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September 29, 2014

Ms. Karel Detterman
Alameda County Health Care Services Agency
1131 Harbor Bay Parkway
Alameda, CA 9502-6577

Subject: Post-Remediation Monitoring and Request for Closure Report
Crow Canyon Dry Cleaners
7272 San Ramon Road Dublin, CA
RO# 000283

Dear Ms. Detterman:

This enclosed report has been prepared by Endpoint Consulting, Inc. on behalf of the Burrows Company, Dwight & Carleton Perry, Gabriel H. Chui & Lai H. Trust, the Lee Family, Nam Sun and Seung Hee Park, and the Raphel-Roessler Retail Group.

I declare, under penalty of perjury, that the information and/or recommendations contained in the attached document or report is true and correct to the best of my knowledge. If you have any questions, please contact Mr. Mehrdad Javaherian of Endpoint at 415-706-8935.

Sincerely,

James Roessler
Roessler Investment Group
442 Post St, Ste 700
San Francisco, CA 94102
Phone: (415) 837-3722
Fax: (415) 837-3717
Email: Jim@RoesslerInvestmentGroup.com
CA DRE #00339311

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Strategy. Science. Sustainability.

September 29, 2014

Ms. Karel Dettermen, P.G.
Alameda County Health Care Services Agency (County)
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502

Subject: Post-Remediation Vapor Monitoring and Request for Closure Report
Crow Canyon Dry Cleaners
7272 San Ramon Road, Dublin, California
(RO # 0002863)

Dear Ms. Dettermen:

Endpoint Consulting, Inc. (Endpoint) is pleased to present this technical report summarizing post-remediation vapor monitoring results for the above-referenced site, and further serving as a formal request for site closure per the rationale set forth herein. This report has been prepared at the request of the County following a meeting held on November 21, 2013, during which the following tasks were specifically identified as part of the roadmap to closure of the site following termination of soil vapor extraction (SVE) activities at the site. The specific tasks discussed in the meeting with the County included:

- Installation and sampling of two vapor monitoring wells targeting the area between the site and the Kildara residential complex located north of the site (see Figure 1):

- Additional vapor sampling from key vapor monitoring wells at the site, including the two wells mentioned in the above bullet, performed in March 2014. This round of sampling generated data approximately one year after termination of SVE activities implemented per the Corrective Action Plan (CAP) for the site. This round of sampling was identified as necessary to help provide additional data relative to establishing tetrachloroethelene (PCE) concentration trends over time in key monitoring wells since termination of SVE operations in March 2013;

- A comprehensive round of sampling from all site-related vapor monitoring wells to be performed in the Second Quarter 2014; and

- Preparation of a comprehensive post-remediation monitoring report (i.e, this document) which would document the results of well installation and above-referenced rounds of vapor sampling conducted in 2014. As requested by the County, this report includes a detailed conceptual site model (CSM) for the site; an assessment of PCE concentration trends over time; screening of the PCE concentrations relative to the site-specific PCE soil vapor cleanup goal of 2,100 ug/m^3, corresponding to the current commercial/industrial

shallow soil gas environmental screening level (ESL) adopted by the San Francisco Bay Regional Water Quality Control board (Water Board); and the aforementioned analysis to confirm the absence of potential site-related vapor intrusion impacts to the nearby residential complex.

Based on the above, this report has been organized as follows:

- Site Background, including a summary of remediation activities, emphasizing the SVE operations;
- Installation of vapor monitoring wells (VM-11 and VM-12) to evaluate potential impacts to the nearest offsite residents at the Kildara complex;
- Post-remediation vapor monitoring results, including concentrations trends over time;
- Conceptual Site Model; and
- Conclusions and Recommendations

BACKGROUND

Site Description

The site is located in a suite within a commercial building located on the west side of San Ramon Road, within a mixed residential/commercial area of Dublin, CA. Historical resources and site reconnaissance have revealed that one of the units of the building (7272 San Ramon Road) has been occupied by a dry-cleaning facility since 1988. The dry-cleaning and solvent storage areas were located in the back of the building, with PCE used as the cleaning solvent until 2004 (AEI, 2007)[1]; current dry cleaning operations do not use any chlorinated solvents.

Immediately adjacent (to the south) to the suite housing the dry cleaners is an occupied commercial/retail space. The suite next to this commercial/retail space is unoccupied, but was formerly occupied by the Montessori School.

Summary of Historical Site Investigations

Preliminary Subsurface Investigation- 2005: Following the recommendation for subsurface investigation outlined in a Phase I Environmental Site Assessment performed in 2004, AEI performed a preliminary subsurface investigation at the property in 2005 (AEI, 2005)[2]. A total of three soil borings (SB-1 to SB-3) were advanced to a maximum depth of 12 feet below ground surface (bgs). Three shallow soil samples and three groundwater samples were analyzed for

[1] AEI Consultants, (2007). Additional Site Investigation Report, 7272 San Ramon Road, Dublin, CA. February 1.
[2] AEI Consultants, (2005). Phase II Subsurface Investigation Report, 7272 San Ramon Road, Dublin, CA. February 8.

halogenated volatile organic compounds (HVOCs). PCE was detected in all the soil and groundwater samples analyzed, with concentrations up to 0.071 milligrams per kilogram (mg/kg) in soil and 22 micrograms per liter (µg/L) in groundwater. In addition, TCE was detected in the groundwater up to 3.0 µg/L. Historical data generated from all AEI investigations are included as Appendix B herein.

Additional Subsurface Investigation & Utility Survey-2006. At the request of the County, AEI performed an additional subsurface investigation at the property in February 2006, including collection of soil, soil vapor, and groundwater samples from seven additional soil borings advanced through the property. PCE was detected in one soil sample at a concentration of 0.013 mg/kg (see Appendix B). PCE was detected in groundwater samples collected from the shallowest (A-Zone) and deeper (B-Zone) aquifers up to a concentration of 23 µg/L and 4.7 µg/L, respectively. PCE was detected in all three soil vapor samples, ranging in concentrations from 30 micrograms per cubic meter (µg/m^3) to 16,000 µg/m^3 (AEI, 2007).

Based on the results of this investigation, and considering the proximity of the adjacent Montessori School, the County requested that the release of HVOCs be investigated further.

Additionally, the ACEHS requested a utility study to evaluate whether they may act as preferential migration pathways. A utility survey conducted in September 2006 (AEI, 2007) revealed that a sewer line runs from a drain within the dry-cleaner through Montessori School towards a cleanout in the direction of San Ramon Road (see Figure 1).

Additional Site Investigation- 2006 and 2007: Between December 2006 and January 2007, AEI performed another subsurface investigation by advancing five soil borings throughout the property; two borings (SB-14 and SB-15) were advanced near the front of the dry cleaning facility, down-gradient from the dry-cleaning facility. Two borings (SB-11 and SB-12) were advanced at the rear of the dry-cleaning facility. One boring (SB-13) was advanced adjacent to the sewer line trace inside the Montessori School. The soil borings were advanced to depths ranging from approximately 5 feet bgs to 30 feet bgs. Soil samples were collected from each boring, while groundwater samples were collected from borings SB-12 through SB-15. In addition, A total of four soil vapor samples were advanced from four soil borings (SB-11, SB-12, SB-13, and SB-15). Each vapor probe boring was advanced to approximately 5 feet bgs where a soil vapor sample was collected.

HVOCs were not detected in the soil sample during this investigation; however, PCE and trichloroethylene (TCE) were detected in groundwater at relatively low concentrations (PCE was detected at 0.78 to 2.5 ug/L in the shallow water-bearing zone, while TCE was detected in one sample at 1.1 ug/L; no other HVOCs were detected in either zone). In addition, PCE was detected in all four of the soil vapor samples analyzed, at concentrations ranging from 270 µg/m^3 to 380,000 µg/m^3 (SB-11-V-D). TCE was detected in three of the soil vapor samples at concentrations ranging from 4.4 µg/m^3 to 3,200 µg/m^3 (SB-11-V-D). The boring (SB-13-V-D) located along the sewer line trace within the footprint of the Montessori preschool contained PCE at a concentration of 6,800 µg/m^3.

Based on the results of this investigation, the County requested additional soil vapor investigation and indoor air sampling to evaluate potential risk to buildings occupants resulting

from vapor intrusion. They further requested a complete investigation of the utility lines and their potential to act as preferential pathways for vapor migration, and an evaluation of the feasibility of potential remedial alternatives for the removal of PCE contamination.

***Indoor Air Sampling- 2007*:** In October 2007, AEI collected two indoor air and one outdoor air samples at the Montessori school. The indoor air sampling results indicated the presence of PCE at concentrations of 1.1 and 1.3 $\mu g/m^3$, both exceeding the indoor air residential screening level of 0.41 $\mu g/m^3$ adopted by the Regional Water Quality Control Board (RWQCB). The outdoor air sample contained PCE at 0.34 $\mu g/m^3$.

In response to the County's concerns over laboratory analytical methods used in the previous indoor air sampling, on December 13, 2007, ERM reinvestigated indoor air and outdoor air quality at the Montessori preschool. All three indoor air samples contained PCE ranging from 1.2 to 1.3 $\mu g/m^3$, while the outdoor air sample contained PCE at 0.70 $\mu g/m^3$. No other VOCs were detected in the indoor or outdoor air samples, confirming the results of the previous indoor/outdoor air sampling.

***Additional Soil Vapor Sampling-2008*:** Ceres Associates performed a soil vapor investigation and related sampling on April 7th and 8th, 2008. A total of 20 soil borings (SB-16 through SB-37) were advanced at the site. Soil vapor samples were collected from all 20 locations and soil samples were collected from two locations (SB-19 and SB-23); the targeted depth of sampling for both media was 5 feet bgs.

Concentrations of PCE during this investigation ranged from below detection limits in several vapor samples to 17,000 $\mu g/m^3$ in the soil vapor sample collected from SB-23-05 (see Appendix B herein). The sub-slab samples taken from the borings inside the Montessori Preschool were found to have concentrations of PCE ranging from below the laboratory detection limits in SB-16-0.5 to 2,300 $\mu g/m^3$ in SB-19-0.5.

Also worth noting Benzene was reported in two of the samples collected from SB-18-05 at concentrations of 230 and 160 $\mu g/m^3$. Toluene was reported in two of the samples collected from SB-18-05 at concentrations of 420 and 310 $\mu g/m^3$. Ethylbenzene was found at 180 $\mu g/m^3$ in SB-29-05; m, p-xylene at 300 $\mu g/m^3$ in SB-25-05 and at 680 $\mu g/m^3$ in SB-29-05; and o-xylene at 130 $\mu g/m^3$ in SB-25-05 and at 360 $\mu g/m^3$ in SB-29-05. No other VOCs were detected at above laboratory detection limits in the soil vapor samples.

The laboratory reported that VOCs were not detected above the method reporting limits in the two soil samples (SB-19-05 and SB-23-05) collected and analyzed during this assessment.

SUMMARY OF REMEDIAL ACTIVITIES

From August through October 2009, Endpoint performed an SVE pilot test at the site as a County-approved interim measure; the interim remediation activities were preceded by

installation and baseline sampling of 10 vapor wells (extraction and monitoring wells) at the site in support of SVE activities[3].

Because of the significant drop in PCE concentrations in response to the two-month-long SVE pilot test and supported by a reduction in observed mass removal rates from the SVE system across the two months of SVE operation, the system was subsequently turned off and monitoring of soil vapor quality was performed across the site. Initially, this post-pilot test monitoring took place one month following cessation of SVE operations; this data revealed that PCE concentrations across the site had remained at significantly reduced levels, with limited rebound. Following discussions with the County, monitoring of soil vapor quality was conducted during two additional events within the next 12 months (i.e, semi-annual events), yielding data some 17 months after the termination of the SVE operations. Combined, the interim measure data of record indicated:

- Six wells (VE1S, VE1D, VE2S, VM1S, VM1D, and VM3D) who's concentrations declined from baseline levels during the SVE operations and thereafter, but then rebounded after cessation of the SVE based on the latest available concentration in each well. Note that despite the rebound, the latest concentration in four of these six wells remains below the highly conservative Commercial Environmental Screening Level (ESL) for protection of indoor air quality.

- Four wells (VE2D, VE3S, VE3D, VM3S, and VM4S) who's concentrations declined as a result of SVE operations without rebound based on available data. The latest data point from each of these wells, including at VM4S which was the primary target of the pilot test (due to proximity to the Montessori School) and which declined from 10,000 ug/m^3 to 1,100 ug/m^3 seventeen months after cessation of the SVE), all remain below the Commercial ESLs.

- Seven wells were newly installed after the SVE operations, so only data post pilot testing was available for these wells. Nevertheless, six of these seven wells (VM5SS, VM6SS, VM2SS, VM7, VM8, and VM10) all recorded concentrations below the ESL. Only one of these wells (VM-9SS) yields a concentration above the Commercial ESL.

These data are summarized in Table 1, with well locations shown on Figure 1 attached herein.

As required by the final CAP for the site, an SVE system was permitted and installed at the site on June 21, 2012, with daily operations beginning on June 28, 2012 and continuing through March 29, 2013 due to diminishing vapor mass removal rates. Operational data for the SVE system are presented in Table 2 herein. As indicated in Table 2, at the time of system termination, an estimated 17.9 pounds of PCE was removed from the site from June 2012 through March 2013.

The results of soil vapor sampling conducted during and after the SVE operations are discussed later herein.

[3] Seven additional vapor monitoring wells (yielding a total of 17 vapor wells) were later added per the County's request in support of semi-annual vapor monitoring following cessation of SVE activities as discussed in more detail below. .

ADDITIONAL MONITORING WELL INSTALLATION ACTIVITIES

Figure 1 depicts the location of the two additional vapor monitoring wells (VM-11 and VM-12) installed in January 2014 per the County's request and in accordance to the County-approved workplan. The two additional vapor monitoring wells were advanced along a north-south line parallel to the property, spaced approximately 30 feet apart and approximately in line with existing monitoring well VM-10. Combined, these three wells served to monitoring vapor locations in between the former PCE release area (i.e, area targeted by SVE operations), and offsite locations west of the site, including the Kildara residential complex located approximately 100 feet west of the site.

Well installation and construction procedures followed those outlined in the well installation workplan approved by the County and depicted on Figure 2.

POST-REMEDIATION MONITORING

As previously indicated, SVE operations were performed as a pilot test (IRAP) in August 2009 through October 2009, and then again as a full-scale remedy under the CAP from June 2012 through July 2013. Vapor monitoring activities performed throughout this period, including over 18 months of post-remediation monitoring after final termination of the SVE system in March 2013.

Table 1 summarizes all historical PCE detections from vapor monitoring activities covering the pilot test and full-scale SVE operation period and associated post-remediation monitoring between July 2009 through August 2014[4]. The sampling procedures implemented during these rounds of sampling followed DTSC (2012) guidelines, with standard operating procedures (SOPs) previously approved by the County via past workplans (e.g., Endpoint, 2014)[5]. These procedures ensured the lack of rainfall events and irrigation activities prior to sampling, and helium leak testing both in the field and via laboratory analysis (see Appendices A and C).

The numerical remedial action objective (RAO) for the site corresponds to 2,100 ug/m^3 of PCE, corresponding to the commercial/industrial ESL and approved by the County. PCE concentration hydrographs are also shown on Figures 3 through 5, including concentration trends for all wells (Figure 3), for source area[6] wells (Figure 4), and for other wells located away from source area (Figure 5).

Important observations from these data are as follow:

1) PCE concentrations prior to remediation activities were as high as 380,000 ug/m^3 within the source area, reducing by more than two-orders-of-magnitude through the SVE remediation efforts and exhibiting a declining trend over this time frame;

[4] Laboratory analytical reports not previously published in past site monitoring reports are included as Appendix A herein.
[5] Endpoint, 2014. Vapor Monitoring Well Installation Workplan, Crow Canyon Dry Cleaners, January 21st.
[6] Source area refers to wells at or near the PCE dry cleaning machine and locations where PCE have been consistently most concentrated and targeted by SVE extraction wells.

2) In more than 6 rounds of vapor sampling performed from October 2012 through August 2014, PCE concentrations slightly exceeded the commercial/industrial ESL in only 3 individual samples from two monitoring well locations (VE-1S and VM-9SS) both within the source area).

3) The rebound in PCE concentration over an 18-month period since the termination of SVE operations in March 2013 remains negligible, with all wells revealing either a declining or stable concentration trend, or with one exception concentrations that are below the commercial/industrial ESL. Importantly, the last sample collected from all the existing site wells indicates that PCE slightly exceeds the commercial/industrial ESL in only one well (VM-9SS) at the site. This concentration occurs at 3,100 ug/m^3 compared to the ESL of 2,100 ug/m^3, and corresponds to a cancer risk of 1.4 x 10^{-6} (see CSM section for calculation); well within the lower end of the risk management range and considered an acceptable risk to daily site occupants under commercial/industrial land use.

4) Away from the source area, PCE concentrations have remained below the ESL sine the full-scale application of the SVE system per the CAP, including stable and declining trends in all wells.

5) Newly installed monitoring wells VM-11 and VM-12, in addition to existing well VM-10 (see Figure 1) located in between the site and the Kildara residential complex all have reported PCE concentrations below the residential ESL of 210 ug/m^3, confirming the absence of potential significant vapor intrusion impacts to offsite residential locations.

CONCEPTUAL SITE MODEL

Data from past site investigation and interim remediation activities have been used to develop a conceptual site model (CSM) as summarized below. The CSM documents the site hydrogeology, primary sources, COPCs, and the extent of the residual source area marking impacts to soil, soil vapor, and groundwater.

Site Hydrogeology: In general, the site is underlain by three units of soils; silty clay overlying sandy clay with interbedded sandy gravel (AEI, 2007). Two permeable, water-bearing zones have been identified within the total explored depth of 30 feet bgs. Both aquifers were found within permeable sandy gravels. The upper (shallow) water-bearing zone is approximately 2 feet thick, consists of sandy gravel with groundwater typically encountered at a depth of approximately 8 to 10 feet bgs (AEI, 2007).

The deeper water-bearing zone is approximately 1.5-feet thick, similarly consists of sandy gravel encountered at a depth of approximately 25 feet bgs. These two water-bearing zones are separated by an approximately 12-foot thick sandy clay layer. The topography of the area is relatively flat, with an overall slope toward the east. An unnamed creek is located to the north which appears to be at a slightly lower elevation. Based on regional information, groundwater is beneath the site expected to flow in an easterly direction.

Primary Sources: Consistent with historical dry cleaning operations at the site, the primary source of contamination at the site is considered to consist of historical spills, leaks, or disposal of PCE used as a dry cleaning solvent. In the absence of PCE usage since 2004, there are no ongoing primary sources present at the site.

Constituents of Potential Concern: Data generated from several rounds of sampling across the site's 20 vapor monitoring wells confirm the presence of PCE as the primary COPC at the site. TCE detections in soil vapor have been largely sporadic and below the residential ESL for protection of indoor air. For example, during the latest vapor monitoring event, TCE was detected in 8 of the 20 wells sampled (at maximum concentration of 54 ug/m^3), but all at levels below the residential ESL.

Residual Source Area and Media of Concern: Based on the afore-mentioned investigation data, the general area at and in the vicinity of the historical dry cleaning machine (same location as the current dry cleaning machine which does not use PCE) is considered the residual source area at the site. The basis for this conceptualization is the historical PCE soil vapor data collected at the site, plus those supplemented by Endpoint's monitoring well sampling efforts.

To summarize, the lateral extent of the source area may be defined by a triangle of wells (and adjacent former borings):

- VM-9SS: with historical PCE concentrations as high as 14,000 ug/m^3
- VE-2S: with historical PCE concentrations as high as 13,000 ug/m^3
- SB-11/VE-1S: with historical PCE concentrations as high as 380,000 ug/m^3 in SB-11, but reduced significantly to 19,000 ug/m^3 in immediately adjacent monitoring well VE-1S.

Based on past PCE detections, the remaining portions of the source area may be defined within the triangular area bounded by wells VM-9SS (14,000 ug/m^3, VE-2S (13,000 ug/m^3), and VE-1S (19,000 ug/m^3). Importantly, the above levels have since declined significantly in response to SVE operations, as discussed in the previous section.

Away from this residual source area, PCE concentrations occur at significantly lower concentrations (see Figure 1), including only three wells (VM-4S, VM-5SS, and VM-8) which exceed the residential ESL; none of the wells outside the residual source area exceed the commercial ESL for PCE.

Vertically, the residual source area is characterized by peak PCE vapor concentrations in shallow soils (2.5 to 5 feet bgs), with additional accumulation of vapors in the sub-slab of the existing buildings (1 to 2 feet bgs); this accumulation is expected since building occupancy results in reduced pressure inside the building and underlying sub-slab, inducing movement of vapors in shallow soils toward the building sub-slab (i.e from areas of higher pressure to lower pressure).

A comparison of PCE vapor concentrations in shallow-screened wells (typically screened from 2.5 feet to 5.5 feet bgs) and deeper screened wells (typically screened from 6 to 9 feet bgs) indicates a consistent pattern of lower vapor concentrations in deeper wells than in shallow wells. Moreover the highest detected concentrations of PCE vapors to date at the site remain in shallow soils, suggesting that shallow soils are the primary source of vapors with contribution to immediately overlying sub-slab locations.

In addition to the soil vapor sampling used to define the source area described above, the soil sampling conducted to date by AEI (2007) indicates that within and beyond the above-referenced triangular source area, PCE remains largely below detection limits and where detected, below residential and commercial soil ESLs (see Appendix B herein for data tables from AEI, 2007). The primary residual detections of PCE in soil center around 5 feet below ground surface (bgs) at former borings SB-1, SB-2, and SB-3 located in the immediate vicinity of the former dry cleaning machine; while these detections show evidence of a historical PCE release (maximum detected concentration of 0.071 mg/kg), they occur at levels well below both the residential (0.37 mg/kg) and commercial (0.7 mg/kg) soil ESLs.

Corresponding to the above observations for soil and soil vapor, the occurrence of PCE in groundwater is also primarily limited to the triangular residual source area. Specifically, AEI (2007) data (see Appendix B) show the highest concentrations of PCE in groundwater coincide with those in soil and soil vapor in the immediate vicinity of the former dry cleaning machine, with the maximum detected concentration of 23 ug/L. This value is above the drinking water standard of 5 ug/L for PCE, but remains well below levels that may pose a vapor intrusion risk from groundwater under commercial (420 ug/L) or residential (120 ug/L) land uses. TCE has also been sporadically detected in groundwater, but at levels below the maximum contaminant level drinking water standard (MCL). Away from the residual source are, grab groundwater sampling results confirm the predominant absence of both PCE and TCE at above detection limits or above MCLs (See Appendix B).

Based on the above rationale, PCE remains the primary COPC, with soil vapor serving as the primary media of concern within the localized residual source area at the site. Since localized exceedance of the PCE MCL has been noted within the residual source area, groundwater is considered as secondary media of concern; as previously indicated, the relatively low PCE concentrations in groundwater are not considered the source of PCE in soil vapor.

Potential Exposure Pathways and Receptors: Based on the components of the CSM discussed above, the primary potential exposure pathway to PCE at the site is indoor air intrusion of vapors. This exposure is largely limited to onsite commercial buildings, with wells located in between the site and the nearest residential facility proved to be below residential ESLs.

With respect to the onsite vapor intrusion exposure pathway, PCE levels have declined significantly through SVE operations, exhibiting stable to declining trends in all wells. With only a single well reporting PCE (3,100 ug/m^3) at above the commercial/industrial ESL adopted as the RAO for the site, this marginal exceedance is deemed insignificant. Specifically, the commercial/industrial ESL of 2,100 ug/m^3 corresponds to a 1 x 10^{-6} cancer risk level. Hence, direct back-calculation of the cancer risk associated with the sole detection of PCE above the ESL of 3,100 ug/m^3 may be performed as follows:

Cancer Risk (exposure to 3,100 ug/m^3) = $\frac{3{,}100\ ug/m^3}{2{,}100\ ug/m^3}$ x 1 x 10^{-6}

= 1.4 x 10^{-6}

This risk is at the lower end of the risk management range of 1 x 10^{-6} to 1 x 10^{-4} adopted by the US EPA and is considered acceptable, especially for the commercial use of the site.

Soils underlying the site remain under paved surfaces with limited potential for direct exposure; more importantly, with PCE soil concentrations detected to date remaining below direct exposure ESLs for residential land use, the potential for direct exposure to daily site occupants or construction workers is considered negligible.

Lastly, in the absence of water supply wells at the site and with PCE (and TCE) concentrations reducing to below MCLs away from the residual source area at the site, potential direct exposure to groundwater is considered incomplete under current site use; although highly unlikely, should shallow groundwater resources be developed for potable purposes within the residual source area, potential direct exposure to PCE in groundwater may theoretically be considered complete under such future usage.

CONCLUSIONS AND RECOMMENDATIONS

Based on the information presented above and in concert with discussions with the County, Endpoint recommends that the subject site be issued a no further action status and accordingly closed. This recommendation is supported by:

- The absence of any ongoing sources of PCE at the site
- Removal of an estimated 20 pounds of PCE and reduction of PCE concentrations in the source area by more than two orders-of-magnitude through SVE operations, helping establish stable and/or declining trends in vapor monitoring wells across the site;
- Consistent presence of PCE in soil vapor at below the RAO for the site, corresponding to commercial/industrial ESL;
- With only a single detection of PCE (3,100 ug/m^3) remaining slightly above the ESL of 2,100 ug/m^3 across the more than 20 monitoring locations at the site, the detected concentration corresponds to an excess lifetime cancer risk of 1.4 x 10^{-6} and is deemed acceptable for the commercial/industrial use of the site; and
- PCE concentrations between the site and the location of the nearest offsite resident are below the residential ESL.

Pending concurrence of the above recommendation from the County, the SVE system from the site will be removed and wells may be decommissioned as deemed necessary by the County.

CLOSING

Endpoint greatly appreciates your assistance with this project. If you have any questions, please contact Mehrdad Javaherian at 415-706-8935, or at mehrdad@endpoint-inc.com.

Sincerely,
Endpoint Consulting, Inc.

Mehrdad Javaherian, Ph.D., MPH, PE, LEED®GA
Program Manager

Attachments:

Table 1 - PCE Vapor Concentrations

Figure 1 – Vapor Monitoring Results- June/August 2014
Figure 2 - Vapor Well Construction Diagram
Figure 3 - PCE Concentration Hydrographs- All Wells
Figure 4 - PCE Concentration Hydrographs- Source Area Wells
Figure 5 - PCE Concentration Hydrographs – Wells Away from the Source Area

Appendix A – Laboratory Analytical Reports
Appendix B – Historical Site Investigation Data
Appendix C – Field Sheets

TABLE

Table 1
PCE Vapor Concentrations
Vapor Monitoring and Extraction Well Locations
Crow Canyon Dry Clenaers
7272 San Ramon Road,
Dublin, California

Well I.D.	7/18/2009 to 7/30/2009 Baseline-Purge Test-SVE Shakedown Sampling Events	9/1/2009 1 Month after operation of SVE Pilot Test (IRAP)	9/28/2009 2 Months after operation of SVE Pilot Test	11/4/09 ~ 1 month after shutdown of SVE Pilot Test	8/26/10 ~ 11 months after shutdown of SVE system	1/12/11 ~ 17 months after shutdown of SVE Pilot Test	6/27/2012* ~ 34 months after shutdown of SVE system	10/9/2012 ~ 3.5 months after SVE restart** (CAP)	08/23/2013 ~ 5.5 months after shutdown of SVE system	11/13/2013 ~ 8.5 months after shutdown of SVE system	3/12/2014 ~ 12.5 months after shutdown of SVE system	6/4/2014 ~ 15.5 months after shutdown of SVE system	8/27/2014 ~ 18 months after shutdown of SVE system
VE-1S/SB-11	380,000***	23	<14	970	1,100	19,000	12,000	41	2,100	1,600	1,000	2,500	890
VE-1D	420	300	<14	770	NS	NS	4,500	NS	NS	NS	520	600	NS
VE-2S	5,900	<14	200	500	3,400	13,000	14,000	35	190	NS	NS	800	NS
VE-2D	1,100	<14	<14	350	NS	NS	5,100	NS	NS	NS	320	670	NS
VE-3S	2,200	30	38	<14	870	260	<500	NS	NS	NS	NS	86	NS
VE-3D	3,800	24	51	<14	NS	NS	790	NS	NS	NS	130	82	NS
VM-1S/SB-23	17,000***	-	<14	20	2,600	580	1,200	NS	NS	NS	200	250	NS
VM-1D	160	-	16	140	NS	NS	520	NS	NS	NS	NS	170	NS
VM-3S	8,100	-	55	81	NS	NS	NS	NS	NS	NS	NS	77	NS
VM-3D	34J	-	<14	300	NS	NS	NS	NS	NS	NS	NS	120	NS
VM-4S	10,000	-	180	310	1,100	1,100	2,100	22	360	120	150	200	NS
VM-5SS	-	-	-	-	1,300	1,100	NS	68	340	NS	NS	230	NS
VM-6SS	-	-	-	-	650	390	NS	110	250	NS	NS	140	NS
VM-2SS	-	-	-	-	28	<14	NS	NS	NS	NS	NS	57	NS
VM-7	-	-	-	-	310	<14	240	NS	NS	NS	NS	88	NS
VM-8	-	-	-	-	1,300	640	820	NS	NS	NS	NS	390	NS
VM-9SS	-	-	-	-	11,000	14,000	7,200	280	1,200	2,200	1,800	3,200	3,100
VM-10	-	-	-	-	450	210	NS	NS	NS	NS	NS	180	NS
VM-11	-	-	-	-	-	-	-	-	-	-	51	190	170
VM-12	-	-	-	-	450	210	NS	NS	NS	NS	15	58	NS
Shallow Soil Gas ESL-Commercial/Industrial Land Use: 2,100 ug/m3 Residential Land Use: 210 ug/m3													

* Baseline Sampling prior to start of SVE Operations on June 28, 2012
** system shutdown one week before sampling
*** Sample results from 2008 sample from SB-vapor probe location
NS = Not Sampled
Value exceeds the remedial action objective (Commercial/Industrial ESL) for the site

FIGURES

LEGEND:

VM-11	Vapor Monitoring Well (June/August 2014)
VM-4	Vapor Monitoring Well
VM-2SS	Sub-Slab Vapor Monitoring Well (2010)
VE-1	Soil Vapor Extraction Well Locations
SB-1	Historical Soil Vapor Boring Locations (2006- 2008))
S/D	Shallow Well Screen/Deep Well Screen
SS	Sub-Slab Well Screen
—— ——	Utility Line
(2,100)	PCE Concentration ($\mu g/m^3$) in soil vapor (August 2013)
(6,800)	PCE Concentration ($\mu g/m^3$) in soil vapor (2008)

N

0 20 40

Scale (feet)

Reference: Base map from drawing titled "PCE Concentrations in Soil Vapor", by Ceres, dated April 2008.

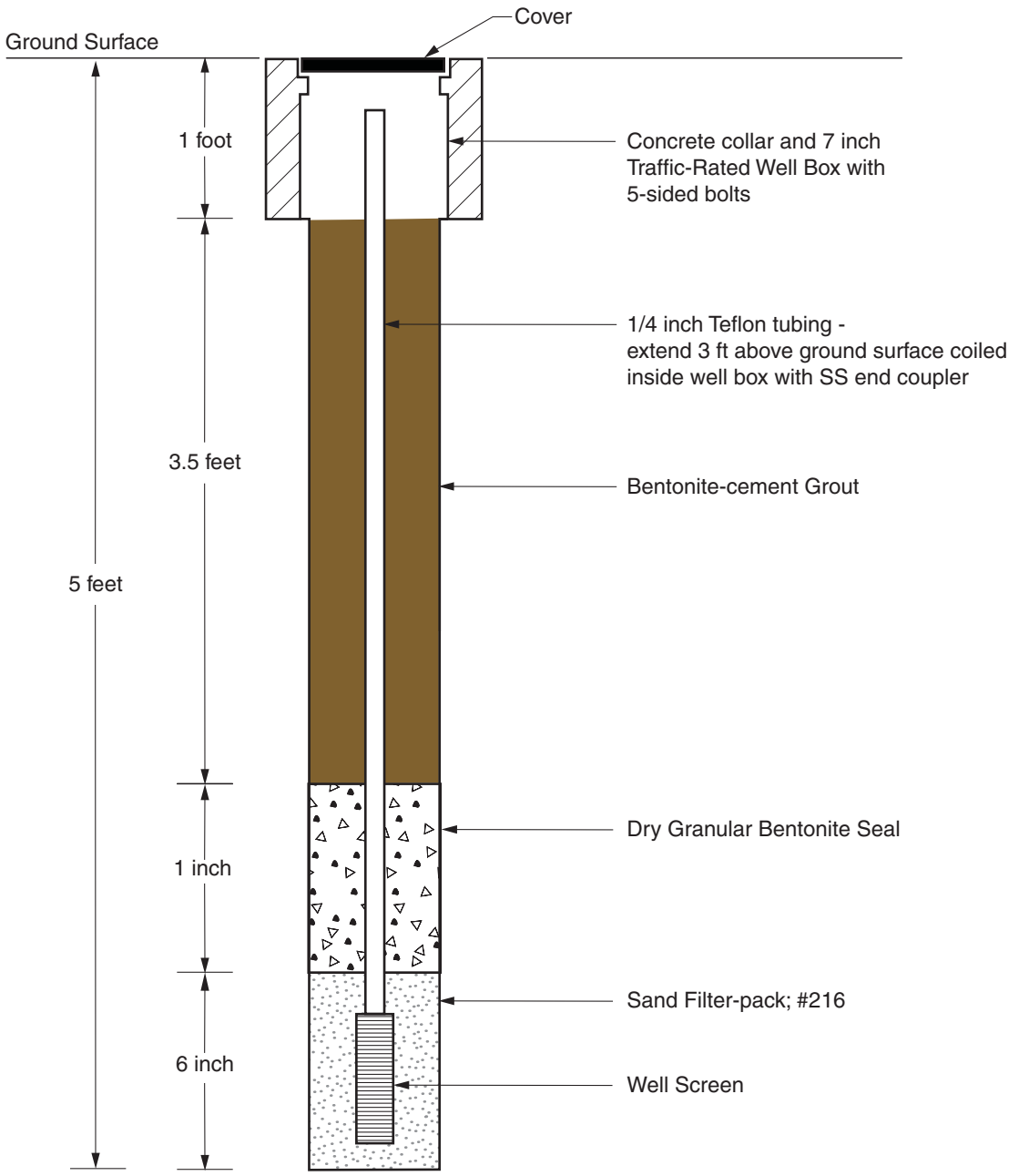
VAPOR MONITORING RESULTS JUNE/AUGUST 2014

CROW CANYON DRY CLEANERS
7272 SAN RAMON ROAD
DUBLIN, CALIFORNIA

Endpoint. Strategy. Science. Sustainability.

Date: 9/28/2014

Figure: 1



Not to scale

VAPOR WELL CONSTRUCTION DIAGRAM

Endpoint. Strategy. Science. Sustainability.

Date: 1/14/2014

Figure: **2**

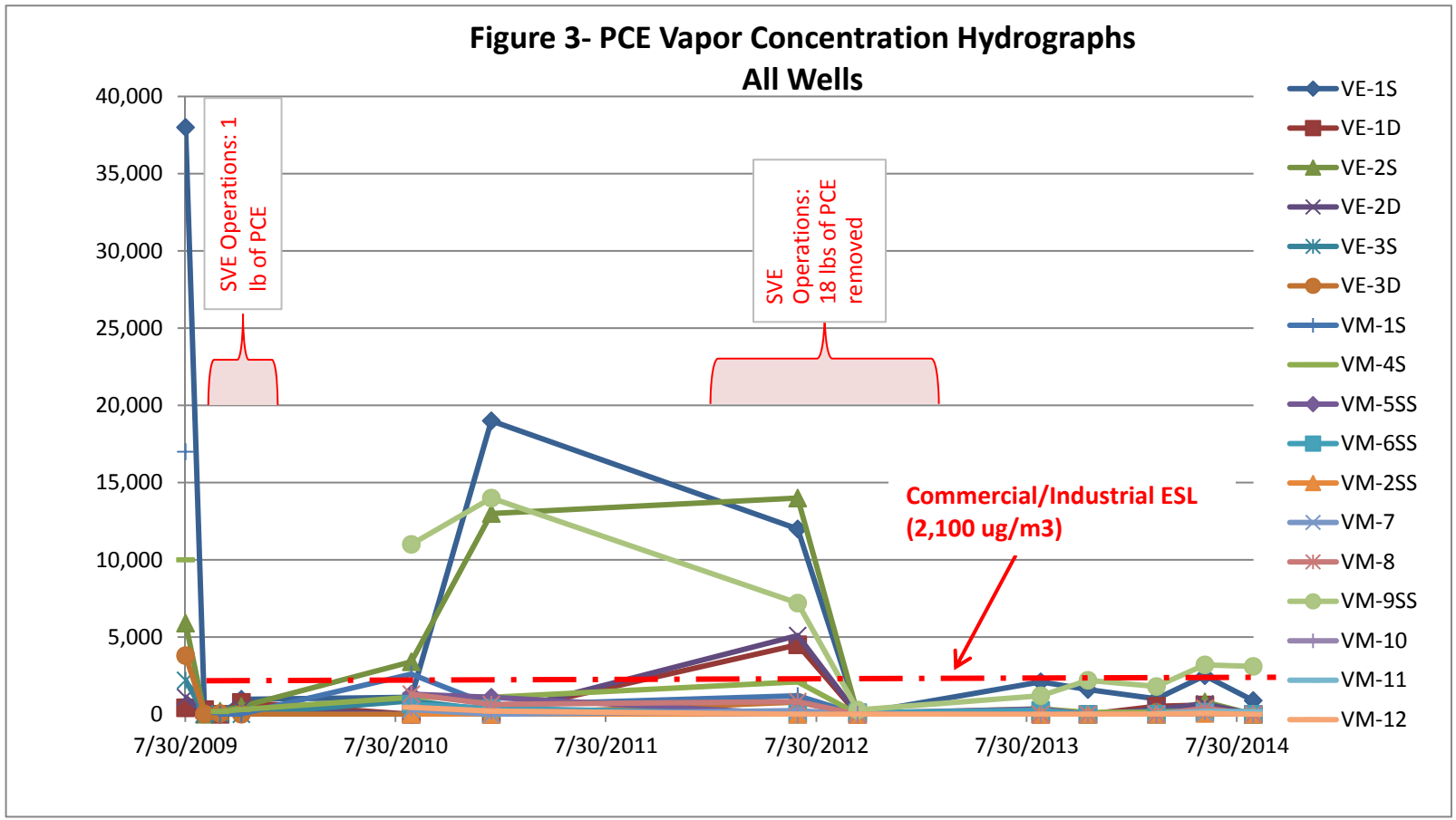


Figure 3- PCE Vapor Concentration Hydrographs
All Wells
40,000
35,000
30,000
25,000
20,000
15,000
10,000
5,000
0
7/30/2009
7/30/2010
7/30/2011
7/30/2012
7/30/2013
7/30/2014
SVE Operations: 1 lb of PCE
SVE Operations: 18 lbs of PCE removed
Commercial/Industrial ESL (2,100 ug/m3)
VE-1S
VE-1D
VE-2S
VE-2D
VE-3S
VE-3D
VM-1S
VM-4S
VM-5SS
VM-6SS
VM-2SS
VM-7
VM-8
VM-9SS
VM-10
VM-11
VM-12

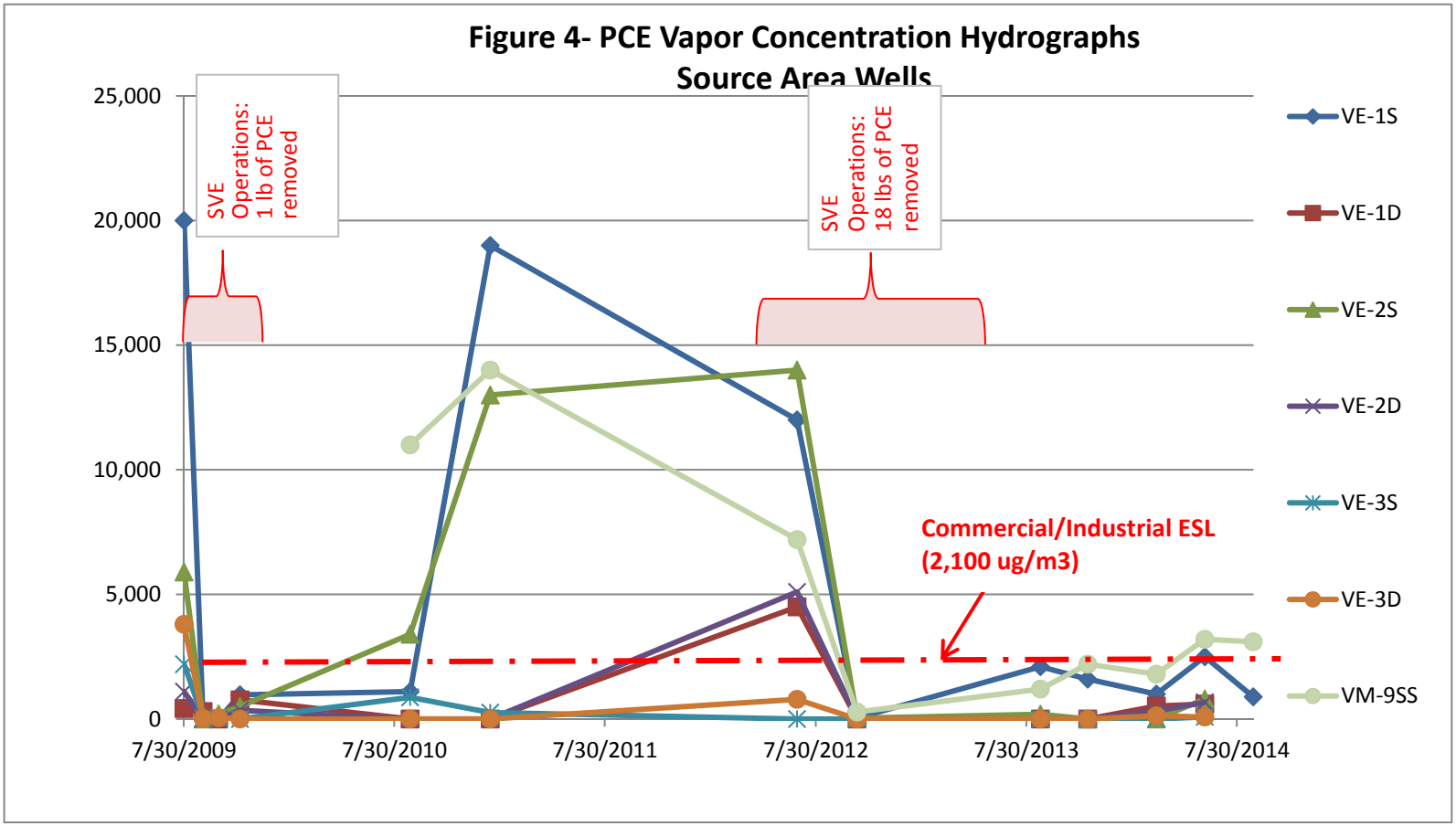
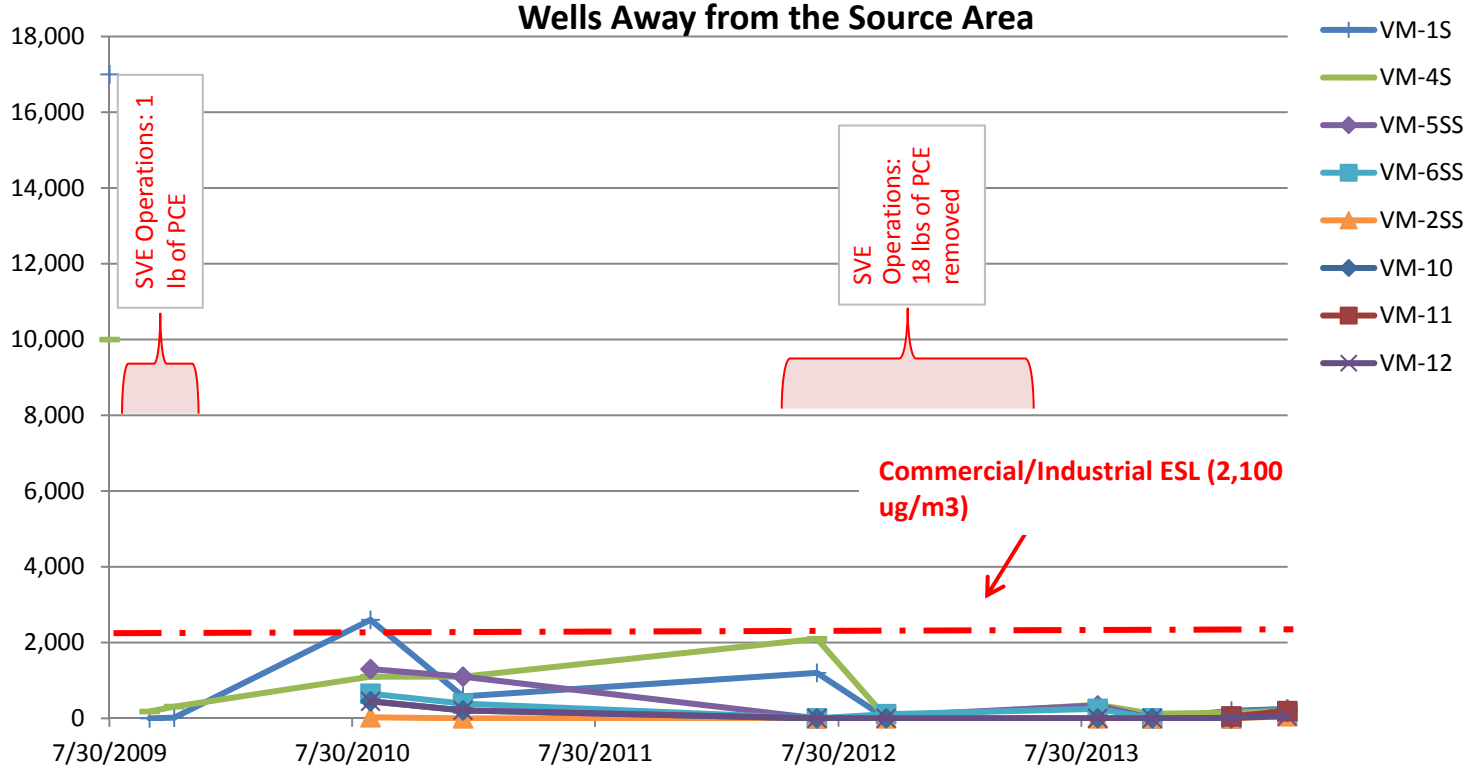


Figure 4- PCE Vapor Concentration Hydrographs
Source Area Wells
SVE Operations: 1 lb of PCE removed
SVE Operations: 18 lbs of PCE removed
Commercial/Industrial ESL (2,100 ug/m3)
25,000
20,000
15,000
10,000
5,000
0
7/30/2009
7/30/2010
7/30/2011
7/30/2012
7/30/2013
7/30/2014
VE-1S
VE-1D
VE-2S
VE-2D
VE-3S
VE-3D
VM-9SS

Figure 5- PCE Vapor Concentration Hydrographs
Wells Away from the Source Area



APPENDIX A

McCampbell Analytical, Inc.

"When Quality Counts"

Analytical Report

WorkOrder: 1406131 **Amended:** 06/12/2014

Report Created for: Endpoint
1534 Plaza Lane #243
Burlingame, CA 94010

Project Contact: Mehrdad Javaher
Project P.O.:
Project Name: Tm Dublin; Crow Canyon Cleaners

Project Received: 06/04/2014

Analytical Report reviewed & approved for release on 06/10/2014 by:

Question about your data?

Click here to email McCampbell

Angela Rydelius,
Laboratory Manager

The report shall not be reproduced except in full, without the written approval of the laboratory. The analytical results relate only to the items tested. Results reported conform to the most current NELAP standards, where applicable, unless otherwise stated in the case narrative.

ACCREDITED IN ACCORDANCE WITH nelac

McCampbell Analytical, Inc.
"When Quality Counts"

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

Glossary of Terms & Qualifier Definitions

Client: Endpoint
Project: Tm Dublin; Crow Canyon Cleaners
WorkOrder: 1406131

Glossary Abbreviation

95% Interval	95% Confident Interval
DF	Dilution Factor
DUP	Duplicate
EDL	Estimated Detection Limit
ITEF	International Toxicity Equivalence Factor
LCS	Laboratory Control Sample
MB	Method Blank
MB % Rec	% Recovery of Surrogate in Method Blank, if applicable
MDL	Method Detection Limit
ML	Minimum Level of Quantitation
MS	Matrix Spike
MSD	Matrix Spike Duplicate
ND	Not detected at or above the indicated MDL or RL
NR	Matrix interferences, or analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix; or sample diluted due to high matrix or analyte content.
RD	Relative Difference
RL	Reporting Limit (The RL is the lowest calibration standard in a multipoint calibration.)
RPD	Relative Percent Deviation
RRT	Relative Retention Time
SPK Val	Spike Value
SPKRef Val	Spike Reference Value
TEQ	Toxicity Equivalence

Quality Control Qualifiers

F2	LCS recovery for this compound is outside of acceptance limits.

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Case Narrative

Client: Endpoint
Project: Tm Dublin; Crow Canyon Cleaners

Work Order: 1406131
June 10, 2014

TO-15 ANALYSIS

All summa canisters are EVACUATED 5 days after the reporting of the results. Please call or email if a longer retention time is required.

In an effort to attain the lowest reporting limits possible for the majority of the TO-15 target list, high level compounds may be analyzed using EPA Method 8260B.

Polymer (Tedlar) bags are not recommended for TO15 samples. The disadvantages are listed in Appendix B of the DTSC Advisory of April 2012.

Angela Rydelius, Lab Manager

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Analytical Report

Client:	Endpoint	**WorkOrder:**	1406131
Project:	Tm Dublin; Crow Canyon Cleaners	**Extraction Method:**	ASTM D 1946-90
Date Received:	6/4/14 20:24	**Analytical Method:**	ASTM D 1946-90
Date Prepared:	6/9/14	**Unit:**	%

Helium

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
VM-2SS	**1406131-006A**	**Soil Gas**	**06/03/2014 11:26**	**GC26**	**91365**

Initial Pressure (psia)	Final Pressure (psia)
12.94	**25.78**

Analytes	Result	RL	DF	Date Analyzed
Helium	**0.0053**	0.0050	1	06/09/2014 14:38

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
VM-6SS	**1406131-007A**	**Soil Gas**	**06/03/2014 11:45**	**GC26**	**91365**

Initial Pressure (psia)	Final Pressure (psia)
13.98	**27.87**

Analytes	Result	RL	DF	Date Analyzed
Helium	**0.0078**	0.0050	1	06/09/2014 14:51

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
VM-5SS	**1406131-008A**	**Soil Gas**	**06/03/2014 12:03**	**GC26**	**91365**

Initial Pressure (psia)	Final Pressure (psia)
13.67	**27.24**

Analytes	Result	RL	DF	Date Analyzed
Helium	ND	0.0050	1	06/09/2014 15:04

(Cont.)

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Analytical Report

Client:	Endpoint	**WorkOrder:**	1406131
Project:	Tm Dublin; Crow Canyon Cleaners	**Extraction Method:**	ASTM D 1946-90
Date Received:	6/4/14 20:24	**Analytical Method:**	ASTM D 1946-90
Date Prepared:	6/9/14	**Unit:**	%

Helium

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
VM-4S	**1406131-013A**	**Soil Gas**	**06/04/2014 08:57**	**GC26**	**91365**

Initial Pressure (psia)	Final Pressure (psia)
12.81	**25.53**

Analytes	Result	RL	DF	Date Analyzed
Helium	ND	0.0050	1	06/09/2014 15:17

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
VE-2D	**1406131-018A**	**Soil Gas**	**06/04/2014 11:57**	**GC26**	**91365**

Initial Pressure (psia)	Final Pressure (psia)
12.54	**24.99**

Analytes	Result	RL	DF	Date Analyzed
Helium	ND	0.0050	1	06/09/2014 15:30

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
VE-2S	**1406131-019A**	**Soil Gas**	**06/04/2014 12:19**	**GC26**	**91365**

Initial Pressure (psia)	Final Pressure (psia)
12.41	**24.72**

Analytes	Result	RL	DF	Date Analyzed
Helium	ND	0.0050	1	06/09/2014 15:42

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Analytical Report

Client:	Endpoint	**WorkOrder:**	1406131
Project:	Tm Dublin; Crow Canyon Cleaners	**Extraction Method:**	ASTM D 1946-90
Date Received:	6/4/14 20:24	**Analytical Method:**	ASTM D 1946-90
Date Prepared:	6/9/14	**Unit:**	%

Helium

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
VM-9SS	1406131-020A	Soil Gas	06/04/2014 12:28	GC26	91365

Initial Pressure (psia)	Final Pressure (psia)
12.73	25.37

Analytes	Result	RL	DF	Date Analyzed
Helium	**0.026**	0.0050	1	06/09/2014 15:55

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Analytical Report

Client:	Endpoint	**WorkOrder:**	1406131
Project:	Tm Dublin; Crow Canyon Cleaners	**Extraction Method:**	TO15
Date Received:	6/4/14 20:24	**Analytical Method:**	TO15
Date Prepared:	6/6/14-6/7/14	**Unit:**	µg/m³

Halogenated Volatile Organic Compounds in µg/m³

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
VM-7	1406131-001A	Soil Gas	06/03/2014 09:15	GC24	91324

Initial Pressure (psia)	Final Pressure (psia)
12.88	25.68

Analytes	Result	RL	DF	Date Analyzed
Bromodichloromethane	ND	3.5	1	06/06/2014 03:26
Bromoform	ND	5.2	1	06/06/2014 03:26
Bromomethane	ND	2.0	1	06/06/2014 03:26
Carbon Tetrachloride	ND	3.2	1	06/06/2014 03:26
Chlorobenzene	ND	2.4	1	06/06/2014 03:26
Chloroethane	ND	1.3	1	06/06/2014 03:26
Chloroform	ND	2.4	1	06/06/2014 03:26
Chloromethane	ND	1.0	1	06/06/2014 03:26
Dibromochloromethane	ND	4.4	1	06/06/2014 03:26
1,2-Dibromo-3-chloropropane	ND	0.12	1	06/06/2014 03:26
1,2-Dibromoethane (EDB)	ND	3.9	1	06/06/2014 03:26
1,2-Dichlorobenzene	ND	3.0	1	06/06/2014 03:26
1,3-Dichlorobenzene	ND	3.0	1	06/06/2014 03:26
1,4-Dichlorobenzene	ND	3.0	1	06/06/2014 03:26
Dichlorodifluoromethane	ND	2.5	1	06/06/2014 03:26
1,1-Dichloroethane	ND	2.0	1	06/06/2014 03:26
1,2-Dichloroethane (1,2-DCA)	ND	2.0	1	06/06/2014 03:26
1,1-Dichloroethene	ND	2.0	1	06/06/2014 03:26
cis-1,2-Dichloroethene	ND	2.0	1	06/06/2014 03:26
trans-1,2-Dichloroethene	ND	2.0	1	06/06/2014 03:26
1,2-Dichloropropane	ND	2.4	1	06/06/2014 03:26
cis-1,3-Dichloropropene	ND	2.3	1	06/06/2014 03:26
trans-1,3-Dichloropropene	ND	2.3	1	06/06/2014 03:26
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	3.6	1	06/06/2014 03:26
Freon 113	ND	3.9	1	06/06/2014 03:26
Methylene chloride	ND	1.8	1	06/06/2014 03:26
1,1,1,2-Tetrachloroethane	ND	3.5	1	06/06/2014 03:26
1,1,2,2-Tetrachloroethane	ND	3.5	1	06/06/2014 03:26
Tetrachloroethene	**88**	3.4	1	06/06/2014 03:26
1,2,4-Trichlorobenzene	ND	3.8	1	06/06/2014 03:26
1,1,1-Trichloroethane	ND	2.8	1	06/06/2014 03:26
1,1,2-Trichloroethane	ND	2.8	1	06/06/2014 03:26
Trichloroethene	**3.8**	2.8	1	06/06/2014 03:26
Trichlorofluoromethane	ND	2.8	1	06/06/2014 03:26

(Cont.)

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Analytical Report

Client:	Endpoint	**WorkOrder:**	1406131
Project:	Tm Dublin; Crow Canyon Cleaners	**Extraction Method:**	TO15
Date Received:	6/4/14 20:24	**Analytical Method:**	TO15
Date Prepared:	6/6/14-6/7/14	**Unit:**	µg/m³

Halogenated Volatile Organic Compounds in µg/m³

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
VM-7	**1406131-001A**	**Soil Gas**	**06/03/2014 09:15**	**GC24**	**91324**

Initial Pressure (psia)	Final Pressure (psia)
12.88	**25.68**

Analytes	Result	RL	DF	Date Analyzed
Vinyl Chloride	ND	1.3	1	06/06/2014 03:26

Surrogates	REC (%)	Limits	
1,2-DCA-d4	98	70-130	06/06/2014 03:26
Toluene-d8	102	70-130	06/06/2014 03:26
4-BFB	101	70-130	06/06/2014 03:26

(Cont.)

CDPH ELAP 1644 ♦ NELAP 4033ORELAP AK Analyst's Initial Angela Rydelius, Lab Manager

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Analytical Report

Client:	Endpoint	**WorkOrder:**	1406131
Project:	Tm Dublin; Crow Canyon Cleaners	**Extraction Method:**	TO15
Date Received:	6/4/14 20:24	**Analytical Method:**	TO15
Date Prepared:	6/6/14-6/7/14	**Unit:**	µg/m³

Halogenated Volatile Organic Compounds in µg/m³

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
VM-8	1406131-002A	Soil Gas	06/03/2014 09:41	GC24	91324

Initial Pressure (psia)	Final Pressure (psia)
12.93	25.76

Analytes	Result	RL	DF	Date Analyzed
Bromodichloromethane	ND	3.5	1	06/06/2014 04:09
Bromoform	ND	5.2	1	06/06/2014 04:09
Bromomethane	ND	2.0	1	06/06/2014 04:09
Carbon Tetrachloride	ND	3.2	1	06/06/2014 04:09
Chlorobenzene	ND	2.4	1	06/06/2014 04:09
Chloroethane	ND	1.3	1	06/06/2014 04:09
Chloroform	ND	2.4	1	06/06/2014 04:09
Chloromethane	ND	1.0	1	06/06/2014 04:09
Dibromochloromethane	ND	4.4	1	06/06/2014 04:09
1,2-Dibromo-3-chloropropane	ND	0.12	1	06/06/2014 04:09
1,2-Dibromoethane (EDB)	ND	3.9	1	06/06/2014 04:09
1,2-Dichlorobenzene	ND	3.0	1	06/06/2014 04:09
1,3-Dichlorobenzene	ND	3.0	1	06/06/2014 04:09
1,4-Dichlorobenzene	ND	3.0	1	06/06/2014 04:09
Dichlorodifluoromethane	ND	2.5	1	06/06/2014 04:09
1,1-Dichloroethane	ND	2.0	1	06/06/2014 04:09
1,2-Dichloroethane (1,2-DCA)	ND	2.0	1	06/06/2014 04:09
1,1-Dichloroethene	ND	2.0	1	06/06/2014 04:09
cis-1,2-Dichloroethene	**11**	2.0	1	06/06/2014 04:09
trans-1,2-Dichloroethene	ND	2.0	1	06/06/2014 04:09
1,2-Dichloropropane	ND	2.4	1	06/06/2014 04:09
cis-1,3-Dichloropropene	ND	2.3	1	06/06/2014 04:09
trans-1,3-Dichloropropene	ND	2.3	1	06/06/2014 04:09
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	3.6	1	06/06/2014 04:09
Freon 113	ND	3.9	1	06/06/2014 04:09
Methylene chloride	ND	1.8	1	06/06/2014 04:09
1,1,1,2-Tetrachloroethane	ND	3.5	1	06/06/2014 04:09
1,1,2,2-Tetrachloroethane	ND	3.5	1	06/06/2014 04:09
Tetrachloroethene	**390**	3.4	1	06/06/2014 04:09
1,2,4-Trichlorobenzene	ND	3.8	1	06/06/2014 04:09
1,1,1-Trichloroethane	ND	2.8	1	06/06/2014 04:09
1,1,2-Trichloroethane	ND	2.8	1	06/06/2014 04:09
Trichloroethene	**54**	2.8	1	06/06/2014 04:09
Trichlorofluoromethane	ND	2.8	1	06/06/2014 04:09

(Cont.)

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Analytical Report

Client:	Endpoint	**WorkOrder:**	1406131
Project:	Tm Dublin; Crow Canyon Cleaners	**Extraction Method:**	TO15
Date Received:	6/4/14 20:24	**Analytical Method:**	TO15
Date Prepared:	6/6/14-6/7/14	**Unit:**	µg/m³

Halogenated Volatile Organic Compounds in µg/m³

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
VM-8	**1406131-002A**	**Soil Gas**	**06/03/2014 09:41**	**GC24**	**91324**

Initial Pressure (psia)	Final Pressure (psia)
12.93	**25.76**

Analytes	Result	RL	DF	Date Analyzed
Vinyl Chloride	ND	1.3	1	06/06/2014 04:09

Surrogates	REC (%)	Limits	
1,2-DCA-d4	106	70-130	06/06/2014 04:09
Toluene-d8	102	70-130	06/06/2014 04:09
4-BFB	100	70-130	06/06/2014 04:09

(Cont.)

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Analytical Report

Client:	Endpoint	**WorkOrder:**	1406131
Project:	Tm Dublin; Crow Canyon Cleaners	**Extraction Method:**	TO15
Date Received:	6/4/14 20:24	**Analytical Method:**	TO15
Date Prepared:	6/6/14-6/7/14	**Unit:**	µg/m³

Halogenated Volatile Organic Compounds in µg/m³

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
VM-10	1406131-003A	Soil Gas	06/03/2014 10:05	GC24	91324

Initial Pressure (psia)	Final Pressure (psia)
13.06	26.03

Analytes	Result	RL	DF	Date Analyzed
Bromodichloromethane	ND	3.5	1	06/06/2014 04:49
Bromoform	ND	5.2	1	06/06/2014 04:49
Bromomethane	ND	2.0	1	06/06/2014 04:49
Carbon Tetrachloride	ND	3.2	1	06/06/2014 04:49
Chlorobenzene	ND	2.4	1	06/06/2014 04:49
Chloroethane	ND	1.3	1	06/06/2014 04:49
Chloroform	ND	2.4	1	06/06/2014 04:49
Chloromethane	ND	1.0	1	06/06/2014 04:49
Dibromochloromethane	ND	4.4	1	06/06/2014 04:49
1,2-Dibromo-3-chloropropane	ND	0.12	1	06/06/2014 04:49
1,2-Dibromoethane (EDB)	ND	3.9	1	06/06/2014 04:49
1,2-Dichlorobenzene	ND	3.0	1	06/06/2014 04:49
1,3-Dichlorobenzene	ND	3.0	1	06/06/2014 04:49
1,4-Dichlorobenzene	ND	3.0	1	06/06/2014 04:49
Dichlorodifluoromethane	ND	2.5	1	06/06/2014 04:49
1,1-Dichloroethane	ND	2.0	1	06/06/2014 04:49
1,2-Dichloroethane (1,2-DCA)	ND	2.0	1	06/06/2014 04:49
1,1-Dichloroethene	ND	2.0	1	06/06/2014 04:49
cis-1,2-Dichloroethene	ND	2.0	1	06/06/2014 04:49
trans-1,2-Dichloroethene	ND	2.0	1	06/06/2014 04:49
1,2-Dichloropropane	ND	2.4	1	06/06/2014 04:49
cis-1,3-Dichloropropene	ND	2.3	1	06/06/2014 04:49
trans-1,3-Dichloropropene	ND	2.3	1	06/06/2014 04:49
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	3.6	1	06/06/2014 04:49
Freon 113	ND	3.9	1	06/06/2014 04:49
Methylene chloride	ND	1.8	1	06/06/2014 04:49
1,1,1,2-Tetrachloroethane	ND	3.5	1	06/06/2014 04:49
1,1,2,2-Tetrachloroethane	ND	3.5	1	06/06/2014 04:49
Tetrachloroethene	**180**	3.4	1	06/06/2014 04:49
1,2,4-Trichlorobenzene	ND	3.8	1	06/06/2014 04:49
1,1,1-Trichloroethane	ND	2.8	1	06/06/2014 04:49
1,1,2-Trichloroethane	ND	2.8	1	06/06/2014 04:49
Trichloroethene	**6.9**	2.8	1	06/06/2014 04:49
Trichlorofluoromethane	ND	2.8	1	06/06/2014 04:49

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Analytical Report

Client:	Endpoint	**WorkOrder:**	1406131
Project:	Tm Dublin; Crow Canyon Cleaners	**Extraction Method:**	TO15
Date Received:	6/4/14 20:24	**Analytical Method:**	TO15
Date Prepared:	6/6/14-6/7/14	**Unit:**	µg/m³

Halogenated Volatile Organic Compounds in µg/m³

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
VM-10	**1406131-003A**	**Soil Gas**	**06/03/2014 10:05**	**GC24**	**91324**

Initial Pressure (psia)	Final Pressure (psia)
13.06	**26.03**

Analytes	Result	RL	DF	Date Analyzed
Vinyl Chloride	ND	1.3	1	06/06/2014 04:49

Surrogates	REC (%)	Limits	
1,2-DCA-d4	97	70-130	06/06/2014 04:49
Toluene-d8	102	70-130	06/06/2014 04:49
4-BFB	99	70-130	06/06/2014 04:49

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Analytical Report

Client:	Endpoint	**WorkOrder:**	1406131
Project:	Tm Dublin; Crow Canyon Cleaners	**Extraction Method:**	TO15
Date Received:	6/4/14 20:24	**Analytical Method:**	TO15
Date Prepared:	6/6/14-6/7/14	**Unit:**	µg/m³

Halogenated Volatile Organic Compounds in µg/m³

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
VM-11	1406131-004A	Soil Gas	06/03/2014 10:33	GC24	91324

Initial Pressure (psia)	Final Pressure (psia)
12.94	25.80

Analytes	Result	RL	DF	Date Analyzed
Bromodichloromethane	ND	3.5	1	06/06/2014 05:29
Bromoform	ND	5.2	1	06/06/2014 05:29
Bromomethane	ND	2.0	1	06/06/2014 05:29
Carbon Tetrachloride	ND	3.2	1	06/06/2014 05:29
Chlorobenzene	ND	2.4	1	06/06/2014 05:29
Chloroethane	ND	1.3	1	06/06/2014 05:29
Chloroform	ND	2.4	1	06/06/2014 05:29
Chloromethane	ND	1.0	1	06/06/2014 05:29
Dibromochloromethane	ND	4.4	1	06/06/2014 05:29
1,2-Dibromo-3-chloropropane	ND	0.12	1	06/06/2014 05:29
1,2-Dibromoethane (EDB)	ND	3.9	1	06/06/2014 05:29
1,2-Dichlorobenzene	ND	3.0	1	06/06/2014 05:29
1,3-Dichlorobenzene	ND	3.0	1	06/06/2014 05:29
1,4-Dichlorobenzene	ND	3.0	1	06/06/2014 05:29
Dichlorodifluoromethane	**2.5**	2.5	1	06/06/2014 05:29
1,1-Dichloroethane	ND	2.0	1	06/06/2014 05:29
1,2-Dichloroethane (1,2-DCA)	ND	2.0	1	06/06/2014 05:29
1,1-Dichloroethene	ND	2.0	1	06/06/2014 05:29
cis-1,2-Dichloroethene	ND	2.0	1	06/06/2014 05:29
trans-1,2-Dichloroethene	ND	2.0	1	06/06/2014 05:29
1,2-Dichloropropane	ND	2.4	1	06/06/2014 05:29
cis-1,3-Dichloropropene	ND	2.3	1	06/06/2014 05:29
trans-1,3-Dichloropropene	ND	2.3	1	06/06/2014 05:29
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	3.6	1	06/06/2014 05:29
Freon 113	ND	3.9	1	06/06/2014 05:29
Methylene chloride	ND	1.8	1	06/06/2014 05:29
1,1,1,2-Tetrachloroethane	ND	3.5	1	06/06/2014 05:29
1,1,2,2-Tetrachloroethane	ND	3.5	1	06/06/2014 05:29
Tetrachloroethene	**190**	3.4	1	06/06/2014 05:29
1,2,4-Trichlorobenzene	ND	3.8	1	06/06/2014 05:29
1,1,1-Trichloroethane	ND	2.8	1	06/06/2014 05:29
1,1,2-Trichloroethane	ND	2.8	1	06/06/2014 05:29
Trichloroethene	ND	2.8	1	06/06/2014 05:29
Trichlorofluoromethane	ND	2.8	1	06/06/2014 05:29

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Analytical Report

Client:	Endpoint	**WorkOrder:**	1406131
Project:	Tm Dublin; Crow Canyon Cleaners	**Extraction Method:**	TO15
Date Received:	6/4/14 20:24	**Analytical Method:**	TO15
Date Prepared:	6/6/14-6/7/14	**Unit:**	µg/m³

Halogenated Volatile Organic Compounds in µg/m³

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
VM-11	**1406131-004A**	**Soil Gas**	**06/03/2014 10:33**	**GC24**	**91324**

Initial Pressure (psia)	Final Pressure (psia)
12.94	**25.80**

Analytes	Result	RL	DF	Date Analyzed
Vinyl Chloride	ND	1.3	1	06/06/2014 05:29

Surrogates	REC (%)	Limits	
1,2-DCA-d4	95	70-130	06/06/2014 05:29
Toluene-d8	102	70-130	06/06/2014 05:29
4-BFB	102	70-130	06/06/2014 05:29

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CDPH ELAP 1644 ♦ NELAP 4033ORELAP AK Analyst's Initial Angela Rydelius, Lab Manager

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Analytical Report

Client:	Endpoint	**WorkOrder:**	1406131
Project:	Tm Dublin; Crow Canyon Cleaners	**Extraction Method:**	TO15
Date Received:	6/4/14 20:24	**Analytical Method:**	TO15
Date Prepared:	6/6/14-6/7/14	**Unit:**	µg/m³

Halogenated Volatile Organic Compounds in µg/m³

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
VM-12	1406131-005A	Soil Gas	06/03/2014 10:59	GC24	91324

Initial Pressure (psia)	Final Pressure (psia)
12.29	24.49

Analytes	Result	RL	DF	Date Analyzed
Bromodichloromethane	ND	3.5	1	06/06/2014 06:12
Bromoform	ND	5.2	1	06/06/2014 06:12
Bromomethane	ND	2.0	1	06/06/2014 06:12
Carbon Tetrachloride	ND	3.2	1	06/06/2014 06:12
Chlorobenzene	ND	2.4	1	06/06/2014 06:12
Chloroethane	ND	1.3	1	06/06/2014 06:12
Chloroform	ND	2.4	1	06/06/2014 06:12
Chloromethane	ND	1.0	1	06/06/2014 06:12
Dibromochloromethane	ND	4.4	1	06/06/2014 06:12
1,2-Dibromo-3-chloropropane	ND	0.12	1	06/06/2014 06:12
1,2-Dibromoethane (EDB)	ND	3.9	1	06/06/2014 06:12
1,2-Dichlorobenzene	ND	3.0	1	06/06/2014 06:12
1,3-Dichlorobenzene	ND	3.0	1	06/06/2014 06:12
1,4-Dichlorobenzene	ND	3.0	1	06/06/2014 06:12
Dichlorodifluoromethane	ND	2.5	1	06/06/2014 06:12
1,1-Dichloroethane	ND	2.0	1	06/06/2014 06:12
1,2-Dichloroethane (1,2-DCA)	ND	2.0	1	06/06/2014 06:12
1,1-Dichloroethene	ND	2.0	1	06/06/2014 06:12
cis-1,2-Dichloroethene	ND	2.0	1	06/06/2014 06:12
trans-1,2-Dichloroethene	ND	2.0	1	06/06/2014 06:12
1,2-Dichloropropane	ND	2.4	1	06/06/2014 06:12
cis-1,3-Dichloropropene	ND	2.3	1	06/06/2014 06:12
trans-1,3-Dichloropropene	ND	2.3	1	06/06/2014 06:12
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	3.6	1	06/06/2014 06:12
Freon 113	ND	3.9	1	06/06/2014 06:12
Methylene chloride	ND	1.8	1	06/06/2014 06:12
1,1,1,2-Tetrachloroethane	ND	3.5	1	06/06/2014 06:12
1,1,2,2-Tetrachloroethane	ND	3.5	1	06/06/2014 06:12
Tetrachloroethene	**58**	3.4	1	06/06/2014 06:12
1,2,4-Trichlorobenzene	ND	3.8	1	06/06/2014 06:12
1,1,1-Trichloroethane	ND	2.8	1	06/06/2014 06:12
1,1,2-Trichloroethane	ND	2.8	1	06/06/2014 06:12
Trichloroethene	ND	2.8	1	06/06/2014 06:12
Trichlorofluoromethane	ND	2.8	1	06/06/2014 06:12

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Analytical Report

Client:	Endpoint	**WorkOrder:**	1406131
Project:	Tm Dublin; Crow Canyon Cleaners	**Extraction Method:**	TO15
Date Received:	6/4/14 20:24	**Analytical Method:**	TO15
Date Prepared:	6/6/14-6/7/14	**Unit:**	µg/m³

Halogenated Volatile Organic Compounds in µg/m³

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
VM-12	**1406131-005A**	**Soil Gas**	**06/03/2014 10:59**	**GC24**	**91324**

Initial Pressure (psia)	Final Pressure (psia)
12.29	**24.49**

Analytes	Result	RL	DF	Date Analyzed
Vinyl Chloride	ND	1.3	1	06/06/2014 06:12

Surrogates	REC (%)	Limits	
1,2-DCA-d4	96	70-130	06/06/2014 06:12
Toluene-d8	103	70-130	06/06/2014 06:12
4-BFB	100	70-130	06/06/2014 06:12

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Analytical Report

Client:	Endpoint	**WorkOrder:**	1406131
Project:	Tm Dublin; Crow Canyon Cleaners	**Extraction Method:**	TO15
Date Received:	6/4/14 20:24	**Analytical Method:**	TO15
Date Prepared:	6/6/14-6/7/14	**Unit:**	µg/m³

Halogenated Volatile Organic Compounds in µg/m³

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
VM-2SS	1406131-006A	Soil Gas	06/03/2014 11:26	GC24	91337

Initial Pressure (psia)	Final Pressure (psia)
12.94	25.78

Analytes	Result	RL	DF	Date Analyzed
Bromodichloromethane	ND	3.5	1	06/07/2014 03:36
Bromoform	ND	5.2	1	06/07/2014 03:36
Bromomethane	ND	2.0	1	06/07/2014 03:36
Carbon Tetrachloride	ND	3.2	1	06/07/2014 03:36
Chlorobenzene	ND	2.4	1	06/07/2014 03:36
Chloroethane	ND	1.3	1	06/07/2014 03:36
Chloroform	ND	2.4	1	06/07/2014 03:36
Chloromethane	ND	1.0	1	06/07/2014 03:36
Dibromochloromethane	ND	4.4	1	06/07/2014 03:36
1,2-Dibromo-3-chloropropane	ND	0.12	1	06/07/2014 03:36
1,2-Dibromoethane (EDB)	ND	3.9	1	06/07/2014 03:36
1,2-Dichlorobenzene	ND	3.0	1	06/07/2014 03:36
1,3-Dichlorobenzene	ND	3.0	1	06/07/2014 03:36
1,4-Dichlorobenzene	ND	3.0	1	06/07/2014 03:36
Dichlorodifluoromethane	ND	2.5	1	06/07/2014 03:36
1,1-Dichloroethane	ND	2.0	1	06/07/2014 03:36
1,2-Dichloroethane (1,2-DCA)	ND	2.0	1	06/07/2014 03:36
1,1-Dichloroethene	ND	2.0	1	06/07/2014 03:36
cis-1,2-Dichloroethene	ND	2.0	1	06/07/2014 03:36
trans-1,2-Dichloroethene	ND	2.0	1	06/07/2014 03:36
1,2-Dichloropropane	ND	2.4	1	06/07/2014 03:36
cis-1,3-Dichloropropene	ND	2.3	1	06/07/2014 03:36
trans-1,3-Dichloropropene	ND	2.3	1	06/07/2014 03:36
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	3.6	1	06/07/2014 03:36
Freon 113	ND	3.9	1	06/07/2014 03:36
Methylene chloride	ND	1.8	1	06/07/2014 03:36
1,1,1,2-Tetrachloroethane	ND	3.5	1	06/07/2014 03:36
1,1,2,2-Tetrachloroethane	ND	3.5	1	06/07/2014 03:36
Tetrachloroethene	**57**	3.4	1	06/07/2014 03:36
1,2,4-Trichlorobenzene	ND	3.8	1	06/07/2014 03:36
1,1,1-Trichloroethane	ND	2.8	1	06/07/2014 03:36
1,1,2-Trichloroethane	ND	2.8	1	06/07/2014 03:36
Trichloroethene	ND	2.8	1	06/07/2014 03:36
Trichlorofluoromethane	ND	2.8	1	06/07/2014 03:36

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Analytical Report

Client:	Endpoint	**WorkOrder:**	1406131
Project:	Tm Dublin; Crow Canyon Cleaners	**Extraction Method:**	TO15
Date Received:	6/4/14 20:24	**Analytical Method:**	TO15
Date Prepared:	6/6/14-6/7/14	**Unit:**	µg/m³

Halogenated Volatile Organic Compounds in µg/m³

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
VM-2SS	**1406131-006A**	**Soil Gas**	**06/03/2014 11:26**	**GC24**	**91337**

Initial Pressure (psia)	Final Pressure (psia)
12.94	**25.78**

Analytes	Result	RL	DF	Date Analyzed
Vinyl Chloride	ND	1.3	1	06/07/2014 03:36

Surrogates	REC (%)	Limits	
1,2-DCA-d4	98	70-130	06/07/2014 03:36
Toluene-d8	101	70-130	06/07/2014 03:36
4-BFB	101	70-130	06/07/2014 03:36

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Analytical Report

Client:	Endpoint	**WorkOrder:**	1406131
Project:	Tm Dublin; Crow Canyon Cleaners	**Extraction Method:**	TO15
Date Received:	6/4/14 20:24	**Analytical Method:**	TO15
Date Prepared:	6/6/14-6/7/14	**Unit:**	µg/m³

Halogenated Volatile Organic Compounds in µg/m³

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
VM-6SS	1406131-007A	Soil Gas	06/03/2014 11:45	GC24	91337

Initial Pressure (psia)	Final Pressure (psia)
13.98	27.87

Analytes	Result	RL	DF	Date Analyzed
Bromodichloromethane	ND	3.5	1	06/07/2014 04:16
Bromoform	ND	5.2	1	06/07/2014 04:16
Bromomethane	ND	2.0	1	06/07/2014 04:16
Carbon Tetrachloride	ND	3.2	1	06/07/2014 04:16
Chlorobenzene	ND	2.4	1	06/07/2014 04:16
Chloroethane	ND	1.3	1	06/07/2014 04:16
Chloroform	ND	2.4	1	06/07/2014 04:16
Chloromethane	ND	1.0	1	06/07/2014 04:16
Dibromochloromethane	ND	4.4	1	06/07/2014 04:16
1,2-Dibromo-3-chloropropane	ND	0.12	1	06/07/2014 04:16
1,2-Dibromoethane (EDB)	ND	3.9	1	06/07/2014 04:16
1,2-Dichlorobenzene	ND	3.0	1	06/07/2014 04:16
1,3-Dichlorobenzene	ND	3.0	1	06/07/2014 04:16
1,4-Dichlorobenzene	ND	3.0	1	06/07/2014 04:16
Dichlorodifluoromethane	ND	2.5	1	06/07/2014 04:16
1,1-Dichloroethane	ND	2.0	1	06/07/2014 04:16
1,2-Dichloroethane (1,2-DCA)	ND	2.0	1	06/07/2014 04:16
1,1-Dichloroethene	ND	2.0	1	06/07/2014 04:16
cis-1,2-Dichloroethene	ND	2.0	1	06/07/2014 04:16
trans-1,2-Dichloroethene	ND	2.0	1	06/07/2014 04:16
1,2-Dichloropropane	ND	2.4	1	06/07/2014 04:16
cis-1,3-Dichloropropene	ND	2.3	1	06/07/2014 04:16
trans-1,3-Dichloropropene	ND	2.3	1	06/07/2014 04:16
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	3.6	1	06/07/2014 04:16
Freon 113	ND	3.9	1	06/07/2014 04:16
Methylene chloride	ND	1.8	1	06/07/2014 04:16
1,1,1,2-Tetrachloroethane	ND	3.5	1	06/07/2014 04:16
1,1,2,2-Tetrachloroethane	ND	3.5	1	06/07/2014 04:16
Tetrachloroethene	**140**	3.4	1	06/07/2014 04:16
1,2,4-Trichlorobenzene	ND	3.8	1	06/07/2014 04:16
1,1,1-Trichloroethane	ND	2.8	1	06/07/2014 04:16
1,1,2-Trichloroethane	ND	2.8	1	06/07/2014 04:16
Trichloroethene	ND	2.8	1	06/07/2014 04:16
Trichlorofluoromethane	ND	2.8	1	06/07/2014 04:16

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Analytical Report

Client:	Endpoint	**WorkOrder:**	1406131
Project:	Tm Dublin; Crow Canyon Cleaners	**Extraction Method:**	TO15
Date Received:	6/4/14 20:24	**Analytical Method:**	TO15
Date Prepared:	6/6/14-6/7/14	**Unit:**	µg/m³

Halogenated Volatile Organic Compounds in µg/m³

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
VM-6SS	**1406131-007A**	**Soil Gas**	**06/03/2014 11:45**	**GC24**	**91337**

Initial Pressure (psia)	Final Pressure (psia)
13.98	**27.87**

Analytes	Result	RL	DF	Date Analyzed
Vinyl Chloride	ND	1.3	1	06/07/2014 04:16

Surrogates	REC (%)	Limits	
1,2-DCA-d4	98	70-130	06/07/2014 04:16
Toluene-d8	100	70-130	06/07/2014 04:16
4-BFB	99	70-130	06/07/2014 04:16

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Analytical Report

Client:	Endpoint	**WorkOrder:**	1406131
Project:	Tm Dublin; Crow Canyon Cleaners	**Extraction Method:**	TO15
Date Received:	6/4/14 20:24	**Analytical Method:**	TO15
Date Prepared:	6/6/14-6/7/14	**Unit:**	µg/m³

Halogenated Volatile Organic Compounds in µg/m³

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
VM-5SS	1406131-008A	Soil Gas	06/03/2014 12:03	GC24	91337

Initial Pressure (psia)	Final Pressure (psia)
13.67	27.24

Analytes	Result	RL	DF	Date Analyzed
Bromodichloromethane	ND	3.5	1	06/07/2014 04:56
Bromoform	ND	5.2	1	06/07/2014 04:56
Bromomethane	ND	2.0	1	06/07/2014 04:56
Carbon Tetrachloride	ND	3.2	1	06/07/2014 04:56
Chlorobenzene	ND	2.4	1	06/07/2014 04:56
Chloroethane	ND	1.3	1	06/07/2014 04:56
Chloroform	ND	2.4	1	06/07/2014 04:56
Chloromethane	ND	1.0	1	06/07/2014 04:56
Dibromochloromethane	ND	4.4	1	06/07/2014 04:56
1,2-Dibromo-3-chloropropane	ND	0.12	1	06/07/2014 04:56
1,2-Dibromoethane (EDB)	ND	3.9	1	06/07/2014 04:56
1,2-Dichlorobenzene	ND	3.0	1	06/07/2014 04:56
1,3-Dichlorobenzene	ND	3.0	1	06/07/2014 04:56
1,4-Dichlorobenzene	ND	3.0	1	06/07/2014 04:56
Dichlorodifluoromethane	ND	2.5	1	06/07/2014 04:56
1,1-Dichloroethane	ND	2.0	1	06/07/2014 04:56
1,2-Dichloroethane (1,2-DCA)	ND	2.0	1	06/07/2014 04:56
1,1-Dichloroethene	ND	2.0	1	06/07/2014 04:56
cis-1,2-Dichloroethene	ND	2.0	1	06/07/2014 04:56
trans-1,2-Dichloroethene	ND	2.0	1	06/07/2014 04:56
1,2-Dichloropropane	ND	2.4	1	06/07/2014 04:56
cis-1,3-Dichloropropene	ND	2.3	1	06/07/2014 04:56
trans-1,3-Dichloropropene	ND	2.3	1	06/07/2014 04:56
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	3.6	1	06/07/2014 04:56
Freon 113	ND	3.9	1	06/07/2014 04:56
Methylene chloride	ND	1.8	1	06/07/2014 04:56
1,1,1,2-Tetrachloroethane	ND	3.5	1	06/07/2014 04:56
1,1,2,2-Tetrachloroethane	ND	3.5	1	06/07/2014 04:56
Tetrachloroethene	**230**	3.4	1	06/07/2014 04:56
1,2,4-Trichlorobenzene	ND	3.8	1	06/07/2014 04:56
1,1,1-Trichloroethane	ND	2.8	1	06/07/2014 04:56
1,1,2-Trichloroethane	ND	2.8	1	06/07/2014 04:56
Trichloroethene	**3.0**	2.8	1	06/07/2014 04:56
Trichlorofluoromethane	ND	2.8	1	06/07/2014 04:56

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Analytical Report

Client:	Endpoint	**WorkOrder:**	1406131
Project:	Tm Dublin; Crow Canyon Cleaners	**Extraction Method:**	TO15
Date Received:	6/4/14 20:24	**Analytical Method:**	TO15
Date Prepared:	6/6/14-6/7/14	**Unit:**	µg/m³

Halogenated Volatile Organic Compounds in µg/m³

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
VM-5SS	**1406131-008A**	**Soil Gas**	**06/03/2014 12:03**	**GC24**	**91337**

Initial Pressure (psia)	Final Pressure (psia)
13.67	**27.24**

Analytes	Result	RL	DF	Date Analyzed
Vinyl Chloride	ND	1.3	1	06/07/2014 04:56

Surrogates	REC (%)	Limits	
1,2-DCA-d4	97	70-130	06/07/2014 04:56
Toluene-d8	101	70-130	06/07/2014 04:56
4-BFB	99	70-130	06/07/2014 04:56

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CDPH ELAP 1644 ♦ NELAP 4033ORELAP AK Analyst's Initial Angela Rydelius, Lab Manager

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Analytical Report

Client:	Endpoint	**WorkOrder:**	1406131
Project:	Tm Dublin; Crow Canyon Cleaners	**Extraction Method:**	TO15
Date Received:	6/4/14 20:24	**Analytical Method:**	TO15
Date Prepared:	6/6/14-6/7/14	**Unit:**	µg/m³

Halogenated Volatile Organic Compounds in µg/m³

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
VM-1S	**1406131-009A**	**Soil Gas**	**06/03/2014 12:36**	**GC24**	**91324**

Initial Pressure (psia)	Final Pressure (psia)
12.89	**25.70**

Analytes	Result	RL	DF	Date Analyzed
Bromodichloromethane	ND	3.5	1	06/06/2014 06:52
Bromoform	ND	5.2	1	06/06/2014 06:52
Bromomethane	ND	2.0	1	06/06/2014 06:52
Carbon Tetrachloride	ND	3.2	1	06/06/2014 06:52
Chlorobenzene	ND	2.4	1	06/06/2014 06:52
Chloroethane	ND	1.3	1	06/06/2014 06:52
Chloroform	ND	2.4	1	06/06/2014 06:52
Chloromethane	ND	1.0	1	06/06/2014 06:52
Dibromochloromethane	ND	4.4	1	06/06/2014 06:52
1,2-Dibromo-3-chloropropane	ND	0.12	1	06/06/2014 06:52
1,2-Dibromoethane (EDB)	ND	3.9	1	06/06/2014 06:52
1,2-Dichlorobenzene	ND	3.0	1	06/06/2014 06:52
1,3-Dichlorobenzene	ND	3.0	1	06/06/2014 06:52
1,4-Dichlorobenzene	ND	3.0	1	06/06/2014 06:52
Dichlorodifluoromethane	ND	2.5	1	06/06/2014 06:52
1,1-Dichloroethane	ND	2.0	1	06/06/2014 06:52
1,2-Dichloroethane (1,2-DCA)	ND	2.0	1	06/06/2014 06:52
1,1-Dichloroethene	ND	2.0	1	06/06/2014 06:52
cis-1,2-Dichloroethene	ND	2.0	1	06/06/2014 06:52
trans-1,2-Dichloroethene	ND	2.0	1	06/06/2014 06:52
1,2-Dichloropropane	ND	2.4	1	06/06/2014 06:52
cis-1,3-Dichloropropene	ND	2.3	1	06/06/2014 06:52
trans-1,3-Dichloropropene	ND	2.3	1	06/06/2014 06:52
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	3.6	1	06/06/2014 06:52
Freon 113	ND	3.9	1	06/06/2014 06:52
Methylene chloride	ND	1.8	1	06/06/2014 06:52
1,1,1,2-Tetrachloroethane	ND	3.5	1	06/06/2014 06:52
1,1,2,2-Tetrachloroethane	ND	3.5	1	06/06/2014 06:52
Tetrachloroethene	**250**	3.4	1	06/06/2014 06:52
1,2,4-Trichlorobenzene	ND	3.8	1	06/06/2014 06:52
1,1,1-Trichloroethane	ND	2.8	1	06/06/2014 06:52
1,1,2-Trichloroethane	ND	2.8	1	06/06/2014 06:52
Trichloroethene	ND	2.8	1	06/06/2014 06:52
Trichlorofluoromethane	ND	2.8	1	06/06/2014 06:52

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Analytical Report

Client:	Endpoint	**WorkOrder:**	1406131
Project:	Tm Dublin; Crow Canyon Cleaners	**Extraction Method:**	TO15
Date Received:	6/4/14 20:24	**Analytical Method:**	TO15
Date Prepared:	6/6/14-6/7/14	**Unit:**	µg/m³

Halogenated Volatile Organic Compounds in µg/m³

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
VM-1S	**1406131-009A**	**Soil Gas**	**06/03/2014 12:36**	**GC24**	**91324**

Initial Pressure (psia)	Final Pressure (psia)
12.89	**25.70**

Analytes	Result	RL	DF	Date Analyzed
Vinyl Chloride	ND	1.3	1	06/06/2014 06:52

Surrogates	REC (%)	Limits	
1,2-DCA-d4	97	70-130	06/06/2014 06:52
Toluene-d8	102	70-130	06/06/2014 06:52
4-BFB	100	70-130	06/06/2014 06:52

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Analytical Report

Client:	Endpoint	**WorkOrder:**	1406131
Project:	Tm Dublin; Crow Canyon Cleaners	**Extraction Method:**	TO15
Date Received:	6/4/14 20:24	**Analytical Method:**	TO15
Date Prepared:	6/6/14-6/7/14	**Unit:**	µg/m³

Halogenated Volatile Organic Compounds in µg/m³

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
VM-1D	1406131-010A	Soil Gas	06/03/2014 13:24	GC24	91324

Initial Pressure (psia)	Final Pressure (psia)
12.78	25.46

Analytes	Result	RL	DF	Date Analyzed
Bromodichloromethane	ND	3.5	1	06/06/2014 07:33
Bromoform	ND	5.2	1	06/06/2014 07:33
Bromomethane	ND	2.0	1	06/06/2014 07:33
Carbon Tetrachloride	ND	3.2	1	06/06/2014 07:33
Chlorobenzene	ND	2.4	1	06/06/2014 07:33
Chloroethane	ND	1.3	1	06/06/2014 07:33
Chloroform	ND	2.4	1	06/06/2014 07:33
Chloromethane	ND	1.0	1	06/06/2014 07:33
Dibromochloromethane	ND	4.4	1	06/06/2014 07:33
1,2-Dibromo-3-chloropropane	ND	0.12	1	06/06/2014 07:33
1,2-Dibromoethane (EDB)	ND	3.9	1	06/06/2014 07:33
1,2-Dichlorobenzene	ND	3.0	1	06/06/2014 07:33
1,3-Dichlorobenzene	ND	3.0	1	06/06/2014 07:33
1,4-Dichlorobenzene	ND	3.0	1	06/06/2014 07:33
Dichlorodifluoromethane	ND	2.5	1	06/06/2014 07:33
1,1-Dichloroethane	ND	2.0	1	06/06/2014 07:33
1,2-Dichloroethane (1,2-DCA)	ND	2.0	1	06/06/2014 07:33
1,1-Dichloroethene	ND	2.0	1	06/06/2014 07:33
cis-1,2-Dichloroethene	ND	2.0	1	06/06/2014 07:33
trans-1,2-Dichloroethene	ND	2.0	1	06/06/2014 07:33
1,2-Dichloropropane	ND	2.4	1	06/06/2014 07:33
cis-1,3-Dichloropropene	ND	2.3	1	06/06/2014 07:33
trans-1,3-Dichloropropene	ND	2.3	1	06/06/2014 07:33
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	3.6	1	06/06/2014 07:33
Freon 113	ND	3.9	1	06/06/2014 07:33
Methylene chloride	ND	1.8	1	06/06/2014 07:33
1,1,1,2-Tetrachloroethane	ND	3.5	1	06/06/2014 07:33
1,1,2,2-Tetrachloroethane	ND	3.5	1	06/06/2014 07:33
Tetrachloroethene	**170**	3.4	1	06/06/2014 07:33
1,2,4-Trichlorobenzene	ND	3.8	1	06/06/2014 07:33
1,1,1-Trichloroethane	ND	2.8	1	06/06/2014 07:33
1,1,2-Trichloroethane	ND	2.8	1	06/06/2014 07:33
Trichloroethene	ND	2.8	1	06/06/2014 07:33
Trichlorofluoromethane	ND	2.8	1	06/06/2014 07:33

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Analytical Report

Client:	Endpoint	**WorkOrder:**	1406131
Project:	Tm Dublin; Crow Canyon Cleaners	**Extraction Method:**	TO15
Date Received:	6/4/14 20:24	**Analytical Method:**	TO15
Date Prepared:	6/6/14-6/7/14	**Unit:**	µg/m³

Halogenated Volatile Organic Compounds in µg/m³

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
VM-1D	**1406131-010A**	**Soil Gas**	**06/03/2014 13:24**	**GC24**	**91324**

Initial Pressure (psia)	Final Pressure (psia)
12.78	**25.46**

Analytes	Result	RL	DF	Date Analyzed
Vinyl Chloride	ND	1.3	1	06/06/2014 07:33

Surrogates	REC (%)	Limits	
1,2-DCA-d4	95	70-130	06/06/2014 07:33
Toluene-d8	102	70-130	06/06/2014 07:33
4-BFB	100	70-130	06/06/2014 07:33

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Analytical Report

Client:	Endpoint	**WorkOrder:**	1406131
Project:	Tm Dublin; Crow Canyon Cleaners	**Extraction Method:**	TO15
Date Received:	6/4/14 20:24	**Analytical Method:**	TO15
Date Prepared:	6/6/14-6/7/14	**Unit:**	µg/m³

Halogenated Volatile Organic Compounds in µg/m³

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
VM-3S	1406131-011A	Soil Gas	06/03/2014 14:08	GC24	91324

Initial Pressure (psia)	Final Pressure (psia)
12.87	25.64

Analytes	Result	RL	DF	Date Analyzed
Bromodichloromethane	ND	3.5	1	06/06/2014 08:13
Bromoform	ND	5.2	1	06/06/2014 08:13
Bromomethane	ND	2.0	1	06/06/2014 08:13
Carbon Tetrachloride	ND	3.2	1	06/06/2014 08:13
Chlorobenzene	ND	2.4	1	06/06/2014 08:13
Chloroethane	ND	1.3	1	06/06/2014 08:13
Chloroform	ND	2.4	1	06/06/2014 08:13
Chloromethane	ND	1.0	1	06/06/2014 08:13
Dibromochloromethane	ND	4.4	1	06/06/2014 08:13
1,2-Dibromo-3-chloropropane	ND	0.12	1	06/06/2014 08:13
1,2-Dibromoethane (EDB)	ND	3.9	1	06/06/2014 08:13
1,2-Dichlorobenzene	ND	3.0	1	06/06/2014 08:13
1,3-Dichlorobenzene	ND	3.0	1	06/06/2014 08:13
1,4-Dichlorobenzene	ND	3.0	1	06/06/2014 08:13
Dichlorodifluoromethane	ND	2.5	1	06/06/2014 08:13
1,1-Dichloroethane	ND	2.0	1	06/06/2014 08:13
1,2-Dichloroethane (1,2-DCA)	ND	2.0	1	06/06/2014 08:13
1,1-Dichloroethene	ND	2.0	1	06/06/2014 08:13
cis-1,2-Dichloroethene	ND	2.0	1	06/06/2014 08:13
trans-1,2-Dichloroethene	ND	2.0	1	06/06/2014 08:13
1,2-Dichloropropane	ND	2.4	1	06/06/2014 08:13
cis-1,3-Dichloropropene	ND	2.3	1	06/06/2014 08:13
trans-1,3-Dichloropropene	ND	2.3	1	06/06/2014 08:13
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	3.6	1	06/06/2014 08:13
Freon 113	ND	3.9	1	06/06/2014 08:13
Methylene chloride	ND	1.8	1	06/06/2014 08:13
1,1,1,2-Tetrachloroethane	ND	3.5	1	06/06/2014 08:13
1,1,2,2-Tetrachloroethane	ND	3.5	1	06/06/2014 08:13
Tetrachloroethene	**86**	3.4	1	06/06/2014 08:13
1,2,4-Trichlorobenzene	ND	3.8	1	06/06/2014 08:13
1,1,1-Trichloroethane	ND	2.8	1	06/06/2014 08:13
1,1,2-Trichloroethane	ND	2.8	1	06/06/2014 08:13
Trichloroethene	ND	2.8	1	06/06/2014 08:13
Trichlorofluoromethane	ND	2.8	1	06/06/2014 08:13

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Analytical Report

Client:	Endpoint	**WorkOrder:**	1406131
Project:	Tm Dublin; Crow Canyon Cleaners	**Extraction Method:**	TO15
Date Received:	6/4/14 20:24	**Analytical Method:**	TO15
Date Prepared:	6/6/14-6/7/14	**Unit:**	µg/m³

Halogenated Volatile Organic Compounds in µg/m³

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
VM-3S	**1406131-011A**	**Soil Gas**	**06/03/2014 14:08**	**GC24**	**91324**

Initial Pressure (psia)	Final Pressure (psia)
12.87	**25.64**

Analytes	Result	RL	DF	Date Analyzed
Vinyl Chloride	ND	1.3	1	06/06/2014 08:13

Surrogates	REC (%)	Limits	
1,2-DCA-d4	95	70-130	06/06/2014 08:13
Toluene-d8	102	70-130	06/06/2014 08:13
4-BFB	100	70-130	06/06/2014 08:13

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Analytical Report

Client:	Endpoint	**WorkOrder:**	1406131
Project:	Tm Dublin; Crow Canyon Cleaners	**Extraction Method:**	TO15
Date Received:	6/4/14 20:24	**Analytical Method:**	TO15
Date Prepared:	6/6/14-6/7/14	**Unit:**	µg/m³

Halogenated Volatile Organic Compounds in µg/m³

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
VM-3D	1406131-012A	Soil Gas	06/03/2014	GC24	91324

Initial Pressure (psia)	Final Pressure (psia)
12.72	25.45

Analytes	Result	RL	DF	Date Analyzed
Bromodichloromethane	ND	3.5	1	06/06/2014 08:53
Bromoform	ND	5.2	1	06/06/2014 08:53
Bromomethane	ND	2.0	1	06/06/2014 08:53
Carbon Tetrachloride	ND	3.2	1	06/06/2014 08:53
Chlorobenzene	ND	2.4	1	06/06/2014 08:53
Chloroethane	ND	1.3	1	06/06/2014 08:53
Chloroform	ND	2.4	1	06/06/2014 08:53
Chloromethane	ND	1.0	1	06/06/2014 08:53
Dibromochloromethane	ND	4.4	1	06/06/2014 08:53
1,2-Dibromo-3-chloropropane	ND	0.12	1	06/06/2014 08:53
1,2-Dibromoethane (EDB)	ND	3.9	1	06/06/2014 08:53
1,2-Dichlorobenzene	ND	3.0	1	06/06/2014 08:53
1,3-Dichlorobenzene	ND	3.0	1	06/06/2014 08:53
1,4-Dichlorobenzene	ND	3.0	1	06/06/2014 08:53
Dichlorodifluoromethane	ND	2.5	1	06/06/2014 08:53
1,1-Dichloroethane	ND	2.0	1	06/06/2014 08:53
1,2-Dichloroethane (1,2-DCA)	ND	2.0	1	06/06/2014 08:53
1,1-Dichloroethene	ND	2.0	1	06/06/2014 08:53
cis-1,2-Dichloroethene	ND	2.0	1	06/06/2014 08:53
trans-1,2-Dichloroethene	ND	2.0	1	06/06/2014 08:53
1,2-Dichloropropane	ND	2.4	1	06/06/2014 08:53
cis-1,3-Dichloropropene	ND	2.3	1	06/06/2014 08:53
trans-1,3-Dichloropropene	ND	2.3	1	06/06/2014 08:53
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	3.6	1	06/06/2014 08:53
Freon 113	ND	3.9	1	06/06/2014 08:53
Methylene chloride	ND	1.8	1	06/06/2014 08:53
1,1,1,2-Tetrachloroethane	ND	3.5	1	06/06/2014 08:53
1,1,2,2-Tetrachloroethane	ND	3.5	1	06/06/2014 08:53
Tetrachloroethene	**120**	3.4	1	06/06/2014 08:53
1,2,4-Trichlorobenzene	ND	3.8	1	06/06/2014 08:53
1,1,1-Trichloroethane	ND	2.8	1	06/06/2014 08:53
1,1,2-Trichloroethane	ND	2.8	1	06/06/2014 08:53
Trichloroethene	ND	2.8	1	06/06/2014 08:53
Trichlorofluoromethane	ND	2.8	1	06/06/2014 08:53

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Analytical Report

Client:	Endpoint	**WorkOrder:**	1406131
Project:	Tm Dublin; Crow Canyon Cleaners	**Extraction Method:**	TO15
Date Received:	6/4/14 20:24	**Analytical Method:**	TO15
Date Prepared:	6/6/14-6/7/14	**Unit:**	µg/m³

Halogenated Volatile Organic Compounds in µg/m³

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
VM-3D	**1406131-012A**	**Soil Gas**	**06/03/2014**	**GC24**	**91324**

Initial Pressure (psia)	Final Pressure (psia)
12.72	**25.45**

Analytes	Result	RL	DF	Date Analyzed
Vinyl Chloride	ND	1.3	1	06/06/2014 08:53

Surrogates	REC (%)	Limits	
1,2-DCA-d4	95	70-130	06/06/2014 08:53
Toluene-d8	102	70-130	06/06/2014 08:53
4-BFB	100	70-130	06/06/2014 08:53

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Analytical Report

Client:	Endpoint	**WorkOrder:**	1406131
Project:	Tm Dublin; Crow Canyon Cleaners	**Extraction Method:**	TO15
Date Received:	6/4/14 20:24	**Analytical Method:**	TO15
Date Prepared:	6/6/14-6/7/14	**Unit:**	µg/m³

Halogenated Volatile Organic Compounds in µg/m³

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
VM-4S	**1406131-013A**	**Soil Gas**	**06/04/2014 08:57**	**GC24**	**91337**

Initial Pressure (psia)	Final Pressure (psia)
12.81	**25.53**

Analytes	Result	RL	DF	Date Analyzed
Bromodichloromethane	ND	3.5	1	06/07/2014 05:38
Bromoform	ND	5.2	1	06/07/2014 05:38
Bromomethane	ND	2.0	1	06/07/2014 05:38
Carbon Tetrachloride	ND	3.2	1	06/07/2014 05:38
Chlorobenzene	ND	2.4	1	06/07/2014 05:38
Chloroethane	ND	1.3	1	06/07/2014 05:38
Chloroform	ND	2.4	1	06/07/2014 05:38
Chloromethane	ND	1.0	1	06/07/2014 05:38
Dibromochloromethane	ND	4.4	1	06/07/2014 05:38
1,2-Dibromo-3-chloropropane	ND	0.12	1	06/07/2014 05:38
1,2-Dibromoethane (EDB)	ND	3.9	1	06/07/2014 05:38
1,2-Dichlorobenzene	ND	3.0	1	06/07/2014 05:38
1,3-Dichlorobenzene	ND	3.0	1	06/07/2014 05:38
1,4-Dichlorobenzene	ND	3.0	1	06/07/2014 05:38
Dichlorodifluoromethane	ND	2.5	1	06/07/2014 05:38
1,1-Dichloroethane	ND	2.0	1	06/07/2014 05:38
1,2-Dichloroethane (1,2-DCA)	ND	2.0	1	06/07/2014 05:38
1,1-Dichloroethene	ND	2.0	1	06/07/2014 05:38
cis-1,2-Dichloroethene	ND	2.0	1	06/07/2014 05:38
trans-1,2-Dichloroethene	ND	2.0	1	06/07/2014 05:38
1,2-Dichloropropane	ND	2.4	1	06/07/2014 05:38
cis-1,3-Dichloropropene	ND	2.3	1	06/07/2014 05:38
trans-1,3-Dichloropropene	ND	2.3	1	06/07/2014 05:38
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	3.6	1	06/07/2014 05:38
Freon 113	ND	3.9	1	06/07/2014 05:38
Methylene chloride	ND	1.8	1	06/07/2014 05:38
1,1,1,2-Tetrachloroethane	ND	3.5	1	06/07/2014 05:38
1,1,2,2-Tetrachloroethane	ND	3.5	1	06/07/2014 05:38
Tetrachloroethene	**200**	3.4	1	06/07/2014 05:38
1,2,4-Trichlorobenzene	ND	3.8	1	06/07/2014 05:38
1,1,1-Trichloroethane	ND	2.8	1	06/07/2014 05:38
1,1,2-Trichloroethane	ND	2.8	1	06/07/2014 05:38
Trichloroethene	ND	2.8	1	06/07/2014 05:38
Trichlorofluoromethane	ND	2.8	1	06/07/2014 05:38

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Analytical Report

Client:	Endpoint	**WorkOrder:**	1406131
Project:	Tm Dublin; Crow Canyon Cleaners	**Extraction Method:**	TO15
Date Received:	6/4/14 20:24	**Analytical Method:**	TO15
Date Prepared:	6/6/14-6/7/14	**Unit:**	µg/m³

Halogenated Volatile Organic Compounds in µg/m³

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
VM-4S	**1406131-013A**	**Soil Gas**	**06/04/2014 08:57**	**GC24**	**91337**

Initial Pressure (psia)	Final Pressure (psia)
12.81	**25.53**

Analytes	Result	RL	DF	Date Analyzed
Vinyl Chloride	ND	1.3	1	06/07/2014 05:38

Surrogates	REC (%)	Limits	
1,2-DCA-d4	96	70-130	06/07/2014 05:38
Toluene-d8	103	70-130	06/07/2014 05:38
4-BFB	100	70-130	06/07/2014 05:38

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Analytical Report

Client:	Endpoint	**WorkOrder:**	1406131
Project:	Tm Dublin; Crow Canyon Cleaners	**Extraction Method:**	TO15
Date Received:	6/4/14 20:24	**Analytical Method:**	TO15
Date Prepared:	6/6/14-6/7/14	**Unit:**	µg/m³

Halogenated Volatile Organic Compounds in µg/m³

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
VE-3S	**1406131-014A**	**Soil Gas**	**06/04/2014 09:18**	**GC24**	**91324**

Initial Pressure (psia)	Final Pressure (psia)
13.13	**26.17**

Analytes	Result	RL	DF	Date Analyzed
Bromodichloromethane	ND	3.5	1	06/06/2014 09:33
Bromoform	ND	5.2	1	06/06/2014 09:33
Bromomethane	ND	2.0	1	06/06/2014 09:33
Carbon Tetrachloride	ND	3.2	1	06/06/2014 09:33
Chlorobenzene	ND	2.4	1	06/06/2014 09:33
Chloroethane	ND	1.3	1	06/06/2014 09:33
Chloroform	ND	2.4	1	06/06/2014 09:33
Chloromethane	ND	1.0	1	06/06/2014 09:33
Dibromochloromethane	ND	4.4	1	06/06/2014 09:33
1,2-Dibromo-3-chloropropane	ND	0.12	1	06/06/2014 09:33
1,2-Dibromoethane (EDB)	ND	3.9	1	06/06/2014 09:33
1,2-Dichlorobenzene	ND	3.0	1	06/06/2014 09:33
1,3-Dichlorobenzene	ND	3.0	1	06/06/2014 09:33
1,4-Dichlorobenzene	ND	3.0	1	06/06/2014 09:33
Dichlorodifluoromethane	ND	2.5	1	06/06/2014 09:33
1,1-Dichloroethane	ND	2.0	1	06/06/2014 09:33
1,2-Dichloroethane (1,2-DCA)	ND	2.0	1	06/06/2014 09:33
1,1-Dichloroethene	ND	2.0	1	06/06/2014 09:33
cis-1,2-Dichloroethene	ND	2.0	1	06/06/2014 09:33
trans-1,2-Dichloroethene	ND	2.0	1	06/06/2014 09:33
1,2-Dichloropropane	ND	2.4	1	06/06/2014 09:33
cis-1,3-Dichloropropene	ND	2.3	1	06/06/2014 09:33
trans-1,3-Dichloropropene	ND	2.3	1	06/06/2014 09:33
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	3.6	1	06/06/2014 09:33
Freon 113	ND	3.9	1	06/06/2014 09:33
Methylene chloride	ND	1.8	1	06/06/2014 09:33
1,1,1,2-Tetrachloroethane	ND	3.5	1	06/06/2014 09:33
1,1,2,2-Tetrachloroethane	ND	3.5	1	06/06/2014 09:33
Tetrachloroethene	**77**	3.4	1	06/06/2014 09:33
1,2,4-Trichlorobenzene	ND	3.8	1	06/06/2014 09:33
1,1,1-Trichloroethane	ND	2.8	1	06/06/2014 09:33
1,1,2-Trichloroethane	ND	2.8	1	06/06/2014 09:33
Trichloroethene	ND	2.8	1	06/06/2014 09:33
Trichlorofluoromethane	ND	2.8	1	06/06/2014 09:33

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Analytical Report

Client:	Endpoint	**WorkOrder:**	1406131
Project:	Tm Dublin; Crow Canyon Cleaners	**Extraction Method:**	TO15
Date Received:	6/4/14 20:24	**Analytical Method:**	TO15
Date Prepared:	6/6/14-6/7/14	**Unit:**	µg/m³

Halogenated Volatile Organic Compounds in µg/m³

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
VE-3S	**1406131-014A**	**Soil Gas**	**06/04/2014 09:18**	**GC24**	**91324**

Initial Pressure (psia)	Final Pressure (psia)
13.13	**26.17**

Analytes	Result	RL	DF	Date Analyzed
Vinyl Chloride	ND	1.3	1	06/06/2014 09:33

Surrogates	REC (%)	Limits	
1,2-DCA-d4	95	70-130	06/06/2014 09:33
Toluene-d8	102	70-130	06/06/2014 09:33
4-BFB	100	70-130	06/06/2014 09:33

(Cont.)

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Analytical Report

Client:	Endpoint	**WorkOrder:**	1406131
Project:	Tm Dublin; Crow Canyon Cleaners	**Extraction Method:**	TO15
Date Received:	6/4/14 20:24	**Analytical Method:**	TO15
Date Prepared:	6/6/14-6/7/14	**Unit:**	µg/m³

Halogenated Volatile Organic Compounds in µg/m³

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
VE-3D	1406131-015A	Soil Gas	06/04/2014 10:05	GC24	91324

Initial Pressure (psia)	Final Pressure (psia)
12.67	25.27

Analytes	Result	RL	DF	Date Analyzed
Bromodichloromethane	ND	3.5	1	06/06/2014 10:15
Bromoform	ND	5.2	1	06/06/2014 10:15
Bromomethane	ND	2.0	1	06/06/2014 10:15
Carbon Tetrachloride	ND	3.2	1	06/06/2014 10:15
Chlorobenzene	ND	2.4	1	06/06/2014 10:15
Chloroethane	ND	1.3	1	06/06/2014 10:15
Chloroform	ND	2.4	1	06/06/2014 10:15
Chloromethane	ND	1.0	1	06/06/2014 10:15
Dibromochloromethane	ND	4.4	1	06/06/2014 10:15
1,2-Dibromo-3-chloropropane	ND	0.12	1	06/06/2014 10:15
1,2-Dibromoethane (EDB)	ND	3.9	1	06/06/2014 10:15
1,2-Dichlorobenzene	ND	3.0	1	06/06/2014 10:15
1,3-Dichlorobenzene	ND	3.0	1	06/06/2014 10:15
1,4-Dichlorobenzene	ND	3.0	1	06/06/2014 10:15
Dichlorodifluoromethane	**2.8**	2.5	1	06/06/2014 10:15
1,1-Dichloroethane	ND	2.0	1	06/06/2014 10:15
1,2-Dichloroethane (1,2-DCA)	ND	2.0	1	06/06/2014 10:15
1,1-Dichloroethene	ND	2.0	1	06/06/2014 10:15
cis-1,2-Dichloroethene	ND	2.0	1	06/06/2014 10:15
trans-1,2-Dichloroethene	ND	2.0	1	06/06/2014 10:15
1,2-Dichloropropane	ND	2.4	1	06/06/2014 10:15
cis-1,3-Dichloropropene	ND	2.3	1	06/06/2014 10:15
trans-1,3-Dichloropropene	ND	2.3	1	06/06/2014 10:15
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	3.6	1	06/06/2014 10:15
Freon 113	ND	3.9	1	06/06/2014 10:15
Methylene chloride	ND	1.8	1	06/06/2014 10:15
1,1,1,2-Tetrachloroethane	ND	3.5	1	06/06/2014 10:15
1,1,2,2-Tetrachloroethane	ND	3.5	1	06/06/2014 10:15
Tetrachloroethene	**82**	3.4	1	06/06/2014 10:15
1,2,4-Trichlorobenzene	ND	3.8	1	06/06/2014 10:15
1,1,1-Trichloroethane	ND	2.8	1	06/06/2014 10:15
1,1,2-Trichloroethane	ND	2.8	1	06/06/2014 10:15
Trichloroethene	ND	2.8	1	06/06/2014 10:15
Trichlorofluoromethane	ND	2.8	1	06/06/2014 10:15

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Analytical Report

Client:	Endpoint	**WorkOrder:**	1406131
Project:	Tm Dublin; Crow Canyon Cleaners	**Extraction Method:**	TO15
Date Received:	6/4/14 20:24	**Analytical Method:**	TO15
Date Prepared:	6/6/14-6/7/14	**Unit:**	µg/m³

Halogenated Volatile Organic Compounds in µg/m³

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
VE-3D	**1406131-015A**	**Soil Gas**	**06/04/2014 10:05**	**GC24**	**91324**

Initial Pressure (psia)	Final Pressure (psia)
12.67	**25.27**

Analytes	Result	RL	DF	Date Analyzed
Vinyl Chloride	ND	1.3	1	06/06/2014 10:15

Surrogates	REC (%)	Limits	
1,2-DCA-d4	97	70-130	06/06/2014 10:15
Toluene-d8	102	70-130	06/06/2014 10:15
4-BFB	100	70-130	06/06/2014 10:15

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Analytical Report

Client:	Endpoint	**WorkOrder:**	1406131
Project:	Tm Dublin; Crow Canyon Cleaners	**Extraction Method:**	TO15
Date Received:	6/4/14 20:24	**Analytical Method:**	TO15
Date Prepared:	6/6/14-6/7/14	**Unit:**	µg/m³

Halogenated Volatile Organic Compounds in µg/m³

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
VE-1D	**1406131-016A**	**Soil Gas**	**06/04/2014 10:55**	**GC24**	**91337**

Initial Pressure (psia)	Final Pressure (psia)
12.71	**25.33**

Analytes	Result	RL	DF	Date Analyzed
Bromodichloromethane	ND	3.5	1	06/07/2014 06:18
Bromoform	ND	5.2	1	06/07/2014 06:18
Bromomethane	ND	2.0	1	06/07/2014 06:18
Carbon Tetrachloride	ND	3.2	1	06/07/2014 06:18
Chlorobenzene	ND	2.4	1	06/07/2014 06:18
Chloroethane	ND	1.3	1	06/07/2014 06:18
Chloroform	ND	2.4	1	06/07/2014 06:18
Chloromethane	ND	1.0	1	06/07/2014 06:18
Dibromochloromethane	ND	4.4	1	06/07/2014 06:18
1,2-Dibromo-3-chloropropane	ND	0.12	1	06/07/2014 06:18
1,2-Dibromoethane (EDB)	ND	3.9	1	06/07/2014 06:18
1,2-Dichlorobenzene	ND	3.0	1	06/07/2014 06:18
1,3-Dichlorobenzene	ND	3.0	1	06/07/2014 06:18
1,4-Dichlorobenzene	ND	3.0	1	06/07/2014 06:18
Dichlorodifluoromethane	ND	2.5	1	06/07/2014 06:18
1,1-Dichloroethane	ND	2.0	1	06/07/2014 06:18
1,2-Dichloroethane (1,2-DCA)	ND	2.0	1	06/07/2014 06:18
1,1-Dichloroethene	ND	2.0	1	06/07/2014 06:18
cis-1,2-Dichloroethene	ND	2.0	1	06/07/2014 06:18
trans-1,2-Dichloroethene	ND	2.0	1	06/07/2014 06:18
1,2-Dichloropropane	ND	2.4	1	06/07/2014 06:18
cis-1,3-Dichloropropene	ND	2.3	1	06/07/2014 06:18
trans-1,3-Dichloropropene	ND	2.3	1	06/07/2014 06:18
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	3.6	1	06/07/2014 06:18
Freon 113	ND	3.9	1	06/07/2014 06:18
Methylene chloride	ND	1.8	1	06/07/2014 06:18
1,1,1,2-Tetrachloroethane	ND	3.5	1	06/07/2014 06:18
1,1,2,2-Tetrachloroethane	ND	3.5	1	06/07/2014 06:18
Tetrachloroethene	**600**	3.4	1	06/07/2014 06:18
1,2,4-Trichlorobenzene	ND	3.8	1	06/07/2014 06:18
1,1,1-Trichloroethane	ND	2.8	1	06/07/2014 06:18
1,1,2-Trichloroethane	ND	2.8	1	06/07/2014 06:18
Trichloroethene	**6.0**	2.8	1	06/07/2014 06:18
Trichlorofluoromethane	ND	2.8	1	06/07/2014 06:18

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Analytical Report

Client:	Endpoint	**WorkOrder:**	1406131
Project:	Tm Dublin; Crow Canyon Cleaners	**Extraction Method:**	TO15
Date Received:	6/4/14 20:24	**Analytical Method:**	TO15
Date Prepared:	6/6/14-6/7/14	**Unit:**	µg/m³

Halogenated Volatile Organic Compounds in µg/m³

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
VE-1D	**1406131-016A**	**Soil Gas**	**06/04/2014 10:55**	**GC24**	**91337**

Initial Pressure (psia)	Final Pressure (psia)
12.71	**25.33**

Analytes	Result	RL	DF	Date Analyzed
Vinyl Chloride	ND	1.3	1	06/07/2014 06:18

Surrogates	REC (%)	Limits	
1,2-DCA-d4	96	70-130	06/07/2014 06:18
Toluene-d8	101	70-130	06/07/2014 06:18
4-BFB	99	70-130	06/07/2014 06:18

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Analytical Report

Client:	Endpoint	**WorkOrder:**	1406131
Project:	Tm Dublin; Crow Canyon Cleaners	**Extraction Method:**	TO15
Date Received:	6/4/14 20:24	**Analytical Method:**	TO15
Date Prepared:	6/6/14-6/7/14	**Unit:**	µg/m³

Halogenated Volatile Organic Compounds in µg/m³

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
VE-1S	**1406131-017A**	**Soil Gas**	**06/04/2014 11:17**	**GC24**	**91337**

Initial Pressure (psia)	Final Pressure (psia)
12.88	**25.66**

Analytes	Result	RL	DF	Date Analyzed
Bromodichloromethane	ND	3.5	1	06/07/2014 06:58
Bromoform	ND	5.2	1	06/07/2014 06:58
Bromomethane	ND	2.0	1	06/07/2014 06:58
Carbon Tetrachloride	ND	3.2	1	06/07/2014 06:58
Chlorobenzene	ND	2.4	1	06/07/2014 06:58
Chloroethane	ND	1.3	1	06/07/2014 06:58
Chloroform	ND	2.4	1	06/07/2014 06:58
Chloromethane	ND	1.0	1	06/07/2014 06:58
Dibromochloromethane	ND	4.4	1	06/07/2014 06:58
1,2-Dibromo-3-chloropropane	ND	0.12	1	06/07/2014 06:58
1,2-Dibromoethane (EDB)	ND	3.9	1	06/07/2014 06:58
1,2-Dichlorobenzene	ND	3.0	1	06/07/2014 06:58
1,3-Dichlorobenzene	ND	3.0	1	06/07/2014 06:58
1,4-Dichlorobenzene	ND	3.0	1	06/07/2014 06:58
Dichlorodifluoromethane	ND	2.5	1	06/07/2014 06:58
1,1-Dichloroethane	ND	2.0	1	06/07/2014 06:58
1,2-Dichloroethane (1,2-DCA)	ND	2.0	1	06/07/2014 06:58
1,1-Dichloroethene	ND	2.0	1	06/07/2014 06:58
cis-1,2-Dichloroethene	ND	2.0	1	06/07/2014 06:58
trans-1,2-Dichloroethene	ND	2.0	1	06/07/2014 06:58
1,2-Dichloropropane	ND	2.4	1	06/07/2014 06:58
cis-1,3-Dichloropropene	ND	2.3	1	06/07/2014 06:58
trans-1,3-Dichloropropene	ND	2.3	1	06/07/2014 06:58
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	3.6	1	06/07/2014 06:58
Freon 113	ND	3.9	1	06/07/2014 06:58
Methylene chloride	ND	1.8	1	06/07/2014 06:58
1,1,1,2-Tetrachloroethane	ND	3.5	1	06/07/2014 06:58
1,1,2,2-Tetrachloroethane	ND	3.5	1	06/07/2014 06:58
Tetrachloroethene	**2500**	14	4	06/07/2014 00:20
1,2,4-Trichlorobenzene	ND	3.8	1	06/07/2014 06:58
1,1,1-Trichloroethane	ND	2.8	1	06/07/2014 06:58
1,1,2-Trichloroethane	ND	2.8	1	06/07/2014 06:58
Trichloroethene	**8.1**	2.8	1	06/07/2014 06:58
Trichlorofluoromethane	ND	2.8	1	06/07/2014 06:58

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Analytical Report

Client:	Endpoint	**WorkOrder:**	1406131
Project:	Tm Dublin; Crow Canyon Cleaners	**Extraction Method:**	TO15
Date Received:	6/4/14 20:24	**Analytical Method:**	TO15
Date Prepared:	6/6/14-6/7/14	**Unit:**	µg/m³

Halogenated Volatile Organic Compounds in µg/m³

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
VE-1S	**1406131-017A**	**Soil Gas**	**06/04/2014 11:17**	**GC24**	**91337**

Initial Pressure (psia)	Final Pressure (psia)
12.88	**25.66**

Analytes	Result	RL	DF	Date Analyzed
Vinyl Chloride	ND	1.3	1	06/07/2014 06:58

Surrogates	REC (%)	Limits	
1,2-DCA-d4	97	70-130	06/07/2014 06:58
Toluene-d8	102	70-130	06/07/2014 06:58
4-BFB	100	70-130	06/07/2014 06:58

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Analytical Report

Client:	Endpoint	**WorkOrder:**	1406131
Project:	Tm Dublin; Crow Canyon Cleaners	**Extraction Method:**	TO15
Date Received:	6/4/14 20:24	**Analytical Method:**	TO15
Date Prepared:	6/6/14-6/7/14	**Unit:**	µg/m³

Halogenated Volatile Organic Compounds in µg/m³

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
VE-2D	**1406131-018A**	**Soil Gas**	**06/04/2014 11:57**	**GC24**	**91337**

Initial Pressure (psia)	Final Pressure (psia)
12.54	**24.99**

Analytes	Result	RL	DF	Date Analyzed
Bromodichloromethane	ND	3.5	1	06/07/2014 07:41
Bromoform	ND	5.2	1	06/07/2014 07:41
Bromomethane	ND	2.0	1	06/07/2014 07:41
Carbon Tetrachloride	ND	3.2	1	06/07/2014 07:41
Chlorobenzene	ND	2.4	1	06/07/2014 07:41
Chloroethane	ND	1.3	1	06/07/2014 07:41
Chloroform	ND	2.4	1	06/07/2014 07:41
Chloromethane	ND	1.0	1	06/07/2014 07:41
Dibromochloromethane	ND	4.4	1	06/07/2014 07:41
1,2-Dibromo-3-chloropropane	ND	0.12	1	06/07/2014 07:41
1,2-Dibromoethane (EDB)	ND	3.9	1	06/07/2014 07:41
1,2-Dichlorobenzene	ND	3.0	1	06/07/2014 07:41
1,3-Dichlorobenzene	ND	3.0	1	06/07/2014 07:41
1,4-Dichlorobenzene	ND	3.0	1	06/07/2014 07:41
Dichlorodifluoromethane	ND	2.5	1	06/07/2014 07:41
1,1-Dichloroethane	ND	2.0	1	06/07/2014 07:41
1,2-Dichloroethane (1,2-DCA)	ND	2.0	1	06/07/2014 07:41
1,1-Dichloroethene	ND	2.0	1	06/07/2014 07:41
cis-1,2-Dichloroethene	ND	2.0	1	06/07/2014 07:41
trans-1,2-Dichloroethene	ND	2.0	1	06/07/2014 07:41
1,2-Dichloropropane	ND	2.4	1	06/07/2014 07:41
cis-1,3-Dichloropropene	ND	2.3	1	06/07/2014 07:41
trans-1,3-Dichloropropene	ND	2.3	1	06/07/2014 07:41
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	3.6	1	06/07/2014 07:41
Freon 113	ND	3.9	1	06/07/2014 07:41
Methylene chloride	ND	1.8	1	06/07/2014 07:41
1,1,1,2-Tetrachloroethane	ND	3.5	1	06/07/2014 07:41
1,1,2,2-Tetrachloroethane	ND	3.5	1	06/07/2014 07:41
Tetrachloroethene	**670**	3.4	1	06/07/2014 07:41
1,2,4-Trichlorobenzene	ND	3.8	1	06/07/2014 07:41
1,1,1-Trichloroethane	ND	2.8	1	06/07/2014 07:41
1,1,2-Trichloroethane	ND	2.8	1	06/07/2014 07:41
Trichloroethene	ND	2.8	1	06/07/2014 07:41
Trichlorofluoromethane	ND	2.8	1	06/07/2014 07:41

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Analytical Report

Client:	Endpoint	**WorkOrder:**	1406131
Project:	Tm Dublin; Crow Canyon Cleaners	**Extraction Method:**	TO15
Date Received:	6/4/14 20:24	**Analytical Method:**	TO15
Date Prepared:	6/6/14-6/7/14	**Unit:**	µg/m³

Halogenated Volatile Organic Compounds in µg/m³

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
VE-2D	**1406131-018A**	**Soil Gas**	**06/04/2014 11:57**	**GC24**	**91337**

Initial Pressure (psia)	Final Pressure (psia)
12.54	**24.99**

Analytes	Result	RL	DF	Date Analyzed
Vinyl Chloride	ND	1.3	1	06/07/2014 07:41

Surrogates	REC (%)	Limits	
1,2-DCA-d4	97	70-130	06/07/2014 07:41
Toluene-d8	103	70-130	06/07/2014 07:41
4-BFB	100	70-130	06/07/2014 07:41

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Analytical Report

Client:	Endpoint	**WorkOrder:**	1406131
Project:	Tm Dublin; Crow Canyon Cleaners	**Extraction Method:**	TO15
Date Received:	6/4/14 20:24	**Analytical Method:**	TO15
Date Prepared:	6/6/14-6/7/14	**Unit:**	µg/m³

Halogenated Volatile Organic Compounds in µg/m³

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
VE-2S	**1406131-019A**	**Soil Gas**	**06/04/2014 12:19**	**GC24**	**91337**

Initial Pressure (psia)	Final Pressure (psia)
12.41	**24.72**

Analytes	Result	RL	DF	Date Analyzed
Bromodichloromethane	ND	3.5	1	06/07/2014 08:21
Bromoform	ND	5.2	1	06/07/2014 08:21
Bromomethane	ND	2.0	1	06/07/2014 08:21
Carbon Tetrachloride	ND	3.2	1	06/07/2014 08:21
Chlorobenzene	ND	2.4	1	06/07/2014 08:21
Chloroethane	ND	1.3	1	06/07/2014 08:21
Chloroform	ND	2.4	1	06/07/2014 08:21
Chloromethane	ND	1.0	1	06/07/2014 08:21
Dibromochloromethane	ND	4.4	1	06/07/2014 08:21
1,2-Dibromo-3-chloropropane	ND	0.12	1	06/07/2014 08:21
1,2-Dibromoethane (EDB)	ND	3.9	1	06/07/2014 08:21
1,2-Dichlorobenzene	ND	3.0	1	06/07/2014 08:21
1,3-Dichlorobenzene	ND	3.0	1	06/07/2014 08:21
1,4-Dichlorobenzene	ND	3.0	1	06/07/2014 08:21
Dichlorodifluoromethane	ND	2.5	1	06/07/2014 08:21
1,1-Dichloroethane	ND	2.0	1	06/07/2014 08:21
1,2-Dichloroethane (1,2-DCA)	ND	2.0	1	06/07/2014 08:21
1,1-Dichloroethene	ND	2.0	1	06/07/2014 08:21
cis-1,2-Dichloroethene	ND	2.0	1	06/07/2014 08:21
trans-1,2-Dichloroethene	ND	2.0	1	06/07/2014 08:21
1,2-Dichloropropane	ND	2.4	1	06/07/2014 08:21
cis-1,3-Dichloropropene	ND	2.3	1	06/07/2014 08:21
trans-1,3-Dichloropropene	ND	2.3	1	06/07/2014 08:21
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	3.6	1	06/07/2014 08:21
Freon 113	ND	3.9	1	06/07/2014 08:21
Methylene chloride	ND	1.8	1	06/07/2014 08:21
1,1,1,2-Tetrachloroethane	ND	3.5	1	06/07/2014 08:21
1,1,2,2-Tetrachloroethane	ND	3.5	1	06/07/2014 08:21
Tetrachloroethene	**800**	3.4	1	06/07/2014 08:21
1,2,4-Trichlorobenzene	ND	3.8	1	06/07/2014 08:21
1,1,1-Trichloroethane	ND	2.8	1	06/07/2014 08:21
1,1,2-Trichloroethane	ND	2.8	1	06/07/2014 08:21
Trichloroethene	**20**	2.8	1	06/07/2014 08:21
Trichlorofluoromethane	ND	2.8	1	06/07/2014 08:21

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Analytical Report

Client:	Endpoint	**WorkOrder:**	1406131
Project:	Tm Dublin; Crow Canyon Cleaners	**Extraction Method:**	TO15
Date Received:	6/4/14 20:24	**Analytical Method:**	TO15
Date Prepared:	6/6/14-6/7/14	**Unit:**	µg/m³

Halogenated Volatile Organic Compounds in µg/m³

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
VE-2S	**1406131-019A**	**Soil Gas**	**06/04/2014 12:19**	**GC24**	**91337**

Initial Pressure (psia)	Final Pressure (psia)
12.41	**24.72**

Analytes	Result	RL	DF	Date Analyzed
Vinyl Chloride	ND	1.3	1	06/07/2014 08:21

Surrogates	REC (%)	Limits	
1,2-DCA-d4	96	70-130	06/07/2014 08:21
Toluene-d8	102	70-130	06/07/2014 08:21
4-BFB	100	70-130	06/07/2014 08:21

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CDPH ELAP 1644 ♦ NELAP 4033ORELAP AK Analyst's Initial  Angela Rydelius, Lab Manager

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Analytical Report

Client:	Endpoint	**WorkOrder:**	1406131
Project:	Tm Dublin; Crow Canyon Cleaners	**Extraction Method:**	TO15
Date Received:	6/4/14 20:24	**Analytical Method:**	TO15
Date Prepared:	6/6/14-6/7/14	**Unit:**	µg/m³

Halogenated Volatile Organic Compounds in µg/m³

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
VM-9SS	1406131-020A	Soil Gas	06/04/2014 12:28	GC24	91337

Initial Pressure (psia)	Final Pressure (psia)
12.73	25.37

Analytes	Result	RL	DF	Date Analyzed
Bromodichloromethane	ND	3.5	1	06/07/2014 09:03
Bromoform	ND	5.2	1	06/07/2014 09:03
Bromomethane	ND	2.0	1	06/07/2014 09:03
Carbon Tetrachloride	ND	3.2	1	06/07/2014 09:03
Chlorobenzene	ND	2.4	1	06/07/2014 09:03
Chloroethane	ND	1.3	1	06/07/2014 09:03
Chloroform	ND	2.4	1	06/07/2014 09:03
Chloromethane	ND	1.0	1	06/07/2014 09:03
Dibromochloromethane	ND	4.4	1	06/07/2014 09:03
1,2-Dibromo-3-chloropropane	ND	0.12	1	06/07/2014 09:03
1,2-Dibromoethane (EDB)	ND	3.9	1	06/07/2014 09:03
1,2-Dichlorobenzene	ND	3.0	1	06/07/2014 09:03
1,3-Dichlorobenzene	ND	3.0	1	06/07/2014 09:03
1,4-Dichlorobenzene	ND	3.0	1	06/07/2014 09:03
Dichlorodifluoromethane	ND	2.5	1	06/07/2014 09:03
1,1-Dichloroethane	ND	2.0	1	06/07/2014 09:03
1,2-Dichloroethane (1,2-DCA)	ND	2.0	1	06/07/2014 09:03
1,1-Dichloroethene	ND	2.0	1	06/07/2014 09:03
cis-1,2-Dichloroethene	**3.7**	2.0	1	06/07/2014 09:03
trans-1,2-Dichloroethene	**2.6**	2.0	1	06/07/2014 09:03
1,2-Dichloropropane	ND	2.4	1	06/07/2014 09:03
cis-1,3-Dichloropropene	ND	2.3	1	06/07/2014 09:03
trans-1,3-Dichloropropene	ND	2.3	1	06/07/2014 09:03
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	3.6	1	06/07/2014 09:03
Freon 113	ND	3.9	1	06/07/2014 09:03
Methylene chloride	ND	1.8	1	06/07/2014 09:03
1,1,1,2-Tetrachloroethane	ND	3.5	1	06/07/2014 09:03
1,1,2,2-Tetrachloroethane	ND	3.5	1	06/07/2014 09:03
Tetrachloroethene	**3200**	14	4	06/07/2014 02:17
1,2,4-Trichlorobenzene	ND	3.8	1	06/07/2014 09:03
1,1,1-Trichloroethane	ND	2.8	1	06/07/2014 09:03
1,1,2-Trichloroethane	ND	2.8	1	06/07/2014 09:03
Trichloroethene	**34**	2.8	1	06/07/2014 09:03
Trichlorofluoromethane	ND	2.8	1	06/07/2014 09:03

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Analytical Report

Client:	Endpoint	**WorkOrder:**	1406131
Project:	Tm Dublin; Crow Canyon Cleaners	**Extraction Method:**	TO15
Date Received:	6/4/14 20:24	**Analytical Method:**	TO15
Date Prepared:	6/6/14-6/7/14	**Unit:**	µg/m³

Halogenated Volatile Organic Compounds in µg/m³

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
VM-9SS	**1406131-020A**	**Soil Gas**	**06/04/2014 12:28**	**GC24**	**91337**

Initial Pressure (psia)	Final Pressure (psia)
12.73	**25.37**

Analytes	Result	RL	DF	Date Analyzed
Vinyl Chloride	ND	1.3	1	06/07/2014 09:03

Surrogates	REC (%)	Limits	
1,2-DCA-d4	97	70-130	06/07/2014 09:03
Toluene-d8	102	70-130	06/07/2014 09:03
4-BFB	98	70-130	06/07/2014 09:03

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Analytical Report

Client:	Endpoint	**WorkOrder:**	1406131
Project:	Tm Dublin; Crow Canyon Cleaners	**Extraction Method:**	TO15
Date Received:	6/4/14 20:24	**Analytical Method:**	TO15
Date Prepared:	6/6/14-6/7/14	**Unit:**	µg/m³

Leak Check Compound

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
VM-7	**1406131-001A**	**Soil Gas**	**06/03/2014 09:15**	**GC24**	**91324**

Initial Pressure (psia)	Final Pressure (psia)
12.88	**25.68**

Analytes	Result	RL	DF	Date Analyzed
Isopropyl Alcohol	ND	50	1	06/06/2014 03:26

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
VM-8	**1406131-002A**	**Soil Gas**	**06/03/2014 09:41**	**GC24**	**91324**

Initial Pressure (psia)	Final Pressure (psia)
12.93	**25.76**

Analytes	Result	RL	DF	Date Analyzed
Isopropyl Alcohol	ND	50	1	06/06/2014 04:09

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
VM-10	**1406131-003A**	**Soil Gas**	**06/03/2014 10:05**	**GC24**	**91324**

Initial Pressure (psia)	Final Pressure (psia)
13.06	**26.03**

Analytes	Result	RL	DF	Date Analyzed
Isopropyl Alcohol	ND	50	1	06/06/2014 04:49

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Analytical Report

Client:	Endpoint	**WorkOrder:**	1406131
Project:	Tm Dublin; Crow Canyon Cleaners	**Extraction Method:**	TO15
Date Received:	6/4/14 20:24	**Analytical Method:**	TO15
Date Prepared:	6/6/14-6/7/14	**Unit:**	µg/m³

Leak Check Compound

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
VM-11	**1406131-004A**	**Soil Gas**	**06/03/2014 10:33**	**GC24**	**91324**

Initial Pressure (psia)	Final Pressure (psia)
12.94	**25.80**

Analytes	Result	RL	DF	Date Analyzed
Isopropyl Alcohol	ND	50	1	06/06/2014 05:29

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
VM-12	**1406131-005A**	**Soil Gas**	**06/03/2014 10:59**	**GC24**	**91324**

Initial Pressure (psia)	Final Pressure (psia)
12.29	**24.49**

Analytes	Result	RL	DF	Date Analyzed
Isopropyl Alcohol	ND	50	1	06/06/2014 06:12

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
VM-1S	**1406131-009A**	**Soil Gas**	**06/03/2014 12:36**	**GC24**	**91324**

Initial Pressure (psia)	Final Pressure (psia)
12.89	**25.70**

Analytes	Result	RL	DF	Date Analyzed
Isopropyl Alcohol	ND	50	1	06/06/2014 06:52

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Analytical Report

Client:	Endpoint	**WorkOrder:**	1406131
Project:	Tm Dublin; Crow Canyon Cleaners	**Extraction Method:**	TO15
Date Received:	6/4/14 20:24	**Analytical Method:**	TO15
Date Prepared:	6/6/14-6/7/14	**Unit:**	µg/m³

Leak Check Compound

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
VM-1D	1406131-010A	Soil Gas	06/03/2014 13:24	GC24	91324

Initial Pressure (psia)	Final Pressure (psia)
12.78	25.46

Analytes	Result	RL	DF	Date Analyzed
Isopropyl Alcohol	ND	50	1	06/06/2014 07:33

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
VM-3S	1406131-011A	Soil Gas	06/03/2014 14:08	GC24	91324

Initial Pressure (psia)	Final Pressure (psia)
12.87	25.64

Analytes	Result	RL	DF	Date Analyzed
Isopropyl Alcohol	ND	50	1	06/06/2014 08:13

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
VM-3D	1406131-012A	Soil Gas	06/03/2014	GC24	91324

Initial Pressure (psia)	Final Pressure (psia)
12.72	25.45

Analytes	Result	RL	DF	Date Analyzed
Isopropyl Alcohol	ND	50	1	06/06/2014 08:53

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Analytical Report

Client:	Endpoint	**WorkOrder:**	1406131
Project:	Tm Dublin; Crow Canyon Cleaners	**Extraction Method:**	TO15
Date Received:	6/4/14 20:24	**Analytical Method:**	TO15
Date Prepared:	6/6/14-6/7/14	**Unit:**	µg/m³

Leak Check Compound

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
VE-3S	**1406131-014A**	**Soil Gas**	**06/04/2014 09:18**	**GC24**	**91324**

Initial Pressure (psia)	Final Pressure (psia)
13.13	**26.17**

Analytes	Result	RL	DF	Date Analyzed
Isopropyl Alcohol	ND	50	1	06/06/2014 09:33

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
VE-3D	**1406131-015A**	**Soil Gas**	**06/04/2014 10:05**	**GC24**	**91324**

Initial Pressure (psia)	Final Pressure (psia)
12.67	**25.27**

Analytes	Result	RL	DF	Date Analyzed
Isopropyl Alcohol	ND	50	1	06/06/2014 10:15

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
VE-1D	**1406131-016A**	**Soil Gas**	**06/04/2014 10:55**	**GC24**	**91337**

Initial Pressure (psia)	Final Pressure (psia)
12.71	**25.33**

Analytes	Result	RL	DF	Date Analyzed
Isopropyl Alcohol	ND	50	1	06/07/2014 06:18

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Analytical Report

Client:	Endpoint	**WorkOrder:**	1406131
Project:	Tm Dublin; Crow Canyon Cleaners	**Extraction Method:**	TO15
Date Received:	6/4/14 20:24	**Analytical Method:**	TO15
Date Prepared:	6/6/14-6/7/14	**Unit:**	µg/m³

Leak Check Compound

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
VE-1S	1406131-017A	Soil Gas	06/04/2014 11:17	GC24	91337

Initial Pressure (psia)	Final Pressure (psia)
12.88	25.66

Analytes	Result	RL	DF	Date Analyzed
Isopropyl Alcohol	ND	50	1	06/07/2014 06:58

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Quality Control Report

Client:	Endpoint	**WorkOrder:**	1406131
Date Prepared:	6/9/14	**BatchID:**	91365
Date Analyzed:	6/9/14	**Extraction Method:**	ASTM D 1946-90
Instrument:	GC26	**Analytical Method:**	ASTM D 1946-90
Matrix:	Soilgas	**Unit:**	%
Project:	Tm Dublin; Crow Canyon Cleaners	**Sample ID:**	MB/LCS-91365

QC Summary Report for ASTM D1946-90

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Helium	ND	0.0113	0.0050	0.010	-	113	60-140

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Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269
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Quality Control Report

Client:	Endpoint	**WorkOrder:**	1406131
Date Prepared:	6/9/14	**BatchID:**	91324
Date Analyzed:	6/5/14	**Extraction Method:**	TO15
Instrument:	GC24	**Analytical Method:**	TO15
Matrix:	Soilgas	**Unit:**	nL/L
Project:	Tm Dublin; Crow Canyon Cleaners	**Sample ID:**	MB/LCS-91324

QC Summary Report for TO15

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Acetone	ND	-	25	-	-	-	-
Acrolein	ND	-	0.50	-	-	-	-
Acrylonitrile	ND	-	0.50	-	-	-	-
tert-Amyl methyl ether (TAME)	ND	-	0.50	-	-	-	-
Benzene	ND	-	0.50	-	-	-	-
Benzyl chloride	ND	-	0.50	-	-	-	-
Bromodichloromethane	ND	27.8	0.50	25	-	111	60-140
Bromoform	ND	29.6	0.50	25	-	118	60-140
Bromomethane	ND	-	0.50	-	-	-	-
1,3-Butadiene	ND	-	0.50	-	-	-	-
2-Butanone (MEK)	ND	-	25	-	-	-	-
t-Butyl alcohol (TBA)	ND	-	10	-	-	-	-
Carbon Disulfide	ND	-	0.50	-	-	-	-
Carbon Tetrachloride	ND	26.9	0.50	25	-	107	60-140
Chlorobenzene	ND	26.2	0.50	25	-	105	60-140
Chloroethane	ND	28.0	0.50	25	-	112	60-140
Chloroform	ND	22.1	0.50	25	-	88.5	60-140
Chloromethane	ND	25.2	0.50	25	-	101	60-140
Cyclohexane	ND	-	5.0	-	-	-	-
Dibromochloromethane	ND	28.9	0.50	25	-	116	60-140
1,2-Dibromo-3-chloropropane	ND	34.6	0.012	25	-	138	60-140
1,2-Dibromoethane (EDB)	ND	26.8	0.50	25	-	107	60-140
1,2-Dichlorobenzene	ND	-	0.50	-	-	-	-
1,3-Dichlorobenzene	ND	26.7	0.50	25	-	107	60-140
1,4-Dichlorobenzene	ND	26.1	0.50	25	-	104	60-140
Dichlorodifluoromethane	ND	24.9	0.50	25	-	99.6	60-140
1,1-Dichloroethane	ND	27.1	0.50	25	-	108	60-140
1,2-Dichloroethane (1,2-DCA)	ND	25.2	0.50	25	-	101	60-140
1,1-Dichloroethene	ND	-	0.50	-	-	-	-
cis-1,2-Dichloroethene	ND	26.3	0.50	25	-	105	60-140
trans-1,2-Dichloroethene	ND	25.6	0.50	25	-	102	60-140
1,2-Dichloropropane	ND	26.5	0.50	25	-	106	60-140
cis-1,3-Dichloropropene	ND	29.5	0.50	25	-	118	60-140
trans-1,3-Dichloropropene	ND	28.2	0.50	25	-	113	60-140
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	24.8	0.50	25	-	99	60-140
Diisopropyl ether (DIPE)	ND	-	0.50	-	-	-	-
1,4-Dioxane	ND	-	0.50	-	-	-	-
Ethanol	ND	-	50	-	-	-	-
Ethyl acetate	ND	-	0.50	-	-	-	-
Ethyl tert-butyl ether (ETBE)	ND	-	0.50	-	-	-	-

(Cont.)

McCampbell Analytical, Inc.
"When Quality Counts"

1534 Willow Pass Road, Pittsburg, CA 94565-1701
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Quality Control Report

Client:	Endpoint	**WorkOrder:**	1406131
Date Prepared:	6/9/14	**BatchID:**	91324
Date Analyzed:	6/5/14	**Extraction Method:**	TO15
Instrument:	GC24	**Analytical Method:**	TO15
Matrix:	Soilgas	**Unit:**	nL/L
Project:	Tm Dublin; Crow Canyon Cleaners	**Sample ID:**	MB/LCS-91324

QC Summary Report for TO15

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Ethylbenzene	ND	-	0.50	-	-	-	-
4-Ethyltoluene	ND	-	0.50	-	-	-	-
Freon 113	ND	23.8	0.50	25	-	95	60-140
Heptane	ND	-	5.0	-	-	-	-
Hexachlorobutadiene	ND	-	0.50	-	-	-	-
Hexane	ND	-	5.0	-	-	-	-
2-Hexanone	ND	-	0.50	-	-	-	-
4-Methyl-2-pentanone (MIBK)	ND	-	0.50	-	-	-	-
Methyl-t-butyl ether (MTBE)	ND	-	0.50	-	-	-	-
Methylene chloride	ND	23.3	0.50	25	-	93.2	60-140
Methyl methacrylate	ND	-	0.50	-	-	-	-
Naphthalene	ND	-	1.0	-	-	-	-
Propene	ND	-	50	-	-	-	-
Styrene	ND	-	0.50	-	-	-	-
1,1,1,2-Tetrachloroethane	ND	26.8	0.50	25	-	107	60-140
1,1,2,2-Tetrachloroethane	ND	26.6	0.50	25	-	106	60-140
Tetrachloroethene	ND	26.8	0.50	25	-	107	60-140
Tetrahydrofuran	ND	-	0.50	-	-	-	-
Toluene	ND	-	0.50	-	-	-	-
1,2,4-Trichlorobenzene	ND	29.0	0.50	25	-	116	60-140
1,1,1-Trichloroethane	ND	29.0	0.50	25	-	116	60-140
1,1,2-Trichloroethane	ND	23.6	0.50	25	-	94.4	60-140
Trichloroethene	ND	24.9	0.50	25	-	99.7	60-140
Trichlorofluoromethane	ND	-	0.50	-	-	-	-
1,2,4-Trimethylbenzene	ND	-	0.50	-	-	-	-
1,3,5-Trimethylbenzene	ND	-	0.50	-	-	-	-
Vinyl Acetate	ND	-	0.50	-	-	-	-
Vinyl Chloride	ND	25.8	0.50	25	-	103	60-140
Xylenes, Total	ND	77.1	1.5	75	-	103	60-140
Surrogate Recovery							
1,2-DCA-d4	485	487		500	97	97	60-140
Toluene-d8	511	518		500	102	103	60-140
4-BFB	489	501		500	98	100	60-140

(Cont.)

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Quality Control Report

Client:	Endpoint	**WorkOrder:**	1406131
Date Prepared:	6/9/14	**BatchID:**	91337
Date Analyzed:	6/6/14	**Extraction Method:**	TO15
Instrument:	GC24	**Analytical Method:**	TO15
Matrix:	Soilgas	**Unit:**	nL/L
Project:	Tm Dublin; Crow Canyon Cleaners	**Sample ID:**	MB/LCS-91337

QC Summary Report for TO15

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Acetone	ND	-	25	-	-	-	-
Acrolein	ND	-	0.50	-	-	-	-
Acrylonitrile	ND	-	0.50	-	-	-	-
tert-Amyl methyl ether (TAME)	ND	-	0.50	-	-	-	-
Benzene	ND	-	0.50	-	-	-	-
Benzyl chloride	ND	-	0.50	-	-	-	-
Bromodichloromethane	ND	29.3	0.50	25	-	117	60-140
Bromoform	ND	33.7	0.50	25	-	135	60-140
Bromomethane	ND	-	0.50	-	-	-	-
1,3-Butadiene	ND	-	0.50	-	-	-	-
2-Butanone (MEK)	ND	-	25	-	-	-	-
t-Butyl alcohol (TBA)	ND	-	10	-	-	-	-
Carbon Disulfide	ND	-	0.50	-	-	-	-
Carbon Tetrachloride	ND	28.3	0.50	25	-	113	60-140
Chlorobenzene	ND	26.8	0.50	25	-	107	60-140
Chloroethane	ND	30.9	0.50	25	-	124	60-140
Chloroform	ND	22.9	0.50	25	-	91.5	60-140
Chloromethane	ND	25.8	0.50	25	-	103	60-140
Cyclohexane	ND	-	5.0	-	-	-	-
Dibromochloromethane	ND	29.7	0.50	25	-	119	60-140
1,2-Dibromo-3-chloropropane	ND	35.4	0.012	25	-	142, F2	60-140
1,2-Dibromoethane (EDB)	ND	27.6	0.50	25	-	111	60-140
1,2-Dichlorobenzene	ND	-	0.50	-	-	-	-
1,3-Dichlorobenzene	ND	27.3	0.50	25	-	109	60-140
1,4-Dichlorobenzene	ND	26.9	0.50	25	-	108	60-140
Dichlorodifluoromethane	ND	24.9	0.50	25	-	99.5	60-140
1,1-Dichloroethane	ND	27.6	0.50	25	-	110	60-140
1,2-Dichloroethane (1,2-DCA)	ND	26.1	0.50	25	-	104	60-140
1,1-Dichloroethene	ND	-	0.50	-	-	-	-
cis-1,2-Dichloroethene	ND	27.0	0.50	25	-	108	60-140
trans-1,2-Dichloroethene	ND	26.2	0.50	25	-	105	60-140
1,2-Dichloropropane	ND	27.8	0.50	25	-	111	60-140
cis-1,3-Dichloropropene	ND	30.3	0.50	25	-	121	60-140
trans-1,3-Dichloropropene	ND	29.0	0.50	25	-	116	60-140
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	24.9	0.50	25	-	99.7	60-140
Diisopropyl ether (DIPE)	ND	-	0.50	-	-	-	-
1,4-Dioxane	ND	-	0.50	-	-	-	-
Ethanol	ND	-	50	-	-	-	-
Ethyl acetate	ND	-	0.50	-	-	-	-
Ethyl tert-butyl ether (ETBE)	ND	-	0.50	-	-	-	-

(Cont.)

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Quality Control Report

Client:	Endpoint	**WorkOrder:**	1406131
Date Prepared:	6/9/14	**BatchID:**	91337
Date Analyzed:	6/6/14	**Extraction Method:**	TO15
Instrument:	GC24	**Analytical Method:**	TO15
Matrix:	Soilgas	**Unit:**	nL/L
Project:	Tm Dublin; Crow Canyon Cleaners	**Sample ID:**	MB/LCS-91337

QC Summary Report for TO15

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Ethylbenzene	ND	-	0.50	-	-	-	-
4-Ethyltoluene	ND	-	0.50	-	-	-	-
Freon 113	ND	26.2	0.50	25	-	105	60-140
Heptane	ND	-	5.0	-	-	-	-
Hexachlorobutadiene	ND	-	0.50	-	-	-	-
Hexane	ND	-	5.0	-	-	-	-
2-Hexanone	ND	-	0.50	-	-	-	-
4-Methyl-2-pentanone (MIBK)	ND	-	0.50	-	-	-	-
Methyl-t-butyl ether (MTBE)	ND	-	0.50	-	-	-	-
Methylene chloride	ND	23.6	0.50	25	-	94.6	60-140
Methyl methacrylate	ND	-	0.50	-	-	-	-
Naphthalene	ND	-	1.0	-	-	-	-
Propene	ND	-	50	-	-	-	-
Styrene	ND	-	0.50	-	-	-	-
1,1,1,2-Tetrachloroethane	ND	27.6	0.50	25	-	110	60-140
1,1,2,2-Tetrachloroethane	ND	27.4	0.50	25	-	109	60-140
Tetrachloroethene	ND	27.5	0.50	25	-	110	60-140
Tetrahydrofuran	ND	-	0.50	-	-	-	-
Toluene	ND	-	0.50	-	-	-	-
1,2,4-Trichlorobenzene	ND	30.1	0.50	25	-	120	60-140
1,1,1-Trichloroethane	ND	29.7	0.50	25	-	119	60-140
1,1,2-Trichloroethane	ND	24.3	0.50	25	-	97.1	60-140
Trichloroethene	ND	26.2	0.50	25	-	105	60-140
Trichlorofluoromethane	ND	-	0.50	-	-	-	-
1,2,4-Trimethylbenzene	ND	-	0.50	-	-	-	-
1,3,5-Trimethylbenzene	ND	-	0.50	-	-	-	-
Vinyl Acetate	ND	-	0.50	-	-	-	-
Vinyl Chloride	ND	26.1	0.50	25	-	105	60-140
Xylenes, Total	ND	79.5	1.5	75	-	106	60-140
Surrogate Recovery							
1,2-DCA-d4	490	488		500	98	98	60-140
Toluene-d8	509	515		500	102	103	60-140
4-BFB	483	497		500	97	99	60-140

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

CHAIN-OF-CUSTODY RECORD

WorkOrder: 1406131 **ClientCode: EPB**

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

Report to:
Mehrdad Javaher
Endpoint
1534 Plaza Lane #243
Burlingame, CA 94010
415-706-8935 FAX:

Email: mehrdad@endpoint-inc.com
cc/3rd Party:
PO:
ProjectNo: Tm Dublin; Crow Canyon Cleaners

Bill to:
Accounts Payable
Endpoint
1534 Plaza Lane #243
Burlingame, CA 94010

Requested TAT: 5 days

Date Received: **06/04/2014**
Date Printed: **06/05/2014**

					Requested Tests (See legend below)											
Lab ID	Client ID	Matrix	Collection Date	Hold	1	2	3	4	5	6	7	8	9	10	11	12
1406131-001	VM-7	Soil Gas	6/3/2014 9:15	☐		A										
1406131-002	VM-8	Soil Gas	6/3/2014 9:41	☐		A										
1406131-003	VM-10	Soil Gas	6/3/2014 10:05	☐		A										
1406131-004	VM-11	Soil Gas	6/3/2014 10:33	☐		A										
1406131-005	VM-12	Soil Gas	6/3/2014 10:59	☐		A										
1406131-006	VM-2SS	Soil Gas	6/3/2014 11:26	☐		A										
1406131-007	VM-6SS	Soil Gas	6/3/2014 11:45	☐		A										
1406131-008	VM-5SS	Soil Gas	6/3/2014 12:03	☐		A										
1406131-009	VM-1S	Soil Gas	6/3/2014 12:36	☐		A										
1406131-010	VM-1D	Soil Gas	6/3/2014 13:24	☐		A										
1406131-011	VM-3S	Soil Gas	6/3/2014 14:08	☐		A										
1406131-012	VM-3D	Soil Gas	6/3/2014	☐		A										
1406131-013	VM-4S	Soil Gas	6/4/2014 8:57	☐		A										
1406131-014	VE-3S	Soil Gas	6/4/2014 9:18	☐		A										
1406131-015	VE-3D	Soil Gas	6/4/2014 10:05	☐		A										
1406131-016	VE-1D	Soil Gas	6/4/2014 10:55	☐		A										

Test Legend:

1	PRUNUSEDSUMMA	2	O15_Scan-SIM_SOIL(UG/M3	3		4		5	
6		7		8		9		10	
11		12							

The following SampIDs: 001A, 002A, 003A, 004A, 005A, 006A, 007A, 008A, 009A, 010A, 011A, 012A, 013A, 014A, 015A, 016A, 017A, 018A, 019A, 020A contain testgroup.

Prepared by: Jena Alfaro

Comments:

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

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

CHAIN-OF-CUSTODY RECORD

WorkOrder: 1406131 **ClientCode: EPB**

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

Report to:
Mehrdad Javaher
Endpoint
1534 Plaza Lane #243
Burlingame, CA 94010
415-706-8935 FAX:

Email: mehrdad@endpoint-inc.com
cc/3rd Party:
PO:
ProjectNo: Tm Dublin; Crow Canyon Cleaners

Bill to:
Accounts Payable
Endpoint
1534 Plaza Lane #243
Burlingame, CA 94010

Requested TAT: 5 days

Date Received: **06/04/2014**
Date Printed: **06/05/2014**

Lab ID	Client ID	Matrix	Collection Date	Hold	Requested Tests (See legend below)											
					1	2	3	4	5	6	7	8	9	10	11	12
1406131-017	VE-1S	Soil Gas	6/4/2014 11:17	☐		A										
1406131-018	VE-2D	Soil Gas	6/4/2014 11:57	☐		A										
1406131-019	VE-2S	Soil Gas	6/4/2014 12:19	☐		A										
1406131-020	VM-9SS	Soil Gas	6/4/2014 12:28	☐		A										
1406131-021	Unused Summa	Soil Gas	6/4/2014	☐	A											

Test Legend:

1	PRUNUSEDSUMMA	2	O15_Scan-SIM_SOIL(UG/M3	3		4		5	
6		7		8		9		10	
11		12							

The following SampIDs: 001A, 002A, 003A, 004A, 005A, 006A, 007A, 008A, 009A, 010A, 011A, 012A, 013A, 014A, 015A, 016A, 017A, 018A, 019A, 020A contain testgroup.

Prepared by: Jena Alfaro

Comments:

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

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WORK ORDER SUMMARY

Client Name: ENDPOINT
Project: Tm Dublin; Crow Canyon Cleaners
Comments:

QC Level: LEVEL 2
Client Contact: Mehrdad Javaher
Contact's Email: mehrdad@endpoint-inc.com

Work Order: 1406131
Date Received: 6/4/2014

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

Lab ID	Client ID	Matrix	Test Name	Number of Containers	Bottle & Preservative	De-chlorinated	Collection Date & Time	TAT	Sediment Content	Hold	SubOut
1406131-001A	VM-7	Soil Gas	TO15 for Soil Vapor	1	1L Summa	☐	6/3/2014 9:15	5 days		☐	
1406131-002A	VM-8	Soil Gas	TO15 for Soil Vapor	1	1L Summa	☐	6/3/2014 9:41	5 days		☐	
1406131-003A	VM-10	Soil Gas	TO15 for Soil Vapor	1	1L Summa	☐	6/3/2014 10:05	5 days		☐	
1406131-004A	VM-11	Soil Gas	TO15 for Soil Vapor	1	1L Summa	☐	6/3/2014 10:33	5 days		☐	
1406131-005A	VM-12	Soil Gas	TO15 for Soil Vapor	1	1L Summa	☐	6/3/2014 10:59	5 days		☐	
1406131-006A	VM-2SS	Soil Gas	TO15 w/ Helium	1	1L Summa	☐	6/3/2014 11:26	5 days		☐	
1406131-007A	VM-6SS	Soil Gas	TO15 w/ Helium	1	1L Summa	☐	6/3/2014 11:45	5 days		☐	
1406131-008A	VM-5SS	Soil Gas	TO15 w/ Helium	1	1L Summa	☐	6/3/2014 12:03	5 days		☐	
1406131-009A	VM-1S	Soil Gas	TO15 for Soil Vapor	1	1L Summa	☐	6/3/2014 12:36	5 days		☐	
1406131-010A	VM-1D	Soil Gas	TO15 for Soil Vapor	1	1L Summa	☐	6/3/2014 13:24	5 days		☐	
1406131-011A	VM-3S	Soil Gas	TO15 for Soil Vapor	1	1L Summa	☐	6/3/2014 14:08	5 days		☐	
1406131-012A	VM-3D	Soil Gas	TO15 for Soil Vapor	1	1L Summa	☐	6/3/2014	5 days		☐	
1406131-013A	VM-4S	Soil Gas	TO15 w/ Helium	1	1L Summa	☐	6/4/2014 8:57	5 days		☐	
1406131-014A	VE-3S	Soil Gas	TO15 for Soil Vapor	1	1L Summa	☐	6/4/2014 9:18	5 days		☐	
1406131-015A	VE-3D	Soil Gas	TO15 for Soil Vapor	1	1L Summa	☐	6/4/2014 10:05	5 days		☐	
1406131-016A	VE-1D	Soil Gas	TO15 for Soil Vapor	1	1L Summa	☐	6/4/2014 10:55	5 days		☐	
1406131-017A	VE-1S	Soil Gas	TO15 for Soil Vapor	1	1L Summa	☐	6/4/2014 11:17	5 days		☐	

*** NOTE: STLC and TCLP extractions require 48 hrs to complete; therefore, all TATs begin after the extraction is completed (i.e., 24hr TAT yields results in 72 hrs from sample submission).**

Bottle Legend:

1L Summa = 1L Summa Canister

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

WORK ORDER SUMMARY

Client Name: ENDPOINT
Project: Tm Dublin; Crow Canyon Cleaners
Comments:

QC Level: LEVEL 2
Client Contact: Mehrdad Javaher
Contact's Email: mehrdad@endpoint-inc.com

Work Order: 1406131
Date Received: 6/4/2014

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

Lab ID	Client ID	Matrix	Test Name	Number of Containers	Bottle & Preservative	De-chlorinated	Collection Date & Time	TAT	Sediment Content	Hold	SubOut
1406131-018A	VE-2D	Soil Gas	TO15 w/ Helium	1	1L Summa	☐	6/4/2014 11:57	5 days		☐	
1406131-019A	VE-2S	Soil Gas	TO15 w/ Helium	1	1L Summa	☐	6/4/2014 12:19	5 days		☐	
1406131-020A	VM-9SS	Soil Gas	TO15 w/ Helium	1	1L Summa	☐	6/4/2014 12:28	5 days		☐	

*** NOTE: STLC and TCLP extractions require 48 hrs to complete; therefore, all TATs begin after the extraction is completed (i.e., 24hr TAT yields results in 72 hrs from sample submission).**

Bottle Legend:
1L Summa = 1L Summa Canister

McCampbell Analytical, Inc. 1406131

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www.mccampbell.com / main@mccampbell.com
Telephone: (877) 252-9262 / Fax: (925) 252-9269

CHAIN OF CUSTODY RECORD

TURN AROUND TIME: RUSH ☐ 1 Day ☐ 2 Day ☐ 3 Day ☐ (5 DAY) ☐

GeoTracker EDF ☐ PDF ☐ EDD ☐ EQuIS ☐ 10 DAY ☐

UST Clean Up Fund Project ☐ Claim #

Report To: MEHRDAD	Bill To: ENDPOINT
Company: ENDPOINT Consulting Inc	
1534 PLAZA LN #243	
Burlingame CA	E-Mail:
Tele: (415) 706-8935	Fax: ( )
Project #: TM Dublin	Project Name: CROW Canyon Cleaners
Project Location: 7272 Gleason Ranch RD	
Sampler Signature:	

Analysis Requested

Field Sample ID (Location)	Collection Date	Collection Time	Canister SN#	Sampler Kit SN#	VOCs by TO-15 (ug/m3)	8010 by TO-15 (ug/m3)	TPH(g) (ug/m3)	LEED (inc. 4PCH, Formaldehyde, CO, Total VOCs)	Fixed Gas: CO2, Methane, Ethane, Ethylene, Acetylene, CO (please circle or indicate in notes) uL/L	Fixed Gas: O2, N2 (please circle) uL/L	Fixed Gas: Propane uL/L	Helium Leak Check (%)	Leak Check (IPA, Norflorane, 1,1-difluroethane) ug/m3	APH: Aliphatic and/or Aromatic (please circle) ug/m3	Other:	Matrix: Soilgas	Matrix: Indoor Air	Cannister Pressure/ Vacuum: Initial	Cannister Pressure/ Vacuum: Final
VM-7	6/3/14	0915	7531	982	X											X		-29	-4.5
VM-8		0941	6164	983														-30	-4.5
VM-10		1005	7522	981														-30	-4.5
VM-11		1033	7521	980														-30	-4.5
VM-12		1059	7530	1228														-30	-4.5
VM-25S		1126	6312	674								X						-30	-4.5
VM-65S		1145	7528	988								X						-30	-4.5
VM-55S		1203	7520	1226								X						-30	-4.5
VM-1S		1236	7519	1227														-29	-4.5
VM-1D		1324	7515	1225														-30	-4.5
VM-3S		1408	~~7516~~ 6420	~~674~~ 989														-30	-4.5
VM-3D			6310	987														-29	-4.5

Helium Shroud SN#

Other:

Notes: Please Specify units if different than defaults VOCs is ug/m3 and fixed gas is uL/L. Leak check default is IPA.

Relinquished By:	Date:	Time:	Received By:
	6/4/14	1355	
Relinquished By:	Date:	Time:	Received By:
Relinquished By:	Date:	Time:	Received By:

Temp (°C) : _____ Work Order #: _____

Condition: _____

Custody Seals Intact?: Yes _____ No _____ None _____

Shipped Via: _____

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CHAIN OF CUSTODY RECORD

TURN AROUND TIME: RUSH ☐ 1 Day ☐ 2 Day ☐ 3 Day ☐ 5 DAY ☐

GeoTracker EDF ☐ PDF ☐ EDD ☐ EQuIS ☐ 10 DAY ☐

UST Clean Up Fund Project ☐ Claim #

Report To: Mehrdad	**Bill To:** Endpoint
Company: Endpoint Consulting	
1534 Plaza Ln # 243	
Burlingame 94010	**E-Mail:**
Tele: (415) 706-8935	**Fax:** ( )
Project #: Tm Dublin	**Project Name:** Crow Canyon
Project Location: 7272 San Ramon Rd Dublin Cleaners	
Sampler Signature:	

Analysis Requested

Field Sample ID (Location)	Collection Date	Collection Time	Canister SN#	Sampler Kit SN#	VOCs by TO-15 (ug/m3)	8010 by TO-15 (ug/m3)	TPH(g) (ug/m3)	LEED (inc. 4PCH, Formaldehyde, CO, Total VOCs)	Fixed Gas: CO2, Methane, Ethane, Ethylene, Acetylene, CO (please circle or indicate in notes) uL/L	Fixed Gas: O2, N2 (please circle) uL/L	Fixed Gas: Propane uL/L	Helium Leak Check (%)	Leak Check (IPA, Norflorane, 1,1-difluroethane) ug/m3	APH: Aliphatic and/or Aromatic (please circle) ug/m3	Other:	Matrix: Soilgas	Matrix: Indoor Air	Cannister Pressure/ Vacuum: Initial	Cannister Pressure/ Vacuum: Final
~~Em~~ VM-4S	6/4/14	0851	~~5~~809	1230	X							X				X		-29	-4.5
VE-3S		0918	7509	985														-30	-4.5
VE-3D		1005	~~5~~807	1229														-30	-4.5
VE-1D		1055	6305	986														-30	-4.5
VE-1S		1117	6408	1231														-30	-4.5
VE-2D		1157	1462	1232								X						-30	-4.5
VE-~~22~~ ~~25~~ 25		1219	1460	1234								X						-30	-4.5
VM-9SS		1228	6203	984								X						-30	-4.5

Helium Shroud SN#

Other:

Notes: Please Specify units if different than defaults VOCs is ug/m3 and fixed gas is uL/L. Leak check default is IPA.

Relinquished By:	Date:	Time:	Received By:
	6/4/14	1355	
Relinquished By:	Date:	Time:	Received By:
Relinquished By:	Date:	Time:	Received By:

Temp (°C) : _____ Work Order #: _____

Condition: _____

Custody Seals Intact?: Yes _____ No _____ None _____

Shipped Via: _____

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Sample Receipt Checklist

Client Name: **Endpoint**
Date and Time Received: **6/4/2014 8:24:09 PM**

Project Name: **Tm Dublin; Crow Canyon Cleaners**
LogIn Reviewed by: Jena Alfaro

WorkOrder N°: **1406131** Matrix: Soil Gas
Carrier: Client Drop-In

Chain of Custody (COC) Information

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

Sample Receipt Information

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

Sample Preservation and Hold Time (HT) Information

All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature	Cooler Temp:		NA ☑
Water - VOA vials have zero headspace / no bubbles?	Yes ☐	No ☐	NA ☑
Sample labels checked for correct preservation?	Yes ☑	No ☐	
pH acceptable upon receipt (Metal: pH<2; 522: pH<4)?	Yes ☐	No ☐	NA ☑
Samples Received on Ice?	Yes ☐	No ☑	

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

Comments:

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Analytical Report

WorkOrder: 1408965

Report Created for: Endpoint
1534 Plaza Lane #243
Burlingame, CA 94010

Project Contact: Mehrdad Javaher
Project P.O.:
Project Name: #TM Dublin; Crow Canyon Cleaners

Project Received: 08/27/2014

Analytical Report reviewed & approved for release on 09/03/2014 by:

Question about your data?

Click here to email McCampbell

Angela Rydelius,
Laboratory Manager

The report shall not be reproduced except in full, without the written approval of the laboratory. The analytical results relate only to the items tested. Results reported conform to the most current NELAP standards, where applicable, unless otherwise stated in the case narrative.

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NELAP: 4033ORELAP ♦ ELAP: 1644 ♦ ISO/IEC: 17025:2005 ♦ WSDE: C972-11 ♦ ADEC: UST-098 ♦ UCMR3

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Glossary of Terms & Qualifier Definitions

Client: Endpoint
Project: #TM Dublin; Crow Canyon Cleaners
WorkOrder: 1408965

Glossary Abbreviation

95% Interval	95% Confident Interval
DF	Dilution Factor
DUP	Duplicate
EDL	Estimated Detection Limit
ITEF	International Toxicity Equivalence Factor
LCS	Laboratory Control Sample
MB	Method Blank
MB % Rec	% Recovery of Surrogate in Method Blank, if applicable
MDL	Method Detection Limit
ML	Minimum Level of Quantitation
MS	Matrix Spike
MSD	Matrix Spike Duplicate
ND	Not detected at or above the indicated MDL or RL
NR	Matrix interferences, or analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix; or sample diluted due to high matrix or analyte content.
PF	Prep Factor
RD	Relative Difference
RL	Reporting Limit (The RL is the lowest calibration standard in a multipoint calibration.)
RPD	Relative Percent Deviation
RRT	Relative Retention Time
SPK Val	Spike Value
SPKRef Val	Spike Reference Value
TEQ	Toxicity Equivalence

Quality Control Qualifiers

F2	LCS recovery for this compound is outside of acceptance limits.

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Case Narrative

Client: Endpoint **Work Order:** 1408965
Project: #TM Dublin; Crow Canyon Cleaners September 03, 2014

TO-15 ANALYSIS

All summa canisters are EVACUATED 5 days after the reporting of the results. Please call or email if a longer retention time is required.

In an effort to attain the lowest reporting limits possible for the majority of the TO-15 target list, high level compounds may be analyzed using EPA Method 8260B.

Polymer (Tedlar) bags are not recommended for TO15 samples. The disadvantages are listed in Appendix B of the DTSC Advisory of April 2012.

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Analytical Report

Client:	Endpoint	**WorkOrder:**	1408965
Project:	#TM Dublin; Crow Canyon Cleaners	**Extraction Method:**	ASTM D 1946-90
Date Received:	8/27/14 15:57	**Analytical Method:**	ASTM D 1946-90
Date Prepared:	8/28/14	**Unit:**	%

Helium

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
VE-1S	**1408965-001A**	**Soil Gas**	**08/26/2014 09:26**	**GC26**	**94623**

Initial Pressure (psia)	Final Pressure (psia)
12.86	**25.65**

Analytes	Result	RL	DF	Date Analyzed
Helium	ND	0.0050	1	08/28/2014 15:51

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
VM-9SS	**1408965-002A**	**Soil Gas**	**08/26/2014 09:55**	**GC26**	**94623**

Initial Pressure (psia)	Final Pressure (psia)
12.73	**25.38**

Analytes	Result	RL	DF	Date Analyzed
Helium	ND	0.0050	1	08/28/2014 16:04

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Analytical Report

Client:	Endpoint	**WorkOrder:**	1408965
Project:	#TM Dublin; Crow Canyon Cleaners	**Extraction Method:**	TO15
Date Received:	8/27/14 15:57	**Analytical Method:**	TO15
Date Prepared:	8/28/14	**Unit:**	µg/m³

Halogenated Volatile Organic Compounds in µg/m³

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
VE-1S	**1408965-001A**	**Soil Gas**	**08/26/2014 09:26**	**GC24**	**94489**

Initial Pressure (psia)	Final Pressure (psia)
12.86	**25.65**

Analytes	Result	RL	DF	Date Analyzed
Bromodichloromethane	ND	3.5	1	08/28/2014 05:54
Bromoform	ND	5.2	1	08/28/2014 05:54
Bromomethane	ND	2.0	1	08/28/2014 05:54
Carbon Tetrachloride	ND	3.2	1	08/28/2014 05:54
Chlorobenzene	ND	2.4	1	08/28/2014 05:54
Chloroethane	ND	1.3	1	08/28/2014 05:54
Chloroform	ND	2.4	1	08/28/2014 05:54
Chloromethane	ND	1.0	1	08/28/2014 05:54
Dibromochloromethane	ND	4.4	1	08/28/2014 05:54
1,2-Dibromo-3-chloropropane	ND	0.12	1	08/28/2014 05:54
1,2-Dibromoethane (EDB)	ND	3.9	1	08/28/2014 05:54
1,2-Dichlorobenzene	ND	3.0	1	08/28/2014 05:54
1,3-Dichlorobenzene	ND	3.0	1	08/28/2014 05:54
1,4-Dichlorobenzene	ND	3.0	1	08/28/2014 05:54
Dichlorodifluoromethane	ND	2.5	1	08/28/2014 05:54
1,1-Dichloroethane	ND	2.0	1	08/28/2014 05:54
1,2-Dichloroethane (1,2-DCA)	ND	2.0	1	08/28/2014 05:54
1,1-Dichloroethene	ND	2.0	1	08/28/2014 05:54
cis-1,2-Dichloroethene	ND	2.0	1	08/28/2014 05:54
trans-1,2-Dichloroethene	ND	2.0	1	08/28/2014 05:54
1,2-Dichloropropane	ND	2.4	1	08/28/2014 05:54
cis-1,3-Dichloropropene	ND	2.3	1	08/28/2014 05:54
trans-1,3-Dichloropropene	ND	2.3	1	08/28/2014 05:54
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	3.6	1	08/28/2014 05:54
Freon 113	ND	3.9	1	08/28/2014 05:54
Methylene chloride	ND	1.8	1	08/28/2014 05:54
1,1,1,2-Tetrachloroethane	ND	3.5	1	08/28/2014 05:54
1,1,2,2-Tetrachloroethane	ND	3.5	1	08/28/2014 05:54
Tetrachloroethene	**890**	3.4	1	08/28/2014 05:54
1,2,4-Trichlorobenzene	ND	3.8	1	08/28/2014 05:54
1,1,1-Trichloroethane	ND	2.8	1	08/28/2014 05:54
1,1,2-Trichloroethane	**15**	2.8	1	08/28/2014 05:54
Trichloroethene	**3.1**	2.8	1	08/28/2014 05:54
Trichlorofluoromethane	ND	2.8	1	08/28/2014 05:54

(Cont.)

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Analytical Report

Client:	Endpoint	**WorkOrder:**	1408965
Project:	#TM Dublin; Crow Canyon Cleaners	**Extraction Method:**	TO15
Date Received:	8/27/14 15:57	**Analytical Method:**	TO15
Date Prepared:	8/28/14	**Unit:**	µg/m³

Halogenated Volatile Organic Compounds in µg/m³

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
VE-1S	**1408965-001A**	**Soil Gas**	**08/26/2014 09:26**	**GC24**	**94489**

Initial Pressure (psia)	Final Pressure (psia)
12.86	**25.65**

Analytes	Result	RL	DF	Date Analyzed
Vinyl Chloride	ND	1.3	1	08/28/2014 05:54

Surrogates	REC (%)	Limits	
1,2-DCA-d4	91	70-130	08/28/2014 05:54
Toluene-d8	100	70-130	08/28/2014 05:54
4-BFB	105	70-130	08/28/2014 05:54

(Cont.)

CDPH ELAP 1644 ♦ NELAP 4033ORELAP AK Analyst's Initial  Angela Rydelius, Lab Manager

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Analytical Report

Client:	Endpoint	**WorkOrder:**	1408965
Project:	#TM Dublin; Crow Canyon Cleaners	**Extraction Method:**	TO15
Date Received:	8/27/14 15:57	**Analytical Method:**	TO15
Date Prepared:	8/28/14	**Unit:**	µg/m³

Halogenated Volatile Organic Compounds in µg/m³

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
VM-9SS	1408965-002A	Soil Gas	08/26/2014 09:55	GC24	94489

Initial Pressure (psia)	Final Pressure (psia)
12.73	25.38

Analytes	Result	RL	DF	Date Analyzed
Bromodichloromethane	ND	3.5	1	08/28/2014 06:38
Bromoform	ND	5.2	1	08/28/2014 06:38
Bromomethane	ND	2.0	1	08/28/2014 06:38
Carbon Tetrachloride	ND	3.2	1	08/28/2014 06:38
Chlorobenzene	ND	2.4	1	08/28/2014 06:38
Chloroethane	ND	1.3	1	08/28/2014 06:38
Chloroform	ND	2.4	1	08/28/2014 06:38
Chloromethane	**1.1**	1.0	1	08/28/2014 06:38
Dibromochloromethane	ND	4.4	1	08/28/2014 06:38
1,2-Dibromo-3-chloropropane	ND	0.12	1	08/28/2014 06:38
1,2-Dibromoethane (EDB)	ND	3.9	1	08/28/2014 06:38
1,2-Dichlorobenzene	ND	3.0	1	08/28/2014 06:38
1,3-Dichlorobenzene	ND	3.0	1	08/28/2014 06:38
1,4-Dichlorobenzene	ND	3.0	1	08/28/2014 06:38
Dichlorodifluoromethane	ND	2.5	1	08/28/2014 06:38
1,1-Dichloroethane	ND	2.0	1	08/28/2014 06:38
1,2-Dichloroethane (1,2-DCA)	ND	2.0	1	08/28/2014 06:38
1,1-Dichloroethene	ND	2.0	1	08/28/2014 06:38
cis-1,2-Dichloroethene	**3.5**	2.0	1	08/28/2014 06:38
trans-1,2-Dichloroethene	**2.2**	2.0	1	08/28/2014 06:38
1,2-Dichloropropane	ND	2.4	1	08/28/2014 06:38
cis-1,3-Dichloropropene	ND	2.3	1	08/28/2014 06:38
trans-1,3-Dichloropropene	ND	2.3	1	08/28/2014 06:38
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	3.6	1	08/28/2014 06:38
Freon 113	ND	3.9	1	08/28/2014 06:38
Methylene chloride	ND	1.8	1	08/28/2014 06:38
1,1,1,2-Tetrachloroethane	ND	3.5	1	08/28/2014 06:38
1,1,2,2-Tetrachloroethane	ND	3.5	1	08/28/2014 06:38
Tetrachloroethene	**3100**	14	4	08/28/2014 04:36
1,2,4-Trichlorobenzene	ND	3.8	1	08/28/2014 06:38
1,1,1-Trichloroethane	ND	2.8	1	08/28/2014 06:38
1,1,2-Trichloroethane	ND	2.8	1	08/28/2014 06:38
Trichloroethene	**32**	2.8	1	08/28/2014 06:38
Trichlorofluoromethane	ND	2.8	1	08/28/2014 06:38

(Cont.)

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Analytical Report

Client:	Endpoint	**WorkOrder:**	1408965
Project:	#TM Dublin; Crow Canyon Cleaners	**Extraction Method:**	TO15
Date Received:	8/27/14 15:57	**Analytical Method:**	TO15
Date Prepared:	8/28/14	**Unit:**	µg/m³

Halogenated Volatile Organic Compounds in µg/m³

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
VM-9SS	**1408965-002A**	**Soil Gas**	**08/26/2014 09:55**	**GC24**	**94489**

Initial Pressure (psia)	Final Pressure (psia)
12.73	**25.38**

Analytes	Result	RL	DF	Date Analyzed
Vinyl Chloride	ND	1.3	1	08/28/2014 06:38

Surrogates	REC (%)	Limits	
1,2-DCA-d4	91	70-130	08/28/2014 06:38
Toluene-d8	102	70-130	08/28/2014 06:38
4-BFB	104	70-130	08/28/2014 06:38

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Quality Control Report

Client:	Endpoint	**WorkOrder:**	1408965
Date Prepared:	8/29/14	**BatchID:**	94623
Date Analyzed:	8/28/14	**Extraction Method:**	ASTM D 1946-90
Instrument:	GC26	**Analytical Method:**	ASTM D 1946-90
Matrix:	Soilgas	**Unit:**	%
Project:	#TM Dublin; Crow Canyon Cleaners	**Sample ID:**	MB/LCS-94623

QC Summary Report for ASTM D1946-90

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Helium	ND	0.0121	0.0050	0.010	-	121	60-140

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Quality Control Report

Client:	Endpoint	**WorkOrder:**	1408965
Date Prepared:	8/26/14	**BatchID:**	94489
Date Analyzed:	8/27/14	**Extraction Method:**	TO15
Instrument:	GC24	**Analytical Method:**	TO15
Matrix:	Soilgas	**Unit:**	nL/L
Project:	#TM Dublin; Crow Canyon Cleaners	**Sample ID:**	MB/LCS-94489

QC Summary Report for TO15

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Acetone	ND	-	25	-	-	-	-
Acrolein	ND	-	0.50	-	-	-	-
Acrylonitrile	ND	-	0.50	-	-	-	-
tert-Amyl methyl ether (TAME)	ND	-	0.50	-	-	-	-
Benzene	ND	-	0.50	-	-	-	-
Benzyl chloride	ND	-	0.50	-	-	-	-
Bromodichloromethane	ND	21.8	0.50	25	-	87.2	60-140
Bromoform	ND	39.3	0.50	25	-	157, F2	60-140
Bromomethane	ND	-	0.50	-	-	-	-
1,3-Butadiene	ND	-	0.50	-	-	-	-
2-Butanone (MEK)	ND	-	25	-	-	-	-
t-Butyl alcohol (TBA)	ND	-	10	-	-	-	-
Carbon Disulfide	ND	-	0.50	-	-	-	-
Carbon Tetrachloride	ND	23.1	0.50	25	-	92.6	60-140
Chlorobenzene	ND	21.8	0.50	25	-	87.1	60-140
Chloroethane	ND	17.8	0.50	25	-	71.2	60-140
Chloroform	ND	16.6	0.50	25	-	66.6	60-140
Chloromethane	ND	16.7	0.50	25	-	66.9	60-140
Cyclohexane	ND	-	5.0	-	-	-	-
Dibromochloromethane	ND	26.1	0.50	25	-	104	60-140
1,2-Dibromo-3-chloropropane	ND	37.0	0.012	25	-	148, F2	60-140
1,2-Dibromoethane (EDB)	ND	20.5	0.50	25	-	81.9	60-140
1,2-Dichlorobenzene	ND	-	0.50	-	-	-	-
1,3-Dichlorobenzene	ND	24.0	0.50	25	-	95.9	60-140
1,4-Dichlorobenzene	ND	22.4	0.50	25	-	89.5	60-140
Dichlorodifluoromethane	ND	19.6	0.50	25	-	78.4	60-140
1,1-Dichloroethane	ND	19.5	0.50	25	-	78.1	60-140
1,2-Dichloroethane (1,2-DCA)	ND	20.1	0.50	25	-	80.6	60-140
1,1-Dichloroethene	ND	-	0.50	-	-	-	-
cis-1,2-Dichloroethene	ND	19.5	0.50	25	-	77.9	60-140
trans-1,2-Dichloroethene	ND	19.0	0.50	25	-	76.2	60-140
1,2-Dichloropropane	ND	19.4	0.50	25	-	77.4	60-140
cis-1,3-Dichloropropene	ND	22.4	0.50	25	-	89.7	60-140
trans-1,3-Dichloropropene	ND	22.1	0.50	25	-	88.3	60-140
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	18.6	0.50	25	-	74.3	60-140
Diisopropyl ether (DIPE)	ND	-	0.50	-	-	-	-
1,4-Dioxane	ND	-	0.50	-	-	-	-
Ethanol	ND	-	50	-	-	-	-
Ethyl acetate	ND	-	0.50	-	-	-	-
Ethyl tert-butyl ether (ETBE)	ND	-	0.50	-	-	-	-

(Cont.)

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Quality Control Report

Client:	Endpoint	**WorkOrder:**	1408965
Date Prepared:	8/26/14	**BatchID:**	94489
Date Analyzed:	8/27/14	**Extraction Method:**	TO15
Instrument:	GC24	**Analytical Method:**	TO15
Matrix:	Soilgas	**Unit:**	nL/L
Project:	#TM Dublin; Crow Canyon Cleaners	**Sample ID:**	MB/LCS-94489

QC Summary Report for TO15

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Ethylbenzene	ND	-	0.50	-	-	-	-
4-Ethyltoluene	ND	-	0.50	-	-	-	-
Freon 113	ND	18.7	0.50	25	-	74.9	60-140
Heptane	ND	-	5.0	-	-	-	-
Hexachlorobutadiene	ND	-	0.50	-	-	-	-
Hexane	ND	-	5.0	-	-	-	-
2-Hexanone	ND	-	0.50	-	-	-	-
4-Methyl-2-pentanone (MIBK)	ND	-	0.50	-	-	-	-
Methyl-t-butyl ether (MTBE)	ND	-	0.50	-	-	-	-
Methylene chloride	ND	16.9	0.50	25	-	67.6	60-140
Methyl methacrylate	ND	-	0.50	-	-	-	-
Naphthalene	ND	-	1.0	-	-	-	-
Propene	ND	-	50	-	-	-	-
Styrene	ND	-	0.50	-	-	-	-
1,1,1,2-Tetrachloroethane	ND	23.3	0.50	25	-	93.2	60-140
1,1,2,2-Tetrachloroethane	ND	18.4	0.50	25	-	73.5	60-140
Tetrachloroethene	ND	23.0	0.50	25	-	92.2	60-140
Tetrahydrofuran	ND	-	0.50	-	-	-	-
Toluene	ND	-	0.50	-	-	-	-
1,2,4-Trichlorobenzene	ND	28.5	0.50	25	-	114	60-140
1,1,1-Trichloroethane	ND	25.2	0.50	25	-	101	60-140
1,1,2-Trichloroethane	ND	17.5	0.50	25	-	70	60-140
Trichloroethene	ND	19.8	0.50	25	-	79.3	60-140
Trichlorofluoromethane	ND	22.4	0.50	25	-	89.5	60-140
1,2,4-Trimethylbenzene	ND	-	0.50	-	-	-	-
1,3,5-Trimethylbenzene	ND	-	0.50	-	-	-	-
Vinyl Acetate	ND	-	0.50	-	-	-	-
Vinyl Chloride	ND	18.3	0.50	25	-	73.1	60-140
Xylenes, Total	ND	61.8	1.5	75	-	82.4	60-140
Surrogate Recovery							
1,2-DCA-d4	459	465		500	92	93	60-140
Toluene-d8	500	493		500	100	99	60-140
4-BFB	517	506		500	103	101	60-140

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CHAIN-OF-CUSTODY RECORD

WorkOrder: 1408965 **ClientCode: EPB**

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

Report to:
Mehrdad Javaher
Endpoint
1534 Plaza Lane #243
Burlingame, CA 94010
415-706-8935 FAX:

Email: mehrdad@endpoint-inc.com
cc/3rd Party:
PO:
ProjectNo: #TM Dublin; Crow Canyon Cleaners

Bill to:
Accounts Payable
Endpoint
1534 Plaza Lane #243
Burlingame, CA 94010

Requested TAT: 5 days

Date Received: **08/27/2014**
Date Printed: **09/03/2014**

Lab ID	Client ID	Matrix	Collection Date	Hold	Requested Tests (See legend below)											
					1	2	3	4	5	6	7	8	9	10	11	12
1408965-001	VE-1S	Soil Gas	8/26/2014 9:26	☐	A	A										
1408965-002	VM-9SS	Soil Gas	8/26/2014 9:55	☐	A	A										

Test Legend:

1	HELIUM_LC_SOILGAS(%)	2	5-8010_Scan-SIM_SOIL(UG	3		4		5	
6		7		8		9		10	
11		12							

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

Prepared by: Jena Alfaro

Comments:

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

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WORK ORDER SUMMARY

Client Name: ENDPOINT
Project: #TM Dublin; Crow Canyon Cleaners
Comments:

QC Level: LEVEL 2
Client Contact: Mehrdad Javaher
Contact's Email: mehrdad@endpoint-inc.com

Work Order: 1408965
Date Received: 8/27/2014

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

Lab ID	Client ID	Matrix	Test Name	Number of Containers	Bottle & Preservative	De-chlorinated	Collection Date & Time	TAT	Sediment Content	Hold	SubOut
1408965-001A	VE-1S	Soil Gas	HVOCs by TO15 for Soil Vapor	1	1L Summa	☐	8/26/2014 9:26	5 days		☐	
			ASTM D1946-90 (Helium)			☐		5 days		☐	
1408965-002A	VM-9SS	Soil Gas	HVOCs by TO15 for Soil Vapor	1	1L Summa	☐	8/26/2014 9:55	5 days		☐	
			ASTM D1946-90 (Helium)			☐		5 days		☐	

*** NOTE: STLC and TCLP extractions require 48 hrs to complete; therefore, all TATs begin after the extraction is completed (i.e., 24hr TAT yields results in 72 hrs from sample submission).**

Bottle Legend:
1L Summa = 1L Summa Canister

1408965

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CHAIN OF CUSTODY RECORD

TURN AROUND TIME: RUSH ☐ 1 DAY ☐ 2 DAY ☐ 3 DAY ☐ 5 DAY ☐

GeoTracker EDF ☐ PDF ☐ EDD ☐ EQuIS ☐ 10 DAY ☐

UST CLEAN UP FUND ☐ ; Claim #

Report To: Mehrdad	**Bill To:** Endpoint
Company: Endpoint Consulting	
1534 Plaza Ln #243	
Burlingame	**E-Mail:**
Tele: (415) 706-8535	**Fax:** ( )
Project #: Tim Dublin	**Project Name:** ~~CCC~~ Crow
Project Location: 7272 San Ramon Canyon Cleaners	
Sampler Signature:	

Field Sample ID (Location)	Collection Date	Collection Time	Canister SN#	Sampler Kit SN#	VOCs by TO-15 (ug/m3) 8010 per M	8010 by TO-15 (ug/m3)	TPH(g) (ug/m3)	LEED (inc. 4PCH, Formaldehyde, CO, Total VOCs)	Fixed Gas: CO2, Methane, Ethane, Ethylene, Acetylene, CO (please circle or indicate in notes) uL/L	Fixed Gas: O2, N2 (please circle) uL/L	Fixed Gas: Propane uL/L	Helium Leak Check (%)	Leak Check (IPA, Norflorane, 1,1-difluroethane) ug/m3	APH: Aliphatic and/or Aromatic (please circle) ug/m3	Other:	Matrix: Soilgas	Matrix: Indoor Air	Canister Pressure/ Vacuum: Initial	Canister Pressure/ Vacuum: Final
VE-15	8/26/14	0926	5805	989	X							X				X			
V m-955	↓	955	1510	990	X							X				X			

Helium Shroud SN#

Other:

Notes: Please Specify units if different than default: VOCs is reported in ug/m3, fixed gas is reported in uL/L. Leak check default is IPA.

Relinquished By:	Date:	Time:	Received By:
	8/26/14	1537	
Relinquished By:	Date:	Time:	Received By:
Relinquished By:	Date:	Time:	Received By:

Temp (°C) : _____ Work Order #: _____

Condition: _____

Custody Seals Intact?: Yes _____ No _____ None _____

Shipped Via: _____

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Sample Receipt Checklist

Client Name: **Endpoint**
Date and Time Received: **8/27/2014 3:57:47 PM**
Project Name: **#TM Dublin; Crow Canyon Cleaners**
LogIn Reviewed by: Jena Alfaro
WorkOrder №: **1408965** Matrix: Soil Gas
Carrier: Client Drop-In

Chain of Custody (COC) Information

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

Sample Receipt Information

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

Sample Preservation and Hold Time (HT) Information

All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature	Cooler Temp:		NA ☑
Water - VOA vials have zero headspace / no bubbles?	Yes ☐	No ☐	NA ☑
Sample labels checked for correct preservation?	Yes ☑	No ☐	
pH acceptable upon receipt (Metal: pH<2; 522: pH<4)?	Yes ☐	No ☐	NA ☑
Samples Received on Ice?	Yes ☐	No ☑	

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

Comments:

McCampbell Analytical, Inc.

"When Quality Counts"

Analytical Report

WorkOrder: 1408966

Report Created for: Endpoint
1534 Plaza Lane #243
Burlingame, CA 94010

Project Contact: Mehrdad Javaher
Project P.O.:
Project Name: #TM Dublin; Crow Canyon Cleaners

Project Received: 08/27/2014

Analytical Report reviewed & approved for release on 09/03/2014 by:

Question about your data?

Click here to email McCampbell

Angela Rydelius,
Laboratory Manager

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Glossary of Terms & Qualifier Definitions

Client: Endpoint
Project: #TM Dublin; Crow Canyon Cleaners
WorkOrder: 1408966

Glossary Abbreviation

95% Interval	95% Confident Interval
DF	Dilution Factor
DUP	Duplicate
EDL	Estimated Detection Limit
ITEF	International Toxicity Equivalence Factor
LCS	Laboratory Control Sample
MB	Method Blank
MB % Rec	% Recovery of Surrogate in Method Blank, if applicable
MDL	Method Detection Limit
ML	Minimum Level of Quantitation
MS	Matrix Spike
MSD	Matrix Spike Duplicate
ND	Not detected at or above the indicated MDL or RL
NR	Matrix interferences, or analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix; or sample diluted due to high matrix or analyte content.
PF	Prep Factor
RD	Relative Difference
RL	Reporting Limit (The RL is the lowest calibration standard in a multipoint calibration.)
RPD	Relative Percent Deviation
RRT	Relative Retention Time
SPK Val	Spike Value
SPKRef Val	Spike Reference Value
TEQ	Toxicity Equivalence

Quality Control Qualifiers

F2	LCS recovery for this compound is outside of acceptance limits.

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Case Narrative

Client: Endpoint
Project: #TM Dublin; Crow Canyon Cleaners

Work Order: 1408966
September 03, 2014

TO-15 ANALYSIS

All summa canisters are EVACUATED 5 days after the reporting of the results. Please call or email if a longer retention time is required.

In an effort to attain the lowest reporting limits possible for the majority of the TO-15 target list, high level compounds may be analyzed using EPA Method 8260B.

Polymer (Tedlar) bags are not recommended for TO15 samples. The disadvantages are listed in Appendix B of the DTSC Advisory of April 2012.

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Analytical Report

Client:	Endpoint	**WorkOrder:**	1408966
Project:	#TM Dublin; Crow Canyon Cleaners	**Extraction Method:**	ASTM D 1946-90
Date Received:	8/27/14 16:00	**Analytical Method:**	ASTM D 1946-90
Date Prepared:	8/28/14	**Unit:**	%

Helium

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
VM-11	1408966-001A	Soil Gas	08/26/2014 09:02	GC26	94623

Initial Pressure (psia)	Final Pressure (psia)
12.44	24.78

Analytes	Result	RL	DF	Date Analyzed
Helium	ND	0.0050	1	08/28/2014 16:17

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Analytical Report

Client:	Endpoint	**WorkOrder:**	1408966
Project:	#TM Dublin; Crow Canyon Cleaners	**Extraction Method:**	TO15
Date Received:	8/27/14 16:00	**Analytical Method:**	TO15
Date Prepared:	8/28/14	**Unit:**	µg/m³

Halogenated Volatile Organic Compounds in µg/m³

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
VM-11	1408966-001A	Soil Gas	08/26/2014 09:02	GC24	94489

Initial Pressure (psia)	Final Pressure (psia)
12.44	24.78

Analytes	Result	RL	DF	Date Analyzed
Bromodichloromethane	ND	3.5	1	08/28/2014 07:18
Bromoform	ND	5.2	1	08/28/2014 07:18
Bromomethane	ND	2.0	1	08/28/2014 07:18
Carbon Tetrachloride	ND	3.2	1	08/28/2014 07:18
Chlorobenzene	ND	2.4	1	08/28/2014 07:18
Chloroethane	ND	1.3	1	08/28/2014 07:18
Chloroform	ND	2.4	1	08/28/2014 07:18
Chloromethane	ND	1.0	1	08/28/2014 07:18
Dibromochloromethane	ND	4.4	1	08/28/2014 07:18
1,2-Dibromo-3-chloropropane	ND	0.12	1	08/28/2014 07:18
1,2-Dibromoethane (EDB)	ND	3.9	1	08/28/2014 07:18
1,2-Dichlorobenzene	ND	3.0	1	08/28/2014 07:18
1,3-Dichlorobenzene	ND	3.0	1	08/28/2014 07:18
1,4-Dichlorobenzene	ND	3.0	1	08/28/2014 07:18
Dichlorodifluoromethane	ND	2.5	1	08/28/2014 07:18
1,1-Dichloroethane	ND	2.0	1	08/28/2014 07:18
1,2-Dichloroethane (1,2-DCA)	ND	2.0	1	08/28/2014 07:18
1,1-Dichloroethene	ND	2.0	1	08/28/2014 07:18
cis-1,2-Dichloroethene	ND	2.0	1	08/28/2014 07:18
trans-1,2-Dichloroethene	ND	2.0	1	08/28/2014 07:18
1,2-Dichloropropane	ND	2.4	1	08/28/2014 07:18
cis-1,3-Dichloropropene	ND	2.3	1	08/28/2014 07:18
trans-1,3-Dichloropropene	ND	2.3	1	08/28/2014 07:18
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	3.6	1	08/28/2014 07:18
Freon 113	ND	3.9	1	08/28/2014 07:18
Methylene chloride	ND	1.8	1	08/28/2014 07:18
1,1,1,2-Tetrachloroethane	ND	3.5	1	08/28/2014 07:18
1,1,2,2-Tetrachloroethane	ND	3.5	1	08/28/2014 07:18
Tetrachloroethene	**170**	3.4	1	08/28/2014 07:18
1,2,4-Trichlorobenzene	ND	3.8	1	08/28/2014 07:18
1,1,1-Trichloroethane	ND	2.8	1	08/28/2014 07:18
1,1,2-Trichloroethane	ND	2.8	1	08/28/2014 07:18
Trichloroethene	ND	2.8	1	08/28/2014 07:18
Trichlorofluoromethane	ND	2.8	1	08/28/2014 07:18

(Cont.)

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Analytical Report

Client:	Endpoint	**WorkOrder:**	1408966
Project:	#TM Dublin; Crow Canyon Cleaners	**Extraction Method:**	TO15
Date Received:	8/27/14 16:00	**Analytical Method:**	TO15
Date Prepared:	8/28/14	**Unit:**	µg/m³

Halogenated Volatile Organic Compounds in µg/m³

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
VM-11	**1408966-001A**	**Soil Gas**	**08/26/2014 09:02**	**GC24**	**94489**

Initial Pressure (psia)	Final Pressure (psia)
12.44	**24.78**

Analytes	Result	RL	DF	Date Analyzed
Vinyl Chloride	ND	1.3	1	08/28/2014 07:18

Surrogates	REC (%)	Limits	
1,2-DCA-d4	91	70-130	08/28/2014 07:18
Toluene-d8	101	70-130	08/28/2014 07:18
4-BFB	105	70-130	08/28/2014 07:18

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Quality Control Report

Client:	Endpoint	**WorkOrder:**	1408966
Date Prepared:	8/29/14	**BatchID:**	94623
Date Analyzed:	8/28/14	**Extraction Method:**	ASTM D 1946-90
Instrument:	GC26	**Analytical Method:**	ASTM D 1946-90
Matrix:	Soilgas	**Unit:**	%
Project:	#TM Dublin; Crow Canyon Cleaners	**Sample ID:**	MB/LCS-94623

QC Summary Report for ASTM D1946-90

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Helium	ND	0.0121	0.0050	0.010	-	121	60-140

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Quality Control Report

Client:	Endpoint	**WorkOrder:**	1408966
Date Prepared:	8/26/14	**BatchID:**	94489
Date Analyzed:	8/27/14	**Extraction Method:**	TO15
Instrument:	GC24	**Analytical Method:**	TO15
Matrix:	Soilgas	**Unit:**	nL/L
Project:	#TM Dublin; Crow Canyon Cleaners	**Sample ID:**	MB/LCS-94489

QC Summary Report for TO15

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Acetone	ND	-	25	-	-	-	-
Acrolein	ND	-	0.50	-	-	-	-
Acrylonitrile	ND	-	0.50	-	-	-	-
tert-Amyl methyl ether (TAME)	ND	-	0.50	-	-	-	-
Benzene	ND	-	0.50	-	-	-	-
Benzyl chloride	ND	-	0.50	-	-	-	-
Bromodichloromethane	ND	21.8	0.50	25	-	87.2	60-140
Bromoform	ND	39.3	0.50	25	-	157, F2	60-140
Bromomethane	ND	-	0.50	-	-	-	-
1,3-Butadiene	ND	-	0.50	-	-	-	-
2-Butanone (MEK)	ND	-	25	-	-	-	-
t-Butyl alcohol (TBA)	ND	-	10	-	-	-	-
Carbon Disulfide	ND	-	0.50	-	-	-	-
Carbon Tetrachloride	ND	23.1	0.50	25	-	92.6	60-140
Chlorobenzene	ND	21.8	0.50	25	-	87.1	60-140
Chloroethane	ND	17.8	0.50	25	-	71.2	60-140
Chloroform	ND	16.6	0.50	25	-	66.6	60-140
Chloromethane	ND	16.7	0.50	25	-	66.9	60-140
Cyclohexane	ND	-	5.0	-	-	-	-
Dibromochloromethane	ND	26.1	0.50	25	-	104	60-140
1,2-Dibromo-3-chloropropane	ND	37.0	0.012	25	-	148, F2	60-140
1,2-Dibromoethane (EDB)	ND	20.5	0.50	25	-	81.9	60-140
1,2-Dichlorobenzene	ND	-	0.50	-	-	-	-
1,3-Dichlorobenzene	ND	24.0	0.50	25	-	95.9	60-140
1,4-Dichlorobenzene	ND	22.4	0.50	25	-	89.5	60-140
Dichlorodifluoromethane	ND	19.6	0.50	25	-	78.4	60-140
1,1-Dichloroethane	ND	19.5	0.50	25	-	78.1	60-140
1,2-Dichloroethane (1,2-DCA)	ND	20.1	0.50	25	-	80.6	60-140
1,1-Dichloroethene	ND	-	0.50	-	-	-	-
cis-1,2-Dichloroethene	ND	19.5	0.50	25	-	77.9	60-140
trans-1,2-Dichloroethene	ND	19.0	0.50	25	-	76.2	60-140
1,2-Dichloropropane	ND	19.4	0.50	25	-	77.4	60-140
cis-1,3-Dichloropropene	ND	22.4	0.50	25	-	89.7	60-140
trans-1,3-Dichloropropene	ND	22.1	0.50	25	-	88.3	60-140
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	18.6	0.50	25	-	74.3	60-140
Diisopropyl ether (DIPE)	ND	-	0.50	-	-	-	-
1,4-Dioxane	ND	-	0.50	-	-	-	-
Ethanol	ND	-	50	-	-	-	-
Ethyl acetate	ND	-	0.50	-	-	-	-
Ethyl tert-butyl ether (ETBE)	ND	-	0.50	-	-	-	-

(Cont.)

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Quality Control Report

Client:	Endpoint	**WorkOrder:**	1408966
Date Prepared:	8/26/14	**BatchID:**	94489
Date Analyzed:	8/27/14	**Extraction Method:**	TO15
Instrument:	GC24	**Analytical Method:**	TO15
Matrix:	Soilgas	**Unit:**	nL/L
Project:	#TM Dublin; Crow Canyon Cleaners	**Sample ID:**	MB/LCS-94489

QC Summary Report for TO15

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Ethylbenzene	ND	-	0.50	-	-	-	-
4-Ethyltoluene	ND	-	0.50	-	-	-	-
Freon 113	ND	18.7	0.50	25	-	74.9	60-140
Heptane	ND	-	5.0	-	-	-	-
Hexachlorobutadiene	ND	-	0.50	-	-	-	-
Hexane	ND	-	5.0	-	-	-	-
2-Hexanone	ND	-	0.50	-	-	-	-
4-Methyl-2-pentanone (MIBK)	ND	-	0.50	-	-	-	-
Methyl-t-butyl ether (MTBE)	ND	-	0.50	-	-	-	-
Methylene chloride	ND	16.9	0.50	25	-	67.6	60-140
Methyl methacrylate	ND	-	0.50	-	-	-	-
Naphthalene	ND	-	1.0	-	-	-	-
Propene	ND	-	50	-	-	-	-
Styrene	ND	-	0.50	-	-	-	-
1,1,1,2-Tetrachloroethane	ND	23.3	0.50	25	-	93.2	60-140
1,1,2,2-Tetrachloroethane	ND	18.4	0.50	25	-	73.5	60-140
Tetrachloroethene	ND	23.0	0.50	25	-	92.2	60-140
Tetrahydrofuran	ND	-	0.50	-	-	-	-
Toluene	ND	-	0.50	-	-	-	-
1,2,4-Trichlorobenzene	ND	28.5	0.50	25	-	114	60-140
1,1,1-Trichloroethane	ND	25.2	0.50	25	-	101	60-140
1,1,2-Trichloroethane	ND	17.5	0.50	25	-	70	60-140
Trichloroethene	ND	19.8	0.50	25	-	79.3	60-140
Trichlorofluoromethane	ND	22.4	0.50	25	-	89.5	60-140
1,2,4-Trimethylbenzene	ND	-	0.50	-	-	-	-
1,3,5-Trimethylbenzene	ND	-	0.50	-	-	-	-
Vinyl Acetate	ND	-	0.50	-	-	-	-
Vinyl Chloride	ND	18.3	0.50	25	-	73.1	60-140
Xylenes, Total	ND	61.8	1.5	75	-	82.4	60-140
Surrogate Recovery							
1,2-DCA-d4	459	465		500	92	93	60-140
Toluene-d8	500	493		500	100	99	60-140
4-BFB	517	506		500	103	101	60-140

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(925) 252-9262

CHAIN-OF-CUSTODY RECORD

WorkOrder: 1408966 **ClientCode: EPB**

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

Report to:
Mehrdad Javaher
Endpoint
1534 Plaza Lane #243
Burlingame, CA 94010
415-706-8935 FAX:

Email: mehrdad@endpoint-inc.com
cc/3rd Party:
PO:
ProjectNo: #TM Dublin; Crow Canyon Cleaners

Bill to:
Accounts Payable
Endpoint
1534 Plaza Lane #243
Burlingame, CA 94010

Requested TAT: 5 days

Date Received: **08/27/2014**
Date Printed: **09/03/2014**

Lab ID	Client ID	Matrix	Collection Date	Hold	Requested Tests (See legend below)											
					1	2	3	4	5	6	7	8	9	10	11	12
1408966-001	VM-11	Soil Gas	8/26/2014 9:02	☐	A	A	A									

Test Legend:

1	HELIUM_LC_SOILGAS(%)	2	PRUNUSEDSUMMA	3	5-8010_Scan-SIM_SOIL(UG	4		5	
6		7		8		9		10	
11		12							

The following SampID: 001A contains testgroup.

Prepared by: Jena Alfaro

Comments:

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

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WORK ORDER SUMMARY

Client Name: ENDPOINT
Project: #TM Dublin; Crow Canyon Cleaners
Comments:

QC Level: LEVEL 2
Client Contact: Mehrdad Javaher
Contact's Email: mehrdad@endpoint-inc.com

Work Order: 1408966
Date Received: 8/27/2014

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

Lab ID	Client ID	Matrix	Test Name	Number of Containers	Bottle & Preservative	De-chlorinated	Collection Date & Time	TAT	Sediment Content	Hold	SubOut
1408966-001A	VM-11	Soil Gas	HVOCs by TO15 for Soil Vapor	1	1L Summa	☐	8/26/2014 9:02	5 days		☐	
			ASTM D1946-90 (Helium)			☐		5 days		☐	

*** NOTE: STLC and TCLP extractions require 48 hrs to complete; therefore, all TATs begin after the extraction is completed (i.e., 24hr TAT yields results in 72 hrs from sample submission).**

Bottle Legend:
1L Summa = 1L Summa Canister

1408966

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CHAIN OF CUSTODY RECORD

TURN AROUND TIME: RUSH ☐ 1 DAY ☐ 2 DAY ☐ 3 DAY ☐ 5 DAY ☐

GeoTracker EDF ☐ PDF ☐ EDD ☐ EQuIS ☐ 10 DAY ☐

UST CLEAN UP FUND ☐ ; Claim #

Report To: McCORMAD **Bill To:** ENDpoint
Company: ENDpoint
1534 PLAZA LN # 243
Burlingame **E-Mail:**
Tele: (415) 906-8335 **Fax:** ( )
Project #: TM DUBLIN **Project Name:** Crow Canyon
Project Location: 7272 San Ramon Rd Chevron
Sampler Signature: [signature]

Helium Shroud SN#
Other:
Notes: Please Specify units if different than default: VOCs is reported in ug/m3, fixed gas is reported in uL/L. Leak check default is IPA.

Analysis Requested:

Field Sample ID (Location)	Collection Date	Collection Time	Canister SN#	Sampler Kit SN#	VOCs by TO-15 (ug/m3) 8010 per MJ	8010 by TO-15 (ug/m3)	TPH(g) (ug/m3)	LEED (inc. 4PCH, Formaldehyde, CO, Total VOCs)	Fixed Gas: CO2, Methane, Ethane, Ethylene, Acetylene, CO (please circle or indicate in notes) uL/L	Fixed Gas: O2, N2 (please circle) uL/L	Fixed Gas: Propane uL/L	Helium Leak Check (%)	Leak Check (IPA, Norflorane, 1,1-difluroethane) ug/m3	APH: Aliphatic and/or Aromatic (please circle) ug/m3	Other:	Matrix: Soilgas	Matrix: Indoor Air	Canister Pressure/Vacuum Initial	Canister Pressure/Vacuum Final
VM-11	8/26/14	0902	6809	987	X							X				X			

Relinquished By:	Date:	Time:	Received By:
[signature]	8/27/14	1537	[signature]

Temp (°C) : ______ Work Order #: ____________

Condition: ____________

Custody Seals Intact?: Yes _____ No _____ None ______

Shipped Via: ____________

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Sample Receipt Checklist

Client Name: **Endpoint**
Date and Time Received: **8/27/2014 4:00:18 PM**
Project Name: **#TM Dublin; Crow Canyon Cleaners**
LogIn Reviewed by: Jena Alfaro
WorkOrder №: **1408966** Matrix: Soil Gas
Carrier: Client Drop-In

Chain of Custody (COC) Information

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

Sample Receipt Information

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

Sample Preservation and Hold Time (HT) Information

All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature	Cooler Temp:		NA ☑
Water - VOA vials have zero headspace / no bubbles?	Yes ☐	No ☐	NA ☑
Sample labels checked for correct preservation?	Yes ☑	No ☐	
pH acceptable upon receipt (Metal: pH<2; 522: pH<4)?	Yes ☐	No ☐	NA ☑
Samples Received on Ice?	Yes ☐	No ☑	

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

Comments:

McCampbell Analytical, Inc.

"When Quality Counts"

Analytical Report

WorkOrder: 1311476

Report Created for: Endpoint
1534 Plaza Lane #243
Burlingame, CA 94010

Project Contact: Mehrdad Javaher
Project P.O.:
Project Name: TM Dublin; Crow Canyon Cleaner

Project Received: 11/14/2013

Analytical Report reviewed & approved for release on 11/19/2013 by:

Question about your data?

Click here to email McCampbell

Angela Rydelius,
Laboratory Manager

McCampbell Analytical, Inc.
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Glossary of Terms & Qualifier Definitions

Client: Endpoint
Project: TM Dublin; Crow Canyon Cleaner
WorkOrder: 1311476

Glossary Abbreviation	Description
95% Interval	95% Confident Interval
DF	Dilution Factor
DUP	Duplicate
LCS	Laboratory Control Sample
MB	Method Blank
MB % Rec	% Recovery of Surrogate in Method Blank, if applicable
MDL	Method Detection Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
ND	Not detected at or above the indicated MDL or RL
NR	Analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix; or sample diluted due to high matrix or analyte content.
RD	Relative Difference
RL	Reporting Limit
RPD	Relative Percent Deviation
SPK Val	Spike Value
SPKRef Val	Spike Reference Value

Quality Control Qualifier	
F2	LCS recovery for this compound is outside of acceptance limits.

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Case Narrative

Client: Endpoint
Project: TM Dublin; Crow Canyon Cleaner

Work Order: 1311476
November 19, 2013

TO-15 ANALYSIS

All summa canisters are EVACUATED 5 days after the reporting of the results. Please call or email if a longer retention time is required.

In an effort to attain the lowest reporting limits possible for the majority of the TO-15 target list, high level compounds may be analyzed using EPA Method 8260B.

Polymer (Tedlar) bags are not recommended for TO15 samples. The disadvantages are listed in Appendix B of the DTSC Advisory of April 2012.

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Analytical Report

Client:	Endpoint	**WorkOrder:**	1311476
Project:	TM Dublin; Crow Canyon Cleaner	**Extraction Method**	TO15
Date Received:	11/14/13 19:25	**Analytical Method:**	TO15
Date Prepared:	11/15/13-11/18/13	**Unit:**	µg/m³

Halogenated Volatile Organic Compounds in µg/m³

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
VM-95S	1311476-001A	Soil Gas	11/13/2013 12:16	GC24	84162

Initial Pressure (psia)	Final Pressure (psia)
13.05	26.00

Analytes	Result	RL	DF	Date Analyzed
Bromodichloromethane	ND	3.5	1	11/15/2013 23:37
Bromoform	ND	5.2	1	11/15/2013 23:37
Bromomethane	ND	2.0	1	11/15/2013 23:37
Carbon Tetrachloride	ND	3.2	1	11/15/2013 23:37
Chlorobenzene	ND	2.4	1	11/15/2013 23:37
Chloroethane	ND	1.3	1	11/15/2013 23:37
Chloroform	ND	2.4	1	11/15/2013 23:37
Chloromethane	ND	1.0	1	11/15/2013 23:37
Dibromochloromethane	ND	4.4	1	11/15/2013 23:37
1,2-Dibromoethane (EDB)	ND	3.9	1	11/15/2013 23:37
1,2-Dichlorobenzene	ND	3.0	1	11/15/2013 23:37
1,3-Dichlorobenzene	ND	3.0	1	11/15/2013 23:37
1,4-Dichlorobenzene	ND	3.0	1	11/15/2013 23:37
Dichlorodifluoromethane	ND	2.5	1	11/15/2013 23:37
1,1-Dichloroethane	ND	2.0	1	11/15/2013 23:37
1,2-Dichloroethane (1,2-DCA)	ND	2.0	1	11/15/2013 23:37
1,1-Dichloroethene	ND	2.0	1	11/15/2013 23:37
cis-1,2-Dichloroethene	**3.5**	2.0	1	11/15/2013 23:37
trans-1,2-Dichloroethene	**2.4**	2.0	1	11/15/2013 23:37
1,2-Dichloropropane	ND	2.4	1	11/15/2013 23:37
cis-1,3-Dichloropropene	ND	2.3	1	11/15/2013 23:37
trans-1,3-Dichloropropene	ND	2.3	1	11/15/2013 23:37
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	3.6	1	11/15/2013 23:37
Freon 113	ND	3.9	1	11/15/2013 23:37
Methylene chloride	ND	1.8	1	11/15/2013 23:37
1,1,1,2-Tetrachloroethane	ND	3.5	1	11/15/2013 23:37
1,1,2,2-Tetrachloroethane	ND	3.5	1	11/15/2013 23:37
Tetrachloroethene	**2200**	34	10	11/18/2013 16:21
1,2,4-Trichlorobenzene	ND	3.8	1	11/15/2013 23:37
1,1,1-Trichloroethane	ND	2.8	1	11/15/2013 23:37
1,1,2-Trichloroethane	ND	2.8	1	11/15/2013 23:37
Trichloroethene	**32**	2.8	1	11/15/2013 23:37
Trichlorofluoromethane	ND	2.8	1	11/15/2013 23:37
Vinyl Chloride	ND	1.3	1	11/15/2013 23:37

(Cont.)

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Analytical Report

Client:	Endpoint	**WorkOrder:**	1311476
Project:	TM Dublin; Crow Canyon Cleaner	**Extraction Method**	TO15
Date Received:	11/14/13 19:25	**Analytical Method:**	TO15
Date Prepared:	11/15/13-11/18/13	**Unit:**	µg/m³

Halogenated Volatile Organic Compounds in µg/m³

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
VM-95S	**1311476-001A**	**Soil Gas**	**11/13/2013 12:16**	**GC24**	**84162**

Initial Pressure (psia)	Final Pressure (psia)
13.05	**26.00**

Analytes	Result	RL	DF	Date Analyzed
Xylenes, Total	ND	6.6	1	11/15/2013 23:37

Surrogates	REC (%)	Limits	
1,2-DCA-d4	93	70-130	11/15/2013 23:37
Toluene-d8	101	70-130	11/15/2013 23:37
4-BFB	100	70-130	11/15/2013 23:37

(Cont.)

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Analytical Report

Client:	Endpoint	**WorkOrder:**	1311476
Project:	TM Dublin; Crow Canyon Cleaner	**Extraction Method**	TO15
Date Received:	11/14/13 19:25	**Analytical Method:**	TO15
Date Prepared:	11/15/13-11/18/13	**Unit:**	µg/m³

Halogenated Volatile Organic Compounds in µg/m³

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
VM-4S	1311476-002A	Soil Gas	11/13/2013 12:19	GC24	84162

Initial Pressure (psia)	Final Pressure (psia)
14.58	29.08

Analytes	Result	RL	DF	Date Analyzed
Bromodichloromethane	ND	3.5	1	11/16/2013 00:17
Bromoform	ND	5.2	1	11/16/2013 00:17
Bromomethane	**9.0**	2.0	1	11/16/2013 00:17
Carbon Tetrachloride	ND	3.2	1	11/16/2013 00:17
Chlorobenzene	ND	2.4	1	11/16/2013 00:17
Chloroethane	ND	1.3	1	11/16/2013 00:17
Chloroform	ND	2.4	1	11/16/2013 00:17
Chloromethane	ND	1.0	1	11/16/2013 00:17
Dibromochloromethane	ND	4.4	1	11/16/2013 00:17
1,2-Dibromoethane (EDB)	ND	3.9	1	11/16/2013 00:17
1,2-Dichlorobenzene	ND	3.0	1	11/16/2013 00:17
1,3-Dichlorobenzene	ND	3.0	1	11/16/2013 00:17
1,4-Dichlorobenzene	ND	3.0	1	11/16/2013 00:17
Dichlorodifluoromethane	ND	2.5	1	11/16/2013 00:17
1,1-Dichloroethane	ND	2.0	1	11/16/2013 00:17
1,2-Dichloroethane (1,2-DCA)	ND	2.0	1	11/16/2013 00:17
1,1-Dichloroethene	ND	2.0	1	11/16/2013 00:17
cis-1,2-Dichloroethene	ND	2.0	1	11/16/2013 00:17
trans-1,2-Dichloroethene	ND	2.0	1	11/16/2013 00:17
1,2-Dichloropropane	ND	2.4	1	11/16/2013 00:17
cis-1,3-Dichloropropene	ND	2.3	1	11/16/2013 00:17
trans-1,3-Dichloropropene	ND	2.3	1	11/16/2013 00:17
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	3.6	1	11/16/2013 00:17
Freon 113	ND	3.9	1	11/16/2013 00:17
Methylene chloride	ND	1.8	1	11/16/2013 00:17
1,1,1,2-Tetrachloroethane	ND	3.5	1	11/16/2013 00:17
1,1,2,2-Tetrachloroethane	ND	3.5	1	11/16/2013 00:17
Tetrachloroethene	**120**	3.4	1	11/16/2013 00:17
1,2,4-Trichlorobenzene	ND	3.8	1	11/16/2013 00:17
1,1,1-Trichloroethane	ND	2.8	1	11/16/2013 00:17
1,1,2-Trichloroethane	ND	2.8	1	11/16/2013 00:17
Trichloroethene	ND	2.8	1	11/16/2013 00:17
Trichlorofluoromethane	ND	2.8	1	11/16/2013 00:17
Vinyl Chloride	ND	1.3	1	11/16/2013 00:17

(Cont.)

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Analytical Report

Client:	Endpoint	**WorkOrder:**	1311476
Project:	TM Dublin; Crow Canyon Cleaner	**Extraction Method**	TO15
Date Received:	11/14/13 19:25	**Analytical Method:**	TO15
Date Prepared:	11/15/13-11/18/13	**Unit:**	µg/m³

Halogenated Volatile Organic Compounds in µg/m³

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
VM-4S	**1311476-002A**	**Soil Gas**	**11/13/2013 12:19**	**GC24**	**84162**

Initial Pressure (psia)	Final Pressure (psia)
14.58	**29.08**

Analytes	Result	RL	DF	Date Analyzed
Xylenes, Total	ND	6.6	1	11/16/2013 00:17

Surrogates	REC (%)	Limits	
1,2-DCA-d4	87	70-130	11/16/2013 00:17
Toluene-d8	101	70-130	11/16/2013 00:17
4-BFB	100	70-130	11/16/2013 00:17

(Cont.)

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Analytical Report

Client:	Endpoint	**WorkOrder:**	1311476
Project:	TM Dublin; Crow Canyon Cleaner	**Extraction Method**	TO15
Date Received:	11/14/13 19:25	**Analytical Method:**	TO15
Date Prepared:	11/15/13-11/18/13	**Unit:**	µg/m³

Halogenated Volatile Organic Compounds in µg/m³

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
VE-1S	**1311476-003A**	**Soil Gas**	**11/13/2013 12:45**	**GC24**	**84162**

Initial Pressure (psia)	Final Pressure (psia)
12.60	**25.10**

Analytes	Result	RL	DF	Date Analyzed
Bromodichloromethane	ND	3.5	1	11/16/2013 00:57
Bromoform	ND	5.2	1	11/16/2013 00:57
Bromomethane	ND	2.0	1	11/16/2013 00:57
Carbon Tetrachloride	ND	3.2	1	11/16/2013 00:57
Chlorobenzene	ND	2.4	1	11/16/2013 00:57
Chloroethane	ND	1.3	1	11/16/2013 00:57
Chloroform	ND	2.4	1	11/16/2013 00:57
Chloromethane	ND	1.0	1	11/16/2013 00:57
Dibromochloromethane	ND	4.4	1	11/16/2013 00:57
1,2-Dibromoethane (EDB)	ND	3.9	1	11/16/2013 00:57
1,2-Dichlorobenzene	ND	3.0	1	11/16/2013 00:57
1,3-Dichlorobenzene	ND	3.0	1	11/16/2013 00:57
1,4-Dichlorobenzene	ND	3.0	1	11/16/2013 00:57
Dichlorodifluoromethane	**2.5**	2.5	1	11/16/2013 00:57
1,1-Dichloroethane	ND	2.0	1	11/16/2013 00:57
1,2-Dichloroethane (1,2-DCA)	ND	2.0	1	11/16/2013 00:57
1,1-Dichloroethene	ND	2.0	1	11/16/2013 00:57
cis-1,2-Dichloroethene	ND	2.0	1	11/16/2013 00:57
trans-1,2-Dichloroethene	ND	2.0	1	11/16/2013 00:57
1,2-Dichloropropane	ND	2.4	1	11/16/2013 00:57
cis-1,3-Dichloropropene	ND	2.3	1	11/16/2013 00:57
trans-1,3-Dichloropropene	ND	2.3	1	11/16/2013 00:57
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	3.6	1	11/16/2013 00:57
Freon 113	ND	3.9	1	11/16/2013 00:57
Methylene chloride	ND	1.8	1	11/16/2013 00:57
1,1,1,2-Tetrachloroethane	ND	3.5	1	11/16/2013 00:57
1,1,2,2-Tetrachloroethane	ND	3.5	1	11/16/2013 00:57
Tetrachloroethene	**1600**	34	10	11/18/2013 17:00
1,2,4-Trichlorobenzene	ND	3.8	1	11/16/2013 00:57
1,1,1-Trichloroethane	ND	2.8	1	11/16/2013 00:57
1,1,2-Trichloroethane	ND	2.8	1	11/16/2013 00:57
Trichloroethene	**6.1**	2.8	1	11/16/2013 00:57
Trichlorofluoromethane	ND	2.8	1	11/16/2013 00:57
Vinyl Chloride	ND	1.3	1	11/16/2013 00:57

(Cont.)

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Analytical Report

Client:	Endpoint	**WorkOrder:**	1311476
Project:	TM Dublin; Crow Canyon Cleaner	**Extraction Method**	TO15
Date Received:	11/14/13 19:25	**Analytical Method:**	TO15
Date Prepared:	11/15/13-11/18/13	**Unit:**	µg/m³

Halogenated Volatile Organic Compounds in µg/m³

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
VE-1S	**1311476-003A**	**Soil Gas**	**11/13/2013 12:45**	**GC24**	**84162**

Initial Pressure (psia)	Final Pressure (psia)
12.60	**25.10**

Analytes	Result	RL	DF	Date Analyzed
Xylenes, Total	ND	6.6	1	11/16/2013 00:57

Surrogates	REC (%)	Limits	
1,2-DCA-d4	91	70-130	11/16/2013 00:57
Toluene-d8	101	70-130	11/16/2013 00:57
4-BFB	100	70-130	11/16/2013 00:57

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Analytical Report

Client:	Endpoint	**WorkOrder:**	1311476
Project:	TM Dublin; Crow Canyon Cleaner	**Extraction Method**	TO15
Date Received:	11/14/13 19:25	**Analytical Method:**	TO15
Date Prepared:	11/15/13-11/16/13	**Unit:**	µg/m³

Leak Check Compound

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
VM-95S	**1311476-001A**	**Soil Gas**	**11/13/2013 12:16**	**GC24**	**84162**

Initial Pressure (psia)	Final Pressure (psia)
13.05	**26.00**

Analytes	Result	RL	DF	Date Analyzed
Isopropyl Alcohol	ND	50	1	11/15/2013 23:37

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
VM-4S	**1311476-002A**	**Soil Gas**	**11/13/2013 12:19**	**GC24**	**84162**

Initial Pressure (psia)	Final Pressure (psia)
14.58	**29.08**

Analytes	Result	RL	DF	Date Analyzed
Isopropyl Alcohol	ND	50	1	11/16/2013 00:17

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
VE-1S	**1311476-003A**	**Soil Gas**	**11/13/2013 12:45**	**GC24**	**84162**

Initial Pressure (psia)	Final Pressure (psia)
12.60	**25.10**

Analytes	Result	RL	DF	Date Analyzed
Isopropyl Alcohol	ND	50	1	11/16/2013 00:57

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Quality Control Report

Client:	Endpoint	**WorkOrder:**	1311476
Date Prepared:	11/18/13	**BatchID:**	84162
Date Analyzed:	11/15/13	**Extraction Method**	TO15
Instrument:	GC24	**Analytical Method:**	TO15
Matrix:	Soilgas	**Unit:**	nL/L
Project:	TM Dublin; Crow Canyon Cleaner	**Sample ID:**	MB/LCS-84162

QC SUMMARY REPORT FOR TO15

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Acetone	ND	-	25	-	-	-	-
Acrylonitrile	ND	-	0.50	-	-	-	-
tert-Amyl methyl ether (TAME)	ND	-	0.50	-	-	-	-
Benzene	ND	-	0.50	-	-	-	-
Benzyl chloride	ND	-	0.50	-	-	-	-
Bromodichloromethane	ND	29.07	0.50	25	-	116	60-140
Bromoform	ND	32.59	0.50	25	-	130	60-140
Bromomethane	ND	-	0.50	-	-	-	-
1,3-Butadiene	ND	-	0.50	-	-	-	-
2-Butanone (MEK)	ND	-	25	-	-	-	-
t-Butyl alcohol (TBA)	ND	-	10	-	-	-	-
Carbon Disulfide	ND	-	0.50	-	-	-	-
Carbon Tetrachloride	ND	32.07	0.50	25	-	128	60-140
Chlorobenzene	ND	25.43	0.50	25	-	102	60-140
Chloroethane	ND	35.84	0.50	25	-	143, F2	60-140
Chloroform	ND	21.92	0.50	25	-	87.7	60-140
Chloromethane	ND	23.59	0.50	25	-	94.3	60-140
Cyclohexane	ND	-	5.0	-	-	-	-
Dibromochloromethane	ND	35.11	0.50	25	-	140	60-140
1,2-Dibromo-3-chloropropane	ND	-	0.012	-	-	-	-
1,2-Dibromoethane (EDB)	ND	22.8	0.50	25	-	91.2	60-140
1,2-Dichlorobenzene	ND	-	0.50	-	-	-	-
1,3-Dichlorobenzene	ND	25.74	0.50	25	-	103	60-140
1,4-Dichlorobenzene	ND	20.79	0.50	25	-	83.2	60-140
Dichlorodifluoromethane	ND	24.75	0.50	25	-	99	60-140
1,1-Dichloroethane	ND	24.74	0.50	25	-	99	60-140
1,2-Dichloroethane (1,2-DCA)	ND	22.7	0.50	25	-	90.8	60-140
1,1-Dichloroethene	ND	-	0.50	-	-	-	-
cis-1,2-Dichloroethene	ND	25.88	0.50	25	-	104	60-140
trans-1,2-Dichloroethene	ND	25.97	0.50	25	-	104	60-140
1,2-Dichloropropane	ND	23.22	0.50	25	-	92.9	60-140
cis-1,3-Dichloropropene	ND	28.35	0.50	25	-	113	60-140
trans-1,3-Dichloropropene	ND	26.71	0.50	25	-	107	60-140
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	25.22	0.50	25	-	101	60-140
Diisopropyl ether (DIPE)	ND	-	0.50	-	-	-	-
1,4-Dioxane	ND	-	0.50	-	-	-	-
Ethanol	ND	-	50	-	-	-	-
Ethyl acetate	ND	-	0.50	-	-	-	-
Ethyl tert-butyl ether (ETBE)	ND	-	0.50	-	-	-	-
Ethylbenzene	ND	-	0.50	-	-	-	-

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Quality Control Report

Client:	Endpoint	**WorkOrder:**	1311476
Date Prepared:	11/18/13	**BatchID:**	84162
Date Analyzed:	11/15/13	**Extraction Method**	TO15
Instrument:	GC24	**Analytical Method:**	TO15
Matrix:	Soilgas	**Unit:**	nL/L
Project:	TM Dublin; Crow Canyon Cleaner	**Sample ID:**	MB/LCS-84162

QC SUMMARY REPORT FOR TO15

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
4-Ethyltoluene	ND	-	0.50	-	-	-	-
Freon 113	ND	16.85	0.50	25	-	67.4	60-140
Heptane	ND	-	5.0	-	-	-	-
Hexachlorobutadiene	ND	-	0.50	-	-	-	-
Hexane	ND	-	5.0	-	-	-	-
2-Hexanone	ND	-	0.50	-	-	-	-
4-Methyl-2-pentanone (MIBK)	ND	-	0.50	-	-	-	-
Methyl-t-butyl ether (MTBE)	ND	-	0.50	-	-	-	-
Methylene chloride	ND	21.62	0.50	25	-	86.5	60-140
Naphthalene	ND	-	1.0	-	-	-	-
Propene	ND	-	50	-	-	-	-
Styrene	ND	-	0.50	-	-	-	-
1,1,1,2-Tetrachloroethane	ND	25.92	0.50	25	-	104	60-140
1,1,2,2-Tetrachloroethane	ND	21.24	0.50	25	-	84.9	60-140
Tetrachloroethene	ND	22.68	0.50	25	-	90.7	60-140
Tetrahydrofuran	ND	-	0.50	-	-	-	-
Toluene	ND	-	0.50	-	-	-	-
1,2,4-Trichlorobenzene	ND	27.05	0.50	25	-	108	60-140
1,1,1-Trichloroethane	ND	28.52	0.50	25	-	114	60-140
1,1,2-Trichloroethane	ND	21.68	0.50	25	-	86.7	60-140
Trichloroethene	ND	21.88	0.50	25	-	87.5	60-140
Trichlorofluoromethane	ND	-	0.50	-	-	-	-
1,2,4-Trimethylbenzene	ND	-	0.50	-	-	-	-
1,3,5-Trimethylbenzene	ND	-	0.50	-	-	-	-
Vinyl Acetate	ND	-	0.50	-	-	-	-
Vinyl Chloride	ND	27.6	0.50	25	-	110	60-140
Xylenes, Total	ND	78.05	1.5	75	-	104	60-140
Surrogate Recovery							
1,2-DCA-d4	469.1	470.3		500	94	94	60-140
Toluene-d8	509.4	504.9		500	102	101	60-140
4-BFB	497.4	510.8		500	99	102	60-140

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

CHAIN-OF-CUSTODY RECORD

WorkOrder: 1311476 **ClientCode: EPB**

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

Report to:
Mehrdad Javaher
Endpoint
1534 Plaza Lane #243
Burlingame, CA 94010
415-706-8935 FAX:

Email: mehrdad@endpoint-inc.com
cc:
PO:
ProjectNo: TM Dublin; Crow Canyon Cleaner

Bill to:
Accounts Payable
Endpoint
1534 Plaza Lane #243
Burlingame, CA 94010

Requested TAT: 5 days

Date Received: **11/14/2013**
Date Printed: **11/15/2013**

Lab ID	Client ID	Matrix	Collection Date	Hold	Requested Tests (See legend below) 1	2	3	4	5	6	7	8	9	10	11	12
1311476-001	VM-95S	Soil Gas	11/13/2013 12:16	☐	A											
1311476-002	VM-4S	Soil Gas	11/13/2013 12:19	☐	A											
1311476-003	VE-1S	Soil Gas	11/13/2013 12:45	☐	A											

Test Legend:

1	5-8010_Scan-SIM_SOIL(UG,	2		3		4		5	
6		7		8		9		10	
11		12							

Prepared by: Daniel Loa

Comments:

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

1311476

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Telephone: (877) 252-9262 / Fax: (925) 252-9269

CHAIN OF CUSTODY RECORD

TURN AROUND TIME ☐ RUSH ☐ 24 HR ☐ 48 HR ☐ 72 HR ☑ 5 DAY

EDF Required? Coelt (Normal) No Write On (DW) No

Report To: Mehrdad Bill To: Endpoint
Company: Endpoint Consulting
1534 Plaza Ln #245
Burlingame CA E-Mail:
Tele: (415) 706.8955 Fax: ( )
Project #: TM-Dublin Project Name: Crow Canyon Cleaners
Project Location: ~~Crow~~ ~~7272 Crow~~ 7272 San Ramon
Sampler Signature: [signature]

Lab Use Only

Pressurized By	Date	Pressurization Gas N2	Pressurization Gas He

Helium Shroud SN#:
Other:
Notes:

Field Sample ID (Location)	Collection Date	Collection Time	Canister SN#	Manifold / Sampler Kit SN#	Analysis Requested	Indoor Air	Soil Gas	Canister Pressure/Vacuum Initial	Final	Receipt	Final (psi)
~~[illegible]~~ VM-9SS	11/13/13	1216	7544	984	TO-15 8010 only		X	30	-4		
VM-4S	↓	1219	6164	983	↓		↓	30	-4		
~~[illegible]~~ -1S	↓	1245	6309	985	↓		↓	30	-4		

Relinquished By:	Date:	Time:	Received By:
[signature]	11/14/13	0845	[signature]
[signature]	11/14/13	1600	[signature]

Temp (°C) : ______ Work Order #: ______________________

Equipment Condition: ______________________

Shipped Via: ______________________

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Sample Receipt Checklist

Client Name: **Endpoint**
Date and Time Received: **11/14/2013 7:25:29 PM**

Project Name: **TM Dublin; Crow Canyon Cleaner**
LogIn Reviewed by: Daniel Loa

WorkOrder N°: **1311476** Matrix: Soil Gas
Carrier: Rob Pringle (MAI Courier)

Chain of Custody (COC) Information

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

Sample Receipt Information

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

Sample Preservation and Hold Time (HT) Information

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

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

Comments:

McCampbell Analytical, Inc.

"When Quality Counts"

Analytical Report

WorkOrder: 1403403 **Amended:** 03/19/2014

Report Created for: Endpoint
1534 Plaza Lane #243
Burlingame, CA 94010

Project Contact: Mehrdad Javaher
Project P.O.:
Project Name: Tim Dublin; Crow Canyon

Project Received: 03/12/2014

Analytical Report reviewed & approved for release on 03/18/2014 by:

Question about your data?

Click here to email McCampbell

Angela Rydelius,
Laboratory Manager

McCampbell Analytical, Inc.
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Glossary of Terms & Qualifier Definitions

Client: Endpoint
Project: Tim Dublin; Crow Canyon
WorkOrder: 1403403

Glossary Abbreviation

95% Interval	95% Confident Interval
DF	Dilution Factor
DUP	Duplicate
EDL	Estimated Detection Limit
ITEF	International Toxicity Equivalence Factor
LCS	Laboratory Control Sample
MB	Method Blank
MB % Rec	% Recovery of Surrogate in Method Blank, if applicable
MDL	Method Detection Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
ND	Not detected at or above the indicated MDL or RL
NR	Matrix interferences, or analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix; or sample diluted due to high matrix or analyte content.
RD	Relative Difference
RL	Reporting Limit (The RL is the lowest calibration standard in a multipoint calibration.)
RPD	Relative Percent Deviation
RRT	Relative Retention Time
SPK Val	Spike Value
SPKRef Val	Spike Reference Value
TEQ	Toxicity Equivalence

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Case Narrative

Client: Endpoint
Project: Tim Dublin; Crow Canyon

Work Order: 1403403
March 18, 2014

TO-15 ANALYSIS

All summa canisters are EVACUATED 5 days after the reporting of the results. Please call or email if a longer retention time is required.

In an effort to attain the lowest reporting limits possible for the majority of the TO-15 target list, high level compounds may be analyzed using EPA Method 8260B.

Polymer (Tedlar) bags are not recommended for TO15 samples. The disadvantages are listed in Appendix B of the DTSC Advisory of April 2012.

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Analytical Report

Client:	Endpoint	**WorkOrder:**	1403403
Project:	Tim Dublin; Crow Canyon	**Extraction Method:**	ASTM D 1946-90
Date Received:	3/12/14 21:47	**Analytical Method:**	ASTM D 1946-90
Date Prepared:	3/13/14	**Unit:**	%

Helium

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
VM-11	**1403403-001A**	**Soil Gas/DISS.**	**03/12/2014 09:55**	**GC26**	**88135**

Initial Pressure (psia)	Final Pressure (psia)
14.18	**28.26**

Analytes	Result	RL	DF	Date Analyzed
Helium	ND	0.0050	1	03/13/2014 13:04

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
VM-12	**1403403-002A**	**Soil Gas/DISS.**	**03/12/2014 10:21**	**GC26**	**88135**

Initial Pressure (psia)	Final Pressure (psia)
12.78	**25.47**

Analytes	Result	RL	DF	Date Analyzed
Helium	**0.0098**	0.0050	1	03/13/2014 13:17

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
VM-1S	**1403403-006A**	**Soil Gas/DISS.**	**03/12/2014 12:43**	**GC26**	**88135**

Initial Pressure (psia)	Final Pressure (psia)
13.00	**25.91**

Analytes	Result	RL	DF	Date Analyzed
Helium	ND	0.0050	1	03/13/2014 14:36

(Cont.)

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Analytical Report

Client:	Endpoint	**WorkOrder:**	1403403
Project:	Tim Dublin; Crow Canyon	**Extraction Method:**	ASTM D 1946-90
Date Received:	3/12/14 21:47	**Analytical Method:**	ASTM D 1946-90
Date Prepared:	3/13/14	**Unit:**	%

Helium

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
VM-4S	**1403403-007A**	**Soil Gas/DISS.**	**03/12/2014 13:08**	**GC26**	**88135**

Initial Pressure (psia)	Final Pressure (psia)
12.64	**25.19**

Analytes	Result	RL	DF	Date Analyzed
Helium	**0.0088**	0.0050	1	03/13/2014 13:30

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
VE-2D	**1403403-008A**	**Soil Gas/DISS.**	**03/12/2014 13:53**	**GC26**	**88135**

Initial Pressure (psia)	Final Pressure (psia)
11.24	**22.38**

Analytes	Result	RL	DF	Date Analyzed
Helium	ND	0.0050	1	03/13/2014 13:42

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
VM-9SS	**1403403-009A**	**Soil Gas/DISS.**	**03/12/2014 14:08**	**GC26**	**88135**

Initial Pressure (psia)	Final Pressure (psia)
12.98	**25.86**

Analytes	Result	RL	DF	Date Analyzed
Helium	ND	0.0050	1	03/13/2014 13:55

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Analytical Report

Client:	Endpoint	**WorkOrder:**	1403403
Project:	Tim Dublin; Crow Canyon	**Extraction Method:**	TO15
Date Received:	3/12/14 21:47	**Analytical Method:**	TO15
Date Prepared:	3/14/14-3/15/14	**Unit:**	µg/m³

Volatile Organic Compounds in µg/m³

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
VM-11	1403403-001A	Soil Gas	03/12/2014 09:55	GC29	88260

Initial Pressure (psia)	Final Pressure (psia)
14.18	28.26

Analytes	Result	RL	DF	Date Analyzed
Bromodichloromethane	ND	3.5	1	03/15/2014 02:58
Carbon Tetrachloride	ND	3.2	1	03/15/2014 02:58
Chlorobenzene	ND	2.4	1	03/15/2014 02:58
Chloroethane	ND	1.3	1	03/15/2014 02:58
Chloroform	ND	2.4	1	03/15/2014 02:58
Chloromethane	ND	1.0	1	03/15/2014 02:58
Dibromochloromethane	ND	4.4	1	03/15/2014 02:58
1,2-Dibromo-3-chloropropane	ND	0.12	1	03/15/2014 02:58
1,2-Dichlorobenzene	ND	3.0	1	03/15/2014 02:58
1,3-Dichlorobenzene	ND	3.0	1	03/15/2014 02:58
1,4-Dichlorobenzene	ND	3.0	1	03/15/2014 02:58
Dichlorodifluoromethane	**3.3**	2.5	1	03/15/2014 02:58
1,1-Dichloroethane	ND	2.0	1	03/15/2014 02:58
1,2-Dichloroethane (1,2-DCA)	ND	2.0	1	03/15/2014 02:58
1,1-Dichloroethene	ND	2.0	1	03/15/2014 02:58
cis-1,2-Dichloroethene	ND	2.0	1	03/15/2014 02:58
trans-1,2-Dichloroethene	ND	2.0	1	03/15/2014 02:58
1,2-Dichloropropane	ND	2.4	1	03/15/2014 02:58
cis-1,3-Dichloropropene	ND	2.3	1	03/15/2014 02:58
trans-1,3-Dichloropropene	ND	2.3	1	03/15/2014 02:58
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	3.6	1	03/15/2014 02:58
Hexachlorobutadiene	ND	5.4	1	03/15/2014 02:58
Methylene chloride	**2.7**	1.8	1	03/15/2014 02:58
1,1,1,2-Tetrachloroethane	ND	3.5	1	03/15/2014 02:58
1,1,2,2-Tetrachloroethane	ND	3.5	1	03/15/2014 02:58
Tetrachloroethene	**51**	3.4	1	03/15/2014 02:58
1,2,4-Trichlorobenzene	ND	3.8	1	03/15/2014 02:58
1,1,1-Trichloroethane	ND	2.8	1	03/15/2014 02:58
1,1,2-Trichloroethane	ND	2.8	1	03/15/2014 02:58
Trichloroethene	**3.3**	2.8	1	03/15/2014 02:58
Trichlorofluoromethane	ND	2.8	1	03/15/2014 02:58
Vinyl Chloride	ND	1.3	1	03/15/2014 02:58

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Analytical Report

Client:	Endpoint	**WorkOrder:**	1403403
Project:	Tim Dublin; Crow Canyon	**Extraction Method:**	TO15
Date Received:	3/12/14 21:47	**Analytical Method:**	TO15
Date Prepared:	3/14/14-3/15/14	**Unit:**	µg/m³

Volatile Organic Compounds in µg/m³

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
VM-11	**1403403-001A**	**Soil Gas**	**03/12/2014 09:55**	**GC29**	**88260**

Initial Pressure (psia)	Final Pressure (psia)
14.18	**28.26**

Analytes	Result	RL	DF	Date Analyzed
Surrogates	REC (%)	Limits		
1,2-DCA-d4	106	70-130		03/15/2014 02:58
Toluene-d8	101	70-130		03/15/2014 02:58
4-BFB	99	70-130		03/15/2014 02:58

(Cont.)

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Analytical Report

Client:	Endpoint	**WorkOrder:**	1403403
Project:	Tim Dublin; Crow Canyon	**Extraction Method:**	TO15
Date Received:	3/12/14 21:47	**Analytical Method:**	TO15
Date Prepared:	3/14/14-3/15/14	**Unit:**	µg/m³

Volatile Organic Compounds in µg/m³

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
VM-12	1403403-002A	Soil Gas	03/12/2014 10:21	GC29	88260

Initial Pressure (psia)	Final Pressure (psia)
12.78	25.47

Analytes	Result	RL	DF	Date Analyzed
Bromodichloromethane	ND	3.5	1	03/15/2014 03:42
Carbon Tetrachloride	ND	3.2	1	03/15/2014 03:42
Chlorobenzene	ND	2.4	1	03/15/2014 03:42
Chloroethane	ND	1.3	1	03/15/2014 03:42
Chloroform	ND	2.4	1	03/15/2014 03:42
Chloromethane	ND	1.0	1	03/15/2014 03:42
Dibromochloromethane	ND	4.4	1	03/15/2014 03:42
1,2-Dibromo-3-chloropropane	ND	0.12	1	03/15/2014 03:42
1,2-Dichlorobenzene	ND	3.0	1	03/15/2014 03:42
1,3-Dichlorobenzene	ND	3.0	1	03/15/2014 03:42
1,4-Dichlorobenzene	ND	3.0	1	03/15/2014 03:42
Dichlorodifluoromethane	**3.3**	2.5	1	03/15/2014 03:42
1,1-Dichloroethane	ND	2.0	1	03/15/2014 03:42
1,2-Dichloroethane (1,2-DCA)	ND	2.0	1	03/15/2014 03:42
1,1-Dichloroethene	ND	2.0	1	03/15/2014 03:42
cis-1,2-Dichloroethene	ND	2.0	1	03/15/2014 03:42
trans-1,2-Dichloroethene	ND	2.0	1	03/15/2014 03:42
1,2-Dichloropropane	ND	2.4	1	03/15/2014 03:42
cis-1,3-Dichloropropene	ND	2.3	1	03/15/2014 03:42
trans-1,3-Dichloropropene	ND	2.3	1	03/15/2014 03:42
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	3.6	1	03/15/2014 03:42
Hexachlorobutadiene	ND	5.4	1	03/15/2014 03:42
Methylene chloride	**1.9**	1.8	1	03/15/2014 03:42
1,1,1,2-Tetrachloroethane	ND	3.5	1	03/15/2014 03:42
1,1,2,2-Tetrachloroethane	ND	3.5	1	03/15/2014 03:42
Tetrachloroethene	**15**	3.4	1	03/15/2014 03:42
1,2,4-Trichlorobenzene	ND	3.8	1	03/15/2014 03:42
1,1,1-Trichloroethane	ND	2.8	1	03/15/2014 03:42
1,1,2-Trichloroethane	ND	2.8	1	03/15/2014 03:42
Trichloroethene	**4.2**	2.8	1	03/15/2014 03:42
Trichlorofluoromethane	ND	2.8	1	03/15/2014 03:42
Vinyl Chloride	ND	1.3	1	03/15/2014 03:42

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Analytical Report

Client:	Endpoint	**WorkOrder:**	1403403
Project:	Tim Dublin; Crow Canyon	**Extraction Method:**	TO15
Date Received:	3/12/14 21:47	**Analytical Method:**	TO15
Date Prepared:	3/14/14-3/15/14	**Unit:**	µg/m³

Volatile Organic Compounds in µg/m³

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
VM-12	**1403403-002A**	**Soil Gas**	**03/12/2014 10:21**	**GC29**	**88260**

Initial Pressure (psia)	Final Pressure (psia)
12.78	**25.47**

Analytes	Result	RL	DF	Date Analyzed
Surrogates	REC (%)	Limits		
1,2-DCA-d4	107	70-130		03/15/2014 03:42
Toluene-d8	101	70-130		03/15/2014 03:42
4-BFB	100	70-130		03/15/2014 03:42

(Cont.)

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Analytical Report

Client:	Endpoint	**WorkOrder:**	1403403
Project:	Tim Dublin; Crow Canyon	**Extraction Method:**	TO15
Date Received:	3/12/14 21:47	**Analytical Method:**	TO15
Date Prepared:	3/14/14-3/15/14	**Unit:**	µg/m³

Volatile Organic Compounds in µg/m³

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
VE-1S	**1403403-003A**	**Soil Gas**	**03/12/2014 10:58**	**GC29**	**88260**

Initial Pressure (psia)	Final Pressure (psia)
13.11	**26.13**

Analytes	Result	RL	DF	Date Analyzed
Bromodichloromethane	ND	3.5	1	03/15/2014 04:26
Carbon Tetrachloride	ND	3.2	1	03/15/2014 04:26
Chlorobenzene	ND	2.4	1	03/15/2014 04:26
Chloroethane	ND	1.3	1	03/15/2014 04:26
Chloroform	**2.6**	2.4	1	03/15/2014 04:26
Dibromochloromethane	ND	4.4	1	03/15/2014 04:26
1,2-Dibromo-3-chloropropane	ND	0.12	1	03/15/2014 04:26
1,2-Dichlorobenzene	ND	3.0	1	03/15/2014 04:26
1,3-Dichlorobenzene	ND	3.0	1	03/15/2014 04:26
1,4-Dichlorobenzene	ND	3.0	1	03/15/2014 04:26
Dichlorodifluoromethane	**2.6**	2.5	1	03/15/2014 04:26
1,1-Dichloroethane	ND	2.0	1	03/15/2014 04:26
1,2-Dichloroethane (1,2-DCA)	ND	2.0	1	03/15/2014 04:26
1,1-Dichloroethene	ND	2.0	1	03/15/2014 04:26
cis-1,2-Dichloroethene	ND	2.0	1	03/15/2014 04:26
trans-1,2-Dichloroethene	ND	2.0	1	03/15/2014 04:26
1,2-Dichloropropane	ND	2.4	1	03/15/2014 04:26
cis-1,3-Dichloropropene	ND	2.3	1	03/15/2014 04:26
trans-1,3-Dichloropropene	ND	2.3	1	03/15/2014 04:26
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	3.6	1	03/15/2014 04:26
Hexachlorobutadiene	ND	5.4	1	03/15/2014 04:26
Methylene chloride	**2.2**	1.8	1	03/15/2014 04:26
1,1,1,2-Tetrachloroethane	ND	3.5	1	03/15/2014 04:26
1,1,2,2-Tetrachloroethane	ND	3.5	1	03/15/2014 04:26
Tetrachloroethene	**1000**	14	4	03/14/2014 21:13
1,2,4-Trichlorobenzene	ND	3.8	1	03/15/2014 04:26
1,1,1-Trichloroethane	ND	2.8	1	03/15/2014 04:26
1,1,2-Trichloroethane	ND	2.8	1	03/15/2014 04:26
Trichloroethene	**5.8**	2.8	1	03/15/2014 04:26
Trichlorofluoromethane	ND	2.8	1	03/15/2014 04:26
Vinyl Chloride	ND	1.3	1	03/15/2014 04:26

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Analytical Report

Client:	Endpoint	**WorkOrder:**	1403403
Project:	Tim Dublin; Crow Canyon	**Extraction Method:**	TO15
Date Received:	3/12/14 21:47	**Analytical Method:**	TO15
Date Prepared:	3/14/14-3/15/14	**Unit:**	µg/m³

Volatile Organic Compounds in µg/m³

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
VE-1S	**1403403-003A**	**Soil Gas**	**03/12/2014 10:58**	**GC29**	**88260**

Initial Pressure (psia)	Final Pressure (psia)
13.11	**26.13**

Analytes	Result	RL	DF	Date Analyzed
Surrogates	REC (%)	Limits		
1,2-DCA-d4	106	70-130		03/15/2014 04:26
Toluene-d8	101	70-130		03/15/2014 04:26
4-BFB	98	70-130		03/15/2014 04:26

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Analytical Report

Client:	Endpoint	**WorkOrder:**	1403403
Project:	Tim Dublin; Crow Canyon	**Extraction Method:**	TO15
Date Received:	3/12/14 21:47	**Analytical Method:**	TO15
Date Prepared:	3/14/14-3/15/14	**Unit:**	µg/m³

Volatile Organic Compounds in µg/m³

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
VE-1D	1403403-004A	Soil Gas	03/12/2014 11:38	GC29	88260

Initial Pressure (psia)	Final Pressure (psia)
13.13	26.18

Analytes	Result	RL	DF	Date Analyzed
Bromodichloromethane	ND	3.5	1	03/15/2014 05:10
Carbon Tetrachloride	ND	3.2	1	03/15/2014 05:10
Chlorobenzene	ND	2.4	1	03/15/2014 05:10
Chloroethane	ND	1.3	1	03/15/2014 05:10
Chloroform	ND	2.4	1	03/15/2014 05:10
Chloromethane	ND	1.0	1	03/15/2014 05:10
Dibromochloromethane	ND	4.4	1	03/15/2014 05:10
1,2-Dibromo-3-chloropropane	ND	0.12	1	03/15/2014 05:10
1,2-Dichlorobenzene	ND	3.0	1	03/15/2014 05:10
1,3-Dichlorobenzene	ND	3.0	1	03/15/2014 05:10
1,4-Dichlorobenzene	ND	3.0	1	03/15/2014 05:10
Dichlorodifluoromethane	**2.6**	2.5	1	03/15/2014 05:10
1,1-Dichloroethane	ND	2.0	1	03/15/2014 05:10
1,2-Dichloroethane (1,2-DCA)	ND	2.0	1	03/15/2014 05:10
1,1-Dichloroethene	ND	2.0	1	03/15/2014 05:10
cis-1,2-Dichloroethene	ND	2.0	1	03/15/2014 05:10
trans-1,2-Dichloroethene	ND	2.0	1	03/15/2014 05:10
1,2-Dichloropropane	ND	2.4	1	03/15/2014 05:10
cis-1,3-Dichloropropene	ND	2.3	1	03/15/2014 05:10
trans-1,3-Dichloropropene	ND	2.3	1	03/15/2014 05:10
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	3.6	1	03/15/2014 05:10
Hexachlorobutadiene	ND	5.4	1	03/15/2014 05:10
Methylene chloride	**2.0**	1.8	1	03/15/2014 05:10
1,1,1,2-Tetrachloroethane	ND	3.5	1	03/15/2014 05:10
1,1,2,2-Tetrachloroethane	ND	3.5	1	03/15/2014 05:10
Tetrachloroethene	**520**	3.4	1	03/15/2014 05:10
1,2,4-Trichlorobenzene	ND	3.8	1	03/15/2014 05:10
1,1,1-Trichloroethane	ND	2.8	1	03/15/2014 05:10
1,1,2-Trichloroethane	ND	2.8	1	03/15/2014 05:10
Trichloroethene	**3.0**	2.8	1	03/15/2014 05:10
Trichlorofluoromethane	ND	2.8	1	03/15/2014 05:10
Vinyl Chloride	ND	1.3	1	03/15/2014 05:10

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Analytical Report

Client:	Endpoint	**WorkOrder:**	1403403
Project:	Tim Dublin; Crow Canyon	**Extraction Method:**	TO15
Date Received:	3/12/14 21:47	**Analytical Method:**	TO15
Date Prepared:	3/14/14-3/15/14	**Unit:**	µg/m³

Volatile Organic Compounds in µg/m³

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
VE-1D	**1403403-004A**	**Soil Gas**	**03/12/2014 11:38**	**GC29**	**88260**

Initial Pressure (psia)	Final Pressure (psia)
13.13	**26.18**

Analytes	Result	RL	DF	Date Analyzed
Surrogates	REC (%)	Limits		
1,2-DCA-d4	106	70-130		03/15/2014 05:10
Toluene-d8	100	70-130		03/15/2014 05:10
4-BFB	101	70-130		03/15/2014 05:10

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Analytical Report

Client:	Endpoint	**WorkOrder:**	1403403
Project:	Tim Dublin; Crow Canyon	**Extraction Method:**	TO15
Date Received:	3/12/14 21:47	**Analytical Method:**	TO15
Date Prepared:	3/14/14-3/15/14	**Unit:**	µg/m³

Volatile Organic Compounds in µg/m³

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
VE-3D	1403403-005A	Soil Gas	03/12/2014 12:19	GC29	88260

Initial Pressure (psia)	Final Pressure (psia)
12.98	25.84

Analytes	Result	RL	DF	Date Analyzed
Bromodichloromethane	ND	3.5	1	03/15/2014 05:54
Carbon Tetrachloride	ND	3.2	1	03/15/2014 05:54
Chlorobenzene	ND	2.4	1	03/15/2014 05:54
Chloroethane	ND	1.3	1	03/15/2014 05:54
Chloroform	ND	2.4	1	03/15/2014 05:54
Chloromethane	ND	1.0	1	03/15/2014 05:54
Dibromochloromethane	ND	4.4	1	03/15/2014 05:54
1,2-Dibromo-3-chloropropane	ND	0.12	1	03/15/2014 05:54
1,2-Dichlorobenzene	ND	3.0	1	03/15/2014 05:54
1,3-Dichlorobenzene	ND	3.0	1	03/15/2014 05:54
1,4-Dichlorobenzene	ND	3.0	1	03/15/2014 05:54
Dichlorodifluoromethane	**2.6**	2.5	1	03/15/2014 05:54
1,1-Dichloroethane	ND	2.0	1	03/15/2014 05:54
1,2-Dichloroethane (1,2-DCA)	ND	2.0	1	03/15/2014 05:54
1,1-Dichloroethene	ND	2.0	1	03/15/2014 05:54
cis-1,2-Dichloroethene	ND	2.0	1	03/15/2014 05:54
trans-1,2-Dichloroethene	ND	2.0	1	03/15/2014 05:54
1,2-Dichloropropane	ND	2.4	1	03/15/2014 05:54
cis-1,3-Dichloropropene	ND	2.3	1	03/15/2014 05:54
trans-1,3-Dichloropropene	ND	2.3	1	03/15/2014 05:54
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	3.6	1	03/15/2014 05:54
Hexachlorobutadiene	ND	5.4	1	03/15/2014 05:54
Methylene chloride	**2.4**	1.8	1	03/15/2014 05:54
1,1,1,2-Tetrachloroethane	ND	3.5	1	03/15/2014 05:54
1,1,2,2-Tetrachloroethane	ND	3.5	1	03/15/2014 05:54
Tetrachloroethene	**130**	3.4	1	03/15/2014 05:54
1,2,4-Trichlorobenzene	ND	3.8	1	03/15/2014 05:54
1,1,1-Trichloroethane	ND	2.8	1	03/15/2014 05:54
1,1,2-Trichloroethane	ND	2.8	1	03/15/2014 05:54
Trichloroethene	ND	2.8	1	03/15/2014 05:54
Trichlorofluoromethane	ND	2.8	1	03/15/2014 05:54
Vinyl Chloride	ND	1.3	1	03/15/2014 05:54

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Analytical Report

Client:	Endpoint	**WorkOrder:**	1403403
Project:	Tim Dublin; Crow Canyon	**Extraction Method:**	TO15
Date Received:	3/12/14 21:47	**Analytical Method:**	TO15
Date Prepared:	3/14/14-3/15/14	**Unit:**	µg/m³

Volatile Organic Compounds in µg/m³

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
VE-3D	**1403403-005A**	**Soil Gas**	**03/12/2014 12:19**	**GC29**	**88260**

Initial Pressure (psia)	Final Pressure (psia)
12.98	**25.84**

Analytes	Result	RL	DF	Date Analyzed
Surrogates	**REC (%)**	**Limits**		
1,2-DCA-d4	109	70-130		03/15/2014 05:54
Toluene-d8	100	70-130		03/15/2014 05:54
4-BFB	100	70-130		03/15/2014 05:54

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Analytical Report

Client:	Endpoint	**WorkOrder:**	1403403
Project:	Tim Dublin; Crow Canyon	**Extraction Method:**	TO15
Date Received:	3/12/14 21:47	**Analytical Method:**	TO15
Date Prepared:	3/14/14-3/15/14	**Unit:**	µg/m³

Volatile Organic Compounds in µg/m³

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
VM-1S	**1403403-006A**	**Soil Gas**	**03/12/2014 12:43**	**GC29**	**88260**

Initial Pressure (psia)	Final Pressure (psia)
13.00	**25.91**

Analytes	Result	RL	DF	Date Analyzed
Bromodichloromethane	ND	3.5	1	03/15/2014 06:38
Carbon Tetrachloride	ND	3.2	1	03/15/2014 06:38
Chlorobenzene	ND	2.4	1	03/15/2014 06:38
Chloroethane	ND	1.3	1	03/15/2014 06:38
Chloroform	ND	2.4	1	03/15/2014 06:38
Chloromethane	ND	1.0	1	03/15/2014 06:38
Dibromochloromethane	ND	4.4	1	03/15/2014 06:38
1,2-Dibromo-3-chloropropane	ND	0.12	1	03/15/2014 06:38
1,2-Dichlorobenzene	ND	3.0	1	03/15/2014 06:38
1,3-Dichlorobenzene	ND	3.0	1	03/15/2014 06:38
1,4-Dichlorobenzene	ND	3.0	1	03/15/2014 06:38
Dichlorodifluoromethane	ND	2.5	1	03/15/2014 06:38
1,1-Dichloroethane	ND	2.0	1	03/15/2014 06:38
1,2-Dichloroethane (1,2-DCA)	ND	2.0	1	03/15/2014 06:38
1,1-Dichloroethene	ND	2.0	1	03/15/2014 06:38
cis-1,2-Dichloroethene	ND	2.0	1	03/15/2014 06:38
trans-1,2-Dichloroethene	ND	2.0	1	03/15/2014 06:38
1,2-Dichloropropane	ND	2.4	1	03/15/2014 06:38
cis-1,3-Dichloropropene	ND	2.3	1	03/15/2014 06:38
trans-1,3-Dichloropropene	ND	2.3	1	03/15/2014 06:38
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	3.6	1	03/15/2014 06:38
Hexachlorobutadiene	ND	5.4	1	03/15/2014 06:38
Methylene chloride	**2.0**	1.8	1	03/15/2014 06:38
1,1,1,2-Tetrachloroethane	ND	3.5	1	03/15/2014 06:38
1,1,2,2-Tetrachloroethane	ND	3.5	1	03/15/2014 06:38
Tetrachloroethene	**200**	3.4	1	03/15/2014 06:38
1,2,4-Trichlorobenzene	ND	3.8	1	03/15/2014 06:38
1,1,1-Trichloroethane	ND	2.8	1	03/15/2014 06:38
1,1,2-Trichloroethane	ND	2.8	1	03/15/2014 06:38
Trichloroethene	ND	2.8	1	03/15/2014 06:38
Trichlorofluoromethane	ND	2.8	1	03/15/2014 06:38
Vinyl Chloride	ND	1.3	1	03/15/2014 06:38

(Cont.)

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Analytical Report

Client:	Endpoint	**WorkOrder:**	1403403
Project:	Tim Dublin; Crow Canyon	**Extraction Method:**	TO15
Date Received:	3/12/14 21:47	**Analytical Method:**	TO15
Date Prepared:	3/14/14-3/15/14	**Unit:**	µg/m³

Volatile Organic Compounds in µg/m³

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
VM-1S	**1403403-006A**	**Soil Gas**	**03/12/2014 12:43**	**GC29**	**88260**

Initial Pressure (psia)	Final Pressure (psia)
13.00	**25.91**

Analytes	Result	RL	DF	Date Analyzed
Surrogates	REC (%)	Limits		
1,2-DCA-d4	104	70-130		03/15/2014 06:38
Toluene-d8	100	70-130		03/15/2014 06:38
4-BFB	99	70-130		03/15/2014 06:38

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Analytical Report

Client:	Endpoint	**WorkOrder:**	1403403
Project:	Tim Dublin; Crow Canyon	**Extraction Method:**	TO15
Date Received:	3/12/14 21:47	**Analytical Method:**	TO15
Date Prepared:	3/14/14-3/15/14	**Unit:**	µg/m³

Volatile Organic Compounds in µg/m³

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
VM-4S	1403403-007A	Soil Gas	03/12/2014 13:08	GC29	88260

Initial Pressure (psia)	Final Pressure (psia)
12.64	25.19

Analytes	Result	RL	DF	Date Analyzed
Bromodichloromethane	ND	3.5	1	03/15/2014 07:22
Carbon Tetrachloride	ND	3.2	1	03/15/2014 07:22
Chlorobenzene	ND	2.4	1	03/15/2014 07:22
Chloroethane	ND	1.3	1	03/15/2014 07:22
Chloroform	ND	2.4	1	03/15/2014 07:22
Chloromethane	ND	1.0	1	03/15/2014 07:22
Dibromochloromethane	ND	4.4	1	03/15/2014 07:22
1,2-Dibromo-3-chloropropane	**0.29**	0.12	1	03/15/2014 07:22
1,2-Dichlorobenzene	ND	3.0	1	03/15/2014 07:22
1,3-Dichlorobenzene	ND	3.0	1	03/15/2014 07:22
1,4-Dichlorobenzene	ND	3.0	1	03/15/2014 07:22
Dichlorodifluoromethane	**2.6**	2.5	1	03/15/2014 07:22
1,1-Dichloroethane	ND	2.0	1	03/15/2014 07:22
1,2-Dichloroethane (1,2-DCA)	ND	2.0	1	03/15/2014 07:22
1,1-Dichloroethene	ND	2.0	1	03/15/2014 07:22
cis-1,2-Dichloroethene	ND	2.0	1	03/15/2014 07:22
trans-1,2-Dichloroethene	ND	2.0	1	03/15/2014 07:22
1,2-Dichloropropane	ND	2.4	1	03/15/2014 07:22
cis-1,3-Dichloropropene	ND	2.3	1	03/15/2014 07:22
trans-1,3-Dichloropropene	ND	2.3	1	03/15/2014 07:22
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	3.6	1	03/15/2014 07:22
Hexachlorobutadiene	ND	5.4	1	03/15/2014 07:22
Methylene chloride	**2.8**	1.8	1	03/15/2014 07:22
1,1,1,2-Tetrachloroethane	ND	3.5	1	03/15/2014 07:22
1,1,2,2-Tetrachloroethane	ND	3.5	1	03/15/2014 07:22
Tetrachloroethene	**150**	3.4	1	03/15/2014 07:22
1,2,4-Trichlorobenzene	ND	3.8	1	03/15/2014 07:22
1,1,1-Trichloroethane	ND	2.8	1	03/15/2014 07:22
1,1,2-Trichloroethane	ND	2.8	1	03/15/2014 07:22
Trichloroethene	ND	2.8	1	03/15/2014 07:22
Trichlorofluoromethane	ND	2.8	1	03/15/2014 07:22
Vinyl Chloride	ND	1.3	1	03/15/2014 07:22

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Analytical Report

Client:	Endpoint	**WorkOrder:**	1403403
Project:	Tim Dublin; Crow Canyon	**Extraction Method:**	TO15
Date Received:	3/12/14 21:47	**Analytical Method:**	TO15
Date Prepared:	3/14/14-3/15/14	**Unit:**	µg/m³

Volatile Organic Compounds in µg/m³

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
VM-4S	**1403403-007A**	**Soil Gas**	**03/12/2014 13:08**	**GC29**	**88260**

Initial Pressure (psia)	Final Pressure (psia)
12.64	**25.19**

Analytes	Result	RL	DF	Date Analyzed
Surrogates	**REC (%)**	**Limits**		
1,2-DCA-d4	107	70-130		03/15/2014 07:22
Toluene-d8	100	70-130		03/15/2014 07:22
4-BFB	105	70-130		03/15/2014 07:22

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Analytical Report

Client:	Endpoint	**WorkOrder:**	1403403
Project:	Tim Dublin; Crow Canyon	**Extraction Method:**	TO15
Date Received:	3/12/14 21:47	**Analytical Method:**	TO15
Date Prepared:	3/14/14-3/15/14	**Unit:**	µg/m³

Volatile Organic Compounds in µg/m³

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
VE-2D	1403403-008A	Soil Gas	03/12/2014 13:53	GC29	88260

Initial Pressure (psia)	Final Pressure (psia)
11.24	22.38

Analytes	Result	RL	DF	Date Analyzed
Bromodichloromethane	ND	3.5	1	03/15/2014 08:06
Carbon Tetrachloride	ND	3.2	1	03/15/2014 08:06
Chlorobenzene	ND	2.4	1	03/15/2014 08:06
Chloroethane	ND	1.3	1	03/15/2014 08:06
Chloroform	ND	2.4	1	03/15/2014 08:06
Chloromethane	ND	1.0	1	03/15/2014 08:06
Dibromochloromethane	ND	4.4	1	03/15/2014 08:06
1,2-Dibromo-3-chloropropane	ND	0.12	1	03/15/2014 08:06
1,2-Dichlorobenzene	ND	3.0	1	03/15/2014 08:06
1,3-Dichlorobenzene	ND	3.0	1	03/15/2014 08:06
1,4-Dichlorobenzene	ND	3.0	1	03/15/2014 08:06
Dichlorodifluoromethane	ND	2.5	1	03/15/2014 08:06
1,1-Dichloroethane	ND	2.0	1	03/15/2014 08:06
1,2-Dichloroethane (1,2-DCA)	ND	2.0	1	03/15/2014 08:06
1,1-Dichloroethene	ND	2.0	1	03/15/2014 08:06
cis-1,2-Dichloroethene	ND	2.0	1	03/15/2014 08:06
trans-1,2-Dichloroethene	ND	2.0	1	03/15/2014 08:06
1,2-Dichloropropane	ND	2.4	1	03/15/2014 08:06
cis-1,3-Dichloropropene	ND	2.3	1	03/15/2014 08:06
trans-1,3-Dichloropropene	ND	2.3	1	03/15/2014 08:06
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	3.6	1	03/15/2014 08:06
Hexachlorobutadiene	ND	5.4	1	03/15/2014 08:06
Methylene chloride	**2.0**	1.8	1	03/15/2014 08:06
1,1,1,2-Tetrachloroethane	ND	3.5	1	03/15/2014 08:06
1,1,2,2-Tetrachloroethane	ND	3.5	1	03/15/2014 08:06
Tetrachloroethene	**320**	3.4	1	03/15/2014 08:06
1,2,4-Trichlorobenzene	ND	3.8	1	03/15/2014 08:06
1,1,1-Trichloroethane	ND	2.8	1	03/15/2014 08:06
1,1,2-Trichloroethane	ND	2.8	1	03/15/2014 08:06
Trichloroethene	**4.8**	2.8	1	03/15/2014 08:06
Trichlorofluoromethane	ND	2.8	1	03/15/2014 08:06
Vinyl Chloride	ND	1.3	1	03/15/2014 08:06

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Analytical Report

Client:	Endpoint	**WorkOrder:**	1403403
Project:	Tim Dublin; Crow Canyon	**Extraction Method:**	TO15
Date Received:	3/12/14 21:47	**Analytical Method:**	TO15
Date Prepared:	3/14/14-3/15/14	**Unit:**	µg/m³

Volatile Organic Compounds in µg/m³

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
VE-2D	**1403403-008A**	**Soil Gas**	**03/12/2014 13:53**	**GC29**	**88260**

Initial Pressure (psia)	Final Pressure (psia)
11.24	**22.38**

Analytes	Result	RL	DF	Date Analyzed
Surrogates	REC (%)	Limits		
1,2-DCA-d4	104	70-130		03/15/2014 08:06
Toluene-d8	100	70-130		03/15/2014 08:06
4-BFB	100	70-130		03/15/2014 08:06

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Analytical Report

Client:	Endpoint	**WorkOrder:**	1403403
Project:	Tim Dublin; Crow Canyon	**Extraction Method:**	TO15
Date Received:	3/12/14 21:47	**Analytical Method:**	TO15
Date Prepared:	3/14/14-3/15/14	**Unit:**	µg/m³

Volatile Organic Compounds in µg/m³

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
VM-9SS	1403403-009A	Soil Gas	03/12/2014 14:08	GC29	88260

Initial Pressure (psia)	Final Pressure (psia)
12.98	25.86

Analytes	Result	RL	DF	Date Analyzed
Bromodichloromethane	ND	3.5	1	03/15/2014 08:50
Carbon Tetrachloride	ND	3.2	1	03/15/2014 08:50
Chlorobenzene	ND	2.4	1	03/15/2014 08:50
Chloroethane	ND	1.3	1	03/15/2014 08:50
Chloroform	ND	2.4	1	03/15/2014 08:50
Chloromethane	ND	1.0	1	03/15/2014 08:50
Dibromochloromethane	ND	4.4	1	03/15/2014 08:50
1,2-Dibromo-3-chloropropane	ND	0.12	1	03/15/2014 08:50
1,2-Dichlorobenzene	ND	3.0	1	03/15/2014 08:50
1,3-Dichlorobenzene	ND	3.0	1	03/15/2014 08:50
1,4-Dichlorobenzene	ND	3.0	1	03/15/2014 08:50
Dichlorodifluoromethane	**2.6**	2.5	1	03/15/2014 08:50
1,1-Dichloroethane	ND	2.0	1	03/15/2014 08:50
1,2-Dichloroethane (1,2-DCA)	ND	2.0	1	03/15/2014 08:50
1,1-Dichloroethene	ND	2.0	1	03/15/2014 08:50
cis-1,2-Dichloroethene	**2.9**	2.0	1	03/15/2014 08:50
trans-1,2-Dichloroethene	ND	2.0	1	03/15/2014 08:50
1,2-Dichloropropane	ND	2.4	1	03/15/2014 08:50
cis-1,3-Dichloropropene	ND	2.3	1	03/15/2014 08:50
trans-1,3-Dichloropropene	ND	2.3	1	03/15/2014 08:50
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	3.6	1	03/15/2014 08:50
Hexachlorobutadiene	ND	5.4	1	03/15/2014 08:50
Methylene chloride	**2.1**	1.8	1	03/15/2014 08:50
1,1,1,2-Tetrachloroethane	ND	3.5	1	03/15/2014 08:50
1,1,2,2-Tetrachloroethane	ND	3.5	1	03/15/2014 08:50
Tetrachloroethene	**1800**	14	4	03/15/2014 01:31
1,2,4-Trichlorobenzene	ND	3.8	1	03/15/2014 08:50
1,1,1-Trichloroethane	ND	2.8	1	03/15/2014 08:50
1,1,2-Trichloroethane	ND	2.8	1	03/15/2014 08:50
Trichloroethene	**20**	2.8	1	03/15/2014 08:50
Trichlorofluoromethane	ND	2.8	1	03/15/2014 08:50
Vinyl Chloride	ND	1.3	1	03/15/2014 08:50

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Analytical Report

Client:	Endpoint	**WorkOrder:**	1403403
Project:	Tim Dublin; Crow Canyon	**Extraction Method:**	TO15
Date Received:	3/12/14 21:47	**Analytical Method:**	TO15
Date Prepared:	3/14/14-3/15/14	**Unit:**	µg/m³

Volatile Organic Compounds in µg/m³

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
VM-9SS	**1403403-009A**	**Soil Gas**	**03/12/2014 14:08**	**GC29**	**88260**

Initial Pressure (psia)	Final Pressure (psia)
12.98	**25.86**

Analytes	Result	RL	DF	Date Analyzed
Surrogates	REC (%)	Limits		
1,2-DCA-d4	107	70-130		03/15/2014 08:50
Toluene-d8	100	70-130		03/15/2014 08:50
4-BFB	98	70-130		03/15/2014 08:50

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Analytical Report

Client:	Endpoint	**WorkOrder:**	1403403
Project:	Tim Dublin; Crow Canyon	**Extraction Method:**	TO15
Date Received:	3/12/14 21:47	**Analytical Method:**	TO15
Date Prepared:	3/15/14	**Unit:**	µg/m³

Leak Check Compound

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
VE-1S	**1403403-003A**	**Soil Gas**	**03/12/2014 10:58**	**GC29**	**88260**

Initial Pressure (psia)	Final Pressure (psia)
13.11	**26.13**

Analytes	Result	RL	DF	Date Analyzed
Isopropyl Alcohol	ND	50	1	03/15/2014 04:26

Surrogates	REC (%)	Limits	
1,2-DCA-d4	106	70-130	03/15/2014 04:26

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
VE-1D	**1403403-004A**	**Soil Gas**	**03/12/2014 11:38**	**GC29**	**88260**

Initial Pressure (psia)	Final Pressure (psia)
13.13	**26.18**

Analytes	Result	RL	DF	Date Analyzed
Isopropyl Alcohol	ND	50	1	03/15/2014 05:10

Surrogates	REC (%)	Limits	
1,2-DCA-d4	106	70-130	03/15/2014 05:10

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
VE-3D	**1403403-005A**	**Soil Gas**	**03/12/2014 12:19**	**GC29**	**88260**

Initial Pressure (psia)	Final Pressure (psia)
12.98	**25.84**

Analytes	Result	RL	DF	Date Analyzed
Isopropyl Alcohol	ND	50	1	03/15/2014 05:54

Surrogates	REC (%)	Limits	
1,2-DCA-d4	109	70-130	03/15/2014 05:54

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Quality Control Report

Client:	Endpoint	**WorkOrder:**	1403403
Date Prepared:	3/13/14	**BatchID:**	88135
Date Analyzed:	3/13/14	**Extraction Method:**	ASTM D 1946-90
Instrument:	GC26	**Analytical Method:**	ASTM D 1946-90
Matrix:	Soilgas	**Unit:**	%
Project:	Tim Dublin; Crow Canyon	**Sample ID:**	MB/LCS-88135

QC Summary Report for ASTM D1946-90

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Helium	ND	0.01148	0.0050	0.010	-	115	60-140

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Quality Control Report

Client:	Endpoint	**WorkOrder:**	1403403
Date Prepared:	3/14/14	**BatchID:**	88260
Date Analyzed:	3/14/14	**Extraction Method:**	TO15
Instrument:	GC29	**Analytical Method:**	TO15
Matrix:	Soilgas	**Unit:**	nL/L
Project:	Tim Dublin; Crow Canyon	**Sample ID:**	MB/LCS-88260

QC Summary Report for TO15

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Acetone	ND	-	25	-	-	-	-
Acrolein	ND	-	0.50	-	-	-	-
Acrylonitrile	ND	22.87	0.50	25	-	91.5	60-140
tert-Amyl methyl ether (TAME)	ND	24.16	0.50	25	-	96.6	60-140
Benzene	ND	20.52	0.50	25	-	82.1	60-140
Benzyl chloride	ND	27.8	0.50	25	-	111	60-140
Bromodichloromethane	ND	25.8	0.50	25	-	103	60-140
Bromoform	ND	34.25	0.50	25	-	137	60-140
Bromomethane	ND	-	0.50	-	-	-	-
1,3-Butadiene	ND	-	0.50	-	-	-	-
2-Butanone (MEK)	ND	-	25	-	-	-	-
t-Butyl alcohol (TBA)	ND	23.75	10	25	-	95	60-140
Carbon Disulfide	ND	22.51	0.50	25	-	90.1	60-140
Carbon Tetrachloride	ND	22.63	0.50	25	-	90.5	60-140
Chlorobenzene	ND	24.78	0.50	25	-	99.1	60-140
Chloroethane	ND	23.91	0.50	25	-	95.6	60-140
Chloroform	ND	22.18	0.50	25	-	88.7	60-140
Chloromethane	ND	19.26	0.50	25	-	77	60-140
Cyclohexane	ND	-	5.0	-	-	-	-
Dibromochloromethane	ND	27.81	0.50	25	-	111	60-140
1,2-Dibromo-3-chloropropane	ND	33.29	0.012	25	-	133	60-140
1,2-Dibromoethane (EDB)	ND	24.37	0.50	25	-	97.5	60-140
1,2-Dichlorobenzene	ND	-	0.50	-	-	-	-
1,3-Dichlorobenzene	ND	27.26	0.50	25	-	109	60-140
1,4-Dichlorobenzene	ND	26.23	0.50	25	-	105	60-140
Dichlorodifluoromethane	ND	20.4	0.50	25	-	81.6	60-140
1,1-Dichloroethane	ND	23.49	0.50	25	-	94	60-140
1,2-Dichloroethane (1,2-DCA)	ND	21.33	0.50	25	-	85.3	60-140
1,1-Dichloroethene	ND	-	0.50	-	-	-	-
cis-1,2-Dichloroethene	ND	23.72	0.50	25	-	94.9	60-140
trans-1,2-Dichloroethene	ND	24.08	0.50	25	-	96.3	60-140
1,2-Dichloropropane	ND	21.16	0.50	25	-	84.7	60-140
cis-1,3-Dichloropropene	ND	28.33	0.50	25	-	113	60-140
trans-1,3-Dichloropropene	ND	25.15	0.50	25	-	101	60-140
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	21.83	0.50	25	-	87.3	60-140
Diisopropyl ether (DIPE)	ND	23.33	0.50	25	-	93.3	60-140
1,4-Dioxane	ND	20.92	0.50	25	-	83.7	60-140
Ethanol	ND	-	50	-	-	-	-
Ethyl acetate	ND	24.57	0.50	25	-	98.3	60-140
Ethyl tert-butyl ether (ETBE)	ND	23.72	0.50	25	-	94.9	60-140

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Quality Control Report

Client:	Endpoint	**WorkOrder:**	1403403
Date Prepared:	3/14/14	**BatchID:**	88260
Date Analyzed:	3/14/14	**Extraction Method:**	TO15
Instrument:	GC29	**Analytical Method:**	TO15
Matrix:	Soilgas	**Unit:**	nL/L
Project:	Tim Dublin; Crow Canyon	**Sample ID:**	MB/LCS-88260

QC Summary Report for TO15

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Ethylbenzene	ND	25.32	0.50	25	-	101	60-140
4-Ethyltoluene	ND	-	0.50	-	-	-	-
Freon 113	ND	23.45	0.50	25	-	93.8	60-140
Heptane	ND	-	5.0	-	-	-	-
Hexachlorobutadiene	ND	29.94	0.50	25	-	120	60-140
Hexane	ND	-	5.0	-	-	-	-
2-Hexanone	ND	-	0.50	-	-	-	-
4-Methyl-2-pentanone (MIBK)	ND	23.29	0.50	25	-	93.2	60-140
Methyl-t-butyl ether (MTBE)	ND	23.29	0.50	25	-	93.2	60-140
Methylene chloride	ND	21.39	0.50	25	-	85.6	60-140
Methyl methacrylate	ND	-	0.50	-	-	-	-
Naphthalene	ND	44.76	1.0	50	-	89.5	60-140
Propene	ND	-	50	-	-	-	-
Styrene	ND	25.49	0.50	25	-	102	60-140
1,1,1,2-Tetrachloroethane	ND	29.61	0.50	25	-	118	60-140
1,1,2,2-Tetrachloroethane	ND	25.39	0.50	25	-	102	60-140
Tetrachloroethene	ND	21.77	0.50	25	-	87.1	60-140
Tetrahydrofuran	ND	22.78	0.50	25	-	91.1	60-140
Toluene	ND	23.3	0.50	25	-	93.2	60-140
1,2,4-Trichlorobenzene	ND	24.42	0.50	25	-	97.7	60-140
1,1,1-Trichloroethane	ND	24.67	0.50	25	-	98.7	60-140
1,1,2-Trichloroethane	ND	22.32	0.50	25	-	89.3	60-140
Trichloroethene	ND	19	0.50	25	-	76	60-140
Trichlorofluoromethane	ND	-	0.50	-	-	-	-
1,2,4-Trimethylbenzene	ND	26.41	0.50	25	-	106	60-140
1,3,5-Trimethylbenzene	ND	25.84	0.50	25	-	103	60-140
Vinyl Acetate	ND	-	0.50	-	-	-	-
Vinyl Chloride	ND	18.38	0.50	25	-	73.5	60-140
Xylenes, Total	ND	78.56	1.5	75	-	105	60-140
Surrogate Recovery							
1,2-DCA-d4	476.4	441.6		500	95	88	60-140
Toluene-d8	471.6	483.4		500	94	97	60-140
4-BFB	477.8	496.3		500	96	99	60-140

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

CHAIN-OF-CUSTODY RECORD

WorkOrder: 1403403 **ClientCode: EPB**

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

Report to:
Mehrdad Javaher
Endpoint
1534 Plaza Lane #243
Burlingame, CA 94010
415-706-8935 FAX:

Email: mehrdad@endpoint-inc.com
cc/3rd Party:
PO:
ProjectNo: Tim Dublin; Crow Canyon

Bill to:
Accounts Payable
Endpoint
1534 Plaza Lane #243
Burlingame, CA 94010

Requested TAT: 5 days

Date Received: **03/12/2014**
Date Printed: **03/13/2014**

					Requested Tests (See legend below)											
Lab ID	**Client ID**	**Matrix**	**Collection Date**	**Hold**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**
1403403-001	VM-11	Soil Gas	3/12/2014 9:55	☐		A										
1403403-002	VM-12	Soil Gas	3/12/2014 10:21	☐		A										
1403403-003	VE-1S	Soil Gas	3/12/2014 10:58	☐		A										
1403403-004	VE-1D	Soil Gas	3/12/2014 11:38	☐		A										
1403403-005	VE-3D	Soil Gas	3/12/2014 12:19	☐		A										
1403403-006	VM-1S	Soil Gas	3/12/2014 12:43	☐		A										
1403403-007	VM-4S	Soil Gas	3/12/2014 13:08	☐		A										
1403403-008	VE-2D	Soil Gas	3/12/2014 13:53	☐		A										
1403403-009	VM-9SS	Soil Gas	12/30/1899 14:08	☐		A										
1403403-010	Unused Summa	Soil Gas	3/12/2014	☐	A											

Test Legend:

1	PRUNUSEDSUMMA	2	O15_Scan-SIM_SOIL(UG/M	3		4		5	
6		7		8		9		10	
11		12							

The following SampIDs: 001A, 002A, 003A, 004A, 005A, 006A, 007A, 008A, 009A contain testgroup.

Prepared by: Jena Alfaro

Comments:

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

McCampbell Analytical, Inc.
"When Quality Counts"

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

WORK ORDER SUMMARY

Client Name: ENDPOINT
Project: Tim Dublin; Crow Canyon
Comments:

QC Level: LEVEL 2
Client Contact: Mehrdad Javaher
Contact's Email: mehrdad@endpoint-inc.com

Work Order: 1403403
Date Received: 3/12/2014

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

Lab ID	Client ID	Matrix	Test Name	Number of Containers	Bottle & Preservative	De-chlorinated	Collection Date & Time	TAT	Sediment Content	Hold	SubOut
1403403-001A	VM-11	Soil Gas	TO15 w/ Helium	1	1L Summa	☐	3/12/2014 9:55	5 days		☐	
1403403-002A	VM-12	Soil Gas	TO15 w/ Helium	1	1L Summa	☐	3/12/2014 10:21	5 days		☐	
1403403-003A	VE-1S	Soil Gas	TO15 for Soil Vapor	1	1L Summa	☐	3/12/2014 10:58	5 days		☐	
1403403-004A	VE-1D	Soil Gas	TO15 for Soil Vapor	1	1L Summa	☐	3/12/2014 11:38	5 days		☐	
1403403-005A	VE-3D	Soil Gas	TO15 for Soil Vapor	1	1L Summa	☐	3/12/2014 12:19	5 days		☐	
1403403-006A	VM-1S	Soil Gas	TO15 w/ Helium	1	1L Summa	☐	3/12/2014 12:43	5 days		☐	
1403403-007A	VM-4S	Soil Gas	TO15 w/ Helium	1	1L Summa	☐	3/12/2014 13:08	5 days		☐	
1403403-008A	VE-2D	Soil Gas	TO15 w/ Helium	1	1L Summa	☐	3/12/2014 13:53	5 days		☐	
1403403-009A	VM-9SS	Soil Gas	TO15 w/ Helium	1	1L Summa	☐	12/30/1899 14:08	5 days		☐	

*** NOTE: STLC and TCLP extractions require 48 hrs to complete; therefore, all TATs begin after the extraction is completed (i.e., 24hr TAT yields results in 72 hrs from sample submission).**

Bottle Legend:
1L Summa = 1L Summa Canister

14033403

McCampbell Analytical, Inc.

1534 Willow Pass Rd. / Pittsburg, Ca. 94565-1701
www.mccampbell.com / main@mccampbell.com
Telephone: (877) 252-9262 / Fax: (925) 252-9269

CHAIN OF CUSTODY RECORD

TURN AROUND TIME: RUSH ☐ 1 Day ☐ 2 Day ☐ 3 Day ☐ 5 DAY ☐
GeoTracker EDF ☐ PDF ☐ EDD ☐ EQuIS ☐ 10 DAY ☐
UST Clean Up Fund Project ☐ Claim #

Report To: Mehrdad	Bill To: Endpoint
Company: Endpoint Consulting	
1534 Plaza Ln # 243	
E-Mail: n/a	
Tele: (415) 706-8935	Fax: ( )
Project #: Tim Dublin	Project Name: Crow Canyon
Project Location: 7272 San Ramon Road Dublin	
Sampler Signature:	

Field Sample ID (Location)	Collection Date	Collection Time	Canister SN#	Sampler Kit SN#
VM-11	3/12/14	~~1021~~ 0955	6807	985
VM-12		1021	753	1234
VE-15		1058	784	981
VE-10		1138	792	988
VE-30		1219	755	984
VM-15		1243	7509	983
VM-45		1308	6423	980
VE-20		1353	859	986
VM-955		1408	6306	987

Analysis Requested

Analysis	Matrix: Soilgas	Matrix: Indoor Air	Cannister Pressure/ Vacuum: Initial	Cannister Pressure/ Vacuum: Final
VM-11	X		-30	-4.5
VM-12	X		-29	-4.5
VE-15	X		-30	-4.5
VE-10	X		>30	-4.5
VE-30	X		>30	-4.5
VM-15	X		-30	-4.5
VM-45	X		-30	-4.5
VE-20	X		-30	-4.5
VM-955	X		-30	-4.5

VOCs by TO-15 (ug/m3) ☐ | 8010 by TO-15 (ug/m3) ☐ | TPH(g) (ug/m3) ☐ | LEED (inc. 4PCH, Formaldehyde, CO, Total VOCs) ☐ | Fixed Gas: CO2, Methane, Ethane, Ethylene, Acetylene, CO (please circle or indicate in notes) uL/L ☐ | Fixed Gas: O2, N2 (please circle) uL/L ☐ | Fixed Gas: Propane uL/L ☐ | Helium Leak Check (%) ☐ | Leak Check (IPA, Norflorane, 1,1-difluroethane) ug/m3 ☐ | APH: Aliphatic and/or Aromatic (please circle) ug/m3 ☐ | Other: ☐

Helium Shroud SN# .

Other:

Notes: Please Specify units if different than defaults VOCs is ug/m3 and fixed gas is uL/L. Leak check default is IPA.

Relinquished By:	Date:	Time:	Received By:
	3/12/14	1504	
Relinquished By:	Date:	Time:	Received By:
Relinquished By:	Date:	Time:	Received By:

Temp (°C) : _____ Work Order #: _____
Condition: _____
Custody Seals Intact?: Yes _____ No _____ None _____
Shipped Via: _____

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

Sample Receipt Checklist

Client Name: **Endpoint**
Date and Time Received: **3/12/2014 9:47:09 PM**
Project Name: **Tim Dublin; Crow Canyon**
LogIn Reviewed by: Jena Alfaro
WorkOrder N°: **1403403** Matrix: Soil Gas
Carrier: Client Drop-In

Chain of Custody (COC) Information

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

Sample Receipt Information

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

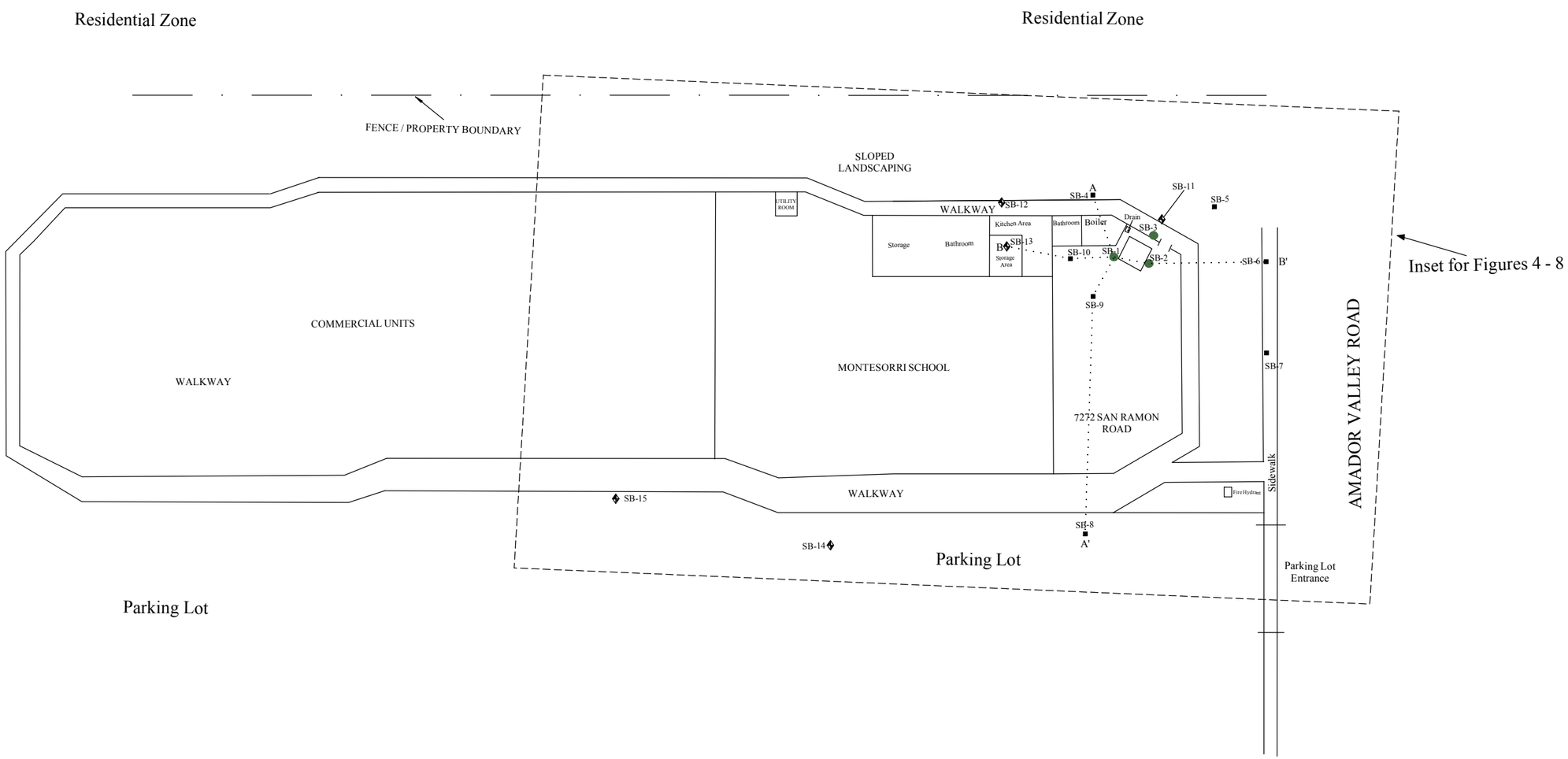
Sample Preservation and Hold Time (HT) Information

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

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

Comments:

APPENDIX B



Drafted By: Adrian Angel (Revised Feb 2007)

Legend:

- ▪ Soil Boring Locations (02/2-6/06)
- ● Soil Boring Locations (01/27/05)
- ♦ Soil Boring (12/27/06 and 1/15/07)
- ····· Fence Line (See Figs 10 and 11)

AEI CONSULTANTS
2500 CAMINO DIABLO BLVD, SUITE 200, WALNUT CREEK, CA

SITE PLAN

7272 San Ramon Road
Dublin, CA 94568

FIGURE 2
PROJECT NO. 263294

Table 1
Soil Sample Analytical Data

Sample ID	Date	Sample Depth feet bgs	PCE mg/kg	TCE mg/kg	All other HVOCs mg/kg
				EPA Method SW8260B	
SB-1 5'	1/27/05	5	0.023	<0.005	<MDL
SB-2 5'	1/27/05	5	0.071	<0.005	<MDL
SB-3 5'	1/27/05	5	0.029	<0.005	<MDL
SB-4-5'	2/6/06	5	<0.005	<0.005	<MDL
SB-4-9'	2/6/06	9	<0.005	<0.005	<MDL
SB-4-16'	2/6/06	16	<0.005	<0.005	<MDL
SB-6-15'	2/2/06	15	<0.005	<0.005	<MDL
SB-9-5'	2/6/06	5	<0.005	<0.005	<MDL
SB-9-8'	2/6/06	8	<0.005	<0.005	<MDL
SB-10-5'	2/6/06	5	<0.005	<0.005	<MDL
SB-10-8.5'	2/6/06	8.5	0.013	<0.005	<MDL
SB-10-12'	2/6/06	12	<0.005	<0.005	<MDL
SB-12-3'	1/16/07	3	<0.005	<0.005	<MDL
SB-12-4'	12/27/06	4	<0.005	<0.005	<MDL
SB-12-6'	12/27/06	6	<0.005	<0.005	<MDL
SB-13-3'	1/16/07	3	<0.005	<0.005	<MDL
SB-13-6'	1/16/07	6	<0.005	<0.005	<MDL
SB-15-6'	12/27/06	6	<0.005	<0.005	<MDL
ESL - DE	-	-	0.43	2.9	-
ESL - GP	-	-	0.70	0.46	
RL	-	-	0.005	0.005	varies

PCE = tetrachloroethylene
TCE = trichloroethylene
ESLs = Environmental Screening Levels for shallow soils where groundwater is current or potential source of drinking water in residential zones, California Regional Water Quality Control Board, February 2005
DE = direct exposure
GP = groundwater protection
Soil values reported in milligrams per kilogram (mg/kg)
RL = laboratory reporting limit (with no dilution)
MDL = method detection limit

Table 2
Groundwater Sample Analytical Data

Sample ID	Date	Screen Interval feet bgs	PCE µg/L	TCE µg/L	All other HVOCs µg/L
			EPA Method SW8260B		
SB-1-W	1/27/05	-	22	<0.5	<MDL
SB-2-W	1/27/05	-	14	0.62	<MDL
SB-3-W	1/27/05	-	19	3.0	<MDL
SB-4-W-1	2/6/06	(11 - 13)	0.90	<0.5	<MDL
SB-4-W-2	2/6/06	(31 - 34)	0.56	<0.5	<MDL
SB-5-W-1	2/3/06	(9 - 12)	<0.5	<0.5	<MDL
SB-5-W-2	2/3/06	(37 - 39)	<0.5	<0.5	<MDL
SB-6-W-1	2/3/06	(11-14)	<0.5	<0.5	<MDL
SB-6-W-2	2/3/06	(31 - 34)	<0.5	<0.5	<MDL
SB-7-W-1	2/3/06	(9 - 12)	<0.5	<0.5	<MDL
SB-7-W-2	2/3/06	(37 - 39)	<0.5	<0.5	<MDL
SB-8-W-1	2/2/06	(9 - 12)	<0.5	<0.5	<MDL
SB-8-W-2	2/2/06	(23 - 26)	<0.5	<0.5	<MDL
SB-9-W-1	2/6/06	(9 - 12)	4.9	<0.5	<MDL
SB-9-W-2	2/6/06	(28 - 32)	0.50	<0.5	<MDL
SB-10-W-1	2/6/06	(9 - 12)	23	<0.5	<MDL
SB-10-W-2	2/6/06	(28 - 32)	4.7	<0.5	<MDL
SB-12-W-1	1/16/07	(9 - 12)	<0.5	<0.5	<MDL
SB-12-W-2	1/16/07	(24 - 28)	<0.5	<0.5	<MDL
SB-13-W-1	1/16/07	(9 - 12)	0.78	<0.5	<MDL
SB-13-W-2	1/16/07	(24 - 28)	<0.5	<0.5	<MDL
SB-14-W-1	12/27/06	(9 - 12)	2.5	<0.5	<MDL
SB-14-W-2	12/27/06	(23 - 27)	<0.5	1.1	<MDL*
SB-15-W-1	12/27/06	(9 - 12)	<0.5	<0.5	<MDL
SB-15-W-2	12/27/06	(24 - 28)	<0.5	<0.5	<MDL**
ESL - DWT	-	-	5.0	5.0	-
RL	-	-	0.5	0.5	Varies

PCE = tetrachloroethylene
TCE = trichloroethylene
VC = vinyl chloride
ESLs = Environmental Screening Levels for shallow soils where groundwater is current or potential source of drinking water in residential zones, California Regional Water Quality Control Board, February 2005
DWT = drinking water toxicity
Groundwater values reported in micrograms per liter (ug/L)
RL = laboratory reporting limit (with no dilution)
Number following "W" designation indicates water-bearing zone (1 - A Zone, 2 - B Zone)
MDL = method detection limit
*= Toluene detected at 0.88 ug/L and xylenes at 1.0 ug/L
**= Chloroform, dibromochloromethane, and bromodichloromethane detected at 0.54, 0.91, and 0.97 ug/L, respectively

Table 3
Soil Vapor Sample Analytical Data

Sample ID	Date Collected	PCE	TCE	All other target HVOCs
		µg/m^3	µg/m^3	µg/m^3
		EPA Method TO-15		
SB-4-V	2/6/06	13000	<2.7	<MDL
SB-4-V-D	2/6/06	16000	<2.7	<MDL
SB-9-V	2/6/06	30	<2.7	<MDL
SB-10-V	2/6/06	230	<2.7	<MDL
SB-11-V	12/27/06	320,000	2,900	<MDL
SB-11-V Duplicate	12/27/06	380,000	3,200	<MDL
SB-12-V	12/27/06	270	12	<MDL
SB-13-V	1/15/07	6,700	<23	<MDL
SB-13-V-Duplicate	1/15/07	6,800	<23	MDL
SB-15-V	12/27/06	630	4.4	<MDL*
ESL - Res	-	410	1,200	-
RL		0.5	varies	varies

PCE = tetrachloroethylene
TCE = trichloroethylene
HVOCs = halogenated volatile organic compounds
ESLs = Environmental Screening Levels for shallow soil gas in residential zones, California Regional Water Quality Control Board, February 2005
Soil vapor concentrations reported in micrograms per cubic meter (ug/m^3)
RL = laboratory reporting limit (with no dilution)
* = The lead check compound, 2-Propanol, detected at 3,200 ug/m^3

Table 2
Results of Soil Vapor Sampling
Micrograms per cubic meters (µg/m³)

Soil Vapor Sample	Tetrachloroethylene (PCE)	Benzene	Toluene	Ethylbenzene	m, p-Xylenes	o-Xylenes
SB-16-0.5 (sub-slab)	**570**	<100	<200	<100	<200	<100
SB-16-05	**610**	<100	<200	<100	<200	<100
SB-17-0.5 (sub-slab)	<100	<100	<200	<100	<200	<100
SB-17-05	**190**	<100	<200	<100	<200	<100
SB-18-05, purge volume 1	**120**	**230**	420	<100	<200	<100
SB-18-05, purge volume 3	**140**	**160**	310	<100	<200	<100
SB-18-05, purge volume 7	**150**	<100	<200	<100	<200	<100
SB-19-0.5 (sub-slab)	**2,300**	<100	<200	<100	<200	<100
SB-19-05	**1,600**	<100	<200	<100	<200	<100
SB-20-04	<100	<100	<200	<100	<200	<100
SB-21-05	**7,500**	<100	<200	<100	<200	<100
SB-22-03	**1,100**	<100	<200	<100	<200	<100
SB-23-05	**17000**	<100	<200	<100	<200	<100
SB-24-3.5	**110**	<100	<200	<100	<200	<100
SB-25-05	**250**	<100	<200	<100	**300**	**130**
SB-27-04	**120**	<100	<200	<100	<200	<100
SB-28-03	<100	<100	<200	<100	<200	<100
SB-29-05	**470**	<100	<200	**180**	**680**	**360**
SB-30-03	<100	<100	<200	<100	<200	<100
SB-31-04	<100	<100	<200	<100	<200	<100
SB-32-03	**200**	<100	<200	<100	<200	<100
SB-33-03	<100	<100	<200	<100	<200	<100
SB-34-04	<100	<100	<200	<100	<200	<100
SB-36-05	<100	<100	<200	<100	<200	<100
SB-37-04	**1,900**	<100	<200	<100	<200	<100
Residential ESLs	410	84	210,000	63,000	21,000*	21,000*

ESLs = Soil vapor environmental screening levels for protection of indoor air quality adopted by the Regional Water Quality Control Board, San Francisco Bay Region
Other compounds were not detected above the method detection limits
Bolded values reflect detections above laboratory detection limits
Boxed values reflect exceedance of residential ESLs
* denotes residential ESL for total xylenes

Table 2
Results of Soil Sampling
Milligrams per kilogram (mg/kg)

Soil Sample	Tetrachloroethylene (PCE)	Ethylbenzene	m, p-Xylene	o-Xylene
SB-19-5	<0.005	<0.005	<0.005	<0.005
SB-23-5	<0.005	<0.005	<0.005	<0.005

APPENDIX C

Soil Vapor Probe Purging/Sampling Log

Project Name: CROW CANYON CLEANERS
Job Number: TM DUBLIN
Date: 6/3/14
Sampler(s): S. Polsky
Sample ID and Time: VM-7 -0915
Notes: Held 150 ml of H_2O for 5 min

Soil Vapor Probe ID:
Suma Can Serial #: 7531
Flow Controller #: 982
Initial Vacuum: -29
Final Vacuum: -4.5

Specifications

Tubing length: _____ cm
Tubing inner diameter: _____ cm
Boring diameter: _____ cm
Sandpack height: _____ cm
Probe length: _____ cm
Probe diameter: _____ cm
Summa flow rate: 200 mL/min
Purge flow rate: 50 mL/min

Purge Volume Calculation

Purge volume = tubing + sandpack
Tubing = Pi * (inner diameter/2)^2 * length
= cm3
Sandpack = Pi * (boring diameter/2)^2 * sandpack height * porosity
= cm3
Single purge volume: 58 cm^3
Total purge volumes extracted: 3.4

Start Time: 0910
Total Purge Time: 4

Pi = 3.1416
1 inch = 2.54 cm
1 ml = 1 cm3
Est. max. porosity = 0.375

Time	He in Shroud %	Purge Time (min./sec.)	He in Purge Sample % or ppm	VOCs ppbv / ppm	Comments
0910	29.3	0	N/A	N/A ~~20~~	~~N/A~~
0912	28.7	2			
0913	28.4	3			
0914	27.9	4	0.0%	0.0	
0915	27.7				
0917	27.1				
0919	26.5				
0921	25.9				
0921	25.4		0.0%	0.0	

Soil Vapor Probe Purging/Sampling Log

Project Name: CROW CANYON CLEANERS
Job Number: TM DUBLIN
Date: 6/3/14
Sampler(s): A. Pelayo
Sample ID and Time: VM-8-0941
Notes: Held 150 mL of Vac For 5 min

Soil Vapor Probe ID:
Suma Can Serial #: 6164
Flow Controller #: 983
Initial Vacuum: -30
Final Vacuum: -4.5

Specifications

Tubing length: _____ cm
Tubing inner diameter: _____ cm
Boring diameter: _____ cm
Sandpack height: _____ cm
Probe length: _____ cm
Probe diameter: _____ cm
Summa flow rate: 150 mL/min
Purge flow rate: 50 mL/min

Purge Volume Calculation

Purge volume = tubing + sandpack
Tubing = Pi * (inner diameter/2)^2 * length
= cm3
Sandpack = Pi * (boring diameter/2)^2 * sandpack height * porosity
= cm3
Single purge volume: 58 cm^3
Total purge volumes extracted: 3.4
Pi = 3.1416
1 inch = 2.54 cm
1 ml = 1 cm3

Start Time: 0936
Total Purge Time: 4
Est. max. porosity = 0.375

Time	He in Shroud %	Purge Time (min./sec.)	He in Purge Sample % or ppm	VOCs ppbv / ppm	Comments
0936	27.3	0	N/A	N/A	
0938	27.0	2			
0935	26.8	3			
0940	26.4	4			
0941	26.3		0.0	0.0	
0943	~~25.9~~	25.9			
0945	25.4				
0947	25.1				
0948	24.9		0.0	0.0	

Soil Vapor Probe Purging/Sampling Log

Project Name: CROW CANYON CLEANERS
Job Number: TM DUBLIN
Date: 6/5/14
Sampler(s): SP
Sample ID and Time: VM - 10
Notes:

Soil Vapor Probe ID:
Suma Can Serial #: 17522
Flow Controller #: 981
Initial Vacuum: -30
Final Vacuum: -4.5

Specifications

Tubing length: _____ cm
Tubing inner diameter: _____ cm
Boring diameter: _____ cm
Sandpack height: _____ cm
Probe length: _____ cm
Probe diameter: _____ cm
Summa flow rate: 150 mL/min
Purge flow rate: 50 mL/min

Purge Volume Calculation

Purge volume = tubing + sandpack
Tubing = Pi * (inner diameter/2)^2 * length
= cm3
Sandpack = Pi * (boring diameter/2)^2 * sandpack height * porosity
= cm3
Single purge volume: 58 cm^3
Total purge volumes extracted: 3.4

Start Time: 1000
Total Purge Time: 4

Pi = 3.1416
1 inch = 2.54 cm
1 ml = 1 cm3
Est. max. porosity = 0.375

Time	He in Shroud %	Purge Time (min./sec.)	He in Purge Sample % or ppm	VOCs ppbv / ppm	Comments
			N/A		
1000	29.8	0			
1002	29.4	2			
1003	28.9	3			
1004	28.7	4			
1005	28.6		0.0	0.0	
1007	28.0				
1009	27.8				
1011	27.1				
1012	26.6		0.0	0.1	

Soil Vapor Probe Purging/Sampling Log

Project Name: CROW CANYON CLEANERS
Job Number: TM DUBLIN
Date: 6/3/14
Sampler(s): SP
Sample ID and Time: VM-11 -1033
Notes: He Leak Test at Vac for 5 min

Soil Vapor Probe ID: VM-11
Suma Can Serial #: 75-21
Flow Controller #: 480
Initial Vacuum: -30
Final Vacuum: -4.5

Specifications

Tubing length: _____ cm
Tubing inner diameter: _____ cm
Boring diameter: _____ cm
Sandpack height: _____ cm
Probe length: _____ cm
Probe diameter: _____ cm
Summa flow rate: 150 mL/min
Purge flow rate: 150 mL/min

Purge Volume Calculation

Purge volume = tubing + sandpack
Tubing = Pi * (inner diameter/2)^2 * length
= cm3
Sandpack = Pi * (boring diameter/2)^2 * sandpack height * porosity
= cm3
Single purge volume: 641 cm^3
Total purge volumes extracted: 3.04

Start Time: 1019
Total Purge Time: 13

Pi = 3.1416
1 inch = 2.54 cm
1 ml = 1 cm3
Est. max. porosity = 0.375

Time	He in Shroud %	Purge Time (min./sec.)	He in Purge Sample % or ppm	VOCs ppbv / (ppm)	Comments
1019	29.9	0	N/A	N/A	
1024	29.0	5	0.0	3.1	
1026	28.6	7			
1028	28.4	9	0.0	1.4	
1030	27.9	11			
1032	27.4	13	0.0	0.0	
1033	27.2				
1035	26.7				
1037	26.2				
1039	25.5				
1040	25.1		0.0	~~0.0~~	<1.0 ppm

Soil Vapor Probe Purging/Sampling Log

Project Name: CROW CANYON CLEANERS
Job Number: TM DUBLIN
Date: 6/3/14
Sampler(s): SP
Sample ID and Time: VM-12-1059
Notes: Held 150" of Vac for 5 min

Soil Vapor Probe ID: VM-12
Suma Can Serial #: 530
Flow Controller #: 1238
Initial Vacuum: -30
Final Vacuum: -4.5

Specifications

Tubing length: _____ cm
Tubing inner diameter: _____ cm
Boring diameter: _____ cm
Sandpack height: _____ cm
Probe length: _____ cm
Probe diameter: _____ cm
Summa flow rate: 150 mL/min
Purge flow rate: 150 mL/min

Purge Volume Calculation

Purge volume = tubing + sandpack
Tubing = Pi * (inner diameter/2)^2 * length
= cm3
Sandpack = Pi * (boring diameter/2)^2 * sandpack height * porosity
= cm3
Single purge volume: 641 cm^3
Total purge volumes extracted: 3.04

Start Time: 1045
Total Purge Time: 13

Pi = 3.1416
1 inch = 2.54 cm
1 ml = 1 cm3
Est. max. porosity = 0.375

Time	He in Shroud %	Purge Time (min./sec.)	He in Purge Sample % or ppm	VOCs ppbv / ppm	Comments
	28.9				
1045	28.7	0			
1047	28.3	2			
1050	27.9	5	0.0	0.0	
1052	27.6	7			
1054	27.0	9	0.0	1.1	
1056	26.8	11			
1058	26.4	13	0.0	1.0	
1059	26.2				
1101	25.7				
1103	25.4				
1105	25.1				
1106	24.7		0.0	1.2	

Soil Vapor Probe Purging/Sampling Log

Project Name: CROW CANYON CLEANERS
Job Number: TM DUBLIN
Date: 6/3/14
Sampler(s): SP
Sample ID and Time: VM-2SS ~~1...~~ 1126
Notes: Held 150" of Vac for 10 min

Soil Vapor Probe ID: VM-2SS-1
Suma Can Serial #: 6312
Flow Controller #: 674
Initial Vacuum: -30
Final Vacuum: -4.5

Specifications

Tubing length: ______ cm
Tubing inner diameter: ______ cm
Boring diameter: ______ cm
Sandpack height: ______ cm
Probe length: ______ cm
Probe diameter: ______ cm
Summa flow rate: 60 mL/min
Purge flow rate: 50 mL/min

Purge Volume Calculation

Purge volume = tubing + sandpack
Tubing = Pi * (inner diameter/2)^2 * length
= ______ cm3
Sandpack = Pi * (boring diameter/2)^2 * sandpack height * porosity
= ______ cm3
Single purge volume: 11 cm^3
Total purge volumes extracted: 3.4
Start Time: 1125
Total Purge Time: 45 sec
Pi = 3.1416
1 inch = 2.54 cm
Est. max. porosity = 0.375
1 ml = 1 cm3

Time	He in Shroud %	Purge Time (min./sec.)	He in Purge Sample % or ppm	VOCs ppbv / ppm	Comments
	28.6				
1125	28.7				
1125	28.5	45 sec	N/A	N/A	
1126	28.2				
~~1128~~	28.0				1128
1130	27.7				"
1132	27.5				
1133	27.1		0.0	.9	

Soil Vapor Probe Purging/Sampling Log

Project Name: CROW CANYON CLEANERS
Job Number: TM DUBLIN
Date: 6/3/14
Sampler(s): SP
Sample ID and Time: VM-655 - 1145
Notes: Held 150" of Vac for 5 min

Soil Vapor Probe ID: VM-655
Suma Can Serial #: 7528
Flow Controller #: 988
Initial Vacuum: -30
Final Vacuum: -4.5

Specifications

Tubing length: _____ cm
Tubing inner diameter: _____ cm
Boring diameter: _____ cm
Sandpack height: _____ cm
Probe length: _____ cm
Probe diameter: _____ cm
Summa flow rate: 150 mL/min
Purge flow rate: 50 mL/min

Purge Volume Calculation

Purge volume = tubing + sandpack
Tubing = Pi * (inner diameter/2)^2 * length
= cm3
Sandpack = Pi * (boring diameter/2)^2 * sandpack height * porosity
= cm3
Single purge volume: 11 cm^3
Total purge volumes extracted: 3.4

Start Time: 1144
Total Purge Time: 45 sec

Pi = 3.1416
1 inch = 2.54 cm
1 ml = 1 cm3
Est. max. porosity = 0.375

Time	He in Shroud %	Purge Time (min./sec.)	He in Purge Sample % or ppm	VOCs ppbv / (ppm)	Comments
	28.6				
1144	28.4	45sec	N/A	N/A	
1145	28.3				
1147	27.7				
1149	27.4				
1151	27.0				
1153	26.4		0.0 %	.3	

Soil Vapor Probe Purging/Sampling Log

Project Name: CROW CANYON CLEANERS
Job Number: TM DUBLIN
Date: 6/3/14
Sampler(s): SP
Sample ID and Time: VM-555 - 1203
Notes: Held 150 ml of Vac for 5 min

Soil Vapor Probe ID: VM-555
Suma Can Serial #: 7520
Flow Controller #: 1226
Initial Vacuum: -30
Final Vacuum: -4.5

Specifications

Tubing length: _____ cm
Tubing inner diameter: _____ cm
Boring diameter: _____ cm
Sandpack height: _____ cm
Probe length: _____ cm
Probe diameter: _____ cm
Summa flow rate: 150 mL/min
Purge flow rate: 50 mL/min

Purge Volume Calculation

Purge volume = tubing + sandpack
Tubing = Pi * (inner diameter/2)^2 * length
= cm3
Sandpack = Pi * (boring diameter/2)^2 * sandpack height * porosity
= cm3
Single purge volume: 11 cm^3
Total purge volumes extracted: 3 1/4

Start Time: 1201
Total Purge Time: 4 5sec

Pi = 3.1416
1 inch = 2.54 cm
1 ml = 1 cm3
Est. max. porosity = 0.375

Time	He in Shroud %	Purge Time (min./sec.)	He in Purge Sample % or ppm	VOCs ppbv / ppm	Comments
	26.3				
1201	26.1				
1202	26.0	45sec			
1203	25.7				
1205	25.2				
1207	24.9				
1209	24.3				
1210	24.0		0.0%	.4	

Soil Vapor Probe Purging/Sampling Log

Project Name: CROW CANYON CLEANERS
Job Number: TM DUBLIN
Date: 6/3/14
Sampler(s): GP
Sample ID and Time: VM-1S-1236
Notes: Held 120" of H_2O Vac for 5 min.

Soil Vapor Probe ID: VM-1S
Summa Can Serial #: 7519
Flow Controller #: 1227
Initial Vacuum: -29
Final Vacuum: -4.5

Specifications

Tubing length: _____ cm
Tubing inner diameter: _____ cm
Boring diameter: _____ cm
Sandpack height: _____ cm
Probe length: _____ cm
Probe diameter: _____ cm
Summa flow rate: 150 mL/min
Purge flow rate: 300 mL/min

Purge Volume Calculation

Purge volume = tubing + sandpack
Tubing = Pi * (inner diameter/2)^2 * length
= cm3
Sandpack = Pi * (boring diameter/2)^2 * sandpack height * porosity
= cm3
Single purge volume: 1235 cm^3
Total purge volumes extracted: 3.116

Start Time: 1222
Total Purge Time: ~~1235~~ 13

Pi = 3.1416
1 inch = 2.54 cm
1 ml = 1 cm3
Est. max. porosity = 0.375

Time	He in Shroud %	Purge Time (min./sec.)	He in Purge Sample % or ppm	VOCs ppbv / ppm	Comments
	29.9				
1222	29.7	1			
1225	29.1	3			
1227	28.9	5	0.0	.6	
1229	28.6	7			
1231	28.2	9	0.0%	.7	
1233	27.7	11		~~.7~~	
1235	27.4	13	0.0%	.6	
1236	27.3				
1238	27.0				
1240	26.5				
1242	25.9		0.0%	0.6	

Soil Vapor Probe Purging/Sampling Log

Project Name: CROW CANYON CLEANERS
Job Number: TM DUBLIN
Date: 6/3/14
Sampler(s): SM
Sample ID and Time: VP2 - ID - 1324
Notes: HELD 140" of H_2O VAC for 6 min

Soil Vapor Probe ID:
Suma Can Serial #: 7515
Flow Controller #: 1225
Initial Vacuum: -30
Final Vacuum: -4.5

Specifications

Tubing length: _____ cm
Tubing inner diameter: _____ cm
Boring diameter: _____ cm
Sandpack height: _____ cm
Probe length: _____ cm
Probe diameter: _____ cm
Summa flow rate: 150 mL/min
Purge flow rate: 500 mL/min

Purge Volume Calculation

Purge volume = tubing + sandpack
Tubing = Pi * (inner diameter/2)^2 * length
= cm3
Sandpack = Pi * (boring diameter/2)^2 * sandpack height * porosity
= cm3
Single purge volume: 5.40 cm^3
Total purge volumes extracted: 3.05

Start Time: 1249
Total Purge Time: 33 min

Pi = 3.1416
1 inch = 2.54 cm
1 ml = 1 cm3
Est. max. porosity = 0.375

Time	He in Shroud %	Purge Time (min./sec.)	He in Purge Sample % or ppm	VOCs ppbv / (ppm)	Comments
	29.9				VAC
1249	29.8	0			5" of H_2O
1252	29.2	3			
1255	28.8	6			
1258	27.3	9			
1300	27.1	11	0.0%	0.0	
1305	25.4	~~16~~			
1311	24.8	22	0.0%	0.0	
1316	23.8	27			
1322	22.7	33	0.0%	0.0	
1323	29.0%				ADDED He
1324	28.1%				
1326	27.9				
1328	27.3				
1350	26.0				
			0.0%	0.0	

Soil Vapor Probe Purging/Sampling Log

Project Name: CROW CANYON CLEANERS
Job Number: TM DUBLIN
Date: 6/3/14
Sampler(s): SP
Sample ID and Time: VM-35-1409
Notes: Field 150" of H_2O Vac for 5 min.

Soil Vapor Probe ID: VM-35
Suma Can Serial #: 6420
Flow Controller #: 989
Initial Vacuum: -30
Final Vacuum: -4.5

Specifications

Tubing length: _____ cm
Tubing inner diameter: _____ cm
Boring diameter: _____ cm
Sandpack height: _____ cm
Probe length: _____ cm
Probe diameter: _____ cm
Summa flow rate: 150 mL/min
Purge flow rate: 500 mL/min

Purge Volume Calculation

Purge volume = tubing + sandpack
Tubing = Pi * (inner diameter/2)^2 * length
= cm3
Sandpack = Pi * (boring diameter/2)^2 * sandpack height * porosity
= cm3
Single purge volume: 5.41 cm^3
Total purge volumes extracted: 3.05

Start Time: 1335
Total Purge Time: 33

Pi = 3.1416
1 inch = 2.54 cm
1 ml = 1 cm3
Est. max. porosity = 0.375

Time	He in Shroud %	Purge Time (min./sec.)	He in Purge Sample % or ppm	VOCs ppbv / (ppm)	Comments
	29.9				
1335	29.7	1	0.0%	.1	
1338	28.9	4			
1341	28.6	7			
1345	28.4	11	0.0%	.2	
1350	27.8	16			
1356	27.1	22	0.0%	0.0	
1401	26.0	27			
1407	25.3	33	0.0%	0.0	
1408	28.0				ADDED He
1409	27.5				
1411	26.9				
1413	26.3				
1415	25.7				
1416	25.2		0.0%	0.0	

Soil Vapor Probe Purging/Sampling Log

Project Name: CROW CANYON CLEANERS
Job Number: TM DUBLIN
Date: 6/3/14
Sampler(s): S. Polston
Sample ID and Time: VM-3D
Notes: HELD 150" of H_2O [illegible] for 5min

Soil Vapor Probe ID: VM-3D
Suma Can Serial #: 6310
Flow Controller #: 987
Initial Vacuum: -29
Final Vacuum: -4.5

Specifications

Tubing length: ____ cm
Tubing inner diameter: ____ cm
Boring diameter: ____ cm
Sandpack height: ____ cm
Probe length: ____ cm
Probe diameter: ____ cm
Summa flow rate: 150 mL/min
Purge flow rate: 500 mL/min

Purge Volume Calculation

Purge volume = tubing + sandpack
Tubing = Pi * (inner diameter/2)^2 * length
= cm3
Sandpack = Pi * (boring diameter/2)^2 * sandpack height * porosity
= cm3
Single purge volume: 7.2 L cm^3
Start Time: 1419
Total purge volumes extracted: 3.13
Total Purge Time: 45min
Pi = 3.1416
1 inch = 2.54 cm
Est. max. porosity = 0.375
1 ml = 1 cm3

Time	He in Shroud %	Purge Time (min./sec.)	He in Purge Sample % or ppm	VOCs ppbv / ppm	Comments
	29.8				
1419	29.8	1	0.0%	.2	
1424	29.2	5			
1419	28.7	10			
1434	28.0	15	0.0%	0.0	
1439	27.0	20			
1444	26.3	25			
1449	25.5	30	0.0%	0.0	
1454	24.7	35			
1459	24.0	40			
1504	23.2	45	0.0%	0.0	
	28.6				~~He~~ ADDED He
1505	28.4				
1507	28.0				
1509	27.5				
1511	26.9				
1512	26.4		0.0%	0.0	

Soil Vapor Probe Purging/Sampling Log

Project Name: CROW CANYON CLEANERS
Job Number: TM DUBLIN
Date: 6/4/14
Sampler(s): SP
Sample ID and Time: VM-45
Notes: He Leak Test 150" of H_2O Vac for 5 min

Soil Vapor Probe ID:
Suma Can Serial #: 0809
Flow Controller #: 1230
Initial Vacuum: -29
Final Vacuum: -4.5

Specifications

Tubing length: _____ cm
Tubing inner diameter: _____ cm
Boring diameter: _____ cm
Sandpack height: _____ cm
Probe length: _____ cm
Probe diameter: _____ cm
Summa flow rate: 150 mL/min
Purge flow rate: ~~3~~ mL/min 300

Purge Volume Calculation

Purge volume = tubing + sandpack
Tubing = Pi * (inner diameter/2)^2 * length
= cm3
Sandpack = Pi * (boring diameter/2)^2 * sandpack height * porosity
= cm3
Single purge volume: 1235 cm^3
Total purge volumes extracted: 3.15

Start Time: 0838
Total Purge Time: 13

Pi = 3.1416
1 inch = 2.54 cm
1 ml = 1 cm3
Est. max. porosity = 0.375

Time	He in Shroud %	Purge Time (min./sec.)	He in Purge Sample % or ppm	VOCs ppbv / ppm	Comments
	27.4				
0838	27.3	1			
0842	26.0	5	0.0%	0.5	
0844	25.7	7			
0846	25.4	9	0.0%	.1	
0848	25.0	11			
0850	24.7	13	0.0%	.1	
0851	24.5				
0853	24.2				
0855	23.7				
0857	23.5				
0858	23.1		0.0%	.1	

Soil Vapor Probe Purging/Sampling Log

Project Name: Crow Canyon Cleaners
Job Number: TM DUBLIN
Date: 6/4/14
Sampler(s): SB
Sample ID and Time: VE-3S
Notes: Held 150" of Vac for 5 min

Soil Vapor Probe ID:
Suma Can Serial #: 7509
Flow Controller #: 985
Initial Vacuum: -30
Final Vacuum: -4.5

Specifications

Tubing length: _____ cm
Tubing inner diameter: _____ cm
Boring diameter: _____ cm
Sandpack height: _____ cm
Probe length: _____ cm
Probe diameter: _____ cm
Summa flow rate: 150 mL/min
Purge flow rate: 300 mL/min

Purge Volume Calculation

Purge volume = tubing + sandpack
Tubing = Pi * (inner diameter/2)^2 * length
= cm3
Sandpack = Pi * (boring diameter/2)^2 * sandpack height * porosity
= cm3
Single purge volume: 1235 cm^3
Total purge volumes extracted: 3.15

Start Time: 0905
Total Purge Time: 13

Pi = 3.1416
1 inch = 2.54 cm
1 ml = 1 cm3
Est. max. porosity = 0.375

Time	He in Shroud %	Purge Time (min./sec.)	He in Purge Sample % or ppm	VOCs ppbv / ppm	Comments
	N/A		N/A		
0905		1			Used Shaving Cream
0909		5		0.0	well Hooked up to
0911		7			Vac
0913		9		0.0	
0915		11			
0917		13		0.0	
918					
926					

Soil Vapor Probe Purging/Sampling Log

Project Name: CROW CANYON CLEANERS
Job Number: TM DUBLIN
Date: 6/4/14
Sampler(s): SP
Sample ID and Time: VE-3D - 1005
Notes: HELD 150" of Vac for 5 min

Soil Vapor Probe ID: VE-3D
Suma Can Serial #: ~~53~~ 6807
Flow Controller #: 1229
Initial Vacuum: -30
Final Vacuum: -4.5

Specifications

Tubing length: ______ cm
Tubing inner diameter: ______ cm
Boring diameter: ______ cm
Sandpack height: ______ cm
Probe length: ______ cm
Probe diameter: ______ cm
Summa flow rate: 150 mL/min
Purge flow rate: 500 mL/min

Purge Volume Calculation

Purge volume = tubing + sandpack
Tubing = Pi * (inner diameter/2)^2 * length
= cm3
Sandpack = Pi * (boring diameter/2)^2 * sandpack height * porosity
= cm3

Single purge volume: 5.4 ℓ ~~cm^3~~ Start Time: 931
Total purge volumes extracted: 3.1 Total Purge Time: 33

Pi = 3.1416 1 inch = 2.54 cm Est. max. porosity = 0.375
1 ml = 1 cm3

Time	He in Shroud %	Purge Time (min./sec.)	He in Purge Sample % or ppm	VOCs ppbv / ppm	Comments
	N/A				
~~08~~931					USED Shaving Cream
0931					well Hooked up 2 VCS
0942		11		0.0	
0953		22		0.0	
1004		33		0.0	G
1005					Gauge sticky
1013				0.0	Vacuum Reading might not Be correct

Soil Vapor Probe Purging/Sampling Log

Project Name: CROW CANYON CLEANERS
Job Number: TM DUBLIN
Date: 6/4/14
Sampler(s): [illegible]
Sample ID and Time: VE-1 ID - 1055
Notes: 1x LD 150" of Vac for 5min

Soil Vapor Probe ID:
Suma Can Serial #: 6306
Flow Controller #: 986
Initial Vacuum: -30
Final Vacuum: -4.5

Specifications

Tubing length: ______ cm
Tubing inner diameter: ______ cm
Boring diameter: ______ cm
Sandpack height: ______ cm
Probe length: ______ cm
Probe diameter: ______ cm
Summa flow rate: 150 mL/min
Purge flow rate: 500 mL/min

Purge Volume Calculation

Purge volume = tubing + sandpack

Tubing = Pi * (inner diameter/2)^2 * length
= ______ cm3

Sandpack = Pi * (boring diameter/2)^2 * sandpack height * porosity
= ______ cm3

Single purge volume: 5.4 l cm^3
Total purge volumes extracted: 3.3
Start Time: 1021
Total Purge Time: 33

Pi = 3.1416
1 inch = 2.54 cm
Est. max. porosity = 0.375
1 ml = 1 cm3

Time	He in Shroud %	Purge Time (min./sec.)	He in Purge Sample % or ppm	VOCs ppbv / ppm	Comments
	N/A		N/A		
1021	↓	0	↓	0.0	USED SHAVING CREAM
1032		11		0.0	WELL HOOKED TO VCS
1043		22		0.0	
1054		33			
1055					
1103					
1104				0.0	

Soil Vapor Probe Purging/Sampling Log

Project Name: CROW CANYON CLEANERS
Job Number: TM DUBLIN
Date: 6/4/14
Sampler(s): SB
Sample ID and Time: VE-15
Notes: He Leak 150" of Vac for 5 min

Soil Vapor Probe ID:
Suma Can Serial #: 6408
Flow Controller #: 1231
Initial Vacuum: -30
Final Vacuum: -4.5

Specifications

Tubing length: _____ cm
Tubing inner diameter: _____ cm
Boring diameter: _____ cm
Sandpack height: _____ cm
Probe length: _____ cm
Probe diameter: _____ cm
Summa flow rate: ~150 mL/min
Purge flow rate: 350 mL/min

Purge Volume Calculation

Purge volume = tubing + sandpack
Tubing = Pi * (inner diameter/2)^2 * length
= cm3
Sandpack = Pi * (boring diameter/2)^2 * sandpack height * porosity
= cm3
Single purge volume: 1350 cm^3
Total purge volumes extracted: 3:1
Pi = 3.1416
1 inch = 2.54 cm
1 ml = 1 cm3

Start Time: 1104
Total Purge Time: 12
Est. max. porosity = 0.375

Time	He in Shroud %	Purge Time (min./sec.)	He in Purge Sample % or ppm	VOCs ppbv / (ppm)	Comments
			N/A		
1104		0			USED SHAVING CREAM
1108		4		0.0	well Hookup up 2
1112		8		0.1	Ves
1116		12		0.1	
1117					
1125				0.1	

Soil Vapor Probe Purging/Sampling Log

Project Name: CROW CANYON CLEANERS
Job Number: TM DUBLIN
Date: 6/4/14
Sampler(s): JP
Sample ID and Time: VE-2D
Notes: Held 150" of Vac for 5 min

Soil Vapor Probe ID:
Suma Can Serial #: 1462
Flow Controller #: 1232
Initial Vacuum:
Final Vacuum:

Specifications

Tubing length: _____ cm
Tubing inner diameter: _____ cm
Boring diameter: _____ cm
Sandpack height: _____ cm
Probe length: _____ cm
Probe diameter: _____ cm
Summa flow rate: 150 mL/min
Purge flow rate: 500 mL/min

Purge Volume Calculation

Purge volume = tubing + sandpack
Tubing = Pi * (inner diameter/2)^2 * length
= cm3
Sandpack = Pi * (boring diameter/2)^2 * sandpack height * porosity
= cm3
Single purge volume: 5.0L ~~cm^3~~
Total purge volumes extracted: 3.0

Start Time: 1126
Total Purge Time: 30 min

Pi = 3.1416
1 inch = 2.54 cm
1 ml = 1 cm3
Est. max. porosity = 0.375

Time	He in Shroud %	Purge Time (min./sec.)	He in Purge Sample % or ppm	VOCs ppbv / ppm	Comments
	29.9				
1126	29.8	0			
1131	28.1	5'			
1136	27.3	10 -	0.0%	0.0	
1141	26.4	15			
1146	25.8	20 -	0.0%	0.0	
1151	25.0	25			
1156	24.1	30 -	0.0%	0.0	
1157	24.0				
1159	23.5				
1201	23.1				
1203	22.8				
1204	22.6		0.0%	0.0	

Soil Vapor Probe Purging/Sampling Log

Project Name: CROW CANYON CLEANERS
Job Number: TM DUBLIN
Date: 6/4/14
Sampler(s): SP
Sample ID and Time: VE-2S
Notes: Held 150" of Vac for 5 min

Soil Vapor Probe ID:
Suma Can Serial #: 1460
Flow Controller #: 1234
Initial Vacuum: -30
Final Vacuum: -4.5

Specifications

Tubing length: _____ cm
Tubing inner diameter: _____ cm
Boring diameter: _____ cm
Sandpack height: _____ cm
Probe length: _____ cm
Probe diameter: _____ cm
Summa flow rate: 150 mL/min
Purge flow rate: 350 mL/min

Purge Volume Calculation

Purge volume = tubing + sandpack
Tubing = Pi * (inner diameter/2)^2 * length
= cm3
Sandpack = Pi * (boring diameter/2)^2 * sandpack height * porosity
= cm3
Single purge volume: 1350 cm^3
Total purge volumes extracted: 3.1
Pi = 3.1416
1 inch = 2.54 cm
1 ml = 1 cm3

Start Time: 1206
Total Purge Time: ~~15~~ 12
Est. max. porosity = 0.375

Time	He in Shroud %	Purge Time (min./sec.)	He in Purge Sample % or ppm	VOCs ppbv / ppm	Comments
	28.3				
1206	28.2	0			
1210	26.7	4	0.0	0.0	
1212	26.1	6			
1214	25.7	8	0.0	0.0	
1216	25.3	10			
1218	25.0	12	0.0	0.0	
1219	24.9				
1221	24.4				
1223	24.0				
1225	23.8				
1227	23.6		0.0	0.0	

Soil Vapor Probe Purging/Sampling Log

Project Name: CROW CANYON CLEANERS
Job Number: TM DUBLIN
Date: 6/4/14
Sampler(s): SP
Sample ID and Time: VM-955
Notes: Held 150" of H_2O for 4 min

Soil Vapor Probe ID:
Suma Can Serial #: 0203
Flow Controller #: 984
Initial Vacuum: -30
Final Vacuum: -4.5

Specifications

Tubing length: _____ cm
Tubing inner diameter: _____ cm
Boring diameter: _____ cm
Sandpack height: _____ cm
Probe length: _____ cm
Probe diameter: _____ cm
Summa flow rate: _____ mL/min
Purge flow rate: ~~200~~ 100 mL/min

Purge Volume Calculation

Purge volume = tubing + sandpack
Tubing = Pi * (inner diameter/2)^2 * length
= cm3
Sandpack = Pi * (boring diameter/2)^2 * sandpack height * porosity
= cm3
Single purge volume: 21 cm^3
Total purge volumes extracted: 3.6

Start Time: 1227
Total Purge Time: 45 sec

Pi = 3.1416
1 inch = 2.54 cm
1 ml = 1 cm3
Est. max. porosity = 0.375

Time	He in Shroud %	Purge Time (min. sec.)	He in Purge Sample % or ppm	VOCs ppbv / ppm	Comments
	29.4				
1227					
1227	29.0	45	0.0	0.1	
1228	28.6				
1230	27.9				
1232	27.2				
1234	26.4		0.0	0.2	
1235	26.0		0.0	0.2	

McCampbell Analytical, Inc.

1534 Willow Pass Rd. / Pittsburg, Ca. 94565-1701
www.mccampbell.com / main@mccampbell.com
Telephone: (877) 252-9262 / Fax: (925) 252-9269

CHAIN OF CUSTODY RECORD

TURN AROUND TIME: RUSH ☐ 1 Day ☐ 2 Day ☐ 3 Day ☐ (5 DAY) ☐
GeoTracker EDF ☐ PDF ☐ EDD ☐ EQuIS ☐ 10 DAY ☐
UST Clean Up Fund Project ☐ Claim #

Report To: Mehrdad **Bill To:** Endpoint
Company: Endpoint Consulting Inc
1534 Plaza Ln #248
Burlingame CA **E-Mail:**
Tele: (415) 706-8935 **Fax:** ( )
Project #: Tim Dublin **Project Name:** Crow Canyon
Project Location: 7272 San Ramon Rd Cleaners
Sampler Signature: [signature]

Analysis Requested

Helium Shroud SN#
Other:
Notes: Please Specify units if different than defaults VOCs is ug/m3 and fixed gas is uL/L. Leak check default is IPA.

Field Sample ID (Location)	Collection Date	Collection Time	Canister SN#	Sampler Kit SN#	VOCs by TO-15 (ug/m3)	8010 by TO-15 (ug/m3)	TPH(g) (ug/m3)	LEED (inc. 4PCH, Formaldehyde, CO, Total VOCs)	Fixed Gas: CO2, Methane, Ethane, Ethylene, Acetylene, CO (please circle or indicate in notes) uL/L	Fixed Gas: O2, N2 (please circle) uL/L	Fixed Gas: Propane uL/L	Helium Leak Check (%)	Leak Check (IPA, Norflorane, 1,1-difluroethane) ug/m3	APH: Aliphatic and/or Aromatic (please circle) ug/m3	Other:	Matrix: Soilgas	Matrix: Indoor Air	Cannister Pressure/ Vacuum Initial	Cannister Pressure/ Vacuum Final
VM-7	6/3/14	0915	7531	982	X											X		-29	-4.5
VM-8		0941	6164	983														-30	-4.1
VM-10		1005	7522	981														-30	-4.5
VM-11		1033	7521	980														-30	-4.5
VM-12		1059	7530	1228														-30	-4.5
VM-25S		1126	6312	674								X						-30	-4.5
VM-65S		1145	7528	988								X						-30	-4.5
VM-55S		1203	7520	1226								X						-30	-4.5
VM-1S		1236	7519	1227														-29	-4.5
VM-1D		1314	7515	1225														-30	-4.5
VM-3S		1408	~~75~~ 6420	~~Fa~~ 989														-30	-4.5
VM-3D			6310	987														-29	-4.5

Relinquished By:	Date:	Time:	Received By:
[signature]	6/4/14	1355	[signature]

Temp (°C) : ______ Work Order #: ______

Condition: ______

Custody Seals Intact?: Yes ______ No ______ None ______

Shipped Via: ______

McCampbell Analytical, Inc.

1534 Willow Pass Rd. / Pittsburg, Ca. 94565-1701
www.mccampbell.com / main@mccampbell.com
Telephone: (877) 252-9262 / Fax: (925) 252-9269

CHAIN OF CUSTODY RECORD

TURN AROUND TIME: RUSH ☐ 1 Day ☐ 2 Day ☐ 3 Day ☒ 5 DAY ☐

GeoTracker EDF ☐ PDF ☐ EDD ☐ EQuIS ☐ 10 DAY ☐

UST Clean Up Fund Project ☐ Claim #

Report To: McLeod
Bill To: Endpoint
Company: Endpoint Consulting
1534 Plaza Ln #243
Burlingame 94010
E-Mail:
Tele: (415) 706-8755
Fax: ( )
Project #: Tom Dalton
Project Name: Grove Canyon
Project Location: 7272 San Ramon Rd Dublin Cleaners
Sampler Signature: [signature]

Helium Shroud SN#

Other:

Notes: Please Specify units if different than defaults VOCs is ug/m3 and fixed gas is uL/L. Leak check default is IPA.

Field Sample ID (Location)	Collection Date	Collection Time	Canister SN#	Sampler Kit SN#	VOCs by TO-15 (ug/m3)	8010 by TO-15 (ug/m3)	TPH(g) (ug/m3)	LEED (inc. 4PCH, Formaldehyde, CO, Total VOCs)	Fixed Gas: CO2, Methane, Ethane, Ethylene, Acetylene, CO (please circle or indicate in notes) uL/L	Fixed Gas: O2, N2 (please circle) uL/L	Fixed Gas: Propane uL/L	Helium Leak Check (%)	Leak Check (IPA, Norflorane, 1,1-difluroethane) ug/m3	APH: Aliphatic and/or Aromatic (please circle) ug/m3	Other:	Matrix: Soilgas	Matrix: Indoor Air	Cannister Pressure/ Vacuum: Initial	Cannister Pressure/ Vacuum: Final
VM-4S	6/4/14	0857	6809	1230	X							X				X		-29	-4.5
VE-3S	↓	0918	7509	985	↓											↓		-30	-4.5
VE-3D	↓	1005	6807	1229	↓											↓		-30	-4.5
VE-1D	↓	1055	6306	986	↓											↓		-30	-4.5
VE-1S	↓	1117	6408	1231	↓											↓		-30	-4.5
VE-2D	↓	1157	1462	1232	↓							X				↓		-30	-4.5
VE-~~2D~~ 2S	↓	1219	1460	1234	↓							X				↓		-30	-4.5
VM-9SS	↓	1238	6203	989	↓							X				↓		-30	-4.5

Relinquished By:	Date:	Time:	Received By:
[signature]	6/4/14	1338	[signature]

Temp (°C) : ______ Work Order #: ______________________

Condition: ______________________________

Custody Seals Intact?: Yes ______ No ______ None ______

Shipped Via: ______________________________

Soil Vapor Probe Purging/Sampling Log

Project Name: CCC
Job Number: TMDoBLW
Date: 8-24-14
Sampler(s): [redacted]
Sample ID and Time: VE-1S
Notes: Held 150" of Vac for 5min
well connected to VE-5, used shaving cream as TRACER GAS

Soil Vapor Probe ID: VE-1S
Suma Can Serial #: 3805
Flow Controller #: 984
Initial Vacuum: -29
Final Vacuum: -4.5

Specifications

Tubing length: _____ cm
Tubing inner diameter: _____ cm
Boring diameter: _____ cm
Sandpack height: _____ cm
Probe length: _____ cm
Probe diameter: _____ cm
Summa flow rate: 150 mL/min
Purge flow rate: 350 mL/min

1350
x 3
4050

Purge Volume Calculation

Purge volume = tubing + sandpack
Tubing = Pi * (inner diameter/2)^2 * length
= cm3
Sandpack = Pi * (boring diameter/2)^2 * sandpack height * porosity
= cm3

Single purge volume: 1350 cm^3
Total purge volumes extracted: 3x1
Pi = 3.1416
1 inch = 2.54 cm
1 ml = 1 cm3

Start Time: 0914
Total Purge Time: 12
Est. max. porosity = 0.379

Time	He in Shroud %	Purge Time (min./sec.)	He in Purge Sample % or ppm	VOCs ppbv / ppm	Comments
	N/A		N/A		
0914		0		.1	
0918		4		.1	
0922		8		.1	
0926		12		.1	
0926					
0931				.1	
0933					

Soil Vapor Probe Purging/Sampling Log

Project Name: CCC
Job Number: 7m Dublin
Date: 8-26-14
Sampler(s): SB
Sample ID and Time: VM-955
Notes: Held 135" of Vac for 4 min

Soil Vapor Probe ID: 9 VM-955
Suma Can Serial #: 1510
Flow Controller #: 986
Initial Vacuum: -30
Final Vacuum: -4.5

Specifications

Tubing length: ____ cm
Tubing inner diameter: ____ cm
Boring diameter: ____ cm
Sandpack height: ____ cm
Probe length: ____ cm
Probe diameter: ____ cm
Summa flow rate: ~~200~~ mL/min 150
Purge flow rate: 60 mL/min

Purge Volume Calculation

Purge volume = tubing + sandpack
Tubing = Pi * (inner diameter/2)^2 * length
= cm3
Sandpack = Pi * (boring diameter/2)^2 * sandpack height * porosity
= cm3
Single purge volume: 21 cm^3
Total purge volumes extracted: 3

Start Time: 0944
Total Purge Time: 1

Pi = 3.1416 1 inch = 2.54 cm Est. max. porosity = 0.375
1 ml = 1 cm3

Time	He in Shroud %	Purge Time (min./sec.)	He in Purge Sample % or ppm	VOCs ppbv / ppm	Comments
	24.9				
0944	24.7	0	0	0	
0945		1	0	.1	
0946	24.6				
0948	24.1				
0951	23.8				
0954	23.5				
0955	23.0		0	0	

Soil Vapor Probe Purging/Sampling Log

Project Name: CCC
Job Number:
Date: 8-26-14
Sampler(s): SP
Sample ID and Time: Vm-11 -0902
Notes: Held 140" of Vac 24 5 min

Soil Vapor Probe ID: Vm-11
Suma Can Serial #: 0809
Flow Controller #: 987
Initial Vacuum: 28.5
Final Vacuum: 4.5

Specifications

Tubing length: _____ cm
Tubing inner diameter: _____ cm
Boring diameter: _____ cm
Sandpack height: _____ cm
Probe length: _____ cm
Probe diameter: _____ cm
Summa flow rate: 150 mL/min
Purge flow rate: 350 mL/min

641
x 3
1923

Purge Volume Calculation

Purge volume = tubing + sandpack
Tubing = Pi * (inner diameter/2)^2 * length
= cm3
Sandpack = Pi * (boring diameter/2)^2 * sandpack height * porosity
= cm3
Single purge volume: 641 cm^3
Total purge volumes extracted: 3.28
Pi = 3.1416
1 inch = 2.54 cm
1 ml = 1 cm3

Start Time: 0855
Total Purge Time: 6
Est. max. porosity = 0.375

Time	He in Shroud %	Purge Time (min./sec.)	He in Purge Sample % or ppm	VOCs ppbv / ppm	Comments
0855	26.2	0	0%	1.5	
0856	25.9				
0857	25.6		0%	0.0	
0859	25.1		0%	0.0	
0901	24.9		0%	0.0	
0902	24.7	0902			
0904	24.4	0904			
0907	24.0	0905			
0908	23.8	0906			
~~0909~~	23.6	0907	0%	0.0	