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LIMITED PHASE II ENVIRONMENTAL SITE SAMPLING REPORT

7100-7120 Dublin Boulevard
Dublin
California

FOR

Mechanics Bank
1999 Harrison Street, Suite 810
Oakland, CA 94612

November 9, 2012
12-ENV2949

655 12TH STREET, #126 • OAKLAND, CA • 94607 • TEL / FAX 510-834-9099 / 9098

basics
ENVIRONMENTAL

November 9, 2012
12-ENV2949

Mechanics Bank
1999 Harrison Street, Suite 810
Oakland, CA 94612

Attention: Ms. Barbara Roesner

Subject: Limited Phase II Environmental Site Sampling Report
7100-7120 Dublin Boulevard
Dublin, California 94568

Dear Ms. Roesner:

Basics Environmental, Inc. (Basics) is pleased to present the results of a Limited Phase II Environmental Site Sampling Report for the site located at 7100-7120 Dublin Boulevard in Dublin, California.

Three soil samples were collected inside the building at 4.5 foot depth. Two groundwater grab samples were collected outside the building in a parking lot southeast of the building from first-encountered groundwater. Five soil gas samples were also collected inside the building from four different tenant spaces.

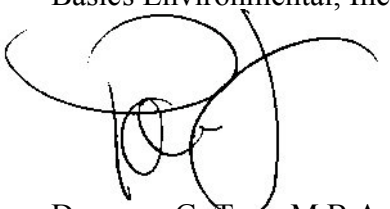
No detectable concentrations exceeding their respective regulatory screening levels of multi range total petroleum hydrocarbons as gasoline, Stoddard solvent, kerosene, diesel, bunker oil or motor oil or volatile organic compounds (VOCs) were detected within any of the soil samples.

Detectable concentrations exceeding the regulatory screening level of multi range total petroleum hydrocarbons as bunker oil were detected within both of the groundwater samples, and the VOC cis-1,2-dichloroethene (cis-1,2-DCE) which is a dry cleaning chemical decomposition product was detected in one of the groundwater samples at a concentration exceeding the regulatory screening level. The dry cleaning chemical tetrachloroethene was detected in all of the soil gas samples with concentrations exceeding the regulatory screening level for commercial land use at two locations in the current dry cleaning store.

Should you have any questions regarding this report, please contact the undersigned.

Sincerely,

Basics Environmental, Inc.



Donavan G. Tom, M.B.A., R.E.A. II
Principal Consultant

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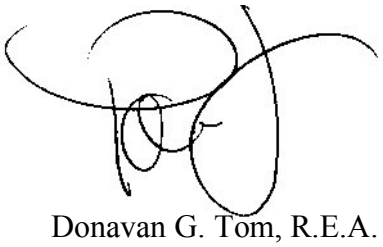
PROFESSIONAL CERTIFICATION

ENVIRONMENTAL SITE SAMPLING REPORT
7100-7120 Dublin Boulevard
Dublin, California
For
Mechanics Bank
12-ENV2949
November 9, 2012

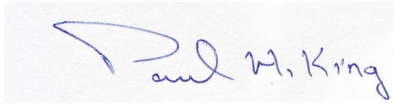
This report has been prepared by the staff of Basics Environmental, Inc. (Basics) under the professional supervision of the Principal Consultant whose seal and signature appears hereon. The findings, interpretations of data, recommendations, specifications or professional opinions are presented within the limits prescribed by available information at the time the report was prepared, in accordance with generally accepted professional environmental practice and within the requirements by the Client. There is no other warranty, either expressed or implied.

The data and findings of this report are based on the data and information obtained from the agreed upon scope of work between Basics and the Client. Because contamination is not necessarily evenly distributed across the property's soils and ground water, it can easily remain undetected and geology may control the subsurface distribution of contamination. Additional scope of services including geologic interpretation (at greater cost) may or may not disclose information which may significantly modify the findings of this report. We accept no liability on completeness or accuracy of the information presented and or provided to us, or any conclusions and decisions which may be made by the Client or others regarding the subject site.

This report was prepared solely for the benefit of Basic's Client. Basics consents to the release of this report to third parties involved in the evaluation of the property for which the report was prepared, including without limitation, lenders, title companies, public institutions, attorneys, and other consultants. However, any use of or reliance upon this report shall be solely at the risk of such party and without legal recourse against Basics, or its subcontractors, affiliates, or their respective employees, officers, or directors, regardless of whether the action in which recovery of damage is sought is based upon contract, tort (including the sole, concurrent or other negligence and strict liability of Basics), statute or otherwise. This report shall not be used or relied upon by a party that does not agree to be bound by the above statements.



Donavan G. Tom, R.E.A. II
Principal Consultant (Expires 11/30/12)



Paul H. King, P.G. #5901
Associate Consultant (Expires 12/31/13)

1.0 INTRODUCTION

1.1 Purpose of Assessment

Basics Environmental, Inc. (Basics) has performed this Phase II Environmental Site Sampling Report (Phase II) for Mechanics Bank pursuant to our signed agreement on August 28, 2012 and associated with a property transaction. The "subject site" is at 7100-7120 Dublin Boulevard, Dublin, California (See Drawing 1). An aerial photograph of the subject site is attached as Drawing 2. A site vicinity map showing current and historical dry cleaning machine locations is attached as Figure 3, and a site map showing the sample collection locations is attached as Figure 4.

1.2 Background

Basics prepared a Phase I Environmental Site Assessment for the subject property dated July 19, 2012. The historical use of the subject property identified in the Phase I report is summarized below.

In 1976, the subject site was developed with two, one-story commercial buildings (7100 & 7120 Dublin Boulevard), a one-story multi-tenant commercial building, and associated paved parking and landscaped areas. The entire subject site consists of a three building complex “Dublin Village Center” (7100-7120 Dublin Boulevard). Prior to that time, the subject site appeared undeveloped.

According to local regulatory agency files reviewed, Park Avenue Cleaners operated a laundry and dry cleaning facility at the address 7102B Dublin Boulevard from 1990 to 2004. The cleaners subsequently moved operations to 7104 Dublin Boulevard (the adjacent unit), and has occupied the business unit from 2004 to the present.

Park Avenue Cleaners (7102B Dublin Boulevard) – Park Avenue Cleaners occupied the subject unit from 1990 to 2004. As part of onsite operations, the cleaners utilized perchloroethylene (PERC) in the dry cleaning machining. Notes from an inspection conducted on September 26, 1997, indicated that the dry cleaners had a storage capacity of approximately 150-gallons for new PERC and water in the dry cleaning unit, and a 55-gallon container for waste PERC. Still bottom oil was noted. Also, noted were 2 x 55-gallon drums of used cartridge filters. The hazardous waste was reported as picked up by Technichem Co. of Emeryville. A site diagram indicating the locations of the various machines including the boilers and dry cleaning unit was provided in Appendix E of the July 19, 2012 Basics Phase I report.

Park Avenue Cleaners (7104 Dublin Boulevard) – Park Avenue Cleaners has occupied the subject unit from 2004 to the present. Located within the central portion of the suite are two dry cleaning machines. According to discussions with Mr. Major Brar, the southernmost dry cleaning machine utilizes PERC as part of dry cleaning operations. The machine was purchased sometime around 2000 (replacing a similar machine from a different manufacturer), and was moved from the previous location at 7102B Dublin Boulevard to the current suite. In addition, the northernmost dry cleaning machine is noted to utilize hydrocarbon fluid (TL HCS 800) as part of dry cleaning operations, and was purchased around 2005 or 2006. Mr. Brar indicated that hazardous waste is collected and disposed of by Technichem (waste PERC approximately every three months; waste hydrocarbon approximately once per year; and waste water and filters every six months). Visual observations of the dry cleaning areas did not reveal any obvious evidence of major stains or spills. Visual observations of the concrete floors in the dry cleaning areas did not reveal any obvious evidence of drains, sumps or other conduits to the subsurface.

A hazardous materials inventory completed in 2004 noted a maximum daily amount of: 1 x 200-gallon tank of C10-C13 Isoparaffins (Ecosolv) and 1 x 200-gallon tank of PERC. The annual waste amounts noted were: 50 gallons of Ecosolv and 50 gallons of PERC (See Appendix C). According to the information provided by EDR, this site is listed as a small quantity generator of hydrocarbon solvents, solids or sludges with halogenated organic compounds >= 1,000 Mg./L, and Aqueous solution with total organic residues less than 10 percent (CAL EPA IDs: CAL000297021/ CAL000320965/ CAD982429102). The site is also permitted for air emissions.

In addition, these areas may also be of concern:

Kragen Auto Parts (formerly located at 7104 Dublin Blvd) – This business unit was previously occupied by Kragen Auto Parts from 1976 to 2004. On April 14, 1997, an HMBP was completed for the site (See Appendix B). The hazardous materials inventory noted maximum daily amounts of: 120-gallons of antifreeze in plastic bottles, 600-gallons of motor oil in plastic bottles, 370-gallons of used motor oil in an above ground storage tank (AST), 40-gallons of sulfuric acid from used automotive batteries, 150-gallons of sulfuric acid from new automotive batteries, 50-gallons of methanol from windshield wiper fluid in plastic bottles, and 0.881 cubic feet of freon in cylinders. The annual waste stream included: 19,240-gallons of used motor oil and 2,080-gallons of used automotive batteries in battery cases.

Kragen Auto Parts are typically noted to store numerous small containers (1 pint or less) of household automotive supplies (i.e. auto parts, accessories, motor oils, cleaners, etc.) packaged for retail sale within the retail area on shelves and displays. Typical of Kragen Auto Parts stores, waste oil and batteries are reported to be collected, manifested and recycled for customers. Waste oil and batteries are noted to be collected within aboveground storage tanks and recycled by appropriate waste haulers and recyclers. Subsequently, the proper permit, fees, CAL EPA#, etc. are required to be submitted. No reports of major violations, stains, spills or unauthorized releases were noted within the local regulatory agency files reviewed.

Acclaim Print Center (formerly located at 7106 Dublin Blvd) – This business unit was previously occupied by Acclaim Print Center from at least the late 1990s to the early 2010s. A hazardous waste manifest was completed on November 16, 2009. The manifest noted 150 pints of waste paint related material (CAL EPA ID: CAL000236102). The transported was noted as Albert Hobson. However, no other information regarding the type, quantities or locations of hazardous materials stored onsite was uncovered for this time frame within the scope of work performed.

One Hour Photo/ Presto Prints (formerly located at 7112 Dublin Blvd) – This business unit was occupied by One Hour Photo from at least the early 1980s to the late 1980s, and Presto Prints in the early 1990s. Hazardous materials were most likely utilized as part of onsite operations, however, no specific information regarding the type, quantities or locations of hazardous materials was uncovered for this time frame within the scope of work performed.

It is conceivable that soil and/or groundwater may have been impacted. Inadvertent discharges of hazardous materials to the subsurface are not always evident. However, the use of (1) appreciable amounts of hazardous materials over an extended period of time; and (2) presence of conduits to the subsurface (i.e. sewer lines connected to dry cleaning machines) increases the potential of inadvertent discharges to the subsurface.

The subject site is not currently listed as a contaminated facility. However, given the use of appreciable amounts of hazardous materials for an extended period of time this would represent a "recognized environmental condition".

As such, Basics was authorized to perform environmental site sampling at the current and former dry cleaning stores, the former auto parts store, and the former photo developing store to assess potential subsurface environmental impacts from past business operations..

1.3 Scope of Work

To address the site-specific suspect areas of concern, Basics proposed the following Limited Phase II Environmental Site Sampling approach to preliminarily assess potential environmental impacts from the identified recognized environmental conditions.

- Under the direction of a California Registered Environmental Assessor II and California Professional Geologist, at least five shallow exploratory borings were to be advanced at the subject site (designated as B1 through B5).

- Basics proposed collection of at least three shallow soil samples at 4.5 feet below the ground surface (bgs) from borings B1 through B3 located inside the strip mall (distributed at 3 different store locations).

- Basics proposed collection of two groundwater grab samples in the parking lot located southeast of the subject property at borehole locations B4 and B5. Based on previous local subsurface investigations, first ground water was anticipated to be encountered at approximately 20 feet bgs or less.

- The soil and groundwater samples were to be collected, labeled, placed in a cooler with ice, and transported with chain of custody documentation to McCampbell Analytical, Inc. of Pittsburg, California, a State-accredited laboratory with the Department of Toxic Substances Control (DTSC) of the California Environmental Protection Agency, for analysis.

- All of the soil samples and groundwater samples were to be analyzed for Total Petroleum Hydrocarbons as Gasoline, Diesel, Stoddard Solvent, Kerosene, Bunker Oil, and Motor Oil (TPH-G/D/SS/K/BO/MO); and for Volatile Organic Compounds (VOCs) by EPA Method 8260B.

- Basics proposed collection of five soil gas samples designated SG1 through SG5 from temporary soil gas wells at a depth of 5 feet bgs, located inside the strip mall (distributed at 4 different store locations).

- The soil gas samples were to be collected, labeled, placed in a cooler, and transported with chain of custody documentation to Eurofins/Air Toxics Limited of Folsom, California, a NELAP-accredited laboratory, for analysis.

- Basics proposed collection of three soil gas sample shroud atmosphere samples while collecting soil gas samples from temporary soil gas wells to evaluate shroud atmosphere tracer gas concentrations.

- The soil gas sample shroud atmosphere samples were to be collected, labeled, placed in a cooler, and transported with chain of custody documentation to McCampbell for analysis;

- All of the soil gas samples were to be analyzed for VOCs using EPA Method TO-15 and for the tracer gas that was used during sample collection.

- All of the soil gas sample shroud atmosphere samples were to be analyzed for the tracer gas that was used during soil gas sample collection using EPA Method 8260B.

The work for this Limited Phase II Environmental Site Sampling was performed within the client-approved scope of work and budget for the assessment. It should be noted that this scope of work only screens the potential of inadvertent discharges of constituents of concern as defined within the previous Phase I Environmental Site Assessment conducted by Basics within representative areas and not the presence of undocumented underground storage tanks. Based on the visual site inspection, no obvious evidence of undocumented underground storage tanks and/or associated appurtenances have been noted for the subject site. If future plans include the

major redevelopment of the subject site, a search for any unforeseen underground storage tanks and/or collection of additional soil samples and ground water samples may be warranted.

1.4 Permits and Regulatory Compliance

Agencies were contacted prior to the beginning of this work and the permits necessary to proceed were obtained. Permits and/or approvals were obtained from the following agencies:

- Zone 7 Water Agency – Well Permit# 2012100; and
- Underground Services Alert (U.S.A.), U.S.A. Ticket # 384029.

2.0 SOIL AND GROUND WATER SAMPLING

2.1 Field Activities

2.1.1 Limited Subsurface Investigation

On October 23, 2012, five soil borings were advanced by Vironex, Inc. of Concord, California under the direction of a California Registered Environmental Assessor II and Professional Geologist. Borings B1 through B3 were specifically intended to sample the shallow subsurface soil, and borings B4 and B5 were specifically intended to sample first-encountered groundwater. The targeted areas of concern are shown on Figure 4 and include the following:

- One boring (B1) was advanced in the kitchen area (inside the Mr. Pickles Sandwich Shop located at 7112 Dublin Boulevard).
- One boring (B2) was advanced near the existing dry cleaning machines (inside the Park Avenue Cleaners space located at 7104 Dublin Boulevard).
- One boring (B3) was advanced near the former dry cleaning machines (inside the Pretty in Pink Clothing Store located at 7102 Dublin Boulevard).
- One boring (B4) was advanced outside the building in the parking lot in the downgradient groundwater flow direction from the dry cleaning stores.
- One boring (B5) was advanced outside the building in the parking lot in an alternate downgradient groundwater flow direction from the dry cleaning stores.

Prior to drilling activities, a representative of Basics performed an inspection of the facility. On October 22, 2912 a plumber located sewer pipes located beneath the building floor slab. Site map details showing the sample collection locations and sub-slab plumbing pipe locations are shown in Figures 5 and 6. Boring locations were based on the locations of the current and former dry cleaning activities at the subject property, and also based on the historical use of chemicals at the stores located at 7106 and 7112 Dublin Boulevard.

The sampling locations were marked at the site with white paint and notification was provided to Underground Service Alert for underground utility location prior to drilling activities. All drilling was performed by Vironex, Inc. of Concord. Boreholes B1 through B3 (located inside the building) were hand- augered using a 3.5-inch outside diameter stainless steel auger to a depth of 4.5 feet bgs. At soil boring locations B1 through B3, a soil sample was collected using a slide hammer to drive a steel sampler containing a 2-inch diameter, six-inch stainless steel tube. Soil samples from boreholes B1 through B3 were retained from the discrete depth of approximately 4.5 to 5.0 feet bgs within the native soil for delivery to the laboratory.

Vironex, Inc. utilized Geoprobe® 6600 DPT drilling methods for borings B4 and B5. DPT uses dry impact methods to drive boring tools into the subsurface. Soil borings B4 and B5 were continuously cored using GeoProbe direct push technology by driving a 2.5-inch outside diameter GeoProbe macrocore barrel sampler lined with transparent PVC sleeves. No soil samples were retained for analysis in boreholes B4 and B5.

The soil from the boreholes was logged in the field in accordance with standard geologic field techniques and the Unified Soil Classification System. Subsurface materials were identified and evaluated based on the continuous cores from the boreholes and relative drilling difficulty. 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.

The subsurface materials encountered in the boreholes B1 through B3 consisted of silty clay to the total depth explored of 4.5 feet bgs at each location. The subsurface materials encountered in the borehole B4 consisted of silty clay and clay to the total depth explored of 15.0 feet bgs with silty sand encountered between the depths of 7.0 to 9.0 and 11.5 to 12.5 feet bgs. The subsurface materials encountered in the borehole B4 consisted of silty clay and clay to the total depth explored of 15.0 feet bgs with silty sand encountered between the depths of 7.0 to 9.0 and 11.5 to 12.5 feet bgs. The subsurface materials encountered in the borehole B5 consisted of silty clay and clay to the total depth explored of 23.0 feet bgs with silty sand encountered

between the depths of 5.5 to 6.0 feet bgs and clayey sand encountered between the depths of 20.5 to 21.0 feet bgs.

Groundwater was not encountered in boreholes B1 through B3. Groundwater was initially encountered in boreholes B4 and B5 during drilling at depths of 11.5 and 20.5 feet bgs, respectively, and was subsequently measured at depths of 10.9 and 21.1 feet bgs, respectively prior to groundwater sample collection. One groundwater grab sample was collected from each of boreholes B4 and B5. The grab groundwater sampling procedures followed by Vironex are as follows:

- Threading together and lowering into the boring 1-inch diameter slotted PVC pipe to the bottom of the borehole,
- Allowing time for groundwater to enter the slotted pipe,
- Lowering a polyethylene tube into the slotted pipe and lifting the water sample to the surface with a peristaltic pump,
- Purging approximately 0.10 and 0.25 gallons from each of the boreholes, respectively,
- Discharging the sample directly from the peristaltic pump discharge tubing into labeled, laboratory-provided containers and placing the containers into a cooler containing ice.

Once retained for laboratory analysis, all samples were maintained in a cooler with ice with chain of custody documentation until delivered to the laboratory. The soil and groundwater samples were subsequently delivered to McCampbell.

Following groundwater sample collection, the temporary slotted PVC pipe was removed and the boreholes were backfilled to the surface with neat cement slurry using a tremie pipe. The drill cuttings were placed in a 55-gallon drum, which was labeled and stored at the site pending receipt of the laboratory analysis. Mr. Jeff Jones with Zone 7 Water Agency was on site to observe and document the grouting of borehole B1 through B5. Copies of the boring logs are attached with this report as Appendix A.

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 Quaternary Fine-Grained Alluvium (Qhaf), which is described as unconsolidated plastic moderately to poorly sorted carbonaceous silt and clay.

Based upon information obtained from the internet application Google Earth, the subject site is located at an elevation of approximately 335 feet above sea level. Based on groundwater level maps obtained from the Zone 7 Water Agency for water levels in the vicinity of the subject site in the Spring and Fall of 2007 the groundwater flow direction at the site is to the southwest (See Figures 7 and 8).

3.0 SOIL GAS SAMPLING

3.1 Field Activities

3.1.1 Limited Subsurface Investigation

Review of the boring logs in Appendix A shows that the fill materials encountered beneath the building floor slab consisted of pea gravel to a depth of 1.0 feet bgs, beneath which silty clay was encountered.

On October 22, 2012 soil gas samples SG1 through SG5 (see Figures 4, 5 and 6 for the sample collection locations) were collected between the depths of 4.0 and 5.0 feet bgs using a temporary soil gas sampling well. The temporary wells were constructed by driving a hollow 1.0-inch diameter Geoprobe rod with an expendable tip to a depth of 5 feet, dislodging the expendable tip, and then inserting a 6.5-foot length of 0.250-inch outside diameter (0.170-inch inside diameter) polyethylene tube into the hollow rod to a depth of approximately 4.5 feet bgs. Prior to inserting the Teflon tubing a 2-inch long, 1/2-inch outside diameter high density porous polyethylene filter was attached to the Teflon tubing with a stainless steel fitting. A #2/16 Lonestar sack sand was added to the annular space between the hollow rod interior and the Teflon tube as the hollow rod was withdrawn from the ground until the lowermost 12 inches of the hole was filled with sand. Granular bentonite (with grains measuring approximately 2 to 3 millimeters in diameter) was placed in the annular space above the sand to a height of 1 foot above the screen. The remaining annular space was filled with hydrated bentonite slurry.

A soil gas sampling manifold with a 6-liter Summa purge canister and 1-liter Summa canister as the sampling canister for each location (see Figure 9) was assembled inside a shroud consisting of a 35-gallon Rubbermaid bin that had been modified by cutting viewing ports into the sides of the bin and covering the viewing ports with transparent polycarbonate sheets. The Rubbermaid bin shroud was also modified to include a hole measuring approximately two inches square in the bottom of the bin to allow the bin to cover the soil gas well while still allowing access to the well through the bottom of the bin. At the time that the sampling manifold was assembled, the vacuum for the sample canister was checked with a vacuum gauge and recorded

on a Soil Gas Sampling Data Sheet (see Appendix B). Following construction of the temporary soil gas well, no activity was performed for approximately 2.5 to 3.5 hours to allow subsurface soil gas equilibration. The temporary soil gas well construction completion time and the start time for soil gas purging were recorded on a Soil Gas Sampling Data Sheet.

Prior to sampling the soil gas, 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 9). Discrepancies in Summa canister vacuum between the vacuum prior to assembling the sampling manifold and during the 10 minute leak check are attributed to lower vacuums in the purge canister than in the sample canister. No purge testing for purge volume determination was performed because the samples were collected using Summa canisters. Following successful verification of the manifold leak check, a default of three purge volumes was extracted prior to sample collection. The purge volume was calculated based on the volume of the void space surrounding the sand interval of the borehole and the tubing interior. The purge time was calculated using a nominal flow rate provided by the manifold flow controller of 170 milliliters per minute. A copy of the purge time calculations is provided in Appendix B.

Following completion of the purging of three volumes, the valve to the purge canister was closed, a lid for the shroud that had been modified to include two gauntlet nitrile gloves for adjustment of equipment inside the shroud while the shroud lid is in place and a viewing port covered with a transparent polycarbonate sheet was placed over the top of the shroud, enclosing the well, the sampling manifold, and the 1-liter sample canister. A tracer gas (1,1-Difluoroethane) was sprayed for one second into the shroud through a small diameter hole in the side the shroud, followed by verification that subsurface low flow conditions were not present at each sampling location.

The gloves in the lid of the shroud were then used to open the sample canister valve. During soil gas collection at three locations (SG2, SG4 and SG5) one air sample was collected from the shroud atmosphere using a 1-liter Tedlar bag in a vacuum chamber. A new piece of tubing was used to connect the shroud atmosphere to the Tedlar bag in the vacuum chamber for each location. Following shroud gas sample collection, the Tedlar bags were stored in a cooler pending delivery to McCampbell. Chain of custody procedures were observed for all sample

handling. Once the vacuum for the sample canister valve had decreased to 5 inches of mercury, the gloves in the lid of the shroud were used to close the sample canister valve. The pressure gage on the inlet side of the flow controller (see Figure 9) was monitored during sample collection to ensure that the vacuum applied to the soil gas well did not exceed 100 inches of water.

One duplicate soil gas sample (designated as SG3 DUP) was collected into a Summa canister at location SG3 using a new sampling manifold for the Summa canister using methods described above. Following completion of soil gas sample collection, the Summa canisters were stored in a box and promptly shipped to the laboratory for extraction and analysis. Chain of custody procedures were observed for all sample handling.

All soil gas sample leak check start and end times, purge start and end times, sample collection start and end times, and final vacuums were recorded on the Soil Gas Sampling Data Sheet (see Appendix B).

No rain fell during the five days preceding the day of soil gas sampling. Approximately 0.64 inches of rain fell on the day of soil gas sampling (October 22, 2012). Weather data, including precipitation and barometric pressure for the day of the sampling event and also for the two weeks preceding and two weeks following the sample date of October 22, 2012 is provided as Appendix C. The weather station used for quantification of precipitation and barometric pressure is located on the south side of Brookside Court to the southeast of the intersection of Brookside Court and Stonedale Drive in Dublin at an elevation of 341 feet, approximately 1.1 miles to the south of the subject site. Based upon information obtained from the internet application Google Earth, the subject site is located at an elevation of approximately 335 feet above sea level. An internet link to the weather station information is also provided in Appendix C.

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 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.

4.0 CHEMICAL ANALYSES AND RESULTS

4.1 Chemical Analyses

All of the soil and groundwater samples were analyzed at McCampbell. The soil samples collected from boreholes B1 through B3 were analyzed for the following:

- Total Petroleum Hydrocarbons as Gasoline (TPH-G), Total Petroleum Hydrocarbons as Stoddard Solvent (TPH-SS), Methyl tert-Butyl Ether (MTBE), benzene, toluene, ethylbenzene, and total xylenes (MBTEX) using EPA Methods 5030B in conjunction with EPA Method 8021B and modified EPA Method 8015B, for Total Petroleum Hydrocarbons as Kerosene (TPH-K), Total Petroleum Hydrocarbons as Diesel (TPH-D), Total Petroleum Hydrocarbons as Bunker Oil, (TPH-BO), and Total Petroleum Hydrocarbons as Motor Oil (TPH-MO) using EPA Methods 3550B in conjunction with EPA Method 8015B, and for Volatile Organic Compounds (VOCs) using EPA Method 8260B.

The groundwater samples collected from boreholes B4 and B5 were analyzed for the following:

- TPH-G and TPH-SS using EPA Methods 5030B in conjunction with modified EPA Method 8015B, for TPH-K, TPH-D, TPH-BO, and TPH-MO using EPA Methods 3510C in conjunction with EPA Method 8015B, and for VOCs including MBTEX using EPA Method 8260B.

Soil gas samples SG1 through SG5 and the field duplicate collected at location SG3 were all analyzed at Air Toxics, Ltd. (Air Toxics) of Folsom, California, and the soil gas sample shroud atmosphere samples were analyzed at McCampbell. The soil gas samples were analyzed for the following:

- VOCs including MBTEX and the tracer gas leak detection compound 1,1-Difluoroethane (1,1-DFA) using Modified EPA Method TO-15.

The soil gas sample shroud atmosphere samples were analyzed for the following:

- the tracer gas leak detection compound 1,1-DFA using Modified EPA Method 8260B.

4.2 Analytical Results

The results of laboratory analytical reports for the soil and groundwater samples collected on October 23, 2012 are presented in Tables 1 and 2, respectively. The results of the laboratory analytical reports for the soil gas samples are presented in Table 3A, and the laboratory analytical results for the shroud atmosphere samples are presented in Table 3B. The laboratory analytical reports and chain of custody documentation are attached with this report as Appendix D.

5.0 HERD SOIL GAS RISK AND HAZARD ANALYSIS

5.1 Soil Gas Risk and Hazard Evaluation

DTSC guidance for evaluation of vapor intrusion to indoor air indicates that if look-up table screening levels are exceeded, that a site-specific evaluation of the site be conducted using appropriate fate and transport modeling. The DTSC has developed with the CalEPA Human and Ecological Risk Division (HERD) a California-specific spreadsheet for calculation of risk and hazard associated with exposure to chemicals based upon the Johnson and Ettinger (JE) model that has been adopted by the USEPA for vapor intrusion fate and transport modeling. At the time that risk and hazard for vapor intrusion to indoor air were evaluated, the DTSC had most recently updated the spreadsheet on December 6, 2011. The spreadsheet is used in the screening mode.

The risk and hazard associated with vapor intrusion to indoor air were calculated using the highest detected soil gas PCE concentration for a commercial/industrial land use scenario using HERD soil gas spreadsheet default values with the following exceptions:

- Averaging time for noncarcinogens and exposure duration were changed from 30 to 25 years for a commercial/industrial exposure scenario,
- Exposure frequency changed from 350 to 250 days a year for a commercial/industrial exposure scenario
- A soil type of silty clay (SIC) was used

The DTSC vapor intrusion model spreadsheet input, intermediate calculation, and output sheet results for the highest PCE soil gas concentration in a commercial/industrial land use scenario are provided in Appendix E. Review of the Appendix E output sheet shows that the hazard quotient was calculated to be less than one for the highest detected concentration of PCE. The cumulative carcinogenic risk for the highest detected concentration of PCE in soil gas was calculated to be 47 per million (4.7E-05).

6.0 DISCUSSION AND RECOMMENDATIONS

6.1 Discussion

6.1.1 Soil Samples

No analytes were detected in any of the soil samples, with the exceptions of TPH-K and TPH-D in sample B1-4.5 at concentrations of 1.1 and 2.1 milligrams per kilogram (mg/kg), respectively, TPH-D in soil samples B2-4.5 and B3-4.5 at concentrations of 1.4 and 1.1 mg/kg, respectively, and PCE in the same two samples at concentrations of 0.011 and 0.012 mg/kg, respectively. All of the detected concentrations in the soil samples were below their respective May 2008 San Francisco Regional Water Quality Board (SF-RWQCB), Table A Environmental Screening Levels (ESLs) for shallow soil and commercial land use. Review of the laboratory analytical report shows that the laboratory described the TPH-D results for all three soil samples as consisting of diesel-range compounds with no recognizable pattern.

6.1.2 Grab Groundwater Samples

TPH-BO, TPH-MO, and cis-1,2-Dichloroethene (cis-1,2-DCE) were detected in groundwater grab sample B4-W at concentrations of 310, 280, and 220 micrograms per Liter (ug/L), respectively, and TPH-BO was detected in sample B5-W at a concentration of 270 ug/L. All of the detected concentrations in the borehole grab groundwater samples exceed their corresponding May 2008 SFRWQCB Table A ESL values where groundwater is a current or potential source of drinking water. Review of the laboratory analytical report shows that the laboratory described the TPH-BO and TPH-MO results for both grab groundwater samples as consisting of oil-range compounds.

The chemical cis-1,2-DCE is a PCE decomposition product, indicating that the source of the cis-1,2-DCE is related to a dry cleaning fluid release. The cis-1,2-DCE also indicates that PCE degradation is occurring at the subject site. No TPH-SS was detected in either of the water samples, suggesting that the detected TPH-BO and TPH-MO is not related to dry cleaning operations. The source of the detected TPH-BO and TPH-MO is presently unknown.

6.1.3 Soil Gas Samples

Comparison of the tracer gas concentrations in all of the soil gas samples in Table 3A with the corresponding shroud tracer gas concentrations in Table 3B shows that none of the tracer gas concentrations detected in the samples exceeds 5 percent of the shroud tracer gas concentration. For samples where a shroud sample was not collected, the shroud tracer gas concentration can be approximated from the shroud tracer gas concentrations that were collected. Based on this information, all of the samples are considered to be valid with respect to sample equipment leaks and short circuiting of atmospheric air into the soil gas wells.

PCE was detected in soil gas samples SG1, SG2, SG3, the duplicate soil gas sample collected at location SG3 (SG3-DUP), SG4, and SG5 at concentrations of 130, 150, 46000, 54000, 3200, and 150 micrograms per cubic meter (ug/m3), respectively. In addition, various other VOCs were detected at concentrations ranging from 5.0 to 160 ug/m3. None of the detected concentrations in the soil gas samples exceed their corresponding May 2008 SFRWQCB Table E ESL value for shallow soil gas in a commercial/industrial land use scenario with the exception of PCE in samples SG3, SG3-DUP, and SG4 which all exceed the corresponding ESL of 1,400 ug/m3. The soil gas samples with PCE concentrations exceeding the Table E ESL for shallow soil gas are located in the vicinity of the existing dry cleaning machines at 7104 Dublin Boulevard.

6.1.4 HERD Soil Gas Risk and Hazard Analysis

DTSC guidance suggests that when the calculated hazard quotient is less than 1.0 that no further action is required. However, DTSC guidance also suggests that when the calculated cumulative carcinogenic risk exceeds 1 per million but is less than 100 per million, that additional action be taken which may include installation of permanent soil gas wells, periodic monitoring of the soil gas concentrations, mitigation or remediation.

The hazard quotient was calculated to be less than one and the cumulative carcinogenic risk was calculated to be 47 per million (4.7E-05) for the highest detected PCE soil gas concentration in a commercial/industrial land use scenario.

6.2 Recommendations

On the basis of the information obtained from three soil samples collected from the depths of approximately 4.5 feet bgs within the building footprint, two groundwater grab samples collected from outside the building footprint, and five soil gas samples and one duplicate soil gas sample collected from inside the building footprint our findings indicate the following:

(1) No Total Petroleum Hydrocarbons as gasoline, Stoddard solvent, kerosene, diesel, bunker oil, and motor oil (TPH-g/ss/k/d/bo/mo) and no VOCs were detected at concentrations exceeding their respective SF-RWQCB May 2008 Table A ESL values within any of the soil samples. As such, Basics recommends no further investigation of soil at this time.

(2) TPH-BO, TPH-MO, and cis-1,2-Dichloroethene (cis-1,2-DCE) were detected in groundwater grab sample B4-W and TPH-BO was detected in sample B5-W at concentrations exceeding their corresponding May 2008 SFRWQCB Table A ESL values where groundwater is a current or potential source of drinking water. As such, Basics recommends that a copy of this report be submitted to an appropriate regulatory agency for review.

(3) PCE was detected in soil gas samples SG3, SG3-DUP, and SG4 at concentrations exceeding their corresponding May 2008 SFRWQCB Table E ESL value for shallow soil gas in a commercial/industrial land use scenario. Calculation of the risk and hazard posed by vapor intrusion to indoor air using the highest detected PCE concentration resulted in a calculated hazard of less than 1.0 and a calculated risk of 47 per million (4.7E-05). Based on the calculated risk, P&D recommends that additional soil gas sample collection be performed six months from the time that the soil gas samples were collected to evaluate any seasonal changes in soil gas concentrations, and that a copy of this report be submitted to an appropriate regulatory agency for review.

(4) No evidence of contamination was detected associated with the historical use of the former Kragen Auto Parts, the former One Hour Photo/Presto Prints, or the Acclaim Print Center stores. The soil gas PCE concentrations that were detected in store locations other than the current dry cleaning store at concentrations below the May 2008 Table E soil gas ESL for commercial land use soil gas of PCE detected below ESLs are interpreted to be related to the PCE release that appears to be in the vicinity of location SG3.

LIMITATIONS:

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

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

This report has been prepared in accordance with generally accepted practices using standards of care and diligence normally practiced by recognized consulting firms performing services of a similar nature. Basics 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.

TABLES

Table 1
Summary of Soil Sample Analytical Results

Sample ID	Sample Date	Sample Depth (Feet)	TPH-G	TPH-SS	TPH-K	TPH-D	TPH-BO	TPH-MO	MTBE	Benzene	Toluene	Ethylbenzene	Total Xylenes	Other VOCs By EPA Method 8260B
B1-4.5	10/23/2012	4.5	ND<1.0	ND<1.0	1.1	2.1, a	ND<5.0	ND<5.0	ND<0.05	ND<0.005	ND<0.005	ND<0.005	ND<0.005	All ND
B2-4.5	10/23/2012	4.5	ND<1.0	ND<1.0	ND<1.0	1.4, a	ND<5.0	ND<5.0	ND<0.05	ND<0.005	ND<0.005	ND<0.005	ND<0.005	All ND, except PCE = 0.011
B3-4.5	10/23/2012	4.5	ND<1.0	ND<1.0	ND<1.0	1.1, a	ND<5.0	ND<5.0	ND<0.05	ND<0.005	ND<0.005	ND<0.005	ND<0.005	All ND, except PCE = 0.012
ESL			*83*	*83*	*83*	*83*	*2,500*	*2,500*	*0.023*	*0.044*	*2.9*	*3.3*	*2.3*	*PCE = 0.70*

Notes:
TPH-G = Total Petroleum Hydrocarbons as Gasoline.
TPH-SS = Total Petroleum Hydrocarbons as Stoddard solvent.
TPH-K = Total Petroleum Hydrocarbons as Kerosene.
TPH-D = Total Petroleum Hydrocarbons as Diesel.
TPH-BO = Total Petroleum Hydrocarbons as Bunker Oil.
TPH-MO = Total Petroleum Hydrocarbons as Motor Oil.
MTBE = Methyl-tert-butyl ether
VOCs = Volatile Organic Compounds.
PCE = Tetrachloroethene.
ND = Not Detected.
a = Laboratory Analytical Note: diesel-range compounds are significant; no recognizable pattern.
ESL= Environmental Screening Level, by San Francisco Bay – Regional Water Quality Control Board (SF-RWQCB), updated May 2008, from Table A– Shallow Soils, Groundwater is a current or potential source of drinking water, Commercial/ Industrial Land Use.
Results in bold exceed their respective ESL Table A values.
Results and ESLs in milligrams per kilogram (mg/kg) unless otherwise indicated.

Table 2
Summary of Groundwater Sample Analytical Results

Sample ID	Sample Date	TPH-G	TPH-SS	TPH-K	TPH-D	TPH-BO	TPH-MO	MTBE	Benzene	Toluene	Ethylbenzene	Total Xylenes	Other VOCs By EPA Method 8260B
B4-W	10/23/2012	ND<50	ND<50	ND<50	ND<50	**310, a**	**280, a**	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	All ND, except cis-1,2-DCE = **220**
B5-W	10/23/2012	ND<50	ND<50	ND<50	ND<50	**270, a**	ND<250	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	All ND
ESL		*100*	*100*	*100*	*100*	*100*	*100*	*5.0*	*1.0*	*40*	*30*	*20*	*cis-1,2-DCE = 6.0*

Notes:
TPH-G = Total Petroleum Hydrocarbons as Gasoline.
TPH-SS = Total Petroleum Hydrocarbons as Stoddard solvent.
TPH-K = Total Petroleum Hydrocarbons as Kerosene.
TPH-D = Total Petroleum Hydrocarbons as Diesel.
TPH-BO = Total Petroleum Hydrocarbons as Bunker Oil.
TPH-MO = Total Petroleum Hydrocarbons as Motor Oil.
MTBE = Methyl-tert-butyl ether
VOCs = Volatile Organic Compounds.
cis-1,2-DCE = cis-1,2-Dichloroethene.
ND = Not Detected.
a = Laboratory Analytical Note: oil-range compounds are significant.
ESL= Environmental Screening Level, by San Francisco Bay – Regional Water Quality Control Board (SF-RWQCB), updated May 2008, from Table A– Shallow Soils, Groundwater is a current or potential source of drinking water.
Results in bold exceed their respective ESL Table A values.
Results and ESLs in micrograms per Liter (ug/L) unless otherwise indicated.

Table 3A
Summary of Soil Gas Sample Analytical Results - VOCs

Compound	Sample ID	SG1	SG2	SG3	SG3-DUP	SG4	SG5	ESL
Sample Collection Date		10/22/2012	10/22/2012	10/22/2012	10/22/2012	10/22/2012	10/22/2012	
Sample Collection Depth (feet)		5	5	5	5	5	5	
Tetrachloroethene (PCE)		130	150	**46,000**	**54,000**	**3,200**	150	1,400
Benzene		35	18	ND<130	ND<160	ND<6.3	5.3	280
Toluene		160	85	ND<160	ND<190	34	47	180,000
Ethylbenzene		29	15	ND<180	ND<220	11	17	3,300
m, p-Xylenes		100	60	ND<180	ND<220	45	78	58,000 (total xylenes)
o-Xylene		32	20	ND<180	ND<220	14	26	
1,3-Butadiene		8.0	ND<2.4	ND<91	ND<110	ND<4.4	ND<2.7	None
2-Butanone (Methyl Ethyl Ketone)		19	14	ND<480	ND<600	ND<23	21	2,900,000
Ethanol		10	14	ND<310	ND<380	ND<15	ND<9.1	None
Acetone		57	46	ND<390	ND<480	ND<47	69	1,800,000
Hexane		59	12	ND<140	ND<180	ND<7.0	5.2	None
Cyclohexane		14	5.0	ND<140	ND<170	ND<6.8	ND<4.2	None
2,2,4-Trimethylpentane		14	7.4	ND<190	ND<240	ND<9.3	ND<5.6	None
Heptane		59	20	ND<170	ND<210	ND<8.1	6.1	None
4-Methyl-2-pentanone (Methyl Isobutyl Ketone)		12	11	ND<170	ND<210	9.1	9.2	1,800,000
4-Ethyltoluene		20	15	ND<200	ND<250	17	ND<5.9	None
1,3,5-Trimethylbenzene		6.2	ND<5.2	ND<200	ND<250	ND<9.8	ND<5.9	None
1,2,4-Trimethylbenzene		19	14	ND<200	ND<250	15	28	None
Carbon Disulfide		ND<15	14	ND<130	ND<160	ND<25	ND<15	None
Propylbenzene		ND<5.9	ND<5.2	ND<200	ND<250	ND<9.8	6.0	None
1,1 - Difluoroethane (tracer gas)		ND<13	ND<12	ND<440	660	ND<21	ND<13	None

Notes:

ND = Not Detected.

ESL = Environmental Screening Level, developed by San Francisco Bay - Regional Water Quality Control Board (SF-RWQCB) updated May 2008, from Table E – Indoor Air and Soil Gas (Vapor Intrusion Concerns) Shallow Soil Gas Screening Levels for Commercial/Industrial Land Use.

Results in bold exceed their respective ESL Table E Shallow Soil Gas values.

Results and ESLs in micrograms per cubic meter ($\mu g/m^3$), unless otherwise noted.

Table 3B

Summary of Soil Gas Sample Shroud Tracer Gas Analytical Results - 1,1-Difluoroethane

Sample ID	Sample Date	Sample Depth (feet)	1,1-Difluoroethane, d
SG2 (Shroud)	10/22/2012	NA	9,800,000
SG4 (Shroud)	10/22/2012	NA	10,000,000
SG5 (Shroud)	10/22/2012	NA	12,000,000
ESL_1			None
ESL_2			None

NOTES:

d = 1,1-Difluoroethane used in field as leak detector for samples collected on 10/22/2012.

ESL_1 = 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) Control Board Shallow Soil Gas Screening Levels for Residential Land Use.

ESL_2 = 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.

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

FIGURES

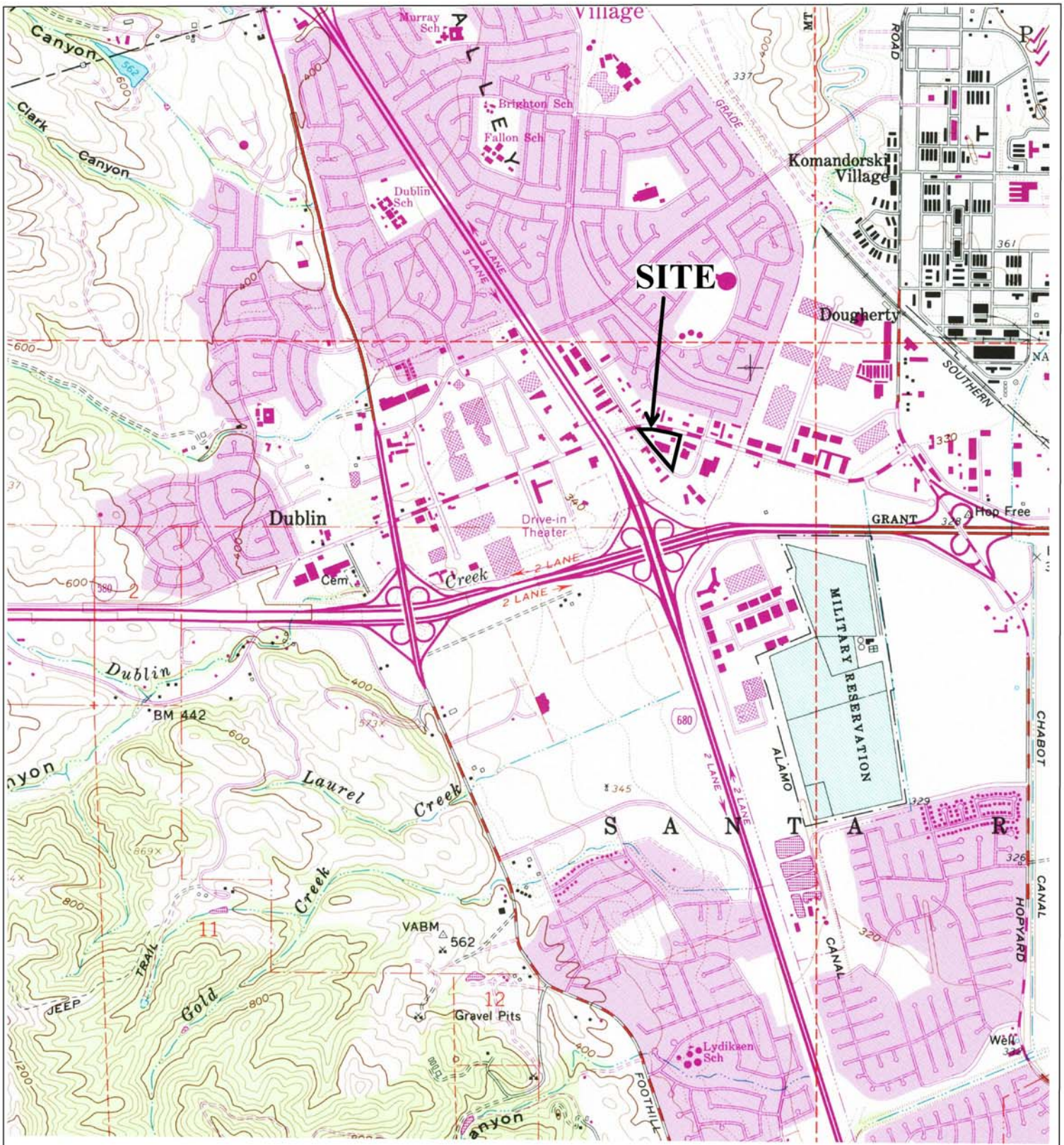


Figure 1
Site Location Map
7100-7120 Dublin Boulevard
Dublin, California

Base Map From:
US Geological Survey Dublin, California, 7.5-Minute Quadrangle Map Edited 1980

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0 1000 2000
Approximate Scale in Feet

N

Figure 2
Site Vicinity Aerial Photograph
7100-7120 Dublin Boulevard
Dublin, California

Base Map from:
Google Earth, Image Dated October 2011

basics ENVIRONMENTAL

0 100 200
Approximate Scale in Feet

N

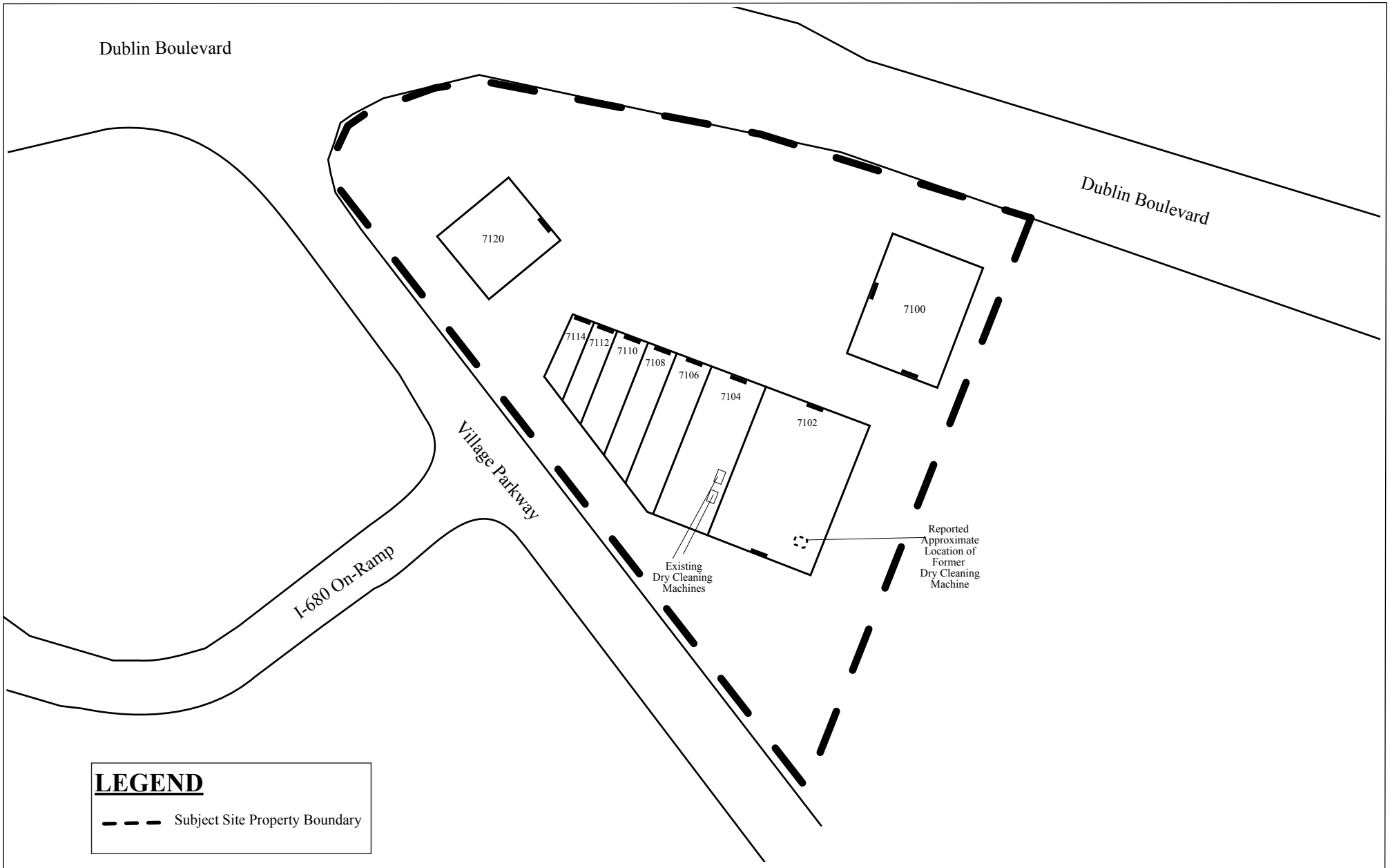

Figure 3
Site Vicinity Map
7100-7120 Dublin Boulevard
Dublin, California

Base Map from:
Basics Environmental, undated
Google Earth, October 2011

basics ENVIRONMENTAL

0 50 100
Approximate Scale in Feet

N

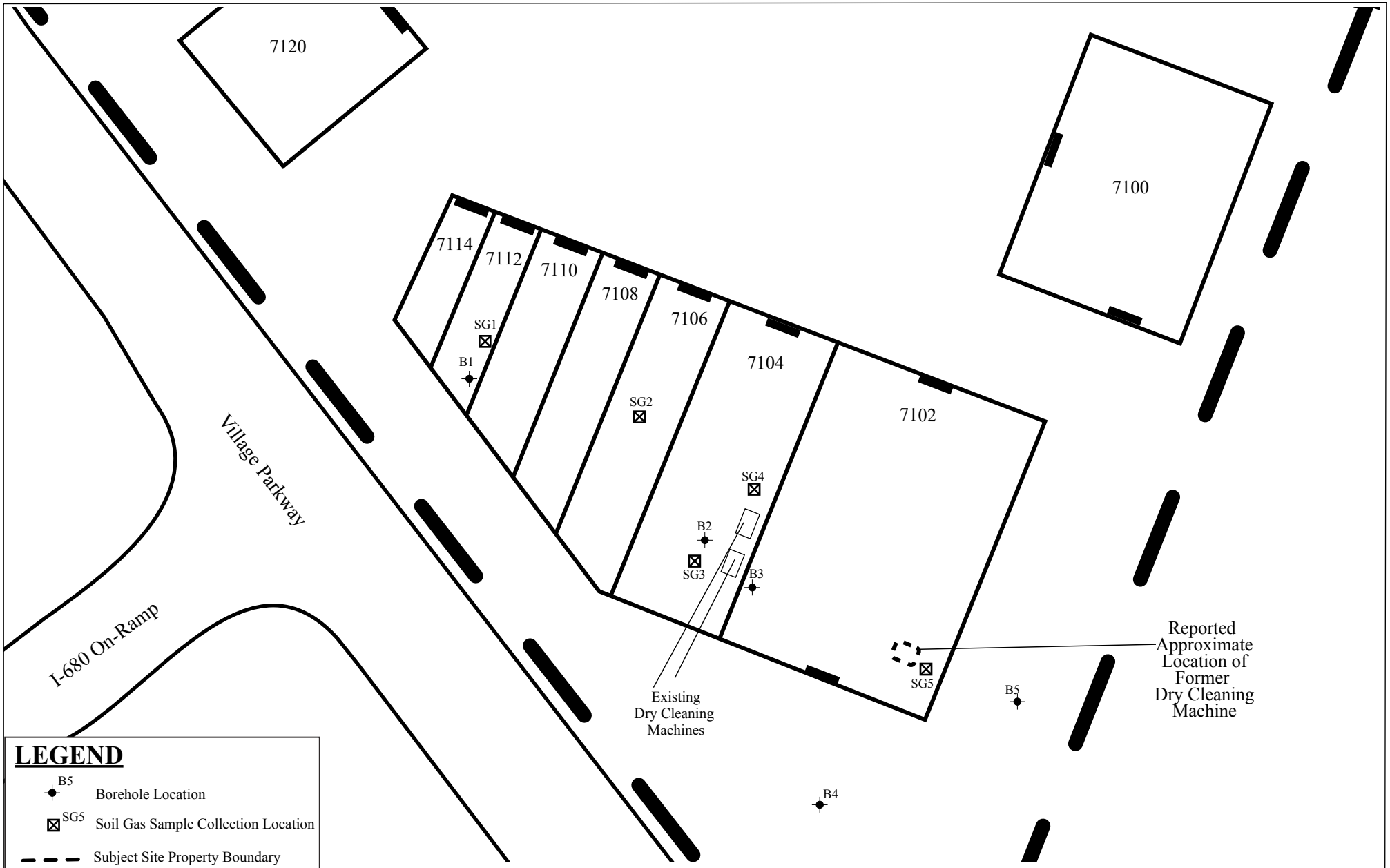

Figure 4
Site Map Detail Showing sample Collection Locations
7100-7120 Dublin Boulevard
Dublin, California

Base Map from:
Basics Environmental, undated
Google Earth, October 2011

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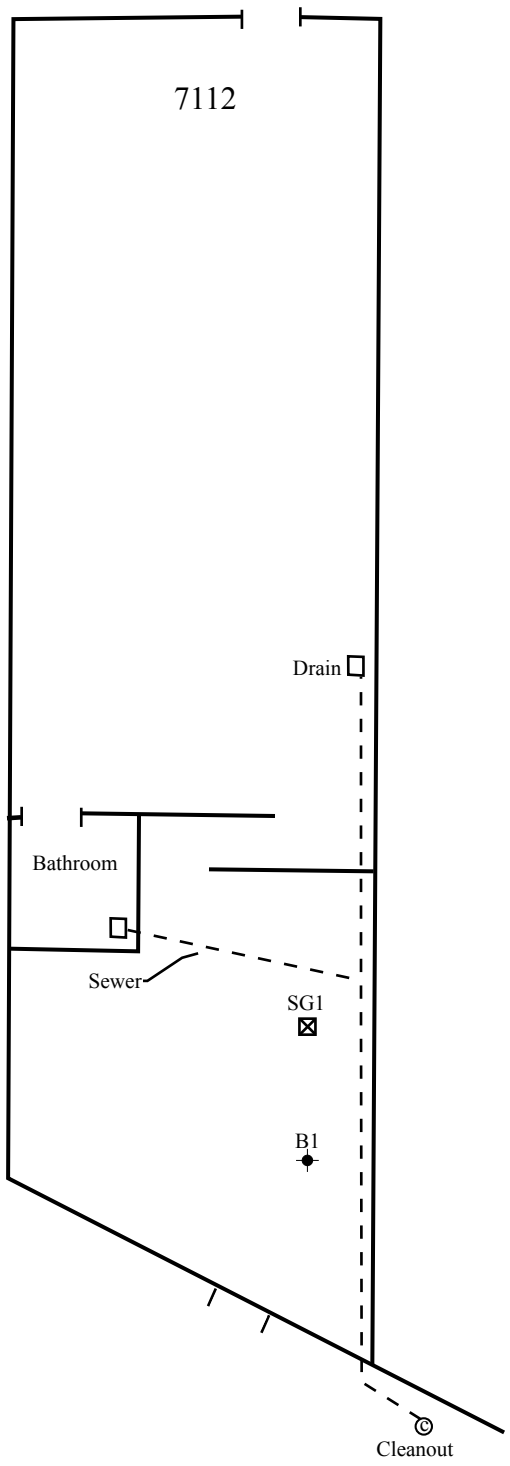
0 25 50
Approximate Scale in Feet

N



LEGEND

- B1 — Borehole Location
- SG1 — Soil Gas Sample Collection Location
- Approximate Sewer Location
- © — Approximate Sewer Cleanout Location

Figure 5
Site Map Detail of Unit 7112
7100-7120 Dublin Boulevard
Dublin, California

Base Map From:
Basics Environmental Using a Steel Tape and a Rolatape on 10/23/12

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0 5 10
Approximate Scale in Feet

N

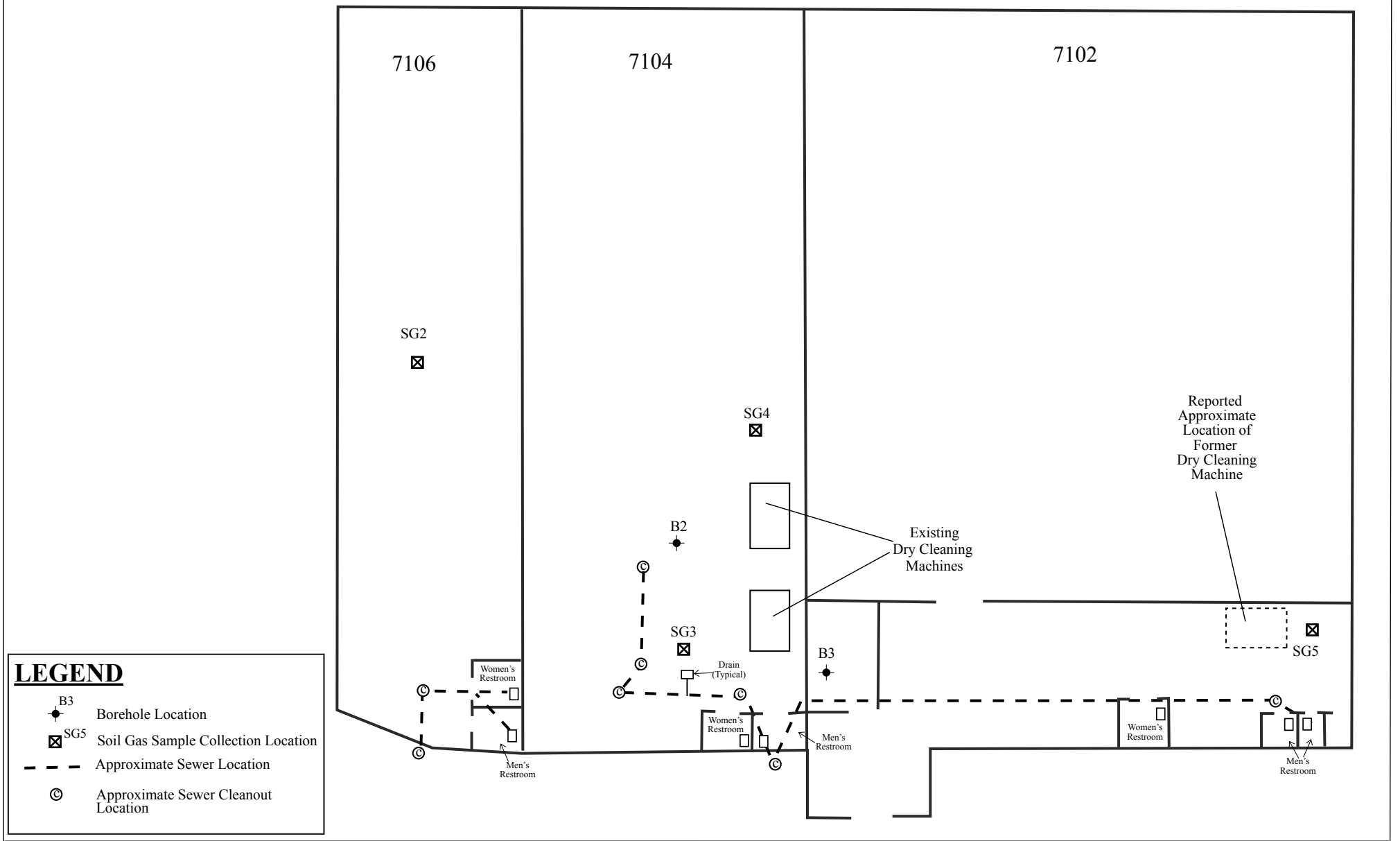

Figure 6
Site Map Detail of Units 7102, 7104, and 7106
7100-7120 Dublin Boulevard
Dublin, California

Base Map from:
Basics Environmental Using a Steel Tape and a Rolatape on 10/23/12.

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0 10 20
Approximate Scale in Feet

N

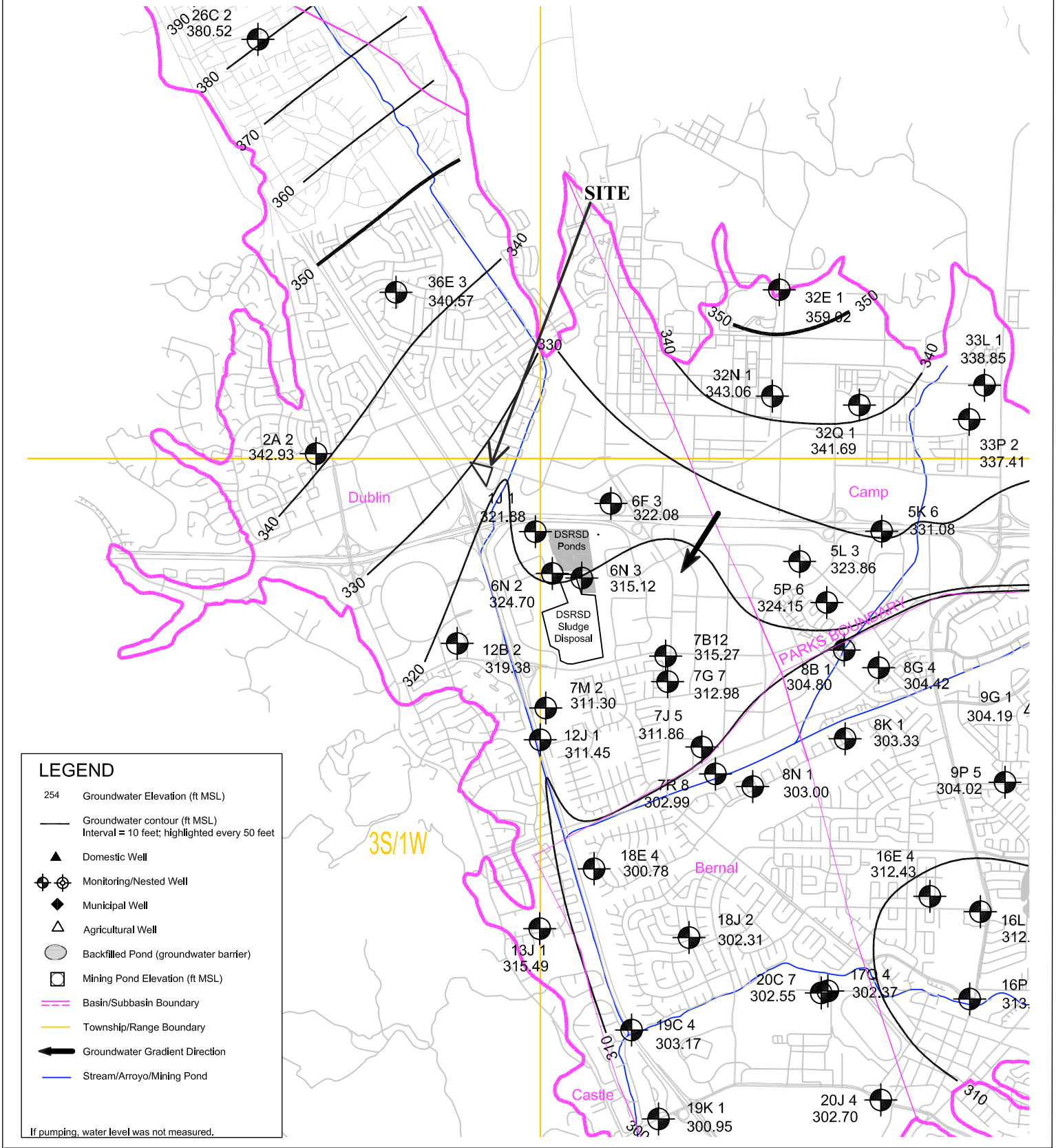

Figure 7
Groundwater Gradient Map Detail: Upper Aquifer, Spring 2007
7100-7120 Dublin Boulevard
Dublin, California

Map From Zone 7 Water Agency, dated June 9, 2008.	P&D Environmental, Inc. 55 Santa Clara Ave., Suite 240 Oakland, CA 94610	0 1,500 3,000 ApproximateScale in Feet N

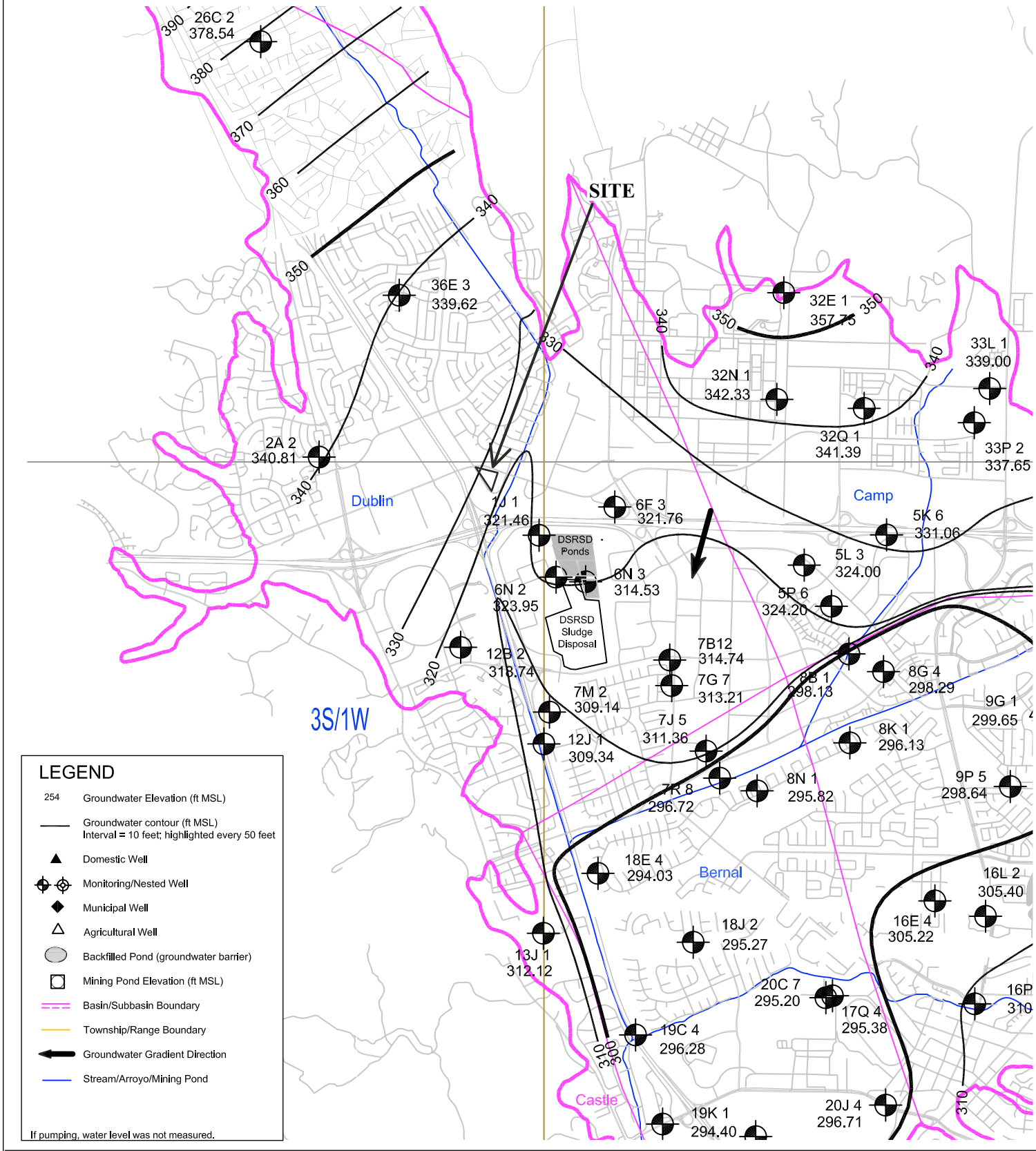

Figure 8
Groundwater Gradient Map Detail: Upper Aquifer, Fall 2007
7100-7120 Dublin Boulevard
Dublin, California

Map From Zone 7 Water Agency, dated June 9, 2008.	P&D Environmental, Inc. 55 Santa Clara Ave., Suite 240 Oakland, CA 94610	0 1,500 3,000 ApproximateScale in Feet N

Figure 9
Typical Soil Gas Sampling Manifold
7100-7120 Dublin Boulevard
Dublin, California

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APPENDIX A

Boring Logs

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BORING NO.: B1	**PROJECT NO.:** 0614	**PROJECT NAME:** 7100-7120 Dublin Blvd., Dublin	
BORING LOCATION: Approximately 9 ft. north and 3 ft. west from the southeast corner of 7112 Dublin Blvd.		**ELEVATION AND DATUM:** None	
DRILLING AGENCY: Vironex, Inc.	**DRILLER:** Joel, Brett	**DATE & TIME STARTED:** 10/23/12 0830	**DATE & TIME FINISHED:** 10/23/12 1400
DRILLING EQUIPMENT: 3.5-inch O.D. Hand Auger			
COMPLETION DEPTH: 4.5 Feet	**BEDROCK DEPTH:** Not Encountered	**LOGGED BY:** MLD	**CHECKED BY:** PHK
FIRST WATER DEPTH: Not Encountered	**NO. OF SAMPLES:** 1 Soil		

DEPTH (FT.)	DESCRIPTION	GRAPHIC COLUMN	WELL CONSTRUCTION LOG	BLOW COUNT PER 6"	PID	REMARKS
	0.0 to 0.5 ft. Concrete.		No Well Constructed			Borehole was hand augered from 0.5 to 4.5 ft. using 3.5-inch O.D. Hand Auger. No groundwater encountered during drilling.
	0.5 to 1.0 ft. Pea gravel (FILL)	FILL				
	1.0 to 4.5 ft. Dark brown silty clay (CL); medium stiff, moist, with light brown mottling. No PHC or solvent odor. (0,0,100)	CL				
5		X	B1-4.5			Soil Sample B1-4.5 collected using a slide hammer to drive a steel sampler containing a 6.0-inch long 2.0-inch O.D. stainless steel tube.
						Borehole grouted on 10/23/12 using neat cement grout. Mr. Jeff Jones with Zone 7 Water Agency on site to observe and document grouting of the borehole.
10						
						Drilling Notes:
						1) Field estimates of percent gravel, sand, and fines are shown in parentheses.
15						2) Density determinations are qualitative and are not based on quantitative evaluation.
20						
25						
30						

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BORING NO.: B2	PROJECT NO.: 0614	PROJECT NAME: 7100-7120 Dublin Blvd., Dublin	
BORING LOCATION: Approximately 32 ft. north and 18 ft. west from the southeast corner of 7104 Dublin Blvd.		ELEVATION AND DATUM: None	
DRILLING AGENCY: Vironex, Inc.	DRILLER: Joel, Brett	DATE & TIME STARTED: 10/23/12 0730	DATE & TIME FINISHED: 10/23/12 1400
DRILLING EQUIPMENT: 3.5-inch O.D. Hand Auger			
COMPLETION DEPTH: 4.5 Feet	BEDROCK DEPTH: Not Encountered	LOGGED BY: MLD	CHECKED BY: PHK
FIRST WATER DEPTH: Not Encountered	NO. OF SAMPLES: 1 Soil		

DEPTH (FT.)	DESCRIPTION	GRAPHIC COLUMN	WELL CONSTRUCTION LOG	BLOW COUNT PER 6"	PID	REMARKS
	0.0 to 0.5 ft. Concrete.		No Well Constructed			Borehole was hand augered from 0.5 to 4.5 ft. using 3.5-inch O.D. Hand Auger. No groundwater encountered during drilling.
	0.5 to 1.0 ft. Pea gravel (FILL)	FILL				
	1.0 to 4.5 ft. Dark brown silty clay (CL); medium stiff, moist, with light gray mottling. No PHC or solvent odor. (0,0,100)	CL				
5		X	B2-4.5			Soil Sample B2-4.5 collected using a slide hammer to drive a steel sampler containing a 6.0-inch long 2.0-inch O.D. stainless steel tube.
						Borehole grouted on 10/23/12 using neat cement grout. Mr. Jeff Jones with Zone 7 Water Agency on site to observe and document grouting of the borehole.
10						
						Drilling Notes:
						1) Field estimates of percent gravel, sand, and fines are shown in parentheses.
15						2) Density determinations are qualitative and are not based on quantitative evaluation.
20						
25						
30						

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BORING NO.: B3	**PROJECT NO.:** 0614	**PROJECT NAME:** 7100-7120 Dublin Blvd., Dublin	
BORING LOCATION: Approximately 22 ft. north and 4 ft. east from the southwest corner of 7102 Dublin Blvd.		**ELEVATION AND DATUM:** None	
DRILLING AGENCY: Vironex, Inc.		**DRILLER:** Joel, Brett	**DATE & TIME STARTED:** 10/23/12 1200 / **DATE & TIME FINISHED:** 10/23/12 1400
DRILLING EQUIPMENT: 3.5-inch O.D. Hand Auger			
COMPLETION DEPTH: 4.5 Feet	**BEDROCK DEPTH:** Not Encountered		**LOGGED BY:** MLD / **CHECKED BY:** PHK
FIRST WATER DEPTH: Not Encountered	**NO. OF SAMPLES:** 1 Soil		

DEPTH (FT.)	DESCRIPTION	GRAPHIC COLUMN	WELL CONSTRUCTION LOG	BLOW COUNT PER 6"	PID	REMARKS
	0.0 to 0.5 ft. Concrete.		No Well Constructed			Borehole was hand augered from 0.5 to 4.5 ft. using 3.5-inch O.D. Hand Auger. No groundwater encountered during drilling.
	0.5 to 1.0 ft. Pea gravel (FILL)	FILL				
	1.0 to 4.5 ft. Dark brown silty clay (CL); medium stiff, moist, with light gray mottling. No PHC or solvent odor. (0,0,100)	CL				
5		X	B3-4.5			Soil Sample B3-4.5 collected using a slide hammer to drive a steel sampler containing a 6.0-inch long 2.0-inch O.D. stainless steel tube.
						Borehole grouted on 10/23/12 using neat cement grout. Mr. Jeff Jones with Zone 7 Water Agency on site to observe and document grouting of the borehole.
10						
						Drilling Notes:
						1) Field estimates of percent gravel, sand, and fines are shown in parentheses.
15						
						2) Density determinations are qualitative and are not based on quantitative evaluation.
20						
25						
30						

basics ENVIRONMENTAL

BORING NO.: B4	PROJECT NO.: 0614	PROJECT NAME: 7100-7120 Dublin Blvd., Dublin	
BORING LOCATION: Approximately 45 ft. south and 25 ft. west from the southeast corner of building			ELEVATION AND DATUM: None
DRILLING AGENCY: Vironex, Inc.		DRILLER: Joel, Brett	DATE & TIME STARTED: 10/23/12 0930 / DATE & TIME FINISHED: 10/23/12 1400
DRILLING EQUIPMENT: Geoprobe 6600			
COMPLETION DEPTH: 15.0 Feet	BEDROCK DEPTH: Not Encountered		LOGGED BY: MLD / CHECKED BY: PHK
FIRST WATER DEPTH: 11.5 Feet	NO. OF SAMPLES: 1 Water		

DEPTH (FT.)	DESCRIPTION	GRAPHIC COLUMN	WELL CONSTRUCTION LOG	BLOW COUNT PER 6"	PID	REMARKS
	0.0 to 0.5 ft. Asphalt and base rock.		No Well Constructed		0	Borehole was pushed to 15.0 ft. using 5-foot long 2.0-inch O.D. Geoprobe Macrocore barrel sampler. The sampler was lined with 4.8-foot long 1.5-inch O.D. transparent PVC tubes.
	0.5 to 1.0 ft. Brown gravelly sand (FILL); medium dense, moist. No Petroleum Hydrocarbon (PHC) or solvent odor.	FILL				
	1.0 to 1.5 ft. Brown clay (CL); medium stiff, moist, with olive-gray mottling. No PHC or solvent odor. (0,0,100)				0	
	1.5 to 2.5 ft. Bluish-gray clay (CL); medium stiff, moist, with brown mottling. No PHC or solvent odor. (0,0,100)	CL				0-5 ft 4.6 ft recovery 5-10 ft 4.4 ft recovery 10-15 ft 4.6 ft recovery
5	2.5 to 7.0 ft. Grayish-brown silty clay (CL); medium stiff, moist. No PHC or solvent odor. (0,0,100)				0	Water encountered during drilling at 11.5 ft. at 0940.
	7.0 to 9.0 ft. Brown silty fine sand (SM); loose, moist. No PHC or solvent odor. (0,85,15)	SM			0	Temporary 1.0-inch diameter slotted PVC casing placed in borehole. Water level measured at 11.2 ft. at 0947, and at 10.9 ft. at 0957. Approximately 0.1-gallons purged from borehole prior to groundwater sample collection using new unused disposable polyethylene tubing connected to a peristaltic pump. Water sample B4-W collected at 1000 directly from discharge tubing. No odor or sheen on sample. Water level subsequently measured at 11.1 ft. at 1028.
10	9.0 to 11.5 ft. Gray silty clay (CL); soft, moist to wet. No PHC or solvent odor. (0,0,100) Wet at 11.0 ft. Saturated at 11.5 ft.	CL	▼ ▽		0	
	11.5 to 12.5 ft. Brown silty sand (SM); loose, saturated. No PHC or solvent odor. (0,90,10)	SM				
	12.5 to 15.0 ft. Brown clay (CL); medium stiff, moist, with few coarse sand. No PHC or solvent odor. (0,10,90)	CL			0	
15						
20						Borehole grouted on 10/23/12 using neat cement grout and a tremie pipe. Mr. Jeff Jones with Zone 7 Water Agency on site to observe and document grouting of the borehole.
25						Drilling Notes: 1) Field estimates of percent gravel, sand, and fines are shown in parentheses. 2) Density determinations are qualitative and are not based on quantitative evaluation.
30						

basics ENVIRONMENTAL

BORING NO.: B5	PROJECT NO.: 0614	PROJECT NAME: 7100-7120 Dublin Blvd., Dublin	
BORING LOCATION: Approximately 17 ft. north and 20 ft. east from the southeast corner of building			ELEVATION AND DATUM: None
DRILLING AGENCY: Vironex		DRILLER: Joel, Brett	DATE & TIME STARTED: 10/23/12 1030 / DATE & TIME FINISHED: 10/23/12 1400
DRILLING EQUIPMENT: Geoprobe 6600			
COMPLETION DEPTH: 23.0 Feet	BEDROCK DEPTH: Not Encountered		LOGGED BY: MLD / CHECKED BY: PHK
FIRST WATER DEPTH: 20.5 Feet	NO. OF SAMPLES: 1 Water		

DEPTH (FT.)	DESCRIPTION	GRAPHIC COLUMN	WELL CONSTRUCTION LOG	BLOW COUNT PER 6"	PID	REMARKS
	0.0 to 0.5 ft. Asphalt and base rock.		No Well Constructed		0	Borehole was pushed to 23.0 ft. using 5-foot long 2.0-inch O.D. Geoprobe Macrocore barrel sampler. The sampler was lined with 4.8-foot long 1.5-inch O.D. transparent PVC tubes.
	0.5 to 1.0 ft. Brown gravelly sand (FILL); loose, dry. No Petroleum Hydrocarbon (PHC) or solvent odor.	FILL				
	1.0 to 5.5 ft. Dark brown silty clay (CL); medium stiff, moist, with abundant roots. No PHC or solvent odor. (0,0,100)	CL			0	0-5 ft 4.6 ft recovery 5-10 ft 4.8 ft recovery 10-15 ft 4.8 ft recovery 15-20 ft 1.0 ft recovery 20-23 ft 2.8 ft recovery
5	5.5 to 6.0 ft. Brown silty fine sand (SM); loose, dry. No PHC or solvent odor. (0,80,20)	SM			0	Water encountered during drilling at 20.5 ft. at 1055.
	6.0 to 10.5 ft. Black clay (CL); medium stiff, moist, with olive-brown mottling. No PHC or solvent odor. (0,0,100)					Temporary 1.0-inch diameter slotted PVC casing placed in borehole. Water level measured at 22.3 ft. at 1103, and at 21.1 ft. at 1113. Approximately 0.25-gallons purged from borehole prior to groundwater sample collection using new unused disposable polyethylene tubing connected to a peristaltic pump. Water sample B5-W collected at 1205 directly from the discharge tubing. No odor or sheen on sample. Water level subsequently measured at 18.2 ft. at 1225.
10					0	
	10.5 to 20.5 ft. Dark brown silty clay (CL); medium stiff, moist to wet. No PHC or solvent odor. (0,0,100)	CL			0	
15						
			▼		0	
20			▽			Borehole grouted on 10/23/12 using neat cement grout and a tremie pipe. Mr. Jeff Jones with Zone 7 Water Agency on site to observe and document grouting of the borehole.
	20.5 to 21.0 ft. Grayish-brown clayey sand (SC); loose, saturated. No PHC or solvent odor. (0,70,30)	SC			0	
	21.0 to 23.0 ft. Olive-brown clay (CL); stiff, moist. No PHC or solvent odor. (0,0,100)	CL				
25						Drilling Notes: 1) Field estimates of percent gravel, sand, and fines are shown in parentheses. 2) Density determinations are qualitative and are not based on quantitative evaluation.
30						

APPENDIX B

Soil Gas Purge Volume Calculations and Soil Gas Sampling Data Sheets

Report 0614.R1
6.5 feet tubing, 12 inch sand interval

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:

Tubing length (h) = length below ground 4.5 + length above ground 2 = 6.5 feet

Tubing diameter = 0.187 inches

V tubing = pi x (r x r) x h, where pi = 3.14, r = 0.187 in./2, and h = 6.5 ft.

V tubing = 3.14 x (0.0935 x 0.0935) x (6.5 ft. x 12 in./ft.) = 2.14 cubic inches.

The sand interval volume is calculated as follows:

Borehole diameter = 1 inches

V sand interval = pi x (r x r) x h x porosity,
where pi = 3.14 , r = 1 in./2, h = 12 in., and porosity = 0.35

V sand interval = 3.14 x (0.5 x 0.5) x 12 x 0.35 = 3.30 cubic inches.

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

V total = 2.14 cubic inches + 3.30 cubic inches = 5.44 cubic inches.

To convert to cubic centimeters:

V total = 5.44 cubic inches x 16.39 cubic centimeters/cubic inches = 89.1 cubic centimeters.

The total volume for 3 purge volumes is calculated as follows:

V purge total = 89.1 cubic centimeters x 3 = 267 cubic centimeters.

The flow controller has a nominal flow rate of 170 cubic centimeters per minute.

The purge time is calculated as follows:

T purge = 267 cubic centimeters/ 170 cubic centimeters per minute = 1.57 minutes.

Converting the purge time to seconds, 1.57 minutes x 60seconds/ minute = 94 seconds.

Notes:

Yellow hi-lite indicates data entry required.
Blue hi-lite indicates values are calculated.

SOIL GAS SAMPLING DATA SHEET

Address 7100 - 7120 DUBLIN BLVD, DUBLIN

Job # 9614

Date 8/22/12

P&D Sampler MLD

Drilling Company VIRONEX

Probe Method (check one)

o PRT

X Temp Well

Soil Gas Location Designation	Probe Depth (Ft.)	Time Probe Installed	Canister #	Sample Canister Initial Vacuum Check (In. Hg) and time	Start leak check vacuum (In. Hg) and time	End leak check vacuum (In. Hg) and time	ADDITIONAL leak check vacuum (In. Hg) and time	Start PURGE time	End PURGE time	Start of tracer gas equilibration time	Time and conc. (ppm) of tracer gas equilibration	Begin sample collection vacuum (In. Hg) and time	End sample collection vacuum (In. Hg) and time	NOTES
SG 1	5	1030	363499	vac -29 time 0940	vac -29 time 0950	vac -29 time 1000	vac time	time 114200	time 114334	time	conc. time	vac -30 time 114530	vac -5 time 115305	
SG 2	5	1135	37658	vac -28 time 1030	vac -27 time 1130	vac -27 time 1140	vac time	time 131030	time 131134	time	conc. time	vac -30 time 133500	vac -3 time 135230	
SG 3	5	1200	1359	vac -29 time 0830	vac -29 time 1140	vac -24 time 1150	vac time	time 114800	time 114930	time	conc. time	vac -30 time 140000	vac -5 time 143917	
SG 3 DUP			35593	vac -29 time 0835	vac time	vac time	vac time	time	time	time	conc. time	vac time	vac time	
SG 4	5	0900	37378	vac -29 time 0850	vac -25 time 0930	vac -25 time 0940	vac time	time 105300	time 105134	time	conc. time	vac -29 time 110430	vac -5 time 111405	
SG 5	5	1050	35677	vac -29 time 0900	vac -29 time 1200	vac -29 time 1210	vac time	time 124100	time 124236	time	conc. time	vac -30 time 125200	vac -5 time 132442	
SG				vac time	vac time	vac time	vac time	time	time	time	conc. time	vac time	vac time	
SG				vac time	vac time	vac time	vac time	time	time	time	conc. time	vac time	vac time	
SG				vac time	vac time	vac time	vac time	time	time	time	conc. time	vac time	vac time	
SG				vac time	vac time	vac time	vac time	time	time	time	conc. time	vac time	vac time	
SG				vac time	vac time	vac time	vac time	time	time	time	conc. time	vac time	vac time	
SG				vac time	vac time	vac time	vac time	time	time	time	conc. time	vac time	vac time	
SG				vac time	vac time	vac time	vac time	time	time	time	conc. time	vac time	vac time	

APPENDIX C

Weather Information

http://www.wunderground.com/weatherstation/WXDailyHistory.asp?ID=KCAPLEAS21&graphspan=custom&month=10&day=8&year=2012&monthend=10&dayend=22&yearend=2012

History for KCAPLEAS21

Pleasanton Foothills, Pleasanton, CA

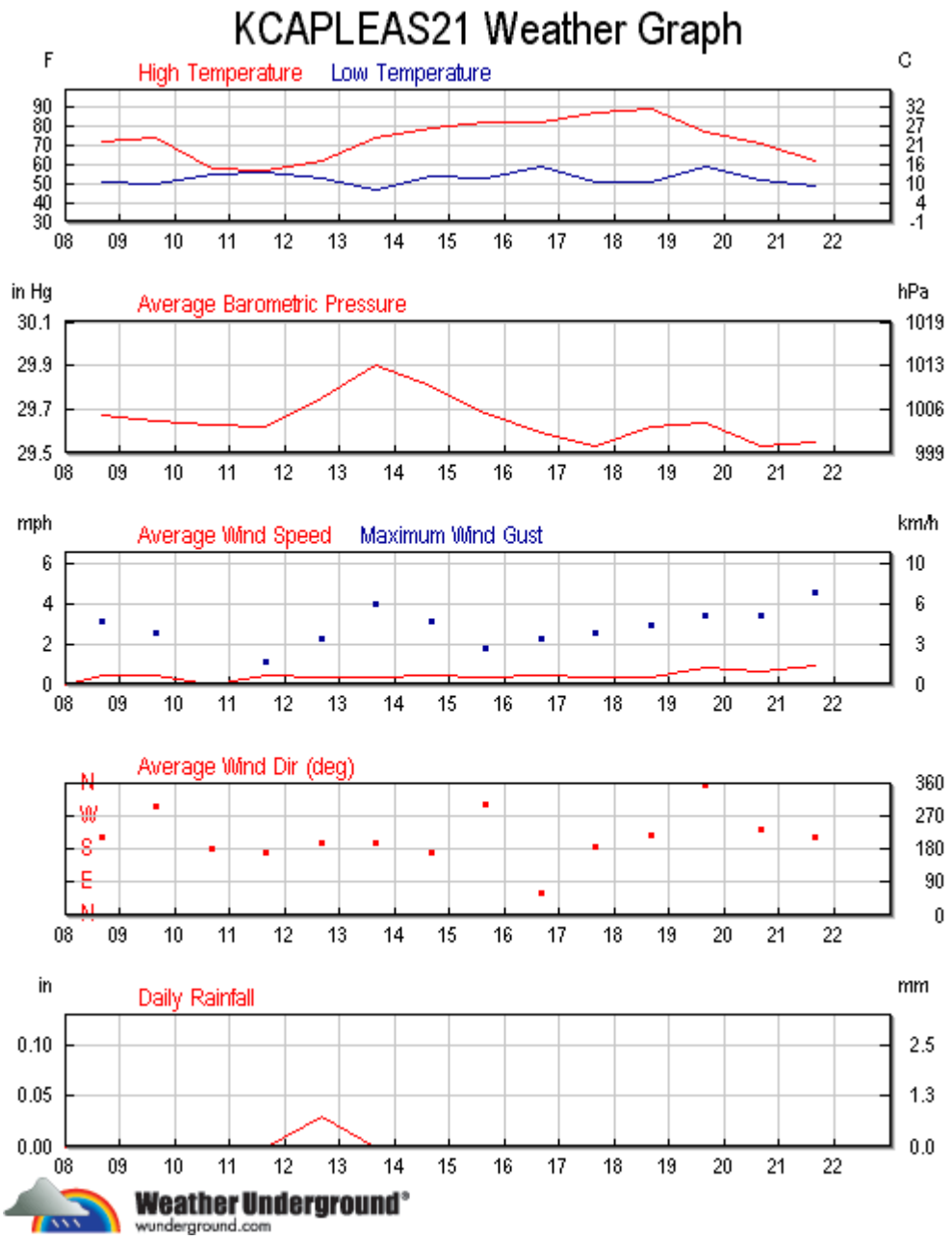
About This Station

Lat: N 37 ° 41 ' 20 " (37.689 °)
Lon: W 121 ° 55 ' 17 " (-121.922 °)
Elevation (ft): 341
MADIS ID: TT060
Hardware: Lacrosse WS-2813U-IT

October 8 2012 - TO - October 22 2012 Go

Daily Weekly Monthly Yearly **Custom**

	High:	Low:	Average:
Temperature:	**89.6** °F	**47.5** °F	**61.5** °F
Dew Point:	**66.0** °F	**37.7** °F	**51.2** °F
Humidity:	89.0%	18.0%	71.1%
Wind Speed:	**5.6**mph from the SSE	-	**0.5**mph
Wind Gust:	**5.6**mph from the SSE	-	-
Wind:	-	-	SW
Pressure:	**29.97**in	**29.39**in	-
Precipitation:	**0.50**in		


KCAPLEAS21 Weather Graph
F
High Temperature
Low Temperature
C
90 80 70 60 50 40 30
32 27 21 16 10 4 -1
08 09 10 11 12 13 14 15 16 17 18 19 20 21 22
in Hg
Average Barometric Pressure
hPa
30.1 29.9 29.7 29.5
1019 1013 1006 999
mph
Average Wind Speed
Maximum Wind Gust
km/h
6 4 2 0
10 6 3 0
Average Wind Dir (deg)
N W S E N
360 270 180 90 0
in
Daily Rainfall
mm
0.10 0.05 0.00
2.5 1.3 0.0
Weather Underground
wunderground.com

http://www.wunderground.com/weatherstation/WXDailyHistory.asp?ID=KCAPLEAS21&graphspan=day&month=10&day=22&year=2012

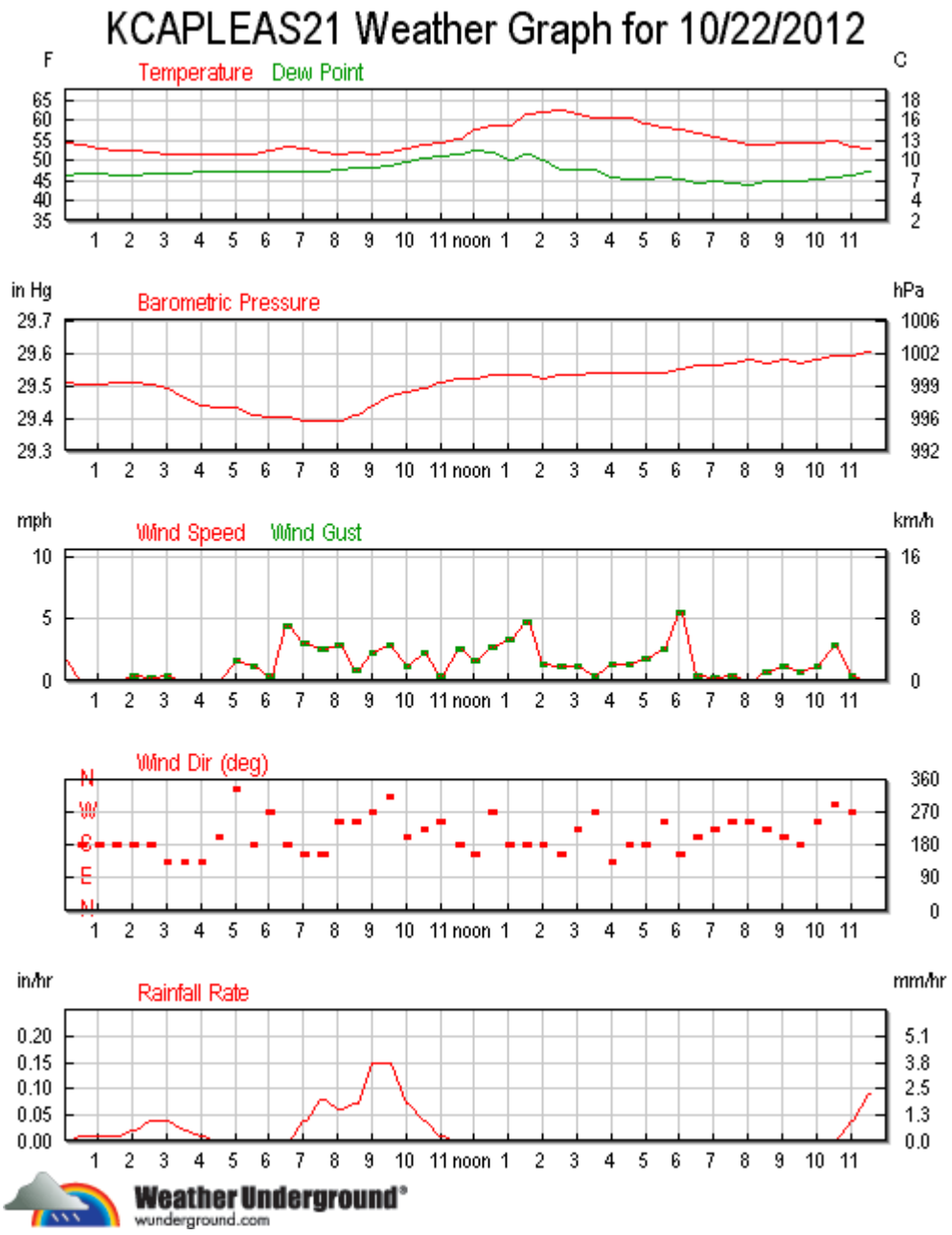
« Previous Day | October 22 2012 View | Next Day »

Daily Weekly Monthly Yearly Custom

	Current:	High:	Low:	Average:
Temperature:	**65.5** °F	**63.4** °F	**52.2** °F	**55.9** °F
Dew Point:	**54.6** °F	**53.4** °F	**44.9** °F	**48.2** °F
Humidity:	68%	89%	57%	76%
Wind Speed:	**0.9**mph	**5.6**mph	-	**1.4**mph
Wind Gust:	**0.9**mph	**5.6**mph	-	-
Wind:	NNW	-	-	SSW
Pressure:	**29.61**in	**29.60**in	**29.39**in	-
Precipitation:	**0.47**in			

Statistics for the rest of the month

	High:	Low:	Average:
Temperature:	**101.2** °F	**44.5** °F	**62.4** °F
Dew Point:	**66.0** °F	**36.8** °F	**50.3** °F
Humidity:	89.0%	12.0%	67.9%
Wind Speed:	**5.6**mph from the SSE	-	**0.4**mph
Wind Gust:	**5.6**mph from the SSE	-	-
Wind:	-	-	SSW
Pressure:	**29.97**in	**29.39**in	-
Precipitation:	**0.64**in		


KCAPLEAS21 Weather Graph for 10/22/2012
F
C
Temperature
Dew Point
65
60
55
50
45
40
35
18
16
13
10
7
4
2
1 2 3 4 5 6 7 8 9 10 11 noon 1 2 3 4 5 6 7 8 9 10 11
in Hg
hPa
Barometric Pressure
29.7
29.6
29.5
29.4
29.3
1006
1002
999
996
992
1 2 3 4 5 6 7 8 9 10 11 noon 1 2 3 4 5 6 7 8 9 10 11
mph
km/h
Wind Speed
Wind Gust
10
5
0
16
8
0
1 2 3 4 5 6 7 8 9 10 11 noon 1 2 3 4 5 6 7 8 9 10 11
Wind Dir (deg)
N
W
E
360
270
180
90
0
1 2 3 4 5 6 7 8 9 10 11 noon 1 2 3 4 5 6 7 8 9 10 11
in/hr
mm/hr
Rainfall Rate
0.20
0.15
0.10
0.05
0.00
5.1
3.8
2.5
1.3
0.0
1 2 3 4 5 6 7 8 9 10 11 noon 1 2 3 4 5 6 7 8 9 10 11
Weather Underground
wunderground.com

APPENDIX D

Laboratory Analytical Reports and Chain of Custody Documentation

Air

- **Field Date 10/22/2012 SG1 through SG5, SG3-DUP Air Toxics Lab Report #1210556**
- **Field Date 10/22/2012 SG2 through SG5 (Shroud) McCampbell Analytical Lab Report #1210765**

Soil

- **Field Date 10/23/12 B1-4.5, B2-4.5 and B3-4.5 McCampbell Analytical Lab Report #1210834**

Groundwater

- **Field Date 10/23/12 B4-W and B5-W McCampbell Analytical Lab Report #1210837**

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11/1/2012
Mr. Michael Deschenes
P & D Environmental
55 Santa Clara
Suite 240
Oakland CA 94610

Project Name: 7100 /7120 Dublin Blvd. DUBLIN, CA
Project #: 0614
Workorder #: 1210556

Dear Mr. Michael Deschenes

The following report includes the data for the above referenced project for sample(s) received on 10/25/2012 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 your 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

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WORK ORDER #: 1210556

Work Order Summary

CLIENT:	Mr. Michael Deschenes P & D Environmental 55 Santa Clara Suite 240 Oakland, CA 94610	**BILL TO:**	Mr. Michael Deschenes P & D Environmental 55 Santa Clara Suite 240 Oakland, CA 94610
PHONE:	510-658-6916	**P.O. #**	
FAX:		**PROJECT #**	0614 7100 /7120 Dublin Blvd. DUBLIN, CA
DATE RECEIVED:	10/25/2012	**CONTACT:**	Kyle Vagadori
DATE COMPLETED:	11/01/2012		

FRACTION #	NAME	TEST	RECEIPT VAC./PRES.	FINAL PRESSURE
01A	SG1	Modified TO-15	5.0 "Hg	15 psi
02A	SG2	Modified TO-15	1.5 "Hg	15 psi
03A	SG3	Modified TO-15	5.5 "Hg	15 psi
04A	SG3-DUP	Modified TO-15	6.0 "Hg	15 psi
05A	SG4	Modified TO-15	4.5 "Hg	15 psi
06A	SG5	Modified TO-15	5.0 "Hg	15 psi
07A	Lab Blank	Modified TO-15	NA	NA
07B	Lab Blank	Modified TO-15	NA	NA
08A	CCV	Modified TO-15	NA	NA
08B	CCV	Modified TO-15	NA	NA
09A	LCS	Modified TO-15	NA	NA
09AA	LCSD	Modified TO-15	NA	NA
09B	LCS	Modified TO-15	NA	NA
09BB	LCSD	Modified TO-15	NA	NA

CERTIFIED BY: Heidi Mayo DATE: 11/01/12

Technical Director

Certfication numbers: AZ Licensure AZ0775, CA NELAP - 12282CA, NY NELAP - 11291,
TX NELAP - T104704434-12-5, UT NELAP CA009332012-3, WA NELAP - C935
Name of Accrediting Agency: NELAP/ORELAP (Oregon Environmental Laboratory Accreditation Program)
Accreditation number: CA300005, Effective date: 10/18/2011, Expiration date: 10/17/2012.
Eurofins Air Toxics Ltd. certifies that the test results contained in this report meet all requirements of the NELAC standards

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 9563
(916) 985-1000 . (800) 985-5955 . FAX (916) 985-1020

LABORATORY NARRATIVE
EPA Method TO-15
P & D Environmental
Workorder# 1210556

Six 1 Liter Summa Canister samples were received on October 25, 2012. The laboratory performed analysis via EPA Method TO-15 using GC/MS in the full scan mode.

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.

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

All Quality Control Limit exceedances 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.

Dilution was performed on samples SG3-DUP, SG4 and SG5 due to the presence of high level target species.

The reported CCV for each daily batch may be derived from more than one analytical file due to the client's request for non-standard compounds.

Non-standard compounds may have different acceptance criteria than the standard TO-14A/TO-15 compound list as per contract or verbal agreement.

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 not 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 and/or LCS.
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

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

Client Sample ID: SG1

Lab ID#: 1210556-01A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	1.2	3.6	2.7	8.0
Ethanol	4.8	5.4	9.1	10
Acetone	12	24	29	57
Hexane	1.2	17	4.3	59
2-Butanone (Methyl Ethyl Ketone)	4.8	6.4	14	19
Cyclohexane	1.2	3.9	4.2	14
2,2,4-Trimethylpentane	1.2	3.0	5.6	14
Benzene	1.2	11	3.9	35
Heptane	1.2	14	5.0	59
4-Methyl-2-pentanone	1.2	3.0	5.0	12
Toluene	1.2	42	4.6	160
Tetrachloroethene	1.2	19	8.2	130
Ethyl Benzene	1.2	6.7	5.2	29
m,p-Xylene	1.2	24	5.2	100
o-Xylene	1.2	7.5	5.2	32
4-Ethyltoluene	1.2	4.0	5.9	20
1,3,5-Trimethylbenzene	1.2	1.3	5.9	6.2
1,2,4-Trimethylbenzene	1.2	3.9	5.9	19

Client Sample ID: SG2

Lab ID#: 1210556-02A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Ethanol	4.3	7.2	8.0	14
Acetone	11	19	25	46
Carbon Disulfide	4.3	4.5	13	14
Hexane	1.1	3.3	3.8	12
2-Butanone (Methyl Ethyl Ketone)	4.3	4.6	12	14
Cyclohexane	1.1	1.4	3.7	5.0
2,2,4-Trimethylpentane	1.1	1.6	5.0	7.4
Benzene	1.1	5.5	3.4	18
Heptane	1.1	4.8	4.4	20
4-Methyl-2-pentanone	1.1	2.7	4.4	11

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

Client Sample ID: SG2

Lab ID#: 1210556-02A

Toluene	1.1	22	4.0	85
Tetrachloroethene	1.1	22	7.2	150
Ethyl Benzene	1.1	3.4	4.6	15
m,p-Xylene	1.1	14	4.6	60
o-Xylene	1.1	4.5	4.6	20
4-Ethyltoluene	1.1	3.0	5.2	15
1,2,4-Trimethylbenzene	1.1	2.9	5.2	14

Client Sample ID: SG3

Lab ID#: 1210556-03A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Tetrachloroethene	41	6700	280	46000

Client Sample ID: SG3-DUP

Lab ID#: 1210556-04A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Tetrachloroethene	50	8000	340	54000
1,1-Difluoroethane	200	240	540	660

Client Sample ID: SG4

Lab ID#: 1210556-05A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
4-Methyl-2-pentanone	2.0	2.2	8.1	9.1
Toluene	2.0	9.1	7.5	34
Tetrachloroethene	2.0	480	13	3200
Ethyl Benzene	2.0	2.5	8.6	11
m,p-Xylene	2.0	10	8.6	45
o-Xylene	2.0	3.2	8.6	14
4-Ethyltoluene	2.0	3.4	9.8	17
1,2,4-Trimethylbenzene	2.0	3.1	9.8	15

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

Client Sample ID: SG5

Lab ID#: 1210556-06A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Acetone	12	29	29	69
Hexane	1.2	1.5	4.3	5.2
2-Butanone (Methyl Ethyl Ketone)	4.8	7.2	14	21
Benzene	1.2	1.7	3.9	5.3
Heptane	1.2	1.5	5.0	6.1
4-Methyl-2-pentanone	1.2	2.2	5.0	9.2
Toluene	1.2	12	4.6	47
Tetrachloroethene	1.2	22	8.2	150
Ethyl Benzene	1.2	3.9	5.2	17
m,p-Xylene	1.2	18	5.2	78
o-Xylene	1.2	6.0	5.2	26
Propylbenzene	1.2	1.2	5.9	6.0
1,2,4-Trimethylbenzene	1.2	5.7	5.9	28

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Client Sample ID: SG1

Lab ID#: 1210556-01A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**j102618**	**Date of Collection:**	**10/22/12 11:53:00 A**
Dil. Factor:	**2.42**	**Date of Analysis:**	**10/26/12 06:01 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	1.2	Not Detected	6.0	Not Detected
Freon 114	1.2	Not Detected	8.4	Not Detected
Chloromethane	12	Not Detected	25	Not Detected
Vinyl Chloride	1.2	Not Detected	3.1	Not Detected
1,3-Butadiene	1.2	3.6	2.7	8.0
Bromomethane	12	Not Detected	47	Not Detected
Chloroethane	4.8	Not Detected	13	Not Detected
Freon 11	1.2	Not Detected	6.8	Not Detected
Ethanol	4.8	5.4	9.1	10
Freon 113	1.2	Not Detected	9.3	Not Detected
1,1-Dichloroethene	1.2	Not Detected	4.8	Not Detected
Acetone	12	24	29	57
2-Propanol	4.8	Not Detected	12	Not Detected
Carbon Disulfide	4.8	Not Detected	15	Not Detected
3-Chloropropene	4.8	Not Detected	15	Not Detected
Methylene Chloride	12	Not Detected	42	Not Detected
Methyl tert-butyl ether	1.2	Not Detected	4.4	Not Detected
trans-1,2-Dichloroethene	1.2	Not Detected	4.8	Not Detected
Hexane	1.2	17	4.3	59
1,1-Dichloroethane	1.2	Not Detected	4.9	Not Detected
2-Butanone (Methyl Ethyl Ketone)	4.8	6.4	14	19
cis-1,2-Dichloroethene	1.2	Not Detected	4.8	Not Detected
Tetrahydrofuran	1.2	Not Detected	3.6	Not Detected
Chloroform	1.2	Not Detected	5.9	Not Detected
1,1,1-Trichloroethane	1.2	Not Detected	6.6	Not Detected
Cyclohexane	1.2	3.9	4.2	14
Carbon Tetrachloride	1.2	Not Detected	7.6	Not Detected
2,2,4-Trimethylpentane	1.2	3.0	5.6	14
Benzene	1.2	11	3.9	35
1,2-Dichloroethane	1.2	Not Detected	4.9	Not Detected
Heptane	1.2	14	5.0	59
Trichloroethene	1.2	Not Detected	6.5	Not Detected
1,2-Dichloropropane	1.2	Not Detected	5.6	Not Detected
1,4-Dioxane	4.8	Not Detected	17	Not Detected
Bromodichloromethane	1.2	Not Detected	8.1	Not Detected
cis-1,3-Dichloropropene	1.2	Not Detected	5.5	Not Detected
4-Methyl-2-pentanone	1.2	3.0	5.0	12
Toluene	1.2	42	4.6	160
trans-1,3-Dichloropropene	1.2	Not Detected	5.5	Not Detected
1,1,2-Trichloroethane	1.2	Not Detected	6.6	Not Detected
Tetrachloroethene	1.2	19	8.2	130
2-Hexanone	4.8	Not Detected	20	Not Detected

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Client Sample ID: SG1

Lab ID#: 1210556-01A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**j102618**	**Date of Collection:**	**10/22/12 11:53:00 A**
Dil. Factor:	**2.42**	**Date of Analysis:**	**10/26/12 06:01 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	1.2	Not Detected	10	Not Detected
1,2-Dibromoethane (EDB)	1.2	Not Detected	9.3	Not Detected
Chlorobenzene	1.2	Not Detected	5.6	Not Detected
Ethyl Benzene	1.2	6.7	5.2	29
m,p-Xylene	1.2	24	5.2	100
o-Xylene	1.2	7.5	5.2	32
Styrene	1.2	Not Detected	5.2	Not Detected
Bromoform	1.2	Not Detected	12	Not Detected
Cumene	1.2	Not Detected	5.9	Not Detected
1,1,2,2-Tetrachloroethane	1.2	Not Detected	8.3	Not Detected
Propylbenzene	1.2	Not Detected	5.9	Not Detected
4-Ethyltoluene	1.2	4.0	5.9	20
1,3,5-Trimethylbenzene	1.2	1.3	5.9	6.2
1,2,4-Trimethylbenzene	1.2	3.9	5.9	19
1,3-Dichlorobenzene	1.2	Not Detected	7.3	Not Detected
1,4-Dichlorobenzene	1.2	Not Detected	7.3	Not Detected
alpha-Chlorotoluene	1.2	Not Detected	6.3	Not Detected
1,2-Dichlorobenzene	1.2	Not Detected	7.3	Not Detected
1,2,4-Trichlorobenzene	4.8	Not Detected	36	Not Detected
Hexachlorobutadiene	4.8	Not Detected	52	Not Detected
1,1-Difluoroethane	4.8	Not Detected	13	Not Detected

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	100	70-130
1,2-Dichloroethane-d4	108	70-130
4-Bromofluorobenzene	83	70-130

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Client Sample ID: SG2

Lab ID#: 1210556-02A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**j102619**	**Date of Collection:**	**10/22/12 1:52:00 PM**
Dil. Factor:	**2.13**	**Date of Analysis:**	**10/26/12 06:38 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	1.1	Not Detected	5.3	Not Detected
Freon 114	1.1	Not Detected	7.4	Not Detected
Chloromethane	11	Not Detected	22	Not Detected
Vinyl Chloride	1.1	Not Detected	2.7	Not Detected
1,3-Butadiene	1.1	Not Detected	2.4	Not Detected
Bromomethane	11	Not Detected	41	Not Detected
Chloroethane	4.3	Not Detected	11	Not Detected
Freon 11	1.1	Not Detected	6.0	Not Detected
Ethanol	4.3	7.2	8.0	14
Freon 113	1.1	Not Detected	8.2	Not Detected
1,1-Dichloroethene	1.1	Not Detected	4.2	Not Detected
Acetone	11	19	25	46
2-Propanol	4.3	Not Detected	10	Not Detected
Carbon Disulfide	4.3	4.5	13	14
3-Chloropropene	4.3	Not Detected	13	Not Detected
Methylene Chloride	11	Not Detected	37	Not Detected
Methyl tert-butyl ether	1.1	Not Detected	3.8	Not Detected
trans-1,2-Dichloroethene	1.1	Not Detected	4.2	Not Detected
Hexane	1.1	3.3	3.8	12
1,1-Dichloroethane	1.1	Not Detected	4.3	Not Detected
2-Butanone (Methyl Ethyl Ketone)	4.3	4.6	12	14
cis-1,2-Dichloroethene	1.1	Not Detected	4.2	Not Detected
Tetrahydrofuran	1.1	Not Detected	3.1	Not Detected
Chloroform	1.1	Not Detected	5.2	Not Detected
1,1,1-Trichloroethane	1.1	Not Detected	5.8	Not Detected
Cyclohexane	1.1	1.4	3.7	5.0
Carbon Tetrachloride	1.1	Not Detected	6.7	Not Detected
2,2,4-Trimethylpentane	1.1	1.6	5.0	7.4
Benzene	1.1	5.5	3.4	18
1,2-Dichloroethane	1.1	Not Detected	4.3	Not Detected
Heptane	1.1	4.8	4.4	20
Trichloroethene	1.1	Not Detected	5.7	Not Detected
1,2-Dichloropropane	1.1	Not Detected	4.9	Not Detected
1,4-Dioxane	4.3	Not Detected	15	Not Detected
Bromodichloromethane	1.1	Not Detected	7.1	Not Detected
cis-1,3-Dichloropropene	1.1	Not Detected	4.8	Not Detected
4-Methyl-2-pentanone	1.1	2.7	4.4	11
Toluene	1.1	22	4.0	85
trans-1,3-Dichloropropene	1.1	Not Detected	4.8	Not Detected
1,1,2-Trichloroethane	1.1	Not Detected	5.8	Not Detected
Tetrachloroethene	1.1	22	7.2	150
2-Hexanone	4.3	Not Detected	17	Not Detected

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Client Sample ID: SG2

Lab ID#: 1210556-02A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**j102619**	**Date of Collection:**	**10/22/12 1:52:00 PM**
Dil. Factor:	**2.13**	**Date of Analysis:**	**10/26/12 06:38 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	1.1	Not Detected	9.1	Not Detected
1,2-Dibromoethane (EDB)	1.1	Not Detected	8.2	Not Detected
Chlorobenzene	1.1	Not Detected	4.9	Not Detected
Ethyl Benzene	1.1	3.4	4.6	15
m,p-Xylene	1.1	14	4.6	60
o-Xylene	1.1	4.5	4.6	20
Styrene	1.1	Not Detected	4.5	Not Detected
Bromoform	1.1	Not Detected	11	Not Detected
Cumene	1.1	Not Detected	5.2	Not Detected
1,1,2,2-Tetrachloroethane	1.1	Not Detected	7.3	Not Detected
Propylbenzene	1.1	Not Detected	5.2	Not Detected
4-Ethyltoluene	1.1	3.0	5.2	15
1,3,5-Trimethylbenzene	1.1	Not Detected	5.2	Not Detected
1,2,4-Trimethylbenzene	1.1	2.9	5.2	14
1,3-Dichlorobenzene	1.1	Not Detected	6.4	Not Detected
1,4-Dichlorobenzene	1.1	Not Detected	6.4	Not Detected
alpha-Chlorotoluene	1.1	Not Detected	5.5	Not Detected
1,2-Dichlorobenzene	1.1	Not Detected	6.4	Not Detected
1,2,4-Trichlorobenzene	4.3	Not Detected	32	Not Detected
Hexachlorobutadiene	4.3	Not Detected	45	Not Detected
1,1-Difluoroethane	4.3	Not Detected	12	Not Detected

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	98	70-130
1,2-Dichloroethane-d4	109	70-130
4-Bromofluorobenzene	81	70-130

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Client Sample ID: SG3

Lab ID#: 1210556-03A

EPA METHOD TO-15 GC/MS

File Name:	**14102621**	**Date of Collection:**	**10/22/12 2:39:00 PM**
Dil. Factor:	**8.23**	**Date of Analysis:**	**10/26/12 04:34 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	41	Not Detected	200	Not Detected
Freon 114	41	Not Detected	290	Not Detected
Chloromethane	160	Not Detected	340	Not Detected
Vinyl Chloride	41	Not Detected	100	Not Detected
1,3-Butadiene	41	Not Detected	91	Not Detected
Bromomethane	41	Not Detected	160	Not Detected
Chloroethane	160	Not Detected	430	Not Detected
Freon 11	41	Not Detected	230	Not Detected
Ethanol	160	Not Detected	310	Not Detected
Freon 113	41	Not Detected	320	Not Detected
1,1-Dichloroethene	41	Not Detected	160	Not Detected
Acetone	160	Not Detected	390	Not Detected
2-Propanol	160	Not Detected	400	Not Detected
Carbon Disulfide	41	Not Detected	130	Not Detected
3-Chloropropene	160	Not Detected	520	Not Detected
Methylene Chloride	41	Not Detected	140	Not Detected
Methyl tert-butyl ether	41	Not Detected	150	Not Detected
trans-1,2-Dichloroethene	41	Not Detected	160	Not Detected
Hexane	41	Not Detected	140	Not Detected
1,1-Dichloroethane	41	Not Detected	170	Not Detected
2-Butanone (Methyl Ethyl Ketone)	160	Not Detected	480	Not Detected
cis-1,2-Dichloroethene	41	Not Detected	160	Not Detected
Tetrahydrofuran	41	Not Detected	120	Not Detected
Chloroform	41	Not Detected	200	Not Detected
1,1,1-Trichloroethane	41	Not Detected	220	Not Detected
Cyclohexane	41	Not Detected	140	Not Detected
Carbon Tetrachloride	41	Not Detected	260	Not Detected
2,2,4-Trimethylpentane	41	Not Detected	190	Not Detected
Benzene	41	Not Detected	130	Not Detected
1,2-Dichloroethane	41	Not Detected	170	Not Detected
Heptane	41	Not Detected	170	Not Detected
Trichloroethene	41	Not Detected	220	Not Detected
1,2-Dichloropropane	41	Not Detected	190	Not Detected
1,4-Dioxane	160	Not Detected	590	Not Detected
Bromodichloromethane	41	Not Detected	280	Not Detected
cis-1,3-Dichloropropene	41	Not Detected	190	Not Detected
4-Methyl-2-pentanone	41	Not Detected	170	Not Detected
Toluene	41	Not Detected	160	Not Detected
trans-1,3-Dichloropropene	41	Not Detected	190	Not Detected
1,1,2-Trichloroethane	41	Not Detected	220	Not Detected
Tetrachloroethene	41	6700	280	46000
2-Hexanone	160	Not Detected	670	Not Detected

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Client Sample ID: SG3

Lab ID#: 1210556-03A

EPA METHOD TO-15 GC/MS

File Name:	**14102621**	**Date of Collection: 10/22/12 2:39:00 PM**	
Dil. Factor:	**8.23**	**Date of Analysis: 10/26/12 04:34 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	41	Not Detected	350	Not Detected
1,2-Dibromoethane (EDB)	41	Not Detected	320	Not Detected
Chlorobenzene	41	Not Detected	190	Not Detected
Ethyl Benzene	41	Not Detected	180	Not Detected
m,p-Xylene	41	Not Detected	180	Not Detected
o-Xylene	41	Not Detected	180	Not Detected
Styrene	41	Not Detected	180	Not Detected
Bromoform	41	Not Detected	420	Not Detected
Cumene	41	Not Detected	200	Not Detected
1,1,2,2-Tetrachloroethane	41	Not Detected	280	Not Detected
Propylbenzene	41	Not Detected	200	Not Detected
4-Ethyltoluene	41	Not Detected	200	Not Detected
1,3,5-Trimethylbenzene	41	Not Detected	200	Not Detected
1,2,4-Trimethylbenzene	41	Not Detected	200	Not Detected
1,3-Dichlorobenzene	41	Not Detected	250	Not Detected
1,4-Dichlorobenzene	41	Not Detected	250	Not Detected
alpha-Chlorotoluene	41	Not Detected	210	Not Detected
1,2-Dichlorobenzene	41	Not Detected	250	Not Detected
1,2,4-Trichlorobenzene	160	Not Detected	1200	Not Detected
Hexachlorobutadiene	160	Not Detected	1800	Not Detected
1,1-Difluoroethane	160	Not Detected	440	Not Detected

Container Type: 1 Liter Summa Canister

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

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Client Sample ID: SG3-DUP

Lab ID#: 1210556-04A

EPA METHOD TO-15 GC/MS

File Name:	**14102622**	**Date of Collection:**	**10/22/12 2:39:00 PM**
Dil. Factor:	**10.1**	**Date of Analysis:**	**10/26/12 05:48 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	50	Not Detected	250	Not Detected
Freon 114	50	Not Detected	350	Not Detected
Chloromethane	200	Not Detected	420	Not Detected
Vinyl Chloride	50	Not Detected	130	Not Detected
1,3-Butadiene	50	Not Detected	110	Not Detected
Bromomethane	50	Not Detected	200	Not Detected
Chloroethane	200	Not Detected	530	Not Detected
Freon 11	50	Not Detected	280	Not Detected
Ethanol	200	Not Detected	380	Not Detected
Freon 113	50	Not Detected	390	Not Detected
1,1-Dichloroethene	50	Not Detected	200	Not Detected
Acetone	200	Not Detected	480	Not Detected
2-Propanol	200	Not Detected	500	Not Detected
Carbon Disulfide	50	Not Detected	160	Not Detected
3-Chloropropene	200	Not Detected	630	Not Detected
Methylene Chloride	50	Not Detected	180	Not Detected
Methyl tert-butyl ether	50	Not Detected	180	Not Detected
trans-1,2-Dichloroethene	50	Not Detected	200	Not Detected
Hexane	50	Not Detected	180	Not Detected
1,1-Dichloroethane	50	Not Detected	200	Not Detected
2-Butanone (Methyl Ethyl Ketone)	200	Not Detected	600	Not Detected
cis-1,2-Dichloroethene	50	Not Detected	200	Not Detected
Tetrahydrofuran	50	Not Detected	150	Not Detected
Chloroform	50	Not Detected	250	Not Detected
1,1,1-Trichloroethane	50	Not Detected	280	Not Detected
Cyclohexane	50	Not Detected	170	Not Detected
Carbon Tetrachloride	50	Not Detected	320	Not Detected
2,2,4-Trimethylpentane	50	Not Detected	240	Not Detected
Benzene	50	Not Detected	160	Not Detected
1,2-Dichloroethane	50	Not Detected	200	Not Detected
Heptane	50	Not Detected	210	Not Detected
Trichloroethene	50	Not Detected	270	Not Detected
1,2-Dichloropropane	50	Not Detected	230	Not Detected
1,4-Dioxane	200	Not Detected	730	Not Detected
Bromodichloromethane	50	Not Detected	340	Not Detected
cis-1,3-Dichloropropene	50	Not Detected	230	Not Detected
4-Methyl-2-pentanone	50	Not Detected	210	Not Detected
Toluene	50	Not Detected	190	Not Detected
trans-1,3-Dichloropropene	50	Not Detected	230	Not Detected
1,1,2-Trichloroethane	50	Not Detected	280	Not Detected
Tetrachloroethene	50	8000	340	54000
2-Hexanone	200	Not Detected	830	Not Detected

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Client Sample ID: SG3-DUP

Lab ID#: 1210556-04A

EPA METHOD TO-15 GC/MS

File Name:	**14102622**	**Date of Collection:**	**10/22/12 2:39:00 PM**
Dil. Factor:	**10.1**	**Date of Analysis:**	**10/26/12 05:48 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	50	Not Detected	430	Not Detected
1,2-Dibromoethane (EDB)	50	Not Detected	390	Not Detected
Chlorobenzene	50	Not Detected	230	Not Detected
Ethyl Benzene	50	Not Detected	220	Not Detected
m,p-Xylene	50	Not Detected	220	Not Detected
o-Xylene	50	Not Detected	220	Not Detected
Styrene	50	Not Detected	220	Not Detected
Bromoform	50	Not Detected	520	Not Detected
Cumene	50	Not Detected	250	Not Detected
1,1,2,2-Tetrachloroethane	50	Not Detected	350	Not Detected
Propylbenzene	50	Not Detected	250	Not Detected
4-Ethyltoluene	50	Not Detected	250	Not Detected
1,3,5-Trimethylbenzene	50	Not Detected	250	Not Detected
1,2,4-Trimethylbenzene	50	Not Detected	250	Not Detected
1,3-Dichlorobenzene	50	Not Detected	300	Not Detected
1,4-Dichlorobenzene	50	Not Detected	300	Not Detected
alpha-Chlorotoluene	50	Not Detected	260	Not Detected
1,2-Dichlorobenzene	50	Not Detected	300	Not Detected
1,2,4-Trichlorobenzene	200	Not Detected	1500	Not Detected
Hexachlorobutadiene	200	Not Detected	2200	Not Detected
1,1-Difluoroethane	200	240	540	660

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	106	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	100	70-130

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Client Sample ID: SG4

Lab ID#: 1210556-05A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**j102621**	**Date of Collection:**	**10/22/12 11:14:00 A**
Dil. Factor:	**3.97**	**Date of Analysis:**	**10/26/12 07:22 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	2.0	Not Detected	9.8	Not Detected
Freon 114	2.0	Not Detected	14	Not Detected
Chloromethane	20	Not Detected	41	Not Detected
Vinyl Chloride	2.0	Not Detected	5.1	Not Detected
1,3-Butadiene	2.0	Not Detected	4.4	Not Detected
Bromomethane	20	Not Detected	77	Not Detected
Chloroethane	7.9	Not Detected	21	Not Detected
Freon 11	2.0	Not Detected	11	Not Detected
Ethanol	7.9	Not Detected	15	Not Detected
Freon 113	2.0	Not Detected	15	Not Detected
1,1-Dichloroethene	2.0	Not Detected	7.9	Not Detected
Acetone	20	Not Detected	47	Not Detected
2-Propanol	7.9	Not Detected	20	Not Detected
Carbon Disulfide	7.9	Not Detected	25	Not Detected
3-Chloropropene	7.9	Not Detected	25	Not Detected
Methylene Chloride	20	Not Detected	69	Not Detected
Methyl tert-butyl ether	2.0	Not Detected	7.2	Not Detected
trans-1,2-Dichloroethene	2.0	Not Detected	7.9	Not Detected
Hexane	2.0	Not Detected	7.0	Not Detected
1,1-Dichloroethane	2.0	Not Detected	8.0	Not Detected
2-Butanone (Methyl Ethyl Ketone)	7.9	Not Detected	23	Not Detected
cis-1,2-Dichloroethene	2.0	Not Detected	7.9	Not Detected
Tetrahydrofuran	2.0	Not Detected	5.8	Not Detected
Chloroform	2.0	Not Detected	9.7	Not Detected
1,1,1-Trichloroethane	2.0	Not Detected	11	Not Detected
Cyclohexane	2.0	Not Detected	6.8	Not Detected
Carbon Tetrachloride	2.0	Not Detected	12	Not Detected
2,2,4-Trimethylpentane	2.0	Not Detected	9.3	Not Detected
Benzene	2.0	Not Detected	6.3	Not Detected
1,2-Dichloroethane	2.0	Not Detected	8.0	Not Detected
Heptane	2.0	Not Detected	8.1	Not Detected
Trichloroethene	2.0	Not Detected	11	Not Detected
1,2-Dichloropropane	2.0	Not Detected	9.2	Not Detected
1,4-Dioxane	7.9	Not Detected	29	Not Detected
Bromodichloromethane	2.0	Not Detected	13	Not Detected
cis-1,3-Dichloropropene	2.0	Not Detected	9.0	Not Detected
4-Methyl-2-pentanone	2.0	2.2	8.1	9.1
Toluene	2.0	9.1	7.5	34
trans-1,3-Dichloropropene	2.0	Not Detected	9.0	Not Detected
1,1,2-Trichloroethane	2.0	Not Detected	11	Not Detected
Tetrachloroethene	2.0	480	13	3200
2-Hexanone	7.9	Not Detected	32	Not Detected

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Client Sample ID: SG4

Lab ID#: 1210556-05A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**j102621**	**Date of Collection:**	**10/22/12 11:14:00 A**
Dil. Factor:	**3.97**	**Date of Analysis:**	**10/26/12 07:22 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	2.0	Not Detected	17	Not Detected
1,2-Dibromoethane (EDB)	2.0	Not Detected	15	Not Detected
Chlorobenzene	2.0	Not Detected	9.1	Not Detected
Ethyl Benzene	2.0	2.5	8.6	11
m,p-Xylene	2.0	10	8.6	45
o-Xylene	2.0	3.2	8.6	14
Styrene	2.0	Not Detected	8.4	Not Detected
Bromoform	2.0	Not Detected	20	Not Detected
Cumene	2.0	Not Detected	9.8	Not Detected
1,1,2,2-Tetrachloroethane	2.0	Not Detected	14	Not Detected
Propylbenzene	2.0	Not Detected	9.8	Not Detected
4-Ethyltoluene	2.0	3.4	9.8	17
1,3,5-Trimethylbenzene	2.0	Not Detected	9.8	Not Detected
1,2,4-Trimethylbenzene	2.0	3.1	9.8	15
1,3-Dichlorobenzene	2.0	Not Detected	12	Not Detected
1,4-Dichlorobenzene	2.0	Not Detected	12	Not Detected
alpha-Chlorotoluene	2.0	Not Detected	10	Not Detected
1,2-Dichlorobenzene	2.0	Not Detected	12	Not Detected
1,2,4-Trichlorobenzene	7.9	Not Detected	59	Not Detected
Hexachlorobutadiene	7.9	Not Detected	85	Not Detected
1,1-Difluoroethane	7.9	Not Detected	21	Not Detected

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	99	70-130
1,2-Dichloroethane-d4	108	70-130
4-Bromofluorobenzene	80	70-130

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Client Sample ID: SG5

Lab ID#: 1210556-06A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**j102620**	**Date of Collection: 10/22/12 1:24:00 PM**	
Dil. Factor:	**2.42**	**Date of Analysis: 10/26/12 07:01 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	1.2	Not Detected	6.0	Not Detected
Freon 114	1.2	Not Detected	8.4	Not Detected
Chloromethane	12	Not Detected	25	Not Detected
Vinyl Chloride	1.2	Not Detected	3.1	Not Detected
1,3-Butadiene	1.2	Not Detected	2.7	Not Detected
Bromomethane	12	Not Detected	47	Not Detected
Chloroethane	4.8	Not Detected	13	Not Detected
Freon 11	1.2	Not Detected	6.8	Not Detected
Ethanol	4.8	Not Detected	9.1	Not Detected
Freon 113	1.2	Not Detected	9.3	Not Detected
1,1-Dichloroethene	1.2	Not Detected	4.8	Not Detected
Acetone	12	29	29	69
2-Propanol	4.8	Not Detected	12	Not Detected
Carbon Disulfide	4.8	Not Detected	15	Not Detected
3-Chloropropene	4.8	Not Detected	15	Not Detected
Methylene Chloride	12	Not Detected	42	Not Detected
Methyl tert-butyl ether	1.2	Not Detected	4.4	Not Detected
trans-1,2-Dichloroethene	1.2	Not Detected	4.8	Not Detected
Hexane	1.2	1.5	4.3	5.2
1,1-Dichloroethane	1.2	Not Detected	4.9	Not Detected
2-Butanone (Methyl Ethyl Ketone)	4.8	7.2	14	21
cis-1,2-Dichloroethene	1.2	Not Detected	4.8	Not Detected
Tetrahydrofuran	1.2	Not Detected	3.6	Not Detected
Chloroform	1.2	Not Detected	5.9	Not Detected
1,1,1-Trichloroethane	1.2	Not Detected	6.6	Not Detected
Cyclohexane	1.2	Not Detected	4.2	Not Detected
Carbon Tetrachloride	1.2	Not Detected	7.6	Not Detected
2,2,4-Trimethylpentane	1.2	Not Detected	5.6	Not Detected
Benzene	1.2	1.7	3.9	5.3
1,2-Dichloroethane	1.2	Not Detected	4.9	Not Detected
Heptane	1.2	1.5	5.0	6.1
Trichloroethene	1.2	Not Detected	6.5	Not Detected
1,2-Dichloropropane	1.2	Not Detected	5.6	Not Detected
1,4-Dioxane	4.8	Not Detected	17	Not Detected
Bromodichloromethane	1.2	Not Detected	8.1	Not Detected
cis-1,3-Dichloropropene	1.2	Not Detected	5.5	Not Detected
4-Methyl-2-pentanone	1.2	2.2	5.0	9.2
Toluene	1.2	12	4.6	47
trans-1,3-Dichloropropene	1.2	Not Detected	5.5	Not Detected
1,1,2-Trichloroethane	1.2	Not Detected	6.6	Not Detected
Tetrachloroethene	1.2	22	8.2	150
2-Hexanone	4.8	Not Detected	20	Not Detected

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Client Sample ID: SG5

Lab ID#: 1210556-06A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**j102620**	**Date of Collection: 10/22/12 1:24:00 PM**	
Dil. Factor:	**2.42**	**Date of Analysis: 10/26/12 07:01 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	1.2	Not Detected	10	Not Detected
1,2-Dibromoethane (EDB)	1.2	Not Detected	9.3	Not Detected
Chlorobenzene	1.2	Not Detected	5.6	Not Detected
Ethyl Benzene	1.2	3.9	5.2	17
m,p-Xylene	1.2	18	5.2	78
o-Xylene	1.2	6.0	5.2	26
Styrene	1.2	Not Detected	5.2	Not Detected
Bromoform	1.2	Not Detected	12	Not Detected
Cumene	1.2	Not Detected	5.9	Not Detected
1,1,2,2-Tetrachloroethane	1.2	Not Detected	8.3	Not Detected
Propylbenzene	1.2	1.2	5.9	6.0
4-Ethyltoluene	1.2	Not Detected	5.9	Not Detected
1,3,5-Trimethylbenzene	1.2	Not Detected	5.9	Not Detected
1,2,4-Trimethylbenzene	1.2	5.7	5.9	28
1,3-Dichlorobenzene	1.2	Not Detected	7.3	Not Detected
1,4-Dichlorobenzene	1.2	Not Detected	7.3	Not Detected
alpha-Chlorotoluene	1.2	Not Detected	6.3	Not Detected
1,2-Dichlorobenzene	1.2	Not Detected	7.3	Not Detected
1,2,4-Trichlorobenzene	4.8	Not Detected	36	Not Detected
Hexachlorobutadiene	4.8	Not Detected	52	Not Detected
1,1-Difluoroethane	4.8	Not Detected	13	Not Detected

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	97	70-130
1,2-Dichloroethane-d4	107	70-130
4-Bromofluorobenzene	81	70-130

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Client Sample ID: Lab Blank

Lab ID#: 1210556-07A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**j102608a**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 10/26/12 11:36 AM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.50	Not Detected	2.5	Not Detected
Freon 114	0.50	Not Detected	3.5	Not Detected
Chloromethane	5.0	Not Detected	10	Not Detected
Vinyl Chloride	0.50	Not Detected	1.3	Not Detected
1,3-Butadiene	0.50	Not Detected	1.1	Not Detected
Bromomethane	5.0	Not Detected	19	Not Detected
Chloroethane	2.0	Not Detected	5.3	Not Detected
Freon 11	0.50	Not Detected	2.8	Not Detected
Ethanol	2.0	Not Detected	3.8	Not Detected
Freon 113	0.50	Not Detected	3.8	Not Detected
1,1-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Acetone	5.0	Not Detected	12	Not Detected
2-Propanol	2.0	Not Detected	4.9	Not Detected
Carbon Disulfide	2.0	Not Detected	6.2	Not Detected
3-Chloropropene	2.0	Not Detected	6.3	Not Detected
Methylene Chloride	5.0	Not Detected	17	Not Detected
Methyl tert-butyl ether	0.50	Not Detected	1.8	Not Detected
trans-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Hexane	0.50	Not Detected	1.8	Not Detected
1,1-Dichloroethane	0.50	Not Detected	2.0	Not Detected
2-Butanone (Methyl Ethyl Ketone)	2.0	Not Detected	5.9	Not Detected
cis-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Tetrahydrofuran	0.50	Not Detected	1.5	Not Detected
Chloroform	0.50	Not Detected	2.4	Not Detected
1,1,1-Trichloroethane	0.50	Not Detected	2.7	Not Detected
Cyclohexane	0.50	Not Detected	1.7	Not Detected
Carbon Tetrachloride	0.50	Not Detected	3.1	Not Detected
2,2,4-Trimethylpentane	0.50	Not Detected	2.3	Not Detected
Benzene	0.50	Not Detected	1.6	Not Detected
1,2-Dichloroethane	0.50	Not Detected	2.0	Not Detected
Heptane	0.50	Not Detected	2.0	Not Detected
Trichloroethene	0.50	Not Detected	2.7	Not Detected
1,2-Dichloropropane	0.50	Not Detected	2.3	Not Detected
1,4-Dioxane	2.0	Not Detected	7.2	Not Detected
Bromodichloromethane	0.50	Not Detected	3.4	Not Detected
cis-1,3-Dichloropropene	0.50	Not Detected	2.3	Not Detected
4-Methyl-2-pentanone	0.50	Not Detected	2.0	Not Detected
Toluene	0.50	Not Detected	1.9	Not Detected
trans-1,3-Dichloropropene	0.50	Not Detected	2.3	Not Detected
1,1,2-Trichloroethane	0.50	Not Detected	2.7	Not Detected
Tetrachloroethene	0.50	Not Detected	3.4	Not Detected
2-Hexanone	2.0	Not Detected	8.2	Not Detected

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Client Sample ID: Lab Blank

Lab ID#: 1210556-07A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**j102608a**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 10/26/12 11:36 AM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	0.50	Not Detected	4.2	Not Detected
1,2-Dibromoethane (EDB)	0.50	Not Detected	3.8	Not Detected
Chlorobenzene	0.50	Not Detected	2.3	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
Styrene	0.50	Not Detected	2.1	Not Detected
Bromoform	0.50	Not Detected	5.2	Not Detected
Cumene	0.50	Not Detected	2.4	Not Detected
1,1,2,2-Tetrachloroethane	0.50	Not Detected	3.4	Not Detected
Propylbenzene	0.50	Not Detected	2.4	Not Detected
4-Ethyltoluene	0.50	Not Detected	2.4	Not Detected
1,3,5-Trimethylbenzene	0.50	Not Detected	2.4	Not Detected
1,2,4-Trimethylbenzene	0.50	Not Detected	2.4	Not Detected
1,3-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
1,4-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
alpha-Chlorotoluene	0.50	Not Detected	2.6	Not Detected
1,2-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
1,2,4-Trichlorobenzene	2.0	Not Detected	15	Not Detected
Hexachlorobutadiene	2.0	Not Detected	21	Not Detected
1,1-Difluoroethane	2.0	Not Detected	5.4	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	100	70-130
1,2-Dichloroethane-d4	114	70-130
4-Bromofluorobenzene	81	70-130

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Client Sample ID: Lab Blank

Lab ID#: 1210556-07B

EPA METHOD TO-15 GC/MS

File Name:	**14102606d**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 10/26/12 09:57 AM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	5.0	Not Detected	25	Not Detected
Freon 114	5.0	Not Detected	35	Not Detected
Chloromethane	20	Not Detected	41	Not Detected
Vinyl Chloride	5.0	Not Detected	13	Not Detected
1,3-Butadiene	5.0	Not Detected	11	Not Detected
Bromomethane	5.0	Not Detected	19	Not Detected
Chloroethane	20	Not Detected	53	Not Detected
Freon 11	5.0	Not Detected	28	Not Detected
Ethanol	20	Not Detected	38	Not Detected
Freon 113	5.0	Not Detected	38	Not Detected
1,1-Dichloroethene	5.0	Not Detected	20	Not Detected
Acetone	20	Not Detected	48	Not Detected
2-Propanol	20	Not Detected	49	Not Detected
Carbon Disulfide	5.0	Not Detected	16	Not Detected
3-Chloropropene	20	Not Detected	63	Not Detected
Methylene Chloride	5.0	Not Detected	17	Not Detected
Methyl tert-butyl ether	5.0	Not Detected	18	Not Detected
trans-1,2-Dichloroethene	5.0	Not Detected	20	Not Detected
Hexane	5.0	Not Detected	18	Not Detected
1,1-Dichloroethane	5.0	Not Detected	20	Not Detected
2-Butanone (Methyl Ethyl Ketone)	20	Not Detected	59	Not Detected
cis-1,2-Dichloroethene	5.0	Not Detected	20	Not Detected
Tetrahydrofuran	5.0	Not Detected	15	Not Detected
Chloroform	5.0	Not Detected	24	Not Detected
1,1,1-Trichloroethane	5.0	Not Detected	27	Not Detected
Cyclohexane	5.0	Not Detected	17	Not Detected
Carbon Tetrachloride	5.0	Not Detected	31	Not Detected
2,2,4-Trimethylpentane	5.0	Not Detected	23	Not Detected
Benzene	5.0	Not Detected	16	Not Detected
1,2-Dichloroethane	5.0	Not Detected	20	Not Detected
Heptane	5.0	Not Detected	20	Not Detected
Trichloroethene	5.0	Not Detected	27	Not Detected
1,2-Dichloropropane	5.0	Not Detected	23	Not Detected
1,4-Dioxane	20	Not Detected	72	Not Detected
Bromodichloromethane	5.0	Not Detected	34	Not Detected
cis-1,3-Dichloropropene	5.0	Not Detected	23	Not Detected
4-Methyl-2-pentanone	5.0	Not Detected	20	Not Detected
Toluene	5.0	Not Detected	19	Not Detected
trans-1,3-Dichloropropene	5.0	Not Detected	23	Not Detected
1,1,2-Trichloroethane	5.0	Not Detected	27	Not Detected
Tetrachloroethene	5.0	Not Detected	34	Not Detected
2-Hexanone	20	Not Detected	82	Not Detected

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Client Sample ID: Lab Blank

Lab ID#: 1210556-07B

EPA METHOD TO-15 GC/MS

File Name:	**14102606d**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 10/26/12 09:57 AM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	5.0	Not Detected	42	Not Detected
1,2-Dibromoethane (EDB)	5.0	Not Detected	38	Not Detected
Chlorobenzene	5.0	Not Detected	23	Not Detected
Ethyl Benzene	5.0	Not Detected	22	Not Detected
m,p-Xylene	5.0	Not Detected	22	Not Detected
o-Xylene	5.0	Not Detected	22	Not Detected
Styrene	5.0	Not Detected	21	Not Detected
Bromoform	5.0	Not Detected	52	Not Detected
Cumene	5.0	Not Detected	24	Not Detected
1,1,2,2-Tetrachloroethane	5.0	Not Detected	34	Not Detected
Propylbenzene	5.0	Not Detected	24	Not Detected
4-Ethyltoluene	5.0	Not Detected	24	Not Detected
1,3,5-Trimethylbenzene	5.0	Not Detected	24	Not Detected
1,2,4-Trimethylbenzene	5.0	Not Detected	24	Not Detected
1,3-Dichlorobenzene	5.0	Not Detected	30	Not Detected
1,4-Dichlorobenzene	5.0	Not Detected	30	Not Detected
alpha-Chlorotoluene	5.0	Not Detected	26	Not Detected
1,2-Dichlorobenzene	5.0	Not Detected	30	Not Detected
1,2,4-Trichlorobenzene	20	Not Detected	150	Not Detected
Hexachlorobutadiene	20	Not Detected	210	Not Detected
1,1-Difluoroethane	20	Not Detected	54	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	103	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	99	70-130

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Client Sample ID: CCV

Lab ID#: 1210556-08A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**j102602**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 10/26/12 08:45 AM**	

Compound	%Recovery
Freon 12	113
Freon 114	94
Chloromethane	115
Vinyl Chloride	90
1,3-Butadiene	80
Bromomethane	90
Chloroethane	92
Freon 11	112
Ethanol	86
Freon 113	90
1,1-Dichloroethene	86
Acetone	88
2-Propanol	91
Carbon Disulfide	90
3-Chloropropene	91
Methylene Chloride	100
Methyl tert-butyl ether	97
trans-1,2-Dichloroethene	90
Hexane	85
1,1-Dichloroethane	102
2-Butanone (Methyl Ethyl Ketone)	93
cis-1,2-Dichloroethene	91
Tetrahydrofuran	94
Chloroform	109
1,1,1-Trichloroethane	108
Cyclohexane	93
Carbon Tetrachloride	114
2,2,4-Trimethylpentane	86
Benzene	113
1,2-Dichloroethane	138 Q
Heptane	114
Trichloroethene	120
1,2-Dichloropropane	111
1,4-Dioxane	103
Bromodichloromethane	129
cis-1,3-Dichloropropene	115
4-Methyl-2-pentanone	92
Toluene	109
trans-1,3-Dichloropropene	126
1,1,2-Trichloroethane	125
Tetrachloroethene	112
2-Hexanone	104

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Client Sample ID: CCV

Lab ID#: 1210556-08A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**j102602**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 10/26/12 08:45 AM**	

Compound	%Recovery
Dibromochloromethane	128
1,2-Dibromoethane (EDB)	120
Chlorobenzene	103
Ethyl Benzene	111
m,p-Xylene	111
o-Xylene	112
Styrene	104
Bromoform	117
Cumene	117
1,1,2,2-Tetrachloroethane	128
Propylbenzene	127
4-Ethyltoluene	115
1,3,5-Trimethylbenzene	112
1,2,4-Trimethylbenzene	105
1,3-Dichlorobenzene	107
1,4-Dichlorobenzene	109
alpha-Chlorotoluene	112
1,2-Dichlorobenzene	108
1,2,4-Trichlorobenzene	92
Hexachlorobutadiene	101
1,1-Difluoroethane	114

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	108	70-130
1,2-Dichloroethane-d4	119	70-130
4-Bromofluorobenzene	82	70-130

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Client Sample ID: CCV

Lab ID#: 1210556-08B

EPA METHOD TO-15 GC/MS

File Name:	**14102602**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 10/26/12 08:27 AM**	

Compound	%Recovery
Freon 12	106
Freon 114	100
Chloromethane	98
Vinyl Chloride	90
1,3-Butadiene	84
Bromomethane	82
Chloroethane	95
Freon 11	103
Ethanol	93
Freon 113	95
1,1-Dichloroethene	98
Acetone	95
2-Propanol	87
Carbon Disulfide	93
3-Chloropropene	88
Methylene Chloride	101
Methyl tert-butyl ether	88
trans-1,2-Dichloroethene	97
Hexane	92
1,1-Dichloroethane	98
2-Butanone (Methyl Ethyl Ketone)	90
cis-1,2-Dichloroethene	99
Tetrahydrofuran	92
Chloroform	97
1,1,1-Trichloroethane	93
Cyclohexane	92
Carbon Tetrachloride	100
2,2,4-Trimethylpentane	96
Benzene	95
1,2-Dichloroethane	99
Heptane	92
Trichloroethene	94
1,2-Dichloropropane	95
1,4-Dioxane	93
Bromodichloromethane	99
cis-1,3-Dichloropropene	90
4-Methyl-2-pentanone	87
Toluene	93
trans-1,3-Dichloropropene	89
1,1,2-Trichloroethane	96
Tetrachloroethene	95
2-Hexanone	86

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Client Sample ID: CCV

Lab ID#: 1210556-08B

EPA METHOD TO-15 GC/MS

File Name:	**14102602**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 10/26/12 08:27 AM**	

Compound	%Recovery
Dibromochloromethane	105
1,2-Dibromoethane (EDB)	99
Chlorobenzene	95
Ethyl Benzene	92
m,p-Xylene	92
o-Xylene	89
Styrene	94
Bromoform	108
Cumene	96
1,1,2,2-Tetrachloroethane	99
Propylbenzene	98
4-Ethyltoluene	98
1,3,5-Trimethylbenzene	98
1,2,4-Trimethylbenzene	98
1,3-Dichlorobenzene	99
1,4-Dichlorobenzene	98
alpha-Chlorotoluene	92
1,2-Dichlorobenzene	101
1,2,4-Trichlorobenzene	107
Hexachlorobutadiene	105
1,1-Difluoroethane	95

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	103	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	101	70-130

eurofins | Air Toxics

Client Sample ID: LCS

Lab ID#: 1210556-09A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**j102603**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 10/26/12 09:26 AM**	

Compound	%Recovery
Freon 12	134 Q
Freon 114	113
Chloromethane	127
Vinyl Chloride	107
1,3-Butadiene	95
Bromomethane	101
Chloroethane	104
Freon 11	131 Q
Ethanol	91
Freon 113	105
1,1-Dichloroethene	104
Acetone	106
2-Propanol	98
Carbon Disulfide	128
3-Chloropropene	114
Methylene Chloride	113
Methyl tert-butyl ether	110
trans-1,2-Dichloroethene	114
Hexane	95
1,1-Dichloroethane	115
2-Butanone (Methyl Ethyl Ketone)	102
cis-1,2-Dichloroethene	98
Tetrahydrofuran	100
Chloroform	122
1,1,1-Trichloroethane	123
Cyclohexane	102
Carbon Tetrachloride	130
2,2,4-Trimethylpentane	93
Benzene	114
1,2-Dichloroethane	138 Q
Heptane	110
Trichloroethene	121
1,2-Dichloropropane	109
1,4-Dioxane	98
Bromodichloromethane	130
cis-1,3-Dichloropropene	117
4-Methyl-2-pentanone	91
Toluene	107
trans-1,3-Dichloropropene	129
1,1,2-Trichloroethane	125
Tetrachloroethene	113
2-Hexanone	99

eurofins | Air Toxics

Client Sample ID: LCS

Lab ID#: 1210556-09A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**j102603**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 10/26/12 09:26 AM**	

Compound	%Recovery
Dibromochloromethane	132 Q
1,2-Dibromoethane (EDB)	123
Chlorobenzene	106
Ethyl Benzene	114
m,p-Xylene	114
o-Xylene	114
Styrene	100
Bromoform	118
Cumene	119
1,1,2,2-Tetrachloroethane	132 Q
Propylbenzene	129
4-Ethyltoluene	104
1,3,5-Trimethylbenzene	119
1,2,4-Trimethylbenzene	106
1,3-Dichlorobenzene	113
1,4-Dichlorobenzene	112
alpha-Chlorotoluene	110
1,2-Dichlorobenzene	108
1,2,4-Trichlorobenzene	99
Hexachlorobutadiene	102
1,1-Difluoroethane	Not Spiked

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	101	70-130
1,2-Dichloroethane-d4	123	70-130
4-Bromofluorobenzene	82	70-130

eurofins | Air Toxics

Client Sample ID: LCSD

Lab ID#: 1210556-09AA

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**j102604**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 10/26/12 09:44 AM**	

Compound	%Recovery
Freon 12	121
Freon 114	103
Chloromethane	117
Vinyl Chloride	98
1,3-Butadiene	85
Bromomethane	97
Chloroethane	100
Freon 11	121
Ethanol	84
Freon 113	100
1,1-Dichloroethene	95
Acetone	103
2-Propanol	94
Carbon Disulfide	123
3-Chloropropene	107
Methylene Chloride	108
Methyl tert-butyl ether	104
trans-1,2-Dichloroethene	112
Hexane	91
1,1-Dichloroethane	109
2-Butanone (Methyl Ethyl Ketone)	103
cis-1,2-Dichloroethene	97
Tetrahydrofuran	96
Chloroform	117
1,1,1-Trichloroethane	116
Cyclohexane	101
Carbon Tetrachloride	125
2,2,4-Trimethylpentane	91
Benzene	111
1,2-Dichloroethane	135 Q
Heptane	108
Trichloroethene	115
1,2-Dichloropropane	106
1,4-Dioxane	99
Bromodichloromethane	124
cis-1,3-Dichloropropene	112
4-Methyl-2-pentanone	84
Toluene	105
trans-1,3-Dichloropropene	125
1,1,2-Trichloroethane	122
Tetrachloroethene	112
2-Hexanone	97

eurofins | Air Toxics

Client Sample ID: LCSD

Lab ID#: 1210556-09AA

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**j102604**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 10/26/12 09:44 AM**	

Compound	%Recovery
Dibromochloromethane	125
1,2-Dibromoethane (EDB)	122
Chlorobenzene	103
Ethyl Benzene	113
m,p-Xylene	112
o-Xylene	110
Styrene	98
Bromoform	114
Cumene	116
1,1,2,2-Tetrachloroethane	130
Propylbenzene	126
4-Ethyltoluene	112
1,3,5-Trimethylbenzene	110
1,2,4-Trimethylbenzene	103
1,3-Dichlorobenzene	112
1,4-Dichlorobenzene	111
alpha-Chlorotoluene	107
1,2-Dichlorobenzene	110
1,2,4-Trichlorobenzene	104
Hexachlorobutadiene	105
1,1-Difluoroethane	Not Spiked

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	103	70-130
1,2-Dichloroethane-d4	122	70-130
4-Bromofluorobenzene	85	70-130

eurofins | Air Toxics

Client Sample ID: LCS
Lab ID#: 1210556-09B
EPA METHOD TO-15 GC/MS

File Name:	**14102603**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 10/26/12 08:50 AM**	

Compound	%Recovery
Freon 12	106
Freon 114	98
Chloromethane	100
Vinyl Chloride	89
1,3-Butadiene	81
Bromomethane	104
Chloroethane	104
Freon 11	103
Ethanol	92
Freon 113	96
1,1-Dichloroethene	103
Acetone	93
2-Propanol	85
Carbon Disulfide	116
3-Chloropropene	96
Methylene Chloride	98
Methyl tert-butyl ether	86
trans-1,2-Dichloroethene	106
Hexane	90
1,1-Dichloroethane	96
2-Butanone (Methyl Ethyl Ketone)	86
cis-1,2-Dichloroethene	97
Tetrahydrofuran	87
Chloroform	96
1,1,1-Trichloroethane	94
Cyclohexane	91
Carbon Tetrachloride	100
2,2,4-Trimethylpentane	93
Benzene	95
1,2-Dichloroethane	97
Heptane	89
Trichloroethene	94
1,2-Dichloropropane	94
1,4-Dioxane	87
Bromodichloromethane	98
cis-1,3-Dichloropropene	89
4-Methyl-2-pentanone	83
Toluene	91
trans-1,3-Dichloropropene	88
1,1,2-Trichloroethane	92
Tetrachloroethene	92
2-Hexanone	81

eurofins | Air Toxics

Client Sample ID: LCS

Lab ID#: 1210556-09B

EPA METHOD TO-15 GC/MS

File Name:	**14102603**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 10/26/12 08:50 AM**	

Compound	%Recovery
Dibromochloromethane	101
1,2-Dibromoethane (EDB)	96
Chlorobenzene	95
Ethyl Benzene	89
m,p-Xylene	93
o-Xylene	91
Styrene	93
Bromoform	105
Cumene	96
1,1,2,2-Tetrachloroethane	102
Propylbenzene	98
4-Ethyltoluene	95
1,3,5-Trimethylbenzene	97
1,2,4-Trimethylbenzene	93
1,3-Dichlorobenzene	100
1,4-Dichlorobenzene	103
alpha-Chlorotoluene	90
1,2-Dichlorobenzene	102
1,2,4-Trichlorobenzene	118
Hexachlorobutadiene	116
1,1-Difluoroethane	Not Spiked

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	104	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	101	70-130

eurofins | Air Toxics

Client Sample ID: LCSD

Lab ID#: 1210556-09BB

EPA METHOD TO-15 GC/MS

File Name:	**14102604**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 10/26/12 09:13 AM**	

Compound	%Recovery
Freon 12	102
Freon 114	98
Chloromethane	99
Vinyl Chloride	89
1,3-Butadiene	81
Bromomethane	103
Chloroethane	101
Freon 11	101
Ethanol	89
Freon 113	94
1,1-Dichloroethene	105
Acetone	92
2-Propanol	86
Carbon Disulfide	115
3-Chloropropene	97
Methylene Chloride	97
Methyl tert-butyl ether	84
trans-1,2-Dichloroethene	106
Hexane	89
1,1-Dichloroethane	94
2-Butanone (Methyl Ethyl Ketone)	87
cis-1,2-Dichloroethene	96
Tetrahydrofuran	86
Chloroform	94
1,1,1-Trichloroethane	92
Cyclohexane	90
Carbon Tetrachloride	98
2,2,4-Trimethylpentane	91
Benzene	94
1,2-Dichloroethane	99
Heptane	90
Trichloroethene	93
1,2-Dichloropropane	94
1,4-Dioxane	86
Bromodichloromethane	98
cis-1,3-Dichloropropene	88
4-Methyl-2-pentanone	84
Toluene	92
trans-1,3-Dichloropropene	88
1,1,2-Trichloroethane	93
Tetrachloroethene	94
2-Hexanone	83

eurofins | Air Toxics

Client Sample ID: LCSD
Lab ID#: 1210556-09BB
EPA METHOD TO-15 GC/MS

File Name:	**14102604**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 10/26/12 09:13 AM**	

Compound	%Recovery
Dibromochloromethane	102
1,2-Dibromoethane (EDB)	97
Chlorobenzene	96
Ethyl Benzene	91
m,p-Xylene	92
o-Xylene	91
Styrene	92
Bromoform	106
Cumene	97
1,1,2,2-Tetrachloroethane	101
Propylbenzene	99
4-Ethyltoluene	93
1,3,5-Trimethylbenzene	96
1,2,4-Trimethylbenzene	94
1,3-Dichlorobenzene	101
1,4-Dichlorobenzene	101
alpha-Chlorotoluene	91
1,2-Dichlorobenzene	103
1,2,4-Trichlorobenzene	124
Hexachlorobutadiene	117
1,1-Difluoroethane	Not Spiked

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	102	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	101	70-130

CHAIN OF CUSTODY RECORD

PAGE 1 OF 1

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

PROJECT NUMBER: 0614

PROJECT NAME: 7100-7120 DUBLIN BLVD. DUBLIN, CA

SAMPLED BY: (PRINTED & SIGNATURE) MICHAEL DESCHENES [signature]

1210556

	SAMPLE NUMBER	DATE	TIME	TYPE	SAMPLE LOCATION (INIT VAC / SUMMA # / FINAL VAC)	NUMBER OF CONTAINERS	ANALYSIS(ES): VOCs by TO-15 + Tracer DFA	PRESERVATIVE	REMARKS
01A	SG1	10/22/12	115305	SOIL GAS	-30 36399 -5	1	X	NONE	NORMAL TURN AROUND
02A	SG2	〃	135232	〃	-30 37658 -3	1	X	〃	〃 〃 〃
03A	SG3	〃	143917	〃	-30 1359 -5	1	X	〃	〃 〃 〃
04A	SG3-DUP	〃	1431?7	〃	-30 35593 -5	1	X	〃	〃 〃 〃
05A	SG4	〃	111405	〃	-29 37378 -5	1	X	〃	〃 〃 〃
06A	SG5	〃	132442	〃	-30 35677 -5	1	X	〃	〃 〃 〃

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)		
[signature]	10/23/12		Fed Ex	Total No. of Samples (This Shipment): 6; Total No. of Containers (This Shipment): 6	LABORATORY: AIR TOXICS, LTD
RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	LABORATORY CONTACT: KYLE VAGADORY	LABORATORY PHONE NUMBER: (916) 985-1000
RELINQUISHED BY: (SIGNATURE) FedEx GA	10/25/12	1330	RECEIVED FOR LABORATORY BY: (SIGNATURE) B Whittaker ATL	SAMPLE ANALYSIS REQUEST SHEET ATTACHED: ( ) YES (X) NO	

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

Custody Seal Intact? Y N (None) Temp N/A

REMARKS: DIFLUOROETHANE WAS OUR TRACER GAS (CAS# 75-37-6)

McCampbell Analytical, Inc.
"When Quality Counts"

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

Analytical Report

P & D Environmental 55 Santa Clara, Ste.240 Oakland, CA 94610	Client Project ID: #0614; 7100-7120 Dublin Blvd, Dublin, CA	Date Sampled: 10/22/12
		Date Received: 10/23/12
	Client Contact: Paul King	Date Reported: 10/26/12
	Client P.O.:	Date Completed: 10/25/12

WorkOrder: 1210765

October 29, 2012

Dear Paul:

Enclosed within are:

1) The results of the 3 analyzed samples from your project: #0614; 7100-7120 Dublin Blvd, Dublin, CA,
2) QC data for the above samples, and
3) A copy of the chain of custody.

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

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

Best regards,

Angela Rydelius
Laboratory Manager
McCampbell Analytical, Inc.

The analytical results relate only to the items tested.

CHAIN OF CUSTODY RECORD 120765 PAGE 1 OF 1

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

PROJECT NUMBER: 0614

PROJECT NAME: 7100-7120 DUBLIN BLVD DUBLIN, CA

SAMPLED BY: (PRINTED & SIGNATURE) MICHAEL DESCHENES

SAMPLE NUMBER	DATE	TIME	TYPE	SAMPLE LOCATION	NUMBER OF CONTAINERS	ANALYSIS(ES): DIFLUOROETHANE (CAS # 75-37-6)	PRESERVATIVE	REMARKS
SG2	10/22/12	1338	AIR	TEDLAR BAG	1	X	NONE	NORMAL TURN AROUND
SG4	"	1105	"	" "	1	X	"	" " "
SG5	"	1255	"	" "	1	X	"	" " "

ICE t° n/a
GOOD CONDITION ✓ APPROPRIATE CONTAINERS ✓
HEAD SPACE ABSENT ___ PRESERVED IN LAB ___
DECHLORINATED IN LAB ___
PRESERVATION VOAS | O & G | METALS | OTHER

RELINQUISHED BY: (SIGNATURE) Michael Deschenes	DATE 10/23/12	TIME 1024	RECEIVED BY: (SIGNATURE)	Total No. of Samples (This Shipment) 3	LABORATORY: McCAMPBELL ANALYTICAL
RELINQUISHED BY: (SIGNATURE)	DATE 10/23/12	TIME 1645	RECEIVED BY: (SIGNATURE)	Total No. of Containers (This Shipment) 3	LABORATORY CONTACT: ANGELA RYDELIUS
RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RECEIVED FOR LABORATORY BY: (SIGNATURE)	SAMPLE ANALYSIS REQUEST SHEET ATTACHED: ( ) YES (X) NO	LABORATORY PHONE NUMBER: (925) 252-9262

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

REMARKS: DIFLUOROETHANE WAS OUR TRACER GAS.

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

CHAIN-OF-CUSTODY RECORD

WorkOrder: 1210765 ClientCode: PDEO

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

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

Email: lab@pdenviro.com
cc:
PO:
ProjectNo: #0614; 7100-7120 Dublin Blvd, Dublin, CA

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

Requested TAT: **5 days**

Date Received: 10/23/2012
Date Printed: 10/23/2012

Lab ID	Client ID	Matrix	Collection Date	Hold	Requested Tests (See legend below)											
					1	2	3	4	5	6	7	8	9	10	11	12
1210765-001	SG2	Air	10/22/2012 13:38	☐	A	A										
1210765-002	SG4	Air	10/22/2012 11:05	☐	A	A										
1210765-003	SG5	Air	10/22/2012 12:55	☐	A	A										

Test Legend:

1	8260B_PPMV	2	8260VOC_A	3		4		5	
6		7		8		9		10	
11		12							

Prepared by: Melissa Valles

Comments:

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

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

Sample Receipt Checklist

Client Name: **P & D Environmental**

Date and Time Received: **10/23/2012 5:00:41 PM**

Project Name: **#0614; 7100-7120 Dublin Blvd, Dublin, CA**

LogIn Reviewed by: Melissa Valles

WorkOrder N°: **1210765** Matrix: Air

Carrier: Rob Pringle (MAI Courier)

Chain of Custody (COC) Information

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

Sample Receipt Information

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

Sample Preservation and Hold Time (HT) Information

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

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

Comments:

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

P & D Environmental	Client Project ID: #0614; 7100-7120 Dublin Blvd, Dublin, CA	Date Sampled: 10/22/12
55 Santa Clara, Ste.240		Date Received: 10/23/12
	Client Contact: Paul King	Date Extracted 10/24/12
Oakland, CA 94610	Client P.O.:	Date Analyzed 10/24/12

Volatile Organics by P&T and GC/MS in PPMV*

Extraction method: SW5030B | Analytical methods: SW8260B | Work Order: 1210765

Lab ID	Client ID	Matrix	1,1-Difluoroethane as Dichlorodifluoromethane	DF	% SS	Comments
001A	SG2	A	2000	2000	96	
002A	SG4	A	2100	2000	103	
003A	SG5	A	2300	2000	96	

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	A	0.061	µL/L
	S	NA	NA

* air samples reported in ppmv (µL/L).

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

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

DHS ELAP Certification 1644

Angela Rydelius, Lab Manager

McCampbell Analytical, Inc.
"When Quality Counts"

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P & D Environmental	Client Project ID: #0614; 7100-7120 Dublin Blvd, Dublin, CA	Date Sampled: 10/22/12
55 Santa Clara, Ste.240		Date Received: 10/23/12
	Client Contact: Paul King	Date Extracted 10/24/12
Oakland, CA 94610	Client P.O.:	Date Analyzed 10/24/12

Volatile Organics by P&T and GC/MS*

Extraction method: SW5030B | Analytical methods: SW8260B | Work Order: 1210765

Lab ID	Client ID	Matrix	1,1-Difluoroethane as Dichlorodifluoromethane	DF	% SS	Comments
001A	SG2	A	9800	2000	96	
002A	SG4	A	10,000	2000	103	
003A	SG5	A	12,000	2000	96	

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	A	0.25	µg/L
	S	NA	NA

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

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

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

DHS ELAP Certification 1644

Angela Rydelius, Lab Manager

McCampbell Analytical, Inc.
"When Quality Counts"

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

QC SUMMARY REPORT FOR SW8260B

W.O. Sample Matrix: Air | QC Matrix: Water | BatchID: 71936 | WorkOrder: 1210765

EPA Method: SW8260B **Extraction: SW5030B** **Spiked Sample ID: N/A**

Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	Acceptance Criteria (%)		
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS
tert-Amyl methyl ether (TAME)	N/A	10	N/A	N/A	N/A	98.5	N/A	N/A	70 - 130
Benzene	N/A	10	N/A	N/A	N/A	97.9	N/A	N/A	70 - 130
t-Butyl alcohol (TBA)	N/A	40	N/A	N/A	N/A	106	N/A	N/A	70 - 130
Chlorobenzene	N/A	10	N/A	N/A	N/A	99.6	N/A	N/A	70 - 130
1,2-Dibromoethane (EDB)	N/A	10	N/A	N/A	N/A	101	N/A	N/A	70 - 130
1,2-Dichloroethane (1,2-DCA)	N/A	10	N/A	N/A	N/A	92.2	N/A	N/A	70 - 130
1,1-Dichloroethene	N/A	10	N/A	N/A	N/A	102	N/A	N/A	70 - 130
Diisopropyl ether (DIPE)	N/A	10	N/A	N/A	N/A	111	N/A	N/A	70 - 130
Ethyl tert-butyl ether (ETBE)	N/A	10	N/A	N/A	N/A	110	N/A	N/A	70 - 130
Methyl-t-butyl ether (MTBE)	N/A	10	N/A	N/A	N/A	108	N/A	N/A	70 - 130
Toluene	N/A	10	N/A	N/A	N/A	105	N/A	N/A	70 - 130
Trichloroethene	N/A	10	N/A	N/A	N/A	87.8	N/A	N/A	70 - 130
%SS1:	N/A	25	N/A	N/A	N/A	94	N/A	N/A	70 - 130
%SS2:	N/A	25	N/A	N/A	N/A	108	N/A	N/A	70 - 130
%SS3:	N/A	2.5	N/A	N/A	N/A	100	N/A	N/A	70 - 130

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

BATCH 71936 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1210765-001A	10/22/12 1:38 PM	10/24/12	10/24/12 1:43 PM	1210765-002A	10/22/12 11:05 AM	10/24/12	10/24/12 2:25 PM
1210765-003A	10/22/12 12:55 PM	10/24/12	10/24/12 3:18 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.

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

DHS ELAP Certification 1644

QA/QC Officer

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

Analytical Report

P & D Environmental	Client Project ID: #0614; 7100-7120 Dublin Blvd.	Date Sampled: 10/23/12
		Date Received: 10/24/12
55 Santa Clara, Ste.240	Client Contact: Paul King	Date Reported: 10/31/12
Oakland, CA 94610	Client P.O.:	Date Completed: 10/29/12

WorkOrder: 1210834

October 31, 2012

Dear Paul:

Enclosed within are:

1) The results of the 3 analyzed samples from your project: #0614; 7100-7120 Dublin Blvd.,
2) QC data for the above samples, and
3) A copy of the chain of custody.

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

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

Best regards,

Angela Rydelius
Laboratory Manager
McCampbell Analytical, Inc.

The analytical results relate only to the items tested.

CHAIN OF CUSTODY RECORD

1210834 PAGE 1 OF 1

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

PROJECT NUMBER: 0614

PROJECT NAME: 7100-7120 Dublin Blvd. Dublin, CA

SAMPLED BY: (PRINTED & SIGNATURE) MICHAEL DESCHENES Michael Deschenes

ANALYSIS(ES): TPH-Multi (G, D, SS, K, BO, MO); EPA 8260

SAMPLE NUMBER	DATE	TIME	TYPE	SAMPLE LOCATION	NUMBER OF CONTAINERS	TPH-Multi (G, D, SS, K, BO, MO)	EPA 8260							PRESERVATIVE	REMARKS
B1-4.5	10/23/12	0900	SOIL		1	X	X							ICE	Normal Turn Around
B2-4.5	"	0815	"		1	X	X							"	" " "
B3-4.5	"	1235	"		1	X	X							"	" " "

ICE/t° 3.2
GOOD CONDITION ____ APPROPRIATE CONTAINERS ____
HEAD SPACE ABSENT ____ PRESERVED IN LAB ____
DECHLORINATED IN LAB ____
PRESERVATION ____ VOAS | O&G | METALS | OTHER

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)		
Michael Deschenes	10/24/12	1322	[signature]	Total No. of Samples (This Shipment): 3 / Total No. of Containers (This Shipment): 3	LABORATORY: McCAMPBELL ANALYTICAL
RELINQUISHED BY: (SIGNATURE) [signature]	10/24/12	1400	RECEIVED BY: (SIGNATURE) [signature]	LABORATORY CONTACT: ANGELA RYDELIUS	LABORATORY PHONE NUMBER: (925) 252-9262
RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RECEIVED FOR LABORATORY BY: (SIGNATURE)	SAMPLE ANALYSIS REQUEST SHEET ATTACHED: ( ) YES (X) NO	

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

REMARKS:

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

CHAIN-OF-CUSTODY RECORD

WorkOrder: 1210834 ClientCode: PDEO

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

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

Email: lab@pdenviro.com
cc:
PO:
ProjectNo: #0614; 7100-7120 Dublin Blvd.

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

Requested TAT: **5 days**

Date Received: 10/24/2012
Date Printed: 10/24/2012

Lab ID	Client ID	Matrix	Collection Date	Hold	Requested Tests (See legend below)											
					1	2	3	4	5	6	7	8	9	10	11	12
1210834-001	B1-4.5	Soil	10/23/2012 9:00	☐	A	A										
1210834-002	B2-4.5	Soil	10/23/2012 8:15	☐	A	A										
1210834-003	B3-4.5	Soil	10/23/2012 12:35	☐	A	A										

Test Legend:

1	8260B_S	2	G-MBTEX_S	3		4		5	
6		7		8		9		10	
11		12							

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

Prepared by: Zoraida Cortez

Comments:

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

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

Sample Receipt Checklist

Client Name: **P & D Environmental**

Date and Time Received: **10/24/2012 7:53:28 PM**

Project Name: **#0614; 7100-7120 Dublin Blvd.**

LogIn Reviewed by: Zoraida Cortez

WorkOrder N°: **1210834** Matrix: Soil

Carrier: Rob Pringle (MAI Courier)

Chain of Custody (COC) Information

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

Sample Receipt Information

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

Sample Preservation and Hold Time (HT) Information

All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature	Cooler Temp: 3.2°C		NA ☐
Water - VOA vials have zero headspace / no bubbles?	Yes ☐	No ☐	No VOA vials submitted ☑
Sample labels checked for correct preservation?	Yes ☑	No ☐	
Metal - pH acceptable upon receipt (pH<2)?	Yes ☐	No ☐	NA ☑
Samples Received on Ice?	Yes ☑	No ☐	

(Ice Type: WET ICE)

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

Comments:

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

P & D Environmental	Client Project ID: #0614; 7100-7120 Dublin Blvd.	Date Sampled: 10/23/12
		Date Received: 10/24/12
55 Santa Clara, Ste.240	Client Contact: Paul King	Date Extracted: 10/24/12
Oakland, CA 94610	Client P.O.:	Date Analyzed: 10/29/12

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

Extraction Method: SW5030B | Analytical Method: SW8260B | Work Order: 1210834

Lab ID	1210834-001A
Client ID	B1-4.5
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	ND	1.0	0.005	sec-Butyl benzene	ND	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	ND	1.0	0.005
4-Isopropyl toluene	ND	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	Xylenes, Total	ND	1.0	0.005

Surrogate Recoveries (%)

%SS1:	108	%SS2:	109
%SS3:	113		

Comments:

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

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

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

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

P & D Environmental	Client Project ID: #0614; 7100-7120 Dublin Blvd.	Date Sampled: 10/23/12
		Date Received: 10/24/12
55 Santa Clara, Ste.240	Client Contact: Paul King	Date Extracted: 10/24/12
Oakland, CA 94610	Client P.O.:	Date Analyzed: 10/26/12

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

Extraction Method: SW5030B | Analytical Method: SW8260B | Work Order: 1210834

Lab ID	1210834-002A
Client ID	B2-4.5
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	ND	1.0	0.005	sec-Butyl benzene	ND	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	ND	1.0	0.005
4-Isopropyl toluene	ND	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	0.011	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	Xylenes, Total	ND	1.0	0.005

Surrogate Recoveries (%)

%SS1:	101	%SS2:	110
%SS3:	116		

Comments:

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

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

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

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P & D Environmental	Client Project ID: #0614; 7100-7120 Dublin Blvd.	Date Sampled: 10/23/12
		Date Received: 10/24/12
55 Santa Clara, Ste.240	Client Contact: Paul King	Date Extracted: 10/24/12
Oakland, CA 94610	Client P.O.:	Date Analyzed: 10/26/12

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

Extraction Method: SW5030B | Analytical Method: SW8260B | Work Order: 1210834

Lab ID	1210834-003A
Client ID	B3-4.5
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	ND	1.0	0.005	sec-Butyl benzene	ND	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	ND	1.0	0.005
4-Isopropyl toluene	ND	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	0.012	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	Xylenes, Total	ND	1.0	0.005

Surrogate Recoveries (%)

%SS1:	98	%SS2:	109
%SS3:	118		

Comments:

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

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

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

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

P & D Environmental 55 Santa Clara, Ste.240 Oakland, CA 94610	Client Project ID: #0614; 7100-7120 Dublin Blvd.	Date Sampled: 10/23/12
		Date Received: 10/24/12
	Client Contact: Paul King	Date Extracted: 10/24/12
	Client P.O.:	Date Analyzed: 10/26/12

Gasoline Range (C6-C12) Stoddard Solvent Range (C9-C12) Volatile Hydrocarbons with BTEX & MTBE*

Extraction Method: SW5030B | Analytical Method: SW8021B/8015Bm | Work Order: 1210834

Lab ID	1210834-001A	1210834-002A	1210834-003A		Reporting Limit for DF =1	
Client ID	B1-4.5	B2-4.5	B3-4.5			
Matrix	S	S	S			
DF	1	1	1		S	W
Compound	**Concentration**				mg/Kg	ug/L
TPH(g)	ND	ND	ND		1.0	NA
TPH(ss)	ND	ND	ND		1.0	NA
MTBE	ND	ND	ND		0.05	NA
Benzene	ND	ND	ND		0.005	NA
Toluene	ND	ND	ND		0.005	NA
Ethylbenzene	ND	ND	ND		0.005	NA
Xylenes	ND	ND	ND		0.005	NA
Surrogate Recoveries (%)						
%SS:	93	94	97			
Comments						

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

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

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

DHS ELAP Certification 1644

Angela Rydelius, Lab Manager

McCampbell Analytical, Inc.
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http://www.mccampbell.com / E-mail: main@mccampbell.com

P & D Environmental	Client Project ID: #0614; 7100-7120 Dublin Blvd.	Date Sampled: 10/23/12
		Date Received: 10/24/12
55 Santa Clara, Ste.240	Client Contact: Paul King	Date Extracted: 10/24/12
Oakland, CA 94610	Client P.O.:	Date Analyzed: 10/29/12-10/30/12

Total Extractable Petroleum Hydrocarbons*

Extraction Method: SW3550B | Analytical Method: SW8015B | Work Order: 1210834

Lab ID	1210834-001A	1210834-002A	1210834-003A		Reporting Limit for DF =1	
Client ID	B1-4.5	B2-4.5	B3-4.5			
Matrix	S	S	S			
DF	1	1	1		S	W
Compound	**Concentration**				mg/Kg	ug/L
TPH-Diesel (C10-C23)	2.1	1.4	1.1		1.0	NA
TPH-Motor Oil (C18-C36)	ND	ND	ND		5.0	NA
TPH-Bunker Oil (C10-C36)	ND	ND	ND		5.0	NA
TPH-Kerosene (C9-C18)	1.1	ND	ND		1.0	NA
Surrogate Recoveries (%)						
%SS	104	99	109			
Comments	e2	e2	e2			

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

cluttered chromatogram resulting in coeluted surrogate and sample peaks, or; surrogate peak is on elevated baseline, or; surrogate has been diminished by dilution of original extract; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation:
e2) diesel range compounds are significant; no recognizable pattern

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Angela Rydelius, Lab Manager

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QC SUMMARY REPORT FOR SW8260B

W.O. Sample Matrix: Soil | QC Matrix: Soil | BatchID: 71897 | WorkOrder: 1210834

EPA Method: SW8260B **Extraction: SW5030B** **Spiked Sample ID: 1210799-001A**

Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	Acceptance Criteria (%)		
	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS
tert-Amyl methyl ether (TAME)	ND	0.050	97.6, F1	80.2	19.6	79.1	56 - 94	30	70 - 130
Benzene	ND	0.050	103	83.6	20.8	84.3	60 - 106	30	70 - 130
t-Butyl alcohol (TBA)	ND	0.20	125	121	3.56	100	56 - 140	30	70 - 130
Chlorobenzene	ND	0.050	107	82.1	26.7	88.1	61 - 108	30	70 - 130
1,2-Dibromoethane (EDB)	ND	0.050	110	85.1	25.3	86.3	54 - 119	30	70 - 130
1,2-Dichloroethane (1,2-DCA)	ND	0.050	97.2	80.5	18.8	79	48 - 115	30	70 - 130
1,1-Dichloroethene	ND	0.050	89.4	79.1	12.2	84.3	46 - 111	30	70 - 130
Diisopropyl ether (DIPE)	ND	0.050	109	91.8	16.8	89.3	53 - 111	30	70 - 130
Ethyl tert-butyl ether (ETBE)	ND	0.050	107, F1	89.8	17.6	87	61 - 104	30	70 - 130
Methyl-t-butyl ether (MTBE)	ND	0.050	114, F1	94	18.9	87.8	58 - 107	30	70 - 130
Toluene	ND	0.050	119, F1	91	26.3	98	64 - 114	30	70 - 130
Trichloroethene	ND	0.050	93.1	75.1	21.4	80.5	60 - 116	30	70 - 130
%SS1:	98	0.12	87	95	8.07	87	70 - 130	30	70 - 130
%SS2:	112	0.12	109	109	0	109	70 - 130	30	70 - 130
%SS3:	112	0.012	111	108	2.77	111	70 - 130	30	70 - 130

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

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

BATCH 71897 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1210834-001A	10/23/12 9:00 AM	10/24/12	10/29/12 9:49 PM	1210834-002A	10/23/12 8:15 AM	10/24/12	10/26/12 10:09 PM
1210834-003A	10/23/12 12:35 PM	10/24/12	10/26/12 10:48 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.

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

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QC SUMMARY REPORT FOR SW8021B/8015Bm

W.O. Sample Matrix: Soil | QC Matrix: Soil | BatchID: 71873 | WorkOrder: 1210834

EPA Method: SW8021B/8015Bm **Extraction: SW5030B** **Spiked Sample ID: 1210766-012A**

Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	Acceptance Criteria (%)		
	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS
TPH(btex)£	ND	0.60	111	113	1.96	114	70 - 130	20	80 - 120
MTBE	ND	0.10	95.7	103	7.57	100	70 - 130	20	80 - 120
Benzene	ND	0.10	101	96.3	4.28	108	70 - 130	20	80 - 120
Toluene	ND	0.10	99.5	98.7	0.746	108	70 - 130	20	80 - 120
Ethylbenzene	ND	0.10	113	99.8	12.7	111	70 - 130	20	80 - 120
Xylenes	ND	0.30	121	102	17.4	114	70 - 130	20	80 - 120
%SS:	108	0.10	101	98	3.24	105	70 - 130	20	70 - 130

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

BATCH 71873 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1210834-001A	10/23/12 9:00 AM	10/24/12	10/26/12 6:13 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.

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QC SUMMARY REPORT FOR SW8021B/8015Bm

W.O. Sample Matrix: Soil | QC Matrix: Soil | BatchID: 71925 | WorkOrder: 1210834

EPA Method: SW8021B/8015Bm **Extraction: SW5030B** **Spiked Sample ID: 1210828-004A**

Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	Acceptance Criteria (%)		
	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS
TPH(btex)£	3.2	0.60	NR	NR	NR	108	N/A	N/A	80 - 120
MTBE	ND<0.25	0.10	NR	NR	NR	95.7	N/A	N/A	80 - 120
Benzene	ND<0.025	0.10	NR	NR	NR	101	N/A	N/A	80 - 120
Toluene	ND<0.025	0.10	NR	NR	NR	109	N/A	N/A	80 - 120
Ethylbenzene	ND<0.025	0.10	NR	NR	NR	115	N/A	N/A	80 - 120
Xylenes	0.03	0.30	NR	NR	NR	117	N/A	N/A	80 - 120
%SS:	111	0.10	NR	NR	NR	110	N/A	N/A	70 - 130

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

BATCH 71925 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1210834-002A	10/23/12 8:15 AM	10/24/12	10/26/12 6:42 AM	1210834-003A	10/23/12 12:35 PM	10/24/12	10/26/12 7:11 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.

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QC SUMMARY REPORT FOR SW8015B

W.O. Sample Matrix: Soil | QC Matrix: Soil | BatchID: 71874 | WorkOrder: 1210834

EPA Method: SW8015B **Extraction: SW3550B** **Spiked Sample ID: 1210766-012A**

Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	Acceptance Criteria (%)		
	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS
TPH-Diesel (C10-C23)	ND	40	103	103	0	104	70 - 130	30	70 - 130
%SS:	90	25	90	89	0.434	88	70 - 130	30	70 - 130

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

BATCH 71874 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1210834-001A	10/23/12 9:00 AM	10/24/12	10/29/12 12:11 PM				

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

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

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

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

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

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QA/QC Officer

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QC SUMMARY REPORT FOR SW8015B

W.O. Sample Matrix: Soil | QC Matrix: Soil | BatchID: 71928 | WorkOrder: 1210834

EPA Method: SW8015B **Extraction: SW3550B** **Spiked Sample ID: 1210834-003A**

Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	Acceptance Criteria (%)		
	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS
TPH-Diesel (C10-C23)	1.1	40	118	123	3.47	100	70 - 130	30	70 - 130
%SS:	109	25	109	112	2.94	82	70 - 130	30	70 - 130

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

BATCH 71928 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1210834-002A	10/23/12 8:15 AM	10/24/12	10/29/12 1:20 PM	1210834-003A	10/23/12 12:35 PM	10/24/12	10/30/12 3:25 PM

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

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

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

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

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

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QA/QC Officer

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Analytical Report

P & D Environmental	Client Project ID: #0614; 7100-7120 Dublin Blvd.	Date Sampled: 10/23/12
		Date Received: 10/24/12
55 Santa Clara, Ste.240	Client Contact: Paul King	Date Reported: 10/30/12
Oakland, CA 94610	Client P.O.:	Date Completed: 10/29/12

WorkOrder: 1210837

October 31, 2012

Dear Paul:

Enclosed within are:

1) The results of the 2 analyzed samples from your project: #0614; 7100-7120 Dublin Blvd.,
2) QC data for the above samples, and
3) A copy of the chain of custody.

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

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

Best regards,

Angela Rydelius
Laboratory Manager
McCampbell Analytical, Inc.

The analytical results relate only to the items tested.

CHAIN OF CUSTODY RECORD

1210937

PAGE 1 OF 1

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

PROJECT NUMBER: 0614

PROJECT NAME: 7100-7120 Dublin Blvd. Dublin, CA

SAMPLED BY: (PRINTED & SIGNATURE) MICHAEL DESCHENES Michael Deschenes

SAMPLE NUMBER	DATE	TIME	TYPE	SAMPLE LOCATION	NUMBER OF CONTAINERS	ANALYSIS(ES): TPH-Multi (Ca, D, SS, K, BO, Mo)	EPA 8260	PRESERVATIVE	REMARKS
B4-W	10/23/12	1000	H20		7	X	X	ICE	Normal Turn Around
B5-W	10/23/12	1305	"		7	X	X	"	"

ICE/t° 3.4
GOOD CONDITION
HEAD SPACE ABSENT
DECHLORINATED IN LAB
PRESERVATION
APPROPRIATE CONTAINERS
PRESERVED IN LAB
VOAS | O&G | METALS | OTHER

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)
Michael Deschenes	10/24/12	1337	
	10/24/12	1400	

Total No. of Samples (This Shipment): 3
Total No. of Containers (This Shipment): 21

LABORATORY: MC CAMPBELL ANALYTICAL

LABORATORY CONTACT: ANGELA RYDELIUS

LABORATORY PHONE NUMBER: (925) 252-9262

SAMPLE ANALYSIS REQUEST SHEET ATTACHED: ( ) YES (X) NO

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

REMARKS: ALL VOAS AND 1-LITER AMBER CONTAINERS PRESERVED WITH HCL.

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

CHAIN-OF-CUSTODY RECORD

WorkOrder: 1210837 ClientCode: PDEO

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

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

Email: lab@pdenviro.com
cc:
PO:
ProjectNo: #0614; 7100-7120 Dublin Blvd.

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

Requested TAT: **5 days**

Date Received: 10/24/2012
Date Printed: 10/24/2012

Lab ID	Client ID	Matrix	Collection Date	Hold	Requested Tests (See legend below)											
					1	2	3	4	5	6	7	8	9	10	11	12
1210837-001	B4-W	Water	10/23/2012 10:00	☐	A	B										
1210837-002	B5-W	Water	10/23/2012 12:05	☐	A	B										

Test Legend:

1	8260B_W	2	G-MBTEX_W	3		4		5	
6		7		8		9		10	
11		12							

The following SampIDs: 001B, 002B contain testgroup.

Prepared by: Zoraida Cortez

Comments:

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

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Sample Receipt Checklist

Client Name: **P & D Environmental**

Date and Time Received: **10/24/2012 8:48:48 PM**

Project Name: **#0614; 7100-7120 Dublin Blvd.**

LogIn Reviewed by: Zoraida Cortez

WorkOrder N°: **1210837** Matrix: Water

Carrier: Rob Pringle (MAI Courier)

Chain of Custody (COC) Information

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

Sample Receipt Information

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

Sample Preservation and Hold Time (HT) Information

All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature	Cooler Temp: 3.4°C		NA ☐
Water - VOA vials have zero headspace / no bubbles?	Yes ☑	No ☐	No VOA vials submitted ☐
Sample labels checked for correct preservation?	Yes ☑	No ☐	
Metal - pH acceptable upon receipt (pH<2)?	Yes ☐	No ☐	NA ☑
Samples Received on Ice?	Yes ☑	No ☐	

(Ice Type: WET ICE)

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

Comments:

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

P & D Environmental	Client Project ID: #0614; 7100-7120 Dublin Blvd.	Date Sampled: 10/23/12
		Date Received: 10/24/12
55 Santa Clara, Ste.240	Client Contact: Paul King	Date Extracted: 10/27/12
Oakland, CA 94610	Client P.O.:	Date Analyzed: 10/27/12

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

Extraction Method: SW5030B | Analytical Method: SW8260B | Work Order: 1210837

Lab ID	1210837-001A
Client ID	B4-W
Matrix	Water

Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acetone	ND<100	10	10	tert-Amyl methyl ether (TAME)	ND<5.0	10	0.5
Benzene	ND<5.0	10	0.5	Bromobenzene	ND<5.0	10	0.5
Bromochloromethane	ND<5.0	10	0.5	Bromodichloromethane	ND<5.0	10	0.5
Bromoform	ND<5.0	10	0.5	Bromomethane	ND<5.0	10	0.5
2-Butanone (MEK)	ND<20	10	2.0	t-Butyl alcohol (TBA)	ND<20	10	2.0
n-Butyl benzene	ND<5.0	10	0.5	sec-Butyl benzene	ND<5.0	10	0.5
tert-Butyl benzene	ND<5.0	10	0.5	Carbon Disulfide	ND<5.0	10	0.5
Carbon Tetrachloride	ND<5.0	10	0.5	Chlorobenzene	ND<5.0	10	0.5
Chloroethane	ND<5.0	10	0.5	Chloroform	ND<5.0	10	0.5
Chloromethane	ND<5.0	10	0.5	2-Chlorotoluene	ND<5.0	10	0.5
4-Chlorotoluene	ND<5.0	10	0.5	Dibromochloromethane	ND<5.0	10	0.5
1,2-Dibromo-3-chloropropane	ND<2.0	10	0.2	1,2-Dibromoethane (EDB)	ND<5.0	10	0.5
Dibromomethane	ND<5.0	10	0.5	1,2-Dichlorobenzene	ND<5.0	10	0.5
1,3-Dichlorobenzene	ND<5.0	10	0.5	1,4-Dichlorobenzene	ND<5.0	10	0.5
Dichlorodifluoromethane	ND<5.0	10	0.5	1,1-Dichloroethane	ND<5.0	10	0.5
1,2-Dichloroethane (1,2-DCA)	ND<5.0	10	0.5	1,1-Dichloroethene	ND<5.0	10	0.5
cis-1,2-Dichloroethene	220	10	0.5	trans-1,2-Dichloroethene	ND<5.0	10	0.5
1,2-Dichloropropane	ND<5.0	10	0.5	1,3-Dichloropropane	ND<5.0	10	0.5
2,2-Dichloropropane	ND<5.0	10	0.5	1,1-Dichloropropene	ND<5.0	10	0.5
cis-1,3-Dichloropropene	ND<5.0	10	0.5	trans-1,3-Dichloropropene	ND<5.0	10	0.5
Diisopropyl ether (DIPE)	ND<5.0	10	0.5	Ethylbenzene	ND<5.0	10	0.5
Ethyl tert-butyl ether (ETBE)	ND<5.0	10	0.5	Freon 113	ND<100	10	10
Hexachlorobutadiene	ND<5.0	10	0.5	Hexachloroethane	ND<5.0	10	0.5
2-Hexanone	ND<5.0	10	0.5	Isopropylbenzene	ND<5.0	10	0.5
4-Isopropyl toluene	ND<5.0	10	0.5	Methyl-t-butyl ether (MTBE)	ND<5.0	10	0.5
Methylene chloride	ND<5.0	10	0.5	4-Methyl-2-pentanone (MIBK)	ND<5.0	10	0.5
Naphthalene	ND<5.0	10	0.5	n-Propyl benzene	ND<5.0	10	0.5
Styrene	ND<5.0	10	0.5	1,1,1,2-Tetrachloroethane	ND<5.0	10	0.5
1,1,2,2-Tetrachloroethane	ND<5.0	10	0.5	Tetrachloroethene	ND<5.0	10	0.5
Toluene	ND<5.0	10	0.5	1,2,3-Trichlorobenzene	ND<5.0	10	0.5
1,2,4-Trichlorobenzene	ND<5.0	10	0.5	1,1,1-Trichloroethane	ND<5.0	10	0.5
1,1,2-Trichloroethane	ND<5.0	10	0.5	Trichloroethene	ND<5.0	10	0.5
Trichlorofluoromethane	ND<5.0	10	0.5	1,2,3-Trichloropropane	ND<5.0	10	0.5
1,2,4-Trimethylbenzene	ND<5.0	10	0.5	1,3,5-Trimethylbenzene	ND<5.0	10	0.5
Vinyl Chloride	ND<5.0	10	0.5	Xylenes, Total	ND<5.0	10	0.5

Surrogate Recoveries (%)

%SS1:	87	%SS2:	112
%SS3:	109		

Comments:

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

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

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

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P & D Environmental	Client Project ID: #0614; 7100-7120 Dublin Blvd.	Date Sampled: 10/23/12
		Date Received: 10/24/12
55 Santa Clara, Ste.240	Client Contact: Paul King	Date Extracted: 10/27/12
Oakland, CA 94610	Client P.O.:	Date Analyzed: 10/27/12

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

Extraction Method: SW5030B | Analytical Method: SW8260B | Work Order: 1210837

Lab ID	1210837-002A
Client ID	B5-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	ND	1.0	0.5	trans-1,2-Dichloroethene	ND	1.0	0.5
1,2-Dichloropropane	ND	1.0	0.5	1,3-Dichloropropane	ND	1.0	0.5
2,2-Dichloropropane	ND	1.0	0.5	1,1-Dichloropropene	ND	1.0	0.5
cis-1,3-Dichloropropene	ND	1.0	0.5	trans-1,3-Dichloropropene	ND	1.0	0.5
Diisopropyl ether (DIPE)	ND	1.0	0.5	Ethylbenzene	ND	1.0	0.5
Ethyl tert-butyl ether (ETBE)	ND	1.0	0.5	Freon 113	ND	1.0	10
Hexachlorobutadiene	ND	1.0	0.5	Hexachloroethane	ND	1.0	0.5
2-Hexanone	ND	1.0	0.5	Isopropylbenzene	ND	1.0	0.5
4-Isopropyl toluene	ND	1.0	0.5	Methyl-t-butyl ether (MTBE)	ND	1.0	0.5
Methylene chloride	ND	1.0	0.5	4-Methyl-2-pentanone (MIBK)	ND	1.0	0.5
Naphthalene	ND	1.0	0.5	n-Propyl benzene	ND	1.0	0.5
Styrene	ND	1.0	0.5	1,1,1,2-Tetrachloroethane	ND	1.0	0.5
1,1,2,2-Tetrachloroethane	ND	1.0	0.5	Tetrachloroethene	ND	1.0	0.5
Toluene	ND	1.0	0.5	1,2,3-Trichlorobenzene	ND	1.0	0.5
1,2,4-Trichlorobenzene	ND	1.0	0.5	1,1,1-Trichloroethane	ND	1.0	0.5
1,1,2-Trichloroethane	ND	1.0	0.5	Trichloroethene	ND	1.0	0.5
Trichlorofluoromethane	ND	1.0	0.5	1,2,3-Trichloropropane	ND	1.0	0.5
1,2,4-Trimethylbenzene	ND	1.0	0.5	1,3,5-Trimethylbenzene	ND	1.0	0.5
Vinyl Chloride	ND	1.0	0.5	Xylenes, Total	ND	1.0	0.5

Surrogate Recoveries (%)

%SS1:	90	%SS2:	111
%SS3:	107		

Comments:

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

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

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

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P & D Environmental	Client Project ID: #0614; 7100-7120 Dublin Blvd.	Date Sampled: 10/23/12
		Date Received: 10/24/12
55 Santa Clara, Ste.240	Client Contact: Paul King	Date Extracted: 10/25/12-10/26/12
Oakland, CA 94610	Client P.O.:	Date Analyzed: 10/25/12-10/26/12

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

Extraction method: SW5030B Analytical methods: SW8015Bm Work Order: 1210837

Lab ID	Client ID	Matrix	TPH(g)	TPH(ss)	DF	% SS	Comments
1210837-001B	B4-W	W	ND	ND	1	103	
1210837-002B	B5-W	W	ND	ND	1	85	

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

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

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

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

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Angela Rydelius, Lab Manager

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P & D Environmental	Client Project ID: #0614; 7100-7120 Dublin Blvd.	Date Sampled: 10/23/12
		Date Received: 10/24/12
55 Santa Clara, Ste.240	Client Contact: Paul King	Date Extracted: 10/24/12
Oakland, CA 94610	Client P.O.:	Date Analyzed: 10/29/12-10/30/12

Total Extractable Petroleum Hydrocarbons*

Extraction Method: SW3510C | Analytical Method: SW8015B | Work Order: 1210837

Lab ID	1210837-001B	1210837-002B			Reporting Limit for DF =1	
Client ID	B4-W	B5-W				
Matrix	W	W				
DF	1	1			S	W
Compound	**Concentration**				ug/kg	µg/L
TPH-Diesel (C10-C23)	ND	ND			NA	50
TPH-Motor Oil (C18-C36)	280	ND			NA	250
TPH-Bunker Oil (C10-C36)	310	270			NA	100
TPH-Kerosene (C9-C18)	ND	ND			NA	50
Surrogate Recoveries (%)						
%SS:	76	93				
Comments	e7	e7				

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

cluttered chromatogram resulting in coeluted surrogate and sample peaks, or; surrogate peak is on elevated baseline, or; surrogate has been diminished by dilution of original extract; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation:
e7) oil range compounds are significant

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QC SUMMARY REPORT FOR SW8260B

W.O. Sample Matrix: Water | QC Matrix: Water | BatchID: 72003 | WorkOrder: 1210837

EPA Method: SW8260B **Extraction: SW5030B** **Spiked Sample ID: 1210851-002A**

Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	Acceptance Criteria (%)		
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS
tert-Amyl methyl ether (TAME)	ND	10	102	101	0.976	103	70 - 130	20	70 - 130
Benzene	ND	10	91.1	92.6	1.60	96.1	70 - 130	20	70 - 130
t-Butyl alcohol (TBA)	ND	40	106	105	1.18	110	70 - 130	20	70 - 130
Chlorobenzene	ND	10	90.3	90.7	0.487	95.2	70 - 130	20	70 - 130
1,2-Dibromoethane (EDB)	ND	10	102	100	1.21	105	70 - 130	20	70 - 130
1,2-Dichloroethane (1,2-DCA)	ND	10	95.8	93.5	2.46	93.1	70 - 130	20	70 - 130
1,1-Dichloroethene	2.4	10	95.6	98.9	2.78	104	70 - 130	20	70 - 130
Diisopropyl ether (DIPE)	ND	10	99.5	99.8	0.279	102	70 - 130	20	70 - 130
Ethyl tert-butyl ether (ETBE)	ND	10	101	99.9	0.643	102	70 - 130	20	70 - 130
Methyl-t-butyl ether (MTBE)	ND	10	100	98.8	1.37	103	70 - 130	20	70 - 130
Toluene	ND	10	87.3	89.9	2.95	93.6	70 - 130	20	70 - 130
Trichloroethene	ND	10	90.6	91.6	1.16	97.6	70 - 130	20	70 - 130
%SS1:	84	25	86	86	0	85	70 - 130	20	70 - 130
%SS2:	114	25	111	111	0	111	70 - 130	20	70 - 130
%SS3:	108	2.5	105	106	1.15	106	70 - 130	20	70 - 130

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

BATCH 72003 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1210837-001A	10/23/12 10:00 AM	10/27/12	10/27/12 4:57 AM	1210837-002A	10/23/12 12:05 PM	10/27/12	10/27/12 5:35 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.

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QC SUMMARY REPORT FOR SW8021B/8015Bm

W.O. Sample Matrix: Water | QC Matrix: Water | BatchID: 71976 | WorkOrder: 1210837

EPA Method: SW8021B/8015Bm **Extraction: SW5030B** **Spiked Sample ID: 1210838-004A**

Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	Acceptance Criteria (%)		
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS
TPH(btex)£	7300	60	NR	NR	NR	105	N/A	N/A	80 - 120
MTBE	ND<500	10	NR	NR	NR	80.4	N/A	N/A	80 - 120
Benzene	1800	10	NR	NR	NR	95.4	N/A	N/A	80 - 120
Toluene	57	10	NR	NR	NR	98.5	N/A	N/A	80 - 120
Ethylbenzene	2500	10	NR	NR	NR	98.4	N/A	N/A	80 - 120
Xylenes	2900	30	NR	NR	NR	102	N/A	N/A	80 - 120
%SS:	115	10	NR	NR	NR	91	N/A	N/A	70 - 130

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

BATCH 71976 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1210837-001B	10/23/12 10:00 AM	10/25/12	10/25/12 2:53 PM				

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

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

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

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

cluttered chromatogram; sample peak coelutes with surrogate peak.

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

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

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QC SUMMARY REPORT FOR SW8021B/8015Bm

W.O. Sample Matrix: Water | QC Matrix: Water | BatchID: 72010 | WorkOrder: 1210837

EPA Method: SW8021B/8015Bm **Extraction: SW5030B** **Spiked Sample ID: 1210837-002A**

Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	Acceptance Criteria (%)		
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS
TPH(btex)£	ND	60	109	112	2.50	107	70 - 130	20	80 - 120
MTBE	ND	10	93.8	98.4	4.82	80.2	70 - 130	20	80 - 120
Benzene	ND	10	103	103	0	99.3	70 - 130	20	80 - 120
Toluene	ND	10	105	105	0	100	70 - 130	20	80 - 120
Ethylbenzene	ND	10	105	104	0.650	101	70 - 130	20	80 - 120
Xylenes	ND	30	108	107	0.782	104	70 - 130	20	80 - 120
%SS:	85	10	93	92	0.848	97	70 - 130	20	70 - 130

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

BATCH 72010 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1210837-002B	10/23/12 12:05 PM	10/26/12	10/26/12 3:09 PM				

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

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

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

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

cluttered chromatogram; sample peak coelutes with surrogate peak.

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

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

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QC SUMMARY REPORT FOR SW8015B

W.O. Sample Matrix: Water | QC Matrix: Water | BatchID: 71829 | WorkOrder: 1210837

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

Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	Acceptance Criteria (%)		
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS
TPH-Diesel (C10-C23)	N/A	1000	N/A	N/A	N/A	109	N/A	N/A	70 - 130
%SS:	N/A	625	N/A	N/A	N/A	88	N/A	N/A	70 - 130

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

BATCH 71829 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1210837-001B	10/23/12 10:00 AM	10/24/12	10/30/12 4:25 AM	1210837-002B	10/23/12 12:05 PM	10/24/12	10/29/12 2:44 PM

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

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

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

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

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

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APPENDIX E

HERD December 2011 Vapor Intrusion Risk and Hazard Calculation Work Sheets

SG-SCREEN
PA Version 2.0; 04/

Reset to Defaults

DTSC
Vapor Intrusion Guidance
Interim Final 12/04
(last modified 12/6/2011)

Soil Gas Concentration Data

ENTER Chemical CAS No. (numbers only, no dashes)	ENTER Soil gas conc., C_g ($\mu g/m^3$)	OR	ENTER Soil gas conc., C_g (ppmv)	Chemical
127184	5.40E+04			Tetrachloroethylene

MORE ↓

ENTER Depth below grade to bottom of enclosed space floor, L_F (15 or 200 cm)	ENTER Soil gas sampling depth below grade, L_s (cm)	ENTER Average soil temperature, T_S (^oC)	ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability)	OR	ENTER User-defined vadose zone soil vapor permeability, k_v (cm^2)
15	152.4	24	SIC		

MORE ↓

ENTER Vandose zone SCS soil type (Lookup Soil Parameters)	ENTER Vadose zone soil dry bulk density, ρ_b^A (g/cm^3)	ENTER Vadose zone soil total porosity, n^V (unitless)	ENTER Vadose zone soil water-filled porosity, θ_w^V (cm^3/cm^3)	ENTER Average vapor flow rate into bldg. (Leave blank to calculate) Q_{soil} (L/m)
SIC	1.38	0.481	0.216	5

MORE ↓

ENTER Averaging time for carcinogens, AT_C (yrs)	ENTER Averaging time for noncarcinogens, AT_{NC} (yrs)	ENTER Exposure duration, ED (yrs)	ENTER Exposure frequency, EF (days/yr)
70	25	25	250

END

INTERMEDIATE CALCULATIONS SHEET

Source-building separation, L_T (cm)	Vadose zone soil air-filled porosity, θ_a^V (cm^3/cm^3)	Vadose zone effective total fluid saturation, S_{te} (cm^3/cm^3)	Vadose zone soil intrinsic permeability, k_i (cm^2)	Vadose zone soil relative air permeability, k_{rg} (cm^2)	Vadose zone soil effective vapor permeability, k_v (cm^2)	Floor-wall seam perimeter, X_{crack} (cm)	Soil gas conc. ($\mu g/m^3$)	Bldg. ventilation rate, $Q_{building}$ (cm^3/s)
137.4	0.265	0.284	1.52E-09	0.844	1.28E-09	4,000	5.40E+04	3.39E+04

Area of enclosed space below grade, A_B (cm^2)	Crack-to-total area ratio, η (unitless)	Crack depth below grade, Z_{crack} (cm)	Enthalpy of vaporization at ave. soil temperature, $\Delta H_{v,TS}$ (cal/mol)	Henry's law constant at ave. soil temperature, H_{TS} ($atm-m^3/mol$)	Henry's law constant at ave. soil temperature, H'_{TS} (unitless)	Vapor viscosity at ave. soil temperature, μ_{TS} (g/cm-s)	Vadose zone effective diffusion coefficient, D^{eff}_V (cm^2/s)	Diffusion path length, L_d (cm)
1.00E+06	5.00E-03	15	9,410	1.74E-02	7.14E-01	1.80E-04	3.74E-03	137.4

Convection path length, L_p (cm)	Source vapor conc., C_{source} ($\mu g/m^3$)	Crack radius, r_{crack} (cm)	Average vapor flow rate into bldg., Q_{soil} (cm^3/s)	Crack effective diffusion coefficient, D^{crack} (cm^2/s)	Area of crack, A_{crack} (cm^2)	Exponent of equivalent foundation Peclet number, $exp(Pe^f)$ (unitless)	Infinite source indoor attenuation coefficient, α (unitless)	Infinite source bldg. conc., $C_{building}$ ($\mu g/m^3$)
15	5.40E+04	1.25	8.33E+01	3.74E-03	5.00E+03	2.35E+19	6.05E-04	3.27E+01

Unit risk factor, URF $(\mu g/m^3)^{-1}$	Reference conc., RfC (mg/m^3)
5.9E-06	3.5E-02

END

RESULTS SHEET

INCREMENTAL RISK CALCULATIONS:

Incremental risk from vapor intrusion to indoor air, carcinogen (unitless)	Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless)
4.7E-05	6.4E-01

MESSAGE SUMMARY BELOW:

END