EMERY SERVICE CENTER, INC.
1400 Powell Street
Emeryville, CA 94608
(510) 653-2251

RECEIVED
By Alameda County Environmental Health 7:46 am, Mar 18, 2016

March 11, 2016

Mr. Mark Detterman
Alameda County Department of Environmental Health
1131 Harbor Parkway, Suite 250
Alameda, CA 94502

SUBJECT: VAPOR INTRUSION INVESTIGATION REPORT CERTIFICATION
County Case # RO 3182
Emeryville Chevron
1400 Powell Street
Emeryville, California

Dear Mr. Detterman:

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

- Vapor Intrusion Investigation Report (VP1 Through VP4; IA1 Through IA3, and AA1) dated March 11, 2016 (document 0719.R1).

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

Should you have any questions, please do not hesitate to contact me at (510) 653-2251.

Sincerely,

Emery Service Center, Inc.

Najmeddin Revan
President

Enclosure

0719.L2

P&D ENVIRONMENTAL, INC.

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

March 11, 2016
Report 0719.R1

Mr. Najmeddin Revan
Emery Service Center, Inc.
Dba Emeryville Chevron
1400 Powell Street
Emeryville, CA 94608

SUBJECT: VAPOR INTRUSION INVESTIGATION REPORT
(VP1 THROUGH VP4, IA1 THROUGH IA3, AND AA1)
County Case # RO 3182
Emeryville Chevron
1400 Powell Street
Emeryville, CA

Dear Mr. Najmeddin:

P&D Environmental, Inc. (P&D) has prepared this report documenting vapor intrusion investigation activities at the subject site. All activities were performed in accordance with P&D's Vapor Intrusion Investigation Work Plan dated February 2, 2016 (document 0719.W1), and were performed in response to a request from the Alameda County Department of Environmental Health (ACDEH) based on development of a portion of the property for use of a burrito shop. P&D's February 2, 2016 work plan was approved in a letter from the ACDEH dated March 10, 2016.

Site activities included installation of four Vapor Pins, initial collection of indoor air samples after the Heating Ventilation and Air Conditioning (HVAC) system was shut off for a minimum of 36 hours, followed by the collection of indoor air samples with the HVAC system operating for a minimum of 36 hours, and the collection of soil gas samples from the Vapor Pins immediately following the collection of the indoor air samples with the HVAC on. Indoor air sample collection duration was 24 hours for each indoor air sampling event, and one ambient air sample was collected during each indoor air sampling event.

The Vapor Pins were installed on February 8, 2015. Following the completion of a facility chemical inventory, the initial indoor air sampling event that occurred after the HVAC system had been shut off for a minimum of 36 hours was performed beginning on February 10, 2016 and ended on February 11, 2016. The second indoor air sampling event that occurred after the HVAC system had been operating for a minimum of 36 hours was performed beginning on February 16, 2016 and ended on February 17, 2016, with the Vapor Pin sampling performed on February 17, 2016 immediately following the completion of the second indoor air sample collection event.

A Site Location Map is attached with this work plan as Figure 1, a Site Vicinity Aerial Photograph showing the current location of fuel USTs and the former location of a waste oil UST at the site is attached as Figure 2, and a Site Aerial Photograph Detail showing indoor and ambient air sample collection locations and the Vapor Pin sub-slab soil gas sample collection locations is attached as Figure 3. All work was performed under the direct supervision of an appropriately licensed California professional.

BACKGROUND

The site is presently operated as a gasoline station. Fuel release county case number RO 67 was closed by the ACDEH on May 30, 2014. Section IV of the case closure required that a change to any land use other than a fueling station required notification to the ACDEH for further evaluation based on potential vapor intrusion to indoor air considerations. In 2015 a burrito shop was constructed at the site with the eastern portion of the burrito shop constructed immediately adjacent to a former waste oil UST pit (see Figure 2). The ACDEH subsequently requested that the current property owner enter into a Voluntary Remedial Action Agreement for the ACDEH to evaluate potential vapor intrusion associated with the new burrito shop as ACDEH case number RO 3182.

The western portion of the building located at the subject site to the east of the gasoline station convenience store is presently occupied by a dry cleaner pick up and drop off facility, and the eastern portion of the building located at the subject site to the east of the gasoline station convenience store is presently vacant.

The adjacent property located to the north of the subject site was historically operated as a fuel bulk plant. The shallowest historical depth to water at the subject site in the vicinity of the new burrito shop has been identified as less than 5 feet below the ground surface. Historical site investigation summary documents are attached with this report as Appendix F.

FIELD ACTIVITIES

Prior to performing field activities, a health and safety plan was prepared, access to the sampling space was scheduled with the tenant, a chemical inventory was performed, and notification of the sample collection dates was provided to the ACDEH.

Chemical Inventory

An inventory of all chemicals at the new burrito shop was performed on February 4, 2016 in preparation for indoor air sample collection for vapor intrusion investigation. Chemicals identified to potentially contain chemicals that could interfere with indoor air testing were removed from the building at least 48 hours prior to indoor air sampling. Copies of the chemical inventory forms are attached with this report as Appendix A.

Vapor Pin Installation

Flush-mounted Vapor Pins designated as VP1 through VP4 were installed through the building floor slab at the approximate locations shown in Figure 3 by IMX, Inc. of Oakland, California on February 8, 2016 to evaluate the presence of petroleum soil vapor concentrations beneath the building floor slab. The Vapor Pins and flush-mounted stainless steel secured covers were installed in accordance with manufacturer recommended installation procedures, and were left in place with the flush-mounted covers following sample collection pending review of the sample results by the ACDEH. The locations shown in Figure 3 vary slightly from the proposed locations shown in the work plan based on access constraints associated with the facility use.

The boreholes for each Vapor Pin extended to a depth of approximately 2 inches below the floor slab, and each drilling location were evaluated to verify that the concrete slab had been fully penetrated. No soil was removed from the ground at any of the drilling locations, and for this reason no boring logs were prepared.

At the conclusion of Vapor Pin installation the HVAC system for the new burrito shop was shut off with the understanding with the burrito shop operator that the HVAC system would remain off until the completion of the indoor air sample collection event that was scheduled to begin on February 10, 2016.

Indoor Air and Ambient Air Sample Collection

Beginning on February 10, 2016 at approximately 07:30 a.m., and ending on February 11, 2016 at approximately 07:40 a.m. indoor air samples were collected at locations designated as IA1 through IA3 inside the building and one ambient air sample was collected outside of the building on the roof after the HVAC system had been off for at least 36-hours. The air samples were collected during a 24-hour period using SIM-certified 6-liter Summa canisters equipped with SIM-certified 24-hour mass flow controllers, with one duplicate indoor air sample collected using a SIM-certified stainless steel tee. The ambient air sample was collected beginning before the indoor air samples were collected and ending after the indoor air samples had been collected. At all indoor air sample collection locations, the inlet to the Summa canisters were located between 4 and 6 feet above the ground surface using 4-foot long stainless steel SIM-certified canes connected to the flow controller.

The sample collection locations are shown in Figure 3. The locations shown in Figure 3 vary slightly from the proposed locations shown in the work plan based on access constraints associated with the facility use. In addition, the ambient air sample collection location was re-located based on UST vent pipe and roof HVAC exhaust location considerations.

After approximately 24 hours, the valves to the Summa canisters were closed with a minimum remaining vacuum of 2 inches of mercury, and the Summa canisters were stored in a box and promptly shipped to the laboratory for extraction and analysis. Chain of custody procedures were observed for all sample handling.

Following the completion of the initial air sampling event on February 11, 2016 the HVAC was restarted, and at least 36 hours after the HVAC system was restarted a second indoor air sampling event was performed starting on February 16, 2016 at approximately 07:45 a.m. and ending on February 17, 2016 at approximately 08:00 a.m. using methods described above. Measurements of Summa canister initial and final vacuums and sample collection start and end times were recorded on Air Sampling Data Sheets that are attached with this report as Appendix B.

Vapor Pin Sample Collection

On February 17, 2016 immediately following the completion of indoor air sample collection with the HVAC system operating, soil gas samples were collected from Vapor Pins VP1 through VP4. Each sample was collected in a shroud for leak detection purposes, with analysis of the shroud air tracer gas concentration for comparison with any tracer gas concentrations detected in the samples.

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 had 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 allowed the shroud to cover the Vapor Pin while still allowing access to the Vapor Pin through the bottom of the shroud. 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 the 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. 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 tubing that connects 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. Purge volume calculations are provided in Appendix C.

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 used to open the sample canister valve. After verifying that low flow conditions were 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 shroud 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 did not exceed 100 inches of water. One duplicate soil gas sample was collected into a Summa canister from the Vapor Pin designated as VP4 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 the shroud air samples were stored in a cooler to prevent crushing and all of the samples were promptly shipped to the laboratory for extraction and analysis. Chain of custody procedures were observed for all sample handling.

In addition to collection of Summa canister soil gas samples as described above, sorbent tube soil gas samples were collected at each Vapor Pin 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 to 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 with a valve, and the valve between the manifold and the sorbent tube was opened. The tracer gas 2-Propanol was then placed into an open container in the shroud, a vacuum pump was used to apply a vacuum to the sorbent tube, and a flow meter was used to measure the soil gas flow rate at a nominal flow rate of 150 cubic centimeters per minute for collection of a 90 cubic centimeter sample. The laboratory did not provide a sorbent tube for the collection of a replicate sample at location VP4. For this reason a replicate sorbent tube sample analysis was not performed. 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 tube were stored in a cooler with ice. During sorbent tube sample collection, a Tedlar bag air sample of the shroud atmosphere was collected using methods described above for characterization of shroud atmosphere tracer gas concentrations during soil gas sample collection. Chain of custody procedures were observed for all sample handling.

Measurements of vacuums, purging and equilibration time intervals, and PID readings were recorded on Soil Gas Sampling Data Sheets that are attached with this report as Appendix C.

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.

WEATHER

No precipitation occurred during the 10 days preceding the February 11, 2016 indoor and ambient air sample collection event or preceding or on the February 17, 2016 indoor and ambient air sample collection event and sub-slab soil gas sample collection event. Weather data, including precipitation and barometric pressure for the month of February 2016, including the dates of soil gas, indoor, and ambient air sample collection (February 11 and 17, 2016) are provided in Appendix D.

The weather station is located at on the north side of Powell Street west of Doyle Street in Emeryville at an elevation of 26 feet above sea level, approximately 600 feet to the east-northeast of the subject site. The subject site is located at an elevation of approximately 20 feet above sea level. An internet link to the weather station information is provided in Appendix D.

LABORATORY ANALYSIS

The indoor and ambient air samples, the Vapor Pin sub-slab soil gas samples collected with Summa canisters, the Vapor Pin sub-slab soil gas samples collected with sorbent tubes, and the associated shroud air samples were all analyzed at Eurofins Air Toxics, Inc. in Folsom, California (Air Toxics). The indoor and ambient air samples and the Vapor Pin sub-slab soil gas samples that were collected using Summa canisters were analyzed for Total Petroleum Hydrocarbons as Gasoline (TPH-G), benzene, toluene, ethylbenzene, and xylenes (BTEX), fuel oxygenates including methyl-tert-butyl ether (MTBE), and Halogenated Volatile Organic Compounds (HVOCs) including Tetrachloroethene (PCE), Trichloroethene (TCE), cis-1,2-Dichloroethene (cis-1,2-DCE), trans-1,2-Dichloroethene (trans-1,2-DCE), and vinyl chloride using EPA Method TO-15. The indoor and ambient air samples were also analyzed for naphthalene using EPA Method TO-15 and the Vapor Pin sub-slab soil gas samples that were collected using Summa canisters were also analyzed for the leak detection compound 1,1-Diflouroethane (DFA) using EPA Method TO-15, and for the gases oxygen, nitrogen, carbon monoxide, methane, carbon dioxide, ethane, and ethane using method ASTM D-1946.

The Vapor Pin sub-slab soil gas samples that were collected using sorbent tubes were analyzed for Total Petroleum Hydrocarbons as Diesel (TPH-D), naphthalene, and the leak detection compound 2-Propanol using EPA method TO-17. The shroud air samples associated with the Vapor Pin sub-slab soil gas samples collected in Summa canisters and also for the samples collected on sorbent tubes were analyzed for DFA and 2-Propanol using EPA Method TO-15.

The indoor and ambient air sample laboratory analytical results are summarized in Table 1. The soil gas TO-15 and TO-17 laboratory analytical results are summarized in Table 2A, the shroud air Tedlar bag sample results are summarized in Table 2B, and the soil gas ASTM D-1946 laboratory analytical results are summarized in Table 2C. The percent shroud information reported in Table 2A is the ratio of the detected tracer gas concentration in the soil gas sample to the corresponding shroud air tracer gas

concentration, expressed as a percentage. Copies of the laboratory analytical reports and chain of custody documentation are attached with this report as Appendix E.

RISK AND HAZARD ANALYSIS

In the absence of subsurface construction work, the only complete pathway for contaminant exposure at the subject site is considered to be potential vapor intrusion from soil gas to indoor air. Risk analysis is the evaluation of the predicted increased incidence of cancer resulting from exposure to Chemicals of Potential Concern (COPCs), and is reported for each COPC as the incremental carcinogenic risk. Hazard analysis is the evaluation of the predicted increased non-cancer adverse health effects resulting from exposure to COPCs, and is reported for each COPC as the hazard quotient. In addition, cumulative incremental carcinogenic risk (the total of the risks posed by all of the COPCs in a sample when all of the individual COPC risks are added together) and hazard indices (the total of the hazards posed by all of the COPCs in a sample when all of the individual COPC hazards are added together) were also calculated for all detected compounds for each sample.

The incremental carcinogenic risk and hazard quotient were calculated for each detected compound for each of the indoor and ambient air samples using equations for health risk-based screening levels considering a single chemical for indoor air inhalation provided in section 3.2.3 of the Interim Final February 2016 San Francisco Bay RWQCB User's Guide: Derivation and Application of Environmental Screening Levels (the User's Guide). The Inhalation Unit Risk factor (IUR) value used for risk calculation and the Reference Concentration (RfC) value used for hazard calculation were obtained from the February 2016 SFRWQCB User's Guide Table IP-2 Toxicity Values, and were verified to be consistent with the Department of Toxic Substances Control (DTSC) Human and Ecological Risk Office (HERO) Human Health Risk Assessment (HHRA) Note Number 3 dated January 2016 and the US Environmental Protection Agency Region 9 Regional Screening Level indoor air values for compounds that were detected that are not listed in HHRA Note Number 3.

TPH-G is not considered to be a carcinogen, and for this reason there is no IUR for TPH-G, and risk is not calculated for TPH-G. In addition, DTSC does not provide a TPH-G RfC for hazard evaluation. The TPH-G RfC of 570 µg/m^3 that was used for calculation of the TPH-G hazard was obtained from the February 2016 RWQCB User's Guide Table Table IP-2.

Default exposure values provided in the February 2016 SFRWQCB User's Guide Table IP-3 for a commercial exposure scenario of

- Exposure time of 8 hours per day,
- Exposure frequency of 250 days per year, and
- Exposure duration for 26 years

and default parameter values provided in the DTSC HERO Vapor Intrusion Screening Model for Soil Gas VLOOKUP Table (last updated December 2014) of

- Averaging time for carcinogens of 70 years, and
- Averaging time for non-carcinogens of 26 years

were used for evaluation of all of the indoor and ambient air samples. In addition, the cumulative incremental carcinogenic risk (the total of the risks posed by all of the Chemicals of Potential Concern (COPCs) in a sample when all of the individual COPC risks are added together) and hazard indices (the total of the hazards posed by all of the COPCs in a sample when all of the individual COPC hazards are added together) were calculated for all detected compounds for each indoor air sample.

The indoor air and associated ambient air incremental risk calculation results are provided in Table 3A, and the indoor and associated ambient air hazard quotient calculation results are provided in Table 3B. The indoor and associated ambient air cumulative incremental carcinogenic risk and hazard index results are summarized in Table 3C.

HISTORICAL SITE INVESTIGATION DOCUMENTS

The subject property is presently occupied by an active gasoline station convenience store that is located in the central portion of the north side of the property. The new burrito shop is located to the west of the gasoline station convenience store. A building located to the east of the gasoline station convenience store has historically been subdivided into two tenant spaces. The western portion of the building that is located to the east of the gasoline station convenience store is presently occupied by a dry cleaner pick up and drop off facility, and the eastern portion of the building that is located to the east of the gasoline station convenience store was formerly occupied by a real estate office and is presently vacant.

The adjacent property located to the north of the subject site was historically operated as a fuel bulk plant. Historical subject site investigation documents are presented in Appendix F with this report as follows:

- Figure 2 – Groundwater Elevation and Hydrocarbon Concentration Map (Shallow Zone) for February 19, 2012 prepared by Conestoga-Rovers & Associates,
- Figure 4 – Groundwater Elevation Contour Map (Shallow Zone) for July 29, 2012 prepared by Arcadis,
- Figure 7B – Groundwater Elevation Contour and Hydrocarbon Concentration Map (Shallow Zone) for January 16, 2013 prepared by Arcadis,
- Figure 6 – Grab Groundwater Sampling Results (Post-Excavation and Dewatering Event) prepared by Arcadis (this figure shows CPT locations),
- Figure 7 – Groundwater Analytical Results for July 29, 2012 prepared by Arcadis,
- Table D-3 - Groundwater Analytical Results (Upgradient Dewatering Wells DW-11 and DW-14, 2 pages)
- Table D-1 - Groundwater Analytical Results (CPT Groundwater Samples From CPT-1 Through CPT-4, 2 pages)

- Table 2 - Groundwater Monitoring Data and Analytical Results for 2011 Through First Quarter 2013 (1 page).

The shallowest historical depth to water at the subject site in the vicinity of the new burrito shop has been identified as less than 5 feet below the ground surface. A rose diagram provided in Appendix F Figure 2 shows the calculated groundwater flow direction at the site to be predominantly westerly to southwesterly, with a range of ground water flow directions that include northwesterly to southwesterly. Figures 4 and 7B in Appendix F show westerly groundwater flow directions on July 29, 2012 and January 16, 2013.

Historical groundwater quality results in the vicinity of the northeast corner of the subject site were evaluated for potential vapor intrusion concerns associated with the subject site building that is located at the northeast corner of the subject site (to the east of the subject site gasoline station convenience store).

The closest shallow groundwater sample collection locations to the building located at the northeast corner of the subject site are identified on the figures in Appendix F as follows:

- Upgradient offsite dewatering well DW-11,
- Onsite cone penetration test location CPT-1, and
- Onsite groundwater monitoring well MW-3A (shallow).

The closest groundwater sample collection locations to the new burrito shop that is located at the northwest corner of the subject site (to the west of the subject site gasoline station convenience store) are identified on the figures in Appendix F as follows:

- Offsite dewatering well DW-14, and
- Onsite groundwater monitoring well MW-2A (shallow).

Review of groundwater quality data tables in Appendix F for groundwater samples collected at locations DW-11, MW-3A and CPT-1 shows the following:

- Table D-3 shows that in upgradient dewatering well DW-11 the compounds TPH-G, MTBE, benzene, and ethylbenzene were not detected.
- Table D-1 shows that in sample CPT-1@6-9' the compounds TPH-D, TPH-G, benzene, and ethylbenzene were detected at concentrations of 260, 690, 42, and 59 µg/L, respectively.
- Table 2 shows that in well MW-3A from 2011 to 2013 the concentration of benzene decreased from 160 µg/L to 19 µg/L, and that ethylbenzene and MTBE were detected at maximum concentrations of 98 and 2.8 µg/L, respectively. Additionally, Figures 6 and 7 of Appendix F show groundwater grab sample results from post-excavation dewatering activities north of the site in 2009 and 2010 and groundwater well sample results from samples collected from well MW-3A on July 29, 2012, respectively. Review of Figure 7 shows that detected petroleum, MTBE,

and BTEX concentrations are less in well MW-3A than the detected concentrations in wells located downgradient of well MW-3A.

Review of groundwater quality data tables in Appendix F for groundwater samples collected at locations DW-14 and MW-2A shows the following:

- Table D-3 shows that in dewatering well DW-14 the compounds TPH-G, benzene, and ethylbenzene were detected at maximum concentrations of 1,800, 55 and 41 ug/L and that MTBE was not detected.
- Table 2 shows that in well MW-2A from 2011 to 2013
    - TPH-G ranged from 1,300 to 2,800 ug/L,
    - Benzene ranged from 150 to 860 ug/L,
    - Ethylbenzene concentrations ranged from 14 to 28 ug/L,
    - MTBE concentrations ranged from 140 to 320 ug/L, and
    - TBA concentrations ranged from 1,300 to 3,400 ug/L.

DISCUSSION AND RECOMMENDATIONS

Review of Table 1 shows that comparison of the indoor air sample results that were collected with the HVAC off (on 2/11/16) with the indoor air sample results that were collected with the HVAC on (on 2/17/16) shows that the sample results were similar.

Review of Table 1 shows that benzene was detected in all of the samples and that naphthalene was detected in one of the indoor air samples (sample IA3 which was collected with the HVAC off) exceed their corresponding February 2016 SFRWQCB Table IA-1 Indoor Air Direct Exposure Human Health Risk Levels (ESL) for commercial land use. The benzene indoor air results were consistent with the benzene ambient air results, indicating that vapor intrusion of benzene was not detected. The naphthalene air sample results also showed that naphthalene was not detected at concentrations exceeding SFRWQCB February 2016 indoor air ESL values for commercial land use when the HVAC was operating.

Review of the Table 2A Percent Shroud columns shows that the tracer gas concentrations detected in the samples are less than 5 percent of the associated shroud atmosphere tracer gas concentrations (see Table 2B) for all of the sub-slab soil gas samples except for duplicate sample VP4-DUP, indicating that atmospheric dilution of the samples during sample collection is not a concern except for duplicate VP4-DUP where 42.31 percent of the associated shroud atmosphere tracer gas DFA concentration was detected. Review of Table 2 sub-slab soil gas sample results shows that none of the detected sub-slab soil gas concentrations exceed either the residential or commercial industrial February 2016 SFRWQCB Table SG-1 Subslab/ Soil Gas Vapor Intrusion Human Health Risk Levels (ESLs).

Review of Table 1C shows that oxygen was detected in sub-slab soil gas samples VP1, VP2, VP3, VP4, and duplicate VP4-DUP all at 20 percent and nitrogen was detected in each of these samples at 80 percent. Methane was detected in samples VP1, VP2, and VP3

at concentrations of 0.00060, 0.00051, and 0.00085 percent, respectively, and carbon dioxide was detected in VP4-DUP at a concentration of 0.028 percent.

Based on the sub-slab soil gas and the indoor air sample results, vapor intrusion is not considered to be a concern for the new burrito shop.

Review of the historical groundwater information in Appendix F of this report shows that the building located to the east of the subject site gasoline station convenience store is located on the upgradient side of the site. Review of groundwater quality data for the subject site shows that petroleum hydrocarbon concentrations in groundwater exceed their respective February 2016 SFRWQCB Table GW-3 Groundwater Vapor Intrusion Human Health Risk Levels (ESLs) for many of the detected compounds.

Based on the absence of sub-slab soil gas concentrations exceeding their respective Table SG-1 ESL values beneath the new burrito shop, and the absence of evidence of detected petroleum concentrations in air exceeding their respective commercial ESL values when the HVAC is operating in the new burrito shop, petroleum in groundwater in the western portion of the site where the highest groundwater concentrations are encountered does not result in unacceptable amounts of vapor intrusion. Based on these conditions vapor intrusion in the eastern portion of the property where the lowest petroleum concentrations in groundwater are encountered is similarly considered to not result in unacceptable amounts of vapor intrusion.

Based on the absence of unacceptable amounts of vapor intrusion at the site P&D recommends that no further investigation be performed and that the case be closed.

DISTRIBUTION

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

LIMITATIONS

This report was prepared solely for the use of Emery Service Center, Inc. The content and conclusions provided by P&D in this assessment are based on information collected during our investigation, which may include, but not be limited to, visual site inspections; interviews with 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 boreholes 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.

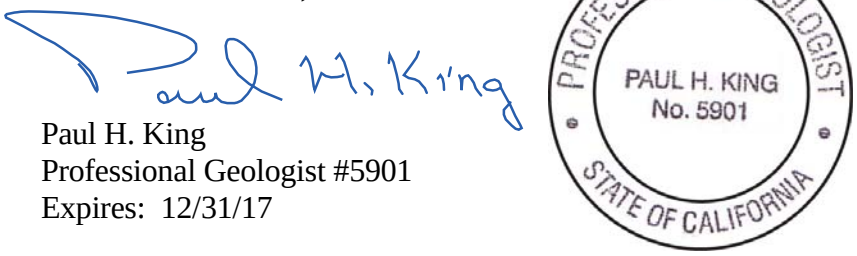
This report is issued with the understanding that it is the responsibility of the owner, or his representative, to ensure that the information contained herein is brought to the attention of the appropriate regulatory agencies, where required by law. Additionally, it is the sole responsibility of the 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: 12/31/17

Attachments:

Table 1 - Summary of Indoor and Ambient Air Sample Analytical results
Table 2A - Summary of Sub-Slab Soil Gas Sample Analytical Results - TPH-D, TPH-G, and VOCs
Table 2B - Summary of Soil Gas Shroud Sample Analytical Results - 1,1,-Difluoroethane and 2-Propanol
Table 2C - Summary of Soil Gas Sample Analytical Results - Oxygen, Methane, and Carbon Dioxide
Table 3A - Indoor and Ambient Air Risk Calculation Results
Table 3B - Indoor and Ambient Air Hazard Calculation Results
Table 3C - Indoor and Ambient Air Risk and Hazard Calculation Results Summary

Figure 1 - Site Location Map
Figure 2 - Site Vicinity Aerial Photograph
Figure 3 - Site Aerial Photograph Detail Showing Proposed Sample Collection Locations
Figure 4 - Typical Soil Gas Sample Collection Manifold

Appendix A - Purge Volume Calculations and Soil Gas Sampling Data Sheets
Appendix B - Chemical Inventory Forms
Appendix C - Air Sampling Data Sheets
Appendix D - Weather Information
Appendix E - Laboratory Analytical Reports and Chain of Custody Documentation
Appendix F - Historical Site Investigation Documents

PHK/mlbd/sjc
0719.R1

TABLES

Table 1
Summary of Indoor and Ambient Air Sample Analytical Results

Compound	Sample ID	IA1 2/11/2016	IA1-DUP 2/11/2016	IA1 2/17/2016	IA1-DUP 2/17/2016	IA2 2/11/2016	IA2 2/17/2016	IA3 2/11/2016	IA3 2/17/2016	AA1 2/11/2016	AA1 2/17/2016	ESL[1]
TPH-G		180	180	260	250	200	230	220	240	180	140	2,500
MTBE		ND<0.58	ND<0.53	ND<0.60	ND<0.62	ND<0.96	ND<0.63	ND<0.57	ND<0.64	ND<0.59	ND<0.58	47
Benzene		**2.1**	**2.0**	**2.3**	**2.4**	**2.1**	**2.2**	**2.1**	**2.4**	**2.2**	**1.5**	0.42
Toluene		7.5	6.2	23	9.5	8.8	8.5	7.1	9.4	7.6	4.2	1,300
Ethylbenzene		1.3	1.3	2.0	1.8	1.3	1.6	1.3	1.6	1.4	0.69	4.9
m,p-Xylene		4.6	4.3	6.1	5.9	4.3	5.4	4.5	5.4	4.5	2.2	440
o-Xylene		1.7	1.6	2.2	2.0	1.6	1.9	1.8	1.9	1.6	0.83	combined
Naphthalene		0.26, a	0.20, a	0.35, a	0.29, a	0.21, a	0.35, a	**0.40, a**	0.35, a	0.26, a	0.20, a	0.36
PCE		ND<0.22	ND<0.20	1.2	ND<0.23	ND<0.36	ND<0.24	ND<0.21	ND<0.24	ND<0.22	ND<0.22	2.1
TCE		0.45	0.40	0.52	ND<0.18	0.37	ND<0.19	0.37	ND<0.19	0.52	ND<0.17	3.0
cis-1,2-DCE		ND<0.13	ND<0.12	ND<0.13	ND<0.14	ND<0.21	ND<0.14	ND<0.12	ND<0.14	ND<0.13	ND<0.13	35
trans-1,2-DCE		ND<0.18	ND<0.16	ND<0.66	ND<0.68	ND<1.0	ND<0.69	ND<0.62	ND<0.71	ND<0.65	ND<0.64	260
Vinyl Chloride		ND<0.041	ND<0.037	ND<0.042	ND<0.044	ND<0.068	ND<0.045	ND<0.040	ND<0.046	ND<0.042	ND<0.041	0.16

Notes:

TPH-G = Total Petroleum Hydrocarbons as Gasoline.

MTBE = Methyl-tert-Butyl Ether

PCE = Tetrachloroethene

TCE = Trichloroethene

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

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

ND = Not Detected.

a = Laboratory Note: Estimated Value.

ESL[1] = Environmental Screening Level, by San Francisco Bay – Regional Water Quality Control Board, Updated February 22, 2016, from Table IA-1 – Indoor Air Direct Exposure Human Health Risk Screening Levels for Commercial/Industrial Land Use.

Results in bold exceed their respective ESL[1] values.

Results and ESLs in micrograms per cubic meter (ug/m^3), unless otherwise noted.

Table 2A

Summary of Sub-Slab Soil Gas Sample Analytical Results - TPH-D, TPH-G and VOCs

Sample ID	Land Use	Sample Date	Sand Pack Interval (Feet bgs)	Probe Depth (Feet bgs)	TPH-D	TPH-G	MTBE	Benzene	Toluene	Ethyl-benzene	m,p-Xylenes	o-Xylenes	TBA	Naphthalene	PCE	DFA	Percent Shroud	2-Propanol	Percent Shroud
VP1	Commercial	2/17/2016	None	Sub-Slab	ND<11,000	19,000	ND<4.3	ND<3.8	ND<4.5	ND<5.2	ND<5.2	ND<5.2	21	18	10	2,900, a	0	ND<540	0
VP2	Commercial	2/17/2016	None	Sub-Slab	ND<11,000	18,000	ND<4.3	ND<3.8	ND<4.5	ND<5.2	ND<5.2	ND<5.2	38	ND<11	ND<8.1	96,000, a	0	ND<540	0
VP3	Commercial	2/17/2016	None	Sub-Slab	ND<11,000	ND<22,000	ND<480	ND<420	ND<500	ND<570	ND<570	ND<570	ND<1,600	ND<11	ND<900	430,000, a	2.39	ND<540	0
VP4	Commercial	2/17/2016	None	Sub-Slab	ND<11,000	19,000	ND<4.8	ND<4.2	ND<5.0	ND<5.7	ND<5.7	ND<5.7	35	ND<11	ND<9.0	10,000, a	0	ND<540	0
VP4-DUP	Commercial	2/17/2016	None	Sub-Slab	NA	ND<210,000	ND<4,600	ND<4,100	ND<4,900	ND<5,600	ND<5,600	ND<5,600	ND<16,000	NA	ND<8,800	11,000,000, a	42.31	NA	--
ESL [1]					*68,000*	*300,000*	*5,400*	*48*	*160,000*	*560*	*Combined = 52,000*		*No Value*	*41*	*240*	*No Value*	*No Value*	*No Value*	*No Value*
ESL [2]					*570,000*	*2,500,000*	*47,000*	*420*	*1,300,000*	*4,900*	*Combined = 440,000*		*No Value*	*360*	*2,100*	*No Value*	*No Value*	*No Value*	*No Value*

Notes:

Feet bgs = Feet Below Ground Surface.

TPH-D = Total Petroleum Hydrocarbons as Diesel.

TPH-G = Total Petroleum Hydrocarbons as Gasoline.

MTBE = Methyl-tert-Butyl Ether.

TBA = tert-Butyl alcohol.

PCE = Tetrachloroethene.

DFA = 1,1-Difluoroethane. (tracer gas)

ND = Not Detected.

NA = Not Analyzed.

NR = Not Reported, matrix interference.

a = Laboratory Note: exceeds instrument calibration range.

Percent Shroud = The ratio of tracer gas concentration detected in the soil gas sample to the tracer gas concentration detected in the shroud air sample, expressed as a percentage.

ESL[1] = Environmental Screening Level, by San Francisco Bay – Regional Water Quality Control Board, updated February 22, 2016 from Table SG1 – Subslab/Soil Gas Vapor Intrusion: Human Health Risk Levels for Residential Land Use.

ESL[2] = Environmental Screening Level, by San Francisco Bay – Regional Water Quality Control Board, updated February 22, 2016 from Table SG1 – Subslab/Soil Gas Vapor Intrusion: Human Health Risk Levels for Commercial/Industrial Land Use.

Values in bold exceed their respective ESL[1] values.

Underlined values exceed their respective ESL[2] values.

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

Table 2B

Summary of Soil Gas Shroud Sample Analytical Results - 1,1-Difluoroethane and 2-Propanol

Sample ID	Sample Date	DFA, #	2-Propanol, ##
SG2 2-Propanol	7/23/2014	NA	8,600,000
SG2 DFA	7/23/2014	31,000,000	NA
SG4 2-Propanol	8/13/2014	570,000	NA
SG4 DFA	8/13/2014	22,000,000	NA
VP1 2-Propanol	2/17/2016	NA	500,000
VP1 DFA	2/17/2016	590,000	NA
VP2 2-Propanol	2/17/2016	NA	140,000
VP2 DFA	2/17/2016	14,000,000	NA
VP3 2-Propanol	2/17/2016	NA	93,000
VP3 DFA	2/17/2016	18,000,000	NA
VP4 2-Propanol	2/17/2016	NA	400,000
VP4 DFA	2/17/2016	26,000,000	NA

Notes:

ND = Not Detected.

NA = Not Analyzed.

= 1,1-Difluoroethane (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 ($\mu g/m^3$), unless otherwise indicated.

Table 2C

Summary of Soil Gas Sample Analytical Results - Oxygen, Nitrogen, Carbon Monoxide, Methane, Carbon Dioxide, Ethane, and Ethene

Sample ID	Sample Date	Probe Depth (Feet bgs)	Oxygen (%)	Nitrogen (%)	Carbon Monoxide (%)	Methane (%)	Carbon Dioxide (%)	Ethane (%)	Ethene (%)
VP1	2/17/2016	Sub-Slab	20	80	ND<0.024	0.00060	ND<0.024	ND<0.0024	ND<0.0024
VP2	2/17/2016	Sub-Slab	20	80	ND<0.024	0.00051	ND<0.024	ND<0.0024	ND<0.0024
VP3	2/17/2016	Sub-Slab	20	80	ND<0.026	0.00085	ND<0.026	ND<0.0026	ND<0.0026
VP4	2/17/2016	Sub-Slab	20	80	ND<0.026	ND<0.00026	ND<0.026	ND<0.0026	ND<0.0026
VP4-DUP	2/17/2016	Sub-Slab	20	80	ND<0.026	ND<0.00026	0.028	ND<0.0026	ND<0.0026

NOTES:

ND = Not Detected.

Results in percent (%), unless otherwise indicated.

Table 3A
Indoor and Ambient Air Risk Calculation Results

Equation		Concentration in Air	X	Exposure Time	X	Exposure Frequency	X	Exposure Duration	X	Inhalation Unit Risk Factor	all divided by	Averaging Time for Carcinogens	X	365	X	24	Calculated Individual Compound Incremental Carcinogenic Risk	Cumulative Carcinogenic Risk	Comments
Units		**(ug/m3)**		**(hrs/day)**		**(days/yr)**		**(yrs)**		**(ug/m3)**		**(yrs)**		**(days/yr)**		**(hr/day)**			
Location	**Compound**																		
Samples Collected February 11, 2016																			
IA1	Benzene	2.1		8		250		25		2.90E-05		70		365		24	4.97E-06		Commercial Exposure
IA1	Ethylbenzene	1.3		8		250		25		2.50E-06		70		365		24	2.65E-07		
IA1	Naphthalene	0.26		8		250		25		3.40E-05		70		365		24	7.21E-07		
IA1	TCE	0.45		8		250		25		4.10E-06		70		365		24	1.50E-07		
																		6.1E-06	
IA1-DUP	Benzene	2.0		8		250		25		2.90E-05		70		365		24	4.73E-06		Commercial Exposure
IA1-DUP	Ethylbenzene	1.3		8		250		25		2.50E-06		70		365		24	2.65E-07		
IA1-DUP	Naphthalene	0.20		8		250		25		3.40E-05		70		365		24	5.54E-07		
IA1-DUP	TCE	0.40		8		250		25		4.10E-06		70		365		24	1.34E-07		
																		5.7E-06	
IA2	Benzene	2.1		8		250		25		2.90E-05		70		365		24	4.97E-06		Commercial Exposure
IA2	Ethylbenzene	1.3		8		250		25		2.50E-06		70		365		24	2.65E-07		
IA2	Naphthalene	0.21		8		250		25		3.40E-05		70		365		24	5.82E-07		
IA2	TCE	0.37		8		250		25		4.10E-06		70		365		24	1.24E-07		
																		5.9E-06	
IA3	Benzene	2.1		8		250		25		2.90E-05		70		365		24	4.97E-06		Commercial Exposure
IA3	Ethylbenzene	1.3		8		250		25		2.50E-06		70		365		24	2.65E-07		
IA3	Naphthalene	0.40		8		250		25		3.40E-05		70		365		24	1.11E-06		
IA3	TCE	0.37		8		250		25		4.10E-06		70		365		24	1.24E-07		
																		6.5E-06	
AA1	Benzene	2.2		8		250		25		2.90E-05		70		365		24	5.20E-06		Commercial Exposure
AA1	Ethylbenzene	1.4		8		250		25		2.50E-06		70		365		24	2.85E-07		
AA1	Naphthalene	0.26		8		250		25		3.40E-05		70		365		24	7.21E-07		
AA1	TCE	0.52		8		250		25		4.10E-06		70		365		24	1.74E-07		
																		6.4E-06	
Samples Collected February 17, 2016																			
IA1	Benzene	2.3		8		250		25		2.90E-05		70		365		24	5.44E-06		Commercial Exposure
IA1	Ethylbenzene	2.0		8		250		25		2.50E-06		70		365		24	4.08E-07		
IA1	Naphthalene	0.35		8		250		25		3.40E-05		70		365		24	9.70E-07		
IA1	PCE	1.20		8		250		25		5.90E-06		70		365		24	5.77E-07		
IA1	TCE	0.45		8		250		25		4.10E-06		70		365		24	1.50E-07		
																		7.5E-06	
IA1-DUP	Benzene	2.4		8		250		25		2.90E-05		70		365		24	5.68E-06		Commercial Exposure
IA1-DUP	Ethylbenzene	1.8		8		250		25		2.50E-06		70		365		24	3.67E-07		
IA1-DUP	Naphthalene	0.29		8		250		25		3.40E-05		70		365		24	8.04E-07		
																		6.8E-06	
IA2	Benzene	2.2		8		250		25		2.90E-05		70		365		24	5.20E-06		Commercial Exposure
IA2	Ethylbenzene	1.6		8		250		25		2.50E-06		70		365		24	3.26E-07		
IA2	Naphthalene	0.35		8		250		25		3.40E-05		70		365		24	9.70E-07		
																		6.5E-06	
IA3	Benzene	2.4		8		250		25		2.90E-05		70		365		24	5.68E-06		Commercial Exposure
IA3	Ethylbenzene	1.6		8		250		25		2.50E-06		70		365		24	3.26E-07		
IA3	Naphthalene	0.35		8		250		25		3.40E-05		70		365		24	9.70E-07		
																		7.0E-06	
AA1	Benzene	1.5		8		250		25		2.90E-05		70		365		24	3.55E-06		Commercial Exposure
AA1	Ethylbenzene	0.69		8		250		25		2.50E-06		70		365		24	1.41E-07		
AA1	Naphthalene	0.20		8		250		25		3.40E-05		70		365		24	5.54E-07		
																		4.2E-06	

Notes:
PCE = Tetrachloroethene.
TCE = Trichloroethene.

Table 3B
Indoor and Ambient Air Hazard Calculation Results

Equation		Concentration in Air	X	Exposure Time	X	Exposure Frequency	X	Exposure Duration	all divided by	Averaging Time for Non-cancer Toxic Effects	X	365	X	24	X	Reference Concentration (RfC)	Calculated Individual Compound Hazard Quotient	Hazard Index	Comments
Units		**(ug/m3)**		**(hrs/day)**		**(days/yr)**		**(yrs)**		**(yrs)**		**(days/yr)**		**(hr/day)**		**(ug/m3)**			
Location	**Compound**																		
Samples Collected February 11, 2016																			
IA1	TPH-G	180		8		250		25		25		365		24		5.70E+02	7.21E-02		Commercial Exposure
IA1	Benzene	2.1		8		250		25		25		365		24		3.00E+00	1.60E-01		
IA1	Toluene	7.5		8		250		25		25		365		24		3.00E+02	5.71E-03		
IA1	Ethylbenzene	1.3		8		250		25		25		365		24		1.00E+03	2.97E-04		
IA1	m,p-Xylene	4.6		8		250		25		25		365		24		1.00E+02	1.05E-02		used p-xylene RfC
IA1	o-Xylene	1.7		8		250		25		25		365		24		1.00E+02	3.88E-03		used p-xylene RfC
IA1	Naphthalene	0.26		8		250		25		25		365		24		3.00E+00	1.98E-02		
IA1	TCE	0.45		8		250		25		25		365		24		2.00E+00	5.14E-02		
																		3.2E-01	
IA1-DUP	TPH-G	180		8		250		25		25		365		24		5.70E+02	7.21E-02		Commercial Exposure
IA1-DUP	Benzene	2.0		8		250		25		25		365		24		3.00E+00	1.52E-01		
IA1-DUP	Toluene	6.2		8		250		25		25		365		24		3.00E+02	4.72E-03		
IA1-DUP	Ethylbenzene	1.3		8		250		25		25		365		24		1.00E+03	2.97E-04		
IA1-DUP	m,p-Xylene	4.3		8		250		25		25		365		24		1.00E+02	9.82E-03		used p-xylene RfC
IA1-DUP	o-Xylene	1.6		8		250		25		25		365		24		1.00E+02	3.65E-03		used p-xylene RfC
IA1-DUP	Naphthalene	0.20		8		250		25		25		365		24		3.00E+00	1.52E-02		
IA1-DUP	TCE	0.40		8		250		25		25		365		24		2.00E+00	4.57E-02		
																		3.0E-01	
IA2	TPH-G	200		8		250		25		25		365		24		5.70E+02	8.01E-02		Commercial Exposure
IA2	Benzene	2.1		8		250		25		25		365		24		3.00E+00	1.60E-01		
IA2	Toluene	8.8		8		250		25		25		365		24		3.00E+02	6.70E-03		
IA2	Ethylbenzene	1.3		8		250		25		25		365		24		1.00E+03	2.97E-04		
IA2	m,p-Xylene	4.3		8		250		25		25		365		24		1.00E+02	9.82E-03		used p-xylene RfC
IA2	o-Xylene	1.6		8		250		25		25		365		24		1.00E+02	3.65E-03		used p-xylene RfC
IA2	Naphthalene	0.21		8		250		25		25		365		24		3.00E+00	1.60E-02		
IA2	TCE	0.37		8		250		25		25		365		24		2.00E+00	4.22E-02		
																		3.2E-01	
IA3	TPH-G	220		8		250		25		25		365		24		5.70E+02	8.81E-02		Commercial Exposure
IA3	Benzene	2.1		8		250		25		25		365		24		3.00E+00	1.60E-01		
IA3	Toluene	7.1		8		250		25		25		365		24		3.00E+02	5.40E-03		
IA3	Ethylbenzene	1.3		8		250		25		25		365		24		1.00E+03	2.97E-04		
IA3	m,p-Xylene	4.5		8		250		25		25		365		24		1.00E+02	1.03E-02		used p-xylene RfC
IA3	o-Xylene	1.8		8		250		25		25		365		24		1.00E+02	4.11E-03		used p-xylene RfC
IA3	Naphthalene	0.40		8		250		25		25		365		24		3.00E+00	3.04E-02		
IA3	TCE	0.37		8		250		25		25		365		24		2.00E+00	4.22E-02		
																		3.4E-01	
AA1	TPH-G	180		8		250		25		25		365		24		5.70E+02	7.21E-02		Commercial Exposure
AA1	Benzene	2.2		8		250		25		25		365		24		3.00E+00	1.67E-01		
AA1	Toluene	7.6		8		250		25		25		365		24		3.00E+02	5.78E-03		
AA1	Ethylbenzene	1.4		8		250		25		25		365		24		1.00E+03	3.20E-04		
AA1	m,p-Xylene	4.5		8		250		25		25		365		24		1.00E+02	1.03E-02		used p-xylene RfC
AA1	o-Xylene	1.6		8		250		25		25		365		24		1.00E+02	3.65E-03		used p-xylene RfC
AA1	Naphthalene	0.26		8		250		25		25		365		24		3.00E+00	1.98E-02		
AA1	TCE	0.52		8		250		25		25		365		24		2.00E+00	5.94E-02		
																		3.4E-01	

Table 3B
Indoor and Ambient Air Hazard Calculation Results

Equation		Concentration in Air	X	Exposure Time	X	Exposure Frequency	X	Exposure Duration	all divided by	Averaging Time for Non-cancer Toxic Effects	X	365	X	24	X	Reference Concentration (RfC)	Calculated Individual Compound Hazard Quotient	Hazard Index	Comments
Units		**(ug/m3)**		**(hrs/day)**		**(days/yr)**		**(yrs)**		**(yrs)**		**(days/yr)**		**(hr/day)**		**(ug/m3)**			
Location	**Compound**																		
Samples Collected February 17, 2016																			
IA1	TPH-G	260		8		250		25		25		365		24		5.70E+02	1.04E-01		Commercial Exposure
IA1	Benzene	2.3		8		250		25		25		365		24		3.00E+00	1.75E-01		
IA1	Toluene	23		8		250		25		25		365		24		3.00E+02	1.75E-02		
IA1	Ethylbenzene	2.0		8		250		25		25		365		24		1.00E+03	4.57E-04		
IA1	m,p-Xylene	6.1		8		250		25		25		365		24		1.00E+02	1.39E-02		used p-xylene RfC
IA1	o-Xylene	2.2		8		250		25		25		365		24		1.00E+02	5.02E-03		used p-xylene RfC
IA1	Naphthalene	0.35		8		250		25		25		365		24		3.00E+00	2.66E-02		
IA1	PCE	1.2		8		250		25		25		365		24		3.50E+01	7.83E-03		
IA1	TCE	0.52		8		250		25		25		365		24		2.00E+00	5.94E-02		
																		4.1E-01	
IA1-DUP	TPH-G	250		8		250		25		25		365		24		5.70E+02	1.00E-01		Commercial Exposure
IA1-DUP	Benzene	2.4		8		250		25		25		365		24		3.00E+00	1.83E-01		
IA1-DUP	Toluene	9.5		8		250		25		25		365		24		3.00E+02	7.23E-03		
IA1-DUP	Ethylbenzene	1.8		8		250		25		25		365		24		1.00E+03	4.11E-04		
IA1-DUP	m,p-Xylene	5.9		8		250		25		25		365		24		1.00E+02	1.35E-02		used p-xylene RfC
IA1-DUP	o-Xylene	2.0		8		250		25		25		365		24		1.00E+02	4.57E-03		used p-xylene RfC
IA1-DUP	Naphthalene	0.29		8		250		25		25		365		24		3.00E+00	2.21E-02		
																		3.3E-01	
IA2	TPH-G	230		8		250		25		25		365		24		5.70E+02	9.21E-02		Commercial Exposure
IA2	Benzene	2.2		8		250		25		25		365		24		3.00E+00	1.67E-01		
IA2	Toluene	8.5		8		250		25		25		365		24		3.00E+02	6.47E-03		
IA2	Ethylbenzene	1.6		8		250		25		25		365		24		1.00E+03	3.65E-04		
IA2	m,p-Xylene	5.4		8		250		25		25		365		24		1.00E+02	1.23E-02		used p-xylene RfC
IA2	o-Xylene	1.9		8		250		25		25		365		24		1.00E+02	4.34E-03		used p-xylene RfC
IA2	Naphthalene	0.35		8		250		25		25		365		24		3.00E+00	2.66E-02		
																		3.1E-01	
IA3	TPH-G	240		8		250		25		25		365		24		5.70E+02	9.61E-02		Commercial Exposure
IA3	Benzene	2.4		8		250		25		25		365		24		3.00E+00	1.83E-01		
IA3	Toluene	9.4		8		250		25		25		365		24		3.00E+02	7.15E-03		
IA3	Ethylbenzene	1.6		8		250		25		25		365		24		1.00E+03	3.65E-04		
IA3	m,p-Xylene	5.4		8		250		25		25		365		24		1.00E+02	1.23E-02		used p-xylene RfC
IA3	o-Xylene	1.9		8		250		25		25		365		24		1.00E+02	4.34E-03		used p-xylene RfC
IA3	Naphthalene	0.35		8		250		25		25		365		24		3.00E+00	2.66E-02		
																		3.3E-01	
AA1	TPH-G	140		8		250		25		25		365		24		5.70E+02	5.61E-02		Commercial Exposure
AA1	Benzene	1.5		8		250		25		25		365		24		3.00E+00	1.14E-01		
AA1	Toluene	4.2		8		250		25		25		365		24		3.00E+02	3.20E-03		
AA1	Ethylbenzene	0.69		8		250		25		25		365		24		1.00E+03	1.58E-04		
AA1	m,p-Xylene	2.2		8		250		25		25		365		24		1.00E+02	5.02E-03		used p-xylene RfC
AA1	o-Xylene	0.83		8		250		25		25		365		24		1.00E+02	1.89E-03		used p-xylene RfC
AA1	Naphthalene	0.20		8		250		25		25		365		24		3.00E+00	1.52E-02		
																		2.0E-01	

Notes:
TPH-G = Total Petroleum Hydrocarbons as Gasoline

Table 3C
Indoor and Ambient Air Risk and Hazard Calculation Results Summary

Air Sample Designation	Calculated Cumulative Incremental Carcinogenic Risk	Calculated Cumulative Incremental Carcinogenic Risk Alternate Description	Calculated Cumulative Incremental Carcinogenic Risk Alternate Description	Calculated Hazard Index	Recommendations Based on DTSC-Recommended Guidance for Action or Response
Location					
Samples Collected February 11, 2016					
IA1	6.1E-06	0.0000061	6.1 in a million	0.32	Evaluate need for action - risk greater than 1 in a million.
IA1-DUP	5.7E-06	0.0000057	5.7 in a million	0.30	Evaluate need for action - risk greater than 1 in a million.
IA2	5.9E-06	0.0000059	5.9 in a million	0.32	Evaluate need for action - risk greater than 1 in a million.
IA3	6.5E-06	0.0000065	6.5 in a million	0.34	Evaluate need for action - risk greater than 1 in a million.
AA1	6.4E-06	0.0000064	6.4 in a million	0.34	Not Applicable - Ambient Air.
Samples Collected February 17, 2016					
IA1	7.5E-06	0.0000075	7.5 in a million	0.41	Evaluate need for action - risk greater than 1 in a million.
IA1-DUP	6.8E-06	0.0000068	6.8 in a million	0.33	Evaluate need for action - risk greater than 1 in a million.
IA2	6.5E-06	0.0000065	6.5 in a million	0.31	Evaluate need for action - risk greater than 1 in a million.
IA3	7.0E-06	0.0000070	7.0 in a million	0.33	Evaluate need for action - risk greater than 1 in a million.
AA1	4.2E-06	0.0000042	4.2 in a million	0.20	Not Applicable - Ambient Air.

Notes:

RISK MANAGEMENT MATRIX FOR VAPOR INTRUSION

Risk	Response	Activities
Less than 1 in a million	No Further Action	None
1 to 100 in a million	Evaluate Need for Action	Possible Actions o Additional Data Collection o Monitoring o Additional Risk Characterization o Mitigation o Source Remediation
More than 100 in a million	Response Action Needed	o Vapor Intrusion Mitigation o Source Remediation

FIGURES

Figure 1
Site Location Map
Emeryville Chevron
1400 Powell Street
Emeryville, California

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

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

0 1,000 2,000
Approxinate Scale In Feet

N

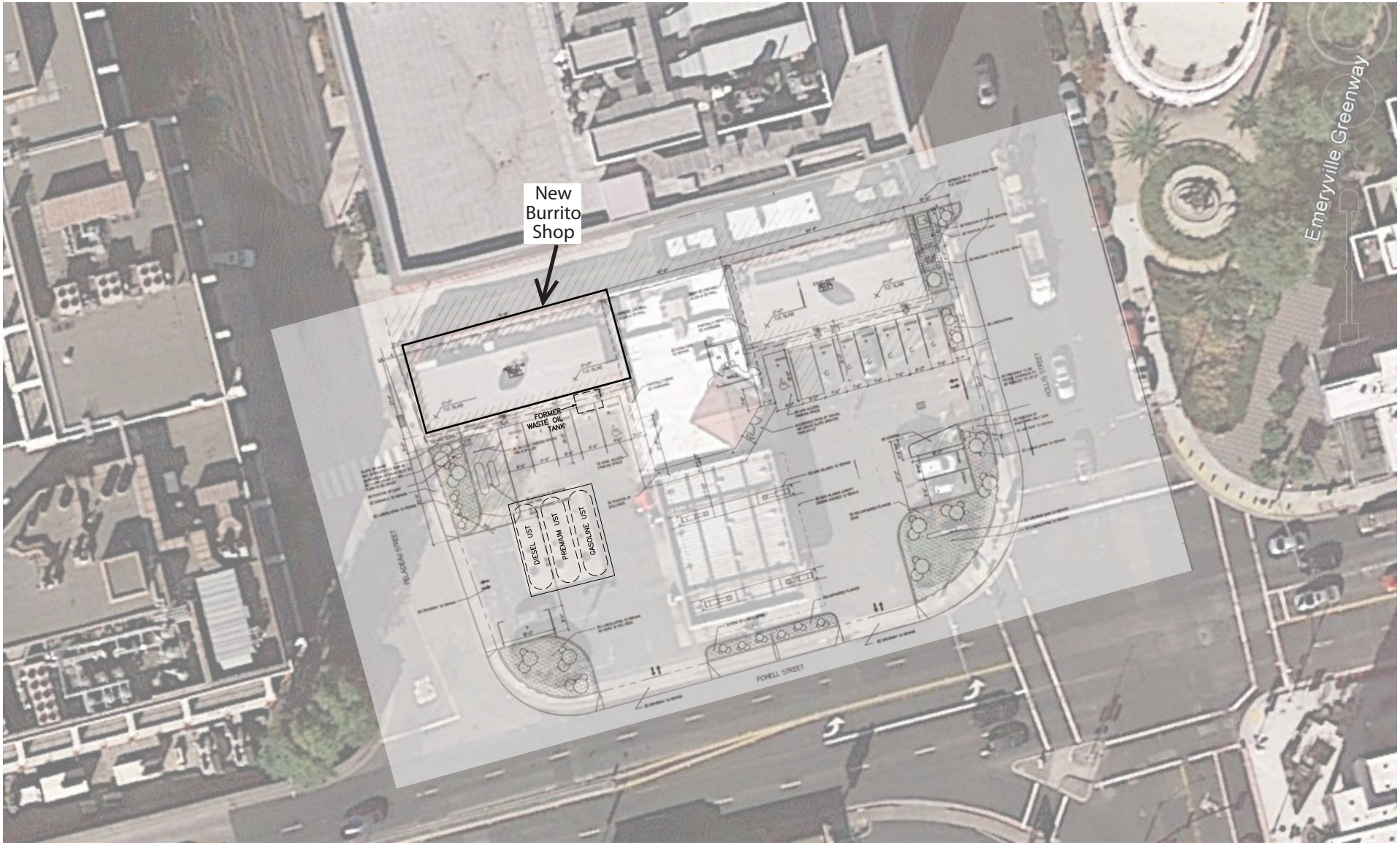


Figure 2
Site Vicinity Aerial Photograph
Emeryville Chevron
1400 Powell Street
Emeryville, California

Base Map from:
Delta Consultants, dated August 4, 2009,
Kava Massih Architects, Sheet No. A1.1, Proposed Site Plan/Elevation, undated, and Google Earth, Image Dated October 30, 2015

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

0 25 50
Approximate Scale in Feet

N

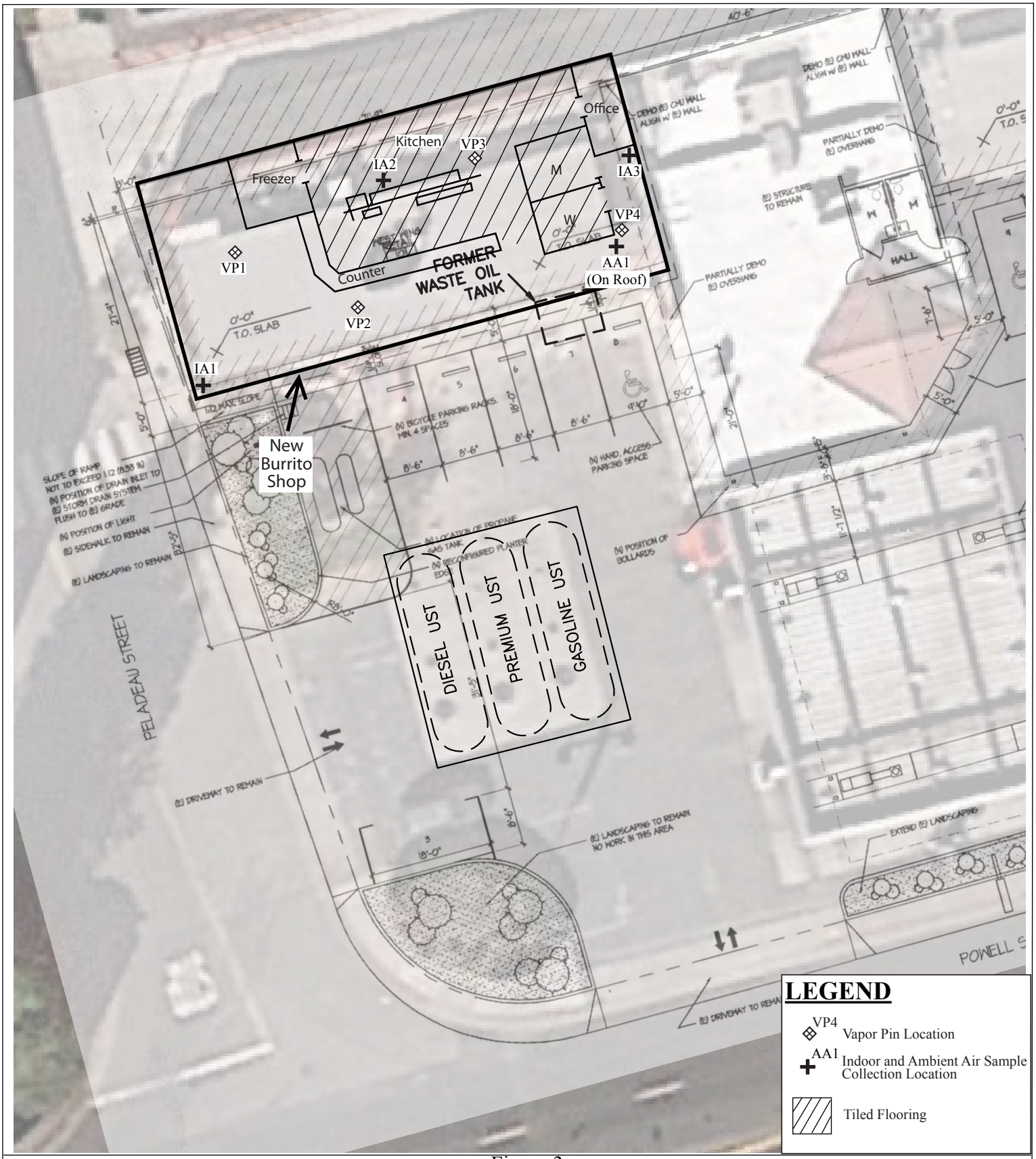


Figure 3
Site Aerial Photograph Detail Showing Sample Collection Locations
Emeryville Chevron
1400 Powell Street
Emeryville, California

Base Map from: Delta Consultants, dated August 4, 2009, Kava Massih Architects, Sheet No. A1.1, Proposed Site Plan/Elevation, undated, and Google Earth, Image Dated October 30, 2015	P&D Environmental, Inc. 55 Santa Clara Ave., Suite 240 Oakland, CA 94610	0 10 20 Approximate Scale in Feet N

Figure 4
Typical Soil Gas Sampling Manifold
Emeryville Chevron
1400 Powell Street
Emeryville, California

APPENDIX A

Chemical Inventory Forms

APPENDIX M – BUILDING SCREENING FORM

Occupant of Building: Best Coast Burrito Shop (Charlie Chun)

Address: 1400-C Powell St

City: Emeryville, CA

Field Investigator: Mikhail Bes-Deschenes Date: 2/4/16

Field Instrument Reading	Measurement Location (Ambient Air, Foundation Opening, or Consumer Product)	If Consumer Product, Potential Volatile Ingredients
1gal	Buckeye "Proclaim" concrete floor coating	Diethylene glycol Ethyl Ether
1 gal	Stylin Professional "Total" Concentrated degreaser	2-butoxy ethanol
1 gal	Zep glass cleaner	Isopropyl Alcohol
~~2 (1 gal)~~ 2(20lbs)	CO_2 cylinders	

Comments:
cleaning chemicals stored inside office.

APPENDIX B

Air Sampling Data Sheets

AIR SAMPLING DATA SHEET EMERYVILLE CHEVRON
Address 1400 TOWELL STREET, EMERYVILLE, CA
Job # 0719
Date 2/10/16
Sampler Name MLBD

Sample Location Designation	Canister #	Start pump flow rate (cc/min) and time	End pump flow rate (cc/min) and time	Sample Canister Initial Vacuum Check (In. Hg) and time	2/10/16 Begin sample collection vacuum (In. Hg) and time	2/11/16 End sample collection vacuum (In. Hg) and time	NOTES
IA1	34500	flow	flow	vac -30	vac -30	vac -9	FLOW CONTROLER- 24-HR (SIM CERTIFIED)
		time	time	time 0653	time 073518	time 073108	
IA1 DUP	33271	flow	flow	vac -27	vac -27	vac -4	
		time	time	time 0653	time 073518	time 073108	
IA2	25267	flow	flow	vac -30	vac -30	vac -13.5	
		time	time	time 0655	time 073820	time ~~073314~~ MLBD 073314	
IA3	933	flow	flow	vac -30	vac -30	vac -7.5	
		time	time	time 0700	time 074006	time 073521	
AA1	3536	flow	flow	vac -30	vac -30	vac -6	
		time	time	time 0650	time 073010	time 074012	
		flow	flow	vac	vac	vac	
		time	time	time	time	time	
		flow	flow	vac	vac	vac	
		time	time	time	time	time	
		flow	flow	vac	vac	vac	
		time	time	time	time	time	
		flow	flow	vac	vac	vac	
		time	time	time	time	time	
		flow	flow	vac	vac	vac	
		time	time	time	time	time	
		flow	flow	vac	vac	vac	
		time	time	time	time	time	
		flow	flow	vac	vac	vac	
		time	time	time	time	time	
		flow	flow	vac	vac	vac	
		time	time	time	time	time	

NOTES

FLOW CONTROLER: 24-HOUR (SIM CERTIFIED)
HVAC (OFF)

AIR SAMPLING DATA SHEET EMERYVILLE CHEVRON
Address 1400 POWELL ST, EMERYVILLE, CA
Job # 0719.R1
Date 2/17/16
Sampler Name ULED

Sample Location Designation	Canister #	Start pump flow rate (cc/min) and time	End pump flow rate (cc/min) and time	Sample Canister Initial Vacuum Check (In. Hg) and time	2/16/16 Begin sample collection vacuum (In. Hg) and time	2/17/16 End sample collection vacuum (In. Hg) and time	NOTES
IA1	6L1258	flow	flow	vac -28.5	vac -28.5	vac -6	
		time	time	time 071700	time 075012	time 074820	
IA1-DUP	13854	flow	flow	vac -30	vac -30	vac -7	
		time	time	time 072000	time 075012	time 074820	
IA2	5770	flow	flow	vac -30	vac -30	vac -8	
		time	time	time 072200	time 075204	time 075031	
IA3	5681	flow	flow	vac -30	vac -30	vac -8	
		time	time	time 072500	time 075341	time 075149	
AA1	4378	flow 4	flow	vac -30	vac -30	vac -6.5	
		time	time	time 071500	time 074510	time 075812	
		flow	flow	vac	vac	vac	
		time	time	time	time	time	
		flow	flow	vac	vac	vac	
		time	time	time	time	time	
		flow	flow	vac	vac	vac	
		time	time	time	time	time	
		flow	flow	vac	vac	vac	
		time	time	time	time	time	
		flow	flow	vac	vac	vac	
		time	time	time	time	time	
		flow	flow	vac	vac	vac	
		time	time	time	time	time	
		flow	flow	vac	vac	vac	
		time	time	time	time	time	
		flow	flow	vac	vac	vac	
		time	time	time	time	time	

NOTES

FLOW CONTROLER: 24-HOUR (SIM CERTIFIED)
HVAC (ON)

APPENDIX C

Purge Volume Calculations and Soil Gas Sampling Data Sheets

Report 0719.R1
4.0 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 = 4 inches
V borehole = pi x (r x r) x h, where pi = 3.14, r = 0.625 in./2, and h = 4.0 in.
V borehole = 3.14 x (0.3125 x 0.3125) x (4.0 in.) = 1.23 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 = 1.23 cubic inches + 0.61 cubic inches + 0.02 cubic inches +
0.66 cubic inches - 0.54 cubic inches - 0.61 cubic inches = 1.37 cubic inches.

To convert to cubic centimeters:

V total = 1.37 cubic inches x 16.39 cubic centimeters/cubic inches = 22.5 cubic centimeters.

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

V purge total = 22.5 cubic centimeters x 3 = 67.5 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 = 68 cubic centimeters/ 150 cubic centimeters per minute = 0.45 minutes.
Converting the purge time to seconds, 0.45 minutes x 60 seconds/ minute = 27 seconds.

Notes:

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

SOIL GAS SAMPLING DATA SHEET EMERYVILLE CHEVRON
Address 1400 POWELL ST.; EMERYVILLE, CA
Job # 8719.E1
Date 2/17/16
Sampler Name MLBD
Drilling Company IMX

Probe Method (check one)
○ PRT
○ Temp Well
○ Permanent Well
☒ Vapor Pin

Soil Gas Location Designation	Probe Depth ~~(Ft)~~ (in)	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
VP1	4	2/8/16	37754	vac -27.5 time 0720	vac -22 time 0840	vac -22 time 0850	vac time	090000 time	090027 time	time SORBENT T.	vac -29 time 091233 092950	vac -5 time 092623 093050	ppm 0 time 0932	VP1 DFA 091312 VP1 ISOPROPYL 092900 PID=0
VP2	4.5	2/8/16	35677	vac -30 time 0724	vac -22 time 1010	vac -22 time 1020	vac time	time 102100	time 102127	time SORBENT TUBE	vac -29 time 103400 104800	vac -5 time 103634 104900	ppm 0 time 1037	VP2 DFA 103000 VP2 ISOPROPYL 1047
VP3	4.0	2/8/16	37426	vac -30 time 0727	vac -22 time 1110	vac -22 time 1120	vac time	time 113300	time 113327	time SORBENT TUBE	vac -26 time 113930 115500	vac -5 time 114750 115600	ppm 0 time 1157	VP3 DFA 114000 VP3 ISOPROPYL 115430
VP4	5.0	2/8/16	8041	vac -30 time 0730	vac -21 time 124600	vac -21 time 125000	vac time	time 125500	time 125527	time SORBENT TUBE	vac -26 time 130400 132600	vac -5 time 131716 132700	ppm 0 time 1328	VP4 DFA 130512 VP4 ISOPROPYL 132400
VP4-DUP	5.0	2/8/16	42413	vac -30 time 0733	vac -21 time 124000	vac -21 time 125000	vac time	time 125500	time 125527	time	vac -26 time 130400	vac -5 time 131716	ppm time	
VP				vac time	vac time	vac time	vac time	time	time	time	vac time	vac time	ppm time	
VP				vac time	vac time	vac time	vac time	time	time	time	vac time	vac time	ppm time	SORBENT TUBE SAMPLE 90 CC/MIN FOR 1 MINUTE.
VP				vac time	vac time	vac time	vac time	time	time	time	vac time	vac time	ppm time	
VP				vac time	vac time	vac time	vac time	time	time	time	vac time	vac time	ppm time	
VP				vac time	vac time	vac time	vac time	time	time	time	vac time	vac time	ppm time	
VP				vac time	vac time	vac time	vac time	time	time	time	vac time	vac time	ppm time	
VP				vac time	vac time	vac time	vac time	time	time	time	vac time	vac time	ppm time	
VP				vac time	vac time	vac time	vac time	time	time	time	vac time	vac time	ppm time	

APPENDIX D

Weather Information

https://www.wunderground.com/personal-weather-station/dashboard?ID=KCAEMERY4#history/s20160201/e20160229/mcustom

About This Weather Station

Weather Station ID: KCAEMERY4

Station Name: Emeryville

Latitude / Longitude: N 37 ° 50 ' 24 ", W 122 ° 17 ' 16 "

Elevation: 26

City: Emeryville

State: CA

Hardware: Netatmo Weather Station

Software: http://meteoware.com

Weather History Table
February 1, 2016 - February 29, 2016

2016	Temperature			Dew Point			Humidity			Speed			Pressure			Precip. Accum.
Feb	High	Avg	Low	High	Avg	Low	High	Avg	Low	High	Avg	Gust	High	Avg	Low	Sum
1	69.8 °F	55.6 °F	44.6 °F	40.5 °F	34.6 °F	28 °F	58 %	47 %	27 %	0 mph	0 mph	0 mph	30.14 in	30.01 in	29.87 in	0 in
2	63 °F	52.5 °F	46.8 °F	46.8 °F	39.8 °F	35.4 °F	84 %	67 %	54 %	0 mph	0 mph	0 mph	30.2 in	30.15 in	30.09 in	0 in
3	61.3 °F	53.8 °F	46 °F	43.9 °F	39.5 °F	35.1 °F	73 %	63 %	52 %	0 mph	0 mph	0 mph	30.31 in	30.25 in	30.19 in	0 in
4	66.6 °F	58 °F	50.4 °F	45.7 °F	41.7 °F	38.8 °F	73 %	59 %	44 %	0 mph	0 mph	0 mph	30.34 in	30.28 in	30.23 in	0 in
5	73 °F	59.4 °F	46.8 °F	49.5 °F	43.8 °F	37 °F	77 %	61 %	43 %	0 mph	0 mph	0 mph	30.31 in	30.26 in	30.22 in	0 in
6	75 °F	61.8 °F	48.6 °F	52 °F	45.8 °F	39.4 °F	79 %	60 %	37 %	0 mph	0 mph	0 mph	30.31 in	30.24 in	30.16 in	0 in
7	75.9 °F	63.2 °F	50 °F	54.3 °F	47.2 °F	40.1 °F	76 %	61 %	45 %	0 mph	0 mph	0 mph	30.19 in	30.11 in	30.03 in	0 in
8	83.1 °F	70.5 °F	59 °F	53.1 °F	47.3 °F	41.2 °F	61 %	44 %	26 %	0 mph	0 mph	0 mph	30.11 in	30.06 in	30.01 in	0 in
9	75.7 °F	65.4 °F	53.4 °F	54.1 °F	47.8 °F	39.9 °F	67 %	57 %	44 %	0 mph	0 mph	0 mph	30.1 in	30.05 in	30 in	0 in
10	75.4 °F	63.7 °F	53.4 °F	54.3 °F	49.3 °F	43.9 °F	77 %	64 %	47 %	0 mph	0 mph	0 mph	30.15 in	30.08 in	30 in	0 in
11	77 °F	64.2 °F	54.1 °F	55.2 °F	50.1 °F	44.6 °F	79 %	65 %	48 %	0 mph	0 mph	0 mph	30.06 in	30.01 in	29.96 in	0 in
12	74.1 °F	63.2 °F	53.2 °F	56.1 °F	50.9 °F	45.3 °F	81 %	70 %	52 %	0 mph	0 mph	0 mph	30.1 in	30.07 in	30.03 in	0 in
13	76.5 °F	63.9 °F	56.3 °F	55.6 °F	51.1 °F	47.3 °F	83 %	69 %	45 %	0 mph	0 mph	0 mph	30.16 in	30.1 in	30.05 in	0 in
14	80.1 °F	65.3 °F	53.4 °F	57.4 °F	50.3 °F	44.4 °F	78 %	63 %	46 %	0 mph	0 mph	0 mph	30.18 in	30.11 in	30.05 in	0 in
15	83.1 °F	70.2 °F	58.1 °F	56.1 °F	51.6 °F	46.8 °F	71 %	55 %	35 %	0 mph	0 mph	0 mph	30.07 in	29.97 in	29.88 in	0 in
16	84.4 °F	70.1 °F	55.6 °F	57.7 °F	52.3 °F	46 °F	77 %	57 %	38 %	0 mph	0 mph	0 mph	29.89 in	29.72 in	29.56 in	0 in
17	67.5 °F	63.3 °F	54.3 °F	53.4 °F	48.4 °F	45.1 °F	80 %	63 %	47 %	0 mph	0 mph	0 mph	29.58 in	29.48 in	29.38 in	0 in
18	64.4 °F	57.8 °F	51.8 °F	46.8 °F	44.4 °F	42.6 °F	80 %	66 %	50 %	0 mph	0 mph	0 mph	29.92 in	29.73 in	29.54 in	0 in
19	63.5 °F	55.9 °F	51.3 °F	49.8 °F	45.3 °F	41.9 °F	79 %	73 %	59 %	0 mph	0 mph	0 mph	30.11 in	29.99 in	29.88 in	0 in
20	69.8 °F	57.9 °F	47.8 °F	49.1 °F	44.2 °F	39.9 °F	82 %	66 %	46 %	0 mph	0 mph	0 mph	30.12 in	30.07 in	30.02 in	0 in
21	74.8 °F	60.2 °F	46.9 °F	50 °F	43.1 °F	36.9 °F	74 %	57 %	37 %	0 mph	0 mph	0 mph	30.16 in	30.12 in	30.08 in	0 in
22	78.6 °F	63.5 °F	49.8 °F	53.4 °F	47.5 °F	40.6 °F	78 %	61 %	39 %	0 mph	0 mph	0 mph	30.13 in	30.03 in	29.93 in	0 in
23	78.6 °F	64.2 °F	51.6 °F	51.3 °F	45.3 °F	40.3 °F	76 %	54 %	35 %	0 mph	0 mph	0 mph	29.96 in	29.91 in	29.86 in	0 in
24	79 °F	64.2 °F	51.3 °F	55.4 °F	46 °F	38.1 °F	69 %	55 %	41 %	0 mph	0 mph	0 mph	30.03 in	29.99 in	29.95 in	0 in
25	80.2 °F	66.4 °F	53.4 °F	55.2 °F	49.5 °F	42.8 °F	75 %	59 %	42 %	0 mph	0 mph	0 mph	30.03 in	29.98 in	29.93 in	0 in
26	72.1 °F	62.1 °F	56.8 °F	53.6 °F	50.8 °F	47.7 °F	80 %	72 %	54 %	0 mph	0 mph	0 mph	30.1 in	30.02 in	29.94 in	0 in
27	76.6 °F	65.8 °F	56.3 °F	53.6 °F	50 °F	44.4 °F	82 %	61 %	39 %	0 mph	0 mph	0 mph	30.09 in	30.03 in	29.98 in	0 in
28	70.3 °F	60.5 °F	53.1 °F	52.3 °F	46.8 °F	41.7 °F	76 %	66 %	42 %	0 mph	0 mph	0 mph	30.11 in	30.06 in	30.01 in	0 in
29	79 °F	64.1 °F	54.5 °F	56.3 °F	50.8 °F	45.5 °F	85 %	67 %	44 %	0 mph	0 mph	0 mph	30.08 in	30.02 in	29.96 in	0 in

APPENDIX E

Laboratory Analytical Reports and Chain of Custody Documentation

Indoor and Ambient Air Samples- Collected February 11 and 17, 2016

- **Air Toxics W/O # 1602252 – IA1, IA1-DUP, IA2, IA3, and AA1 TO-15 Air Results**
- **Air Toxics W/O # 1602346A – IA1, IA1-DUP, IA2, IA3, and AA1 TO-15 Air Results**

Soil Gas and Shroud Samples - Collected February 17, 2016

- **Air Toxics W/O # 1602347A – VP1, VP2, VP3, VP4, and VP4-DUP TO-15 Soil Gas Results**
- **Air Toxics W/O # 1602323 – VP1, VP2, VP3, and VP4 TO-17 Soil Gas Results**
- **Air Toxics W/O # 1602321 – VP1, VP2, VP3, and VP4 Shroud Air Sample DFA Results**
- **Air Toxics W/O # 1602322 – VP1, VP2, VP3, and VP4 Shroud Air Sample 2-Propanol Results**
- **Air Toxics W/O # 1602347B – VP1, VP2, VP3, VP4, and VP4-DUP ASTM D-1946 Soil Gas Results**

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2/25/2016
Mr. Paul King
P & D Environmental
55 Santa Clara
Suite 240
Oakland CA 94610

Project Name: EMERYVILLE CHEVRON 1400 POWELL ST. EMVER
Project #: 0719
Workorder #: 1602252

Dear Mr. Paul King

The following report includes the data for the above referenced project for sample(s) received on 2/11/2016 at Air Toxics Ltd.

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

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

Regards,

Kyle Vagadori

Project Manager

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WORK ORDER #: 1602252

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 #**	0719 EMERYVILLE CHEVRON 1400 POWELL ST. EMVER
DATE RECEIVED:	02/11/2016	**CONTACT:**	Kyle Vagadori
DATE COMPLETED:	02/25/2016		

FRACTION #	NAME	TEST	RECEIPT VAC./PRES.	FINAL PRESSURE
01A	IA1	Modified TO-15	5.1 "Hg	4.9 psi
01B	IA1	Modified TO-15	5.1 "Hg	4.9 psi
02A	IA1-DUP	Modified TO-15	2.6 "Hg	4.9 psi
02B	IA1-DUP	Modified TO-15	2.6 "Hg	4.9 psi
03A	IA2	Modified TO-15	14.9 "Hg	5 psi
03B	IA2	Modified TO-15	14.9 "Hg	5 psi
04A	IA3	Modified TO-15	4.3 "Hg	5.1 psi
04B	IA3	Modified TO-15	4.3 "Hg	5.1 psi
05A	AA1	Modified TO-15	5.5 "Hg	4.9 psi
05B	AA1	Modified TO-15	5.5 "Hg	4.9 psi
06A	Lab Blank	Modified TO-15	NA	NA
06B	Lab Blank	Modified TO-15	NA	NA
07A	CCV	Modified TO-15	NA	NA
07B	CCV	Modified TO-15	NA	NA
08A	LCS	Modified TO-15	NA	NA
08AA	LCSD	Modified TO-15	NA	NA
08B	LCS	Modified TO-15	NA	NA
08BB	LCSD	Modified TO-15	NA	NA

CERTIFIED BY:  DATE: 02/25/16

Technical Director

Certification numbers: AZ Licensure AZ0775, NJ NELAP - CA016, NY NELAP - 11291,
TX NELAP - T104704343-14-7, UT NELAP CA009332014-5, VA NELAP - 460197, WA NELAP - C935
Name of Accreditation Body: NELAP/ORELAP (Oregon Environmental Laboratory Accreditation Program)
Accreditation number: CA300005, Effective date: 10/18/2014, Expiration date: 10/17/2015.
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 - 95630
(916) 985-1000 . (800) 985-5955 . FAX (916) 985-1020

LABORATORY NARRATIVE
Modified TO-15 Full Scan/SIM
P & D Environmental
Workorder# 1602252

Five 6 Liter Summa Canister (SIM Certified) samples were received on February 11, 2016. The laboratory performed analysis via modified EPA Method TO-15 using GC/MS in the Full Scan and SIM acquisition modes. The method involves concentrating up to 1.0 liters of air. The concentrated aliquot is then flash vaporized and swept through a water management system to remove water vapor. Following dehumidification, the sample passes directly into the GC/MS for analysis.

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

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

Requirement	***TO-15***	***ATL Modifications***
ICAL %RSD acceptance criteria	</=30% RSD with 2 compounds allowed out to < 40% RSD	For Full Scan: 30% RSD with 4 compounds allowed out to < 40% RSD For SIM: Project specific; default criteria is </=30% RSD with 10% of compounds allowed out to < 40% RSD
Daily Calibration	+- 30% Difference	For Full Scan: </= 30% Difference with four allowed out up to </=40%.; flag and narrate outliers For SIM: Project specific; default criteria is </= 30% Difference with 10% of compounds allowed out up to </=40%.; flag and narrate outliers
Blank and standards	Zero air	Nitrogen
Method Detection Limit	Follow 40CFR Pt.136 App. B	The MDL met all relevant requirements in Method TO-15 (statistical MDL less than the LOQ). The concentration of the spiked replicate may have exceeded 10X the calculated MDL in some cases

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

The results for each sample in this report were acquired from two separate data files originating from the same analytical run. The two data files have the same base file name and are differentiated with a "sim" extension on the SIM data file.

As per project specific client request the laboratory has reported estimated values for Naphthalene and

Benzene hits that are below the Reporting Limit but greater than the Method Detection Limit. All The canisters used for this project have been certified to the Reporting Limit for the target analytes included in this workorder. Concentrations that are below the level at which the canister was certified may be false positives.

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

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

B - Compound present in laboratory blank greater than reporting limit (background subtraction not performed).

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the reporting limit.

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

N - The identification is based on presumptive evidence.

CN - See case narrative explanation

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

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue

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

Client Sample ID: IA1

Lab ID#: 1602252-01A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
TPH ref. to Gasoline (MW=100)	16	45	66	180

Client Sample ID: IA1

Lab ID#: 1602252-01B

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Benzene	0.080	0.66	0.26	2.1
Trichloroethene	0.032	0.083	0.17	0.45
Toluene	0.032	2.0	0.12	7.5
Ethyl Benzene	0.032	0.31	0.14	1.3
m,p-Xylene	0.064	1.1	0.28	4.6
o-Xylene	0.032	0.40	0.14	1.7
Naphthalene	0.080	0.050 J	0.42	0.26 J

Client Sample ID: IA1-DUP

Lab ID#: 1602252-02A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
TPH ref. to Gasoline (MW=100)	15	45	60	180

Client Sample ID: IA1-DUP

Lab ID#: 1602252-02B

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Benzene	0.073	0.62	0.23	2.0
Trichloroethene	0.029	0.074	0.16	0.40
Toluene	0.029	1.6	0.11	6.2
Ethyl Benzene	0.029	0.29	0.13	1.3
m,p-Xylene	0.058	0.99	0.25	4.3
o-Xylene	0.029	0.37	0.13	1.6
Naphthalene	0.073	0.039 J	0.38	0.20 J

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

Client Sample ID: IA2

Lab ID#: 1602252-03A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
TPH ref. to Gasoline (MW=100)	27	48	110	200

Client Sample ID: IA2

Lab ID#: 1602252-03B

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Benzene	0.13	0.65	0.42	2.1
Trichloroethene	0.053	0.069	0.28	0.37
Toluene	0.053	2.3	0.20	8.8
Ethyl Benzene	0.053	0.29	0.23	1.3
m,p-Xylene	0.11	1.0	0.46	4.3
o-Xylene	0.053	0.37	0.23	1.6
Naphthalene	0.13	0.041 J	0.70	0.21 J

Client Sample ID: IA3

Lab ID#: 1602252-04A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
TPH ref. to Gasoline (MW=100)	16	54	64	220

Client Sample ID: IA3

Lab ID#: 1602252-04B

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Benzene	0.078	0.66	0.25	2.1
Trichloroethene	0.031	0.068	0.17	0.37
Toluene	0.031	1.9	0.12	7.1
Ethyl Benzene	0.031	0.31	0.14	1.3
m,p-Xylene	0.063	1.0	0.27	4.5
o-Xylene	0.031	0.41	0.14	1.8
Naphthalene	0.078	0.075 J	0.41	0.40 J

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

Client Sample ID: AA1

Lab ID#: 1602252-05A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
TPH ref. to Gasoline (MW=100)	16	44	67	180

Client Sample ID: AA1

Lab ID#: 1602252-05B

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Benzene	0.082	0.68	0.26	2.2
Trichloroethene	0.033	0.098	0.18	0.52
Toluene	0.033	2.0	0.12	7.6
Ethyl Benzene	0.033	0.31	0.14	1.4
m,p-Xylene	0.065	1.0	0.28	4.5
o-Xylene	0.033	0.38	0.14	1.6
Naphthalene	0.082	0.050 J	0.43	0.26 J

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Client Sample ID: IA1

Lab ID#: 1602252-01A

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

File Name:	**e021713**	**Date of Collection: 2/11/16 7:31:00 AM**	
Dil. Factor:	**1.61**	**Date of Analysis: 2/17/16 05:28 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
tert-Amyl methyl ether	3.2	Not Detected	13	Not Detected
tert-Butyl alcohol	3.2	Not Detected	9.8	Not Detected
Isopropyl ether	3.2	Not Detected	13	Not Detected
Ethyl-tert-butyl ether	3.2	Not Detected	13	Not Detected
TPH ref. to Gasoline (MW=100)	16	45	66	180

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	95	70-130
Toluene-d8	96	70-130
4-Bromofluorobenzene	99	70-130

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Client Sample ID: IA1

Lab ID#: 1602252-01B

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

File Name:	**e021713sim**	**Date of Collection: 2/11/16 7:31:00 AM**	
Dil. Factor:	**1.61**	**Date of Analysis: 2/17/16 05:28 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.016	Not Detected	0.041	Not Detected
1,1-Dichloroethene	0.016	Not Detected	0.064	Not Detected
trans-1,2-Dichloroethene	0.16	Not Detected	0.64	Not Detected
Methyl tert-butyl ether	0.16	Not Detected	0.58	Not Detected
1,1-Dichloroethane	0.032	Not Detected	0.13	Not Detected
cis-1,2-Dichloroethene	0.032	Not Detected	0.13	Not Detected
1,1,1-Trichloroethane	0.032	Not Detected	0.18	Not Detected
Benzene	0.080	0.66	0.26	2.1
Trichloroethene	0.032	0.083	0.17	0.45
Toluene	0.032	2.0	0.12	7.5
Tetrachloroethene	0.032	Not Detected	0.22	Not Detected
Ethyl Benzene	0.032	0.31	0.14	1.3
m,p-Xylene	0.064	1.1	0.28	4.6
o-Xylene	0.032	0.40	0.14	1.7
Naphthalene	0.080	0.050 J	0.42	0.26 J

J = Estimated value.

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	94	70-130
Toluene-d8	97	70-130
4-Bromofluorobenzene	100	70-130

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Client Sample ID: IA1-DUP

Lab ID#: 1602252-02A

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

File Name:	**e021714**	**Date of Collection: 2/11/16 7:31:00 AM**	
Dil. Factor:	**1.46**	**Date of Analysis: 2/17/16 06:33 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
tert-Amyl methyl ether	2.9	Not Detected	12	Not Detected
tert-Butyl alcohol	2.9	Not Detected	8.8	Not Detected
Isopropyl ether	2.9	Not Detected	12	Not Detected
Ethyl-tert-butyl ether	2.9	Not Detected	12	Not Detected
TPH ref. to Gasoline (MW=100)	15	45	60	180

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	93	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	100	70-130

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Client Sample ID: IA1-DUP

Lab ID#: 1602252-02B

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

File Name:	**e021714sim**	**Date of Collection: 2/11/16 7:31:00 AM**	
Dil. Factor:	**1.46**	**Date of Analysis: 2/17/16 06:33 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.015	Not Detected	0.037	Not Detected
1,1-Dichloroethene	0.015	Not Detected	0.058	Not Detected
trans-1,2-Dichloroethene	0.15	Not Detected	0.58	Not Detected
Methyl tert-butyl ether	0.15	Not Detected	0.53	Not Detected
1,1-Dichloroethane	0.029	Not Detected	0.12	Not Detected
cis-1,2-Dichloroethene	0.029	Not Detected	0.12	Not Detected
1,1,1-Trichloroethane	0.029	Not Detected	0.16	Not Detected
Benzene	0.073	0.62	0.23	2.0
Trichloroethene	0.029	0.074	0.16	0.40
Toluene	0.029	1.6	0.11	6.2
Tetrachloroethene	0.029	Not Detected	0.20	Not Detected
Ethyl Benzene	0.029	0.29	0.13	1.3
m,p-Xylene	0.058	0.99	0.25	4.3
o-Xylene	0.029	0.37	0.13	1.6
Naphthalene	0.073	0.039 J	0.38	0.20 J

J = Estimated value.

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	94	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	98	70-130

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Client Sample ID: IA2

Lab ID#: 1602252-03A

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

File Name:	**e021715**	**Date of Collection: 2/11/16 7:33:00 AM**	
Dil. Factor:	**2.66**	**Date of Analysis: 2/17/16 07:16 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
tert-Amyl methyl ether	5.3	Not Detected	22	Not Detected
tert-Butyl alcohol	5.3	Not Detected	16	Not Detected
Isopropyl ether	5.3	Not Detected	22	Not Detected
Ethyl-tert-butyl ether	5.3	Not Detected	22	Not Detected
TPH ref. to Gasoline (MW=100)	27	48	110	200

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	96	70-130
Toluene-d8	96	70-130
4-Bromofluorobenzene	97	70-130

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Client Sample ID: IA2

Lab ID#: 1602252-03B

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

File Name:	**e021715sim**	**Date of Collection: 2/11/16 7:33:00 AM**	
Dil. Factor:	**2.66**	**Date of Analysis: 2/17/16 07:16 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.027	Not Detected	0.068	Not Detected
1,1-Dichloroethene	0.027	Not Detected	0.10	Not Detected
trans-1,2-Dichloroethene	0.27	Not Detected	1.0	Not Detected
Methyl tert-butyl ether	0.27	Not Detected	0.96	Not Detected
1,1-Dichloroethane	0.053	Not Detected	0.22	Not Detected
cis-1,2-Dichloroethene	0.053	Not Detected	0.21	Not Detected
1,1,1-Trichloroethane	0.053	Not Detected	0.29	Not Detected
Benzene	0.13	0.65	0.42	2.1
Trichloroethene	0.053	0.069	0.28	0.37
Toluene	0.053	2.3	0.20	8.8
Tetrachloroethene	0.053	Not Detected	0.36	Not Detected
Ethyl Benzene	0.053	0.29	0.23	1.3
m,p-Xylene	0.11	1.0	0.46	4.3
o-Xylene	0.053	0.37	0.23	1.6
Naphthalene	0.13	0.041 J	0.70	0.21 J

J = Estimated value.

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	96	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	98	70-130

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Client Sample ID: IA3

Lab ID#: 1602252-04A

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

File Name:	**e021716**	**Date of Collection: 2/11/16 7:35:00 AM**	
Dil. Factor:	**1.57**	**Date of Analysis: 2/17/16 08:01 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
tert-Amyl methyl ether	3.1	Not Detected	13	Not Detected
tert-Butyl alcohol	3.1	Not Detected	9.5	Not Detected
Isopropyl ether	3.1	Not Detected	13	Not Detected
Ethyl-tert-butyl ether	3.1	Not Detected	13	Not Detected
TPH ref. to Gasoline (MW=100)	16	54	64	220

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	95	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	100	70-130

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Client Sample ID: IA3

Lab ID#: 1602252-04B

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

File Name:	**e021716sim**	**Date of Collection: 2/11/16 7:35:00 AM**	
Dil. Factor:	**1.57**	**Date of Analysis: 2/17/16 08:01 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.016	Not Detected	0.040	Not Detected
1,1-Dichloroethene	0.016	Not Detected	0.062	Not Detected
trans-1,2-Dichloroethene	0.16	Not Detected	0.62	Not Detected
Methyl tert-butyl ether	0.16	Not Detected	0.57	Not Detected
1,1-Dichloroethane	0.031	Not Detected	0.13	Not Detected
cis-1,2-Dichloroethene	0.031	Not Detected	0.12	Not Detected
1,1,1-Trichloroethane	0.031	Not Detected	0.17	Not Detected
Benzene	0.078	0.66	0.25	2.1
Trichloroethene	0.031	0.068	0.17	0.37
Toluene	0.031	1.9	0.12	7.1
Tetrachloroethene	0.031	Not Detected	0.21	Not Detected
Ethyl Benzene	0.031	0.31	0.14	1.3
m,p-Xylene	0.063	1.0	0.27	4.5
o-Xylene	0.031	0.41	0.14	1.8
Naphthalene	0.078	0.075 J	0.41	0.40 J

J = Estimated value.

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	96	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	99	70-130

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Client Sample ID: AA1

Lab ID#: 1602252-05A

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

File Name:	**e021717**	**Date of Collection: 2/11/16 7:40:00 AM**	
Dil. Factor:	**1.63**	**Date of Analysis: 2/17/16 08:44 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
tert-Amyl methyl ether	3.3	Not Detected	14	Not Detected
tert-Butyl alcohol	3.3	Not Detected	9.9	Not Detected
Isopropyl ether	3.3	Not Detected	14	Not Detected
Ethyl-tert-butyl ether	3.3	Not Detected	14	Not Detected
TPH ref. to Gasoline (MW=100)	16	44	67	180

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	96	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	99	70-130

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Client Sample ID: AA1

Lab ID#: 1602252-05B

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

File Name:	**e021717sim**	**Date of Collection: 2/11/16 7:40:00 AM**	
Dil. Factor:	**1.63**	**Date of Analysis: 2/17/16 08:44 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.016	Not Detected	0.042	Not Detected
1,1-Dichloroethene	0.016	Not Detected	0.065	Not Detected
trans-1,2-Dichloroethene	0.16	Not Detected	0.65	Not Detected
Methyl tert-butyl ether	0.16	Not Detected	0.59	Not Detected
1,1-Dichloroethane	0.033	Not Detected	0.13	Not Detected
cis-1,2-Dichloroethene	0.033	Not Detected	0.13	Not Detected
1,1,1-Trichloroethane	0.033	Not Detected	0.18	Not Detected
Benzene	0.082	0.68	0.26	2.2
Trichloroethene	0.033	0.098	0.18	0.52
Toluene	0.033	2.0	0.12	7.6
Tetrachloroethene	0.033	Not Detected	0.22	Not Detected
Ethyl Benzene	0.033	0.31	0.14	1.4
m,p-Xylene	0.065	1.0	0.28	4.5
o-Xylene	0.033	0.38	0.14	1.6
Naphthalene	0.082	0.050 J	0.43	0.26 J

J = Estimated value.

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	96	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	99	70-130

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Client Sample ID: Lab Blank

Lab ID#: 1602252-06A

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

File Name:	**e021707**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 2/17/16 12:04 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
tert-Amyl methyl ether	2.0	Not Detected	8.4	Not Detected
tert-Butyl alcohol	2.0	Not Detected	6.1	Not Detected
Isopropyl ether	2.0	Not Detected	8.4	Not Detected
Ethyl-tert-butyl ether	2.0	Not Detected	8.4	Not Detected
TPH ref. to Gasoline (MW=100)	10	Not Detected	41	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	92	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	101	70-130

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Client Sample ID: Lab Blank

Lab ID#: 1602252-06B

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

File Name:	**e021707sima**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 2/17/16 12:04 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.010	Not Detected	0.026	Not Detected
1,1-Dichloroethene	0.010	Not Detected	0.040	Not Detected
trans-1,2-Dichloroethene	0.10	Not Detected	0.40	Not Detected
Methyl tert-butyl ether	0.10	Not Detected	0.36	Not Detected
1,1-Dichloroethane	0.020	Not Detected	0.081	Not Detected
cis-1,2-Dichloroethene	0.020	Not Detected	0.079	Not Detected
1,1,1-Trichloroethane	0.020	Not Detected	0.11	Not Detected
Benzene	0.050	0.024 J	0.16	0.077 J
Trichloroethene	0.020	Not Detected	0.11	Not Detected
Toluene	0.020	Not Detected	0.075	Not Detected
Tetrachloroethene	0.020	Not Detected	0.14	Not Detected
Ethyl Benzene	0.020	Not Detected	0.087	Not Detected
m,p-Xylene	0.040	Not Detected	0.17	Not Detected
o-Xylene	0.020	Not Detected	0.087	Not Detected
Naphthalene	0.050	Not Detected	0.26	Not Detected

J = Estimated value.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	95	70-130
Toluene-d8	97	70-130
4-Bromofluorobenzene	100	70-130

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Client Sample ID: CCV

Lab ID#: 1602252-07A

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

File Name:	**e021702**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 2/17/16 08:14 AM**	

Compound	%Recovery
tert-Amyl methyl ether	116
tert-Butyl alcohol	134
Isopropyl ether	115
Ethyl-tert-butyl ether	111
TPH ref. to Gasoline (MW=100)	100

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	90	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	103	70-130

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Client Sample ID: CCV

Lab ID#: 1602252-07B

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

File Name:	**e021702sim**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 2/17/16 08:14 AM**	

Compound	%Recovery
Vinyl Chloride	110
1,1-Dichloroethene	107
trans-1,2-Dichloroethene	111
Methyl tert-butyl ether	107
1,1-Dichloroethane	112
cis-1,2-Dichloroethene	108
1,1,1-Trichloroethane	112
Benzene	105
Trichloroethene	107
Toluene	112
Tetrachloroethene	113
Ethyl Benzene	115
m,p-Xylene	115
o-Xylene	114
Naphthalene	73

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	90	70-130
Toluene-d8	97	70-130
4-Bromofluorobenzene	102	70-130

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Client Sample ID: LCS

Lab ID#: 1602252-08A

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

File Name:	**e021703**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 2/17/16 08:58 AM**	

Compound	%Recovery	Method Limits
tert-Amyl methyl ether	Not Spiked	0-0
tert-Butyl alcohol	Not Spiked	0-0
Isopropyl ether	Not Spiked	0-0
Ethyl-tert-butyl ether	Not Spiked	0-0
TPH ref. to Gasoline (MW=100)	Not Spiked	

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	88	70-130
Toluene-d8	96	70-130
4-Bromofluorobenzene	100	70-130

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Client Sample ID: LCSD

Lab ID#: 1602252-08AA

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

File Name:	**e021704**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 2/17/16 09:40 AM**	

Compound	%Recovery	Method Limits
tert-Amyl methyl ether	Not Spiked	0-0
tert-Butyl alcohol	Not Spiked	0-0
Isopropyl ether	Not Spiked	0-0
Ethyl-tert-butyl ether	Not Spiked	0-0
TPH ref. to Gasoline (MW=100)	Not Spiked	

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	92	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	101	70-130

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Client Sample ID: LCS

Lab ID#: 1602252-08B

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

File Name:	**e021703sim**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 2/17/16 08:58 AM**	

Compound	%Recovery	Method Limits
Vinyl Chloride	89	70-130
1,1-Dichloroethene	84	70-130
trans-1,2-Dichloroethene	75	70-130
Methyl tert-butyl ether	82	70-130
1,1-Dichloroethane	87	70-130
cis-1,2-Dichloroethene	93	70-130
1,1,1-Trichloroethane	88	70-130
Benzene	82	70-130
Trichloroethene	84	70-130
Toluene	88	70-130
Tetrachloroethene	90	70-130
Ethyl Benzene	90	70-130
m,p-Xylene	90	70-130
o-Xylene	92	70-130
Naphthalene	79	60-140

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	90	70-130
Toluene-d8	97	70-130
4-Bromofluorobenzene	100	70-130

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Client Sample ID: LCSD

Lab ID#: 1602252-08BB

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

File Name:	**e021704sim**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 2/17/16 09:40 AM**	

Compound	%Recovery	Method Limits
Vinyl Chloride	90	70-130
1,1-Dichloroethene	84	70-130
trans-1,2-Dichloroethene	75	70-130
Methyl tert-butyl ether	83	70-130
1,1-Dichloroethane	87	70-130
cis-1,2-Dichloroethene	93	70-130
1,1,1-Trichloroethane	88	70-130
Benzene	82	70-130
Trichloroethene	83	70-130
Toluene	88	70-130
Tetrachloroethene	90	70-130
Ethyl Benzene	90	70-130
m,p-Xylene	91	70-130
o-Xylene	91	70-130
Naphthalene	79	60-140

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	90	70-130
Toluene-d8	97	70-130
4-Bromofluorobenzene	100	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: 0719

PROJECT NAME: EMERYVILLE CHEVRON 1400 POWELL ST. EMERYVILLE, CA

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

SAMPLE NUMBER	DATE	TIME	TYPE	SAMPLE LOCATION INIT VAC	FINAL VAC	SUMMA #	NUMBER OF CONTAINERS	ANALYSIS(ES): TO-15 Full List	TPH-G, BTEX, MTBE	NAPHTHALENE	PRESERVATIVE	REMARKS
IA1	2/11/16	07:35 / 13:10	AIR	-30	-9	34500	1	X			NONE	NORMAL TAT
IA1-DUP		07:35 / 13:10		-27	-4	33871	1	X				
IA2		07:28 / 13:14		-30	-13.5	25267	1	X				
IA3		07:46 / 13:35		-30	-7.5	933	1	X				
AA1		07:36 / 13:40		-30	-6	3536	1	X				

Custody Seal Intact?
Y N None Temp LA
EATL n/c

RELINQUISHED BY: (SIGNATURE) Michael Bass-Deschenes	DATE 2-11-16	TIME 1505	RECEIVED BY: (SIGNATURE)	Total No. of Samples (This Shipment) 5 / Total No. of Containers (This Shipment) 5	LABORATORY: EUROFIN/AIRTOXICS LTD.
RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	LABORATORY CONTACT: KYLE VAGADOR	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: FLOW CONTROLER - 24 HR (SIM CERTIFIED)

1602252

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2/29/2016
Mr. Paul King
P & D Environmental
55 Santa Clara
Suite 240
Oakland CA 94610

Project Name: EMERYVILLE CHEVRON 1400 POWELL ST
Project #: 0719
Workorder #: 1602346A

Dear Mr. Paul King

The following report includes the data for the above referenced project for sample(s) received on 2/17/2016 at Air Toxics Ltd.

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

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

Regards,

Kyle Vagadori

Project Manager

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WORK ORDER #: 1602346A

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 #**	0719 EMERYVILLE CHEVRON 1400 POWELL ST
DATE RECEIVED:	02/17/2016	**CONTACT:**	Kyle Vagadori
DATE COMPLETED:	02/29/2016		

FRACTION #	NAME	TEST	RECEIPT VAC./PRES.	FINAL PRESSURE
01A	IA1	Modified TO-15	5.7 "Hg	5.1 psi
01B	IA1	Modified TO-15	5.7 "Hg	5.1 psi
02A	IA1-DUP	Modified TO-15	6.5 "Hg	5.1 psi
02B	IA1-DUP	Modified TO-15	6.5 "Hg	5.1 psi
03A	IA2	Modified TO-15	6.9 "Hg	5.1 psi
03B	IA2	Modified TO-15	6.9 "Hg	5.1 psi
04A	IA3	Modified TO-15	7.3 "Hg	5.2 psi
04B	IA3	Modified TO-15	7.3 "Hg	5.2 psi
05A	AA1	Modified TO-15	5.1 "Hg	5 psi
05B	AA1	Modified TO-15	5.1 "Hg	5 psi
06A	Lab Blank	Modified TO-15	NA	NA
06B	Lab Blank	Modified TO-15	NA	NA
07A	CCV	Modified TO-15	NA	NA
07B	CCV	Modified TO-15	NA	NA
08A	LCS	Modified TO-15	NA	NA
08AA	LCSD	Modified TO-15	NA	NA
08B	LCS	Modified TO-15	NA	NA
08BB	LCSD	Modified TO-15	NA	NA

CERTIFIED BY: Heidi Rayos DATE: 02/29/16

Technical Director

Certification numbers: AZ Licensure AZ0775, NJ NELAP - CA016, NY NELAP - 11291,
TX NELAP - T104704343-14-7, UT NELAP CA009332014-5, VA NELAP - 460197, WA NELAP - C935
Name of Accreditation Body: NELAP/ORELAP (Oregon Environmental Laboratory Accreditation Program)
Accreditation number: CA300005, Effective date: 10/18/2014, Expiration date: 10/17/2015.
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 TO-15 Full Scan/SIM
P & D Environmental
Workorder# 1602346A

Five 6 Liter Summa Canister (SIM Certified) samples were received on February 17, 2016. The laboratory performed analysis via modified EPA Method TO-15 using GC/MS in the Full Scan and SIM acquisition modes. The method involves concentrating up to 1.0 liters of air. The concentrated aliquot is then flash vaporized and swept through a water management system to remove water vapor. Following dehumidification, the sample passes directly into the GC/MS for analysis.

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

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

Requirement	***TO-15***	***ATL Modifications***
ICAL %RSD acceptance criteria	</=30% RSD with 2 compounds allowed out to < 40% RSD	For Full Scan: 30% RSD with 4 compounds allowed out to < 40% RSD For SIM: Project specific; default criteria is </=30% RSD with 10% of compounds allowed out to < 40% RSD
Daily Calibration	+- 30% Difference	For Full Scan: </= 30% Difference with four allowed out up to </=40%.; flag and narrate outliers For SIM: Project specific; default criteria is </= 30% Difference with 10% of compounds allowed out up to </=40%.; flag and narrate outliers
Blank and standards	Zero air	Nitrogen
Method Detection Limit	Follow 40CFR Pt.136 App. B	The MDL met all relevant requirements in Method TO-15 (statistical MDL less than the LOQ). The concentration of the spiked replicate may have exceeded 10X the calculated MDL in some cases

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

The results for each sample in this report were acquired from two separate data files originating from the same analytical run. The two data files have the same base file name and are differentiated with a "sim" extension on the SIM data file.

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.

As per project specific client request, the laboratory has reported estimated values for Benzene and Naphthalene hits that are below the Reporting Limit but greater than the Method Detection Limit. All the canisters used for this project have been certified to the Reporting Limit for the target analytes included in this workorder. Concentrations that are below the level at which the canister was certified may be false positives.

Definition of Data Qualifying Flags

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

B - Compound present in laboratory blank greater than reporting limit (background subtraction not performed).

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the reporting limit.

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

N - The identification is based on presumptive evidence.

CN - See case narrative explanation

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

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN
EMERYVILLE CHEVRON 1400 POWELL ST

Client ID:	IA1		
Lab ID:	1602346A-01A	**Date/Time Analyzed:**	2/19/16 04:23 PM
Date/Time Collected:	2/17/16 07:48 AM	**Dilution Factor:**	1.66
Media:	6 Liter Summa Canister (SIM Certified)	**Instrument/Filename:**	msd20.i / 20021912

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Ethyl-tert-butyl ether	637-92-3	0.12	D	14	Not Detected
Isopropyl ether	108-20-3	0.20	D	14	Not Detected
tert-Amyl methyl ether	994-05-8	0.83	D	14	Not Detected
tert-Butyl alcohol	75-65-0	0.18	D	10	Not Detected
TPH ref. to Gasoline (MW=100)	9999-9999-038	NA	D	68	260

D: Analyte not within the DoD scope of accreditation.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	104
4-Bromofluorobenzene	460-00-4	70-130	91
Toluene-d8	2037-26-5	70-130	98

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN
EMERYVILLE CHEVRON 1400 POWELL ST

Client ID:	IA1		
Lab ID:	1602346A-01B	**Date/Time Analyzed:**	2/19/16 04:23 PM
Date/Time Collected:	2/17/16 07:48 AM	**Dilution Factor:**	1.66
Media:	6 Liter Summa Canister (SIM Certified)	**Instrument/Filename:**	msd20.i / 20021912sim

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1,1-Trichloroethane	71-55-6	0.0076	0.045	0.18	Not Detected
1,1-Dichloroethane	75-34-3	0.0048	0.034	0.13	Not Detected
1,1-Dichloroethene	75-35-4	0.0058	0.033	0.066	Not Detected
Benzene	71-43-2	0.0039	0.034	0.26	2.3
cis-1,2-Dichloroethene	156-59-2	0.0069	0.033	0.13	Not Detected
Ethyl Benzene	100-41-4	0.0066	0.036	0.14	2.0
m,p-Xylene	108-38-3	0.0094	0.036	0.29	6.1
Methyl tert-butyl ether	1634-04-4	0.0031	0.030	0.60	Not Detected
Naphthalene	91-20-3	0.012	0.35	0.44	0.35 J
o-Xylene	95-47-6	0.0090	0.036	0.14	2.2
Tetrachloroethene	127-18-4	0.011	0.056	0.22	1.2
Toluene	108-88-3	0.0055	0.031	0.12	23
trans-1,2-Dichloroethene	156-60-5	0.0072	0.033	0.66	Not Detected
Trichloroethene	79-01-6	0.0070	0.045	0.18	0.52
Vinyl Chloride	75-01-4	0.0063	0.021	0.042	Not Detected

J = Estimated value.
D: Analyte not within the DoD scope of accreditation.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	106
4-Bromofluorobenzene	460-00-4	70-130	96
Toluene-d8	2037-26-5	70-130	98

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN
EMERYVILLE CHEVRON 1400 POWELL ST

Client ID:	IA1-DUP		
Lab ID:	1602346A-02A	**Date/Time Analyzed:**	2/19/16 05:03 PM
Date/Time Collected:	2/17/16 07:48 AM	**Dilution Factor:**	1.72
Media:	6 Liter Summa Canister (SIM Certified)	**Instrument/Filename:**	msd20.i / 20021913

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Ethyl-tert-butyl ether	637-92-3	0.12	D	14	Not Detected
Isopropyl ether	108-20-3	0.20	D	14	Not Detected
tert-Amyl methyl ether	994-05-8	0.86	D	14	Not Detected
tert-Butyl alcohol	75-65-0	0.19	D	10	Not Detected
TPH ref. to Gasoline (MW=100)	9999-9999-038	NA	D	70	250

D: Analyte not within the DoD scope of accreditation.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	99
4-Bromofluorobenzene	460-00-4	70-130	93
Toluene-d8	2037-26-5	70-130	97

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN
EMERYVILLE CHEVRON 1400 POWELL ST

Client ID:	IA1-DUP		
Lab ID:	1602346A-02B	**Date/Time Analyzed:**	2/19/16 05:03 PM
Date/Time Collected:	2/17/16 07:48 AM	**Dilution Factor:**	1.72
Media:	6 Liter Summa Canister (SIM Certified)	**Instrument/Filename:**	msd20.i / 20021913sim

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1,1-Trichloroethane	71-55-6	0.0079	0.047	0.19	Not Detected
1,1-Dichloroethane	75-34-3	0.0050	0.035	0.14	Not Detected
1,1-Dichloroethene	75-35-4	0.0061	0.034	0.068	Not Detected
Benzene	71-43-2	0.0040	0.036	0.27	2.4
cis-1,2-Dichloroethene	156-59-2	0.0072	0.034	0.14	Not Detected
Ethyl Benzene	100-41-4	0.0068	0.037	0.15	1.8
m,p-Xylene	108-38-3	0.0098	0.037	0.30	5.9
Methyl tert-butyl ether	1634-04-4	0.0032	0.031	0.62	Not Detected
Naphthalene	91-20-3	0.012	0.36	0.45	0.29 J
o-Xylene	95-47-6	0.0093	0.037	0.15	2.0
Tetrachloroethene	127-18-4	0.011	0.058	0.23	Not Detected
Toluene	108-88-3	0.0057	0.032	0.13	9.5
trans-1,2-Dichloroethene	156-60-5	0.0075	0.034	0.68	Not Detected
Trichloroethene	79-01-6	0.0072	0.046	0.18	Not Detected
Vinyl Chloride	75-01-4	0.0065	0.022	0.044	Not Detected

J = Estimated value.
D: Analyte not within the DoD scope of accreditation.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	101
4-Bromofluorobenzene	460-00-4	70-130	97
Toluene-d8	2037-26-5	70-130	98

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN
EMERYVILLE CHEVRON 1400 POWELL ST

Client ID:	IA2		
Lab ID:	1602346A-03A	**Date/Time Analyzed:**	2/19/16 05:42 PM
Date/Time Collected:	2/17/16 07:50 AM	**Dilution Factor:**	1.75
Media:	6 Liter Summa Canister (SIM Certified)	**Instrument/Filename:**	msd20.i / 20021914

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Ethyl-tert-butyl ether	637-92-3	0.12	D	15	Not Detected
Isopropyl ether	108-20-3	0.21	D	15	Not Detected
tert-Amyl methyl ether	994-05-8	0.87	D	15	Not Detected
tert-Butyl alcohol	75-65-0	0.19	D	11	Not Detected
TPH ref. to Gasoline (MW=100)	9999-9999-038	NA	D	72	230

D: Analyte not within the DoD scope of accreditation.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	103
4-Bromofluorobenzene	460-00-4	70-130	98
Toluene-d8	2037-26-5	70-130	97

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN
EMERYVILLE CHEVRON 1400 POWELL ST

Client ID:	IA2		
Lab ID:	1602346A-03B	**Date/Time Analyzed:**	2/19/16 05:42 PM
Date/Time Collected:	2/17/16 07:50 AM	**Dilution Factor:**	1.75
Media:	6 Liter Summa Canister (SIM Certified)	**Instrument/Filename:**	msd20.i / 20021914sim

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1,1-Trichloroethane	71-55-6	0.0080	0.048	0.19	Not Detected
1,1-Dichloroethane	75-34-3	0.0051	0.035	0.14	Not Detected
1,1-Dichloroethene	75-35-4	0.0062	0.035	0.069	Not Detected
Benzene	71-43-2	0.0041	0.036	0.28	2.2
cis-1,2-Dichloroethene	156-59-2	0.0073	0.035	0.14	Not Detected
Ethyl Benzene	100-41-4	0.0069	0.038	0.15	1.6
m,p-Xylene	108-38-3	0.010	0.038	0.30	5.4
Methyl tert-butyl ether	1634-04-4	0.0033	0.032	0.63	Not Detected
Naphthalene	91-20-3	0.012	0.37	0.46	0.35 J
o-Xylene	95-47-6	0.0095	0.038	0.15	1.9
Tetrachloroethene	127-18-4	0.012	0.059	0.24	Not Detected
Toluene	108-88-3	0.0058	0.033	0.13	8.5
trans-1,2-Dichloroethene	156-60-5	0.0076	0.035	0.69	Not Detected
Trichloroethene	79-01-6	0.0073	0.047	0.19	Not Detected
Vinyl Chloride	75-01-4	0.0066	0.022	0.045	Not Detected

J = Estimated value.
D: Analyte not within the DoD scope of accreditation.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	106
4-Bromofluorobenzene	460-00-4	70-130	98
Toluene-d8	2037-26-5	70-130	98

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN
EMERYVILLE CHEVRON 1400 POWELL ST

Client ID:	IA3		
Lab ID:	1602346A-04A	**Date/Time Analyzed:**	2/19/16 06:22 PM
Date/Time Collected:	2/17/16 07:51 AM	**Dilution Factor:**	1.79
Media:	6 Liter Summa Canister (SIM Certified)	**Instrument/Filename:**	msd20.i / 20021915

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Ethyl-tert-butyl ether	637-92-3	0.12	D	15	Not Detected
Isopropyl ether	108-20-3	0.21	D	15	Not Detected
tert-Amyl methyl ether	994-05-8	0.89	D	15	Not Detected
tert-Butyl alcohol	75-65-0	0.19	D	11	Not Detected
TPH ref. to Gasoline (MW=100)	9999-9999-038	NA	D	73	240

D: Analyte not within the DoD scope of accreditation.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	108
4-Bromofluorobenzene	460-00-4	70-130	96
Toluene-d8	2037-26-5	70-130	98

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN
EMERYVILLE CHEVRON 1400 POWELL ST

Client ID:	IA3		
Lab ID:	1602346A-04B	**Date/Time Analyzed:**	2/19/16 06:22 PM
Date/Time Collected:	2/17/16 07:51 AM	**Dilution Factor:**	1.79
Media:	6 Liter Summa Canister (SIM Certified)	**Instrument/Filename:**	msd20.i / 20021915sim

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1,1-Trichloroethane	71-55-6	0.0082	0.049	0.20	Not Detected
1,1-Dichloroethane	75-34-3	0.0052	0.036	0.14	Not Detected
1,1-Dichloroethene	75-35-4	0.0063	0.035	0.071	Not Detected
Benzene	71-43-2	0.0042	0.037	0.28	2.4
cis-1,2-Dichloroethene	156-59-2	0.0074	0.035	0.14	Not Detected
Ethyl Benzene	100-41-4	0.0071	0.039	0.16	1.6
m,p-Xylene	108-38-3	0.010	0.039	0.31	5.4
Methyl tert-butyl ether	1634-04-4	0.0034	0.032	0.64	Not Detected
Naphthalene	91-20-3	0.013	0.38	0.47	0.35 J
o-Xylene	95-47-6	0.0097	0.039	0.16	1.9
Tetrachloroethene	127-18-4	0.012	0.061	0.24	Not Detected
Toluene	108-88-3	0.0059	0.034	0.13	9.4
trans-1,2-Dichloroethene	156-60-5	0.0078	0.035	0.71	Not Detected
Trichloroethene	79-01-6	0.0075	0.048	0.19	Not Detected
Vinyl Chloride	75-01-4	0.0068	0.023	0.046	Not Detected

J = Estimated value.
D: Analyte not within the DoD scope of accreditation.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	107
4-Bromofluorobenzene	460-00-4	70-130	97
Toluene-d8	2037-26-5	70-130	98

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN
EMERYVILLE CHEVRON 1400 POWELL ST

Client ID:	AA1		
Lab ID:	1602346A-05A	**Date/Time Analyzed:**	2/19/16 07:57 PM
Date/Time Collected:	2/17/16 07:58 AM	**Dilution Factor:**	1.61
Media:	6 Liter Summa Canister (SIM Certified)	**Instrument/Filename:**	msd20.i / 20021916

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Ethyl-tert-butyl ether	637-92-3	0.11	D	13	Not Detected
Isopropyl ether	108-20-3	0.19	D	13	Not Detected
tert-Amyl methyl ether	994-05-8	0.80	D	13	Not Detected
tert-Butyl alcohol	75-65-0	0.17	D	9.8	Not Detected
TPH ref. to Gasoline (MW=100)	9999-9999-038	NA	D	66	140

D: Analyte not within the DoD scope of accreditation.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	105
4-Bromofluorobenzene	460-00-4	70-130	94
Toluene-d8	2037-26-5	70-130	98

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN
EMERYVILLE CHEVRON 1400 POWELL ST

Client ID:	AA1		
Lab ID:	1602346A-05B	**Date/Time Analyzed:**	2/19/16 07:57 PM
Date/Time Collected:	2/17/16 07:58 AM	**Dilution Factor:**	1.61
Media:	6 Liter Summa Canister (SIM Certified)	**Instrument/Filename:**	msd20.i / 20021916sim

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1,1-Trichloroethane	71-55-6	0.0074	0.044	0.18	Not Detected
1,1-Dichloroethane	75-34-3	0.0047	0.032	0.13	Not Detected
1,1-Dichloroethene	75-35-4	0.0057	0.032	0.064	Not Detected
Benzene	71-43-2	0.0038	0.033	0.26	1.5
cis-1,2-Dichloroethene	156-59-2	0.0067	0.032	0.13	Not Detected
Ethyl Benzene	100-41-4	0.0064	0.035	0.14	0.69
m,p-Xylene	108-38-3	0.0092	0.035	0.28	2.2
Methyl tert-butyl ether	1634-04-4	0.0030	0.029	0.58	Not Detected
Naphthalene	91-20-3	0.012	0.34	0.42	0.20 J
o-Xylene	95-47-6	0.0087	0.035	0.14	0.83
Tetrachloroethene	127-18-4	0.010	0.055	0.22	Not Detected
Toluene	108-88-3	0.0053	0.030	0.12	4.2
trans-1,2-Dichloroethene	156-60-5	0.0070	0.032	0.64	Not Detected
Trichloroethene	79-01-6	0.0067	0.043	0.17	Not Detected
Vinyl Chloride	75-01-4	0.0061	0.020	0.041	Not Detected

J = Estimated value.
D: Analyte not within the DoD scope of accreditation.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	108
4-Bromofluorobenzene	460-00-4	70-130	99
Toluene-d8	2037-26-5	70-130	97

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN
EMERYVILLE CHEVRON 1400 POWELL ST

Client ID:	Lab Blank		
Lab ID:	1602346A-06A	**Date/Time Analyzed:**	2/19/16 12:45 PM
Date/Time Collected:	NA - Not Applicable	**Dilution Factor:**	1.00
Media:	NA - Not Applicable	**Instrument/Filename:**	msd20.i / 20021907

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Ethyl-tert-butyl ether	637-92-3	0.070	D	8.4	Not Detected
Isopropyl ether	108-20-3	0.12	D	8.4	Not Detected
tert-Amyl methyl ether	994-05-8	0.50	D	8.4	Not Detected
tert-Butyl alcohol	75-65-0	0.11	D	6.1	Not Detected
TPH ref. to Gasoline (MW=100)	9999-9999-038	NA	D	41	Not Detected

D: Analyte not within the DoD scope of accreditation.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	104
4-Bromofluorobenzene	460-00-4	70-130	92
Toluene-d8	2037-26-5	70-130	96

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN
EMERYVILLE CHEVRON 1400 POWELL ST

Client ID:	Lab Blank		
Lab ID:	1602346A-06B	**Date/Time Analyzed:**	2/19/16 12:45 PM
Date/Time Collected:	NA - Not Applicable	**Dilution Factor:**	1.00
Media:	NA - Not Applicable	**Instrument/Filename:**	msd20.i / 20021907sima

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1,1-Trichloroethane	71-55-6	0.0046	0.027	0.11	Not Detected
1,1-Dichloroethane	75-34-3	0.0029	0.020	0.081	Not Detected
1,1-Dichloroethene	75-35-4	0.0035	0.020	0.040	Not Detected
Benzene	71-43-2	0.0023	0.021	0.16	Not Detected
cis-1,2-Dichloroethene	156-59-2	0.0042	0.020	0.079	Not Detected
Ethyl Benzene	100-41-4	0.0040	0.022	0.087	Not Detected
m,p-Xylene	108-38-3	0.0057	0.022	0.17	Not Detected
Methyl tert-butyl ether	1634-04-4	0.0019	0.018	0.36	Not Detected
Naphthalene	91-20-3	0.0072	0.21	0.26	0.038 J
o-Xylene	95-47-6	0.0054	0.022	0.087	Not Detected
Tetrachloroethene	127-18-4	0.0066	0.034	0.14	Not Detected
Toluene	108-88-3	0.0033	0.019	0.075	Not Detected
trans-1,2-Dichloroethene	156-60-5	0.0044	0.020	0.40	Not Detected
Trichloroethene	79-01-6	0.0042	0.027	0.11	Not Detected
Vinyl Chloride	75-01-4	0.0038	0.013	0.026	Not Detected

J = Estimated value.
D: Analyte not within the DoD scope of accreditation.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	105
4-Bromofluorobenzene	460-00-4	70-130	95
Toluene-d8	2037-26-5	70-130	96

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN
EMERYVILLE CHEVRON 1400 POWELL ST

Client ID:	CCV		
Lab ID:	1602346A-07A	**Date/Time Analyzed:**	2/19/16 08:55 AM
Date/Time Collected:	NA - Not Applicable	**Dilution Factor:**	1.00
Media:	NA - Not Applicable	**Instrument/Filename:**	msd20.i / 20021902

Compound	CAS#	%Recovery
Ethyl-tert-butyl ether	637-92-3	104
Isopropyl ether	108-20-3	106
tert-Amyl methyl ether	994-05-8	103
tert-Butyl alcohol	75-65-0	101
TPH ref. to Gasoline (MW=100)	9999-9999-038	100

D: Analyte not within the DoD scope of accreditation.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	99
4-Bromofluorobenzene	460-00-4	70-130	96
Toluene-d8	2037-26-5	70-130	102

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN
EMERYVILLE CHEVRON 1400 POWELL ST

Client ID:	CCV		
Lab ID:	1602346A-07B	**Date/Time Analyzed:**	2/19/16 08:55 AM
Date/Time Collected:	NA - Not Applicable	**Dilution Factor:**	1.00
Media:	NA - Not Applicable	**Instrument/Filename:**	msd20.i / 20021902sim

Compound	CAS#	%Recovery
1,1,1-Trichloroethane	71-55-6	102
1,1-Dichloroethane	75-34-3	101
1,1-Dichloroethene	75-35-4	96
Benzene	71-43-2	101
cis-1,2-Dichloroethene	156-59-2	101
Ethyl Benzene	100-41-4	112
m,p-Xylene	108-38-3	111
Methyl tert-butyl ether	1634-04-4	108
Naphthalene	91-20-3	109
o-Xylene	95-47-6	112
Tetrachloroethene	127-18-4	98
Toluene	108-88-3	106
trans-1,2-Dichloroethene	156-60-5	98
Trichloroethene	79-01-6	96
Vinyl Chloride	75-01-4	96

D: Analyte not within the DoD scope of accreditation.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	97
4-Bromofluorobenzene	460-00-4	70-130	101
Toluene-d8	2037-26-5	70-130	103

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN
EMERYVILLE CHEVRON 1400 POWELL ST

Client ID:	LCS		
Lab ID:	1602346A-08A	**Date/Time Analyzed:**	2/19/16 09:39 AM
Date/Time Collected:	NA - Not Applicable	**Dilution Factor:**	1.00
Media:	NA - Not Applicable	**Instrument/Filename:**	msd20.i / 20021903

Compound	CAS#	%Recovery
Ethyl-tert-butyl ether	637-92-3	Not Spiked
Isopropyl ether	108-20-3	Not Spiked
tert-Amyl methyl ether	994-05-8	Not Spiked
tert-Butyl alcohol	75-65-0	Not Spiked
TPH ref. to Gasoline (MW=100)	9999-9999-038	Not Spiked

D: Analyte not within the DoD scope of accreditation.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	95
4-Bromofluorobenzene	460-00-4	70-130	97
Toluene-d8	2037-26-5	70-130	105

* % Recovery is calculated using unrounded analytical results.

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN
EMERYVILLE CHEVRON 1400 POWELL ST

Client ID:	LCSD		
Lab ID:	1602346A-08AA	**Date/Time Analyzed:**	2/19/16 10:23 AM
Date/Time Collected:	NA - Not Applicable	**Dilution Factor:**	1.00
Media:	NA - Not Applicable	**Instrument/Filename:**	msd20.i / 20021904

Compound	CAS#	%Recovery
Ethyl-tert-butyl ether	637-92-3	Not Spiked
Isopropyl ether	108-20-3	Not Spiked
tert-Amyl methyl ether	994-05-8	Not Spiked
tert-Butyl alcohol	75-65-0	Not Spiked
TPH ref. to Gasoline (MW=100)	9999-9999-038	Not Spiked

D: Analyte not within the DoD scope of accreditation.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	92
4-Bromofluorobenzene	460-00-4	70-130	97
Toluene-d8	2037-26-5	70-130	102

* % Recovery is calculated using unrounded analytical results.

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN
EMERYVILLE CHEVRON 1400 POWELL ST

Client ID:	LCS		
Lab ID:	1602346A-08B	**Date/Time Analyzed:**	2/19/16 09:39 AM
Date/Time Collected:	NA - Not Applicable	**Dilution Factor:**	1.00
Media:	NA - Not Applicable	**Instrument/Filename:**	msd20.i / 20021903sim

Compound	CAS#	%Recovery
1,1,1-Trichloroethane	71-55-6	101
1,1-Dichloroethane	75-34-3	99
1,1-Dichloroethene	75-35-4	96
Benzene	71-43-2	100
cis-1,2-Dichloroethene	156-59-2	97
Ethyl Benzene	100-41-4	110
m,p-Xylene	108-38-3	111
Methyl tert-butyl ether	1634-04-4	104
Naphthalene	91-20-3	81
o-Xylene	95-47-6	113
Tetrachloroethene	127-18-4	100
Toluene	108-88-3	106
trans-1,2-Dichloroethene	156-60-5	99
Trichloroethene	79-01-6	96
Vinyl Chloride	75-01-4	100

D: Analyte not within the DoD scope of accreditation.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	96
4-Bromofluorobenzene	460-00-4	70-130	100
Toluene-d8	2037-26-5	70-130	103

* % Recovery is calculated using unrounded analytical results.

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN
EMERYVILLE CHEVRON 1400 POWELL ST

Client ID:	LCSD		
Lab ID:	1602346A-08BB	**Date/Time Analyzed:**	2/19/16 10:23 AM
Date/Time Collected:	NA - Not Applicable	**Dilution Factor:**	1.00
Media:	NA - Not Applicable	**Instrument/Filename:**	msd20.i / 20021904sim

Compound	CAS#	%Recovery
1,1,1-Trichloroethane	71-55-6	100
1,1-Dichloroethane	75-34-3	97
1,1-Dichloroethene	75-35-4	94
Benzene	71-43-2	100
cis-1,2-Dichloroethene	156-59-2	96
Ethyl Benzene	100-41-4	110
m,p-Xylene	108-38-3	111
Methyl tert-butyl ether	1634-04-4	104
Naphthalene	91-20-3	83
o-Xylene	95-47-6	113
Tetrachloroethene	127-18-4	100
Toluene	108-88-3	106
trans-1,2-Dichloroethene	156-60-5	98
Trichloroethene	79-01-6	95
Vinyl Chloride	75-01-4	96

D: Analyte not within the DoD scope of accreditation.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	96
4-Bromofluorobenzene	460-00-4	70-130	101
Toluene-d8	2037-26-5	70-130	104

* % Recovery is calculated using unrounded analytical results.

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: 0719

PROJECT NAME: EMERYVILLE CHEVRON 1400 POWELL ST EMERYVILLE, CA

SAMPLED BY: (PRINTED & SIGNATURE)
MICHAEL BASS-DESROCHES Michael Bass-Desroches

	SAMPLE NUMBER	DATE	TIME	TYPE	SAMPLE LOCATION	START VAC	FINAL VAC	SUMMA #	NUMBER OF CONTAINERS	ANALYSIS(ES): EPA TO-15 INCLUDING BTEX, NAPHTHALENE	GASES BY ASTM-D-1946	PRESERVATIVE	REMARKS
01A	IA1	2/17/16	0750 12 0748 20	AIR		-28.5	-6	6L1258	1	X	X	NONE	NORMAL TAT
02A	IA1-DUP		0750 19 0748 20			-30	-7	13854	1	X	X		
03A	IA2		0758 04 0750 21			-30	-8	5770	1	X	X		
04A	IA3		0756 41 0756 49			-30	-8	5681	1	X	X		
05A	AA1		0746 50 0758 12			-30	-6.5	4370	1	X	X		

RELINQUISHED BY: (SIGNATURE) Michael Bass-Desroches — DATE 2-17-16 — TIME 1438
RECEIVED BY: (SIGNATURE)

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

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

Total No. of Samples (This Shipment): 5
Total No. of Containers (This Shipment): 5

LABORATORY: EUROFINS/AIR TOXICS INC

LABORATORY CONTACT: KYLE VAGADORI

LABORATORY PHONE NUMBER: (916) 605-3339

SAMPLE ANALYSIS REQUEST SHEET ATTACHED: ( ) YES (X) NO 1602348

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

REMARKS: 6-LITER SUMMA

Custody Seal Intact?
Y N None Temp 4°
EAT-DI

eurofins | Air Toxics

3/1/2016
Mr. Paul King
P & D Environmental
55 Santa Clara
Suite 240
Oakland CA 94610

Project Name: EMERYVILLE CHEVRON 1400 POWERLL ST.
Project #: 0719
Workorder #: 1602347A

Dear Mr. Paul King

The following report includes the data for the above referenced project for sample(s) received on 2/17/2016 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 Eurofins Air Toxics Inc. for your air analysis needs. Eurofins Air Toxics Inc. is committed to providing accurate data of the highest quality. Please feel free 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 #: 1602347A

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 #**	0719 EMERYVILLE CHEVRON 1400 POWERLL ST.
DATE RECEIVED:	02/17/2016	**CONTACT:**	Kyle Vagadori
DATE COMPLETED:	03/01/2016		

FRACTION #	NAME	TEST	RECEIPT VAC./PRES.	FINAL PRESSURE
01A	VP1	TO-15	4.5 "Hg	15 psi
02A	VP2	TO-15	4.5 "Hg	15 psi
03A	VP3	TO-15	7.0 "Hg	15 psi
04A	VP4	TO-15	7.0 "Hg	15 psi
05A	VP4-DUP	TO-15	6.5 "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: 03/01/16

Technical Director

Certification numbers: AZ Licensure AZ0775, NJ NELAP - CA016, NY NELAP - 11291,
TX NELAP - T104704343-14-7, UT NELAP CA009332014-5, VA NELAP - 460197, WA NELAP - C935
Name of Accreditation Body: NELAP/ORELAP (Oregon Environmental Laboratory Accreditation Program)
Accreditation number: CA300005, Effective date: 10/18/2014, Expiration date: 10/17/2015.
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# 1602347A

Five 1 Liter Summa Canister samples were received on February 17, 2016. 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.

Dilution was performed on samples VP3 and VP4-DUP due to the presence of high level target species.

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.

The hydrocarbon profile present in samples VP1, VP2 and VP4 did not resemble that of commercial gasoline. Results were calculated using the response factor derived from the gasoline calibration.

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

EPA METHOD TO-15 GC/MS FULL SCAN
EMERYVILLE CHEVRON 1400 POWERLL ST.

Client ID:	VP1		
Lab ID:	1602347A-01A	**Date/Time Analyzed:**	2/22/16 10:04 PM
Date/Time Collecte	2/17/16 09:20 AM	**Dilution Factor:**	2.38
Media:	1 Liter Summa Canister	**Instrument/Filename:**	msda.i / a022213

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1,1-Trichloroethane	71-55-6	0.83	3.2	6.5	Not Detected
1,1-Dichloroethane	75-34-3	1.0	2.4	4.8	Not Detected
1,1-Dichloroethene	75-35-4	1.6	2.4	4.7	Not Detected
1,1-Difluoroethane	75-37-6	NA	D	13	2900 E
Benzene	71-43-2	0.36	1.9	3.8	Not Detected
cis-1,2-Dichloroethene	156-59-2	1.1	2.4	4.7	Not Detected
Ethyl Benzene	100-41-4	1.0	2.6	5.2	Not Detected
Ethyl-tert-butyl ether	637-92-3	1.1	D	20	Not Detected
Isopropyl ether	108-20-3	0.92	D	20	Not Detected
m,p-Xylene	108-38-3	0.95	2.6	5.2	Not Detected
Methyl tert-butyl ether	1634-04-4	0.75	2.1	4.3	Not Detected
o-Xylene	95-47-6	0.72	2.6	5.2	Not Detected
tert-Amyl methyl ether	994-05-8	2.6	D	20	Not Detected
tert-Butyl alcohol	75-65-0	1.2	D	14	21
Tetrachloroethene	127-18-4	1.8	4.0	8.1	10
Toluene	108-88-3	1.0	2.2	4.5	Not Detected
TPH ref. to Gasoline (MW=100)	9999-9999-038	NA	D	490	19000
trans-1,2-Dichloroethene	156-60-5	1.4	2.4	4.7	Not Detected
Trichloroethene	79-01-6	1.2	3.2	6.4	Not Detected
Vinyl Chloride	75-01-4	0.52	1.5	3.0	Not Detected

E = Exceeds instrument calibration range.
D: Analyte not within the DoD scope of accreditation.

Surrogates	CAS#	Limits	%Recovery

EPA METHOD TO-15 GC/MS FULL SCAN
EMERYVILLE CHEVRON 1400 POWERLL ST.

Client ID:	VP1		
Lab ID:	1602347A-01A	**Date/Time Analyzed:**	2/22/16 10:04 PM
Date/Time Collecte	2/17/16 09:20 AM	**Dilution Factor:**	2.38
Media:	1 Liter Summa Canister	**Instrument/Filename:**	msda.i / a022213

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	95
4-Bromofluorobenzene	460-00-4	70-130	103
Toluene-d8	2037-26-5	70-130	96

EPA METHOD TO-15 GC/MS FULL SCAN
EMERYVILLE CHEVRON 1400 POWERLL ST.

Client ID:	VP2		
Lab ID:	1602347A-02A	**Date/Time Analyzed:**	2/22/16 10:43 PM
Date/Time Collecte	2/17/16 10:36 AM	**Dilution Factor:**	2.38
Media:	1 Liter Summa Canister	**Instrument/Filename:**	msda.i / a022214

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1,1-Trichloroethane	71-55-6	0.83	3.2	6.5	Not Detected
1,1-Dichloroethane	75-34-3	1.0	2.4	4.8	Not Detected
1,1-Dichloroethene	75-35-4	1.6	2.4	4.7	Not Detected
1,1-Difluoroethane	75-37-6	NA	D	13	96000 E
Benzene	71-43-2	0.36	1.9	3.8	Not Detected
cis-1,2-Dichloroethene	156-59-2	1.1	2.4	4.7	Not Detected
Ethyl Benzene	100-41-4	1.0	2.6	5.2	Not Detected
Ethyl-tert-butyl ether	637-92-3	1.1	D	20	Not Detected
Isopropyl ether	108-20-3	0.92	D	20	Not Detected
m,p-Xylene	108-38-3	0.95	2.6	5.2	Not Detected
Methyl tert-butyl ether	1634-04-4	0.75	2.1	4.3	Not Detected
o-Xylene	95-47-6	0.72	2.6	5.2	Not Detected
tert-Amyl methyl ether	994-05-8	2.6	D	20	Not Detected
tert-Butyl alcohol	75-65-0	1.2	D	14	38
Tetrachloroethene	127-18-4	1.8	4.0	8.1	Not Detected
Toluene	108-88-3	1.0	2.2	4.5	Not Detected
TPH ref. to Gasoline (MW=100)	9999-9999-038	NA	D	490	18000
trans-1,2-Dichloroethene	156-60-5	1.4	2.4	4.7	Not Detected
Trichloroethene	79-01-6	1.2	3.2	6.4	Not Detected
Vinyl Chloride	75-01-4	0.52	1.5	3.0	Not Detected

E = Exceeds instrument calibration range.
D: Analyte not within the DoD scope of accreditation.

Surrogates	CAS#	Limits	%Recovery

EPA METHOD TO-15 GC/MS FULL SCAN
EMERYVILLE CHEVRON 1400 POWERLL ST.

Client ID:	VP2		
Lab ID:	1602347A-02A	**Date/Time Analyzed:**	2/22/16 10:43 PM
Date/Time Collecte	2/17/16 10:36 AM	**Dilution Factor:**	2.38
Media:	1 Liter Summa Canister	**Instrument/Filename:**	msda.i / a022214

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	96
4-Bromofluorobenzene	460-00-4	70-130	102
Toluene-d8	2037-26-5	70-130	97

EPA METHOD TO-15 GC/MS
EMERYVILLE CHEVRON 1400 POWERLL ST.

Client ID:	VP3		
Lab ID:	1602347A-03A	**Date/Time Analyzed:**	2/24/16 05:34 PM
Date/Time Collecte	2/17/16 11:47 AM	**Dilution Factor:**	26.4
Media:	1 Liter Summa Canister	**Instrument/Filename:**	msd14.i / 14022413

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1,1-Trichloroethane	71-55-6	150	430	720	Not Detected
1,1-Dichloroethane	75-34-3	64	320	530	Not Detected
1,1-Dichloroethene	75-35-4	450	450	520	Not Detected
1,1-Difluoroethane	75-37-6	NA	D	1400	430000 E
Benzene	71-43-2	80	250	420	Not Detected
cis-1,2-Dichloroethene	156-59-2	120	310	520	Not Detected
Ethyl Benzene	100-41-4	120	340	570	Not Detected
Ethyl-tert-butyl ether	637-92-3	190	D	2200	Not Detected
Isopropyl ether	108-20-3	130	D	2200	Not Detected
m,p-Xylene	108-38-3	48	340	570	Not Detected
Methyl tert-butyl ether	1634-04-4	44	280	480	Not Detected
o-Xylene	95-47-6	69	340	570	Not Detected
tert-Amyl methyl ether	994-05-8	140	D	2200	Not Detected
tert-Butyl alcohol	75-65-0	170	D	1600	Not Detected
Tetrachloroethene	127-18-4	230	540	900	Not Detected
Toluene	108-88-3	61	300	500	Not Detected
TPH ref. to Gasoline (MW=100)	9999-9999-038	NA	D	22000	Not Detected
trans-1,2-Dichloroethene	156-60-5	110	310	520	Not Detected
Trichloroethene	79-01-6	150	420	710	Not Detected
Vinyl Chloride	75-01-4	110	200	340	Not Detected

E = Exceeds instrument calibration range.
D: Analyte not within the DoD scope of accreditation.

Surrogates	CAS#	Limits	%Recovery

EPA METHOD TO-15 GC/MS
EMERYVILLE CHEVRON 1400 POWERLL ST.

Client ID:	VP3		
Lab ID:	1602347A-03A	**Date/Time Analyzed:**	2/24/16 05:34 PM
Date/Time Collecte	2/17/16 11:47 AM	**Dilution Factor:**	26.4
Media:	1 Liter Summa Canister	**Instrument/Filename:**	msd14.i / 14022413

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	99
4-Bromofluorobenzene	460-00-4	70-130	97
Toluene-d8	2037-26-5	70-130	98

EPA METHOD TO-15 GC/MS FULL SCAN
EMERYVILLE CHEVRON 1400 POWERLL ST.

Client ID:	VP4		
Lab ID:	1602347A-04A	**Date/Time Analyzed:**	2/22/16 11:48 PM
Date/Time Collecte	2/17/16 01:17 PM	**Dilution Factor:**	2.64
Media:	1 Liter Summa Canister	**Instrument/Filename:**	msda.i / a022216

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1,1-Trichloroethane	71-55-6	0.92	3.6	7.2	Not Detected
1,1-Dichloroethane	75-34-3	1.1	2.7	5.3	Not Detected
1,1-Dichloroethene	75-35-4	1.8	2.6	5.2	Not Detected
1,1-Difluoroethane	75-37-6	NA	D	14	10000 E
Benzene	71-43-2	0.40	2.1	4.2	Not Detected
cis-1,2-Dichloroethene	156-59-2	1.2	2.6	5.2	Not Detected
Ethyl Benzene	100-41-4	1.1	2.9	5.7	Not Detected
Ethyl-tert-butyl ether	637-92-3	1.2	D	22	Not Detected
Isopropyl ether	108-20-3	1.0	D	22	Not Detected
m,p-Xylene	108-38-3	1.0	2.9	5.7	Not Detected
Methyl tert-butyl ether	1634-04-4	0.83	2.4	4.8	Not Detected
o-Xylene	95-47-6	0.80	2.9	5.7	Not Detected
tert-Amyl methyl ether	994-05-8	2.8	D	22	Not Detected
tert-Butyl alcohol	75-65-0	1.3	D	16	35
Tetrachloroethene	127-18-4	2.0	4.5	9.0	Not Detected
Toluene	108-88-3	1.1	2.5	5.0	Not Detected
TPH ref. to Gasoline (MW=100)	9999-9999-038	NA	D	540	19000
trans-1,2-Dichloroethene	156-60-5	1.5	2.6	5.2	Not Detected
Trichloroethene	79-01-6	1.3	3.5	7.1	Not Detected
Vinyl Chloride	75-01-4	0.57	1.7	3.4	Not Detected

E = Exceeds instrument calibration range.
D: Analyte not within the DoD scope of accreditation.

Surrogates	CAS#	Limits	%Recovery

EPA METHOD TO-15 GC/MS FULL SCAN
EMERYVILLE CHEVRON 1400 POWERLL ST.

Client ID:	VP4		
Lab ID:	1602347A-04A	**Date/Time Analyzed:**	2/22/16 11:48 PM
Date/Time Collecte	2/17/16 01:17 PM	**Dilution Factor:**	2.64
Media:	1 Liter Summa Canister	**Instrument/Filename:**	msda.i / a022216

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	97
4-Bromofluorobenzene	460-00-4	70-130	100
Toluene-d8	2037-26-5	70-130	97

EPA METHOD TO-15 GC/MS
EMERYVILLE CHEVRON 1400 POWERLL ST.

Client ID:	VP4-DUP		
Lab ID:	1602347A-05A	**Date/Time Analyzed:**	2/24/16 05:53 PM
Date/Time Collecte	2/17/16 01:17 PM	**Dilution Factor:**	258
Media:	1 Liter Summa Canister	**Instrument/Filename:**	msd14.i / 14022414

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1,1-Trichloroethane	71-55-6	1400	4200	7000	Not Detected
1,1-Dichloroethane	75-34-3	630	3100	5200	Not Detected
1,1-Dichloroethene	75-35-4	4400	4400	5100	Not Detected
1,1-Difluoroethane	75-37-6	NA	D	14000	11000000 E
Benzene	71-43-2	780	2500	4100	Not Detected
cis-1,2-Dichloroethene	156-59-2	1200	3100	5100	Not Detected
Ethyl Benzene	100-41-4	1200	3400	5600	Not Detected
Ethyl-tert-butyl ether	637-92-3	1900	D	22000	Not Detected
Isopropyl ether	108-20-3	1300	D	22000	Not Detected
m,p-Xylene	108-38-3	470	3400	5600	Not Detected
Methyl tert-butyl ether	1634-04-4	440	2800	4600	Not Detected
o-Xylene	95-47-6	680	3400	5600	Not Detected
tert-Amyl methyl ether	994-05-8	1400	D	22000	Not Detected
tert-Butyl alcohol	75-65-0	1600	D	16000	Not Detected
Tetrachloroethene	127-18-4	2200	5200	8800	Not Detected
Toluene	108-88-3	590	2900	4900	Not Detected
TPH ref. to Gasoline (MW=100)	9999-9999-038	NA	D	210000	Not Detected
trans-1,2-Dichloroethene	156-60-5	1000	3100	5100	Not Detected
Trichloroethene	79-01-6	1400	4200	6900	Not Detected
Vinyl Chloride	75-01-4	1100	2000	3300	Not Detected

E = Exceeds instrument calibration range.
D: Analyte not within the DoD scope of accreditation.

Surrogates	CAS#	Limits	%Recovery

EPA METHOD TO-15 GC/MS
EMERYVILLE CHEVRON 1400 POWERLL ST.

Client ID:	VP4-DUP		
Lab ID:	1602347A-05A	**Date/Time Analyzed:**	2/24/16 05:53 PM
Date/Time Collecte	2/17/16 01:17 PM	**Dilution Factor:**	258
Media:	1 Liter Summa Canister	**Instrument/Filename:**	msd14.i / 14022414

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	100
4-Bromofluorobenzene	460-00-4	70-130	97
Toluene-d8	2037-26-5	70-130	96

EPA METHOD TO-15 GC/MS FULL SCAN
EMERYVILLE CHEVRON 1400 POWERLL ST.

Client ID:	Lab Blank		
Lab ID:	1602347A-06A	**Date/Time Analyzed:**	2/22/16 01:07 PM
Date/Time Collecte	NA - Not Applicable	**Dilution Factor:**	1.00
Media:	NA - Not Applicable	**Instrument/Filename:**	msda.i / a022206a

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1,1-Trichloroethane	71-55-6	0.35	1.4	2.7	Not Detected
1,1-Dichloroethane	75-34-3	0.42	1.0	2.0	Not Detected
1,1-Dichloroethene	75-35-4	0.66	0.99	2.0	Not Detected
1,1-Difluoroethane	75-37-6	NA	D	5.4	Not Detected
Benzene	71-43-2	0.15	0.80	1.6	Not Detected
cis-1,2-Dichloroethene	156-59-2	0.45	0.99	2.0	Not Detected
Ethyl Benzene	100-41-4	0.42	1.1	2.2	Not Detected
Ethyl-tert-butyl ether	637-92-3	0.46	D	8.4	Not Detected
Isopropyl ether	108-20-3	0.38	D	8.4	Not Detected
m,p-Xylene	108-38-3	0.40	1.1	2.2	Not Detected
Methyl tert-butyl ether	1634-04-4	0.31	0.90	1.8	Not Detected
o-Xylene	95-47-6	0.30	1.1	2.2	Not Detected
tert-Amyl methyl ether	994-05-8	1.1	D	8.4	Not Detected
tert-Butyl alcohol	75-65-0	0.50	D	6.1	Not Detected
Tetrachloroethene	127-18-4	0.76	1.7	3.4	Not Detected
Toluene	108-88-3	0.42	0.94	1.9	Not Detected
TPH ref. to Gasoline (MW=100)	9999-9999-038	NA	D	200	Not Detected
trans-1,2-Dichloroethene	156-60-5	0.57	0.99	2.0	Not Detected
Trichloroethene	79-01-6	0.51	1.3	2.7	Not Detected
Vinyl Chloride	75-01-4	0.22	0.64	1.3	Not Detected

D: Analyte not within the DoD scope of accreditation.

Surrogates	CAS#	Limits	%Recovery

EPA METHOD TO-15 GC/MS FULL SCAN
EMERYVILLE CHEVRON 1400 POWERLL ST.

Client ID:	Lab Blank		
Lab ID:	1602347A-06A	**Date/Time Analyzed:**	2/22/16 01:07 PM
Date/Time Collecte	NA - Not Applicable	**Dilution Factor:**	1.00
Media:	NA - Not Applicable	**Instrument/Filename:**	msda.i / a022206a

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	97
4-Bromofluorobenzene	460-00-4	70-130	102
Toluene-d8	2037-26-5	70-130	97

EPA METHOD TO-15 GC/MS
EMERYVILLE CHEVRON 1400 POWERLL ST.

Client ID:	Lab Blank		
Lab ID:	1602347A-06B	**Date/Time Analyzed:**	2/24/16 04:55 PM
Date/Time Collecte	NA - Not Applicable	**Dilution Factor:**	1.00
Media:	NA - Not Applicable	**Instrument/Filename:**	msd14.i / 14022412a

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1,1-Trichloroethane	71-55-6	5.6	16	27	Not Detected
1,1-Dichloroethane	75-34-3	2.4	12	20	Not Detected
1,1-Dichloroethene	75-35-4	17	17	20	Not Detected
1,1-Difluoroethane	75-37-6	NA	D	54	Not Detected
Benzene	71-43-2	3.0	9.6	16	Not Detected
cis-1,2-Dichloroethene	156-59-2	4.5	12	20	Not Detected
Ethyl Benzene	100-41-4	4.6	13	22	Not Detected
Ethyl-tert-butyl ether	637-92-3	7.3	D	84	Not Detected
Isopropyl ether	108-20-3	4.9	D	84	Not Detected
m,p-Xylene	108-38-3	1.8	13	22	Not Detected
Methyl tert-butyl ether	1634-04-4	1.7	11	18	Not Detected
o-Xylene	95-47-6	2.6	13	22	Not Detected
tert-Amyl methyl ether	994-05-8	5.3	D	84	Not Detected
tert-Butyl alcohol	75-65-0	6.3	D	61	Not Detected
Tetrachloroethene	127-18-4	8.6	20	34	Not Detected
Toluene	108-88-3	2.3	11	19	Not Detected
TPH ref. to Gasoline (MW=100)	9999-9999-038	NA	D	820	Not Detected
trans-1,2-Dichloroethene	156-60-5	4.1	12	20	Not Detected
Trichloroethene	79-01-6	5.6	16	27	Not Detected
Vinyl Chloride	75-01-4	4.1	7.7	13	Not Detected

D: Analyte not within the DoD scope of accreditation.

Surrogates	CAS#	Limits	%Recovery

EPA METHOD TO-15 GC/MS
EMERYVILLE CHEVRON 1400 POWERLL ST.

Client ID:	Lab Blank		
Lab ID:	1602347A-06B	**Date/Time Analyzed:**	2/24/16 04:55 PM
Date/Time Collecte	NA - Not Applicable	**Dilution Factor:**	1.00
Media:	NA - Not Applicable	**Instrument/Filename:**	msd14.i / 14022412a

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	102
4-Bromofluorobenzene	460-00-4	70-130	100
Toluene-d8	2037-26-5	70-130	99

EPA METHOD TO-15 GC/MS FULL SCAN
EMERYVILLE CHEVRON 1400 POWERLL ST.

Client ID:	CCV		
Lab ID:	1602347A-07A	**Date/Time Analyzed:**	2/22/16 10:17 AM
Date/Time Collecte	NA - Not Applicable	**Dilution Factor:**	1.00
Media:	NA - Not Applicable	**Instrument/Filename:**	msda.i / a022202

Compound	CAS#	%Recovery
1,1,1-Trichloroethane	71-55-6	76
1,1-Dichloroethane	75-34-3	87
1,1-Dichloroethene	75-35-4	77
1,1-Difluoroethane	75-37-6	100
Benzene	71-43-2	88
cis-1,2-Dichloroethene	156-59-2	86
Ethyl Benzene	100-41-4	85
Ethyl-tert-butyl ether	637-92-3	85
Isopropyl ether	108-20-3	74
m,p-Xylene	108-38-3	85
Methyl tert-butyl ether	1634-04-4	77
o-Xylene	95-47-6	84
tert-Amyl methyl ether	994-05-8	84
tert-Butyl alcohol	75-65-0	84
Tetrachloroethene	127-18-4	87
Toluene	108-88-3	83
TPH ref. to Gasoline (MW=100)	9999-9999-038	100
trans-1,2-Dichloroethene	156-60-5	80
Trichloroethene	79-01-6	78
Vinyl Chloride	75-01-4	83

D: Analyte not within the DoD scope of accreditation.

Surrogates	CAS#	Limits	%Recovery

EPA METHOD TO-15 GC/MS FULL SCAN
EMERYVILLE CHEVRON 1400 POWERLL ST.

Client ID:	CCV		
Lab ID:	1602347A-07A	**Date/Time Analyzed:**	2/22/16 10:17 AM
Date/Time Collecte	NA - Not Applicable	**Dilution Factor:**	1.00
Media:	NA - Not Applicable	**Instrument/Filename:**	msda.i / a022202

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	94
4-Bromofluorobenzene	460-00-4	70-130	103
Toluene-d8	2037-26-5	70-130	98

EPA METHOD TO-15 GC/MS
EMERYVILLE CHEVRON 1400 POWERLL ST.

Client ID:	CCV		
Lab ID:	1602347A-07B	**Date/Time Analyzed:**	2/24/16 09:52 AM
Date/Time Collecte	NA - Not Applicable	**Dilution Factor:**	1.00
Media:	NA - Not Applicable	**Instrument/Filename:**	msd14.i / 14022402

Compound	CAS#	%Recovery
1,1,1-Trichloroethane	71-55-6	102
1,1-Dichloroethane	75-34-3	99
1,1-Dichloroethene	75-35-4	94
1,1-Difluoroethane	75-37-6	109
Benzene	71-43-2	96
cis-1,2-Dichloroethene	156-59-2	99
Ethyl Benzene	100-41-4	93
Ethyl-tert-butyl ether	637-92-3	121
Isopropyl ether	108-20-3	103
m,p-Xylene	108-38-3	94
Methyl tert-butyl ether	1634-04-4	130
o-Xylene	95-47-6	96
tert-Amyl methyl ether	994-05-8	116
tert-Butyl alcohol	75-65-0	123
Tetrachloroethene	127-18-4	94
Toluene	108-88-3	92
TPH ref. to Gasoline (MW=100)	9999-9999-038	100
trans-1,2-Dichloroethene	156-60-5	101
Trichloroethene	79-01-6	85
Vinyl Chloride	75-01-4	96

D: Analyte not within the DoD scope of accreditation.

Surrogates	CAS#	Limits	%Recovery

EPA METHOD TO-15 GC/MS
EMERYVILLE CHEVRON 1400 POWERLL ST.

Client ID:	CCV		
Lab ID:	1602347A-07B	**Date/Time Analyzed:**	2/24/16 09:52 AM
Date/Time Collecte	NA - Not Applicable	**Dilution Factor:**	1.00
Media:	NA - Not Applicable	**Instrument/Filename:**	msd14.i / 14022402

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	102
4-Bromofluorobenzene	460-00-4	70-130	103
Toluene-d8	2037-26-5	70-130	98

EPA METHOD TO-15 GC/MS FULL SCAN
EMERYVILLE CHEVRON 1400 POWERLL ST.

Client ID:	LCS		
Lab ID:	1602347A-08A	**Date/Time Analyzed:**	2/22/16 10:55 AM
Date/Time Collecte	NA - Not Applicable	**Dilution Factor:**	1.00
Media:	NA - Not Applicable	**Instrument/Filename:**	msda.i / a022203

Compound	CAS#	%Recovery
1,1,1-Trichloroethane	71-55-6	77
1,1-Dichloroethane	75-34-3	90
1,1-Dichloroethene	75-35-4	77
1,1-Difluoroethane	75-37-6	Not Spiked
Benzene	71-43-2	91
cis-1,2-Dichloroethene	156-59-2	88
Ethyl Benzene	100-41-4	86
Ethyl-tert-butyl ether	637-92-3	Not Spiked
Isopropyl ether	108-20-3	Not Spiked
m,p-Xylene	108-38-3	85
Methyl tert-butyl ether	1634-04-4	77
o-Xylene	95-47-6	87
tert-Amyl methyl ether	994-05-8	Not Spiked
tert-Butyl alcohol	75-65-0	Not Spiked
Tetrachloroethene	127-18-4	88
Toluene	108-88-3	86
TPH ref. to Gasoline (MW=100)	9999-9999-038	Not Spiked
trans-1,2-Dichloroethene	156-60-5	83
Trichloroethene	79-01-6	92
Vinyl Chloride	75-01-4	88

D: Analyte not within the DoD scope of accreditation.

Surrogates	CAS#	Limits	%Recovery

* % Recovery is calculated using unrounded analytical results.

EPA METHOD TO-15 GC/MS FULL SCAN
EMERYVILLE CHEVRON 1400 POWERLL ST.

Client ID:	LCS		
Lab ID:	1602347A-08A	**Date/Time Analyzed:**	2/22/16 10:55 AM
Date/Time Collecte	NA - Not Applicable	**Dilution Factor:**	1.00
Media:	NA - Not Applicable	**Instrument/Filename:**	msda.i / a022203

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	94
4-Bromofluorobenzene	460-00-4	70-130	103
Toluene-d8	2037-26-5	70-130	98

* % Recovery is calculated using unrounded analytical results.

EPA METHOD TO-15 GC/MS FULL SCAN
EMERYVILLE CHEVRON 1400 POWERLL ST.

Client ID:	LCSD		
Lab ID:	1602347A-08AA	**Date/Time Analyzed:**	2/22/16 11:31 AM
Date/Time Collecte	NA - Not Applicable	**Dilution Factor:**	1.00
Media:	NA - Not Applicable	**Instrument/Filename:**	msda.i / a022204

Compound	CAS#	%Recovery
1,1,1-Trichloroethane	71-55-6	76
1,1-Dichloroethane	75-34-3	89
1,1-Dichloroethene	75-35-4	77
1,1-Difluoroethane	75-37-6	Not Spiked
Benzene	71-43-2	91
cis-1,2-Dichloroethene	156-59-2	84
Ethyl Benzene	100-41-4	85
Ethyl-tert-butyl ether	637-92-3	Not Spiked
Isopropyl ether	108-20-3	Not Spiked
m,p-Xylene	108-38-3	85
Methyl tert-butyl ether	1634-04-4	77
o-Xylene	95-47-6	86
tert-Amyl methyl ether	994-05-8	Not Spiked
tert-Butyl alcohol	75-65-0	Not Spiked
Tetrachloroethene	127-18-4	89
Toluene	108-88-3	86
TPH ref. to Gasoline (MW=100)	9999-9999-038	Not Spiked
trans-1,2-Dichloroethene	156-60-5	82
Trichloroethene	79-01-6	91
Vinyl Chloride	75-01-4	85

D: Analyte not within the DoD scope of accreditation.

Surrogates	CAS#	Limits	%Recovery

* % Recovery is calculated using unrounded analytical results.

EPA METHOD TO-15 GC/MS FULL SCAN
EMERYVILLE CHEVRON 1400 POWERLL ST.

Client ID:	LCSD		
Lab ID:	1602347A-08AA	**Date/Time Analyzed:**	2/22/16 11:31 AM
Date/Time Collecte	NA - Not Applicable	**Dilution Factor:**	1.00
Media:	NA - Not Applicable	**Instrument/Filename:**	msda.i / a022204

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	93
4-Bromofluorobenzene	460-00-4	70-130	104
Toluene-d8	2037-26-5	70-130	99

* % Recovery is calculated using unrounded analytical results.

EPA METHOD TO-15 GC/MS
EMERYVILLE CHEVRON 1400 POWERLL ST.

Client ID:	LCS		
Lab ID:	1602347A-08B	**Date/Time Analyzed:**	2/24/16 11:53 AM
Date/Time Collecte	NA - Not Applicable	**Dilution Factor:**	1.00
Media:	NA - Not Applicable	**Instrument/Filename:**	msd14.i / 14022404

Compound	CAS#	%Recovery
1,1,1-Trichloroethane	71-55-6	100
1,1-Dichloroethane	75-34-3	96
1,1-Dichloroethene	75-35-4	90
1,1-Difluoroethane	75-37-6	Not Spiked
Benzene	71-43-2	94
cis-1,2-Dichloroethene	156-59-2	95
Ethyl Benzene	100-41-4	94
Ethyl-tert-butyl ether	637-92-3	Not Spiked
Isopropyl ether	108-20-3	Not Spiked
m,p-Xylene	108-38-3	96
Methyl tert-butyl ether	1634-04-4	112
o-Xylene	95-47-6	99
tert-Amyl methyl ether	994-05-8	Not Spiked
tert-Butyl alcohol	75-65-0	Not Spiked
Tetrachloroethene	127-18-4	98
Toluene	108-88-3	92
TPH ref. to Gasoline (MW=100)	9999-9999-038	Not Spiked
trans-1,2-Dichloroethene	156-60-5	98
Trichloroethene	79-01-6	83
Vinyl Chloride	75-01-4	96

D: Analyte not within the DoD scope of accreditation.

Surrogates	CAS#	Limits	%Recovery

* % Recovery is calculated using unrounded analytical results.

EPA METHOD TO-15 GC/MS
EMERYVILLE CHEVRON 1400 POWERLL ST.

Client ID:	LCS		
Lab ID:	1602347A-08B	**Date/Time Analyzed:**	2/24/16 11:53 AM
Date/Time Collecte	NA - Not Applicable	**Dilution Factor:**	1.00
Media:	NA - Not Applicable	**Instrument/Filename:**	msd14.i / 14022404

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	97
4-Bromofluorobenzene	460-00-4	70-130	103
Toluene-d8	2037-26-5	70-130	100

* % Recovery is calculated using unrounded analytical results.

EPA METHOD TO-15 GC/MS
EMERYVILLE CHEVRON 1400 POWERLL ST.

Client ID:	LCSD		
Lab ID:	1602347A-08BB	**Date/Time Analyzed:**	2/24/16 12:12 PM
Date/Time Collecte	NA - Not Applicable	**Dilution Factor:**	1.00
Media:	NA - Not Applicable	**Instrument/Filename:**	msd14.i / 14022405

Compound	CAS#	%Recovery
1,1,1-Trichloroethane	71-55-6	99
1,1-Dichloroethane	75-34-3	95
1,1-Dichloroethene	75-35-4	90
1,1-Difluoroethane	75-37-6	Not Spiked
Benzene	71-43-2	96
cis-1,2-Dichloroethene	156-59-2	93
Ethyl Benzene	100-41-4	95
Ethyl-tert-butyl ether	637-92-3	Not Spiked
Isopropyl ether	108-20-3	Not Spiked
m,p-Xylene	108-38-3	102
Methyl tert-butyl ether	1634-04-4	124
o-Xylene	95-47-6	103
tert-Amyl methyl ether	994-05-8	Not Spiked
tert-Butyl alcohol	75-65-0	Not Spiked
Tetrachloroethene	127-18-4	102
Toluene	108-88-3	93
TPH ref. to Gasoline (MW=100)	9999-9999-038	Not Spiked
trans-1,2-Dichloroethene	156-60-5	92
Trichloroethene	79-01-6	82
Vinyl Chloride	75-01-4	94

D: Analyte not within the DoD scope of accreditation.

Surrogates	CAS#	Limits	%Recovery

* % Recovery is calculated using unrounded analytical results.

EPA METHOD TO-15 GC/MS
EMERYVILLE CHEVRON 1400 POWERLL ST.

Client ID:	LCSD		
Lab ID:	1602347A-08BB	**Date/Time Analyzed:**	2/24/16 12:12 PM
Date/Time Collecte	NA - Not Applicable	**Dilution Factor:**	1.00
Media:	NA - Not Applicable	**Instrument/Filename:**	msd14.i / 14022405

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	96
4-Bromofluorobenzene	460-00-4	70-130	103
Toluene-d8	2037-26-5	70-130	98

* % Recovery is calculated using unrounded analytical results.

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: 0719

PROJECT NAME: EMERYVILLE CHEVRON, 1400 POWELL ST., EMERYVILLE, CA

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

	SAMPLE NUMBER	DATE	TIME	TYPE	SAMPLE LOCATION (SUMMA INIT VAC / FINAL VAC / PID)	NUMBER OF CONTAINERS	ANALYSIS(ES): TO-15 INCLUDING TPHG, BTEX AND NAPHTHALENE (CASES BY ASTM-D-1946)	PRESERVATIVE	REMARKS
01A	VP1	9/17/16	091233 / 092023	AIR	37754 -29.5 -5 0	1	X	NONE	NORMAL TAT
02A	VP2		102900 / 104334		35677 -30 -5 0	1	X		
03A	VP3		113930 / 114750		37426 -30 -5 0	1	X		
04A	VP4		130400 / 131716		8041 -30 -5 0	1	X		
05A	VP4-DUP		130400 / 131716		42413 -30 -5	1	X		

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	Total No. of Samples (This Shipment)	5	LABORATORY:
	9/17/16	1730		Total No. of Containers (This Shipment)	5	EUROFINS/AIRTOXICS,LTD
RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	LABORATORY CONTACT: KYLE VAGADORI		LABORATORY PHONE NUMBER: (906) 485-3339
RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RECEIVED FOR LABORATORY BY: (SIGNATURE)	SAMPLE ANALYSIS REQUEST SHEET ATTACHED: ( ) YES (X) NO		1602347

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

REMARKS: 1-LITER SUMMA

Custody Seal Intact? Y N N/A Temp 17.6°C

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2/29/2016
Mr. Paul King
P & D Environmental
55 Santa Clara
Suite 240
Oakland CA 94610

Project Name: EMERYVILLE CHEVRON 1400 POWELL ST. EMERY
Project #: 0719
Workorder #: 1602323

Dear Mr. Paul King

The following report includes the data for the above referenced project for sample(s) received on 2/17/2016 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 Eurofins Air Toxics Inc. for your air analysis needs. Eurofins Air Toxics Inc. is committed to providing accurate data of the highest quality. Please feel free to the Project Manager: Kyle Vagadori at 916-985-1000 if you have any questions regarding the data in this report.

Regards,

Kyle Vagadori

Project Manager

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WORK ORDER #: 1602323

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 #**	0719 EMERYVILLE CHEVRON 1400 POWELL ST. EMERY
DATE RECEIVED:	02/17/2016	**CONTACT:**	Kyle Vagadori
DATE COMPLETED:	02/29/2016		

FRACTION #	NAME	TEST
01A	VP1	Modified TO-17 VI
02A	VP2	Modified TO-17 VI
03A	VP3	Modified TO-17 VI
04A	VP4	Modified TO-17 VI
05A	Lab Blank	Modified TO-17 VI
06A	CCV	Modified TO-17 VI
07A	LCS	Modified TO-17 VI
07AA	LCSD	Modified TO-17 VI

CERTIFIED BY:  DATE: 02/29/16

Technical Director

Certification numbers: AZ Licensure AZ0775, NJ NELAP - CA016, NY NELAP - 11291,
TX NELAP - T104704343-14-7, UT NELAP CA009332014-5, VA NELAP - 460197, WA NELAP - C935
Name of Accreditation Body: NELAP/ORELAP (Oregon Environmental Laboratory Accreditation Program)
Accreditation number: CA300005, Effective date: 10/18/2014, Expiration date: 10/17/2015.
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
Modified EPA Method TO-17 (VI Tubes)
P & D Environmental
Workorder# 1602323

Four TO-17 VI Tube samples were received on February 17, 2016. 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.
Analytical Precision	</=20% RPD	<30% RPD for Fluorene, Phenanthrene, Anthracene, Fluoranthene, and Pyrene.

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

A sampling volume of 0.09 L was used to convert ng to ug/m3 for the associated Lab Blank.

The reported CCV and LCS for each daily batch may be derived from more than one analytical file.

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

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Summary of Detected Compounds
EPA METHOD TO-17

Client Sample ID: VP1

Lab ID#: 1602323-01A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Naphthalene	1.0	11	1.6	18

Client Sample ID: VP2

Lab ID#: 1602323-02A

No Detections Were Found.

Client Sample ID: VP3

Lab ID#: 1602323-03A

No Detections Were Found.

Client Sample ID: VP4

Lab ID#: 1602323-04A

No Detections Were Found.

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Client Sample ID: VP1
Lab ID#: 1602323-01A
EPA METHOD TO-17

File Name:	**11021818**	**Date of Extraction: NA**	**Date of Collection: 2/17/16 9:30:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 2/18/16 11:26 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
2-Propanol	49	540	Not Detected	Not Detected
Naphthalene	1.0	11	1.6	18
TPH (Diesel Range C10-C24)	1000	11000	Not Detected	Not Detected

Air Sample Volume(L): 0.0900
Container Type: TO-17 VI Tube

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	89	50-150
Toluene-d8	94	50-150
Naphthalene-d8	114	50-150

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Client Sample ID: VP2
Lab ID#: 1602323-02A
EPA METHOD TO-17

File Name:	**11021820**	**Date of Extraction: NA**	**Date of Collection: 2/17/16 10:49:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 2/19/16 12:59 AM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
2-Propanol	49	540	Not Detected	Not Detected
Naphthalene	1.0	11	Not Detected	Not Detected
TPH (Diesel Range C10-C24)	1000	11000	Not Detected	Not Detected

Air Sample Volume(L): 0.0900
Container Type: TO-17 VI Tube

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	86	50-150
Toluene-d8	91	50-150
Naphthalene-d8	114	50-150

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Client Sample ID: VP3
Lab ID#: 1602323-03A
EPA METHOD TO-17

File Name:	**11021822**	**Date of Extraction: NA**	**Date of Collection: 2/17/16 11:56:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 2/19/16 02:33 AM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
2-Propanol	49	540	Not Detected	Not Detected
Naphthalene	1.0	11	Not Detected	Not Detected
TPH (Diesel Range C10-C24)	1000	11000	Not Detected	Not Detected

Air Sample Volume(L): 0.0900
Container Type: TO-17 VI Tube

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	83	50-150
Toluene-d8	87	50-150
Naphthalene-d8	106	50-150

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Client Sample ID: VP4
Lab ID#: 1602323-04A
EPA METHOD TO-17

File Name:	**11021824**	**Date of Extraction: NA**	**Date of Collection: 2/17/16 1:27:00 PM**
Dil. Factor:	**1.00**		**Date of Analysis: 2/19/16 04:05 AM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
2-Propanol	49	540	Not Detected	Not Detected
Naphthalene	1.0	11	Not Detected	Not Detected
TPH (Diesel Range C10-C24)	1000	11000	Not Detected	Not Detected

Air Sample Volume(L): 0.0900
Container Type: TO-17 VI Tube

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	82	50-150
Toluene-d8	88	50-150
Naphthalene-d8	108	50-150

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Client Sample ID: Lab Blank

Lab ID#: 1602323-05A

EPA METHOD TO-17

File Name:	**11021806**	**Date of Extraction: NA**	**Date of Collection: NA**
Dil. Factor:	**1.00**		**Date of Analysis: 2/18/16 01:22 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
2-Propanol	49	540	Not Detected	Not Detected
Naphthalene	1.0	11	Not Detected	Not Detected
TPH (Diesel Range C10-C24)	1000	11000	Not Detected	Not Detected

Air Sample Volume(L): 0.0900

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	98	50-150
Toluene-d8	105	50-150
Naphthalene-d8	117	50-150

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Client Sample ID: CCV
Lab ID#: 1602323-06A
EPA METHOD TO-17

File Name:	**11021803**	**Date of Extraction: NA**	**Date of Collection: NA**
Dil. Factor:	**1.00**		**Date of Analysis: 2/18/16 10:55 AM**

Compound	%Recovery
2-Propanol	99
Naphthalene	104
TPH (Diesel Range C10-C24)	103

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

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	102	50-150
Toluene-d8	104	50-150
Naphthalene-d8	111	50-150

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Client Sample ID: LCS
Lab ID#: 1602323-07A
EPA METHOD TO-17

File Name:	**11021804**	**Date of Extraction: NA**	**Date of Collection: NA**
Dil. Factor:	**1.00**		**Date of Analysis: 2/18/16 11:44 AM**

Compound	%Recovery	Method Limits
2-Propanol	95	70-130
Naphthalene	115	70-130
TPH (Diesel Range C10-C24)	Not Spiked	60-140

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

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	91	50-150
Toluene-d8	92	50-150
Naphthalene-d8	99	50-150

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Client Sample ID: LCSD
Lab ID#: 1602323-07AA
EPA METHOD TO-17

File Name:	**11021805**	**Date of Extraction: NA**	**Date of Collection: NA**
Dil. Factor:	**1.00**		**Date of Analysis: 2/18/16 12:33 PM**

Compound	%Recovery	Method Limits
2-Propanol	95	70-130
Naphthalene	109	70-130
TPH (Diesel Range C10-C24)	Not Spiked	60-140

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

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	88	50-150
Toluene-d8	89	50-150
Naphthalene-d8	96	50-150

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: 0719

PROJECT NAME: EMERYVILLE CHEVRON, 1400 POWELL ST. EMERYVILLE, CA

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

SAMPLE NUMBER	DATE	TIME	TYPE	SAMPLE LOCATION	NUMBER OF CONTAINERS	ANALYSIS(ES): TPH-D, LIGHT HALOGENS BY TO-17	PRESERVATIVE	REMARKS
01A VP1	2/17/16	093450 093750	Air		1	X	ICE	NORMAL TAT
02A VP2	↓	104800 104900	↓		1	X	↓	↓
03A VP3		115500 115600			1	X		
04A VP4		132600 132700			1	X		

Custody Seal Intact? Y N None Temp 16.8°C EATED

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	Total No. of Samples (This Shipment)	4	LABORATORY:
Michael Bass-Desch	2/17/16	1438		Total No. of Containers (This Shipment)	4	EUROFINS ARTOXICS
RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	LABORATORY CONTACT: KYLE VAEKOORI		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 = 90cc FOR 1 MINUTE -

1602323

eurofins | Air Toxics

2/27/2016
Mr. Paul King
P & D Environmental
55 Santa Clara
Suite 240
Oakland CA 94610

Project Name: EMERYVILLE CHEVRON 1400 POWELL ST. EMERY
Project #: 0719
Workorder #: 1602321

Dear Mr. Paul King

The following report includes the data for the above referenced project for sample(s) received on 2/17/2016 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 Eurofins Air Toxics Inc. for your air analysis needs. Eurofins Air Toxics Inc. is committed to providing accurate data of the highest quality. Please feel free 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 #: 1602321

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 #**	0719 EMERYVILLE CHEVRON 1400 POWELL ST. EMERY
DATE RECEIVED:	02/17/2016	**CONTACT:**	Kyle Vagadori
DATE COMPLETED:	02/27/2016		

FRACTION #	NAME	TEST	RECEIPT VAC./PRES.	FINAL PRESSURE
01A	VP1-DFA	Modified TO-15 (5&20 ppbv	Tedlar Bag	Tedlar Bag
02A	VP2-DFA	Modified TO-15 (5&20 ppbv	Tedlar Bag	Tedlar Bag
03A	VP3-DFA	Modified TO-15 (5&20 ppbv	Tedlar Bag	Tedlar Bag
04A	VP4-DFA	Modified TO-15 (5&20 ppbv	Tedlar Bag	Tedlar Bag
05A	Lab Blank	Modified TO-15 (5&20 ppbv	NA	NA
05B	Lab Blank	Modified TO-15 (5&20 ppbv	NA	NA
05C	Lab Blank	Modified TO-15 (5&20 ppbv	NA	NA
06A	CCV	Modified TO-15 (5&20 ppbv	NA	NA
06B	CCV	Modified TO-15 (5&20 ppbv	NA	NA
06C	CCV	Modified TO-15 (5&20 ppbv	NA	NA

CERTIFIED BY: Heidi Mayo DATE: 02/27/16

Technical Director

Certification numbers: AZ Licensure AZ0775, NJ NELAP - CA016, NY NELAP - 11291,
TX NELAP - T104704343-14-7, UT NELAP CA009332014-5, VA NELAP - 460197, WA NELAP - C935
Name of Accreditation Body: NELAP/ORELAP (Oregon Environmental Laboratory Accreditation Program)
Accreditation number: CA300005, Effective date: 10/18/2014, Expiration date: 10/17/2015.
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 - 95630
(916) 985-1000 . (800) 985-5955 . FAX (916) 985-1020

LABORATORY NARRATIVE
EPA Method TO-15 Soil Gas
P & D Environmental
Workorder# 1602321

Four 1 Liter Tedlar Bag samples were received on February 17, 2016. 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.

Dilution was performed on samples VP1-DFA, VP2-DFA, VP3-DFA and VP4-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

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

Client Sample ID: VP1-DFA

Lab ID#: 1602321-01A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1-Difluoroethane	40000	220000	110000	590000

Client Sample ID: VP2-DFA

Lab ID#: 1602321-02A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1-Difluoroethane	1000000	5200000	2700000	14000000

Client Sample ID: VP3-DFA

Lab ID#: 1602321-03A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1-Difluoroethane	1000000	6900000	2700000	18000000

Client Sample ID: VP4-DFA

Lab ID#: 1602321-04A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1-Difluoroethane	2000000	9600000	5400000	26000000

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Client Sample ID: VP1-DFA

Lab ID#: 1602321-01A

EPA METHOD TO-15 GC/MS

File Name:	**14021915**	**Date of Collection: 2/17/16 9:13:00 AM**	
Dil. Factor:	**2000**	**Date of Analysis: 2/19/16 05:56 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1-Difluoroethane	40000	220000	110000	590000

Container Type: 1 Liter Tedlar Bag

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

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Client Sample ID: VP2-DFA

Lab ID#: 1602321-02A

EPA METHOD TO-15 GC/MS

File Name:	**14022328**	**Date of Collection:**	**2/17/16 10:30:00 AM**
Dil. Factor:	**50000**	**Date of Analysis:**	**2/24/16 09:21 AM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1-Difluoroethane	1000000	5200000	2700000	14000000

Container Type: 1 Liter Tedlar Bag

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	97	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	96	70-130

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Client Sample ID: VP3-DFA

Lab ID#: 1602321-03A

EPA METHOD TO-15 GC/MS

File Name:	**14022327**	**Date of Collection: 2/17/16 11:40:00 AM**	
Dil. Factor:	**50000**	**Date of Analysis: 2/24/16 08:54 AM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1-Difluoroethane	1000000	6900000	2700000	18000000

Container Type: 1 Liter Tedlar Bag

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	102	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	96	70-130

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Client Sample ID: VP4-DFA

Lab ID#: 1602321-04A

EPA METHOD TO-15 GC/MS

File Name:	**14022419**	**Date of Collection: 2/17/16 1:05:00 PM**	
Dil. Factor:	**100000**	**Date of Analysis: 2/24/16 09:05 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1-Difluoroethane	2000000	9600000	5400000	26000000

Container Type: 1 Liter Tedlar Bag

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	96	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	99	70-130

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Client Sample ID: Lab Blank

Lab ID#: 1602321-05A

EPA METHOD TO-15 GC/MS

File Name:	**14021909a**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 2/19/16 01:35 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	101	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	99	70-130

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Client Sample ID: Lab Blank

Lab ID#: 1602321-05B

EPA METHOD TO-15 GC/MS

File Name:	**14022307d**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 2/23/16 12:26 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	100	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	100	70-130

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Client Sample ID: Lab Blank

Lab ID#: 1602321-05C

EPA METHOD TO-15 GC/MS

File Name:	**14022412c**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 2/24/16 04:55 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	102	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	100	70-130

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Client Sample ID: CCV

Lab ID#: 1602321-06A

EPA METHOD TO-15 GC/MS

File Name:	**14021906a**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 2/19/16 11:54 AM**	

Compound	%Recovery
1,1-Difluoroethane	115

Container Type: NA - Not Applicable

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

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Client Sample ID: CCV

Lab ID#: 1602321-06B

EPA METHOD TO-15 GC/MS

File Name:	**14022306**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 2/23/16 12:00 PM**	

Compound	%Recovery
1,1-Difluoroethane	106

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	0	70-130
Toluene-d8	0	70-130
4-Bromofluorobenzene	0	70-130

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Client Sample ID: CCV

Lab ID#: 1602321-06C

EPA METHOD TO-15 GC/MS

File Name:	**14022410**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 2/24/16 04:10 PM**	

Compound	%Recovery
1,1-Difluoroethane	109

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	100	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	104	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: 0719

PROJECT NAME: EMERYVILLE CHEVRON, 1400 POWELL ST., EMERYVILLE, CA

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

	SAMPLE NUMBER	DATE	TIME	TYPE	SAMPLE LOCATION	NUMBER OF CONTAINERS	ANALYSIS(ES): DFA	PRESERVATIVE	REMARKS
01a	VP1-DFA	2/17/16	091310	AIR		1	X	NONE	NORMAL TAT
02a	VP2-DFA	↓	103000	↓		1	X	↓	↓
03a	VP3-DFA		114000			1	X		
04a	VP4-DFA	↓	130512	↓		1	X	↓	↓

RELINQUISHED BY: (SIGNATURE) MICHAEL BASS-DESCHENES	DATE 2-17-16	TIME 1436	RECEIVED BY: (SIGNATURE)	Total No. of Samples (This Shipment): 4	LABORATORY: EUROFINS/AIR TOXICS LTD.
RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	Total No. of Containers (This Shipment): 4	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: 1-LITER TEDLAR

1602321

eurofins | Air Toxics

2/29/2016
Mr. Paul King
P & D Environmental
55 Santa Clara
Suite 240
Oakland CA 94610

Project Name: EMERYVILLE CHEVRON 1400 POWELL ST. EMERY
Project #: 0719
Workorder #: 1602322

Dear Mr. Paul King

The following report includes the data for the above referenced project for sample(s) received on 2/17/2016 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 Eurofins Air Toxics Inc. for your air analysis needs. Eurofins Air Toxics Inc. is committed to providing accurate data of the highest quality. Please feel free 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 #: 1602322

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 #**	0719 EMERYVILLE CHEVRON 1400 POWELL ST. EMERY
DATE RECEIVED:	02/17/2016	**CONTACT:**	Kyle Vagadori
DATE COMPLETED:	02/29/2016		

FRACTION #	NAME	TEST	RECEIPT VAC./PRES.	FINAL PRESSURE
01A	VP1-2-PROPANOL	Modified TO-15 (5&20 ppbv	Tedlar Bag	Tedlar Bag
02A	VP2 2-PROPANOL	Modified TO-15 (5&20 ppbv	Tedlar Bag	Tedlar Bag
03A	VP3 2-PROPANOL	Modified TO-15 (5&20 ppbv	Tedlar Bag	Tedlar Bag
04A	VP4-2-PROPANOL	Modified TO-15 (5&20 ppbv	Tedlar Bag	Tedlar Bag
05A	Lab Blank	Modified TO-15 (5&20 ppbv	NA	NA
06A	CCV	Modified TO-15 (5&20 ppbv	NA	NA
07A	LCS	Modified TO-15 (5&20 ppbv	NA	NA
07AA	LCSD	Modified TO-15 (5&20 ppbv	NA	NA

CERTIFIED BY:  DATE: 02/29/16

Technical Director

Certification numbers: AZ Licensure AZ0775, NJ NELAP - CA016, NY NELAP - 11291,
TX NELAP - T104704343-14-7, UT NELAP CA009332014-5, VA NELAP - 460197, WA NELAP - C935
Name of Accreditation Body: NELAP/ORELAP (Oregon Environmental Laboratory Accreditation Program)
Accreditation number: CA300005, Effective date: 10/18/2014, Expiration date: 10/17/2015.
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# 1602322

Four 1 Liter Tedlar Bag samples were received on February 17, 2016. 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

The Chain of Custody (COC) information for samples VP1-2-PROPANOL, VP2 2-PROPANOL, VP3 2-PROPANOL and VP4-2-PROPANOL did not match the entries on the sample tags with regard to sample identification. Therefore the information on the COC was used to process and report the samples.

Analytical Notes

Dilution was performed on samples VP1-2-PROPANOL, VP2 2-PROPANOL, VP3 2-PROPANOL and VP4-2-PROPANOL due to the presence of high level target species.

Samples VP1-2-PROPANOL, VP2 2-PROPANOL, VP3 2-PROPANOL and VP4-2-PROPANOL were transferred from Tedlar bags into 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.

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

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

Client Sample ID: VP1-2-PROPANOL

Lab ID#: 1602322-01A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
2-Propanol	10000	200000	25000	500000

Client Sample ID: VP2 2-PROPANOL

Lab ID#: 1602322-02A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
2-Propanol	16000	58000	40000	140000

Client Sample ID: VP3 2-PROPANOL

Lab ID#: 1602322-03A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
2-Propanol	16000	38000	40000	93000

Client Sample ID: VP4-2-PROPANOL

Lab ID#: 1602322-04A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
2-Propanol	16000	160000	40000	400000

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Client Sample ID: VP1-2-PROPANOL

Lab ID#: 1602322-01A

EPA METHOD TO-15 GC/MS

File Name:	**14022516**	**Date of Collection: 2/17/16 9:29:00 AM**	
Dil. Factor:	**505**	**Date of Analysis: 2/25/16 04:42 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
2-Propanol	10000	200000	25000	500000

Container Type: 1 Liter Tedlar Bag

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

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Client Sample ID: VP2 2-PROPANOL

Lab ID#: 1602322-02A

EPA METHOD TO-15 GC/MS

File Name:	**14022517**	**Date of Collection: 2/17/16 10:47:00 AM**	
Dil. Factor:	**808**	**Date of Analysis: 2/25/16 05:07 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
2-Propanol	16000	58000	40000	140000

Container Type: 1 Liter Tedlar Bag

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	102	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	104	70-130

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Client Sample ID: VP3 2-PROPANOL

Lab ID#: 1602322-03A

EPA METHOD TO-15 GC/MS

File Name:	**14022518**	**Date of Collection: 2/17/16 11:54:00 AM**	
Dil. Factor:	**808**	**Date of Analysis: 2/25/16 05:34 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
2-Propanol	16000	38000	40000	93000

Container Type: 1 Liter Tedlar Bag

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	101	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	102	70-130

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Client Sample ID: VP4-2-PROPANOL

Lab ID#: 1602322-04A

EPA METHOD TO-15 GC/MS

File Name:	**14022519**	**Date of Collection: 2/17/16 1:24:00 PM**	
Dil. Factor:	**808**	**Date of Analysis: 2/25/16 06:03 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
2-Propanol	16000	160000	40000	400000

Container Type: 1 Liter Tedlar Bag

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	100	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	102	70-130

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Client Sample ID: Lab Blank

Lab ID#: 1602322-05A

EPA METHOD TO-15 GC/MS

File Name:	**14022509**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 2/25/16 12:14 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	102	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	101	70-130

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Client Sample ID: CCV

Lab ID#: 1602322-06A

EPA METHOD TO-15 GC/MS

File Name:	**14022502**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 2/25/16 08:46 AM**	

Compound	%Recovery
2-Propanol	104

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	103	70-130
Toluene-d8	97	70-130
4-Bromofluorobenzene	103	70-130

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Client Sample ID: LCS

Lab ID#: 1602322-07A

EPA METHOD TO-15 GC/MS

File Name:	**14022503**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 2/25/16 09:21 AM**	

Compound	%Recovery	Method Limits
2-Propanol	127	70-130

Container Type: NA - Not Applicable

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

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Client Sample ID: LCSD

Lab ID#: 1602322-07AA

EPA METHOD TO-15 GC/MS

File Name:	**14022504**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 2/25/16 09:51 AM**	

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

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	99	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	103	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: 0719

PROJECT NAME: EMERYVILLE CHEVRON 1400 POWELL ST. EMERYVILLE, CA

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

	SAMPLE NUMBER	DATE	TIME	TYPE	SAMPLE LOCATION	NUMBER OF CONTAINERS	ANALYSIS(ES): 2-PROPANOL	PRESERVATIVE	REMARKS
01a	VP1 - 2-PROPANOL	2/17/16	0912HR	AIR		1	X	NONE	NORMAL TAT
02a	VP2 2-PROPANOL		1047HR			1	X		
03a	VP3 2-PROPANOL		1154HR			1	X		
04a	VP4 2-PROPANOL		1324HR			1	X		

RELINQUISHED BY: (SIGNATURE) — DATE 2/17/16 — TIME 1730 — RECEIVED BY: (SIGNATURE)

Total No. of Samples (This Shipment): 4
Total No. of Containers (This Shipment): 4

LABORATORY: EUROFINS/AIR TOXICS LTD

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

LABORATORY CONTACT: KYLE VAGADORI

LABORATORY PHONE NUMBER: (916) 985-3339

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 TEDLAR.

1602322

eurofins | Air Toxics

3/1/2016
Mr. Paul King
P & D Environmental
55 Santa Clara
Suite 240
Oakland CA 94610

Project Name: EMERYVILLE CHEVRON 1400 POWERLL ST.
Project #: 0719
Workorder #: 1602347B

Dear Mr. Paul King

The following report includes the data for the above referenced project for sample(s) received on 2/17/2016 at Air Toxics Ltd.

The data and associated QC analyzed by Modified ASTM D-1946 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 Eurofins Air Toxics Inc. for your air analysis needs. Eurofins Air Toxics Inc. is committed to providing accurate data of the highest quality. Please feel free the Project Manager: Kyle Vagadori at 916-985-1000 if you have any questions regarding the data in this report.

Regards,

Kyle Vagadori

Project Manager

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WORK ORDER #: 1602347B

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 #**	0719 EMERYVILLE CHEVRON 1400 POWERLL ST.
DATE RECEIVED:	02/17/2016	**CONTACT:**	Kyle Vagadori
DATE COMPLETED:	03/01/2016		

FRACTION #	NAME	TEST	RECEIPT VAC./PRES.	FINAL PRESSURE
01A	VP1	Modified ASTM D-1946	4.5 "Hg	15 psi
02A	VP2	Modified ASTM D-1946	4.5 "Hg	15 psi
03A	VP3	Modified ASTM D-1946	7.0 "Hg	15 psi
04A	VP4	Modified ASTM D-1946	7.0 "Hg	15 psi
05A	VP4-DUP	Modified ASTM D-1946	6.5 "Hg	15 psi
06A	Lab Blank	Modified ASTM D-1946	NA	NA
07A	LCS	Modified ASTM D-1946	NA	NA
07AA	LCSD	Modified ASTM D-1946	NA	NA

CERTIFIED BY: Heidi Mayo DATE: 03/01/16

Technical Director

Certification numbers: AZ Licensure AZ0775, NJ NELAP - CA016, NY NELAP - 11291,
TX NELAP - T104704343-14-7, UT NELAP CA009332014-5, VA NELAP - 460197, WA NELAP - C935
Name of Accreditation Body: NELAP/ORELAP (Oregon Environmental Laboratory Accreditation Program)
Accreditation number: CA300005, Effective date: 10/18/2014, Expiration date: 10/17/2015.
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
Modified ASTM D-1946
P & D Environmental
Workorder# 1602347B

Five 1 Liter Summa Canister samples were received on February 17, 2016. The laboratory performed analysis via Modified ASTM Method D-1946 for Methane and fixed gases in air using GC/FID or GC/TCD. The method involves direct injection of 1.0 mL of sample.

On the analytical column employed for this analysis, Oxygen coelutes with Argon. The corresponding peak is quantitated as Oxygen.

Since Nitrogen is used to pressurize samples, the reported Nitrogen values are calculated by adding all the sample components and subtracting from 100%.

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

Requirement	***ASTM D-1946***	***ATL Modifications***
Calibration	A single point calibration is performed using a reference standard closely matching the composition of the unknown.	A minimum of 5-point calibration curve is performed. Quantitation is based on average Response Factor.
Reference Standard	The composition of any reference standard must be known to within 0.01 mol % for any component.	The standards used by ATL are blended to a >/= 95% accuracy.
Sample Injection Volume	Components whose concentrations are in excess of 5 % should not be analyzed by using sample volumes greater than 0.5 mL.	The sample container is connected directly to a fixed volume sample loop of 1.0 mL on the GC. Linear range is defined by the calibration curve. Bags are loaded by vacuum.
Normalization	Normalize the mole percent values by multiplying each value by 100 and dividing by the sum of the original values. The sum of the original values should not differ from 100% by more than 1.0%.	Results are not normalized. The sum of the reported values can differ from 100% by as much as 15%, either due to analytical variability or an unusual sample matrix.
Precision	Precision requirements established at each concentration level.	Duplicates should agree within 25% RPD for detections > 5 X's the RL.

Receiving Notes

The Chain of Custody was missing method information. EATL proceeded with the analysis as per the original contract or verbal agreement.

Analytical Notes

There were no analytical discrepancies.

Definition of Data Qualifying Flags

Seven qualifiers may have been used on the data analysis sheets and indicate as follows:
B - Compound present in laboratory blank greater than reporting limit.
J - Estimated value.
E - Exceeds instrument calibration range.
S - Saturated peak.
Q - Exceeds quality control limits.
U - Compound analyzed for but not detected above the detection limit.
M - Reported value may be biased due to apparent matrix interferences.
File extensions may have been used on the data analysis sheets and indicates as follows:
a-File was requantified
b-File was quantified by a second column and detector
r1-File was requantified for the purpose of reissue

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Summary of Detected Compounds
NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

Client Sample ID: VP1

Lab ID#: 1602347B-01A

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.24	20
Nitrogen	0.24	80
Methane	0.00024	0.00060

Client Sample ID: VP2

Lab ID#: 1602347B-02A

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.24	20
Nitrogen	0.24	80
Methane	0.00024	0.00051

Client Sample ID: VP3

Lab ID#: 1602347B-03A

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.26	20
Nitrogen	0.26	80
Methane	0.00026	0.00085

Client Sample ID: VP4

Lab ID#: 1602347B-04A

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.26	20
Nitrogen	0.26	80

Client Sample ID: VP4-DUP

Lab ID#: 1602347B-05A

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.26	20

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Summary of Detected Compounds
NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

Client Sample ID: VP4-DUP

Lab ID#: 1602347B-05A

Nitrogen	0.26	80
Carbon Dioxide	0.026	0.028

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Client Sample ID: VP1

Lab ID#: 1602347B-01A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	**9022007**	**Date of Collection: 2/17/16 9:20:00 AM**	
Dil. Factor:	**2.38**	**Date of Analysis: 2/20/16 10:26 AM**	

Compound	**Rpt. Limit (%)**	**Amount (%)**
Oxygen	0.24	20
Nitrogen	0.24	80
Carbon Monoxide	0.024	Not Detected
Methane	0.00024	0.00060
Carbon Dioxide	0.024	Not Detected
Ethane	0.0024	Not Detected
Ethene	0.0024	Not Detected

Container Type: 1 Liter Summa Canister

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Client Sample ID: VP2

Lab ID#: 1602347B-02A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	**9022008**	**Date of Collection: 2/17/16 10:36:00 AM**	
Dil. Factor:	**2.38**	**Date of Analysis: 2/20/16 10:52 AM**	

Compound	**Rpt. Limit (%)**	**Amount (%)**
Oxygen	0.24	20
Nitrogen	0.24	80
Carbon Monoxide	0.024	Not Detected
Methane	0.00024	0.00051
Carbon Dioxide	0.024	Not Detected
Ethane	0.0024	Not Detected
Ethene	0.0024	Not Detected

Container Type: 1 Liter Summa Canister

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Client Sample ID: VP3

Lab ID#: 1602347B-03A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	**9022009**	**Date of Collection: 2/17/16 11:47:00 AM**	
Dil. Factor:	**2.64**	**Date of Analysis: 2/20/16 11:15 AM**	

Compound	**Rpt. Limit (%)**	**Amount (%)**
Oxygen	0.26	20
Nitrogen	0.26	80
Carbon Monoxide	0.026	Not Detected
Methane	0.00026	0.00085
Carbon Dioxide	0.026	Not Detected
Ethane	0.0026	Not Detected
Ethene	0.0026	Not Detected

Container Type: 1 Liter Summa Canister

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Client Sample ID: VP4

Lab ID#: 1602347B-04A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	**9022010**	**Date of Collection: 2/17/16 1:17:00 PM**	
Dil. Factor:	**2.64**	**Date of Analysis: 2/20/16 11:40 AM**	

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.26	20
Nitrogen	0.26	80
Carbon Monoxide	0.026	Not Detected
Methane	0.00026	Not Detected
Carbon Dioxide	0.026	Not Detected
Ethane	0.0026	Not Detected
Ethene	0.0026	Not Detected

Container Type: 1 Liter Summa Canister

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Client Sample ID: VP4-DUP

Lab ID#: 1602347B-05A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	**9022011**	**Date of Collection: 2/17/16 1:17:00 PM**	
Dil. Factor:	**2.58**	**Date of Analysis: 2/20/16 12:06 PM**	

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.26	20
Nitrogen	0.26	80
Carbon Monoxide	0.026	Not Detected
Methane	0.00026	Not Detected
Carbon Dioxide	0.026	0.028
Ethane	0.0026	Not Detected
Ethene	0.0026	Not Detected

Container Type: 1 Liter Summa Canister

eurofins | Air Toxics

Client Sample ID: Lab Blank

Lab ID#: 1602347B-06A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	**9022003**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 2/20/16 08:39 AM**	

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.10	Not Detected
Nitrogen	0.10	Not Detected
Carbon Monoxide	0.010	Not Detected
Methane	0.00010	Not Detected
Carbon Dioxide	0.010	Not Detected
Ethane	0.0010	Not Detected
Ethene	0.0010	Not Detected

Container Type: NA - Not Applicable

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Client Sample ID: LCS

Lab ID#: 1602347B-07A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	**9022002**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 2/20/16 08:13 AM**	

Compound	%Recovery	Method Limits
Oxygen	96	85-115
Nitrogen	90	85-115
Carbon Monoxide	102	85-115
Methane	94	85-115
Carbon Dioxide	102	85-115
Ethane	94	85-115
Ethene	95	85-115

Container Type: NA - Not Applicable

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Client Sample ID: LCSD

Lab ID#: 1602347B-07AA

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	**9022018**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 2/20/16 03:28 PM**	

Compound	%Recovery	Method Limits
Oxygen	96	85-115
Nitrogen	90	85-115
Carbon Monoxide	102	85-115
Methane	95	85-115
Carbon Dioxide	102	85-115
Ethane	94	85-115
Ethene	96	85-115

Container Type: NA - Not Applicable

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: 0719

PROJECT NAME: EMERYVILLE CHEVRON, 1400 POWELL ST., EMERYVILLE, CA

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

	SAMPLE NUMBER	DATE	TIME	TYPE	SAMPLE LOCATION (SUMMA INIT VAC / FINAL VAC / PID)	NUMBER OF CONTAINERS	ANALYSIS(ES): TO-15 INCLUDING TPHG, BTEX AND NAPHTHALENE (CASES BY ASTM-D-1946)	PRESERVATIVE	REMARKS
01A	VP1	9/17/16	091233 / 092023	AIR	37754 -29.5 -5 0	1	X	NONE	NORMAL TAT
02A	VP2		102900 / 104334		35677 -30 -5 0	1	X		
03A	VP3		113930 / 114750		37426 -30 -5 0	1	X		
04A	VP4		130400 / 131716		8041 -30 -5 0	1	X		
05A	VP4-DUP		130400 / 131716		42413 -30 -5	1	X		

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	Total No. of Samples (This Shipment)	5	LABORATORY:
	9/17/16	1730		Total No. of Containers (This Shipment)	5	EUROFINS/AIRTOXICS,LTD
RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	LABORATORY CONTACT: KYLE VAGADORI		LABORATORY PHONE NUMBER: (906) 485-3339
RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RECEIVED FOR LABORATORY BY: (SIGNATURE)	SAMPLE ANALYSIS REQUEST SHEET ATTACHED: ( ) YES (X) NO		1602347

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

REMARKS: 1-LITER SUMMA

Custody Seal Intact? Y N N/A Temp 17.6°C

APPENDIX F

Historical Site Investigation Documents

Figures

- **Figure 2 - February 19, 2012 Groundwater Elevation and Hydrocarbon Concentration Map 1 Page**
- **Figure 4 - July 29, 2012 Groundwater Elevation Contour Map (Shallow Zone) 1 Page**
- **Figure 7B - January 16, 2013 Groundwater Elevation Contour and Hydrocarbon Concentration Map (Shallow Zone) 1 Page**
- **Figure 6 - Grab Groundwater Sampling Results (Post-Excavation and Dewatering Event) 1 Page**
- **Figure 7A - July 29, 2012 Groundwater Analytical Results 1 Page**

Tables

- **Table D-3 - Groundwater Analytical Results (Upgradient Dewatering Wells DW-11 and DW-14) 2 Pages**
- **Table D-1 - Groundwater Analytical Results (CPT Groundwater Samples From CPT-1 Through CPT-4) 2 Pages**
- **Table 2 - Groundwater Monitoring Data and Analytical Results for 2011 Through First Quarter 2013) 1 Page**

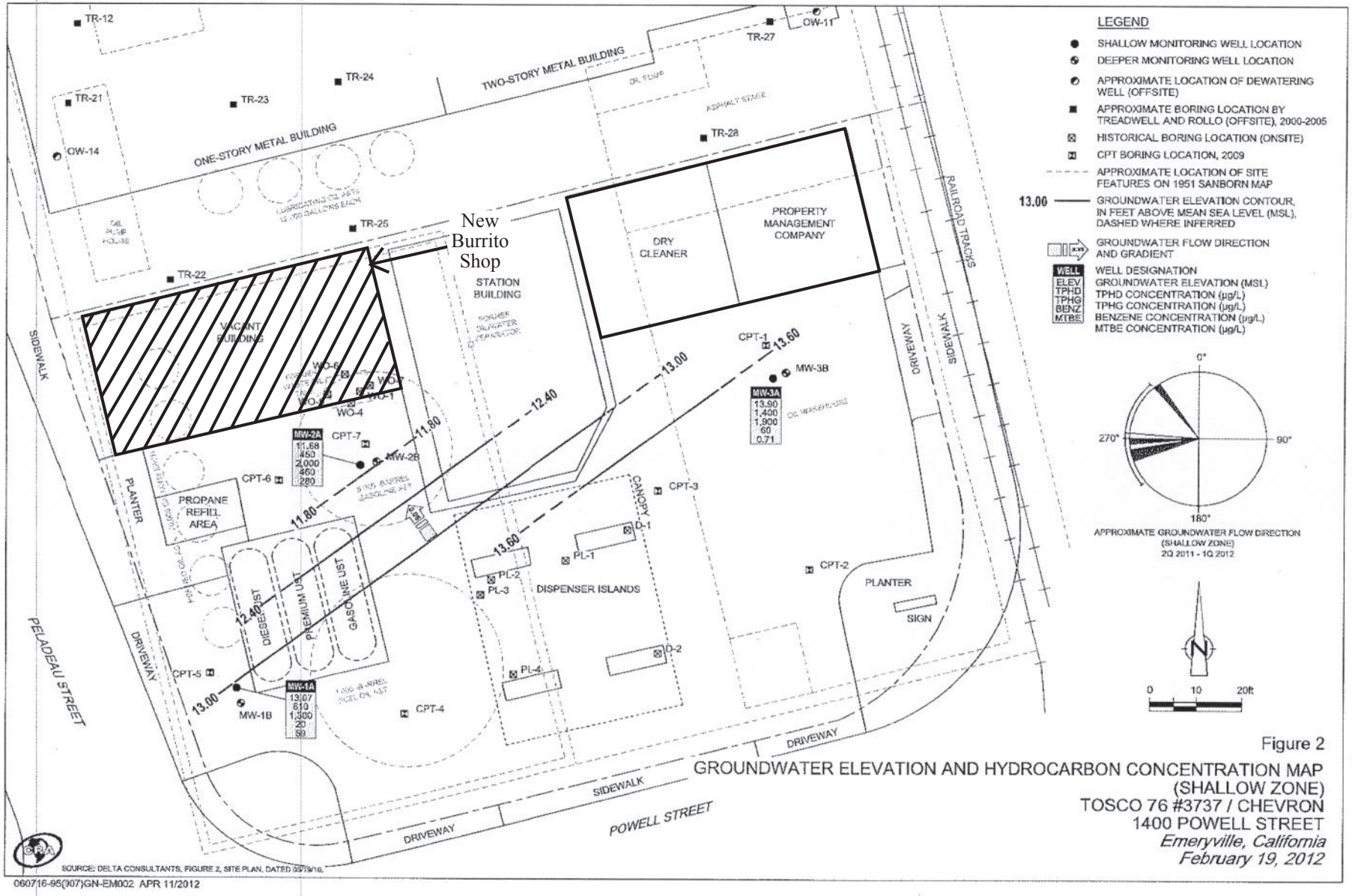
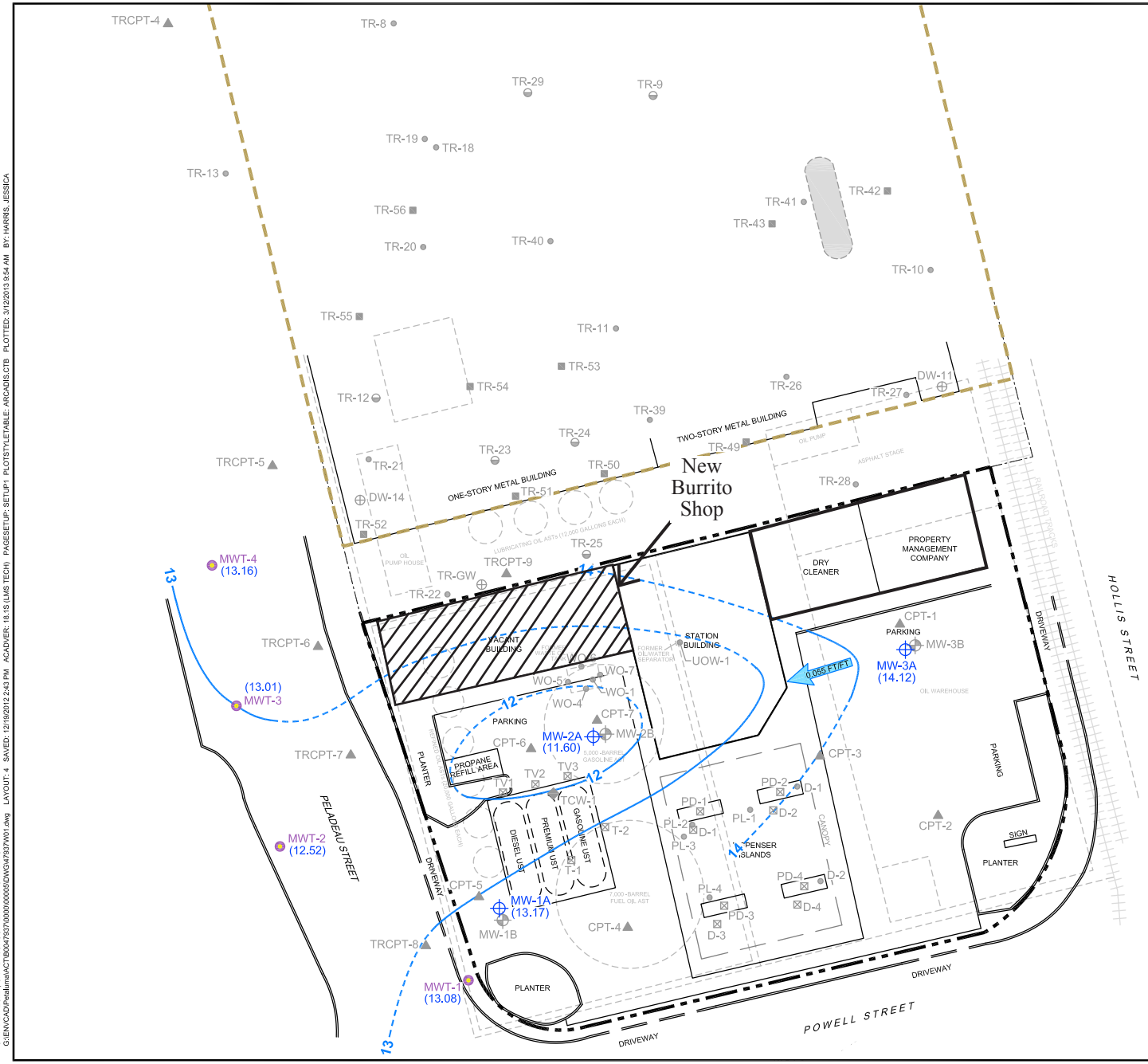


Figure 2

GROUNDWATER ELEVATION AND HYDROCARBON CONCENTRATION MAP
(SHALLOW ZONE)
TOSCO 76 #3737 / CHEVRON
1400 POWELL STREET
Emeryville, California
February 19, 2012

SOURCE: DELTA CONSULTANTS, FIGURE 2, SITE PLAN, DATED 03/19/10.

060716-95(007)GN-EM002 APR 11/2012



LEGEND

- PROPERTY BOUNDARY
- LOT LINE
- MW-1A — MONITORING WELL LOCATION (SHALLOW ZONE)
- MW-1B — MONITORING WELL LOCATION (DEEP ZONE)
- TCW-1 — TANK CAVITY WELL (GRAB SAMPLE) [2]
- DW-11 — DEWATERING WELL (OFFSITE) [2]
- TR-54 — APPROXIMATE CONFIRMATION SOIL SAMPLE LOCATION BY TREADWELL AND ROLLO (OFFSITE), 2006 [POST 2006 EXCAVATION AND DEWATERING; RETRIEVED FROM FINAL EXCAVATION DEPTH] [3]
- TR-11 — APPROXIMATE HISTORICAL SOIL SAMPLE LOCATION (OFFSITE), 2000-2006 [PRIOR TO 2006 EXCAVATION AND DEWATERING] [2 3]
- TR-25 — APPROXIMATE SOIL AND GROUNDWATER SAMPLE LOCATION BY TREADWELL AND ROLLO (OFFSITE) 2000-2006 [PRIOR TO 2006 EXCAVATION AND DEWATERING] [2 3]
- TR-GW — GRAB GROUNDWATER SAMPLE LOCATION BY TREADWELL AND ROLLO, 2008
- D-1 — HISTORICAL BORING LOCATION (ONSITE) [2]
- CPT-1 — CPT BORING LOCATION, 2009
- TRCPT-8 — APPROXIMATE CPT BORING LOCATION BY TREADWELL AND ROLLO (OFFSITE), 2010
- TV1 — SOIL VAPOR SAMPLING LOCATION (1997)
- MWT-1 — TEMPORARY MONITORING WELL LOCATION, 2012
- APPROXIMATE LOCATION OF SITE FEATURES ON 1951 SANBORN MAP
- APPROXIMATE LOCATION OF UST (REMOVED 1990)
- 2006 EXCAVATION EXTENT (12'-16' BELOW GROUND SURFACE)
- GROUNDWATER ELEVATION CONTOUR (FT MSL; DASHED WHERE INFERRED)
- (13.17) — GROUNDWATER ELEVATION IN FEET RELATIVE TO MEAN SEA LEVEL (MSL)
- 0.055 FT/FT — APPROXIMATE GROUNDWATER FLOW DIRECTION AND GRADIENT MEASURED IN FOOT PER FOOT (FT/FT)

NOTES:

1. TEMPORARY MONITORING WELL LOCATIONS, BUILDING, CURB, PLANTER, AND PARKING AREAS SURVEYED BY MUIR CONSULTING, INC. 8/1/12. HORIZONTAL DATUM NAD83, VERTICAL DATUM NAVD88. ALL OTHER FEATURES AND LOCATIONS ARE APPROXIMATE AND WERE PROVIDED BY CRA, DATED 1/27/2011, AT A SCALE OF 1"=20'.
2. SAMPLES RETRIEVED PRIOR TO 2006 EXCAVATION AND DEWATERING EVENT.
3. LOCATION APPROXIMATED FROM 5885 HOLLIS STREET CASE CLOSURE SUMMARY.
4. HISTORICAL DATA NOT AVAILABLE FOR TR-39 THROUGH TR-41. SAMPLE IDs WERE INADVERTENTLY DUPLICATED DURING POST-EXCAVATION SAMPLING.

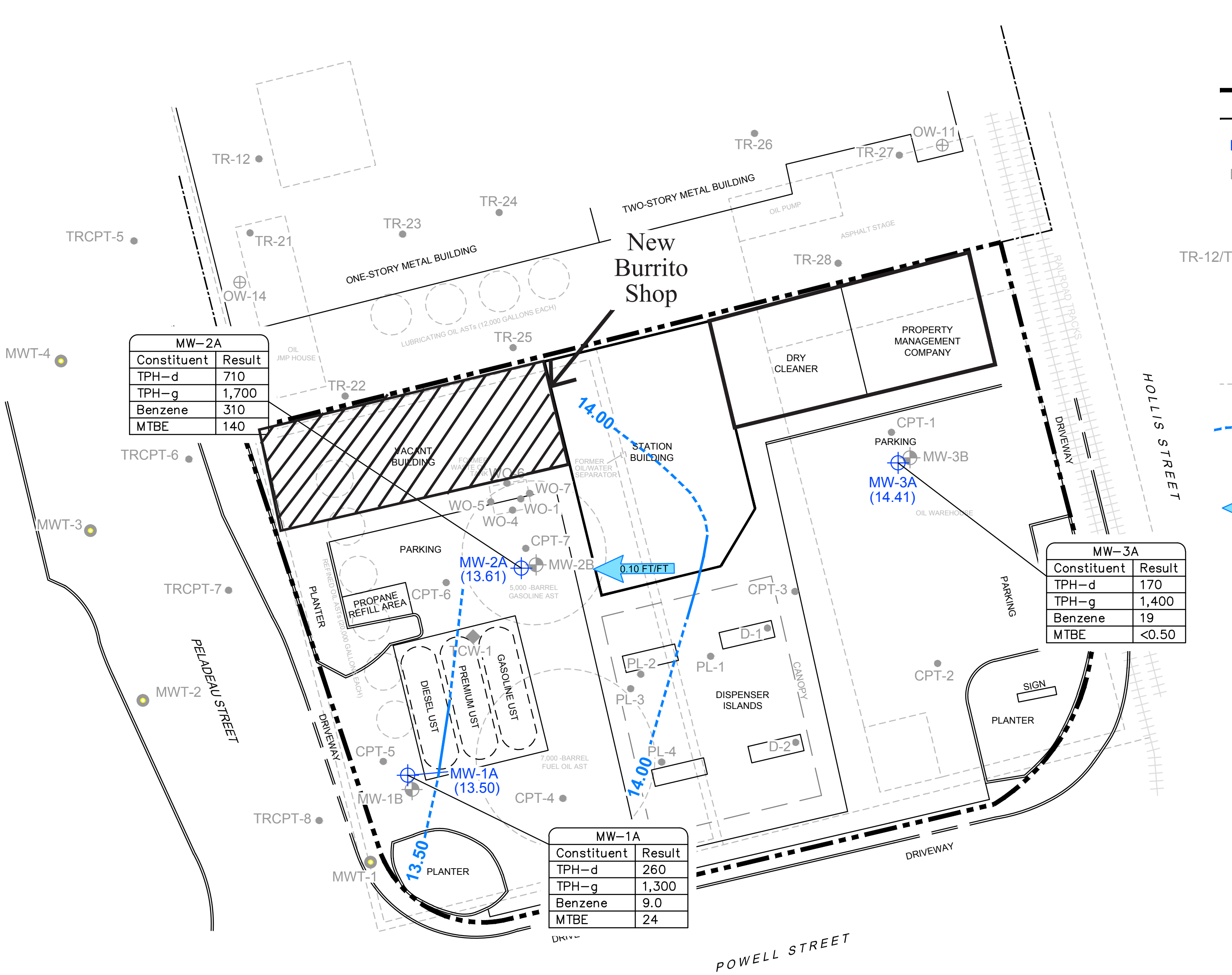
0 30' 60'
GRAPHIC SCALE

UNION OIL
FORMER 76 SERVICE STATION 3737
1400 POWELL STREET
EMERYVILLE, CALIFORNIA

GROUNDWATER ELEVATION CONTOUR MAP (SHALLOW ZONE)- JULY 29, 2012

ARCADIS

FIGURE 4



MW-2A

Constituent	Result
TPH-d	710
TPH-g	1,700
Benzene	310
MTBE	140

MW-3A

Constituent	Result
TPH-d	170
TPH-g	1,400
Benzene	19
MTBE	<0.50

MW-1A

Constituent	Result
TPH-d	260
TPH-g	1,300
Benzene	9.0
MTBE	24

LEGEND

- PROPERTY BOUNDARY
- LOT LINE
- MW-1A MONITORING WELL LOCATION (SHALLOW ZONE)
- MW-1B MONITORING WELL LOCATION (DEEP ZONE)
- TCW-1 TANK CAVITY WELL
- OW-11 DEWATERING WELL (OFFSITE)
- TR-12/TRCPT-8 APPROXIMATE BORING LOCATION BY TREADWELL AND ROLLO (OFFSITE), 2000-2010
- D-1 HISTORICAL BORING LOCATION (ONSITE)
- CPT-1 CPT BORING LOCATION, 2009
- MWT-1 TEMPORARY MONITORING WELL LOCATION
- APPROXIMATE LOCATION OF SITE FEATURES ON 1951 SANBORN MAP
- GROUNDWATER ELEVATION CONTOUR (FT MSL; DASHED WHERE INFERRED)
- (14.41) GROUNDWATER ELEVATION IN FEET RELATIVE TO MEAN SEA LEVEL (MSL)
- 0.10 FT/FT APPROXIMATE GROUNDWATER FLOW DIRECTION AND GRADIENT MEASURED IN FOOT PER FOOT (FT/FT)

NOTE:

1. TEMPORARY MONITORING WELL LOCATIONS, BUILDING, CURB, PLANTER, AND PARKING AREAS SURVEYED PROVIDED BY MUIR CONSULTING, INC. 8/1/12. HORIZONTAL DATUM NAD83, VERTICAL DATUM NAVD88. ALL OTHER FEATURES AND LOCATIONS ARE APPROXIMATE AND WERE PROVIDED BY CRA, DATED 1/27/2011, AT A SCALE OF 1"=20'.

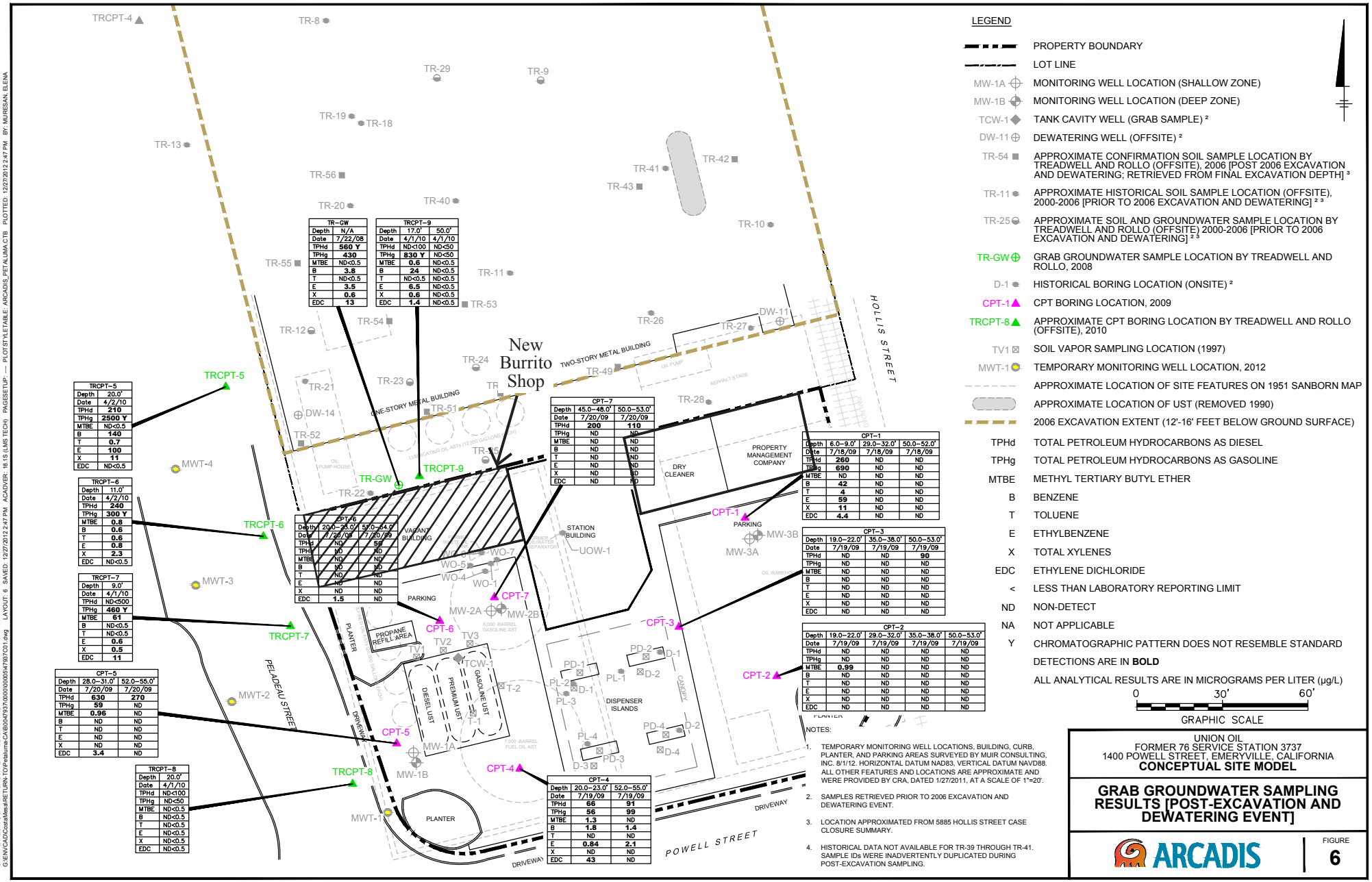
0 25' 50'
GRAPHIC SCALE

UNION OIL
FORMER 76 SERVICE STATION 35-1780
1400 POWELL STREET
EMERYVILLE, CALIFORNIA

GROUNDWATER ELEVATION CONTOUR AND HYDROCARBON CONCENTRATION MAP (SHALLOW ZONE) JANUARY 16, 2013

ARCADIS

FIGURE
7B



TR-GW	
Depth	N/A
Date	7/22/08
TPHd	560 Y
TPHg	430
MTBE	ND<0.5
B	3.8
T	ND<0.5
E	3.5
X	0.6
EDC	13

TRCPT-9		
Depth	17.0'	50.0'
Date	4/1/10	4/1/10
TPHd	ND<100	ND<50
TPHg	830 Y	ND<50
MTBE	0.6	ND<0.5
B	24	ND<0.5
T	ND<0.5	ND<0.5
E	6.5	ND<0.5
X	0.6	ND<0.5
EDC	1.4	ND<0.5

TRCPT-5	
Depth	20.0'
Date	4/2/10
TPHd	210
TPHg	2500 Y
MTBE	ND<0.5
B	140
T	0.7
E	100
X	11
EDC	ND<0.5

TRCPT-6	
Depth	11.0'
Date	4/2/10
TPHd	240
TPHg	300 Y
MTBE	0.8
B	0.6
T	0.6
E	0.8
X	2.3
EDC	ND<0.5

TRCPT-7	
Depth	9.0'
Date	4/1/10
TPHd	ND<500
TPHg	460 Y
MTBE	61
B	ND<0.5
T	ND<0.5
E	0.6
X	0.5
EDC	11

CPT-5		
Depth	28.0–31.0'	52.0–55.0'
Date	7/20/09	7/20/09
TPHd	630	270
TPHg	59	ND
MTBE	0.96	ND
B	ND	ND
T	ND	ND
E	ND	ND
X	ND	ND
EDC	3.4	ND

TRCPT-8	
Depth	20.0'
Date	4/1/10
TPHd	ND<100
TPHg	ND<50
MTBE	ND<0.5
B	ND<0.5
T	ND<0.5
E	ND<0.5
X	ND<0.5
EDC	ND<0.5

CPT-6		
Depth	20.0–26.0'	52.0–54.0'
Date	7/20/09	7/20/09
TPHd	ND	59
TPHg	ND	ND
MTBE	ND	ND
B	ND	ND
T	ND	ND
E	ND	ND
X	ND	ND
EDC	1.5	ND

CPT-7		
Depth	45.0–48.0'	50.0–53.0'
Date	7/20/09	7/20/09
TPHd	200	110
TPHg	ND	ND
MTBE	ND	ND
B	ND	ND
T	ND	ND
E	ND	ND
X	ND	ND
EDC	ND	ND

CPT-1			
Depth	6.0–9.0'	29.0–32.0'	50.0–52.0'
Date	7/18/09	7/18/09	7/18/09
TPHd	260	ND	ND
TPHg	690	ND	ND
MTBE	ND	ND	ND
B	42	ND	ND
T	4	ND	ND
E	59	ND	ND
X	11	ND	ND
EDC	4.4	ND	ND

CPT-3			
Depth	19.0–22.0'	35.0–38.0'	50.0–53.0'
Date	7/19/09	7/19/09	7/19/09
TPHd	ND	ND	90
TPHg	ND	ND	ND
MTBE	ND	ND	ND
B	ND	ND	ND
T	ND	ND	ND
E	ND	ND	ND
X	ND	ND	ND
EDC	ND	ND	ND

CPT-2				
Depth	19.0–22.0'	29.0–32.0'	35.0–38.0'	50.0–53.0'
Date	7/19/09	7/19/09	7/19/09	7/19/09
TPHd	ND	ND	ND	ND
TPHg	ND	ND	ND	ND
MTBE	0.99	ND	ND	ND
B	ND	ND	ND	ND
T	ND	ND	ND	ND
E	ND	ND	ND	ND
X	ND	ND	ND	ND
EDC	ND	ND	ND	ND

CPT-4		
Depth	20.0–23.0'	52.0–55.0'
Date	7/19/09	7/19/09
TPHd	66	91
TPHg	56	99
MTBE	1.3	ND
B	1.8	1.4
T	ND	ND
E	0.84	2.1
X	ND	ND
EDC	43	ND

LEGEND

- PROPERTY BOUNDARY
- LOT LINE
- MW-1A — MONITORING WELL LOCATION (SHALLOW ZONE)
- MW-1B — MONITORING WELL LOCATION (DEEP ZONE)
- TCW-1 — TANK CAVITY WELL (GRAB SAMPLE) [2]
- DW-11 — DEWATERING WELL (OFFSITE) [2]
- TR-54 — APPROXIMATE CONFIRMATION SOIL SAMPLE LOCATION BY TREADWELL AND ROLLO (OFFSITE), 2006 [POST 2006 EXCAVATION AND DEWATERING; RETRIEVED FROM FINAL EXCAVATION DEPTH] [3]
- TR-11 — APPROXIMATE HISTORICAL SOIL SAMPLE LOCATION (OFFSITE), 2000-2006 [PRIOR TO 2006 EXCAVATION AND DEWATERING] [2 3]
- TR-25 — APPROXIMATE SOIL AND GROUNDWATER SAMPLE LOCATION BY TREADWELL AND ROLLO (OFFSITE) 2000-2006 [PRIOR TO 2006 EXCAVATION AND DEWATERING] [2 3]
- TR-GW — GRAB GROUNDWATER SAMPLE LOCATION BY TREADWELL AND ROLLO, 2008
- D-1 — HISTORICAL BORING LOCATION (ONSITE) [2]
- CPT-1 — CPT BORING LOCATION, 2009
- TRCPT-8 — APPROXIMATE CPT BORING LOCATION BY TREADWELL AND ROLLO (OFFSITE), 2010
- TV1 — SOIL VAPOR SAMPLING LOCATION (1997)
- MWT-1 — TEMPORARY MONITORING WELL LOCATION, 2012
- APPROXIMATE LOCATION OF SITE FEATURES ON 1951 SANBORN MAP
- APPROXIMATE LOCATION OF UST (REMOVED 1990)
- 2006 EXCAVATION EXTENT (12'-16' FEET BELOW GROUND SURFACE)

TPHd	TOTAL PETROLEUM HYDROCARBONS AS DIESEL
TPHg	TOTAL PETROLEUM HYDROCARBONS AS GASOLINE
MTBE	METHYL TERTIARY BUTYL ETHER
B	BENZENE
T	TOLUENE
E	ETHYLBENZENE
X	TOTAL XYLENES
EDC	ETHYLENE DICHLORIDE
<	LESS THAN LABORATORY REPORTING LIMIT
ND	NON-DETECT
NA	NOT APPLICABLE
Y	CHROMATOGRAPHIC PATTERN DOES NOT RESEMBLE STANDARD
	DETECTIONS ARE IN **BOLD**
	ALL ANALYTICAL RESULTS ARE IN MICROGRAMS PER LITER (µg/L)

0 30' 60'
GRAPHIC SCALE

NOTES:

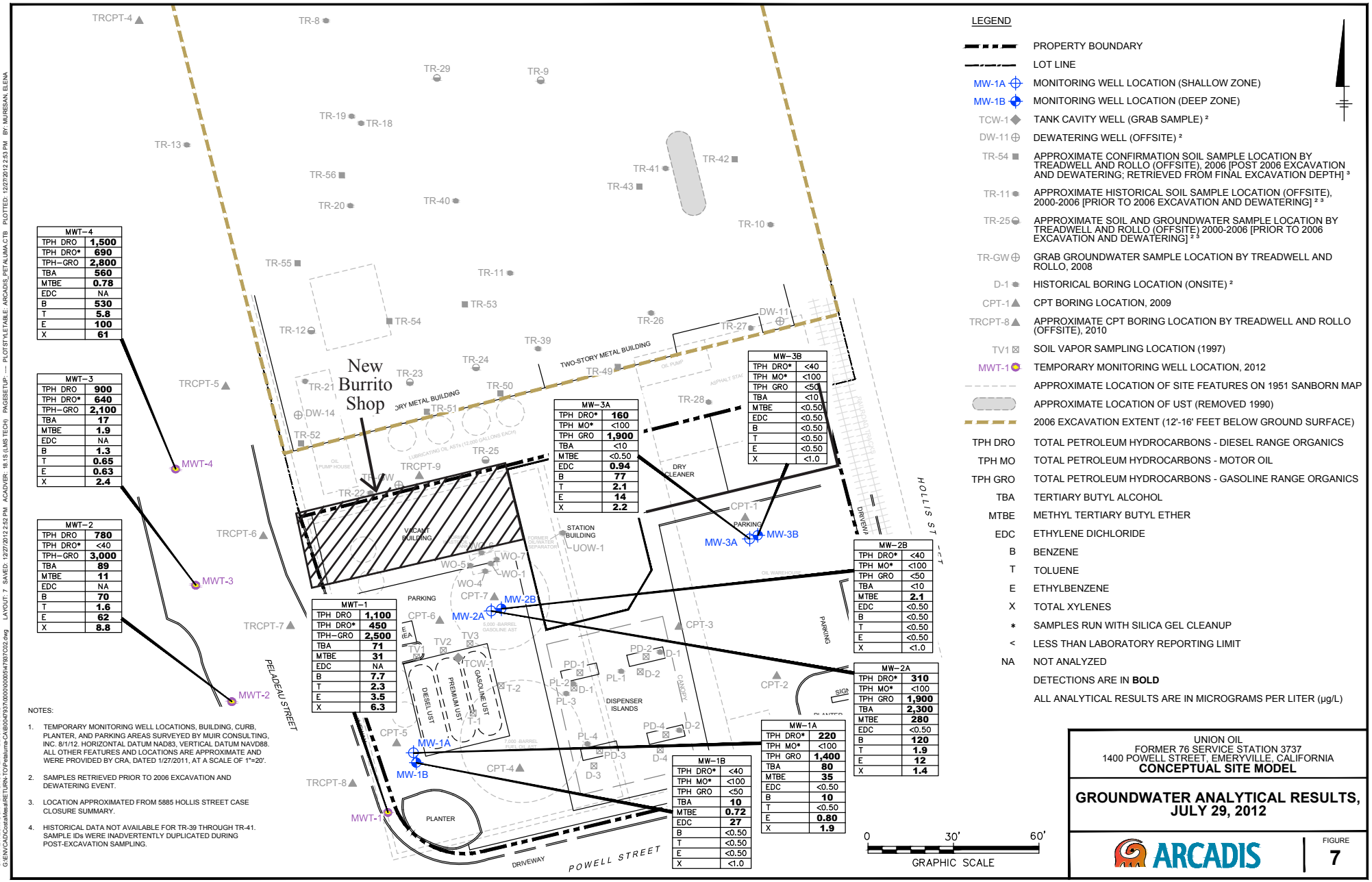
1. TEMPORARY MONITORING WELL LOCATIONS, BUILDING, CURB, PLANTER, AND PARKING AREAS SURVEYED BY MUIR CONSULTING, INC. 8/1/12. HORIZONTAL DATUM NAD83, VERTICAL DATUM NAVD88. ALL OTHER FEATURES AND LOCATIONS ARE APPROXIMATE AND WERE PROVIDED BY CRA, DATED 1/27/2011, AT A SCALE OF 1"=20'.
2. SAMPLES RETRIEVED PRIOR TO 2006 EXCAVATION AND DEWATERING EVENT.
3. LOCATION APPROXIMATED FROM 5885 HOLLIS STREET CASE CLOSURE SUMMARY.
4. HISTORICAL DATA NOT AVAILABLE FOR TR-39 THROUGH TR-41. SAMPLE IDs WERE INADVERTENTLY DUPLICATED DURING POST-EXCAVATION SAMPLING.

UNION OIL
FORMER 76 SERVICE STATION 3737
1400 POWELL STREET, EMERYVILLE, CALIFORNIA
CONCEPTUAL SITE MODEL

GRAB GROUNDWATER SAMPLING RESULTS [POST-EXCAVATION AND DEWATERING EVENT]

ARCADIS

FIGURE 6



MWT–4	
TPH DRO	**1,500**
TPH DRO*	**690**
TPH–GRO	**2,800**
TBA	**560**
MTBE	**0.78**
EDC	NA
B	**530**
T	**5.8**
E	**100**
X	**61**

MWT–3	
TPH DRO	**900**
TPH DRO*	**640**
TPH–GRO	**2,100**
TBA	**17**
MTBE	**1.9**
EDC	NA
B	**1.3**
T	**0.65**
E	**0.63**
X	**2.4**

MWT–2	
TPH DRO	**780**
TPH DRO*	<40
TPH–GRO	**3,000**
TBA	**89**
MTBE	**11**
EDC	NA
B	**70**
T	**1.6**
E	**62**
X	**8.8**

MWT–1	
TPH DRO	**1,100**
TPH DRO*	**450**
TPH–GRO	**2,500**
TBA	**71**
MTBE	**31**
EDC	NA
B	**7.7**
T	**2.3**
E	**3.5**
X	**6.3**

MW–3A	
TPH DRO*	**160**
TPH MO*	<100
TPH GRO	**1,900**
TBA	<10
MTBE	<0.50
EDC	**0.94**
B	**77**
T	**2.1**
E	**14**
X	**2.2**

MW–3B	
TPH DRO*	<40
TPH MO*	<100
TPH GRO	<50
TBA	<10
MTBE	<0.50
EDC	<0.50
B	<0.50
T	<0.50
E	<0.50
X	<1.0

MW–2B	
TPH DRO*	<40
TPH MO*	<100
TPH GRO	<50
TBA	<10
MTBE	**2.1**
EDC	<0.50
B	<0.50
T	<0.50
E	<0.50
X	<1.0

MW–2A	
TPH DRO*	**310**
TPH MO*	<100
TPH GRO	**1,900**
TBA	**2,300**
MTBE	**280**
EDC	<0.50
B	**120**
T	**1.9**
E	**12**
X	**1.4**

MW–1A	
TPH DRO*	**220**
TPH MO*	<100
TPH GRO	**1,400**
TBA	**80**
MTBE	**35**
EDC	<0.50
B	**10**
T	<0.50
E	**0.80**
X	**1.9**

MW–1B	
TPH DRO*	<40
TPH MO*	<100
TPH GRO	<50
TBA	**10**
MTBE	**0.72**
EDC	**27**
B	<0.50
T	<0.50
E	<0.50
X	<1.0

NOTES:

1. TEMPORARY MONITORING WELL LOCATIONS, BUILDING, CURB, PLANTER, AND PARKING AREAS SURVEYED BY MUIR CONSULTING, INC. 8/1/12. HORIZONTAL DATUM NAD83, VERTICAL DATUM NAVD88. ALL OTHER FEATURES AND LOCATIONS ARE APPROXIMATE AND WERE PROVIDED BY CRA, DATED 1/27/2011, AT A SCALE OF 1"=20'.
2. SAMPLES RETRIEVED PRIOR TO 2006 EXCAVATION AND DEWATERING EVENT.
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LEGEND

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- LOT LINE
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- APPROXIMATE LOCATION OF UST (REMOVED 1990)
- 2006 EXCAVATION EXTENT (12'-16' FEET BELOW GROUND SURFACE)

TPH DRO	TOTAL PETROLEUM HYDROCARBONS - DIESEL RANGE ORGANICS
TPH MO	TOTAL PETROLEUM HYDROCARBONS - MOTOR OIL
TPH GRO	TOTAL PETROLEUM HYDROCARBONS - GASOLINE RANGE ORGANICS
TBA	TERTIARY BUTYL ALCOHOL
MTBE	METHYL TERTIARY BUTYL ETHER
EDC	ETHYLENE DICHLORIDE
B	BENZENE
T	TOLUENE
E	ETHYLBENZENE
X	TOTAL XYLENES
*	SAMPLES RUN WITH SILICA GEL CLEANUP
<	LESS THAN LABORATORY REPORTING LIMIT
NA	NOT ANALYZED
	DETECTIONS ARE IN **BOLD**
	ALL ANALYTICAL RESULTS ARE IN MICROGRAMS PER LITER (µg/L)

UNION OIL
FORMER 76 SERVICE STATION 3737
1400 POWELL STREET, EMERYVILLE, CALIFORNIA
CONCEPTUAL SITE MODEL

GROUNDWATER ANALYTICAL RESULTS, JULY 29, 2012

ARCADIS

FIGURE 7

7A

TABLE D-3

GROUNDWATER ANALYTICAL RESULTS
Dewatering Wells
5885 Hollis Street
Emeryville, California

Sample ID	Sample Date	TPH			VOCs												
		Gasoline	Diesel Fuel	Motor Oil	TBA	MTBE	DIPE	ETBE	TAME	Ethanol	B	T	E	X	EDB	EDC	Other VOCs
DW-11	4/13/2006	<50	<50	<300	<10	<0.5	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5	<0.5	<0.5	--	--	--
	4/18/2006	<50	<50	<300	<10	<0.5	<0.5	<0.5	<0.5	<1,000	<0.5	**0.6**	<0.5	<0.5	<0.5	<0.5	All ND
	4/26/2006	<50	<50	<300	<10	<0.5	<0.5	<0.5	<0.5	<1,000	<0.5	**9.8**	<0.5	<0.5	<5.0	<5.0	--
	5/3/2006	<50	**130 Y**	<300	<10	<0.5	<0.5	<0.5	<0.5	<1,000	<0.5	**2.3**	<0.5	<0.5	<5.0	<5.0	--
	5/10/2006	<50	<50	<300	<10	<0.5	<0.5	<0.5	<0.5	<1,000	<0.5	**0.9**	<0.5	<0.5	<5.0	<5.0	--
	5/17/2006	<50	**100 Y**	<300	<10	<0.5	<0.5	<0.5	<0.5	<1,000	<0.5	**0.6**	<0.5	<0.5	<5.0	<5.0	--
	5/23/2006	<50	<50	<300	<10	<0.5	<0.5	<0.5	<0.5	<1,000	<0.5	**0.5**	<0.5	<0.5	<5.0	<5.0	--
	6/1/2006	<50	<50	<300	<10	<0.5	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5	<0.5	<0.5	<5.0	<5.0	--
	6/8/2006	<50	<50	<300	<10	<0.5	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5	<0.5	<0.5	<5.0	<5.0	--
	6/16/2006	<50	<50	<300	<10	<0.5	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5	<0.5	<0.5	<5.0	<5.0	--
	6/22/2006	<50	<50	<300	<10	<0.5	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5	<0.5	<0.5	<5.0	<5.0	--
	6/30/2006	<50	<50	<300	<10	<0.5	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5	<0.5	<0.5	<5.0	<5.0	--
	7/5/2006	<50	<50	<300	<10	<0.5	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5	<0.5	<0.5	<5.0	<5.0	--
	7/12/2006	<50	**78 Y**	<300	<10	<0.5	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5	<0.5	<0.5	<5.0	<5.0	--
	7/18/2006	<50	<50	<300	<10	<0.5	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5	<0.5	<0.5	<5.0	<5.0	--
	7/27/2006	<50	<50	<300	<10	<0.5	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5	<0.5	<0.5	<5.0	<5.0	--
	ESLs	500	640	640	18,000	1,800	NE	NE	NE	50,000	46	130	290	100	NE	200	Varies

TABLE D-3

GROUNDWATER ANALYTICAL RESULTS
Dewatering Wells
5885 Hollis Street
Emeryville, California

Sample ID	Sample Date	TPH			VOCs												
		Gasoline	Diesel Fuel	Motor Oil	TBA	MTBE	DIPE	ETBE	TAME	Ethanol	B	T	E	X	EDB	EDC	Other VOCs
DW-14	4/13/2006	77 L Y	<50	<300	72	<0.5	<0.5	<0.5	<0.5	<1,000	10	0.8	<0.5	0.6	--	--	--
	4/18/2006	250	110Y	<300	72	<0.5	<0.5	<0.5	<0.5	<1,000	22	1.3	6.4	5.7	<0.5	19	Isopropyl Benzene = 1.9 Propyl Benzene = 1.7 1,3,5 Trimethylbenzene = 1.9 1,2,4 Trimethylbenzene = 0.8 para-Isopropyl Toluene = 1.3 n-Butylbenzene = 0.6 All Others ND
	4/26/2006	630	440 L	<300	76	<0.5	<0.5	<0.5	<0.5	<1,000	42	4.9	14	6.8	<5.0	16	--
	5/3/2006	620	370 L Y	<300	64	<0.5	<0.5	<0.5	<0.5	<1,000	39	1.8	21	10	<5.0	18	--
	5/10/2006	450	250 L Y	<300	83	<0.5	<0.5	<0.5	<0.5	<1,000	11	2.4	8.6	4.9	<5.0	15	--
	5/17/2006	450	340 Y	<300	44	<0.5	<0.5	<0.5	<0.5	<1,000	37	0.6	9.1	6.2	<5.0	16	--
	5/23/2006	390	110 L Y	<300	30	<0.5	<0.5	<0.5	<0.5	<1,000	28	<0.5	4.9	3.3	<5.0	15	--
	6/1/2006	1,800	360 L Y	<300	58	<0.5	<0.5	<0.5	<0.5	<1,000	55	1.2	41	28	<5.0	16	--
	6/8/2006	520	130 L Y	<300	40	<0.5	<0.5	<0.5	<0.5	<1,000	37	<0.5	6.0	4.7	<5.0	16	--
	6/16/2006	580	150 L Y	<300	34	<0.5	<0.5	<0.5	<0.5	<1,000	35	<0.5	6.4	5.4	<5.0	15	--
	6/22/2006	1,200	320 L Y	<300	47	<0.5	<0.5	<0.5	<0.5	<1,000	34	0.5	7.6	9.7	<5.0	14	--
	6/30/2006	970	270 L Y	<300	35	<0.5	<0.5	<0.5	<0.5	<1,000	30	<0.5	6.7	5.6	<5.0	15	--
	7/5/2006	950	230 L Y	<300	37	<0.5	<0.5	<0.5	<0.5	<1,000	38	<0.5	6.1	5.2	<5.0	16	--
	7/12/2006	850 Y	<50	<300	24	<0.5	<0.5	<0.5	<0.5	<1,000	26	<0.5	6.9	4.6	<5.0	14	--
	7/18/2006	980	220 L Y	<300	57	<0.5	<0.5	<0.5	<0.5	<1,000	39	<0.5	6.5	4.8	<5.0	14	--
	7/27/2006	670	170 L Y	<300	51	<0.5	<0.5	<0.5	<0.5	<1,000	38	0.5	3.2	5.3	<5.0	15	--
	ESLs	500	640	640	18,000	1,800	NE	NE	NE	50,000	46	130	290	100	NE	200	Varies

TABLE D-1

Summary of Groundwater Analytical Results
ConocoPhillips Service Station No. 3737
1400 Powell Street
Emeryville, CA

Contaminant	Sample Depth						Reporting Limit	Units
	CPT-1@6-9'	CPT-1@29-32'	CPT-1@50-52'	CPT-2@19-22'	CPT-2@29-32'	CPT-2@35-38'		
Benzene	**42**	ND	ND	ND	ND	ND	0.5	ug/L
1,2-Dibromoethane	ND	ND	ND	ND	ND	ND	0.5	ug/L
1,2-Dichloroethane	**4.4**	ND	ND	ND	ND	ND	0.5	ug/L
Ethylbenzene	**59**	ND	ND	ND	ND	ND	0.5	ug/L
Methyl t-butyl ether	ND	ND	ND	**0.99**	ND	ND	0.5	ug/L
Toluene	**4**	ND	ND	ND	ND	ND	0.5	ug/L
Total Xylenes	**11**	ND	ND	ND	ND	ND	1	ug/L
t-Amyl Methyl ether	ND	ND	ND	ND	ND	ND	0.5	ug/L
t-Butyl alcohol	ND	ND	ND	ND	ND	ND	10	ug/L
Diisopropyl ether	ND	ND	ND	ND	ND	ND	0.5	ug/L
Ethanol	ND	ND	ND	ND	ND	ND	250	ug/L
Ethyl t-butyl ether	ND	ND	ND	ND	ND	ND	0.5	ug/L
Gasoline Range Organics (C4 - C12)	**690**	ND	ND	ND	ND	ND	50	ug/L
Diesel Range Organics (C12 - C24)	**260**	ND	ND	ND	ND	ND	59	ug/L

ND = below laboratory reporting limits
ug/L = micrograms per liter
bold = above laboratory reporting limits

TABLE D-1

Summary of Groundwater Analytical Results
ConocoPhillips Service Station No. 3737
1400 Powell Street
Emeryville, CA

Contaminant	Sample Depth						Reporting Limit	Units
	CPT-2@50-53'	CPT-3@19-22'	CPT-3@35-38'	CPT-3@50-53'	CPT-4@20-23'	CPT-4@52-55'		
Benzene	ND	ND	ND	ND	**1.8**	**1.4**	0.5	ug/L
1,2-Dibromoethane	ND	ND	ND	ND	ND	ND	0.5	ug/L
1,2-Dichloroethane	ND	ND	ND	ND	**43**	ND	0.5	ug/L
Ethylbenzene	ND	ND	ND	ND	**0.84**	**2.1**	0.5	ug/L
Methyl t-butyl ether	ND	ND	ND	ND	**1.3**	ND	0.5	ug/L
Toluene	ND	ND	ND	ND	ND	ND	0.5	ug/L
Total Xylenes	ND	ND	ND	ND	ND	ND	1	ug/L
t-Amyl Methyl ether	ND	ND	ND	ND	ND	ND	0.5	ug/L
t-Butyl alcohol	ND	ND	ND	ND	ND	ND	10	ug/L
Diisopropyl ether	ND	ND	ND	ND	ND	ND	0.5	ug/L
Ethanol	ND	ND	ND	ND	ND	ND	250	ug/L
Ethyl t-butyl ether	ND	ND	ND	ND	ND	ND	0.5	ug/L
Gasoline Range Organics (C4 - C12)	ND	ND	ND	ND	**56**	**99**	50	ug/L
Diesel Range Organics (C12 - C24)	ND	ND	ND	**90**	**66**	**91**	59	ug/L

ND = below laboratory reporting limits ug/L = micrograms per liter
bold = above laboratory reporting limits

Table 2
Groundwater Monitoring Data and Analytical Results for 2011 through First Quarter 2013
76 Station 3737
1400 Powell Street, Emeryville, California

Well ID	Date Sampled [a]	TOC (feet AMSL)	DTW (feet bgs)	LPH Thickness (feet)	GWE (feet AMSL)	Previous Quarter GWE (feet AMSL)	Change in Elevation (feet)	TPH-Motor Oil (8015B/FFP)	TPH-d (FFP) (8015B/FFP)	TPH-g (8015B)	TPH-g (Luft-GC/MS)	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE	TBA	EDB	EDC	DIPE	ETBE	TAME	Ethanol	Comments
ESL [b]								**100**	**100**	**100**	**100**	**1.0**	**40**	**30**	**20**	**5**	**12**	**0.05**	**0.5**	**--**	**--**	**--**	**--**	
MW-1A	01/26/2011	18.74	5.80	0.00	12.94	--	--	<200	450	--	960	8.4	<0.50	1.9	1.6	50	62	<0.50	<0.50	<0.50	<0.50	1.4	<250	A52
	05/01/2011	18.74	5.68	0.00	13.06	12.94	-0.12	<200	450	--	1,100	36	0.86	5.9	1.9	31	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<250	
	08/28/2011	18.74	5.72	0.00	13.02	13.06	0.04	170	540	--	840	21	0.68	3.8	1.8	55	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<250	
	11/20/2011	18.74	5.58	0.00	13.16	13.02	-0.14	<100	460	--	1,300	20	0.74	6.4	<1.0	40	79	<0.50	<0.50	<0.50	<0.50	<0.50	<250	
	02/19/2012	18.74	5.67	0.00	13.07	13.16	0.09	<100	610	--	1,300	20	0.91	6.8	2.5	59	80	<0.50	<0.50	<0.50	<0.50	2.0	<250	
	05/20/2012	18.74	5.50	0.00	13.24	13.07	-0.17	<100	380	--	1,600	18	0.81	5.1	2.7	26	39	<0.50	<0.50	<0.50	<0.50	0.76	<250	A52
	07/29/2012	18.74	5.57	0.00	13.17	13.24	0.07	<100	220	--	1,400	10	<0.50	0.8	1.9	35	80	<0.50	<0.50	<0.50	<0.50	1.2	<250	
	10/28/2012	18.74	5.32	0.00	13.42	13.17	-0.25	<100	180	--	1,500	13	0.72	2.8	1.7	52	120	<0.50	<0.50	<0.50	<0.50	1.9	<250	
	1/16/2013	18.74	5.29	0.00	13.45	13.42	-0.03	230	260	1,000	1,300	9.0	<0.50	2.1	1.7	24	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<250	A01, A52, A57
MW-1B	01/26/2011	18.88	9.46	0.00	9.42	--	--	<200	<50	--	<50	<0.50	<0.50	<0.50	<1.0	0.66	<10	<0.50	24	<0.50	<0.50	<0.50	<250	
	05/01/2011	18.88	8.51	0.00	10.37	9.42	-0.95	<200	82	--	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<10	<0.50	19	<0.50	<0.50	<0.50	<250	
	08/28/2011	18.88	8.27	0.00	10.61	10.37	-0.24	<100	59	--	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<10	<0.50	18	<0.50	<0.50	<0.50	<250	
	11/20/2011	18.88	7.88	0.00	11.00	10.61	-0.39	<100	69	--	<50	<0.50	<0.50	<0.50	<1.0	0.55	<10	<0.50	16	<0.50	<0.50	<0.50	<250	
	02/19/2012	18.88	7.59	0.00	11.29	11.00	-0.29	<100	<40	--	<50	<0.50	<0.50	<0.50	<1.0	0.87	<10	<0.50	26	<0.50	<0.50	<0.50	<250	
	05/20/2012	18.88	7.33	0.00	11.55	11.29	-0.26	<100	<40	--	<50	<0.50	<0.50	<0.50	<1.0	0.75	<10	<0.50	24	<0.50	<0.50	<0.50	<250	
	07/29/2012	18.88	6.90	0.00	11.98	11.55	-0.43	<100	<40	--	<50	<0.50	<0.50	<0.50	<1.0	0.72	<10	<0.50	27	<0.50	<0.50	<0.50	<250	
	10/28/2012	18.88	5.44	0.00	13.44	11.98	-1.46	<100	<40	--	<50	<0.50	<0.50	<0.50	<1.0	0.63	<10	<0.50	23	<0.50	<0.50	<0.50	<250	
	1/16/2013	18.88	6.62	0.00	12.26	13.44	20.06	100	<40	<50	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<10	<0.50	15	<0.50	<0.50	<0.50	<250	A52, A57
MW-2A	01/26/2011	18.93	8.02	0.00	10.91	--	--	<1000	1200	--	2,500	100	2.2	28	9	140	1,300	<0.50	<0.50	<0.50	<0.50	<0.50	<250	
	05/01/2011	18.93	6.40	0.00	12.53	10.91	-1.62	<1000	1,500	--	2,800	860	4.6	<0.50	12	220	2,500	<0.50	<0.50	<0.50	<0.50	<0.50	<250	A01
	08/28/2011	18.93	5.93	0.00	13.00	12.53	-0.47	<1000	1,600	--	2,300	690	<5.0	<5.0	<10	320	2,100	<5.0	<5.0	<5.0	<5.0	<5.0	<2,500	A01
	11/20/2011	18.93	5.73	0.00	13.20	13.00	-0.20	<500	1,200	--	1,800	440	<5.0	<5.0	<10	160	2,200	<5.0	<5.0	<5.0	<5.0	<5.0	<2,500	A01
	02/19/2012	18.93	7.25	0.00	11.68	13.20	1.52	<100	450	--	2,000	460	5.1	<0.50	5.8	280	3,200	<0.50	<0.50	<0.50	<0.50	<0.50	<250	
	05/20/2012	18.93	7.77	0.00	11.16	11.68	0.52	<100	470	--	2,100	250	3.2	<0.50	3.1	290	2,400	<0.50	<0.50	<0.50	<0.50	<0.50	<250	A01, A52
	07/29/2012	18.93	7.33	0.00	11.60	11.16	-0.44	<100	310	--	1,900	120	1.9	12	1.4	280	2,300	<0.50	<0.50	<0.50	<0.50	<0.50	<250	
	10/28/2012	18.93	5.68	0.00	13.25	11.60	-1.65	<100	91	--	1,300	150	<2.5	14	5.4	270	2,100	<2.5	<2.5	<2.5	<2.5	<2.5	<1,200	A01
	1/16/2013	18.93	5.32	0.00	13.61	13.25	18.57	340	710	2,800	1,700	310	7.0	14	5.2	140	3,400	<0.50	<0.50	<0.50	<0.50	<0.50	<250	A01, A52, A57
MW-2B	01/26/2011	19.10	5.51	0.00	13.59	--	--	<200	<50	--	<50	0.55	<0.50	<0.50	<1.0	3.4	<10	<0.50	<0.50	<.050	<0.50	<0.50	<250	
	05/01/2011	19.10	7.57	0.00	11.53	13.59	2.06	<200	<50	--	<50	1.2	<0.50	<0.50	<1.0	3.4	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<250	
	08/28/2011	19.10	5.82	0.00	13.28	11.53	-1.75	<100	<40	--	<50	<0.50	<0.50	<0.50	<1.0	2.3	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<250	
	11/20/2011	19.10	5.73	0.00	13.37	13.28	-0.09	<100	56	--	<50	<0.50	<0.50	<0.50	<1.0	2.0	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<250	
	02/19/2012	19.10	5.46	0.00	13.64	13.37	-0.27	<100	<40	--	<50	<0.50	<0.50	<0.50	<1.0	3.1	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<250	
	05/20/2012	19.10	5.18	0.00	13.92	13.64	-0.28	<100	<40	--	<50	<0.50	<0.50	<0.50	<1.0	3.0	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<250	
	07/29/2012	19.10	5.28	0.00	13.82	13.92	0.10	<100	<40	--	<50	<0.50	<0.50	<0.50	<1.0	2.1	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<250	
	10/28/2012	19.10	5.22	0.00	13.88	13.82	-0.06	<100	<40	--	<50	<0.50	<0.50	<0.50	<1.0	1.7	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<250	
	1/16/2013	19.10	4.92	0.00	14.18	13.88	18.80	<100	<40	<50	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<250	A52, A57
MW-3A	01/26/2011	18.62	4.75	0.00	13.87	--	--	<200	830	--	3,100	160	<5.0	96	<10	<5.0	<100	<5.0	<5.0	<5.0	<5.0	<5.0	<2500	
	05/01/2011	18.62	4.68	0.00	13.94	13.87	-0.07	<200	460	--	2,700	130	2.7	98	3.6	<0.50	<10	<0.50	1.2	<0.50	<0.50	<0.50	<250	A01
	08/28/2011	18.62	4.92	0.00	13.70	13.94	0.24	130	440	--	1,700	39	0.51	28	1.6	<0.50	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<250	
	11/20/2011	18.62	4.97	0.00	13.65	13.70	0.05	<100	330	--	1,200	25	0.83	17	<1.0	<0.50	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<250	
	02/19/2012	18.62	4.72	0.00	13.90	13.65	-0.25	<1000	1400	--	1,900	60	2.1	41	2.1	0.71	30	<0.50	0.80	<0.50	<0.50	<0.50	<250	A01
	05/20/2012	18.62	4.40	0.00	14.22	13.90	-0.32	<100	340	--	2,200	45	2.2	30	2.5	0.54	25	<0.50	0.85	<0.50	<0.50	<0.50	<250	A52
	07/29/2012	18.62	4.50	0.00	14.12	14.22	0.10	<100	160	--	1,900	77	2.1	14	2.2	<0.50	<10	<0.50	0.94	<0.50	<0.50	<0.50	<250	
	10/28/2012	18.62	4.37	0.00	14.25	14.12	-0.13	<100	130	--	1,600	54	3.9	27	4.4	2.8	<20	<1.0	<1.0	<1.0	<1.0	<1.0	<500	A01
	1/16/2013	18.62	4.21	0.00	14.41	14.25	-0.16	210	170	1,600	1,400	19	1	3.3	<1.0	<0.50	<10	<0.50	1	<0.50	<0.50	<0.50	<250	A01, A52, A57
MW-3B	01/26/2011	18.57	7.33	0.00	11.24	--	--	<200	57	--	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<250	
	05/01/2011	18.57	6.68	0.00	11.89	11.24	-0.65	<200	<50	--	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<250	
	08/28/2011	18.57	7.29	0.00	11.28	11.89	0.61	<100	<40	--	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<250	
	11/20/2011	18.57	6.33	0.00	12.24	11.28	-0.96	<100	45	--	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<250	
	02/19/2012	18.57	4.62	0.00	13.95	12.24	-1.71	<100	<40	--	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<250	
	05/20/2012	18.57	4.52	0.00	14.05	13.95	-0.10	<100	<40	--	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<250	
	07/29/2012	18.57	4.36	0.00	14.21	14.05	-0.16	<100	<40	--	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<250	
	10/28/2012	18.57	4.10	0.00	14.47	14.21	-0.26	<100	<40	--	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<250	
	1/16/2013	18.57	4.16	0.00	14.41	14.47	0.06	<100	<40	<50	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<250	A52. A57, SO5