475 Lesser Street, LLC

RECEIVED
By Alameda County Environmental Health at 1:22 pm, Sep 05, 2014

September 2, 2014

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

SUBJECT: SOIL VAPOR ASSESSMENT REPORT CERTIFICATION
County Case # RO 3135
Lesser Commercial Property
475 Lesser Street
Oakland, CA

Dear Mr. Wickham:

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

- Soil Vapor Assessment Report dated September 2, 2014 (document 0675.R3).

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

Please don't hesitate to call me if you have any questions.

Sincerely,

Daniel Rabin
475 Lesser Street, LLC

0675.L4

P&D ENVIRONMENTAL, INC.

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

September 2, 2014
Report 0675.R3

Ms. Kendra Marshall
475 Lesser Street, LLC
731 Sansome Street, 2nd Floor
San Francisco, CA 94111

SUBJECT: SOIL VAPOR ASSESSMENT REPORT
(SS1 THROUGH SS9)
Lesser Commercial Property
475 Lesser Street
Oakland, California

Dear Ms. Marshall:

P&D Environmental, Inc. (P&D) has prepared this report documenting the installation of nine vapor pins designated as SS1 through SS9 for evaluation of sub-slab soil gas at the subject site. Vapor pins SS1 through SS6 were installed on July 9, 2014; and were sampled on July 10, 2014 in accordance with P&D's Subsurface Investigation Work Plan (document 0675.W2) dated July 7, 2014. The work plan was approved in a letter from the Alameda County Department of Environmental Health (ACDEH) dated July 8, 2014. Following receipt of the vapor pin sample results and a discussion with the ACDEH, approval was provided by the ACDEH for installation and sampling of additional vapor pins SS7 through SS9.

A Site Location Map (Figure 1), a Site Plan showing vapor pin soil gas sample Total Petroleum Hydrocarbons as Gasoline (TPH-G) concentrations (Figure 2), and a Site Plan showing vapor pin soil gas sample benzene concentrations (Figure 3) are attached with this report. All work was performed under the direct supervision of a California professional geologist.

BACKGROUND

Documentation of two prior Phase I environmental site assessments are provided in the following reports prepared by AllWest Environmental, Inc. (AllWest), and Basics Environmental, Inc. (Basics), respectively.

- September 28, 2012 Environmental Site Assessment,
- April 3, 2014 Phase I Environmental Site Assessment,

Documentation of a historical investigation and sample collection at the site is also provided in the following report prepared by P&D Environmental, Inc.

- April 3, 2014 Subsurface Investigation Report (B1 through B4),
- June 11, 2014 Subsurface Investigation Report (B1A, B5 through B8 and SG1 through SG3),

Based on review of these documents, the following information was identified for the site history.

Site History

The following subject site information was obtained from an AllWest Environmental, Inc. September 28, 2012 Environmental Site Assessment. The subject site is a rectangular 0.459-acre parcel developed with four one- story industrial buildings and was previously occupied by Instawhip Tip Top Foods, Inc. (Instawhip). The buildings and a concrete-paved driveway and outdoor service area cover the entire site. Building 1 consists of an office area and former food products processing area, product ingredients mix room, chemical storage room and a receiving area. Building 2 consists of a storage shed, building 3 is a cold storage building consisting of product refrigerator, freezer units and loading docks. Building 4 is a dry goods storage warehouse equipped with raised docks. The site is currently unoccupied except for a maintenance attendant.

It is P&D's understanding that based on historical documents there was a 8,000-gallon diesel underground storage tank (UST) grouted in place on April 9, 1987, and that the associated pump and piping were removed.

On March 26, 2014 P&D personnel oversaw the drilling of boreholes B1 through B4 at the subject site to depths of 8.0 to 10.0 feet below the ground surface (bgs) and the collection of soil and groundwater grab samples from the boreholes using a Geoprobe drill rig. Groundwater was encountered in the boreholes at depths of 6.0 or 6.5 feet bgs. The subsurface materials consisted of gravelly sand and gravelly clayey sand fill to a depth of 2.0 to 4.5 feet bgs, beneath which variable amounts of clay, silty sand, and sand were encountered. No elevated Photoionization Detector (PID) values were measured and no odors, staining, or discoloration were observed in the soil from any of the boreholes. No odor or sheen were detected or observed for any of the groundwater grab samples.

Review of the soil sample results shows that benzene, toluene, ethylbenzene, and total xylenes (BTEX) were not detected in any of the soil samples, and that Total Petroleum Hydrocarbons as Diesel (TPH-D) was only detected in the samples collected from boreholes B1 and B4 at concentrations of 6.0 and 2.4 milligrams per kilogram (mg/kg), respectively. Review of the laboratory analytical report shows that the laboratory described the TPH-D results for soil samples B1-5.0 and B4-5.0 as consisting of both oil-range compounds and diesel-range compounds with no recognizable pattern.

Review of the groundwater sample results shows that BTEX compounds were not detected in any of the samples with the exception of the water sample from borehole B3, where benzene, toluene, ethylbenzene, and total xylenes were detected at concentrations of 2.6, 0.64, 4.3, and 20 micrograms per Liter (µg/L), respectively. TPH-D was detected in

groundwater samples B1-W, B2-W, B3-W and B4-W at concentrations of 67, 450, 790, and 240 µg/L, respectively. Review of the laboratory analytical results shows that the laboratory described the TPH-D results for groundwater samples B1-W, B2-W, and B4-W as consisting of both oil-range compounds and diesel-range compounds with no recognizable pattern, and the TPH-D results for groundwater sample B3-W was described as consisting of oil-range compounds, diesel-range compounds with no recognizable pattern, and gasoline- range compounds. Documentation of the subsurface investigation is provided in P&D's Subsurface Investigation Report dated April 3, 2014 (document 0675.R1).

A Phase I Environmental Site Assessment for the subject site dated April 3, 2014 prepared by Basics Environmental, Inc. of Oakland, California (Basics) recommended that a copy of P&D's April 3, 2014 Subsurface Investigation Report be provided to a regulatory agency for review.

In a letter dated April 17, 2014 the Alameda County Department of Environmental Health (ACDEH) commented regarding P&D's April 3, 2014 Subsurface Investigation Report and also requested that copies of any other reports or documents relevant to the fuel release or other unauthorized releases not currently in the case files. On April 17, 2014 P&D personnel forwarded copies of the 2012 All West and the 2014 Basics Phase I reports to the ACDEH.

Following review of county assessor parcel maps, P&D personnel visited the City of Oakland offices on April 18, 2014 to identify the owner of the parcel located adjacent to Oakport Street in Oakland where a proposed borehole was located. Review of City files showed that the parcel is a Union Pacific Railroad (UPRR) right-of-way. Following telephone calls with the UPRR for site access, it was determined that the insurance requirements for site access were cost-prohibitive. On April 25, 2014 P&D personnel contacted representatives for the neighboring property at American Cylinder Head at 499 Lesser Street for permission for site access to drill a borehole for groundwater sample collection and access was denied. On April 29, 2014 P&D personnel contacted representatives for the neighboring property to the north of American Cylinder Head property at the Taz Marble property at 4445 Jensen Street (located on Oakport Street) and obtained permission for site access to drill a borehole for groundwater sample collection.

In a May 7, 2014 Subsurface Investigation Work Plan (document 0675.W1), P&D proposed to collect groundwater samples at four offsite locations to define the extent of petroleum hydrocarbons in groundwater, soil gas samples at three onsite locations in the suspected vicinity of the former UST, and soil samples from one onsite borehole to evaluate Low Threat Closure Policy (LTCP) direct contact and outdoor air exposure conditions at the site. The work plan was approved in a letter from the ACDEH dated May 8, 2014.

Soil and groundwater samples were collected and soil gas wells constructed at the site on May 15, 2014 and soil gas samples were collected from the soil gas wells on May 19, 2014. Because of the shallow depth to groundwater (approximately 3 feet), efforts to collect soil

gas samples at locations SG1 and SG2 were not successful and a soil gas sample was only collected at location SG3. Based on the investigation sample results, P&D concluded that the extent of petroleum hydrocarbons in groundwater had been defined; that no unacceptable petroleum hydrocarbon concentrations were detected in soil; and that based on conditions encountered at the time of construction and sampling of soil gas well SG3 that well SG3 is located in the vicinity of the UST. Documentation of the investigation and sample results is provided in P&D's June 11, 2014 Subsurface Investigation Report (document 0675.R2). In a letter dated June 26, 2014 the ACDEH requested a Soil Vapor Assessment Work Plan. P&D subsequently provided a Subsurface Investigation Work Plan (document 0675.W2) dated July 7, 2014, which was approved in a letter from the ACDEH dated July 8, 2014.

FIELD ACTIVITIES

No permits were required for installation of the vapor pins. The drilling locations were marked with white paint, Underground Service Alert was notified for underground utility location, a health and safety plan was prepared, and site access was arranged with the property owner.

Vapor Pin Installation and Sampling

Six flush-mounted vapor pins were installed by P&D at locations SS1 through SS6 on July 9, 2014 and three additional flush-mounted vapor pins were installed at locations SS7 through SS6 on August 4, 2014 (see Figures 2 and 3) in accordance with manufacturer recommended methods, as described below.

A rotohammer was used to drill a 1.5-inch diameter hole 1.75 inches into the concrete slab. A 5/8-inch diameter hole was then drilled through the center of the 1.5-inch diameter hole in the slab to two inches below the bottom of the concrete slab. The total concrete floor slab thickness was measured to be 5.0 inches at drilling locations SS1 and SS6, 5.5 inches at locations SS4 and SS5, and 6.0 inches at all other drilling locations. Once the desired depth was reached the hole was cleaned with a vacuum and a bottle brush. The vapor pin was then installed in the 5/8-inch diameter hole in the concrete slab and covered with a flush-mounted stainless steel cover. Prior to placement of the flush-mounted stainless steel cover, a plastic cap was placed on the top of the vapor pin barb fitting.

Vapor pin sub-slab soil gas samples were collected by P&D personnel from vapor pins SS1 through SS6 on July 10, 2014 and from vapor pins SS6 through SS9 on August 7, 2014. A soil gas sampling manifold with a 1-liter Summa canister as the sampling canister for each location (see Figure 4) was assembled in a shroud consisting of a 35-gallon Rubbermaid bin that has been modified by cutting viewing ports into the sides of the shroud and covering the viewing ports with transparent polycarbonate sheets. A hole measuring approximately two inches square in the bottom of the shroud allows the shroud to cover the vapor pin while still allowing access to the vapor pin through the bottom of the bin. At the

time that the sampling manifold was assembled, the vacuum for the sample canister was verified with a vacuum gauge and recorded.

Prior to sampling each vapor pin, a 10 minute shut-in test 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 4). No purge testing for purge volume determination was performed because the samples were collected using 1-liter Summa canisters, and the volume of the canisters is substantially larger than the purge volumes used for purge volume testing. Following successful verification of the manifold shut-in test, a default of three purge volumes was extracted prior to sample collection. The purge volume was calculated based on the void space below the vapor pin plus the volume of the tube that extends through the vapor pin and the volume of the 2.0-foot length of 0.187-inch diameter tubing that connected the vapor pin to the sample media. The purge time was calculated using a nominal flow rate provided by the flow controller of 150 cubic centimeters per minute. In addition, a dish containing 2-Propanol was placed in the shroud to be used as a tracer gas for EPA Method TO-17 sample analysis.

Following completion of the purging of three volumes, a lid was placed onto the shroud and a tracer gas 1,1-Difluoroethane (DFA) was sprayed into the shroud interior for one second through a tube connected to a hole in the side of the shroud. Gloves in the lid of the shroud were then used to open the sample canister valve. After verifying that low flow conditions are not present associated with the soil gas sample, an air sample was collected from the shroud atmosphere to quantify the shroud tracer gas concentration while the soil gas sample was being collected. The shroud atmosphere sample was collected into a Tedlar bag that was placed into a vacuum chamber with the Tedlar bag inlet connected to a new piece of Teflon or polyethylene tubing that was inserted into the shroud atmosphere through a hole in the side of the shroud.

Once the vacuum for the sample canister valve had decreased to 5 inches of mercury, the gloves in the lid of the bin were used to close the sample canister valve. The pressure gage on the inlet side of the flow controller (see Figure 4) was monitored during sample collection to ensure that the vacuum applied to the soil gas well does not exceed 100 inches of water.

One duplicate soil gas sample was collected into a Summa canister from one of the vapor pins during each soil gas sampling date using a stainless steel sampling tee for the Summa canisters using methods described above. Following soil gas sample collection, a PID was connected to the vapor pin to obtain a preliminary field value for the sample collection location. The soil gas Summa canisters were stored in a box and promptly shipped to the laboratory for extraction and analysis.

In addition to collection of Summa canister samples as described above, sorbent tube samples were collected at each location as follows. Each manifold was equipped with a tee located downstream from the flow controller. At the time that the manifold was assembled (prior to the shut-in test), a sorbent tube was connected inside the shroud to the

tee, that was located downstream from the flow controller with a valve located between the sorbent tube and the tee. The downstream side of the sorbent tube was connected with a polyethylene tube to a flow meter and a vacuum pump. Following Summa canister sample collection, the Summa canister was isolated from the manifold by closing the Summa canister valve, and the valve between the manifold and the sorbent tube was opened. A vacuum pump was used to apply a vacuum to the sorbent tube and a rotometer located downstream of the sorbent tube was used to verify the soil gas flow rate at a nominal flow rate of 150 cubic centimeters per minute for collection of a 200 cubic centimeter sample. In addition to collection of one sorbent tube sample at each vapor pin location, one replicate sorbent tube sample was collected during each sample collection date. Following collection of each sorbent tube soil gas sample, the ends of the sorbent tube were sealed. Before and after connection of the sorbent tube to the manifold the sorbent tubes were stored in a cooler with ice.

Chain of custody procedures were observed for all sample handling. Vapor pin surge volume calculations for the different floor slab thicknesses are attached with this report as Appendix A. Measurements of vacuums, purging and equilibration time intervals, and PID readings were recorded on Soil Gas Sampling Data Sheets, which are also attached with this report as Appendix A.

All vapor pin construction equipment was cleaned with an Alconox solution wash followed by a clean water rinse prior to use at each location. New vapor pins with new silicone sleeves were used at each sample collection location. Clean, unused vacuum gages and stainless steel sampling manifolds were used at each sample collection location.

GEOLOGY AND HYDROGEOLOGY

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 Holocene Deposits, Bay mud (Qhbm), which is described as unconsolidated water-saturated dark plastic carbonaceous clay and silty clay. It may contain a few lenses of well-sorted fine sand and silt and a few shelly and peaty layers.

Review of the Geologic map and map database of the Oakland metropolitan area, Alameda, Contra Costa, and San Francisco Counties, California: A Digital Database that was compiled by R.W. Graymer (U. S. Geological Survey Miscellaneous Field Studies, MF-2342, Version 1.0 in 2000), shows the subject site as being underlain by artificial fill (af) which is described as consisting of Man-made deposits of various materials and ages. The materials are further described as some being compacted and quite firm, but fills made before 1965 are nearly everywhere not compacted and consist simply of dumped materials.

Based on the materials previously encountered in boreholes B1 through B4 to depths of 8.0 and 10.0 feet bgs at the subject site, the subsurface materials encountered at the site consisted of gravelly sand and gravelly clayey sand fill to a depth of 2.0 to 4.5 feet bgs,

beneath which variable amounts of clay, silty sand, and sand were encountered. The maximum sand layer thickness encountered was 2.5 feet. Groundwater was encountered during drilling in borehole B1 at a depth of 6.5 feet bgs, and at a depth of 6.0 feet bgs in the remaining boreholes, and was subsequently measured in boreholes B1, B2, B3, and B4 at 2.8, 2.9, 3.2, and 4.0 feet bgs, respectively.

The nearest surface water body to the subject site is a tidal canal located approximately 1,450 feet to the south of the site that is connected to the San Leandro Bay estuary, and San Leandro Bay which is located approximately 1,450 feet to the south. An underground culvert or storm drain portion of Peralta Creek is located approximately 630 feet west of the subject site and runs north-south along Colliseum Way. The groundwater flow direction at the site is unknown, but is presumed to be westerly to southerly towards these nearby surface water bodies. It is unknown if groundwater levels at the site are tidally influenced. Additionally, the conductivity of the water at the site is presently unknown.

WEATHER INFORMATION

No precipitation occurred during the week prior to either of the two sampling events, and no precipitation occurred on the day of either of the two sampling events (July 10 and August 7, 2014). Weather data, including precipitation and barometric pressure for the two weeks preceding each of the two sampling events, the days of sampling, and for the two weeks following each of the sampling events are provided with this report as Appendix B. The weather station used for this weather information is located at the intersection of Fernside Boulevard and High Street in Alameda at an elevation of 16 feet above sea level, approximately 0.4 miles to the west-southwest of the subject site. The subject site is located at an elevation of approximately 12 feet above sea level. An internet link to the weather station information is provided with this report in Appendix B.

LABORATORY ANALYSIS

All of the soil gas samples were analyzed at Air Toxics Limited of Folsom California. The Summa canister soil gas samples were analyzed for Total Petroleum Hydrocarbons as Gasoline (TPH-G), methyl tertiary-butyl ether (MTBE), BTEX, and DFA (the tracer gas) using EPA Method TO-15. The samples collected on sorbent tubes were analyzed for naphthalene and 2-Propanol (the tracer gas) using EPA Method TO-17. The analyses were performed with detection limits that equal or are less than San Francisco Bay Regional Water Quality Control Board (RWQCB) December 2013 Table E soil gas commercial/industrial Environmental Screening Levels (ESLs).

All of the Tedlar bags were analyzed using EPA Method TO-15 for the tracer gas DFA for the Tedlar bag samples that were collected during Summa canister sample collection for TO-15 analysis, and for the tracer gas 2-Propanol for the Tedlar bag samples that were collected during sorbent tube sample collection for TO-17 analysis.

The soil gas sample results are summarized in Tables 1 and the shroud sample results are summarized in Table 2. Copies of the laboratory analytical reports are attached with this report as Appendix C.

DISCUSSION AND RECOMMENDATIONS

Review of the Table 1 Percent Shroud columns shows that the tracer gas concentrations detected in the samples are less than 5 percent of the shroud atmosphere tracer gas concentrations (see Table 2 for the shroud tracer gas concentrations), indicating that the soil gas samples are valid samples. Additionally, review of Table 1 shows that none of the TO-15 or TO-17 analytes were detected at concentrations exceeding their respective December 2013 Table E soil gas commercial/industrial ESL values with the exception of TPH-G at locations SS4 and SS5, and benzene at location SS4. The only building where sub-slab soil gas concentrations exceed their respective Table E ESL commercial land use values is Building 2.

Based on the shallow depth to static groundwater in boreholes at the site (approximately 3 feet bgs) and less than 5 percent oxygen in soil gas collected at the site from soil gas well SG3 on May 19, 2014 Table 1 also provides State Water Resources Control Board (SWRCB) 2012 Low Threat Closure Policy (LTCP) Appendix 4 Direct Measurement of Soil Gas Concentrations, soil gas criteria with no bioattenuation zone values for benzene, ethylbenzene, and naphthalene for commercial land use. Comparison of the sample results with the LTCP criteria shows that only benzene at location SS4 exceeds the respective LTCP value. The only building where sub-slab soil gas concentrations exceed their respective LTCP commercial land use soil gas criteria with no bioattenuation zone values is Building 2.

Based on the detected concentrations of TPH-G and benzene in vapor pin sub-slab soil gas samples SS4 P&D recommends the collection of two indoor air samples in Building 2 with concurrent ambient air sample collection and concurrent collection of a sub-slab soil gas sample at vapor pin SS4, where the highest TPH-G concentration and the only benzene concentration were detected in sub-slab soil gas. The indoor air and ambient air sample collection duration should be 24 hours, and the samples should be collected when the ventilation system is not operating for building 2. All of the samples should be analyzed for the analytes that soil gas samples SS1 through SS9 were analyzed for using the same analytical methods described above with detection limits equal to or less than commercial land use December 2014 Table E ESL values. In addition, one duplicate indoor air sample and one duplicate soil gas sample should be collected, and one shroud sample should be collected at the time of soil gas sample collection using methods described above.

LIMITATIONS

This report was prepared solely for the use of 475 Lesser Street, LLC. The content and conclusions provided by P&D in this assessment are based on information collected during our investigation, which may include, but not be limited to, visual site inspections; interviews with the site owner, regulatory agencies and other pertinent individuals;

review of available public documents; subsurface exploration and our professional judgment based on said information at the time of preparation of this document. Any subsurface sample results and observations presented herein are considered to be representative of the area of investigation; however, geological conditions may vary between borings and may not necessarily apply to the general site as a whole. If future subsurface or other conditions are revealed which vary from these findings, the newly revealed conditions must be evaluated and may invalidate the findings of this report.

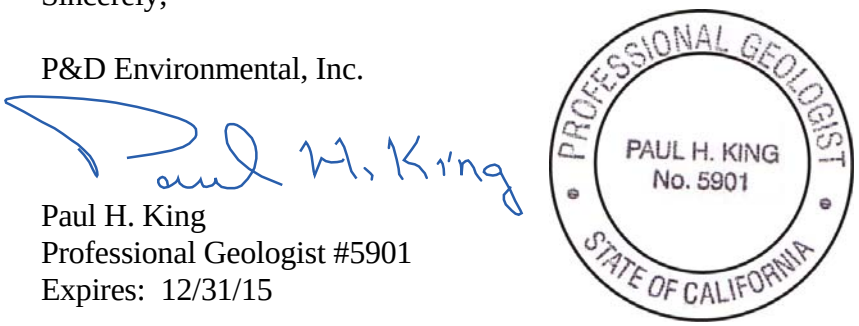
This report is issued with the understanding that it is the responsibility of the owner, or his representative, to ensure that the information contained herein is brought to the attention of the appropriate regulatory agencies, where required by law. Additionally, it is the sole responsibility of the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

This report has been prepared in accordance with generally accepted practices using standards of care and diligence normally practiced by recognized consulting firms performing services of a similar nature. P&D is not responsible for the accuracy or completeness of information provided by other individuals or entities 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.

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

Sincerely,

P&D Environmental, Inc.



Paul H. King
Professional Geologist #5901
Expires: 12/31/15

Attachments:

Table 1 - Summary of Soil Gas Sample Analytical Results
Table 2 - Summary of Shroud Sample Tracer Gas Analytical Results

Figure 1 - Site Location Map
Figure 2 - Site Plan Showing Vapor Pin Sub-Slab Soil Gas TPH-G Concentrations
Figure 3 - Site Plan Showing Vapor Pin Sub-Slab Soil Gas Benzene Concentrations
Figure 4 - Typical Soil Gas Sampling Manifold

Appendix A - Purge Volume Calculations and Soil Gas Sampling Data Sheets
Appendix B - Weather Information
Appendix C - Laboratory Analytical Results and Chain of Custody Documentation

Cc: Ms. Kendra Marshall, 475 Lesser Street, LLC.

PHK/mlbd/sjc
0675.R3

TABLES

Table 1
Summary of Soil Gas Sample Analytical Results

Sample ID	Sample Date	TPH-G	MTBE	Benzene	Toluene	Ethyl-benzene	m,p-Xylenes	o-Xylenes	Naphthalene	1,1-DFA	Percent Shroud	2-Propanol	Percent Shroud
SS1	7/10/2014	380	ND<4.3	ND<3.8	12	ND<5.2	12	6.0	ND<2.5	20,000, a	0.1	ND<240	0
SS1-DUP	7/10/2014	300	ND<4.3	ND<3.8	5.2	ND<5.2	13	5.9	NA	45,000, a	0.3	NA	NA
SS1-REP	7/10/2014	NA	NA	NA	NA	NA	NA	NA	ND<2.5	NA	NA	ND<240	0
SS2	7/10/2014	3,700	ND<4.3	ND<3.8	84	8.7	28	6.0	ND<2.5	2,700, a	0	ND<240	0
SS3	7/10/2014	760	ND<4.4	ND<3.9	6.3	30	120	58	ND<2.5	16	0	ND<240	0
SS4	7/10/2014	**2,700,000**	240	***3,400***	480	ND<250	ND<250	ND<250	ND<2.5	5,200	0	ND<240	0
SS5	7/10/2014	2,200,000	ND<320	ND<280	440	ND<390	ND<390	ND<390	ND<2.5	ND<960	0	ND<240	0
SS6	7/10/2014	ND<240	ND<4.2	ND<3.7	ND<4.4	ND<5.1	5.6	ND<5.1	ND<2.5	5,900, a	0	ND<240	0
SS6	8/7/2014	ND<240	ND<4.2	ND<3.8	5.6	ND<5.1	6.2	ND<5.1	ND<2.5	ND<13	0	ND<240	0
SS7	8/7/2014	ND<250	ND<4.4	ND<3.9	ND<4.6	ND<5.3	ND<5.3	ND<5.3	ND<2.5	6,900. a	0	ND<240	0
SS7-DUP	8/7/2014	ND<250	ND<4.4	ND<3.9	ND<4.6	ND<5.3	ND<5.3	ND<5.3	NA	2,300, a	0	NA	NA
SS7-REP	8/7/2014	NA	NA	NA	NA	NA	NA	NA	8.1	NA	NA	ND<240	0
SS8	8/7/2014	ND<230	ND<4.1	ND<3.6	ND<4.3	ND<4.9	ND<5.0	ND<5.0	ND<2.5	7,500, a	0	ND<240	0
SS9	8/7/2014	ND<240	ND<4.3	ND<3.8	6.5	ND<5.2	8.2	ND<5.2	ND<2.5	150	0	ND<240	0
LTCP				280		3,600			310				
ESL		2,500,000	47,000	420	1,300,000	4,900	Combined = 440,000		360	No Value	No Value	No Value	No Value

Notes:

TPH-G = Total Petroleum Hydrocarbons as Gasoline.

MTBE = Methyl-tert-Butyl Ether.

1,1-DFA = 1,1-Difluoroethane.

ND = Not Detected.

NA = Not Analyzed.

a = Laboratory Note: exceeds instrument calibration range.

LTCP = Low Threat Closure Policy, developed by State Water Resources Control Board , effective August 17, 2012, from Appendix 4 Direct Measurement of Soil Gas Concentrations. Soil Gas Criteria with no bioattenuation zone.

ESL = Environmental Screening Level, by San Francisco Bay – Regional Water Quality Control Board , updated December 2013 from Table E – Soil Gas Screening Levels for Evaluation of Potential Vapor Intrusion for Commercial/Industrial Land Use.

Italicized values exceed their respective LTCP values.

Values in bold exceed their respective ESL values.

Results and LTCP and ESL values in micrograms per cubic meter (µg/m3).

Table 2

Summary of Shroud Sample Tracer Gas Analytical Results

Sample ID	Sample Date	1,1-DFA, #	2-Propanol, ##
SS1 DFA	7/10/2014	16,000,000	NA
SS1 2-PROPANOL	7/10/2014	NA	2,700,000
SS2 DFA	7/10/2014	17,000,000	NA
SS2 2-PROPANOL	7/10/2014	NA	210,000
SS3 DFA	7/10/2014	28,000,000	NA
SS3 2-PROPANOL	7/10/2014	NA	1,500,000
SS4 DFA	7/10/2014	13,000,000	NA
SS4 2-PROPANOL	7/10/2014	NA	3,500,000
SS5 DFA	7/10/2014	15,000,000	NA
SS5 2-PROPANOL	7/10/2014	NA	650,000
SS6 DFA	7/10/2014	6,000,000	NA
SS6 2-PROPANOL	7/10/2014	NA	38,000
SS6 DFA	8/7/2014	15,000,000	NA
SS6 2-PROPANOL	8/7/2014	NA	7,600,000
SS7 DFA	8/7/2014	16,000,000	NA
SS7 2-PROPANOL	8/7/2014	NA	1,100,000
SS8 DFA	8/7/2014	13,000,000	NA
SS8 2-PROPANOL	8/7/2014	NA	2,400,000
SS9 DFA	8/7/2014	14,000,000	NA
SS9 2-PROPANOL	8/7/2014	NA	1,600,000

Notes:

ND = Not Detected.

NA = Not Analyzed.

= 1,1-DFA used as leak detection compound for TO-15 analysis.

= 2-Propanol used as leak detection compound for TO-17 analysis.

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

FIGURES

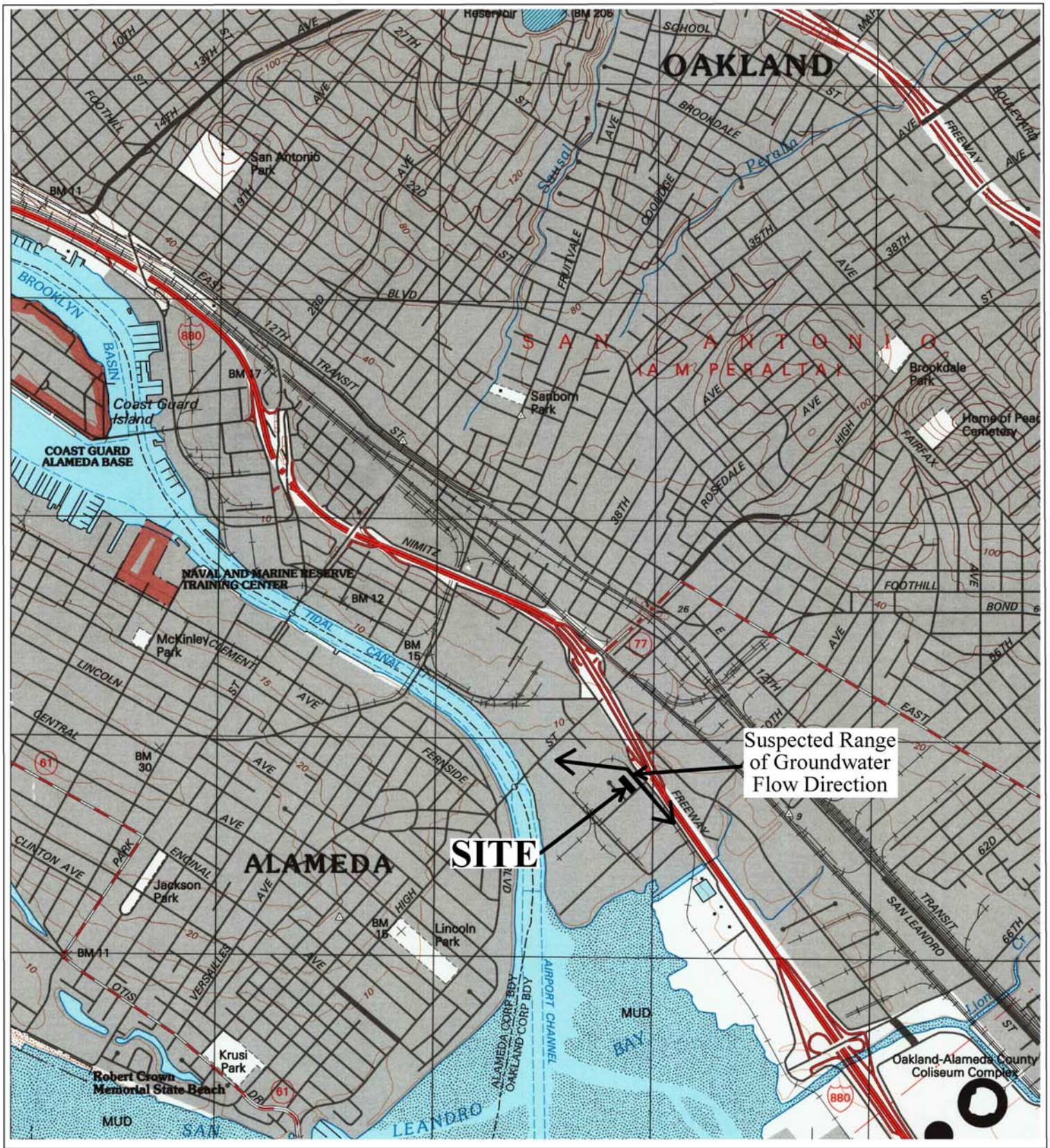


Figure 1
Site Location Map
475 Lesser Street
Oakland, California

Basemap from:
U.S. Geological Survey
Oakland East, California
7.5-Minute Quadrangle, Map edited 1996

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

0 1,000 2,000
Approximate Scale in Feet

N

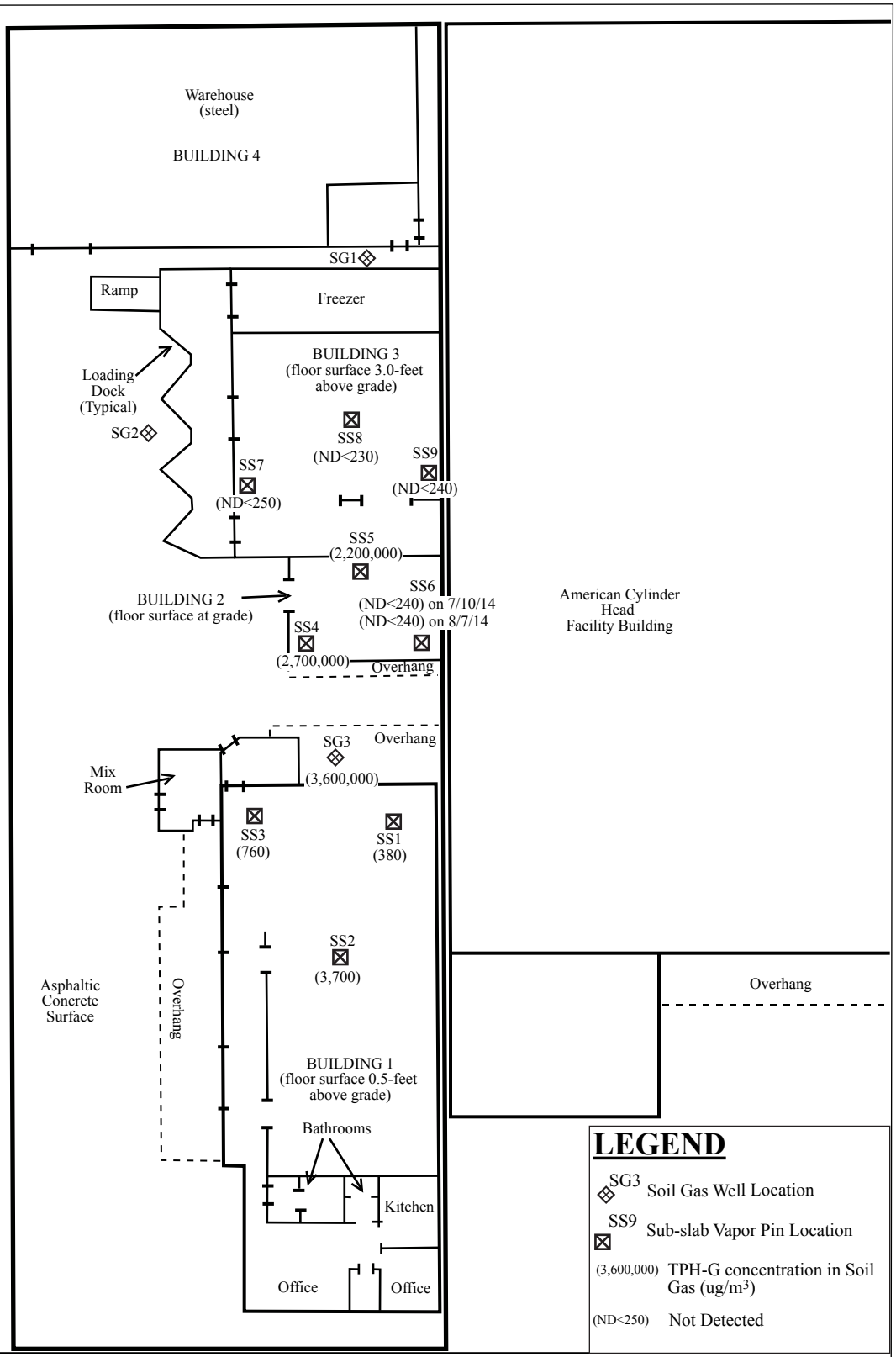


Figure 2
Site Plan Showing Vapor Pin Sub-Slab Soil Gas TPH-G Concentrations
475 Lesser Street
Oakland, California

Base Map From:	P&D Environmental, Inc. 55 Santa Clara Ave., Suite 240 Oakland, CA 94610	0 15 30 Approximate Scale in Feet N
Basics Environmental, Inc., dated April 3, 2014, and Google Earth, 8/28/2012		

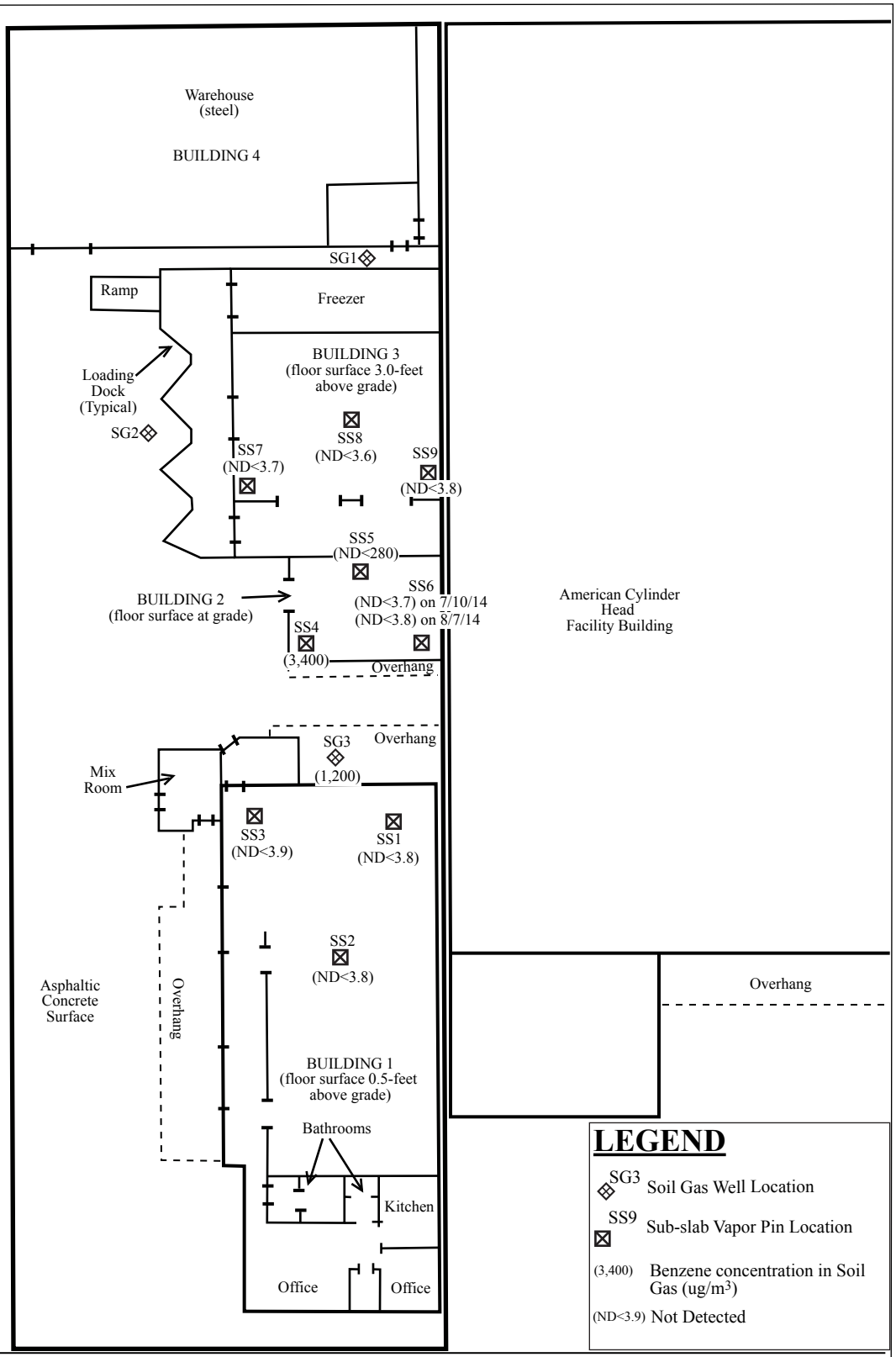


Figure 3
Site Plan Showing Vapor Pin Sub-Slab Soil Gas Benzene Concentrations
475 Lesser Street
Oakland, California

Base Map From:	P&D Environmental, Inc.	0 15 30 N
Basics Environmental, Inc., dated April 3, 2014, and Google Earth, 8/28/2012	55 Santa Clara Ave., Suite 240 Oakland, CA 94610	Approximate Scale in Feet

Figure 4
Typical Soil Gas Sampling Manifold
475 Lesser Street
Oakland, California

APPENDIX A

Purge Volume Calculation Sheet and Soil Gas Sampling Field Data Sheet

Report 0675.R3
Appendix A
5 inch slab, recessed vapor pin, 2.0 feet tubing

Soil Gas Purge Volume Calculations

One Purge Volume is calculated as

1 The volume of the hole through the slab,
2 Plus the volume of the hole beneath the slab,
3 Plus the volume of the tube in the Vapor Pin,
4 Plus the volume of the tube connecting the Vapor Pin to the sample container,
5 Less the volume of the hole through the slab for any drilling for recessed Vapor Pin placement
6 Less the volume of the Vapor Pin

1 The slab borehole volume is calculated as follows:

Borehole slab dia. = 0.625 inches (this is 5/8 inch diameter)
Slab Thickness = 5 inches
V borehole = pi x (r x r) x h, where pi = 3.14, r = 0.625 in./2, and h = 5.0 in.
V borehole = 3.14 x (0.3125 x 0.3125) x (5.0 in.) = 1.53 cubic inches.

2 The sub-slab borehole volume is calculated as follows:

Borehole slab dia. = 0.625 inches (this is 5/8 inch diameter)
Depth below slab = 2 inches
V borehole = pi x (r x r) x h, where pi = 3.14, r = 0.625 in./2, and h = 2.0 in.
V borehole = 3.14 x (0.3125 x 0.3125) x (2.0 in.) = 0.61 cubic inches.

3 The Vapor Pin tube volume is calculated as follows:

Tubing diameter = 0.125 inches
Tubing Length = 2 inches
V borehole = pi x (r x r) x h, where pi = 3.14, r = 0.125 in./2, and h = 2.0 in.
V borehole = 3.14 x (0.0625 x 0.0625) x (2.0 in.) = 0.02 cubic inches.

4 The tube volume connecting the Vapor Pin to the sample container is calculated as follows:

Tubing diameter = 0.187 inches
Tubing Length = 24 inches
V borehole = pi x (r x r) x h, where pi = 3.14, r = 0.187 in./2, and h = 24.0 in.
V borehole = 3.14 x (0.0935 x 0.0935) x (24.0 in.) = 0.66 cubic inches.

5 The slab borehole volume that is removed for the recessed Vapor Pin is calculated as follows:

Borehole slab dia. = 0.625 inches (this is 5/8 inch diameter)
Slab Thickness = 1.75 inches (if Vapor Pin is recessed this is 1.75 inches)
V borehole = pi x (r x r) x h, where pi = 3.14, r = 0.625 in./2, and h = 1.8 in.
V borehole = 3.14 x (0.3125 x 0.3125) x (1.8 in.) = 0.54 cubic inches.

6 The Vapor Pin volume is calculated as follows:

Vapor Pin diameter = 0.625 inches (this is 5/8 inch diameter)
Vapor Pin Length = 2 inches
V borehole = pi x (r x r) x h, where pi = 3.14, r = 0.625 in./2, and h = 2.0 in.
V borehole = 3.14 x (0.3125 x 0.3125) x (2.0 in.) = 0.61 cubic inches.

The total volume for one purge volume is V slab borehole + V sub-slab borehole + V vapor pin tube + V tubing connecting vapor pin to sample container

.- V slab borehole for recessed vapor pin - V vapor pin

V total = 1.53 cubic inches + 0.61 cubic inches + 0.02 cubic inches +
0.66 cubic inches - 0.54 cubic inches - 0.61 cubic inches = 1.68 cubic inches.

To convert to cubic centimeters:

V total = 1.68 cubic inches x 16.39 cubic centimeters/cubic inches = 27.5 cubic centimeters.

The total volume for 3 purge volume(s) is calculated as follows:

V purge total = 27.5 cubic centimeters x 3 = 82.6 cubic centimeters.

The flow controller has a nominal flow rate of 150 cubic centimeters per minute.

The purge time is calculated as follows:

T purge = 83 cubic centimeters/ 150 cubic centimeters per minute = 0.55 minutes.
Converting the purge time to seconds, 0.55 minutes x 60 seconds/ minute = 33 seconds.

Notes:

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

Report 0675.R3
Appendix A
5.5 inch slab, recessed vapor pin, 2.0 feet tubing

Soil Gas Purge Volume Calculations

One Purge Volume is calculated as

1 The volume of the hole through the slab,
2 Plus the volume of the hole beneath the slab,
3 Plus the volume of the tube in the Vapor Pin,
4 Plus the volume of the tube connecting the Vapor Pin to the sample container,
5 Less the volume of the hole through the slab for any drilling for recessed Vapor Pin placement
6 Less the volume of the Vapor Pin

1 The slab borehole volume is calculated as follows:

Borehole slab dia. = 0.625 inches (this is 5/8 inch diameter)

Slab Thickness = 5.5 inches

V borehole = pi x (r x r) x h, where pi = 3.14, r = 0.625 in./2, and h = 5.5 in.

V borehole = 3.14 x (0.3125 x 0.3125) x (5.5 in.) = 1.69 cubic inches.

2 The sub-slab borehole volume is calculated as follows:

Borehole slab dia. = 0.625 inches (this is 5/8 inch diameter)

Depth below slab = 2 inches

V borehole = pi x (r x r) x h, where pi = 3.14, r = 0.625 in./2, and h = 2.0 in.

V borehole = 3.14 x (0.3125 x 0.3125) x (2.0 in.) = 0.61 cubic inches.

3 The Vapor Pin tube volume is calculated as follows:

Tubing diameter = 0.125 inches

Tubing Length = 2 inches

V borehole = pi x (r x r) x h, where pi = 3.14, r = 0.125 in./2, and h = 2.0 in.

V borehole = 3.14 x (0.0625 x 0.0625) x (2.0 in.) = 0.02 cubic inches.

4 The tube volume connecting the Vapor Pin to the sample container is calculated as follows:

Tubing diameter = 0.187 inches

Tubing Length = 24 inches

V borehole = pi x (r x r) x h, where pi = 3.14, r = 0.187 in./2, and h = 24.0 in.

V borehole = 3.14 x (0.0935 x 0.0935) x (24.0 in.) = 0.66 cubic inches.

5 The slab borehole volume that is removed for the recessed Vapor Pin is calculated as follows:

Borehole slab dia. = 0.625 inches (this is 5/8 inch diameter)

Slab Thickness = 1.75 inches (if Vapor Pin is recessed this is 1.75 inches)

V borehole = pi x (r x r) x h, where pi = 3.14, r = 0.625 in./2, and h = 1.8 in.

V borehole = 3.14 x (0.3125 x 0.3125) x (1.8 in.) = 0.54 cubic inches.

6 The Vapor Pin volume is calculated as follows:

Vapor Pin diameter = 0.625 inches (this is 5/8 inch diameter)

Vapor Pin Length = 2 inches

V borehole = pi x (r x r) x h, where pi = 3.14, r = 0.625 in./2, and h = 2.0 in.

V borehole = 3.14 x (0.3125 x 0.3125) x (2.0 in.) = 0.61 cubic inches.

The total volume for one purge volume is V slab borehole + V sub-slab borehole + V vapor pin tube + V tubing connecting vapor pin to sample container

.- V slab borehole for recessed vapor pin - V vapor pin

V total = 1.69 cubic inches + 0.61 cubic inches + 0.02 cubic inches +
0.66 cubic inches - 0.54 cubic inches - 0.61 cubic inches = 1.83 cubic inches.

To convert to cubic centimeters:

V total = 1.83 cubic inches x 16.39 cubic centimeters/cubic inches = 30.0 cubic centimeters.

The total volume for 3 **purge volume(s)** is calculated as follows:

V purge total = 30.0 cubic centimeters x 3 = 90.1 cubic centimeters.

The flow controller has a nominal flow rate of 150 cubic centimeters per minute.

The purge time is calculated as follows:

T purge = 90 cubic centimeters/ 150 cubic centimeters per minute = 0.60 minutes.

Converting the purge time to seconds, 0.60 minutes x 60 seconds/ minute = 36 seconds.

Notes:

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

Report 0675.R3
Appendix A
6 inch slab, recessed vapor pin, 2.0 feet tubing

Soil Gas Purge Volume Calculations

One Purge Volume is calculated as

1 The volume of the hole through the slab,
2 Plus the volume of the hole beneath the slab,
3 Plus the volume of the tube in the Vapor Pin,
4 Plus the volume of the tube connecting the Vapor Pin to the sample container,
5 Less the volume of the hole through the slab for any drilling for recessed Vapor Pin placement
6 Less the volume of the Vapor Pin

1 The slab borehole volume is calculated as follows:

Borehole slab dia. = 0.625 inches (this is 5/8 inch diameter)

Slab Thickness = 6 inches

V borehole = pi x (r x r) x h, where pi = 3.14, r = 0.625 in./2, and h = 6.0 in.

V borehole = 3.14 x (0.3125 x 0.3125) x (6.0 in.) = 1.84 cubic inches.

2 The sub-slab borehole volume is calculated as follows:

Borehole slab dia. = 0.625 inches (this is 5/8 inch diameter)

Depth below slab = 2 inches

V borehole = pi x (r x r) x h, where pi = 3.14, r = 0.625 in./2, and h = 2.0 in.

V borehole = 3.14 x (0.3125 x 0.3125) x (2.0 in.) = 0.61 cubic inches.

3 The Vapor Pin tube volume is calculated as follows:

Tubing diameter = 0.125 inches

Tubing Length = 2 inches

V borehole = pi x (r x r) x h, where pi = 3.14, r = 0.125 in./2, and h = 2.0 in.

V borehole = 3.14 x (0.0625 x 0.0625) x (2.0 in.) = 0.02 cubic inches.

4 The tube volume connecting the Vapor Pin to the sample container is calculated as follows:

Tubing diameter = 0.187 inches

Tubing Length = 24 inches

V borehole = pi x (r x r) x h, where pi = 3.14, r = 0.187 in./2, and h = 24.0 in.

V borehole = 3.14 x (0.0935 x 0.0935) x (24.0 in.) = 0.66 cubic inches.

5 The slab borehole volume that is removed for the recessed Vapor Pin is calculated as follows:

Borehole slab dia. = 0.625 inches (this is 5/8 inch diameter)

Slab Thickness = 1.75 inches (if Vapor Pin is recessed this is 1.75 inches)

V borehole = pi x (r x r) x h, where pi = 3.14, r = 0.625 in./2, and h = 1.8 in.

V borehole = 3.14 x (0.3125 x 0.3125) x (1.8 in.) = 0.54 cubic inches.

6 The Vapor Pin volume is calculated as follows:

Vapor Pin diameter = 0.625 inches (this is 5/8 inch diameter)

Vapor Pin Length = 2 inches

V borehole = pi x (r x r) x h, where pi = 3.14, r = 0.625 in./2, and h = 2.0 in.

V borehole = 3.14 x (0.3125 x 0.3125) x (2.0 in.) = 0.61 cubic inches.

The total volume for one purge volume is V slab borehole + V sub-slab borehole + V vapor pin tube + V tubing connecting vapor pin to sample container

.- V slab borehole for recessed vapor pin - V vapor pin

V total = 1.84 cubic inches + 0.61 cubic inches + 0.02 cubic inches +
0.66 cubic inches - 0.54 cubic inches - 0.61 cubic inches = 1.99 cubic inches.

To convert to cubic centimeters:

V total = 1.99 cubic inches x 16.39 cubic centimeters/cubic inches = 32.6 cubic centimeters.

The total volume for 3 **purge volume(s)** is calculated as follows:

V purge total = 32.6 cubic centimeters x 3 = 97.7 cubic centimeters.

The flow controller has a nominal flow rate of 150 cubic centimeters per minute.

The purge time is calculated as follows:

T purge = 98 cubic centimeters/ 150 cubic centimeters per minute = 0.65 minutes.

Converting the purge time to seconds, 0.65 minutes x 60 seconds/ minute = 39 seconds.

Notes:

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

SOIL GAS SAMPLING DATA SHEET

Address 475 LESSER ST, OAKLAND
Job # 0675
Date 7/10/14
Sampler Name MLGD
Drilling Company INN

Probe Method (check one)
- o PRT
- o Temp Well
- o Permanent Well
- x Vapor Pin

Soil Gas Location Designation	Probe Depth (Ft.)	Time Probe Installation Completed (7/9/14)	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 injection time	Begin sample collection vacuum (In. Hg) and time	End sample collection vacuum (In. Hg) and time	PID value in Teflon tube after sample collection	NOTES
SS 1		1135	36450	vac -28	vac -25	vac -25	vac				vac -28	vac -5	ppm 0	DFA 1023
				time 0930	time 0940	time 0950	time	time 110800	time 110833	time	time 102130	time 140116	time 1208	
										SORBENT	115100	115320		2-PROPANOL 1145
SS 1		1135	36392	vac -29	vac -25	vac -25	vac				vac -28	vac -5	ppm	~~DFA 1033~~ MLGD
DUP				time 0932	time 0940	time 0950	time	time 110800	time 110833	time	time 102130	time 140116	time	
										REP SORBENT	115700	115820		
SS 2		1140	36461	vac -29	vac -27	vac -27	vac				vac -29	vac -5	ppm 0.6	
				time 0955	time 0958	time 1008	time	time 111000	time 111039	time	time 121800	time 122609	time 1236	DFA 1219
										SORBENT	123300	123420		2-PROPANOL 1230
SS 3		1145	31776	vac -29	vac -28	vac -28	vac				vac -29	vac -5	ppm 0.1	
				time 1005	time 1008	time 1018	time	time 111200	time 111239	time	time 124420	time 125230	time 1301	DFA 1244
										SORBENT	125800	125920		2-PROPANOL 1256
SS 4		1150	37416	vac -29	vac -26	vac -26	vac				vac -29	vac -5	ppm 193	
				time 1351	time 1402	time 1412	time	time 145600	time 145631	time	time 150619	time 151322	time 1523	DFA 1504
										SORBENT	131930	132050		2-PROPANOL 1516
SS 5		1155	12391	vac -29	vac -25	vac -25	vac				vac -29	vac -5	ppm 64	
				time 1415	time 1426	time 1430	time	time 145800	time 145836	time	time 153320	time 154020	time 1553	DFA 1529
										SORBENT	154600	154820		2-PROPANOL 1543
SS 6		1200	1351	vac -29	vac -28	vac -28	vac				vac -28	vac -5	ppm 0	
				time 1430	time 1435	time 1445	time	time 150000	time 150033	time	time 160200	time 160925	time 1617	DFA 1559
										SORBENT	161400	161520		2-PROPANOL 1611
SS				vac	vac	vac	vac				vac	vac	ppm	
				time	time	time	time	time	time	time	time	time	time	
														FLOW CONTROLLER
SS				vac	vac	vac	vac				vac	vac	ppm	NOMINAL FLOW RATE
				time	time	time	time	time	time	time	time	time	time	150 CC/MIN
SS				vac	vac	vac	vac				vac	vac	ppm	SORBENT TUBE
				time	time	time	time	time	time	time	time	time	time	NOMINAL FLOW RATE
														150 CC/MIN FOR
SS				vac	vac	vac	vac				vac	vac	ppm	COLLECTION 200 CC
				time	time	time	time	time	time	time	time	time	time	SAMPLE.
SS				vac	vac	vac	vac				vac	vac	ppm	
				time	time	time	time	time	time	time	time	time	time	
SS				vac	vac	vac	vac				vac	vac	ppm	
				time	time	time	time	time	time	time	time	time	time	

SOIL GAS SAMPLING DATA SHEET

Address: 475 LESSER ST. OAKLAND

Job #: CG75

Date: 8/7/14

Sampler Name: MLBD

Drilling Company: TMX

Probe Method (check one)
- o PRT
- o Temp Well
- o Permanent Well
- x Vapor Pin

Soil Gas Location Designation	Probe Depth (Ft.)	Time Probe Installation Completed	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 injection time	Begin sample collection vacuum (In. Hg) and time	End sample collection vacuum (In. Hg) and time	PID value in Teflon tube after sample collection	NOTES
SS 6		7/10/14	36396	vac -30	vac 28	vac 28	vac				vac -30	vac -5	ppm 8.3	DFA 100800
				time 0940	time 1005	time 1015	time	time 1020	time 102033	time	time 100730	time 111300	time	2-PROPANOL 1117
										SORBENT	111800	111920	1122	
SS 7		8/6/14	11430	vac -30	vac -28	vac -28	vac				vac -30	vac -5	ppm 0	
				time 1210	time 1220	time 1230	time	time 1300	time 130039	time	time 131500	time 132540	time 1348	
										SORBENT	133200	133320		
SS 7 DUP		8/6/14	36403	vac -30	vac -28	vac -28	vac				vac -30	vac -5	ppm 0	DFA 131600
				time 1215	time 1220	time 1230	time	time 1300	time 130039	time	time 131500	time 132540	time 1348	2-PROPANOL 1330
									SORBENT REP		134000	134120		
SS 8		8/6/14	33636	vac -30	vac -28	vac -28	vac				vac -30	vac -5	ppm 0	
				time 1402	time 1410	time 1420	time	time 1425	time 142539	time	time 143500	time 144107	time 1450	DFA 1343
										SORBENT	144580	144620		2-PROPANOL 1444
SS 9		8/6/14	37383	vac -30	vac -26	vac -26	vac				vac -30	vac -5	ppm 0	
				time 1455	time 1500	time 1510	time	time 1520	time 152039	time	time 152605	time 153335	time 1534	DFA 1526
										SORBENT	153600	153720		2-PROPANOL 1535
SS				vac	vac	vac	vac				vac	vac	ppm	
				time	time	time	time	time	time	time	time	time	time	
														SORBENT TUBE SAMPLE 200CC
SS				vac	vac	vac	vac				vac	vac	ppm	
				time	time	time	time	time	time	time	time	time	time	
SS				vac	vac	vac	vac				vac	vac	ppm	
				time	time	time	time	time	time	time	time	time	time	
SS				vac	vac	vac	vac				vac	vac	ppm	
				time	time	time	time	time	time	time	time	time	time	
SS				vac	vac	vac	vac				vac	vac	ppm	
				time	time	time	time	time	time	time	time	time	time	
SS				vac	vac	vac	vac				vac	vac	ppm	
				time	time	time	time	time	time	time	time	time	time	
SS				vac	vac	vac	vac				vac	vac	ppm	
				time	time	time	time	time	time	time	time	time	time	
SS				vac	vac	vac	vac				vac	vac	ppm	
				time	time	time	time	time	time	time	time	time	time	

APPENDIX B

Weather Information

http://www.wunderground.com/weatherstation/WXDailyHistory.asp?ID=KCAALAME7&graphspan=custom&month=6&day=26&year=2014&monthend=7&dayend=10&yearend=2014

Weather History for KCAALAME7

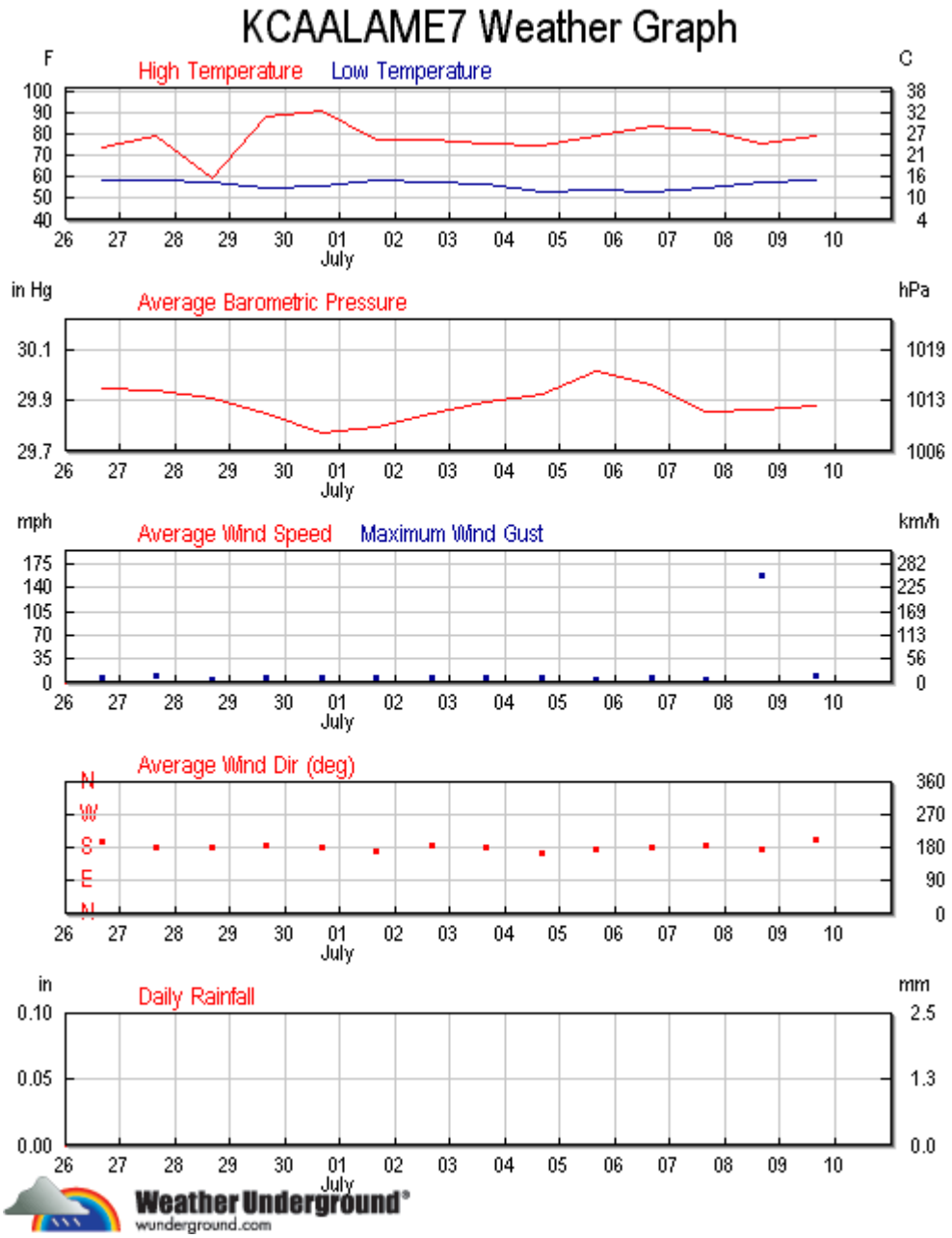
High St Bridge, Alameda, CA
About This Weather Station

Lat: N 37 ° 45 ' 48 " (37.763 °)
Lon: W 122 ° 13 ' 33 " (-122.226 °)
Elevation (ft): 16
Hardware: Davis Vantage VUE

June 26 2014 - TO - July 10 2014 Go

Daily Weekly Monthly Yearly **Custom**

	High:	Low:	Average:
Temperature:	**91.2** °F	**53.1** °F	**65.1** °F
Dew Point:	**64.5** °F	**51.4** °F	**57.2** °F
Humidity:	97.0%	34.0%	77.7%
Wind Speed:	**2.0**mph from the NW	-	**0.4**mph
Wind Gust:	**204.0**mph from the ESE	-	-
Wind:	-	-	South
Pressure:	**30.05**in	**29.74**in	-
Precipitation:	**0.00**in		


KCAALAME7 Weather Graph
F
High Temperature
Low Temperature
C
100 90 80 70 60 50 40
38 32 27 21 16 10 4
26 27 28 29 30 01 02 03 04 05 06 07 08 09 10
July
in Hg
Average Barometric Pressure
hPa
30.1 29.9 29.7
1019 1013 1006
mph
Average Wind Speed
Maximum Wind Gust
km/h
175 140 105 70 35 0
282 225 169 113 56 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=KCAALAME7&day=10&year=2014&month=7&graphspan=day

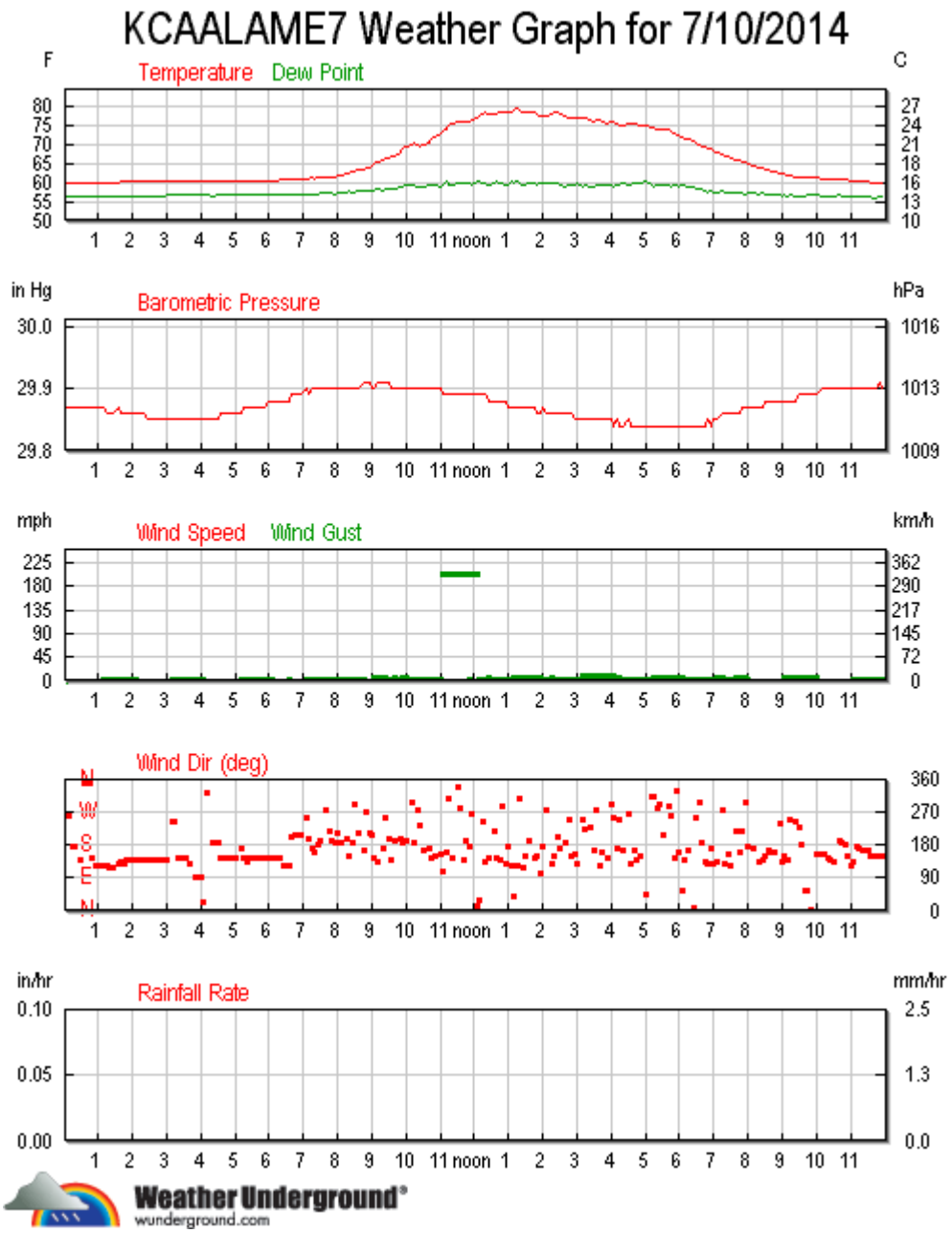
« Previous Day | July | 10 | 2014 | View | Next Day »

Daily Weekly Monthly Yearly Custom

	Current:	High:	Low:	Average:
Temperature:	**89.0** °F	**80.3** °F	**60.7** °F	**67.9** °F
Dew Point:	**57.8** °F	**61.2** °F	**56.9** °F	**58.7** °F
Humidity:	35%	88%	52%	74%
Wind Speed:	**1.0**mph	**2.0**mph	-	**0.5**mph
Wind Gust:	**1.0**mph	**204.0**mph	-	-
Wind:	South	-	-	South
Pressure:	**29.77**in	**29.91**in	**29.84**in	-
Precipitation:	**0.00**in			

Weather History for the Rest of This Month

	High:	Low:	Average:
Temperature:	**91.3** °F	**53.1** °F	**66.5** °F
Dew Point:	**66.0** °F	**51.4** °F	**58.7** °F
Humidity:	97.0%	39.0%	77.5%
Wind Speed:	**3.0**mph from the East	-	**0.4**mph
Wind Gust:	**204.0**mph from the ESE	-	-
Wind:	-	-	South
Pressure:	**30.11**in	**29.76**in	-
Precipitation:	**0.00**in		

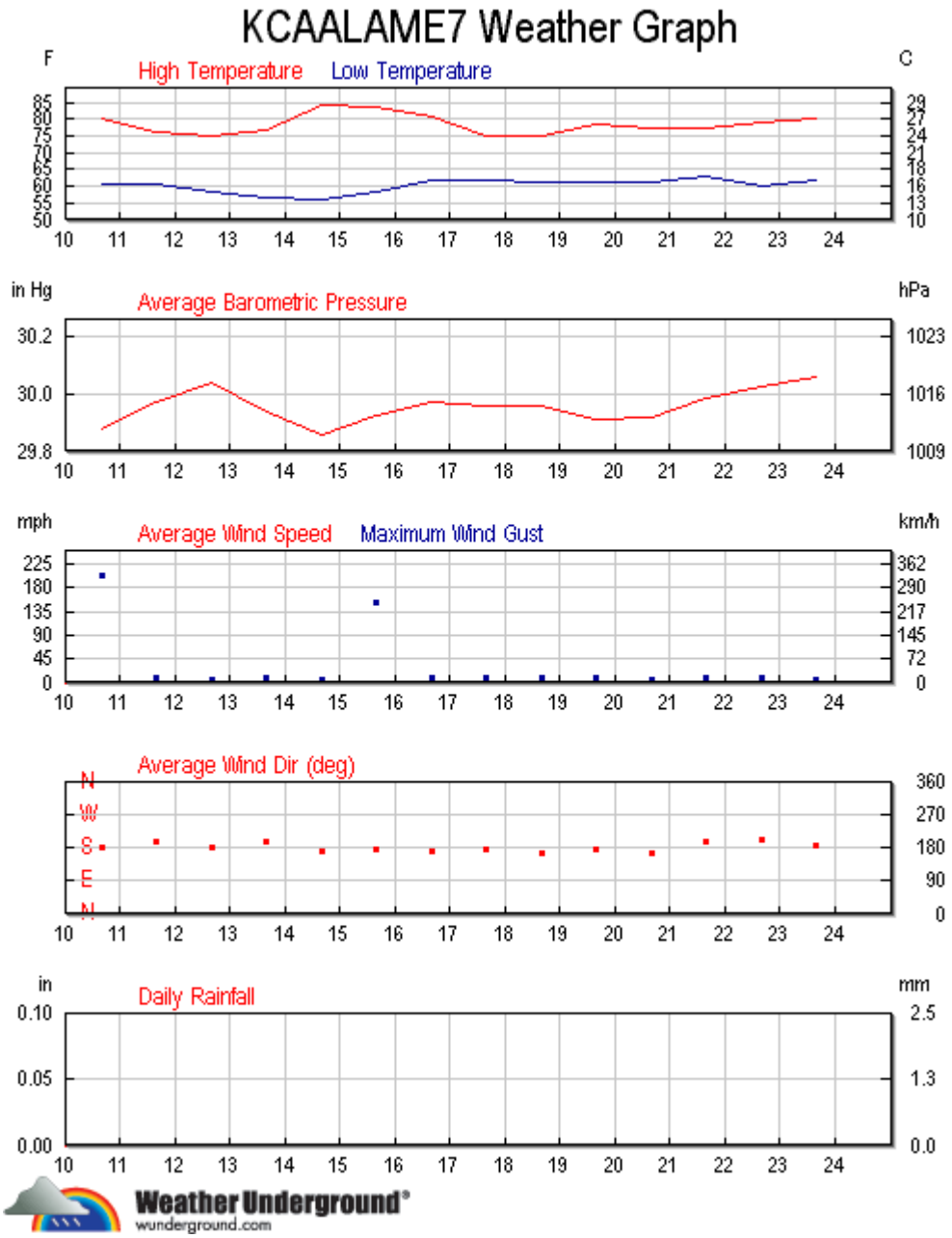

KCAALAME7 Weather Graph for 7/10/2014
F
C
Temperature
Dew Point
80 75 70 65 60 55 50
27 24 21 18 16 13 10
1 2 3 4 5 6 7 8 9 10 11 noon 1 2 3 4 5 6 7 8 9 10 11
in Hg
hPa
Barometric Pressure
30.0 29.9 29.8
1016 1013 1009
mph
km/h
Wind Speed
Wind Gust
225 180 135 90 45 0
362 290 217 145 72 0
Wind Dir (deg)
N W S E N
360 270 180 90 0
in/hr
mm/hr
Rainfall Rate
0.10 0.05 0.00
2.5 1.3 0.0
Weather Underground
wunderground.com

http://www.wunderground.com/weatherstation/WXDailyHistory.asp?ID=KCAALAME7&graphspan=custom&month=7&day=10&year=2014&monthend=7&dayend=24&yearend=2014

July 10 2014 - TO - July 24 2014 Go

Daily Weekly Monthly Yearly **Custom**

	High:	Low:	Average:
Temperature:	**91.3** °F	**56.3** °F	**67.8** °F
Dew Point:	**66.0** °F	**54.5** °F	**59.9** °F
Humidity:	97.0%	39.0%	77.3%
Wind Speed:	**3.0**mph from the East	-	**0.5**mph
Wind Gust:	**204.0**mph from the ESE	-	-
Wind:	-	-	South
Pressure:	**30.11**in	**29.78**in	-
Precipitation:	**0.00**in		

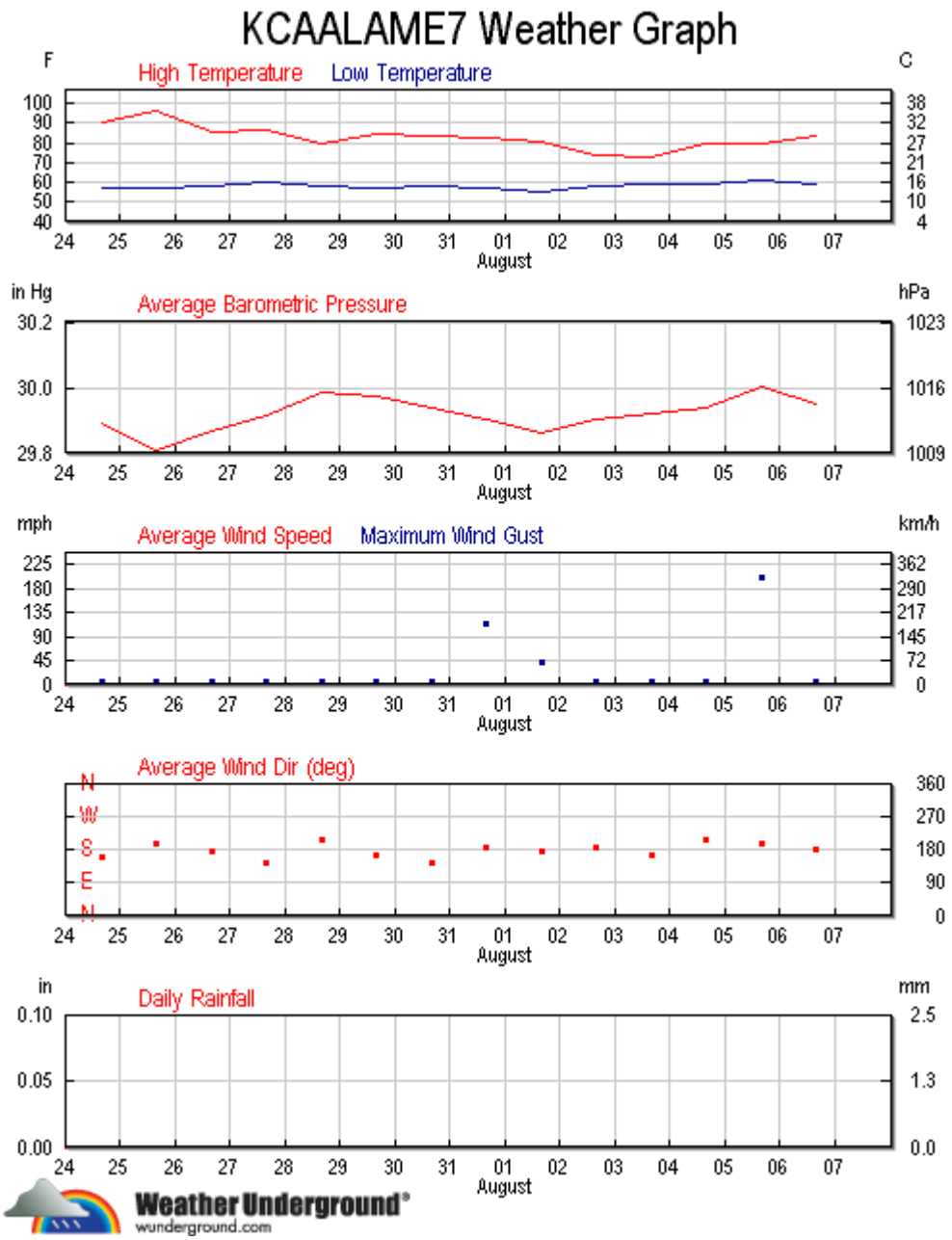

KCAALAME7 Weather Graph
F
High Temperature
Low Temperature
C
85
80
75
70
65
60
55
50
29
27
24
21
18
16
13
10
10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
in Hg
Average Barometric Pressure
hPa
30.2
30.0
29.8
1023
1016
1009
10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
mph
Average Wind Speed
Maximum Wind Gust
km/h
225
180
135
90
45
0
362
290
217
145
72
0
10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
Average Wind Dir (deg)
N
W
S
E
N
360
270
180
90
0
10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
in
Daily Rainfall
mm
0.10
0.05
0.00
2.5
1.3
0.0
10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
Weather Underground
wunderground.com

http://www.wunderground.com/weatherstation/WXDailyHistory.asp?ID=KCAALAME7&graphspan=custom&month=7&day=24&year=2014&monthend=8&dayend=7&yearend=2014

July 24 2014 - TO - August 7 2014 Go

Daily Weekly Monthly Yearly **Custom**

	High:	Low:	Average:
Temperature:	**97.4** °F	**55.8** °F	**68.2** °F
Dew Point:	**66.6** °F	**54.5** °F	**59.5** °F
Humidity:	98.0%	28.0%	76.5%
Wind Speed:	**2.0**mph from the SW	-	**0.3**mph
Wind Gust:	**200.0**mph from the South	-	-
Wind:	-	-	South
Pressure:	**30.05**in	**29.77**in	-
Precipitation:	**0.00**in		


KCAALAME7 Weather Graph
F
High Temperature
Low Temperature
C
100 90 80 70 60 50 40
38 32 27 21 16 10 4
24 25 26 27 28 29 30 31 01 02 03 04 05 06 07
August
in Hg
Average Barometric Pressure
hPa
30.2 30.0 29.8
1023 1016 1009
mph
Average Wind Speed
Maximum Wind Gust
km/h
225 180 135 90 45 0
362 290 217 145 72 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=KCAALAME7&graphspan=day&month=8&day=7&year=2014

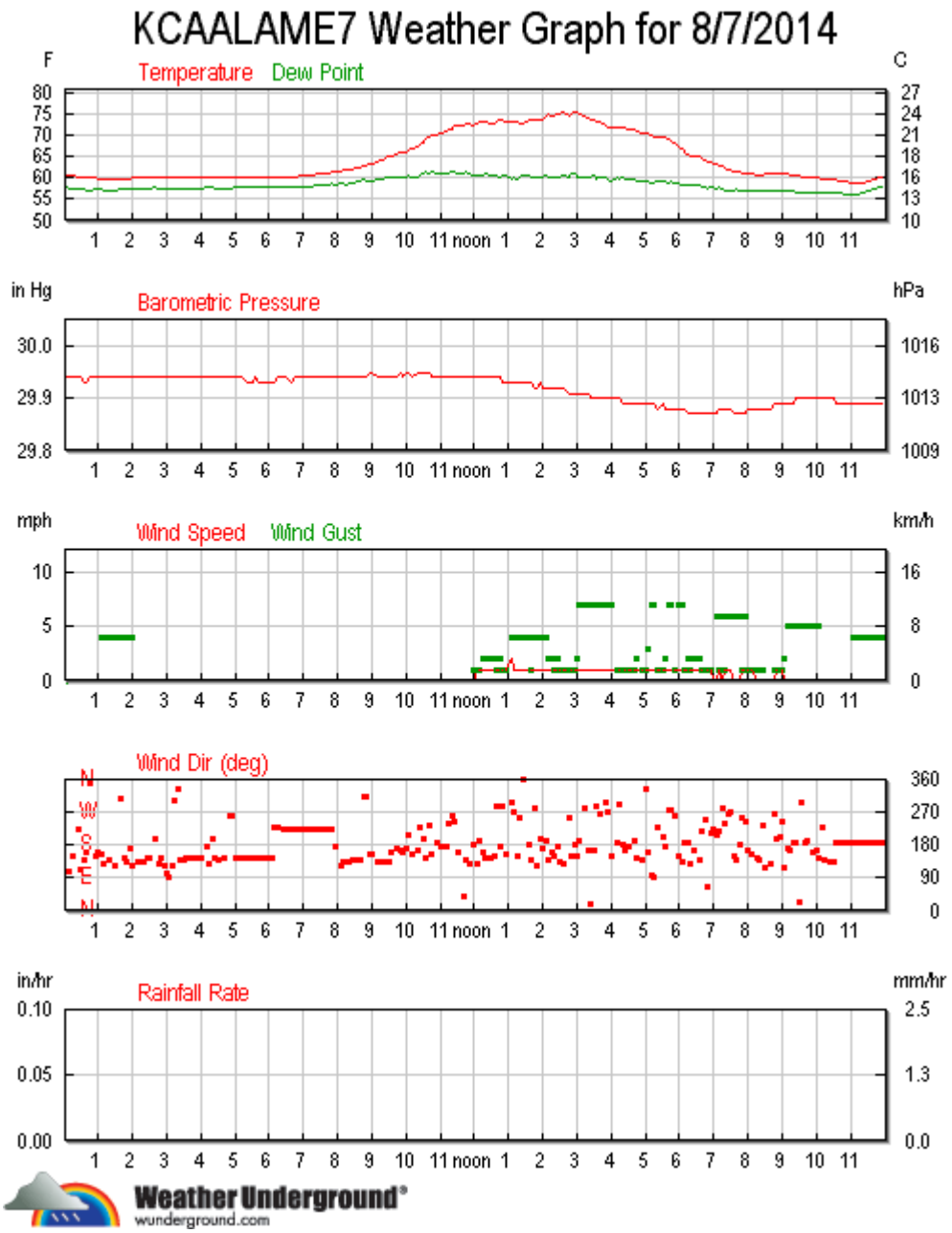
« Previous Day | August 7 2014 View | Next Day »

Daily Weekly Monthly Yearly Custom

	Current:	High:	Low:	Average:
Temperature:	**78.6** °F	**75.9** °F	**58.8** °F	**67.3** °F
Dew Point:	**60.0** °F	**61.6** °F	**56.1** °F	**58.6** °F
Humidity:	53%	92%	59%	81%
Wind Speed:	**1.0**mph	**2.0**mph	-	**0.3**mph
Wind Gust:	**3.0**mph	**7.0**mph	-	-
Wind:	SSE	-	-	SSW
Pressure:	**29.96**in	**29.95**in	**29.87**in	-
Precipitation:	**0.00**in			

Weather History for the Rest of This Month

	High:	Low:	Average:
Temperature:	**83.9** °F	**55.8** °F	**66.2** °F
Dew Point:	**66.6** °F	**53.8** °F	**59.0** °F
Humidity:	98.0%	48.0%	79.2%
Wind Speed:	**2.0**mph from the SSE	-	**0.3**mph
Wind Gust:	**249.0**mph from the ESE	-	-
Wind:	-	-	SSW
Pressure:	**30.05**in	**29.77**in	-
Precipitation:	**0.00**in		

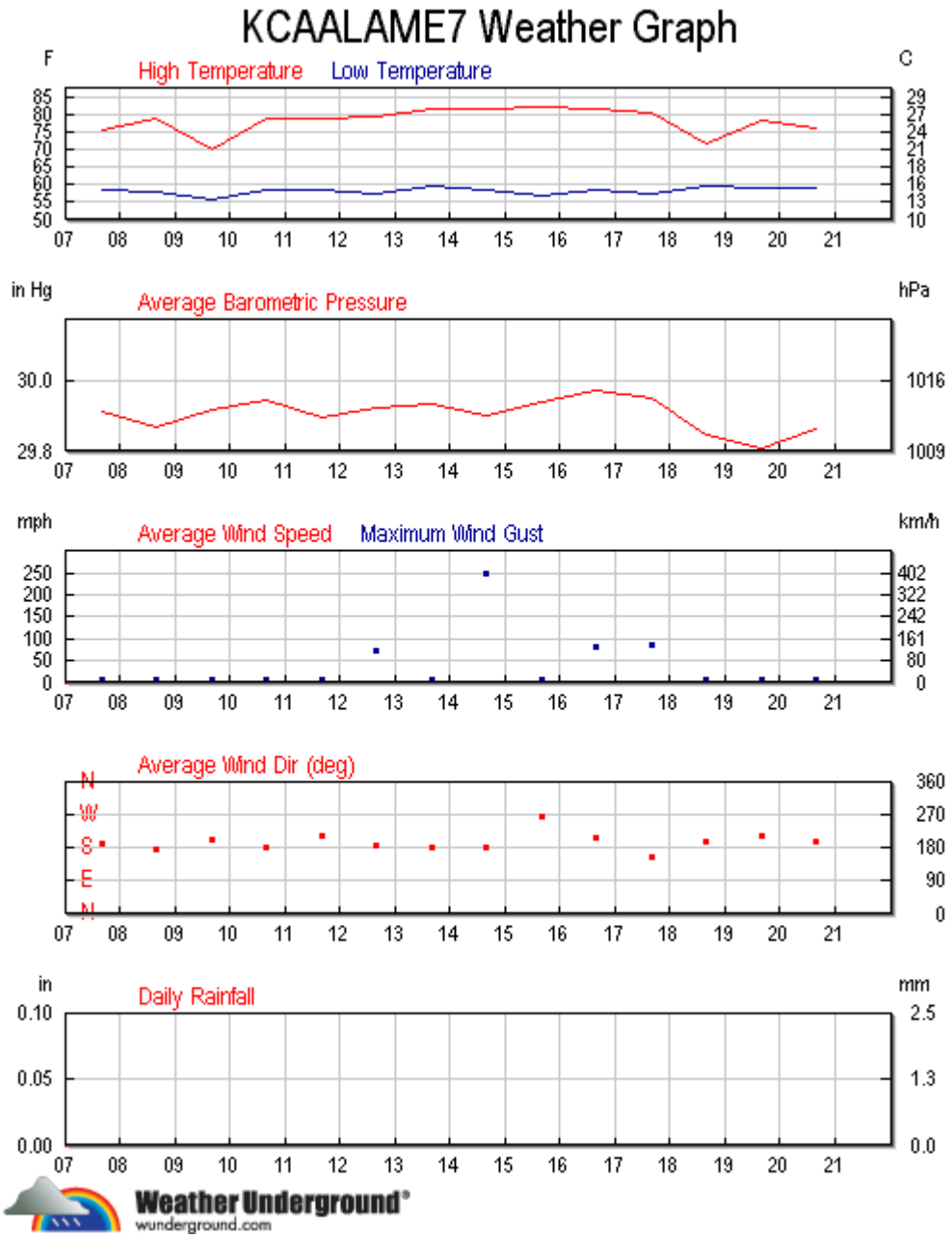

KCAALAME7 Weather Graph for 8/7/2014
F
C
Temperature
Dew Point
80
75
70
65
60
55
50
27
24
21
18
16
13
10
1 2 3 4 5 6 7 8 9 10 11 noon 1 2 3 4 5 6 7 8 9 10 11
in Hg
hPa
Barometric Pressure
30.0
29.9
29.8
1016
1013
1009
1 2 3 4 5 6 7 8 9 10 11 noon 1 2 3 4 5 6 7 8 9 10 11
mph
km/h
Wind Speed
Wind Gust
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
S
N
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
0.10
0.05
0.00
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

http://www.wunderground.com/weatherstation/WXDailyHistory.asp?ID=KCAALAME7&graphspan=custom&month=8&day=7&year=2014&monthend=8&dayend=21&yearend=2014

August 7 2014 - TO - August 21 2014 Go

Daily Weekly Monthly Yearly **Custom**

	High:	Low:	Average:
Temperature:	**83.0** °F	**56.1** °F	**66.0** °F
Dew Point:	**64.1** °F	**53.8** °F	**58.8** °F
Humidity:	97.0%	48.0%	79.1%
Wind Speed:	**2.0**mph from the WNW	-	**0.3**mph
Wind Gust:	**249.0**mph from the ESE	-	-
Wind:	-	-	SSW
Pressure:	**30.02**in	**29.77**in	-
Precipitation:	**0.00**in		


KCAALAME7 Weather Graph
F
High Temperature
Low Temperature
C
85 80 75 70 65 60 55 50
29 27 24 21 18 16 13 10
07 08 09 10 11 12 13 14 15 16 17 18 19 20 21
in Hg
Average Barometric Pressure
hPa
30.0
29.8
1016
1009
mph
Average Wind Speed
Maximum Wind Gust
km/h
250 200 150 100 50 0
402 322 242 161 80 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

APPENDIX C

Laboratory Analytical Reports and Chain of Custody Documentation

- **Air Toxics Work Order # 1407202: Vapor Pin Samples SS1, SS1-DUP, and SS2 Through SS6 TPH-G, MBTEX, and 1,1-DFA Results**
- **Air Toxics Work Order # 14057201: Vapor Pin Samples SS1, SS1-REP, and SS2 Through SS6 Naphthalene and 2-Propanol Results**
- **Air Toxics Work Order # 1407200A: Vapor Pin Shroud Samples SS1 DFA Through SS6 DFA 1,1-DFA Results**
- **Air Toxics Work Order # 1407200B: Vapor Pin Shroud Samples SS1 2-Propanol Through SS6 2-Propanol 2-Propanol Results**
- **Air Toxics Work Order # 1408148: Vapor Pin Samples SS6, SS7, SS7-DUP, SS8, and SS9 TPH-G, MBTEX, and 1,1-DFA Results**
- **Air Toxics Work Order # 14058139: Vapor Pin Samples SS6, SS7, SS7-REP, SS8, and SS9 Naphthalene and 2-Propanol Results**
- **Air Toxics Work Order # 1408140A: Vapor Pin Shroud Samples SS6 DFA Through SS9 DFA 1,1-DFA Results**
- **Air Toxics Work Order # 1408140B: Vapor Pin Shroud Samples SS6 2-Propanol Through SS9 2-Propanol 2-Propanol Results**

eurofins | Air Toxics

7/25/2014
Mr. Paul King
P & D Environmental
55 Santa Clara
Suite 240
Oakland CA 94610

Project Name: 475 LESSER STREET OAKLAND, CA
Project #: 0675
Workorder #: 1407202

Dear Mr. Paul King

The following report includes the data for the above referenced project for sample(s) received on 7/11/2014 at Air Toxics Ltd.

The data and associated QC analyzed by 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

eurofins | Air Toxics

WORK ORDER #: 1407202

Work Order Summary

CLIENT:	Mr. Paul King P & D Environmental 55 Santa Clara Suite 240 Oakland, CA 94610	**BILL TO:**	Mr. Paul King P & D Environmental 55 Santa Clara Suite 240 Oakland, CA 94610
PHONE:	510-658-6916	**P.O. #**	
FAX:	510-834-0772	**PROJECT #**	0675 475 LESSER STREET OAKLAND, CA
DATE RECEIVED:	07/11/2014	**CONTACT:**	Kyle Vagadori
DATE COMPLETED:	07/25/2014		

FRACTION #	NAME	TEST	RECEIPT VAC./PRES.	FINAL PRESSURE
01A	SS1	TO-15	4.7 "Hg	15.1 psi
02A	SS1-DUP	TO-15	5.1 "Hg	14.7 psi
03A	SS2	TO-15	4.7 "Hg	15.1 psi
04A	SS3	TO-15	5.1 "Hg	14.9 psi
05A	SS4	TO-15	3.9 "Hg	14.6 psi
06A	SS5	TO-15	5.7 "Hg	15 psi
07A	SS6	TO-15	4.1 "Hg	15 psi
08A	Lab Blank	TO-15	NA	NA
09A	CCV	TO-15	NA	NA
10A	LCS	TO-15	NA	NA
10AA	LCSD	TO-15	NA	NA

CERTIFIED BY: Heidi Hayes DATE: 07/25/14

Technical Director

Certification numbers: AZ Licensure AZ0775, CA NELAP - 12282CA, NJ NELAP - CA016, NY NELAP - 11291, TX NELAP - T104704434-13-6, UT NELAP CA009332013-4, VA NELAP - 460197, WA NELAP - C935
Name of Accrediting Agency: NELAP/ORELAP (Oregon Environmental Laboratory Accreditation Program)
Accreditation number: CA300005, Effective date: 10/18/2013, Expiration date: 10/17/2014.
Eurofins Air Toxics Inc.. 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# 1407202

Seven 1 Liter Summa Canister samples were received on July 11, 2014. 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

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.

A single point calibration for TPH referenced to Gasoline was performed for each daily analytical batch. Recovery is reported as 100% in the associated results for each CCV.

Dilution was performed on samples SS4 and SS5 due to matrix interference.

1,1-Difluoroethane was detected at concentrations less than 5 times the reporting limit in sample SS3. Because the preceding sample contained concentrations of 1,1-Difluoroethane exceeding the calibration range, the result for this compound in sample SS3 may be biased high.

The recovery of surrogate 1,2-Dichloroethane-d4 in samples SS4 and SS5 was outside laboratory control limits due to high level hydrocarbon matrix interference. The surrogate recovery is flagged.

Definition of Data Qualifying Flags

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

B - Compound present in laboratory blank greater than reporting limit (background subtraction 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, LOD, or MDL value. See data page for project specific U-flag definition.

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

N - The identification is based on presumptive evidence.

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

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

eurofins | Air Toxics

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

Client Sample ID: SS1

Lab ID#: 1407202-01A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Toluene	1.2	3.1	4.5	12
m,p-Xylene	1.2	2.9	5.2	12
o-Xylene	1.2	1.4	5.2	6.0
TPH ref. to Gasoline (MW=100)	60	94	240	380
1,1-Difluoroethane	4.8	7300 E	13	20000 E

Client Sample ID: SS1-DUP

Lab ID#: 1407202-02A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Toluene	1.2	1.4	4.5	5.2
m,p-Xylene	1.2	3.1	5.2	13
o-Xylene	1.2	1.4	5.2	5.9
TPH ref. to Gasoline (MW=100)	60	73	250	300
1,1-Difluoroethane	4.8	17000 E	13	45000 E

Client Sample ID: SS2

Lab ID#: 1407202-03A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Toluene	1.2	22	4.5	84
Ethyl Benzene	1.2	2.0	5.2	8.7
m,p-Xylene	1.2	6.5	5.2	28
o-Xylene	1.2	1.4	5.2	6.0
TPH ref. to Gasoline (MW=100)	60	900	240	3700
1,1-Difluoroethane	4.8	1000 E	13	2700 E

Client Sample ID: SS3

Lab ID#: 1407202-04A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Toluene	1.2	1.7	4.6	6.3

eurofins | Air Toxics

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

Client Sample ID: SS3

Lab ID#: 1407202-04A

Ethyl Benzene	1.2	6.9	5.3	30
m,p-Xylene	1.2	28	5.3	120
o-Xylene	1.2	13	5.3	58
TPH ref. to Gasoline (MW=100)	61	180	250	760
1,1-Difluoroethane	4.9	6.1	13	16

Client Sample ID: SS4

Lab ID#: 1407202-05A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Methyl tert-butyl ether	57	68	200	240
Benzene	57	1100	180	3400
Toluene	57	130	210	480
TPH ref. to Gasoline (MW=100)	2800	660000	12000	2700000
1,1-Difluoroethane	230	1900	620	5200

Client Sample ID: SS5

Lab ID#: 1407202-06A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Toluene	89	120	340	440
TPH ref. to Gasoline (MW=100)	4400	530000	18000	2200000

Client Sample ID: SS6

Lab ID#: 1407202-07A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
m,p-Xylene	1.2	1.3	5.1	5.6
1,1-Difluoroethane	4.7	2200 E	13	5900 E

eurofins | Air Toxics

Client Sample ID: SS1

Lab ID#: 1407202-01A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**3072417**	**Date of Collection:**	**7/10/14 11:40:00 AM**
Dil. Factor:	**2.40**	**Date of Analysis:**	**7/24/14 05:15 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Methyl tert-butyl ether	1.2	Not Detected	4.3	Not Detected
Benzene	1.2	Not Detected	3.8	Not Detected
Toluene	1.2	3.1	4.5	12
Ethyl Benzene	1.2	Not Detected	5.2	Not Detected
m,p-Xylene	1.2	2.9	5.2	12
o-Xylene	1.2	1.4	5.2	6.0
TPH ref. to Gasoline (MW=100)	60	94	240	380
1,1-Difluoroethane	4.8	7300 E	13	20000 E

E = Exceeds instrument calibration range.

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	98	70-130
1,2-Dichloroethane-d4	108	70-130
4-Bromofluorobenzene	106	70-130

eurofins | Air Toxics

Client Sample ID: SS1-DUP

Lab ID#: 1407202-02A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**3072418**	**Date of Collection:**	**7/10/14 11:40:00 AM**
Dil. Factor:	**2.41**	**Date of Analysis:**	**7/24/14 05:43 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Methyl tert-butyl ether	1.2	Not Detected	4.3	Not Detected
Benzene	1.2	Not Detected	3.8	Not Detected
Toluene	1.2	1.4	4.5	5.2
Ethyl Benzene	1.2	Not Detected	5.2	Not Detected
m,p-Xylene	1.2	3.1	5.2	13
o-Xylene	1.2	1.4	5.2	5.9
TPH ref. to Gasoline (MW=100)	60	73	250	300
1,1-Difluoroethane	4.8	17000 E	13	45000 E

E = Exceeds instrument calibration range.

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	98	70-130
1,2-Dichloroethane-d4	111	70-130
4-Bromofluorobenzene	107	70-130

eurofins | Air Toxics

Client Sample ID: SS2

Lab ID#: 1407202-03A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**3072419**	**Date of Collection:**	**7/10/14 12:26:00 PM**
Dil. Factor:	**2.40**	**Date of Analysis:**	**7/24/14 06:11 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Methyl tert-butyl ether	1.2	Not Detected	4.3	Not Detected
Benzene	1.2	Not Detected	3.8	Not Detected
Toluene	1.2	22	4.5	84
Ethyl Benzene	1.2	2.0	5.2	8.7
m,p-Xylene	1.2	6.5	5.2	28
o-Xylene	1.2	1.4	5.2	6.0
TPH ref. to Gasoline (MW=100)	60	900	240	3700
1,1-Difluoroethane	4.8	1000 E	13	2700 E

E = Exceeds instrument calibration range.

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	99	70-130
1,2-Dichloroethane-d4	108	70-130
4-Bromofluorobenzene	106	70-130

eurofins | Air Toxics

Client Sample ID: SS3

Lab ID#: 1407202-04A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**3072420**	**Date of Collection:**	**7/10/14 12:52:00 PM**
Dil. Factor:	**2.43**	**Date of Analysis:**	**7/24/14 06:39 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Methyl tert-butyl ether	1.2	Not Detected	4.4	Not Detected
Benzene	1.2	Not Detected	3.9	Not Detected
Toluene	1.2	1.7	4.6	6.3
Ethyl Benzene	1.2	6.9	5.3	30
m,p-Xylene	1.2	28	5.3	120
o-Xylene	1.2	13	5.3	58
TPH ref. to Gasoline (MW=100)	61	180	250	760
1,1-Difluoroethane	4.9	6.1	13	16

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	97	70-130
1,2-Dichloroethane-d4	110	70-130
4-Bromofluorobenzene	108	70-130

eurofins | Air Toxics

Client Sample ID: SS4

Lab ID#: 1407202-05A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**3072422**	**Date of Collection:**	**7/10/14 3:13:00 PM**
Dil. Factor:	**114**	**Date of Analysis:**	**7/24/14 07:32 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Methyl tert-butyl ether	57	68	200	240
Benzene	57	1100	180	3400
Toluene	57	130	210	480
Ethyl Benzene	57	Not Detected	250	Not Detected
m,p-Xylene	57	Not Detected	250	Not Detected
o-Xylene	57	Not Detected	250	Not Detected
TPH ref. to Gasoline (MW=100)	2800	660000	12000	2700000
1,1-Difluoroethane	230	1900	620	5200

Q = Exceeds Quality Control limits of 70% to 130%, due to matrix effects.

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	96	70-130
1,2-Dichloroethane-d4	147 Q	70-130
4-Bromofluorobenzene	107	70-130

eurofins | Air Toxics

Client Sample ID: SS5

Lab ID#: 1407202-06A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**3072423**	**Date of Collection:**	**7/10/14 3:40:00 PM**
Dil. Factor:	**178**	**Date of Analysis:**	**7/24/14 07:55 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Methyl tert-butyl ether	89	Not Detected	320	Not Detected
Benzene	89	Not Detected	280	Not Detected
Toluene	89	120	340	440
Ethyl Benzene	89	Not Detected	390	Not Detected
m,p-Xylene	89	Not Detected	390	Not Detected
o-Xylene	89	Not Detected	390	Not Detected
TPH ref. to Gasoline (MW=100)	4400	530000	18000	2200000
1,1-Difluoroethane	360	Not Detected	960	Not Detected

Q = Exceeds Quality Control limits of 70% to 130%, due to matrix effects.

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	94	70-130
1,2-Dichloroethane-d4	135 Q	70-130
4-Bromofluorobenzene	107	70-130

eurofins | Air Toxics

Client Sample ID: SS6

Lab ID#: 1407202-07A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**3072421**	**Date of Collection:**	**7/10/14 4:09:00 PM**
Dil. Factor:	**2.34**	**Date of Analysis:**	**7/24/14 07:06 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Methyl tert-butyl ether	1.2	Not Detected	4.2	Not Detected
Benzene	1.2	Not Detected	3.7	Not Detected
Toluene	1.2	Not Detected	4.4	Not Detected
Ethyl Benzene	1.2	Not Detected	5.1	Not Detected
m,p-Xylene	1.2	1.3	5.1	5.6
o-Xylene	1.2	Not Detected	5.1	Not Detected
TPH ref. to Gasoline (MW=100)	58	Not Detected	240	Not Detected
1,1-Difluoroethane	4.7	2200 E	13	5900 E

E = Exceeds instrument calibration range.

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	101	70-130
1,2-Dichloroethane-d4	109	70-130
4-Bromofluorobenzene	106	70-130

eurofins | Air Toxics

Client Sample ID: Lab Blank

Lab ID#: 1407202-08A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**3072407a**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 7/24/14 10:52 AM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Methyl tert-butyl ether	0.50	Not Detected	1.8	Not Detected
Benzene	0.50	Not Detected	1.6	Not Detected
Toluene	0.50	Not Detected	1.9	Not Detected
Ethyl Benzene	0.50	Not Detected	2.2	Not Detected
m,p-Xylene	0.50	Not Detected	2.2	Not Detected
o-Xylene	0.50	Not Detected	2.2	Not Detected
TPH ref. to Gasoline (MW=100)	25	Not Detected	100	Not Detected
1,1-Difluoroethane	2.0	Not Detected	5.4	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	96	70-130
1,2-Dichloroethane-d4	105	70-130
4-Bromofluorobenzene	105	70-130

eurofins | Air Toxics

Client Sample ID: CCV

Lab ID#: 1407202-09A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**3072402**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 7/24/14 08:43 AM**	

Compound	%Recovery
Methyl tert-butyl ether	103
Benzene	100
Toluene	100
Ethyl Benzene	102
m,p-Xylene	105
o-Xylene	105
TPH ref. to Gasoline (MW=100)	100
1,1-Difluoroethane	87

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	98	70-130
1,2-Dichloroethane-d4	105	70-130
4-Bromofluorobenzene	104	70-130

eurofins | Air Toxics

Client Sample ID: LCS

Lab ID#: 1407202-10A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**3072403**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 7/24/14 09:08 AM**	

Compound	%Recovery	Method Limits
Methyl tert-butyl ether	99	70-130
Benzene	97	70-130
Toluene	97	70-130
Ethyl Benzene	98	70-130
m,p-Xylene	101	70-130
o-Xylene	99	70-130
TPH ref. to Gasoline (MW=100)	Not Spiked	
1,1-Difluoroethane	Not Spiked	

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	97	70-130
1,2-Dichloroethane-d4	101	70-130
4-Bromofluorobenzene	108	70-130

eurofins | Air Toxics

Client Sample ID: LCSD

Lab ID#: 1407202-10AA

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**3072404**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 7/24/14 09:33 AM**	

Compound	%Recovery	Method Limits
Methyl tert-butyl ether	100	70-130
Benzene	98	70-130
Toluene	94	70-130
Ethyl Benzene	99	70-130
m,p-Xylene	100	70-130
o-Xylene	98	70-130
TPH ref. to Gasoline (MW=100)	Not Spiked	
1,1-Difluoroethane	Not Spiked	

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	97	70-130
1,2-Dichloroethane-d4	104	70-130
4-Bromofluorobenzene	106	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: 0675

PROJECT NAME: 475 LESSER STREET OAKLAND, CA

SAMPLED BY: (PRINTED & SIGNATURE) MICHAEL BASS-DESCHENES

	SAMPLE NUMBER	DATE	TIME	TYPE	SAMPLE LOCATION: INITIAL VACUUM	FINAL VACUUM	PID (PPM)	NUMBER OF CONTAINERS	ANALYSIS(ES): TPH-G	MTBE	BTEX AND	DFA (TRACER GAS) BY EPA TO-15					PRESERVATIVE	REMARKS
01A	SS1	7/10/14	1021 30 1140 16	AIR	-28	-5	0	1	X	X	X	X					NONE	NORMAL TAT
02A	SS1-DUP	"	1021 30 1140 16	"	-28	-5	0	1	X	X	X	X					"	
03A	SS2	"	1218 02 1226 08	"	-29	-5	0.6	1	X	X	X	X					"	
04A	SS3	"	1244 30 1252 30	"	-29	-5	0.1	1	X	X	X	X					"	
05A	SS4	"	1526 19 1513 22	"	-29	-5	193	1	X	X	X	X					"	
06A	SS5	"	1533 00 1540 20	"	-29	-5	64	1	X	X	X	X					"	
07A	SS6	"	1602 00 1609 25	"	-28	-5	0	1	X	X	X	X					"	

Custody Seal Intact?
Y N None Temp NA
EAT Droplet

RELINQUISHED BY: (SIGNATURE) Michael Bass-Deschenes	DATE 7-11-14	TIME 1252	RECEIVED BY: (SIGNATURE)	Total No. of Samples (This Shipment) 7 / Total No. of Containers (This Shipment) 7	LABORATORY: AIR TOXICS, INC. EUROFINS	
RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	LABORATORY CONTACT: KYLE VAGATORY	LABORATORY PHONE NUMBER: (916) 605-3339	
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: 1 LITER SUMMAS

140709

eurofins | Air Toxics

7/28/2014
Mr. Paul King
P & D Environmental
55 Santa Clara
Suite 240
Oakland CA 94610

Project Name: 475 LESSER STREET OAKLAND, CA
Project #: 0675
Workorder #: 1407201

Dear Mr. Paul King

The following report includes the data for the above referenced project for sample(s) received on 7/11/2014 at Air Toxics Ltd.

The data and associated QC analyzed by Modified TO-17 VI 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

eurofins | Air Toxics

WORK ORDER #: 1407201

Work Order Summary

CLIENT:	Mr. Paul King P & D Environmental 55 Santa Clara Suite 240 Oakland, CA 94610	**BILL TO:**	Mr. Paul King P & D Environmental 55 Santa Clara Suite 240 Oakland, CA 94610
PHONE:	510-658-6916	**P.O. #**	
FAX:	510-834-0772	**PROJECT #**	0675 475 LESSER STREET OAKLAND, CA
DATE RECEIVED:	07/11/2014	**CONTACT:**	Kyle Vagadori
DATE COMPLETED:	07/25/2014		

FRACTION #	NAME	TEST
01A	SS1	Modified TO-17 VI
02A	SS1 REP	Modified TO-17 VI
03A	SS2	Modified TO-17 VI
04A	SS3	Modified TO-17 VI
05A	SS4	Modified TO-17 VI
06A	SS5	Modified TO-17 VI
07A	SS6	Modified TO-17 VI
08A	Lab Blank	Modified TO-17 VI
09A	CCV	Modified TO-17 VI
10A	LCS	Modified TO-17 VI
10AA	LCSD	Modified TO-17 VI

CERTIFIED BY: Heidi Rayos DATE: 07/28/14

Technical Director

Certification numbers: AZ Licensure AZ0775, CA NELAP - 12282CA, NJ NELAP - CA016, NY NELAP - 11291, TX NELAP - T104704434-13-6, UT NELAP CA009332013-4, VA NELAP - 460197, WA NELAP - C935
Name of Accrediting Agency: NELAP/ORELAP (Oregon Environmental Laboratory Accreditation Program)
Accreditation number: CA300005, Effective date: 10/18/2013, Expiration date: 10/17/2014.
Eurofins Air Toxics Inc.. certifies that the test results contained in this report meet all requirements of the NELAC standards

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 956
(916) 985-1000 . (800) 985-5955 . FAX (916) 985-1020

LABORATORY NARRATIVE
Modified EPA Method TO-17 (VI Tubes)
P & D Environmental
Workorder# 1407201

Seven TO-17 VI Tube samples were received on July 11, 2014. The laboratory performed the analysis via modified EPA Method TO-17 using GC/MS in the full scan mode. TO-17 'VI' sorbent tubes are thermally desorbed onto a secondary trap. The trap is thermally desorbed to elute the components into the GC/MS system for compound separation and detection.

A modification that may be applied to EPA Method TO-17 at the client's discretion is the requirement to transport sorbent tubes at 4 deg C. Laboratory studies demonstrate a high level of stability for VOCs on the TO-17 'VI' tube at room temperature for periods of up to 14 days. Tubes can be shipped to and from the field site at ambient conditions as long as the 14-day sample hold time is upheld. Trip blanks and field surrogate spikes are used as additional control measures to monitor recovery and background contribution during tube transport.

Since the TO-17 VI application significantly extends the scope of target compounds addressed in EPA Method TO-15 and TO-17, the laboratory has implemented several method modifications outlined in the table below. Specific project requirements may over-ride the laboratory modifications.

Requirement	***TO-17***	***ATL Modifications***
Initial Calibration	%RSD</=30% with 2 allowed out up to 40%	VOC list: %RSD</=30% with 2 allowed out up to 40% SVOC list: %RSD</=30% with 2 allowed out up to 40%
Daily Calibration	%D for each target compound within +/-30%.	Fluorene, Phenanthrene, Anthracene, Fluoranthene, and Pyrene within +/-40%D
Audit Accuracy	70-130%	Second source recovery limits for Fluorene, Phenanthrene, Anthracene, Fluoranthene, and Pyrene = 60-140%.
Distributed Volume Pairs	Collection of distributed volume pairs required for monitoring ambient air to insure high quality.	If site is well-characterized or performance previously verified, single tube sampling may be appropriate. Distributed pairs may be impractical for soil gas collection due to configuration and volume constraints.

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

Due to instrument malfunction, sample SS6 failed to inject the sample from the secondary trap onto the GC/MS after sample tube desorption. In order to preserve the sample, the laboratory desorbed the secondary trap onto the GC/MS on the next shift when the error was identified.

Since the sample was concentrated on the secondary trap for an extended period of time, the recovery of all internal standards in sample SS6 was outside method acceptance limits of 60-140%. Recoveries for IS Bromochloromethane was high at 302%, for IS 1,4-Difluorobenzene was high at 407%, for IS

Chlorobenzene-d5 was high at 396%, and for for IS Bromochloromethane was high at 401%. The associated field surrogates recovered within expected limits. The field surrogate recovery suggests that the high internal standard recovery resulted in increased sensitivity across all compounds, and the accuracy of the reported data is not greatly affected. Data is reported as qualified. (Corrective Action Request #E5JH163532).

A sampling volume of 0.200 L was used to convert ng to ug/m3 for the associated Lab Blank.

Field surrogate 1,2-Dichloroethane-d4 in samples SS4 and SS5 did not recover due to sever matrix interference. As a result, surrogate recovery could not be reported.

Definition of Data Qualifying Flags

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

B - Compound present in blank (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, LOD, or MDL value. See data page for project specific U-flag definition.
UJ- Non-detected compound associated with low bias in the CCV
N - The identification is based on presumptive evidence.

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

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

eurofins | Air Toxics

Summary of Detected Compounds
EPA METHOD TO-17

Client Sample ID: SS1

Lab ID#: 1407201-01A

No Detections Were Found.

Client Sample ID: SS1 REP

Lab ID#: 1407201-02A

No Detections Were Found.

Client Sample ID: SS2

Lab ID#: 1407201-03A

No Detections Were Found.

Client Sample ID: SS3

Lab ID#: 1407201-04A

No Detections Were Found.

Client Sample ID: SS4

Lab ID#: 1407201-05A

No Detections Were Found.

Client Sample ID: SS5

Lab ID#: 1407201-06A

No Detections Were Found.

Client Sample ID: SS6

Lab ID#: 1407201-07A

No Detections Were Found.

eurofins | Air Toxics

Client Sample ID: SS1

Lab ID#: 1407201-01A

EPA METHOD TO-17

File Name:	**18071418**	**Date of Extraction: NA**	**Date of Collection: 7/10/14 11:52:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 7/15/14 01:34 AM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
2-Propanol	49	240	Not Detected	Not Detected
Naphthalene	0.50	2.5	Not Detected	Not Detected

Air Sample Volume(L): 0.200
Container Type: TO-17 VI Tube

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	88	50-150
Toluene-d8	93	50-150
Naphthalene-d8	100	50-150

eurofins | Air Toxics

Client Sample ID: SS1 REP

Lab ID#: 1407201-02A

EPA METHOD TO-17

File Name:	**18071419**	**Date of Extraction: NA**	**Date of Collection: 7/10/14 11:58:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 7/15/14 02:16 AM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
2-Propanol	49	240	Not Detected	Not Detected
Naphthalene	0.50	2.5	Not Detected	Not Detected

Air Sample Volume(L): 0.200
Container Type: TO-17 VI Tube

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	88	50-150
Toluene-d8	90	50-150
Naphthalene-d8	105	50-150

eurofins | Air Toxics

Client Sample ID: SS2

Lab ID#: 1407201-03A

EPA METHOD TO-17

File Name:	**18071420**	**Date of Extraction: NA**	**Date of Collection: 7/10/14 12:34:00 PM**
Dil. Factor:	**1.00**		**Date of Analysis: 7/15/14 02:58 AM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
2-Propanol	49	240	Not Detected	Not Detected
Naphthalene	0.50	2.5	Not Detected	Not Detected

Air Sample Volume(L): 0.200
Container Type: TO-17 VI Tube

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	89	50-150
Toluene-d8	95	50-150
Naphthalene-d8	86	50-150

eurofins | Air Toxics

Client Sample ID: SS3

Lab ID#: 1407201-04A

EPA METHOD TO-17

File Name:	**18071421**	**Date of Extraction: NA**	**Date of Collection: 7/10/14 12:59:00 PM**
Dil. Factor:	**1.00**		**Date of Analysis: 7/15/14 03:40 AM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
2-Propanol	49	240	Not Detected	Not Detected
Naphthalene	0.50	2.5	Not Detected	Not Detected

Air Sample Volume(L): 0.200
Container Type: TO-17 VI Tube

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	97	50-150
Toluene-d8	97	50-150
Naphthalene-d8	107	50-150

eurofins | Air Toxics

Client Sample ID: SS4

Lab ID#: 1407201-05A

EPA METHOD TO-17

File Name:	**18071422**	**Date of Extraction: NA**	**Date of Collection: 7/10/14 1:20:00 PM**
Dil. Factor:	**1.00**		**Date of Analysis: 7/15/14 04:22 AM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
2-Propanol	49	240	Not Detected	Not Detected
Naphthalene	0.50	2.5	Not Detected	Not Detected

Air Sample Volume(L): 0.200
Container Type: TO-17 VI Tube

Surrogates	%Recovery	Method Limits
Toluene-d8	59	50-150
Naphthalene-d8	76	50-150

eurofins | Air Toxics

Client Sample ID: SS5

Lab ID#: 1407201-06A

EPA METHOD TO-17

File Name:	**18071423**	**Date of Extraction: NA**	**Date of Collection: 7/10/14 3:47:00 PM**
Dil. Factor:	**1.00**		**Date of Analysis: 7/15/14 05:04 AM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
2-Propanol	49	240	Not Detected	Not Detected
Naphthalene	0.50	2.5	Not Detected	Not Detected

Air Sample Volume(L): 0.200
Container Type: TO-17 VI Tube

Surrogates	%Recovery	Method Limits
Toluene-d8	87	50-150
Naphthalene-d8	95	50-150

eurofins | Air Toxics

Client Sample ID: SS6

Lab ID#: 1407201-07A

EPA METHOD TO-17

File Name:	**18071425**	**Date of Extraction: NA**	**Date of Collection: 7/10/14 4:15:00 PM**
Dil. Factor:	**1.00**		**Date of Analysis: 7/15/14 09:00 AM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
2-Propanol	49	240	Not Detected	Not Detected
Naphthalene	0.50	2.5	Not Detected	Not Detected

Air Sample Volume(L): 0.200
Container Type: TO-17 VI Tube

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	92	50-150
Toluene-d8	94	50-150
Naphthalene-d8	106	50-150

eurofins | Air Toxics

Client Sample ID: Lab Blank

Lab ID#: 1407201-08A

EPA METHOD TO-17

File Name:	**18071407**	**Date of Extraction: NA**	**Date of Collection: NA**
Dil. Factor:	**1.00**		**Date of Analysis: 7/14/14 05:06 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
2-Propanol	49	240	Not Detected	Not Detected
Naphthalene	0.50	2.5	Not Detected	Not Detected

Air Sample Volume(L): 0.200
Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	79	50-150
Toluene-d8	78	50-150
Naphthalene-d8	78	50-150

eurofins | Air Toxics

Client Sample ID: CCV

Lab ID#: 1407201-09A

EPA METHOD TO-17

File Name:	**18071403**	**Date of Extraction: NA**	**Date of Collection: NA**
Dil. Factor:	**1.00**		**Date of Analysis: 7/14/14 11:31 AM**

Compound	%Recovery
2-Propanol	84
Naphthalene	100

Air Sample Volume(L): 1.00

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	95	50-150
Toluene-d8	89	50-150
Naphthalene-d8	98	50-150

eurofins | Air Toxics

Client Sample ID: LCS

Lab ID#: 1407201-10A

EPA METHOD TO-17

File Name:	**18071406**	**Date of Extraction: NA**	**Date of Collection: NA**
Dil. Factor:	**1.00**		**Date of Analysis: 7/14/14 03:30 PM**

Compound	%Recovery	Method Limits
2-Propanol	78	70-130
Naphthalene	85	70-130

Air Sample Volume(L): 1.00

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	88	50-150
Toluene-d8	77	50-150
Naphthalene-d8	81	50-150

eurofins | Air Toxics

Client Sample ID: LCSD

Lab ID#: 1407201-10AA

EPA METHOD TO-17

File Name:	**18071405**	**Date of Extraction: NA**	**Date of Collection: NA**
Dil. Factor:	**1.00**		**Date of Analysis: 7/14/14 12:58 PM**

Compound	%Recovery	Method Limits
2-Propanol	83	70-130
Naphthalene	99	70-130

Air Sample Volume(L): 1.00

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	91	50-150
Toluene-d8	91	50-150
Naphthalene-d8	98	50-150

CHAIN OF CUSTODY RECORD

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

PROJECT NUMBER: 0675

PROJECT NAME: 475 LESSER STREET OAKLAND, CA

SAMPLED BY: (PRINTED & SIGNATURE) Michael Ross Deschenes

	SAMPLE NUMBER	DATE	TIME	TYPE	SAMPLE LOCATION	NUMBER OF CONTAINERS	NAPHTHALENE AND	1,2,3-TRIMETHYLBENZENE EPA TO-17	PRESERVATIVE	REMARKS
01A	SS1	7/10/14	[illegible]	Air		1	X	X	ICE	NORMAL TAT
02A	SS1 REP	"	[illegible]	"		1	X	X	"	
03A	SS2	"	[illegible]	"		1	X	X	"	
04A	SS3	"	[illegible]	"		1	X	X	"	
05A	SS4	"	[illegible]	"		1	X	X	"	
06A	SS5	"	[illegible]	"		1	X	X	"	
07A	SS6	"	[illegible]	"		1	X	X	"	↓ ↓

Custody Seal Intact? Y N None Temp 18°C

RELINQUISHED BY: (SIGNATURE) Michael Ross Deschenes DATE 7/11/14 TIME 1232 RECEIVED BY: (SIGNATURE) [signature]

Total No. of Samples (This Shipment) 7

Total No. of Containers (This Shipment) 7

LABORATORY: AIR TOXICS INC. EUROFINS

RELINQUISHED BY: (SIGNATURE) DATE TIME RECEIVED BY: (SIGNATURE)

LABORATORY CONTACT: Kyle Vagadori

LABORATORY PHONE NUMBER: (916) 605-3339

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: SORBENT TUBES

1407201

eurofins | Air Toxics

7/24/2014
Mr. Paul King
P & D Environmental
55 Santa Clara
Suite 240
Oakland CA 94610

Project Name: 475 LESSER STREET OAKLAND, CA
Project #: 0675
Workorder #: 1407200A

Dear Mr. Paul King

The following report includes the data for the above referenced project for sample(s) received on 7/11/2014 at Air Toxics Ltd.

The data and associated QC analyzed by Modified TO-15 (5&20 ppbv) 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

eurofins | Air Toxics

WORK ORDER #: 1407200A

Work Order Summary

CLIENT:	Mr. Paul King P & D Environmental 55 Santa Clara Suite 240 Oakland, CA 94610	**BILL TO:**	Mr. Paul King P & D Environmental 55 Santa Clara Suite 240 Oakland, CA 94610
PHONE:	510-658-6916	**P.O. #**	
FAX:	510-834-0772	**PROJECT #**	0675 475 LESSER STREET OAKLAND, CA
DATE RECEIVED:	07/11/2014	**CONTACT:**	Kyle Vagadori
DATE COMPLETED:	07/24/2014		

FRACTION #	NAME	TEST	RECEIPT VAC./PRES.	FINAL PRESSURE
01A	SS1 DFA	Modified TO-15 (5&20 ppbv	Tedlar Bag	Tedlar Bag
03A	SS2 DFA	Modified TO-15 (5&20 ppbv	Tedlar Bag	Tedlar Bag
05A	SS3 DFA	Modified TO-15 (5&20 ppbv	Tedlar Bag	Tedlar Bag
07A	SS4 DFA	Modified TO-15 (5&20 ppbv	Tedlar Bag	Tedlar Bag
09A	SS5 DFA	Modified TO-15 (5&20 ppbv	Tedlar Bag	Tedlar Bag
11A	SS6 DFA	Modified TO-15 (5&20 ppbv	Tedlar Bag	Tedlar Bag
12A	Lab Blank	Modified TO-15 (5&20 ppbv	NA	NA
13A	CCV	Modified TO-15 (5&20 ppbv	NA	NA

CERTIFIED BY:  DATE: 07/24/14

Technical Director

Certification numbers: AZ Licensure AZ0775, CA NELAP - 12282CA, NJ NELAP - CA016, NY NELAP - 11291, TX NELAP - T104704434-13-6, UT NELAP CA009332013-4, VA NELAP - 460197, WA NELAP - C935
Name of Accrediting Agency: NELAP/ORELAP (Oregon Environmental Laboratory Accreditation Program)
Accreditation number: CA300005, Effective date: 10/18/2013, Expiration date: 10/17/2014.
Eurofins Air Toxics Inc.. 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 Soil Gas
P & D Environmental
Workorder# 1407200A

Six Client Tedlar Bag samples were received on July 11, 2014. The laboratory performed analysis via EPA Method TO-15 using GC/MS in the full scan mode. The method involves concentrating up to 50 mLs of air. The concentrated aliquot is then flash vaporized and swept through a water management system to remove water vapor. Following dehumidification, the sample passes directly into the GC/MS for analysis.

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

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

Dilution was performed on all of the samples due to the presence of high level target species.

Method TO-15 is validated for samples collected in specially treated canisters. As such, the use of Tedlar bags for sample collection is outside the scope of the method and not recommended for ambient or indoor air samples. It is the responsibility of the data user to determine the usability of TO-15 results generated from Tedlar bags.

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, LOD, or MDL value. See data page for project specific U-flag definition.

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

N - The identification is based on presumptive evidence.

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

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue

eurofins | Air Toxics

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

Client Sample ID: SS1 DFA

Lab ID#: 1407200A-01A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1-Difluoroethane	330000	6100000	900000	16000000

Client Sample ID: SS2 DFA

Lab ID#: 1407200A-03A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1-Difluoroethane	140000	6200000	380000	17000000

Client Sample ID: SS3 DFA

Lab ID#: 1407200A-05A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1-Difluoroethane	250000	10000000	680000	28000000

Client Sample ID: SS4 DFA

Lab ID#: 1407200A-07A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1-Difluoroethane	330000	4800000	900000	13000000

Client Sample ID: SS5 DFA

Lab ID#: 1407200A-09A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1-Difluoroethane	330000	5400000	900000	15000000

Client Sample ID: SS6 DFA

Lab ID#: 1407200A-11A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1-Difluoroethane	330000	2200000	900000	6000000

eurofins | Air Toxics

Client Sample ID: SS1 DFA

Lab ID#: 1407200A-01A

EPA METHOD TO-15 GC/MS

File Name:	**14071131**	**Date of Collection: 7/10/14 10:23:00 AM**	
Dil. Factor:	**16700**	**Date of Analysis: 7/11/14 10:39 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1-Difluoroethane	330000	6100000	900000	16000000

Container Type: Client Tedlar Bag

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	130	70-130
Toluene-d8	90	70-130
4-Bromofluorobenzene	114	70-130

eurofins | Air Toxics

Client Sample ID: SS2 DFA

Lab ID#: 1407200A-03A

EPA METHOD TO-15 GC/MS

File Name:	**14071130**	**Date of Collection: 7/10/14 12:19:00 PM**	
Dil. Factor:	**7140**	**Date of Analysis: 7/11/14 10:20 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1-Difluoroethane	140000	6200000	380000	17000000

Container Type: Client Tedlar Bag

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	126	70-130
Toluene-d8	93	70-130
4-Bromofluorobenzene	110	70-130

eurofins | Air Toxics

Client Sample ID: SS3 DFA

Lab ID#: 1407200A-05A

EPA METHOD TO-15 GC/MS

File Name:	**14071132**	**Date of Collection: 7/10/14 12:44:00 PM**	
Dil. Factor:	**12500**	**Date of Analysis: 7/11/14 10:59 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1-Difluoroethane	250000	10000000	680000	28000000

Container Type: Client Tedlar Bag

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	126	70-130
Toluene-d8	91	70-130
4-Bromofluorobenzene	108	70-130

eurofins | Air Toxics

Client Sample ID: SS4 DFA

Lab ID#: 1407200A-07A

EPA METHOD TO-15 GC/MS

File Name:	**14071133**	**Date of Collection: 7/10/14 3:04:00 PM**	
Dil. Factor:	**16700**	**Date of Analysis: 7/11/14 11:20 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1-Difluoroethane	330000	4800000	900000	13000000

Container Type: Client Tedlar Bag

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	126	70-130
Toluene-d8	92	70-130
4-Bromofluorobenzene	112	70-130

eurofins | Air Toxics

Client Sample ID: SS5 DFA

Lab ID#: 1407200A-09A

EPA METHOD TO-15 GC/MS

File Name:	**14071134**	**Date of Collection: 7/10/14 3:29:00 PM**	
Dil. Factor:	**16700**	**Date of Analysis: 7/11/14 11:42 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1-Difluoroethane	330000	5400000	900000	15000000

Container Type: Client Tedlar Bag

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	129	70-130
Toluene-d8	91	70-130
4-Bromofluorobenzene	113	70-130

eurofins | Air Toxics

Client Sample ID: SS6 DFA

Lab ID#: 1407200A-11A

EPA METHOD TO-15 GC/MS

File Name:	**14071135**	**Date of Collection: 7/10/14 3:59:00 PM**	
Dil. Factor:	**16700**	**Date of Analysis: 7/12/14 12:03 AM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1-Difluoroethane	330000	2200000	900000	6000000

Container Type: Client Tedlar Bag

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	129	70-130
Toluene-d8	91	70-130
4-Bromofluorobenzene	107	70-130

eurofins | Air Toxics

Client Sample ID: Lab Blank

Lab ID#: 1407200A-12A

EPA METHOD TO-15 GC/MS

File Name:	**14071109a**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 7/11/14 11:08 AM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1-Difluoroethane	20	Not Detected	54	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	124	70-130
Toluene-d8	92	70-130
4-Bromofluorobenzene	108	70-130

eurofins | Air Toxics

Client Sample ID: CCV

Lab ID#: 1407200A-13A

EPA METHOD TO-15 GC/MS

File Name:	**14071102**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 7/11/14 08:00 AM**	

Compound	%Recovery
1,1-Difluoroethane	96

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	117	70-130
Toluene-d8	91	70-130
4-Bromofluorobenzene	114	70-130

CHAIN OF CUSTODY REC

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

PROJECT NUMBER: 0675

PROJECT NAME: 475 LESSER STREET OAKLAND, CA

SAMPLED BY: (PRINTED & SIGNATURE) MICHAEL BASS-DESCHENES

	SAMPLE NUMBER	DATE	TIME	TYPE	SAMPLE LOCATION	NUMBER OF CONTAINERS	ANALYSIS(ES): DFA	2-PROPANOL	PRESERVATIVE	REMARKS
01A	SS1 DFA	7/10/14	1023	AIR		1	X	X	NONE	NORMAL TAT
	SS1 2-PROPANOL	"	1145	"		1	X	X	"	
03A	SS2 DFA	7/10/14	1219	AIR		1	X	X	"	
	SS2 2-PROPANOL	"	1230	"		1	X	X	"	
05A	SS3 DFA	7/10/14	1244	AIR		1	X	X	"	
	SS3 2-PROPANOL	"	1256	"		1	X	X	"	
07A	SS4 DFA	7/10/14	1504	AIR		1	X	X	"	
	SS4 2-PROPANOL	"	1516	"		1	X	X	"	
09A	SS5 DFA	7/10/14	1529	AIR		1	X	X	"	
	SS5 2-PROPANOL	"	1543	"		1	X	X	"	
11A	SS6 DFA	"	1559	"		1	X	X	"	
	SS6 2-PROPANOL	"	1611	"		1	X	X	"	

RELINQUISHED BY: (SIGNATURE) — DATE 7-11-14 — TIME 1252 — RECEIVED BY: (SIGNATURE)

Total No. of Samples (This Shipment): 12
Total No. of Containers (This Shipment): 12

LABORATORY: AIR TOXICS, INC EUROFINS

RELINQUISHED BY: (SIGNATURE) — DATE — TIME — RECEIVED BY: (SIGNATURE)

LABORATORY CONTACT: KYLE VAGADORI

LABORATORY PHONE NUMBER: (916) 605-3339

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: TEDLAR BAGS.

Custody Seal Intact?
Y N None Temp NA

EAT Droplet

1407200

eurofins | Air Toxics

7/21/2014
Mr. Paul King
P & D Environmental
55 Santa Clara
Suite 240
Oakland CA 94610

Project Name: 475 LESSER STREET OAKLAND, CA
Project #: 0675
Workorder #: 1407200B

Dear Mr. Paul King

The following report includes the data for the above referenced project for sample(s) received on 7/11/2014 at Air Toxics Ltd.

The data and associated QC analyzed by Modified TO-15 (5&20 ppbv) 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

eurofins | Air Toxics

WORK ORDER #: 1407200B

Work Order Summary

CLIENT:	Mr. Paul King P & D Environmental 55 Santa Clara Suite 240 Oakland, CA 94610	**BILL TO:**	Mr. Paul King P & D Environmental 55 Santa Clara Suite 240 Oakland, CA 94610
PHONE:	510-658-6916	**P.O. #**	
FAX:	510-834-0772	**PROJECT #**	0675 475 LESSER STREET OAKLAND, CA
DATE RECEIVED:	07/11/2014	**CONTACT:**	Kyle Vagadori
DATE COMPLETED:	07/21/2014		

FRACTION #	NAME	TEST	RECEIPT VAC./PRES.	FINAL PRESSURE
02A	SS1 2-PROPANOL	Modified TO-15 (5&20 ppbv	Tedlar Bag	Tedlar Bag
04A	SS2 2-PROPANOL	Modified TO-15 (5&20 ppbv	Tedlar Bag	Tedlar Bag
06A	SS3 2-PROPANOL	Modified TO-15 (5&20 ppbv	Tedlar Bag	Tedlar Bag
08A	SS4 2-PROPANOL	Modified TO-15 (5&20 ppbv	Tedlar Bag	Tedlar Bag
10A	SS5 2-PROPANOL	Modified TO-15 (5&20 ppbv	Tedlar Bag	Tedlar Bag
12A	SS6 2-PROPANOL	Modified TO-15 (5&20 ppbv	Tedlar Bag	Tedlar Bag
13A	Lab Blank	Modified TO-15 (5&20 ppbv	NA	NA
14A	CCV	Modified TO-15 (5&20 ppbv	NA	NA
15A	LCS	Modified TO-15 (5&20 ppbv	NA	NA
15AA	LCSD	Modified TO-15 (5&20 ppbv	NA	NA

CERTIFIED BY: Heidi Mayo DATE: 07/21/14

Technical Director

Certification numbers: AZ Licensure AZ0775, CA NELAP - 12282CA, NJ NELAP - CA016, NY NELAP - 11291, TX NELAP - T104704434-13-6, UT NELAP CA009332013-4, VA NELAP - 460197, WA NELAP - C935
Name of Accrediting Agency: NELAP/ORELAP (Oregon Environmental Laboratory Accreditation Program)
Accreditation number: CA300005, Effective date: 10/18/2013, Expiration date: 10/17/2014.
Eurofins Air Toxics Inc.. 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 Soil Gas
P & D Environmental
Workorder# 1407200B

Six Client Tedlar Bag samples were received on July 11, 2014. The laboratory performed analysis via EPA Method TO-15 using GC/MS in the full scan mode. The method involves concentrating up to 50 mLs of air. The concentrated aliquot is then flash vaporized and swept through a water management system to remove water vapor. Following dehumidification, the sample passes directly into the GC/MS for analysis.

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

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

Dilution was performed on all of the samples due to the presence of high level target species.

Method TO-15 is validated for samples collected in specially treated canisters. As such, the use of Tedlar bags for sample collection is outside the scope of the method and not recommended for ambient or indoor air samples. It is the responsibility of the data user to determine the usability of TO-15 results generated from Tedlar bags.

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, LOD, or MDL value. See data page for project specific U-flag definition.

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

N - The identification is based on presumptive evidence.

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

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue

eurofins | Air Toxics

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

Client Sample ID: SS1 2-PROPANOL

Lab ID#: 1407200B-02A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
2-Propanol	6700	1100000	16000	2700000

Client Sample ID: SS2 2-PROPANOL

Lab ID#: 1407200B-04A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
2-Propanol	2000	86000	4900	210000

Client Sample ID: SS3 2-PROPANOL

Lab ID#: 1407200B-06A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
2-Propanol	4000	630000	9800	1500000

Client Sample ID: SS4 2-PROPANOL

Lab ID#: 1407200B-08A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
2-Propanol	6700	1400000	16000	3500000

Client Sample ID: SS5 2-PROPANOL

Lab ID#: 1407200B-10A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
2-Propanol	6700	260000	16000	650000

Client Sample ID: SS6 2-PROPANOL

Lab ID#: 1407200B-12A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
2-Propanol	6700	16000	16000	38000

eurofins | Air Toxics

Client Sample ID: SS1 2-PROPANOL

Lab ID#: 1407200B-02A

EPA METHOD TO-15 GC/MS

File Name:	**14071121**	**Date of Collection: 7/10/14 11:45:00 AM**	
Dil. Factor:	**333**	**Date of Analysis: 7/11/14 06:49 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
2-Propanol	6700	1100000	16000	2700000

Container Type: Client Tedlar Bag

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	118	70-130
Toluene-d8	94	70-130
4-Bromofluorobenzene	108	70-130

eurofins | Air Toxics

Client Sample ID: SS2 2-PROPANOL

Lab ID#: 1407200B-04A

EPA METHOD TO-15 GC/MS

File Name:	**14071120**	**Date of Collection: 7/10/14 12:30:00 PM**	
Dil. Factor:	**100**	**Date of Analysis: 7/11/14 06:19 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
2-Propanol	2000	86000	4900	210000

Container Type: Client Tedlar Bag

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	125	70-130
Toluene-d8	90	70-130
4-Bromofluorobenzene	107	70-130

eurofins | Air Toxics

Client Sample ID: SS3 2-PROPANOL

Lab ID#: 1407200B-06A

EPA METHOD TO-15 GC/MS

File Name:	**14071124**	**Date of Collection: 7/10/14 12:56:00 PM**	
Dil. Factor:	**200**	**Date of Analysis: 7/11/14 08:02 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
2-Propanol	4000	630000	9800	1500000

Container Type: Client Tedlar Bag

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	128	70-130
Toluene-d8	91	70-130
4-Bromofluorobenzene	112	70-130

eurofins | Air Toxics

Client Sample ID: SS4 2-PROPANOL

Lab ID#: 1407200B-08A

EPA METHOD TO-15 GC/MS

File Name:	**14071125**	**Date of Collection: 7/10/14 3:16:00 PM**	
Dil. Factor:	**333**	**Date of Analysis: 7/11/14 08:22 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
2-Propanol	6700	1400000	16000	3500000

Container Type: Client Tedlar Bag

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	122	70-130
Toluene-d8	93	70-130
4-Bromofluorobenzene	110	70-130

eurofins | Air Toxics

Client Sample ID: SS5 2-PROPANOL

Lab ID#: 1407200B-10A

EPA METHOD TO-15 GC/MS

File Name:	**14071126**	**Date of Collection: 7/10/14 3:43:00 PM**	
Dil. Factor:	**333**	**Date of Analysis: 7/11/14 08:58 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
2-Propanol	6700	260000	16000	650000

Container Type: Client Tedlar Bag

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	121	70-130
Toluene-d8	92	70-130
4-Bromofluorobenzene	107	70-130

eurofins | Air Toxics

Client Sample ID: SS6 2-PROPANOL

Lab ID#: 1407200B-12A

EPA METHOD TO-15 GC/MS

File Name:	**14071127**	**Date of Collection: 7/10/14 4:11:00 PM**	
Dil. Factor:	**333**	**Date of Analysis: 7/11/14 09:18 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
2-Propanol	6700	16000	16000	38000

Container Type: Client Tedlar Bag

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	129	70-130
Toluene-d8	91	70-130
4-Bromofluorobenzene	112	70-130

eurofins | Air Toxics

Client Sample ID: Lab Blank

Lab ID#: 1407200B-13A

EPA METHOD TO-15 GC/MS

File Name:	**14071109**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 7/11/14 11:08 AM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
2-Propanol	20	Not Detected	49	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	124	70-130
Toluene-d8	92	70-130
4-Bromofluorobenzene	108	70-130

eurofins | Air Toxics

Client Sample ID: CCV

Lab ID#: 1407200B-14A

EPA METHOD TO-15 GC/MS

File Name:	**14071102**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 7/11/14 08:00 AM**	

Compound	%Recovery
2-Propanol	107

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	117	70-130
Toluene-d8	91	70-130
4-Bromofluorobenzene	114	70-130

eurofins | Air Toxics

Client Sample ID: LCS

Lab ID#: 1407200B-15A

EPA METHOD TO-15 GC/MS

File Name:	**14071103**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 7/11/14 08:26 AM**	

Compound	%Recovery	Method Limits
2-Propanol	113	70-130

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	121	70-130
Toluene-d8	91	70-130
4-Bromofluorobenzene	116	70-130

eurofins | Air Toxics

Client Sample ID: LCSD

Lab ID#: 1407200B-15AA

EPA METHOD TO-15 GC/MS

File Name:	**14071104**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 7/11/14 08:47 AM**	

Compound	%Recovery	Method Limits
2-Propanol	100	70-130

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	116	70-130
Toluene-d8	92	70-130
4-Bromofluorobenzene	116	70-130

CHAIN OF CUSTODY REC

PAGE 1 OF 1

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

PROJECT NUMBER:	PROJECT NAME:
0675	475 LESSER STREET OAKLAND, CA

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

	SAMPLE NUMBER	DATE	TIME	TYPE	SAMPLE LOCATION	NUMBER OF CONTAINERS	ANALYSIS(ES): DFA	2-PROPANOL	PRESERVATIVE	REMARKS
	S51 DFA	7/10/14	1023	AIR		1	X	X	NONE	NORMAL TAT
02A	S51 2-PROPANOL	"	1145	"		1	X	X	"	
	S52 DFA	7/10/14	1219	AIR		1	X	X	"	
04A	S52 2-PROPANOL	"	1230	"		1	X	X	"	
	S53 DFA	7/10/14	1244	AIR		1	X	X	"	
06A	S53 2-PROPANOL	"	1256	"		1	X	X	"	
	S54 DFA	7/10/14	1504	AIR		1	X	X	"	
08A	S54 2-PROPANOL	"	1516	"		1	X	X	"	
	S55 DFA	7/10/14	1529	AIR		1	X	X	"	
10A	S55 2-PROPANOL	"	1543	"		1	X	X	"	
	S56 DFA	"	1559	"		1	X	X	"	
12A	S56 2-PROPANOL	"	1611	"		1	X	X	"	

	DATE	TIME			
RELINQUISHED BY: (SIGNATURE) Michael Bass-Deschenes	7-11-14	1252	RECEIVED BY: (SIGNATURE)	Total No. of Samples (This Shipment)	12
				Total No. of Containers (This Shipment)	12
RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	LABORATORY CONTACT: KYLE UHADDORI	LABORATORY PHONE NUMBER: (916) 985-1000
RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RECEIVED FOR LABORATORY BY: (SIGNATURE)	SAMPLE ANALYSIS REQUEST SHEET ATTACHED: ( ) YES (X) NO	

LABORATORY: AIR TOXICS, INC EUROFINS

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

REMARKS: TEDLAR BAGS.

Custody Seal Intact?
Y N None Temp NA

EAT Dropoff

1407200

eurofins | Air Toxics

8/22/2014
Mr. Paul King
P & D Environmental
55 Santa Clara
Suite 240
Oakland CA 94610

Project Name: 475 LESSER STREET OAKLAND, CA
Project #: 0675
Workorder #: 1408148

Dear Mr. Paul King

The following report includes the data for the above referenced project for sample(s) received on 8/8/2014 at Air Toxics Ltd.

The data and associated QC analyzed by 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

eurofins | Air Toxics

WORK ORDER #: 1408148

Work Order Summary

CLIENT:	Mr. Paul King P & D Environmental 55 Santa Clara Suite 240 Oakland, CA 94610	**BILL TO:**	Mr. Paul King P & D Environmental 55 Santa Clara Suite 240 Oakland, CA 94610
PHONE:	510-658-6916	**P.O. #**	
FAX:	510-834-0772	**PROJECT #**	0675 475 LESSER STREET OAKLAND, CA
DATE RECEIVED:	08/08/2014	**CONTACT:**	Kyle Vagadori
DATE COMPLETED:	08/22/2014		

FRACTION #	NAME	TEST	RECEIPT VAC./PRES.	FINAL PRESSURE
01A	SS6	TO-15	4.3 "Hg	14.9 psi
02A	SS7	TO-15	5.1 "Hg	15 psi
03A	SS7-DUP	TO-15	5.1 "Hg	14.9 psi
04A	SS8	TO-15	3.7 "Hg	14.7 psi
05A	SS9	TO-15	4.5 "Hg	15 psi
06A	Lab Blank	TO-15	NA	NA
06B	Lab Blank	TO-15	NA	NA
07A	CCV	TO-15	NA	NA
07B	CCV	TO-15	NA	NA
08A	LCS	TO-15	NA	NA
08AA	LCSD	TO-15	NA	NA
08B	LCS	TO-15	NA	NA
08BB	LCSD	TO-15	NA	NA

CERTIFIED BY: Heidi Mayo DATE: 08/22/14

Technical Director

Certification numbers: AZ Licensure AZ0775, NJ NELAP - CA016, NY NELAP - 11291,
TX NELAP - T104704434-13-6, UT NELAP CA009332014-5, VA NELAP - 460197, WA NELAP - C935
Name of Accrediting Agency: NELAP/ORELAP (Oregon Environmental Laboratory Accreditation Program)
Accreditation number: CA300005, Effective date: 10/18/2013, Expiration date: 10/17/2014.
Eurofins Air Toxics Inc.. 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# 1408148

Five 1 Liter Summa Canister samples were received on August 08, 2014. 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

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.

A single point calibration for TPH referenced to Gasoline was performed for each daily analytical batch. Recovery is reported as 100% in the associated results for each CCV.

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, LOD, or MDL value. See data page for project specific U-flag definition.

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

N - The identification is based on presumptive evidence.

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

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue

eurofins | Air Toxics

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

Client Sample ID: SS6

Lab ID#: 1408148-01A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Toluene	1.2	1.5	4.4	5.6
m,p-Xylene	1.2	1.4	5.1	6.2

Client Sample ID: SS7

Lab ID#: 1408148-02A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1-Difluoroethane	4.9	2600 E	13	6900 E

Client Sample ID: SS7-DUP

Lab ID#: 1408148-03A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1-Difluoroethane	4.9	860 E	13	2300 E

Client Sample ID: SS8

Lab ID#: 1408148-04A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1-Difluoroethane	4.6	2800 E	12	7500 E

Client Sample ID: SS9

Lab ID#: 1408148-05A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Toluene	1.2	1.7	4.5	6.5
m,p-Xylene	1.2	1.9	5.2	8.2
1,1-Difluoroethane	4.8	54	13	150

eurofins | Air Toxics

Client Sample ID: SS6

Lab ID#: 1408148-01A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**3081218**	**Date of Collection: 8/7/14 11:13:00 AM**	
Dil. Factor:	**2.35**	**Date of Analysis: 8/12/14 10:59 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Methyl tert-butyl ether	1.2	Not Detected	4.2	Not Detected
Benzene	1.2	Not Detected	3.8	Not Detected
Toluene	1.2	1.5	4.4	5.6
Ethyl Benzene	1.2	Not Detected	5.1	Not Detected
m,p-Xylene	1.2	1.4	5.1	6.2
o-Xylene	1.2	Not Detected	5.1	Not Detected
TPH ref. to Gasoline (MW=100)	59	Not Detected	240	Not Detected
1,1-Difluoroethane	4.7	Not Detected	13	Not Detected

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	99	70-130
1,2-Dichloroethane-d4	116	70-130
4-Bromofluorobenzene	102	70-130

eurofins | Air Toxics

Client Sample ID: SS7

Lab ID#: 1408148-02A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**3081219**	**Date of Collection: 8/7/14 1:25:00 PM**	
Dil. Factor:	**2.43**	**Date of Analysis: 8/12/14 11:27 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Methyl tert-butyl ether	1.2	Not Detected	4.4	Not Detected
Benzene	1.2	Not Detected	3.9	Not Detected
Toluene	1.2	Not Detected	4.6	Not Detected
Ethyl Benzene	1.2	Not Detected	5.3	Not Detected
m,p-Xylene	1.2	Not Detected	5.3	Not Detected
o-Xylene	1.2	Not Detected	5.3	Not Detected
TPH ref. to Gasoline (MW=100)	61	Not Detected	250	Not Detected
1,1-Difluoroethane	4.9	2600 E	13	6900 E

E = Exceeds instrument calibration range.

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	99	70-130
1,2-Dichloroethane-d4	113	70-130
4-Bromofluorobenzene	109	70-130

eurofins | Air Toxics

Client Sample ID: SS7-DUP

Lab ID#: 1408148-03A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**3081220**	**Date of Collection:**	**8/7/14 1:25:00 PM**
Dil. Factor:	**2.43**	**Date of Analysis:**	**8/12/14 11:55 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Methyl tert-butyl ether	1.2	Not Detected	4.4	Not Detected
Benzene	1.2	Not Detected	3.9	Not Detected
Toluene	1.2	Not Detected	4.6	Not Detected
Ethyl Benzene	1.2	Not Detected	5.3	Not Detected
m,p-Xylene	1.2	Not Detected	5.3	Not Detected
o-Xylene	1.2	Not Detected	5.3	Not Detected
TPH ref. to Gasoline (MW=100)	61	Not Detected	250	Not Detected
1,1-Difluoroethane	4.9	860 E	13	2300 E

E = Exceeds instrument calibration range.

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	103	70-130
1,2-Dichloroethane-d4	106	70-130
4-Bromofluorobenzene	112	70-130

eurofins | Air Toxics

Client Sample ID: SS8

Lab ID#: 1408148-04A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**3081322**	**Date of Collection:**	**8/7/14 2:46:00 PM**
Dil. Factor:	**2.28**	**Date of Analysis:**	**8/13/14 10:47 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Methyl tert-butyl ether	1.1	Not Detected	4.1	Not Detected
Benzene	1.1	Not Detected	3.6	Not Detected
Toluene	1.1	Not Detected	4.3	Not Detected
Ethyl Benzene	1.1	Not Detected	4.9	Not Detected
m,p-Xylene	1.1	Not Detected	5.0	Not Detected
o-Xylene	1.1	Not Detected	5.0	Not Detected
TPH ref. to Gasoline (MW=100)	57	Not Detected	230	Not Detected
1,1-Difluoroethane	4.6	2800 E	12	7500 E

E = Exceeds instrument calibration range.

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	96	70-130
1,2-Dichloroethane-d4	116	70-130
4-Bromofluorobenzene	100	70-130

eurofins | Air Toxics

Client Sample ID: SS9

Lab ID#: 1408148-05A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**3081222**	**Date of Collection: 8/7/14 3:33:00 PM**	
Dil. Factor:	**2.38**	**Date of Analysis: 8/13/14 12:49 AM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Methyl tert-butyl ether	1.2	Not Detected	4.3	Not Detected
Benzene	1.2	Not Detected	3.8	Not Detected
Toluene	1.2	1.7	4.5	6.5
Ethyl Benzene	1.2	Not Detected	5.2	Not Detected
m,p-Xylene	1.2	1.9	5.2	8.2
o-Xylene	1.2	Not Detected	5.2	Not Detected
TPH ref. to Gasoline (MW=100)	60	Not Detected	240	Not Detected
1,1-Difluoroethane	4.8	54	13	150

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	101	70-130
1,2-Dichloroethane-d4	119	70-130
4-Bromofluorobenzene	118	70-130

eurofins | Air Toxics

Client Sample ID: Lab Blank

Lab ID#: 1408148-06A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**3081208c**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 8/12/14 03:03 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Methyl tert-butyl ether	0.50	Not Detected	1.8	Not Detected
Benzene	0.50	Not Detected	1.6	Not Detected
Toluene	0.50	Not Detected	1.9	Not Detected
Ethyl Benzene	0.50	Not Detected	2.2	Not Detected
m,p-Xylene	0.50	Not Detected	2.2	Not Detected
o-Xylene	0.50	Not Detected	2.2	Not Detected
TPH ref. to Gasoline (MW=100)	25	Not Detected	100	Not Detected
1,1-Difluoroethane	2.0	Not Detected	5.4	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	98	70-130
1,2-Dichloroethane-d4	103	70-130
4-Bromofluorobenzene	108	70-130

eurofins | Air Toxics

Client Sample ID: Lab Blank

Lab ID#: 1408148-06B

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**3081308a**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 8/13/14 03:01 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Methyl tert-butyl ether	0.50	Not Detected	1.8	Not Detected
Benzene	0.50	Not Detected	1.6	Not Detected
Toluene	0.50	Not Detected	1.9	Not Detected
Ethyl Benzene	0.50	Not Detected	2.2	Not Detected
m,p-Xylene	0.50	Not Detected	2.2	Not Detected
o-Xylene	0.50	Not Detected	2.2	Not Detected
TPH ref. to Gasoline (MW=100)	25	Not Detected	100	Not Detected
1,1-Difluoroethane	2.0	Not Detected	5.4	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	96	70-130
1,2-Dichloroethane-d4	107	70-130
4-Bromofluorobenzene	94	70-130

eurofins | Air Toxics

Client Sample ID: CCV

Lab ID#: 1408148-07A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**3081202**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 8/12/14 10:07 AM**	

Compound	%Recovery
Methyl tert-butyl ether	114
Benzene	90
Toluene	94
Ethyl Benzene	103
m,p-Xylene	105
o-Xylene	104
TPH ref. to Gasoline (MW=100)	100
1,1-Difluoroethane	100

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	100	70-130
1,2-Dichloroethane-d4	110	70-130
4-Bromofluorobenzene	106	70-130

eurofins | Air Toxics

Client Sample ID: CCV

Lab ID#: 1408148-07B

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**3081302**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 8/13/14 11:06 AM**	

Compound	%Recovery
Methyl tert-butyl ether	97
Benzene	97
Toluene	96
Ethyl Benzene	97
m,p-Xylene	104
o-Xylene	101
TPH ref. to Gasoline (MW=100)	100
1,1-Difluoroethane	97

Container Type: NA - Not Applicable

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

eurofins | Air Toxics

Client Sample ID: LCS

Lab ID#: 1408148-08A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**3081203**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 8/12/14 10:33 AM**	

Compound	%Recovery	Method Limits
Methyl tert-butyl ether	92	70-130
Benzene	102	70-130
Toluene	93	70-130
Ethyl Benzene	96	70-130
m,p-Xylene	99	70-130
o-Xylene	99	70-130
TPH ref. to Gasoline (MW=100)	Not Spiked	
1,1-Difluoroethane	Not Spiked	

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	100	70-130
1,2-Dichloroethane-d4	106	70-130
4-Bromofluorobenzene	111	70-130

eurofins | Air Toxics

Client Sample ID: LCSD

Lab ID#: 1408148-08AA

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**3081204**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 8/12/14 10:59 AM**	

Compound	%Recovery	Method Limits
Methyl tert-butyl ether	97	70-130
Benzene	105	70-130
Toluene	105	70-130
Ethyl Benzene	94	70-130
m,p-Xylene	97	70-130
o-Xylene	91	70-130
TPH ref. to Gasoline (MW=100)	Not Spiked	
1,1-Difluoroethane	Not Spiked	

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	109	70-130
1,2-Dichloroethane-d4	112	70-130
4-Bromofluorobenzene	110	70-130

eurofins | Air Toxics

Client Sample ID: LCS

Lab ID#: 1408148-08B

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**3081304**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 8/13/14 11:59 AM**	

Compound	%Recovery	Method Limits
Methyl tert-butyl ether	90	70-130
Benzene	83	70-130
Toluene	79	70-130
Ethyl Benzene	94	70-130
m,p-Xylene	93	70-130
o-Xylene	92	70-130
TPH ref. to Gasoline (MW=100)	Not Spiked	
1,1-Difluoroethane	Not Spiked	

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	83	70-130
1,2-Dichloroethane-d4	109	70-130
4-Bromofluorobenzene	108	70-130

eurofins | Air Toxics

Client Sample ID: LCSD

Lab ID#: 1408148-08BB

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**3081305**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 8/13/14 12:41 PM**	

Compound	%Recovery	Method Limits
Methyl tert-butyl ether	101	70-130
Benzene	84	70-130
Toluene	79	70-130
Ethyl Benzene	94	70-130
m,p-Xylene	96	70-130
o-Xylene	96	70-130
TPH ref. to Gasoline (MW=100)	Not Spiked	
1,1-Difluoroethane	Not Spiked	

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	84	70-130
1,2-Dichloroethane-d4	107	70-130
4-Bromofluorobenzene	109	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: 0675

PROJECT NAME: 475 LESSER STREET OAKLAND, CA

SAMPLED BY: (PRINTED & SIGNATURE)
MICHAEL BASS-DESCHENES

SAMPLE NUMBER	DATE	TIME	TYPE	SAMPLE LOCATION	INIT. VAC.	FINAL VAC.	FLOW (L/min)	NUMBER OF CONTAINERS	ANALYSIS(ES): TPH-g	MTBE	BTEX AND	DFA (TRACER GAS) ALL BY EPA TO-15	PRESERVATIVE	REMARKS
01A SS6	8/7/14	1007-1113	SV GAS		-30	-5	0.3	1	X	X	X	X	NONE	NORMAL TAT
02A SS7		1315-1325			-30	-5	0	1	X	X	X	X		
03A SS7-DUP		1315-1327			-30	-5	0	1	X	X	X	X		
04A SS8		1335-1347			-30	-5	0	1	X	X	X	X		
05A SS9		1326-1333			-30	-5	0	1	X	X	X	X		

Custody Seal Intact?
Y N (None) Temp NA
EDF Dropoff

	DATE	TIME			
RELINQUISHED BY: (SIGNATURE)	8/8/14	1229	RECEIVED BY: (SIGNATURE)	Total No. of Samples (This Shipment): 5	LABORATORY: EUROFINS/AIR TOXICS, INC.
RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	Total No. of Containers (This Shipment): 5	LABORATORY CONTACT: KYLE VAGADORI
RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RECEIVED FOR LABORATORY BY: (SIGNATURE)		LABORATORY PHONE NUMBER: (916) 985-3339
					SAMPLE ANALYSIS REQUEST SHEET ATTACHED: ( ) YES (✓) NO

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

REMARKS: 1 LITER SUMMAS.

1408148

8/21/2014
Mr. Paul King
P & D Environmental
55 Santa Clara
Suite 240
Oakland CA 94610

Project Name: 475 LESSER STREET OAKLAND, CA
Project #: 0675
Workorder #: 1408139

Dear Mr. Paul King

The following report includes the data for the above referenced project for sample(s) received on 8/8/2014 at Air Toxics Ltd.

The data and associated QC analyzed by Modified TO-17 VI 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

eurofins | Air Toxics

WORK ORDER #: 1408139

Work Order Summary

CLIENT:	Mr. Paul King P & D Environmental 55 Santa Clara Suite 240 Oakland, CA 94610	**BILL TO:**	Mr. Paul King P & D Environmental 55 Santa Clara Suite 240 Oakland, CA 94610
PHONE:	510-658-6916	**P.O. #**	
FAX:	510-834-0772	**PROJECT #**	0675 475 LESSER STREET OAKLAND, CA
DATE RECEIVED:	08/08/2014	**CONTACT:**	Kyle Vagadori
DATE COMPLETED:	08/20/2014		

FRACTION #	NAME	TEST
01A	SS6	Modified TO-17 VI
02A	SS7	Modified TO-17 VI
03A	SS7-REP	Modified TO-17 VI
04A	SS8	Modified TO-17 VI
05A	SS9	Modified TO-17 VI
06A	Lab Blank	Modified TO-17 VI
07A	CCV	Modified TO-17 VI
08A	LCS	Modified TO-17 VI
08AA	LCSD	Modified TO-17 VI

CERTIFIED BY: Heidi Rayos DATE: 08/21/14

Technical Director

Certification numbers: AZ Licensure AZ0775, NJ NELAP - CA016, NY NELAP - 11291,
TX NELAP - T104704434-13-6, UT NELAP CA009332014-5, VA NELAP - 460197, WA NELAP - C935
Name of Accrediting Agency: NELAP/ORELAP (Oregon Environmental Laboratory Accreditation Program)
Accreditation number: CA300005, Effective date: 10/18/2013, Expiration date: 10/17/2014.
Eurofins Air Toxics Inc.. certifies that the test results contained in this report meet all requirements of the NELAC standards

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 956
(916) 985-1000 . (800) 985-5955 . FAX (916) 985-1020

LABORATORY NARRATIVE
Modified EPA Method TO-17 (VI Tubes)
P & D Environmental
Workorder# 1408139

Five TO-17 VI Tube samples were received on August 08, 2014. The laboratory performed the analysis via modified EPA Method TO-17 using GC/MS in the full scan mode. TO-17 'VI' sorbent tubes are thermally desorbed onto a secondary trap. The trap is thermally desorbed to elute the components into the GC/MS system for compound separation and detection.

A modification that may be applied to EPA Method TO-17 at the client's discretion is the requirement to transport sorbent tubes at 4 deg C. Laboratory studies demonstrate a high level of stability for VOCs on the TO-17 'VI' tube at room temperature for periods of up to 14 days. Tubes can be shipped to and from the field site at ambient conditions as long as the 14-day sample hold time is upheld. Trip blanks and field surrogate spikes are used as additional control measures to monitor recovery and background contribution during tube transport.

Since the TO-17 VI application significantly extends the scope of target compounds addressed in EPA Method TO-15 and TO-17, the laboratory has implemented several method modifications outlined in the table below. Specific project requirements may over-ride the laboratory modifications.

Requirement	***TO-17***	***ATL Modifications***
Initial Calibration	%RSD</=30% with 2 allowed out up to 40%	VOC list: %RSD</=30% with 2 allowed out up to 40% SVOC list: %RSD</=30% with 2 allowed out up to 40%
Daily Calibration	%D for each target compound within +/-30%.	Fluorene, Phenanthrene, Anthracene, Fluoranthene, and Pyrene within +/-40%D
Audit Accuracy	70-130%	Second source recovery limits for Fluorene, Phenanthrene, Anthracene, Fluoranthene, and Pyrene = 60-140%.
Distributed Volume Pairs	Collection of distributed volume pairs required for monitoring ambient air to insure high quality.	If site is well-characterized or performance previously verified, single tube sampling may be appropriate. Distributed pairs may be impractical for soil gas collection due to configuration and volume constraints.

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

A sampling volume of 0.200 L was used to convert ng to ug/m3 for the associated Lab Blank.

Definition of Data Qualifying Flags

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

B - Compound present in blank (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, LOD, or MDL value. See data page for project specific U-flag definition.

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

N - The identification is based on presumptive evidence.

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

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue

eurofins | Air Toxics

Summary of Detected Compounds
EPA METHOD TO-17

Client Sample ID: SS6

Lab ID#: 1408139-01A

No Detections Were Found.

Client Sample ID: SS7

Lab ID#: 1408139-02A

No Detections Were Found.

Client Sample ID: SS7-REP

Lab ID#: 1408139-03A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Naphthalene	0.50	2.5	1.6	8.1

Client Sample ID: SS8

Lab ID#: 1408139-04A

No Detections Were Found.

Client Sample ID: SS9

Lab ID#: 1408139-05A

No Detections Were Found.

eurofins | Air Toxics

Client Sample ID: SS6

Lab ID#: 1408139-01A

EPA METHOD TO-17

File Name:	**18081215**	**Date of Extraction: NA**	**Date of Collection: 8/7/14 11:19:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 8/13/14 02:37 AM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
2-Propanol	49	240	Not Detected	Not Detected
Naphthalene	0.50	2.5	Not Detected	Not Detected

Air Sample Volume(L): 0.200
Container Type: TO-17 VI Tube

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	99	50-150
Toluene-d8	90	50-150
Naphthalene-d8	90	50-150

eurofins | Air Toxics

Client Sample ID: SS7

Lab ID#: 1408139-02A

EPA METHOD TO-17

File Name:	**18081216**	**Date of Extraction: NA**	**Date of Collection: 8/7/14 1:33:00 PM**
Dil. Factor:	**1.00**		**Date of Analysis: 8/13/14 03:19 AM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
2-Propanol	49	240	Not Detected	Not Detected
Naphthalene	0.50	2.5	Not Detected	Not Detected

Air Sample Volume(L): 0.200
Container Type: TO-17 VI Tube

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	99	50-150
Toluene-d8	91	50-150
Naphthalene-d8	95	50-150

eurofins | Air Toxics

Client Sample ID: SS7-REP

Lab ID#: 1408139-03A

EPA METHOD TO-17

File Name:	**18081217**	**Date of Extraction: NA**	**Date of Collection: 8/7/14 1:41:00 PM**
Dil. Factor:	**1.00**		**Date of Analysis: 8/13/14 04:00 AM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
2-Propanol	49	240	Not Detected	Not Detected
Naphthalene	0.50	2.5	1.6	8.1

Air Sample Volume(L): 0.200
Container Type: TO-17 VI Tube

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	88	50-150
Toluene-d8	89	50-150
Naphthalene-d8	89	50-150

eurofins | Air Toxics

Client Sample ID: SS8

Lab ID#: 1408139-04A

EPA METHOD TO-17

File Name:	**18081218**	**Date of Extraction: NA**	**Date of Collection: 8/7/14 2:46:00 PM**
Dil. Factor:	**1.00**		**Date of Analysis: 8/13/14 04:42 AM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
2-Propanol	49	240	Not Detected	Not Detected
Naphthalene	0.50	2.5	Not Detected	Not Detected

Air Sample Volume(L): 0.200
Container Type: TO-17 VI Tube

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	98	50-150
Toluene-d8	91	50-150
Naphthalene-d8	86	50-150

eurofins | Air Toxics

Client Sample ID: SS9

Lab ID#: 1408139-05A

EPA METHOD TO-17

File Name:	**18081219**	**Date of Extraction: NA**	**Date of Collection: 8/7/14 3:37:00 PM**
Dil. Factor:	**1.00**		**Date of Analysis: 8/13/14 05:23 AM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
2-Propanol	49	240	Not Detected	Not Detected
Naphthalene	0.50	2.5	Not Detected	Not Detected

Air Sample Volume(L): 0.200
Container Type: TO-17 VI Tube

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	95	50-150
Toluene-d8	89	50-150
Naphthalene-d8	98	50-150

eurofins | Air Toxics

Client Sample ID: Lab Blank

Lab ID#: 1408139-06A

EPA METHOD TO-17

File Name:	**18081206**	**Date of Extraction: NA**	**Date of Collection: NA**
Dil. Factor:	**1.00**		**Date of Analysis: 8/12/14 06:06 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
2-Propanol	49	240	Not Detected	Not Detected
Naphthalene	0.50	2.5	Not Detected	Not Detected

Air Sample Volume(L): 0.200

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	90	50-150
Toluene-d8	84	50-150
Naphthalene-d8	93	50-150

eurofins | Air Toxics

Client Sample ID: CCV
Lab ID#: 1408139-07A
EPA METHOD TO-17

File Name:	**18081203**	**Date of Extraction: NA**	**Date of Collection: NA**
Dil. Factor:	**1.00**		**Date of Analysis: 8/12/14 03:33 PM**

Compound	%Recovery
2-Propanol	89
Naphthalene	104

Air Sample Volume(L): 1.00
Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	95	50-150
Toluene-d8	90	50-150
Naphthalene-d8	96	50-150

eurofins | Air Toxics

Client Sample ID: LCS

Lab ID#: 1408139-08A

EPA METHOD TO-17

File Name:	**18081204**	**Date of Extraction: NA**	**Date of Collection: NA**
Dil. Factor:	**1.00**		**Date of Analysis: 8/12/14 04:15 PM**

Compound	%Recovery	Method Limits
2-Propanol	95	70-130
Naphthalene	111	70-130

Air Sample Volume(L): 1.00

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	102	50-150
Toluene-d8	98	50-150
Naphthalene-d8	108	50-150

eurofins | Air Toxics

Client Sample ID: LCSD

Lab ID#: 1408139-08AA

EPA METHOD TO-17

File Name:	**18081205**	**Date of Extraction: NA**	**Date of Collection: NA**
Dil. Factor:	**1.00**		**Date of Analysis: 8/12/14 04:57 PM**

Compound	%Recovery	Method Limits
2-Propanol	94	70-130
Naphthalene	109	70-130

Air Sample Volume(L): 1.00

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	98	50-150
Toluene-d8	91	50-150
Naphthalene-d8	98	50-150

CHAIN OF CUSTODY RECORD

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

PROJECT NUMBER: 0625

PROJECT NAME: 475 LESSER STREET OAKLAND, CA

SAMPLED BY: (PRINTED & SIGNATURE) MICHAEL BASS-DESCHENES

	SAMPLE NUMBER	DATE	TIME	TYPE	SAMPLE LOCATION	NUMBER OF CONTAINERS	NAPHTHALENE AND	2-PROPANOL BY EPA TO-17	PRESERVATIVE	REMARKS
01A	SS6	8/7/14	11:18 / 11:30	SV / GAS		1	X	X	ICE	NORMAL TAT
02A	SS7	↓	12:32 / 12:33	↓		1	X	X	↓	↓
03A	SS7-REP	↓	12:40 / 12:41	↓		1	X	X	↓	↓
04A	SS8	↓	14:55 / 14:56	↓		1	X	X	↓	↓
05A	SS9	↓	15:36 / 15:37	↓		1	X	X	↓	↓

Custody Seal Intact? Y N None Temp 2.4°C

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	Total No. of Samples (This Shipment)	5	LABORATORY:
[signature]	8-8-14	1229	[signature]	Total No. of Containers (This Shipment)	5	EUROFINS AIR TOXICS, INC.
RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	LABORATORY CONTACT: KYLE VAGADORI		LABORATORY PHONE NUMBER: (916) 605-3339
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: SORBENT TUBE SAMPLE = 200 cc

1408130

eurofins | Air Toxics

8/22/2014
Mr. Paul King
P & D Environmental
55 Santa Clara
Suite 240
Oakland CA 94610

Project Name: 475 LESSER STREET OAKLAND, CA
Project #: 0675
Workorder #: 1408140A

Dear Mr. Paul King

The following report includes the data for the above referenced project for sample(s) received on 8/8/2014 at Air Toxics Ltd.

The data and associated QC analyzed by Modified TO-15 (5&20 ppbv) 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

eurofins | Air Toxics

WORK ORDER #: 1408140A

Work Order Summary

CLIENT:	Mr. Paul King P & D Environmental 55 Santa Clara Suite 240 Oakland, CA 94610	**BILL TO:**	Mr. Paul King P & D Environmental 55 Santa Clara Suite 240 Oakland, CA 94610
PHONE:	510-658-6916	**P.O. #**	
FAX:	510-834-0772	**PROJECT #**	0675 475 LESSER STREET OAKLAND, CA
DATE RECEIVED:	08/08/2014	**CONTACT:**	Kyle Vagadori
DATE COMPLETED:	08/22/2014		

FRACTION #	NAME	TEST	RECEIPT VAC./PRES.	FINAL PRESSURE
01A	SS6 DFA	Modified TO-15 (5&20 ppbv	Tedlar Bag	Tedlar Bag
03A	SS7 DFA	Modified TO-15 (5&20 ppbv	Tedlar Bag	Tedlar Bag
05A	SS8 DFA	Modified TO-15 (5&20 ppbv	Tedlar Bag	Tedlar Bag
07A	SS9 DFA	Modified TO-15 (5&20 ppbv	Tedlar Bag	Tedlar Bag
08A	Lab Blank	Modified TO-15 (5&20 ppbv	NA	NA
09A	CCV	Modified TO-15 (5&20 ppbv	NA	NA

CERTIFIED BY: Heidi Hayes DATE: 08/22/14

Technical Director

Certification numbers: AZ Licensure AZ0775, NJ NELAP - CA016, NY NELAP - 11291,
TX NELAP - T104704434-13-6, UT NELAP CA009332014-5, VA NELAP - 460197, WA NELAP - C935
Name of Accrediting Agency: NELAP/ORELAP (Oregon Environmental Laboratory Accreditation Program)
Accreditation number: CA300005, Effective date: 10/18/2013, Expiration date: 10/17/2014.
Eurofins Air Toxics Inc.. 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 Soil Gas
P & D Environmental
Workorder# 1408140A

Four 1 Liter Tedlar Bag samples were received on August 08, 2014. The laboratory performed analysis via EPA Method TO-15 using GC/MS in the full scan mode. The method involves concentrating up to 50 mLs of air. The concentrated aliquot is then flash vaporized and swept through a water management system to remove water vapor. Following dehumidification, the sample passes directly into the GC/MS for analysis.

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

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

Samples SS6 DFA, SS7 DFA, SS8 DFA and SS9 DFA were transferred from Tedlar bags into a summa canisters to extend the hold time from 72 hours to 30 days. Canister pressurization resulted in a dilution factor which was applied to all analytical results.

Dilution was performed on samples SS6 DFA, SS7 DFA, SS8 DFA and SS9 DFA due to the presence of high level target species.

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, LOD, or MDL value. See data page for project specific U-flag definition.

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

N - The identification is based on presumptive evidence.

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

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue

eurofins | Air Toxics

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

Client Sample ID: SS6 DFA

Lab ID#: 1408140A-01A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1-Difluoroethane	250000	5600000	680000	15000000

Client Sample ID: SS7 DFA

Lab ID#: 1408140A-03A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1-Difluoroethane	250000	6100000	680000	16000000

Client Sample ID: SS8 DFA

Lab ID#: 1408140A-05A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1-Difluoroethane	260000	4800000	690000	13000000

Client Sample ID: SS9 DFA

Lab ID#: 1408140A-07A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1-Difluoroethane	250000	5300000	680000	14000000

eurofins | Air Toxics

Client Sample ID: SS6 DFA

Lab ID#: 1408140A-01A

EPA METHOD TO-15 GC/MS

File Name:	**14082134**	**Date of Collection:**	**8/7/14 10:08:00 AM**
Dil. Factor:	**12600**	**Date of Analysis:**	**8/21/14 10:18 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1-Difluoroethane	250000	5600000	680000	15000000

Container Type: Client Tedlar Bag

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	91	70-130
Toluene-d8	97	70-130
4-Bromofluorobenzene	100	70-130

eurofins | Air Toxics

Client Sample ID: SS7 DFA

Lab ID#: 1408140A-03A

EPA METHOD TO-15 GC/MS

File Name:	**14082135**	**Date of Collection:**	**8/7/14 1:16:00 PM**
Dil. Factor:	**12600**	**Date of Analysis:**	**8/21/14 10:41 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1-Difluoroethane	250000	6100000	680000	16000000

Container Type: Client Tedlar Bag

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	89	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	99	70-130

eurofins | Air Toxics

Client Sample ID: SS8 DFA

Lab ID#: 1408140A-05A

EPA METHOD TO-15 GC/MS

File Name:	**14082136**	**Date of Collection:**	**8/7/14 1:43:00 PM**
Dil. Factor:	**12800**	**Date of Analysis:**	**8/21/14 11:12 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1-Difluoroethane	260000	4800000	690000	13000000

Container Type: Client Tedlar Bag

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	87	70-130
Toluene-d8	97	70-130
4-Bromofluorobenzene	97	70-130

eurofins | Air Toxics

Client Sample ID: SS9 DFA

Lab ID#: 1408140A-07A

EPA METHOD TO-15 GC/MS

File Name:	**14082137**	**Date of Collection:**	**8/7/14 3:26:00 PM**
Dil. Factor:	**12600**	**Date of Analysis:**	**8/21/14 11:58 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1-Difluoroethane	250000	5300000	680000	14000000

Container Type: Client Tedlar Bag

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	90	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	101	70-130

eurofins | Air Toxics

Client Sample ID: Lab Blank

Lab ID#: 1408140A-08A

EPA METHOD TO-15 GC/MS

File Name:	**14082132**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 8/21/14 09:23 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1-Difluoroethane	20	Not Detected	54	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	89	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	102	70-130

eurofins | Air Toxics

Client Sample ID: CCV

Lab ID#: 1408140A-09A

EPA METHOD TO-15 GC/MS

File Name:	**14082128**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 8/21/14 07:35 PM**	

Compound	%Recovery
1,1-Difluoroethane	90

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	86	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	103	70-130

CHAIN OF CUSTODY RECORD

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

PROJECT NUMBER: 0675

PROJECT NAME: 475 LESSER STREET OAKLAND, CA

SAMPLED BY: (PRINTED & SIGNATURE) MICHAEL BASS-DESCHENES

	SAMPLE NUMBER	DATE	TIME	TYPE	SAMPLE LOCATION	NUMBER OF CONTAINERS	ANALYSIS(ES): DFA	ANALYSIS(ES): 2-PROPANOL	PRESERVATIVE	REMARKS
01A	SS6 DFA	8/7/14	1008	AIR		1	X		NONE	NORMAL TAT
	SS6 2-PROPANOL		1117			1		X		
03A	SS7 DFA		1316			1	X			
	SS7 2-PROPANOL		1330			1		X		
05A	SS8 DFA		1343			1	X			
	SS8 2-PROPANOL		1446			1		X		
07A	SS9 DFA		1526			1	X			
	SS9 2-PROPANOL		1535			1		X		

Custody Seal Intact?
Y N None Temp NA
EAT Dropoff

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	Total No. of Samples (This Shipment)	8	LABORATORY:
Michael Bass-Deschenes	8/8/14	1229		Total No. of Containers (This Shipment)	8	EUROFINS AIR TOXICS, INC.
RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	LABORATORY CONTACT: KYLE VAGADORI		LABORATORY PHONE NUMBER: (916) 605-3339
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: TEDLAR BAGS.

140814

eurofins | Air Toxics

8/22/2014
Mr. Paul King
P & D Environmental
55 Santa Clara
Suite 240
Oakland CA 94610

Project Name: 475 LESSER STREET OAKLAND, CA
Project #: 0675
Workorder #: 1408140B

Dear Mr. Paul King

The following report includes the data for the above referenced project for sample(s) received on 8/8/2014 at Air Toxics Ltd.

The data and associated QC analyzed by Modified TO-15 (5&20 ppbv) 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

eurofins | Air Toxics

WORK ORDER #: 1408140B

Work Order Summary

CLIENT:	Mr. Paul King P & D Environmental 55 Santa Clara Suite 240 Oakland, CA 94610	**BILL TO:**	Mr. Paul King P & D Environmental 55 Santa Clara Suite 240 Oakland, CA 94610
PHONE:	510-658-6916	**P.O. #**	
FAX:	510-834-0772	**PROJECT #**	0675 475 LESSER STREET OAKLAND, CA
DATE RECEIVED:	08/08/2014	**CONTACT:**	Kyle Vagadori
DATE COMPLETED:	08/22/2014		

FRACTION #	NAME	TEST	RECEIPT VAC./PRES.	FINAL PRESSURE
02A	SS6 2-PROPANOL	Modified TO-15 (5&20 ppbv	Tedlar Bag	Tedlar Bag
04A	SS7 2-PROPANOL	Modified TO-15 (5&20 ppbv	Tedlar Bag	Tedlar Bag
06A	SS8 2-PROPANOL	Modified TO-15 (5&20 ppbv	Tedlar Bag	Tedlar Bag
08A	SS9 2-PROPANOL	Modified TO-15 (5&20 ppbv	Tedlar Bag	Tedlar Bag
09A	Lab Blank	Modified TO-15 (5&20 ppbv	NA	NA
10A	CCV	Modified TO-15 (5&20 ppbv	NA	NA
11A	LCS	Modified TO-15 (5&20 ppbv	NA	NA
11AA	LCSD	Modified TO-15 (5&20 ppbv	NA	NA

CERTIFIED BY: Heidi Hayes DATE: 08/22/14

Technical Director

Certification numbers: AZ Licensure AZ0775, NJ NELAP - CA016, NY NELAP - 11291,
TX NELAP - T104704434-13-6, UT NELAP CA009332014-5, VA NELAP - 460197, WA NELAP - C935
Name of Accrediting Agency: NELAP/ORELAP (Oregon Environmental Laboratory Accreditation Program)
Accreditation number: CA300005, Effective date: 10/18/2013, Expiration date: 10/17/2014.
Eurofins Air Toxics Inc.. 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 Soil Gas
P & D Environmental
Workorder# 1408140B

Four Client Tedlar Bag samples were received on August 08, 2014. The laboratory performed analysis via EPA Method TO-15 using GC/MS in the full scan mode. The method involves concentrating up to 50 mLs of air. The concentrated aliquot is then flash vaporized and swept through a water management system to remove water vapor. Following dehumidification, the sample passes directly into the GC/MS for analysis.

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

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

Method TO-15 is validated for samples collected in specially treated canisters. As such, the use of Tedlar bags for sample collection is outside the scope of the method and not recommended for ambient or indoor air samples. It is the responsibility of the data user to determine the usability of TO-15 results generated from Tedlar bags.

Samples SS6 2-PROPANOL, SS7 2-PROPANOL, SS8 2-PROPANOL and SS9 2-PROPANOL were transferred from Tedlar bags into a summa canisters to extend the hold time from 72 hours to 30 days. Canister pressurization resulted in a dilution factor which was applied to all analytical results.

Dilution was performed on samples SS6 2-PROPANOL, SS7 2-PROPANOL, SS8 2-PROPANOL and SS9 2-PROPANOL due to the presence of high level target species.

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, LOD, or MDL value. See data page for project specific U-flag definition.

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

N - The identification is based on presumptive evidence.

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

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

eurofins | Air Toxics

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

Client Sample ID: SS6 2-PROPANOL

Lab ID#: 1408140B-02A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
2-Propanol	20000	3100000	50000	7600000

Client Sample ID: SS7 2-PROPANOL

Lab ID#: 1408140B-04A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
2-Propanol	20000	440000	50000	1100000

Client Sample ID: SS8 2-PROPANOL

Lab ID#: 1408140B-06A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
2-Propanol	20000	970000	50000	2400000

Client Sample ID: SS9 2-PROPANOL

Lab ID#: 1408140B-08A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
2-Propanol	20000	670000	50000	1600000

eurofins | Air Toxics

Client Sample ID: SS6 2-PROPANOL

Lab ID#: 1408140B-02A

EPA METHOD TO-15 GC/MS

File Name:	**14082139**	**Date of Collection:**	**8/7/14 11:17:00 AM**
Dil. Factor:	**1010**	**Date of Analysis:**	**8/22/14 06:25 AM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
2-Propanol	20000	3100000	50000	7600000

Container Type: Client Tedlar Bag

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	88	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	93	70-130

eurofins | Air Toxics

Client Sample ID: SS7 2-PROPANOL

Lab ID#: 1408140B-04A

EPA METHOD TO-15 GC/MS

File Name:	**14082140**	**Date of Collection: 8/7/14 1:30:00 PM**	
Dil. Factor:	**1010**	**Date of Analysis: 8/22/14 06:48 AM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
2-Propanol	20000	440000	50000	1100000

Container Type: Client Tedlar Bag

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	91	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	98	70-130

eurofins | Air Toxics

Client Sample ID: SS8 2-PROPANOL

Lab ID#: 1408140B-06A

EPA METHOD TO-15 GC/MS

File Name:	**14082141**	**Date of Collection: 8/7/14 2:44:00 PM**	
Dil. Factor:	**1010**	**Date of Analysis: 8/22/14 07:09 AM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
2-Propanol	20000	970000	50000	2400000

Container Type: Client Tedlar Bag

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	91	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	100	70-130

eurofins | Air Toxics

Client Sample ID: SS9 2-PROPANOL

Lab ID#: 1408140B-08A

EPA METHOD TO-15 GC/MS

File Name:	**14082142**	**Date of Collection: 8/7/14 3:35:00 PM**	
Dil. Factor:	**1010**	**Date of Analysis: 8/22/14 07:30 AM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
2-Propanol	20000	670000	50000	1600000

Container Type: Client Tedlar Bag

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	91	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	102	70-130

eurofins | Air Toxics

Client Sample ID: Lab Blank

Lab ID#: 1408140B-09A

EPA METHOD TO-15 GC/MS

File Name:	**14082132**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 8/21/14 09:23 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
2-Propanol	20	Not Detected	49	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	89	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	102	70-130

eurofins | Air Toxics

Client Sample ID: CCV

Lab ID#: 1408140B-10A

EPA METHOD TO-15 GC/MS

File Name:	**14082128**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 8/21/14 07:35 PM**	

Compound	%Recovery
2-Propanol	80

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	86	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	103	70-130

eurofins | Air Toxics

Client Sample ID: LCS

Lab ID#: 1408140B-11A

EPA METHOD TO-15 GC/MS

File Name:	**14082129**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 8/21/14 08:02 PM**	

Compound	%Recovery	Method Limits
2-Propanol	77	70-130

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	89	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	101	70-130

eurofins | Air Toxics

Client Sample ID: LCSD

Lab ID#: 1408140B-11AA

EPA METHOD TO-15 GC/MS

File Name:	**14082130**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 8/21/14 08:25 PM**	

Compound	%Recovery	Method Limits
2-Propanol	75	70-130

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	88	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	105	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: 0675

PROJECT NAME: 475 LESSER STREET OAKLAND, CA

SAMPLED BY: (PRINTED & SIGNATURE) MICHAEL BASS-DESCHENES

	SAMPLE NUMBER	DATE	TIME	TYPE	SAMPLE LOCATION	NUMBER OF CONTAINERS	ANALYSIS(ES): DFA	2-PROPANOL	PRESERVATIVE	REMARKS
	SS6 DFA	8/7/14	1008	AIR		1	X		NONE	NORMAL TAT
02A	SS6 2-PROPANOL		1117			1		X		
	SS7 DFA		1316			1	X			
04A	SS7 2-PROPANOL		1330			1		X		
	SS8 DFA		1343			1	X			
06A	SS8 2-PROPANOL		1446			1		X		
	SS9 DFA		1526			1	X			
08A	SS9 2-PROPANOL		1535			1		X		

~~Custody Seal Intact?~~
~~Y N None~~ Temp NA
EAT Dropoff

RELINQUISHED BY: (SIGNATURE) Michael Bass-Deschenes	DATE 8.8.14	TIME 1229	RECEIVED BY: (SIGNATURE)	Total No. of Samples (This Shipment) 8	LABORATORY: EUROFINS AIR TOXICS, INC
RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	Total No. of Containers (This Shipment) 8	LABORATORY CONTACT: KYLE VAGADORI
RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RECEIVED FOR LABORATORY BY: (SIGNATURE)		LABORATORY PHONE NUMBER: (916) 605-3339
					SAMPLE ANALYSIS REQUEST SHEET ATTACHED: ( ) YES (✓) NO

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

REMARKS: TEDLAR BAGS-

140814O