razor blade. A #2/16 Lonestar sack sand was added to the annular space between the hollow rod and the Teflon tube as the hollow rod was withdrawn from the ground until the lowermost 8 inches of the hole was filled with sand. Granular bentonite (with grains the size of kitty litter) was placed in the annular space above the sand to the ground surface. The bentonite was hydrated and the 6-liter Suma purge canister and 1-liter Suma sample canister were then connected to the Teflon tubing using the configuration shown in Figure 3. At the time that the sampling manifold was assembled, the vacuum for the sample canister was checked with a vacuum gauge and recorded. The temporary well was then undisturbed for a minimum of 30 minutes prior to purging for sample collection to allow soil gas equilibration.

Following the equilibration period and prior to purging the soil gas from the temporary soil gas sampling well, a 10 minute leak check of the sampling manifold was performed by closing the valve located between the filter and the pressure gauge, opening the purge canister valve, and recording the manifold system vacuum (see Figure 3). Following successful verification of the manifold leak check, the purge volume was calculated. No purge testing for purge volume determination was done because no mobile laboratory was at the site. A default of three purge volumes was extracted prior to sample collection. The purge time was calculated using a

nominal flow rate provided by the flow controller of 200 milliliters per minute. Purge volume calculations are provided in Appendix C of this report.

Following completion of purging three purge volumes, the valve to the purge canister was closed, a tracer gas (2-Propanol) was placed in a dish adjacent to the purge canister, and a clear Rubbermaid bin was placed over the top of the temporary well, the sampling manifold, and the 1-liter sample canister. The vapor concentration of the 2-Propanol was monitored with a PID until 2-Propanol vapor concentrations appeared to have equilibrated. The Rubbermaid bin was then temporarily and partially lifted long enough to open the sample canister valve and the bin was then be replaced over the sampling equipment and the 2-Propanol vapor concentrations were then monitored again with the PID. Once the vacuum for the sample canister valve decreased to 5 inches of mercury, the Rubbermaid lid was removed and the sample canister valve closed.

A total of one replicate soil gas sample (designated as DUP) was collected into a one-liter Summa canister using procedures described above immediately after the collection of the corresponding original sample. The void space and tubing was not purged of three purge volumes prior to collection of the replicate sample. Following soil gas sample collection, a PID was connected to the Teflon tubing to obtain a preliminary field value for the sample collection location. The soil gas samples were then stored in a box and promptly shipped to the laboratory for extraction and analysis. Soil gas sampling was not performed during or following a precipitation event. Measurements of vacuums, purging and equilibration time intervals, and PID readings were recorded on Soil Gas Sampling Data Sheets that are provided in Appendix C of this report.

During sample collection, an initial attempt was made to collect a soil gas sample at location SG6. However, because of high vacuum conditions, the sample collection location was relocated to a second location approximately five feet away from the initial sample collection location.

All drilling rods and associated drilling fittings were cleaned with an Alconox solution wash followed by a clean water rinse. New Teflon tubing was used at each sample collection location. Clean, unused vacuum gages and stainless steel sampling manifolds containing flow restrictors were used at each sample collection location. Following soil gas sample collection the Teflon tubing was pulled from each temporary soil gas sampling well and a 1-inch diameter solid steel rod was driven through the bentonite and sand to the total depth of the temporary soil gas sampling well. The solid steel rod was then removed, and the borehole was filled with neat cement.

# **Drum Disposal**

On March 30, 2009 one drum containing soil generated during the subsurface investigation was removed from the site by Clearwater Environmental, Inc. of Union City, California. The drum was removed as non-hazardous waste with manifest number 6733. The soil was taken to the Alviso Independent Oil facility in Alviso, California. A copy of the manifest is attached as Appendix D.

### GEOLOGY AND HYDROGEOLOGY

Review of Figure 1 shows that the Brooklyn Basin (connected to San Francisco Bay by way of a Tidal Canal to the south and the Oakland Inner Harbor to the north) is located approximately 1,800 feet to the west of the subject site, and Sausal Creek is located approximately 2,900 feet to the east of the subject site.

Based on review of regional geologic maps from U. S. Geological Survey Professional Paper 943, "Flatland Deposits - Their Geology and Engineering Properties and Their Importance to Comprehensive Planning," by E. J. Helley and K. R. Lajoie, 1979, the subject site is underlain by Pleistocene Beach and Dune Sand Deposits (Merrit Sand), which is described as loose well-sorted fine to medium sand. The site is bordered immediately to the north and east by Holocene Medium-Grained Alluvium (Qham), described as unconsolidated moderately sorted permeable fine sand, silt, and clayey silt with a few thin beds of coarse sand.

Based on the materials encountered in the borehole cores and soil conductivity logs at drilling locations SB7 through SB13, the subsurface materials encountered at the site consisted predominantly of clay, silty clay, and sandy clay, with intermittent layers of clayey sand. The subsurface materials at the site correlate with Holocene Medium-Grained Alluvium (Qham) rather than Pleistocene Beach and Dune Sand Deposits (Merrit Sand).

The measured depth to water in groundwater monitoring wells at the subject site have historically ranged from approximately 5 to 9 feet below the ground surface. The groundwater flow direction at the subject site has historically been calculated to be to the northwest. However, historic water level measurements in the UST pit (wells EW1 and MW1) have been elevated relative to the water levels in the surrounding wells. Similarly, the water level in well MW6 appears anomalously low in relative to the water levels in the adjacent wells. Based on the groundwater levels in wells MW1 through MW5, the groundwater flow direction on June 4, 2007 appeared to be westerly to southwesterly.

Review of groundwater flow direction information for nearby sites with groundwater monitoring wells shows that the groundwater flow direction at 2200 East 12<sup>th</sup> Street (located approximately

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800 feet northwest of the subject site) has historically been to the west-southwest, and the groundwater flow direction at 2345 International Boulevard (located approximately 500 feet northeast of the subject site) has historically been to the southwest.

## LABORATORY ANALYSIS

The soil and groundwater samples collected from each borehole were analyzed at McCampbell Analytical, Inc. (McCampbell) in Pittsburg, California. McCampbell is a State-Accredited hazardous waste testing facility. The soil gas samples were analyzed at Air Toxics Limited of Folsom, California.

The soil samples collected from boreholes SB11, SB12, and SB13 and the groundwater samples collected from boreholes SB7 through SB13 were analyzed for TPH-G using EPA Method 5030 in conjunction with Modified EPA Method 8015, for TPH-D using EPA Methods 3550 or 3510 in conjunction with Modified EPA Method 8015, and Volatile Organic Compounds (VOCs), including methyl tertiary-butyl ether (MTBE), benzene, toluene, ethylbenzene, and total xylenes (BTEX), lead scavengers, and fuel oxygenates using EPA Method 5030B in conjunction with EPA Method 8260B.

The soil gas samples collected from boreholes SG-1 through SG-6 were analyzed for VOCs (tetrachloroethene, trichloroethene, cis-1,2-dichloroethene, trans-1,2-dichloroethene, vinyl chloride, MTBE, BTEX, naphthalene, and the tracer gas 2-propanol) by modified EPA Method TO15, and for TPH-G by modified EPA Method TO-3. In addition, the laboratory also performed two duplicate sample analyses identified as SG1-DUP Lab Duplicate and SG5 Lab Duplicate.

The soil sample results are summarized in Tables 1A and 1B, the groundwater sample results are summarized in Tables 2A, 2B and 2C, and the soil gas sample results are summarized in Table 3. Copies of the laboratory analytical reports and chain of custody documentation are attached with this report as Appendix E.

# SOIL GAS RISK AND HAZARD CALCULATION

The soil gas results for all detected VOCs were evaluated using the Cal/EPA screening-level model for soil gas contamination (last modified February 4, 2009). The model is the California-adopted Johnson Ettinger model used for calculating predicted risk and hazard posed by vapor intrusion to indoor air. The default values of the model DATAENTER page were used with the following exceptions.

• Soil type SI was selected for the vadose zone soil type.

- Soil gas sampling depth was three feet (91.4 centimeters) for SG1 through SG5, and the default sampling depth of five feet (152.4 centimeters) was used for SG6.
- After calculating risk and hazard for the default residential exposure scenario (exposure duration of 30 years and exposure frequency of 350 days per year) a commercial exposure scenario was calculated using an exposure duration of 25 years and an exposure frequency of 250 days per year).

The p-xylene CAS # was used for calculation of the m,p-xylene risk and hazard.

The spreadsheet RESULTS page output for the calculated risk and hazard for both the residential and commercial exposure scenarios are summarized in Table 4.

Model sensitivity analysis resulted in the following findings.

- The default average soil temperature value of 24 degrees C yielded the same risk and hazard results as calculations using an average soil temperature of 18 degrees C.
- The vadose zone soil type SI yielded the same risk and hazard results as soil types SC, SIL and S.
- Different soil gas sampling depths yielded different risk and hazard results.
- Residential and commercial exposure scenarios yielded different risk and hazard results.

# **DISCUSSION AND RECOMMENDATIONS**

Review of the soil sample results in Table 1A shows that the detected soil sample results exceeded May 2008 San Francisco Bay – Regional Water Quality Control Board (SF-RWQCB) Table A Environmental Screening Level (ESLs) for commercial/industrial land use for TPH-G at a depth of 8.5 feet at SB11 and at a depth of 9.5 feet at SB12 and SB13. The TPH-G Table C ESL value was also exceeded in SB12 and SB13 at a depth of 17.5 feet. Similarly, the TPH-D Table A ESL was exceeded at depths of 8.5 and 9.5 feet at SB11 and SB13, respectively, and the TPH-D Table C ESL was exceeded at a depth of 17.5 feet at SB13. MTBE and BTEX were not detected in any of the samples with the exception of 0.84 mg/kg ethylbenzene, which was at a concentration below the respective ESL value. Review of the soil sample results in Table 1B shows that none of the other VOCs detected have ESLs or were detected at a concentration exceeding their respective ESL. The maximum concentration for any detected VOC in soil on Table 2 is 1.2 mg/kg.

Review of the groundwater sample results in Table 2A shows that the detected groundwater sample results exceeded May 2008 SF-RWQCB Table A Environmental Screening Level (ESLs) for TPH-G in first encountered groundwater at locations SB9, SB11, SB12 and SB13, and at SB12 at a depth of 45 feet. Similarly, TPH-D was detected at concentrations exceeding the Table A ESL in

all of the samples with the exception of the first encountered groundwater sample from SB8 and the groundwater sample collected at a depth of 48 feet in SW13. The only MTBE and BTEX concentrations exceeding their respective ESL values were benzene in shallow groundwater at locations SB11 and SB13 and ethylbenzene in shallow groundwater at locations SB11. Review of the groundwater sample results in Table 2B shows that none of the other VOCs detected have ESLs or were detected at a concentration exceeding their respective ESL with the exception of 1,2-DCA at SB10 and TBA at SB13. Review of Table 2C shows that the only detected shallow groundwater HVOC concentrations exceeding their respective May 2008 Table A ESL values were TCE at SB9, SB10 and SB11, cis-1,2-DCE at SB10 and SB11, trans 1,2-DCE at SB11, and vinyl chloride at SB11 and SB13.

TPH-D concentrations in groundwater are shown in Figure 4, and TPH-G and benzene concentrations in groundwater are shown in Figures 5 and 6, respectively. Review of these figures shows that the highest concentrations of TPH-D, TPH-G and benzene are located in the immediate vicinity of the former UST pits, and extend northwestward to beyond the northwest side of 23<sup>rd</sup> Avenue. However, the concentrations of these compounds at SB11 (in the sanitary sewer trench) are not consistent with concentrations encountered at nearby locations SB3, SB4, SB5 and SB12. The concentrations detected in the sanitary sewer trench at SB11 are substantially higher than the other nearby detected concentrations and are interpreted to have originated from some other unknown source. Similarly, the general absence of petroleum hydrocarbons in samples SB7 and SB8 (also collected in utility trenches) indicates that petroleum hydrocarbons are not preferentially migrating southeastwards from the site in utility trenches at concentrations of concern. Figures 4, 5 and 6 also show that petroleum hydrocarbons do not appear to be migrating to the west toward an inactive well previously identified in P&D's December 8, 2008 Sensitive Receptor Survey Report (document 0404.R2) at 1091 Calcot Street. Although the well location at the property is not known, the shortest distance from the subject site to the 1091 Calcot Street property is approximately 235 feet. Review of Figure 4 shows that the TPH-D concentration at SB9 indicates that the extent of TPH-D has not been defined in first encountered groundwater to south of the subject site. Railroad tracks are located immediately to the south of the subject site, and no further investigation of TPH-D to the south of the site is recommended at this time.

Figure 7 shows the historic maximum TCE and DCE groundwater concentrations encountered in the vicinity of the site, and Figure 8 shows the most recent TCE and DCE groundwater concentrations in the vicinity of the subject site. Groundwater TCE isoconcentration contours are shown in the two figures. Comparison of the two figures shows that historic elevated TCE and DCE groundwater concentrations in the immediate vicinity of the former UST pits has diminished entirely. Review of Figure 8 shows that the only locations where TCE was detected during the current investigation in groundwater at concentrations exceeding the May 2008 Table A ESL was to the southwest and west at locations SB9, SB10 and SB11.

Review of SB12 and SB13 groundwater sample results shown in Tables 2A, 2B and 2C and on Figures 4, 5, 6, and 8 show that no analytes were detected in groundwater at a depth of 48 feet at SB13 (located in the source area), but that detectable concentrations of analytes were encountered at a depth of 45 feet at a distance of approximately 125 feet to the northwest of the site. The presence of detectable concentrations of analytes at SB12 at a depth of 45 feet indicates that the groundwater plume is moving vertically downwards with distance from the subject site. Only TPH-D and TPH-G were detected at SB12 at a depth of 45 feet at concentrations exceeding their respective May 2008 Table A ESL values.

Review of the soil gas results in Table 3 shows that the only compound detected at concentrations exceeding the May 2008 SFRWQCB Table E ESL for industrial land use was TPH-G. The TPH-G concentrations exceeded the ESL for all samples except at location SG5. TPH-G and benzene soil gas concentrations are shown in Figures 9 and 10, respectively.

Review of Table 4 shows that none of the calculated cumulative hazards from vapor intrusion for any of the sampling locations exceeded 1.0. However, the cumulative incremental carcinogenic risk from vapor intrusion for a commercial exposure scenario exceeded 1.0E-06 at locations SG2, SG4, and also for the evaluation of the highest concentrations encountered for each detected analyte in soil gas at the site.

Based on the TPH-G soil gas results and the Table 4 results of cumulative incremental carcinogenic risk from vapor intrusion for a commercial exposure scenario, P&D recommends that sub-slab soil gas samples be collected at locations SG7 through SG10 as shown on Figures 9 and 10.

# **DISTRIBUTION**

A copy of this report should be uploaded to the Alameda County Environmental Health Department ftp website with a letter on company letterhead identifying the contact information for the responsible party. In addition, a copy of this report should also be uploaded to the GeoTracker website.

# LIMITATIONS

This report was prepared solely for the use of J.W. Silveira Realty. 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

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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 which is 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.

PAUL H. KING

No. 5901

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

Sincerely,

P&D Environmental, Inc.

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### Attachments:

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# **TABLES**

	Table 1A.	Summary o	Summary of Soil Sample Laboratory Analytical Results - TPH and BTEX									
Sample ID	Sample Date	TPH-D	TPH-G	MTBE	Benzene	Toluene	Ethylbenzene	Total Xylenes				
SB11-8.5	3/11/2009	97, b,c,d	370, a	ND<0. <b>20</b>	ND<0. <b>20</b>	ND<0.20	ND<0.20	ND<0.20				
SB12-9.5	3/10/2009	67, b,c,d	360, a	ND<0. <b>20</b>	ND<0.20	ND<0.20	ND<0.20	ND<0.20				
SB12-14.5	3/10/2009	15, b,c,d	25, a	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005				
SB12-17.5	3/10/2009	13, b,c,d	390, a	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005				
SB13-9.5	3/10/2009	280,d,e	820, a	ND<0. <b>20</b>	ND<0.20	ND<0.20	ND<0.20	ND<0.20				
SB13-13.5	3/10/2009	9.5, b,c,d	35, a	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005				
SB13-17.5	3/10/2009	94, b,d	460, a	ND<0. <b>20</b>	ND<0. <b>20</b>	ND<0.20	0.84	ND<0.20				
$ESL^1$		83	83	0.023	0.044	2.9	2.3	2.3				
ESL <sup>2</sup>		83	83	0.023	0.044	2.9	3.3	2.3				
ESL <sup>3</sup>		83	83	0.023	0.044	2.9	3.3	2.3				
ESL <sup>4</sup>		83	83	0.023	0.044	2.9	3.3	2.3				

TPH-D = Total Petroleum Hydrocarbons as Diesel

TPH-G = Total Petroleum Hydrocarbons as Gasoline

MTBE = Methyl tertiary-butyl ether

a = no recognizable pattern.

b = Laboratory Note: diesel range compounds are significant; no recognizable pattern.

- c = Laboratory Note: oil range compounds are significant.
- d = Laboratory Note: Stoddard solvent/ mineral spirits (?)
- e = Laboratory Note: unmodified or weakly modified diesel is significant.

ND = Not detected

ESL <sup>1</sup>= Environmental Screening Level, developed by San Francisco Bay – Regional Water Quality Control Board (SF-RWQCB), from Table A – Shallow Soils, groundwater is a current or potential source of drinking water, updated May 2008. Residential Land use.

ESL <sup>2</sup>= Environmental Screening Level, developed by San Francisco Bay – Regional Water Quality Control Board (SF-RWQCB), from Table C – Deep Soils, groundwater is a current or potential source of drinking water, updated May 2008. Residential Land use.

ESL <sup>3</sup> = Environmental Screening Level, developed by San Francisco Bay – Regional Water Quality Control Board (SF-RWQCB), from Table A – Shallow Soils, groundwater is a current or potential source of drinking water, updated May 2008. Commercial/Industrial Land use.

ESL <sup>4</sup>= Environmental Screening Level, developed by San Francisco Bay – Regional Water Quality Control Board (SF-RWQCB), from Table C – Deep Soils, groundwater is a current or potential source of drinking water, updated May 2008. Commercial/Industrial Land use.

### Values in bold exceed ESLs

Results in milligrams per Kilogram (mg/kg) unless otherwise specified.

Sample ID	Sample Date	VOCs	ESL, 1	ESL, <sup>2</sup>
SB11-8.5	3/11/2009	ND, except		
		n-Butyl benzene = 0.81	None	None
		4-Isopropyl toluene = 0.48	None	None
		sec-Butyl benzene = $0.36$	None	None
		Isopropyl benzene = 0.44	None	None
		n-Propyl benzene = 0.94	None	None
SB12-9.5	3/10/2009	ND, except		
~	27 - 27 - 27 - 27	n-Butyl benzene = $0.63$	None	None
		4-Isopropyl toluene = 0.52	None	None
		sec-Butyl benzene = 0.35	None	None
		Isopropyl benzene = 0.63	None	None
		n-Propyl benzene = 1.2	None	None
SB12-14.5	3/10/2009	ND, except		
эв 12-14.3	3/10/2009	n-Butyl benzene = 0.054	None	None
		4-Isopropyl toluene = 0.038	None	None
		sec-Butyl benzene = 0.031	None	None
		Isopropyl benzene = 0.047	None	None
		n-Propyl benzene = 0.074	None	None
SB12-17.5	3/10/2009	ND, except		
3D12-17.3	3/10/2009	Acetone = $0.057$		0.5
		n-Butyl benzene = 0.054	None	None
		4-Isopropyl toluene = 0.045	None	None
		sec-Butyl benzene = 0.028	None	None
		Isopropyl benzene = 0.053	None	None
		n-Propyl benzene = 0.098	None	None
SB13-9.5	3/10/2009	ND, except		
3D13-9.3	3/10/2009	n-Butyl benzene = 1.2		None
		4-Isopropyl toluene = 0.73		None
		sec-Butyl benzene = 0.41		None
		Isopropyl benzene = 0.41		None
		n-Propyl benzene = 0.91		None
		• •		None
SB13-13.5	3/10/2009	ND, except		N
		n-Butyl benzene = 0.018		None
		4-Isopropyl toluene = 0.018		None
		sec-Butyl benzene = 0.0090		None
		Isopropyl benzene = 0.0091		None
SB13-17.5	3/10/2009	ND, except		
		n-Butyl benzene = $0.59$		None
		4-Isopropyl toluene = $0.39$		None
		sec-Butyl benzene = 0.24		None
		Isopropyl benzene = $0.52$		None
		n-Propyl benzene = $0.97$		None

# Abbreviations and Notes: ND = Not detected

ESL1 = Environmental Screening Level, developed by San Francisco Bay - Regional Water Quality Control Board (SF-RWQCB) updated May 2008, from Table A -Shallow Soil Screening Levels, Groundwater is a current or potential source of drinking water (Residential Land Use).

ESL<sup>2</sup> = Environmental Screening Level, developed by San Francisco Bay - Regional Water Quality Control Board (SF-RWQCB) updated May 2008, from Table A – Shallow Soil Screening Levels, Groundwater is a current or potential source of drinking water (Commercial/Industrial Use).

Italicised Compounds are non-petroleum VOCs.

Values in bold exceed ESLs

Results in milligrams per Kilogram (mg/kg) unless otherwise specified.

	Table 2A. Summary of Groundwater Sample Laboratory Analytical Results - TPH and BTEX											
Sample ID	Sample Date	TPH-D	TPH-G	MTBE	Benzene	Toluene	Ethylbenzene	Total Xylenes				
SB7-W	3/5/2009	100, c,d	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5				
SB8-W	3/5/2009	ND<50	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5				
SB9-W	3/10/2009	1,400, c,d,e	160, b	ND<0.5	ND<0.5	2.9	0.53	ND<0.5				
SB10-W	3/11/2009	110, с	ND<50	ND<1.0	ND<1.0	3.2	ND<1.0	ND<1.0				
SB11-W	3/11/2009	8,100, a,c,d,e	9,100, a	ND<2.5	37	ND<2.5	41	6.1				
SB12-W	3/10/2009	760, d,e	2,300	ND<1.2	ND<1.2	14	1.3	3.8				
SB12W-45	3/10/2009	110, c,d,e	130, b	ND<0.5	ND<0.5	1.7	ND<0.5	0.60				
SB13-W	3/10/2009	610, c,d,e	420	ND<0.5	8.4	1.8	2.7	0.88				
SB13W-48	3/10/2009	ND<50	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5				
ESL		100	100	5.0	1.0	40	30	20				

TPH-D = Total Petroleum Hydrocarbons as Diesel

TPH-G = Total Petroleum Hydrocarbons as Gasoline

MTBE = Methyl tertiary-butyl ether

ND = Not detected

a = Laboratory Note: lighter than water immiscible sheen/ product is present

b = Laboratory Note: no recognizable pattern.

c = Laboratory Note: diesel range compounds are significant; no recognizable pattern

d = Laboratory Note: oil range compounds are significant.

e = Laboratory Note: Stoddard solvent/mineral spirits (?).

ESL= Environmental Screening Level, developed by San Francisco Bay – Regional Water Quality Control Board

(SF-RWQCB), from Table A – Shallow Soils, groundwater is a current or potential

source of drinking water, updated May 2008.

# Values in bold exceed ESLs

Results in micrograms per liter (µg/L) unless otherwise specified.

Table 2B.	Summary of Gr	Results - Other Detected Non-	
Sample ID	Sample Date	Other Detected VOCs	ESL
SB7-W	3/5/2009	ND	
SB8-W	3/5/2009	ND	
SB9-W	3/10/2009	ND	
SB10-W	3/11/2009	ND, except	
		Acetone = $43$	1,500
		MEK = 10	4,200
		1,2-DCA = 1.2;	0.5
SB11-W	3/11/2009	ND, except	
		n-Butyl benzene = 29	None
		4-Isopropyl toluene = 27	None
		sec-Butyl benzene = 17	None
		Isopropyl benzene = 66	None
		n-Propyl benzene = 90	None
SB12-W	3/10/2009	ND, except,	
5512 **	3/10/2007	Acetone = 43	1,500
		MEK = 5.2	4,200
		n-Butyl benzene = 5.7,	None
		4-Isopropyl toluene = 5.4,	None
		sec-Butyl benzene = 3.8,	None
		Isopropyl benzene = 12,	None
		n-Propyl benzene = 14	None
		1,2,4-Trimethylbenzene = 2.4	None
		1,3,5-Trimethylbenzene = 1.2	None
SB12W-45	3/10/2009	ND, except	
		Isopropylbenzene = $0.51$ ,	None
		n-Propylbenzene = $0.59$	None
		Naphthalene = $0.69$ ,	17
SB13-W	3/10/2009	Acetone = 49	1,500
		MEK = 23	4,200
		Chlorobenzene = $2.4$	25
		Isopropylbenzene $= 2.1$ ,	None
		n-Propylbenzene = $1.7$	None
		Napthalene = $1.2$ ,	17
		TBA = 14	12
		2-Hexanone = 1.7	None
SB13W-48	3/10/2009	ND	
ESL			

VOCs = Volatile Organic Compounds.

1,2-DCA = 1,2-Dichloroethane

MEK = Methyl Ethyl Ketone (2-butanone)

TBA = tert-Butyl Alcohol

ND = Not detected

VOC results were analyzed using EPA Method 8260B.

ESL = Environmental Screening Level, developed by San Francisco Bay - Regional Water Quality Control Board (SF-RWQCB) updated May 2008, from Table A – Shallow Soil Screening Levels, Groundwater is a current or potential source of drinking water.

## Values in bold exceed ESLs

Results in micrograms per liter (µg/L) unless otherwise specified.

Т	Table 2C. Summary of Groundwater Sample Laboratory Analytical Results - Detected Halogenated VOCs												
Sample ID	Sample Date	PCE	TCE	cis-1,2-DCE	trans-1,2-DCE	1,1-DCE	1,1-DCA	Vinyl Chloride	Chloroform				
SB7-W	3/5/2009	ND<0.5	0.86	0.63	ND<0.5	ND<0.5	ND<0.5	ND< <b>0.5</b>	ND<0.5				
SB8-W	3/5/2009	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND< <b>0.5</b>	ND<0.5				
SB9-W	3/10/2009	ND<0.5	18	1.2	ND<0.5	ND<0.5	ND<0.5	ND< <b>0.5</b>	ND<0.5				
SB10-W	3/11/2009	ND<1.0	42	49	4.4	ND<1.0	ND<1.0	ND<1.0	ND<1.0				
SB11-W	3/11/2009	ND<2.5	30	9.6	11	ND<2.5	ND<2.5	3.1	ND<2.5				
SB12-W	3/10/2009	ND<1.2	ND<1.2	ND<1.2	ND<1.2	ND<1.2	ND<1.2	ND<1.2	ND<1.2				
SB12W-45	3/10/2009	ND<0.5	0.80	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND< <b>0.5</b>	ND<0.5				
SB13-W	3/10/2009	ND<0.5	ND<0.5	3.1	2.1	ND<0.5	ND<0.5	1.2	ND<0.5				
SB13W-48	3/10/2009	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND< <b>0.5</b>	ND<0.5				
ESL		5.0	5.0	6.0	10	6.0	5.0	0.5	70.0				

PCE = Tetrachloroethene

TCE = Trichloroethene

cis-1,2-DCE = cis-1,2-Dichloroethene

trans-1,2-DCE = trans-1,2-Dichloroethene

1,1-DCE = Dichloroethene

1,1-DCA= Dichloroethane

VOCs = Volatile Organic Compounds.

ND = Not detected

VOC results were analyzed using EPA Method 8260B.

ESL = Environmental Screening Level, developed by San Francisco Bay - Regional Water Quality Control Board (SF-RWQCB) updated May 2008, from Table A – Shallow Soil Screening Levels, Groundwater is a current or potential source of drinking water.

### Values in bold exceed ESLs

Results in micrograms per liter (µg/L) unless otherwise specified.

# TABLE 3 SUMMARY OF SOIL GAS ANALYTICAL RESULTS

Sampl	le ID	Sample Date	PCE	TCE	cis-1,2- DCE	trans-1,2- DCE	Vinyl Chloride	TPH-G	Benzene	Toluene	Ethylbenzene	m,p-Xylene	o-Xylenes	2-Propanol, b
SG	<del>)</del> 1	3/9/2009	ND<61	ND<49	ND<36	ND<36	ND<23	94,000	70	9,700	380	1,100	310	ND<89
SG1-l	DUP	3/9/2009	ND<34	ND<27	ND<20	ND<20	ND<13	<u>67,000</u>	54	5,500	250	770	220	ND<49
SG1-DU Dupli			ND<15	ND<12	ND<8.9	ND<8.9	ND<5.7	NA	53	5,800, a	240	760	220	ND<22
SG	i2	3/9/2009	21	ND<14	ND<10	ND<10	ND<6.6	<u>270,000</u>	140	3,200	190	630	260	ND<25
SG	<del>i</del> 3	3/9/2009	ND<33	ND<26	ND<19	ND<19	ND<12	<u>450,000</u>	46	6,600	280	930	310	ND<47
SG	<b>i</b> 4	3/9/2009	ND<39	ND<31	ND<23	ND<23	ND<15	300,000	150	7,100	400	1,400	460	ND<56
SG	i5	3/10/2009	20	ND<6.4	ND<4.7	ND<4.7	ND<3.0	8,000	49	710	50	170	45	ND<12
SG5 Lab I	Duplicate		NA	NA	NA	NA	NA	8,300	NA	NA	NA	NA	NA	NA
SG	i6	3/10/2009	ND<30	ND<23	ND<17	ND<17	ND<11	48,000	31	4,400	160	510	160	ND<43
ESL 1			410	1,200	7,300	15,000	31	10,000	84	63,000	980	m, p, o xy	vlenes 21,000 combined	None
ESL <sup>2</sup>			1,400	4,100	20,000	41,000	100	29,000	280	180,000	3,300	m, p, o x	ylenes58,000 combined	None

### Abbreviations and Notes:

PCE = Tetrachloroethene

TCE = Trichloroethene

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

trans-1,2-DCE = trans-1,2-dichloroethene

TPH-G = Total Petroleum Hydrocarbons as Gasoline.

ND = Not Detected.

NA = Not Analyzed.

a = Laboratory Note: Exceeds Instrument Calibration Range.

b = 2-propanol used in field as leak detector.

ESL1 = Environmental Screening Level, developed by San Francisco Bay - Regional Water Quality Control Board

(SF-RWQCB), from Table E – Indoor Air and Soil Gas (Vapor Intrusion Concerns)

Shallow Soil Gas Screening Levels for Residential Land Use.

ESL<sup>2</sup> = Environmental Screening Level, developed by San Francisco Bay – Regional Water Quality Control Board

(SF-RWQCB), from Table E – Indoor Air and Soil Gas (Vapor Intrusion Concerns)

Shallow Soil Gas Screening Levels for Commercial/Industrial Land Use.

### Values in bold exceed ESL<sup>1</sup>

Values Underlined exceed ESL<sup>2</sup>

All soil gas samples collected at 5-foot depth.

Results in micrograms per cubic meter (µg/m3), unless otherwise indicated.

Table 4
Calculated Vapor Intrusion Risk and Hazard Summary
Cal/EPA Screening-Level Model
for Soil Gas Contamination (last modified 2/4/2009)

Mel Senna Brake Service	•	iiiica 2/4/2009)	Residenti	al Exposure	Commer	cial Exposure
2301 E 12th St.			Incremental	Hazard	Incremental	Hazard
Oakland, CA			risk from	quotient	risk from	quotient
,			vapor	from vapor	vapor	from vapor
			intrusion to	intrusion to	intrusion to	intrusion to
			indoor air,	indoor air,	indoor air,	indoor air,
Chemical	Sample	Concentration	carcinogen	noncarcinogen	carcinogen	noncarcinogen
	Location	$(\mu g/m^3)$	(unitless)	(unitless)	(unitless)	(unitless)
	SG1	(μg/111 )	(difference)	(diffeess)	(difference)	(difference)
Benzene	~ ~ ~	70	1.1E-06	2.9E-03	6.3E-07	1.7E-03
Toluene		9,700	NA	3.9E-02	NA	2.3E-02
Ethyl Benzene		380	4.6E-07	4.3E-04	2.7E-07	2.6E-04
m,p-xylene		1,100	NA	1.3E-02	NA	7.5E-03
o-xylene		310	NA	3.8E-03	NA	2.2E-03
		TOTALS	1.6E-06	5.9E-02	9.0E-07	3.5E-02
_	SG2					
Benzene		140	2.1E-06	5.7E-03	1.3E-06	3.4E-03
Toluene		3,200	NA	1.3E-02	NA	7.7E-03
Ethyl Benzene		190	2.3E-07	2.1E-04	1.4E-07	1.3E-04
m,p-xylene		630	NA	7.2E-03	NA	4.3E-03
o-xylene		260	NA	3.2E-03	NA	1.9E-03
Tetrachloroethene		21	5.9E-08	6.6E-04	3.5E-08	3.9E-04
		TOTALC	2 4E 06	2.015.02	1.5E 06	1.00.03
		TOTALS	2.4E-06	3.0E-02	1.5E-06	1.8E-02
	SG3					
Benzene		46	7.0E-07	1.9E-03	4.2E-07	1.1E-03
Toluene		6,600	NA	2.7E-02	NA	1.6E-02
Ethyl Benzene		280	3.4E-07	3.2E-04	2.0E-07	1.9E-04
m,p-xylene		930	NA	1.1E-02	NA	6.3E-03
o-xylene		310	NA	3.8E-03	NA	2.2E-03
-						
		TOTALS	1.0E-06	4.4E-02	6.2E-07	2.6E-02

# **NOTES**

Used p-xylene CAS # for m,p-xylene risk and hazard calculation.

Spreadsheet default values were used, except for vadose zone soil type SI was selected,

soil gas sampling depth of 91.4 cm for SG1 through SG5, and

25 years exposure duration and 250 days/year exposure frequency for commercial exposure scenario.

Table 4
Calculated Vapor Intrusion Risk and Hazard Summary
Cal/EPA Screening-Level Model
for Soil Gas Contamination (last modified 2/4/2009)

Mel Senna Brake Service	,	iiiica 2/4/2009)	Residenti	al Exposure	Commer	cial Exposure
2301 E 12th St.			Incremental	Hazard	Incremental	Hazard
Oakland, CA			risk from	quotient	risk from	quotient
o uniturio, Ol I			vapor	from vapor	vapor	from vapor
			intrusion to	intrusion to	intrusion to	intrusion to
			indoor air,	indoor air,	indoor air,	indoor air,
Chemical	Sample	Concentration	carcinogen	noncarcinogen	carcinogen	noncarcinogen
Chemicar	Location	$(\mu g/m^3)$	(unitless)	(unitless)	(unitless)	(unitless)
		(μg/m )	(unitiess)	(unitiess)	(unitiess)	(unitiess)
Damana	SG4	150	2.3E-06	6.1E-03	1 4E 06	3.6E-03
Benzene		150			1.4E-06	
Toluene		7,100	NA 4 OF O7	2.9E-02	NA	1.7E-02
Ethyl Benzene		400	4.8E-07	4.5E-04	2.9E-07	2.7E-04
m,p-xylene		1,400	NA	1.6E-02	NA	9.5E-03
o-xylene		460	NA	5.6E-03	NA	3.3E-03
		TOTAL C	<b>4</b> 0F 06	# #FF 0.0	1 50 06	2.45.02
		TOTALS	2.8E-06	5.7E-02	1.7E-06	3.4E-02
	SG5					
Benzene	503	49	7.5E-07	2.0E-03	4.4E-07	1.2E-03
Toluene		710	NA	2.9E-03	NA	1.7E-03
Ethyl Benzene		50	6.0E-08	5.6E-05	3.6E-08	3.4E-05
m,p-xylene		170	NA	1.9E-03	NA	1.2E-03
o-xylene		45	NA	5.5E-04	NA	3.3E-04
Tetrachloroethene		20	5.6E-08	6.3E-04	3.3E-08	3.8E-04
		TOTALS	8.7E-07	8.0E-03	5.1E-07	4.8E-03
	SG6					
Benzene		31	5.4E-07	1.4E-03	3.2E-07	8.6E-04
Toluene		4,400	NA	1.3E-02	NA	7.7E-03
Ethyl Benzene		160	1.4E-07	1.3E-04	8.1E-08	7.6E-05
m,p-xylene		510	NA	4.1E-03	NA	2.5E-03
o-xylene		160	NA	1.4E-03	NA	8.4E-04
		TOTALS	6.8E-07	2.0E-02	4.0E-07	1.2E-02

# **NOTES**

Used p-xylene CAS # for m,p-xylene risk and hazard calculation.

Spreadsheet default values were used, except for vadose zone soil type SI was selected,

soil gas sampling depth of 91.4 cm for SG1 through SG5, and

25 years exposure duration and 250 days/year exposure frequency for commercial exposure scenario.

Table 4
Calculated Vapor Intrusion Risk and Hazard Summary
Cal/EPA Screening-Level Model
for Soil Gas Contamination (last modified 2/4/2009)

Mel Senna Brake Service	e		Residenti	al Exposure	<b>Commercial Exposure</b>		
2301 E 12th St.			Incremental	Hazard	Incremental	Hazard	
Oakland, CA			risk from	quotient	risk from	quotient	
			vapor	from vapor	vapor	from vapor	
		Highest	intrusion to	intrusion to	intrusion to	intrusion to	
		Detected	indoor air,	indoor air,	indoor air,	indoor air,	
<u>Chemical</u>	Sample	Concentration	carcinogen	noncarcinogen	carcinogen	noncarcinogen	
	Location	$(\mu g/m^3)$	(unitless)	(unitless)	(unitless)	(unitless)	
Benzene	SG4	150	2.3E-06	6.1E-03	1.4E-06	3.6E-03	
Toluene	SG1	9,700	NA	3.9E-02	NA	2.3E-02	
Ethyl Benzene	SG4	400	4.8E-07	4.5E-04	2.9E-07	2.7E-04	
m,p-xylene	SG4	1,400	NA	1.6E-02	NA	9.5E-03	
o-xylene	SG4	460	NA	5.6E-03	NA	3.3E-03	
Tetrachloroethene	SG2	21	5.9E-08	6.6E-04	3.5E-08	3.9E-04	
		TOTALS	2.8E-06	6.8E-02	1.7E-06	4.0E-02	

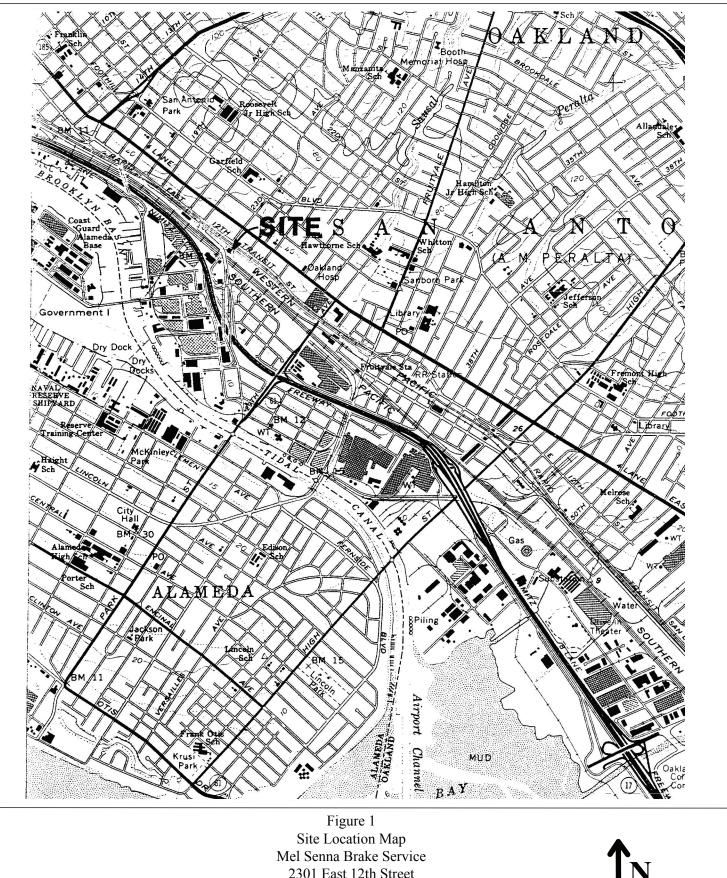
# **NOTES**

Used p-xylene CAS # for m,p-xylene risk and hazard calculation.

Spreadsheet default values were used, except for vadose zone soil type SI was selected, soil gas sampling depth of 91.4 cm for SG1 through SG5, and

25 years exposure duration and 250 days/year exposure frequency for commercial exposure scenario.

# **FIGURES**

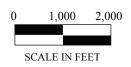


2301 East 12th Street Oakland, California



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

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



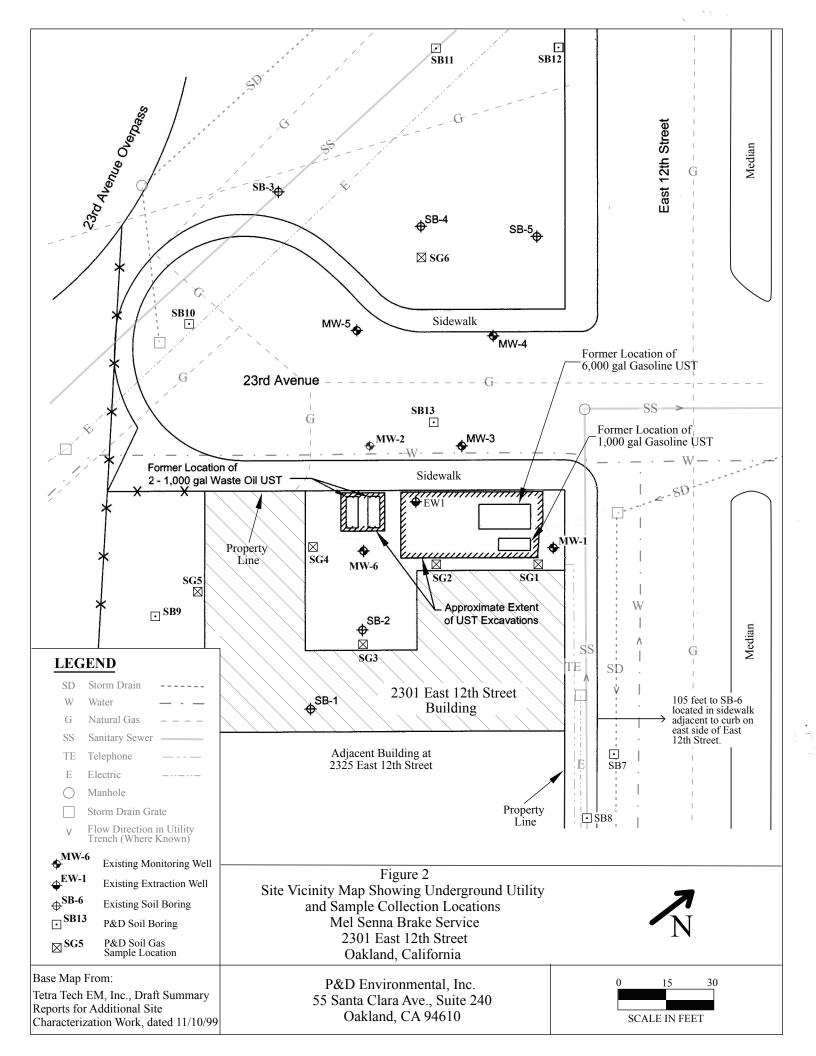
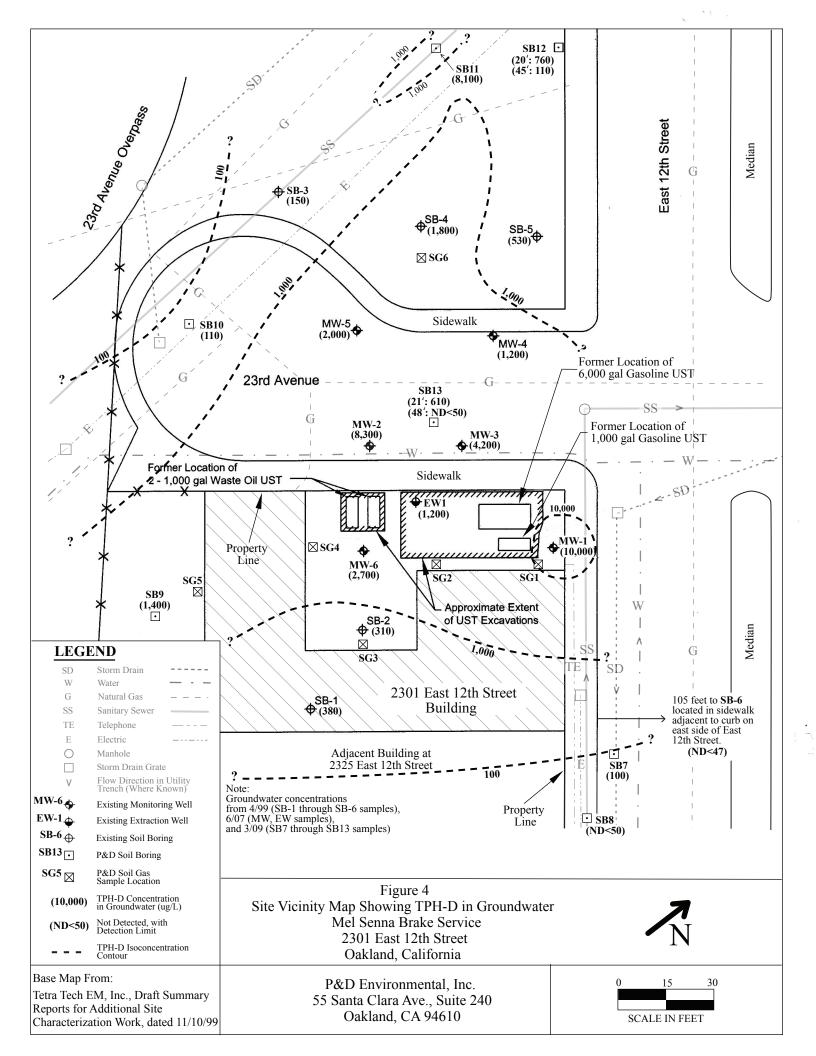
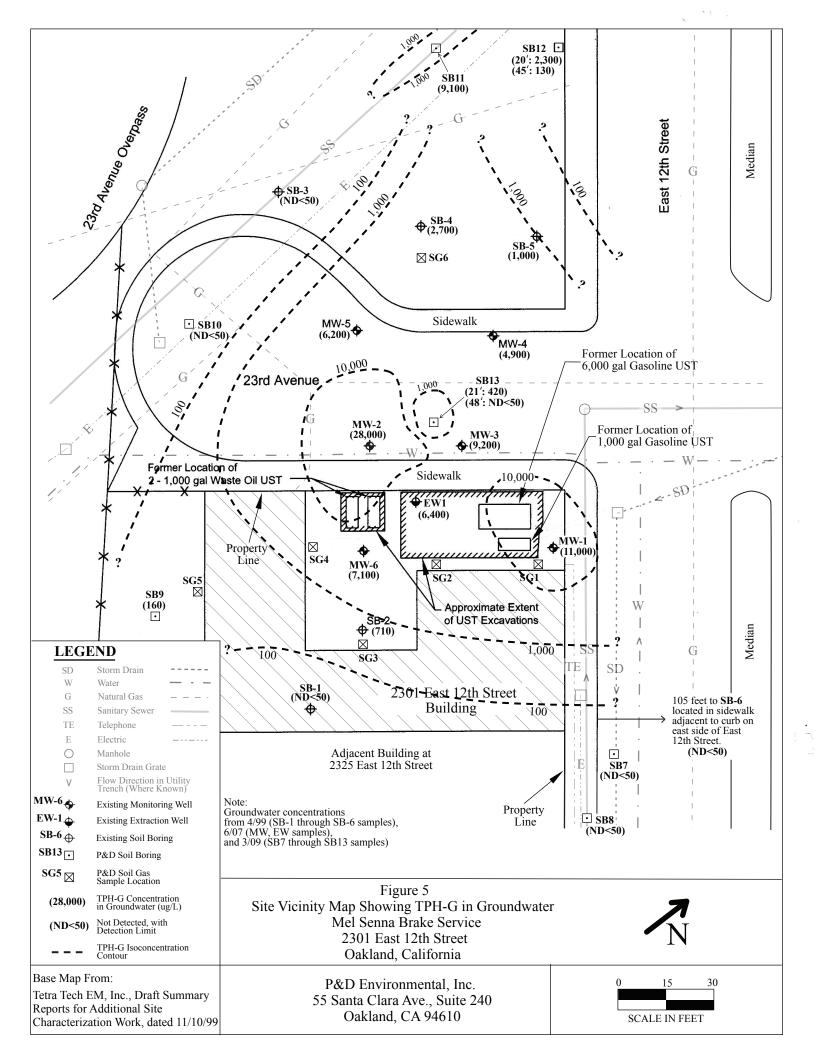


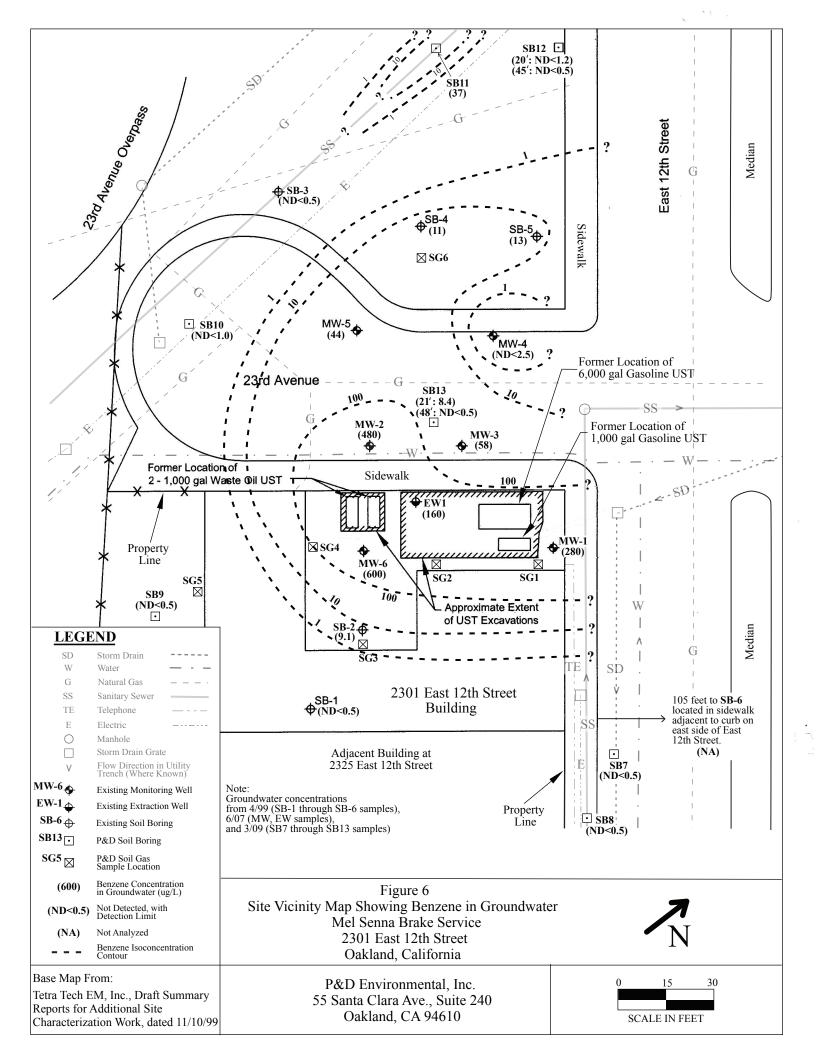


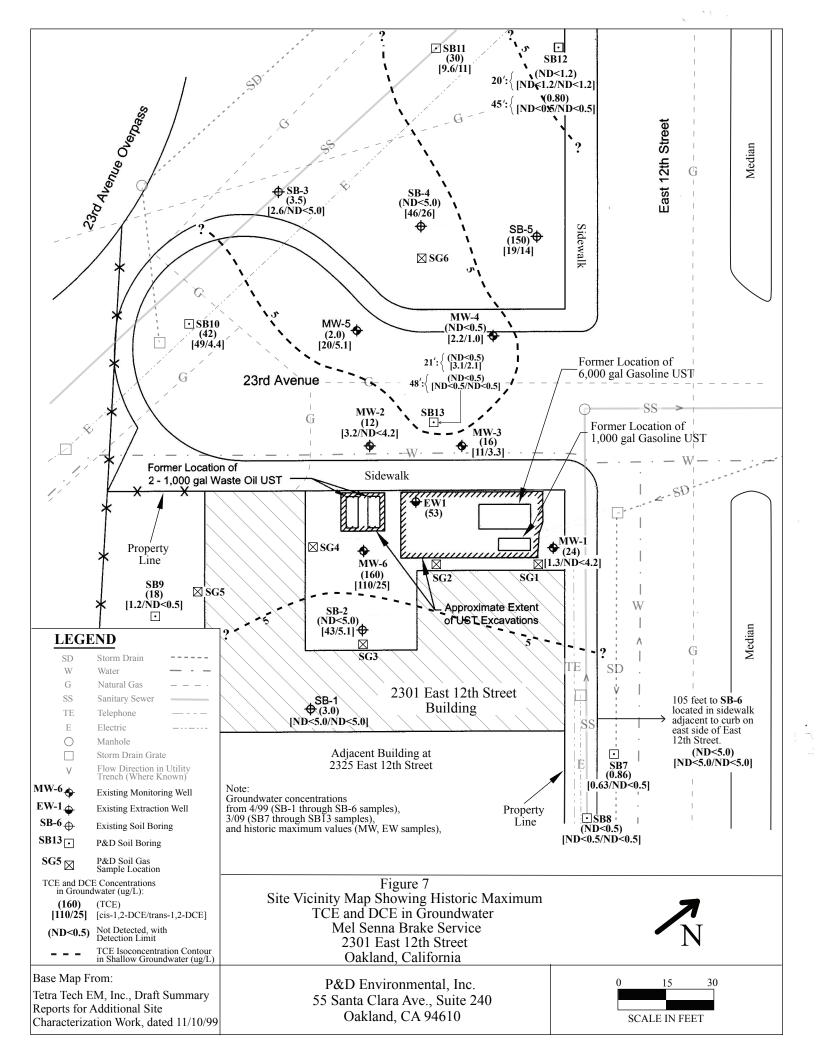
Figure 3
Typical Soil Gas Sample Collection Manifold
Mel Senna Brake Service
2301 East 12th Street
Oakland, California

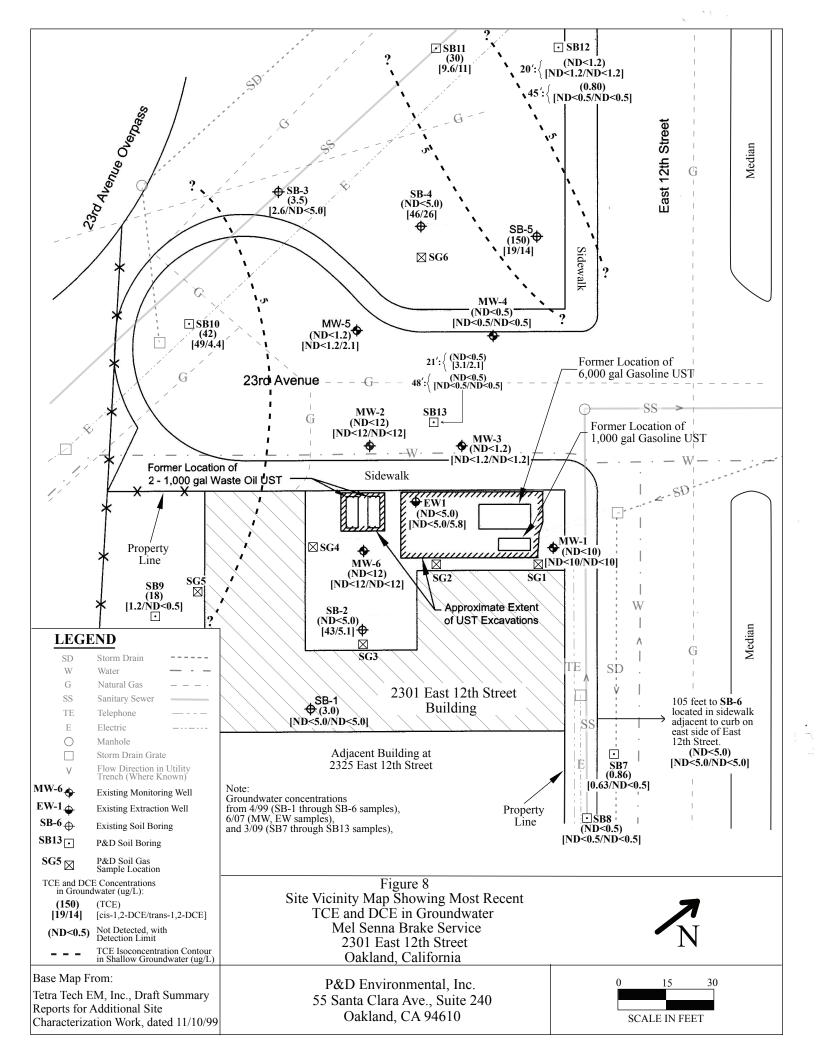
P&D Environmental, Inc. 55 Santa Clara Ave., Suite 240 Oakland, CA 94610

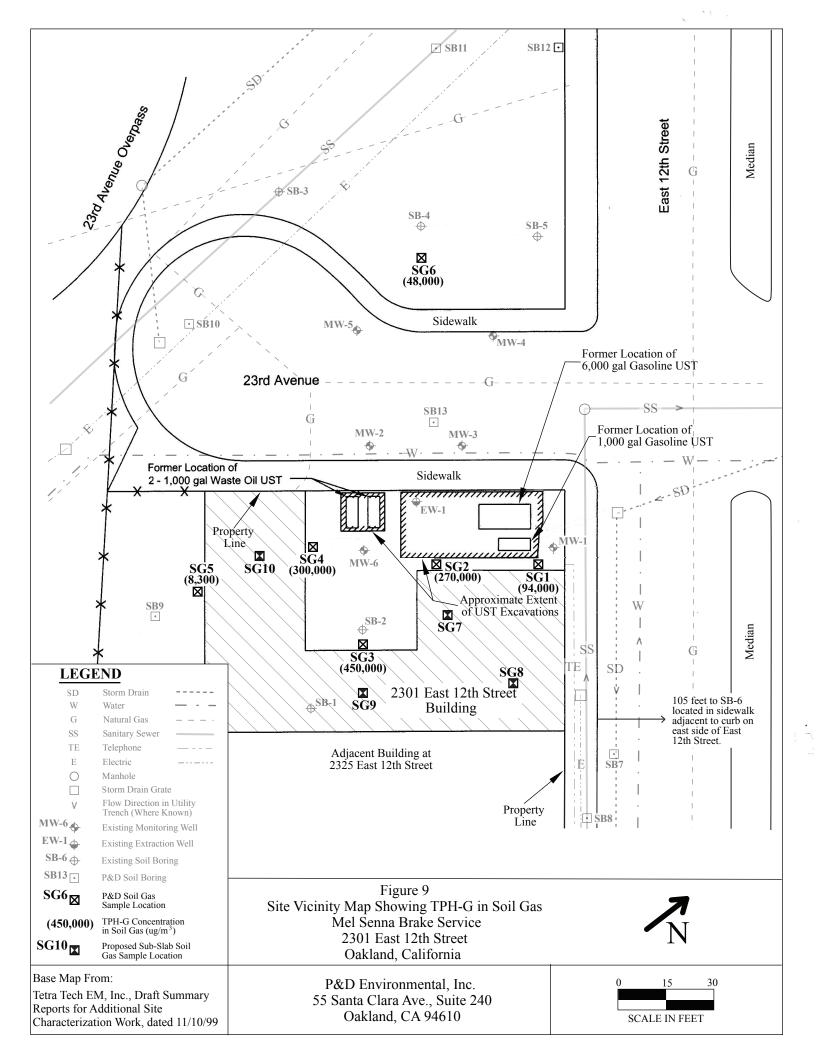


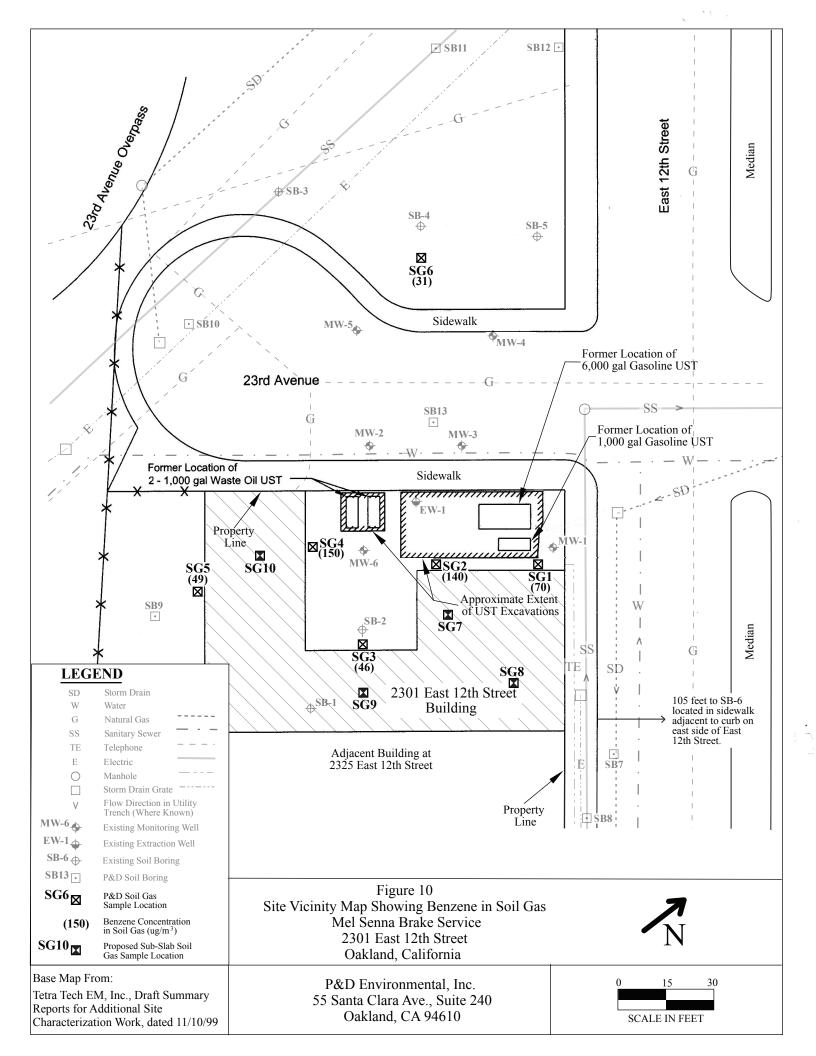












## **APPENDIX A**

**Soil Boring Logs** 

ВС	RING	NO.:	SB7 PROJECT NO.: 0404 PROJECT	NAME:	Mel Senna Brake	e Serv	ice, 23	01 E. 12th	Steet, Oakland
В	ORING	LOC	CATION: In parking lane 5 ft. from curb, ~7 ft. southeast	t of 2301	E. 12th St.		ELEVA	TION AND DA	тим: None
_			GENCY: Gregg Drilling	DRILLE	R: Rob/Antonio	DATE	3/5/0		DATE & TIME FINISHED: 3/5/09
Di	RILLIN	IG E	QUIPMENT: Hand Auger				104		1240
			N DEPTH: 8.2 Feet BEDROCK DEPTH: ]		untered		LOGGI	ED BY:	CHECKED BY:
FI		ATEI	R DEPTH: 8.0 Feet NO. OF SAMPLES: 1	Water	Z			I	
	DEPTH (FT.)		DESCRIPTION	GRAPHIC	WELL CONSTRUCTION LOG	BLOW COUNT PER 6"	PID	]	REMARKS
			0.0 to 0.4 ft. Asphalt and base rock.  0.4 to 6.0 ft. Dark brown clay (CL); medium stiff, moist to wet, with orange mottling. No Petroleum Hydrocarbon (PHC) or Solvent odor.		No Well Constructed		0		hand augered to 8.2 ft. 3-in. O.D. auger.
				CL			0		
	5		5.0 ft. With gravel to 0.25-in. diameter, and yellow and red silty inclusions.  6.0 to 8.2 ft. Dark brown clay (CL); medium stiff, wet;	CL			0		
-  -  -			heterogeneous, with abundant fine to coarse sand, angular and rounded gravel to 0.25 in. diameter, and yellow and red silty inclusions.  No PHC or Solvent odor.	Ţ Ţ			0	Water enco	untered at 8.0 ft.
			8.2 ft. Drilling refusal on large rock or box.					Borehole to 3/5/09.	erminated at 8.2 ft. on
	10							1240. Wat collected a	I measured at 7.0 ft. at er sample SB7-W t 1300; slight PHC odor en on sample.
								Borehole g using a trer cement gro	routed on 3/5/09 nie pipe and neat ut.
	15								
_ _ _  -		_							
	20								
_									
_	25								
_ _ _		_							
	30								

ВС	ORING	NO.:	SB8 PROJECT NO.: 0404 PROJECT N	AME: 1	Mel Senna Brake	e Serv	ice, 23	01 E. 12th	Steet, Oakland
В	ORING	LOC	CATION: On sidewalk ~3 ft. from curb, 20 ft. southsouther	ast of S	BB7		ELEVA	TION AND DA	тим: None
			GENCY: Gregg Drilling	DRILLE	R: Rob/Antonio	DATI	3/5/0		DATE & TIME FINISHED: 3/5/09
			QUIPMENT: Hand Auger				131		1410
			N DEPTH: 7.0 Feet BEDROCK DEPTH: No		ıntered		LOGGI		CHECKED BY:
FI		ATE	R DEPTH: 7.0 Feet NO. OF SAMPLES: 1 V	Vater	z			1	
	DEPTH (FT.)		DESCRIPTION	GRAPHIC	WELL CONSTRUCTION LOG	BLOW COUNT PER 6"	PID	]	REMARKS
			0.0 to 0.5 ft. Concrete and base rock.  0.5 to 2.0 ft. Brown sand (FILL); loose, moist to wet, — No Petroleum Hydrocarbon (PHC) or Solvent odor. —	FILL	No Well Constructed		0		nand augered to 7.0 ft. 3-in. O.D. auger.
			2.0 to 7.0 ft. Dark brown clay (CL); medium stiff, moist to wet, with orange mottling, and inclusions of fine and—medium sand. No PHC or Solvent odor.				0		
	5		5.5 to 7.0 ft. Heterogeneous, with angular and rounded gravel to 0.25-in. diameter, yellow and red silty inclusions, and disintegrating brick fragments	CL			0		
			7.0 ft. Drilling refusal on large rock or box.	<b>▼</b>			0	Water enco during drill	untered at 7.0 ft. ing.
	10 15 20							3/5/09.  Water leve 1410. Wat collected a sheen on sa Borehole g	routed on 3/5/09 nie pipe and neat
_ _ _	30								

во	RING	NO.:	SB9 project no.: 0404 project	NAME: I	Mel Senna Brake	e Serv	ice, 23	01 E. 12th	Steet, Oakland
ВС	RING	LOC	CATION: Loading dock area				ELEVA	TION AND DA	тим: None
DR	ILLIN	G AC	SENCY: Vironex, Inc.	DRILLEI	R: Tim/Manuel	DATI	E & TIMI	E STARTED:	DATE & TIME FINISHED:
DF	RILLIN	G E	QUIPMENT: Geoprobe 6600				143		3/10/09 1448
cc	MPLE	TIO	N DEPTH: 20.0 Feet BEDROCK DEPTH: N	lot Enco	untered		LOGGI MI		СНЕСКЕД ВУ:
FII		ATEF	R DEPTH: 14.5 Feet NO. OF SAMPLES: 1	Water	l +=		IVII		
	DEPTH (FT.)		DESCRIPTION	GRAPHIC	WELL CONSTRUCTION LOG	BLOW COUNT PER 6"	PID		REMARKS
			0.0 to 1.0 ft. Asphalt (0.3 ft.) and road base.  1.0 to 11.0 ft. Dark brown silty clay (CL); stiff, moist, with trace gravel to 0.25-in. diameter.  No Petroleum Hydrocarbon (PHC) odor.		No Well Constructed		0	using a 5-f Geoprobe I sampler. T with 5-foot	ontinuously cored oot long 2.0-inch O.D. Macrocore barrel he sampler was lined i-long 1.5-inch O.D. PVC tubes.
<u>-</u>	5		- - - - - - -	CL <u>*</u>			0	0 to 5 ft. 3	0 ft. recovery
	10		11.0 to 12.5 ft. Dark brown clayey sand (SC); medium dense, moist, with gravel to 0.5-in. diameter.  No PHC odor.				0	5 to 10 ft.	3.4 ft. recovery
	15		12.5 to 14.5 ft. Dark brown sandy clay (CL); medium-stiff, moist, with gravel to 0.5-in. diameter.  No PHC odor.  14.5 to 20.0 ft. Dark brown clayey sand (SC); very loose, wet, with interbedded sandy silt.	CL			0	10 to 15 ft	4.6 ft. recovery
			No PHC odor.	SC			0		. 4.8 ft. recovery
	20							at 14.5 ft.	untered during drilling
	2.5		- - - - - - -					3/10/09. To slotted PVG borehole. V 15.3 ft. at 1 1500. Water	erminated at 20.0 ft. on emporary 1-in. diam. C casing placed in Water level measured at 450, and at 8.6 ft. at er sample SB9-W 1510; no odor or sheen
	25		- - - - - - - - - - -						routed on 3/10/09 nie pipe and neat ut.
	30	_	-						

ВС	RING	NO.:	SB10 PROJECT NO.: 0404 PROJECT	ΓΝΑΙ	ме: Л	Mel Senna Brake	e Serv	ice, 23	01 E. 12th	Steet, Oakland
В	ORING	LOC	CATION: In 23rd Avenue cul-de-sac							тим: None
DI	RILLIN	G AG	SENCY: Vironex, Inc.	D	RILLER	e: Tim/Manuel	DATE	2 & TIMI 3/10/	E STARTED:	DATE & TIME FINISHED: 3/10/09
DI	RILLIN	G E(	QUIPMENT: Geoprobe 6600					120		1225
C	OMPLE	TIO	N DEPTH: 20.0 Feet BEDROCK DEPTH:	Not	Encou	intered		LOGGI MI		CHECKED BY:
FI	RST W	ATER	R DEPTH: Not Encountered No. of samples:	l Wa	ater			IVII	JD	
	DEPTH (FT.)		DESCRIPTION		GRAPHIC	WELL CONSTRUCTION LOG	BLOW COUNT PER 6"	PID	]	REMARKS
E			0.0 to 1.0 ft. Asphalt (0.3 ft.) and road base.			No Well Constructed		0		ontinuously cored oot long 2.0-inch O.D.
_ _ _ _			1.0 to 11.0 ft. Dark gray clay (CL); stiff, moist, with trace gravel to 0.25-in. diameter.  No Petroleum Hydrocarbon (PHC) odor.			Constructed		V	Geoprobe ! sampler. T with 5-foot	Macrocore barrel he sampler was lined -long 1.5-inch O.D. PVC tubes.
_ _ _ _ _	5		7.0 to 11.0 ft. Color change to dark brown, with bluish green staining.		CL			0	0 to 5 ft. 3.	5 ft. recovery
_ _ _ _	10		with offish green stanning.						5 to 10 ft.	4.6 ft. recovery
	15		11.0 to 16.0 ft. Brown clayey silt (ML); stiff, moist, with black mottling. No PHC odor.		ML			0	10 to 15 ft.	4.5 ft. recovery
_ _ _ _ _			16.0 to 19.0 ft. Dark brown sandy clay (CL); medium stiff, moist, with black mottling. No PHC odor.  19.0 to 20.0 ft. Reddish brown clayey gravel (GC);		CL ¥			0		4.6 ft. recovery
E	20	4	moist, with gravel to 0.5-in. diameter. No PHC odor.	_	GC			0	drilling.	erminated at 20.0 ft. on
	25								3/10/09. To slotted PV0 borehole. I 20 ft. depth overnight of Water level at 18.3 ft. a SB10-W co odor or she	emporary 1-in. diam. C casing placed in No water in borehole to a Borehole left open lue to slow recharge. I measured on 3/11/09 at 0830. Water sample offected at 0840; no ten on sample.  Touted on 3/11/09 mie pipe and neat
	30									

	ORING		SB11 PROJECT NO.: 0404 PROJECT N	Mel Senna Brak	e Serv	rice, 23	01 E. 12th	Steet, Oakland	
В	ORING	LOC	CATION: 40 feet west of SB12				ELEVA	TION AND DA	тим: None
⊢			GENCY: Vironex, Inc.	DRILLE	R: Brian/Steve	DAT	3/11/ 115		DATE & TIME FINISHED: 3/11/09 1400
			QUIPMENT: Hand Auger		1		LOGGE		CHECKED BY:
			N DEPTH: 12.5 Feet BEDROCK DEPTH: N R DEPTH: 10.0 Feet NO. OF SAMPLES: 15			-	MLD		CHECKED B1.
FI		AIEI	R DEPTH: 10.0 Feet NO. OF SAMPLES: 13	5011, 1 V		_			
	DEPTH (FT.)		DESCRIPTION	GRAPHIC	WELL CONSTRUCTION LOG	BLOW COUNT PER 6"	PID	]	REMARKS
			0.0 to 1.0 ft. Dark brown sandy silty clay (FILL); stiff, moist, with brick fragments. No Petroleum Hydrocarbon (PHC) odor.		No Well Constructed		0	Borehole h	and augered to 12.5 ft. .5-in. O.D. auger.
			1.0 to 12.0 ft. Dark brown clay (CL); stiff, moist, mottled with light brown silt, with trace gravel to 0.25-in. diameter. PHC odor.		Constructed		0	with 3.	.s-iii. O.D. augei.
			=	-			0		
	5	_		CL					
_ _ _ _			7.5 to 12.0 ft. Gray soil discoloration, with moderate to strong PHC odor.				142 1,014		
	10		with inoderate to strong the odol.	<u></u>	SB11-8.5		765 405 730 250		
_		_	12.0 to 12.5 ft. Gray clay (CL); stiff, wet, with some sand, and with trace gravel to 0.25-in. diameter. No PHC odor.	CL			448 106	Water enco	ountered at 10.0 ft. ling.
			_	_				Borehole t 3/11/09.	erminated at 12.5 ft. on
_ _ _	15	_	= = =	-				Water sam at 1405; Pl sample.	ple SB11-W collected HC odor and sheen on
				- - -				Borehole g using a tre- cement gro	grouted on 3/11/09 mie pipe and neat out.
_									
	20		<u>-</u>	-					
	-	$\exists$	=	-					
		$\exists$	Ξ	-					
		$\exists$	_						
		$\exists$							
	25		=	<u> </u>  -					
			=	-					
		$\exists$	=	-					
			<u>-</u>	-					
		=	_	1					
	30								

ВС	RING	NO.:	SB12 PROJECT NO.: 0404 PROJECT N	NAME:	Mel Senna Brake	e Serv	ice, 23	01 E. 12th	Steet, Oakland	
ВС	RING	LOC	EATION: 85 ft. northwest of intersection of E. 12th St. ar	d 23rd	Ave.		ELEVA	TION AND DA	тим: None	
DR	ILLIN	G AC	SENCY: Vironex, Inc.	DRILLE	R: Tim/Manuel	DATI		E STARTED:	DATE & TIME FINISHED:	
DI	ILLIN	G E	QUIPMENT: Geoprobe 6600				3/10/ 080		3/10/09 0920	
co	MPLE	ETIO	N DEPTH: 20.0 Feet BEDROCK DEPTH: N	ot Enco	untered		LOGGI		СНЕСКЕД ВУ:	
FII	RST W	ATEF	R DEPTH: Not Encountered No. of samples: 3 S	Soil, 2 V			MI	_D		
	DEPTH (FT.)		DESCRIPTION	GRAPHIC COLUMN	WELL CONSTRUCTION LOG	BLOW COUNT PER 6"	PID	1	REMARKS	
			0.0 to 1.0 ft. Dark brown sandy silty clay (CL); stiff, moist to wet. No Petroleum Hydrocarbon (PHC) odor.      1.0 to 20.0 ft. Dark brown silty clay (CL); stiff, moist, — with black mottling. No PHC odor.		No Well Constructed		0	probe was pelectrical co Boring growtremie pipe	a soil conductivity bushed to 60.0 ft. for onductivity logging. uted on 3/9/09 using a and neat cement grout.	
_ _ _ _ _	5		- - - - - - - - - - - -	CL				south of the probe hole, uously core using a 5-fo Geoprobe N sampler. T with a 5-fo	on approximately 4 feet e soil conductivity a borehole was continded from 0.0 to 20.0 ft. to to long 2.0-inch O.D. Macrocore barrel he sampler was lined to long 1.5-inch O.D. PVC tubes.	
			8.0 to 18.0 ft. Bluish green with orange mottling,	_ ▼			33	0 to 5 ft. 4.0	) ft. recovery	
	10	=	and strong PHC odor.		SB12-9.5			5 to 10 ft. 4.6 ft. recovery		
Е	10								4.8 ft. recovery	
				-				Water not e	4.8 ft. recovery ncountered during continuously cored	
<u> </u>	15		X 	- - - - -	SB12-14.5		243	inated at 20 Temporary casing plac level meast and at 8.7 f sample SB	sly cored borehole term- 0.0 ft. on 3/10/09. 1-in. diam. slotted PVC ed in borehole. Water ired at 9.7 ft. at 0922, t. at 0932. Water 12-W collected at 0935;	
_ _ _ _	20		18.0 to 20.0 ft. Olive-brown, medium stiff, moist, with angular gravel to 0.25-in. diameter, orange mottling, and no PHC odor.	-	SB12-17.5		0	Borehole g	no sheen on sample. routed on 3/10/09 using be and neat cement	
	25							west of bore at 20.0 ft., a pushed to 4' Hydropunch firmed using level indica	n approximately 3 ft. shole SB12 terminated Hydropunch was 9.0 ft.on 3/10/09. n seal integrity was con- gan electrical water tor. The Hydropunch is were then retracted to	
	25							rods was me 0946, and at sample SB1	evel in the Hydropunch casured at 42.6 ft. at 32.4 ft. at 0956. Water 2-45W collected at or or sheen on sample.	
	30	_							borehole grouted on g a tremie pipe and grout.	

## **P&D ENVIRONMENTAL, INC.**

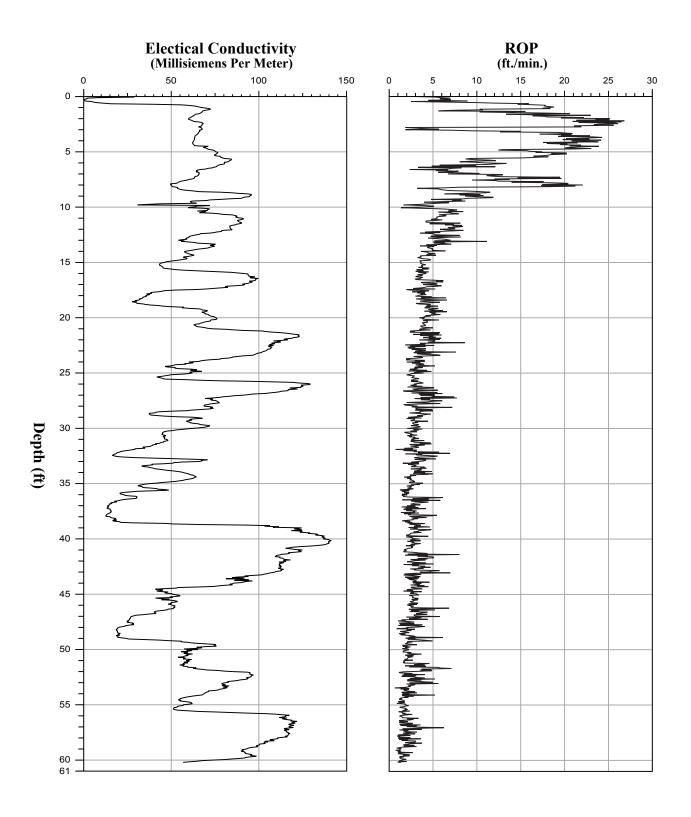
ВС	RING	NO.:	SB13 PROJECT NO.: 0404 PROJECT	CT N	AME: I	Mel Senna Brake	e Serv	ice, 23	01 E. 12th	Steet, Oakland
ВС	ORING	LOC	EATION: Between MW-2 and MW-3 in 23rd Ave., 12	ft. f	rom sic	lewalk		ELEVA	TION AND DA	тим: None
DR	ILLIN	G AC	GENCY: Vironex, Inc.		DRILLEI	R: Tim/Manuel	DATI	E & TIMI 3/10/	E STARTED:	DATE & TIME FINISHED: 3/10/09
DF	RILLIN	G E	QUIPMENT: Geoprobe 6600					105		1500
CC	OMPLE	TIO	N DEPTH: 60.0 Feet BEDROCK DEPTH:	No	t Encou	intered		LOGGI MI		CHECKED BY:
FII		ATEI	R DEPTH: 21.0 Feet NO. OF SAMPLES:	3 S	oil, 2 V			IVII	<u> </u>	
	DEPTH (FT.)		DESCRIPTION		GRAPHIC COLUMN	WELL CONSTRUCTION LOG	BLOW COUNT PER 6"	PID	]	REMARKS
L			0.0 to 1.0 ft. Asphalt (0.3 ft.) and base rock.			No Well Constructed		0		a soil conductivity pushed to 60.0 ft. for
		_	1.0 to 11.0 ft. Dark grayish brown clay (CL); stiff, moist, with orange mottling.  No Petroleum Hydrocarbon (PHC) odor.	_		Constructed		0	electrical c Boring gro	onductivity logging. uted on 3/10/09 using a and neat cement grout.
	5				CL			75	location ap of the soil of a borehole from 0.0 to long 2.0-in Macrocore sampler wa long 1.5-in	at 1050 on 3/10/09, at a proximately 4 feet west conductivity probe hole, was continuously cored 60.0 ft. using a 5-foot ch O.D. Geoprobe barrel sampler. The as lined with 4.8-foot ch O.D. transparent
	10		<ul><li>8.0 to 10.0 ft. With strong PHC odor, bluish green discoloration, and gravel to 0.25-in. diameter.</li><li>10.0 to 11.0 ft. With strong PHC odor, and trace gravel to 0.25-in. diameter.</li></ul>	<u>x</u>		SB13-9.5		95	PVC tubes. 0 to 5 ft. 4.	2 ft. recovery
			11.0 to 19.0 ft. Bluish green clayey silt (ML); stiff, moist, with orange mottling. Strong PHC odor.			SB13-13.5		145		l.6 ft. recovery
<u>-</u>	15	_		_	ML ▼					4.8 ft. recovery
						CD 12 17 5			15 to 20 ft.	4.0 ft. recovery
		_	18.0 to 19.0 ft. Color change to olive-green, with little or no clay.  19.0 to 19.5 ft. Gray fine sand (SP); medium dense, moist.	<u>x</u>	SP SC	SB13-17.5		6		untered during contin- Irilling at 21.0 ft.
	20	_	Slight PHC odor.  19.5 to 20.0 ft. Reddish brown clayey sand (SC); medium dense, moist, with gravel to 0.25-in. diameter. No PHC odor.  20.0 to 21.5 ft. Gray clay (CL); soft, wet to saturated.	7	CL ∑			0	arily stoppe rary 1-in. d	s core drilling tempor- ed at 25.0 ft. and tempo- iam. slotted PVC casing
	25		Slight PHC odor.  21.5 to 25.5 ft. Grayish brown clayey sand (SC); very loose, saturated. Slight PHC odor.		SC			0	measured a 15.4 ft. at 1 SB13-W co odor, no sh	orehole. Water level tt 15.7 ft. at 1341, and at 351. Water sample bllected at 1425; slight een on sample. groundwater sample
	25		25.5 to 26.5 ft. Reddish brown sandy silt (ML); medium stiff, saturated, with black mottling. No PHC odor.	_	ML			0		continuous core drilling
		_	26.5 to 28.5 ft. Grayish brown sandy clay (CL); medium stiff, moist, with abundant gravel to 0.25-in. diameter.  No PHC odor.	_	CL			0	20 to 25 ft.	2.0 ft. recovery
	30	_	28.5 to 30.0 ft. Reddish brown clayey sand (SC); medium dense, moist, with gravel to 0.25-in. diameter No PHC odor.	r.—	SC			0	25 to 30 ft.	4.6 ft. recovery

## **P&D ENVIRONMENTAL, INC.**

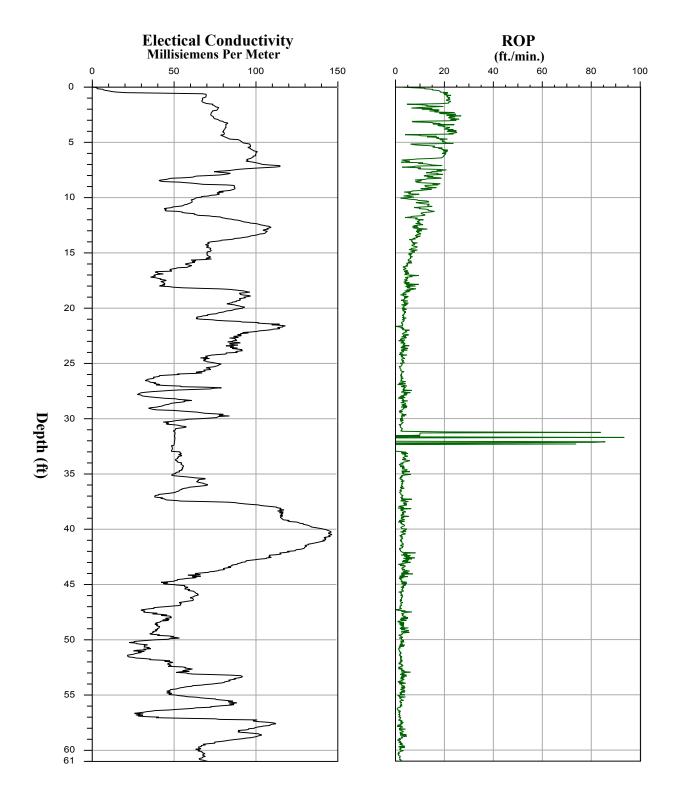
_			· · · · · · · · · · · · · · · · · · ·							
ВС	RING	NO.:	SB13 PROJECT NO.: 0404 PROJECT	CT NA	AME: N	Mel Senna Brake	e Serv	rice, 23	01 E. 12th	Steet, Oakland
В	ORING	LOC	EATION: Between MW-2 and MW-3 in 23rd Ave., 12	ft. fi	rom sid	ewalk	,	ELEVA	TION AND DA	тим: None
DF	RILLIN	G AC	GENCY: Vironex, Inc.		DRILLER	a: Tim/Manuel	DAT	E & TIMI 3/10/	E STARTED: /09	DATE & TIME FINISHED: 3/10/09
DI	RILLIN	NG EC	QUIPMENT: Geoprobe 6600					105		1500
co	OMPLE	ETIO	N DEPTH: 60.0 Feet BEDROCK DEPTH:	No	t Enco	untered		LOGGI		CHECKED BY:
FI	RST W	ATE	R DEPTH: 21.0 Feet NO. OF SAMPLES:	3 S	Soil, 2 V			IVII	-D	
	DEPTH (FT.)		DESCRIPTION		GRAPHIC COLUMN	WELL CONSTRUCTION LOG	BLOW COUNT PER 6"	Ша	]	REMARKS
			30.0 to 34.0 ft. Grayish brown clay (CL); soft, wet, with trace gravel to 0.25-in. diameter. No PHC odor.		CL	No Well Constructed		0		4.2 ft. recovery 3.8 ft. recovery
	35		34.0 to 35.0 ft. Reddish brown clayey fine sand (SC); medium dense, moist. No PHC odor. 35.0 to 42.5 ft. Grayish brown sandy clay (CL); medium stiff, moist, with trace gravel to 0.25-in. diameter. No PHC odor.		SC			0	40 to 45 ft.	4.0 ft. recovery
_ _ _ _					CL			0		3.8 ft. recovery 4.6 ft. recovery
<u>-</u> - - -	40		40.5 ft. Soft, saturated.						55 to 60 ft.	4.3 ft. recovery
	45		<ul><li>42.5 to 48.0 ft. Olive-green silty clay (CL); stiff, moist, with black mottling No PHC odor.</li><li>45.0 to 48.0 ft. With fine sand.</li></ul>		CL			0	imately 4 f uously core punch was Hydropunc confirmed level indica	, at a location approx- .: south of the contin- .: dorehole, a Hydro- pushed to 52.0 ft. h seal integrity was using an electrical water ttor. The Hydropunch s were then retracted to
	50		48.0 to 53.0 ft. Orange brown gravelly clayey sand (SC); medium dense, moist to wet, with gravel to 0.25-in. diameter, and sandy clay interbeds.  No PHC odor.		SC			0	48.0 ft. The water I rods was m 1325, and a Water samp at 1340; no sample. Hy collected w	evel in the Hydropunch easured at 46.7 ft. at t 10.4 ft. at 1335. ble SB13-48W collected odor or sheen on 'dropunch sample hile waiting for water uporary PVC pipe in
_ _ _ _	55		53.0 to 56.5 ft. Olive-brown clay (CL); stiff, moist, with black mottling No PHC odor.		CL			0	Continuous	y cored borehole.  h borehole grouted on ng a tremie pipe and
			56.5 to 58.0 ft. Brown clayey coarse sand (SC); loose, saturated, with gravel to 0.25-in. diameter. No PHC odor.	_	SC			0		
	<b>.</b>		58.0 to 60.0 ft. Olive-brown clay (CL); stiff, moist. No PHC odor.		CL			0	terminated Borehole g	ally cored borehole at 60.0 ft. on 3/10/09. routed using a tremie at cement grout.
	60									

# **APPENDIX B**

**Soil Conductivity Logs** 



Soil Conductivity Log of Borehole SB12



Soil Conductivity Log of Borehole SB13

# **APPENDIX C**

**Soil Gas Purge Calculation and Field Data Sheets** 

#### Soil Gas Purge Volume Calculations

One Purge Volume is calculated as the volume of the tubing interior plus the volume of the sand interval of the borehole.

The tubing interior volume is calculated as follows:

V tubing = pi x (r x r) x h, where pi = 3.14, r = 0.187 in./2, and h = 4 ft.

V tubing =  $3.14 \times (0.0935 \times 0.0935) \times (4 \text{ ft. } \times 12 \text{ in./ft.}) =$ 

1.32 cubic inches.

The sand interval volume is calculated as follows:

V sand interval = pi x (r x r) x h x porosity, where pi = 3.14, r = 1.0 in./2, h = 8 in., and porosity = 0.35

V sand interval =  $3.14 \times (0.5 \times 0.5) \times 8 \times 0.35 =$ 

2.20 cubic inches.

The total volume for one purge volume is V tubing + V sand interval, where

V total = 1.32 cubic inches + 2.20 cubic inches =

3.52 cubic inches.

To convert to cubic centimeters:

V total = 3.52 cubic inches x 16.39 cubic centimeters/cubic inches =

57.6 cubic

centimeters.

The total volume to be purged is 3 purge volumes.

V purge total = 57.6 cubic centimeters x 3 =

173

cubic centimeters.

The flow controller has a nominal flow rate of 200 cubic centimeters per minute.

The purge time is calculated as follows:

0.86

minutes.

Converting the purge time to seconds, 0.86 minutes x 60 seconds/ minute =

T purge = 173 cubic centimeters/200 cubic centimeters per minute =

52

seconds.

#### Soil Gas Purge Volume Calculations

One Purge Volume is calculated as the volume of the tubing interior plus the volume of the sand interval of the borehole.

The tubing interior volume is calculated as follows:

V tubing = pi x (r x r) x h, where pi = 3.14, r = 0.187 in./2, and h = 7 ft.

V tubing =  $3.14 \times (0.0935 \times 0.0935) \times (7 \text{ ft. } \times 12 \text{ in./ft.}) =$ 

2.31 cubic inches.

The sand interval volume is calculated as follows:

V sand interval = pi x (r x r) x h x porosity, where pi = 3.14, r = 1.0 in./2, h = 8 in., and porosity = 0.35

V sand interval =  $3.14 \times (0.5 \times 0.5) \times 8 \times 0.35 =$ 

2.20 cubic inches.

The total volume for one purge volume is V tubing + V sand interval, where

V total = 2.31 cubic inches + 2.20 cubic inches =

4.51 cubic inches.

To convert to cubic centimeters:

V total = 4.51 cubic inches x 16.39 cubic centimeters/cubic inches =

73.9 cubic centimeters.

The total volume to be purged is 3 purge volumes.

V purge total = 73.9 cubic centimeters x 3 =

cubic cubic

centimeters.

The flow controller has a nominal flow rate of 200 cubic centimeters per minute.

The purge time is calculated as follows:

T purge = 222 cubic centimeters/200 cubic centimeters per minute =

1.11

minutes.

Converting the purge time to seconds, 1.11 minutes x 60seconds/ minute =

67

seconds.

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# **APPENDIX D**

Soil Disposal Manifest

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	NON-HAZARDOUS	1. Generator's US EPA ID No.	2. Page of	1 3	3. Docume	nt Number	
}	WASTE MANIFEST		6			6733	
1	4. Generator's Name and Mailing Address			1			
П	Soma Automotive						
П	2301 East 12th Street						
	Odeland, CA 94606  Generator's Phone 415-935-5518						
П	5. Transporter Company Name	6. US EPA ID Number	7. Trans	norter Ph	none		
Ш	o. Harsporter company reams	G. GG II AND NAMED	7. 114113	portor r	10110		
	CLEARWATER ENVIRONMENTAL	[ CAR000007013		(510	) 476-1	740	-
	8. Designated Facility Name and Site Address	9. US EPA ID Number	10. Facil	lity's Pho	ne		
	ALVISO INDEPENDENT OIL 5002 ARCHER STREET						
G	ALVISO, CA 95002	CAL000161743	<del></del>		476-17		,
GENER	11. Waste Shipping Name and Description			12. Cont No.	ainers Type	13. Total Quantity	14. Unit Wt/Vol
A T O	Non-Hazardous waste – Solid		(	90l	da	400	P
R	b.  15. Special Handling Instructions and Additional Info Wear PPE Emergency Contact (510) 476-1740 Attn: Kirk Hayward	ormation	Handling	g Codes i	for Wastes	a Listed Above	
	16 GENERATOR'S CERTIFICATION - I cartify the m	naterials described above on this manifest are not subject to state or fede	eral regulatio	ns for rep	orting prop	er disposal of Haza	dous Waste.
IJ	Printed/Typed Name	Signature			<del></del>		
▼ TRANSPORTER	Signed on Behalf of 17. Transporter Acknowledgement of Receipt of Ma		ul			Month [	Say Year
ĕ	Printed/Typed Name	Signature	<del></del>			<del></del>	1
RTE	Milliam Clas	k buylet	-			Month 6	Day Year
~	18. Discrepancy Indication Space						1
FAC							
)-LI-Y	19 Secility Owner or Operator Cartification of soco	ipt of waste materials covered by this manifest except as noted in	n Item 12		<u></u>		
	Printed/Typed Marne	Signatury					
	Charles Seaton	(Mat	<			Month 3	Day Year

### **APPENDIX E**

### Laboratory Analytical Reports and Chain of Custody Documentation

- McCampbell Work Order # 0903273 Borehole Soil SB11
- McCampbell Work Order # 0903272 Borehole Soil SB12 & SB13
- McCampbell Work Order # 0903181 Borehole Groundwater SB7 & SB8
- McCampbell Work Order # 0903274 Borehole Groundwater SB11
- McCampbell Work Order # 0903275 Borehole Groundwater SB9, SB10, SB12, & SB13
- Air Toxics Work Order # 0903356B\_d Soil Gas SG1 through SG6 TO-3/TPH-G
- Air Toxics Work Order # 0903356A\_d Soil Gas SG1 through SG6 TO-15/HVOCs

# 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: #0404; 2301 E.12th St.,	Date Sampled: 03/11/09
55 Santa Clara, Ste.240	Oakland	Date Received: 03/11/09
Oakland, CA 94610	Client Contact: Paul King	Date Reported: 03/18/09
Outline, Cri 7 1010	Client P.O.:	Date Completed: 03/18/09

WorkOrder: 0903273

March 18, 2009

Dear Paul	•
-----------	---

#### Enclosed within are:

- 1 analyzed sample from your project: #0404; 2301 E.12th St., Oakland, 1) The results of the
- 2) A QC report for the above sample,
- 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.

0903273

55 Santa Clara Ave, Suite 240 Oakland, CA 94610

CHAIN OF CUSTODY RECORD PAGE \_ OF \_

PROJECT NUMBER:		P	230	Oakland			(ES);	Fuerra	Sto She			//		
SHEVE CAM	NTED AND	SIGNAT	LJ Q	en	NUMBER OF	AWAL YESCH	000	8× 10	//	//		PRESERVIT	REMARKS	
SAMPLE NUMBER	DATE	TIME	TYPE	SAMPLE LOCATION	NON	1			/	/	/	/ A		
SBI1-8.5	3/11/09	1310	501L		1	X	X			4		ICE	Normatturnground	Tim
					-	F	F			-				1
					-	F	F		H	-				
					-	F	F		H	-				1
					1	F	F	F						
			_	GOOD CC HEAD SP	ACE ABSEN	AR	AP	PRO PR	PRI. FTA! ESE	NER RVE	S IN	LAB		
				PRESERV	VOA	910	G	MET	LS	ЭТНІ	R			1
					1	F	F	F						1
RELINQUISHED BY:	SIGNATURE	E)	DATE 3/11/07	TIME RECEIVED BY: (SIGNATU	RE)		(Res	347	SAMPU SONTAI SONTAI		1	LAB	Campbell Analytical,	ne.
RELINQUISHED BY:	(SIGNATURE	3/	BATE 109	TIME RECEIVED BY: (SIGNATU	RÉ)	LA	BOR	ATO	RY	CON	TAC	T: LAB	ORATORY PHONE NUMBER: 77) 752 - 9262	
RELINQUISHED BY:	(SICNATURE	5//	DATE	TIME RECEIVED FOR LABORAT	ORY BY:	T		3	AMPL	E.	MAL	YSIS R	EQUEST SHEET S (X)NO	
Results and billing P&D Environmental, lab@pdenviro.com	to: Inc.			REMARKS:										

### McCampbell Analytical, Inc.

1534 Willow Pass Rd Pittsburg, CA 94565-1701

## CHAIN-OF-CUSTODY RECORD

WorkOrder: 0903273

ClientCode: PDEO

Page 1 of 1

		WriteOn	ı EDF		Excel		Fax	[	<b>✓</b> Email		HardCo	ру	ThirdF	Party	☐ J-	flag
						Bill to:						Requ	ested T	AT:	5 0	days
onmental ara, Ste.240	Email: cc: PO:	lab@pdenviro	o.com			Р	& D Env	/ironme	ental			Date	Receiv	ed:	03/11/	2009
A 94610 16 FAX 510-834-0152	ProjectNo:	#0404; 2301 E	E.12th St., Oaklan	ıd								Date	Printe	d:	03/11/	2009
								Req	uested	Tests	(See lege	nd be	elow)			
Client ID		Matrix	<b>Collection Date</b>	Hold	1	2	3	4	5	6	7	8	9	10	11	12
SB11-8.5		Soil	3/11/2009 13:10		Α	Α										
2	ara, Ste.240 A 94610 16 FAX 510-834-0152 Client ID	onmental cc: ara, Ste.240 PO: A 94610 ProjectNo: 16 FAX 510-834-0152	Email: lab@pdenviro co: ara, Ste.240 PO: A 94610 ProjectNo: #0404; 2301 I 16 FAX 510-834-0152  Client ID Matrix	Email: lab@pdenviro.com conmental cc: ara, Ste.240 PO: A 94610 ProjectNo: #0404; 2301 E.12th St., Oaklan 16 FAX 510-834-0152  Client ID Matrix Collection Date	Email: lab@pdenviro.com conmental cc: ara, Ste.240 PO: A 94610 ProjectNo: #0404; 2301 E.12th St., Oakland 16 FAX 510-834-0152  Client ID Matrix Collection Date Hold	Email: lab@pdenviro.com conmental cc: ara, Ste.240 PO: A 94610 ProjectNo: #0404; 2301 E.12th St., Oakland 16 FAX 510-834-0152  Client ID Matrix Collection Date Hold 1	Bill to:   Email: lab@pdenviro.com	Bill to:	Bill to:	Bill to:   Accounts Payable   P & D Environmental   projectNo: #0404; 2301 E.12th St., Oakland   Oakland, CA 94610   Requested   Client ID   Matrix   Collection Date   Hold   1   2   3   4   5   5   5   5   5   6   6   6   6   6	Bill to:	Bill to:   Accounts Payable   P & D Environmental   Ste. 240   PO:   S5 Santa Clara, Ste. 240   Oakland, CA 94610   Oakland, CA 94610   Requested Tests (See lege   Client ID   Matrix   Collection Date   Hold   1   2   3   4   5   6   7	Bill to:   Requested Tests (See legend between the first seed of	Bill to:   Requested T	Bill to:   Requested TAT:	Bill to:   Requested TAT:   5 cm     Email:   lab@pdenviro.com   Accounts Payable   P & D Environmental

#### Test Legend:

1	8260B_S	2 G-MBTEX_S	3	4	5	
6		7	8	9	10	
11		12				
The fol	lowing SampID: 001A con	tains testgroup.			Prepared by: Ana V	Venegas

#### **Comments:**

### **Sample Receipt Checklist**

Client Name:	P & D Envir	onmental			Date a	and Time Received:	3/11/2009	6:01:40 PM
Project Name:	#0404; 2301	E.12th St., Oakland			Check	klist completed and r	eviewed by:	Ana Venegas
WorkOrder N°:	0903273	Matrix Soil			Carrie	r: Rob Pringle (M	IAI Courier)	
		Chain	of Cu	istody (C	COC) Informa	ation		
Chain of custody	/ present?		Yes	<b>V</b>	No 🗆			
Chain of custody	signed when r	elinquished and received?	Yes	V	No 🗆			
Chain of custody	agrees with sa	ample labels?	Yes	<b>✓</b>	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 i	noted on COC?		Yes	✓	No 🗆			
		<u>s</u>	ample	Receipt	t Information	<u> </u>		
Custody seals in	tact on shipping	g container/cooler?	Yes		No 🗆		NA 🔽	
Shipping contain	er/cooler in goo	od condition?	Yes	<b>V</b>	No 🗆			
Samples in prope	er containers/b	ottles?	Yes	<b>~</b>	No 🗆			
Sample containe	ers intact?		Yes	✓	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:	6.4°C		NA $\square$	
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 🗌			
TTLC Metal - pH	acceptable upo	on receipt (pH<2)?	Yes		No 🗆		NA 🔽	
Samples Receive	ed on Ice?		Yes	<b>V</b>	No 🗆			
		(Ice Typ	e: WE	T ICE	)			
* NOTE: If the "I	No" box is chec	ked, see comments below.						
		=======						======
Client contacted:		Date contact	ted:			Contacted	by:	
Comments:								

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

P & D Environmental	Client Project ID: #0404; 2301 E.12th	Date Sampled: 03/11/09
55 Santa Clara, Ste.240	St., Oakland	Date Received: 03/11/09
33 Santa Ciara, Stc.240	Client Contact: Paul King	Date Extracted: 03/11/09
Oakland, CA 94610	Client P.O.:	Date Analyzed 03/18/09

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

Analytical Method: SW8260B Extraction Method: SW5030B Work Order: 0903273

83	3		%SS2:	10	3			
		1						
1	Surr	ogate Re	coveries (%)	r				
ND<0.20	40			ND<0.20	40	0.005		
ND<0.20	40	0.005	1,3,5-Trimethylbenzene	ND<0.20	40	0.005		
ND<0.20		0.005	1,2,3-Trichloropropane	ND<0.20	40	0.005		
ND<0.20	40	0.005	Trichloroethene	ND<0.20	40	0.005		
ND<0.20	40	0.005	1,1,1-Trichloroethane	ND<0.20	40	0.005		
ND<0.20	40	0.005	1,2,3-Trichlorobenzene	ND<0.20	40	0.005		
ND<0.20	40	0.005	Tetrachloroethene	ND<0.20	40	0.005		
ND<0.20	40	0.005	1,1,1,2-Tetrachloroethane	ND<0.20	40	0.005		
ND<0.20	40	0.005	n-Propyl benzene	0.94	40	0.005		
ND<0.20	40	0.005	4-Methyl-2-pentanone (MIBK)	ND<0.20	40	0.005		
0.48	40	0.005	Methyl-t-butyl ether (MTBE)	ND<0.20	40	0.005		
ND<0.20	40	0.005	Isopropylbenzene	0.44	40	0.005		
ND<0.20	40	0.005	Hexachloroethane	ND<0.20	40	0.005		
ND<0.20	40	0.005	Freon 113	ND<4.0	40	0.1		
ND<0.20	40	0.005	Ethylbenzene	ND<0.20	40	0.005		
ND<0.20	40	0.005	trans-1,3-Dichloropropene	ND<0.20	40	0.005		
ND<0.20	40	0.005	1,1-Dichloropropene	ND<0.20	40	0.005		
ND<0.20	40	0.005	1,3-Dichloropropane	ND<0.20	40	0.005		
ND<0.20	40	0.005	trans-1,2-Dichloroethene	ND<0.20	40	0.005		
ND<0.16	40	0.004	1,1-Dichloroethene	ND<0.20	40	0.005		
ND<0.20	40	0.005	1,1-Dichloroethane	ND<0.20	40	0.005		
ND<0.20	40	0.005	1,4-Dichlorobenzene	ND<0.20	40	0.005		
ND<0.20	40	0.005	1,2-Dichlorobenzene	ND<0.20	40	0.005		
ND<0.16	40	0.004	1,2-Dibromoethane (EDB)	ND<0.16	40	0.004		
ND<0.20	40	0.005	Dibromochloromethane	ND<0.20	40	0.005		
ND<0.20	40	0.005	2-Chlorotoluene	ND<0.20	40	0.005		
ND<0.20	40	0.005	Chloroform	ND<0.20	40	0.005		
ND<0.20	40	0.005	Chlorobenzene	ND<0.20	40	0.005		
ND<0.20	40	0.005	Carbon Disulfide	ND<0.20	40	0.005		
0.81	40	0.005	sec-Butyl benzene	0.36	40	0.005		
ND<0.80	40	0.02	t-Butyl alcohol (TBA)	ND<2.0	40	0.05		
ND<0.20	40	0.005	Bromomethane	ND<0.20	40	0.005		
ND<0.20	40	0.005	Bromodichloromethane	ND<0.20	40	0.005		
ND<0.20	40	0.005	Bromobenzene	ND<0.20	40	0.005		
ND<2.0	40	0.05	tert-Amyl methyl ether (TAME)	ND<0.20	40	0.005		
Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit		
			Soil					
	SB11-8.5							
0903273-001A								
T	Analyt	icai Metho	a: SW8260B	Work Order: 0903	213			
	ND<2.0	Concentration * DF  ND<2.0	Concentration * DF   Reporting   Limit		ND<-2.0	ND<0.20		

ND means not detected above the reporting 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.

a3) sample diluted due to high organic content.

<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 µg/wipe.

P & D Environmental	Client Project ID: #0404; 2301 E.12th St., Oakland	Date Sampled: 03/11/09
55 Santa Clara, Ste.240	St., Oakiand	Date Received: 03/11/09
	Client Contact: Paul King	Date Extracted: 03/11/09
Oakland, CA 94610	Client P.O.:	Date Analyzed 03/14/09

#### Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline\*

Analytical methods SW8015Bm Extraction method SW5030B Work Order: 0903273

Lab ID	Client ID	Matrix	TPH(g)	DF	% SS
001A	SB11-8.5	S	370,d9	33	#
D.o.	aporting Limit for DE -1:	***	N/A		

Reporting Limit for DF =1;	W	NA	NA
ND means not detected at or above the reporting limit	S	1.0	mg/Kg

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

d9) no recognizable pattern

<sup>#</sup> cluttered chromatogram; sample peak coelutes w/surrogate peak; low surrogate recovery due to matrix interference.

<sup>+</sup>The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation:

	•	
P & D Environmental	Client Project ID: #0404; 2301 E.12th St., Oakland	Date Sampled: 03/11/09
55 Santa Clara, Ste.240	St., Oakianu	Date Received: 03/11/09
·	Client Contact: Paul King	Date Extracted: 03/11/09
Oakland, CA 94610	Client P.O.:	Date Analyzed 03/12/09

#### Total Extractable Petroleum Hydrocarbons\*

Extraction method SW3550C Analytical methods: SW8015B Work Order: 0903273

)F	
	% SS
5	109

Reporting Limit for DF =1;	W	NA	NA
ND means not detected at or	C	1.0	ma/Va
above the reporting limit	3	1.0	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.

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



<sup>#</sup> 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.

#### **QC SUMMARY REPORT FOR SW8260B**

W.O. Sample Matrix: Soil QC Matrix: Soil BatchID: 41960 WorkOrder: 0903273

EPA Method SW8260B	Extrac	ction SW	5030B					5	Spiked San	nple ID	: 0903265-0	03A
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acce	eptance	Criteria (%)	
7 mary to	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
tert-Amyl methyl ether (TAME)	ND	0.050	86.5	87.3	0.878	83.5	88.8	6.17	60 - 130	30	60 - 130	30
Benzene	ND	0.050	112	115	2.53	109	118	8.46	60 - 130	30	60 - 130	30
t-Butyl alcohol (TBA)	ND	0.25	89.4	92.1	2.92	86.1	91.1	5.70	60 - 130	30	60 - 130	30
Chlorobenzene	ND	0.050	108	108	0	104	110	6.24	60 - 130	30	60 - 130	30
1,2-Dibromoethane (EDB)	ND	0.050	102	97.6	3.93	95.9	101	5.37	60 - 130	30	60 - 130	30
1,2-Dichloroethane (1,2-DCA)	ND	0.050	97.8	99.4	1.62	98.4	105	6.01	60 - 130	30	60 - 130	30
1,1-Dichloroethene	ND	0.050	76.6	80.1	4.39	81	84.8	4.55	60 - 130	30	60 - 130	30
Diisopropyl ether (DIPE)	ND	0.050	110	114	3.99	105	113	7.23	60 - 130	30	60 - 130	30
Ethyl tert-butyl ether (ETBE)	ND	0.050	112	115	2.82	107	115	7.45	60 - 130	30	60 - 130	30
Methyl-t-butyl ether (MTBE)	ND	0.050	103	103	0	98.4	106	7.46	60 - 130	30	60 - 130	30
Toluene	ND	0.050	113	111	1.44	116	121	4.08	60 - 130	30	60 - 130	30
Trichloroethene	ND	0.050	102	106	4.14	103	109	5.32	60 - 130	30	60 - 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 41960 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
0903273-001A	03/11/09 1:10 PM	1 03/11/09	03/18/09 3:47 AM				

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

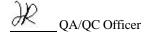
% Recovery = 100 \* (MS-Sample) / (Amount Spiked); RPD = 100 \* (MS - MSD) / ((MS + MSD) / 2).

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.

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.

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



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

W.O. Sample Matrix: Soil QC Matrix: Soil BatchID: 41945 WorkOrder 0903273

EPA Method SW8015Bm	Extra	ction SW	5030B					S	Spiked San	nple ID	: 0903236-0	A 800
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acce	eptance	Criteria (%)	
7 mary to	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
TPH(btex)	ND	0.60	104	101	3.11	114	101	11.9	70 - 130	20	70 - 130	20
MTBE	ND	0.10	109	115	5.57	109	108	0.677	70 - 130	20	70 - 130	20
Benzene	ND	0.10	93.7	96.4	2.78	99.1	100	1.23	70 - 130	20	70 - 130	20
Toluene	ND	0.10	103	106	2.74	111	113	1.86	70 - 130	20	70 - 130	20
Ethylbenzene	ND	0.10	102	104	2.36	110	111	0.433	70 - 130	20	70 - 130	20
Xylenes	ND	0.30	114	116	2.24	118	123	3.92	70 - 130	20	70 - 130	20
%SS:	81	0.10	96	87	10.4	98	100	1.79	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 41945 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
0903273-001A	03/11/09 1:10 PM	M 03/11/09	03/14/09 2:29 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).

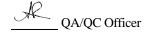
MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the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



QC SUMMARY REPORT FOR SW8015B

W.O. Sample Matrix: Soil QC Matrix: Soil BatchID: 41914 WorkOrder 0903273

EPA Method SW8015B Extraction SW3550C Spiked Sar									nple ID	: 0903208-0	12A	
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acc	eptance	Criteria (%)	
7 mary to	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
TPH-Diesel (C10-C23)	ND	20	102	102	0	94	91.5	2.68	70 - 130	30	70 - 130	30
%SS:	99	50	99	100	0.470	82	82	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 41914 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
0903273-001A	03/11/09 1:10 PM	I 03/11/09	03/12/09 3:56 AM				

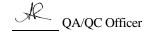
MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% 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.

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: #0404; J.W. Silviera Mel	Date Sampled: 03/10/09
55 Santa Clara, Ste.240	Senna Brakes Service	Date Received: 03/11/09
Oakland, CA 94610	Client Contact: Paul King	Date Reported: 03/18/09
Outline, Cri 7 1010	Client P.O.:	Date Completed: 03/18/09

WorkOrder: 0903272

March 18, 2009

Dear Paul	٠
-----------	---

#### Enclosed within are:

- 6 analyzed samples from your project: #0404; J.W. Silviera Mel Senna Bra 1) The results of the
- 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.

0903272

## CHAIN OF CUSTODY RECORD PAGE \_\_ OF \_\_

(510) 658-6916. PROJECT NUMBER:		Р	ROJECT	NAME: T	.W. SILVIERA					/. /	14	E. C.	77	7	/
0404		1	LEL S	ENNA	BRAKES SERVICE -		, and	152):	WELL OF	TOWN THE PARTY OF	Coal South		//		
SAMPLED BY: (PRINTED AND SIGNATURE)  MICHAEL DESCHENES CHICLE					1 Leschen-	NUMBER OF CONTAINERS	AWAL YSICK	6.5	Selve	1	//	//	1	AU KAUNE	REWARKS
SAMPLE NUMBER	DATE	ЭМП	TYPE		SAMPLE LOCATION	CON	/E	1	1	1	4	4	1 8		
5B12-9.5	3/10/09	1830	Soil			1	X	V	+	+	Н		ICE	A MPALAI	- TURN ARIV
53 12-14.5	3/10/09	0840	11			1	V	X	1				11	12	i)
SB 12-17.5	3/10/09		εi			ì	X	¥	F	F			U	- 11	11
SB13-9.5	3/10/09	1116	U				X	×					ij	11	1(
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					PRESERVATION	SIOEG	ME	ALS	ОП	HER				-	
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esticle De	sdew	8/	DATE 1169	TIME	RECEIVED BY: (SIGNATURE)	/	TOTA	(He	30F	MOIT)		60	M	C. CAMPB	ELL ANALYTIC
RELINQUISHED BY:	(SIGNATURE	1/3	DATE/	TIME	RECEIVED BY: (SIGNATURE)	e							9		PHONE NUMBER
RELINQUISHED BY:	(SIGNATURE	-)	DATE	TIME	RECEIVED FOR LABORATORY (SIGNATURE)	BY:				AMP	LE.	ANAL	YSIS F	EQUEST SI	HEET
Results and billing to P&D Environmental, lab@pdenviro.com	inc.				RFMARKS:										

### McCampbell Analytical, Inc.

SB13-13.5

SB13-17.5

Soil

Soil

3/10/2009 11:27

3/10/2009 11:38

1534 Willow Pass Rd

### CHAIN-OF-CUSTODY RECORD

Page 1 of 1

Pittsburg, CA 94565-1701 **WorkOrder: 0903272** ClientCode: PDEO (925) 252-9262 WriteOn EDF Excel Fax ✓ Email HardCopy ThirdParty J-flag Report to: Bill to: Requested TAT: 5 days Paul King Email: lab@pdenviro.com Accounts Payable P & D Environmental P & D Environmental cc: Date Received: 03/11/2009 PO: 55 Santa Clara, Ste.240 55 Santa Clara, Ste.240 Oakland, CA 94610 ProjectNo: #0404; J.W. Silviera Mel Senna Brakes Oakland, CA 94610 Date Printed: 03/11/2009 FAX 510-834-0152 Service (510) 658-6916 Requested Tests (See legend below) Lab ID **Client ID** Collection Date Hold 2 3 5 6 9 10 12 Matrix 1 11 0903272-001 SB12-9.5 Soil 3/10/2009 8:30 Α Α 0903272-002 SB12-14.5 3/10/2009 8:40 Α Α Soil 0903272-003 SB12-17.5 Soil 3/10/2009 9:17 Α Α 0903272-004 Soil 3/10/2009 11:10 Α Α SB13-9.5

Α

Α

Test Legend:				
1 8260B_S	2 G-MBTEX_S	3	4	5
6	7	8	9	10
11	12			
The following SampIDs: 001A, 0	002A, 003A, 004A, 005A, 006A contain testgrou	ıp.		Prepared by: Ana Venegas

#### **Comments:**

0903272-005

0903272-006

### **Sample Receipt Checklist**

Client Name: P & D Environmental			Date a	and Time Received:	3/11/2009	5:44:16 PM		
Project Name: #0404; J.W. Silviera Mel Senna Bra			rakes	Service	Check	Checklist completed and r		Ana Venegas
WorkOrder N°:	0903272	Matrix Soil			Carrie	er: Rob Pringle (M	IAI Courier)	
		<u>Chai</u>	n of Cu	istody (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 $\square$			
Chain of custody agrees with sample labels?			Yes	<b>✓</b>	No 🗌			
Sample IDs noted	d by Client on CC	OC?	Yes	<b>V</b>	No 🗆			
Date and Time of	collection noted	by Client on COC?	Yes	<b>✓</b>	No $\square$			
Sampler's name r	noted on COC?		Yes	✓	No 🗆			
		<u>!</u>	Sample	Receipt	t Information	<u>1</u>		
Custody seals in	tact on shipping	container/cooler?	Yes		No 🗆		NA 🔽	
Shipping container/cooler in good condition?			Yes	<b>V</b>	No 🗆			
Samples in proper containers/bottles?			Yes	<b>~</b>	No 🗆			
Sample containers intact?		Yes	<b>✓</b>	No 🗆				
Sufficient sample	e volume for indi	cated test?	Yes	<b>✓</b>	No 🗌			
		Sample Pres	ervatio	n and Ho	old Time (HT	) Information		
All samples recei	ived within holdi	ng time?	Yes	<b>✓</b>	No 🗌			
All samples received within holding time?  Container/Temp Blank temperature		Coole	er Temp:	4.2°C		NA $\square$		
Water - VOA via	ls have zero he	adspace / no bubbles?	Yes		No 🗆	No VOA vials subm	itted 🗹	
Sample labels ch	necked for corre	ct preservation?	Yes	<b>~</b>	No 🗌			
TTLC Metal - pH	acceptable upor	n receipt (pH<2)?	Yes		No 🗆		NA 🗹	
Samples Received on Ice?		Yes	<b>V</b>	No $\square$				
		(Ice Ty	pe: WE	T ICE	)			
* NOTE: If the "N	No" box is check	ked, see comments below.						
	====		=			=====		
Client contacted: Date contacted		cted:			Contacted	by:		
Comments:								

P & D Environmental	Client Project ID: #0404; J.W. Silviera	Date Sampled: 03/10/09
55 Santa Clara, Ste.240	Mel Senna Brakes Service	Date Received: 03/11/09
55 Santa Ciara, Stc.240	Client Contact: Paul King	Date Extracted: 03/11/09
Oakland, CA 94610	Client P.O.:	Date Analyzed 03/17/09

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

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 0903272

Extraction Method: SW5030B		Analytical Method: SW8260B Work Order: 0903272								
Lab ID	0903272-001A									
Client ID	SB12-9.5									
Matrix Soil										
Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit			
Acetone	ND<2.0	40	0.05	tert-Amyl methyl ether (TAME)	ND<0.20	40	0.005			
Benzene	ND<0.20	40	0.005	Bromobenzene	ND<0.20	40	0.005			
Bromochloromethane	ND<0.20	40	0.005	Bromodichloromethane	ND<0.20	40	0.005			
Bromoform	ND<0.20	40	0.005	Bromomethane	ND<0.20	40	0.005			
2-Butanone (MEK)	ND<0.80	40	0.02	t-Butyl alcohol (TBA)	ND<2.0	40	0.05			
n-Butyl benzene	0.63	40	0.005	sec-Butyl benzene	0.35	40	0.005			
tert-Butyl benzene	ND<0.20	40	0.005	Carbon Disulfide	ND<0.20	40	0.005			
Carbon Tetrachloride	ND<0.20	40	0.005	Chlorobenzene	ND<0.20	40	0.005			
Chloroethane	ND<0.20	40	0.005	Chloroform	ND<0.20	40	0.005			
Chloromethane	ND<0.20	40	0.005	2-Chlorotoluene	ND<0.20	40	0.005			
4-Chlorotoluene	ND<0.20	40	0.005	Dibromochloromethane	ND<0.20	40	0.005			
1,2-Dibromo-3-chloropropane	ND<0.16	40	0.004	1,2-Dibromoethane (EDB)	ND<0.16	40	0.004			
Dibromomethane	ND<0.20	40	0.005	1,2-Dichlorobenzene	ND<0.20	40	0.005			
1,3-Dichlorobenzene	ND<0.20	40	0.005	1,4-Dichlorobenzene	ND<0.20	40	0.005			
Dichlorodifluoromethane	ND<0.20	40	0.005	1,1-Dichloroethane	ND<0.20	40	0.005			
1,2-Dichloroethane (1,2-DCA)	ND<0.16	40	0.004	1.1-Dichloroethene	ND<0.20	40	0.005			
cis-1,2-Dichloroethene	ND<0.20	40	0.005	trans-1,2-Dichloroethene	ND<0.20	40	0.005			
1,2-Dichloropropane	ND<0.20	40	0.005	1,3-Dichloropropane	ND<0.20	40	0.005			
2,2-Dichloropropane	ND<0.20	40	0.005	1,1-Dichloropropene	ND<0.20	40	0.005			
cis-1,3-Dichloropropene	ND<0.20	40	0.005	trans-1,3-Dichloropropene	ND<0.20	40	0.005			
Diisopropyl ether (DIPE)	ND<0.20	40	0.005	Ethylbenzene	ND<0.20	40	0.005			
Ethyl tert-butyl ether (ETBE)	ND<0.20	40	0.005	Freon 113	ND<4.0	40	0.1			
Hexachlorobutadiene	ND<0.20	40	0.005	Hexachloroethane	ND<0.20	40	0.005			
2-Hexanone	ND<0.20	40	0.005	Isopropylbenzene	0.63	40	0.005			
4-Isopropyl toluene	0.52	40	0.005	Methyl-t-butyl ether (MTBE)	ND<0.20	40	0.005			
Methylene chloride	ND<0.20	40	0.005	4-Methyl-2-pentanone (MIBK)	ND<0.20	40	0.005			
Naphthalene	ND<0.20	40	0.005	n-Propyl benzene	1.2	40	0.005			
Styrene	ND<0.20	40	0.005	1,1,1,2-Tetrachloroethane	ND<0.20	40	0.005			
1,1,2,2-Tetrachloroethane	ND<0.20	40	0.005	Tetrachloroethene	ND<0.20	40	0.005			
Toluene	ND<0.20	40	0.005	1,2,3-Trichlorobenzene	ND<0.20	40	0.005			
1,2,4-Trichlorobenzene	ND<0.20	40	0.005	1,1,1-Trichloroethane	ND<0.20	40	0.005			
1,1,2-Trichloroethane	ND<0.20	40	0.005	Trichloroethene	ND<0.20	40	0.005			
Trichlorofluoromethane	ND<0.20	40	0.005	1,2,3-Trichloropropane	ND<0.20	40	0.005			
1,2,4-Trimethylbenzene	ND<0.20	40	0.005	1,3,5-Trimethylbenzene	ND<0.20	40	0.005			
Vinvl Chloride	ND<0.20	40	0.005	Xvlenes	ND<0.20	40	0.005			
Surrogate Recoveries (%)										
%SS1:	92	%SS2: 97								
%SS3: 105				y to any hard time to						
		-		•						

Comments: a3

ND means not detected above the reporting 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.

a3) sample diluted due to high organic content.

c2) estimated value due to high surrogate recovery, caused by matrix interference/high organic content.

<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  $\mu g/wipe$ .

P & D Environmental	Client Project ID: #0404; J.W. Silviera	Date Sampled: 03/10/09
55 Santa Clara, Ste.240	Mel Senna Brakes Service	Date Received: 03/11/09
33 Santa Ciara, Stc.240	Client Contact: Paul King	Date Extracted: 03/11/09
Oakland, CA 94610	Client P.O.:	Date Analyzed 03/18/09

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

Extraction Method: SW5030B	Analytical Method: SW8260B			Work Order: 0903272			
Lab ID	0903272-002A						
Client ID				SB12-14.5			
Matrix				Soil			
Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acetone	ND	1.0	0.05	tert-Amyl methyl ether (TAME)	ND	1.0	0.005
Benzene	ND	1.0	0.005	Bromobenzene	ND	1.0	0.005
Bromochloromethane	ND	1.0	0.005	Bromodichloromethane	ND	1.0	0.005
Bromoform	ND	1.0	0.005	Bromomethane	ND	1.0	0.005
2-Butanone (MEK)	ND	1.0	0.02	t-Butyl alcohol (TBA)	ND	1.0	0.05
n-Butyl benzene	0.054	1.0	0.005	sec-Butyl benzene	0.031	1.0	0.005
tert-Butyl benzene	ND	1.0	0.005	Carbon Disulfide	ND	1.0	0.005
Carbon Tetrachloride	ND	1.0	0.005	Chlorobenzene	ND	1.0	0.005
Chloroethane	ND	1.0	0.005	Chloroform	ND	1.0	0.005
Chloromethane	ND	1.0	0.005	2-Chlorotoluene	ND	1.0	0.005
4-Chlorotoluene	ND	1.0	0.005	Dibromochloromethane	ND	1.0	0.005
1,2-Dibromo-3-chloropropane	ND	1.0	0.004	1,2-Dibromoethane (EDB)	ND	1.0	0.004
Dibromomethane	ND	1.0	0.005	1,2-Dichlorobenzene	ND	1.0	0.005
1,3-Dichlorobenzene	ND	1.0	0.005	1,4-Dichlorobenzene	ND	1.0	0.005
Dichlorodifluoromethane	ND	1.0	0.005	1,1-Dichloroethane	ND	1.0	0.005
1,2-Dichloroethane (1,2-DCA)	ND	1.0	0.004	1,1-Dichloroethene	ND	1.0	0.005
cis-1,2-Dichloroethene	ND	1.0	0.005	trans-1,2-Dichloroethene	ND	1.0	0.005
1,2-Dichloropropane	ND	1.0	0.005	1,3-Dichloropropane	ND	1.0	0.005
2,2-Dichloropropane	ND	1.0	0.005	1,1-Dichloropropene	ND	1.0	0.005
cis-1,3-Dichloropropene	ND	1.0	0.005	trans-1,3-Dichloropropene	ND	1.0	0.005
Diisopropyl ether (DIPE)	ND	1.0	0.005	Ethylbenzene	ND	1.0	0.005
Ethyl tert-butyl ether (ETBE)	ND	1.0	0.005	Freon 113	ND	1.0	0.1
Hexachlorobutadiene	ND	1.0	0.005	Hexachloroethane	ND	1.0	0.005
2-Hexanone	ND	1.0	0.005	Isopropylbenzene	0.047	1.0	0.005
4-Isopropyl toluene	0.038	1.0	0.005	Methyl-t-butyl ether (MTBE)	ND	1.0	0.005
Methylene chloride	ND	1.0	0.005	4-Methyl-2-pentanone (MIBK)	ND	1.0	0.005
Naphthalene	ND	1.0	0.005	n-Propyl benzene	0.074	1.0	0.005
Styrene	ND	1.0	0.005	1,1,1,2-Tetrachloroethane	ND	1.0	0.005
1,1,2,2-Tetrachloroethane	ND	1.0	0.005	Tetrachloroethene	ND	1.0	0.005
Toluene	ND	1.0	0.005	1,2,3-Trichlorobenzene	ND	1.0	0.005
1,2,4-Trichlorobenzene	ND	1.0	0.005	1,1,1-Trichloroethane	ND	1.0	0.005
1,1,2-Trichloroethane	ND	1.0	0.005	Trichloroethene	ND	1.0	0.005
Trichlorofluoromethane	ND	1.0	0.005	1,2,3-Trichloropropane	ND	1.0	0.005
1,2,4-Trimethylbenzene	ND	1.0	0.005	1,3,5-Trimethylbenzene	ND	1.0	0.005
Vinvl Chloride	ND	1.0		Xvlenes	ND	1.0	0.005
		Surre	gate Re	coveries (%)			
%SS1:	10	3		%SS2:	10	)8	
%SS3:		#					

ND means not detected above the reporting 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.

a3) sample diluted due to high organic content.

<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 µg/wipe.

P & D Environmental	Client Project ID: #0404; J.W. Silviera	Date Sampled: 03/10/09
55 Santa Clara, Ste.240	Mel Senna Brakes Service	Date Received: 03/11/09
33 Santa Ciara, Stc.240	Client Contact: Paul King	Date Extracted: 03/11/09
Oakland, CA 94610	Client P.O.:	Date Analyzed 03/18/09

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

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 0903272

Extraction Method: SW5030B	Analytical Method: SW8260B Work Order: 0903272						
Lab ID		0903272-003A					
Client ID		SB12-17.5					
Matrix				Soil			
Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acetone	0.057	1.0	0.05	tert-Amyl methyl ether (TAME)	ND	1.0	0.005
Benzene	ND	1.0	0.005	Bromobenzene	ND	1.0	0.005
Bromochloromethane	ND	1.0	0.005	Bromodichloromethane	ND	1.0	0.005
Bromoform	ND	1.0	0.005	Bromomethane	ND	1.0	0.005
2-Butanone (MEK)	ND	1.0	0.02	t-Butyl alcohol (TBA)	ND	1.0	0.05
n-Butyl benzene	0.054	1.0	0.005	sec-Butyl benzene	0.028	1.0	0.005
tert-Butyl benzene	ND	1.0	0.005	Carbon Disulfide	ND	1.0	0.005
Carbon Tetrachloride	ND	1.0	0.005	Chlorobenzene	ND	1.0	0.005
Chloroethane	ND	1.0	0.005	Chloroform	ND	1.0	0.005
Chloromethane	ND	1.0	0.005	2-Chlorotoluene	ND	1.0	0.005
4-Chlorotoluene	ND	1.0	0.005	Dibromochloromethane	ND	1.0	0.005
1,2-Dibromo-3-chloropropane	ND	1.0	0.004	1,2-Dibromoethane (EDB)	ND	1.0	0.004
Dibromomethane	ND	1.0	0.005	1,2-Dichlorobenzene	ND	1.0	0.005
1,3-Dichlorobenzene	ND	1.0	0.005	1,4-Dichlorobenzene	ND	1.0	0.005
Dichlorodifluoromethane	ND	1.0	0.005	1,1-Dichloroethane	ND	1.0	0.005
1,2-Dichloroethane (1,2-DCA)	ND	1.0	0.004	1,1-Dichloroethene	ND	1.0	0.005
cis-1,2-Dichloroethene	ND	1.0	0.005	trans-1,2-Dichloroethene	ND	1.0	0.005
1,2-Dichloropropane	ND	1.0	0.005	1,3-Dichloropropane	ND	1.0	0.005
2,2-Dichloropropane	ND	1.0	0.005	1,1-Dichloropropene	ND	1.0	0.005
cis-1,3-Dichloropropene	ND	1.0	0.005	trans-1,3-Dichloropropene	ND	1.0	0.005
Diisopropyl ether (DIPE)	ND	1.0	0.005	Ethylbenzene	ND	1.0	0.005
Ethyl tert-butyl ether (ETBE)	ND	1.0	0.005	Freon 113	ND	1.0	0.1
Hexachlorobutadiene	ND	1.0	0.005	Hexachloroethane	ND	1.0	0.005
2-Hexanone	ND	1.0	0.005	Isopropylbenzene	0.053	1.0	0.005
4-Isopropyl toluene	0.045	1.0	0.005	Methyl-t-butyl ether (MTBE)	ND	1.0	0.005
Methylene chloride	ND	1.0	0.005	4-Methyl-2-pentanone (MIBK)	ND	1.0	0.005
Naphthalene	ND	1.0	0.005	n-Propyl benzene	0.098	1.0	0.005
Styrene	ND	1.0	0.005	1,1,1,2-Tetrachloroethane	ND	1.0	0.005
1,1,2,2-Tetrachloroethane	ND	1.0	0.005	Tetrachloroethene	ND	1.0	0.005
Toluene	ND	1.0	0.005	1,2,3-Trichlorobenzene	ND	1.0	0.005
1,2,4-Trichlorobenzene	ND	1.0	0.005	1,1,1-Trichloroethane	ND	1.0	0.005
1,1,2-Trichloroethane	ND	1.0	0.005	Trichloroethene	ND	1.0	0.005
Trichlorofluoromethane	ND	1.0	0.005	1,2,3-Trichloropropane	ND	1.0	0.005
1,2,4-Trimethylbenzene	ND	1.0	0.005	1,3,5-Trimethylbenzene	ND	1.0	0.005
Vinvl Chloride	ND	1.0	0.005	Xvlenes	ND	1.0	0.005
		Surr	ogate Re	coveries (%)			
%SS1:	10	4		%SS2:	10	)4	
	1			T .			

%SS3:

ND means not detected above the reporting 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.

a3) sample diluted due to high organic content.

<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 µg/wipe.

P & D Environmental	Client Project ID: #0404; J.W. Silviera	Date Sampled: 03/10/09
55 Santa Clara, Ste.240	Mel Senna Brakes Service	Date Received: 03/11/09
55 Santa Ciara, Stc.240	Client Contact: Paul King	Date Extracted: 03/11/09
Oakland, CA 94610	Client P.O.:	Date Analyzed 03/18/09

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

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 0903272

Extraction Method: SW5030B	Analytical Method: SW8260B Work Order: 0903272							
Lab ID		0903272-004A						
Client ID				SB13-9.5				
Matrix				Soil				
Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit	
Acetone	ND<2.0	40	0.05	tert-Amyl methyl ether (TAME)	ND<0.20	40	0.005	
Benzene	ND<0.20	40	0.005	Bromobenzene	ND<0.20	40	0.005	
Bromochloromethane	ND<0.20	40	0.005	Bromodichloromethane	ND<0.20	40	0.005	
Bromoform	ND<0.20	40	0.005	Bromomethane	ND<0.20	40	0.005	
2-Butanone (MEK)	ND<0.80	40	0.02	t-Butyl alcohol (TBA)	ND<2.0	40	0.05	
n-Butyl benzene	1.2	40	0.005	sec-Butyl benzene	0.41	40	0.005	
tert-Butyl benzene	ND<0.20	40	0.005	Carbon Disulfide	ND<0.20	40	0.005	
Carbon Tetrachloride	ND<0.20	40	0.005	Chlorobenzene	ND<0.20	40	0.005	
Chloroethane	ND<0.20	40	0.005	Chloroform	ND<0.20	40	0.005	
Chloromethane	ND<0.20	40	0.005	2-Chlorotoluene	ND<0.20	40	0.005	
4-Chlorotoluene	ND<0.20	40	0.005	Dibromochloromethane	ND<0.20	40	0.005	
1,2-Dibromo-3-chloropropane	ND<0.16	40	0.004	1,2-Dibromoethane (EDB)	ND<0.16	40	0.004	
Dibromomethane	ND<0.20	40	0.005	1,2-Dichlorobenzene	ND<0.20	40	0.005	
1.3-Dichlorobenzene	ND<0.20	40	0.005	1.4-Dichlorobenzene	ND<0.20	40	0.005	
Dichlorodifluoromethane	ND<0.20	40	0.005	1,1-Dichloroethane	ND<0.20	40	0.005	
1,2-Dichloroethane (1,2-DCA)	ND<0.16	40	0.004	1.1-Dichloroethene	ND<0.20	40	0.005	
cis-1.2-Dichloroethene	ND<0.20	40	0.005	trans-1.2-Dichloroethene	ND<0.20	40	0.005	
1,2-Dichloropropane	ND<0.20	40	0.005	1,3-Dichloropropane	ND<0.20	40	0.005	
2,2-Dichloropropane	ND<0.20	40	0.005	1.1-Dichloropropene	ND<0.20	40	0.005	
cis-1,3-Dichloropropene	ND<0.20	40	0.005	trans-1,3-Dichloropropene	ND<0.20	40	0.005	
Diisopropyl ether (DIPE)	ND<0.20	40	0.005	Ethylbenzene	ND<0.20	40	0.005	
Ethyl tert-butyl ether (ETBE)	ND<0.20	40	0.005	Freon 113	ND<4.0	40	0.1	
Hexachlorobutadiene	ND<0.20	40	0.005	Hexachloroethane	ND<0.20	40	0.005	
2-Hexanone	ND<0.20	40	0.005	Isopropylbenzene	0.91	40	0.005	
4-Isopropyl toluene	0.73	40	0.005	Methyl-t-butyl ether (MTBE)	ND<0.20	40	0.005	
Methylene chloride	ND<0.20	40	0.005	4-Methyl-2-pentanone (MIBK)	ND<0.20	40	0.005	
Naphthalene	ND<0.20	40	0.005	n-Propyl benzene	1.9	40	0.005	
Styrene	ND<0.20	40	0.005	1,1,1,2-Tetrachloroethane	ND<0.20	40	0.005	
1,1,2,2-Tetrachloroethane	ND<0.20	40	0.005	Tetrachloroethene	ND<0.20	40	0.005	
Toluene	ND<0.20	40	0.005	1,2,3-Trichlorobenzene	ND<0.20	40	0.005	
1,2,4-Trichlorobenzene	ND<0.20	40	0.005	1,1,1-Trichloroethane	ND<0.20	40	0.005	
1,1,2-Trichloroethane	ND<0.20	40	0.005	Trichloroethene	ND<0.20	40	0.005	
Trichlorofluoromethane	ND<0.20	40	0.005		ND<0.20	40	0.005	
1,2,4-Trimethylbenzene	ND<0.20	40	0.005	1,3,5-Trimethylbenzene	ND<0.20	40	0.005	
Vinvl Chloride	ND<0.20	40	0.005	Xvlenes	ND<0.20	40	0.005	
		Surre	ogate Re	coveries (%)				
%SS1:	9	1	-	%SS2:	10	1		
%SS3:				y to any hard time to	, 10	_		
	•	*		•				

Comments: a3

ND means not detected above the reporting 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.

a3) sample diluted due to high organic content.

<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  $\mu g/wipe$ .

P & D Environmental	Client Project ID: #0404; J.W. Silviera	Date Sampled: 03/10/09
55 Santa Clara, Ste.240	Mel Senna Brakes Service	Date Received: 03/11/09
55 Santa Ciara, Stc.240	Client Contact: Paul King	Date Extracted: 03/11/09
Oakland, CA 94610	Client P.O.:	Date Analyzed 03/18/09

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

Extraction Method: SW5030B	Analytical Method: SW8260B			Work Order: 0903272				
Lab ID		0903272-005A						
Client ID				SB13-13.5				
Matrix				Soil				
Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit	
Acetone	ND	1.0	0.05	tert-Amyl methyl ether (TAME)	ND	1.0	0.005	
Benzene	ND	1.0	0.005	Bromobenzene	ND	1.0	0.005	
Bromochloromethane	ND	1.0	0.005	Bromodichloromethane	ND	1.0	0.005	
Bromoform	ND	1.0	0.005	Bromomethane	ND	1.0	0.005	
2-Butanone (MEK)	ND	1.0	0.02	t-Butyl alcohol (TBA)	ND	1.0	0.05	
n-Butyl benzene	0.018	1.0	0.005	sec-Butyl benzene	0.0090	1.0	0.005	
tert-Butyl benzene	ND	1.0	0.005	Carbon Disulfide	ND	1.0	0.005	
Carbon Tetrachloride	ND	1.0	0.005	Chlorobenzene	ND	1.0	0.005	
Chloroethane	ND	1.0	0.005	Chloroform	ND	1.0	0.005	
Chloromethane	ND	1.0	0.005	2-Chlorotoluene	ND	1.0	0.005	
4-Chlorotoluene	ND	1.0	0.005	Dibromochloromethane	ND	1.0	0.005	
1,2-Dibromo-3-chloropropane	ND	1.0	0.004	1.2-Dibromoethane (EDB)	ND	1.0	0.004	
Dibromomethane	ND	1.0	0.005	1,2-Dichlorobenzene	ND	1.0	0.005	
1.3-Dichlorobenzene	ND	1.0	0.005	1.4-Dichlorobenzene	ND	1.0	0.005	
Dichlorodifluoromethane	ND	1.0	0.005	1.1-Dichloroethane	ND	1.0	0.005	
1.2-Dichloroethane (1.2-DCA)	ND	1.0	0.004	1.1-Dichloroethene	ND	1.0	0.005	
cis-1,2-Dichloroethene	ND	1.0	0.005	trans-1,2-Dichloroethene	ND	1.0	0.005	
1,2-Dichloropropane	ND	1.0	0.005	1,3-Dichloropropane	ND	1.0	0.005	
2,2-Dichloropropane	ND	1.0	0.005	1,1-Dichloropropene	ND	1.0	0.005	
cis-1,3-Dichloropropene	ND	1.0	0.005	trans-1,3-Dichloropropene	ND	1.0	0.005	
Diisopropyl ether (DIPE)	ND	1.0	0.005	Ethylbenzene	ND	1.0	0.005	
Ethyl tert-butyl ether (ETBE)	ND	1.0	0.005	Freon 113	ND	1.0	0.1	
Hexachlorobutadiene	ND	1.0	0.005	Hexachloroethane	ND	1.0	0.005	
2-Hexanone	ND	1.0	0.005	Isopropylbenzene	0.0091	1.0	0.005	
4-Isopropyl toluene	0.018	1.0	0.005	Methyl-t-butyl ether (MTBE)	ND	1.0	0.005	
Methylene chloride	ND	1.0	0.005	4-Methyl-2-pentanone (MIBK)	ND	1.0	0.005	
Naphthalene	ND	1.0	0.005	n-Propyl benzene	ND	1.0	0.005	
Styrene	ND	1.0	0.005	1,1,1,2-Tetrachloroethane	ND	1.0	0.005	
1.1.2.2-Tetrachloroethane	ND	1.0	0.005	Tetrachloroethene	ND	1.0	0.005	
Toluene	ND	1.0	0.005	1,2,3-Trichlorobenzene	ND	1.0	0.005	
1,2,4-Trichlorobenzene	ND	1.0	0.005	1,1,1-Trichloroethane	ND	1.0	0.005	
1,1,2-Trichloroethane	ND	1.0	0.005	Trichloroethene	ND	1.0	0.005	
Trichlorofluoromethane	ND	1.0	0.005	1,2,3-Trichloropropane	ND	1.0	0.005	
1,2,4-Trimethylbenzene	ND	1.0	0.005	1,3,5-Trimethylbenzene	ND	1.0	0.005	
Vinyl Chloride	ND	1.0	0.005	Xvlenes	ND	1.0	0.005	
		Surro	gate Re	coveries (%)				
%SS1:	8.			%SS2:	11	1		
%SS3:	8			,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		-		
						_		

ND means not detected above the reporting 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.

a3) sample diluted due to high organic content.



<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 µg/wipe.

c2) estimated value due to high surrogate recovery, caused by matrix interference/high organic content.

P & D Environmental	Client Project ID: #0404; J.W. Silviera	Date Sampled: 03/10/09
55 Santa Clara, Ste.240	Mel Senna Brakes Service	Date Received: 03/11/09
33 Santa Ciara, Stc.240	Client Contact: Paul King	Date Extracted: 03/11/09
Oakland, CA 94610	Client P.O.:	Date Analyzed 03/18/09

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

Extraction Method: SW5030B	Analytical Method: SW8260B			d: SW8260B	Work Order: 0903272			
Lab ID		0903272-006A						
Client ID				SB13-17.5				
Matrix				Soil				
Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit	
Acetone	ND<2.0	40	0.05	tert-Amyl methyl ether (TAME)	ND<0.20	40	0.005	
Benzene	ND<0.20	40	0.005	Bromobenzene	ND<0.20	40	0.005	
Bromochloromethane	ND<0.20	40	0.005	Bromodichloromethane	ND<0.20	40	0.005	
Bromoform	ND<0.20	40	0.005	Bromomethane	ND<0.20	40	0.005	
2-Butanone (MEK)	ND<0.80	40	0.02	t-Butyl alcohol (TBA)	ND<2.0	40	0.05	
n-Butyl benzene	0.59	40	0.005	sec-Butyl benzene	0.24	40	0.005	
tert-Butyl benzene	ND<0.20	40	0.005	Carbon Disulfide	ND<0.20	40	0.005	
Carbon Tetrachloride	ND<0.20	40	0.005	Chlorobenzene	ND<0.20	40	0.005	
Chloroethane	ND<0.20	40	0.005	Chloroform	ND<0.20	40	0.005	
Chloromethane	ND<0.20	40	0.005	2-Chlorotoluene	ND<0.20	40	0.005	
4-Chlorotoluene	ND<0.20	40	0.005	Dibromochloromethane	ND<0.20	40	0.005	
1,2-Dibromo-3-chloropropane	ND<0.16	40	0.004	1,2-Dibromoethane (EDB)	ND<0.16	40	0.004	
Dibromomethane	ND<0.20	40	0.005	1,2-Dichlorobenzene	ND<0.20	40	0.005	
1,3-Dichlorobenzene	ND<0.20	40	0.005	1,4-Dichlorobenzene	ND<0.20	40	0.005	
Dichlorodifluoromethane	ND<0.20	40	0.005	1,1-Dichloroethane	ND<0.20	40	0.005	
1,2-Dichloroethane (1,2-DCA)	ND<0.16	40	0.004	1,1-Dichloroethene	ND<0.20	40	0.005	
cis-1,2-Dichloroethene	ND<0.20	40	0.005	trans-1,2-Dichloroethene	ND<0.20	40	0.005	
1,2-Dichloropropane	ND<0.20	40	0.005	1,3-Dichloropropane	ND<0.20	40	0.005	
2,2-Dichloropropane	ND<0.20	40	0.005	1,1-Dichloropropene	ND<0.20	40	0.005	
cis-1,3-Dichloropropene	ND<0.20	40	0.005	trans-1,3-Dichloropropene	ND<0.20	40	0.005	
Diisopropyl ether (DIPE)	ND<0.20	40	0.005	Ethylbenzene	0.84	40	0.005	
Ethyl tert-butyl ether (ETBE)	ND<0.20	40	0.005	Freon 113	ND<4.0	40	0.1	
Hexachlorobutadiene	ND<0.20	40	0.005	Hexachloroethane	ND<0.20	40	0.005	
2-Hexanone	ND<0.20	40	0.005	Isopropylbenzene	0.52	40	0.005	
4-Isopropyl toluene	0.39	40	0.005	Methyl-t-butyl ether (MTBE)	ND<0.20	40	0.005	
Methylene chloride	ND<0.20	40	0.005	4-Methyl-2-pentanone (MIBK)	ND<0.20	40	0.005	
Naphthalene	ND<0.20	40	0.005	n-Propyl benzene	0.97	40	0.005	
Styrene	ND<0.20	40	0.005	1,1,1,2-Tetrachloroethane	ND<0.20	40	0.005	
1,1,2,2-Tetrachloroethane	ND<0.20	40	0.005	Tetrachloroethene	ND<0.20	40	0.005	
Toluene	ND<0.20	40	0.005	•	ND<0.20	40	0.005	
1,2,4-Trichlorobenzene	ND<0.20	40	0.005	1,1,1-Trichloroethane	ND<0.20	40	0.005	
1,1,2-Trichloroethane	ND<0.20	40	0.005	Trichloroethene	ND<0.20	40	0.005	
Trichlorofluoromethane	ND<0.20	40	0.005		ND<0.20	40	0.005	
1,2,4-Trimethylbenzene	ND<0.20	40	0.005	, , , , , , , , , , , , , , , , , , , ,	ND<0.20	40	0.005	
Vinvl Chloride	ND<0.20	40	0.005	Xvlenes	ND<0.20	40	0.005	
		Surr	ogate Re	ecoveries (%)				
%SS1:	90	)		% SS2:	10	4		
%SS3:	10	3						

ND means not detected above the reporting 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.

a3) sample diluted due to high organic content.

<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 µg/wipe.

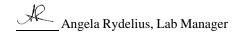
P & D Environmental	Client Project ID: #0404; J.W. Silviera Mel Senna Brakes Service	Date Sampled: 03/10/09
55 Santa Clara, Ste.240	iviei Seilila Diakes Seivice	Date Received: 03/11/09
	Client Contact: Paul King	Date Extracted: 03/11/09
Oakland, CA 94610	Client P.O.:	Date Analyzed 03/13/09-03/16/09

	Gasoline Ra	ange (C6-C12) Volatile H	lydrocarbons as Gasoline*		
Extraction method SW5	5030B	Analytical methods	SW8015Bm	Work Order: 09	03272
Lab ID	Client ID	Matrix	TPH(g)	DF	% SS
001A	SB12-9.5	S	360,d9	67	#
002A	SB12-14.5	S	25,d9	1	96
003A	SB12-17.5	S	390,d9	33	#
004A	SB13-9.5	S	820,d9	50	#
005A	SB13-13.5	S	35,d9	2	99
006A	SB13-17.5	S	460,d9	33	#
	ing Limit for DF =1;	w	NA	N	ΙA
	ans not detected at or the reporting limit	S	1.0	mg	g/Kg

Reporting Limit for Dr =1,	W	NA	NA
ND means not detected at or	S	1.0	ma/Ka
above the reporting limit	5	1.0	mg/Kg

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

d9) no recognizable pattern



<sup>#</sup> cluttered chromatogram; sample peak coelutes w/surrogate peak; low surrogate recovery due to matrix interference.

<sup>+</sup>The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation:

P & D Environmental	Client Project ID: #0404; J.W. Silviera Mel Senna Brakes Service	Date Sampled: 03/10/09
55 Santa Clara, Ste.240	iviei Seilila Diakes Seivice	Date Received: 03/11/09
	Client Contact: Paul King	Date Extracted: 03/11/09
Oakland, CA 94610	Client P.O.:	Date Analyzed 03/11/09-03/13/09

# Total Extractable Petroleum Hydrocarbons\*

Extraction method SW3550C Analytical methods: SW8015B Work Order: 0903272

Extraction method 3 w.	3330C	Alialytical methods. Sw 6013B		work Order. 0	703212
Lab ID	Client ID	Matrix	TPH-Diesel (C10-C23)	DF	% SS
0903272-001A	SB12-9.5	S	67,e11,e7,e2	1	115
0903272-002A	SB12-14.5	S	15,e11,e7,e2	1	108
0903272-003A	SB12-17.5	S	13,e11,e7,e2	1	99
0903272-004A	SB13-9.5	S	280,e11,e1	1	117
0903272-005A	SB13-13.5	S	9.5,e7,e11,e2	1	109
0903272-006A	SB13-17.5	S	94,e11,e2	5	111

Reporting Limit for DF =1;	W	NA	NA
ND means not detected at or above the reporting limit	S	1.0	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.

- +The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation:
- e1) unmodified or weakly modified diesel is significant
- e2) diesel range compounds are significant; no recognizable pattern
- e7) oil range compounds are significant
- e11) stoddard solvent/mineral spirit (?)



<sup>#</sup> 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.

QC SUMMARY REPORT FOR SW8260B

W.O. Sample Matrix: Soil QC Matrix: Soil BatchID: 41960 WorkOrder 0903272

EPA Method SW8260B Extraction SW5030B Spiked Sample ID: 090326									: 0903265-0	)03A		
Analyte	Sample	ple Spiked MS			MS-MSD	LCS LCSD L	LCS-LCSD	Acceptance Criteria (%)			)	
, may to	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
tert-Amyl methyl ether (TAME)	ND	0.050	86.5	87.3	0.878	83.5	88.8	6.17	60 - 130	30	60 - 130	30
Benzene	ND	0.050	112	115	2.53	109	118	8.46	60 - 130	30	60 - 130	30
t-Butyl alcohol (TBA)	ND	0.25	89.4	92.1	2.92	86.1	91.1	5.70	60 - 130	30	60 - 130	30
Chlorobenzene	ND	0.050	108	108	0	104	110	6.24	60 - 130	30	60 - 130	30
1,2-Dibromoethane (EDB)	ND	0.050	102	97.6	3.93	95.9	101	5.37	60 - 130	30	60 - 130	30
1,2-Dichloroethane (1,2-DCA)	ND	0.050	97.8	99.4	1.62	98.4	105	6.01	60 - 130	30	60 - 130	30
1,1-Dichloroethene	ND	0.050	76.6	80.1	4.39	81	84.8	4.55	60 - 130	30	60 - 130	30
Diisopropyl ether (DIPE)	ND	0.050	110	114	3.99	105	113	7.23	60 - 130	30	60 - 130	30
Ethyl tert-butyl ether (ETBE)	ND	0.050	112	115	2.82	107	115	7.45	60 - 130	30	60 - 130	30
Methyl-t-butyl ether (MTBE)	ND	0.050	103	103	0	98.4	106	7.46	60 - 130	30	60 - 130	30
Toluene	ND	0.050	113	111	1.44	116	121	4.08	60 - 130	30	60 - 130	30
Trichloroethene	ND	0.050	102	106	4.14	103	109	5.32	60 - 130	30	60 - 130	30
%SS1:	87	0.12	83	84	1.05	83	83	0	70 - 130	30	70 - 130	30
%SS2:	105	0.12	105	104	1.13	106	106	0	70 - 130	30	70 - 130	30
%SS3:	97	0.012	85	88	2.91	87	84	3.68	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 41960 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
0903272-001A	03/10/09 8:30 AM	03/11/09	03/17/09 11:57 PM	0903272-002A	03/10/09 8:40 AM	03/11/09	03/18/09 12:37 AM
0903272-003A	03/10/09 9:17 AM	03/11/09	03/18/09 10:39 AM	0903272-004A	03/10/09 11:10 AM	03/11/09	03/18/09 1:53 AM
0903272-005A	03/10/09 11:27 AM	03/11/09	03/18/09 11:17 AM	0903272-006A	03/10/09 11:38 AM	03/11/09	03/18/09 3:09 AM

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

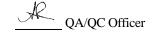
% Recovery = 100 \* (MS-Sample) / (Amount Spiked); RPD = 100 \* (MS - MSD) / ((MS + MSD) / 2).

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.

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.

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



QC SUMMARY REPORT FOR SW8021B/8015Bm

# W.O. Sample Matrix: Soil QC Matrix: Soil BatchID: 41945 WorkOrder 0903272

EPA Method SW8021B/8015Bm Extraction SW5030B Spiked Sample ID: 0903236-006A												
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acce	eptance	Criteria (%)	
Analyte	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
TPH(btexf)	ND	0.60	104	101	3.11	114	101	11.9	70 - 130	20	70 - 130	20
MTBE	ND	0.10	109	115	5.57	109	108	0.677	70 - 130	20	70 - 130	20
Benzene	ND	0.10	93.7	96.4	2.78	99.1	100	1.23	70 - 130	20	70 - 130	20
Toluene	ND	0.10	103	106	2.74	111	113	1.86	70 - 130	20	70 - 130	20
Ethylbenzene	ND	0.10	102	104	2.36	110	111	0.433	70 - 130	20	70 - 130	20
Xylenes	ND	0.30	114	116	2.24	118	123	3.92	70 - 130	20	70 - 130	20
%SS:	81	0.10	96	87	10.4	98	100	1.79	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 41945 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
0903272-001A	03/10/09 8:30 AM	03/11/09	03/13/09 8:21 PM	0903272-002A	03/10/09 8:40 AM	03/11/09	03/16/09 5:12 PM
0903272-003A	03/10/09 9:17 AM	03/11/09	03/13/09 10:37 PM	0903272-004A	03/10/09 11:10 AM	03/11/09	03/14/09 12:17 AM
0903272-005A	03/10/09 11:27 AM	03/11/09	03/16/09 4:33 PM	0903272-006A	03/10/09 11:38 AM	03/11/09	03/14/09 1:56 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).

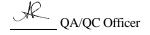
MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the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



# QC SUMMARY REPORT FOR SW8015B

W.O. Sample Matrix: Soil QC Matrix: Soil BatchID: 41914 WorkOrder 0903272

EPA Method SW8015B Extraction SW3550C								S	Spiked San	nple ID:	: 0903208-0	)12A
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)			
	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
TPH-Diesel (C10-C23)	ND	20	102	102	0	94	91.5	2.68	70 - 130	30	70 - 130	30
%SS:	99	50	99	100	0.470	82	82	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 41914 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
0903272-001A	03/10/09 8:30 AM	03/11/09	03/12/09 5:28 PM	0903272-002A	03/10/09 8:40 AM	03/11/09	03/12/09 8:30 AM
0903272-003A	03/10/09 9:17 AM	03/11/09	03/13/09 4:57 AM	0903272-004A	03/10/09 11:10 AM	03/11/09	03/13/09 6:04 AM
0903272-005A	03/10/09 11:27 AM	03/11/09	03/12/09 11:18 PM	0903272-006A	03/10/09 11:38 AM	03/11/09	03/11/09 11:23 PM

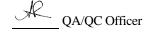
MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% 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: #0404; 2301 E. 12th St,	Date Sampled: 03/05/09
55 Santa Clara, Ste.240	Oakland	Date Received: 03/06/09
Oakland, CA 94610	Client Contact: Paul King	Date Reported: 03/11/09
	Client P.O.:	Date Completed: 03/11/09

WorkOrder: 0903181

March 11, 2009

Dear	Paul	١

### Enclosed within are:

- 2 analyzed samples from your project: #0404; 2301 E. 12th St, Oakland, 1) The results of the
- 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 (510) 658-6916

# CHAIN OF CUSTODY RECORD

(510) 656-4	3710.			71 17(11	01	000	3100		`_				8	J			PAC	E 1	_ OF _	
PROJECT NUMBER:	TED AND	SIGNAT	JRE)			t., Oak	bush	R OF NERS	AWAL YSISCE	PH 6.70	9	L.H.	Car The	1	//	"ESERVA TVE		REMA	ARKS	
Steven F	DATE	TIME	TYPE	Acue	SAMPLE L	LOCATION		NUMBER OF CONTAINERS	₹/-		836		/		100	"ESP	/			
587-W	3/5/09	1300	W					7	X		K			1	ica	1	Norma	I Tru	n Aron	nd
588-W	3/5/09	1415	W					7	X		Х				ice	- 1	Vormal	7	un Aro	ml
										7	0	-	1			-				1
								GOOD HEAD DECHL	CON	DITI	DN_ BSEN	LAB	4	PPR OC _PI	OPRIAT NTAIN RESER	ERS.	N LAB			1
								PRESE			VQ	AS	DAG	ME	ALS O	THER				
														_		-				
RELINQUISHED BY: (	SIGNATURE	=)	DATE 609	TIME 306	RECEIVED	BY: (SIGN	NATURE)	7	TOTAL	PAS :	OF CO	(THE		2	1	BOR	ATORY:	bell	Aud	442
RELINQUISHED BY: (	-2	//3/	GATE 9	TIME	Ch	BY: (SIGN	4	9		W.	jelu	R	de	liv	N) (	877	1257	2-90	NUMBER	2:
RELINQUISHED BY: (	SIGNATURE	=) /	DATE	TIME	(SIGNATUR	FOR LABO	ORATORY	BY:									0 N(X)	IEET		
Results and billing t P&D Environmental, lab@pdenviro.com				•	REMARKS:	:	Co	ruet no	w	5	Pr	-es	Cr	red	N	; +L	, HC	2.		

# McCampbell Analytical, Inc.

1534 Willow Pass Rd

SB7-W

SB8-W

Water

Water

# CHAIN-OF-CUSTODY RECORD

Α

Page 1 of 1

Pittsburg, CA 94565-1701 (925) 252-9262					WorkO	der: 0903	181	ClientC	ode: PDEO			
		WriteO	n EDF		Excel	Fax	<b>✓</b> Emai	il	HardCopy	ThirdPa	arty 🔲	J-flag
Report to:					Bi	II to:			Red	quested TA	.T: <b>5</b>	days
Paul King P & D Environmental 55 Santa Clara, Ste.240	Email: cc: PO:	lab@pdenvire	o.com				Payable vironmental Clara, Ste.240	0	Da	te Receive	d: 03/0	6/2009
Oakland, CA 94610 (510) 658-6916 FAX 510-834-0152	ProjectNo	o: #0404; 2301	E. 12th St, Oakla	and		Oakland,	CA 94610		Da	te Printed	: 03/0	6/2009
							Requested	d Tests (	See legend	below)		
Lab ID Client ID		Matrix	Collection Date	e Hold	1	2 3	4 5	6	7 8	9 1	10 11	12

3/5/2009 13:00

3/5/2009 14:15

# Test Legend:

0903181-001

0903181-002

1 8260B_W	2 G-MBTEX_W	3 TPH(D)_W	4	5
6	7	8	9	10
11	12			
The following SampIDs: 001A, 002	A contain testgroup.			Prepared by: Ana Venegas

### **Comments:**

# **Sample Receipt Checklist**

Client Name:	P & D Enviro	nmental			Date a	and Time Received:	3/6/2009	7:35:24 PM
Project Name:	#0404; 2301 i	E. 12th St, Oakland			Check	clist completed and	reviewed by:	Ana Venegas
WorkOrder N°:	0903181	Matrix Water			Carrie	r: Rob Pringle (N	(1AI Courier)	
		<u>Cha</u>	in of Cu	ıstody (C	COC) Informa	ntion		
Chain of custody	y present?		Yes	<b>V</b>	No 🗆			
Chain of custody	y signed when rel	nquished and received?	Yes	<b>V</b>	No 🗆			
Chain of custody	y agrees with sam	ple labels?	Yes	<b>✓</b>	No 🗌			
Sample IDs noted	d by Client on COC	??	Yes	<b>V</b>	No 🗆			
Date and Time of	f collection noted b	y Client on COC?	Yes	<b>✓</b>	No 🗆			
Sampler's name	noted on COC?		Yes	✓	No 🗆			
			Sample	Receipt	t Information	!		
Custody seals in	ntact on shipping o	ontainer/cooler?	Yes		No 🗆		NA 🗹	
Shipping contain	ner/cooler in good	condition?	Yes	<b>V</b>	No 🗆			
Samples in prop	er containers/bott	les?	Yes	<b>V</b>	No 🗆			
Sample containe	ers intact?		Yes	<b>✓</b>	No $\square$			
Sufficient sample	e volume for indic	ated test?	Yes	<b>✓</b>	No 🗌			
		Sample Pres	ervatio	n and Ho	old Time (HT)	) Information		
All samples rece	ived within holding	g time?	Yes	<b>✓</b>	No 🗌			
Container/Temp	Blank temperature	•	Coole	er Temp:	2.6°C		NA 🗆	
Water - VOA via	als have zero head	dspace / no bubbles?	Yes	<b>✓</b>	No 🗆	No VOA vials subm	nitted $\square$	
Sample labels cl	hecked for correc	preservation?	Yes	<b>~</b>	No 🗌			
TTLC Metal - pH	acceptable upon	receipt (pH<2)?	Yes		No 🗆		NA 🗹	
Samples Receive	ed on Ice?		Yes	<b>✓</b>	No 🗆			
		(Ice Ty	rpe: WE	ET ICE	)			
* NOTE: If the "I	No" box is checke	d, see comments below	•					
=====		======	===	===				======
Client contacted:	:	Date conta	cted:			Contacted	l by:	
Comments:								

P & D Environmental	Client Project ID: #0404; 2301 E. 12th	Date Sampled: 03/05/09
55 Santa Clara, Ste.240	St, Oakland	Date Received: 03/06/09
55 Santa Ciara, Stc.240	Client Contact: Paul King	Date Extracted: 03/10/09
Oakland, CA 94610	Client P.O.:	Date Analyzed 03/10/09

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

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 0903181

Lab ID				0903181-001B			
Client ID				SB7-W			
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	0.63	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	0.86	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:	7.		J	%SS2:	9.	4	
%SS3:	8			70552.		т	
Comments: b1	0			•			

ND means not detected above the reporting 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.



<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: #0404; 2301 E. 12th	Date Sampled: 03/05/09
55 Santa Clara, Ste.240	St, Oakland	Date Received: 03/06/09
33 Santa Ciara, Stc.240	Client Contact: Paul King	Date Extracted: 03/10/09
Oakland, CA 94610	Client P.O.:	Date Analyzed 03/10/09

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

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 0903181

Extraction Method: SW5030B		Anaryt	icai Metho	d: 5W8200B	work Order: 0903	101		
Lab ID				0903181-002B				
Client ID				SB8-W				
Matrix				Water				
Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reportin 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	
Vinvl Chloride	ND	1.0	0.5	Xvlenes	ND	1.0	0.5	
		Surr	ogate Re	ecoveries (%)				
%SS1:	7		<i>a</i>	%SS2:	95			
%SS3:	8			/0552.		<i>,</i>		
Comments: b1	. 0			<u> </u>				

ND means not detected above the reporting 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.



<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  $\mu g$ /wipe.

P & D Environmental	Client Project ID: #0404; 2301 E. 12th St, Oakland	Date Sampled: 03/05/09
55 Santa Clara, Ste.240	St, Oakiand	Date Received: 03/06/09
	Client Contact: Paul King	Date Extracted: 03/10/09
Oakland, CA 94610	Client P.O.:	Date Analyzed 03/10/09

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline\* Analytical methods SW8015Bm Extraction method SW5030B Work Order: 0903181 TPH(g) Lab ID Client ID Matrix DF % SS 001A SB7-W W ND,b1 100 002A W 98 SB8-W 1 ND,b1

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

<sup>\*</sup> water and vapor samples and all TCLP & SPLP extracts are reported in ug/L, soil/sludge/solid samples in mg/kg, wipe samples in  $\mu$ g/wipe, product/oil/non-aqueous liquid samples in mg/L.

# cluttered chromatogram; sample peak coelutes with surrogate peak.

+The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation:

P & D Environmental	Client Project ID: #0404; 2301 E. 12th St, Oakland	Date Sampled: 03/05/09
55 Santa Clara, Ste.240	St, Oakiand	Date Received: 03/06/09
,	Client Contact: Paul King	Date Extracted: 03/06/09
Oakland, CA 94610	Client P.O.:	Date Analyzed 03/07/09-03/10/09

# Total Extractable Petroleum Hydrocarbons\*

Extraction method SW3510C Analytical methods: SW8015B Work Order: 0903181

Estitution method B W a			memous. BirouteB	mont order.	00101
Lab ID	Client ID	Matrix	TPH-Diesel (C10-C23)	DF	% SS
0903181-001A	SB7-W	W	100,e7,e2,b1	1	101
0903181-002A	SB8-W	w	ND,b1	1	98

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

<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.

- +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
- e2) diesel range compounds are significant; no recognizable pattern
- e7) oil range compounds are significant

<sup>#</sup> 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.

QC SUMMARY REPORT FOR SW8260B

W.O. Sample Matrix: Water QC Matrix: Water BatchID: 41873 WorkOrder 0903181

EPA Method SW8260B Extraction SW5030B Spiked Sample ID: 0903150-004A											004A		
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)				
7 may to	μg/L	μg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD	
tert-Amyl methyl ether (TAME)	ND	10	104	104	0	95.6	95.9	0.384	70 - 130	30	70 - 130	30	
Benzene	ND	10	118	119	0.679	110	111	1.24	70 - 130	30	70 - 130	30	
t-Butyl alcohol (TBA)	ND	50	95.7	98.8	3.23	105	98.8	6.20	70 - 130	30	70 - 130	30	
Chlorobenzene	ND	10	104	103	0.980	105	104	1.35	70 - 130	30	70 - 130	30	
1,2-Dibromoethane (EDB)	ND	10	102	103	0.783	105	106	0.964	70 - 130	30	70 - 130	30	
1,2-Dichloroethane (1,2-DCA)	ND	10	125	127	1.31	98.2	98.8	0.580	70 - 130	30	70 - 130	30	
1,1-Dichloroethene	ND	10	75.4	76.3	1.10	73.1	72.3	1.13	70 - 130	30	70 - 130	30	
Diisopropyl ether (DIPE)	ND	10	123	124	1.16	99.5	99.8	0.382	70 - 130	30	70 - 130	30	
Ethyl tert-butyl ether (ETBE)	ND	10	127	124	2.74	111	110	0.867	70 - 130	30	70 - 130	30	
Methyl-t-butyl ether (MTBE)	ND	10	117	115	2.13	106	105	0.583	70 - 130	30	70 - 130	30	
Toluene	ND	10	124	123	0.798	109	110	0.669	70 - 130	30	70 - 130	30	
Trichloroethene	ND	10	106	103	2.99	106	105	0.890	70 - 130	30	70 - 130	30	
%SS1:	71	25	80	80	0	71	71	0	70 - 130	30	70 - 130	30	
%SS2:	99	25	99	99	0	100	100	0	70 - 130	30	70 - 130	30	
%SS3:	77	2.5	78	76	3.21	85	86	0.444	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 41873 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
0903181-001B	03/05/09 1:00 PM	f 03/10/09	03/10/09 10:20 PM	0903181-002B	03/05/09 2:15 PM	I 03/10/09	03/10/09 11:04 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

W.O. Sample Matrix: Water

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

BatchID: 41894

WorkOrder 0903181

QC SUMMARY REPORT FOR SW8021B/8015Cm

# QU SUNIMINI IEEE ONI I ON SVOOZIE/OUICEM

QC Matrix: Water

EPA Method SW8015Bm	Extra	ction SW	5030B					5	Spiked Sar	nple ID	: 0903172-0	03A
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acc	eptance	Criteria (%)	1
/ tildly to	μg/L	μg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
TPH(btex <sup>£</sup>	ND	60	94.1	99.6	5.68	103	108	4.76	70 - 130	20	70 - 130	20
МТВЕ	ND	10	76.8	82.7	7.47	98.6	102	2.90	70 - 130	20	70 - 130	20
Benzene	ND	10	85.8	93.6	8.76	89.7	94.9	5.66	70 - 130	20	70 - 130	20
Toluene	ND	10	86.4	94.3	8.76	92.9	97.7	5.05	70 - 130	20	70 - 130	20
Ethylbenzene	ND	10	90.8	98.4	8.12	95	99.2	4.33	70 - 130	20	70 - 130	20
Xylenes	ND	30	101	109	6.81	107	112	4.44	70 - 130	20	70 - 130	20
%SS:	88	10	92	95	3.26	104	103	0.644	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 41894 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
0903181-001A	03/05/09 1:00 PM	I 03/10/09	03/10/09 1:50 AM	0903181-002A	03/05/09 2:15 PM	03/10/09	03/10/09 2:23 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).

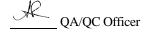
MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the 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 SW8015B

W.O. Sample Matrix: Water QC Matrix: Water BatchID: 41876 WorkOrder: 0903181

EPA Method SW8015B	Spiked Sample ID: N/A											
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acce	eptance	Criteria (%)	
, and y to	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	91.6	91.7	0.158	N/A	N/A	70 - 130	30
%SS:	N/A	2500	N/A	N/A	N/A	80	83	3.12	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 41876 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
0903181-001A	03/05/09 1:00 PM	I 03/06/09	03/10/09 12:37 AM	0903181-002A	03/05/09 2:15 PM	M 03/06/09	03/07/09 3:36 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.

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: #0404; 2301 E.12th St.,	Date Sampled: 03/11/09
55 Santa Clara, Ste.240	Oakland	Date Received: 03/11/09
Oakland, CA 94610	Client Contact: Paul King	Date Reported: 03/17/09
Outline, Cri 7 1010	Client P.O.:	Date Completed: 03/17/09

WorkOrder: 0903274

March 17, 2009

Dear Paul	•
-----------	---

### Enclosed within are:

- 1 analyzed sample from your project: #0404; 2301 E.12th St., Oakland, 1) The results of the
- 2) A QC report for the above sample,
- 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.

0903274

CHAIN OF CUSTODY RECORD PAGE \_ OF \_ Oakland, CA 94610 (510) 658-6916. PROJECT NUMBER: PROJECT NAME: 2301 E. 12 th St., Oakland 0404 NUMBER OF CONTAINERS SAMPLED BY: (PRINTED AND SIGNATURE) REMARKS Steve Carmack SAMPLE NUMBER SAMPLE LOCATION DATE TIME TYPE ICE Normal Turgaround Time SBII-W 3/11/09 1405 1400 ICE/to GOOD CONDITION HEAD SPACE A DECHLORINATED IN LAS VOAS | D& G| METALS OTHER PRESERVATION RELINQUISHED/BY; (SIGNATURE) RECEIVED BY: (SIGNATURE) DATE TIME Mc Campbell And shin THE SHIPMENT RELINQUISHED BY: (SIGNATURE) LABORATORY CONTACT: LABORATORY PHONE NUMBER: DATE RECEIVED BY: (SIGNATURE) TIME 18771252-9262 RELINQUISHED BY: (SIGNATURE) RECEIVED FOR LABORATORY BY: SAMPLE ANALYSIS REQUEST SHEET DATE TIME ATTACHED: ( )YTS (X)NO (SIGNATURE) Results and billing to: REMARKS: All bottles preserved of HCC P&D Environmental, Inc. lab@pdenviro.com

# McCampbell Analytical, Inc.

1534 Willow Pass Rd Pittsburg, CA 94565 Pittsburg, CA 94565-1701

# CHAIN-OF-CUSTODY RECORD

Page 1 of 1

—// A A	52-9262					Work	Order	: 0903	274	(	ClientC	ode: P	DEO				
			WriteOn	EDF		Excel		Fax	E	<b>✓</b> Email		Hard	Сору	Thi	rdParty	☐ J-	-flag
Report to: Paul King P & D Envir 55 Santa Cl Oakland, C/ (510) 658-69	ara, Ste.240 A 94610	Email: cc: PO: ProjectNo:	lab@pdenviro #0404; 2301 E	o.com E.12th St., Oaklan	d		P 8 55	& D Env Santa	Payable vironme Clara, S CA 946	ntal Ste.240			Dat	uested e Rece e Prin	eived:	5 (03/11/ 03/11/	
									Req	uested	Tests (	(See leg	gend b	elow)			
Lab ID	Client ID		Matrix	<b>Collection Date</b>	Hold	1	2	3	4	5	6	7	8	9	10	11	12
0903274-001	SB11-W		Water	3/11/2009 14:05		В	Α										

# Test Legend:

1	8260B_W		2	G-MBTEX_W		3		4		5
6		] [	7			8		9		10
11		] [	12		]					
The	following SampID: 001A con	itains test	group						Pre	pared by: Ana Venegas

# **Comments:**

# **Sample Receipt Checklist**

Client Name:	P & D Enviro	nmental			Date a	and Time Received:	3/11/2009	6:11:14 PM
Project Name:	#0404; 2301 i	E.12th St., Oakland			Check	list completed and i	reviewed by:	Ana Venegas
WorkOrder N°:	0903274	Matrix Water			Carrie	r: Rob Pringle (M	(1AI Courier)	
		<u>Chair</u>	n of Cu	stody (C	COC) Informa	tion		
Chain of custody	y present?		Yes	<b>V</b>	No 🗆			
Chain of custody	y signed when rel	nquished and received?	Yes	V	No 🗆			
Chain of custody	y agrees with sam	ple labels?	Yes	✓	No 🗌			
Sample IDs noted	d by Client on COC	??	Yes	<b>V</b>	No 🗆			
Date and Time of	f collection noted b	y Client on COC?	Yes	<b>✓</b>	No 🗆			
Sampler's name	noted on COC?		Yes	✓	No 🗆			
		<u>s</u>	ample	Receipt	t Information			
Custody seals in	ntact on shipping o	ontainer/cooler?	Yes		No 🗆		NA 🔽	
Shipping contain	ner/cooler in good	condition?	Yes	<b>V</b>	No 🗆			
Samples in prop	er containers/bott	les?	Yes	<b>V</b>	No 🗆			
Sample containe	ers intact?		Yes	<b>✓</b>	No 🗆			
Sufficient sample	e volume for indic	ated test?	Yes	<b>✓</b>	No 🗌			
		Sample Prese	rvatio	n and Ho	old Time (HT)	<u>Information</u>		
All samples rece	ived within holding	g time?	Yes	<b>✓</b>	No 🗌			
Container/Temp	Blank temperature	•	Coole	er Temp:	4.8°C		NA $\square$	
Water - VOA via	als have zero head	dspace / no bubbles?	Yes	<b>✓</b>	No 🗆	No VOA vials subm	nitted $\square$	
Sample labels cl	hecked for correc	preservation?	Yes	<b>V</b>	No 🗌			
TTLC Metal - pH	acceptable upon	receipt (pH<2)?	Yes		No 🗆		NA 🔽	
Samples Receive	ed on Ice?		Yes	<b>✓</b>	No 🗆			
		(Ісе Тур	e: WE	T ICE	)			
* NOTE: If the "I	No" box is checke	d, see comments below.						
=====		======		===		=====		======
Client contacted:	:	Date contac	ted:			Contacted	l by:	
Comments:								

P & D Environmental	Client Project ID: #0404; 2301 E.12th	Date Sampled: 03/11/09
55 Santa Clara, Ste.240	St., Oakland	Date Received: 03/11/09
55 Santa Ciara, Stc.240	Client Contact: Paul King	Date Extracted: 03/15/09
Oakland, CA 94610	Client P.O.:	Date Analyzed 03/15/09

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

Analytical Method: SW8260B Extraction Method: SW5030B Work Order: 0903274

Extraction Method: SW5030B		Analytical Method: SW8260B Work Order: 0903274										
Lab ID		0903274-001B										
Client ID	SB11-W											
Matrix				Water								
Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reportii Limit					
Acetone	ND<50	5.0	10	tert-Amyl methyl ether (TAME)	ND<2.5	5.0	0.5					
Benzene	37	5.0	0.5	Bromobenzene	ND<2.5	5.0	0.5					
Bromochloromethane	ND<2.5	5.0	0.5	Bromodichloromethane	ND<2.5	5.0	0.5					
Bromoform	ND<2.5	5.0	0.5	Bromomethane	ND<2.5	5.0	0.5					
2-Butanone (MEK)	ND<10	5.0	2.0	t-Butyl alcohol (TBA)	ND<10	5.0	2.0					
n-Butyl benzene	29	5.0	0.5	sec-Butyl benzene	17	5.0	0.5					
tert-Butyl benzene	ND<2.5	5.0	0.5	Carbon Disulfide	ND<2.5	5.0	0.5					
Carbon Tetrachloride	ND<2.5	5.0	0.5	Chlorobenzene	ND<2.5	5.0	0.5					
Chloroethane	ND<2.5	5.0	0.5	Chloroform	ND<2.5	5.0	0.5					
Chloromethane	ND<2.5	5.0	0.5	2-Chlorotoluene	ND<2.5	5.0	0.5					
4-Chlorotoluene	ND<2.5	5.0	0.5	Dibromochloromethane	ND<2.5	5.0	0.5					
1,2-Dibromo-3-chloropropane	ND<1.0	5.0	0.2	1,2-Dibromoethane (EDB)	ND<2.5	5.0	0.5					
Dibromomethane	ND<2.5	5.0	0.5	1,2-Dichlorobenzene	ND<2.5	5.0	0.5					
1,3-Dichlorobenzene	ND<2.5	5.0	0.5	1.4-Dichlorobenzene	ND<2.5	5.0	0.5					
Dichlorodifluoromethane	ND<2.5	5.0	0.5	1,1-Dichloroethane	ND<2.5	5.0	0.5					
1,2-Dichloroethane (1,2-DCA)	ND<2.5	5.0	0.5	1,1-Dichloroethene	ND<2.5	5.0	0.5					
cis-1.2-Dichloroethene	9.6	5.0	0.5	trans-1.2-Dichloroethene	11	5.0	0.5					
1,2-Dichloropropane	ND<2.5	5.0	0.5	1,3-Dichloropropane	ND<2.5	5.0	0.5					
2,2-Dichloropropane	ND<2.5	5.0	0.5	1,1-Dichloropropene	ND<2.5	5.0	0.5					
cis-1,3-Dichloropropene	ND<2.5	5.0	0.5	trans-1,3-Dichloropropene	ND<2.5	5.0	0.5					
Diisopropyl ether (DIPE)	ND<2.5	5.0	0.5	Ethylbenzene	41	5.0	0.5					
Ethyl tert-butyl ether (ETBE)	ND<2.5	5.0	0.5	Freon 113	ND<50	5.0	10					
Hexachlorobutadiene	ND<2.5	5.0	0.5	Hexachloroethane	ND<2.5	5.0	0.5					
2-Hexanone	ND<2.5	5.0	0.5	Isopropylbenzene	66	5.0	0.5					
4-Isopropyl toluene	27	5.0	0.5	Methyl-t-butyl ether (MTBE)	ND<2.5	5.0	0.5					
Methylene chloride	ND<2.5	5.0	0.5	4-Methyl-2-pentanone (MIBK)	ND<2.5	5.0	0.5					
Naphthalene	ND<2.5	5.0	0.5	n-Propyl benzene	90	5.0	0.5					
Styrene	ND<2.5	5.0	0.5	1,1,1,2-Tetrachloroethane	ND<2.5	5.0	0.5					
1,1,2,2-Tetrachloroethane	ND<2.5	5.0	0.5	Tetrachloroethene	ND<2.5	5.0	0.5					
Toluene	ND<2.5	5.0	0.5	1,2,3-Trichlorobenzene	ND<2.5	5.0	0.5					
1,2,4-Trichlorobenzene	ND<2.5	5.0	0.5	1,1,1-Trichloroethane	ND<2.5	5.0	0.5					
1,1,2-Trichloroethane	ND<2.5	5.0	0.5	Trichloroethene	30	5.0	0.5					
Trichlorofluoromethane	ND<2.5	5.0	0.5	1,2,3-Trichloropropane	ND<2.5	5.0	0.5					
1,2,4-Trimethylbenzene	ND<2.5	5.0	0.5	1.3.5-Trimethylbenzene	ND<2.5	5.0	0.5					
Vinyl Chloride	3.1	5.0	0.5	Xvlenes	6.1	5.0	0.5					
				ecoveries (%)	***							
%SS1:	9			%SS2:	90	)						
%SS3:	9			70332.	95	7						
Comments: h6 h1		-π		L								

ND means not detected above the reporting 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.

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 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: #0404; 2301 E.12th	Date Sampled: 03/11/09
55 Santa Clara, Ste.240	St., Oakland	Date Received: 03/11/09
	Client Contact: Paul King	Date Extracted: 03/13/09
Oakland, CA 94610	Client P.O.:	Date Analyzed 03/13/09

# Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline\*

Extraction method SW5030B Analytical methods SW8015Bm Work Order: 0903274

Extraction method	SW5030B	Analytic	al methods SW8015Bm Work O	der: 090	)32/4
Lab ID	Client ID	Matrix	TPH(g)	DF	% SS
001A	SB11-W	W	9100,d1,b6,b1	10	105
	eporting Limit for DF =1;	W	50	μg/L	
	means not detected at or bove the reporting limit	S	NA	N	A

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

# cluttered chromatogram; sample peak coelutes with surrogate peak.

- b1) aqueous sample that contains greater than ~1 vol. % sediment
- b6) lighter than water immiscible sheen/product is present
- d1) weakly modified or unmodified gasoline is significant



<sup>+</sup>The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation:

55 Santa Clara, Ste.240

Oakland, CA 94610

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

<b>*</b>	"When Ouality Counts"			377-252-9262 Fax: 925	
& D Environmental		Client Project ID: St., Oakland	#0404; 2301 E.12th	Date Sampled:	03/11/09
		St., Oakialiu		Date Received:	03/11/09

Client Contact: Paul King Date Extracted: 03/11/09

Client P.O.: Date Analyzed 03/12/09

# Total Extractable Petroleum Hydrocarbons\*

Extraction method SW3510C Analytical methods: SW8015B Work Order: 0903274

Extraction method SW3	510C	Analytical	Analytical methods: SW8015B					
Lab ID	Client ID	Matrix	TPH-Diesel (C10-C23)	DF	% SS			
)903274-001A	SB11-W	W	8100,e11,e7,e2,b6,b1	10	93			

Reporting Limit for DF =1;	W	50	μg/L
ND means not detected at or	C	N/A	NI A
above the reporting limit	3	NA	NA

<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.

- +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 (?)

10					
ALK	_	_			_

# QC SUMMARY REPORT FOR SW8021B/8015Bm

W.O. Sample Matrix: Water QC Matrix: Water BatchID: 41954 WorkOrder 0903274

EPA Method SW8021B/8015Bm	5030B	Spiked Sample ID: 0903264-011A										
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria		Criteria (%)	
7 mary to	μg/L	μg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
TPH(btex)	ND	60	104	96.1	7.47	89.9	95.5	6.07	70 - 130	20	70 - 130	20
MTBE	ND	10	95.8	101	5.23	89.6	96	6.91	70 - 130	20	70 - 130	20
Benzene	ND	10	92.9	95.7	3.02	106	96.4	9.42	70 - 130	20	70 - 130	20
Toluene	ND	10	104	106	2.40	96.7	87.9	9.55	70 - 130	20	70 - 130	20
Ethylbenzene	ND	10	103	104	1.14	109	96.4	12.2	70 - 130	20	70 - 130	20
Xylenes	ND	30	115	115	0	103	94.8	8.30	70 - 130	20	70 - 130	20
%SS:	99	10	95	98	2.71	107	100	6.60	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 41954 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
0903274-001A	03/11/09 2:05 PM	I 03/13/09	03/13/09 8:57 PM				

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

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

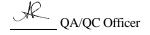
MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the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

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

# cluttered chromatogram; sample peak coelutes with surrogate peak.

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

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



# QC SUMMARY REPORT FOR SW8260B

W.O. Sample Matrix: Water QC Matrix: Water BatchID: 41955 WorkOrder 0903274

EPA Method SW8260B Extraction SW5030B Spiked Sample ID: 0903260-005B										005B		
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acc	eptance	Criteria (%)	1
7 may to	μg/L	μg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
tert-Amyl methyl ether (TAME)	ND	10	86.1	85.9	0.153	101	102	1.61	70 - 130	30	70 - 130	30
Benzene	ND	10	104	104	0	114	112	1.41	70 - 130	30	70 - 130	30
t-Butyl alcohol (TBA)	3.9	50	82.5	85.9	3.73	91.2	93.5	2.50	70 - 130	30	70 - 130	30
Chlorobenzene	ND	10	97.2	99	1.76	101	102	0.965	70 - 130	30	70 - 130	30
1,2-Dibromoethane (EDB)	ND	10	95.1	101	6.49	106	108	1.86	70 - 130	30	70 - 130	30
1,2-Dichloroethane (1,2-DCA)	ND	10	97.9	97.5	0.440	104	104	0	70 - 130	30	70 - 130	30
1,1-Dichloroethene	ND	10	75.1	74.8	0.437	73.9	73.3	0.859	70 - 130	30	70 - 130	30
Diisopropyl ether (DIPE)	ND	10	90.7	90.5	0.161	110	110	0	70 - 130	30	70 - 130	30
Ethyl tert-butyl ether (ETBE)	ND	10	96.2	97.6	1.51	119	119	0	70 - 130	30	70 - 130	30
Methyl-t-butyl ether (MTBE)	21	10	80.3	86.6	2.16	109	110	0.656	70 - 130	30	70 - 130	30
Toluene	0.76	10	102	103	0.312	106	108	1.95	70 - 130	30	70 - 130	30
Trichloroethene	ND	10	99.4	98.4	1.00	106	104	2.00	70 - 130	30	70 - 130	30
%SS1:	81	25	80	82	2.11	80	79	0.570	70 - 130	30	70 - 130	30
% SS2:	100	25	95	96	1.50	98	99	1.33	70 - 130	30	70 - 130	30
%SS3:	83	2.5	86	84	2.92	86	86	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 41955 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
0903274-001B	03/11/09 2:05 PM	M 03/15/09	03/15/09 2:51 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 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: 41946 WorkOrder 0903274

EPA Method SW8015B		Spiked Sample ID: N/A										
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)			١
	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	96.8	99.1	2.41	N/A	N/A	70 - 130	30
%SS:	N/A	2500	N/A	N/A	N/A	104	107	3.03	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 41946 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
0903274-001A	03/11/09 2:05 PM	I 03/11/09	03/12/09 3:28 AM				

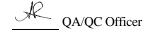
MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% 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.

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.

"When Ouality 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: #0404; J.W Silviera, Mel Senna Brakes Service	Date Sampled:	03/10/09-03/11/09
55 Santa Clara, Ste.240	Seilia diakes Seivice	Date Received:	03/11/09
Oakland, CA 94610	Client Contact: Paul King	Date Reported:	03/18/09
	Client P.O.:	Date Completed:	03/18/09

WorkOrder: 0903275

March 18, 2009

Dear	Paul	١

### Enclosed within are:

- 1) The results of the 6 analyzed samples from your project: #0404; J.W Silviera, Mel Senna Bra
- 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.

0903275

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

CHAIN OF CUSTODY RECORD

PAGE \_ OF \_

040			2301	ENNA E	BRAKEISERVICE 12th STREET AKLAND		Je/e-	il in the second	B. Willem		3/	//	/ / Inte	
MICHAEL D	/		V. S. C. C.	Midde	ul Desolienes	NUMBER OF CONTAINERS	AWAL YSTOCK	3	3	/	//	PRESIDE	N. C.	REMARKS
SAMPLE NUMBER	DATE	TIME	TYPE		SAMPLE LOCATION	₹8	Và	The state of	1	$^{\prime}/$		1	/	
589-W	3/19/09	15:10	WATER			17	X	X		1	I	ICE	NORMA	L TURN AR
5B10-W	3/11/09	08:40	(1 .			* 7	×	×		1	1	1(	и	u
5B12-W	3/19/09	0935	()			1	X.	X		+		11	ic	- 4
S.B12W-45	3/10/09	0958	(1			17	14	Y	+	1	1	11	- 11	1)
5B13-W-48	3/10/09	1425	61			17	7	44		+	F	1)	r)	- 7(
	17								H	+	F			
						ICE/t°_ G000 CO HEAD SPA	MENTI A 30	BSE	NT_	1.0	CON	MATE	NLAB	
						PRESERV		V	AS C	8 6	METAL	OTHER		
RELINQUISHED BY: (	selier	er 8	BATE 169	TIME 349	BECEIVED BY: (SIGNATUR		TOTA	THE !	OF SA	HTUNKS	64	2 LAB	ORATORY:	BELL ANALY
RELINQUISHED BY:		) 3	BATE /	-	RECEIVED BY: (SIGNATUR	P			AR	LYDE	Liv.	5 18	77) 25	HONE NUMBER
RELINQUISHED BY: (	SIGNATURE	n /	DATE	TIME	(SIGNATURE)	RY BY:							EQUEST SH S (>)NO	IEE1

# McCampbell Analytical, Inc.

1534 Willow Pass Rd (925) 252-9262

# CHAIN-OF-CUSTODY RECORD

Page 1 of 1

Pittsburg, CA 94565-1701 WorkOrder: 0903275 ClientCode: PDEO WriteOn EDF Excel Fax ✓ Email HardCopy ThirdParty J-flag Bill to: Report to: Requested TAT: 5 days Accounts Payable Paul King Email: lab@pdenviro.com P & D Environmental P & D Environmental cc: Date Received: 03/11/2009 PO: 55 Santa Clara, Ste.240 55 Santa Clara, Ste.240 Date Printed: Oakland, CA 94610 ProjectNo: #0404; J.W Silviera, Mel Senna Brakes Oakland, CA 94610 03/11/2009 (510) 658-6916 Service FAX 510-834-0152

					Requested Tests (See legend below)											
Lab ID	Client ID	Matrix	<b>Collection Date</b>	Hold	1	2	3	4	5	6	7	8	9	10	11	12
0000075 004	CDO W	Matan	2/40/2000 45:40			Α.										
0903275-001	SB9-W	Water	3/10/2009 15:10	<b>└</b> ╚	В	А										—
0903275-002	SB10-W	Water	3/11/2009 8:40	Ш	В	Α										
0903275-003	SB12-W	Water	3/10/2009 9:35		В	Α										
0903275-004	SB12W-45	Water	3/10/2009 9:58		В	Α										
0903275-005	SB13-W	Water	3/10/2009 14:25		В	Α										
0903275-006	SB13W-48	Water	3/10/2009 13:40		В	Α										

Test Legend:				
1 8260B_W	2 G-MBTEX_W	3	4	5
6	7	8	9	10
11	12			
The following SampIDs: 001A, 00	02A, 003A, 004A, 005A, 006A contain testgro	up.	_	Prepared by: Ana Venegas

#### **Comments:**

# **Sample Receipt Checklist**

Client Name:	P & D Environmental				Date	and Time Received	3/11/2009	6:22:32 PM
Project Name:	#0404; J.W Silviera, M	lel Senna Bra	kes	Service	Che	cklist completed an	d reviewed by:	Ana Venegas
WorkOrder N°:	<b>0903275</b> Matrix	x <u>Water</u>			Carr	ier: Rob Pringle	(MAI Courier)	
		<u>Chain</u>	of Cu	stody (C	OC) Inforn	nation		
Chain of custody	present?		Yes	<b>V</b>	No 🗆			
Chain of custody	signed when relinquished a	and received?	Yes	<b>V</b>	No 🗆			
Chain of custody	agrees with sample labels?	•	Yes	✓	No 🗌			
Sample IDs noted	by Client on COC?		Yes	<b>V</b>	No 🗆			
Date and Time of	collection noted by Client on	COC?	Yes	<b>✓</b>	No 🗆			
Sampler's name r	noted on COC?		Yes	<b>V</b>	No $\square$			
		<u>Sa</u>	mple	Receipt	Informatio	o <u>n</u>		
Custody seals int	tact on shipping container/co	ooler?	Yes		No 🗆		NA 🔽	
Shipping containe	er/cooler in good condition?		Yes	<b>V</b>	No 🗆			
Samples in prope	er containers/bottles?		Yes	<b>~</b>	No 🗆			
Sample containe	rs intact?		Yes	✓	No 🗆			
Sufficient sample	e volume for indicated test?		Yes	<b>✓</b>	No 🗌			
	<u>\$</u>	Sample Preserv	vatior	n and Ho	old Time (H	T) Information		
All samples recei	ved within holding time?		Yes	<b>✓</b>	No 🗌			
Container/Temp E	Blank temperature		Coole	er Temp:	3.6°C		NA 🗆	
Water - VOA vial	ls have zero headspace / no	bubbles?	Yes	✓	No 🗆	No VOA vials sub	omitted	
Sample labels ch	necked for correct preservati	on?	Yes	<b>✓</b>	No 🗌			
TTLC Metal - pH	acceptable upon receipt (pH-	<2)?	Yes		No 🗆		NA 🗹	
Samples Receive	ed on Ice?		Yes	<b>✓</b>	No 🗆			
		(Ice Type	: WE	TICE	)			
* NOTE: If the "N	No" box is checked, see com	nments below.						
	=======	=====		:				======
Client contacted:		Date contacte	ed:			Contact	ed by:	
Comments:								

P & D Environmental	Client Project ID: #0404; J.W Silviera,	Date Sampled: 03/10/09
55 Santa Clara, Ste.240	Mel Senna Brakes Service	Date Received: 03/11/09
33 Santa Ciara, Stc.240	Client Contact: Paul King	Date Extracted: 03/16/09
Oakland, CA 94610	Client P.O.:	Date Analyzed 03/16/09

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

Analytical Method: SW8260B Extraction Method: SW5030B Work Order: 0903275

Extraction Method: SW5030B		Analyti	cai Metno	d: SW8260B	Work Order: 0903	12/13	
Lab ID				0903275-001B			
Client ID				SB9-W			
Matrix				Water			
Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reportin 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	1.2	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	2.9	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	18	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	0.53	1.0	0.5
		Surro	gate Re	coveries (%)			
%SS1:	80			%SS2:	90	9	
%SS3:	8			,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	<i></i>	•	

ND means not detected above the reporting 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.



<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: #0404; J.W Silviera,	Date Sampled: 03/11/09
55 Santa Clara, Ste.240	Mel Senna Brakes Service	Date Received: 03/11/09
	Client Contact: Paul King	Date Extracted: 03/16/09
Oakland, CA 94610	Client P.O.:	Date Analyzed 03/16/09

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

Analytical Method: SW8260B Extraction Method: SW5030B Work Order: 0903275

Extraction Method: SW5030B		Analyti	cal Metho	d: SW8260B	Work Order: 0903	275	
Lab ID		0903275-002B					
Client ID				SB10-W			
Matrix		Water					
Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acetone	43	2.0	10	tert-Amyl methyl ether (TAME)	ND<1.0	2.0	0.5
Benzene	ND<1.0	2.0	0.5	Bromobenzene	ND<1.0	2.0	0.5
Bromochloromethane	ND<1.0	2.0	0.5	Bromodichloromethane	ND<1.0	2.0	0.5
Bromoform	ND<1.0	2.0	0.5	Bromomethane	ND<1.0	2.0	0.5
2-Butanone (MEK)	10	2.0	2.0	t-Butyl alcohol (TBA)	ND<4.0	2.0	2.0
n-Butyl benzene	ND<1.0	2.0	0.5	sec-Butyl benzene	ND<1.0	2.0	0.5
tert-Butyl benzene	ND<1.0	2.0	0.5	Carbon Disulfide	ND<1.0	2.0	0.5
Carbon Tetrachloride	ND<1.0	2.0	0.5	Chlorobenzene	ND<1.0	2.0	0.5
Chloroethane	ND<1.0	2.0	0.5	Chloroform	ND<1.0	2.0	0.5
Chloromethane	ND<1.0	2.0	0.5	2-Chlorotoluene	ND<1.0	2.0	0.5
4-Chlorotoluene	ND<1.0	2.0	0.5	Dibromochloromethane	ND<1.0	2.0	0.5
1,2-Dibromo-3-chloropropane	ND<0.40	2.0	0.2	1,2-Dibromoethane (EDB)	ND<1.0	2.0	0.5
Dibromomethane	ND<1.0	2.0	0.5	1,2-Dichlorobenzene	ND<1.0	2.0	0.5
1.3-Dichlorobenzene	ND<1.0	2.0	0.5	1.4-Dichlorobenzene	ND<1.0	2.0	0.5
Dichlorodifluoromethane	ND<1.0	2.0	0.5	1,1-Dichloroethane	ND<1.0	2.0	0.5
1,2-Dichloroethane (1,2-DCA)	1.2	2.0	0.5	1.1-Dichloroethene	ND<1.0	2.0	0.5
cis-1.2-Dichloroethene	49	2.0	0.5	trans-1.2-Dichloroethene	4.4	2.0	0.5
1,2-Dichloropropane	ND<1.0	2.0	0.5	1,3-Dichloropropane	ND<1.0	2.0	0.5
2,2-Dichloropropane	ND<1.0	2.0	0.5	1,1-Dichloropropene	ND<1.0	2.0	0.5
cis-1,3-Dichloropropene	ND<1.0	2.0	0.5	trans-1,3-Dichloropropene	ND<1.0	2.0	0.5
Diisopropyl ether (DIPE)	ND<1.0	2.0	0.5	Ethylbenzene	ND<1.0	2.0	0.5
Ethyl tert-butyl ether (ETBE)	ND<1.0	2.0	0.5	Freon 113	ND<20	2.0	10
Hexachlorobutadiene	ND<1.0	2.0	0.5	Hexachloroethane	ND<1.0	2.0	0.5
2-Hexanone	ND<1.0	2.0	0.5	Isopropylbenzene	ND<1.0	2.0	0.5
4-Isopropyl toluene	ND<1.0	2.0	0.5	Methyl-t-butyl ether (MTBE)	ND<1.0	2.0	0.5
Methylene chloride	ND<1.0	2.0	0.5	4-Methyl-2-pentanone (MIBK)	ND<1.0	2.0	0.5
Naphthalene	ND<1.0	2.0	0.5	n-Propyl benzene	ND<1.0	2.0	0.5
Styrene	ND<1.0	2.0	0.5	1,1,1,2-Tetrachloroethane	ND<1.0	2.0	0.5
1,1,2,2-Tetrachloroethane	ND<1.0	2.0	0.5	Tetrachloroethene	ND<1.0	2.0	0.5
Toluene	3.2	2.0	0.5	1,2,3-Trichlorobenzene	ND<1.0	2.0	0.5
1,2,4-Trichlorobenzene	ND<1.0	2.0	0.5	1,1,1-Trichloroethane	ND<1.0	2.0	0.5
1,1,2-Trichloroethane	ND<1.0	2.0	0.5	Trichloroethene	42	2.0	0.5
Trichlorofluoromethane	ND<1.0	2.0	0.5	1,2,3-Trichloropropane	ND<1.0	2.0	0.5
1,2,4-Trimethylbenzene	ND<1.0	2.0	0.5	1,3,5-Trimethylbenzene	ND<1.0	2.0	0.5
Vinvl Chloride	ND<1.0	2.0	0.5	Xvlenes	ND<1.0	2.0	0.5
		Surro	gate Re	coveries (%)			
%SS1:	80			%SS2:	90	)	
%SS3:	80			, 0 20 20 .	<i></i>	•	
Comments: h1							

ND means not detected above the reporting 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.



<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: #0404; J.W Silviera,	Date Sampled: 03/10/09
55 Santa Clara, Ste.240	Mel Senna Brakes Service	Date Received: 03/11/09
	Client Contact: Paul King	Date Extracted: 03/16/09
Oakland, CA 94610	Client P.O.:	Date Analyzed 03/16/09

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

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 0903275

Lab ID				0903275-003B			
Client ID		SB12-W					
Matrix		Water					
Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reportin Limit
Acetone	43	2.5	10	tert-Amyl methyl ether (TAME)	ND<1.2	2.5	0.5
Benzene	ND<1.2	2.5	0.5	Bromobenzene	ND<1.2	2.5	0.5
Bromochloromethane	ND<1.2	2.5	0.5	Bromodichloromethane	ND<1.2	2.5	0.5
Bromoform	ND<1.2	2.5	0.5	Bromomethane	ND<1.2	2.5	0.5
2-Butanone (MEK)	5.2	2.5	2.0	t-Butyl alcohol (TBA)	ND<5.0	2.5	2.0
n-Butyl benzene	5.7	2.5	0.5	sec-Butyl benzene	3.8	2.5	0.5
tert-Butyl benzene	ND<1.2	2.5	0.5	Carbon Disulfide	ND<1.2	2.5	0.5
Carbon Tetrachloride	ND<1.2	2.5	0.5	Chlorobenzene	ND<1.2	2.5	0.5
Chloroethane	ND<1.2	2.5	0.5	Chloroform	ND<1.2	2.5	0.5
Chloromethane	ND<1.2	2.5	0.5	2-Chlorotoluene	ND<1.2	2.5	0.5
4-Chlorotoluene	ND<1.2	2.5	0.5	Dibromochloromethane	ND<1.2	2.5	0.5
1,2-Dibromo-3-chloropropane	ND<0.50	2.5	0.2	1,2-Dibromoethane (EDB)	ND<1.2	2.5	0.5
Dibromomethane	ND<1.2	2.5	0.5	1,2-Dichlorobenzene	ND<1.2	2.5	0.5
1,3-Dichlorobenzene	ND<1.2	2.5	0.5	1,4-Dichlorobenzene	ND<1.2	2.5	0.5
Dichlorodifluoromethane	ND<1.2	2.5	0.5	1,1-Dichloroethane	ND<1.2	2.5	0.5
1,2-Dichloroethane (1,2-DCA)	ND<1.2	2.5	0.5	1,1-Dichloroethene	ND<1.2	2.5	0.5
cis-1,2-Dichloroethene	ND<1.2	2.5	0.5	trans-1,2-Dichloroethene	ND<1.2	2.5	0.5
1,2-Dichloropropane	ND<1.2	2.5	0.5	1,3-Dichloropropane	ND<1.2	2.5	0.5
2,2-Dichloropropane	ND<1.2	2.5	0.5	1,1-Dichloropropene	ND<1.2	2.5	0.5
cis-1,3-Dichloropropene	ND<1.2	2.5	0.5	trans-1,3-Dichloropropene	ND<1.2	2.5	0.5
Diisopropyl ether (DIPE)	ND<1.2	2.5	0.5	Ethylbenzene	1.3	2.5	0.5
Ethyl tert-butyl ether (ETBE)	ND<1.2	2.5	0.5	Freon 113	ND<25	2.5	10
Hexachlorobutadiene	ND<1.2	2.5	0.5	Hexachloroethane	ND<1.2	2.5	0.5
2-Hexanone	ND<1.2	2.5	0.5	Isopropylbenzene	12	2.5	0.5
4-Isopropyl toluene	5.4	2.5	0.5	Methyl-t-butyl ether (MTBE)	ND<1.2	2.5	0.5
Methylene chloride	ND<1.2	2.5	0.5	4-Methyl-2-pentanone (MIBK)	ND<1.2	2.5	0.5
Naphthalene	ND<1.2	2.5	0.5	n-Propyl benzene	14	2.5	0.5
Styrene	ND<1.2	2.5	0.5	1,1,1,2-Tetrachloroethane	ND<1.2	2.5	0.5
1,1,2,2-Tetrachloroethane	ND<1.2	2.5	0.5	Tetrachloroethene	ND<1.2	2.5	0.5
Toluene	14	2.5	0.5	1,2,3-Trichlorobenzene	ND<1.2	2.5	0.5
1,2,4-Trichlorobenzene	ND<1.2	2.5	0.5	1,1,1-Trichloroethane	ND<1.2	2.5	0.5
1,1,2-Trichloroethane	ND<1.2	2.5	0.5	Trichloroethene	ND<1.2	2.5	0.5
Trichlorofluoromethane	ND<1.2	2.5	0.5	1,2,3-Trichloropropane	ND<1.2	2.5	0.5
1,2,4-Trimethylbenzene	2.4	2.5	0.5	1,3,5-Trimethylbenzene	1.2	2.5	0.5
Vinvl Chloride	ND<1.2	2.5	0.5	Xvlenes	3.8	2.5	0.5
		Surr	ogate Re	ecoveries (%)			
%SS1:	8:			%SS2:	9	8	
%SS3:	9,			70552.			
Comments: b1	<u> </u>						

ND means not detected above the reporting 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.



<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  $\mu g$ /wipe.

P & D Environmental	Client Project ID: #0404; J.W Silviera,	Date Sampled: 03/10/09
55 Santa Clara, Ste.240	Mel Senna Brakes Service	Date Received: 03/11/09
	Client Contact: Paul King	Date Extracted: 03/16/09
Oakland, CA 94610	Client P.O.:	Date Analyzed 03/16/09

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

Analytical Method: SW8260B Extraction Method: SW5030B Work Order: 0903275

Extraction Method: SW5030B		Analyt	ical Metho	d: SW8260B	Work Order: 0903	275	
Lab ID				0903275-004B			
Client ID				SB12W-45			
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	0.51	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	0.69	1.0	0.5	n-Propyl benzene	0.59	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	1.7	1.0	0.5	1,2,3-Trichlorobenzene	ND	1.0	0.5
1,2,4-Trichlorobenzene	ND	1.0	0.5	1,1,1-Trichloroethane	ND	1.0	0.5
1,1,2-Trichloroethane	ND	1.0	0.5	Trichloroethene	0.80	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	0.60	1.0	0.5
		Surr	ogate Re	ecoveries (%)			
%SS1:	87			%SS2:	100	0	
%SS3:	83			7000-	100		
Comments: b1	0.						

ND means not detected above the reporting 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.



<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: #0404; J.W Silviera,	Date Sampled: 03/10/09
55 Santa Clara, Ste.240	Mel Senna Brakes Service	Date Received: 03/11/09
	Client Contact: Paul King	Date Extracted: 03/16/09
Oakland, CA 94610	Client P.O.:	Date Analyzed 03/16/09

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

Analytical Method: SW8260B Extraction Method: SW5030B Work Order: 0903275

Extraction Method: SW5030B		Analyti	cal Metho	d: SW8260B	Work Order: 0903	5275	
Lab ID	0903275-005B						
Client ID				SB13-W			
Matrix				Water			
Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reportin Limit
Acetone	49	1.0	10	tert-Amyl methyl ether (TAME)	ND	1.0	0.5
Benzene	8.4	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)	23	1.0	2.0	t-Butyl alcohol (TBA)	14	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	2.4	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	3.1	1.0	0.5	trans-1.2-Dichloroethene	2.1	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	2.7	1.0	0.5
Ethyl tert-butyl ether (ETBE)	ND	1.0	0.5	Freon 113	ND ND	1.0	10
Hexachlorobutadiene	ND	1.0	0.5	Hexachloroethane	ND	1.0	0.5
2-Hexanone	1.7	1.0	0.5	Isopropylbenzene	2.1	1.0	0.5
4-Isopropyl toluene	ND ND	1.0	0.5	Methyl-t-butyl ether (MTBE)	ND 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	1.2	1.0	0.5	n-Propyl benzene	1.7	1.0	0.5
Styrene	ND 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	1.8	1.0	0.5	1.2.3-Trichlorobenzene	ND ND	1.0	0.5
1,2,4-Trichlorobenzene	ND 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	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	1.2	1.0	0.5	Xvlenes	0.88	1.0	0.5
	***	110		coveries (%)	0.00	***	
%SS1:	8.			%SS2:	10	0	
%SS1: %SS3:	8			70332.	10	U	
Comments: h1	. 0	O		I			

ND means not detected above the reporting 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.



<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: #0404; J.W Silviera,	Date Sampled: 03/10/09
55 Santa Clara, Ste.240	Mel Senna Brakes Service	Date Received: 03/11/09
	Client Contact: Paul King	Date Extracted: 03/15/09
Oakland, CA 94610	Client P.O.:	Date Analyzed 03/15/09

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

Analytical Method: SW8260B Extraction Method: SW5030B Work Order: 0903275

Extraction Method: SW5030B		Analyti	cal Metho	d: SW8260B	Work Order: 0903	275		
Lab ID		0903275-006B						
Client ID		SB13W-48						
Matrix				Water				
Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reportin 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 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 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 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	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	
		Surra		ecoveries (%)				
%SS1:	8		<b></b>	%SS2:	10	1/4		
%SS3:	9			/0002.	10			
Comments: h1								

ND means not detected above the reporting 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.



<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: #0404; J.W Silviera, Mel Senna Brakes Service	Date Sampled:	03/10/09-03/11/09
55 Santa Clara, Ste.240	wei Seilia Brakes Service	Date Received:	03/11/09
	Client Contact: Paul King	Date Extracted:	03/14/09-03/15/09
Oakland, CA 94610	Client P.O.:	Date Analyzed	03/14/09-03/15/09

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline\* Analytical methods SW8015Bm Extraction method SW5030B Work Order: 0903275 TPH(g) Lab ID Client ID Matrix DF % SS 001A SB9-W W 160,d9,b1 122 002A W 1 105 SB10-WND,b1 003A W 1 116 SB12-W 2300,d1,b1 004A SB12W-45 W 130,d9,b1 1 115 85 005A SB13-W W 420,d1,b1 1 006A SB13W-48 W ND,b1 1 101

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

<sup>\*</sup> water and vapor samples and all TCLP & SPLP extracts are reported in ug/L, soil/sludge/solid samples in mg/kg, wipe samples in  $\mu$ g/wipe, product/oil/non-aqueous liquid samples in mg/L.

# cluttered chromatogram; sample peak coelutes with surrogate peak.

- +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
- d1) weakly modified or unmodified gasoline is significant
- d9) no recognizable pattern



P & D Environmental	Client Project ID: #0404; J.W Silviera, Mel Senna Brakes Service	Date Sampled:	03/10/09-03/11/09
55 Santa Clara, Ste.240	wei Seilia Brakes Service	Date Received:	03/11/09
	Client Contact: Paul King	Date Extracted:	03/11/09
Oakland, CA 94610	Client P.O.:	Date Analyzed	03/12/09-03/18/09

#### Total Extractable Petroleum Hydrocarbons\*

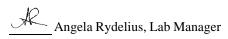
Extraction method SW3510C Analytical methods: SW8015B Work Order: 0903275

Extraction method 3 v	¥3310C	Anaryticari	nethous. Sw 6013B	work Order.	03213
Lab ID	Client ID	Matrix	TPH-Diesel (C10-C23)	DF	% SS
0903275-001A	SB9-W	W	1400,e7,e11,e2,b1	2	98
0903275-002A	SB10-W	W	110,e2,b1	1	109
0903275-003A	SB12-W	W	760,e11,e7,b1	1	103
0903275-004A	SB12W-45	W	110,e7,e2,e11,b1	1	103
0903275-005A	SB13-W	W	610,e7,e11,e2,b1	2	86
0903275-006A	SB13W-48	W	ND,b1	1	107

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

<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.

- +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
- e2) diesel range compounds are significant; no recognizable pattern
- e7) oil range compounds are significant
- e11) stoddard solvent/mineral spirit (?)



<sup>#</sup> 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.

QC SUMMARY REPORT FOR SW8260B

W.O. Sample Matrix: Water QC Matrix: Water BatchID: 41967 WorkOrder 0903275

EPA Method SW8260B	Extra	ction SW	5030B					S	Spiked Sar	nple ID	: 0903275-0	)02B
Analyte	Sample	Spiked	MS	MSD	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
tert-Amyl methyl ether (TAME)	ND<1.0	10	90.7	95.5	5.20	91.6	98	6.69	70 - 130	30	70 - 130	30
Benzene	ND<1.0	10	112	116	3.16	109	115	4.70	70 - 130	30	70 - 130	30
t-Butyl alcohol (TBA)	ND<4.0	50	92.3	95	2.96	87.8	80.2	9.04	70 - 130	30	70 - 130	30
Chlorobenzene	ND<1.0	10	107	112	4.04	113	111	2.08	70 - 130	30	70 - 130	30
1,2-Dibromoethane (EDB)	ND<1.0	10	107	112	4.76	108	104	3.54	70 - 130	30	70 - 130	30
1,2-Dichloroethane (1,2-DCA)	1.2	10	108	115	5.23	105	107	2.10	70 - 130	30	70 - 130	30
1,1-Dichloroethene	ND<1.0	10	76.7	82.5	7.28	74.8	76.4	2.10	70 - 130	30	70 - 130	30
Diisopropyl ether (DIPE)	ND<1.0	10	94.5	99	4.61	96.4	92	4.64	70 - 130	30	70 - 130	30
Ethyl tert-butyl ether (ETBE)	ND<1.0	10	100	107	6.12	104	100	3.51	70 - 130	30	70 - 130	30
Methyl-t-butyl ether (MTBE)	ND<1.0	10	97.7	101	3.44	99.2	98.1	1.05	70 - 130	30	70 - 130	30
Toluene	3.2	10	121	130	5.63	128	126	1.70	70 - 130	30	70 - 130	30
Trichloroethene	42	10	NR	NR	NR	102	108	5.26	70 - 130	30	70 - 130	30
%SS1:	86	25	89	92	3.36	81	80	1.15	70 - 130	30	70 - 130	30
%SS2:	99	25	96	99	2.53	98	95	2.92	70 - 130	30	70 - 130	30
%SS3:	80	2.5	90	89	1.02	86	89	3.35	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 41967 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
0903275-001B	03/10/09 3:10 PM	03/16/09	03/16/09 4:29 PM	0903275-002B	03/11/09 8:40 AM	03/16/09	03/16/09 5:11 PM
0903275-003B	03/10/09 9:35 AM	03/16/09	03/16/09 7:19 PM	0903275-004B	03/10/09 9:58 AM	03/16/09	03/16/09 8:01 PM
0903275-005B	03/10/09 2:25 PM	03/16/09	03/16/09 8:44 PM	0903275-006B	03/10/09 1:40 PM	03/15/09	03/15/09 1:32 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.

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

W.O. Sample Matrix: Water

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

BatchID: 41966

WorkOrder 0903275

QC SUMMARY REPORT FOR SW8021B/8015Bm

#### QC SUMMANT REPORT FOR SW0021D/0015DIII

QC Matrix: Water

EPA Method SW8015Bm	Extra	ction SW	5030B					5	Spiked Sar	nple ID	: 0903275-0	006A
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acc	eptance	Criteria (%)	1
Analyto	μg/L	μg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
TPH(btex)	ND	60	95.1	90.8	4.61	111	109	2.53	70 - 130	20	70 - 130	20
МТВЕ	ND	10	96.3	94.4	1.99	103	104	0.590	70 - 130	20	70 - 130	20
Benzene	ND	10	91.1	91.4	0.307	92.5	97	4.79	70 - 130	20	70 - 130	20
Toluene	ND	10	80.9	82.6	1.99	94.8	103	7.84	70 - 130	20	70 - 130	20
Ethylbenzene	ND	10	93.7	93.8	0.0864	96.6	102	5.63	70 - 130	20	70 - 130	20
Xylenes	ND	30	89.6	89.5	0.0972	109	118	8.12	70 - 130	20	70 - 130	20
%SS:	101	10	98	98	0	101	102	0.266	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 41966 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
0903275-001A	03/10/09 3:10 PM	03/14/09	03/14/09 4:56 AM	0903275-002A	03/11/09 8:40 AM	03/15/09	03/15/09 7:47 AM
0903275-003A	03/10/09 9:35 AM	03/14/09	03/14/09 5:56 AM	0903275-004A	03/10/09 9:58 AM	03/14/09	03/14/09 6:25 AM
0903275-005A	03/10/09 2:25 PM	03/14/09	03/14/09 6:55 AM	0903275-006A	03/10/09 1:40 PM	03/14/09	03/14/09 7:25 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).

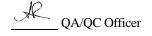
MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the 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 SW8015B

W.O. Sample Matrix: Water QC Matrix: Water BatchID: 41946 WorkOrder 0903275

EPA Method SW8015B	Spiked Sample ID: N/A											
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acce	eptance	Criteria (%)	١
	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	96.8	99.1	2.41	N/A	N/A	70 - 130	30
%SS:	N/A	2500	N/A	N/A	N/A	104	107	3.03	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 41946 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
0903275-001A	03/10/09 3:10 PM	I 03/11/09	03/13/09 8:20 AM	0903275-002A	03/11/09 8:40 AM	03/11/09	03/18/09 10:47 AM
0903275-003A	03/10/09 9:35 AM	03/11/09	03/12/09 12:02 PM	0903275-004A	03/10/09 9:58 AM	03/11/09	03/13/09 6:38 PM
0903275-005A	03/10/09 2:25 PM	I 03/11/09	03/13/09 8:20 AM				

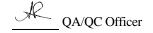
MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% 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.

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.



## QC SUMMARY REPORT FOR SW8015B

W.O. Sample Matrix: Water QC Matrix: Water BatchID: 41965 WorkOrder 0903275

EPA Method SW8015B	Spiked Sample ID: N/A											
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acce	eptance	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	104	97.9	5.70	N/A	N/A	70 - 130	30
%SS:	N/A	2500	N/A	N/A	N/A	106	104	1.26	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 41965 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
0903275-006A	03/10/09 1:40 PM	<b>d</b> 03/11/09	03/12/09 3:28 AM				

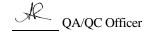
MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% 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.

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.





3/20/2009

Mr. Paul King P & D Environmental 55 Santa Clara Suite 240 Oakland CA 94610

Project Name: J.W. Silviera

Project #: 0404

Workorder #: 0903356B

Dear Mr. Paul King

The following report includes the data for the above referenced project for sample(s) received on 3/13/2009 at Air Toxics Ltd.

The data and associated QC analyzed by Modified TO-3 are compliant with the project requirements or laboratory criteria with the exception of the deviations noted in the attached case narrative.

Thank you for choosing Air Toxics Ltd. for you air analysis needs. Air Toxics Ltd. is committed to providing accurate data of the highest quality. Please feel free to contact the Project Manager: Kyle Vagadori at 916-985-1000 if you have any questions regarding the data in this report.

Regards,

Kyle Vagadori Project Manager

Vych

#### WORK ORDER #: 0903356B

Work Order Summary

CLIENT: Mr. Paul King BILL TO: Mr. Paul King

P & D Environmental
P & D Environmental
S Santa Clara
S Santa Clara

55 Santa Clara Suite 240 55 Santa Clara Suite 240

Oakland, CA 94610 Oakland, CA 94610

**PHONE:** 510-658-6916 **P.O.** #

 FAX:
 510-834-0772
 PROJECT # 0404 J.W. Silviera

 DATE RECEIVED:
 03/13/2009
 CONTACT:
 Kyle Vagadori

 DATE COMPLETED:
 03/20/2009

FRACTION#	NAME	TEST	RECEIPT VAC./PRES.	FINAL PRESSURE
01A	SG1	Modified TO-3	3.2 "Hg	15 psi
02A	SG1-DUP	Modified TO-3	3.0 "Hg	15 psi
03A	SG2	Modified TO-3	4.0 "Hg	15 psi
04A	SG3	Modified TO-3	4.8 "Hg	15 psi
05A	SG4	Modified TO-3	3.6 "Hg	15 psi
06A	SG5	Modified TO-3	4.4 "Hg	15 psi
06AA	SG5 Lab Duplicate	Modified TO-3	4.4 "Hg	15 psi
07A	SG6	Modified TO-3	13.6 "Hg	15 psi
08A	Lab Blank	Modified TO-3	NA	NA
09A	LCS	Modified TO-3	NA	NA

CERTIFIED BY: DATE: 03/20/09

Laboratory Director

Certfication numbers: CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763, NJ NELAP - CA004 NY NELAP - 11291, UT NELAP - 9166389892, AZ Licensure AZ0719

Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act,

Accreditation number: E87680, Effective date: 07/01/08, Expiration date: 06/30/09

This report shall not be reproduced, except in full, without the written approval of Air Toxics Ltd.

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630 (916) 985-1000 . (800) 985-5955 . FAX (916) 985-1020

Air Toxics Ltd. certifies that the test results contained in this report meet all requirements of the NELAC standards



# LABORATORY NARRATIVE Modified TO-3 P & D Environmental Workorder# 0903356B

Seven 1 Liter Summa Canister samples were received on March 13, 2009. The laboratory performed analysis for volatile organic compounds in air via modified EPA Method TO-3 using gas chromatography with flame ionization detection. The method involves concentrating up to 200 mL of sample. The concentrated aliquot is then dry purged to remove water vapor prior to entering the chromatographic system. The TPH (Gasoline Range) results are calculated using the response factor of Gasoline. A molecular weight of 100 is used to convert the TPH (Gasoline Range) ppmv result to ug/L.

Method modifications taken to run these samples are summarized in the table below. Specific project requirements may over-ride the ATL modifications.

Requirement	TO-3	ATL Modifications
Daily Calibration Standard Frequency	Prior to sample analysis and every 4 - 6 hrs	Prior to sample analysis and after the analytical batch = 20 samples</td
Initial Calibration Calculation	4-point calibration using a linear regression model	5-point calibration using average Response Factor
Initial Calibration Frequency	Weekly	When daily calibration standard recovery is outside 75 - 125 %, or upon significant changes to procedure or instrumentation
Moisture Control	Nafion system	Sorbent system
Minimum Detection Limit (MDL)	Calculated using the equation DL = A+3.3S, where A is intercept of calibration line and S is the standard deviation of at least 3 reps of low level standard	40 CFR Pt. 136 App. B
Preparation of Standards	Levels achieved through dilution of gas mixture	Levels achieved through loading various volumes of the gas mixture

## **Receiving Notes**

There were no receiving discrepancies.

## **Analytical Notes**

The recovery of surrogate Fluorobenzene in sample SG4 was outside control limits due to high level hydrocarbon matrix interference. Data is reported as qualified.

## **Definition of Data Qualifying Flags**

Seven qualifiers may have been used on the data analysis sheets and indicate as follows:

B - Compound present in laboratory blank greater than reporting limit.



- J Estimated value.
- E Exceeds instrument calibration range.
- S Saturated peak.
- Q Exceeds quality control limits.
- U Compound analyzed for but not detected above the detection limit.
- M Reported value may be biased due to apparent matrix interferences.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue



## **Summary of Detected Compounds MODIFIED EPA METHOD TO-3 GC/FID**

Client Sample ID: SG1				
Lab ID#: 0903356B-01A				
_	Rpt. Limit	Rpt. Limit	Amount	Amount
Compound	(ppmv)	(uG/L)	(ppmv)	(uG/L)
TPH (Gasoline Range)	0.16	0.66	23	94
Client Sample ID: SG1-DUP				
Lab ID#: 0903356B-02A				
	Rpt. Limit	Rpt. Limit	Amount	Amount
Compound	(ppmv)	(uG/L)	(ppmv)	(uG/L)
TPH (Gasoline Range)	0.056	0.23	16	67
Client Sample ID: SG2				
Lab ID#: 0903356B-03A				
	Rpt. Limit	Rpt. Limit	Amount	Amount
Compound	(ppmv)	(uG/L)	(ppmv)	(uG/L)
TPH (Gasoline Range)	0.12	0.48	66	270
Client Sample ID: SG3				
Lab ID#: 0903356B-04A				
	Rpt. Limit	Rpt. Limit	Amount	Amount
Compound	(ppmv)	(uG/L)	(ppmv)	(uG/L)
TPH (Gasoline Range)	0.24	0.98	110	450
Client Sample ID: SG4				
Lab ID#: 0903356B-05A				
0	Rpt. Limit	Rpt. Limit	Amount	Amount
Compound	(ppmv)	(uG/L)	(ppmv)	(uG/L)
TPH (Gasoline Range)	0.15	0.63	72	300
Client Sample ID: SG5				
Lab ID#: 0903356B-06A				
	Rpt. Limit	Rpt. Limit	Amount	Amount
Compound	(ppmv)	(uG/L)	(ppmv)	(uG/L)
TPH (Gasoline Range)	0.059	0.24	2.0	8.0



## **Summary of Detected Compounds MODIFIED EPA METHOD TO-3 GC/FID**

Client Sample ID: SG5 Lab Duplicate

Lab ID#: 0903356B-06AA

	Rpt. Limit	Rpt. Limit	Amount	Amount
Compound	(ppmv)	(uG/L)	(ppmv)	(uG/L)
TPH (Gasoline Range)	0.059	0.24	2.0	8.3

Client Sample ID: SG6

Lab ID#: 0903356B-07A

Compound	Rpt. Limit	Rpt. Limit	Amount	Amount
	(ppmv)	(uG/L)	(ppmv)	(uG/L)
TPH (Gasoline Range)	0.092	0.38	12	48



## Client Sample ID: SG1 Lab ID#: 0903356B-01A

## MODIFIED EPA METHOD TO-3 GC/FID

File Name: Dil. Factor:	d031715 6.46		Date of Collection: 3/9/09 1:05:00 PM Date of Analysis: 3/17/09 05:55 PM	
Compound	Rpt. Limit (ppmv)	Rpt. Limit Amount (uG/L) (ppmv)		Amount (uG/L)
TPH (Gasoline Range)	0.16	0.66	23	94
Container Type: 1 Liter Summa	Canister			
Surrogates		%Recovery		Method Limits
Fluorobenzene (FID)		99		75-150



Fluorobenzene (FID)

AN ENVIRONMENTAL ANALYTICAL LABORATORY

## Client Sample ID: SG1-DUP Lab ID#: 0903356B-02A

## MODIFIED EPA METHOD TO-3 GC/FID

File Name:	d031716	Date of Collection: 3/9/09 1:18:00 PM		
Dil. Factor:	2.24	2.24 Date of Analysis: 3/1		′/09 06:39 PM
Compound	Rɒt. Limit (ppmv)	Rpt. Limit (uG/L)	Amount (ppmv)	Amount (uG/L)
TPH (Gasoline Range)	0.056	0.23	16	67
Container Type: 1 Liter Summa	Canister			
				Method
Surrogates		%Recovery		Limits

103

75-150



## Client Sample ID: SG2 Lab ID#: 0903356B-03A

#### MODIFIED EPA METHOD TO-3 GC/FID

File Name:	d031717	Date of Collection: 3/9/09 2:08:00 PM Date of Analysis: 3/17/09 07:12 PM		
Dil. Factor:	4.66			
Compound	Rpt. Limit (ppmv)	Rpt. Limit (uG/L)	Amount (ppmv)	Amount (uG/L)
TPH (Gasoline Range)	0.12	0.48	66	270
Container Type: 1 Liter Summa	Canister			
Surrogates		%Recovery		Method Limits
Fluorobenzene (FID)		149		75-150



## Client Sample ID: SG3 Lab ID#: 0903356B-04A

#### MODIFIED EPA METHOD TO-3 GC/FID

File Name: Dil. Factor:	d031718 9.60			9 2:06:00 PM 9 07:47 PM
Compound	Rpt. Limit (ppmv)	Rpt. Limit (uG/L)	Amount (ppmv)	Amount (uG/L)
TPH (Gasoline Range)	0.24	0.98	110	450
Container Type: 1 Liter Summa	Canister			
Surrogates		%Recovery		Method Limits
Fluorobenzene (FID)		135	_	75-150



## Client Sample ID: SG4 Lab ID#: 0903356B-05A

## MODIFIED EPA METHOD TO-3 GC/FID

	Pnt Limit	Rnt Limit	Amount	<b>Amount</b>
Dil. Factor:	6.13	Date of Analysis: 3/17/09 08:20 PM		
File Name:	d031719	Date of Collection: 3/9/09 4:14:00 PM		

	RDT. LIMIT	Rpt. Limit	Amount	Amount
Compound	(ppmv)	(uG/L)	(ppmv)	(uG/L)
TPH (Gasoline Range)	0.15	0.63	72	300

Q = Exceeds Quality Control limits, possibly due to matrix effects.

		Method
Surrogates	%Recovery	Limits
Fluorobenzene (FID)	176 Q	75-150



## Client Sample ID: SG5 Lab ID#: 0903356B-06A

## MODIFIED EPA METHOD TO-3 GC/FID

File Name: Dil. Factor:  Compound	d031720 2.37		Date of Collection: 3/10/09 4:28:00 PM Date of Analysis: 3/17/09 08:53 PM	
	Rpt. Limit (ppmv)	Rpt. Limit (uG/L)	Amount (ppmv)	Amount (uG/L)
TPH (Gasoline Range)	0.059	0.24	2.0	8.0
Container Type: 1 Liter Summa	Canister			
Surrogates		%Recovery		Method Limits
Fluorobenzene (FID)		105		75-150



Fluorobenzene (FID)

AN ENVIRONMENTAL ANALYTICAL LABORATORY

## Client Sample ID: SG5 Lab Duplicate Lab ID#: 0903356B-06AA

#### MODIFIED EPA METHOD TO-3 GC/FID

File Name: Dil. Factor:	d031721 2.37		of Collection: 3/10/ of Analysis: 3/17/0	
Compound	Rpt. Limit (ppmv)	Rpt. Limit (uG/L)	Amount (ppmv)	Amount (uG/L)
TPH (Gasoline Range)	0.059	0.24	2.0	8.3
Container Type: 1 Liter Summa	a Canister			
Surrogates		%Recovery		Method Limits
Fluorobenzene (FID)		107		75-150



Fluorobenzene (FID)

AN ENVIRONMENTAL ANALYTICAL LABORATORY

## Client Sample ID: SG6 Lab ID#: 0903356B-07A

#### MODIFIED EPA METHOD TO-3 GC/FID

File Name: Dil. Factor:			te of Collection: 3/11/09 12:48:00 PM te of Analysis: 3/17/09 09:58 PM	
Compound	Rpt. Limit (ppmv)	Rpt. Limit (uG/L)	Amount (ppmv)	Amount (uG/L)
TPH (Gasoline Range)	0.092	0.38	12	48
Container Type: 1 Liter Summa	a Canister			
Surrogates		%Recovery		Method Limits
Fluorobenzene (FID)		102		75-150



## Client Sample ID: Lab Blank Lab ID#: 0903356B-08A

## MODIFIED EPA METHOD TO-3 GC/FID

File Name: Dil. Factor:	d031706 1.00		e of Collection: NA e of Analysis: 3/17/0	9 11:11 AM
Compound	Rpt. Limit (ppmv)	Rpt. Limit (uG/L)	Amount (ppmv)	Amount (uG/L)
TPH (Gasoline Range)	0.025	0.10	Not Detected	Not Detected
Container Type: NA - Not Appli	cable			
Surrogates		%Recovery		Method Limits
Fluorobenzene (FID)		104		75-150



## Client Sample ID: LCS Lab ID#: 0903356B-09A

## MODIFIED EPA METHOD TO-3 GC/FID

File Name: d031705 Date of Collection: NA

Dil. Factor: 1.00 Date of Analysis: 3/17/09 10:12 AM

Compound %Recovery

TPH (Gasoline Range) 122

**Container Type: NA - Not Applicable** 

Surrogates%RecoveryMethod LimitsFluorobenzene (FID)10175-150



3/26/2009

Mr. Paul King P & D Environmental 55 Santa Clara Suite 240 Oakland CA 94610

Project Name: J.W. Silviera

Project #: 0404

Workorder #: 0903356A

Dear Mr. Paul King

The following report includes the data for the above referenced project for sample(s) received on 3/13/2009 at Air Toxics Ltd.

The data and associated QC analyzed by Modified TO-15 are compliant with the project requirements or laboratory criteria with the exception of the deviations noted in the attached case narrative.

Thank you for choosing Air Toxics Ltd. for you air analysis needs. Air Toxics Ltd. is committed to providing accurate data of the highest quality. Please feel free to contact the Project Manager: Kyle Vagadori at 916-985-1000 if you have any questions regarding the data in this report.

Regards,

Kyle Vagadori Project Manager

Kya Vych

#### WORK ORDER #: 0903356A

Work Order Summary

CLIENT: Mr. Paul King BILL TO: Mr. Paul King

P & D Environmental
P & D Environmental
S Santa Clara
Suite 240
Suite 240
P & D Environmental
S Santa Clara
Suite 240

Oakland, CA 94610 Oakland, CA 94610

PHONE: 510-658-6916 P.O. #

 FAX:
 510-834-0772
 PROJECT # 0404 J.W. Silviera

 DATE RECEIVED:
 03/13/2009
 CONTACT:
 Kyle Vagadori

 DATE COMPLETED:
 03/26/2009

			RECEIPT	FINAL
FRACTION #	<u>NAME</u>	<u>TEST</u>	VAC./PRES.	<b>PRESSURE</b>
01A	SG1	Modified TO-15	3.2 "Hg	15 psi
02A	SG1-DUP	Modified TO-15	3.0 "Hg	15 psi
02AA	SG1-DUP Lab Duplicate	Modified TO-15	3.0 "Hg	15 psi
03A	SG2	Modified TO-15	4.0 "Hg	15 psi
04A	SG3	Modified TO-15	4.8 "Hg	15 psi
05A	SG4	Modified TO-15	3.6 "Hg	15 psi
06A	SG5	Modified TO-15	4.4 "Hg	15 psi
07A	SG6	Modified TO-15	13.6 "Hg	15 psi
08A	Lab Blank	Modified TO-15	NA	NA
09A	CCV	Modified TO-15	NA	NA
10A	LCS	Modified TO-15	NA	NA

CERTIFIED BY:

Linda d. Fruman

DATE: 03/26/09

Laboratory Director

Certification numbers: CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763, NJ NELAP - CA004 NY NELAP - 11291, UT NELAP - 9166389892, AZ Licensure AZ0719

Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act,

Accreditation number: E87680, Effective date: 07/01/08, Expiration date: 06/30/09 Air Toxics Ltd. certifies that the test results contained in this report meet all requirements of the NELAC standards

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is report shall not be reproduced, except in run, without the written approval of All Toxics



# LABORATORY NARRATIVE Modified TO-15 P & D Environmental Workorder# 0903356A

Seven 1 Liter Summa Canister samples were received on March 13, 2009. The laboratory performed analysis via modified EPA Method TO-15 using GC/MS in the full scan mode. The method involves concentrating up to 0.2 liters of air. The concentrated aliquot is then flash vaporized and swept through a water management system to remove water vapor. Following dehumidification, the sample passes directly into the GC/MS for analysis.

This workorder was independently validated prior to submittal using 'USEPA National Functional Guidelines' as generally applied to the analysis of volatile organic compounds in air. A rules-based, logic driven, independent validation engine was employed to assess completeness, evaluate pass/fail of relevant project quality control requirements and verification of all quantified amounts.

Method modifications taken to run these samples are summarized in the table below. Specific project requirements may over-ride the ATL modifications.

Requirement	TO-15	ATL Modifications
Daily CCV	= 30% Difference</td <td><!--= 30% Difference; Compounds exceeding this criterion<br-->and associated data are flagged and narrated.</td>	= 30% Difference; Compounds exceeding this criterion<br and associated data are flagged and narrated.
Sample collection media	Summa canister	ATL recommends use of summa canisters to insure data defensibility, but will report results from Tedlar bags at client request
Method Detection Limit	Follow 40CFR Pt.136 App. B	The MDL met all relevant requirements in Method TO-15 (statistical MDL less than the LOQ). The concentration of the spiked replicate may have exceeded 10X the calculated MDL in some cases

## **Receiving Notes**

There were no receiving discrepancies.

## **Analytical Notes**

All Quality Control Limit failures and affected sample results are noted by flags. Each flag is defined at the bottom of this Case Narrative and on each Sample Result Summary page. Target compound non-detects in the samples that are associated with high bias in QC analyses have not been flagged.

## **Definition of Data Qualifying Flags**

Eight qualifiers may have been used on the data analysis sheets and indicates as follows:

- B Compound present in laboratory blank greater than reporting limit (background subtraction no performed).
  - J Estimated value.
  - E Exceeds instrument calibration range.
  - S Saturated peak.



- Q Exceeds quality control limits.
- U Compound analyzed for but not detected above the reporting limit.
- UJ- Non-detected compound associated with low bias in the CCV
- N The identification is based on presumptive evidence.

File extensions may have been used on the data analysis sheets and indicates as follows:

- a-File was requantified
- b-File was quantified by a second column and detector
- r1-File was requantified for the purpose of reissue



## Summary of Detected Compounds MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

Client Sample ID: SG1

Lab ID#: 0903356A-01A

	Rpt. Limit	Amount	Rpt. Limit	Amount
Compound	(ppbv)	(ppbv)	(ug/m3)	(ug/m3)
Benzene	9.0	22	29	70
Toluene	9.0	2600	34	9700
Ethyl Benzene	9.0	86	39	380
m,p-Xylene	9.0	260	39	1100
o-Xylene	9.0	71	39	310

**Client Sample ID: SG1-DUP** 

Lab ID#: 0903356A-02A

	Rpt. Limit	Amount	Rpt. Limit	Amount
Compound	(ppbv)	(ppbv)	(ug/m3)	(ug/m3)
Benzene	5.0	17	16	54
Toluene	5.0	1500	19	5500
Ethyl Benzene	5.0	58	22	250
m,p-Xylene	5.0	180	22	770
o-Xylene	5.0	50	22	220

Client Sample ID: SG1-DUP Lab Duplicate

Lab ID#: 0903356A-02AA

	Rpt. Limit	Amount	Rpt. Limit	Amount
Compound	(ppbv)	(ppbv)	(ug/m3)	(ug/m3)
Benzene	2.2	16	7.2	53
Toluene	2.2	1500 E	8.4	5800 E
Ethyl Benzene	2.2	56	9.7	240
m,p-Xylene	2.2	180	9.7	760
o-Xylene	2.2	50	9.7	220

Client Sample ID: SG2

Lab ID#: 0903356A-03A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
•			• • • • • • • • • • • • • • • • • • • •	
Tetrachloroethene	2.6	3.1	18	21
Benzene	2.6	43	8.3	140
Toluene	2.6	860	9.8	3200
Ethyl Benzene	2.6	43	11	190
m,p-Xylene	2.6	140	11	630



## Summary of Detected Compounds MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

Client Sample ID: SG2

Lab ID#: 0903356A-03A

o-Xylene 2.6 60 11 260

Client Sample ID: SG3

Lab ID#: 0903356A-04A

	Rpt. Limit	Amount	Rpt. Limit	Amount
Compound	(ppbv)	(ppbv)	(ug/m3)	(ug/m3)
Benzene	4.8	14	15	46
Toluene	4.8	1800	18	6600
Ethyl Benzene	4.8	66	21	280
m,p-Xylene	4.8	210	21	930
o-Xylene	4.8	71	21	310

Client Sample ID: SG4

Lab ID#: 0903356A-05A

	Rpt. Limit	Amount	Rpt. Limit	Amount
Compound	(ppbv)	(ppbv)	(ug/m3)	(ug/m3)
Benzene	5.8	47	18	150
Toluene	5.8	1900	22	7100
Ethyl Benzene	5.8	93	25	400
m,p-Xylene	5.8	310	25	1400
o-Xylene	5.8	100	25	460

Client Sample ID: SG5

Lab ID#: 0903356A-06A

Compound	Rbt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Tetrachloroethene	1.2	3.0	8.0	20
Benzene	1.2	15	3.8	49
Toluene	1.2	190	4.5	710
Ethyl Benzene	1.2	12	5.1	50
m,p-Xylene	1.2	38	5.1	170
o-Xylene	1.2	10	5.1	45

Client Sample ID: SG6

Lab ID#: 0903356A-07A



## Summary of Detected Compounds MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

Client Sample ID: SG6

Lab ID#: 0903356A-07A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Benzene	4.4	9.8	14	31
Toluene	4.4	1200	16	4400
Ethyl Benzene	4.4	38	19	160
m,p-Xylene	4.4	120	19	510
o-Xylene	4.4	37	19	160



## Client Sample ID: SG1 Lab ID#: 0903356A-01A

## MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name: d032411 Date of Collection: 3/9/09 1:05:00 PM
Dil. Factor: 18.1 Date of Analysis: 3/24/09 05:11 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Tetrachloroethene	9.0	Not Detected	61	Not Detected
2-Propanol	36	Not Detected	89	Not Detected
Methyl tert-butyl ether	9.0	Not Detected U J	33	Not Detected U J
Benzene	9.0	22	29	70
Toluene	9.0	2600	34	9700
Ethyl Benzene	9.0	86	39	380
m,p-Xylene	9.0	260	39	1100
o-Xylene	9.0	71	39	310
Trichloroethene	9.0	Not Detected	49	Not Detected
cis-1,2-Dichloroethene	9.0	Not Detected	36	Not Detected
trans-1,2-Dichloroethene	9.0	Not Detected	36	Not Detected
Vinyl Chloride	9.0	Not Detected	23	Not Detected
Naphthalene	36	Not Detected	190	Not Detected

UJ = Non-detected compound associated with low bias in the CCV

		Method Limits	
Surrogates	%Recovery		
Toluene-d8	100	70-130	
1,2-Dichloroethane-d4	109	70-130	
4-Bromofluorobenzene	96	70-130	



## Client Sample ID: SG1-DUP Lab ID#: 0903356A-02A

## MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

 File Name:
 d032412
 Date of Collection: 3/9/09 1:18:00 PM

 Dil. Factor:
 9.96
 Date of Analysis: 3/24/09 05:44 PM

Compound	Rɒt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Tetrachloroethene	5.0	Not Detected	34	Not Detected
2-Propanol	20	Not Detected	49	Not Detected
Methyl tert-butyl ether	5.0	Not Detected U J	18	Not Detected U J
Benzene	5.0	17	16	54
Toluene	5.0	1500	19	5500
Ethyl Benzene	5.0	58	22	250
m,p-Xylene	5.0	180	22	770
o-Xylene	5.0	50	22	220
Trichloroethene	5.0	Not Detected	27	Not Detected
cis-1,2-Dichloroethene	5.0	Not Detected	20	Not Detected
trans-1,2-Dichloroethene	5.0	Not Detected	20	Not Detected
Vinyl Chloride	5.0	Not Detected	13	Not Detected
Naphthalene	20	Not Detected	100	Not Detected

UJ = Non-detected compound associated with low bias in the CCV

· ·		Method Limits	
Surrogates	%Recovery		
Toluene-d8	101	70-130	
1,2-Dichloroethane-d4	107	70-130	
4-Bromofluorobenzene	96	70-130	



## Client Sample ID: SG1-DUP Lab Duplicate Lab ID#: 0903356A-02AA

## MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name: d032410 Date of Collection: 3/9/09 1:18:00 PM
Dil. Factor: 4.48 Date of Analysis: 3/24/09 04:29 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Tetrachloroethene	2.2	Not Detected	15	Not Detected
2-Propanol	9.0	Not Detected	22	Not Detected
Methyl tert-butyl ether	2.2	Not Detected U J	8.1	Not Detected U J
Benzene	2.2	16	7.2	53
Toluene	2.2	1500 E	8.4	5800 E
Ethyl Benzene	2.2	56	9.7	240
m,p-Xylene	2.2	180	9.7	760
o-Xylene	2.2	50	9.7	220
Trichloroethene	2.2	Not Detected	12	Not Detected
cis-1,2-Dichloroethene	2.2	Not Detected	8.9	Not Detected
trans-1,2-Dichloroethene	2.2	Not Detected	8.9	Not Detected
Vinyl Chloride	2.2	Not Detected	5.7	Not Detected
Naphthalene	9.0	Not Detected	47	Not Detected

UJ = Non-detected compound associated with low bias in the CCV

E = Exceeds instrument calibration range.

· ·		Method Limits	
Surrogates	%Recovery		
Toluene-d8	105	70-130	
1,2-Dichloroethane-d4	120	70-130	
4-Bromofluorobenzene	99	70-130	



## Client Sample ID: SG2 Lab ID#: 0903356A-03A

## MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

 File Name:
 d032415
 Date of Collection: 3/9/09 2:08:00 PM

 Dil. Factor:
 5.18
 Date of Analysis: 3/24/09 08:31 PM

Compound	Rɒt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Tetrachloroethene	2.6	3.1	18	21
2-Propanol	10	Not Detected	25	Not Detected
Methyl tert-butyl ether	2.6	Not Detected U J	9.3	Not Detected U J
Benzene	2.6	43	8.3	140
Toluene	2.6	860	9.8	3200
Ethyl Benzene	2.6	43	11	190
m,p-Xylene	2.6	140	11	630
o-Xylene	2.6	60	11	260
Trichloroethene	2.6	Not Detected	14	Not Detected
cis-1,2-Dichloroethene	2.6	Not Detected	10	Not Detected
trans-1,2-Dichloroethene	2.6	Not Detected	10	Not Detected
Vinyl Chloride	2.6	Not Detected	6.6	Not Detected
Naphthalene	10	Not Detected	54	Not Detected

UJ = Non-detected compound associated with low bias in the CCV

		Method Limits	
Surrogates	%Recovery		
Toluene-d8	104	70-130	
1,2-Dichloroethane-d4	104	70-130	
4-Bromofluorobenzene	95	70-130	



## Client Sample ID: SG3 Lab ID#: 0903356A-04A

## MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

 File Name:
 d032416
 Date of Collection: 3/9/09 2:06:00 PM

 Dil. Factor:
 9.62
 Date of Analysis: 3/24/09 09:05 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Tetrachloroethene	4.8	Not Detected	33	Not Detected
2-Propanol	19	Not Detected	47	Not Detected
Methyl tert-butyl ether	4.8	Not Detected U J	17	Not Detected U J
Benzene	4.8	14	15	46
Toluene	4.8	1800	18	6600
Ethyl Benzene	4.8	66	21	280
m,p-Xylene	4.8	210	21	930
o-Xylene	4.8	71	21	310
Trichloroethene	4.8	Not Detected	26	Not Detected
cis-1,2-Dichloroethene	4.8	Not Detected	19	Not Detected
trans-1,2-Dichloroethene	4.8	Not Detected	19	Not Detected
Vinyl Chloride	4.8	Not Detected	12	Not Detected
Naphthalene	19	Not Detected	100	Not Detected

UJ = Non-detected compound associated with low bias in the CCV

		Method Limits	
Surrogates	%Recovery		
Toluene-d8	100	70-130	
1,2-Dichloroethane-d4	96	70-130	
4-Bromofluorobenzene	92	70-130	



## Client Sample ID: SG4 Lab ID#: 0903356A-05A

## MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name: d032420 Date of Collection: 3/9/09 4:14:00 PM
Dil. Factor: 11.5 Date of Analysis: 3/25/09 12:33 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Tetrachloroethene	5.8	Not Detected	39	Not Detected
2-Propanol	23	Not Detected	56	Not Detected
Methyl tert-butyl ether	5.8	Not Detected U J	21	Not Detected U J
Benzene	5.8	47	18	150
Toluene	5.8	1900	22	7100
Ethyl Benzene	5.8	93	25	400
m,p-Xylene	5.8	310	25	1400
o-Xylene	5.8	100	25	460
Trichloroethene	5.8	Not Detected	31	Not Detected
cis-1,2-Dichloroethene	5.8	Not Detected	23	Not Detected
trans-1,2-Dichloroethene	5.8	Not Detected	23	Not Detected
Vinyl Chloride	5.8	Not Detected	15	Not Detected
Naphthalene	23	Not Detected	120	Not Detected

UJ = Non-detected compound associated with low bias in the CCV

		Method
Surrogates	%Recovery	Limits
Toluene-d8	99	70-130
1,2-Dichloroethane-d4	99	70-130
4-Bromofluorobenzene	92	70-130



## Client Sample ID: SG5 Lab ID#: 0903356A-06A

## MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name: d032418 Date of Collection: 3/10/09 4:28:00 PM Dil. Factor: 2.37 Date of Analysis: 3/24/09 10:09 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Tetrachloroethene	1.2	3.0	8.0	20
2-Propanol	4.7	Not Detected	12	Not Detected
Methyl tert-butyl ether	1.2	Not Detected U J	4.3	Not Detected U J
Benzene	1.2	15	3.8	49
Toluene	1.2	190	4.5	710
Ethyl Benzene	1.2	12	5.1	50
m,p-Xylene	1.2	38	5.1	170
o-Xylene	1.2	10	5.1	45
Trichloroethene	1.2	Not Detected	6.4	Not Detected
cis-1,2-Dichloroethene	1.2	Not Detected	4.7	Not Detected
trans-1,2-Dichloroethene	1.2	Not Detected	4.7	Not Detected
Vinyl Chloride	1.2	Not Detected	3.0	Not Detected
Naphthalene	4.7	Not Detected	25	Not Detected

UJ = Non-detected compound associated with low bias in the CCV

		Method
Surrogates	%Recovery	Limits
Toluene-d8	97	70-130
1,2-Dichloroethane-d4	88	70-130
4-Bromofluorobenzene	91	70-130



## Client Sample ID: SG6 Lab ID#: 0903356A-07A

## MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name: d032419 Date of Collection: 3/11/09 12:48:00 PM
Dil. Factor: 8.70 Date of Analysis: 3/24/09 11:48 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Tetrachloroethene	4.4	Not Detected	30	Not Detected
2-Propanol	17	Not Detected	43	Not Detected
Methyl tert-butyl ether	4.4	Not Detected U J	16	Not Detected U J
Benzene	4.4	9.8	14	31
Toluene	4.4	1200	16	4400
Ethyl Benzene	4.4	38	19	160
m,p-Xylene	4.4	120	19	510
o-Xylene	4.4	37	19	160
Trichloroethene	4.4	Not Detected	23	Not Detected
cis-1,2-Dichloroethene	4.4	Not Detected	17	Not Detected
trans-1,2-Dichloroethene	4.4	Not Detected	17	Not Detected
Vinyl Chloride	4.4	Not Detected	11	Not Detected
Naphthalene	17	Not Detected	91	Not Detected

UJ = Non-detected compound associated with low bias in the CCV

		Method
Surrogates	%Recovery	Limits
Toluene-d8	97	70-130
1,2-Dichloroethane-d4	93	70-130
4-Bromofluorobenzene	92	70-130



## Client Sample ID: Lab Blank Lab ID#: 0903356A-08A

## MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	d032408	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 3/24/09 02:46 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Tetrachloroethene	0.50	Not Detected	3.4	Not Detected
2-Propanol	2.0	Not Detected	4.9	Not Detected
Methyl tert-butyl ether	0.50	Not Detected U J	1.8	Not Detected U J
Benzene	0.50	Not Detected	1.6	Not Detected
Toluene	0.50	Not Detected	1.9	Not Detected
Ethyl Benzene	0.50	Not Detected	2.2	Not Detected
m,p-Xylene	0.50	Not Detected	2.2	Not Detected
o-Xylene	0.50	Not Detected	2.2	Not Detected
Trichloroethene	0.50	Not Detected	2.7	Not Detected
cis-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected
trans-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Vinyl Chloride	0.50	Not Detected	1.3	Not Detected
Naphthalene	2.0	Not Detected	10	Not Detected

UJ = Non-detected compound associated with low bias in the CCV

Container Type: NA - Not Applicable

		Method
Surrogates	%Recovery	Limits
Toluene-d8	98	70-130
1,2-Dichloroethane-d4	128	70-130
4-Bromofluorobenzene	104	70-130



## Client Sample ID: CCV Lab ID#: 0903356A-09A

## MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name: d032402 Date of Collection: NA
Dil. Factor: 1.00 Date of Analysis: 3/24/09 09:51 AM

Compound	%Recovery
Tetrachloroethene	92
2-Propanol	97
Methyl tert-butyl ether	66 Q
Benzene	90
Toluene	91
Ethyl Benzene	92
m,p-Xylene	94
o-Xylene	91
Trichloroethene	92
cis-1,2-Dichloroethene	93
trans-1,2-Dichloroethene	88
Vinyl Chloride	98
Naphthalene	93

## Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

		Method
Surrogates	%Recovery	Limits
Toluene-d8	100	70-130
1,2-Dichloroethane-d4	106	70-130
4-Bromofluorobenzene	97	70-130



## Client Sample ID: LCS Lab ID#: 0903356A-10A

## MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name: d032406 Date of Collection: NA
Dil. Factor: 1.00 Date of Analysis: 3/24/09 01:05 PM

Compound	%Recovery
Tetrachloroethene	90
2-Propanol	99
Methyl tert-butyl ether	83
Benzene	89
Toluene	94
Ethyl Benzene	88
m,p-Xylene	89
o-Xylene	88
Trichloroethene	92
cis-1,2-Dichloroethene	94
trans-1,2-Dichloroethene	86
Vinyl Chloride	95
Naphthalene	88

## **Container Type: NA - Not Applicable**

		Method
Surrogates	%Recovery	Limits
Toluene-d8	102	70-130
1,2-Dichloroethane-d4	108	70-130
4-Bromofluorobenzene	96	70-130