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By Alameda County Environmental Health 2:55 pm, Aug 22, 2016

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August 17, 2016

Mr. Mark Detterman
Hazardous Materials Specialist
Alameda County Environmental Health Services
Environmental Protection, Local Oversight Program
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577

**Subject: Letter of Transmittal for Data Gap Investigation Report
Former McGrath Steel, 6655 Hollis Street, Emeryville, California 94608
ACEH Fuel Leak Case No. RO0000063, GeoTracker Global ID No.
T0600102099**

Dear Mr. Detterman:

As requested in your letter of March 7, 2016, we submit this transmittal letter and accompanying *Data Gap Investigation Report* for the above-reference subject site.

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.

Sincerely,

MCG Investments LLC,
A California Limited Liability
Company



Walter F. Merkle
Authorized Agent



AllWest Environmental

DATA GAP INVESTIGATION REPORT

Former McGrath Steel, 6655 Hollis St. & 1471 67th St., Emeryville, CA 94608

**Alameda County Fuel Leak Case #RO0000063
GeoTracker Facility Global ID #T0600102099**



PREPARED FOR:

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**ALLWEST PROJECT 16076.23/15179.23
August 3, 2016**

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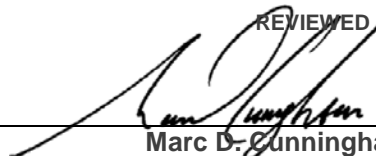

Marc D. Cunningham
President
US EPA Environmental Professional



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DATA GAP INVESTIGATION REPORT

Former McGrath Steel, 6655 Hollis St. & 1471 67th St., Emeryville, Ca 94608
Alameda County Fuel Leak Case # RO0000063
GeoTracker Facility Global ID # T0600102099

I. EXECUTIVE SUMMARY

AllWest Environmental, Inc. (AllWest) conducted a subsurface investigation on February 3 through 8, and May 12 and 13, 2016 to further characterize soil, groundwater and soil vapor conditions at the subject site referenced above (Figures 1 and 2). The purpose of the investigation was to assess the lateral and vertical extent of petroleum hydrocarbons and volatile organic compounds (VOCs) in subject site soil, soil vapor and groundwater. The second goal of the assessment was to evaluate soil vapor intrusion impact of petroleum hydrocarbons and VOCs to the subject site indoor air quality.

This work was performed in response to requests by Alameda County Health Care Services Agency (ACHCS) in their letters dated September 15, 2014, July 16, 2015 and December 15, 2015. AllWest submitted a *Data Gap Investigation Workplan* on October 30, 2015 and a *Data Gap Investigation Workplan Addendum* on January 16, 2015 summarizing the proposed scope of work. The *Data Gap Investigation Workplan* and *Addendum* were approved in the ACHCS letter dated March 7, 2016. This work was completed after approval and with oversight of the ACHCS.

This executive summary is provided solely for the purpose of overview. Any party who relies on this report must read the full report. The executive summary may omit details, any one of which could be crucial to the proper understanding and risk assessment of the subject matter.

Seven soil borings were advanced at the subject site using Geoprobe™ direct push technology (DPT) methods on February 3, 2016. One soil boring (SB-26) was advanced to 24 feet below ground surface (bgs) in the driveway between the office and warehouse buildings. Six soil borings (SVP-1 through SVP-6) were advanced to 7 feet bgs (2 feet below the building foundations). SVP-1 through SVP-5 were located within the warehouse building at 1471 67th Street; SVP-6 was located in the driveway between the office and warehouse buildings (Figure 2).

Soil samples were collected for laboratory analysis at 4.5-5, 9.5-10, 11.5-12 and 20.5-21 feet bgs from boring SB-26; at 1.5-2 and 6.5-7 feet bgs from boring SVP-1; at 3-3.5 and 6.5-7 feet bgs from boring SVP-2; at 6.5-7 feet bgs from borings SVP-3, SVP-4 and SVP-6; and at 3.5-4 feet bgs from boring SVP-5. Groundwater was encountered at 22.5 feet bgs in boring SB-26, and a sample was collected for laboratory analysis. Borings SVP-1 through SVP-6 were completed as temporary soil vapor probes, and soil vapor samples collected from each on February 5 through 8, 2016. Five temporary sub-slab soil vapor probes SVP-7 through SVP-11 were installed below the warehouse building floor slab. A soil vapor sample was collected only from SVP-7 due to defective surface seal integrity in the other sub-slab probes. All soil vapor probes were removed and abandoned with cement grout and concrete patch following completion of sampling activities.

Since soil vapor samples were unable to be collected from four of the sub-slab probes SVP-8 through SVP-11, and the integrity of the SVP-7 sub-slab probe seal was questionable, five new semi-permanent sub-slab Vapor Pin™ type probes SVP-12 through SVP-15 were installed and sampled on May 12 and 13, 2016 (Figure 2). To determine potential vapor intrusion impact to future occupants of the subject property buildings, indoor air quality (IAQ) samples IAQ-6 through IAQ-10 were collected inside the 6655 Hollis Street

office building and 1471 67th Street warehouse building. An outdoor ambient air (OAA) control sample OAA-2 was collected on the second floor balcony of the office building (Figure 3). The IAQ and OAA samples were collected over an 8-hour period on May 13, 2016.

Soil, groundwater, soil vapor, IAQ and OAA samples were analyzed for constituents of concern (COCs) including total petroleum hydrocarbons as gasoline (TPH-g) and volatile organic compounds (VOCs). Soil vapor samples were additionally analyzed for the leak detection gas helium, and the gases oxygen, methane and carbon dioxide to evaluate biodegradation activity.

Soil Sampling Results: TPH-g was detected in soil samples from all borings, but none at concentrations exceeding the most conservative California Regional Water Quality Control Board, San Francisco Bay Region (RWQCB) Environmental Screening Level (ESL) of 500 mg/kg for odor/nuisance at commercial/industrial sites, whether or not groundwater is a potential drinking water resource. A City of Emeryville ordinance prohibits use of groundwater for drinking water purposes due to widespread regional contamination, and no plans exist for future beneficial use.

Low concentrations of VOCs including benzene, toluene, ethylbenzene, total xylenes (BTEX), methyl tertiary butyl ether (MTBE), 1,2,4-trimethylbenzene, 1,3,5-trimethylbenzene, n-butyl benzene, sec-butyl benzene, isopropylbenzene, naphthalene, n-propyl benzene and/or tert-butyl alcohol were detected in soil samples from all borings.

The only VOC which exceeded applicable soil ESLs for commercial/industrial sites where groundwater is not a potential drinking water resource was benzene in four samples from SB-26 at 9.5-10 and 11.5-12 feet bgs, and SVP-1 and SVP-2 at 6.5-7 feet bgs. Benzene was detected at a maximum concentration of 0.56 mg/kg at 11.5-12 feet bgs in SB-26 located exterior and adjacent to the office building, which exceeded its ESL of 0.049 mg/kg based on aquatic habitat eco-toxicity impact to groundwater from soil leaching. Since the nearest aquatic habitat on the San Francisco Bay shoreline is approximately 0.25 miles downgradient, this benzene screening level is probably not applicable. The commercial/industrial land use direct exposure human health risk ESL of 1.0 mg/kg for benzene was not exceeded.

Groundwater Sampling Results: TPH-g (1,700 micrograms per liter (µg/L), benzene (310 µg/L), toluene (300 µg/L) ethylbenzene (85 µg/L), total xylenes (370 µg/L), MTBE (170 µg/L), naphthalene (7.9 µg/L) and TCE (18 µg/L) were detected in the groundwater sample from SB-26 (located upgradient of the warehouse and former UST area and exterior and adjacent to the office building). TPH-g, benzene, toluene, ethylbenzene and total xylenes concentrations exceeded their ESLs for groundwater that is not a potential drinking water resource. All of these ESLs with the exception of benzene are based on aquatic habitat eco-toxicity impact to groundwater from soil leaching. Given that the nearest aquatic habitat is approximately 0.25 miles downgradient, these screening levels are probably not applicable. Benzene was the only COC detected in the groundwater sample from SB-26 at concentrations exceeding its applicable groundwater vapor intrusion ESL of 9.7 µg/L for commercial/industrial land use. None of the other detected COCs exceeded their applicable vapor intrusion ESLs. Given the vertical vapor attenuation shown in the soil vapor and subslab samples described below, the benzene concentration in groundwater is not likely of concern for vapor intrusion.

Soil Vapor/Sub-Slab Sampling Results:

Deep samples: TPH-g, benzene, ethylbenzene, toluene, total xylenes, MTBE and/or 1,2-dichloroethane (1,2-DCA) were detected in all soil vapor samples from 7 feet bgs temporary vapor probes, at maximum concentrations exceeding their respective applicable commercial/industrial land use soil vapor ESLs. None of the other detected COCs exceeded their ESLs.

Shallow Samples: None of the COCs detected in any sub-slab (0.5 feet bgs) soil vapor samples exceeded ESLs with the exception of TPH-g at 220,000 µg/m³ in SVP-7.

Concentrations of COCs detected in the sub-slab (0.5 feet bgs) vapor probes were several orders of magnitude lower than those detected in adjacent soil vapor probes at 7 feet bgs ; with the highest being in SVP-7 at 0.5 feet bgs in the southwest portion of the warehouse. Concentrations of oxygen, methane and carbon dioxide detected in soil vapor (sub-slab and 7 feet bgs) samples (except SVP-1) indicate the presence of a biodegradation attenuation zone to 5 feet below the building foundation.

Indoor Air Quality Sampling Results: Total petroleum hydrocarbons as gasoline (TPH-g) were detected in all of the IAQ and OAA samples, but none exceeded the commercial/industrial direct exposure human health risk indoor air ESL of 2,500 µg/m³. Benzene was detected in all IAQ samples and the OAA control sample at a maximum concentration of 0.55 µg/m³ in sample IAQ-9; only concentrations in samples IAQ-8 and IAQ-9 exceeded the applicable commercial/industrial indoor air ESL of 0.42 µg/m³ (based on direct exposure human health risk). Carbon tetrachloride was detected in all IAQ and OAA samples at concentrations exceeding the applicable commercial/industrial indoor air ESL of 0.29 µg/m³ (based on direct exposure human health risk), with a maximum concentration of 0.43 µg/m³ in sample IAQ-9. Chloroform was detected only in sample IAQ-7 at its applicable commercial/industrial ESL of 0.53 µg/m³. None of the other COCs detected in IAQ and OAA samples exceeded their applicable ESLs.

Concentrations of all the detected COCs were similar (within an order of magnitude) between the IAQ samples and the OAA control sample, implying an atmospheric source rather than soil vapor intrusion is likely. Concentrations of the COCs detected in IAQ samples and the OAA control sample during the May 2016 indoor air sampling event were similar (within an order of magnitude) to those detected during the June 2014 sampling event.

Conclusion: The results of this data gap study allow AllWest to conclude that petroleum hydrocarbon and VOC concentrations detected at 5 feet bgs or deeper in soil, groundwater and soil vapor samples beneath and adjacent to the subject site warehouse building have attenuated significantly at shallower depths (0.5 feet bgs) and do not present a significant vapor intrusion risk to future building occupants. AllWest further concludes that petroleum hydrocarbon and VOC concentrations detected in indoor air quality samples most likely originate from atmospheric sources, not from soil vapor intrusion.

II. PROJECT BACKGROUND

A. Site Location and Description

The subject property is located at the southwest corner of the intersection of Hollis and 67th Streets in a commercial and industrial district of the City of Emeryville, Alameda County, California. A site vicinity map is included as Figure 1.

The subject property consists of two parcels (Assessor's Parcel Numbers 049-1511-01 and 049-1511-014). Parcel 01, on the southwest corner of Hollis and 67th Streets at the 6655 Hollis Street address, is developed with an approximately 4,100 square foot two-story commercial office building constructed in 1947, and a smaller metal tool shed building. Parcel 14, to the west of Parcel 1 at the 1471 67th Street address, is developed with an approximately 15,246 square foot light industrial warehouse building constructed circa 1946 (Stellar, 2011).

The subject property was last occupied by CMC Rebar and is currently vacant. Two USTs formerly present under the sidewalk in front of the warehouse at 1471 67th Street were removed in 1996. A site plan with former UST locations and historical and current boring and monitoring well locations is included as Figure 2.

B. Site Geology and Hydrogeology

The subject site is located on a generally level parcel at an elevation of approximately 20 feet above mean seal level (msl) with a slight slope to the west towards San Francisco Bay approximately ½ mile to the west. The subject site is located within the East Bay Plain Sub-Basin of the Santa Clara Valley Groundwater Basin, an alluvial plain located along the east shore of San Francisco Bay. Although groundwater in the subject site vicinity is not currently used for drinking water purposes, the East Bay Plain Sub-Basin, including the subject site vicinity, has been designated as a zone where groundwater is a potential drinking water resource by the SFRWQCB *Water Quality Control Plan (Basin Plan)* dated June 29, 2013 (SFRWQCB, June 2013).

According to an e-mail communication on February 6, 2013 with Maurice Kaufman, director of the City of Emeryville Public Works Department, use of groundwater for drinking water purposes within the City of Emeryville is prohibited by a City ordinance due to widespread regional contamination. No plans exist for future beneficial use of groundwater within the City of Emeryville. Therefore, AllWest does not regard groundwater in the subject site vicinity as a potential drinking water resource.

The lithology encountered in most borings during subsurface investigations performed by AllWest in 2013 consisted of interbedded silts, clays, and sands. Occasional lenses of silty gravel and gravelly silt were encountered to depths of 12 feet below ground surface (bgs) in borings B16, B17, B19 and B22. Gravelly clay was encountered between 13 and 18 feet bgs in B19. Silty sand was encountered between approximately 15 and 21 feet bgs in borings AMW-1, AMW-2 and AMW-3. Fine sand was encountered to a depth of approximately 9 feet bgs in boring B23 (AllWest, 2013e). Boring and well locations are shown in Figure 2.

Groundwater was encountered during the 2013 investigations between approximately 9 to 30 feet bgs, and rose to static levels of approximately 9 to 11 feet bgs. The direction of groundwater flow was to the southeast at a gradient of 0.0167 feet per foot. During groundwater monitoring events conducted by AllWest from July 2012 to February 2015, depths to groundwater in monitoring wells at the subject site have ranged from 7.26 to 11.52 feet below top-of-casing (TOC). Groundwater flow direction has been predominantly to the southwest, but has varied to the west-northwest at gradients ranging from 0.0107 to 0.02 feet per foot.

C. Site Background

From the early 1900s until circa 1946, the subject property Parcel 01 was developed as a residence, and Parcel 14 was undeveloped. Between circa 1946 and 1950, the subject property was developed with the current office and light industrial warehouse buildings. The McGrath Steel Company operated a steel warehouse and/or the Pacific Rolling Door Company from circa 1950 until about 2007. The McGrath Steel business was sold and relocated in 2007 (Stellar, 2011). CMC Rebar subsequently leased the subject property until circa 2012-2013. The subject property has since been unoccupied.

Two (2) 2,000-gallon single-wall steel underground storage tanks (USTs) were formerly located beneath the 67th Street sidewalk in front of the warehouse building. The diesel and gasoline USTs were installed in 1979 and 1981, respectively. Fuel dispenser pumps were located adjacent to the warehouse building in the driveway between the warehouse and office buildings. The USTs were removed in July 1996 [Subsurface Environmental Corp. (SEC), *Tank Removal Closure Report*, September 16, 1996 (SEC, 1996)]. The fuel dispenser pumps were removed at an indeterminate date following the UST removals.

D. Previous Investigations

Several subsurface investigations, groundwater monitoring events and remedial actions have been performed since removal of the USTs in 1996. Summaries of previous investigations, remedial actions and monitoring activities have been included in our *Additional Site Characterization and Interim Remedial Action Workplan* (AllWest, 2011), *Additional Site Characterization Workplan Addendum* (AllWest, 2012a), *Subsurface Investigation* (AllWest, 2013b), *Additional Site Characterization and Monitoring Well Installation Report* (AllWest, 2013e), *Indoor Air Quality Monitoring Report* (AllWest, 2014e), and *First Semiannual 2015 Groundwater Monitoring Report* (AllWest, 2015). Historical soil boring and groundwater monitoring well locations are shown in Figure 2.

A brief summary of previous subsurface investigations, groundwater monitoring events and remedial activities is included below.

The two USTs were removed in July 1996 by SEC. No holes were noted in the USTs, but obvious discoloration and petroleum hydrocarbon odor were noted in the surrounding soil. No information was included in the SEC report regarding any product piping or fuel dispenser pump removals.

Elevated concentrations of petroleum hydrocarbons were detected in confirmatory soil samples following the UST removal. Additional soil was over-excavated to a depth of approximately 12 feet bgs for a total of approximately 70 cubic yards of soil removed. Confirmatory soil samples collected following over-excavation contained low to moderate concentrations of total petroleum hydrocarbons as gasoline (TPH-g) and diesel (TPH-d), (SEC, 1996).

No documentation has been reviewed by AllWest concerning removal of the product piping and fuel dispenser pumps. The site plan in the 1998 Weiss Associates report implies that these had been removed prior to their investigation; however, no explicit reference to their removal is made in the narrative of that or subsequent reports. The fuel dispenser pumps were no longer present at the time of AllWest's first site visit in September 2011. It is uncertain from the available documentation whether the product piping has been removed.

Weiss Associates (WA) conducted a subsurface investigation at the subject property in May 1998. Three soil borings (B-1, B-2 and B-5) were advanced to depths ranging from 16.5 to 24 feet bgs in the vicinity of the former USTs along the north and south sides of 67th Street. Additional borings B-6 and B-7 were attempted but encountered refusal in gravel base rock material at approximately 2 feet bgs and were not sampled. Proposed borings B-3 and B-4 were not attempted. Low concentrations of petroleum hydrocarbons were detected in soil samples collected only from boring B-5 at 12 feet bgs. Elevated concentrations of petroleum hydrocarbons were detected in grab groundwater samples from all three borings (WA, 1998).

WA conducted an additional subsurface investigation in December 2005. Six soil borings (B-8 through B-14) were advanced to a maximum depth of approximately 22 feet bgs in the vicinity of the former USTs and downgradient to the west, along the north and south sides of 67th Street and within the sidewalk on the south side of 67th Street. Low to moderate concentrations of petroleum hydrocarbons were detected in soil samples from all six borings. Elevated concentrations of dissolved phase petroleum hydrocarbons were detected in groundwater samples from all six (6) soil borings, and in monitoring well MW-3 located adjacent to the former USTs (WA, 2006).

Monitoring well MW-3 was previously installed in 1995 as part of an investigation of the former Clearprint Paper Company leaking UST (LUST) site at 1482 67th Street, located to the northwest across 67th Street from the subject site in the downgradient direction. The Clearprint LUST case was closed in 2005, and two of its three monitoring wells abandoned, leaving MW-3 intact (ACHCS *Fuel Leak Site Case Closure, Clearprint Paper Co.*, June 27, 2005).

Petroleum hydrocarbon concentrations in soil and groundwater detected in the WA investigations exceeded applicable commercial/industrial Environmental Screening Levels (ESLs) where groundwater is not a drinking water resource, as established by the San Francisco Bay Regional Water Quality Control Board (SFRWQCB), (WA, 2006).

The ACHCS, in their letters of April 7, 2006, November 19, 2010 (revised December 6, 2010) and May 2, 2012 requested additional characterization of the downgradient extent and distribution of dissolved phase petroleum hydrocarbons and residual free product, and implementation of interim remedial action, at the subject site.

Groundwater sampling of monitoring well MW-3 was attempted by Stellar Environmental Solutions, Inc. (Stellar) in May 2011; however a sample was not collected due to the presence of free product in the bailer (Stellar, 2011). During a site visit on September 14, 2011, AllWest measured a floating free product thickness of approximately 3 feet in MW-3. Quarterly groundwater monitoring of well MW-3, and interim free product removal by bailing, was conducted by AllWest commencing in August 2012.

AllWest conducted a subsurface assessment at the subject property in January 2013 and August 2013 consisting of the advancement of eleven direct push technology (DPT) soil borings (B15 through B25), three (3) groundwater monitoring well installations (AMW-1, AMW-2 and AMW-3), and the collection of soil and groundwater samples. The DPT borings were advanced to depths of 9 to 30 feet bgs, and the groundwater monitoring wells were installed to depths of 23 to 24 feet bgs.

TPH-g, TPH-d, total petroleum hydrocarbons as mineral spirits (TPH-ms), BTEX, MTBE, 2-methylnaphthalene, naphthalene and benzo (a) anthracene were detected in soil and/or groundwater samples at elevated concentrations exceeding their applicable commercial/industrial ESLs where groundwater is not a drinking water resource. Lower concentrations of various other VOCs and polynuclear aromatic hydrocarbons (PNAs/PAHs) were also detected in soil and/or groundwater samples at concentrations not exceeding their applicable ESLs.

AllWest concluded the downgradient extent of the adsorbed and dissolved phase petroleum hydrocarbon plume in soil and groundwater was largely defined and extended from the vicinity of the former McGrath Steel USTs to the west along 67th Street to the vicinity of monitoring well AMW-1 west of the former Clearprint Paper Company USTs. The cross-gradient extent of the adsorbed and dissolved phase hydrocarbon plume had not been fully defined. AllWest recommended conducting quarterly groundwater monitoring at the subject site in the new monitoring wells AMW-1, AMW-2 and AMW-3 and existing monitoring well MW-3. AllWest also recommended implementing interim remedial action of free product in the vicinity of the former USTs at the subject site by installing a passive skimming device in monitoring well MW-3 (AllWest, 2013e).

AllWest conducted quarterly groundwater monitoring of the existing monitoring well MW-3 and new monitoring wells AMW-1, AMW-2 and AMW-3 from August 2012 to June 2014, at which time monitoring frequency was reduced to semiannual per the ACHCS letter dated September 15, 2014. AllWest subsequently conducted a semiannual groundwater monitoring event in February 2015. Interim removal of free product in well MW-3 by bailing and skimming was conducted by AllWest commencing in July 2012. Free product thickness measured in MW-3 has declined from 2.65 feet in July 2012 to none measured since December 2013. A passive hydrocarbon skimming device was installed in well MW-3 in December 2013 and was removed in February 2015. Free product has not been observed in any of the other site monitoring wells (AllWest, 2015).

AllWest conducted indoor air quality (IAQ) monitoring in June, 2014 at the subject property. Five IAQ samples were collected inside the warehouse building at 1471 67th Street. One outdoor ambient air (OAA) control sample (OAA-1) was collected on the exterior second floor balcony at the 6655 Hollis Street office building. Benzene concentrations detected in four of the five collected IAQ samples exceeded the RWQCB indoor air commercial ESL for benzene. Carbon tetrachloride exceeded its applicable ESL in all five indoor air samples as well as the outdoor ambient air sample OAA-1. Naphthalene exceeded its applicable ESL in one indoor air sample. None of the other detected VOC concentrations exceeded their respective applicable RWQCB commercial indoor air ESLs. AllWest concluded that benzene, carbon tetrachloride and several other detected VOCs were atmospheric contaminants and do not originate from the UST source area (AllWest, 2014e).

III. PURPOSE AND SCOPE OF WORK

The purpose of this proposed investigation was to further assess the potential presence and lateral and vertical extent of petroleum hydrocarbons and their VOC constituents in soil, groundwater and soil vapor at the subject site, and to evaluate potential soil vapor intrusion impact to the indoor air quality at the subject site.

The scope of work as performed consisted of the following tasks:

- 1) Prepared a written workplan and addendum for conducting an additional subsurface investigation including soil, groundwater and soil vapor sampling at the subject site. Submitted the workplan to the ACHCS for review and concurrence;
- 2) Updated the site-specific health and safety plan;
- 3) Obtained a drilling permit from Alameda County Public Works Agency (ACPWA);
- 4) Engaged the service of Underground Service Alert (USA) and a private underground utility locator to locate and clear underground utilities within the proposed investigation area to reduce the potential of

accidental damage to underground utilities during subsurface investigation. Notified the ACPWA, ACHCS and facility owners, maintenance personnel and tenants prior to the start of field work;

- 5) Retained the services of a C-57 licensed drilling contractor for the advancement by Geoprobe® DPT methods of one boring (SB-26) in the driveway between the office and warehouse buildings to approximately 24 feet bgs, and six borings (SVP-1 through SVP-6) to approximately 7 feet bgs inside the warehouse and in the driveway. Collected soil samples for analytical testing. Installed temporary PVC well screen and casing and collected a “grab” groundwater sample from SB-26 only;
- 6) Installed six temporary soil vapor probes in borings SVP-1 through SVP-6 to 7 feet bgs. Cored the concrete floor slab and installed five temporary sub-slab soil vapor probes (SVP-7 through SVP-11) and five semi-permanent sub-slab soil vapor probes (SVP-12 through SVP-16) inside of the warehouse building at 1471 67th Street to approximately 0.5 feet bgs. Soil vapor probe installations were in general accordance with California Environmental Protection Agency (CalEPA) Department of Toxic Substance Control (DTSC) *Final, Guidance for the Evaluation and Mitigation of Subsurface Vapor Intrusion to Indoor Air (Vapor Intrusion Guidance)*, October 2011 and *Advisory – Active Soil Gas Investigations*, July, 2015;
- 7) Collected six soil vapor samples from the temporary 7 feet bgs soil vapor probes SVP-1 through SVP-6, one soil vapor sample from the temporary sub-slab vapor probe SVP-7, five soil vapor samples from the semi-permanent sub-slab vapor probes SVP-12 through SVP-16, and one ambient leak detection gas sample from the SVP-6 location, using Summa canisters in general accordance with the DTSC *Advisory – Active Soil Gas Investigations*, July, 2015. Sub-slab probes SVP-8 through SVP-11 were not sampled due to defective surface seals;
- 8) At the completion of drilling and sampling activities, removed Geoprobe® drive casings, temporary PVC well screen, casings and all vapor probes and tubing. Backfilled each boring with a “neat” cement grout slurry and restored the interior floor slabs by backfilling with a concrete slurry. Stored all soil spoils generated during the assessment in a drum onsite pending profiling for disposal at an appropriate offsite facility;
- 9) Collected five indoor air quality (IAQ) samples IAQ-6 through IAQ-10 from within the 6655 Hollis Street office building and 1471 67th Street warehouse building, and one outdoor ambient air (OAA) control sample OAA-2 from the exterior second floor balcony at the 6655 Hollis Street building. The IAQ and OAA samples were collected over an 8-hour period per procedures outlined in the California Department of Toxic Substances Control (DTSC) *Final – Guidance for the Evaluation and Mitigation of Subsurface Vapor Intrusion to Indoor Air (Vapor Intrusion Guidance)*, October 2011;
- 10) Maintained soil and groundwater samples under chain-of-custody and transport to a Department of Health Services (DHS) certified analytical laboratory (McC Campbell Analytical of Pittsburg, California) for chemical analyses. Analyzed twelve soil samples and one groundwater sample for TPH-g and VOCs including BTEX, naphthalene, and fuel oxygenates including MTBE by EPA Method modified 8260B;
- 11) Maintained soil vapor, ambient leak detect gas, indoor air quality and outdoor ambient air control samples under chain-of-custody and transported the samples to a Department of Health Services (DHS) certified analytical laboratory (Eurofins/Calscience of Garden Grove, California) for chemical analyses. Analyzed twelve soil vapor samples for TPH-g by EPA Method TO-3(M), BTEX, naphthalene and MTBE by EPA Method TO-15(M), the leak detection gas helium by method ASTM D1946, and the gases oxygen, methane and carbon dioxide by method ASTM D1946. Analyzed one ambient leak detection gas sample for helium by method ASTM D1946. Analyzed IAQ and OAA samples for total petroleum hydrocarbons as gasoline (TPH-g) by EPA Method TO-3 (M) and full-scan volatile organic compounds (VOCs) by EPA Method TO-15 SIM; and
- 12) Prepared a written Data Gap Investigation Report describing the field activities, summarizing the laboratory data, presenting investigation findings, and providing conclusions and recommendations.

IV. INVESTIGATIVE ACTIVITIES

A. Permitting

AllWest prepared and submitted a drilling permit application for the Geoprobe® DPT borings to ACPWA for review and approval. Upon permit approval, AllWest notified ACPWA and ACHCS of the drilling schedule a minimum of 5 working days in advance to allow scheduling of drilling and grouting inspection. A copy of the approved ACPWA drilling permit is included in Appendix A.

B. Health and Safety Plan

AllWest prepared a site specific health and safety plan prior to mobilizing to the site. A tailgate safety meeting was given prior to commencing work. All site personnel were required to review the health and safety plan.

C. Underground Utility Inspection

To avoid damage to underground utility installations during the course of the subsurface investigation, AllWest contacted Underground Service Alert (USA), an organization for public utility information, on the pending subsurface investigation. USA then notified public and private entities that maintained underground utilities within the site vicinity to locate and mark their installations for field identification. A private underground utility locator, Subtronic, Inc. of Concord, California, was also employed by AllWest to conduct a magnetometer and GPR sweep investigation to locate marked and unmarked underground utilities in the vicinity of the proposed boring locations;

D. Geoprobe® DPT Boring Advancement and Soil Sampling

A State of California C-57 licensed drilling contractor, Environmental Control Associates (ECA) of Aptos, California, was retained to advance seven soil borings using truck-mounted Geoprobe® direct push technology (DPT) equipment on February 3, 2016. One soil boring (SB-26) was advanced in the driveway between the 6655 Hollis Street office and 1471 67th Street warehouse buildings to below first encountered groundwater at a total depth of approximately 24 feet bgs. Following coring of the concrete floor slab or asphalt pavement, seven soil borings (SVP-1 through SVP-6) were advanced to 7 feet bgs (2 feet below the building foundation footings). Borings SVP-1 through SVP-5 were located within the warehouse building, and boring SVP-6 was located in the driveway between the warehouse and office buildings, adjacent to SB-26. The boring locations are shown in Figure 2.

The borings were advanced using continuous core Geoprobe® DPT sampling methods. Soil samples were collected for lithologic characterization and potential laboratory analysis using a nominal 4-foot long, 2-inch outside diameter (OD) stainless steel core barrel drive probe and extension rods. The drive probe was equipped with nominal 1 ½-inch inside diameter (ID) clear PVC plastic tubes that lined the interior of the probe. The probe and insert tubes were together hydraulically driven using a percussion hammer to the specified depth (approximately 1 foot bgs). After the specified drive interval, the drive probe and rods were retrieved to the surface. The PVC tube containing subsurface soil is then removed. Selected soil sample intervals will be cut from the PVC tube for analytical testing. The ends of samples for possible analytical testing are sealed using Teflon™ squares and plastic end caps. The samples were labeled, and stored in an iced cooler.

Soil samples were collected for laboratory analysis at depth intervals of 4.5-5, 9.5-10, 11.5-12 and 20.5-21 feet bgs from boring SB-26; at 1.5-2 and 6.5-7 feet bgs from boring SVP-1; at 3-3.5 and 6.5-7 feet bgs from boring SVP-2; at 6.5-7 feet bgs from borings SVP-3, SVP-4 and SVP-6; and at 3.5-4 feet bgs from boring SVP-5. Soil samples were collected for analysis in discrete water-bearing zones, at noticeable changes in lithology, and in zones of suspected contamination or elevated organic vapor concentrations as measured by photo-ionizer detector (PID) screening. Geoprobe® DPT soil sampling procedures are included in Appendix B.

An AllWest environmental professional oversaw field work and drilling activities. The recovered soil samples were inspected after each drive interval with lithologic and relevant drilling observations recorded. Soil samples were screened for organic vapors using a PID or other appropriate device by taking readings of headspace vapor concentrations of the soil inside a zip-lock plastic bag. PID readings, soil staining and other relevant observations were recorded on the boring logs. Boring logs are included in Appendix D.

E. Groundwater Sampling

The groundwater level was measured at approximately 22.5 feet bgs and a “grab” groundwater sample collected from the DPT boring SB-26 on February 4, 2016 after the completion of soil coring to the anticipated total depth of approximately 24 feet bgs. The rods and drive probe were removed from the borehole, and new, temporary nominal 0.5 to 0.75-inch inside diameter (ID) PVC solid well casing with a 5-foot slotted screened interval was lowered into the borehole.

A grab groundwater sample was then collected from the temporary PVC casing using disposable polyethylene sample tubing connected to an electric peristaltic pump. Geoprobe® DPT groundwater sampling procedures are included in Appendix B.

Upon retrieval of the groundwater samples, the retained water was transferred to appropriate sample bottles furnished by the analytical laboratory. Samples for TPH-g and VOC analysis were collected in four 40-milliliter (ml) glass volatile organic analysis (VOA) vials preserved with hydrochloric acid (HCl). Sample bottles were labeled and immediately placed on ice to preserve the chemical characteristics of its content.

To prevent cross-contamination, all groundwater sampling equipment that comes in contact with the groundwater was decontaminated prior to sampling. To minimize the possibility of cross contamination, new disposable sample tubing was used to collect each groundwater sample. Sampling, sample handling, storage, and transport procedures are described in Appendix B.

F. Temporary Soil Vapor Probe Advancement and Installation

Following advancement of the six borings SVP-1 to SVP-6 to 7 feet bgs (5 feet below the building foundation footings), temporary soil vapor probes SVP-1 through SVP-6 were installed in the boreholes on February 3, 2016. Probes SVP-1 through SVP-5 were located within the warehouse building at 1471 67th Street. Probe SVP-6 was located adjacent to the DPT boring SB-26 in the driveway between the 1471 67th Street warehouse and 6655 Hollis Street office buildings. The temporary soil vapor probe locations are shown in Figure 2.

A plastic soil vapor probe, ½-inch diameter by 2-inches long and tipped with a porous plastic membrane, was inserted to the bottom of the 2.25-inch diameter borehole at 5 feet bgs. The probe tip was attached to a 7-foot length of 0.25-inch OD Teflon™ tubing extending to above the top of the pavement. A fine sand filter pack approximately 1 foot thick was placed in the borehole annulus around the probe. A 1 foot layer of non-hydrated granular bentonite was used to fill the annular space above the filter pack. Hydrated granular bentonite was then used to fill the annular space above the non-hydrated bentonite to the top of the pavement. Temporary soil vapor probe installation procedures were performed in general accordance with guidelines presented in the DTSC *Advisory – Active Soil Gas Investigations*, July, 2015 (DTSC, 2015).

At least 2 hours were allowed to elapse prior to collecting vapor samples to allow the bentonite seal to hydrate and borehole conditions to equalize, per DTSC vapor sampling guidelines (DTSC, 2015). Temporary soil vapor probe installation procedures and schematic diagrams are included in Appendix B.

G. Temporary Sub-Slab Soil Vapor Probe Installation

A State of California C-57 licensed drilling contractor (ECA) cored through the approximately 3 to 4-inch thick concrete floor slab and approximately 2 to 4 inches into the sub-base using a power-operated Roto-Hammer 2-inch diameter coring bit at five (5) locations within the 1471 67th Street

warehouse building. The boreholes were completed as sub-slab soil vapor probes SVP-7 through SVP-11 on February 4. The sub-slab vapor probe locations are shown in Figure 2.

Plastic vapor probes, ½-inch diameter by 2-inch long and tipped with porous plastic membranes, were inserted through the 2-inch diameter boreholes into the subgrade material approximately 2 to 4 inches beneath the base of the floor slab. The probe tips were attached to approximately 6 to 8-inch lengths of 0.25-inch outside diameter (OD) Teflon™ tubing extending to about 1 inch below the top of the floor slab. The top of the Teflon™ or stainless steel tubing in each probe were attached to a brass threaded male Swagelock™ fitting and cap recessed below the concrete floor. A fine sand filter pack approximately 4 to 6 inches thick was placed in the borehole annulus around the probes. A Teflon™ sealing disk will be placed around the tubing above the filter pack.

Dry granular bentonite was placed in the borehole annulus above the Teflon™ sealing disk to approximately 1 inch above the base of the concrete floor slab. Hydrated granulated bentonite was then used to fill the annular space above the dry granular bentonite to approximately 2 inches below the top of the floor slab, and was hydrated from the surface using deionized water. Quick-drying cement/bentonite grout will then be used to fill the remaining annular space to the Swagelock fitting approximately ¾ to 1 inch below the top of the slab.

It was intended for the sub-slab probes SVP-7 through SVP-11 to be semi-permanent installations; however, due to the unexpected thinness of the concrete floor slab (only 3-4 inches thick rather than the expected 6 inches), the integrity of the surface seal was compromised in probes SVP-8 through SVP-11 due to cracks in the cement grout surface seal when the Swagelok connection fittings were tightened. Therefore, a sub-slab soil vapor sample was collected only from probe SVP-7, and none of the sub-slab probes were retained as semi-permanent installations. Additional hydrated bentonite was poured around the Swagelok fitting above the cement surface seal in SVP-7 prior to sampling to ensure an adequate seal.

At least 2 hours were allowed to elapse prior to collecting vapor samples to allow the bentonite and cement grout seal to hydrate and borehole conditions to equalize, per DTSC sub-slab vapor sampling guidelines (DTSC, 2015). Typical semi-permanent sub-slab probe construction procedures and diagram are included in Appendix B.

H. Semi-Permanent Sub-Slab Vapor Pin™ Soil Vapor Probe Installation

Due to the compromised integrity of the surface seals of the sub-slab probes SVP-7 through SVP-11, five additional semi-permanent soil vapor probes were installed on May 12, 2016 using the Cox-Colvin & Associates, Inc. Vapor Pin™, which provides a superior surface seal and can be installed in thinner slabs. A State of California C-57 licensed drilling contractor (Vironex, Inc. of Santa Ana, California) cored through the approximately 3 to 4-inch thick concrete floor slab and approximately 1 to 4 inches into the sub-base using a power-operated Roto-Hammer coring bit at five locations within the 1471 67th Street warehouse building. The borings were completed as semi-permanent sub-slab soil vapor probes SVP-12 through SVP-16. The semi-permanent sub-slab soil vapor probe locations are presented on Figure 2.

Vironex completed the semi-permanent soil vapor probes using the Cox-Colvin & Associates, Inc. Vapor Pin™, consisting of a hollow brass sampling device with barbed nipple fitting and outer silicone sleeve installed within the floor slab. The Vapor Pin™ is driven to the base of the floor slab, into a 5/8-inch diameter hole drilled within the slab, set within a 1 ½-inch diameter countersunk hole for flush mounting below the slab surface. Since the silicone sleeve seals the probe in the borehole, no filter pack, hydrated bentonite, or cement grout seal is required; therefore, no setting or curing time is required. A flush-mounted threaded metal cap covers the Vapor Pin™. A second cap seals the barbed nipple fitting. The Vapor Pin™ installation standard operating procedure is included in Appendix B.

AllWest allowed a minimum 2-hour equilibrium period between the Vapor Pin™ installation and soil vapor sampling activities to ensure compliance with the equilibrium times recommended in DTSC *Frequently Asked Questions, 2012 Advisory – Active Soil Gas Investigations (ASGI)*, March 2013.

I. Soil Vapor Sampling

AllWest collected soil vapor samples from six temporary 7 feet bgs vapor probes SVP-1 through SVP-6 on February 5 through 8, 2016, one temporary sub-slab soil vapor probe SVP-7 on February 5, 2016, and five semi-permanent sub-slab soil vapor probes SVP-12 through SVP-16 on May 12 and 13, 2016 following a minimum 2-hour period after hydration of the bentonite and cement grout surface seals. Due to visible cracking of the cement surface seals when tube fittings were tightened, sampling of sub-slab probes SVP-8 through SVP-11 was not conducted. Soil vapor sampling was performed in general accordance with the DTSC *Advisory – Active Soil Gas Investigations*, July 2015. Soil vapor sampling procedures and schematic diagrams are included in Appendix B.

AllWest collected soil vapor samples from each probe in laboratory prepared 1-liter or 6-liter capacity SUMMA canisters. Prior to vapor purging and sample collection, a vacuum leak shut-in test of the flow-controller/gauge manifold assembly was performed for a minimum of 2 minutes, with a maximum allowable vacuum drop of 0.2 inches of mercury (in Hg). If maximum allowable vacuum drop was exceeded, the manifold fittings were tightened or manifold replaced and the shut-in test redone. Vacuum gauges were sensitive enough to register a minimum of 0.2 in Hg.

The approximate sampling system volume of a temporary soil vapor probe to 7 feet bgs is 240 milliliters (ml), assuming a borehole diameter of 2 inches, tubing and probe inside diameter of 0.17 inches, sand pack interval of 1 foot and porosity of 0.3, and a sample train length (internal and external tubing) of 12 feet. The approximate sampling system volume of a temporary sub-slab soil vapor probe is 70 ml, assuming a borehole diameter of 2 inches, sand pack interval of 4 inches below the concrete floor slab and porosity of 0.3, tubing and probe inside diameter of 0.17 inches, and a sample train length (internal and external tubing) of 5 feet.

The approximate sampling system volume of a Vapor Pin™ system is 60ml, assuming a 4.5 ml/feet for 0.25-inch Outside Diameter (OD)/0.17-inch Inside Diameter (ID) sample tubing, and a 0.17-inch ID Vapor Pin probe, and 155 ml/feet for a 1-inch diameter borehole within the concrete floor slab with a 3-inch deep void space below the Vapor Pin probe.

Prior to sample collection, a maximum of three sample system volumes of soil vapor (per DTSC, 2015) were purged at a flow rate of approximately 150-200 milliliters per minute (ml/min) from each soil vapor probe, using a dedicated 6-liter capacity SUMMA purge canister. Three sample system volumes equaled approximately 720 ml from each temporary 7 feet bgs vapor probe, 210 ml from each temporary sub-slab soil vapor probe and 180 ml from each semi-permanent sub-slab soil vapor probe.

While purging and sampling, a leak detection test was conducted using helium as a leak tracer inside an airtight plastic shroud covering the entire sampling apparatus, as recommended in the DTSC *Advisory – Active Soil Gas Investigations* (DTSC, 2015). A three-way valve was fitted in the sample tubing train between the probe and SUMMA canister manifold system, with the valve handle passing through the shroud wall where it can be turned from the outside without leakage of helium. The Teflon™ inflow sample tubing was connected from the vapor probe to the three-way valve. The valve controlled two Teflon™ outflow tubes, one leading to the sample Summa canister manifold, and one leading to a purge monitoring port on the outside of the shroud.

The helium concentration within the shroud was monitored with a helium gas detection meter with a minimum precision of 0.1% to keep the concentration at approximately $\pm 10\%$ of the target concentration of approximately 20% (or at least three orders of magnitude above the minimum meter detection limit). The helium tracer gas was infused into the shroud at the required concentration at least 5 minutes prior to sample collection, as recommended in the DTSC *Advisory – Active Soil Gas Investigations* (DTSC, 2015).

If necessary, additional helium was infused into the shroud to maintain the desired concentration, which was monitored and recorded in the field log sample collection remarks column until sampling is completed. To verify helium detection meter accuracy, one ambient air sample was collected inside the leak detection shroud during the sampling of probe SVP-6 to measure helium

concentrations inside the shroud. A schematic diagram of the soil vapor sampling system and leak detection shroud is included in Appendix B.

Following purging of three sample system volumes, the soil vapor purge monitoring port was monitored for helium leak tracer gas concentrations using a helium gas detection meter to determine integrity of the vapor probe surface seal per DTSC *Advisory – Active Soil Gas Investigations, Appendix C* (DTSC, 2015). Soil vapor helium concentrations following purging were recorded in the sampling field logs.

Flow rates of approximately 150-200 ml/min were used to fill the sample canisters. The canisters were filled to approximate 80% of capacity (approximately 5 inches of mercury vacuum remaining). All pertinent field observations, pressure, times and readings were recorded. After filling and closing the sample valve, all SUMMA canisters were removed from the manifold, labeled with sampling information, including initial and final vacuum pressures, placed in a dark container and transported under chain-of-custody to the analytical laboratory, Eurofins/Calscience, Inc., in Garden Grove, California. The analytical laboratory recorded the final SUMMA canister vacuum upon receipt. Soil vapor sampling procedures are included in Appendix B and copies of the soil vapor sampling field logs are included in Appendix E.

J. Borehole Backfilling

At the completion of drilling and sampling activities, Geoprobe® DPT drive casings, temporary PVC well screen and casings, soil vapor probes and sample tubing were removed and the boreholes backfilled with a “neat” Portland Type I or II cement grout slurry tremied into the borehole through a PVC pipe. The level of grout was checked to ascertain if any settling has occurred and was “topped off” as required. The ACPWA was notified 72 hours in advance of the anticipated grouting time in order to schedule inspection.

K. Investigative Derived Waste Containment and Disposal

Investigative derived waste including soil cores and rinseate were contained in a secure area onsite in sealed 55-gallon drums pending analytical results, profiling and transport to an appropriate disposal facility.

L. Indoor Air Quality Sampling

Prior to indoor air quality sampling activities, AllWest performed a survey of the building layout and conditions to determine optimum IAQ sample locations. Building survey forms are included in Appendix E.

To evaluate the potential indoor air quality impact of intrusion of petroleum hydrocarbons and VOCs in the vapor phase from soil beneath the concrete building floor slabs, five IAQ samples (IAQ-6 through IAQ-10) were collected within the subject site 1471 67th Street warehouse building and 6655 Hollis Street office building, and one OAA control sample (OAA-2) collected outside the office building.

IAQ-6 was collected within the office building's main room in the center of the building, and IAQ-2 within the office building women's restroom in the southwest corner of the building. IAQ-8 and IAQ-9 were collected within a large open area in the north- and south-central portion of the warehouse building. IAQ-10 was collected within the warehouse building restroom in the northwest corner of the building. Indoor air quality sample locations are shown on Figure 3.

Although the DTSC *Vapor Intrusion Guidance* (DTSC, 2011) recommends collecting OAA samples upwind from the subject site, no suitably secure sample location exists along 67th Street in the predominantly westerly upwind direction from the subject site. Therefore, AllWest located the outdoor ambient air sample OAA-2 on the second floor balcony of the adjacent office building at 6655 Hollis Street. Although in the predominantly downwind direction east of the subject site, this was the only relatively secure and accessible outdoor sample location adjacent to the subject site.

The OAA-2 Summa canister was secured to the balcony railing by a locked chain. Outdoor ambient air control sample locations are shown on Figure 3.

AllWest collected air quality samples in laboratory prepared 6-liter capacity SUMMA canisters. Flow rates of approximately 12.5 milliliters per minute (ml/min) are used to fill the canisters over an 8 hour period. The canisters are filled to approximately 80% of capacity. Pertinent field observations, pressure, times and readings are recorded. Indoor air quality field sampling logs are included in Appendix E. Sampling was conducted in general accordance with the DTSC *Final, Guidance for the Evaluation and Mitigation of Subsurface Vapor Intrusion to Indoor Air (Vapor Intrusion Guidance)* (DTSC, 2011).

M. Sample Preservation, Storage and Handling

To prevent the loss of constituents of interest, all soil and groundwater samples were preserved by storing in an ice chest cooled to 4°C with crushed ice immediately after their collection and during transportation to the laboratory. Samples were stored within the cooler in separate zip-lock plastic bags to avoid cross-contamination. All SUMMA canisters were removed from the manifold, labeled with sampling information, including initial and final vacuum pressures, and placed in a dark container for transport to the analytical laboratory

N. Chain-Of-Custody Program

All samples collected for this project were transported under chain-of-custody protocol. The chain-of-custody program allows for the tracing of possession and handling of individual samples from the time of field collection through laboratory analysis. The document includes the signature of the collector, date and time of collection, sample number, number and type of sample containers including preservatives, SUMMA canister ID numbers, initial and final SUMMA canister vacuums, parameters requested for analysis, signatures of persons and inclusive dates involved in the chain of possession. Upon delivery to the laboratory the document will also include the name of the person receiving the samples, and date and time samples were received. Chain of custody documents are included in Appendix F.

V. ASSESSMENT FINDINGS

A. Subsurface Conditions

The lithology encountered in borings during this investigation consisted of interbedded silts and clays with minor sands from below pavement to a depth of approximately 20.5 feet bgs, sandy silt with gravel from approximately 20.5 to 23 feet bgs, fine sand from 23 to 24 feet bgs, and clay at the total explored depth of 24 feet bgs. Noticeable petroleum odor and/or elevated PID concentration measurements were observed in soil samples from borings SVP-3 at approximately 0.5 to 2 feet bgs, SVP-4 from approximately 1 to 7 feet bgs, SVP-5 from approximately 4 to 7 feet bgs, and SVP-6 at approximately 6 to 7 feet bgs.

Groundwater was encountered at approximately 22.5 feet bgs in boring SB-26.

B. Laboratory Analyses and Sampling Data

Soil

All soil samples selected for analysis were analyzed by a State of California certified independent analytical laboratory, McCampbell Analytical, Inc. (MAI), of Pittsburg, California. Twelve soil samples were analyzed for TPH-g and VOCs including BTEX, naphthalene, and fuel oxygenates including MTBE by EPA Method modified 8260B.

Low concentrations of TPH-g and VOCs including BTEX, MTBE, 1,2,4-trimethylbenzene, 1,3,5-trimethylbenzene, n-butyl benzene, sec-butyl benzene, isopropylbenzene, naphthalene, n-propyl benzene and/or tert-butyl alcohol were detected in soil samples from all borings at the following maximum concentrations in milligrams per kilogram (mg/kg):

Constituent of Concern	Maximum Concentration (mg/kg)	Boring ID #	Depth (Feet bgs)
TPH-g	60	SB-26	11.5-12
Benzene	0.56	SB-26	11.5-12
Ethylbenzene	1.2	SB-26	11.5-12
Toluene	3.4	SB-26	11.5-12
Total Xylenes	6.7	SB-26	11.5-12
n-Butyl benzene	0.81	SVP-4	6.5-7
sec-Butyl benzene	0.033	SVP-5	3.5-4
Isopropylbenzene	0.016	SVP_5	3.5-4
Methyl Tertiary Butyl Ether (MTBE)	0.21	SVP-3	6.5-7
Naphthalene	1.0	SB-26 SVP-4	11.5-12 6.5-7
n-Propyl benzene	0.92	SVP-4	6.5-7
Tertiary Butyl Alcohol (TBA)	0.11	SVP-5	3.5-4
1,2,4-Trimethylbenzene	3.6	SVP-4	6.5-7
1,3,5-Trimethylbenzene	0.97	SVP-4	6.5-7

No other VOCs were detected in any soil samples analyzed. Soil petroleum hydrocarbon and VOC analytical data is summarized in Table 1. Historical soil polynuclear aromatics (PNAs) / polyaromatic hydrocarbons (PAHs) analytical data are summarized in Table 2. Laboratory analytical reports are included in Appendix F.

Groundwater

All groundwater samples were analyzed by a State of California certified independent analytical laboratory, MAI. One groundwater sample Analyzed for TPH-g and volatile organic compounds (VOCs) including benzene, toluene, ethylbenzene and total xylenes (BTEX), naphthalene, and fuel oxygenates including MTBE by EPA Method modified 8260B.

TPH-g, BTEX, MTBE, naphthalene N-propyl benzene, TCE , 1,2,4-trimethylbenzene and 1,3,5-trimethylbenzene were detected in the groundwater sample from SB-26 at the following concentrations in micrograms per liter (µg/L):

Constituent of Concern	Concentration (µg/L)
TPH-g	1,700
Benzene	310
Ethylbenzene	85
Toluene	300
Total Xylenes	370
Methyl Tertiary Butyl Ether (MTBE)	170
Naphthalene	7.9
n-Propyl benzene	7.8
Trichloroethene (TCE)	18
1,2,4-Trimethylbenzene	67
1,3,5-Trimethylbenzene	21

No other VOCs were detected in the groundwater sample from SB-26. Groundwater analytical data is summarized in Table 3. Historical groundwater PNAs/PAHs analytical data are summarized in Table 4. Laboratory analytical reports are included in Appendix F.

Soil Vapor

All soil vapor sample analysis was performed by a State of California certified independent analytical laboratory, Eurofins/Calscience, Inc. (ECI) of Garden Grove, California. Twelve soil vapor samples were analyzed for TPH-g by EPA Method TO-3(M), BTEX, naphthalene and MTBE by EPA Method TO-15(M), and the leak detection gas helium and the gases oxygen, methane and carbon dioxide by method ASTM D1946. One ambient leak detection gas sample will be analyzed for helium by ASTM D1946.

TPH-g, benzene, ethylbenzene, toluene, total xylenes, MTBE, acetone, 2-butanone, 1,1-dichloroethane (1,1-DCA) 1,2-dichloroethane (1,2-DCA), ethanol, 4-ethyltoluene, isopropanol, tert-butyl alcohol (TBA), tetrachloroethene (PCE), 1,2,4-trimethylbenzene and 1,3,5-trimethylbenzene were detected in soil vapor samples at the following maximum concentrations in micrograms per cubic meter ($\mu\text{g}/\text{m}^3$):

Constituent of Concern	Maximum Concentration ($\mu\text{g}/\text{m}^3$)	Vapor Probe ID #	Depth (Feet bgs)
TPH-g	910,000,000	SVP-3	7
Benzene	1,600,000	SVP-5	7
Ethylbenzene	810,000	SVP-5	7
Toluene	1,700,000	SVP-3	7
Total Xylenes	3,570,000	SVP-5	7
Acetone	64	SVP-7	0.5
2-Butanone	8.1	SVP-7	0.5
1,1-Dichloroethane (1,1-DCA)	1,300	SVP-6	7
1,2-Dichloroethane (1,2-DCA)	2,500	SVP-6	7
Ethanol	24	SVP-15	0.5
4-Ethyltoluene	160,000	SVP-3	7
Isopropanol	1,000,000	SVP-5	7
Methyl Tertiary Butyl Ether (MTBE)	990,000	SVP-5	7
Tert-butyl Alcohol (TBA)	6.4	SVP-16	0.5
Tetrachloroethene (PCE)	41	SVP-7	0.5
1,2,4-Trimethylbenzene	390,000	SVP-3	7
1,3,5-Trimethylbenzene	170,000	SVP-3	7

No other VOCs were detected in any soil vapor sample analyzed.

The gases helium, oxygen, methane and carbon dioxide were detected in soil vapor and ambient air samples at the following maximum (or minimum) concentrations in percent by volume (%v/v):

Constituent of Concern	Maximum Concentration (%v/v)	Vapor Probe ID #	Depth (Feet bgs)
Helium (ambient air in shroud)	7.95	SVP-6	surface
Helium (soil vapor)	0.807	SVP13	0.5
Oxygen (maximum)	19.2	SVP-12	0.5
Oxygen (minimum)	2.72	SVP-1	7
Methane	8.80	SVP-1	7
Carbon Dioxide	14.7	SVP-3	7

Soil vapor analytical data is summarized in Table 5. Laboratory analytical reports are included in Appendix F.

Indoor Air

All indoor air sample analysis was performed by a State of California certified independent analytical laboratory, Eurofins/Calscience, Inc. (ECI) of Garden Grove, California. Five IAQ

samples and one OAA control sample were analyzed for TPH-g by EPA Method TO-3(M) and VOCs by EPA Method TO-15 SIM.

TPH-g, benzene, ethylbenzene, toluene, total xylenes, MTBE, acetone, 2-butanone, 1,1-dichloroethane (1,1-DCA) 1,2-dichloroethane (1,2-DCA), ethanol, 4-ethyltoluene, isopropanol, tert-butyl alcohol (TBA), tetrachloroethene (PCE), 1,2,4-trimethylbenzene and 1,3,5-trimethylbenzene were detected in IAQ and/or OAA samples at the following maximum concentrations in micrograms per cubic meter ($\mu\text{g}/\text{m}^3$):

Constituent of Concern	Maximum Concentration ($\mu\text{g}/\text{m}^3$)	Sample ID #	Location
TPH-g	1,400	IAQ-9	North-central warehouse
Benzene	0.55	IAQ-9	North-central warehouse
Ethylbenzene	0.28	IAQ-10	Warehouse restroom
Toluene	1.1	IAQ-6	Office main room
Total Xylenes	2.21	IAQ-10	Warehouse restroom
Carbon Tetrachloride	0.43	IAQ-9	North-central warehouse
Chloroform	0.53	IAQ-7	Office woman's restroom
Chloromethane	1.1	OAA-2	Office balcony
Dichlorodifluoromethane	1.6	IAQ-10	Warehouse restroom
Methylene Chloride	3.1	IAQ-6	Office main room
Naphthalene	0.17	IAQ-6	Office main room
Trichloroethene (TCE)	0.17	IAQ-7	Office woman's restroom
Trichlorofluoromethane	1.3	IAQ-9	North-central warehouse
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.54	IAQ-9	North-central warehouse
1,2,4-Trimethylbenzene	0.44	IAQ-6	Office main room
1,3,5-Trimethylbenzene	0.13	IAQ-6	Office main room

No other VOCs were detected in any soil vapor sample analyzed. Indoor air analytical data is summarized in Table 6. Laboratory analytical reports are included in Appendix F.

C. Laboratory Quality Assurance and Quality Control

A review of laboratory internal quality assurance/quality control (QA/QC) report indicates the method blank and sample spike data for all analyses were within the laboratory recovery limits. The samples were also analyzed within the acceptable EPA holding times. The data from the MAI and ECI are considered to be of good quality. Laboratory QA/QC reports and chain-of-custody records are included in Appendix F.

VI. DISCUSSION

A. Environmental Screening Levels

To assess if the identified COCs in soil pose a risk to human health and the environment, AllWest compared analytical data generated during this investigation to Environmental Screening Levels (ESLs) for commercial/industrial land use. The ESLs are compiled by the Regional Water Quality Control Board, San Francisco Bay Region (RWQCB) in *User's Guide: Derivation and Application of Environmental Screening Levels (ESLs)*, Interim Final – February 2016 (Rev. 3, May 23, 2016). ESLs used in this investigation were established using the site-specific Tier 2 Interactive Tool, *Table T2-1: Tier 2 ESL Input and Output* (RWQCB, 2016).

Under most circumstances, the presence of a chemical at a concentration below the corresponding ESL is presumed to not pose a significant risk to human health or the environment. The ESLs for the subject suite were established with the following assumptions: commercial/industrial property

use, a 'sand scenario' soil type, shallow groundwater (<10 feet bgs) which is not a potential drinking water resource, and shallow AND deep direct exposure, soil depths (≤10 ft bgs and > 10 feet bgs). A City of Emeryville ordinance prohibits use of groundwater for drinking water purposes due to widespread regional contamination, and no plans exist for future beneficial use.

Soil

TPH-g was not detected in any soil samples at concentrations exceeding the applicable ESL of 500 mg/kg for commercial/industrial sites where groundwater is a potential drinking water resource according to the site-specific Tier 2 Interactive Tool, Table T2-1 (RWQCB, 2016).

The COCs which exceeded applicable soil ESLs for commercial/industrial sites where groundwater is a potential drinking water resource were benzene, toluene, total xylenes, MTBE and naphthalene.

The only COC which exceeded applicable soil ESLs for commercial/industrial sites where groundwater is not a potential drinking water resource was benzene. COCs exceeding applicable soil ESLs are summarized below:

Constituent of Concern	Maximum Soil Concentration (mg/kg)	Soil ESL - Drinking Water (mg/kg)	Soil ESL - Non-Drinking Water (mg/kg)
Benzene	0.56	0.044	0.049
Toluene	3.4	2.9	9.3
Total Xylenes	6.7	2.3	11
Methyl Tertiary Butyl Ether (MTBE)	0.21	0.023	0.84
Naphthalene	1.0	0.033	3.9

None of the other COCs detected in soil samples exceeded applicable ESLs. Applicable soil ESLs for COCs detected at the subject site are summarized in Tables 1 and 2.

Groundwater

TPH-g, benzene, toluene, ethylbenzene, total xylenes, MTBE, naphthalene and TCE concentrations detected in the groundwater sample from SB-26 exceeded their applicable ESLs for groundwater that is a potential drinking water resource. TPH-g, benzene, toluene, ethylbenzene and total xylenes concentrations exceeded their applicable ESLs for groundwater that is not a potential drinking water resource. COCs exceeding applicable groundwater ESLs are summarized below:

Constituent of Concern	SB-26 Groundwater Concentration (µg/L)	Groundwater ESL - Drinking Water (µg/L)	Groundwater ESL - Non-Drinking Water (µg/L)	Groundwater ESL - Vapor Intrusion (µg/L)
TPH-g	1,700	100	640	NE
Benzene	310	1.0	9.7	9.7
Ethylbenzene	85	30	43	110
Toluene	300	40	130	30,000
Total Xylenes	370	20	100	11,000
Methyl Tertiary Butyl Ether (MTBE)	170	5.0	180	11,000
Naphthalene	7.9	0.17	24	170
Trichloroethene (TCE)	18	5.0	49	49

NE = Not Established (Use Soil Gas ESL)

None of the other COCs detected in the groundwater sample from SB-26 exceeded applicable ESLs. Applicable groundwater ESLs for COCs detected at the subject site are summarized in Tables 3 and 4.

Soil Vapor

TPH-g, benzene, ethylbenzene, toluene, total xylenes, MTBE and 1,2-DCA were detected in soil vapor samples collected during this sampling event at concentrations exceeding their respective applicable commercial/industrial land use soil vapor ESLs, as summarized below:

Constituent of Concern	Maximum Concentration ($\mu\text{g}/\text{m}^3$)	Commercial/Industrial ESL ($\mu\text{g}/\text{m}^3$)
TPH-g	910,000,000	100,000
Benzene	1,600,000	420
Ethylbenzene	810,000	4,900
Toluene	1,700,000	1,300,000
Total Xylenes	3,570,000	440,000
Methyl Tertiary Butyl Ether (MTBE)	990,000	47,000
1,2-Dichloroethane (1,2-DCA)	2,500	470

All except one of the exceedances of ESLs were in soil vapor samples collected from the 7 feet bgs temporary probes. The only ESL exceedance in the 0.5 feet bgs sub-slab probes was 220,000 $\mu\text{g}/\text{m}^3$ TPH-g in SVP-7. None of the other COCs detected in soil vapor samples exceeded their applicable ESLs. Applicable soil vapor ESLs for COCs detected at the subject site are summarized in Table 5.

Concentrations of oxygen, methane and carbon dioxide detected in soil vapor samples indicate the presence of a minimum 5-foot biodegradation attenuation zone below building foundations per the State Water Resources Control Board (SWRCB) *Low-Threat Underground Storage Tank Case Closure Policy* (SWRCB, 2012), with the exception of SVP-1, which has an oxygen concentration of less than 4 percent by volume (%v/v).

Indoor Air

Benzene, carbon tetrachloride, naphthalene, and chloroform were detected in indoor air samples collected during this sampling event at concentrations exceeding their respective applicable commercial/industrial land use soil vapor ESLs, as summarized below:

Constituent of Concern	Maximum Concentration ($\mu\text{g}/\text{m}^3$)	Commercial/Industrial ESL ($\mu\text{g}/\text{m}^3$)
TPH-g	1,400	100
Benzene	0.55	0.42
Carbon Tetrachloride	0.43	0.29
Chloroform	0.53	0.53

None of the other COCs detected in the indoor air samples exceeded their applicable ESLs. Applicable indoor air ESLs for COCs detected at the subject site are summarized in Table 6.

B. Contaminant Distribution

Elevated concentrations of petroleum hydrocarbons and VOCs have been detected in soil samples collected during this investigation east and upgradient of the former USTs and fuel dispensers in the vicinity of boring SB-26 between the subject site office and warehouse buildings. The upgradient extent of COCs in soil in the vicinity of the subject site office building at 6655 Hollis Street has not been fully defined. Low concentrations of petroleum hydrocarbons and VOCs have been detected in soil samples from beneath the warehouse building, cross-gradient from the former USTs, with the vertical and lateral extent to the south largely defined.

During previous investigations, the lateral extent of petroleum hydrocarbons and VOCs in soil was largely defined along 67th Street to the northwest and west of the former subject site USTs. The anomalously high TPH-d concentrations detected in the soil samples from the farthest west and downgradient boring AMW-1 appears to originate from an offsite source, possibly the former Clearprint Paper Company USTs. The extent of COCs in soil is shown in Figure 3.

Elevated concentrations of petroleum hydrocarbons and VOCs have been detected in groundwater samples collected during this investigation east and upgradient of the former USTs and fuel dispensers in the vicinity of boring SB-26 between the subject site office and warehouse buildings. The upgradient extent of COCs in groundwater in the vicinity of the subject site office building at 6655 Hollis Street has not been fully defined.

During previous investigations, the lateral extent of dissolved-phase petroleum hydrocarbons and their constituents was largely defined in the downgradient direction west of the former McGrath USTs at monitoring well AMW-1, but has not been fully defined in the cross-gradient directions to the north and particularly to the south of 67th Street. The extent of TPH-g and benzene in groundwater is shown in Figures 4 and 5.

Elevated concentrations of petroleum hydrocarbons and VOCs have been detected in soil vapor samples upgradient of the former USTs and fuel dispensers in the vicinity of vapor probe SVP-6 between the office and warehouse buildings, and in vapor probes SVP-1 through SVP-5 and SVP-7 from beneath the warehouse building, cross-gradient from the former USTs. Concentrations of COCs detected in soil vapor were generally highest in probe SVP-3 in the northwest portion of the warehouse, SVP-5 in the northeast portion adjacent to the former USTs, and SVP-1 in the southwest portion, all at a depth of 7 feet bgs.

Concentrations of COCs detected in the sub-slab vapor probe SVP-7 at 0.5 feet bgs in the southwest portion of the warehouse were significantly lower (more than an order of magnitude) than those detected in adjacent soil vapor probes at 7 feet bgs. Soil vapor probes SVP-12 through SVP-16 had no detectable COCs above their respective ESLs, indicating that COC concentrations have been significantly attenuated by several orders of magnitude at shallow depths (0.5 feet bgs), compared to those in the adjacent 7 feet bgs probes. The low COC concentrations in the sub-slab probes indicate that soil vapor intrusion is probably not significantly impacting indoor air quality in the warehouse building. The extent of COCs in soil vapor is shown in Figure 6.

Concentrations of all the detected COCs were similar (within an order of magnitude) between the IAQ samples and the OAA control sample, implying an atmospheric source rather than soil vapor intrusion is likely. Concentrations of the COCs detected in IAQ samples and the OAA control sample during the May 2016 indoor air sampling event were similar (within an order of magnitude) to those detected during the previous June 2014 sampling event. The extent of COCs in indoor air during the June 2014 and May 2016 sampling events is shown on Figure 7.

There does not appear to be a significant correlation between nature or concentrations of COCs detected in soil vapor samples during the current investigation and those detected in indoor air samples in the same vicinity.

VII. CONCLUSIONS

AllWest concludes that petroleum hydrocarbon and VOC concentrations detected at 5 feet bgs or deeper in soil, groundwater and soil vapor samples beneath and adjacent to the subject site warehouse building have attenuated significantly at shallower depths (0.5 feet bgs) and do not present a significant vapor intrusion risk to future building occupants. AllWest further concludes that petroleum hydrocarbon and VOC concentrations detected in indoor air quality samples most likely originate from atmospheric sources, not from soil vapor intrusion.

VIII. LIMITATIONS

The work described in this report was performed in accordance with the Environmental Consulting Agreement between MCG Investments, LLC (Client) and AllWest Environmental, Inc, dated September 2015. AllWest has prepared this report for the exclusive use of the Client for this particular project and in accordance with generally accepted practices at the time of the work. No other warranties, certifications or representations, either expressed or implied are made as to the professional advice offered. The services provided for the Client were limited to their specific requirements; the limited scope allows for AllWest to form no more than an opinion of the actual site conditions. No matter how much research and sampling may be performed, the only way to know about the actual composition and condition of the subsurface of a site is through excavation.

The conclusions and recommendations contained in this report are made based on observed conditions existing at the site, laboratory test results of the submitted samples, and interpretation of a limited data set. It must be recognized that changes can occur in subsurface conditions due to site use or other reasons. Furthermore, the distribution of chemical concentrations in the subsurface can vary spatially and over time. The results of chemical analysis are valid as of the date and at the sampling location only. AllWest is not responsible for the accuracy of the test data from an independent laboratory, or for any analyte quantities falling below the recognized standard detection limits or for the method utilized by the independent laboratories.

Background information that AllWest has used in preparing this report, including but not limited to previous field measurements, analytical results, site plans, and other data, has been furnished to AllWest by the Client, its previous consultants, and/or third parties. AllWest has relied on this information as furnished. AllWest is not responsible, for nor has it confirmed, the accuracy of this information.

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TABLES

TABLE 1
Summary of Soil Analytical Data
Total Petroleum Hydrocarbons and VOCs
Former McGrath Steel
6655 Hollis Street
Emeryville, California
AllWest Project No. 15179.23

Sample Name and Depth (feet bgs)	Date Sampled	TPH-g (mg/kg)	TPH-ms (mg/kg)	TPH-d (mg/kg)	TPH-mo* (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl- benzene (mg/kg)	Total Xylenes (mg/kg)	MTBE (mg/kg)	1,2,4- Trimethyl- benzene (mg/kg)	1,3,5- Trimethyl- benzene (mg/kg)	Other VOCs (mg/kg)
B15-10-10.5	1/17/2013	ND <1.0	ND <1.0	ND <1.0	NA	ND <0.005	ND <0.005	ND <0.005	0.012	ND <0.05	NA	NA	NA
B15-19.5-20 qualifiers	1/17/2013	ND <1.0	ND <1.0	2.7 e2	NA	ND <0.005	ND <0.005	ND <0.005	0.007	ND <0.05	NA	NA	NA
B16-8.5-9 qualifiers	1/17/2013	110 d1	59 d1	3.8 e4	NA	0.84	4.8	2.8	13	ND <0.50	NA	NA	NA
B16-11.5-12 qualifiers	1/17/2013	260 d1	130 d1	9.6 e4	NA	2.9	16	5.7	24	ND <1.5	NA	NA	NA
B16-14.5-15 qualifiers	1/17/2013	140 d1	84 d1	3.7 e4	NA	2.6	10	2.6	16	ND <1.0	NA	NA	NA
B17-8.5-9	1/16/2013	ND <1.0	ND <1.0	ND <1.0	ND <5.0	ND <0.005	ND <0.005	ND <0.005	ND <0.005	ND <1.0	NA	NA	NA
B18-10-10.5 qualifiers	1/16/2013	450 d2, d9	430 d2, d9	60 e4, e2	5.4 e4, e2	ND <0.50	ND <0.50	8.0	25	ND <5.0	NA	NA	NA
B18-15.5-16 qualifiers	1/16/2013	ND <1.0 d1	ND <1.0 d1	2.4 e2	ND <5.0 e2	ND <0.005	ND <0.005	ND <0.005	ND <0.005	ND <0.05	NA	NA	NA
B19-10-10.5 qualifiers	1/16/2013	360 d1	350 d1	32 e4	ND <5.0 e4	0.31	0.23	8.8	26	ND <1.0	NA	NA	NA
B19-14.5-15 qualifiers	1/16/2013	240 d1	240 d1	11 e4	ND <5.0 e4	0.12	0.16	5.7	14	ND <1.0	NA	NA	NA
B20-10-10.5 qualifiers	1/17/2013	480	280 d1	90 e4	NA	2.2	17	7.1	42	ND <0.50	19	6.5	2.3 (n-butyl benzene) 3.3 (naphthalene) 0.67 (isopropylbenzene) 2.9 (n-propyl benzene) ND (others - varies)
B20-12-12.5 qualifiers	1/17/2013	2,000	1,200 d1	24 e4	NA	8.0	92	35	210	ND <5.0	89	29	9.1 (n-butyl benzene) 14 (naphthalene) 13 (n-propyl benzene) ND (others -varies)

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B20-14.5-15 qualifiers	1/17/2013	27	15 d1	5.1 e4	NA	0.72	1.5	0.37	2.2	0.28	0.66	0.21	0.17 (naphthalene) ND (others - varies)
B21-4.5-5 qualifiers	1/18/2013	280	410 d1	40 e2, e4	NA	ND <0.50 a13	4.3 a13	3.2 a13	19 a13	0.98 a13	13	4.1	3.3 (naphthalene) 1.8 (n-propyl benzene) 1.8 (n-butyl benzene) ND (others - varies) a13
B21-10-10.5 qualifiers	1/18/2013	1,900	1,200 d1	180 e4	NA	12 a13	88 a13	31 a13	170 a13	7.6 a13	68	23	7.0 (n-butyl benzene) 9.6 (naphthalene) 11 (n-propyl benzene) ND (others - varies) a13
B21-21.5-22 qualifiers	1/18/2013	120	340 d1	22 e4	NA	1.2 a13	4.9 a13	1.8 a13	11 a13	12 a13	4.6	1.5	0.50 (n-butyl benzene) 0.77 (naphthalene) 0.67 (n-propyl benzene) ND (others - varies) a13
B22-4.5-5 qualifiers	1/18/2013	92	120 d1	9.1 e4	NA	0.16 a13	ND <0.12 a13	1.5 a13	6.3 a13	0.45 a13	4.2	1.4	0.54 (n-butyl benzene) 0.13 (4-isopropyl toluene) 0.74 (naphthalene) 0.16 (isopropylbenzene) 0.74 (n-propyl benzene) ND (others - varies) a13
B22-10-10.5 qualifiers	1/18/2013	68	280 d1	17 e4	NA	0.79 a13	3.3 a13	1.2 a13	6.0 a13	3.1 a13	2.6	0.85	0.27 (n-butyl benzene) 0.47 (naphthalene) 0.39 (n-propyl benzene) ND (others - varies) a13

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B22-14.5-15 qualifiers	1/18/2013	30	20 d1	3.2 e4	NA	1.2 a13	1.7 a13	0.46 a13	2.1 a13	1.2 a13	0.81	0.26	0.11 (n-butyl benzene) 0.14 (naphthalene) 0.14 (n-propyl benzene) ND (others - varies) a13
B23-5-5.5	1/17/2013	ND <0.25	ND <1.0	ND <1.0	NA	ND <0.005	ND <0.005	ND <0.005	ND <0.005	ND <0.005	ND <0.005	ND <0.005	ND (varies)
B23-8.5-9 qualifiers	1/17/2013	0.57	ND <1.0	15 e2, e7	NA	ND <0.005	ND <0.005	ND <0.005	ND <0.005	ND <0.005	ND <0.005	ND <0.005	ND (varies)
B24-4.5-5 qualifiers	1/18/2013	0.45	ND <1.0	1.8 e2	NA	ND <0.005	ND <0.005	ND <0.005	ND <0.005	0.12	ND <0.005	ND <0.005	0.096 (acetone) 0.029 (2-butanone) ND (others - varies)
B24-8.5-9 qualifiers	1/18/2013	250	230 d1	44 e4	NA	0.53 a13	6.8 a13	4.1 a13	23 a13	0.53 a13	10	3.5	1.2 (n-butyl benzene) 1.6 (naphthalene) 1.6 (n-propyl benzene) ND (others - varies) a13
B24-21.5-22 qualifiers	1/18/2013	1.6	4.2 d1	2.2 e2	NA	0.022 a13	0.11 a13	0.032 a13	0.19 a13	0.24 a13	0.065	0.019	ND (others - varies) a13
B25-10-10.5 qualifiers	1/16/2013	16 d1	6.8 d1	3.4 e2	ND <5.0 e2	0.0088	0.034	0.30	0.015	ND <0.05	NA	NA	NA
B25-15-15.5	1/16/2013	ND <1.0	ND <1.0	ND <1.0	ND <5.0	ND <0.005	ND <0.005	ND <0.005	ND <0.005	ND <0.05	NA	NA	NA
AMW-1-6.5-7 qualifiers	8/2/2013	ND <1.0	ND <1.0	13 e7, e1	NA	ND <0.005	ND <0.005	ND <0.005	ND <0.005	ND <0.05	NA	NA	NA
AMW-1-12.5-13 qualifiers	8/2/2013	ND <1.0	ND <1.0	2.9 e7, e1	NA	ND <0.005	ND <0.005	ND <0.005	ND <0.005	ND <0.05	NA	NA	NA
AMW-1-18.5-19 qualifiers	8/2/2013	3.8 d7	7.5 d7	1,900 e7, e1	NA	ND <0.005	0.0053	0.0059	0.028	ND <0.05	NA	NA	NA
AMW-2-6.5-7	8/1/2013	ND <1.0	ND <1.0	ND <1.0	NA	ND <0.005	ND <0.005	ND <0.005	ND <0.005	ND <0.05	NA	NA	NA

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AMW-2-15.5-16 qualifiers	8/1/2013	430 d1	440 d1	83 e4, e2	NA	1.3	8.3	10	45	ND <2.0	NA	NA	NA
AMW-2-23-23.5	8/1/2013	ND <1.0	ND <1.0	ND <1.0	NA	ND <0.005	ND <0.005	ND <0.005	ND <0.005	ND <0.05	NA	NA	NA
AMW-3-6.5-7 qualifiers	8/2/2013	ND <1.0	ND <1.0	1.0 e7, e2	NA	ND <0.005	ND <0.005	ND <0.005	ND <0.005	ND <0.05	NA	NA	NA
AMW-3-9-9.5 qualifiers	8/2/2013	240 d1	260 d1	82 e4, e7, e2	NA	0.26	1.3	5.1	18	0.90	NA	NA	NA
AMW-3-12-12.5 qualifiers	8/2/2013	41 d1	44 d1	28 e4, e2	NA	0.078	0.28	0.96	4.6	ND <0.25	NA	NA	NA
SB-26A-4.5-5	2/3/2016	ND (<0.25)	NA	NA	NA	ND (<0.0050)	ND (<0.0050)	ND (<0.0050)	ND (<0.0050)	ND (<0.0050)	0.0087	ND (<0.0050)	ND (other, varies)
SB-26A-9.5-10	2/3/2016	2.5	NA	NA	NA	0.086	ND (<0.010)	0.12	0.54	0.013	0.29	0.091	0.034 (n-Butyl benzene) 0.067 (Naphthalene) 0.047 (n-Propyl benzene)
SB-26A-11.5-12	2/3/2016	60	NA	NA	NA	0.56	3.4	1.2	6.7	ND (<0.20)	1.9	0.58	1.0 (Naphthalene) 0.24 (n-Propyl benzene) ND (other, varies)
SB-26A-20.5-21	2/4/2016	ND (<0.25)	NA	NA	NA	ND (<0.0050)	ND (<0.0050)	ND (<0.0050)	ND (<0.0050)	0.0071	ND (<0.0050)	ND (<0.0050)	ND (other, varies)
SVP-1-1.5-2	2/3/2016	1.1	NA	NA	NA	ND (<0.0050)	ND (<0.0050)	ND (<0.0050)	0.021	ND (<0.0050)	ND (<0.0050)	ND (<0.0050)	ND (other, varies)
SVP-1-6.5-7	2/3/2016	3.0	NA	NA	NA	0.056	0.25	0.15	0.72	ND (<0.010)	0.28	0.090	0.015 (n-Butyl benzene) 0.011 (Isopropylbenzene) 0.036 (Naphthalene) 0.055 (n-Propyl benzene) ND (other, varies)
SVP-2-3-3.5	2/3/2016	2.3	NA	NA	NA	0.037	ND (<0.020)	0.057	0.53	ND (<0.020)	0.20	0.085	ND (other, varies)

TABLE 1
Summary of Soil Analytical Data
Total Petroleum Hydrocarbons and VOCs
Former McGrath Steel
6655 Hollis Street
Emeryville, California
AllWest Project No. 15179.23

Sample Name and Depth (feet bgs)	Date Sampled	TPH-g (mg/kg)	TPH-ms (mg/kg)	TPH-d (mg/kg)	TPH-mo* (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl-benzene (mg/kg)	Total Xylenes (mg/kg)	MTBE (mg/kg)	1,2,4-Trimethyl-benzene (mg/kg)	1,3,5-Trimethyl-benzene (mg/kg)	Other VOCs (mg/kg)
SVP-2-6.5-7	2/3/2016	4.0	NA	NA	NA	0.34	0.90	0.18	1.2	ND (<0.025)	0.27	0.075	0.26 (Naphthalene) 0.026 (n-Propyl benzene) ND (other, varies)
SVP-3-6.5-7	2/3/2016	1.1	NA	NA	NA	0.060	0.052	0.032	0.20	0.21	0.085	0.023	0.18 (Naphthalene) ND (other, varies)
SVP-4-6.5-7	2/4/2016	54	NA	NA	NA	ND (<0.25)	ND (<0.25)	0.59	1.4	ND (<0.25)	3.6	0.97	0.81 (N-Butyl benzene) 1.0 (Naphthalene) 0.92 (n-Propyl benzene) ND (other, varies)
SVP-5-3.5-4	2/4/2016	3.9	NA	NA	NA	ND (<0.0050)	ND (<0.0050)	ND (<0.0050)	ND (<0.0050)	0.082	0.016	ND (<0.0050)	0.11 (TBA) 0.11 (n-Butyl benzene) 0.033 (sec-Butyl benzene) 0.016 (Isopropylbenzene) 0.11 (n-Propyl benzene) ND (other, varies)
SVP-6-6.5-7	2/3/2016	0.45	NA	NA	NA	ND (<0.0050)	ND (<0.0050)	ND (<0.0050)	0.020	0.0092	0.029	ND (<0.0050)	ND (other, varies)
SFRWQCB Commercial/Industrial ESLs, soil/groundwater ≤10 feet bgs, drinking water		500 ON	500 ON	570 SL	5,100 GC	0.044 SL	2.9 SL	1.4 SL	2.3 SL	0.023 SL	NE	NE	0.5 (acetone) SL 0.033 (naphthalene) SL NE or varies (others)
SFRWQCB Commercial/Industrial ESLs, soil >10 feet bgs, groundwater ≤10 feet bgs drinking water		500 ON	500 ON	570 SL	5,100 GC	0.044 SL	2.9 SL	1.4 SL	2.3 SL	0.023 SL	NE	NE	0.5 (acetone) SL 0.033 (naphthalene) SL NE or varies (others)
SFRWQCB Commercial/Industrial ESLs, soil/groundwater ≤10 feet bgs, non-drinking water		500 ON	500 ON	880 DE (CW)	5,100 GC	0.049 SL	9.3 SL	1.4 SL	11 SL	0.84 SL	NE	NE	0.5 (acetone) SL 3.9 (naphthalene) SL NE or varies (others)

TABLE 1
Summary of Soil Analytical Data
Total Petroleum Hydrocarbons and VOCs
Former McGrath Steel
6655 Hollis Street
Emeryville, California
AllWest Project No. 15179.23

Sample Name and Depth (feet bgs)	Date Sampled	TPH-g (mg/kg)	TPH-ms (mg/kg)	TPH-d (mg/kg)	TPH-mo* (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Total Xylenes (mg/kg)	MTBE (mg/kg)	1,2,4-Trimethylbenzene (mg/kg)	1,3,5-Trimethylbenzene (mg/kg)	Other VOCs (mg/kg)
SFRWQCB Commercial/Industrial ESLs, soil >10 feet bgs, groundwater ≤10 feet bgs, non-drinking water		500 ON	500 ON	880 DE (CW)	5,100 GC	0.049 SL	9.3 SL	1.4 SL	11 SL	0.84 SL	NE	NE	0.5 (acetone) SL 3.9 (naphthalene) SL NE or varies (others)

Notes:

All samples analyzed by McCampbell Analytical, Inc., Pittsburg, California
All results are reported in milligrams per kilogram (mg/kg)

- TPH-g Total petroleum hydrocarbons gasoline range (C6-C12), Analytical Method SW8021B/8015Bm for soil samples collected from borings B15, B16, B17, B18, B19, B25, AMW-1, AMW-2 and AMW-3; Analytical Method SW8260B for soil samples collected from borings B20, B21, B22, B23, and B24
- TPH-ms Total petroleum hydrocarbons mineral spirits range (C9-C12), Analytical Method SW8021/8015Bm
- TPH-d Total petroleum hydrocarbons as diesel (C10-C23), Analytical Method SW8015B with silica gel cleanup
- TPH-mo Total petroleum hydrocarbons as motor oil (C18-C36), Analytical Method SW8015B with silica gel cleanup
- MTBE Methyl tertiary butyl ether, Analytical Method SW8021B/8015Bm for soil samples collected from borings B15, B16, B17, B18, B19, B25, AMW-1, AMW-2, and AMW-3; Analytical Method SW8260B for soil samples collected from borings B20, B21, B22, B23 and B24
- BTEX Benzene, Toluene, Ethylbenzene and Total Xylenes by Analytical Method SW8021B/8015Bm for soil samples collected from borings B15, B16, B17, B18, B19, B25, AMW-1, AMW-2 and AMW-3; Analytical Method SW8260B for soil samples collected from borings B20, B21, B22, B23 and B24, SB-26 and SVP-1 through SVP-6.
- VOCs Volatile organic compounds, Analytical Method SW8260B for soil samples collected from borings B20, B21, B22, B23 and B24, SB-26 and SVP-1 through SVP-6 only.
- TBA t-Butyl alcohol
- ND (<1.0) Not detected at or above listed reporting limit
- NE Not established

* Analysis not requested by AllWest but performed anyway where listed

Laboratory Qualifiers:

- L - lighter hydrocarbons contributed to the quantitation
Y - sample exhibits chromatographic pattern which does not resemble standard
a13 - reporting limit raised due to low density sample

TABLE 1
Summary of Soil Analytical Data
Total Petroleum Hydrocarbons and VOCs
Former McGrath Steel
6655 Hollis Street
Emeryville, California
AllWest Project No. 15179.23

Sample Name and Depth (feet bgs)	Date Sampled	TPH-g (mg/kg)	TPH-ms (mg/kg)	TPH-d (mg/kg)	TPH-mo* (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl-benzene (mg/kg)	Total Xylenes (mg/kg)	MTBE (mg/kg)	1,2,4-Trimethyl-benzene (mg/kg)	1,3,5-Trimethyl-benzene (mg/kg)	Other VOCs (mg/kg)
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d1 - weakly modified or unmodified gasoline is significant

e1 - unmodified or weakly modified diesel is significant

e2 - diesel range compounds are significant; no recognizable pattern

e4 - gasoline-range compounds are significant

e7 - oil-range compounds are significant

San Francisco Bay Regional Water Quality Control Board (SFRWQCB) Environmental Screening Levels (ESLs) for commercial/industrial land use where groundwater IS a potential drinking water resource were established using the site-specific Tier 2 Interactive Tool *Table T2-1: Tier 2 ESL Input and Output, User's Guide: Derivation and Application of Environmental Screening Levels (ESLs)*, Interim Final, February 22, 2016, Revision 3 (May 23, 2016). These ESLs were established with the following assumptions: Commercial property use, a 'sand scenario' soil type, shallow groundwater (<10 ft below ground surface (bgs)), and shallow and deep soil depths (≤10 ft bgs and >10 ft bgs) for direct exposure.

San Francisco Bay Regional Water Quality Control Board (SFRWQCB) Environmental Screening Levels (ESLs) for commercial/industrial land use where groundwater is NOT a potential drinking water resource were established using the site-specific Tier 2 Interactive Tool *Table T2-1: Tier 2 ESL Input and Output, User's Guide: Derivation and Application of Environmental Screening Levels (ESLs)*, Interim Final, February 22, 2016, Revision 3 (May 23, 2016). These ESLs were established with the following assumptions: Commercial property use, a 'sand scenario' soil type, shallow groundwater (<10 ft below ground surface (bgs)), and shallow and deep soil depths (≤10 ft bgs and >10 ft bgs) for direct exposure.

DE (COM) = Direct Exposure Human Health Risk Levels, Commercial/Industrial Land Use (*Table S-1 - Direct Exposure Human Health Risk Levels*)

DE (CW) = Direct Exposure Human Health Risk Levels, Construction Worker/Any Land Use (*Table S-1 - Direct Exposure Human Health Risk Levels*)

ON = Taste and Odor Nuisance Screening Level (*Table S-4 - Odor Nuisance Levels*)

SL = Soil Leaching Screening Level (*Table S-2 - Leaching to Groundwater Levels*)

GC = Gross Contamination Screening Level (*Table S-3 - Gross Contamination Levels*)

TABLE 2
Summary of Soil Analytical Data
PNAs/PAHs
Former McGrath Steel
6655 Hollis Street
Emeryville, California
AllWest Project No. 15179.23

Sample Name and Depth (feet bgs)	Date Sampled	Benzo (a) anthracene (mg/kg)	Chrysene (mg/kg)	Fluoranthene (mg/kg)	1-Methylnaphthalene (mg/kg)	2-Methylnaphthalene (mg/kg)	Naphthalene (mg/kg)	Phenanthrene (mg/kg)	Pyrene (mg/kg)	Other PNAs/PAHs (mg/kg)
B15-10-10.5	1/17/2013	ND <0.01	ND <0.01	ND <0.01	ND <0.01	ND <0.01	ND <0.01	ND <0.01	ND <0.01	ND <0.01
B15-19.5-20	1/17/2013	ND <0.01	ND <0.01	ND <0.01	ND <0.01	ND <0.01	ND <0.01	ND <0.01	ND <0.01	ND <0.01
B16-8.5-9	1/17/2013	ND <0.01	ND <0.01	ND <0.01	0.097	0.19	0.23	ND <0.01	ND <0.01	ND <0.01
B16-11.5-12	1/17/2013	ND <0.01	ND <0.01	ND <0.01	0.082	0.15	0.15	ND <0.01	ND <0.01	ND <0.01
B16-14.5-15	1/17/2013	ND <0.01	ND <0.01	ND <0.01	0.039	0.069	0.075	ND <0.01	ND <0.01	ND <0.01
B17-8.5-9	1/16/2013	ND <0.01	ND <0.01	ND <0.01	ND <0.01	ND <0.01	ND <0.01	ND <0.01	ND <0.01	ND <0.01
B18-10-10.5	1/16/2013	ND <0.10	ND <0.10	ND <0.10	0.69	1.1	0.47	ND <0.10	ND <0.10	ND <0.10
B18-15.5-16	1/16/2013	ND <0.01	ND <0.01	ND <0.01	ND <0.01	ND <0.01	ND <0.01	ND <0.01	ND <0.01	ND <0.01
B19-10-10.5	1/16/2013	ND <0.10	ND <0.10	ND <0.10	0.48	0.76	0.72	ND <0.10	ND <0.10	ND <0.10
B19-14.5-15	1/16/2013	ND <0.01	ND <0.01	ND <0.01	0.26	0.50	0.50	0.014	ND <0.01	ND <0.01
B20-10-10.5	1/17/2013	ND <0.20	ND <0.20	ND <0.20	1.7	2.9	4.5	ND <0.20	ND <0.20	ND <0.20
B20-12-12.5	1/17/2013	ND <0.20	ND <0.20	ND <0.20	2.5	4.3	7.1	ND <0.20	ND <0.20	ND <0.20
B20-14-14.5	1/17/2013	ND <0.01	ND <0.01	ND <0.01	0.085	0.16	0.22	ND <0.01	ND <0.01	ND <0.01
B21-4.5-5	1/18/2013	ND <0.10	ND <0.10	ND <0.10	0.87	1.4	1.6	ND <0.10	ND <0.10	ND <0.10
B21-10-10.5	1/18/2013	ND <0.20	ND <0.20	ND <0.20	2.1	3.7	5.0	ND <0.20	ND <0.20	ND <0.20
B21-21.5-22	1/18/2013	ND <0.01	ND <0.01	ND <0.01	0.27	0.50	0.43	ND <0.01	ND <0.01	ND <0.01
B22-4.5-5	1/18/2013	ND <0.01	ND <0.01	ND <0.01	0.13	0.24	0.15	ND <0.01	ND <0.01	ND <0.01
B22-10-10.5	1/18/2013	ND <0.050	ND <0.050	ND <0.050	0.26	0.41	0.67	ND <0.050	ND <0.050	ND <0.050
B22-14.5-15	1/18/2013	ND <0.01	ND <0.01	ND <0.01	0.024	0.044	0.058	ND <0.01	ND <0.01	ND <0.01
B23-5-5.5	1/17/2013	ND <0.01	ND <0.01	ND <0.01	ND <0.01	ND <0.01	ND <0.01	ND <0.01	ND <0.01	ND <0.01
B23-8.5-9	1/17/2013	ND <0.01	ND <0.015	0.016	ND <0.01	ND <0.01	ND <0.01	ND <0.01	0.018	ND <0.01
B24-4.5-5	1/18/2013	ND <0.01	ND <0.01	ND <0.01	0.013	0.025	0.029	ND <0.01	ND <0.01	ND <0.01
B24-8.5-9	1/18/2013	ND <0.10	ND <0.10	ND <0.10	0.59	0.95	0.85	ND <0.10	ND <0.10	ND <0.10
B24-21.5-22	1/18/2013	ND <0.01	ND <0.01	ND <0.01	ND <0.01	ND <0.01	0.014	ND <0.01	ND <0.01	ND <0.01
B25-10-10.5	1/16/2013	0.013	0.013	0.037	0.014	0.028	0.012	0.043	0.033	ND <0.01
B25-15-15.5	1/16/2013	ND <0.01	ND <0.01	ND <0.01	ND <0.01	ND <0.01	ND <0.01	ND <0.01	ND <0.01	ND <0.01
AMW-1-6.5-7	8/2/2013	ND <0.01	ND <0.01	ND <0.01	ND <0.01	ND <0.01	ND <0.01	ND <0.01	ND <0.01	ND <0.01
AMW-1-12.5-13	8/2/2013	ND <0.01	ND <0.01	ND <0.01	ND <0.01	ND <0.01	ND <0.01	ND <0.01	ND <0.01	ND <0.01

TABLE 2
Summary of Soil Analytical Data
PNAs/PAHs
Former McGrath Steel
6655 Hollis Street
Emeryville, California
AllWest Project No. 15179.23

Sample Name and Depth (feet bgs)	Date Sampled	Benzo (a) anthracene (mg/kg)	Chrysene (mg/kg)	Fluoranthene (mg/kg)	1-Methylnaphthalene (mg/kg)	2-Methylnaphthalene (mg/kg)	Naphthalene (mg/kg)	Phenanthrene (mg/kg)	Pyrene (mg/kg)	Other PNAs/PAHs (mg/kg)
AMW-1-18.5-19	8/2/2013	ND <1.0	ND <1.0	ND <1.0	1.2	1.5	ND <1.0	1.4	ND <1.0	ND <1.0
AMW-2-6.5-7	8/1/2013	ND <0.01	ND <0.01	ND <0.01	ND <0.01	ND <0.01	ND <0.01	ND <0.01	ND <0.01	ND <0.01
AMW-2-15.5-16	8/1/2013	ND <0.20	ND <0.20	ND <0.20	1.4	2.4	2.5	ND <0.20	ND <0.20	ND <0.20
AMW-2-23-23.5	8/1/2013	ND <0.01	ND <0.01	ND <0.01	ND <0.01	ND <0.01	ND <0.01	ND <0.01	ND <0.01	ND <0.01
AMW-3-6.5-7	8/2/2013	ND <0.01	ND <0.01	ND <0.01	ND <0.01	ND <0.01	ND <0.01	ND <0.01	ND <0.01	ND <0.01
AMW-3-9-9.5	8/2/2013	ND <0.10	ND <0.10	ND <0.10	0.93	1.6	1.2	ND <0.10	ND <0.10	ND <0.10
AMW-3-12-12.5	8/2/2013	ND <0.050	ND <0.050	ND <0.050	0.30	0.51	0.37	ND <0.050	ND <0.050	ND <0.050
SFRWQCB Commercial/Industrial ESLs, soil/groundwater ≤10 feet bgs, drinking water		2.9 DE (COM)	3.8 SL/GC	60 SL/GC	NE	0.25 SL	0.033 SL	11 SL	85 SL/GC	Vary
SFRWQCB Commercial/Industrial ESLs, soil >10 feet bgs, groundwater ≤10 feet bgs drinking water		12 SL/GC	3.8 SL/GC	60 SL/GC	NE	0.25 SL	0.033 SL	11 SL	85 SL/GC	Vary
SFRWQCB Commercial/Industrial ESLs, soil/groundwater ≤10 feet bgs, non-drinking water		2.9 DE (COM)	3.8 SL/GC	60 SL/GC	NE	0.25 SL	3.9 SL	11 SL	85 SL/GC	Vary
SFRWQCB Commercial/Industrial ESLs, soil >10 feet bgs, groundwater ≤10 feet bgs, non-drinking water		12 SL/GC	3.8 GC	60 SL/GC	NE	0.25 SL	3.9 SL	11 SL	85 SL/GC	Vary

TABLE 2
Summary of Soil Analytical Data
PNAs/PAHs
Former McGrath Steel
6655 Hollis Street
Emeryville, California
AllWest Project No. 15179.23

Sample Name and Depth (feet bgs)	Date Sampled	Benzo (a) anthracene (mg/kg)	Chrysene (mg/kg)	Fluoranthene (mg/kg)	1-Methylnaphthalene (mg/kg)	2-Methylnaphthalene (mg/kg)	Naphthalene (mg/kg)	Phenanthrene (mg/kg)	Pyrene (mg/kg)	Other PNAs/PAHs (mg/kg)
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Notes:

All samples analyzed by McCampbell Analytical, Inc., Pittsburg, California
All results are reported in milligrams per kilogram (mg/kg)

- PNAs/PAHs Polynuclear Aromatic Hydrocarbons/Polycyclic Aromatic Hydrocarbons, Analytical Method SW8270C-SIM
- ND <0.01 Not detected at or above listed reporting limit
- NE Not established

San Francisco Bay Regional Water Quality Control Board (SFRWQCB) Environmental Screening Levels (ESLs) for commercial/industrial land use where groundwater IS a potential drinking water resource were established using the site-specific Tier 2 Interactive Tool, *Table T2-1: Tier 2 ESL Input and Output, User's Guide: Derivation and Application of Environmental Screening Levels (ESLs)*, Interim Final, February 22, 2016, Revision 3 (May 23, 2016). These ESLs were established with the following assumptions: Commercial property use, a 'sand scenario' soil type, shallow groundwater (<10 ft below ground surface (bgs)), and shallow and deep soil depths (≤10 ft bgs and >10 ft bgs) for direct exposure.

San Francisco Bay Regional Water Quality Control Board (SFRWQCB) Environmental Screening Levels (ESLs) for commercial/industrial land use where groundwater is NOT a potential drinking water resource were established using the site-specific Tier 2 Interactive Tool, *Table T2-1: Tier 2 ESL Input and Output, User's Guide: Derivation and Application of Environmental Screening Levels (ESLs)*, Interim Final, February 22, 2016, Revision 3 (May 23, 2016). These ESLs were established with the following assumptions: Commercial property use, a 'sand scenario' soil type, shallow groundwater (<10 ft below ground surface (bgs)), and shallow and deep soil depths (≤10 ft bgs and >10 ft bgs) for direct exposure.

- DE (COM)** = Direct Exposure Human Health Risk Levels, Commercial/Industrial Land Use (*Table S-1 - Direct Exposure Human Health Risk Levels*)
- DE (CW)** = Direct Exposure Human Health Risk Levels, Construction Worker/Any Land Use (*Table S-1 - Direct Exposure Human Health Risk Levels*)
- ON** = Taste and Odor Nuisance Screening Level (*Table S-4 - Odor Nuisance Levels*)
- SL** = Soil Leaching Screening Level (*Table S-2 - Leaching to Groundwater Levels*)
- GC** = Gross Contamination Screening Level (*Table S-3 - Gross Contamination Levels*)

TABLE 3
Summary of Groundwater Analytical Data
Total Petroleum Hydrocarbons and VOCs
Former McGrath Steel
6655 Hollis Street
Emeryville, California
AllWest Project No. 15179.23

Sample / Field Point Name	Date Sampled	TPH-g (µg/L)	TPH-ms (µg/L)	TPH-d (µg/L)	TPH-mo (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	Other VOCs (µg/L)
MW-3	10/17/1995	8,600	ND <100	220	NA	730	2,100	270	1,400	NA	NA
MW-3 qualifiers	8/22/2005	39,000	NA	2,500 L,Y	NA	3,100	3,800	1,100	4,700	7,200	Oxygenates - ND (varies)
MW-3 qualifiers	12/20/2005	54,000	NA	2,600 L,Y	NA	6,000	10,000	1,700	9,600	12,000	Oxygenates - ND (varies)
MW-3 qualifiers	8/2/2012	27,000	14,000 d1	33,000 e4, e2	680 e4, e2	1,300	3,800	400	4,500	630	400 (TBA) 110 (trans-1,3-dichloropropene) 250 (naphthalene) 1,100 (1,2,4-trimethylbenzene) 280 (1,3,5-trimethylbenzene) ND (others - varies)
MW-3 qualifiers	12/18/2012	21,000	12,000 d1	2,600 e4	ND <250 e4	830	1,400	450	2,600	840	140 (naphthalene) 630 (1,2,4-trimethylbenzene) 78 (n-propyl benzene) 190 (1,3,5-trimethylbenzene) ND (others - varies)
MW-3 qualifiers	6/27/2013	18,000	NA	2,300 e4	NA	1,900	2,000	540	2,700	1,900	520 (TBA) 170 (naphthalene) 650 (1,2,4-trimethylbenzene) 84 (n-propyl benzene) 200 (1,3,5-trimethylbenzene) ND, reporting limits vary (others)

TABLE 3
Summary of Groundwater Analytical Data
Total Petroleum Hydrocarbons and VOCs
Former McGrath Steel
6655 Hollis Street
Emeryville, California
AllWest Project No. 15179.23

Sample / Field Point Name	Date Sampled	TPH-g (µg/L)	TPH-ms (µg/L)	TPH-d (µg/L)	TPH-mo (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	Other VOCs (µg/L)
MW-3 qualifiers	8/7/2013	130,000 d1, b6	54,000 d1, b6	24,000 e4, b6	NA	9,800 b6, c8	16,000 b6, c8	4,200 b6, c8	24,000 b6, c8	6,300 b6, c8	1,100 (naphthalene) 5,200 (1,2,4-trimethylbenzene) 620 (n-propyl benzene) 1,500 (1,3,5-trimethylbenzene) others ND. reporting limits varv b6, c8
MW-3 qualifiers	11/6/2013	49,000 d1, b6	19,000 d1, b6	6,400 e4	NA	3,200 c8	4,900 c8	2,100 c8	11,000 c8	2,600 c8	700 (TBA), 140 (n-butyl benzene), 130 (isopropylbenzene), 690 (naphthalene), 460 (n-propyl benzene), 3,200 (1,2,4- trimethylbenzene) 1,000 (1,3,5- trimethylbenzene), others ND, reporting limits vary c8
MW-3 qualifiers	3/19/2014	87,000 d1	40,000 d1	11,000 e4	NA	5,500	7,200	2,000	11,000	4,400	1,500 (TBA), 480 (naphthalene), 340 (n-propyl benzene), 2,600 (1,2,4-trimethylbenzene) 780 (1,3,5- trimethylbenzene), others ND, reporting limits varv
MW-3 qualifiers	6/20/2014	54,000 d1	26,000 d1	12,000 e4	NA	1,100	ND <100	ND <100	5,700	2,700	790 (TBA), 420 (naphthalene), 2,300 (1,2,4-trimethylbenzene) 610 (1,3,5-trimethylbenzene), others ND. reporting limits varv

TABLE 3
Summary of Groundwater Analytical Data
Total Petroleum Hydrocarbons and VOCs
Former McGrath Steel
6655 Hollis Street
Emeryville, California
AllWest Project No. 15179.23

Sample / Field Point Name	Date Sampled	TPH-g (µg/L)	TPH-ms (µg/L)	TPH-d (µg/L)	TPH-mo (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	Other VOCs (µg/L)
MW-3 qualifiers	2/28/2015	84,000 d1	21,000 d1	1,400 e4	NA	7,700	4,700	1,300	6,000	5,200	3,400 (TBA), 430 (naphthalene), 150 (n-propyl benzene), 1,400 (1,2,4-trimethylbenzene), 380 (1,3,5-trimethylbenzene), others ND. reporting limits vary
B15 qualifiers	1/17/2013	1,900 b1	1,300 d1, b1	740 e4, b1	NA	3.1 b1	32 b1	24 b1	160 b1	ND <1.2 b1	9.8 (n-butyl benzene) 27 (naphthalene) 100 (1,2,4-trimethylbenzene) 1.8 (sec-butyl benzene) 2.6 (isopropylbenzene) 12 (n-propyl benzene) 53 (TCE) 33 (1,3,5-trimethylbenzene) ND (others - varies) b1
B16 qualifiers	1/17/2013	47,000 b1	ND <5,000 d1, b1	6,300 e4, b1	NA	2,200 b1	5,700 b1	1,100 b1	5,800 b1	900 b1	190 (naphthalene) 1,600 (1,2,4-trimethylbenzene) 180 (n-propyl benzene) 460 (1,3,5-trimethylbenzene) ND (others - varies) b1
B17 qualifiers	1/16/2013	190 b1	ND <50 b1	320 e7, e2, b1	NA	ND <0.5 b1	ND <0.5 b1	ND <0.5 b1	ND <0.5 b1	ND <0.5 b1	ND - varies b1

TABLE 3
Summary of Groundwater Analytical Data
Total Petroleum Hydrocarbons and VOCs
Former McGrath Steel
6655 Hollis Street
Emeryville, California
AllWest Project No. 15179.23

Sample / Field Point Name	Date Sampled	TPH-g (µg/L)	TPH-ms (µg/L)	TPH-d (µg/L)	TPH-mo (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	Other VOCs (µg/L)
B18 qualifiers	1/16/2013	8,300 b1	4,800 d2, b1	1,500 e4, b1	NA	17 b1	ND <12 b1	290 b1	1,100 b1	ND <12 b1	64 (naphthalene) 380 (1,2,4-trimethylbenzene) 15 (isopropylbenzene) 57 (n-propyl benzene) 100 (1,3,5-trimethylbenzene) ND (others - varies) b1
B19 qualifiers	1/16/2013	5,000 b1	3,000 d2, b1	1,300 e4, b1	NA	6.5 b1	ND <5.0 b1	150 b1	350 b1	ND <5.0 b1	27 (n-butyl benzene) 44 (naphthalene) 290 (1,2,4-trimethylbenzene) 7.3 (sec-buytl benzene) 14 (isopropylbenzene) 57 (n-propyl benzene) 89 (1,3,5-trimethylbenzene) ND (others - varies) b1
B20 qualifiers	1/17/2013	160,000 b1, b6	22,000 b1, b6, d1	95,000 b1, b6, e4	NA	21,000 b1, b6	47,000 b1, b6	3,700 b1, b6	21,000 b1, b6	2,300 b1, b6	1,800 (1,2,4-trimethylbenzene) ND (others - varies) b1, b6
B21 qualifiers	1/18/2013	41,000	16,000 d1	3,900 e4	NA	ND <2,500	6,100	ND <2,500	6,200	140,000	ND (varies)
B22 qualifiers	1/18/2013	110,000	17,000 d1	8,800 e4	NA	7,700	26,000	3,500	21,000	8,100	910 (naphthalene) 2,300 (1,2,4-trimethylbenzene) 590 (1,3,5-trimethylbenzene) ND (others - varies)

TABLE 3
Summary of Groundwater Analytical Data
Total Petroleum Hydrocarbons and VOCs
Former McGrath Steel
6655 Hollis Street
Emeryville, California
AllWest Project No. 15179.23

Sample / Field Point Name	Date Sampled	TPH-g (µg/L)	TPH-ms (µg/L)	TPH-d (µg/L)	TPH-mo (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	Other VOCs (µg/L)
B23 qualifiers	1/17/2013	170 b1	160 b1, d1	140 b1, e2, e4	NA	ND <0.5 b1	1.3 b1	1.3 b1	5.0 b1	1.8 b1	0.96 (n-butyl benzene) 2.1 (naphthalene) 3.0 (1,2,4-trimethylbenzene) 1.3 (sec-butyl benzene) 3.8 (isopropylbenzene) 9.3 (n-propyl benzene) 0.76 (1,3,5-trimethylbenzene) ND (others - varies) b1
B24 qualifiers	1/18/2013	17,000	7,600 d1	8,800 e4	NA	340	2,100	520	2,800	2,500	130 (naphthalene) 710 (1,2,4-trimethylbenzene) 87 (n-propyl benzene) 220 (1,3,5-trimethylbenzene) ND (others - varies)
B25 qualifiers	1/16/2013	270 b1	87 d2, b1	340 e7, e4, e2, b1	NA	ND <0.5 c8, b1	ND <0.5 c8, b1	4.3 c8, b1	1.4 c8, b1	23 c8, b1	2.4 (2-butanone) 0.55 (1,2-DCA) 3.0 (naphthalene) 4.8 (1,2,4-trimethylbenzene) 1.5 (1,1-dichloroethene) 1.5 (n-propyl benzene) 0.83 (TCE) 1.0 (1,3,5-trimethylbenzene) ND (others - varies) c8, b1

TABLE 3
Summary of Groundwater Analytical Data
Total Petroleum Hydrocarbons and VOCs

Former McGrath Steel
6655 Hollis Street
Emeryville, California
AllWest Project No. 15179.23

Sample / Field Point Name	Date Sampled	TPH-g (µg/L)	TPH-ms (µg/L)	TPH-d (µg/L)	TPH-mo (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	Other VOCs (µg/L)
AMW-1 qualifiers	8/7/2013	ND <50 b1	ND <50 b1	110 e7, e1, b1	NA	ND <1.2 b1	ND <1.2 b1	ND <1.2 b1	ND <1.2 b1	2.5 b1	2.0 (1,1-dichloroethane) 39 (1,1-dichloroethene) 7.3 (TCE) ND (others, reporting limits vary) b1
AMW-1 qualifiers	11/6/2013	ND <50 c4	ND <50 c4	ND <50	NA	ND <1.0	ND <1.0	ND <1.0	ND <1.0	2.4	2.0 (1,1-dichloroethane), 50 (1,1-dichloroethene), 7.6 (TCE), ND (others, reporting limits vary)
AMW-1 qualifiers	3/19/2014	ND <50 c2, b1	ND <50 c2, b1	ND <50 b1	NA	ND <5.0 b1	ND <5.0 b1	ND <5.0 b1	ND <5.0 b1	ND <5.0 b1	83 (1,1-dichloroethene), 7.2 (TCE), ND (others, reporting limits vary) b1
AMW-1 qualifiers	6/20/2014	ND <50 c2, S	ND <50 c2, S	ND <100	NA	ND <1.0	ND <1.0	ND <1.0	ND <1.0	2.3	1.8 (1,1-dichloroethane), 21 (1,1-dichloroethene), 5.4 (TCE), ND (others, reporting limits vary)
AMW-1	2/28/2015	ND <50	ND <50	ND <50	NA	ND <0.50	ND <0.50	ND <0.50	ND <0.50	2.1	2.1 (1,1-dichloroethane), 0.82 (1,2-DCA), 36 (1,1-dichloroethene), 0.59 (DIPE), 0.59 (PCE), 6.8 (TCE), ND (others, reporting limits vary)
AMW-2 qualifiers	8/7/2013	1,300 d1, b1	550 d1, b1	210 e4, e2, b1	NA	66 b1	74 b1	48 b1	280 b1	350 b1	22 (naphthalene) 46 (1,2,4-trimethylbenzene) 6.4 (n-propyl benzene) 29 (1,3,5-trimethylbenzene) ND (others, reporting limits vary) b1

TABLE 3
Summary of Groundwater Analytical Data
Total Petroleum Hydrocarbons and VOCs
Former McGrath Steel
6655 Hollis Street
Emeryville, California
AllWest Project No. 15179.23

Sample / Field Point Name	Date Sampled	TPH-g (µg/L)	TPH-ms (µg/L)	TPH-d (µg/L)	TPH-mo (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	Other VOCs (µg/L)
AMW-2 qualifiers	11/6/2013	2,200 d1	1,400 d1	330 e4	NA	130	16	120	270	330	7.2 (n-butyl benzene), 7.2 (isopropylbenzene), 54 (naphthalene), 23 (n-propyl benzene), 150 (1,2,4-trimethylbenzene), 49 (1,3,5-trimethylbenzene), ND (others, reporting limits vary)
AMW-2 qualifiers	3/19/2014	550 d1	430 d1	190 e4	NA	30	ND <5.0	17	19	300	14 (naphthalene), 6.2 (n-propyl benzene), 38 (1,2,4-trimethylbenzene), 6.0 (1,3,5-trimethylbenzene), ND (others, reporting limits vary)
AMW-2 qualifiers	6/20/2014	370 d1	270 d1	110 e4	NA	22	ND <5.0	11	44	380	8.4 (naphthalene), 40 (1,2,4-trimethylbenzene), ND (others, reporting limits vary)
AMW-2 qualifiers	2/28/2015	120 d1	77 d1	ND <50	NA	5.1	ND <5.0	ND <5.0	5.1	260	7.4 (1,2,4-trimethylbenzene), ND (others, reporting limits vary)

TABLE 3
Summary of Groundwater Analytical Data
Total Petroleum Hydrocarbons and VOCs
Former McGrath Steel
6655 Hollis Street
Emeryville, California
AllWest Project No. 15179.23

Sample / Field Point Name	Date Sampled	TPH-g (µg/L)	TPH-ms (µg/L)	TPH-d (µg/L)	TPH-mo (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	Other VOCs (µg/L)
AMW-3	8/7/2013	2,000	1,000	340	NA	17	72	83	360	ND <5.0	7.4 (n-butyl benzene) 18 (naphthalene) 76 (1,2,4-trimethylbenzene) 5.2 (1,1-dichloroethane) 140 (1,1-dichloroethene) 18 (n-propyl benzene) 5.3 (1,1,1-trichloroethane) 20 (TCE) 39 (1,3,5-trimethylbenzene) ND (others, reporting limits vary)
qualifiers		d1, b1	d1, b1	e4, e2, b1							
AMW-3	11/6/2013	110	99	130	NA	ND <5.0	ND <5.0	ND <5.0	ND <5.0	ND <5.0	5.4 (1,1-dichloroethane), 180 (1,1-dichloroethene), 6.1 (1,1,1-trichloroethane), 22 (TCE), ND (others, reporting limits vary)
qualifiers		d1, c4	d1, c4	e4		c8	c8	c8	c8	c8	c8
AMW-3	3/19/2014	140	110	130	NA	ND <5.0	ND <5.0	9.3	ND <5.0	ND <5.0	240 (1,1-dichloroethene), 9.0 (naphthalene), 19 (TCE), ND (others, reporting limits vary)
qualifiers		d1, c4	d1, c4	e4							c8
AMW-3	6/20/2014	320	250	220	NA	13	ND <2.5	44	2.9	ND <2.5	3.4 (1,1-dichloroethane), 74 (1,1-dichloroethene), 12 (naphthalene), 7.5 (n-propyl benzene), 2.8 (1,1,1-trichloroethane), 9.9 (TCE), 6.8 (1,2,4-trimethylbenzene), ND (others, reporting limits vary)
qualifiers		d1, c4, S	d1, c4, S	e4							

TABLE 3
Summary of Groundwater Analytical Data
Total Petroleum Hydrocarbons and VOCs
Former McGrath Steel
6655 Hollis Street
Emeryville, California
AllWest Project No. 15179.23

Sample / Field Point Name	Date Sampled	TPH-g (µg/L)	TPH-ms (µg/L)	TPH-d (µg/L)	TPH-mo (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	Other VOCs (µg/L)
AMW-3 qualifiers	2/28/2015	770 d1, c4	560 d1, c4	240 e4	NA	7.4	3.0	28	100	ND <2.5	4.4 (n-butyl benzene), 3.6 (1,1-dichloroethane), 77 (1,1-dichloroethene), 3.1 (isopropylbenzene), 16 (naphthalene), 8.9 (n-propyl benzene), 4.0 (1,1,1-trichloroethane), 13 (TCE), 57 (1,2,4-trimethylbenzene), 17 (1,3,5-trimethylbenzene), ND (others, reporting limits vary)
SB-26	2/4/2016	1,700	NA	NA	NA	310	300	85	370	170	7.9 (Naphthalene) 7.8 (n-Propyl benzene) 18 (TCE) 67 (1, 2, 4-Trimethylbenzene) 21 (1, 3, 5-Trimethylbenzene) ND (other varies)
SFRWQCB Commercial/Industrial ESLs, drinking water*		100 ON	100 ON	100 ON	50,000 GC	1.0 DE	40 DE/ON	30 DE/ON	20 DE/ON	5.0 DE/ON	0.5 (1,2-DCA) DE 12 (TBA) DE 5.0 (TCE) DE 0.5 (1,3-dichloropropene) DE 0.17 (naphthalene) DE NE or varies (others)
SFRWQCB Commercial/Industrial ESLs, non-drinking water*		640 AHG	640 AHG	640 AHG	50,000 GC	9.7 VI	130 AHG	43 AHG	100 AHG	180 ON	53 (1,2-DCA) VI 18,000 (TBA) AHG 49 (TCE) VI 33 (1,3-dichloropropene) VI 24 (naphthalene) AHG NE or vary (others)

TABLE 3
Summary of Groundwater Analytical Data
Total Petroleum Hydrocarbons and VOCs

Former McGrath Steel
6655 Hollis Street
Emeryville, California
AllWest Project No. 15179.23

Sample / Field Point Name	Date Sampled	TPH-g (µg/L)	TPH-ms (µg/L)	TPH-d (µg/L)	TPH-mo (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	Other VOCs (µg/L)
SFRWQCB Commercial/Industrial ESLs, vapor intrusion		NE	NE	NE	NE	9.7 VI	30,000 VI	110 VI	11,000 VI	11,000 VI	53 (1,2-DCA) 49 (TCE) VI 33 (1,3-dichloropropene) VI 170 (naphthalene) VI NE or vary (others)

Notes:

All results are reported in micrograms per liter (µg/L) [equivalent to parts per billion (ppb)], except where noted.

- 1,2-DCA 1,2-dichloroethane, Analytical Method SW8260B
- TCE trichloroethene, Analytical Method SW8260B
- TPH-g Total petroleum hydrocarbons as gasoline, Analytical Method SW8260B, except samples collected on 10/17/95, 8/22/05 and 12/20/05 Analytical Method SW8015B
- TPH-ms Total petroleum hydrocarbons Mineral Spirits Range (C9-C12), Analytical Method SW8015Bm
- TPH-d Total petroleum hydrocarbons as diesel, C10-C23, Analytical Method SW8015B with silica gel cleanup
- TPH-mo Total petroleum hydrocarbons as motor oil, C18-C36, Analytical Method SW8015B with silica gel cleanup
- MTBE Methyl tertiary butyl ether, Analytical Method SW8260B
- TBA Tertiary butyl alcohol, Analytical Method SW8260B
- BTEX Benzene, Toluene, Ethylbenzene, Xylenes, Analytical Method SW8021B on 10/17/95 only; Analytical Method SW8260B on all other dates
- VOCs Volatile organic compounds, Analytical Method SW8260B
- ND <100 Not detected at or above listed reporting limit
- NE Not established
- NA Not analyzed

Laboratory Qualifiers:

- L - lighter hydrocarbons contributed to the quantitation
- Y - sample exhibits chromatographic pattern which does not resemble standard

TABLE 3
Summary of Groundwater Analytical Data
Total Petroleum Hydrocarbons and VOCs

Former McGrath Steel
6655 Hollis Street
Emeryville, California
AllWest Project No. 15179.23

Sample / Field Point Name	Date Sampled	TPH-g (µg/L)	TPH-ms (µg/L)	TPH-d (µg/L)	TPH-mo (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	Other VOCs (µg/L)
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- b1 - aqueous sample that contains greater than ~1 vol. % sediment
- b6 - lighter than water immiscible sheen/product is present
- c8 - sample pH is greater than 2
- d1 - weakly modified or unmodified gasoline is significant
- d2 - heavier gasoline range compounds are significant (aged gasoline?)
- e2 - diesel range compounds are significant; no recognizable pattern
- e4 - gasoline-range compounds are significant
- e7 - oil range compounds are significant

San Francisco Bay Regional Water Quality Control Board (SFRWQCB) Environmental Screening Levels (ESLs) for commercial/industrial land use where groundwater IS a potential drinking water resource were established using the site-specific Tier 2 Interactive Tool, *Table T2-1: Tier 2 ESL Input and Output, User's Guide: Derivation and Application of Environmental Screening Levels (ESLs)*, Interim Final, February 22, 2016. These ESLs were established with the following assumptions: Commercial property use, a 'sand scenario' soil type, shallow groundwater (<10 ft below ground surface (bgs)), and shallow soil depths (<10 ft bgs) for direct exposure and vapor intrusion.

San Francisco Bay Regional Water Quality Control Board (SFRWQCB) Environmental Screening Levels (ESLs) for commercial/industrial land use where groundwater is NOT a potential drinking water resource were established using the site-specific Tier 2 Interactive Tool, *Table T2-1: Tier 2 ESL Input and Output, User's Guide: Derivation and Application of Environmental Screening Levels (ESLs)*, Interim Final, February 22, 2016, Revision 3 (May 23, 2016). These ESLs were established with the following assumptions: Commercial property use, a 'sand scenario' soil type, shallow groundwater (<10 ft below ground surface (bgs)), and shallow soil depths (<10 ft bgs) for direct exposure and vapor intrusion.

San Francisco Bay Regional Water Quality Control Board (SFRWQCB) Groundwater Screening Levels for Evaluation of Potential Vapor Intrusion (Volatile Chemicals Only) for commercial/industrial land use were established using the site-specific Tier 2 Interactive Tool, *Table T2-1: Tier 2 ESL Input and Output, User's Guide: Derivation and Application of Environmental Screening Levels (ESLs)*, Interim Final, February 22, 2016, Revision 3 (May 23, 2016). These ESLs were established with the following assumptions: Commercial property use, a 'sand scenario' soil type, shallow groundwater (<10 ft below ground surface (bgs)), and shallow soil depths (<10 ft bgs) for direct exposure and vapor intrusion.

* The subject site lies within the City of Emeryville, where groundwater use as a drinking water resource is currently prohibited by City ordinance due to widespread regional contamination, and no plans exist for future beneficial groundwater use.

TABLE 3
Summary of Groundwater Analytical Data
Total Petroleum Hydrocarbons and VOCs

Former McGrath Steel
6655 Hollis Street
Emeryville, California
AllWest Project No. 15179.23

Sample / Field Point Name	Date Sampled	TPH-g (µg/L)	TPH-ms (µg/L)	TPH-d (µg/L)	TPH-mo (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl- benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	Other VOCs (µg/L)
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** Residential vapor intrusion ESL - commercial ESL for vapor intrusion not established, soil gas sampling recommended.

ON = Taste and Odor Nuisance Screening Level (*Table GW-5 - Odor Nuisance Levels*)

VI = Vapor Intrusion Human Health Risk Screening Level (*Table GW-3 - Groundwater Vapor Intrusion Human Health Risk Levels*)

GC = Gross Contamination Screening Level (*Table GW-4 - Gross Contamination Levels*)

AHG = Ecological Aquatic Habitat Screening Level (*Table GW-2 - Aquatic Habitat Goal Levels*)

TABLE 4
Summary of Groundwater Analytical Data
PNAs/PAHs
Former McGrath Steel
6655 Hollis Street
Emeryville, California
AllWest Project No. 15179.23

Sample / Field Point Name	Date Sampled	Benzo (a) anthracene (µg/L)	Fluoranthene (µg/L)	1-Methylnaphthalene (µg/L)	2-Methylnaphthalene (µg/L)	Naphthalene (µg/L)	Phenanthrene (µg/L)	Pyrene (µg/L)	Other PNAs/PAHs (µg/L)
B15 (qualifiers)	1/17/2013 b1	ND <0.5	ND <0.5	ND <0.5	ND <0.5	ND <0.5	ND <0.5	ND <0.5	ND <0.5
B16	1/17/2013	NA	NA	NA	NA	NA	NA	NA	NA
B17 (qualifiers)	1/16/2013 b1	ND <0.5	ND <0.5	ND <0.5	ND <0.5	ND <0.5	ND <0.5	ND <0.5	ND <0.5
B18 (qualifiers)	1/16/2013 b1	ND <5.0	ND <5.0	22	36	67	ND <5.0	ND <5.0	ND <5.0
B19 (qualifiers)	1/16/2013 b1	ND <0.5	ND <0.5	15	27	0.67	ND <0.5	ND <0.5	ND <0.5
B20 (qualifiers)	1/17/2013 b1	ND <50	ND <50	460	750	1,700	ND <50	ND <50	ND <50
B21	1/18/2013	NA	NA	NA	NA	NA	NA	NA	NA
B22	1/18/2013	ND <50	ND <50	280	420	1,300	ND <50	ND <50	ND <50
B23 (qualifiers)	1/17/2013 b1	0.56	0.94	ND <0.5	ND <0.5	ND <0.55	0.75	1.0	ND <0.5
B24	1/18/2013	ND <5.0	ND <5.0	20	30	80	ND <5.0	ND <5.0	ND <5.0
B25 (qualifiers)	1/16/2013 b1	ND <0.5	ND <0.5	4.4	6.8	12	0.88	ND <0.5	ND <0.5
MW-3 qualifiers	8/7/2013 b6	ND <50	ND <50	390	710	890	ND <50	ND <50	ND <50
MW-3	11/6/2013	ND <25	ND <25	330	620	1,100	ND <25	ND <25	ND <25

TABLE 4
Summary of Groundwater Analytical Data
PNAs/PAHs
Former McGrath Steel
6655 Hollis Street
Emeryville, California
AllWest Project No. 15179.23

Sample / Field Point Name	Date Sampled	Benzo (a) anthracene (µg/L)	Fluoranthene (µg/L)	1-Methylnaphthalene (µg/L)	2-Methylnaphthalene (µg/L)	Naphthalene (µg/L)	Phenanthrene (µg/L)	Pyrene (µg/L)	Other PNAs/PAHs (µg/L)
qualifiers	c1								
MW-3	3/19/2014	ND <10	ND <10	80	150	360	ND <10	ND <10	ND <10
MW-3	6/20/2014	ND <21	ND <21	110	210	410	ND <21	ND <21	ND <21
MW-3	2/28/2015	ND <25	ND <25	700	1,400	1,100	ND <25	ND <25	ND <25
qualifiers	c1								
AMW-1	8/7/2013	ND <0.5	ND <0.5	ND <0.5	ND <0.5	ND <0.5	ND <0.5	ND <0.5	ND <0.5
qualifiers	b1								
AMW-1	11/6/2013	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND	ND <0.50
AMW-1	3/19/2014	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND	ND <0.50
AMW-1	6/20/2014	ND <2.1	ND <2.1	ND <11	ND <2.1	ND <2.1	ND <2.1	ND <2.1	ND <2.1
AMW-1	2/28/2015	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND	ND <0.50
AMW-2	8/7/2013	ND <0.5	ND <0.5	1.5	1.6	7.7	ND <0.5	ND <0.5	ND <0.5
qualifiers	b1								
AMW-2	11/6/2013	ND <0.50	ND <0.50	5.4	9.2	26	ND <0.50	ND	ND <0.50
AMW-2	3/19/2014	ND <0.50	ND <0.50	2.3	2.6	13	ND <0.50	ND	ND <0.50
AMW-2	6/20/2014	ND <2.1	ND <2.1	ND <10	ND <2.1	2.1	ND <2.1	ND <2.1	ND <2.1
AMW-2	2/28/2015	ND <0.50	ND <0.50	ND <0.50	ND <0.50	0.96	ND <0.50	ND	ND <0.50
AMW-3	8/7/2013	ND <0.5	ND <0.5	3.2	ND <0.5	ND <0.5	ND <0.5	ND <0.5	ND <0.5
qualifiers	b1								
AMW-3	11/6/2013	ND <0.50	ND <0.50	1.5	2.6	7.5	ND <0.50	ND	ND <0.50
AMW-3	3/19/2014	ND <0.50	ND <0.50	2.7	2.8	6.3	ND <0.50	ND	ND <0.50
AMW-3	6/20/2014	ND <1.5	ND <1.5	ND <7.4	ND <1.5	2.3	ND <1.5	ND <1.5	ND <1.5
AMW-3	2/28/2015	ND <0.50	ND <0.50	4.4	6.7	9.4	ND <0.50	ND	ND <0.50

TABLE 4
Summary of Groundwater Analytical Data
PNAs/PAHs
Former McGrath Steel
6655 Hollis Street
Emeryville, California
AllWest Project No. 15179.23

Sample / Field Point Name	Date Sampled	Benzo (a) anthracene (µg/L)	Fluoranthene (µg/L)	1-Methylnaphthalene (µg/L)	2-Methylnaphthalene (µg/L)	Naphthalene (µg/L)	Phenanthrene (µg/L)	Pyrene (µg/L)	Other PNAs/PAHs (µg/L)
SFRWQCB Commercial/Industrial ESLs, drinking water*		0.027 AHG	8.0 AHG	NE	2.1 AHG	0.17 DE	4.6 AHG	2.0 AHG	Vary
SFRWQCB Commercial/Industrial ESLs, non-drinking water*		0.027 AHG	8.0 AHG	NE	2.1 AHG	24 AHG	4.6 AHG	2.0 AHG	Vary
SFRWQCB Commercial/Industrial ESLs, vapor intrusion		NE	NE	NE	NE	170 VI	NE	NE	Vary

Notes: All results are reported in micrograms per liter (µg/L) [equivalent to parts per billion (ppb)], except where noted.

All samples analyzed by McCampbell Analytical, Inc., Pittsburg, California

PNAs/PAHs = Polynuclear Aromatic Hydrocarbons/Polycyclic Aromatic Hydrocarbons by analytical method SW8270C-SIM

ND (<0.5) - Not detected at or above listed reporting limit

NE - Not established

Laboratory Qualifiers:

b1 - Aqueous sample that contains greater than ~1 vol. % sediment

b6 - Lighter than water immiscible sheen/product is present.

TABLE 4
Summary of Groundwater Analytical Data
PNAs/PAHs

Former McGrath Steel
6655 Hollis Street
Emeryville, California
AllWest Project No. 15179.23

Sample / Field Point Name	Date Sampled	Benzo (a) anthracene (µg/L)	Fluoranthene (µg/L)	1-Methylnaphthalene (µg/L)	2-Methylnaphthalene (µg/L)	Naphthalene (µg/L)	Phenanthrene (µg/L)	Pyrene (µg/L)	Other PNAs/PAHs (µg/L)
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San Francisco Bay Regional Water Quality Control Board (SFRWQCB) Environmental Screening Levels (ESLs) for commercial/industrial land use where groundwater IS a potential drinking water resource were established using the site-specific Tier 2 Interactive Tool, *Table T2-1: Tier 2 ESL Input and Output, User's Guide: Derivation and Application of Environmental Screening Levels (ESLs)*, Interim Final, February 22, 2016, Revision 3 (May 23, 2016). These ESLs were established with the following assumptions: Commercial property use, a 'sand scenario' soil type, shallow groundwater (<10 ft below ground surface (bgs)), and shallow soil depths (<10 ft bgs) for direct exposure and vapor intrusion.

San Francisco Bay Regional Water Quality Control Board (SFRWQCB) Environmental Screening Levels (ESLs) for commercial/industrial land use where groundwater is NOT a potential drinking water resource were established using the site-specific Tier 2 Interactive Tool, *Table T2-1: Tier 2 ESL Input and Output, User's Guide: Derivation and Application of Environmental Screening Levels (ESLs)*, Interim Final, February 22, 2016, Revision 3 (May 23, 2016). These ESLs were established with the following assumptions: Commercial property use, a 'sand scenario' soil type, shallow groundwater (<10 ft below ground surface (bgs)), and shallow soil depths (<10 ft bgs) for direct exposure and vapor intrusion.

ON = Taste and Odor Nuisance Screening Level (*Table GW-5 - Odor Nuisance Levels*)

VI = Vapor Intrusion Human Health Risk Screening Level (*Table GW-3 - Groundwater Vapor Intrusion Human Health Risk Levels*)

GC = Gross Contamination Screening Level (*Table GW-4 - Gross Contamination Levels*)

AHG = Ecological Aquatic Habitat Screening Level (*Table GW-2 - Aquatic Habitat Goal Levels*)

* The subject site lies within the City of Emeryville, where groundwater use as a drinking water resource is currently prohibited by City ordinance due to widespread regional contamination, and no plans exist for future beneficial groundwater use.

TABLE 5
Summary of Soil Vapor Analytical Data
Former McGrath Steel
6655 Hollis Street
Emeryville, California
AllWest Project No. 15179.23/16076.23

Sample Number	Date	Sample Depth feet bgs	TPH-g $\mu\text{g}/\text{m}^3$	Benzene $\mu\text{g}/\text{m}^3$	Ethylbenzene $\mu\text{g}/\text{m}^3$	Isopropanol $\mu\text{g}/\text{m}^3$	4-Ethyltoluene $\mu\text{g}/\text{m}^3$	Toluene $\mu\text{g}/\text{m}^3$	Xylenes (Total)* $\mu\text{g}/\text{m}^3$	Napthalene $\mu\text{g}/\text{m}^3$	1,2,4-Trimethylbenzene $\mu\text{g}/\text{m}^3$	1,3,5-Trimethylbenzene $\mu\text{g}/\text{m}^3$	Tetrachloroethane (PCE) $\mu\text{g}/\text{m}^3$	MTBE $\mu\text{g}/\text{m}^3$	Other VOCs $\mu\text{g}/\text{m}^3$	Helium** (Leak detect gas) (% v/v)	Methane (% v/v)	Carbon Dioxide (% v/v)	Oxygen (% v/v)
SVP-1	2/5/2016	7	330,000,000	500,000	410,000	650,000	71,000	1,400,000	1,640,000	ND (<260,000)	180,000	62,000	ND (<34,000)	ND (<72,000)	ND (others, varies)	0.130	8.80	13.8	2.72
SVP-2	2/5/2016	7	13,000,000	210,000	61,000	ND (<6,100)	8,700	330,000	362,000	ND (<13,000)	21,000	9,100	ND (<1,700)	ND (<3,600)	ND (others, varies)	0.568	ND (<0.500)	ND (<0.500)	9.27
SVP-3	2/6/2016	7	910,000,000	1,100,000	720,000	1,000,000	160,000	1,700,000	3,280,000	ND (<260,000)	390,000	170,000	ND (<34,000)	ND (<72,000)	ND (others, varies)	0.0113	4.63	14.7	4.11
SVP-4	2/6/2016 - 2/8/2016	7	10,000,000	45,000	90,000	ND (<6,100)	29,000	15,000	232,000	ND (<13,000)	83,000	27,000	ND (<1,700)	12,000	ND (others, varies)	0.417	1.83	ND (<0.500)	8.30
SVP-5	2/8/2016	7	84,000,000	1,600,000	810,000	160,000	120,000	1,300,000	3,570,000	ND (<130,000)	320,000	130,000	ND (<17,000)	990,000	ND (others, varies)	0.0706	0.918	ND (<0.500)	11.3
SVP-6	2/8/2016	7	13,000,000	130,000	66,000	ND (<7,700)	14,000	220,000	301,000	ND (<16,000)	38,000	13,000	ND (<2,100)	6,900	1,300 (1,1-Dichloroethane) 2,500 (1,2-Dichloroethane) ND (others, varies)	0.0106	1.52	ND (<0.500)	7.33
SVP-6 Ambient	2/8/2016	7	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	7.95	NA	NA	NA
SVP-7	2/5/2016	0.5	220,000	20	97	ND (<17)	85	46	490	ND (<36)	290	77	41	ND (<10)	8.1 (2-Butanone) 64 (Acetone) ND (others, varies)	0.319	ND (<0.500)	3.34	18.2
SVP-12	5/12/2016	0.5	ND (<7,000)	ND (<1.6)	ND (<2.2)	51	ND (<2.5)	3.2	ND (<2.2, <8.7)	ND (<26)	ND (<7.4)	ND (<2.5)	19	ND (<7.2)	22 (Acetone) 9.6 (Ethanol)	0.0920	<0.50	2.49	19.2
SVP-13	5/13/2016	0.5	ND (<7,000)	ND (<1.6)	ND (<2.2)	37	ND (<2.5)	2.2	ND (<2.2, <8.7)	ND (<26)	ND (<7.4)	ND (<2.5)	4.5	ND (<7.2)	26 (Acetone) 11 (Ethanol)	0.807	<0.50	7.88	15.4
SVP-14	5/13/2016	0.5	ND (<7,000)	12	11	ND (<12)	3.7	31	54.1	ND (<26)	8.9	ND (<2.5)	11	ND (<7.2)	8.9 (Acetone) 14 (Ethanol)	0.0301	<0.50	3.64	18.4
SVP-15	5/13/2016	0.5	ND (<7,000)	ND (<1.6)	ND (<2.2)	16	ND (<2.5)	ND (<1.9)	ND (<2.2, <8.7)	ND (<26)	ND (<7.4)	ND (<2.5)	ND (<3.4)	ND (<7.2)	11 (Acetone) 24 (Ethanol)	0.0232	<0.50	2.53	17.0
SVP-16	5/13/2016	0.5	ND (<7,000)	ND (<1.6)	ND (<2.2)	ND (<12)	ND (<2.5)	5.6	ND (<2.2, <8.7)	ND (<26)	ND (<7.4)	ND (<2.5)	ND (<3.4)	ND (<7.2)	6.4 (Tert-Butyl Alcohol (TBA))	0.149	<0.50	12.40	7.54
SFRWQCB ESL	Commercial Soil Gas		100,000 ON	420 VI	4,900 VI	NE	NE	1,300,000 VI	440,000 VI/ON	360 VI	NE	NE	2,100 VI	47,000 VI	31,000,000 (Acetone) ON 7,700 (1,1-Dichloroethane) VI 470 (1,2-Dichloroethane) VI	NE	NE	NE	NE
SWRCB LTUSTCCP	Commercial Soil Gas With 5 ft bgs Bioattenuation Zone (Oxygen \geq 4%)		NE	280,000	3,600,000	NE	NE	NE	NE	310,000	NE	NE	NE	NE	NE (Acetone) NE (1,1-Dichloroethane) NE (1,2-Dichloroethane)	NE	NE	NE	\geq 4.0
SWRCB LTUSTCCP	Commercial Soil Gas Without 5 ft bgs Bioattenuation Zone (Oxygen < 4%)		NE	280	3,600	NE	NE	NE	NE	310	NE	NE	NE	NE	NE (Acetone) NE (1,1-Dichloroethane) NE (1,2-Dichloroethane)	NE	NE	NE	<4.0

Notes:

VOCs = Volatile Organic Compounds by EPA Method TO-15, Eurofins/Calscience, Inc., Garden Grove, CA
Helium, methane, carbon dioxide and oxygen by analytical method ASTM D1946, Eurofins/Calscience, Inc., Garden Grove, CA
 $\mu\text{g}/\text{m}^3$ = Micrograms per cubic meter = 0.001 micrograms per liter
% v/v = percent by volume
ND = Not detected at or below laboratory reporting limit
NE = Not Established
* = Quantified as o- and p/m-xylenes, detection limits listed respectively

ON = Taste and Odor Nuisance Screening Level
VI = Vapor Intrusion Human Health Risk Screening Level
GC = Gross Contamination Screening Level
AHG = Ecological Aquatic Habitat Screening Level
NA = Not Analyzed
Bold Font = Detected values exceed regulatory screening levels
** = Leak detection gas or agent

ESL = San Francisco Bay Regional Water Quality Control Board (SFRWQCB) Environmental Screening Levels (ESLs) for sub-slab and soil gas vapor intrusion for commercial/industrial land use were established using the Tier *Table SG-1 - Subslab/Soil Gas Vapor Intrusion: Human Health Risk Levels*, and *Table SG-2 - Subslab/Soil Gas Vapor Intrusion: Odor Nuisance Levels, User's Guide: Derivation and Application of Environmental Screening Levels (ESLs)*, Interim Final, February 22, 2016, Revision 3 (May 23, 2016).

SWRCB = California State Water Resources Control Board (SWRCB) *Low Threat Underground Storage Tank Case Closure Policy* (LTUSTCCP) criteria for soil gas, *Appendix 4, Scenario 4 - Direct Measurement of Soil Gas Concentrations, Soil Gas Sampling - with Bioattenuation Zone and No LTUSTCCP Bioattenuation Zone*, August 24, 2012.

TABLE 6
SUMMARY OF INDOOR AIR QUALITY SAMPLE ANALYTICAL DATA
FORMER McGRATH STEEL
6655 HOLLIS STREET AND 1471 67th STREET
EMERYVILLE, CALIFORNIA
AllWest Project No. 16076.23

Sample ID	Sample Date	Sample Duration	Location	TPH-g (µg/m ³)	1,1,2-Trichloro-1,2,2-Trifluoroethane (µg/m ³)	1,1-Difluoroethane (µg/m ³)	1,2,4-Trimethylbenzene (µg/m ³)	1,2-Dichloroethane (µg/m ³)	1,3,5-Trimethylbenzene (µg/m ³)	4-Ethyl-toluene (µg/m ³)	Benzene (µg/m ³)	Carbon tetrachloride (µg/m ³)	Chloro-methane (µg/m ³)	Dichlorodifluoro-methane (µg/m ³)	Ethyl-benzene (µg/m ³)	Methylene Chloride (µg/m ³)	Naphthalene (µg/m ³)	o-Xylene (µg/m ³)	p/m-Xylene (µg/m ³)	Toluene (µg/m ³)	Trichloro-ethene (µg/m ³)	Trichloro-fluoro-methane (µg/m ³)	Other VOCs (µg/m ³)
IAQ-1	6/25/2014-6/26/2014	24 hours	Restroom	ND (<930)	0.53	0.11	0.53	0.15	0.13	0.20	0.79	0.50	1.0	2.2	0.31	0.22	0.50	0.38	1.4	1.9	ND (<0.13)	1.3	ND, reporting limits vary
IAQ-2	6/25/2014-6/26/2014	24 hours	Office	ND (<930)	0.54	0.099	0.34	ND (<0.10)	ND (<0.12)	0.17	0.56	0.55	1.1	2.3	0.28	0.36	0.15	0.24	0.80	1.2	0.48	1.3	ND, reporting limits vary
IAQ-3	6/25/2014-6/26/2014	24 hours	North wall	ND (<930)	0.56	0.12	0.15	ND (<0.10)	ND (<0.12)	ND (<0.12)	0.39	0.55	1.1	2.3	0.14	0.29	0.080	0.19	0.45	0.53	ND (<0.13)	1.3	ND, reporting limits vary
IAQ-4	6/25/2014-6/26/2014	24 hours	Storage area	ND (<930)	0.52	0.15	0.28	ND (<0.10)	0.15	0.20	0.54	0.53	0.99	2.2	0.14	0.26	0.076	0.19	0.48	0.59	ND (<0.13)	1.2	ND, reporting limits vary
IAQ-5	6/25/2014-6/26/2014	24 hours	South central floor area	ND (<930)	0.57	0.14	0.22	ND (<0.10)	ND (<0.12)	ND (<0.12)	0.96	0.54	1.3	2.5	0.26	0.26	0.079	0.18	0.49	0.52	ND (<0.13)	1.3	ND, reporting limits vary
OAA-1	6/25/2014-6/26/2014	24 hours	2nd floor balcony of adjacent building	ND (<930)	0.54	0.19	0.15	ND (<0.10)	ND (<0.12)	ND (<0.12)	0.31	0.51	1.0	2.3	0.16	0.24	0.13	0.20	0.50	0.61	ND (<0.13)	1.3	ND, reporting limits vary
IAQ-6	5/13/2016	8 hours	1st floor central office counter	1,000	0.51	ND (<0.10)	0.44	ND (<0.10)	0.13	ND (<0.25)	0.41	0.42	0.94	1.4	0.21	3.1	0.17	0.36	0.80	1.1	ND (<0.13)	1.2	ND, reporting limits vary
IAQ-7	5/13/2016	8 hours	1st floor woman's bathroom	1,200	0.46	ND (<0.10)	ND (<0.25)	ND (<0.10)	ND (<0.12)	ND (<0.25)	0.30	0.38	0.99	1.4	0.13	2.6	0.092	0.22	0.44	0.94	0.17	1.1	0.53 - Chloroform
IAQ-8	5/13/2016	8 hours	warehouse - outside SW office	1,200	0.52	ND (<0.68)	ND (<0.25)	ND (<0.10)	ND (<0.12)	ND (<0.25)	0.54	0.42	0.95	1.5	ND (<0.11)	0.32	ND (<0.052)	0.16	0.26	0.36	ND (<0.13)	1.2	ND, reporting limits vary
IAQ-9	5/13/2016	8 hours	warehouse - adjacent to stairs by restroom	1,400	0.54	ND (<0.68)	ND (<0.25)	ND (<0.10)	ND (<0.12)	ND (<0.25)	0.55	0.43	1.0	1.4	0.13	0.33	0.057	0.31	0.49	0.50	ND (<0.13)	1.3	ND, reporting limits vary
IAQ-10	5/13/2016	8 hours	warehouse - restroom	1,100	0.51	ND (<0.68)	ND (<0.25)	ND (<0.10)	ND (<0.12)	ND (<0.25)	0.40	0.40	0.94	1.6	0.28	0.28	ND (<0.052)	0.91	1.3	0.37	ND (<0.13)	1.2	ND, reporting limits vary
OAA-2	5/13/2016	8 hours	2nd floor balcony of adjacent building	970	0.49	ND (<0.68)	ND (<0.25)	ND (<0.10)	ND (<0.12)	ND (<0.25)	0.30	0.40	1.1	1.4	0.12	0.27	ND (<0.052)	0.16	0.38	0.53	ND (<0.13)	1.1	ND, reporting limits vary
SFRWQCB ESLs - Table E, Indoor Air Screening Levels, Commercial/Industrial Land Use				100 ON	NL	NL	NL	0.47 DE	NL	NL	0.42 DE	0.29 DE	390 DE	NL	4.9 DE	12 DE	0.36 DE	440 (total xylenes) DE	440 (total xylenes) DE	1,300 DE	3.0 DE	NL	0.53 - Chloroform DE

Notes:

Laboratory analyses by Eurofins Calscience, Garden Grove, CA

µg/m³ = micrograms per cubic meter

TPH-g = total petroleum hydrocarbons as gasoline, analytical method TO-3M

VOCs = volatile organic compounds, analytical method TO-15 SIM

IAQ = Indoor Air Quality sample, 24-hour sampling interval (6/26/2014-6/27/2014)

OAA = Outdoor Ambient Air Control sample, 24-hour sampling interval (6/26/2014-6/27/2014)

ND = Not detected above the listed reporting limit

NL = Not listed

Bold Font = Detected values exceed regulatory screening levels.

ON = Taste and Odor Nuisance Screening Level

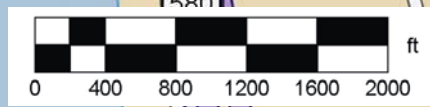
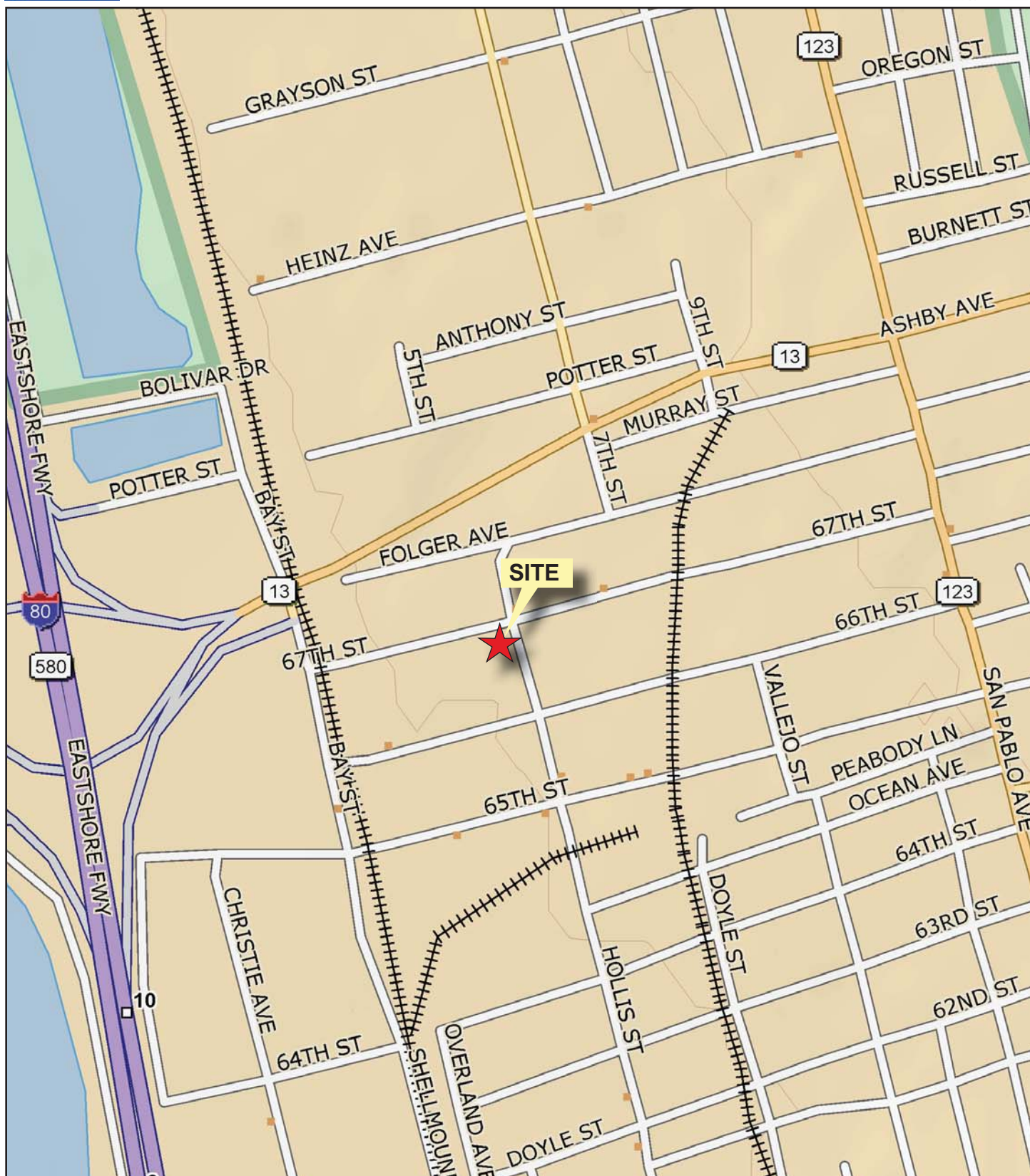
DE = Direct Exposure Human Health Risk Screening Level


GC = Gross Contamination Screening Level

AHG = Ecological Aquatic Habitat Screening Level

SFRWQCB ESLs = Regional Water Quality Control Board, San Francisco Bay Region, *User's Guide: Derivation and Application of Environmental Screening Levels (ESLs), Table IA-1 - Indoor Air Direct Exposure Human Health Risk Screening Levels (Volatile Chemicals Only), Commercial/Industrial Direct Exposure Risk Levels*, and *Table IA-1 - Indoor Air Odor Nuisance Levels*, Interim Final - February 2016, Revision 3 (May 23, 2016).

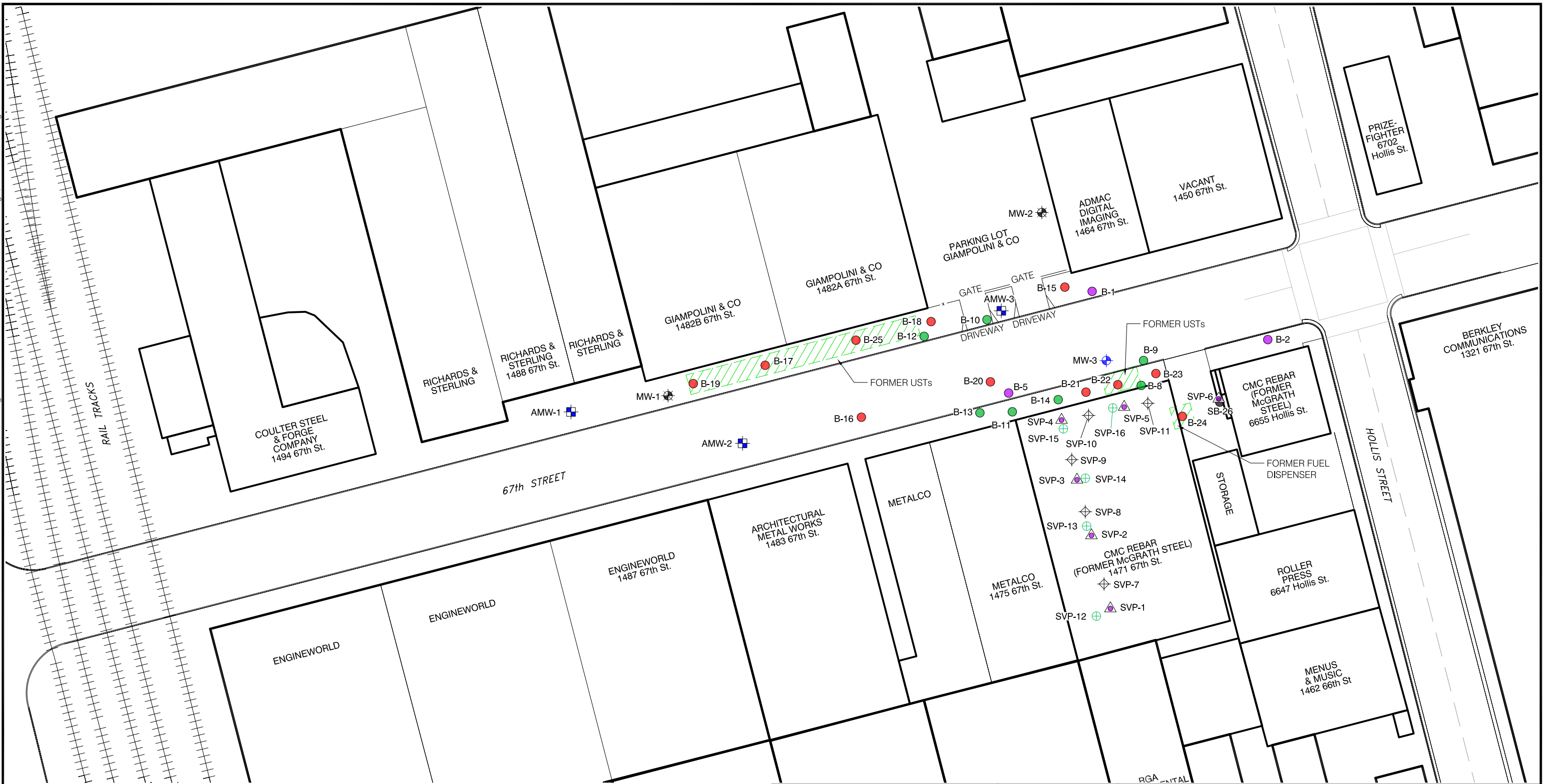
FIGURES




 MN (14.0° E)


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 PROJECT NO.
 16076.23.28

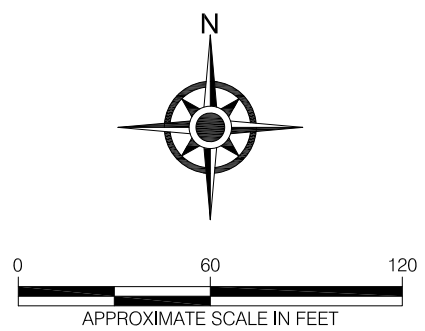
VICINITY MAP
FIGURE 1
6655 HOLLIS STREET
EMERYVILLE, CALIFORNIA 94608
SOURCE: DELORME TOPO
PREPARED BY: D. CAMACHO
DATE: 6/29/16



LEGEND

- SVP-12 ⊕ Semi-Permanent Sub-Slab Vapor Probe (AllWest, May 2016)
- SVP-1 ⊕ Soil Boring-Vapor Probe (AllWest, February, 2016)
- SVP-7 ⊕ Temporary Sub-Slab Soil Vapor Probe (AllWest, February, 2016)
- MW-2 ⊕ Monitoring Well (Clearprint/ESC - Destroyed, 2005)
- MW-3 ⊕ Monitoring Well (Clearprint/ESC, 1995)
- AMW-3 ⊕ Monitoring Well (AllWest, 2013)
- B-5 ⊕ Soil Boring (Weiss Associates, 1998)

- B-14 ● Soil Boring (Weiss Associates, 2005)
- B-25 ● Soil Boring (Weiss Associates, January 16, 17, & 18, 2013)
- SB-26 ● Soil Boring (AllWest, February 4, 2016)
- ▨ Former USTs, Fuel Dispensers (Removed 1994 & 1996)
- x - Fence



AllWest

PROJECT NO.
16076.23.28

FIGURE 2

SITE PLAN WITH BORING, WELL AND SOIL VAPOR PROBE LOCATIONS

Former McGrath Steel
6655 Hollis Street, Emeryville, California

SOURCE: Morrow Surveying and Google Earth

DRAWN BY: CM (06/19/2016)

C:\Drawing_Files\AllWest\Environmental\16076.23.28\16076.23.28 Fig 3. Indoor Air Sample Locations - 06/19/2016



LEGEND

- IAQ-5 ⊗ Indoor Air Sample Location
- OAA-2 ⊗ Outdoor Air Sample Location

0 20 40
APPROXIMATE SCALE IN FEET


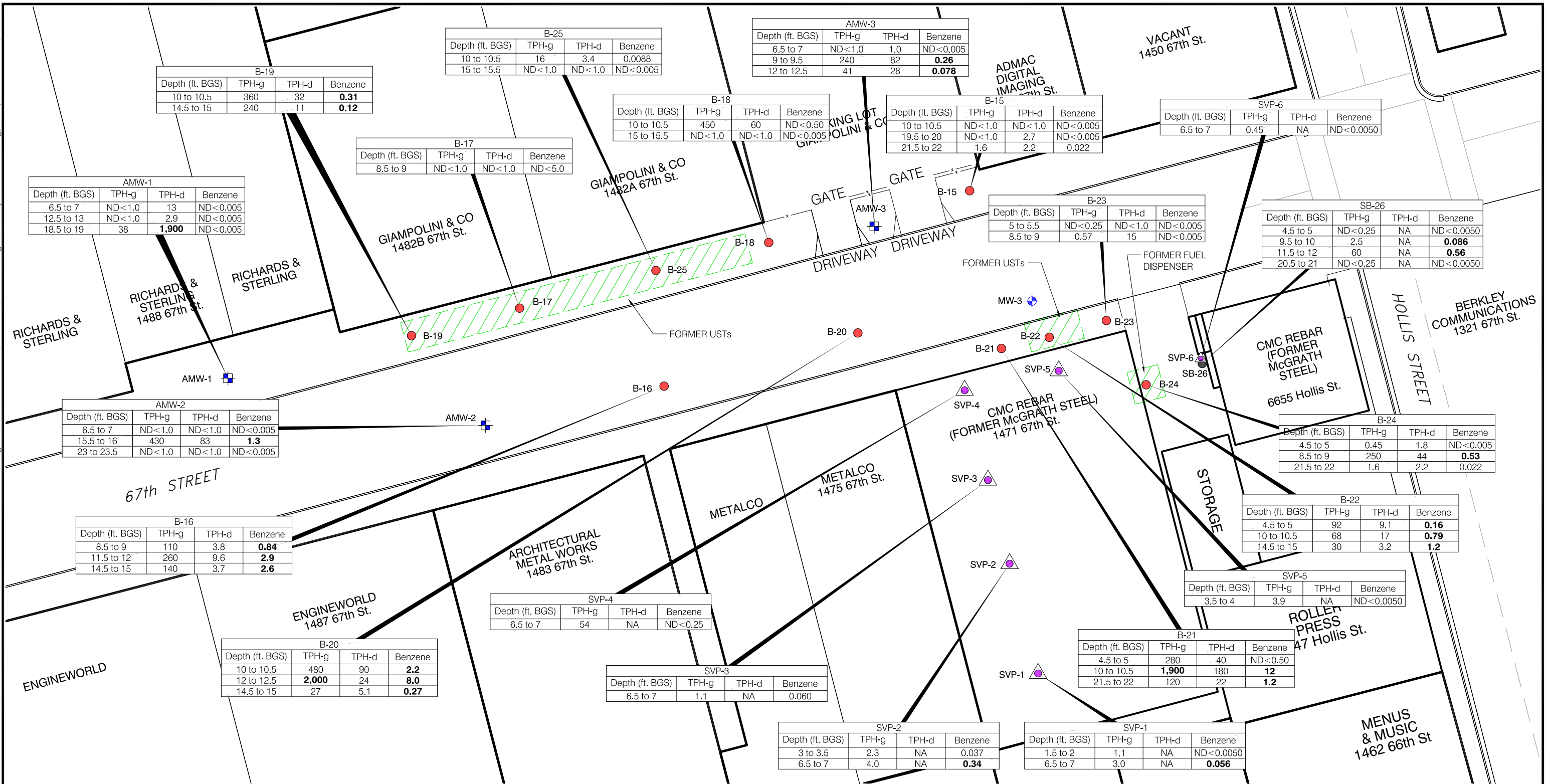

AllWest

FIGURE 3
INDOOR AIR SAMPLE LOCATIONS

Former McGrath Steel
6655 Hollis Street, Emeryville, California
PROJECT NO: 16076.23.28
SOURCE: Morrow Surveying and Google Earth
DRAWN BY: CM (06/19/2016)

C:\Drawing Files\AllWest Environmental\16076.23.28\16076.23.28 Fig 4. Soil Analytical Results - TPH-g, TPH-d, And Benzene - 06/21/2016



LEGEND

- SVP-1 Soil Boring-Vapor Probe (AllWest, February 3-4, 2016)
- MW-3 Monitoring Well (ESC, 1995)
- AMW-3 Monitoring Well (AllWest, 2013)
- B-25 Soil Boring (January 16, 17, & 18, 2013)
- SB-26 Soil Boring (AllWest, February 4, 2016)
- Former USTs, Fuel Dispensers (Removed 1994 & 1996)
- Fence

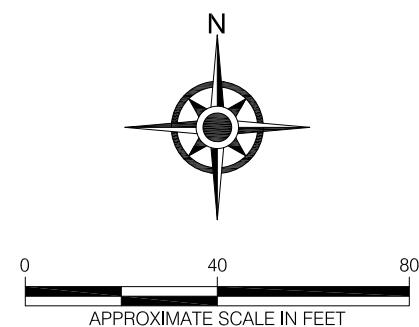
Analyte	ESL
TPH-g	500
TPH-d	570
Benzene	0.044

NOTE:

TPH-g - Total Petroleum Hydrocarbons as Gasoline
 TPH-d - Total Petroleum Hydrocarbons as Diesel
 ft. BGS - Feet Below Ground Surface

All Analytical results in milligrams per kilogram (mg/kg)

0.060 - Exceeds SFRWQCB Commercial/Industrial Environmental Screening Level (ESL)



PROJECT NO.
16076.23.28

**FIGURE 4
SOIL ANALYTICAL RESULTS -
TPH-g, TPH-d AND BENZENE**

Former McGrath Steel
6655 Hollis Street, Emeryville, California

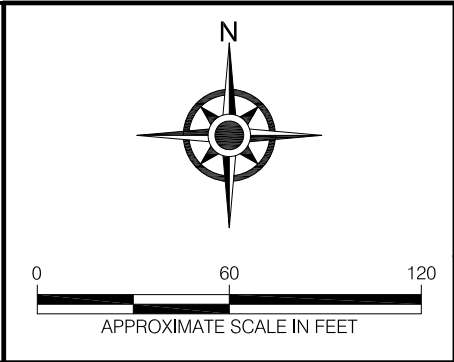
SOURCE: Morrow Surveying and Google Earth
DRAWN BY: CM (03/17/2016)

C:\Drawing Files\AllWest Environmental\16076.23.28\16076.23.28 Fig 5. TPH-g Iso-Contours In GW 02-28-2015 & 02-04-2016 - 06/21/2016



LEGEND	
MW-3 84,000	Monitoring Well (ESC, 1995) With TPH-g Concentration in Micrograms per Liter ($\mu\text{g/L}$) - Dashed Where Inferred
AMW-3 770	Monitoring Well (AllWest, 2013) With TPH-g Concentration in Micrograms per Liter ($\mu\text{g/L}$) - Dashed Where Inferred
B-25 270	Soil Boring (January 16, 17, & 18, 2013) With TPH-g Concentration in Micrograms per Liter ($\mu\text{g/L}$) - Dashed Where Inferred
SB-26 1,700	Soil Boring (AllWest February 4, 2016) With TPH-g Concentration in Micrograms per Liter ($\mu\text{g/L}$) - Dashed Where Inferred

	Former USTs, Fuel Dispensers (Removed 1994 & 1996)
	Fence
NOTE: TPH-g- Total Petroleum Hydrocarbons as Gasoline	

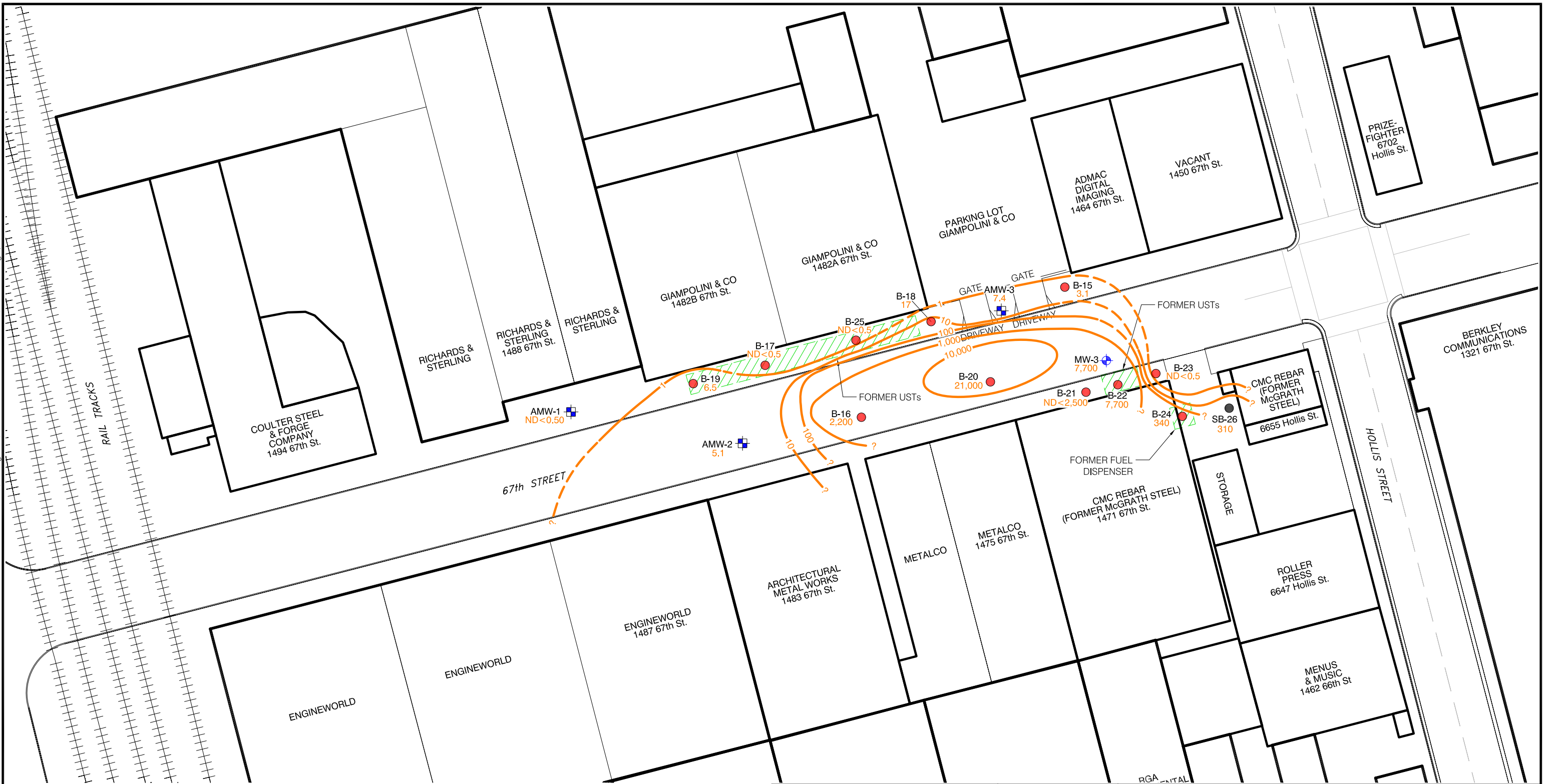



AllWest

PROJECT NO.
16076.23.28

FIGURE 5 TPH-g ISOCONCENTRATION CONTOURS IN GROUNDWATER FEBRUARY 28, 2015 AND FEBRUARY 4, 2016	
Former McGrath Steel	
6655 Hollis Street, Emeryville, California	
SOURCE: Morrow Surveying and Google Earth	
DRAWN BY: CM	(06/21/2016)

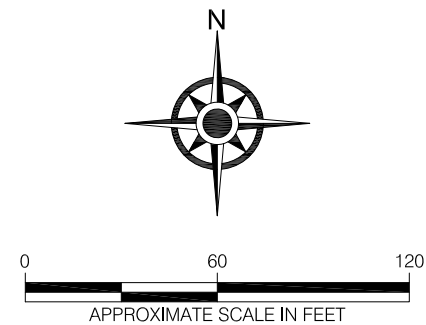
C:\Drawing Files\AllWest Environmental\16076.23.28\Fig 6. Benzene Iso-Contours In GW 02-28-2015 & 02-04-2016 - 06/21/2016



LEGEND

- MW-3  Monitoring Well (ESC, 1995) With Benzene Concentration in Micrograms per Liter ($\mu\text{g/L}$) - Dashed Where Inferred
7,700
- AMW-3  Monitoring Well (ALLWEST, 2013) With Benzene Concentration in Micrograms per Liter ($\mu\text{g/L}$) - Dashed Where Inferred
7.4
- B-25  Soil Boring (January 16, 17, & 18, 2013) With Benzene Concentration in Micrograms per Liter ($\mu\text{g/L}$) - Dashed Where Inferred
ND<0.5
- SB-26  Soil Boring (AllWest February 4, 2016) With Benzene Concentration in Micrograms per Liter ($\mu\text{g/L}$) - Dashed Where Inferred
310

-  Former USTs, Fuel Dispensers (Removed 1994 & 1996)
-  Fence



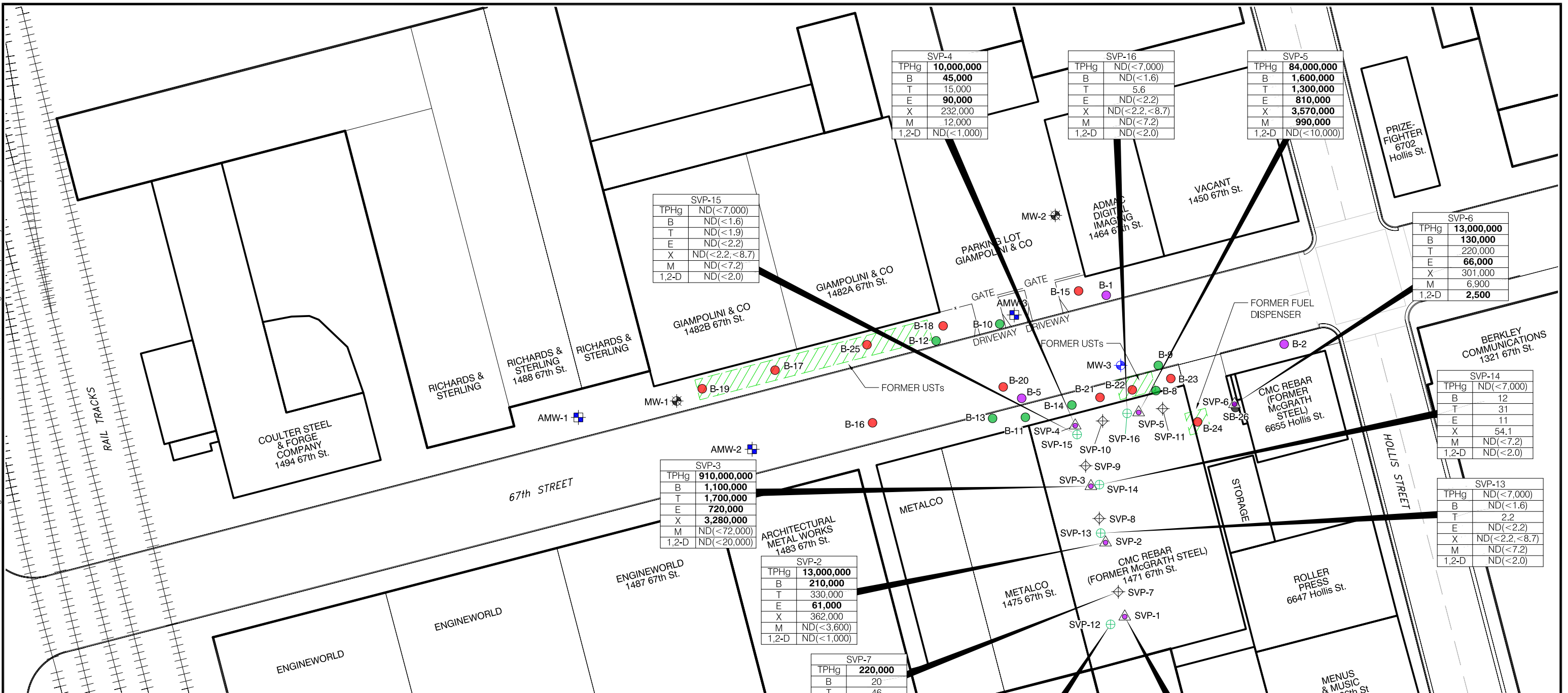
PROJECT NO.
16076.23.28

FIGURE 6
BENZENE ISOCONCENTRATION
CONTOURS IN GROUNDWATER
FEBRUARY 28, 2015 AND FEBRUARY 4, 2016

Former McGrath Steel
6655 Hollis Street, Emeryville, California

SOURCE: Morrow Surveying and Google Earth

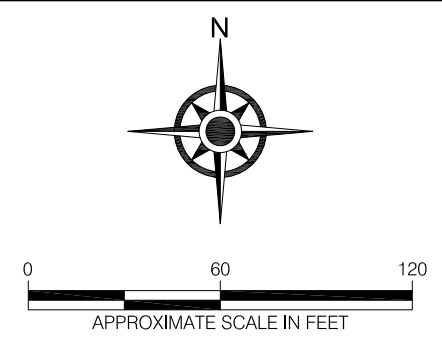
DRAWN BY: CM (06/21/2016)



- LEGEND**
- SVP-12 ⊕ Semi-Permanent Sub-Slab Vapor Probe (AllWest, May 2016)
 - SVP-1 ⊕ Soil Boring-Vapor Probe (AllWest, February, 2016)
 - SVP-7 ⊕ Temporary Sub-Slab Soil Vapor Probe (AllWest, February, 2016)
 - MW-2 ⊕ Monitoring Well (Clearprint/ESC - Destroyed, 2005)
 - MW-3 ⊕ Monitoring Well (Clearprint/ESC, 1995)
 - AMW-3 ⊕ Monitoring Well (AllWest, 2013)
 - B-5 ● Soil Boring (Weiss Associates, 1998)
 - B-14 ● Soil Boring (Weiss Associates, 2005)
 - B-25 ● Soil Boring (Weiss Associates, January 16, 17, & 18, 2013)
 - SB-26 ● Soil Boring (AllWest, February 4, 2016)
 - ▨ Former USTs, Fuel Dispensers (Removed 1994 & 1996)
 - x- Fence

Analyte	ESL
TPHg	100,000
B	420
T	1,300,000
E	4,900
X	440,000
M	47,000
1,2-D	470

Notes:
 TPH-g - Total Petroleum Hydrocarbons as Gasoline
 B - Benzene T - Toluene
 E - Ethylbenzene X - Total Xylenes
 M - Methyl Tertiary Butyl Ether (MTBE)
 1,2-D - 1,2-Dichloroethane (1,2-DCA)
 910,000,000* Concentrations in micrograms per cubic meter (µg/m³) bolded where exceeding RWQCB Environmental Screening Level (ESL)



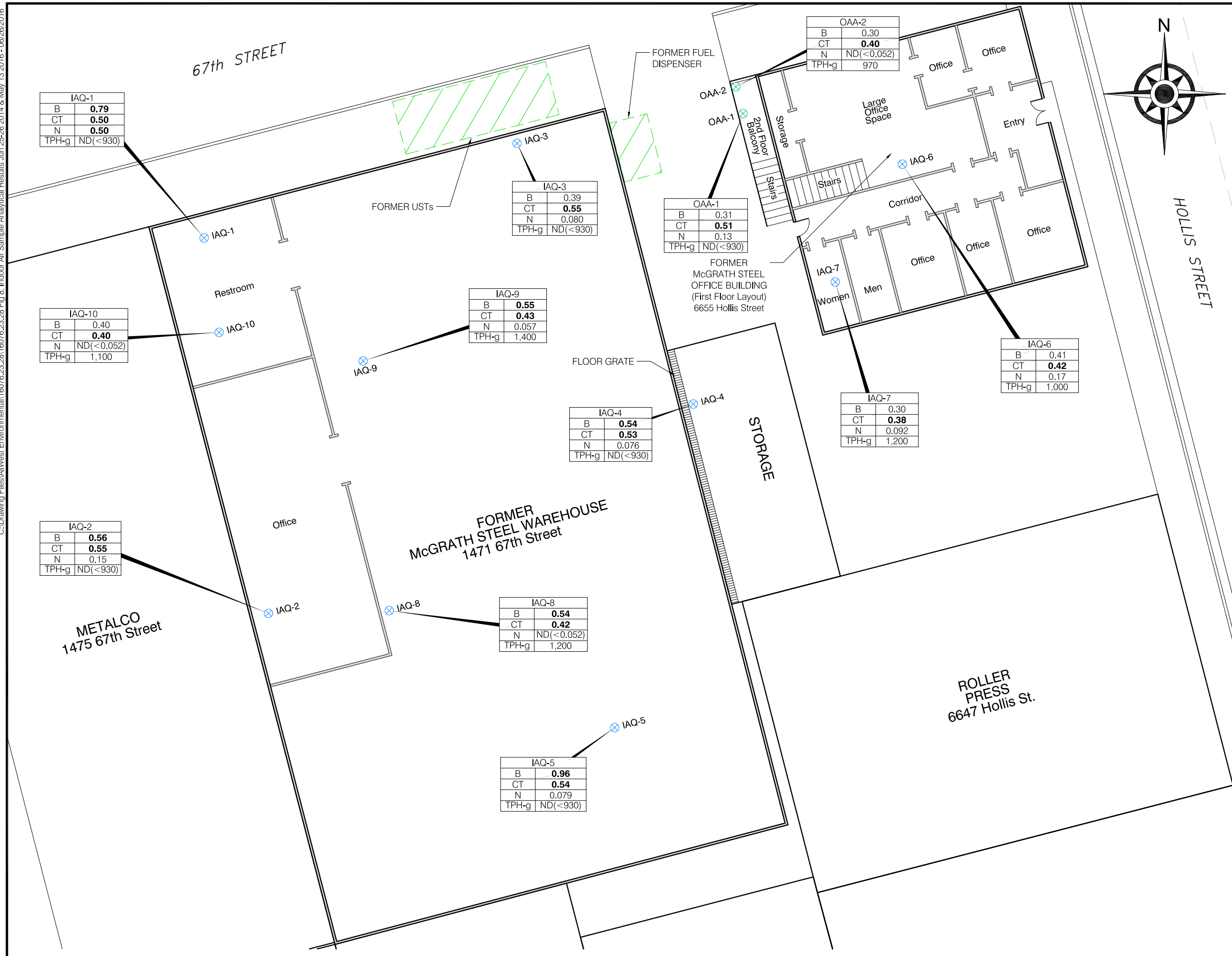
PROJECT NO.
16076.23.28

FIGURE 7
SOIL VAPOR ANALYTICAL SUMMARY
FEBRUARY 5-8, 2016 AND MAY 12-13, 2016

Former McGrath Steel
 6655 Hollis Street, Emeryville, California

SOURCE: Morrow Surveying and Google Earth
DRAWN BY: CM (06/23/2016)

C:\Drawing Files\AllWest Environmental\16076.23.28\Fig 8_ Indoor Air Sample Analytical Results Jun 25-26 2014 & May 13 2016 - 06/26/2016



LEGEND

IAQ-5 ⊗ Indoor Air Sample Location

OAA-2 ⊗ Outdoor Air Sample Location

NOTE:

IAQ-1 through IAQ-5 and OAA-1 were sampled 6/25/2014 - 6/26/2014

IAQ-6 through IAQ-10 and OAA-2 were sampled 5/13/2016

All concentrations in micrograms per cubic meter ($\mu\text{g}/\text{m}^3$)

B - Benzene
 CT - Carbon Tetrachloride
 N - Naphthalene
 TPH-g - Total Petroleum Hydrocarbons as Gasoline
 ND - Not Detected above listed reporting limit
 0.96 - Exceeds SFRWQCB Commercial/Industrial Environmental Screening Level (ESL)

Analyte	ESL
B	0.42
CT	0.29
N	0.36
TPH-g	2,500

0 20 40
 APPROXIMATE SCALE IN FEET

FIGURE 8
INDOOR AIR SAMPLE ANALYTICAL RESULTS
JUNE 25-26, 2014 AND
MAY 13, 2016

Former McGrath Steel
 6655 Hollis Street, Emeryville, California
 PROJECT NO: 16076.23.28
 SOURCE: Morrow Surveying and Google Earth
 DRAWN BY: CM (06/23/2016)

APPENDIX A



STANDARD GEOPROBE™ DPT SAMPLING PROCEDURES

Soil Sampling

Direct push technology (DPT) soil core sampling using Geoprobe™ or similar methods is accomplished using a nominal 4-foot long, 2-inch diameter stainless steel drive probe and extension rods. The drive probe is equipped with nominal 1-1/2 inch diameter clear plastic poly tubes that line the interior of the probe. The probe and insert tubes are together pneumatically driven using a percussion hammer in 4-foot intervals. After each drive interval the drive probe and rods are retrieved to the surface. The poly tube containing subsurface soil is then removed. The drive probe is then cleaned, equipped with a new poly tube and reinserted into the boring with extension rods as required. The apparatus is then driven following the above procedure until the desired depth is obtained. The poly tubes and soil are inspected after each drive interval with lithologic and relevant drilling observations recorded. Soil samples are screened for organic vapors using an organic vapor meter (OVM), photo-ionization detector (PID) or other appropriate device. OVM/PID readings, soil staining and other relevant observations are recorded. Selected soil sample intervals can be cut from the 4-foot intervals for possible analytical or geotechnical testing or other purposes.

The soils contained in the sample liners are then classified according to the Uniform Soil Classification System and recorded on the soil boring logs.

Sample liners selected for laboratory analyses are sealed with Teflon sheets, plastic end caps, and silicon tape. The sealed sample liner is then labeled, sealed in a plastic bag, and placed in an ice chest cooled to 4°C with crushed ice for temporary field storage and transportation. The standard chain-of-custody protocol is maintained for all soil samples from the time of collection to arrival at the laboratory.

Groundwater Sampling

Groundwater sampling is performed after the completion of soil sampling and when the boring has reached its desired depth. The steel probe and rods are then removed from the boring and new, nominal 1-inch diameter PVC solid and perforated temporary casing is lowered into the borehole. Alternatively, a retractable screen sampling device such as a Hydropunch™ can be driven to the desired depth and pulled back to expose the screened interval. Depth to water is then measured using an electronic groundwater probe. Groundwater samples are collected using a stainless steel bailer, disposable Teflon™ bailer, or check valve or peristaltic pump with disposable Teflon™ or polyethylene sample tubing.

After the retrieval of the bailer, groundwater contained in the bailer (or discharged from sample tubing) is decanted into laboratory provided containers. The containers are then sealed with Teflon coated caps with no headspace, labeled, and placed in an ice chest for field storage and transportation to a state certified analytical laboratory. The standard chain-of-custody protocols are followed from sample collection to delivery to the laboratory. A new bailer (or sample tubing) is used for each groundwater sampling location to avoid cross contamination.

APPENDIX B



AllWest

STANDARD GEOPROBE® AND SUB-SLAB PROBE SOIL VAPOR SAMPLING PROCEDURES

Geoprobe® DPT PRT Temporary Soil Vapor Probe Advancement

The Geoprobe® Direct Push Technology (DPT) Post Run Tubing (PRT) soil vapor sampling process involves driving into the subsurface a disposable Geoprobe® DPT sampling probe with expendable tip and a PRT adapter that are connected to 4-foot sections of Geoprobe® 1.25-inch inside diameter (ID) extension rods. The PRT adapter has a reverse-thread adapter at the upper end to allow the connection of flexible soil vapor sampling tubing with a PRT tubing adaptor after the installation (post-run) of the tip. The entire sampling assembly, the sampling tip, PRT adapter, and the Geoprobe® extension rods, is driven into the subsurface by a truck-mounted hydraulic percussion hammer. The sampler is driven to the desired depth as additional rods are connected. At the desired sampling depth, typically 5 feet below ground surface (bgs) a sufficient length of disposable flexible 0.25-inch OD polyethylene, Nylaflow™ or Teflon™ sample tubing is first lowered through the center of the extension rod and connected to the PRT adapter. Only Teflon™ sample tubing is to be used if naphthalene analysis is intended. The extension rod is then retracted 3 to 4 inches to create a small void around the PRT adapter and the expendable sampling tip for extracting a soil vapor sample from that location. Bentonite chips will be used to fill the annular space between the probe and the subgrade material to the ground surface. The bentonite will then be hydrated with distilled water. The temporary Geoprobe® PRT soil vapor probe will be sampled at least 2 hours following driving of the probe, to allow vapor conditions to equalize in subsurface materials and the bentonite surface seal to hydrate in general accordance with guidelines presented in the CalEPA Department of Toxic Substance Control (DTSC) *Advisory – Active Soil Gas Investigations*, July, 2015.

Geoprobe® DPT Borehole Advancement and Temporary Soil Vapor Probe Installation

Alternatively, borings will be advanced using truck-mounted or limited access Geoprobe® DPT equipment, or a hand-operated slide hammer, to drive 1-inch outside diameter (OD) rods and probes with expendable steel tips to 5 feet bgs, without recovering soil cores. Or, borings will be advanced using Geoprobe® DPT continuous coring equipment using a nominal 4-foot or 5-foot long, 2-inch OD stainless steel core barrel drive sampler and extension rods. The drive probe will be equipped with nominal 1 ½-inch inside diameter (ID) clear PETG plastic tubes that line the interior of the probe. Continuous soil sample cores are recovered for potential lithologic characterization and laboratory analysis. After the probes or core barrels are advanced to the specified depth, typically 5 feet bgs, the probes and drive rods are removed, leaving the borehole open with the expendable probe tip (if used) at the bottom.

Plastic or stainless steel soil vapor probes, ½-inch diameter by 2-inches long and tipped with porous plastic membranes, are then inserted to the bottom of the 1-inch diameter boreholes at 5 feet bgs. The probe tips are attached to 7-foot lengths of flexible 0.25-inch OD polyethylene, Nylaflow™ or Teflon™ tubing extending to the top of the floor slab. Only Teflon™ sample tubing is to be used if naphthalene analysis is intended. A fine sand filter pack is placed in the borehole annulus around the probe. Hydrated bentonite chips are then used to fill the annular space above the filter pack to the top of the floor slab. The bentonite is allowed to hydrate and borehole conditions to equalize for 2 hours prior to sampling activities, per DTSC vapor sampling guidelines. Temporary soil vapor probe installation procedures will be performed in general accordance with guidelines presented in the DTSC *Advisory – Active Soil Gas Investigations*, July, 2015.



AllWest

Sub Slab Soil Vapor Probe Installation

Semi-permanent sub-slab soil vapor probes are emplaced as follows: A 1-inch diameter hole is drilled through the concrete floor slab using a portable electric drill. The boreholes are advanced approximately 0.5 feet bgs into the subgrade material beneath the floor slab. Stainless steel or plastic vapor probes 2 inches long by 0.5 inches in diameter, tipped with porous plastic membranes, will be inserted to the bottom of each sub-slab borehole. The probe tips will be attached to lengths of 0.25-inch diameter Teflon™ or stainless steel tubing extending to approximately 1 inch below the top of the floor slab. The top of the Teflon™ or stainless steel tubing in each probe will be attached to a brass threaded male Swagelock™ fitting and cap recessed below the concrete floor. A fine sand filter pack approximately 2 to 4 inches thick will be placed in the borehole annulus around the probes. A Teflon™ sealing disk will be placed around the tubing above the filter pack.

Dry granular bentonite will be placed in the borehole annulus above the Teflon™ sealing disk to above the base of the concrete floor slab. Hydrated granulated bentonite will then be used to fill the annular space above the dry granular to approximately 2 inches above the bottom of the floor slab, and will be hydrated from the surface using deionized water. Quick-drying cement/bentonite grout will then be used to fill the remaining annular space to the Swagelock fitting approximately ¾ to 1 inch below the top of the slab. A watertight plastic cap or metal vault box will be installed flush with the top of the floor slab within a 2 to 4-inch diameter countersunk hole to protect the probe fitting. At least 2 hours will elapse prior to collecting vapor samples to allow the bentonite and cement grout seal to hydrate and borehole conditions to equalize, per DTSC sub-slab vapor sampling guidelines (DTSC, 2011).

Soil Vapor Sampling via Summa Canister

Soil vapor sampling procedures will be similar for Geoprobe® PRT and continuously cored temporary soil vapor probes, and semi-permanent sub-slab soil vapor probes, and will be in general accordance with *DTSC Advisory – Active Soil Gas Investigations*, July 2015. Soil vapor sampling will not be performed if significant precipitation (greater than ½ inch in a 24 hour period) has occurred within the previous five days. The soil vapor probe Teflon™ sample tubing will be connected to the sample manifold system via threaded SwageLok™ connectors.

AllWest will collect soil vapor samples in laboratory prepared 1-liter capacity SUMMA canisters. Prior to vapor purging and sample collection, a vacuum leak shut-in test of the flow-controller/gauge manifold assembly will be performed for a minimum of 1 minute, with a no allowable observed vacuum drop of 0.2 inches of mercury (in Hg). If any noticeable vacuum drop is observed, the manifold fittings will be tightened or manifold replaced and the shut-in test redone. Vacuum gauge sensitivity will register a minimum of 0.5 inches of mercury (in Hg). The sampling system configuration is shown in the attached schematic diagram.

Prior to sample collection, approximately 3 sampling system volumes of soil vapor will be purged at a flow rate of approximately 150-200 milliliters per minute (ml/min) from each vapor probe using a dedicated 6-liter capacity SUMMA purge canister (approximately 200 ml per in Hg vacuum). A 3-way valve (with the handle mounted outside the leak detection shroud) will be opened to divert the flow of purged soil vapor from the probe to the purge Summa canister, after opening the purge Summa valve. Typical sampling system volumes are 4.5 ml/foot for ¼-inch OD/0.17-inch ID tubing, and 200 ml/foot for a 2-inch diameter borehole with sand filter pack (minus tubing volume). Assuming a 2-inch diameter borehole with a 0.5 feet sand filter pack interval, the typical system volume would be approximately 130 ml for a 5-feet bgs



temporary probe, and 115 ml for a 1-foot bgs sub-slab probe, including 2-3 feet of tubing above grade. Therefore, 3 system volumes would typically be approximately 350 to 400 milliliters (ml) depending on tubing length and borehole diameter, depth and filter pack interval.

During purging and sampling, a leak detection test is conducted using helium as a leak tracer inside an airtight plastic shroud covering the entire sampling apparatus, as recommended in the DTSC *Advisory – Active Soil Gas Investigations* (DTSC Appendix C, 2015). The leak detection shroud configuration is shown in the attached schematic diagram. The helium concentration within the shroud is monitored with a helium gas detection meter with a minimum precision of 0.1% to keep the ambient concentration at approximately 10% to 20% (or at least two orders of magnitude above the minimum meter detection limit).

The helium tracer gas will be infused into the shroud at the required concentration at least 5 minutes prior to purging and sample collection. The ambient helium concentration within the shroud will be maintained throughout the purge and sample periods to within $\pm 10\%$ of the target concentration.

Depending upon helium availability, other leak detection gases such as isopropyl alcohol (IPA) or difluoroethane (DFA, commonly known as DustOff) may be substituted. Ambient concentrations of IPA within the shroud or purged soil vapor will be measured with a photo-ionization detector (PID); DFA concentrations are not measurable with a PID. The same volume of IPA (typically a cotton ball soaked with 5 milliliters of IPA) or DFA (typically a 5-second aerosol can discharge) will be used for each sample to maintain consistent ambient concentrations within the shroud.

Immediately following purging of 3 sampling system volumes of soil vapor, a leak test of the probe seal will be conducted by using the 3-way valve to divert the flow of purged soil vapor from the probe to the helium detection meter via a monitoring port on the outside of the shroud. If the measured purged soil vapor helium concentration is less than 5% of the ambient shroud concentration, the soil vapor probe seal is presumed to be acceptable (per DTSC Appendix C, 2015), and sampling will proceed. If the measured purged soil vapor helium concentration is greater than 5% of the ambient shroud concentration, the soil vapor probe seal is presumed to be defective, and the probe should be reinstalled and re-sampled.

Following the purged soil vapor readings and acceptable vapor probe seal leak test, the 3-way and purge Summa valves will be closed, sample Summa valve opened, and additional helium added to the shroud to bring the ambient concentration back up to within $\pm 10\%$ of the target concentration. The 3-way valve will then be turned to divert soil vapor from the probe to the sample Summa canister. To verify helium detection (or PID if used) meter accuracy, one (1) ambient air sample per day is usually collected using a 1-liter SUMMA canister with a 150-200 ml/min flow restrictor inside the leak detection shroud during the sampling of one probe to measure ambient helium (or IPA or DFA if used instead) concentrations inside the shroud.

Flow rates of approximately 150-200 ml/min are used to fill the sample canisters. The canisters are filled to approximate 80% of capacity (approximately 5 inches of mercury vacuum remaining), at which point first the 3-way valve, then the sample Summa valve are closed. All pertinent field observations, pressure, times and readings are recorded. After filling and closing the sample valve, all SUMMA canisters are removed from the manifold, labeled with sampling information, including initial and final vacuum pressures, placed in a dark container and transported under chain-of-custody to the analytical laboratory. The analytical laboratory will record the final SUMMA canister vacuum upon receipt.



Soil Vapor Sampling via Tenax™ Sorbent Tubes

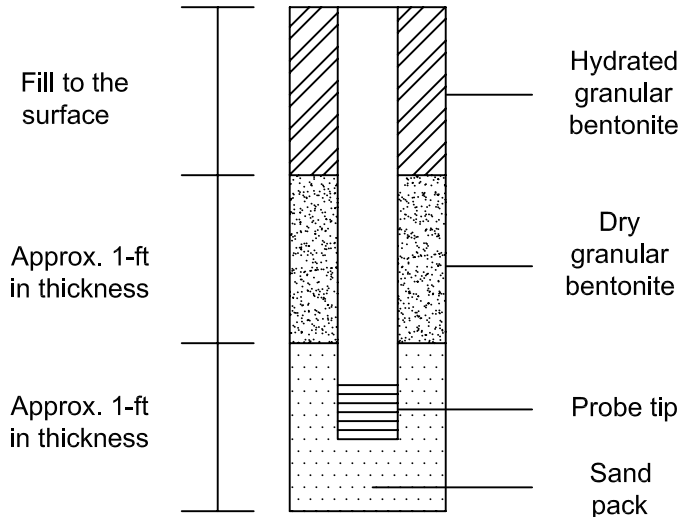
For collecting soil vapor samples in sorbent tubes for analysis by EPA Method TO-17, the sampling manifold setup, shut-in leak checks, system purging and leak detect shroud setup are similar to that using Summa canisters. However, instead of using Summa canisters for sample collection, samples are collected in stainless steel sample tubes filled with Tenax™ sorbent material. The sorbent tubes are attached with Swagelock™ fittings to the sample manifold downstream from the gauges, filters, flow restrictors, and purge canister or pump, and within the leak detection shroud. In areas of suspected high contaminant concentrations, two (2) Tenax™ sorbent tubes may be placed in series to prevent contaminant breakthrough. A vacuum pump, 100 ml syringe or second SUMMA sample purge canister is attached to the downstream end of the Tenax™ sorbent tubes. If the sample manifold train is too large to fit in the leak detection shroud, the pump, syringe or second sample purge SUMMA may be located outside the shroud with the sample train tubing passing through the shroud wall.

A cotton ball saturated with approximately 5 ml isopropyl alcohol (IPA) and placed inside the shroud will be used as the leak detection gas agent. A photo-ionization detector (PID) is used to monitor IPA concentrations within the leak detection shroud, or purged soil vapor through access ports in the shroud via the 3-way valve. The 3-way valve is used to divert purged soil vapor to either the purge Summa canister during purging, or to the purged soil vapor monitoring port following purging for probe seal leak detection by monitoring IPA concentrations with a PID, as described in the Summa canister sampling section.

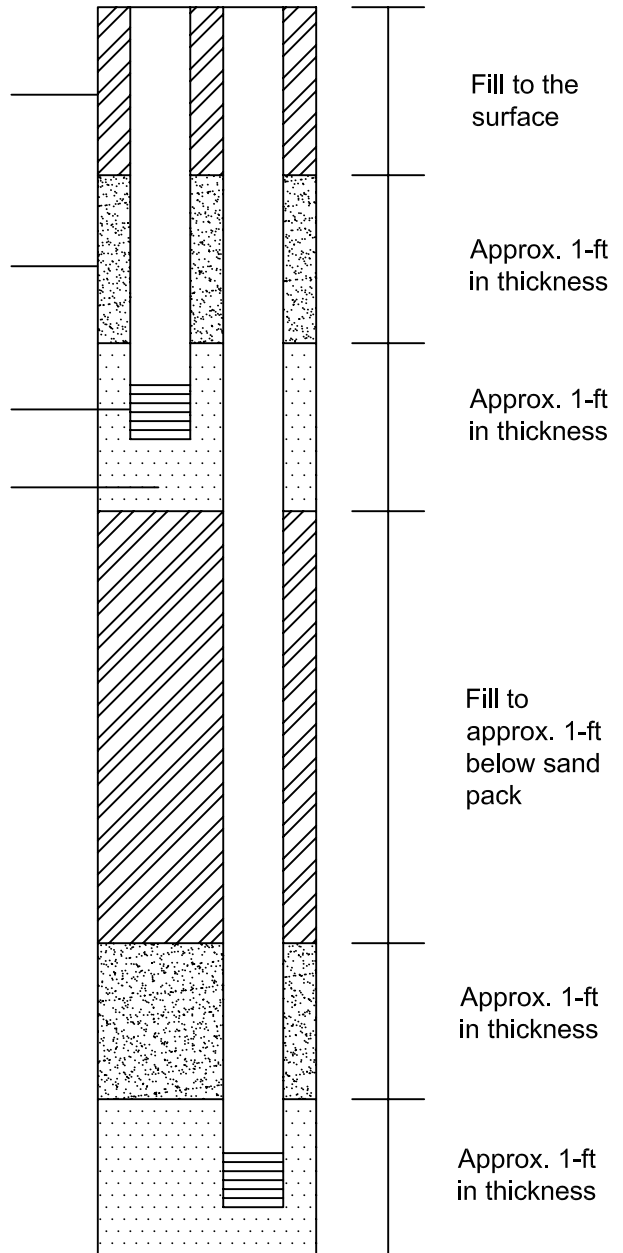
Flow rates of approximately 50 to 100 ml/min are used to fill the sorbent tubes with a total sample volume of approximately 1 to 4 liters, depending on the desired laboratory detection limits. The sampling system vacuum should not exceed 100 inches of water (or 7.4 in Hg). All pertinent field observations, pressure, times, and ambient and soil vapor IPA (PID) concentration readings are recorded. After the desired sample volume is withdrawn through the sorbent tubes, the tubes are removed from the manifold, capped with Swagelock™ caps, wrapped in aluminum foil, placed in a sealed plastic tube container, labeled with sampling information, placed in an ice chest cooled to 4°C with crushed ice, and transported under chain-of-custody to the analytical laboratory.

Soil Gas Probe Emplacement Methods

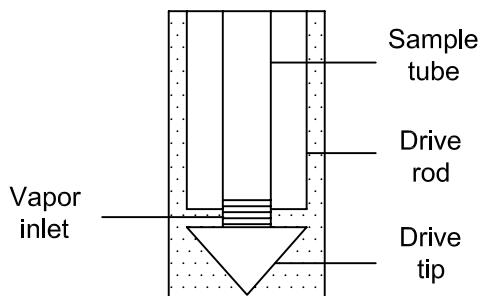
**Figure 1
Permanent/Semi-permanent
Gas Probe
Construction**



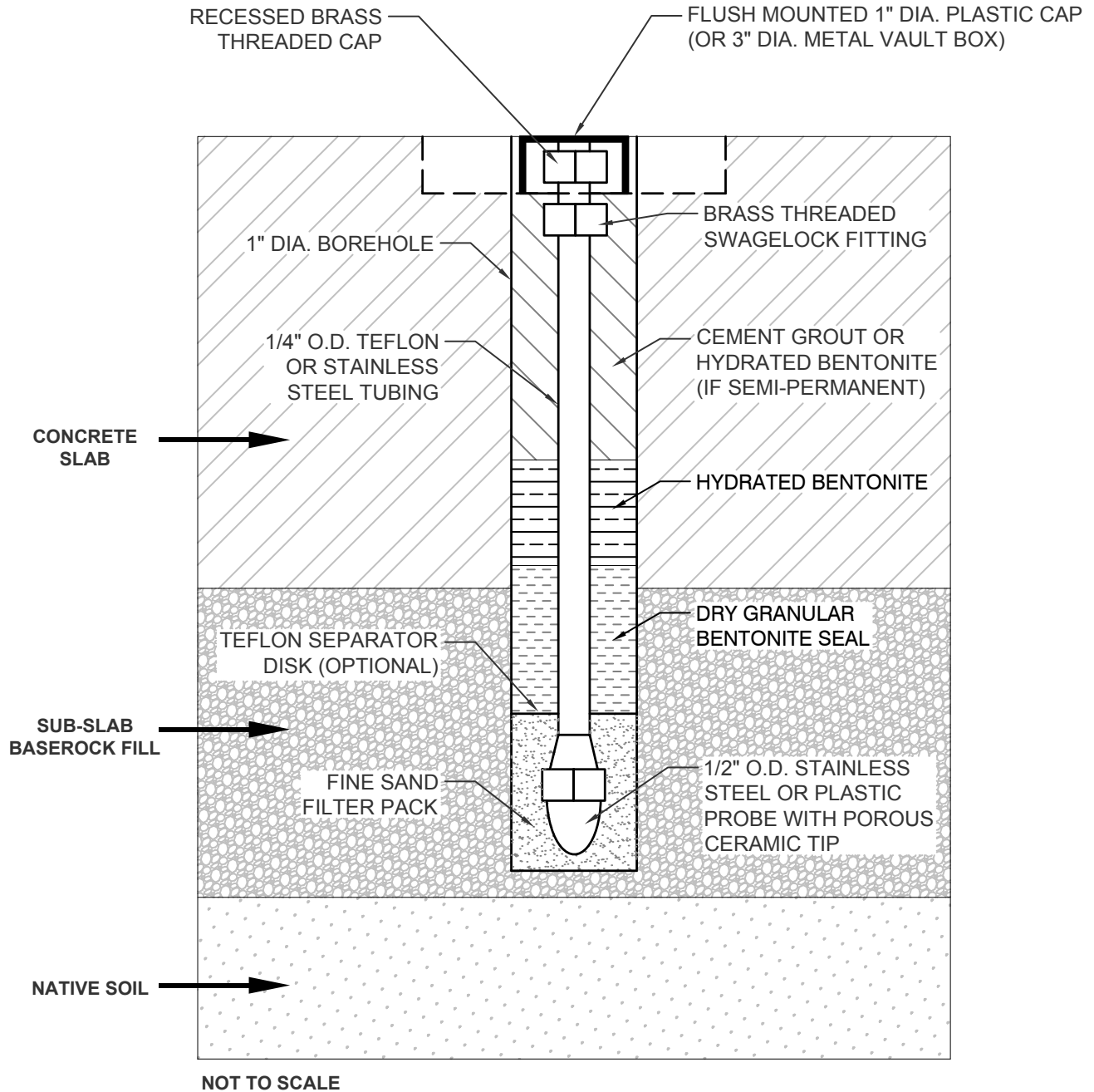
**Figure 2
Multi-depth
Gas Probe
Construction**



**Temporary
Gas Probe Method**



General Schematic of Sub-Slab Vapor Probe



STANDARD OPERATING PROCEDURE
SOIL VAPOR SAMPLING
SUB-SLAB PROBE
SOURCE: ALLWEST
PREPARED BY: C. MONAHAN 07/09/2013

Scope:

This standard operating procedure describes the installation and extraction of the Vapor Pin™¹ for use in sub-slab soil-gas sampling.

Purpose:

The purpose of this procedure is to assure good quality control in field operations and uniformity between field personnel in the use of the Vapor Pin™ for the collection of sub-slab soil-gas samples.

Equipment Needed:

- Assembled Vapor Pin™ [Vapor Pin™ and silicone sleeve (Figure 1)];
- Hammer drill;
- 5/8-inch diameter hammer bit (Hilti™ TE-YX 5/8" x 22" #00206514 or equivalent);
- 1½-inch diameter hammer bit (Hilti™ TE-YX 1½" x 23" #00293032 or equivalent) for flush mount applications;
- ¾-inch diameter bottle brush;
- Wet/dry vacuum with HEPA filter (optional);
- Vapor Pin™ installation/extraction tool;
- Dead blow hammer;
- Vapor Pin™ flush mount cover, as necessary;
- Vapor Pin™ protective cap; and
- VOC-free hole patching material (hydraulic cement) and putty knife or trowel.



Figure 1. Assembled Vapor Pin™.

Installation Procedure:

- 1) Check for buried obstacles (pipes, electrical lines, etc.) prior to proceeding.
- 2) Set up wet/dry vacuum to collect drill cuttings.
- 3) If a flush mount installation is required, drill a 1½-inch diameter hole at least 1¾-inches into the slab.
- 4) Drill a 5/8-inch diameter hole through the slab and approximately 1-inch into the underlying soil to form a void.
- 5) Remove the drill bit, brush the hole with the bottle brush, and remove the loose cuttings with the vacuum.
- 6) Place the lower end of Vapor Pin™ assembly into the drilled hole. Place the small hole located in the handle of the extraction/installation tool over the Vapor Pin™ to protect the barb fitting and cap, and tap the Vapor Pin™ into place using a

¹Cox-Colvin & Associates, Inc., designed and developed the Vapor Pin™; a patent is pending.

dead blow hammer (Figure 2). Make sure the extraction/installation tool is aligned parallel to the Vapor Pin™ to avoid damaging the barb fitting.



Figure 2. Installing the Vapor Pin™.

For flush mount installations, unscrew the threaded coupling from the installation/extraction handle and use the hole in the end of the tool to assist with the installation (Figure 3).



Figure 3. Flush-mount installation.

During installation, the silicone sleeve will form a slight bulge between the slab and the Vapor Pin™ shoulder. Place the protective cap on Vapor Pin™ to prevent vapor loss prior to sampling (Figure 4).



Figure 4. Installed Vapor Pin™.

- 7) For flush mount installations, cover the Vapor Pin™ with a flush mount cover.
- 8) Allow 20 minutes or more (consult applicable guidance for your situation) for the sub-slab soil-gas conditions to equilibrate prior to sampling.
- 9) Remove protective cap and connect sample tubing to the barb fitting of the Vapor Pin™ (Figure 5).

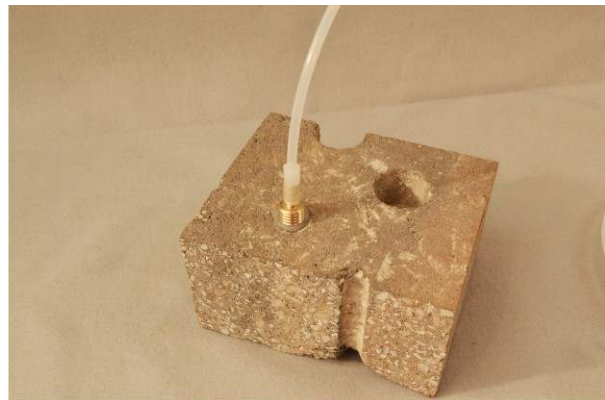


Figure 5. Vapor Pin™ sample connection.

- 10) Conduct leak tests [(e.g., real-time monitoring of oxygen levels on extracted sub-slab soil gas, or placement of a water

dam around the Vapor Pin™) Figure 6]. Consult your local guidance for possible tests.



Figure 6. Water dam used for leak detection.

- 11) Collect sub-slab soil gas sample. When finished sampling, replace the protective cap and flush mount cover until the next sampling event. If the sampling is complete, extract the Vapor Pin™.

Extraction Procedure:

- 1) Remove the protective cap, and thread the installation/extraction tool onto the barrel of the Vapor Pin™ (Figure 7). Continue

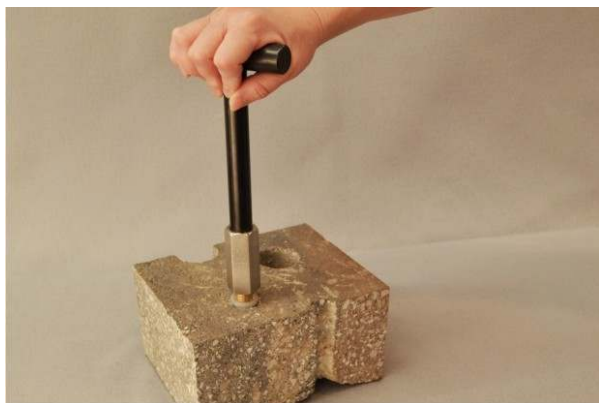


Figure 7. Removing the Vapor Pin™.

turning the tool to assist in extraction, then pull the Vapor Pin™ from the hole (Figure 8).



Figure 8. Extracted Vapor Pin™.

- 2) Fill the void with hydraulic cement and smooth with the trowel or putty knife.
- 3) Prior to reuse, remove the silicone sleeve and discard. Decontaminate the Vapor Pin™ in a hot water and Alconox® wash, then heat in an oven to a temperature of 130° C.

The Vapor Pin™ is designed to be used repeatedly; however, replacement parts and supplies will be required periodically. These parts are available on-line at www.CoxColvin.com.

Replacement Parts:

- Vapor Pin™ Kit Case - VPC001
- Vapor Pins™ - VPIN0522
- Silicone Sleeves - VPTS077
- Installation/Extraction Tool - VP1E023
- Protective Caps - VPPC010
- Flush Mount Covers - VPFM050
- Water Dam - VPWD004
- Brush - VPB026



STANDARD VAPOR PIN™ SUB-SLAB PROBE INSTALLATION AND SOIL VAPOR SAMPLING PROCEDURES

Vapor Pin™ Sub-Slab Soil Vapor Probe Installation

The Cox-Colvin Vapor Pin™ semi-permanent sub-slab soil vapor probes are emplaced as follows: For a flush-mount installation, a 1 ½-inch diameter countersunk hole is drilled at least 1 ¾ inches into the concrete floor slab using a portable electric drill. A 5/8-inch diameter hole is then drilled below the countersunk hole through the concrete floor slab using a portable electric drill, and approximately 1-inch into the underlying soil to form a void. The concrete corings are removed using a brush or vacuum. Place the lower end of Vapor Pin™ assembly into the drilled hole. Place the small hole located in the handle of the extraction/installation tool over the Vapor Pin™ to protect the barb fitting and cap, and tap the Vapor Pin™ into place using a dead blow hammer. Make sure the extraction/installation tool is aligned parallel to the Vapor Pin™ to avoid damaging the barb fitting.

For flush mount installations, unscrew the threaded coupling from the installation/extraction handle and use the hole in the end of the tool to assist with the installation. During installation, the silicone sleeve will form a slight bulge between the slab and the Vapor Pin™ shoulder. Place the protective plastic cap on the Vapor Pin™ barbed fitting to prevent vapor loss prior to sampling. For flush mount installations, cover the Vapor Pin™ with a threaded metal flush mount cover. Allow 2 hours or more (per DTSC sub-slab vapor sampling guidelines) for the sub-slab soil-gas conditions to equilibrate prior to sampling.

Vapor Pin™ Sub-Slab Soil Vapor Sampling via Summa Canister

Soil vapor sampling procedures will be in general accordance with *DTSC Advisory – Active Soil Gas Investigations*, July 2015. Soil vapor sampling will not be performed if significant precipitation (greater than ½ inch in a 24 hour period) has occurred within the previous five days. The 0.25-inch outside diameter (OD)/0.17-inch inside diameter (ID) Teflon sample tubing will be placed over the Vapor Pin™ barbed fitting. Since the 0.17-inch ID tubing may be too small and too rigid to fit over the barbed fitting, it may be necessary to construct a connector sleeve using a short length of 3/8-inch OD/3/16-inch ID flexible silicone Masterflex® or similar tubing to fit over both the Vapor Pin™ barbed fitting and the end of the 0.25-inch OD/0.17-inch ID sample tubing. The sample tubing will then be connected to the sample manifold system via threaded SwageLok™ connectors.

AllWest will collect soil vapor samples in laboratory prepared 1-liter capacity SUMMA canisters. Prior to vapor purging and sample collection, a vacuum leak shut-in test of the flow-controller/gauge manifold assembly will be performed for a minimum of 1 minute, with a no allowable observed vacuum drop of 0.2 inches of mercury (in Hg). If any noticeable vacuum drop is observed, the manifold fittings will be tightened or manifold replaced and the shut-in test redone. Vacuum gauge sensitivity will register a minimum of 0.5 inches of mercury (in Hg). The sampling system configuration is shown in the attached schematic diagram.

Prior to sample collection, approximately 3 sampling system volumes of soil vapor will be purged at a flow rate of approximately 150-200 milliliters per minute (ml/min) from each vapor probe using a dedicated 6-liter capacity SUMMA purge canister (approximately 200 ml per in Hg vacuum). A 3-way valve (with the handle mounted outside the leak detection shroud) will be opened to divert the flow of purged soil vapor from the probe to the purge Summa canister, after opening the purge Summa valve. Typical sampling system volumes are 4.5 ml/feet for ¼-inch OD/0.17-inch ID tubing and 0.17-inch ID Vapor Pin™ probe,



and 155 ml/feet for a 1-inch diameter borehole within the concrete floor slab. Assuming a 1-inch diameter borehole with a 3-inch deep void space in the floor slab below the Vapor Pin™ probe, the typical system volume would be approximately 60 ml including 5 feet of tubing and manifold above grade. Therefore, 3 system volumes would typically be approximately 180 milliliters (ml) depending on sample tubing and manifold length, borehole diameter, and floor slab borehole void depth below the installed Vapor Pin™ probe.

During purging and sampling, a leak detection test is conducted using helium as a leak tracer inside an airtight plastic shroud covering the entire sampling apparatus, as recommended in the DTSC *Advisory – Active Soil Gas Investigations* (DTSC Appendix C, 2015). The leak detection shroud configuration is shown in the attached schematic diagram. The helium concentration within the shroud is monitored with a helium gas detection meter with a minimum precision of 0.1% to keep the ambient concentration at approximately 10% to 20% (or at least two orders of magnitude above the minimum meter detection limit). The helium tracer gas will be infused into the shroud at the required concentration at least 5 minutes prior to purging and sample collection. The ambient helium concentration within the shroud will be maintained throughout the purge and sample periods to within $\pm 10\%$ of the target concentration.

Depending upon helium availability, other leak detection gases such as isopropyl alcohol (IPA) or difluoroethane (DFA, commonly known as DustOff) may be substituted. Ambient concentrations of IPA within the shroud or purged soil vapor will be measured with a photo-ionization detector (PID); DFA concentrations are not measurable with a PID. The same volume of IPA (typically a cotton ball soaked with 5 milliliters of IPA) or DFA (typically a 5-second aerosol can discharge) will be used for each sample to maintain consistent ambient concentrations within the shroud.

Immediately following purging of 3 sampling system volumes of soil vapor, a leak test of the probe seal will be conducted by using the 3-way valve to divert the flow of purged soil vapor from the probe to the helium detection meter via a monitoring port on the outside of the shroud. If the measured purged soil vapor helium concentration is less than 5% of the ambient shroud concentration, the soil vapor probe seal is presumed to be acceptable (per DTSC Appendix C, 2015), and sampling will proceed. If the measured purged soil vapor helium concentration is greater than 5% of the ambient shroud concentration, the soil vapor probe seal is presumed to be defective, and the probe should be reinstalled and re-sampled.

Following the purged soil vapor readings and acceptable vapor probe seal leak test, the 3-way and purge Summa valves will be closed, sample Summa valve opened, and additional helium added to the shroud to bring the ambient concentration back up to within $\pm 10\%$ of the target concentration. The 3-way valve will then be turned to divert soil vapor from the probe to the sample Summa canister. To verify helium detection (or PID if used) meter accuracy, one (1) ambient air sample per day is usually collected using a 1-liter SUMMA canister with a 150-200 ml/min flow restrictor inside the leak detection shroud during the sampling of one probe to measure ambient helium (or IPA or DFA if used instead) concentrations inside the shroud.

Flow rates of approximately 150-200 ml/min are used to fill the sample canisters. The canisters are filled to approximate 80% of capacity (approximately 5 inches of mercury vacuum remaining), at which point first the 3-way valve, then the sample Summa valve are closed. All pertinent field observations, pressure, times and readings are recorded. After filling and closing the sample valve, all SUMMA canisters are removed from the manifold, labeled with sampling information, including initial and final vacuum pressures, placed in a dark container and transported under chain-of-custody to the analytical laboratory. The analytical laboratory will record the final SUMMA canister vacuum upon receipt.



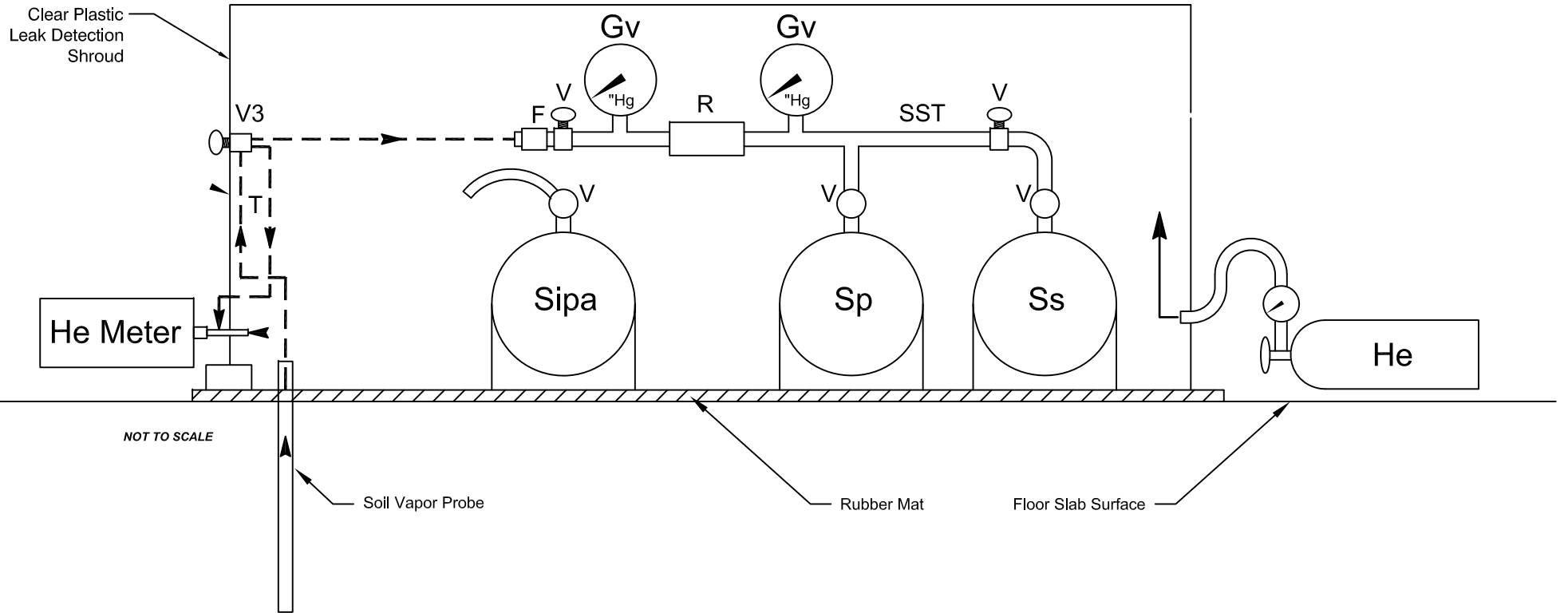
Soil Vapor Sampling via Tenax™ Sorbent Tubes

For collecting soil vapor samples in sorbent tubes for analysis by EPA Method TO-17, the sampling manifold setup, shut-in leak checks, system purging and leak detect shroud setup are similar to that using Summa canisters. However, instead of using Summa canisters for sample collection, samples are collected in stainless steel sample tubes filled with Tenax™ sorbent material. The sorbent tubes are attached with Swagelock™ fittings to the sample manifold downstream from the gauges, filters, flow restrictors, and purge canister or pump, and within the leak detection shroud. In areas of suspected high contaminant concentrations, two (2) Tenax™ sorbent tubes may be placed in series to prevent contaminant breakthrough. A vacuum pump, 100 ml syringe or second SUMMA sample purge canister is attached to the downstream end of the Tenax™ sorbent tubes. If the sample manifold train is too large to fit in the leak detection shroud, the pump, syringe or second sample purge SUMMA may be located outside the shroud with the sample train tubing passing through the shroud wall.

A cotton ball saturated with approximately 5 ml isopropyl alcohol (IPA) and placed inside the shroud will be used as the leak detection gas agent. A photo-ionization detector (PID) is used to monitor IPA concentrations within the leak detection shroud, or purged soil vapor through access ports in the shroud via the 3-way valve. The 3-way valve is used to divert purged soil vapor to either the purge Summa canister during purging, or to the purged soil vapor monitoring port following purging for probe seal leak detection by monitoring IPA concentrations with a PID, as described in the Summa canister sampling section.

Flow rates of approximately 50 to 100 ml/min are used to fill the sorbent tubes with a total sample volume of approximately 1 to 4 liters, depending on the desired laboratory detection limits. The sampling system vacuum should not exceed 100 inches of water (or 7.4 in Hg). All pertinent field observations, pressure, times, and ambient and soil vapor IPA (PID) concentration readings are recorded. After the desired sample volume is withdrawn through the sorbent tubes, the tubes are removed from the manifold, capped with Swagelock™ caps, wrapped in aluminum foil, placed in a sealed plastic tube container, labeled with sampling information, placed in an ice chest cooled to 4°C with crushed ice, and transported under chain-of-custody to the analytical laboratory.

General Soil Gas Sampling Manifold Schematic with Leak Detection Shroud



LEGEND

- F = Filter
- V = Valve
- V3 = Valve - 3-Way
- Gp = Pressure Gauge
- R = Flow Regulator
- Gv = Vacuum Gauge
- Sp = Purge Summa Canister
- Ss = Sample Summa Canister
- Sipa = Ambient Air Helium Leak Detect Gas Summa Canister
- He Meter = Helium detector for He concentration readings - Shroud Ambient & Purged Soul Vapor
- T = Disposable Teflon or Polyethylene Tubing
- SST = Stainless Steel Tubing and Fittings
- He = Helium tank, leak detect gas, regulator and tubing



STANDARD OPERATING PROCEDURE
SOIL VAPOR SAMPLING
HELIUM SHROUD
SOURCE: ALLWEST
PREPARED BY: C. RAMELB / C. MONAHAN

APPENDIX C



STANDARD INDOOR AIR QUALITY SAMPLING PROCEDURES

Indoor air quality (IAQ) sampling is conducted in general accordance with the DTSC *Final, Guidance for the Evaluation and Mitigation of Subsurface Vapor Intrusion to Indoor Air (Vapor Intrusion Guidance)*, October 2011. Prior to collecting IAQ samples, AllWest will perform a survey of the building layout and conditions to determine optimum IAQ sample locations, and conduct an inventory of chemicals at the site that may affect IAQ sample data. Building and chemical survey forms per the DTSC *Vapor Intrusion Guidance* will be utilized.

To evaluate the potential indoor air quality impact of intrusion of petroleum hydrocarbons and VOCs in the vapor phase from soil beneath the concrete floor slab in site buildings, IAQ samples and typically one outdoor ambient air (OAA) control sample will be collected during two semiannual monitoring events at the subject site. IAQ samples will typically be located in the center of building spaces to evaluate conditions in primary work areas, addition to locations in restrooms or near floor drains to evaluate preferential pathway conduits such as sewer lines. IAQ and OAA samples will be collected in approximately the same locations during both sampling events.

During each sampling event, at least one outdoor OAA sample will be collected in a secure exterior area in the presumed upwind direction away from building walls or foundation slabs, inaccessible to the public, chosen to ensure that the SUMMA canister is not stolen or tampered with overnight. The OAA sample will be secured by lock and chain to an immovable object. OAA sample collection will start at least 30 minutes prior to the start of IAQ sampling, and will be terminated 30 minutes after the last IAQ sample.

AllWest will collect air quality samples in laboratory prepared SIM-certified 6-liter capacity SUMMA canisters. Flow rates of approximately 3.5 milliliters per minute (ml/min) are used to fill the canisters over a 24 hour period. The canisters are filled to approximate 80% of capacity. All pertinent field observations, pressure, times and readings are recorded. Sample containers are labeled, placed in a dark container and transported under chain-of-custody control to the California State-certified analytical laboratory, Calscience Environmental Laboratories, Inc. (Calscience) in Garden Grove, California. Other certified analytical laboratories may be used if necessary. An example of an indoor air quality field sampling log is included in Appendix C.

A second IAQ monitoring event will be performed approximately six months from the first event in order to evaluate any seasonal variability in sub-slab vapor conditions, as recommended in the DTSC *Vapor Intrusion Guidance* (DTSC, October 2011). The scope of work, number of samples and sampling methodology will be similar to those described above, except that samples will be collected over an 8-hour period at flow rates of 10.4 ml/min.

APPENDIX D

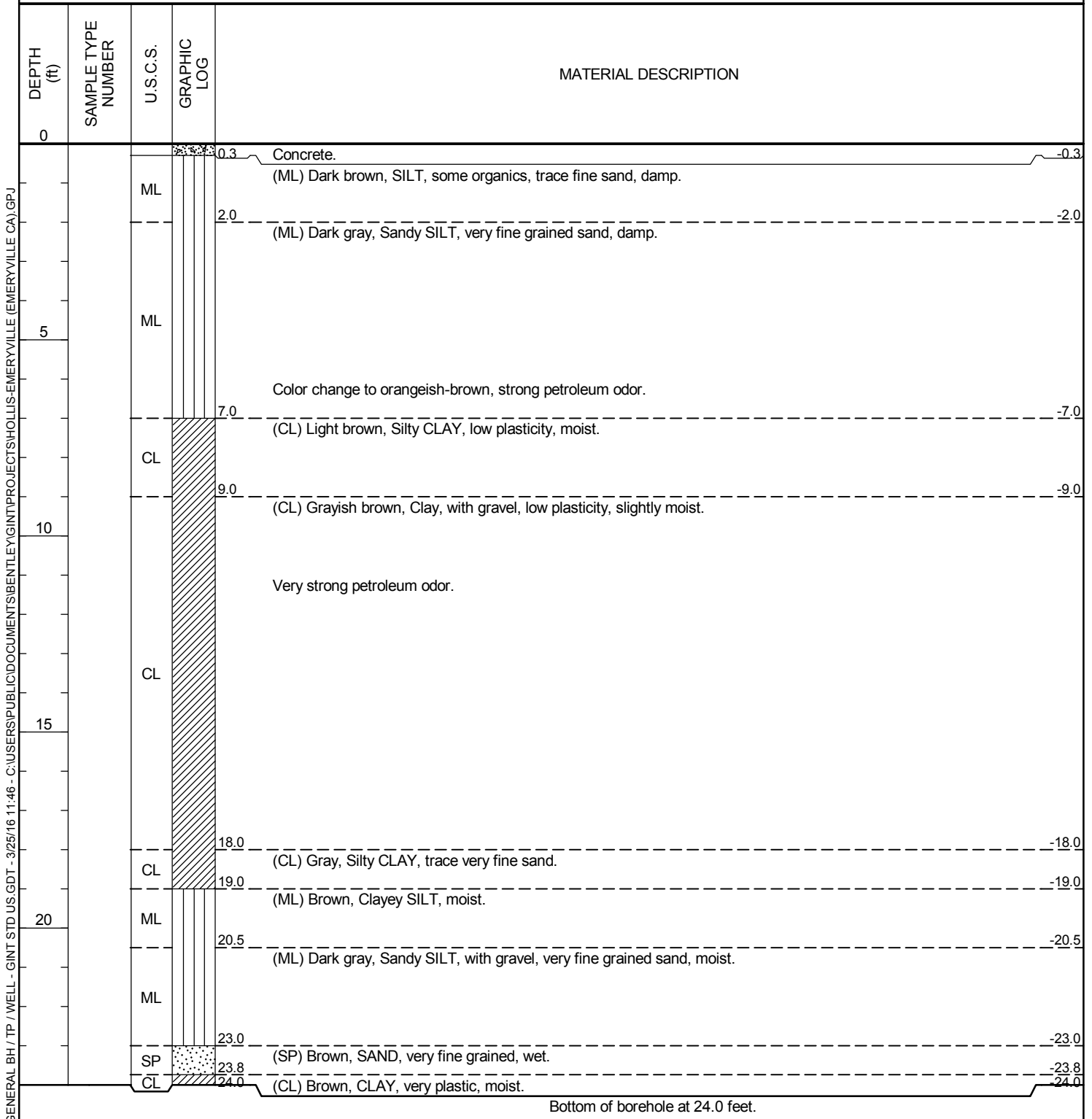


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BORING NUMBER SB-26

PAGE 1 OF 1

CLIENT <u>Walter Merkle</u>	PROJECT NAME <u>Former McGrath Steel</u>
PROJECT NUMBER <u>15179.23</u>	PROJECT LOCATION <u>Emeryville, CA</u>
DATE STARTED <u>2/3/16</u> COMPLETED <u>2/3/16</u>	GROUND ELEVATION <u>0 ft</u> HOLE SIZE <u>2.25</u>
DRILLING CONTRACTOR <u>ECA</u>	GROUND WATER LEVELS:
DRILLING METHOD <u>Geoprobe</u>	AT TIME OF DRILLING <u>---</u>
LOGGED BY <u>Sara Bloom</u> CHECKED BY <u>Leonard Niles</u>	AT END OF DRILLING <u>---</u>
NOTES _____	AFTER DRILLING <u>---</u>



GENERAL BH / TP / WELL - GINT STD US.GDT - 3/25/16 11:46 - C:\USERS\PUBLIC\DOCUMENTS\BENTLEY\GINT\PROJECTS\HOLLIS-EMERYVILLE (EMERYVILLE CA).GPJ



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BORING NUMBER SVP-1

PAGE 1 OF 1

CLIENT <u>Walter Merkle</u>	PROJECT NAME <u>Former McGrath Steel</u>
PROJECT NUMBER <u>15179.23</u>	PROJECT LOCATION <u>Emeryville, CA</u>
DATE STARTED <u>2/3/16</u> COMPLETED <u>2/3/16</u>	GROUND ELEVATION <u>0 ft</u> HOLE SIZE <u>2.25</u>
DRILLING CONTRACTOR <u>ECA</u>	GROUND WATER LEVELS:
DRILLING METHOD <u>Geoprobe</u>	AT TIME OF DRILLING <u>---</u>
LOGGED BY <u>Sara Bloom</u> CHECKED BY <u>Leonard Niles</u>	AT END OF DRILLING <u>---</u>
NOTES _____	AFTER DRILLING <u>---</u>

GENERAL BH / TP / WELL - GINT STD U.S.GDT - 3/15/16 16:31 - C:\USERS\PUBLIC\DOCUMENTS\BENTLEY\GINT\PROJECTS\HOLLIS-EMERYVILLE (EMERYVILLE CA).GPI

DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY %	REMARKS	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	Environmental Data
0							
	UB	100	SVP-1@1.5'-2'	ML		Concrete. (ML) Dark brown, SILT, some organics, trace fine sand, damp.	
				CL		(CL) Dark gray, CLAY, trace fine sand, medium plasticity, damp, slight old petroleum odor.	PID = 12.8
5	UB	100	SVP-1@6.5'-7'	ML		(ML) Dark gray, Sandy SILT, very fine grained sand, damp, slight petroleum odor. Very fine to medium grained sand from 5.5' to 7' bgs.	PID = 67.1

Bottom of borehole at 7.0 feet.



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BORING NUMBER SVP-2

CLIENT <u>Walter Merkle</u>	PROJECT NAME <u>Former McGrath Steel</u>
PROJECT NUMBER <u>15179.23</u>	PROJECT LOCATION <u>Emeryville, CA</u>
DATE STARTED <u>2/3/16</u> COMPLETED <u>2/3/16</u>	GROUND ELEVATION <u>0 ft</u> HOLE SIZE <u>2.25</u>
DRILLING CONTRACTOR <u>ECA</u>	GROUND WATER LEVELS:
DRILLING METHOD <u>Geoprobe</u>	AT TIME OF DRILLING <u>---</u>
LOGGED BY <u>Sara Bloom</u> CHECKED BY <u>Leonard Niles</u>	AT END OF DRILLING <u>---</u>
NOTES _____	AFTER DRILLING <u>---</u>

GENERAL BH / TP / WELL - GINT STD U.S.GDT - 3/15/16 16:31 - C:\USERS\PUBLIC\DOCUMENTS\BENTLEY\GINT\PROJECTS\HOLLIS-EMERYVILLE (EMERYVILLE CA).GPJ

DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY %	REMARKS	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	Environmental Data
0							
0.3						Concrete.	
		100		ML		(ML) Dark brown, Sandy SILT, fine grained sand, damp.	
	SB		SVP-2@3'-3.5'			Mild to moderate petroleum odor observed.	PID = 54.4
4.0				CL		(CL) Dark brown, CLAY, damp.	
		100				Color grades to gray.	
6.5			SVP-2@6.5'-7'	ML		(ML) Orangeish-brown, SILT, damp.	PID = 31.7
7.0							

Bottom of borehole at 7.0 feet.






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BORING NUMBER SVP-3

PAGE 1 OF 1

CLIENT <u>Walter Merkle</u>	PROJECT NAME <u>Former McGrath Steel</u>
PROJECT NUMBER <u>15179.23</u>	PROJECT LOCATION <u>Emeryville, CA</u>
DATE STARTED <u>2/3/16</u> COMPLETED <u>2/3/16</u>	GROUND ELEVATION <u>0 ft</u> HOLE SIZE <u>2.25</u>
DRILLING CONTRACTOR <u>ECA</u>	GROUND WATER LEVELS:
DRILLING METHOD <u>Geoprobe</u>	AT TIME OF DRILLING <u>---</u>
LOGGED BY <u>Sara Bloom</u> CHECKED BY <u>Leonard Niles</u>	AT END OF DRILLING <u>---</u>
NOTES _____	AFTER DRILLING <u>---</u>

DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY %	REMARKS	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	Environmental Data
0							
		100		ML		0.3 Concrete. -0.3 (ML) Dark brown to black, SILT, with organics, strong petroleum odor.	
		100		CL		2.0 -2.0 (CL) Dark gray, Silty CLAY, mild petroleum odor.	
5	UB		SVP-3@6.5'-7'	ML		6.5 -6.5 7.0 -7.0 (ML) Orangish-brown, SILT, some fine grained sand, very strong petroleum odor.	PID = 98.6

Bottom of borehole at 7.0 feet.

GENERAL BH / TP / WELL - GINT STD US.GDT - 3/15/16 16:31 - C:\USERS\PUBLIC\DOCUMENTS\BENTLEY\GINT\PROJECTS\HOLLIS-EMERYVILLE (EMERYVILLE CA).GPJ



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BORING NUMBER SVP-4

CLIENT <u>Walter Merkle</u>	PROJECT NAME <u>Former McGrath Steel</u>
PROJECT NUMBER <u>15179.23</u>	PROJECT LOCATION <u>Emeryville, CA</u>
DATE STARTED <u>2/3/16</u> COMPLETED <u>2/3/16</u>	GROUND ELEVATION <u>0 ft</u> HOLE SIZE <u>2.25</u>
DRILLING CONTRACTOR <u>ECA</u>	GROUND WATER LEVELS:
DRILLING METHOD <u>Geoprobe</u>	AT TIME OF DRILLING <u>---</u>
LOGGED BY <u>Sara Bloom</u> CHECKED BY <u>Leonard Niles</u>	AT END OF DRILLING <u>---</u>
NOTES _____	AFTER DRILLING <u>---</u>

GENERAL BH / TP / WELL - GINT STD US.GDT - 3/15/16 16:31 - C:\USERS\PUBLIC\DOCUMENTS\BENTLEY\GINT\PROJECTS\HOLLIS-EMERYVILLE (EMERYVILLE CA).GPJ

DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY %	REMARKS	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	Environmental Data
0							
0.3						Concrete.	
		100				(ML) Dark brown, SILT, some organics, moist, mild petroleum odor.	
				ML		Color change to dark brownish gray, no organics.	
5		100				Color change to gray, moderate petroleum odor. As above, some gravel present.	
	UB		SVP-4@6.5'-7'				
7.0						Very strong petroleum odor.	PID = 70.1

Bottom of borehole at 7.0 feet.



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BORING NUMBER SVP-6

PAGE 1 OF 1

CLIENT Walter Merkle PROJECT NAME Former McGrath Steel
 PROJECT NUMBER 15179.23 PROJECT LOCATION Emeryville, CA
 DATE STARTED 2/3/16 COMPLETED 2/3/16 GROUND ELEVATION 0 ft HOLE SIZE 2.25
 DRILLING CONTRACTOR ECA GROUND WATER LEVELS:
 DRILLING METHOD Geoprobe AT TIME OF DRILLING ---
 LOGGED BY Sara Bloom CHECKED BY Leonard Niles AT END OF DRILLING ---
 NOTES _____ AFTER DRILLING ---

GENERAL BH / TP / WELL - GINT STD US.GDT - 3/15/16 16:31 - C:\USERS\PUBLIC\DOCUMENTS\BENTLEY\GINT\PROJECTS\HOLLIS-EMERYVILLE (EMERYVILLE CA).GPJ

DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY %	REMARKS	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	Environmental Data
0							
		100		ML		0.3 Concrete. -0.3 (ML) Dark brown, SILT, some organics, trace fine sand, damp.	
		100		ML		2.0 -2.0 (ML) Dark gray, Sandy SILT, very fine grained sand, damp.	
5	UB		SVP-6@6.5'-7'			Color change to orangeish-brown, strong petroleum odor.	
						7.0 -7.0 Bottom of borehole at 7.0 feet.	PID = 70.8

APPENDIX E

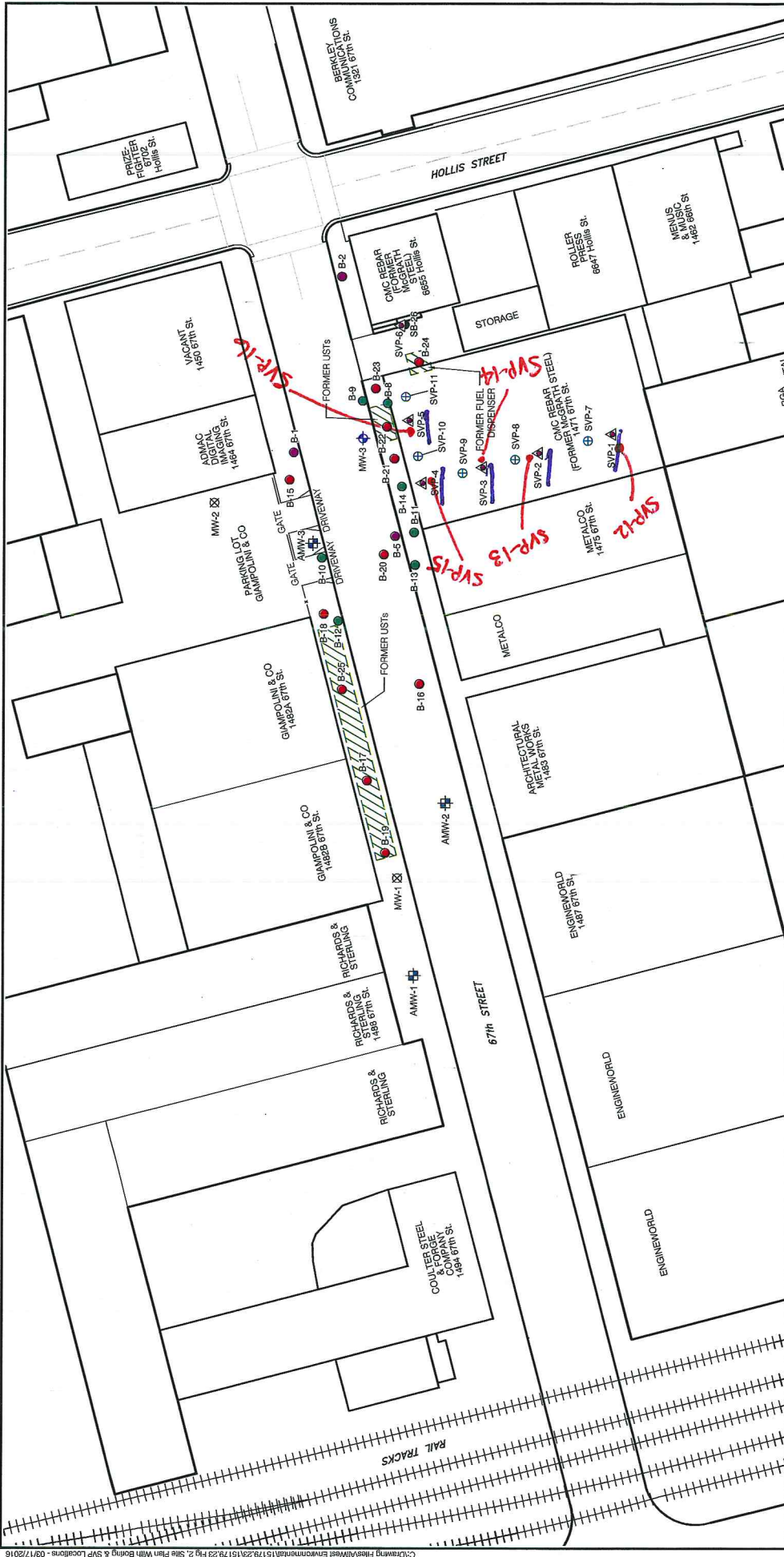


FIGURE 2
SITE PLAN WITH BORING, WELL AND SOIL VAPOR PROBE LOCATIONS

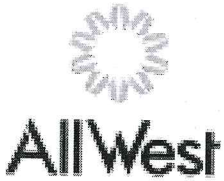
Former McGrath Steel
 6655 Hollis Street, Emeryville, California
 SOURCE: Morrow Surveying and Google Earth
 DRAWN BY: CM (03/17/2016)

AllWest
 PROJECT NO. 15179.23

0 60 120
 APPROXIMATE SCALE IN FEET

LEGEND

- SVP-1 ▲ Soil Boring-Vapor Probe (AllWest, February 3-4, 2016)
- SVP-7 ⊕ Semi-Permanent Sub-Slab Soil Vapor Probe
- MW-2 ⊕ Monitoring Well (Clearprint/ESC - Destroyed, 2005)
- MW-3 ⊕ Monitoring Well (Clearprint/ESC, 1995)
- AMW-3 ⊕ Monitoring Well (AllWest, 2013)
- B-5 ● Soil Boring (Weiss Associates, 1996)
- B-14 ● Soil Boring (Weiss Associates, 2006)
- B-25 ● Soil Boring (Weiss Associates, January 16, 17, & 18, 2013)
- SB-26 ● Soil Boring (AllWest, February 4, 2016)
- Former USTs, Fuel Dispensers (Removed, 1994 & 1996)
- Fence



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Specialists in Physical Due
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SOIL GAS VAPOR FIELD LOG

Project No: 16076.23.28 Project Name: HOUSS EMERYVILLE
 Date: 5/12/16 Vapor Probe No: SVP-12 Serial No: PURGE: D219
SAMPLE: D104
 Regulatory Agencies: ALEMEDA COUNTY
 Contractor: CASCADE DRILLING
 Hole Diameter: 1 1/2" Total Depth: 5" Grout/Bentonite: N/A
 Probe Diameter: 1/8" Line Length: 6' Purge Volume: _____
 Tracer Gas: HELIUM Flow Regulator: SGM 196 (ml/min) Leak Test: Pass
150-200
 Laboratory Name and Number: EUROFINS

SAMPLE COLLECTION

Start Time	Time Elapsed	Pressure	Remarks
1438	—	30Hg	BEGIN LEAK TEST.
1446	8 MIN	30Hg	END LEAK TEST - PASS.
1448			BEGAN INJECTING HELIUM INTO SHROUD.
1455		30Hg	He @ 25.8%, BEGAN PURGING
1459	4 MIN	26Hg	END PURGE, He @ 45.7%, 0% DOWNHOLE
1505	—		BEGAN SAMPLING, He @ 41.1%
1520		24Hg	He @ 34.4%
1541	36 MIN	5.5Hg	He @ 29.6%, 0% DOWNHOLE, 29.3%

Remarks: _____

Sampler: SARA BLUM



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SOIL GAS VAPOR FIELD LOG

Project No: _____ Project Name: HOLLIS EMERYVILLE
 Date: 5/13/16 Vapor Probe No: SVP-13 PURGE: 0219
 Serial No: SAMPLE: SIM054
 Regulatory Agencies: ALEMEDA COUNTY PUBLIC HEALTH ENVIRONMENTAL HEALTH SVCS.
 Contractor: CASCADE DRILLING
 Hole Diameter: 1 1/2" Total Depth: 5" Grout/Bentonite: N/A
 Probe Diameter: 1/8" Line Length: 6' Purge Volume: _____
 Tracer Gas: HELIUM Flow Regulator: 150-200 (ml/min) Leak Test: Pass Fail
SGM 190
 Laboratory Name and Number: _____

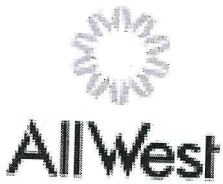
SAMPLE COLLECTION

Start Time	Time Elapsed	Pressure	Remarks
1615	—	26 Hg	BEGAN LEAK TEST.
1615	—	20.5 Hg	BAD FLOW RESTRICTOR.
1624		20.5 Hg	
<hr/>			
0850	—	19.5 Hg	BEGIN LEAK TEST
0855	5 MIN	19.5 Hg	END LEAK TEST - PASS
0900	—	19.5 Hg	He: 25.5%, 0% (DOWNHOLE), BEGIN PURGING
0905		16 Hg	END PURGE, 19.8%, BEGIN SAMPLING
0920		22.5 Hg	He: 21.6%
0935		10 Hg	He: 20%

Remarks: SGM 190 - BAD FLOW RESTRICTOR, CAN'T TIGHTEN ENOUGH TO SECURE.
SGM 253 - REGULATOR DOESN'T MOVE.

0942 5 Hg END PURGE: He: 19.5%, 0% DOWNHOLE

Sampler: SARA BLOOM



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Specialists in Physical Due Diligence and Remedial Services

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San Francisco, CA 94110
Tel 415.391.2510
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SOIL GAS VAPOR FIELD LOG

Project No: _____

Project Name: HOLLIS EMEZYVILLE

Date: 5/13/16

Vapor Probe No: SVP-14

PURGE: D219
Serial No: SAMPLE: D182

Regulatory Agencies: ALEMEDA COUNTY ENVIRONMENTAL HEALTH

Contractor: CASCADE DRILLING

Hole Diameter: 1 1/2"

Total Depth: 5"

Grout/Bentonite: N/A

Probe Diameter: 1/8"

Line Length: 6'

Purge Volume: _____

Tracer Gas: HELIUM

Flow Regulator: 150-200 (ml/min)
SGM266

Leak Test: Pass/Fail

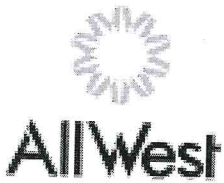
Laboratory Name and Number: _____

SAMPLE COLLECTION

Start Time	Time Elapsed	Pressure	Remarks
1022	—	16 Hg	BEGIN LEAK TEST
1027	5 MIN	16 Hg	END LEAK TEST - PASSED
1030	—	16 Hg	BEGAN PURGING; He 20.1%
1033	3 MIN	13 Hg	END PURGE; He: 19.0%
1036		30 Hg	BEGAN SAMPLING; He: 23.3%
1056	20 MIN	11 Hg	He: 21.1%
1107	31 MIN	4 Hg	END SAMPLE; He: 19.6%, 0% DOWNHOLE

Remarks: _____

Sampler: SARA BLOOM



AllWest Environmental, Inc.
Specialists in Physical Due
Diligence and Remedial Services

2141 Mission Street, Suite 100
San Francisco, CA 94110
Tel 415.391.2510
Fax 415.391.2008

SOIL GAS VAPOR FIELD LOG

Project No: _____ Project Name: HOLLIS EMERVILLE
 Date: 5/13/16 Vapor Probe No: SVP-15 PURGE: D219
 Serial No: SAMPLE: D243
 Regulatory Agencies: ALEMEDA COUNTY ENVIRONMENTAL HEALTH
 Contractor: CASCADE DRILLING
 Hole Diameter: 1 1/2" Total Depth: 5" Grout/Bentonite: N/A
 Probe Diameter: 1/8" Line Length: 6' Purge Volume: _____
 Tracer Gas: HELIUM Flow Regulator: 150-200 (ml/min) Leak Test: Pass
SEMOLI
 Laboratory Name and Number: EUROFINS

SAMPLE COLLECTION

Start Time	Time Elapsed	Pressure	Remarks
1202	—	13Hg	BEGIN LEAK TEST
1207	5 MIN	13Hg	END LEAK TEST - PASS
1210	—	13Hg	BEGIN PURGE; He: 20.5%
1215	5 MIN	10Hg	END PURGE; He: 21.7%
1216	—	30Hg	BEGIN SAMPLING; He: 19.6%
1231	15 MIN	20Hg	He: 19.8%
1250	34 MIN	6Hg	END SAMPLE; He: 18.6%, 0% DOWNHOLE

Remarks: _____

Sampler: SACA BLOOM



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 Diligence and Remedial Services

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 San Francisco, CA 94110
 Tel 415.391.2510
 Fax 415.391.2008

SOIL GAS VAPOR FIELD LOG

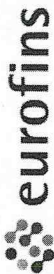
Project No: _____ Project Name: HOLLIS EMERYVILLE
 Date: 5/13/16 Vapor Probe No: SVP-16 PURGE: D219
 Serial No: SAMPLE: D596
 Regulatory Agencies: ALEMEDA COUNTY ENVIRONMENTAL HEALTH
 Contractor: CASCADE DRILLING
 Hole Diameter: 1 1/2" Total Depth: 5' Grout/Bentonite: N/A
 Probe Diameter: 1/8" Line Length: 6' Purge Volume: _____
 Tracer Gas: HELIUM Flow Regulator: 150-200 (ml/min) Leak Test: Pass/Fail
SGM025
 Laboratory Name and Number: _____

SAMPLE COLLECTION

Start Time	Time Elapsed	Pressure	Remarks
1324	—	10 Hg	BEGIN LEAK TEST
1329	5 MIN	10 Hg	END LEAK TEST - PASS
1335	—	10 Hg	BEGIN PURGING; He: 20.0%
1340	5 MIN	7 Hg	END PURGE; He: 18.9%
1342	—	30 Hg	BEGIN SAMPLING; He: 19.5%
1402	20 MIN	11 Hg	He: 19.9%
1410	28 MIN	5 Hg	END SAMPLE; He: 19.99%, 0% DOWNHOLE

Remarks: _____

Sampler: SARA BLOOM



Calscience

7440 Lincoln Way, Garden Grove, CA 92841-1427 • (714) 895-5494
For courier service / sample drop off information, contact us26_sales@eurofins.com or call us.

AIR CHAIN-OF-CUSTODY RECORD

DATE: 5/13/16
PAGE: 1 OF 1

WO NO. / LAB USE ONLY

LABORATORY CLIENT: **ALLWEST ENVIRONMENTAL**

ADDRESS: **214H MISSION ST, STE100**

CITY: **SAN FRANCISCO, CA** STATE: **CA** ZIP: **94110**

TEL: **(415) 391-2510** E-MAIL: **LEONARDO@ALLWESTI.COM**

TURNAROUND TIME (Rush surcharges may apply to any TAT not "STANDARD"):
 SAME DAY 24 HR 48 HR 72 HR 5 DAYS STANDARD

EDD: COELT EDF OTHER

SPECIAL INSTRUCTIONS:

CLIENT PROJECT NAME / NO.: **HOLLS EMERYVILLE**

PROJECT CONTACT: **LEONARD NILES**

PROJECT ADDRESS: **6655 HOLLS ST**

CITY: **EMERYVILLE** STATE: **CA** ZIP: **CA**

P.O. NO.: **16076.23.28**

LAB CONTACT OR QUOTE NO.:

SAMPLER(S): (PRINT) **SARA BLOOM**

LAB USE ONLY	SAMPLE ID	FIELD ID / POINT OF COLLECTION	MATRIX Indoor (I) Soil Vap. (SV) Ambient (A)	SAMPLING EQUIPMENT			START SAMPLING INFORMATION			STOP SAMPLING INFORMATION			REQUESTED ANALYSES	
				Media ID	Canister Size 6L or 1L	Flow Controller ID	Date	Time (24 hr clock)	Canister Pressure (in Hg)	Date	Time (24 hr clock)	Canister Pressure (in Hg)		
	IAQ-6		I	D173	6L	FC236	5/13/16	0752	30	5/13/16	1543	5	X	70-15 SIM (FILL UP + NIT) (FILL) S-P
	IAQ-7		I	D206	6L	FC247	5/13/16	0754	30	5/13/16	1554	12	X	
	IAQ-8		I	D251	6L	FC231	5/13/16	0816	30	5/13/16	1615	5	X	
	IAQ-9		I	SIM088	6L	FC561	5/13/16	0832	30	5/13/16	1621	5	X	
	IAQ-10		I	D794	6L	FC472	5/13/16	0835	30	5/13/16	1635	9	X	
	OAA-2		A	SIM088	6L	FC233	5/13/16	0836	30	5/13/16	1606	5	X	

Relinquished by: (Signature) *Sara Bloom*

Relinquished by: (Signature)

Relinquished by: (Signature)

Date: _____

Date: _____

Date: _____



AllWest Environmental, Inc.
 Specialists in Physical Due Diligence and Remedial Services
 530 Howard Street, Suite 300
 San Francisco, CA 94105
 Tel 415.391.2510
 Fax 415.391.2008

INDOOR/AMBIENT AIR SAMPLING FIELD LOG

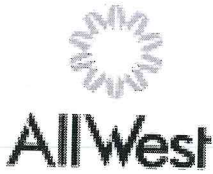
Project No: _____ Project Name: HOLLIS EMERYVILLE
 Date: 5/13/16 Site Location: 6655 HOLLIS ST
 Sample ID No: 1AQ-~~OFF~~6 Canister Type: 6L SUMMA Serial No: D673
 Regulatory Agencies: _____ Contractor: _____
 Indoor/Outdoor: INDOOR Building Name/Location: _____
 Initial Vacuum: 30 ("Hg) Final Vacuum: _____ ("Hg) Canister Volume: 6 (L)
 Sampling Interval (hrs): 8 Flow Regulator: FC238 (ml/min) Regulator Serial No: FC238
 Laboratory Name and Location: EUROFINS
 Laboratory Analyses: _____

SAMPLE COLLECTION

Start Time	Time Elapsed	Pressure	Remarks
0752	—	30Hg	START INDOOR AIR SAMPLING
1543	7HR 51MIN	5Hg	END INDOOR AIR SAMPLING

Remarks: _____

Sampler: SARA BLOOM



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 San Francisco, CA 94105
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 Fax 415.391.2008

INDOOR/AMBIENT AIR SAMPLING FIELD LOG

Project No: _____ Project Name: HOLLIS EMERYVILLE
 Date: 5/13/16 Site Location: 6655 HOLLIS ST.
 Sample ID No: 1AQ-~~DBH~~ 7 Canister Type: 6L SUMMA Serial No: D206
 Regulatory Agencies: _____ Contractor: _____
 Indoor/Outdoor: INDOOR Building Name/Location: WOMAN'S BATHROOM
 Initial Vacuum: 30 ("Hg) Final Vacuum: 3 ("Hg) Canister Volume: 6 (L)
 Sampling Interval (hrs): 8 Flow Regulator: _____ (ml/min) Regulator Serial No: FC247
 Laboratory Name and Location: _____
 Laboratory Analyses: _____

SAMPLE COLLECTION

Start Time	Time Elapsed	Pressure	Remarks
<u>0754</u>	<u>—</u>	<u>30Hg</u>	<u>START INDOOR AIR SAMPLING</u>
<u>1554</u>	<u>8HR</u>	<u>12Hg</u>	<u>END INDOOR AIR SAMPLING</u>

Remarks: _____

Sampler: SARA BLOOM



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 Diligence and Remedial Services
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 San Francisco, CA 94105
 Tel 415.391.2510
 Fax 415.391.2008

INDOOR/AMBIENT AIR SAMPLING FIELD LOG

Project No: _____ Project Name: HOLLIS EMERYVILLE
 Date: 5/13/16 Site Location: 6655 HOLLIS ST.
 Sample ID No: OAA-2 Canister Type: 6L SUMMA Serial No: D251
~~OAO-BALC~~
 Regulatory Agencies: _____ Contractor: _____
 Indoor/Outdoor: OUTDOOR Building Name/Location: OUTSIDE BALCONY
 Initial Vacuum: 30 ("Hg) Final Vacuum: 5 ("Hg) Canister Volume: 6 (L)
 Sampling Interval (hrs): 8 Flow Regulator: _____ (ml/min) Regulator Serial No: FC231
 Laboratory Name and Location: EUROFINS
 Laboratory Analyses: _____

SAMPLE COLLECTION

Start Time	Time Elapsed	Pressure	Remarks
0816	—	30Hg	START OUTDOOR AIR SAMPLING
1615	7HR 59MIN	5Hg	END OUTDOOR AIR SAMPLING

Remarks: _____

Sampler: SARA BLOOM



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530 Howard Street, Suite 300
San Francisco, CA 94105
Tel 415.391.2510
Fax 415.391.2008

INDOOR/AMBIENT AIR SAMPLING FIELD LOG

Project No: _____ Project Name: HOLLIS EMERYVILLE

Date: 5/13/16 Site Location: 6655 HOLLIS ST.

Sample ID No: IAQ-8 Canister Type: 6LSUMMA Serial No: S1M088

Regulatory Agencies: ACEH Contractor: —

Indoor/Outdoor: INDOOR Building Name/Location: S CENTER WALL-ON CAGE

Initial Vacuum: 30 ("Hg) Final Vacuum: 5 ("Hg) Canister Volume: 6 (L)

Sampling Interval (hrs): 8 Flow Regulator: _____ (ml/min) Regulator Serial No: FC561

Laboratory Name and Location: EUROFINS

Laboratory Analyses: _____

SAMPLE COLLECTION

Start Time	Time Elapsed	Pressure	Remarks
0832	—	30Hg	BEGIN INDOOR AIR SAMPLING
1621	7HR 49MIN	5 Hg	END INDOOR AIR SAMPLING

Remarks: _____

Sampler: SARA BLOOM



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San Francisco, CA 94105
Tel 415.391.2510
Fax 415.391.2008

INDOOR/AMBIENT AIR SAMPLING FIELD LOG

Project No: _____ Project Name: HOLLIS EMERYVILLE
Date: 5/13/16 Site Location: 6655 HOLLIS ST
Sample ID No: IAQ-9 Canister Type: 6L SUMMA Serial No: D794
Regulatory Agencies: ACEH Contractor: _____
Indoor/Outdoor: INDOOR Building Name/Location: BETWEEN SVP-3 & SVP-4
Initial Vacuum: 30 ("Hg) Final Vacuum: _____ ("Hg) Canister Volume: 6 (L)
Sampling Interval (hrs): 8 Flow Regulator: _____ (ml/min) Regulator Serial No: FC472
Laboratory Name and Location: EUROFINS
Laboratory Analyses: _____

SAMPLE COLLECTION

Start Time	Time Elapsed	Pressure	Remarks
<u>0835</u>	<u>—</u>	<u>30Hg</u>	<u>START INDOOR AIR SAMPLING</u>
<u>1635</u>	<u>8hr</u>	<u>9Hg</u>	<u>END INDOOR AIR SAMPLING</u>

Remarks: _____

Sampler: SARA BLOOM



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San Francisco, CA 94105
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Fax 415.391.2008

INDOOR/AMBIENT AIR SAMPLING FIELD LOG

Project No: _____ Project Name: HOLLIS EMERYVILLE

Date: 5/13/16 Site Location: 6655 HOLLIS ST.

Sample ID No: 1AQ-10 Canister Type: 6L SUMMA Serial No: SIM008

Regulatory Agencies: ACEH Contractor: —

Indoor/Outdoor: INDOOR Building Name/Location: WAREHOUSE BATHROOM

Initial Vacuum: 30 ("Hg) Final Vacuum: 5 ("Hg) Canister Volume: 6 (L)

Sampling Interval (hrs): 8 Flow Regulator: _____ (ml/min) Regulator Serial No: FC233

Laboratory Name and Location: EUROFINS

Laboratory Analyses: _____

SAMPLE COLLECTION

Start Time	Time Elapsed	Pressure	Remarks
0836	—	30Hg	BEGIN INDOOR AIR SAMPLING
1606	7HR 30MIN	5Hg	END INDOOR AIR SAMPLING

Remarks: _____

Sampler: SARA BLOOM

APPENDIX L - BUILDING SURVEY FORM

Preparer's Name: SARA BLOOM Date/Time Prepared: 5/13/16
Affiliation: ALLWEST Phone Number: _____

Occupant Information

Occupant Name: VACANT Interviewed: Yes No
Mailing Address: 6655 HOLLS ST
City: EMERYVILLE State: CA Zip Code: _____
Phone: _____ Email: _____

Owner/Landlord Information (Check if same as occupant)

Occupant Name: N/A Interviewed: Yes No
Mailing Address: _____
City: _____ State: _____ Zip Code: _____
Phone: _____ Email: _____

Building Type (Check appropriate boxes)

- Residential Residential Duplex Apartment Building Mobile Home Commercial (office)
 Commercial (warehouse) Industrial Strip Mall Split Level Church School

Building Characteristics

Approximate Building Age (years): _____ Number of Stories: 2
Approximate Building Area (square feet): _____ Number of Elevators: 0

Foundation Type (Check appropriate boxes)

- Slab-on-Grade Crawl Space Basement

Basement Characteristics (Check appropriate boxes)

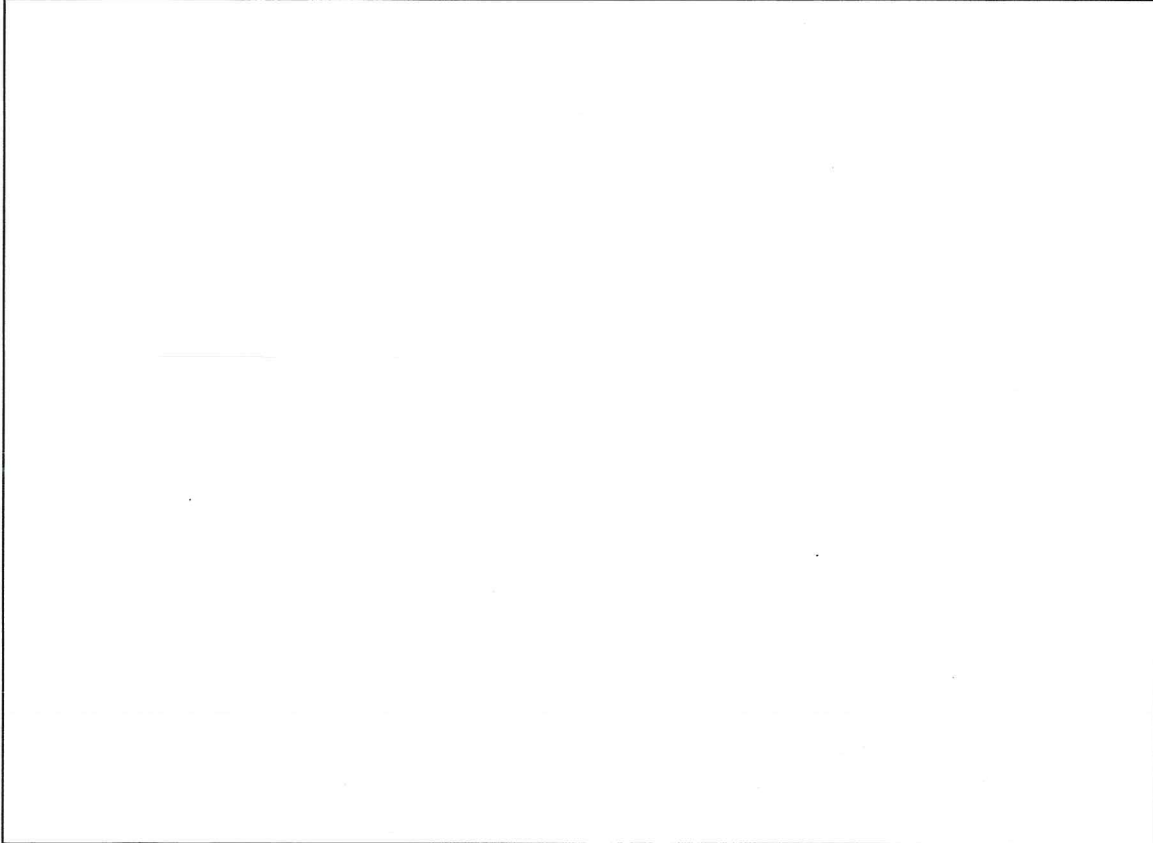
- Dirt Floor Sealed Wet Surfaces Sump Pump Concrete Cracks Floor Drains

Factors Influencing Indoor Air Quality

- | | |
|----------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Is there an attached garage? | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| Is there smoking in the building? | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| Is there new carpet or furniture? | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Describe: _____ |
| Have clothes or drapes been recently dry cleaned? | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Describe: _____ |
| Has painting or staining been done with the last six months? | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Describe: _____ |
| Has the building been recently remodeled? | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Describe: _____ |
| Has the building ever had a fire? | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| Is there a hobby or craft area in the building? | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Describe: _____ |
| Is gun cleaner stored in the building? | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| Is there a fuel oil tank on the property? | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| Is there a septic tank on the property? | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| Has the building been fumigated or sprayed for pests recently? | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Describe: _____ |
| Do any building occupants use solvents at work? | <input type="checkbox"/> Yes <input type="checkbox"/> No Describe: _____ |

Sampling Locations

Draw the general floor plan of the building and denote locations of sample collection. Indicate locations of doors, windows, indoor air contaminant sources and field instrument readings.



Primary Type of Energy Used (Check appropriate boxes)

Natural Gas Fuel Oil Propane Electricity Wood Kerosene

Meteorological Conditions

Describe the general weather conditions during the indoor air sampling event.

CLOUDY, 50's-60's, BREEZY

General Comments

Provide any other information that may be of importance in understanding the indoor air quality of this building.

THE BUILDING IS CURRENTLY VACANT, BUT HAS BEE INHABITED BY THE HOMELESS IN RECENT MONTHS/WEEKS.

NO ELECTRICITY / POWER. ALL DOORS / WINDOWS WERE CLOSED DURING SAMPLING.

APPENDIX L - BUILDING SURVEY FORM

Preparer's Name: SARA BLOOM Date/Time Prepared: 5/13/16
Affiliation: ALWEST Phone Number: (415) 391-2510

Occupant Information

Occupant Name: VACANT Interviewed: Yes No
Mailing Address: 67TH ST.
City: EMERYVILLE State: CA Zip Code: _____
Phone: _____ Email: _____

Owner/Landlord Information (Check if same as occupant)

Occupant Name: N/A Interviewed: Yes No
Mailing Address: _____
City: _____ State: _____ Zip Code: _____
Phone: _____ Email: _____

Building Type (Check appropriate boxes)

- Residential Residential Duplex Apartment Building Mobile Home Commercial (office)
 Commercial (warehouse) Industrial Strip Mall Split Level Church School

Building Characteristics

Approximate Building Age (years): _____ Number of Stories: 1
Approximate Building Area (square feet): _____ Number of Elevators: 0

Foundation Type (Check appropriate boxes)

- Slab-on-Grade Crawl Space Basement

Basement Characteristics (Check appropriate boxes)

- Dirt Floor Sealed Wet Surfaces Sump Pump Concrete Cracks Floor Drains

Factors Influencing Indoor Air Quality

- | | |
|----------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Is there an attached garage? | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| Is there smoking in the building? | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| Is there new carpet or furniture? | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Describe: _____ |
| Have clothes or drapes been recently dry cleaned? | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Describe: _____ |
| Has painting or staining been done with the last six months? | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Describe: _____ |
| Has the building been recently remodeled? | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Describe: _____ |
| Has the building ever had a fire? | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| Is there a hobby or craft area in the building? | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Describe: _____ |
| Is gun cleaner stored in the building? | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| Is there a fuel oil tank on the property? | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| Is there a septic tank on the property? | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| Has the building been fumigated or sprayed for pests recently? | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Describe: _____ |
| Do any building occupants use solvents at work? | <input type="checkbox"/> Yes <input type="checkbox"/> No Describe: _____ |

Sampling Locations

Draw the general floor plan of the building and denote locations of sample collection. Indicate locations of doors, windows, indoor air contaminant sources and field instrument readings.



Primary Type of Energy Used (Check appropriate boxes)

Natural Gas Fuel Oil Propane Electricity Wood Kerosene

Meteorological Conditions

Describe the general weather conditions during the indoor air sampling event.

CLOUDY, 50-60's, BREEZY

General Comments

Provide any other information that may be of importance in understanding the indoor air quality of this building.

NO ELECTRICITY/POWER. ALL DOORS WERE CLOSED, HOWEVER SOME UPPER WINDOWS WERE OPEN.

APPENDIX M – BUILDING SCREENING FORM

Occupant of Building VACANT

Address 6655 HOLLIS ST

City EMERYVILLE, CA

Field Investigator SARA BLOOM Date 5/13/16

Field Instrument Reading	Measurement Location (Ambient Air, Foundation Opening, or Consumer Product)	If Consumer Product, Potential Volatile Ingredients
OFFICE BLDG	DUAL PUMP FLUID II	
	GAS CAN - NO LID, EMPTY	
	SPILED LASER JET INK	
	WHITE POWDER ON CUPBOARD SHELF	
	LAUNDRY DETERGENT	
	LYSOL SPRAY	
	HOT SHOT PLUS INDUSTRIAL CLEANER	
	SPRAY PAINT CANS	
	PAINT CANS (LIDS OFF)	
	MOTOR OIL - 2 STROKE, 2/3 FULL, LID OFF	
OUTSIDE BETWEEN OFFICE & WAREHOUSE	PAINT CHIPPER/BLASTER	
WAREHOUSE	GREASE/OIL STAINS ON SLAB OF WAREHOUSE	

Comments:

APPENDIX F



McC Campbell Analytical, Inc.

"When Quality Counts"

Analytical Report

WorkOrder: 1602146

Report Created for: All West Environmental, Inc
2141 Mission Street, Ste 100
San Francisco, CA 94110

Project Contact: Sara Bloom
Project P.O.:
Project Name: 15179.23; Hollis

Project Received: 02/03/2016

Analytical Report reviewed & approved for release on 02/09/2016 by:

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.





Glossary of Terms & Qualifier Definitions

Client: All West Environmental, Inc
Project: 15179.23; Hollis
WorkOrder: 1602146

Glossary Abbreviation

95% Interval	95% Confident Interval
DF	Dilution Factor
DI WET	(DISTLC) Waste Extraction Test using DI water
DISS	Dissolved (direct analysis of 0.45 µm filtered and acidified water sample)
DLT	Dilution Test
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
N/A	Not Applicable
ND	Not detected at or above the indicated MDL or RL
NR	Data Not Reported due to matrix interference or insufficient sample amount.
PDS	Post Digestion Spike
PDSD	Post Digestion Spike Duplicate
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
SPLP	Synthetic Precipitation Leachate Procedure
TCLP	Toxicity Characteristic Leachate Procedure
TEQ	Toxicity Equivalents
WET (STLC)	Waste Extraction Test (Soluble Threshold Limit Concentration)

Analytical Qualifiers

S	Surrogate spike recovery outside accepted recovery limits
c7	Surrogate value diluted out of range



Glossary of Terms & Qualifier Definitions

Client: All West Environmental, Inc
Project: 15179.23; Hollis
WorkOrder: 1602146

Quality Control Qualifiers

F1 MS/MSD recovery and/or RPD is out of acceptance criteria; LCS validated the prep batch.
F2 LCS recovery for this compound is outside of acceptance limits.



Analytical Report

Client: All West Environmental, Inc
Date Received: 2/3/16 17:45
Date Prepared: 2/3/16
Project: 15179.23; Hollis

WorkOrder: 1602146
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SB-26A @ 4.5'-5'	1602146-001A	Soil	02/03/2016 09:40	GC16	116226

Analytes	Result	RL	DF	Date Analyzed
Acetone	ND	0.10	1	02/05/2016 14:29
tert-Amyl methyl ether (TAME)	ND	0.0050	1	02/05/2016 14:29
Benzene	ND	0.0050	1	02/05/2016 14:29
Bromobenzene	ND	0.0050	1	02/05/2016 14:29
Bromochloromethane	ND	0.0050	1	02/05/2016 14:29
Bromodichloromethane	ND	0.0050	1	02/05/2016 14:29
Bromoform	ND	0.0050	1	02/05/2016 14:29
Bromomethane	ND	0.0050	1	02/05/2016 14:29
2-Butanone (MEK)	ND	0.020	1	02/05/2016 14:29
t-Butyl alcohol (TBA)	ND	0.050	1	02/05/2016 14:29
n-Butyl benzene	ND	0.0050	1	02/05/2016 14:29
sec-Butyl benzene	ND	0.0050	1	02/05/2016 14:29
tert-Butyl benzene	ND	0.0050	1	02/05/2016 14:29
Carbon Disulfide	ND	0.0050	1	02/05/2016 14:29
Carbon Tetrachloride	ND	0.0050	1	02/05/2016 14:29
Chlorobenzene	ND	0.0050	1	02/05/2016 14:29
Chloroethane	ND	0.0050	1	02/05/2016 14:29
Chloroform	ND	0.0050	1	02/05/2016 14:29
Chloromethane	ND	0.0050	1	02/05/2016 14:29
2-Chlorotoluene	ND	0.0050	1	02/05/2016 14:29
4-Chlorotoluene	ND	0.0050	1	02/05/2016 14:29
Dibromochloromethane	ND	0.0050	1	02/05/2016 14:29
1,2-Dibromo-3-chloropropane	ND	0.0040	1	02/05/2016 14:29
1,2-Dibromoethane (EDB)	ND	0.0040	1	02/05/2016 14:29
Dibromomethane	ND	0.0050	1	02/05/2016 14:29
1,2-Dichlorobenzene	ND	0.0050	1	02/05/2016 14:29
1,3-Dichlorobenzene	ND	0.0050	1	02/05/2016 14:29
1,4-Dichlorobenzene	ND	0.0050	1	02/05/2016 14:29
Dichlorodifluoromethane	ND	0.0050	1	02/05/2016 14:29
1,1-Dichloroethane	ND	0.0050	1	02/05/2016 14:29
1,2-Dichloroethane (1,2-DCA)	ND	0.0040	1	02/05/2016 14:29
1,1-Dichloroethene	ND	0.0050	1	02/05/2016 14:29
cis-1,2-Dichloroethene	ND	0.0050	1	02/05/2016 14:29
trans-1,2-Dichloroethene	ND	0.0050	1	02/05/2016 14:29
1,2-Dichloropropane	ND	0.0050	1	02/05/2016 14:29
1,3-Dichloropropane	ND	0.0050	1	02/05/2016 14:29
2,2-Dichloropropane	ND	0.0050	1	02/05/2016 14:29

(Cont.)



Analytical Report

Client: All West Environmental, Inc
Date Received: 2/3/16 17:45
Date Prepared: 2/3/16
Project: 15179.23; Hollis

WorkOrder: 1602146
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SB-26A @ 4.5'-5'	1602146-001A	Soil	02/03/2016 09:40	GC16	116226
Analytes	Result	RL	DF	Date Analyzed	
1,1-Dichloropropene	ND	0.0050	1	02/05/2016 14:29	
cis-1,3-Dichloropropene	ND	0.0050	1	02/05/2016 14:29	
trans-1,3-Dichloropropene	ND	0.0050	1	02/05/2016 14:29	
Diisopropyl ether (DIPE)	ND	0.0050	1	02/05/2016 14:29	
Ethylbenzene	ND	0.0050	1	02/05/2016 14:29	
Ethyl tert-butyl ether (ETBE)	ND	0.0050	1	02/05/2016 14:29	
Freon 113	ND	0.0050	1	02/05/2016 14:29	
Hexachlorobutadiene	ND	0.0050	1	02/05/2016 14:29	
Hexachloroethane	ND	0.0050	1	02/05/2016 14:29	
2-Hexanone	ND	0.0050	1	02/05/2016 14:29	
Isopropylbenzene	ND	0.0050	1	02/05/2016 14:29	
4-Isopropyl toluene	ND	0.0050	1	02/05/2016 14:29	
Methyl-t-butyl ether (MTBE)	ND	0.0050	1	02/05/2016 14:29	
Methylene chloride	ND	0.0050	1	02/05/2016 14:29	
4-Methyl-2-pentanone (MIBK)	ND	0.0050	1	02/05/2016 14:29	
Naphthalene	ND	0.0050	1	02/05/2016 14:29	
n-Propyl benzene	ND	0.0050	1	02/05/2016 14:29	
Styrene	ND	0.0050	1	02/05/2016 14:29	
1,1,1,2-Tetrachloroethane	ND	0.0050	1	02/05/2016 14:29	
1,1,2,2-Tetrachloroethane	ND	0.0050	1	02/05/2016 14:29	
Tetrachloroethene	ND	0.0050	1	02/05/2016 14:29	
Toluene	ND	0.0050	1	02/05/2016 14:29	
1,2,3-Trichlorobenzene	ND	0.0050	1	02/05/2016 14:29	
1,2,4-Trichlorobenzene	ND	0.0050	1	02/05/2016 14:29	
1,1,1-Trichloroethane	ND	0.0050	1	02/05/2016 14:29	
1,1,2-Trichloroethane	ND	0.0050	1	02/05/2016 14:29	
Trichloroethene	ND	0.0050	1	02/05/2016 14:29	
Trichlorofluoromethane	ND	0.0050	1	02/05/2016 14:29	
1,2,3-Trichloropropane	ND	0.0050	1	02/05/2016 14:29	
1,2,4-Trimethylbenzene	0.0087	0.0050	1	02/05/2016 14:29	
1,3,5-Trimethylbenzene	ND	0.0050	1	02/05/2016 14:29	
Vinyl Chloride	ND	0.0050	1	02/05/2016 14:29	
Xylenes, Total	ND	0.0050	1	02/05/2016 14:29	

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Analytical Report

Client: All West Environmental, Inc
Date Received: 2/3/16 17:45
Date Prepared: 2/3/16
Project: 15179.23; Hollis

WorkOrder: 1602146
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SB-26A @ 4.5'-5'	1602146-001A	Soil	02/03/2016 09:40	GC16	116226

Analytes	Result	RL	DF	Date Analyzed
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
Dibromofluoromethane	98	70-130		02/05/2016 14:29
Toluene-d8	116	70-130		02/05/2016 14:29
4-BFB	95	70-130		02/05/2016 14:29
Benzene-d6	93	60-140		02/05/2016 14:29
Ethylbenzene-d10	109	60-140		02/05/2016 14:29
1,2-DCB-d4	74	60-140		02/05/2016 14:29

Analyst(s): KBO



Analytical Report

Client: All West Environmental, Inc
Date Received: 2/3/16 17:45
Date Prepared: 2/3/16
Project: 15179.23; Hollis

WorkOrder: 1602146
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SB-26A @ 9.5'-10'	1602146-003A	Soil	02/03/2016 10:00	GC16	116226

Analytes	Result	RL	DF	Date Analyzed
Acetone	ND	0.20	2	02/08/2016 23:06
tert-Amyl methyl ether (TAME)	ND	0.010	2	02/08/2016 23:06
Benzene	0.086	0.010	2	02/08/2016 23:06
Bromobenzene	ND	0.010	2	02/08/2016 23:06
Bromochloromethane	ND	0.010	2	02/08/2016 23:06
Bromodichloromethane	ND	0.010	2	02/08/2016 23:06
Bromoform	ND	0.010	2	02/08/2016 23:06
Bromomethane	ND	0.010	2	02/08/2016 23:06
2-Butanone (MEK)	ND	0.040	2	02/08/2016 23:06
t-Butyl alcohol (TBA)	ND	0.10	2	02/08/2016 23:06
n-Butyl benzene	0.034	0.010	2	02/08/2016 23:06
sec-Butyl benzene	ND	0.010	2	02/08/2016 23:06
tert-Butyl benzene	ND	0.010	2	02/08/2016 23:06
Carbon Disulfide	ND	0.010	2	02/08/2016 23:06
Carbon Tetrachloride	ND	0.010	2	02/08/2016 23:06
Chlorobenzene	ND	0.010	2	02/08/2016 23:06
Chloroethane	ND	0.010	2	02/08/2016 23:06
Chloroform	ND	0.010	2	02/08/2016 23:06
Chloromethane	ND	0.010	2	02/08/2016 23:06
2-Chlorotoluene	ND	0.010	2	02/08/2016 23:06
4-Chlorotoluene	ND	0.010	2	02/08/2016 23:06
Dibromochloromethane	ND	0.010	2	02/08/2016 23:06
1,2-Dibromo-3-chloropropane	ND	0.0080	2	02/08/2016 23:06
1,2-Dibromoethane (EDB)	ND	0.0080	2	02/08/2016 23:06
Dibromomethane	ND	0.010	2	02/08/2016 23:06
1,2-Dichlorobenzene	ND	0.010	2	02/08/2016 23:06
1,3-Dichlorobenzene	ND	0.010	2	02/08/2016 23:06
1,4-Dichlorobenzene	ND	0.010	2	02/08/2016 23:06
Dichlorodifluoromethane	ND	0.010	2	02/08/2016 23:06
1,1-Dichloroethane	ND	0.010	2	02/08/2016 23:06
1,2-Dichloroethane (1,2-DCA)	ND	0.0080	2	02/08/2016 23:06
1,1-Dichloroethene	ND	0.010	2	02/08/2016 23:06
cis-1,2-Dichloroethene	ND	0.010	2	02/08/2016 23:06
trans-1,2-Dichloroethene	ND	0.010	2	02/08/2016 23:06
1,2-Dichloropropane	ND	0.010	2	02/08/2016 23:06
1,3-Dichloropropane	ND	0.010	2	02/08/2016 23:06
2,2-Dichloropropane	ND	0.010	2	02/08/2016 23:06

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Analytical Report

Client: All West Environmental, Inc
Date Received: 2/3/16 17:45
Date Prepared: 2/3/16
Project: 15179.23; Hollis

WorkOrder: 1602146
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SB-26A @ 9.5'-10'	1602146-003A	Soil	02/03/2016 10:00	GC16	116226
Analytes	Result	RL	DF	Date Analyzed	
1,1-Dichloropropene	ND	0.010	2	02/08/2016 23:06	
cis-1,3-Dichloropropene	ND	0.010	2	02/08/2016 23:06	
trans-1,3-Dichloropropene	ND	0.010	2	02/08/2016 23:06	
Diisopropyl ether (DIPE)	ND	0.010	2	02/08/2016 23:06	
Ethylbenzene	0.12	0.010	2	02/08/2016 23:06	
Ethyl tert-butyl ether (ETBE)	ND	0.010	2	02/08/2016 23:06	
Freon 113	ND	0.010	2	02/08/2016 23:06	
Hexachlorobutadiene	ND	0.010	2	02/08/2016 23:06	
Hexachloroethane	ND	0.010	2	02/08/2016 23:06	
2-Hexanone	ND	0.010	2	02/08/2016 23:06	
Isopropylbenzene	ND	0.010	2	02/08/2016 23:06	
4-Isopropyl toluene	ND	0.010	2	02/08/2016 23:06	
Methyl-t-butyl ether (MTBE)	0.013	0.010	2	02/08/2016 23:06	
Methylene chloride	ND	0.010	2	02/08/2016 23:06	
4-Methyl-2-pentanone (MIBK)	ND	0.010	2	02/08/2016 23:06	
Naphthalene	0.067	0.010	2	02/08/2016 23:06	
n-Propyl benzene	0.047	0.010	2	02/08/2016 23:06	
Styrene	ND	0.010	2	02/08/2016 23:06	
1,1,1,2-Tetrachloroethane	ND	0.010	2	02/08/2016 23:06	
1,1,2,2-Tetrachloroethane	ND	0.010	2	02/08/2016 23:06	
Tetrachloroethene	ND	0.010	2	02/08/2016 23:06	
Toluene	ND	0.010	2	02/08/2016 23:06	
1,2,3-Trichlorobenzene	ND	0.010	2	02/08/2016 23:06	
1,2,4-Trichlorobenzene	ND	0.010	2	02/08/2016 23:06	
1,1,1-Trichloroethane	ND	0.010	2	02/08/2016 23:06	
1,1,2-Trichloroethane	ND	0.010	2	02/08/2016 23:06	
Trichloroethene	ND	0.010	2	02/08/2016 23:06	
Trichlorofluoromethane	ND	0.010	2	02/08/2016 23:06	
1,2,3-Trichloropropane	ND	0.010	2	02/08/2016 23:06	
1,2,4-Trimethylbenzene	0.29	0.010	2	02/08/2016 23:06	
1,3,5-Trimethylbenzene	0.091	0.010	2	02/08/2016 23:06	
Vinyl Chloride	ND	0.010	2	02/08/2016 23:06	
Xylenes, Total	0.54	0.010	2	02/08/2016 23:06	

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Analytical Report

Client: All West Environmental, Inc
Date Received: 2/3/16 17:45
Date Prepared: 2/3/16
Project: 15179.23; Hollis

WorkOrder: 1602146
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SB-26A @ 9.5'-10'	1602146-003A	Soil	02/03/2016 10:00	GC16	116226

Analytes	Result	RL	DF	Date Analyzed
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
Dibromofluoromethane	103	70-130		02/08/2016 23:06
Toluene-d8	102	70-130		02/08/2016 23:06
4-BFB	114	70-130		02/08/2016 23:06
Benzene-d6	95	60-140		02/08/2016 23:06
Ethylbenzene-d10	97	60-140		02/08/2016 23:06
1,2-DCB-d4	84	60-140		02/08/2016 23:06

Analyst(s): KF



Analytical Report

Client: All West Environmental, Inc
Date Received: 2/3/16 17:45
Date Prepared: 2/3/16
Project: 15179.23; Hollis

WorkOrder: 1602146
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SB-26A @ 11.5'-12'	1602146-004A	Soil	02/03/2016 10:07	GC18	116226

Analytes	Result	RL	DF	Date Analyzed
Acetone	ND	4.0	40	02/08/2016 14:14
tert-Amyl methyl ether (TAME)	ND	0.20	40	02/08/2016 14:14
Benzene	0.56	0.20	40	02/08/2016 14:14
Bromobenzene	ND	0.20	40	02/08/2016 14:14
Bromochloromethane	ND	0.20	40	02/08/2016 14:14
Bromodichloromethane	ND	0.20	40	02/08/2016 14:14
Bromoform	ND	0.20	40	02/08/2016 14:14
Bromomethane	ND	0.20	40	02/08/2016 14:14
2-Butanone (MEK)	ND	0.80	40	02/08/2016 14:14
t-Butyl alcohol (TBA)	ND	2.0	40	02/08/2016 14:14
n-Butyl benzene	ND	0.20	40	02/08/2016 14:14
sec-Butyl benzene	ND	0.20	40	02/08/2016 14:14
tert-Butyl benzene	ND	0.20	40	02/08/2016 14:14
Carbon Disulfide	ND	0.20	40	02/08/2016 14:14
Carbon Tetrachloride	ND	0.20	40	02/08/2016 14:14
Chlorobenzene	ND	0.20	40	02/08/2016 14:14
Chloroethane	ND	0.20	40	02/08/2016 14:14
Chloroform	ND	0.20	40	02/08/2016 14:14
Chloromethane	ND	0.20	40	02/08/2016 14:14
2-Chlorotoluene	ND	0.20	40	02/08/2016 14:14
4-Chlorotoluene	ND	0.20	40	02/08/2016 14:14
Dibromochloromethane	ND	0.20	40	02/08/2016 14:14
1,2-Dibromo-3-chloropropane	ND	0.16	40	02/08/2016 14:14
1,2-Dibromoethane (EDB)	ND	0.16	40	02/08/2016 14:14
Dibromomethane	ND	0.20	40	02/08/2016 14:14
1,2-Dichlorobenzene	ND	0.20	40	02/08/2016 14:14
1,3-Dichlorobenzene	ND	0.20	40	02/08/2016 14:14
1,4-Dichlorobenzene	ND	0.20	40	02/08/2016 14:14
Dichlorodifluoromethane	ND	0.20	40	02/08/2016 14:14
1,1-Dichloroethane	ND	0.20	40	02/08/2016 14:14
1,2-Dichloroethane (1,2-DCA)	ND	0.16	40	02/08/2016 14:14
1,1-Dichloroethene	ND	0.20	40	02/08/2016 14:14
cis-1,2-Dichloroethene	ND	0.20	40	02/08/2016 14:14
trans-1,2-Dichloroethene	ND	0.20	40	02/08/2016 14:14
1,2-Dichloropropane	ND	0.20	40	02/08/2016 14:14
1,3-Dichloropropane	ND	0.20	40	02/08/2016 14:14
2,2-Dichloropropane	ND	0.20	40	02/08/2016 14:14

(Cont.)



Analytical Report

Client: All West Environmental, Inc
Date Received: 2/3/16 17:45
Date Prepared: 2/3/16
Project: 15179.23; Hollis

WorkOrder: 1602146
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SB-26A @ 11.5'-12'	1602146-004A	Soil	02/03/2016 10:07	GC18	116226

Analytes	Result	RL	DF	Date Analyzed
1,1-Dichloropropene	ND	0.20	40	02/08/2016 14:14
cis-1,3-Dichloropropene	ND	0.20	40	02/08/2016 14:14
trans-1,3-Dichloropropene	ND	0.20	40	02/08/2016 14:14
Diisopropyl ether (DIPE)	ND	0.20	40	02/08/2016 14:14
Ethylbenzene	1.2	0.20	40	02/08/2016 14:14
Ethyl tert-butyl ether (ETBE)	ND	0.20	40	02/08/2016 14:14
Freon 113	ND	0.20	40	02/08/2016 14:14
Hexachlorobutadiene	ND	0.20	40	02/08/2016 14:14
Hexachloroethane	ND	0.20	40	02/08/2016 14:14
2-Hexanone	ND	0.20	40	02/08/2016 14:14
Isopropylbenzene	ND	0.20	40	02/08/2016 14:14
4-Isopropyl toluene	ND	0.20	40	02/08/2016 14:14
Methyl-t-butyl ether (MTBE)	ND	0.20	40	02/08/2016 14:14
Methylene chloride	ND	0.20	40	02/08/2016 14:14
4-Methyl-2-pentanone (MIBK)	ND	0.20	40	02/08/2016 14:14
Naphthalene	1.0	0.20	40	02/08/2016 14:14
n-Propyl benzene	0.24	0.20	40	02/08/2016 14:14
Styrene	ND	0.20	40	02/08/2016 14:14
1,1,1,2-Tetrachloroethane	ND	0.20	40	02/08/2016 14:14
1,1,2,2-Tetrachloroethane	ND	0.20	40	02/08/2016 14:14
Tetrachloroethene	ND	0.20	40	02/08/2016 14:14
Toluene	3.4	0.20	40	02/08/2016 14:14
1,2,3-Trichlorobenzene	ND	0.20	40	02/08/2016 14:14
1,2,4-Trichlorobenzene	ND	0.20	40	02/08/2016 14:14
1,1,1-Trichloroethane	ND	0.20	40	02/08/2016 14:14
1,1,2-Trichloroethane	ND	0.20	40	02/08/2016 14:14
Trichloroethene	ND	0.20	40	02/08/2016 14:14
Trichlorofluoromethane	ND	0.20	40	02/08/2016 14:14
1,2,3-Trichloropropane	ND	0.20	40	02/08/2016 14:14
1,2,4-Trimethylbenzene	1.9	0.20	40	02/08/2016 14:14
1,3,5-Trimethylbenzene	0.58	0.20	40	02/08/2016 14:14
Vinyl Chloride	ND	0.20	40	02/08/2016 14:14
Xylenes, Total	6.7	0.20	40	02/08/2016 14:14

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Analytical Report

Client: All West Environmental, Inc
Date Received: 2/3/16 17:45
Date Prepared: 2/3/16
Project: 15179.23; Hollis

WorkOrder: 1602146
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SB-26A @ 11.5'-12'	1602146-004A	Soil	02/03/2016 10:07	GC18	116226

Analytes	Result	RL	DF	Date Analyzed
<u>Surrogates</u>	<u>REC (%)</u>	<u>Qualifiers</u>	<u>Limits</u>	
Dibromofluoromethane	123		70-130	02/08/2016 14:14
Toluene-d8	103		70-130	02/08/2016 14:14
4-BFB	86		70-130	02/08/2016 14:14
Benzene-d6	131		60-140	02/08/2016 14:14
Ethylbenzene-d10	134		60-140	02/08/2016 14:14
1,2-DCB-d4	176	S	60-140	02/08/2016 14:14

Analyst(s): KF

Analytical Comments: c7



Analytical Report

Client: All West Environmental, Inc
Date Received: 2/3/16 17:45
Date Prepared: 2/3/16
Project: 15179.23; Hollis

WorkOrder: 1602146
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SVP-6 @ 6.5'-7'	1602146-006A	Soil	02/03/2016 11:20	GC18	116226

Analytes	Result	RL	DF	Date Analyzed
Acetone	ND	0.10	1	02/08/2016 10:57
tert-Amyl methyl ether (TAME)	ND	0.0050	1	02/08/2016 10:57
Benzene	ND	0.0050	1	02/08/2016 10:57
Bromobenzene	ND	0.0050	1	02/08/2016 10:57
Bromochloromethane	ND	0.0050	1	02/08/2016 10:57
Bromodichloromethane	ND	0.0050	1	02/08/2016 10:57
Bromoform	ND	0.0050	1	02/08/2016 10:57
Bromomethane	ND	0.0050	1	02/08/2016 10:57
2-Butanone (MEK)	ND	0.020	1	02/08/2016 10:57
t-Butyl alcohol (TBA)	ND	0.050	1	02/08/2016 10:57
n-Butyl benzene	ND	0.0050	1	02/08/2016 10:57
sec-Butyl benzene	ND	0.0050	1	02/08/2016 10:57
tert-Butyl benzene	ND	0.0050	1	02/08/2016 10:57
Carbon Disulfide	ND	0.0050	1	02/08/2016 10:57
Carbon Tetrachloride	ND	0.0050	1	02/08/2016 10:57
Chlorobenzene	ND	0.0050	1	02/08/2016 10:57
Chloroethane	ND	0.0050	1	02/08/2016 10:57
Chloroform	ND	0.0050	1	02/08/2016 10:57
Chloromethane	ND	0.0050	1	02/08/2016 10:57
2-Chlorotoluene	ND	0.0050	1	02/08/2016 10:57
4-Chlorotoluene	ND	0.0050	1	02/08/2016 10:57
Dibromochloromethane	ND	0.0050	1	02/08/2016 10:57
1,2-Dibromo-3-chloropropane	ND	0.0040	1	02/08/2016 10:57
1,2-Dibromoethane (EDB)	ND	0.0040	1	02/08/2016 10:57
Dibromomethane	ND	0.0050	1	02/08/2016 10:57
1,2-Dichlorobenzene	ND	0.0050	1	02/08/2016 10:57
1,3-Dichlorobenzene	ND	0.0050	1	02/08/2016 10:57
1,4-Dichlorobenzene	ND	0.0050	1	02/08/2016 10:57
Dichlorodifluoromethane	ND	0.0050	1	02/08/2016 10:57
1,1-Dichloroethane	ND	0.0050	1	02/08/2016 10:57
1,2-Dichloroethane (1,2-DCA)	ND	0.0040	1	02/08/2016 10:57
1,1-Dichloroethene	ND	0.0050	1	02/08/2016 10:57
cis-1,2-Dichloroethene	ND	0.0050	1	02/08/2016 10:57
trans-1,2-Dichloroethene	ND	0.0050	1	02/08/2016 10:57
1,2-Dichloropropane	ND	0.0050	1	02/08/2016 10:57
1,3-Dichloropropane	ND	0.0050	1	02/08/2016 10:57
2,2-Dichloropropane	ND	0.0050	1	02/08/2016 10:57

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Analytical Report

Client: All West Environmental, Inc
Date Received: 2/3/16 17:45
Date Prepared: 2/3/16
Project: 15179.23; Hollis

WorkOrder: 1602146
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SVP-6 @ 6.5'-7'	1602146-006A	Soil	02/03/2016 11:20	GC18	116226
Analytes	Result	RL	DF	Date Analyzed	
1,1-Dichloropropene	ND	0.0050	1	02/08/2016 10:57	
cis-1,3-Dichloropropene	ND	0.0050	1	02/08/2016 10:57	
trans-1,3-Dichloropropene	ND	0.0050	1	02/08/2016 10:57	
Diisopropyl ether (DIPE)	ND	0.0050	1	02/08/2016 10:57	
Ethylbenzene	ND	0.0050	1	02/08/2016 10:57	
Ethyl tert-butyl ether (ETBE)	ND	0.0050	1	02/08/2016 10:57	
Freon 113	ND	0.0050	1	02/08/2016 10:57	
Hexachlorobutadiene	ND	0.0050	1	02/08/2016 10:57	
Hexachloroethane	ND	0.0050	1	02/08/2016 10:57	
2-Hexanone	ND	0.0050	1	02/08/2016 10:57	
Isopropylbenzene	ND	0.0050	1	02/08/2016 10:57	
4-Isopropyl toluene	ND	0.0050	1	02/08/2016 10:57	
Methyl-t-butyl ether (MTBE)	0.0092	0.0050	1	02/08/2016 10:57	
Methylene chloride	ND	0.0050	1	02/08/2016 10:57	
4-Methyl-2-pentanone (MIBK)	ND	0.0050	1	02/08/2016 10:57	
Naphthalene	ND	0.0050	1	02/08/2016 10:57	
n-Propyl benzene	ND	0.0050	1	02/08/2016 10:57	
Styrene	ND	0.0050	1	02/08/2016 10:57	
1,1,1,2-Tetrachloroethane	ND	0.0050	1	02/08/2016 10:57	
1,1,2,2-Tetrachloroethane	ND	0.0050	1	02/08/2016 10:57	
Tetrachloroethene	ND	0.0050	1	02/08/2016 10:57	
Toluene	ND	0.0050	1	02/08/2016 10:57	
1,2,3-Trichlorobenzene	ND	0.0050	1	02/08/2016 10:57	
1,2,4-Trichlorobenzene	ND	0.0050	1	02/08/2016 10:57	
1,1,1-Trichloroethane	ND	0.0050	1	02/08/2016 10:57	
1,1,2-Trichloroethane	ND	0.0050	1	02/08/2016 10:57	
Trichloroethene	ND	0.0050	1	02/08/2016 10:57	
Trichlorofluoromethane	ND	0.0050	1	02/08/2016 10:57	
1,2,3-Trichloropropane	ND	0.0050	1	02/08/2016 10:57	
1,2,4-Trimethylbenzene	0.029	0.0050	1	02/08/2016 10:57	
1,3,5-Trimethylbenzene	ND	0.0050	1	02/08/2016 10:57	
Vinyl Chloride	ND	0.0050	1	02/08/2016 10:57	
Xylenes, Total	0.020	0.0050	1	02/08/2016 10:57	

(Cont.)



Analytical Report

Client: All West Environmental, Inc
Date Received: 2/3/16 17:45
Date Prepared: 2/3/16
Project: 15179.23; Hollis

WorkOrder: 1602146
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SVP-6 @ 6.5'-7'	1602146-006A	Soil	02/03/2016 11:20	GC18	116226

Analytes	Result	RL	DF	Date Analyzed
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
Dibromofluoromethane	117	70-130		02/08/2016 10:57
Toluene-d8	116	70-130		02/08/2016 10:57
4-BFB	88	70-130		02/08/2016 10:57
Benzene-d6	113	60-140		02/08/2016 10:57
Ethylbenzene-d10	105	60-140		02/08/2016 10:57
1,2-DCB-d4	104	60-140		02/08/2016 10:57

Analyst(s): KF



Analytical Report

Client: All West Environmental, Inc
Date Received: 2/3/16 17:45
Date Prepared: 2/3/16
Project: 15179.23; Hollis

WorkOrder: 1602146
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SVP-1 @1.5'-2'	1602146-007A	Soil	02/03/2016 12:42	GC18	116226

Analytes	Result	RL	DF	Date Analyzed
Acetone	ND	0.10	1	02/08/2016 11:35
tert-Amyl methyl ether (TAME)	ND	0.0050	1	02/08/2016 11:35
Benzene	ND	0.0050	1	02/08/2016 11:35
Bromobenzene	ND	0.0050	1	02/08/2016 11:35
Bromochloromethane	ND	0.0050	1	02/08/2016 11:35
Bromodichloromethane	ND	0.0050	1	02/08/2016 11:35
Bromoform	ND	0.0050	1	02/08/2016 11:35
Bromomethane	ND	0.0050	1	02/08/2016 11:35
2-Butanone (MEK)	ND	0.020	1	02/08/2016 11:35
t-Butyl alcohol (TBA)	ND	0.050	1	02/08/2016 11:35
n-Butyl benzene	ND	0.0050	1	02/08/2016 11:35
sec-Butyl benzene	ND	0.0050	1	02/08/2016 11:35
tert-Butyl benzene	ND	0.0050	1	02/08/2016 11:35
Carbon Disulfide	ND	0.0050	1	02/08/2016 11:35
Carbon Tetrachloride	ND	0.0050	1	02/08/2016 11:35
Chlorobenzene	ND	0.0050	1	02/08/2016 11:35
Chloroethane	ND	0.0050	1	02/08/2016 11:35
Chloroform	ND	0.0050	1	02/08/2016 11:35
Chloromethane	ND	0.0050	1	02/08/2016 11:35
2-Chlorotoluene	ND	0.0050	1	02/08/2016 11:35
4-Chlorotoluene	ND	0.0050	1	02/08/2016 11:35
Dibromochloromethane	ND	0.0050	1	02/08/2016 11:35
1,2-Dibromo-3-chloropropane	ND	0.0040	1	02/08/2016 11:35
1,2-Dibromoethane (EDB)	ND	0.0040	1	02/08/2016 11:35
Dibromomethane	ND	0.0050	1	02/08/2016 11:35
1,2-Dichlorobenzene	ND	0.0050	1	02/08/2016 11:35
1,3-Dichlorobenzene	ND	0.0050	1	02/08/2016 11:35
1,4-Dichlorobenzene	ND	0.0050	1	02/08/2016 11:35
Dichlorodifluoromethane	ND	0.0050	1	02/08/2016 11:35
1,1-Dichloroethane	ND	0.0050	1	02/08/2016 11:35
1,2-Dichloroethane (1,2-DCA)	ND	0.0040	1	02/08/2016 11:35
1,1-Dichloroethene	ND	0.0050	1	02/08/2016 11:35
cis-1,2-Dichloroethene	ND	0.0050	1	02/08/2016 11:35
trans-1,2-Dichloroethene	ND	0.0050	1	02/08/2016 11:35
1,2-Dichloropropane	ND	0.0050	1	02/08/2016 11:35
1,3-Dichloropropane	ND	0.0050	1	02/08/2016 11:35
2,2-Dichloropropane	ND	0.0050	1	02/08/2016 11:35

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Analytical Report

Client: All West Environmental, Inc
Date Received: 2/3/16 17:45
Date Prepared: 2/3/16
Project: 15179.23; Hollis

WorkOrder: 1602146
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SVP-1 @1.5'-2'	1602146-007A	Soil	02/03/2016 12:42	GC18	116226

Analytes	Result	RL	DF	Date Analyzed
1,1-Dichloropropene	ND	0.0050	1	02/08/2016 11:35
cis-1,3-Dichloropropene	ND	0.0050	1	02/08/2016 11:35
trans-1,3-Dichloropropene	ND	0.0050	1	02/08/2016 11:35
Diisopropyl ether (DIPE)	ND	0.0050	1	02/08/2016 11:35
Ethylbenzene	ND	0.0050	1	02/08/2016 11:35
Ethyl tert-butyl ether (ETBE)	ND	0.0050	1	02/08/2016 11:35
Freon 113	ND	0.0050	1	02/08/2016 11:35
Hexachlorobutadiene	ND	0.0050	1	02/08/2016 11:35
Hexachloroethane	ND	0.0050	1	02/08/2016 11:35
2-Hexanone	ND	0.0050	1	02/08/2016 11:35
Isopropylbenzene	ND	0.0050	1	02/08/2016 11:35
4-Isopropyl toluene	ND	0.0050	1	02/08/2016 11:35
Methyl-t-butyl ether (MTBE)	ND	0.0050	1	02/08/2016 11:35
Methylene chloride	ND	0.0050	1	02/08/2016 11:35
4-Methyl-2-pentanone (MIBK)	ND	0.0050	1	02/08/2016 11:35
Naphthalene	ND	0.0050	1	02/08/2016 11:35
n-Propyl benzene	ND	0.0050	1	02/08/2016 11:35
Styrene	ND	0.0050	1	02/08/2016 11:35
1,1,1,2-Tetrachloroethane	ND	0.0050	1	02/08/2016 11:35
1,1,2,2-Tetrachloroethane	ND	0.0050	1	02/08/2016 11:35
Tetrachloroethene	ND	0.0050	1	02/08/2016 11:35
Toluene	ND	0.0050	1	02/08/2016 11:35
1,2,3-Trichlorobenzene	ND	0.0050	1	02/08/2016 11:35
1,2,4-Trichlorobenzene	ND	0.0050	1	02/08/2016 11:35
1,1,1-Trichloroethane	ND	0.0050	1	02/08/2016 11:35
1,1,2-Trichloroethane	ND	0.0050	1	02/08/2016 11:35
Trichloroethene	ND	0.0050	1	02/08/2016 11:35
Trichlorofluoromethane	ND	0.0050	1	02/08/2016 11:35
1,2,3-Trichloropropane	ND	0.0050	1	02/08/2016 11:35
1,2,4-Trimethylbenzene	ND	0.0050	1	02/08/2016 11:35
1,3,5-Trimethylbenzene	ND	0.0050	1	02/08/2016 11:35
Vinyl Chloride	ND	0.0050	1	02/08/2016 11:35
Xylenes, Total	0.021	0.0050	1	02/08/2016 11:35

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Analytical Report

Client: All West Environmental, Inc
Date Received: 2/3/16 17:45
Date Prepared: 2/3/16
Project: 15179.23; Hollis

WorkOrder: 1602146
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SVP-1 @1.5'-2'	1602146-007A	Soil	02/03/2016 12:42	GC18	116226

Analytes	Result	RL	DF	Date Analyzed
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
Dibromofluoromethane	120	70-130		02/08/2016 11:35
Toluene-d8	114	70-130		02/08/2016 11:35
4-BFB	89	70-130		02/08/2016 11:35
Benzene-d6	116	60-140		02/08/2016 11:35
Ethylbenzene-d10	106	60-140		02/08/2016 11:35
1,2-DCB-d4	104	60-140		02/08/2016 11:35

Analyst(s): KF



Analytical Report

Client: All West Environmental, Inc
Date Received: 2/3/16 17:45
Date Prepared: 2/3/16
Project: 15179.23; Hollis

WorkOrder: 1602146
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SVP-1 @ 6.5'-7'	1602146-008A	Soil	02/03/2016 12:50	GC16	116226

Analytes	Result	RL	DF	Date Analyzed
Acetone	ND	0.20	2	02/08/2016 11:23
tert-Amyl methyl ether (TAME)	ND	0.010	2	02/08/2016 11:23
Benzene	0.056	0.010	2	02/08/2016 11:23
Bromobenzene	ND	0.010	2	02/08/2016 11:23
Bromochloromethane	ND	0.010	2	02/08/2016 11:23
Bromodichloromethane	ND	0.010	2	02/08/2016 11:23
Bromoform	ND	0.010	2	02/08/2016 11:23
Bromomethane	ND	0.010	2	02/08/2016 11:23
2-Butanone (MEK)	ND	0.040	2	02/08/2016 11:23
t-Butyl alcohol (TBA)	ND	0.10	2	02/08/2016 11:23
n-Butyl benzene	0.015	0.010	2	02/08/2016 11:23
sec-Butyl benzene	ND	0.010	2	02/08/2016 11:23
tert-Butyl benzene	ND	0.010	2	02/08/2016 11:23
Carbon Disulfide	ND	0.010	2	02/08/2016 11:23
Carbon Tetrachloride	ND	0.010	2	02/08/2016 11:23
Chlorobenzene	ND	0.010	2	02/08/2016 11:23
Chloroethane	ND	0.010	2	02/08/2016 11:23
Chloroform	ND	0.010	2	02/08/2016 11:23
Chloromethane	ND	0.010	2	02/08/2016 11:23
2-Chlorotoluene	ND	0.010	2	02/08/2016 11:23
4-Chlorotoluene	ND	0.010	2	02/08/2016 11:23
Dibromochloromethane	ND	0.010	2	02/08/2016 11:23
1,2-Dibromo-3-chloropropane	ND	0.0080	2	02/08/2016 11:23
1,2-Dibromoethane (EDB)	ND	0.0080	2	02/08/2016 11:23
Dibromomethane	ND	0.010	2	02/08/2016 11:23
1,2-Dichlorobenzene	ND	0.010	2	02/08/2016 11:23
1,3-Dichlorobenzene	ND	0.010	2	02/08/2016 11:23
1,4-Dichlorobenzene	ND	0.010	2	02/08/2016 11:23
Dichlorodifluoromethane	ND	0.010	2	02/08/2016 11:23
1,1-Dichloroethane	ND	0.010	2	02/08/2016 11:23
1,2-Dichloroethane (1,2-DCA)	ND	0.0080	2	02/08/2016 11:23
1,1-Dichloroethene	ND	0.010	2	02/08/2016 11:23
cis-1,2-Dichloroethene	ND	0.010	2	02/08/2016 11:23
trans-1,2-Dichloroethene	ND	0.010	2	02/08/2016 11:23
1,2-Dichloropropane	ND	0.010	2	02/08/2016 11:23
1,3-Dichloropropane	ND	0.010	2	02/08/2016 11:23
2,2-Dichloropropane	ND	0.010	2	02/08/2016 11:23

(Cont.)



Analytical Report

Client: All West Environmental, Inc
Date Received: 2/3/16 17:45
Date Prepared: 2/3/16
Project: 15179.23; Hollis

WorkOrder: 1602146
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SVP-1 @ 6.5'-7'	1602146-008A	Soil	02/03/2016 12:50	GC16	116226

Analytes	Result	RL	DF	Date Analyzed
1,1-Dichloropropene	ND	0.010	2	02/08/2016 11:23
cis-1,3-Dichloropropene	ND	0.010	2	02/08/2016 11:23
trans-1,3-Dichloropropene	ND	0.010	2	02/08/2016 11:23
Diisopropyl ether (DIPE)	ND	0.010	2	02/08/2016 11:23
Ethylbenzene	0.15	0.010	2	02/08/2016 11:23
Ethyl tert-butyl ether (ETBE)	ND	0.010	2	02/08/2016 11:23
Freon 113	ND	0.010	2	02/08/2016 11:23
Hexachlorobutadiene	ND	0.010	2	02/08/2016 11:23
Hexachloroethane	ND	0.010	2	02/08/2016 11:23
2-Hexanone	ND	0.010	2	02/08/2016 11:23
Isopropylbenzene	0.011	0.010	2	02/08/2016 11:23
4-Isopropyl toluene	ND	0.010	2	02/08/2016 11:23
Methyl-t-butyl ether (MTBE)	ND	0.010	2	02/08/2016 11:23
Methylene chloride	ND	0.010	2	02/08/2016 11:23
4-Methyl-2-pentanone (MIBK)	ND	0.010	2	02/08/2016 11:23
Naphthalene	0.036	0.010	2	02/08/2016 11:23
n-Propyl benzene	0.055	0.010	2	02/08/2016 11:23
Styrene	ND	0.010	2	02/08/2016 11:23
1,1,1,2-Tetrachloroethane	ND	0.010	2	02/08/2016 11:23
1,1,2,2-Tetrachloroethane	ND	0.010	2	02/08/2016 11:23
Tetrachloroethene	ND	0.010	2	02/08/2016 11:23
Toluene	0.25	0.010	2	02/08/2016 11:23
1,2,3-Trichlorobenzene	ND	0.010	2	02/08/2016 11:23
1,2,4-Trichlorobenzene	ND	0.010	2	02/08/2016 11:23
1,1,1-Trichloroethane	ND	0.010	2	02/08/2016 11:23
1,1,2-Trichloroethane	ND	0.010	2	02/08/2016 11:23
Trichloroethene	ND	0.010	2	02/08/2016 11:23
Trichlorofluoromethane	ND	0.010	2	02/08/2016 11:23
1,2,3-Trichloropropane	ND	0.010	2	02/08/2016 11:23
1,2,4-Trimethylbenzene	0.28	0.010	2	02/08/2016 11:23
1,3,5-Trimethylbenzene	0.090	0.010	2	02/08/2016 11:23
Vinyl Chloride	ND	0.010	2	02/08/2016 11:23
Xylenes, Total	0.72	0.010	2	02/08/2016 11:23

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Analytical Report

Client: All West Environmental, Inc
Date Received: 2/3/16 17:45
Date Prepared: 2/3/16
Project: 15179.23; Hollis

WorkOrder: 1602146
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SVP-1 @ 6.5'-7'	1602146-008A	Soil	02/03/2016 12:50	GC16	116226

Analytes	Result	RL	DF	Date Analyzed
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
Dibromofluoromethane	104	70-130		02/08/2016 11:23
Toluene-d8	106	70-130		02/08/2016 11:23
4-BFB	101	70-130		02/08/2016 11:23
Benzene-d6	88	60-140		02/08/2016 11:23
Ethylbenzene-d10	87	60-140		02/08/2016 11:23
1,2-DCB-d4	77	60-140		02/08/2016 11:23

Analyst(s): KF



Analytical Report

Client: All West Environmental, Inc
Date Received: 2/3/16 17:45
Date Prepared: 2/3/16
Project: 15179.23; Hollis

WorkOrder: 1602146
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SVP-2 @3'-3.5	1602146-009A	Soil	02/03/2016 13:15	GC16	116226

Analytes	Result	RL	DF	Date Analyzed
Acetone	ND	0.40	4	02/08/2016 12:03
tert-Amyl methyl ether (TAME)	ND	0.020	4	02/08/2016 12:03
Benzene	0.037	0.020	4	02/08/2016 12:03
Bromobenzene	ND	0.020	4	02/08/2016 12:03
Bromochloromethane	ND	0.020	4	02/08/2016 12:03
Bromodichloromethane	ND	0.020	4	02/08/2016 12:03
Bromoform	ND	0.020	4	02/08/2016 12:03
Bromomethane	ND	0.020	4	02/08/2016 12:03
2-Butanone (MEK)	ND	0.080	4	02/08/2016 12:03
t-Butyl alcohol (TBA)	ND	0.20	4	02/08/2016 12:03
n-Butyl benzene	ND	0.020	4	02/08/2016 12:03
sec-Butyl benzene	ND	0.020	4	02/08/2016 12:03
tert-Butyl benzene	ND	0.020	4	02/08/2016 12:03
Carbon Disulfide	ND	0.020	4	02/08/2016 12:03
Carbon Tetrachloride	ND	0.020	4	02/08/2016 12:03
Chlorobenzene	ND	0.020	4	02/08/2016 12:03
Chloroethane	ND	0.020	4	02/08/2016 12:03
Chloroform	ND	0.020	4	02/08/2016 12:03
Chloromethane	ND	0.020	4	02/08/2016 12:03
2-Chlorotoluene	ND	0.020	4	02/08/2016 12:03
4-Chlorotoluene	ND	0.020	4	02/08/2016 12:03
Dibromochloromethane	ND	0.020	4	02/08/2016 12:03
1,2-Dibromo-3-chloropropane	ND	0.016	4	02/08/2016 12:03
1,2-Dibromoethane (EDB)	ND	0.016	4	02/08/2016 12:03
Dibromomethane	ND	0.020	4	02/08/2016 12:03
1,2-Dichlorobenzene	ND	0.020	4	02/08/2016 12:03
1,3-Dichlorobenzene	ND	0.020	4	02/08/2016 12:03
1,4-Dichlorobenzene	ND	0.020	4	02/08/2016 12:03
Dichlorodifluoromethane	ND	0.020	4	02/08/2016 12:03
1,1-Dichloroethane	ND	0.020	4	02/08/2016 12:03
1,2-Dichloroethane (1,2-DCA)	ND	0.016	4	02/08/2016 12:03
1,1-Dichloroethene	ND	0.020	4	02/08/2016 12:03
cis-1,2-Dichloroethene	ND	0.020	4	02/08/2016 12:03
trans-1,2-Dichloroethene	ND	0.020	4	02/08/2016 12:03
1,2-Dichloropropane	ND	0.020	4	02/08/2016 12:03
1,3-Dichloropropane	ND	0.020	4	02/08/2016 12:03
2,2-Dichloropropane	ND	0.020	4	02/08/2016 12:03

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Analytical Report

Client: All West Environmental, Inc
Date Received: 2/3/16 17:45
Date Prepared: 2/3/16
Project: 15179.23; Hollis

WorkOrder: 1602146
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SVP-2 @3'-3.5	1602146-009A	Soil	02/03/2016 13:15	GC16	116226

Analytes	Result	RL	DF	Date Analyzed
1,1-Dichloropropene	ND	0.020	4	02/08/2016 12:03
cis-1,3-Dichloropropene	ND	0.020	4	02/08/2016 12:03
trans-1,3-Dichloropropene	ND	0.020	4	02/08/2016 12:03
Diisopropyl ether (DIPE)	ND	0.020	4	02/08/2016 12:03
Ethylbenzene	0.057	0.020	4	02/08/2016 12:03
Ethyl tert-butyl ether (ETBE)	ND	0.020	4	02/08/2016 12:03
Freon 113	ND	0.020	4	02/08/2016 12:03
Hexachlorobutadiene	ND	0.020	4	02/08/2016 12:03
Hexachloroethane	ND	0.020	4	02/08/2016 12:03
2-Hexanone	ND	0.020	4	02/08/2016 12:03
Isopropylbenzene	ND	0.020	4	02/08/2016 12:03
4-Isopropyl toluene	ND	0.020	4	02/08/2016 12:03
Methyl-t-butyl ether (MTBE)	ND	0.020	4	02/08/2016 12:03
Methylene chloride	ND	0.020	4	02/08/2016 12:03
4-Methyl-2-pentanone (MIBK)	ND	0.020	4	02/08/2016 12:03
Naphthalene	ND	0.020	4	02/08/2016 12:03
n-Propyl benzene	ND	0.020	4	02/08/2016 12:03
Styrene	ND	0.020	4	02/08/2016 12:03
1,1,1,2-Tetrachloroethane	ND	0.020	4	02/08/2016 12:03
1,1,2,2-Tetrachloroethane	ND	0.020	4	02/08/2016 12:03
Tetrachloroethene	ND	0.020	4	02/08/2016 12:03
Toluene	ND	0.020	4	02/08/2016 12:03
1,2,3-Trichlorobenzene	ND	0.020	4	02/08/2016 12:03
1,2,4-Trichlorobenzene	ND	0.020	4	02/08/2016 12:03
1,1,1-Trichloroethane	ND	0.020	4	02/08/2016 12:03
1,1,2-Trichloroethane	ND	0.020	4	02/08/2016 12:03
Trichloroethene	ND	0.020	4	02/08/2016 12:03
Trichlorofluoromethane	ND	0.020	4	02/08/2016 12:03
1,2,3-Trichloropropane	ND	0.020	4	02/08/2016 12:03
1,2,4-Trimethylbenzene	0.20	0.020	4	02/08/2016 12:03
1,3,5-Trimethylbenzene	0.085	0.020	4	02/08/2016 12:03
Vinyl Chloride	ND	0.020	4	02/08/2016 12:03
Xylenes, Total	0.53	0.020	4	02/08/2016 12:03

(Cont.)



Analytical Report

Client: All West Environmental, Inc
Date Received: 2/3/16 17:45
Date Prepared: 2/3/16
Project: 15179.23; Hollis

WorkOrder: 1602146
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SVP-2 @3'-3.5	1602146-009A	Soil	02/03/2016 13:15	GC16	116226

Analytes	Result	RL	DF	Date Analyzed
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
Dibromofluoromethane	105	70-130		02/08/2016 12:03
Toluene-d8	102	70-130		02/08/2016 12:03
4-BFB	99	70-130		02/08/2016 12:03
Benzene-d6	95	60-140		02/08/2016 12:03
Ethylbenzene-d10	92	60-140		02/08/2016 12:03
1,2-DCB-d4	85	60-140		02/08/2016 12:03

Analyst(s): KF



Analytical Report

Client: All West Environmental, Inc
Date Received: 2/3/16 17:45
Date Prepared: 2/3/16
Project: 15179.23; Hollis

WorkOrder: 1602146
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SVP-2 @ 6.5'-7'	1602146-010A	Soil	02/03/2016 13:25	GC18	116226

Analytes	Result	RL	DF	Date Analyzed
Acetone	ND	0.50	5	02/08/2016 12:19
tert-Amyl methyl ether (TAME)	ND	0.025	5	02/08/2016 12:19
Benzene	0.34	0.025	5	02/08/2016 12:19
Bromobenzene	ND	0.025	5	02/08/2016 12:19
Bromochloromethane	ND	0.025	5	02/08/2016 12:19
Bromodichloromethane	ND	0.025	5	02/08/2016 12:19
Bromoform	ND	0.025	5	02/08/2016 12:19
Bromomethane	ND	0.025	5	02/08/2016 12:19
2-Butanone (MEK)	ND	0.10	5	02/08/2016 12:19
t-Butyl alcohol (TBA)	ND	0.25	5	02/08/2016 12:19
n-Butyl benzene	ND	0.025	5	02/08/2016 12:19
sec-Butyl benzene	ND	0.025	5	02/08/2016 12:19
tert-Butyl benzene	ND	0.025	5	02/08/2016 12:19
Carbon Disulfide	ND	0.025	5	02/08/2016 12:19
Carbon Tetrachloride	ND	0.025	5	02/08/2016 12:19
Chlorobenzene	ND	0.025	5	02/08/2016 12:19
Chloroethane	ND	0.025	5	02/08/2016 12:19
Chloroform	ND	0.025	5	02/08/2016 12:19
Chloromethane	ND	0.025	5	02/08/2016 12:19
2-Chlorotoluene	ND	0.025	5	02/08/2016 12:19
4-Chlorotoluene	ND	0.025	5	02/08/2016 12:19
Dibromochloromethane	ND	0.025	5	02/08/2016 12:19
1,2-Dibromo-3-chloropropane	ND	0.020	5	02/08/2016 12:19
1,2-Dibromoethane (EDB)	ND	0.020	5	02/08/2016 12:19
Dibromomethane	ND	0.025	5	02/08/2016 12:19
1,2-Dichlorobenzene	ND	0.025	5	02/08/2016 12:19
1,3-Dichlorobenzene	ND	0.025	5	02/08/2016 12:19
1,4-Dichlorobenzene	ND	0.025	5	02/08/2016 12:19
Dichlorodifluoromethane	ND	0.025	5	02/08/2016 12:19
1,1-Dichloroethane	ND	0.025	5	02/08/2016 12:19
1,2-Dichloroethane (1,2-DCA)	ND	0.020	5	02/08/2016 12:19
1,1-Dichloroethene	ND	0.025	5	02/08/2016 12:19
cis-1,2-Dichloroethene	ND	0.025	5	02/08/2016 12:19
trans-1,2-Dichloroethene	ND	0.025	5	02/08/2016 12:19
1,2-Dichloropropane	ND	0.025	5	02/08/2016 12:19
1,3-Dichloropropane	ND	0.025	5	02/08/2016 12:19
2,2-Dichloropropane	ND	0.025	5	02/08/2016 12:19

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Analytical Report

Client: All West Environmental, Inc
Date Received: 2/3/16 17:45
Date Prepared: 2/3/16
Project: 15179.23; Hollis

WorkOrder: 1602146
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SVP-2 @ 6.5'-7'	1602146-010A	Soil	02/03/2016 13:25	GC18	116226

Analytes	Result	RL	DF	Date Analyzed
1,1-Dichloropropene	ND	0.025	5	02/08/2016 12:19
cis-1,3-Dichloropropene	ND	0.025	5	02/08/2016 12:19
trans-1,3-Dichloropropene	ND	0.025	5	02/08/2016 12:19
Diisopropyl ether (DIPE)	ND	0.025	5	02/08/2016 12:19
Ethylbenzene	0.18	0.025	5	02/08/2016 12:19
Ethyl tert-butyl ether (ETBE)	ND	0.025	5	02/08/2016 12:19
Freon 113	ND	0.025	5	02/08/2016 12:19
Hexachlorobutadiene	ND	0.025	5	02/08/2016 12:19
Hexachloroethane	ND	0.025	5	02/08/2016 12:19
2-Hexanone	ND	0.025	5	02/08/2016 12:19
Isopropylbenzene	ND	0.025	5	02/08/2016 12:19
4-Isopropyl toluene	ND	0.025	5	02/08/2016 12:19
Methyl-t-butyl ether (MTBE)	ND	0.025	5	02/08/2016 12:19
Methylene chloride	ND	0.025	5	02/08/2016 12:19
4-Methyl-2-pentanone (MIBK)	ND	0.025	5	02/08/2016 12:19
Naphthalene	0.26	0.025	5	02/08/2016 12:19
n-Propyl benzene	0.026	0.025	5	02/08/2016 12:19
Styrene	ND	0.025	5	02/08/2016 12:19
1,1,1,2-Tetrachloroethane	ND	0.025	5	02/08/2016 12:19
1,1,2,2-Tetrachloroethane	ND	0.025	5	02/08/2016 12:19
Tetrachloroethene	ND	0.025	5	02/08/2016 12:19
Toluene	0.90	0.025	5	02/08/2016 12:19
1,2,3-Trichlorobenzene	ND	0.025	5	02/08/2016 12:19
1,2,4-Trichlorobenzene	ND	0.025	5	02/08/2016 12:19
1,1,1-Trichloroethane	ND	0.025	5	02/08/2016 12:19
1,1,2-Trichloroethane	ND	0.025	5	02/08/2016 12:19
Trichloroethene	ND	0.025	5	02/08/2016 12:19
Trichlorofluoromethane	ND	0.025	5	02/08/2016 12:19
1,2,3-Trichloropropane	ND	0.025	5	02/08/2016 12:19
1,2,4-Trimethylbenzene	0.27	0.025	5	02/08/2016 12:19
1,3,5-Trimethylbenzene	0.075	0.025	5	02/08/2016 12:19
Vinyl Chloride	ND	0.025	5	02/08/2016 12:19
Xylenes, Total	1.2	0.025	5	02/08/2016 12:19

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Analytical Report

Client: All West Environmental, Inc
Date Received: 2/3/16 17:45
Date Prepared: 2/3/16
Project: 15179.23; Hollis

WorkOrder: 1602146
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SVP-2 @ 6.5'-7'	1602146-010A	Soil	02/03/2016 13:25	GC18	116226

Analytes	Result	RL	DF	Date Analyzed
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
Dibromofluoromethane	119	70-130		02/08/2016 12:19
Toluene-d8	103	70-130		02/08/2016 12:19
4-BFB	91	70-130		02/08/2016 12:19
Benzene-d6	128	60-140		02/08/2016 12:19
Ethylbenzene-d10	119	60-140		02/08/2016 12:19
1,2-DCB-d4	132	60-140		02/08/2016 12:19

Analyst(s): KF



Analytical Report

Client: All West Environmental, Inc
Date Received: 2/3/16 17:45
Date Prepared: 2/3/16
Project: 15179.23; Hollis

WorkOrder: 1602146
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SVP-3 @ 6.5'-7'	1602146-011A	Soil	02/03/2016 13:54	GC18	116226

Analytes	Result	RL	DF	Date Analyzed
Acetone	ND	0.20	2	02/08/2016 13:36
tert-Amyl methyl ether (TAME)	ND	0.010	2	02/08/2016 13:36
Benzene	0.060	0.010	2	02/08/2016 13:36
Bromobenzene	ND	0.010	2	02/08/2016 13:36
Bromochloromethane	ND	0.010	2	02/08/2016 13:36
Bromodichloromethane	ND	0.010	2	02/08/2016 13:36
Bromoform	ND	0.010	2	02/08/2016 13:36
Bromomethane	ND	0.010	2	02/08/2016 13:36
2-Butanone (MEK)	ND	0.040	2	02/08/2016 13:36
t-Butyl alcohol (TBA)	ND	0.10	2	02/08/2016 13:36
n-Butyl benzene	ND	0.010	2	02/08/2016 13:36
sec-Butyl benzene	ND	0.010	2	02/08/2016 13:36
tert-Butyl benzene	ND	0.010	2	02/08/2016 13:36
Carbon Disulfide	ND	0.010	2	02/08/2016 13:36
Carbon Tetrachloride	ND	0.010	2	02/08/2016 13:36
Chlorobenzene	ND	0.010	2	02/08/2016 13:36
Chloroethane	ND	0.010	2	02/08/2016 13:36
Chloroform	ND	0.010	2	02/08/2016 13:36
Chloromethane	ND	0.010	2	02/08/2016 13:36
2-Chlorotoluene	ND	0.010	2	02/08/2016 13:36
4-Chlorotoluene	ND	0.010	2	02/08/2016 13:36
Dibromochloromethane	ND	0.010	2	02/08/2016 13:36
1,2-Dibromo-3-chloropropane	ND	0.0080	2	02/08/2016 13:36
1,2-Dibromoethane (EDB)	ND	0.0080	2	02/08/2016 13:36
Dibromomethane	ND	0.010	2	02/08/2016 13:36
1,2-Dichlorobenzene	ND	0.010	2	02/08/2016 13:36
1,3-Dichlorobenzene	ND	0.010	2	02/08/2016 13:36
1,4-Dichlorobenzene	ND	0.010	2	02/08/2016 13:36
Dichlorodifluoromethane	ND	0.010	2	02/08/2016 13:36
1,1-Dichloroethane	ND	0.010	2	02/08/2016 13:36
1,2-Dichloroethane (1,2-DCA)	ND	0.0080	2	02/08/2016 13:36
1,1-Dichloroethene	ND	0.010	2	02/08/2016 13:36
cis-1,2-Dichloroethene	ND	0.010	2	02/08/2016 13:36
trans-1,2-Dichloroethene	ND	0.010	2	02/08/2016 13:36
1,2-Dichloropropane	ND	0.010	2	02/08/2016 13:36
1,3-Dichloropropane	ND	0.010	2	02/08/2016 13:36
2,2-Dichloropropane	ND	0.010	2	02/08/2016 13:36

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Analytical Report

Client: All West Environmental, Inc
Date Received: 2/3/16 17:45
Date Prepared: 2/3/16
Project: 15179.23; Hollis

WorkOrder: 1602146
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SVP-3 @ 6.5'-7'	1602146-011A	Soil	02/03/2016 13:54	GC18	116226
Analytes	Result	RL	DF	Date Analyzed	
1,1-Dichloropropene	ND	0.010	2	02/08/2016 13:36	
cis-1,3-Dichloropropene	ND	0.010	2	02/08/2016 13:36	
trans-1,3-Dichloropropene	ND	0.010	2	02/08/2016 13:36	
Diisopropyl ether (DIPE)	ND	0.010	2	02/08/2016 13:36	
Ethylbenzene	0.032	0.010	2	02/08/2016 13:36	
Ethyl tert-butyl ether (ETBE)	ND	0.010	2	02/08/2016 13:36	
Freon 113	ND	0.010	2	02/08/2016 13:36	
Hexachlorobutadiene	ND	0.010	2	02/08/2016 13:36	
Hexachloroethane	ND	0.010	2	02/08/2016 13:36	
2-Hexanone	ND	0.010	2	02/08/2016 13:36	
Isopropylbenzene	ND	0.010	2	02/08/2016 13:36	
4-Isopropyl toluene	ND	0.010	2	02/08/2016 13:36	
Methyl-t-butyl ether (MTBE)	0.21	0.010	2	02/08/2016 13:36	
Methylene chloride	ND	0.010	2	02/08/2016 13:36	
4-Methyl-2-pentanone (MIBK)	ND	0.010	2	02/08/2016 13:36	
Naphthalene	0.18	0.010	2	02/08/2016 13:36	
n-Propyl benzene	ND	0.010	2	02/08/2016 13:36	
Styrene	ND	0.010	2	02/08/2016 13:36	
1,1,1,2-Tetrachloroethane	ND	0.010	2	02/08/2016 13:36	
1,1,2,2-Tetrachloroethane	ND	0.010	2	02/08/2016 13:36	
Tetrachloroethene	ND	0.010	2	02/08/2016 13:36	
Toluene	0.052	0.010	2	02/08/2016 13:36	
1,2,3-Trichlorobenzene	ND	0.010	2	02/08/2016 13:36	
1,2,4-Trichlorobenzene	ND	0.010	2	02/08/2016 13:36	
1,1,1-Trichloroethane	ND	0.010	2	02/08/2016 13:36	
1,1,2-Trichloroethane	ND	0.010	2	02/08/2016 13:36	
Trichloroethene	ND	0.010	2	02/08/2016 13:36	
Trichlorofluoromethane	ND	0.010	2	02/08/2016 13:36	
1,2,3-Trichloropropane	ND	0.010	2	02/08/2016 13:36	
1,2,4-Trimethylbenzene	0.085	0.010	2	02/08/2016 13:36	
1,3,5-Trimethylbenzene	0.023	0.010	2	02/08/2016 13:36	
Vinyl Chloride	ND	0.010	2	02/08/2016 13:36	
Xylenes, Total	0.20	0.010	2	02/08/2016 13:36	

(Cont.)



Analytical Report

Client: All West Environmental, Inc
Date Received: 2/3/16 17:45
Date Prepared: 2/3/16
Project: 15179.23; Hollis

WorkOrder: 1602146
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SVP-3 @ 6.5'-7'	1602146-011A	Soil	02/03/2016 13:54	GC18	116226

Analytes	Result	RL	DF	Date Analyzed
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
Dibromofluoromethane	120	70-130		02/08/2016 13:36
Toluene-d8	107	70-130		02/08/2016 13:36
4-BFB	88	70-130		02/08/2016 13:36
Benzene-d6	110	60-140		02/08/2016 13:36
Ethylbenzene-d10	100	60-140		02/08/2016 13:36
1,2-DCB-d4	105	60-140		02/08/2016 13:36

Analyst(s): KF



Analytical Report

Client: All West Environmental, Inc
Date Received: 2/3/16 17:45
Date Prepared: 2/3/16
Project: 15179.23; Hollis

WorkOrder: 1602146
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

TPH(g) by Purge & Trap and GC/MS

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SB-26A @ 4.5'-5'	1602146-001A	Soil	02/03/2016 09:40	GC16	116226

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	0.25	1	02/05/2016 14:29
Surrogates	REC (%)	Limits		
Dibromofluoromethane	109	70-130		02/05/2016 14:29
Benzene-d6	102	60-140		02/05/2016 14:29

Analyst(s): KBO

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SB-26A @ 9.5'-10'	1602146-003A	Soil	02/03/2016 10:00	GC18	116226

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	2.5	0.25	1	02/05/2016 17:29
Surrogates	REC (%)	Limits		
Dibromofluoromethane	109	70-130		02/05/2016 17:29
Benzene-d6	108	60-140		02/05/2016 17:29

Analyst(s): KF

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SB-26A @ 11.5'-12'	1602146-004A	Soil	02/03/2016 10:07	GC16	116226

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	60	10	40	02/08/2016 22:26
Surrogates	REC (%)	Limits		
Dibromofluoromethane	114	70-130		02/08/2016 22:26
Benzene-d6	129	60-140		02/08/2016 22:26

Analyst(s): KF

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Analytical Report

Client: All West Environmental, Inc
Date Received: 2/3/16 17:45
Date Prepared: 2/3/16
Project: 15179.23; Hollis

WorkOrder: 1602146
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

TPH(g) by Purge & Trap and GC/MS

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SVP-6 @ 6.5'-7'	1602146-006A	Soil	02/03/2016 11:20	GC18	116226

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	0.45	0.25	1	02/06/2016 13:06

Surrogates	REC (%)	Limits	Date Analyzed
Dibromofluoromethane	111	70-130	02/06/2016 13:06
Benzene-d6	108	60-140	02/06/2016 13:06

Analyst(s): KF

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SVP-1 @ 1.5'-2'	1602146-007A	Soil	02/03/2016 12:42	GC18	116226

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	1.1	0.25	1	02/06/2016 13:44

Surrogates	REC (%)	Limits	Date Analyzed
Dibromofluoromethane	113	70-130	02/06/2016 13:44
Benzene-d6	109	60-140	02/06/2016 13:44

Analyst(s): KF

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SVP-1 @ 6.5'-7'	1602146-008A	Soil	02/03/2016 12:50	GC18	116226

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	3.0	0.25	1	02/06/2016 14:22

Surrogates	REC (%)	Limits	Date Analyzed
Dibromofluoromethane	110	70-130	02/06/2016 14:22
Benzene-d6	103	60-140	02/06/2016 14:22

Analyst(s): KF

(Cont.)



Analytical Report

Client: All West Environmental, Inc
Date Received: 2/3/16 17:45
Date Prepared: 2/3/16
Project: 15179.23; Hollis

WorkOrder: 1602146
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

TPH(g) by Purge & Trap and GC/MS

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SVP-2 @3'-3.5'	1602146-009A	Soil	02/03/2016 13:15	GC18	116226

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	2.3	0.25	1	02/06/2016 15:01

Surrogates	REC (%)	Limits	Date Analyzed
Dibromofluoromethane	111	70-130	02/06/2016 15:01
Benzene-d6	101	60-140	02/06/2016 15:01

Analyst(s): KF

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SVP-2 @ 6.5'-7'	1602146-010A	Soil	02/03/2016 13:25	GC18	116226

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	4.0	0.25	1	02/06/2016 15:39

Surrogates	REC (%)	Limits	Date Analyzed
Dibromofluoromethane	110	70-130	02/06/2016 15:39
Benzene-d6	107	60-140	02/06/2016 15:39

Analyst(s): KF

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SVP-3 @ 6.5'-7'	1602146-011A	Soil	02/03/2016 13:54	GC18	116226

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	1.1	0.25	1	02/06/2016 16:17

Surrogates	REC (%)	Limits	Date Analyzed
Dibromofluoromethane	109	70-130	02/06/2016 16:17
Benzene-d6	104	60-140	02/06/2016 16:17

Analyst(s): KF



Quality Control Report

Client: All West Environmental, Inc
Date Prepared: 2/3/16
Date Analyzed: 2/4/16
Instrument: GC18, GC28
Matrix: Soil
Project: 15179.23; Hollis

WorkOrder: 1602146
BatchID: 116226
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg
Sample ID: MB/LCS-116226
 1602146-011AMS/MSD

QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Acetone	ND	-	0.10	-	-	-	-
tert-Amyl methyl ether (TAME)	ND	0.0611	0.0050	0.050	-	122, F2	53-116
Benzene	ND	0.0594	0.0050	0.050	-	119	63-137
Bromobenzene	ND	-	0.0050	-	-	-	-
Bromochloromethane	ND	-	0.0050	-	-	-	-
Bromodichloromethane	ND	-	0.0050	-	-	-	-
Bromoform	ND	-	0.0050	-	-	-	-
Bromomethane	ND	-	0.0050	-	-	-	-
2-Butanone (MEK)	ND	-	0.020	-	-	-	-
t-Butyl alcohol (TBA)	ND	0.248	0.050	0.20	-	124	41-135
n-Butyl benzene	ND	-	0.0050	-	-	-	-
sec-Butyl benzene	ND	-	0.0050	-	-	-	-
tert-Butyl benzene	ND	-	0.0050	-	-	-	-
Carbon Disulfide	ND	-	0.0050	-	-	-	-
Carbon Tetrachloride	ND	-	0.0050	-	-	-	-
Chlorobenzene	ND	0.0546	0.0050	0.050	-	109	77-121
Chloroethane	ND	-	0.0050	-	-	-	-
Chloroform	ND	-	0.0050	-	-	-	-
Chloromethane	ND	-	0.0050	-	-	-	-
2-Chlorotoluene	ND	-	0.0050	-	-	-	-
4-Chlorotoluene	ND	-	0.0050	-	-	-	-
Dibromochloromethane	ND	-	0.0050	-	-	-	-
1,2-Dibromo-3-chloropropane	ND	-	0.0040	-	-	-	-
1,2-Dibromoethane (EDB)	ND	0.0558	0.0040	0.050	-	112	67-119
Dibromomethane	ND	-	0.0050	-	-	-	-
1,2-Dichlorobenzene	ND	-	0.0050	-	-	-	-
1,3-Dichlorobenzene	ND	-	0.0050	-	-	-	-
1,4-Dichlorobenzene	ND	-	0.0050	-	-	-	-
Dichlorodifluoromethane	ND	-	0.0050	-	-	-	-
1,1-Dichloroethane	ND	-	0.0050	-	-	-	-
1,2-Dichloroethane (1,2-DCA)	ND	0.0609	0.0040	0.050	-	122	58-135
1,1-Dichloroethene	ND	0.0533	0.0050	0.050	-	107	42-145
cis-1,2-Dichloroethene	ND	-	0.0050	-	-	-	-
trans-1,2-Dichloroethene	ND	-	0.0050	-	-	-	-
1,2-Dichloropropane	ND	-	0.0050	-	-	-	-
1,3-Dichloropropane	ND	-	0.0050	-	-	-	-
2,2-Dichloropropane	ND	-	0.0050	-	-	-	-

(Cont.)



Quality Control Report

Client: All West Environmental, Inc
Date Prepared: 2/3/16
Date Analyzed: 2/4/16
Instrument: GC18, GC28
Matrix: Soil
Project: 15179.23; Hollis

WorkOrder: 1602146
BatchID: 116226
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg
Sample ID: MB/LCS-116226
 1602146-011AMS/MSD

QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
1,1-Dichloropropene	ND	-	0.0050	-	-	-	-
cis-1,3-Dichloropropene	ND	-	0.0050	-	-	-	-
trans-1,3-Dichloropropene	ND	-	0.0050	-	-	-	-
Diisopropyl ether (DIPE)	ND	0.0629	0.0050	0.050	-	126	52-129
Ethylbenzene	ND	-	0.0050	-	-	-	-
Ethyl tert-butyl ether (ETBE)	ND	0.0624	0.0050	0.050	-	125	53-125
Freon 113	ND	-	0.0050	-	-	-	-
Hexachlorobutadiene	ND	-	0.0050	-	-	-	-
Hexachloroethane	ND	-	0.0050	-	-	-	-
2-Hexanone	ND	-	0.0050	-	-	-	-
Isopropylbenzene	ND	-	0.0050	-	-	-	-
4-Isopropyl toluene	ND	-	0.0050	-	-	-	-
Methyl-t-butyl ether (MTBE)	ND	0.0590	0.0050	0.050	-	118	58-122
Methylene chloride	ND	-	0.0050	-	-	-	-
4-Methyl-2-pentanone (MIBK)	ND	-	0.0050	-	-	-	-
Naphthalene	ND	-	0.0050	-	-	-	-
n-Propyl benzene	ND	-	0.0050	-	-	-	-
Styrene	ND	-	0.0050	-	-	-	-
1,1,1,2-Tetrachloroethane	ND	-	0.0050	-	-	-	-
1,1,2,2-Tetrachloroethane	ND	-	0.0050	-	-	-	-
Tetrachloroethene	ND	-	0.0050	-	-	-	-
Toluene	ND	0.0513	0.0050	0.050	-	103	76-130
1,2,3-Trichlorobenzene	ND	-	0.0050	-	-	-	-
1,2,4-Trichlorobenzene	ND	-	0.0050	-	-	-	-
1,1,1-Trichloroethane	ND	-	0.0050	-	-	-	-
1,1,2-Trichloroethane	ND	-	0.0050	-	-	-	-
Trichloroethene	ND	0.0594	0.0050	0.050	-	119	72-132
Trichlorofluoromethane	ND	-	0.0050	-	-	-	-
1,2,3-Trichloropropane	ND	-	0.0050	-	-	-	-
1,2,4-Trimethylbenzene	ND	-	0.0050	-	-	-	-
1,3,5-Trimethylbenzene	ND	-	0.0050	-	-	-	-
Vinyl Chloride	ND	-	0.0050	-	-	-	-
Xylenes, Total	ND	-	0.0050	-	-	-	-

(Cont.)



Quality Control Report

Client: All West Environmental, Inc
Date Prepared: 2/3/16
Date Analyzed: 2/4/16
Instrument: GC18, GC28
Matrix: Soil
Project: 15179.23; Hollis

WorkOrder: 1602146
BatchID: 116226
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg
Sample ID: MB/LCS-116226
 1602146-011AMS/MSD

QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Surrogate Recovery							
Dibromofluoromethane	0.125	0.150		0.12	100	120	70-130
Toluene-d8	0.136	0.135		0.12	109	108	70-130
4-BFB	0.0110	0.0124		0.012	88	99	70-130
Benzene-d6	0.105	0.125		0.10	105	125	60-140
Ethylbenzene-d10	0.115	0.116		0.10	115	116	60-140
1,2-DCB-d4	0.0872	0.108		0.10	87	108	60-140

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
tert-Amyl methyl ether (TAME)	0.0584	0.0579	0.050	ND<0.010	117,F1	116,F1	56-94	0.718	20
Benzene	NR	NR	0.050	0.05987	NR	NR	60-106	NR	20
t-Butyl alcohol (TBA)	0.304	0.318	0.20	ND<0.10	134	141,F1	56-140	4.40	20
Chlorobenzene	0.0503	0.0489	0.050	ND<0.010	101	98	61-108	2.91	20
1,2-Dibromoethane (EDB)	0.0502	0.0505	0.050	ND<0.0080	100	101	54-119	0.609	20
1,2-Dichloroethane (1,2-DCA)	0.0586	0.0581	0.050	ND<0.0080	117,F1	116,F1	48-115	0.872	20
1,1-Dichloroethene	0.0497	0.0487	0.050	ND<0.010	99	97	46-111	2.07	20
Diisopropyl ether (DIPE)	0.0577	0.0588	0.050	ND<0.010	115,F1	118,F1	53-111	1.84	20
Ethyl tert-butyl ether (ETBE)	0.0567	0.0584	0.050	ND<0.010	113,F1	117,F1	61-104	2.82	20
Methyl-t-butyl ether (MTBE)	NR	NR	0.050	0.2056	NR	NR	58-107	NR	20
Toluene	NR	NR	0.050	0.05215	NR	NR	64-114	NR	20
Trichloroethene	0.0545	0.0526	0.050	ND<0.010	109	105	60-116	3.56	20
Surrogate Recovery									
Dibromofluoromethane	0.152	0.152	0.12		121	122	70-130	0.504	20
Toluene-d8	0.129	0.131	0.12		103	105	70-130	1.29	20
4-BFB	0.0115	0.0119	0.012		92	95	88-121	3.94	20
Benzene-d6	0.114	0.116	0.10		114	116	60-140	1.16	20
Ethylbenzene-d10	0.106	0.106	0.10		106	106	60-140	0	20
1,2-DCB-d4	0.0992	0.101	0.10		99	101	60-140	1.75	20

CLIENT: All West Environmental, Inc
Work Order: 1602146
Project: 15179.23; Hollis

ANALYTICAL QC SUMMARY REPORT

BatchID: 116226

SampleID MB-116226	TestCode: 8260gas_s	Units: mg/kg	Prep Date: 2/3/2016
Batch ID: 116226	TestNo: SW8260B	Run ID: GC18_160209C	Analysis Date: 2/4/2016
Analyte	Result	PQL SPKValue SPKRefVal %REC Limits	RPDRefVal %RPD RPDLimit Qual
TPH(g)	ND	0.25	-

Surrogate Recovery

Dibromofluoromethane	0.139	0.125	111	70 - 130
Benzene-d6	0.120	0.1	120	60 - 140

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 B - Analyte detected in the associated Method Blank

S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits
 E - Value above quantitation range

CLIENT: All West Environmental, Inc

ANALYTICAL QC SUMMARY REPORT

Work Order: 1602146

Project: 15179.23; Hollis

BatchID: 116226

SampleID	LCS-116226	TestCode:	8260gas_s	Units:	mg/kg	Prep Date:	2/3/2016			
Batch ID:	116226	TestNo:	SW8260B	Run ID:	GC18_160209C	Analysis Date:	2/4/2016			
Analyte	Result	PQL	SPKValue	SPKRefVal	%REC	Limits	RPDRefVal	%RPD	RPDLimit	Qual

VOC (C6-C12)	2.91	0.25	3.2	0	91	74 - 142				
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Surrogate Recovery

Dibromofluoromethane	0.141		0.125		113	70 - 130				
Benzene-d6	0.117		0.1		117	60 - 140				

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 B - Analyte detected in the associated Method Blank

S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits
 E - Value above quantitation range

 Angela Rydelius, Lab Manager



1534 Willow Pass Rd
Pittsburg, CA 94565-1701
(925) 252-9262

CHAIN-OF-CUSTODY RECORD

WorkOrder: 1602146

ClientCode: AWE

WaterTrax
 WriteOn
 EDF
 Excel
 EQUIS
 Email
 HardCopy
 ThirdParty
 J-flag

Report to:

Sara Bloom
All West Environmental, Inc
2141 Mission Street, Ste 100
San Francisco, CA 94110
(415) 391-2510 FAX: (415) 391-2008

Email: sara@allwest1.com
cc/3rd Party: Leonard@allwest1.com; darlene@allwest1.
PO:
ProjectNo: 15179.23; Hollis

Bill to:

Darlene Torio
All West Environmental, Inc
2141 Mission Street, Ste 100
San Francisco, CA 94110
darlene@allwest1.com

Requested TAT: 5 days;

Date Received: 02/03/2016

Date Logged: 02/03/2016

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	
1602146-001	SB-26A @ 4.5'-5'	Soil	2/3/2016 9:40	<input type="checkbox"/>	A	A	A										
1602146-003	SB-26A @ 9.5'-10'	Soil	2/3/2016 10:00	<input type="checkbox"/>	A	A											
1602146-004	SB-26A @ 11.5'-12'	Soil	2/3/2016 10:07	<input type="checkbox"/>	A	A											
1602146-006	SVP-6 @ 6.5'-7'	Soil	2/3/2016 11:20	<input type="checkbox"/>	A	A											
1602146-007	SVP-1 @ 1.5'-2'	Soil	2/3/2016 12:42	<input type="checkbox"/>	A	A											
1602146-008	SVP-1 @ 6.5'-7'	Soil	2/3/2016 12:50	<input type="checkbox"/>	A	A											
1602146-009	SVP-2 @ 3'-3.5	Soil	2/3/2016 13:15	<input type="checkbox"/>	A	A											
1602146-010	SVP-2 @ 6.5'-7'	Soil	2/3/2016 13:25	<input type="checkbox"/>	A	A											
1602146-011	SVP-3 @ 6.5'-7'	Soil	2/3/2016 13:54	<input type="checkbox"/>	A	A											

Test Legend:

1	8260B_S	2	8260GAS_S	3	PREDF REPORT	4	
5		6		7		8	
9		10		11		12	

The following SampIDs: 001A, 003A, 004A, 006A, 007A, 008A, 009A, 010A, 011A contain testgroup.

Prepared by: Alexandra Iniguez

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.



WORK ORDER SUMMARY

Client Name: ALL WEST ENVIRONMENTAL, INC

QC Level: LEVEL 2

Work Order: 1602146

Project: 15179.23; Hollis

Client Contact: Sara Bloom

Date Logged: 2/3/2016

Comments:

Contact's Email: sara@allwest1.com

WaterTrax
 WriteOn
 EDF
 Excel
 Fax
 Email
 HardCopy
 ThirdParty
 J-flag

Lab ID	Client ID	Matrix	Test Name	Containers /Composites	Bottle & Preservative	De- chlorinated	Collection Date & Time	TAT	Sediment Content	Hold	SubOut
1602146-001A	SB-26A @ 4.5'-5'	Soil	TPH(g) & 8260 (Basic List) by P&T GCMS	1	Acetate Liner	<input type="checkbox"/>	2/3/2016 9:40	5 days		<input type="checkbox"/>	
1602146-002A	SB-26A @ 6.5'-7'	Soil		1	Acetate Liner	<input type="checkbox"/>	2/3/2016 9:50			<input checked="" type="checkbox"/>	
1602146-003A	SB-26A @ 9.5'-10'	Soil	TPH(g) & 8260 (Basic List) by P&T GCMS	1	Acetate Liner	<input type="checkbox"/>	2/3/2016 10:00	5 days		<input type="checkbox"/>	
1602146-004A	SB-26A @ 11.5'-12'	Soil	TPH(g) & 8260 (Basic List) by P&T GCMS	1	Acetate Liner	<input type="checkbox"/>	2/3/2016 10:07	5 days		<input type="checkbox"/>	
1602146-005A	SB-26A @ 15.5'-16'	Soil		1	Acetate Liner	<input type="checkbox"/>	2/3/2016 10:21			<input checked="" type="checkbox"/>	
1602146-006A	SVP-6 @ 6.5'-7'	Soil	TPH(g) & 8260 (Basic List) by P&T GCMS	1	Acetate Liner	<input type="checkbox"/>	2/3/2016 11:20	5 days		<input type="checkbox"/>	
1602146-007A	SVP-1 @ 1.5'-2'	Soil	TPH(g) & 8260 (Basic List) by P&T GCMS	1	Acetate Liner	<input type="checkbox"/>	2/3/2016 12:42	5 days		<input type="checkbox"/>	
1602146-008A	SVP-1 @ 6.5'-7'	Soil	TPH(g) & 8260 (Basic List) by P&T GCMS	1	Acetate Liner	<input type="checkbox"/>	2/3/2016 12:50	5 days		<input type="checkbox"/>	
1602146-009A	SVP-2 @ 3'-3.5'	Soil	TPH(g) & 8260 (Basic List) by P&T GCMS	1	Acetate Liner	<input type="checkbox"/>	2/3/2016 13:15	5 days		<input type="checkbox"/>	
1602146-010A	SVP-2 @ 6.5'-7'	Soil	TPH(g) & 8260 (Basic List) by P&T GCMS	1	Acetate Liner	<input type="checkbox"/>	2/3/2016 13:25	5 days		<input type="checkbox"/>	
1602146-011A	SVP-3 @ 6.5'-7'	Soil	TPH(g) & 8260 (Basic List) by P&T GCMS	1	Acetate Liner	<input type="checkbox"/>	2/3/2016 13:54	5 days		<input type="checkbox"/>	

NOTES: - STLC and TCLP extractions require 2 days to complete; therefore, all TATs begin after the extraction is completed (i.e., One-day TAT yields results in 3 days from sample submission).
 - MAI assumes that all material present in the provided sampling container is considered part of the sample - MAI does not exclude any material from the sample prior to sample preparation unless requested in writing by the client.



Sample Receipt Checklist

Client Name: **All West Environmental, Inc**
 Project Name: **15179.23; Hollis**
 WorkOrder No: **1602146** Matrix: Soil
 Carrier: Bernie Cummins (MAI Courier)

Date and Time Received: **2/3/2016 15:15**
 Date Logged: **2/3/2016**
 Received by: **Alexandra Iniguez**
 Logged by: **Alexandra Iniguez**

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
 Sample/Temp Blank temperature Temp: 10.9°C 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: <2; 522: <4; 218.7: >8)? Yes No NA
 Samples Received on Ice? Yes No

(Ice Type: WET ICE)

UCMR3 Samples:

Total Chlorine tested and acceptable upon receipt for EPA 522? Yes No NA
 Free Chlorine tested and acceptable upon receipt for EPA 218.7, 300.1, 537, 539? Yes No NA

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

 Comments:



McC Campbell Analytical, Inc.

"When Quality Counts"

Analytical Report

WorkOrder: 1602296

Report Created for: All West Environmental, Inc
2141 Mission Street, Ste 100
San Francisco, CA 94110

Project Contact: Leonard Niles
Project P.O.:
Project Name: 15179.23

Project Received: 02/09/2016

Analytical Report reviewed & approved for release on 02/16/2016 by:

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.





Glossary of Terms & Qualifier Definitions

Client: All West Environmental, Inc
Project: 15179.23
WorkOrder: 1602296

Glossary Abbreviation

95% Interval	95% Confident Interval
DF	Dilution Factor
DI WET	(DISTLC) Waste Extraction Test using DI water
DISS	Dissolved (direct analysis of 0.45 µm filtered and acidified water sample)
DLT	Dilution Test
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
N/A	Not Applicable
ND	Not detected at or above the indicated MDL or RL
NR	Data Not Reported due to matrix interference or insufficient sample amount.
PDS	Post Digestion Spike
PDSD	Post Digestion Spike Duplicate
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
SPLP	Synthetic Precipitation Leachate Procedure
ST	Sorbent Tube
TCLP	Toxicity Characteristic Leachate Procedure
TEQ	Toxicity Equivalents
WET (STLC)	Waste Extraction Test (Soluble Threshold Limit Concentration)

Analytical Qualifiers

S	Surrogate spike recovery outside accepted recovery limits
b1	aqueous sample that contains greater than ~1 vol. % sediment
c7	Surrogate value diluted out of range



Glossary of Terms & Qualifier Definitions

Client: All West Environmental, Inc
Project: 15179.23
WorkOrder: 1602296

Quality Control Qualifiers

F1 MS/MSD recovery and/or RPD is out of acceptance criteria; LCS validated the prep batch.



Analytical Report

Client: All West Environmental, Inc
Date Received: 2/9/16 16:00
Date Prepared: 2/9/16
Project: 15179.23

WorkOrder: 1602296
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SB-26A@20.5-21'	1602296-001A	Soil	02/04/2016	GC16	116419

Analytes	Result	RL	DF	Date Analyzed
Acetone	ND	0.10	1	02/12/2016 04:33
tert-Amyl methyl ether (TAME)	ND	0.0050	1	02/12/2016 04:33
Benzene	ND	0.0050	1	02/12/2016 04:33
Bromobenzene	ND	0.0050	1	02/12/2016 04:33
Bromochloromethane	ND	0.0050	1	02/12/2016 04:33
Bromodichloromethane	ND	0.0050	1	02/12/2016 04:33
Bromoform	ND	0.0050	1	02/12/2016 04:33
Bromomethane	ND	0.0050	1	02/12/2016 04:33
2-Butanone (MEK)	ND	0.020	1	02/12/2016 04:33
t-Butyl alcohol (TBA)	ND	0.050	1	02/12/2016 04:33
n-Butyl benzene	ND	0.0050	1	02/12/2016 04:33
sec-Butyl benzene	ND	0.0050	1	02/12/2016 04:33
tert-Butyl benzene	ND	0.0050	1	02/12/2016 04:33
Carbon Disulfide	ND	0.0050	1	02/12/2016 04:33
Carbon Tetrachloride	ND	0.0050	1	02/12/2016 04:33
Chlorobenzene	ND	0.0050	1	02/12/2016 04:33
Chloroethane	ND	0.0050	1	02/12/2016 04:33
Chloroform	ND	0.0050	1	02/12/2016 04:33
Chloromethane	ND	0.0050	1	02/12/2016 04:33
2-Chlorotoluene	ND	0.0050	1	02/12/2016 04:33
4-Chlorotoluene	ND	0.0050	1	02/12/2016 04:33
Dibromochloromethane	ND	0.0050	1	02/12/2016 04:33
1,2-Dibromo-3-chloropropane	ND	0.0040	1	02/12/2016 04:33
1,2-Dibromoethane (EDB)	ND	0.0040	1	02/12/2016 04:33
Dibromomethane	ND	0.0050	1	02/12/2016 04:33
1,2-Dichlorobenzene	ND	0.0050	1	02/12/2016 04:33
1,3-Dichlorobenzene	ND	0.0050	1	02/12/2016 04:33
1,4-Dichlorobenzene	ND	0.0050	1	02/12/2016 04:33
Dichlorodifluoromethane	ND	0.0050	1	02/12/2016 04:33
1,1-Dichloroethane	ND	0.0050	1	02/12/2016 04:33
1,2-Dichloroethane (1,2-DCA)	ND	0.0040	1	02/12/2016 04:33
1,1-Dichloroethene	ND	0.0050	1	02/12/2016 04:33
cis-1,2-Dichloroethene	ND	0.0050	1	02/12/2016 04:33
trans-1,2-Dichloroethene	ND	0.0050	1	02/12/2016 04:33
1,2-Dichloropropane	ND	0.0050	1	02/12/2016 04:33
1,3-Dichloropropane	ND	0.0050	1	02/12/2016 04:33
2,2-Dichloropropane	ND	0.0050	1	02/12/2016 04:33

(Cont.)



Analytical Report

Client: All West Environmental, Inc
Date Received: 2/9/16 16:00
Date Prepared: 2/9/16
Project: 15179.23

WorkOrder: 1602296
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SB-26A@20.5-21'	1602296-001A	Soil	02/04/2016	GC16	116419
Analytes	Result	RL	DF	Date Analyzed	
1,1-Dichloropropene	ND	0.0050	1	02/12/2016 04:33	
cis-1,3-Dichloropropene	ND	0.0050	1	02/12/2016 04:33	
trans-1,3-Dichloropropene	ND	0.0050	1	02/12/2016 04:33	
Diisopropyl ether (DIPE)	ND	0.0050	1	02/12/2016 04:33	
Ethylbenzene	ND	0.0050	1	02/12/2016 04:33	
Ethyl tert-butyl ether (ETBE)	ND	0.0050	1	02/12/2016 04:33	
Freon 113	ND	0.0050	1	02/12/2016 04:33	
Hexachlorobutadiene	ND	0.0050	1	02/12/2016 04:33	
Hexachloroethane	ND	0.0050	1	02/12/2016 04:33	
2-Hexanone	ND	0.0050	1	02/12/2016 04:33	
Isopropylbenzene	ND	0.0050	1	02/12/2016 04:33	
4-Isopropyl toluene	ND	0.0050	1	02/12/2016 04:33	
Methyl-t-butyl ether (MTBE)	0.0071	0.0050	1	02/12/2016 04:33	
Methylene chloride	ND	0.0050	1	02/12/2016 04:33	
4-Methyl-2-pentanone (MIBK)	ND	0.0050	1	02/12/2016 04:33	
Naphthalene	ND	0.0050	1	02/12/2016 04:33	
n-Propyl benzene	ND	0.0050	1	02/12/2016 04:33	
Styrene	ND	0.0050	1	02/12/2016 04:33	
1,1,1,2-Tetrachloroethane	ND	0.0050	1	02/12/2016 04:33	
1,1,2,2-Tetrachloroethane	ND	0.0050	1	02/12/2016 04:33	
Tetrachloroethene	ND	0.0050	1	02/12/2016 04:33	
Toluene	ND	0.0050	1	02/12/2016 04:33	
1,2,3-Trichlorobenzene	ND	0.0050	1	02/12/2016 04:33	
1,2,4-Trichlorobenzene	ND	0.0050	1	02/12/2016 04:33	
1,1,1-Trichloroethane	ND	0.0050	1	02/12/2016 04:33	
1,1,2-Trichloroethane	ND	0.0050	1	02/12/2016 04:33	
Trichloroethene	ND	0.0050	1	02/12/2016 04:33	
Trichlorofluoromethane	ND	0.0050	1	02/12/2016 04:33	
1,2,3-Trichloropropane	ND	0.0050	1	02/12/2016 04:33	
1,2,4-Trimethylbenzene	ND	0.0050	1	02/12/2016 04:33	
1,3,5-Trimethylbenzene	ND	0.0050	1	02/12/2016 04:33	
Vinyl Chloride	ND	0.0050	1	02/12/2016 04:33	
Xylenes, Total	ND	0.0050	1	02/12/2016 04:33	

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Analytical Report

Client: All West Environmental, Inc
Date Received: 2/9/16 16:00
Date Prepared: 2/9/16
Project: 15179.23

WorkOrder: 1602296
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SB-26A@20.5-21'	1602296-001A	Soil	02/04/2016	GC16	116419

Analytes	Result	RL	DF	Date Analyzed
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
Dibromofluoromethane	103	70-130		02/12/2016 04:33
Toluene-d8	113	70-130		02/12/2016 04:33
4-BFB	113	70-130		02/12/2016 04:33
Benzene-d6	102	60-140		02/12/2016 04:33
Ethylbenzene-d10	101	60-140		02/12/2016 04:33
1,2-DCB-d4	70	60-140		02/12/2016 04:33

Analyst(s): KF



Analytical Report

Client: All West Environmental, Inc
Date Received: 2/9/16 16:00
Date Prepared: 2/9/16
Project: 15179.23

WorkOrder: 1602296
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SVP-4@6.5'-7'	1602296-002A	Soil	02/04/2016 14:33	GC16	116419

Analytes	Result	RL	DF	Date Analyzed
Acetone	ND	5.0	50	02/12/2016 05:13
tert-Amyl methyl ether (TAME)	ND	0.25	50	02/12/2016 05:13
Benzene	ND	0.25	50	02/12/2016 05:13
Bromobenzene	ND	0.25	50	02/12/2016 05:13
Bromochloromethane	ND	0.25	50	02/12/2016 05:13
Bromodichloromethane	ND	0.25	50	02/12/2016 05:13
Bromoform	ND	0.25	50	02/12/2016 05:13
Bromomethane	ND	0.25	50	02/12/2016 05:13
2-Butanone (MEK)	ND	1.0	50	02/12/2016 05:13
t-Butyl alcohol (TBA)	ND	2.5	50	02/12/2016 05:13
n-Butyl benzene	0.81	0.25	50	02/12/2016 05:13
sec-Butyl benzene	ND	0.25	50	02/12/2016 05:13
tert-Butyl benzene	ND	0.25	50	02/12/2016 05:13
Carbon Disulfide	ND	0.25	50	02/12/2016 05:13
Carbon Tetrachloride	ND	0.25	50	02/12/2016 05:13
Chlorobenzene	ND	0.25	50	02/12/2016 05:13
Chloroethane	ND	0.25	50	02/12/2016 05:13
Chloroform	ND	0.25	50	02/12/2016 05:13
Chloromethane	ND	0.25	50	02/12/2016 05:13
2-Chlorotoluene	ND	0.25	50	02/12/2016 05:13
4-Chlorotoluene	ND	0.25	50	02/12/2016 05:13
Dibromochloromethane	ND	0.25	50	02/12/2016 05:13
1,2-Dibromo-3-chloropropane	ND	0.20	50	02/12/2016 05:13
1,2-Dibromoethane (EDB)	ND	0.20	50	02/12/2016 05:13
Dibromomethane	ND	0.25	50	02/12/2016 05:13
1,2-Dichlorobenzene	ND	0.25	50	02/12/2016 05:13
1,3-Dichlorobenzene	ND	0.25	50	02/12/2016 05:13
1,4-Dichlorobenzene	ND	0.25	50	02/12/2016 05:13
Dichlorodifluoromethane	ND	0.25	50	02/12/2016 05:13
1,1-Dichloroethane	ND	0.25	50	02/12/2016 05:13
1,2-Dichloroethane (1,2-DCA)	ND	0.20	50	02/12/2016 05:13
1,1-Dichloroethene	ND	0.25	50	02/12/2016 05:13
cis-1,2-Dichloroethene	ND	0.25	50	02/12/2016 05:13
trans-1,2-Dichloroethene	ND	0.25	50	02/12/2016 05:13
1,2-Dichloropropane	ND	0.25	50	02/12/2016 05:13
1,3-Dichloropropane	ND	0.25	50	02/12/2016 05:13
2,2-Dichloropropane	ND	0.25	50	02/12/2016 05:13

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Analytical Report

Client: All West Environmental, Inc
Date Received: 2/9/16 16:00
Date Prepared: 2/9/16
Project: 15179.23

WorkOrder: 1602296
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SVP-4@6.5'-7'	1602296-002A	Soil	02/04/2016 14:33	GC16	116419

Analytes	Result	RL	DF	Date Analyzed
1,1-Dichloropropene	ND	0.25	50	02/12/2016 05:13
cis-1,3-Dichloropropene	ND	0.25	50	02/12/2016 05:13
trans-1,3-Dichloropropene	ND	0.25	50	02/12/2016 05:13
Diisopropyl ether (DIPE)	ND	0.25	50	02/12/2016 05:13
Ethylbenzene	0.59	0.25	50	02/12/2016 05:13
Ethyl tert-butyl ether (ETBE)	ND	0.25	50	02/12/2016 05:13
Freon 113	ND	0.25	50	02/12/2016 05:13
Hexachlorobutadiene	ND	0.25	50	02/12/2016 05:13
Hexachloroethane	ND	0.25	50	02/12/2016 05:13
2-Hexanone	ND	0.25	50	02/12/2016 05:13
Isopropylbenzene	ND	0.25	50	02/12/2016 05:13
4-Isopropyl toluene	ND	0.25	50	02/12/2016 05:13
Methyl-t-butyl ether (MTBE)	ND	0.25	50	02/12/2016 05:13
Methylene chloride	ND	0.25	50	02/12/2016 05:13
4-Methyl-2-pentanone (MIBK)	ND	0.25	50	02/12/2016 05:13
Naphthalene	1.0	0.25	50	02/12/2016 05:13
n-Propyl benzene	0.92	0.25	50	02/12/2016 05:13
Styrene	ND	0.25	50	02/12/2016 05:13
1,1,1,2-Tetrachloroethane	ND	0.25	50	02/12/2016 05:13
1,1,2,2-Tetrachloroethane	ND	0.25	50	02/12/2016 05:13
Tetrachloroethene	ND	0.25	50	02/12/2016 05:13
Toluene	ND	0.25	50	02/12/2016 05:13
1,2,3-Trichlorobenzene	ND	0.25	50	02/12/2016 05:13
1,2,4-Trichlorobenzene	ND	0.25	50	02/12/2016 05:13
1,1,1-Trichloroethane	ND	0.25	50	02/12/2016 05:13
1,1,2-Trichloroethane	ND	0.25	50	02/12/2016 05:13
Trichloroethene	ND	0.25	50	02/12/2016 05:13
Trichlorofluoromethane	ND	0.25	50	02/12/2016 05:13
1,2,3-Trichloropropane	ND	0.25	50	02/12/2016 05:13
1,2,4-Trimethylbenzene	3.6	0.25	50	02/12/2016 05:13
1,3,5-Trimethylbenzene	0.97	0.25	50	02/12/2016 05:13
Vinyl Chloride	ND	0.25	50	02/12/2016 05:13
Xylenes, Total	1.4	0.25	50	02/12/2016 05:13

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Analytical Report

Client: All West Environmental, Inc
Date Received: 2/9/16 16:00
Date Prepared: 2/9/16
Project: 15179.23

WorkOrder: 1602296
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SVP-4@6.5'-7'	1602296-002A	Soil	02/04/2016 14:33	GC16	116419

Analytes	Result	RL	DF	Date Analyzed
<u>Surrogates</u>	<u>REC (%)</u>	<u>Qualifiers</u>	<u>Limits</u>	
Dibromofluoromethane	106		70-130	02/12/2016 05:13
Toluene-d8	98		70-130	02/12/2016 05:13
4-BFB	112		70-130	02/12/2016 05:13
Benzene-d6	218	S	60-140	02/12/2016 05:13
Ethylbenzene-d10	210	S	60-140	02/12/2016 05:13
1,2-DCB-d4	142	S	60-140	02/12/2016 05:13

Analyst(s): KF

Analytical Comments: c7



Analytical Report

Client: All West Environmental, Inc
Date Received: 2/9/16 16:00
Date Prepared: 2/9/16
Project: 15179.23

WorkOrder: 1602296
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SVP-5@3.5'-4'	1602296-003A	Soil	02/04/2016 14:41	GC16	116419

Analytes	Result	RL	DF	Date Analyzed
Acetone	ND	0.10	1	02/11/2016 04:30
tert-Amyl methyl ether (TAME)	ND	0.0050	1	02/11/2016 04:30
Benzene	ND	0.0050	1	02/11/2016 04:30
Bromobenzene	ND	0.0050	1	02/11/2016 04:30
Bromochloromethane	ND	0.0050	1	02/11/2016 04:30
Bromodichloromethane	ND	0.0050	1	02/11/2016 04:30
Bromoform	ND	0.0050	1	02/11/2016 04:30
Bromomethane	ND	0.0050	1	02/11/2016 04:30
2-Butanone (MEK)	ND	0.020	1	02/11/2016 04:30
t-Butyl alcohol (TBA)	0.11	0.050	1	02/11/2016 04:30
n-Butyl benzene	0.11	0.0050	1	02/11/2016 04:30
sec-Butyl benzene	0.033	0.0050	1	02/11/2016 04:30
tert-Butyl benzene	ND	0.0050	1	02/11/2016 04:30
Carbon Disulfide	ND	0.0050	1	02/11/2016 04:30
Carbon Tetrachloride	ND	0.0050	1	02/11/2016 04:30
Chlorobenzene	ND	0.0050	1	02/11/2016 04:30
Chloroethane	ND	0.0050	1	02/11/2016 04:30
Chloroform	ND	0.0050	1	02/11/2016 04:30
Chloromethane	ND	0.0050	1	02/11/2016 04:30
2-Chlorotoluene	ND	0.0050	1	02/11/2016 04:30
4-Chlorotoluene	ND	0.0050	1	02/11/2016 04:30
Dibromochloromethane	ND	0.0050	1	02/11/2016 04:30
1,2-Dibromo-3-chloropropane	ND	0.0040	1	02/11/2016 04:30
1,2-Dibromoethane (EDB)	ND	0.0040	1	02/11/2016 04:30
Dibromomethane	ND	0.0050	1	02/11/2016 04:30
1,2-Dichlorobenzene	ND	0.0050	1	02/11/2016 04:30
1,3-Dichlorobenzene	ND	0.0050	1	02/11/2016 04:30
1,4-Dichlorobenzene	ND	0.0050	1	02/11/2016 04:30
Dichlorodifluoromethane	ND	0.0050	1	02/11/2016 04:30
1,1-Dichloroethane	ND	0.0050	1	02/11/2016 04:30
1,2-Dichloroethane (1,2-DCA)	ND	0.0040	1	02/11/2016 04:30
1,1-Dichloroethene	ND	0.0050	1	02/11/2016 04:30
cis-1,2-Dichloroethene	ND	0.0050	1	02/11/2016 04:30
trans-1,2-Dichloroethene	ND	0.0050	1	02/11/2016 04:30
1,2-Dichloropropane	ND	0.0050	1	02/11/2016 04:30
1,3-Dichloropropane	ND	0.0050	1	02/11/2016 04:30
2,2-Dichloropropane	ND	0.0050	1	02/11/2016 04:30

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Analytical Report

Client: All West Environmental, Inc
Date Received: 2/9/16 16:00
Date Prepared: 2/9/16
Project: 15179.23

WorkOrder: 1602296
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SVP-5@3.5'-4'	1602296-003A	Soil	02/04/2016 14:41	GC16	116419

Analytes	Result	RL	DF	Date Analyzed
1,1-Dichloropropene	ND	0.0050	1	02/11/2016 04:30
cis-1,3-Dichloropropene	ND	0.0050	1	02/11/2016 04:30
trans-1,3-Dichloropropene	ND	0.0050	1	02/11/2016 04:30
Diisopropyl ether (DIPE)	ND	0.0050	1	02/11/2016 04:30
Ethylbenzene	ND	0.0050	1	02/11/2016 04:30
Ethyl tert-butyl ether (ETBE)	ND	0.0050	1	02/11/2016 04:30
Freon 113	ND	0.0050	1	02/11/2016 04:30
Hexachlorobutadiene	ND	0.0050	1	02/11/2016 04:30
Hexachloroethane	ND	0.0050	1	02/11/2016 04:30
2-Hexanone	ND	0.0050	1	02/11/2016 04:30
Isopropylbenzene	0.016	0.0050	1	02/11/2016 04:30
4-Isopropyl toluene	ND	0.0050	1	02/11/2016 04:30
Methyl-t-butyl ether (MTBE)	0.082	0.0050	1	02/11/2016 04:30
Methylene chloride	ND	0.0050	1	02/11/2016 04:30
4-Methyl-2-pentanone (MIBK)	ND	0.0050	1	02/11/2016 04:30
Naphthalene	ND	0.0050	1	02/11/2016 04:30
n-Propyl benzene	0.11	0.0050	1	02/11/2016 04:30
Styrene	ND	0.0050	1	02/11/2016 04:30
1,1,1,2-Tetrachloroethane	ND	0.0050	1	02/11/2016 04:30
1,1,2,2-Tetrachloroethane	ND	0.0050	1	02/11/2016 04:30
Tetrachloroethene	ND	0.0050	1	02/11/2016 04:30
Toluene	ND	0.0050	1	02/11/2016 04:30
1,2,3-Trichlorobenzene	ND	0.0050	1	02/11/2016 04:30
1,2,4-Trichlorobenzene	ND	0.0050	1	02/11/2016 04:30
1,1,1-Trichloroethane	ND	0.0050	1	02/11/2016 04:30
1,1,2-Trichloroethane	ND	0.0050	1	02/11/2016 04:30
Trichloroethene	ND	0.0050	1	02/11/2016 04:30
Trichlorofluoromethane	ND	0.0050	1	02/11/2016 04:30
1,2,3-Trichloropropane	ND	0.0050	1	02/11/2016 04:30
1,2,4-Trimethylbenzene	0.016	0.0050	1	02/11/2016 04:30
1,3,5-Trimethylbenzene	ND	0.0050	1	02/11/2016 04:30
Vinyl Chloride	ND	0.0050	1	02/11/2016 04:30
Xylenes, Total	ND	0.0050	1	02/11/2016 04:30

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Analytical Report

Client: All West Environmental, Inc
Date Received: 2/9/16 16:00
Date Prepared: 2/9/16
Project: 15179.23

WorkOrder: 1602296
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SVP-5@3.5'-4'	1602296-003A	Soil	02/04/2016 14:41	GC16	116419

Analytes	Result	RL	DF	Date Analyzed
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
Dibromofluoromethane	105	70-130		02/11/2016 04:30
Toluene-d8	110	70-130		02/11/2016 04:30
4-BFB	116	70-130		02/11/2016 04:30
Benzene-d6	86	60-140		02/11/2016 04:30
Ethylbenzene-d10	89	60-140		02/11/2016 04:30
1,2-DCB-d4	67	60-140		02/11/2016 04:30

Analyst(s): AK



Analytical Report

Client: All West Environmental, Inc
Date Received: 2/9/16 16:00
Date Prepared: 2/13/16
Project: 15179.23

WorkOrder: 1602296
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/L

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SB-26	1602296-004A	Water	02/04/2016 09:12	GC16	116686

Analytes	Result	RL	DF	Date Analyzed
Acetone	ND	100	10	02/13/2016 15:55
tert-Amyl methyl ether (TAME)	ND	5.0	10	02/13/2016 15:55
Benzene	310	5.0	10	02/13/2016 15:55
Bromobenzene	ND	5.0	10	02/13/2016 15:55
Bromochloromethane	ND	5.0	10	02/13/2016 15:55
Bromodichloromethane	ND	5.0	10	02/13/2016 15:55
Bromoform	ND	5.0	10	02/13/2016 15:55
Bromomethane	ND	5.0	10	02/13/2016 15:55
2-Butanone (MEK)	ND	20	10	02/13/2016 15:55
t-Butyl alcohol (TBA)	ND	20	10	02/13/2016 15:55
n-Butyl benzene	ND	5.0	10	02/13/2016 15:55
sec-Butyl benzene	ND	5.0	10	02/13/2016 15:55
tert-Butyl benzene	ND	5.0	10	02/13/2016 15:55
Carbon Disulfide	ND	5.0	10	02/13/2016 15:55
Carbon Tetrachloride	ND	5.0	10	02/13/2016 15:55
Chlorobenzene	ND	5.0	10	02/13/2016 15:55
Chloroethane	ND	5.0	10	02/13/2016 15:55
Chloroform	ND	5.0	10	02/13/2016 15:55
Chloromethane	ND	5.0	10	02/13/2016 15:55
2-Chlorotoluene	ND	5.0	10	02/13/2016 15:55
4-Chlorotoluene	ND	5.0	10	02/13/2016 15:55
Dibromochloromethane	ND	5.0	10	02/13/2016 15:55
1,2-Dibromo-3-chloropropane	ND	2.0	10	02/13/2016 15:55
1,2-Dibromoethane (EDB)	ND	5.0	10	02/13/2016 15:55
Dibromomethane	ND	5.0	10	02/13/2016 15:55
1,2-Dichlorobenzene	ND	5.0	10	02/13/2016 15:55
1,3-Dichlorobenzene	ND	5.0	10	02/13/2016 15:55
1,4-Dichlorobenzene	ND	5.0	10	02/13/2016 15:55
Dichlorodifluoromethane	ND	5.0	10	02/13/2016 15:55
1,1-Dichloroethane	ND	5.0	10	02/13/2016 15:55
1,2-Dichloroethane (1,2-DCA)	ND	5.0	10	02/13/2016 15:55
1,1-Dichloroethene	ND	5.0	10	02/13/2016 15:55
cis-1,2-Dichloroethene	ND	5.0	10	02/13/2016 15:55
trans-1,2-Dichloroethene	ND	5.0	10	02/13/2016 15:55
1,2-Dichloropropane	ND	5.0	10	02/13/2016 15:55
1,3-Dichloropropane	ND	5.0	10	02/13/2016 15:55
2,2-Dichloropropane	ND	5.0	10	02/13/2016 15:55

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Analytical Report

Client: All West Environmental, Inc
Date Received: 2/9/16 16:00
Date Prepared: 2/13/16
Project: 15179.23

WorkOrder: 1602296
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/L

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SB-26	1602296-004A	Water	02/04/2016 09:12	GC16	116686
Analytes	Result	RL	DF	Date Analyzed	
1,1-Dichloropropene	ND	5.0	10	02/13/2016 15:55	
cis-1,3-Dichloropropene	ND	5.0	10	02/13/2016 15:55	
trans-1,3-Dichloropropene	ND	5.0	10	02/13/2016 15:55	
Diisopropyl ether (DIPE)	ND	5.0	10	02/13/2016 15:55	
Ethylbenzene	85	5.0	10	02/13/2016 15:55	
Ethyl tert-butyl ether (ETBE)	ND	5.0	10	02/13/2016 15:55	
Freon 113	ND	5.0	10	02/13/2016 15:55	
Hexachlorobutadiene	ND	5.0	10	02/13/2016 15:55	
Hexachloroethane	ND	5.0	10	02/13/2016 15:55	
2-Hexanone	ND	5.0	10	02/13/2016 15:55	
Isopropylbenzene	ND	5.0	10	02/13/2016 15:55	
4-Isopropyl toluene	ND	5.0	10	02/13/2016 15:55	
Methyl-t-butyl ether (MTBE)	170	5.0	10	02/13/2016 15:55	
Methylene chloride	ND	5.0	10	02/13/2016 15:55	
4-Methyl-2-pentanone (MIBK)	ND	5.0	10	02/13/2016 15:55	
Naphthalene	7.9	5.0	10	02/13/2016 15:55	
n-Propyl benzene	7.8	5.0	10	02/13/2016 15:55	
Styrene	ND	5.0	10	02/13/2016 15:55	
1,1,1,2-Tetrachloroethane	ND	5.0	10	02/13/2016 15:55	
1,1,2,2-Tetrachloroethane	ND	5.0	10	02/13/2016 15:55	
Tetrachloroethene	ND	5.0	10	02/13/2016 15:55	
Toluene	300	5.0	10	02/13/2016 15:55	
1,2,3-Trichlorobenzene	ND	5.0	10	02/13/2016 15:55	
1,2,4-Trichlorobenzene	ND	5.0	10	02/13/2016 15:55	
1,1,1-Trichloroethane	ND	5.0	10	02/13/2016 15:55	
1,1,2-Trichloroethane	ND	5.0	10	02/13/2016 15:55	
Trichloroethene	18	5.0	10	02/13/2016 15:55	
Trichlorofluoromethane	ND	5.0	10	02/13/2016 15:55	
1,2,3-Trichloropropane	ND	5.0	10	02/13/2016 15:55	
1,2,4-Trimethylbenzene	67	5.0	10	02/13/2016 15:55	
1,3,5-Trimethylbenzene	21	5.0	10	02/13/2016 15:55	
Vinyl Chloride	ND	5.0	10	02/13/2016 15:55	
Xylenes, Total	370	5.0	10	02/13/2016 15:55	

(Cont.)



Analytical Report

Client: All West Environmental, Inc
Date Received: 2/9/16 16:00
Date Prepared: 2/13/16
Project: 15179.23

WorkOrder: 1602296
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/L

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SB-26	1602296-004A	Water	02/04/2016 09:12	GC16	116686

Analytes	Result	RL	DF	Date Analyzed
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
Dibromofluoromethane	103	70-130		02/13/2016 15:55
Toluene-d8	98	70-130		02/13/2016 15:55
4-BFB	92	70-130		02/13/2016 15:55

Analyst(s): KF

Analytical Comments: b1



Analytical Report

Client: All West Environmental, Inc
Date Received: 2/9/16 16:00
Date Prepared: 2/9/16
Project: 15179.23

WorkOrder: 1602296
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

TPH(g) by Purge & Trap and GC/MS

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SB-26A@20.5'-21'	1602296-001A	Soil	02/04/2016	GC16	116419

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	0.25	1	02/11/2016 03:50

Surrogates	REC (%)	Limits	Date Analyzed
Dibromofluoromethane	114	70-130	02/11/2016 03:50
Benzene-d6	111	60-140	02/11/2016 03:50

Analyst(s): AK

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SVP-4@6.5'-7'	1602296-002A	Soil	02/04/2016 14:33	GC16	116419

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	54	12	50	02/12/2016 05:13

Surrogates	REC (%)	Limits	Date Analyzed
Dibromofluoromethane	117	70-130	02/12/2016 05:13
Benzene-d6	122	60-140	02/12/2016 05:13

Analyst(s): KF

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SVP-5@3.5'-4'	1602296-003A	Soil	02/04/2016 14:41	GC16	116419

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	3.9	0.25	1	02/11/2016 04:30

Surrogates	REC (%)	Limits	Date Analyzed
Dibromofluoromethane	116	70-130	02/11/2016 04:30
Benzene-d6	97	60-140	02/11/2016 04:30

Analyst(s): AK



Analytical Report

Client: All West Environmental, Inc
Date Received: 2/9/16 16:00
Date Prepared: 2/13/16
Project: 15179.23

WorkOrder: 1602296
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/L

TPH(g) by Purge & Trap and GC/MS

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SB-26	1602296-004A	Water	02/04/2016 09:12	GC16	116686

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	1700	50	1	02/13/2016 01:20

Surrogates	REC (%)	Limits	Date Analyzed
Dibromofluoromethane	114	70-130	02/13/2016 01:20

Analyst(s): AK Analytical Comments: b1



Quality Control Report

Client: All West Environmental, Inc
Date Prepared: 2/9/16
Date Analyzed: 2/9/16
Instrument: GC16
Matrix: Soil
Project: 15179.23

WorkOrder: 1602296
BatchID: 116419
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg
Sample ID: MB/LCS-116419
 1602280-009AMS/MSD

QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Acetone	ND	-	0.10	-	-	-	-
tert-Amyl methyl ether (TAME)	ND	0.0415	0.0050	0.050	-	83	53-116
Benzene	ND	0.0469	0.0050	0.050	-	94	63-137
Bromobenzene	ND	-	0.0050	-	-	-	-
Bromochloromethane	ND	-	0.0050	-	-	-	-
Bromodichloromethane	ND	-	0.0050	-	-	-	-
Bromoform	ND	-	0.0050	-	-	-	-
Bromomethane	ND	-	0.0050	-	-	-	-
2-Butanone (MEK)	ND	-	0.020	-	-	-	-
t-Butyl alcohol (TBA)	ND	0.202	0.050	0.20	-	101	41-135
n-Butyl benzene	ND	-	0.0050	-	-	-	-
sec-Butyl benzene	ND	-	0.0050	-	-	-	-
tert-Butyl benzene	ND	-	0.0050	-	-	-	-
Carbon Disulfide	ND	-	0.0050	-	-	-	-
Carbon Tetrachloride	ND	-	0.0050	-	-	-	-
Chlorobenzene	ND	0.0446	0.0050	0.050	-	89	77-121
Chloroethane	ND	-	0.0050	-	-	-	-
Chloroform	ND	-	0.0050	-	-	-	-
Chloromethane	ND	-	0.0050	-	-	-	-
2-Chlorotoluene	ND	-	0.0050	-	-	-	-
4-Chlorotoluene	ND	-	0.0050	-	-	-	-
Dibromochloromethane	ND	-	0.0050	-	-	-	-
1,2-Dibromo-3-chloropropane	ND	-	0.0040	-	-	-	-
1,2-Dibromoethane (EDB)	ND	0.0456	0.0040	0.050	-	91	67-119
Dibromomethane	ND	-	0.0050	-	-	-	-
1,2-Dichlorobenzene	ND	-	0.0050	-	-	-	-
1,3-Dichlorobenzene	ND	-	0.0050	-	-	-	-
1,4-Dichlorobenzene	ND	-	0.0050	-	-	-	-
Dichlorodifluoromethane	ND	-	0.0050	-	-	-	-
1,1-Dichloroethane	ND	-	0.0050	-	-	-	-
1,2-Dichloroethane (1,2-DCA)	ND	0.0461	0.0040	0.050	-	92	58-135
1,1-Dichloroethene	ND	0.0418	0.0050	0.050	-	84	42-145
cis-1,2-Dichloroethene	ND	-	0.0050	-	-	-	-
trans-1,2-Dichloroethene	ND	-	0.0050	-	-	-	-
1,2-Dichloropropane	ND	-	0.0050	-	-	-	-
1,3-Dichloropropane	ND	-	0.0050	-	-	-	-
2,2-Dichloropropane	ND	-	0.0050	-	-	-	-

(Cont.)



Quality Control Report

Client: All West Environmental, Inc
Date Prepared: 2/9/16
Date Analyzed: 2/9/16
Instrument: GC16
Matrix: Soil
Project: 15179.23

WorkOrder: 1602296
BatchID: 116419
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg
Sample ID: MB/LCS-116419
 1602280-009AMS/MSD

QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
1,1-Dichloropropene	ND	-	0.0050	-	-	-	-
cis-1,3-Dichloropropene	ND	-	0.0050	-	-	-	-
trans-1,3-Dichloropropene	ND	-	0.0050	-	-	-	-
Diisopropyl ether (DIPE)	ND	0.0454	0.0050	0.050	-	91	52-129
Ethylbenzene	ND	-	0.0050	-	-	-	-
Ethyl tert-butyl ether (ETBE)	ND	0.0448	0.0050	0.050	-	90	53-125
Freon 113	ND	-	0.0050	-	-	-	-
Hexachlorobutadiene	ND	-	0.0050	-	-	-	-
Hexachloroethane	ND	-	0.0050	-	-	-	-
2-Hexanone	ND	-	0.0050	-	-	-	-
Isopropylbenzene	ND	-	0.0050	-	-	-	-
4-Isopropyl toluene	ND	-	0.0050	-	-	-	-
Methyl-t-butyl ether (MTBE)	ND	0.0434	0.0050	0.050	-	87	58-122
Methylene chloride	ND	-	0.0050	-	-	-	-
4-Methyl-2-pentanone (MIBK)	ND	-	0.0050	-	-	-	-
Naphthalene	ND	-	0.0050	-	-	-	-
n-Propyl benzene	ND	-	0.0050	-	-	-	-
Styrene	ND	-	0.0050	-	-	-	-
1,1,1,2-Tetrachloroethane	ND	-	0.0050	-	-	-	-
1,1,2,2-Tetrachloroethane	ND	-	0.0050	-	-	-	-
Tetrachloroethene	ND	-	0.0050	-	-	-	-
Toluene	ND	0.0481	0.0050	0.050	-	96	76-130
1,2,3-Trichlorobenzene	ND	-	0.0050	-	-	-	-
1,2,4-Trichlorobenzene	ND	-	0.0050	-	-	-	-
1,1,1-Trichloroethane	ND	-	0.0050	-	-	-	-
1,1,2-Trichloroethane	ND	-	0.0050	-	-	-	-
Trichloroethene	ND	0.0445	0.0050	0.050	-	89	72-132
Trichlorofluoromethane	ND	-	0.0050	-	-	-	-
1,2,3-Trichloropropane	ND	-	0.0050	-	-	-	-
1,2,4-Trimethylbenzene	ND	-	0.0050	-	-	-	-
1,3,5-Trimethylbenzene	ND	-	0.0050	-	-	-	-
Vinyl Chloride	ND	-	0.0050	-	-	-	-
Xylenes, Total	ND	-	0.0050	-	-	-	-

(Cont.)



Quality Control Report

Client: All West Environmental, Inc
Date Prepared: 2/9/16
Date Analyzed: 2/9/16
Instrument: GC16
Matrix: Soil
Project: 15179.23

WorkOrder: 1602296
BatchID: 116419
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg
Sample ID: MB/LCS-116419
 1602280-009AMS/MSD

QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Surrogate Recovery							
Dibromofluoromethane	0.127	0.126		0.12	102	100	70-130
Toluene-d8	0.148	0.141		0.12	119	113	70-130
4-BFB	0.0138	0.0148		0.012	111	118	70-130
Benzene-d6	0.109	0.111		0.10	109	111	60-140
Ethylbenzene-d10	0.110	0.127		0.10	110	127	60-140
1,2-DCB-d4	0.0738	0.0807		0.10	74	81	60-140

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
tert-Amyl methyl ether (TAME)	0.0416	0.0437	0.050	ND	83	87	56-94	4.92	20
Benzene	0.0412	0.0449	0.050	ND	82	90	60-106	8.68	20
t-Butyl alcohol (TBA)	0.168	0.179	0.20	ND	84	90	56-140	6.21	20
Chlorobenzene	0.0478	0.0489	0.050	ND	95	98	61-108	2.33	20
1,2-Dibromoethane (EDB)	0.0460	0.0465	0.050	ND	92	93	54-119	1.19	20
1,2-Dichloroethane (1,2-DCA)	0.0444	0.0440	0.050	ND	89	88	48-115	0.713	20
1,1-Dichloroethene	0.0276	0.0356	0.050	ND	55	71	46-111	25.6,F1	20
Diisopropyl ether (DIPE)	0.0378	0.0418	0.050	ND	76	84	53-111	9.96	20
Ethyl tert-butyl ether (ETBE)	0.0401	0.0436	0.050	ND	80	87	61-104	8.58	20
Methyl-t-butyl ether (MTBE)	0.0395	0.0433	0.050	ND	79	87	58-107	9.18	20
Toluene	0.0438	0.0463	0.050	ND	88	93	64-114	5.62	20
Trichloroethene	0.0428	0.0466	0.050	ND	86	93	60-116	8.39	20

Surrogate Recovery									
Dibromofluoromethane	0.137	0.137	0.12		110	109	70-130	0.455	20
Toluene-d8	0.155	0.154	0.12		124	123	70-130	0.915	20
4-BFB	0.0118	0.0118	0.012		94	95	88-121	0.314	20
Benzene-d6	0.0926	0.103	0.10		93	103	60-140	10.3	20
Ethylbenzene-d10	0.116	0.118	0.10		116	118	60-140	1.66	20
1,2-DCB-d4	0.0972	0.0955	0.10		97	95	60-140	1.81	20



Quality Control Report

Client: All West Environmental, Inc
Date Prepared: 2/13/16
Date Analyzed: 2/12/16
Instrument: GC16
Matrix: Water
Project: 15179.23

WorkOrder: 1602296
BatchID: 116686
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/L
Sample ID: MB/LCS-116686
 1602484-003AMS/MSD

QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Acetone	ND	-	10	-	-	-	-
tert-Amyl methyl ether (TAME)	ND	11.6	0.50	10	-	116	54-140
Benzene	ND	11.1	0.50	10	-	111	47-158
Bromobenzene	ND	-	0.50	-	-	-	-
Bromochloromethane	ND	-	0.50	-	-	-	-
Bromodichloromethane	ND	-	0.50	-	-	-	-
Bromoform	ND	-	0.50	-	-	-	-
Bromomethane	ND	-	0.50	-	-	-	-
2-Butanone (MEK)	ND	-	2.0	-	-	-	-
t-Butyl alcohol (TBA)	ND	47.9	2.0	40	-	120	42-140
n-Butyl benzene	ND	-	0.50	-	-	-	-
sec-Butyl benzene	ND	-	0.50	-	-	-	-
tert-Butyl benzene	ND	-	0.50	-	-	-	-
Carbon Disulfide	ND	-	0.50	-	-	-	-
Carbon Tetrachloride	ND	-	0.50	-	-	-	-
Chlorobenzene	ND	10.3	0.50	10	-	103	43-157
Chloroethane	ND	-	0.50	-	-	-	-
Chloroform	ND	-	0.50	-	-	-	-
Chloromethane	ND	-	0.50	-	-	-	-
2-Chlorotoluene	ND	-	0.50	-	-	-	-
4-Chlorotoluene	ND	-	0.50	-	-	-	-
Dibromochloromethane	ND	-	0.50	-	-	-	-
1,2-Dibromo-3-chloropropane	ND	-	0.20	-	-	-	-
1,2-Dibromoethane (EDB)	ND	10.7	0.50	10	-	107	44-155
Dibromomethane	ND	-	0.50	-	-	-	-
1,2-Dichlorobenzene	ND	-	0.50	-	-	-	-
1,3-Dichlorobenzene	ND	-	0.50	-	-	-	-
1,4-Dichlorobenzene	ND	-	0.50	-	-	-	-
Dichlorodifluoromethane	ND	-	0.50	-	-	-	-
1,1-Dichloroethane	ND	-	0.50	-	-	-	-
1,2-Dichloroethane (1,2-DCA)	ND	11.8	0.50	10	-	118	66-125
1,1-Dichloroethene	ND	10.4	0.50	10	-	104	47-149
cis-1,2-Dichloroethene	ND	-	0.50	-	-	-	-
trans-1,2-Dichloroethene	ND	-	0.50	-	-	-	-
1,2-Dichloropropane	ND	-	0.50	-	-	-	-
1,3-Dichloropropane	ND	-	0.50	-	-	-	-
2,2-Dichloropropane	ND	-	0.50	-	-	-	-

(Cont.)



Quality Control Report

Client: All West Environmental, Inc
Date Prepared: 2/13/16
Date Analyzed: 2/12/16
Instrument: GC16
Matrix: Water
Project: 15179.23

WorkOrder: 1602296
BatchID: 116686
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/L
Sample ID: MB/LCS-116686
 1602484-003AMS/MSD

QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
1,1-Dichloropropene	ND	-	0.50	-	-	-	-
cis-1,3-Dichloropropene	ND	-	0.50	-	-	-	-
trans-1,3-Dichloropropene	ND	-	0.50	-	-	-	-
Diisopropyl ether (DIPE)	ND	11.8	0.50	10	-	118	57-136
Ethylbenzene	ND	-	0.50	-	-	-	-
Ethyl tert-butyl ether (ETBE)	ND	11.8	0.50	10	-	118	55-137
Freon 113	ND	-	0.50	-	-	-	-
Hexachlorobutadiene	ND	-	0.50	-	-	-	-
Hexachloroethane	ND	-	0.50	-	-	-	-
2-Hexanone	ND	-	0.50	-	-	-	-
Isopropylbenzene	ND	-	0.50	-	-	-	-
4-Isopropyl toluene	ND	-	0.50	-	-	-	-
Methyl-t-butyl ether (MTBE)	ND	11.4	0.50	10	-	114	53-139
Methylene chloride	ND	-	0.50	-	-	-	-
4-Methyl-2-pentanone (MIBK)	ND	-	0.50	-	-	-	-
Naphthalene	ND	-	0.50	-	-	-	-
n-Propyl benzene	ND	-	0.50	-	-	-	-
Styrene	ND	-	0.50	-	-	-	-
1,1,1,2-Tetrachloroethane	ND	-	0.50	-	-	-	-
1,1,2,2-Tetrachloroethane	ND	-	0.50	-	-	-	-
Tetrachloroethene	ND	-	0.50	-	-	-	-
Toluene	ND	9.97	0.50	10	-	100	52-137
1,2,3-Trichlorobenzene	ND	-	0.50	-	-	-	-
1,2,4-Trichlorobenzene	ND	-	0.50	-	-	-	-
1,1,1-Trichloroethane	ND	-	0.50	-	-	-	-
1,1,2-Trichloroethane	ND	-	0.50	-	-	-	-
Trichloroethene	ND	10.6	0.50	10	-	106	43-157
Trichlorofluoromethane	ND	-	0.50	-	-	-	-
1,2,3-Trichloropropane	ND	-	0.50	-	-	-	-
1,2,4-Trimethylbenzene	ND	-	0.50	-	-	-	-
1,3,5-Trimethylbenzene	ND	-	0.50	-	-	-	-
Vinyl Chloride	ND	-	0.50	-	-	-	-
Xylenes, Total	ND	-	0.50	-	-	-	-

(Cont.)



Quality Control Report

Client: All West Environmental, Inc
Date Prepared: 2/13/16
Date Analyzed: 2/12/16
Instrument: GC16
Matrix: Water
Project: 15179.23

WorkOrder: 1602296
BatchID: 116686
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/L
Sample ID: MB/LCS-116686
 1602484-003AMS/MSD

QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Surrogate Recovery							
Dibromofluoromethane	26.2	26.9		25	105	108	70-130
Toluene-d8	25.8	24.9		25	103	99	70-130
4-BFB	2.27	2.58		2.5	91	103	70-130

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
tert-Amyl methyl ether (TAME)	11.1	11.6	10	ND	111	116	69-139	4.50	20
Benzene	10.4	10.9	10	ND	105	109	69-141	4.24	20
t-Butyl alcohol (TBA)	48.2	50.7	40	ND	120	127	41-152	5.24	20
Chlorobenzene	9.76	10.0	10	ND	98	100	77-120	2.80	20
1,2-Dibromoethane (EDB)	10.2	10.6	10	ND	102	106	76-135	3.22	20
1,2-Dichloroethane (1,2-DCA)	11.3	11.8	10	ND	113	119	73-139	4.38	20
1,1-Dichloroethene	9.75	10.2	10	ND	98	102	59-140	4.97	20
Diisopropyl ether (DIPE)	11.3	11.5	10	ND	113	115	72-140	2.42	20
Ethyl tert-butyl ether (ETBE)	11.3	11.7	10	ND	113	117	71-140	3.69	20
Methyl-t-butyl ether (MTBE)	11.1	11.6	10	ND	111	116	73-139	4.63	20
Toluene	9.33	9.62	10	ND	91	94	71-128	3.14	20
Trichloroethene	9.90	10.2	10	ND	99	102	64-132	3.26	20
Surrogate Recovery									
Dibromofluoromethane	26.8	27.2	25		107	109	73-131	1.38	20
Toluene-d8	24.5	24.5	25		98	98	72-117	0	20
4-BFB	2.59	2.67	2.5		104	107	74-116	3.14	20

CLIENT: All West Environmental, Inc
 Work Order: 1602296
 Project: 15179.23

ANALYTICAL QC SUMMARY REPORT

BatchID: 116419

SampleID MB-116419	TestCode: 8260gas_s	Units: mg/kg	Prep Date: 2/9/2016
Batch ID: 116419	TestNo: SW8260B	Run ID: GC16_160212D	Analysis Date: 2/9/2016
Analyte	Result	PQL SPKValue SPKRefVal %REC	Limits RPDPRefVal %RPD RPDLimit Qual
TPH(g)	ND	0.25	-

Surrogate Recovery

Dibromofluoromethane	0.140	0.125	112	70 - 130
Benzene-d6	0.114	0.1	114	60 - 140

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 B - Analyte detected in the associated Method Blank

S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits
 E - Value above quantitation range

CLIENT: All West Environmental, Inc
Work Order: 1602296
Project: 15179.23

ANALYTICAL QC SUMMARY REPORT

BatchID: 116419

SampleID LCS-116419	TestCode: 8260gas_s	Units: mg/kg	Prep Date: 2/9/2016
Batch ID: 116419	TestNo: SW8260B	Run ID: GC16_160212D	Analysis Date: 2/9/2016

Analyte	Result	PQL	SPKValue	SPKRefVal	%REC	Limits	RPDRefVal	%RPD	RPDLimit	Qual
VOC (C6-C12)	2.72	0.25	3.2	0	85	74 - 142				

Surrogate Recovery

Dibromofluoromethane	0.140		0.125		112	70 - 130				
Benzene-d6	0.117		0.1		117	60 - 140				

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 B - Analyte detected in the associated Method Blank

S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits
 E - Value above quantitation range

CLIENT: All West Environmental, Inc
Work Order: 1602296
Project: 15179.23

ANALYTICAL QC SUMMARY REPORT

BatchID: 116686

SampleID MB-116686	TestCode: 8260GAS_W	Units: µg/L	Prep Date: 2/13/2016
Batch ID: 116686	TestNo: SW8260B	Run ID: GC16_160213A	Analysis Date: 2/12/2016

Analyte	Result	PQL	SPKValue	SPKRefVal	%REC	Limits	RPDRefVal	%RPD	RPDLimit	Qual
TPH(g)	ND		50			-				

Surrogate Recovery

Dibromofluoromethane	29.0		25		116	70 - 130			
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Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 B - Analyte detected in the associated Method Blank

S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits
 E - Value above quantitation range

CLIENT: All West Environmental, Inc
Work Order: 1602296
Project: 15179.23

ANALYTICAL QC SUMMARY REPORT

BatchID: 116686

SampleID LCS-116686	TestCode: 8260GAS_W	Units: µg/L	Prep Date: 2/13/2016
Batch ID: 116686	TestNo: SW8260B	Run ID: GC16_160213A	Analysis Date: 2/12/2016

Analyte	Result	PQL	SPKValue	SPKRefVal	%REC	Limits	RPDRefVal	%RPD	RPDLimit	Qual
VOC (C6-C12)	574	50	644	0	89	75 - 105				

Surrogate Recovery

Dibromofluoromethane	29.9		25		120	70 - 130				
----------------------	------	--	----	--	-----	----------	--	--	--	--

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 B - Analyte detected in the associated Method Blank

S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits
 E - Value above quantitation range



1534 Willow Pass Rd
Pittsburg, CA 94565-1701
(925) 252-9262

CHAIN-OF-CUSTODY RECORD

WorkOrder: 1602296

ClientCode: AWE

WaterTrax
 WriteOn
 EDF
 Excel
 EQUIS
 Email
 HardCopy
 ThirdParty
 J-flag

Report to:

Leonard Niles
All West Environmental, Inc
2141 Mission Street, Ste 100
San Francisco, CA 94110
(415) 391-2510 FAX: (415) 391-2008

Email: Leonard@allwest1.com
cc/3rd Party:
PO:
ProjectNo: 15179.23

Bill to:

Darlene Torio
All West Environmental, Inc
2141 Mission Street, Ste 100
San Francisco, CA 94110
darlene@allwest1.com

Requested TAT: 5 days;

Date Received: 02/09/2016

Date Logged: 02/09/2016

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
1602296-001	SB-26A@20.5-21'	Soil	2/4/2016	<input type="checkbox"/>	A		A		A							
1602296-002	SVP-4@6.5'-7'	Soil	2/4/2016 14:33	<input type="checkbox"/>	A		A									
1602296-003	SVP-5@3.5'-4'	Soil	2/4/2016 14:41	<input type="checkbox"/>	A		A									
1602296-004	SB-26	Water	2/4/2016 9:12	<input type="checkbox"/>		A		A								

Test Legend:

1	8260B_S	2	8260B_W	3	8260GAS_S	4	8260GAS_W
5	PREDF REPORT	6		7		8	
9		10		11		12	

Project Manager:

The following SamplIDs: 001A, 002A, 003A, 004A contain testgroup.

Prepared by: Briana Cutino

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.



WORK ORDER SUMMARY

Client Name: ALL WEST ENVIRONMENTAL, INC

QC Level: LEVEL 2

Work Order: 1602296

Project: 15179.23

Client Contact: Leonard Niles

Date Logged: 2/9/2016

Comments:

Contact's Email: Leonard@allwest1.com

WaterTrax WriteOn EDF Excel Fax Email HardCopy ThirdParty J-flag

Lab ID	Client ID	Matrix	Test Name	Containers /Composites	Bottle & Preservative	De-chlorinated	Collection Date & Time	TAT	Sediment Content	Hold	SubOut
1602296-001A	SB-26A@20.5-21'	Soil	TPH(g) & 8260 (Basic List) by P&T GCMS	1	Acetate Liner	<input type="checkbox"/>	2/4/2016	5 days		<input type="checkbox"/>	
1602296-002A	SVP-4@6.5'-7'	Soil	TPH(g) & 8260 (Basic List) by P&T GCMS	1	Acetate Liner	<input type="checkbox"/>	2/4/2016 14:33	5 days		<input type="checkbox"/>	
1602296-003A	SVP-5@3.5'-4'	Soil	TPH(g) & 8260 (Basic List) by P&T GCMS	1	Acetate Liner	<input type="checkbox"/>	2/4/2016 14:41	5 days		<input type="checkbox"/>	
1602296-004A	SB-26	Water	TPH(g) & 8260 (Basic List) by P&T GCMS	4	VOA w/ HCl	<input type="checkbox"/>	2/4/2016 9:12	5 days	1%+	<input type="checkbox"/>	

NOTES: - STLC and TCLP extractions require 2 days to complete; therefore, all TATs begin after the extraction is completed (i.e., One-day TAT yields results in 3 days from sample submission).
 - MAI assumes that all material present in the provided sampling container is considered part of the sample - MAI does not exclude any material from the sample prior to sample preparation unless requested in writing by the client.



McCAMPBELL ANALYTICAL, INC.

1534 WILLOW PASS ROAD
PITTSBURG, CA 94565-1701 **1602296**

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

CHAIN OF CUSTODY RECORD

TURN AROUND TIME

RUSH 24 HR 48 HR 72 HR 5 DAY

GeoTracker EDF PDF Excel Write On (DW)

Check if sample is effluent and "J" flag is required

Report To: **LEN NILES** Bill To: **DAKLENE TORIO**
Company: **ALLWEST ENV.**
2141 MISSION ST, STE 100
SAN FRANCISCO, CA 94110 E-Mail:
Tele: **(415) 391-2510** Fax: ()
Project #: **15179.23** Project Name:
Project Location: **EMERYVILLE HOLLIS**
Sampler Signature: **[Signature]**

SAMPLE ID	LOCATION/ Field Point Name	SAMPLING		# Containers	Type Containers	MATRIX					METHOD PRESERVED				Analysis Request	Other	Comments
		Date	Time			Water	Soil	Air	Sludge	Other	ICE	HCL	HNO ₃	Other			
SB-26		2/4/16	0912	4		X											
SVP-406.5-7		↑	1433	1		X											
SVP-503.5-4		↓	1441	1		X											
SB-26		2/4/16	0912	4		X											

**MAI clients MUST disclose any dangerous chemicals known to be present in their submitted samples in concentrations that may cause immediate harm or serious future health endangerment as a result of brief, gloved, open air, sample handling by MAI staff. Non-disclosure incurs an immediate \$250 surcharge and the client is subject to full legal liability for harm suffered. Thank you for your understanding and for allowing us to work safely.

Relinquished By: **[Signature]** Date: **2/4/16** Time: **1600**
Received By: **[Signature]** Date: **2/4/16** Time: **1130**
Relinquished By: **[Signature]** Date: **2/4/16** Time: **1600**
Received By: **[Signature]** Date: **2/4/16** Time: **1130**

ICE/° _____ COMMENTS:
GOOD CONDITION _____
HEAD SPACE ABSENT _____
DECHLORINATED IN LAB _____
APPROPRIATE CONTAINERS _____
PRESERVED IN LAB _____
VOAS O&G METALS OTHER
PRESERVATION pH<2



Sample Receipt Checklist

Client Name:	All West Environmental, Inc	Date and Time Received:	2/9/2016 14:45
Project Name:	15179.23	Date Logged:	2/9/2016
WorkOrder №:	1602296	Matrix:	<u>Soil/Water</u>
Carrier:	<u>Bernie Cummins (MAI Courier)</u>	Received by:	Maria Venegas
		Logged by:	Briana Cutino

Chain of Custody (COC) Information

Chain of custody present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Chain of custody signed when relinquished and received?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Chain of custody agrees with sample labels?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Sample IDs noted by Client on COC?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Date and Time of collection noted by Client on COC?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Sampler's name noted on COC?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>

Sample Receipt Information

Custody seals intact on shipping container/cooler?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>
Shipping container/cooler in good condition?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Samples in proper containers/bottles?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sample containers intact?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sufficient sample volume for indicated test?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	

Sample Preservation and Hold Time (HT) Information

All samples received within holding time?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sample/Temp Blank temperature		Temp: 2°C	NA <input type="checkbox"/>
Water - VOA vials have zero headspace / no bubbles?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	NA <input type="checkbox"/>
Sample labels checked for correct preservation?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
pH acceptable upon receipt (Metal: <2; 522: <4; 218.7: >8)?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>
Samples Received on Ice?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	

(Ice Type: WET ICE)

UCMR3 Samples:

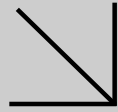
Total Chlorine tested and acceptable upon receipt for EPA 522?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>
Free Chlorine tested and acceptable upon receipt for EPA 218.7, 300.1, 537, 539?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>

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

Comments:



Calscience



WORK ORDER NUMBER: 16-02-0790

The difference is service



AIR | SOIL | WATER | MARINE CHEMISTRY

Analytical Report For

Client: AllWest Environmental, Inc.

Client Project Name: Hollis / 15179.23

Attention: Leonard Niles
2141 Mission Street, Suite 100
San Francisco, CA 94110-6331

Vikas Patel

Approved for release on 02/17/2016 by:
Vikas Patel
Project Manager

ResultLink ▶

Email your PM ▶



Eurofins Calscience, Inc. (Calscience) certifies that the test results provided in this report meet all NELAC requirements for parameters for which accreditation is required or available. Any exceptions to NELAC requirements are noted in the case narrative. The original report of subcontracted analyses, if any, is attached to this report. The results in this report are limited to the sample(s) tested and any reproduction thereof must be made in its entirety. The client or recipient of this report is specifically prohibited from making material changes to said report and, to the extent that such changes are made, Calscience is not responsible, legally or otherwise. The client or recipient agrees to indemnify Calscience for any defense to any litigation which may arise.

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 Work Order Number: 16-02-0790

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Condition Upon Receipt:

Samples were received under Chain-of-Custody (COC) on 02/10/16. They were assigned to Work Order 16-02-0790.

Unless otherwise noted on the Sample Receiving forms all samples were received in good condition and within the recommended EPA temperature criteria for the methods noted on the COC. The COC and Sample Receiving Documents are integral elements of the analytical report and are presented at the back of the report.

Holding Times:

All samples were analyzed within prescribed holding times (HT) and/or in accordance with the Calscience Sample Acceptance Policy unless otherwise noted in the analytical report and/or comprehensive case narrative, if required.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of ≤ 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

Quality Control:

All quality control parameters (QC) were within established control limits except where noted in the QC summary forms or described further within this report.

Subcontractor Information:

Unless otherwise noted below (or on the subcontract form), no samples were subcontracted.

Additional Comments:

Air - Sorbent-extracted air methods (EPA TO-4A, EPA TO-10, EPA TO-13A, EPA TO-17): Analytical results are converted from mass/sample basis to mass/volume basis using client-supplied air volumes.

Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are always reported on a wet weight basis.



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Sample Summary

Client: AllWest Environmental, Inc.	Work Order:	16-02-0790
2141 Mission Street, Suite 100	Project Name:	Hollis / 15179.23
San Francisco, CA 94110-6331	PO Number:	
	Date/Time Received:	02/10/16 09:35
	Number of Containers:	8

Attn: Leonard Niles

Sample Identification	Lab Number	Collection Date and Time	Number of Containers	Matrix
SVP-1	16-02-0790-1	02/05/16 13:31	1	Air
SVP-7	16-02-0790-2	02/05/16 12:12	1	Air
SVP-2	16-02-0790-3	02/05/16 17:08	1	Air
SVP-3	16-02-0790-4	02/06/16 12:58	1	Air
SVP-4	16-02-0790-5	02/08/16 07:30	1	Air
SVP-5	16-02-0790-6	02/08/16 09:22	1	Air
SVP-6	16-02-0790-7	02/08/16 10:15	1	Air
SVP-6-AMBIENT-HE	16-02-0790-8	02/08/16 10:15	1	Air

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Detections Summary

Client: AllWest Environmental, Inc.
2141 Mission Street, Suite 100
San Francisco, CA 94110-6331

Work Order: 16-02-0790
Project Name: Hollis / 15179.23
Received: 02/10/16

Attn: Leonard Niles

Page 1 of 4

Client SampleID

Analyte	Result	Qualifiers	RL	Units	Method	Extraction
SVP-1 (16-02-0790-1)						
Methane	8.80		0.500	%v	ASTM D-1946	N/A
Carbon Dioxide	13.8		0.500	%v	ASTM D-1946	N/A
Oxygen (+ Argon)	2.72		0.500	%v	ASTM D-1946	N/A
Helium	0.130		0.0100	%v	ASTM D-1946 (M)	N/A
1,2,4-Trimethylbenzene	180000		74000	ug/m3	EPA TO-15	N/A
1,3,5-Trimethylbenzene	62000		25000	ug/m3	EPA TO-15	N/A
4-Ethyltoluene	71000		25000	ug/m3	EPA TO-15	N/A
Benzene	500000		16000	ug/m3	EPA TO-15	N/A
Ethylbenzene	410000		22000	ug/m3	EPA TO-15	N/A
Toluene	1400000		19000	ug/m3	EPA TO-15	N/A
o-Xylene	340000		22000	ug/m3	EPA TO-15	N/A
p/m-Xylene	1300000		87000	ug/m3	EPA TO-15	N/A
Isopropanol	650000		120000	ug/m3	EPA TO-15	N/A
TPH as Gasoline	330000000		1400000	ug/m3	EPA TO-3M	N/A
SVP-7 (16-02-0790-2)						
Carbon Dioxide	3.34		0.500	%v	ASTM D-1946	N/A
Oxygen (+ Argon)	18.2		0.500	%v	ASTM D-1946	N/A
Helium	0.319		0.0100	%v	ASTM D-1946 (M)	N/A
1,2,4-Trimethylbenzene	290		10	ug/m3	EPA TO-15	N/A
1,3,5-Trimethylbenzene	77		3.4	ug/m3	EPA TO-15	N/A
2-Butanone	8.1		6.1	ug/m3	EPA TO-15	N/A
4-Ethyltoluene	85		3.4	ug/m3	EPA TO-15	N/A
Acetone	64		6.6	ug/m3	EPA TO-15	N/A
Benzene	20		2.2	ug/m3	EPA TO-15	N/A
Ethylbenzene	97		3.0	ug/m3	EPA TO-15	N/A
Tetrachloroethene	41		4.7	ug/m3	EPA TO-15	N/A
Toluene	46		2.6	ug/m3	EPA TO-15	N/A
o-Xylene	130		3.0	ug/m3	EPA TO-15	N/A
p/m-Xylene	360		12	ug/m3	EPA TO-15	N/A
TPH as Gasoline	220000		7000	ug/m3	EPA TO-3M	N/A

* MDL is shown



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Detections Summary

Client: AllWest Environmental, Inc.
2141 Mission Street, Suite 100
San Francisco, CA 94110-6331

Work Order: 16-02-0790
Project Name: Hollis / 15179.23
Received: 02/10/16

Attn: Leonard Niles

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Client SampleID

Analyte	Result	Qualifiers	RL	Units	Method	Extraction
SVP-2 (16-02-0790-3)						
Oxygen (+ Argon)	9.27		0.500	%v	ASTM D-1946	N/A
Helium	0.568		0.0100	%v	ASTM D-1946 (M)	N/A
1,2,4-Trimethylbenzene	21000		3700	ug/m3	EPA TO-15	N/A
1,3,5-Trimethylbenzene	9100		1200	ug/m3	EPA TO-15	N/A
4-Ethyltoluene	8700		1200	ug/m3	EPA TO-15	N/A
Ethylbenzene	61000		1100	ug/m3	EPA TO-15	N/A
o-Xylene	82000		1100	ug/m3	EPA TO-15	N/A
p/m-Xylene	280000		4300	ug/m3	EPA TO-15	N/A
Benzene	210000		3200	ug/m3	EPA TO-15	N/A
Toluene	330000		3800	ug/m3	EPA TO-15	N/A
TPH as Gasoline	13000000		70000	ug/m3	EPA TO-3M	N/A
SVP-3 (16-02-0790-4)						
Methane	4.63		0.500	%v	ASTM D-1946	N/A
Carbon Dioxide	14.7		0.500	%v	ASTM D-1946	N/A
Oxygen (+ Argon)	4.11		0.500	%v	ASTM D-1946	N/A
Helium	0.0113		0.0100	%v	ASTM D-1946 (M)	N/A
1,2,4-Trimethylbenzene	390000		74000	ug/m3	EPA TO-15	N/A
1,3,5-Trimethylbenzene	170000		25000	ug/m3	EPA TO-15	N/A
4-Ethyltoluene	160000		25000	ug/m3	EPA TO-15	N/A
Benzene	1100000		16000	ug/m3	EPA TO-15	N/A
Ethylbenzene	720000		22000	ug/m3	EPA TO-15	N/A
Toluene	1700000		19000	ug/m3	EPA TO-15	N/A
o-Xylene	680000		22000	ug/m3	EPA TO-15	N/A
p/m-Xylene	2600000		87000	ug/m3	EPA TO-15	N/A
Isopropanol	1000000		120000	ug/m3	EPA TO-15	N/A
TPH as Gasoline	910000000		3500000	ug/m3	EPA TO-3M	N/A


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* MDL is shown



Calscience

Detections Summary

Client: AllWest Environmental, Inc.
2141 Mission Street, Suite 100
San Francisco, CA 94110-6331

Work Order: 16-02-0790
Project Name: Hollis / 15179.23
Received: 02/10/16

Attn: Leonard Niles

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Client SampleID

Analyte	Result	Qualifiers	RL	Units	Method	Extraction
SVP-4 (16-02-0790-5)						
Methane	1.83		0.500	%v	ASTM D-1946	N/A
Oxygen (+ Argon)	8.30		0.500	%v	ASTM D-1946	N/A
Helium	0.417		0.0100	%v	ASTM D-1946 (M)	N/A
1,2,4-Trimethylbenzene	83000		3700	ug/m3	EPA TO-15	N/A
1,3,5-Trimethylbenzene	27000		1200	ug/m3	EPA TO-15	N/A
4-Ethyltoluene	29000		1200	ug/m3	EPA TO-15	N/A
Benzene	45000		800	ug/m3	EPA TO-15	N/A
Ethylbenzene	90000		1100	ug/m3	EPA TO-15	N/A
Toluene	15000		940	ug/m3	EPA TO-15	N/A
o-Xylene	52000		1100	ug/m3	EPA TO-15	N/A
p/m-Xylene	180000		4300	ug/m3	EPA TO-15	N/A
Methyl-t-Butyl Ether (MTBE)	12000		3600	ug/m3	EPA TO-15	N/A
TPH as Gasoline	10000000		70000	ug/m3	EPA TO-3M	N/A
SVP-5 (16-02-0790-6)						
Methane	0.918		0.500	%v	ASTM D-1946	N/A
Oxygen (+ Argon)	11.3		0.500	%v	ASTM D-1946	N/A
Helium	0.0706		0.0100	%v	ASTM D-1946 (M)	N/A
1,2,4-Trimethylbenzene	320000		37000	ug/m3	EPA TO-15	N/A
1,3,5-Trimethylbenzene	130000		12000	ug/m3	EPA TO-15	N/A
4-Ethyltoluene	120000		12000	ug/m3	EPA TO-15	N/A
Benzene	1600000		8000	ug/m3	EPA TO-15	N/A
Ethylbenzene	810000		11000	ug/m3	EPA TO-15	N/A
Toluene	1300000		9400	ug/m3	EPA TO-15	N/A
o-Xylene	770000		11000	ug/m3	EPA TO-15	N/A
p/m-Xylene	2800000		43000	ug/m3	EPA TO-15	N/A
Methyl-t-Butyl Ether (MTBE)	990000		36000	ug/m3	EPA TO-15	N/A
Isopropanol	160000		61000	ug/m3	EPA TO-15	N/A
TPH as Gasoline	84000000		350000	ug/m3	EPA TO-3M	N/A


 Return to Contents

* MDL is shown



Calscience

Detections Summary

Client: AllWest Environmental, Inc.
2141 Mission Street, Suite 100
San Francisco, CA 94110-6331

Work Order: 16-02-0790
Project Name: Hollis / 15179.23
Received: 02/10/16

Attn: Leonard Niles

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Client SampleID

Analyte	Result	Qualifiers	RL	Units	Method	Extraction
SVP-6 (16-02-0790-7)						
Methane	1.52		0.500	%v	ASTM D-1946	N/A
Oxygen (+ Argon)	7.33		0.500	%v	ASTM D-1946	N/A
Helium	0.0106		0.0100	%v	ASTM D-1946 (M)	N/A
1,1-Dichloroethane	1300		1300	ug/m3	EPA TO-15	N/A
1,2,4-Trimethylbenzene	38000		4600	ug/m3	EPA TO-15	N/A
1,2-Dichloroethane	2500		1300	ug/m3	EPA TO-15	N/A
1,3,5-Trimethylbenzene	13000		1500	ug/m3	EPA TO-15	N/A
4-Ethyltoluene	14000		1500	ug/m3	EPA TO-15	N/A
Benzene	130000		1000	ug/m3	EPA TO-15	N/A
Ethylbenzene	66000		1400	ug/m3	EPA TO-15	N/A
o-Xylene	71000		1400	ug/m3	EPA TO-15	N/A
p/m-Xylene	230000		5400	ug/m3	EPA TO-15	N/A
Methyl-t-Butyl Ether (MTBE)	6900		4500	ug/m3	EPA TO-15	N/A
Toluene	220000		2400	ug/m3	EPA TO-15	N/A
TPH as Gasoline	13000000		70000	ug/m3	EPA TO-3M	N/A
SVP-6-AMBIENT-HE (16-02-0790-8)						
Helium	7.95		0.0100	%v	ASTM D-1946 (M)	N/A

Subcontracted analyses, if any, are not included in this summary.

* MDL is shown



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Analytical Report

AllWest Environmental, Inc.
2141 Mission Street, Suite 100
San Francisco, CA 94110-6331

Date Received: 02/10/16
Work Order: 16-02-0790
Preparation: N/A
Method: ASTM D-1946
Units: %v

Project: Hollis / 15179.23

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SVP-1	16-02-0790-1-A	02/05/16 13:31	Air	GC 65	N/A	02/10/16 13:12	160210L01
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Methane		8.80		0.500		1.00	
Carbon Dioxide		13.8		0.500		1.00	
Oxygen (+ Argon)		2.72		0.500		1.00	
SVP-7	16-02-0790-2-A	02/05/16 12:12	Air	GC 65	N/A	02/10/16 13:47	160210L01
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Methane		ND		0.500		1.00	
Carbon Dioxide		3.34		0.500		1.00	
Oxygen (+ Argon)		18.2		0.500		1.00	
SVP-2	16-02-0790-3-A	02/05/16 17:08	Air	GC 65	N/A	02/10/16 14:07	160210L01
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Methane		ND		0.500		1.00	
Carbon Dioxide		ND		0.500		1.00	
Oxygen (+ Argon)		9.27		0.500		1.00	
SVP-3	16-02-0790-4-A	02/06/16 12:58	Air	GC 65	N/A	02/16/16 14:08	160216L01
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Methane		4.63		0.500		1.00	
Carbon Dioxide		14.7		0.500		1.00	
Oxygen (+ Argon)		4.11		0.500		1.00	
SVP-4	16-02-0790-5-A	02/08/16 07:30	Air	GC 65	N/A	02/10/16 14:53	160210L01
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Methane		1.83		0.500		1.00	
Carbon Dioxide		ND		0.500		1.00	
Oxygen (+ Argon)		8.30		0.500		1.00	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

AllWest Environmental, Inc.
 2141 Mission Street, Suite 100
 San Francisco, CA 94110-6331

Date Received: 02/10/16
 Work Order: 16-02-0790
 Preparation: N/A
 Method: ASTM D-1946
 Units: %v

Project: Hollis / 15179.23

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SVP-5	16-02-0790-6-A	02/08/16 09:22	Air	GC 65	N/A	02/10/16 15:32	160210L01

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
Methane	0.918	0.500	1.00	
Carbon Dioxide	ND	0.500	1.00	
Oxygen (+ Argon)	11.3	0.500	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SVP-6	16-02-0790-7-A	02/08/16 10:15	Air	GC 65	N/A	02/10/16 15:50	160210L01

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
Methane	1.52	0.500	1.00	
Carbon Dioxide	ND	0.500	1.00	
Oxygen (+ Argon)	7.33	0.500	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-16-444-350	N/A	Air	GC 65	N/A	02/10/16 11:04	160210L01

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
Methane	ND	0.500	1.00	
Carbon Dioxide	ND	0.500	1.00	
Oxygen (+ Argon)	ND	0.500	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-16-444-354	N/A	Air	GC 65	N/A	02/16/16 10:38	160216L01

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
Methane	ND	0.500	1.00	
Carbon Dioxide	ND	0.500	1.00	
Oxygen (+ Argon)	ND	0.500	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



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Analytical Report

AllWest Environmental, Inc.
2141 Mission Street, Suite 100
San Francisco, CA 94110-6331

Date Received: 02/10/16
Work Order: 16-02-0790
Preparation: N/A
Method: ASTM D-1946 (M)
Units: %v

Project: Hollis / 15179.23

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SVP-1	16-02-0790-1-A	02/05/16 13:31	Air	GC 55	N/A	02/10/16 13:11	160210L01
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Helium		0.130		0.0100		1.00	
SVP-7	16-02-0790-2-A	02/05/16 12:12	Air	GC 55	N/A	02/10/16 14:20	160210L01
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Helium		0.319		0.0100		1.00	
SVP-2	16-02-0790-3-A	02/05/16 17:08	Air	GC 55	N/A	02/10/16 15:14	160210L01
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Helium		0.568		0.0100		1.00	
SVP-3	16-02-0790-4-A	02/06/16 12:58	Air	GC 55	N/A	02/10/16 16:40	160210L01
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Helium		0.0113		0.0100		1.00	
SVP-4	16-02-0790-5-A	02/08/16 07:30	Air	GC 55	N/A	02/10/16 18:20	160210L01
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Helium		0.417		0.0100		1.00	
SVP-5	16-02-0790-6-A	02/08/16 09:22	Air	GC 55	N/A	02/10/16 20:10	160210L01
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Helium		0.0706		0.0100		1.00	
SVP-6	16-02-0790-7-A	02/08/16 10:15	Air	GC 55	N/A	02/10/16 17:31	160210L01
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Helium		0.0106		0.0100		1.00	
SVP-6-AMBIENT-HE	16-02-0790-8-A	02/08/16 10:15	Air	GC 55	N/A	02/10/16 21:29	160210L01
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Helium		7.95		0.0100		1.00	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

AllWest Environmental, Inc.
2141 Mission Street, Suite 100
San Francisco, CA 94110-6331

Date Received: 02/10/16
Work Order: 16-02-0790
Preparation: N/A
Method: ASTM D-1946 (M)
Units: %v

Project: Hollis / 15179.23

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-12-872-905	N/A	Air	GC 55	N/A	02/10/16 10:40	160210L01

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
Helium	ND	0.0100	1.00	

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AllWest Environmental, Inc.
2141 Mission Street, Suite 100
San Francisco, CA 94110-6331

Date Received: 02/10/16
Work Order: 16-02-0790
Preparation: N/A
Method: EPA TO-15
Units: ug/m3

Project: Hollis / 15179.23

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SVP-1	16-02-0790-1-A	02/05/16 13:31	Air	GC/MS KKK	N/A	02/11/16 20:14	160211L01

Parameter	Result	RL	DF	Qualifiers
1,1,1-Trichloroethane	ND	27000	10000	
1,1,2,2-Tetrachloroethane	ND	69000	10000	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	110000	10000	
1,1,2-Trichloroethane	ND	27000	10000	
1,1-Dichloroethane	ND	20000	10000	
1,1-Dichloroethene	ND	20000	10000	
1,2,4-Trimethylbenzene	180000	74000	10000	
1,2-Dibromoethane	ND	38000	10000	
Dichlorotetrafluoroethane	ND	140000	10000	
1,2-Dichlorobenzene	ND	30000	10000	
1,2-Dichloroethane	ND	20000	10000	
1,2-Dichloropropane	ND	23000	10000	
1,3,5-Trimethylbenzene	62000	25000	10000	
1,3-Dichlorobenzene	ND	30000	10000	
1,4-Dichlorobenzene	ND	30000	10000	
2-Butanone	ND	44000	10000	
2-Hexanone	ND	61000	10000	
4-Ethyltoluene	71000	25000	10000	
4-Methyl-2-Pentanone	ND	61000	10000	
Acetone	ND	48000	10000	
Benzene	500000	16000	10000	
Benzyl Chloride	ND	78000	10000	
Bromodichloromethane	ND	34000	10000	
Bromoform	ND	52000	10000	
Bromomethane	ND	19000	10000	
Carbon Disulfide	ND	62000	10000	
Carbon Tetrachloride	ND	31000	10000	
Chlorobenzene	ND	23000	10000	
Chloroethane	ND	13000	10000	
Chloroform	ND	24000	10000	
Chloromethane	ND	10000	10000	
Dibromochloromethane	ND	43000	10000	
Dichlorodifluoromethane	ND	25000	10000	
Ethylbenzene	410000	22000	10000	
Hexachloro-1,3-Butadiene	ND	160000	10000	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

AllWest Environmental, Inc.
 2141 Mission Street, Suite 100
 San Francisco, CA 94110-6331

Date Received: 02/10/16
 Work Order: 16-02-0790
 Preparation: N/A
 Method: EPA TO-15
 Units: ug/m3

Project: Hollis / 15179.23

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
Methylene Chloride	ND	170000	10000	
Styrene	ND	64000	10000	
Tetrachloroethene	ND	34000	10000	
Toluene	1400000	19000	10000	
t-1,2-Dichloroethene	ND	20000	10000	
Trichloroethene	ND	27000	10000	
Trichlorofluoromethane	ND	56000	10000	
Vinyl Acetate	ND	70000	10000	
Vinyl Chloride	ND	13000	10000	
c-1,3-Dichloropropene	ND	23000	10000	
c-1,2-Dichloroethene	ND	20000	10000	
o-Xylene	340000	22000	10000	
t-1,3-Dichloropropene	ND	45000	10000	
p/m-Xylene	1300000	87000	10000	
Methyl-t-Butyl Ether (MTBE)	ND	72000	10000	
Isopropanol	650000	120000	10000	
1,1-Difluoroethane	ND	54000	10000	
Naphthalene	ND	260000	10000	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>	
1,4-Bromofluorobenzene	98	68-134		
1,2-Dichloroethane-d4	108	67-133		
Toluene-d8	100	70-130		



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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

AllWest Environmental, Inc.
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Date Received: 02/10/16
Work Order: 16-02-0790
Preparation: N/A
Method: EPA TO-15
Units: ug/m3

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SVP-7	16-02-0790-2-A	02/05/16 12:12	Air	GC/MS KKK	N/A	02/11/16 17:43	160211L01

Parameter	Result	RL	DF	Qualifiers
1,1,1-Trichloroethane	ND	3.8	1.38	
1,1,2,2-Tetrachloroethane	ND	9.5	1.38	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	16	1.38	
1,1,2-Trichloroethane	ND	3.8	1.38	
1,1-Dichloroethane	ND	2.8	1.38	
1,1-Dichloroethene	ND	2.7	1.38	
1,2,4-Trimethylbenzene	290	10	1.38	
1,2-Dibromoethane	ND	5.3	1.38	
Dichlorotetrafluoroethane	ND	19	1.38	
1,2-Dichlorobenzene	ND	4.1	1.38	
1,2-Dichloroethane	ND	2.8	1.38	
1,2-Dichloropropane	ND	3.2	1.38	
1,3,5-Trimethylbenzene	77	3.4	1.38	
1,3-Dichlorobenzene	ND	4.1	1.38	
1,4-Dichlorobenzene	ND	4.1	1.38	
2-Butanone	8.1	6.1	1.38	
2-Hexanone	ND	8.5	1.38	
4-Ethyltoluene	85	3.4	1.38	
4-Methyl-2-Pentanone	ND	8.5	1.38	
Acetone	64	6.6	1.38	
Benzene	20	2.2	1.38	
Benzyl Chloride	ND	11	1.38	
Bromodichloromethane	ND	4.6	1.38	
Bromoform	ND	7.1	1.38	
Bromomethane	ND	2.7	1.38	
Carbon Disulfide	ND	8.6	1.38	
Carbon Tetrachloride	ND	4.3	1.38	
Chlorobenzene	ND	3.2	1.38	
Chloroethane	ND	1.8	1.38	
Chloroform	ND	3.4	1.38	
Chloromethane	ND	1.4	1.38	
Dibromochloromethane	ND	5.9	1.38	
Dichlorodifluoromethane	ND	3.4	1.38	
Ethylbenzene	97	3.0	1.38	
Hexachloro-1,3-Butadiene	ND	22	1.38	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

AllWest Environmental, Inc.
 2141 Mission Street, Suite 100
 San Francisco, CA 94110-6331

Date Received: 02/10/16
 Work Order: 16-02-0790
 Preparation: N/A
 Method: EPA TO-15
 Units: ug/m3

Project: Hollis / 15179.23

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
Methylene Chloride	ND	24	1.38	
Styrene	ND	8.8	1.38	
Tetrachloroethene	41	4.7	1.38	
Toluene	46	2.6	1.38	
t-1,2-Dichloroethene	ND	2.7	1.38	
Trichloroethene	ND	3.7	1.38	
Trichlorofluoromethane	ND	7.8	1.38	
Vinyl Acetate	ND	9.7	1.38	
Vinyl Chloride	ND	1.8	1.38	
c-1,3-Dichloropropene	ND	3.1	1.38	
c-1,2-Dichloroethene	ND	2.7	1.38	
o-Xylene	130	3.0	1.38	
t-1,3-Dichloropropene	ND	6.3	1.38	
p/m-Xylene	360	12	1.38	
Methyl-t-Butyl Ether (MTBE)	ND	10	1.38	
Isopropanol	ND	17	1.38	
1,1-Difluoroethane	ND	7.5	1.38	
Naphthalene	ND	36	1.38	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>	
1,4-Bromofluorobenzene	106	68-134		
1,2-Dichloroethane-d4	108	67-133		
Toluene-d8	99	70-130		

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

AllWest Environmental, Inc.
2141 Mission Street, Suite 100
San Francisco, CA 94110-6331

Date Received: 02/10/16
Work Order: 16-02-0790
Preparation: N/A
Method: EPA TO-15
Units: ug/m3

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SVP-2	16-02-0790-3-A	02/05/16 17:08	Air	GC/MS KKK	N/A	02/11/16 03:03	160210L01

Parameter	Result	RL	DF	Qualifiers
1,1,1-Trichloroethane	ND	1400	500	
1,1,2,2-Tetrachloroethane	ND	3400	500	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	5700	500	
1,1,2-Trichloroethane	ND	1400	500	
1,1-Dichloroethane	ND	1000	500	
1,1-Dichloroethene	ND	990	500	
1,2,4-Trimethylbenzene	21000	3700	500	
1,2-Dibromoethane	ND	1900	500	
Dichlorotetrafluoroethane	ND	7000	500	
1,2-Dichlorobenzene	ND	1500	500	
1,2-Dichloroethane	ND	1000	500	
1,2-Dichloropropane	ND	1200	500	
1,3,5-Trimethylbenzene	9100	1200	500	
1,3-Dichlorobenzene	ND	1500	500	
1,4-Dichlorobenzene	ND	1500	500	
2-Butanone	ND	2200	500	
2-Hexanone	ND	3100	500	
4-Ethyltoluene	8700	1200	500	
4-Methyl-2-Pentanone	ND	3100	500	
Acetone	ND	2400	500	
Benzyl Chloride	ND	3900	500	
Bromodichloromethane	ND	1700	500	
Bromoform	ND	2600	500	
Bromomethane	ND	970	500	
Carbon Disulfide	ND	3100	500	
Carbon Tetrachloride	ND	1600	500	
Chlorobenzene	ND	1200	500	
Chloroethane	ND	660	500	
Chloroform	ND	1200	500	
Chloromethane	ND	520	500	
Dibromochloromethane	ND	2100	500	
Dichlorodifluoromethane	ND	1200	500	
Ethylbenzene	61000	1100	500	
Hexachloro-1,3-Butadiene	ND	8000	500	
Methylene Chloride	ND	8700	500	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



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Analytical Report

AllWest Environmental, Inc.
2141 Mission Street, Suite 100
San Francisco, CA 94110-6331

Date Received: 02/10/16
Work Order: 16-02-0790
Preparation: N/A
Method: EPA TO-15
Units: ug/m3

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
Styrene	ND	3200	500	
Tetrachloroethene	ND	1700	500	
t-1,2-Dichloroethene	ND	990	500	
Trichloroethene	ND	1300	500	
Trichlorofluoromethane	ND	2800	500	
Vinyl Acetate	ND	3500	500	
Vinyl Chloride	ND	640	500	
c-1,3-Dichloropropene	ND	1100	500	
c-1,2-Dichloroethene	ND	990	500	
o-Xylene	82000	1100	500	
t-1,3-Dichloropropene	ND	2300	500	
p/m-Xylene	280000	4300	500	
Methyl-t-Butyl Ether (MTBE)	ND	3600	500	
Isopropanol	ND	6100	500	
1,1-Difluoroethane	ND	2700	500	
Naphthalene	ND	13000	500	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
1,4-Bromofluorobenzene	101	68-134	
1,2-Dichloroethane-d4	110	67-133	
Toluene-d8	101	70-130	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SVP-2	16-02-0790-3-A	02/05/16 17:08	Air	GC/MS KKK	N/A	02/11/16 18:31	160211L01

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
Benzene	210000	3200	2000	
Toluene	330000	3800	2000	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
1,4-Bromofluorobenzene	117	68-134	
1,2-Dichloroethane-d4	105	67-133	
Toluene-d8	104	70-130	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



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Analytical Report

AllWest Environmental, Inc.
2141 Mission Street, Suite 100
San Francisco, CA 94110-6331

Date Received: 02/10/16
Work Order: 16-02-0790
Preparation: N/A
Method: EPA TO-15
Units: ug/m3

Project: Hollis / 15179.23

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SVP-3	16-02-0790-4-A	02/06/16 12:58	Air	GC/MS KKK	N/A	02/11/16 21:07	160211L01

Parameter	Result	RL	DF	Qualifiers
1,1,1-Trichloroethane	ND	27000	10000	
1,1,2,2-Tetrachloroethane	ND	69000	10000	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	110000	10000	
1,1,2-Trichloroethane	ND	27000	10000	
1,1-Dichloroethane	ND	20000	10000	
1,1-Dichloroethene	ND	20000	10000	
1,2,4-Trimethylbenzene	390000	74000	10000	
1,2-Dibromoethane	ND	38000	10000	
Dichlorotetrafluoroethane	ND	140000	10000	
1,2-Dichlorobenzene	ND	30000	10000	
1,2-Dichloroethane	ND	20000	10000	
1,2-Dichloropropane	ND	23000	10000	
1,3,5-Trimethylbenzene	170000	25000	10000	
1,3-Dichlorobenzene	ND	30000	10000	
1,4-Dichlorobenzene	ND	30000	10000	
2-Butanone	ND	44000	10000	
2-Hexanone	ND	61000	10000	
4-Ethyltoluene	160000	25000	10000	
4-Methyl-2-Pentanone	ND	61000	10000	
Acetone	ND	48000	10000	
Benzene	1100000	16000	10000	
Benzyl Chloride	ND	78000	10000	
Bromodichloromethane	ND	34000	10000	
Bromoform	ND	52000	10000	
Bromomethane	ND	19000	10000	
Carbon Disulfide	ND	62000	10000	
Carbon Tetrachloride	ND	31000	10000	
Chlorobenzene	ND	23000	10000	
Chloroethane	ND	13000	10000	
Chloroform	ND	24000	10000	
Chloromethane	ND	10000	10000	
Dibromochloromethane	ND	43000	10000	
Dichlorodifluoromethane	ND	25000	10000	
Ethylbenzene	720000	22000	10000	
Hexachloro-1,3-Butadiene	ND	160000	10000	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

AllWest Environmental, Inc.
2141 Mission Street, Suite 100
San Francisco, CA 94110-6331

Date Received: 02/10/16
Work Order: 16-02-0790
Preparation: N/A
Method: EPA TO-15
Units: ug/m3

Project: Hollis / 15179.23

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
Methylene Chloride	ND	170000	10000	
Styrene	ND	64000	10000	
Tetrachloroethene	ND	34000	10000	
Toluene	1700000	19000	10000	
t-1,2-Dichloroethene	ND	20000	10000	
Trichloroethene	ND	27000	10000	
Trichlorofluoromethane	ND	56000	10000	
Vinyl Acetate	ND	70000	10000	
Vinyl Chloride	ND	13000	10000	
c-1,3-Dichloropropene	ND	23000	10000	
c-1,2-Dichloroethene	ND	20000	10000	
o-Xylene	680000	22000	10000	
t-1,3-Dichloropropene	ND	45000	10000	
p/m-Xylene	2600000	87000	10000	
Methyl-t-Butyl Ether (MTBE)	ND	72000	10000	
Isopropanol	1000000	120000	10000	
1,1-Difluoroethane	ND	54000	10000	
Naphthalene	ND	260000	10000	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>	
1,4-Bromofluorobenzene	100	68-134		
1,2-Dichloroethane-d4	108	67-133		
Toluene-d8	100	70-130		

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

AllWest Environmental, Inc.
2141 Mission Street, Suite 100
San Francisco, CA 94110-6331

Date Received: 02/10/16
Work Order: 16-02-0790
Preparation: N/A
Method: EPA TO-15
Units: ug/m3

Project: Hollis / 15179.23

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SVP-4	16-02-0790-5-A	02/08/16 07:30	Air	GC/MS KKK	N/A	02/11/16 03:53	160210L01

Parameter	Result	RL	DF	Qualifiers
1,1,1-Trichloroethane	ND	1400	500	
1,1,2,2-Tetrachloroethane	ND	3400	500	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	5700	500	
1,1,2-Trichloroethane	ND	1400	500	
1,1-Dichloroethane	ND	1000	500	
1,1-Dichloroethene	ND	990	500	
1,2,4-Trimethylbenzene	83000	3700	500	
1,2-Dibromoethane	ND	1900	500	
Dichlorotetrafluoroethane	ND	7000	500	
1,2-Dichlorobenzene	ND	1500	500	
1,2-Dichloroethane	ND	1000	500	
1,2-Dichloropropane	ND	1200	500	
1,3,5-Trimethylbenzene	27000	1200	500	
1,3-Dichlorobenzene	ND	1500	500	
1,4-Dichlorobenzene	ND	1500	500	
2-Butanone	ND	2200	500	
2-Hexanone	ND	3100	500	
4-Ethyltoluene	29000	1200	500	
4-Methyl-2-Pentanone	ND	3100	500	
Acetone	ND	2400	500	
Benzene	45000	800	500	
Benzyl Chloride	ND	3900	500	
Bromodichloromethane	ND	1700	500	
Bromoform	ND	2600	500	
Bromomethane	ND	970	500	
Carbon Disulfide	ND	3100	500	
Carbon Tetrachloride	ND	1600	500	
Chlorobenzene	ND	1200	500	
Chloroethane	ND	660	500	
Chloroform	ND	1200	500	
Chloromethane	ND	520	500	
Dibromochloromethane	ND	2100	500	
Dichlorodifluoromethane	ND	1200	500	
Ethylbenzene	90000	1100	500	
Hexachloro-1,3-Butadiene	ND	8000	500	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

AllWest Environmental, Inc.
 2141 Mission Street, Suite 100
 San Francisco, CA 94110-6331

Date Received: 02/10/16
 Work Order: 16-02-0790
 Preparation: N/A
 Method: EPA TO-15
 Units: ug/m3

Project: Hollis / 15179.23

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
Methylene Chloride	ND	8700	500	
Styrene	ND	3200	500	
Tetrachloroethene	ND	1700	500	
Toluene	15000	940	500	
t-1,2-Dichloroethene	ND	990	500	
Trichloroethene	ND	1300	500	
Trichlorofluoromethane	ND	2800	500	
Vinyl Acetate	ND	3500	500	
Vinyl Chloride	ND	640	500	
c-1,3-Dichloropropene	ND	1100	500	
c-1,2-Dichloroethene	ND	990	500	
o-Xylene	52000	1100	500	
t-1,3-Dichloropropene	ND	2300	500	
p/m-Xylene	180000	4300	500	
Methyl-t-Butyl Ether (MTBE)	12000	3600	500	
Isopropanol	ND	6100	500	
1,1-Difluoroethane	ND	2700	500	
Naphthalene	ND	13000	500	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>	
1,4-Bromofluorobenzene	104	68-134		
1,2-Dichloroethane-d4	109	67-133		
Toluene-d8	101	70-130		



 Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

AllWest Environmental, Inc.
2141 Mission Street, Suite 100
San Francisco, CA 94110-6331

Date Received: 02/10/16
Work Order: 16-02-0790
Preparation: N/A
Method: EPA TO-15
Units: ug/m3

Project: Hollis / 15179.23

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SVP-5	16-02-0790-6-A	02/08/16 09:22	Air	GC/MS KKK	N/A	02/11/16 05:35	160210L01

Parameter	Result	RL	DF	Qualifiers
1,1,1-Trichloroethane	ND	14000	5000	
1,1,2,2-Tetrachloroethane	ND	34000	5000	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	57000	5000	
1,1,2-Trichloroethane	ND	14000	5000	
1,1-Dichloroethane	ND	10000	5000	
1,1-Dichloroethene	ND	9900	5000	
1,2,4-Trimethylbenzene	320000	37000	5000	
1,2-Dibromoethane	ND	19000	5000	
Dichlorotetrafluoroethane	ND	70000	5000	
1,2-Dichlorobenzene	ND	15000	5000	
1,2-Dichloroethane	ND	10000	5000	
1,2-Dichloropropane	ND	12000	5000	
1,3,5-Trimethylbenzene	130000	12000	5000	
1,3-Dichlorobenzene	ND	15000	5000	
1,4-Dichlorobenzene	ND	15000	5000	
2-Butanone	ND	22000	5000	
2-Hexanone	ND	31000	5000	
4-Ethyltoluene	120000	12000	5000	
4-Methyl-2-Pentanone	ND	31000	5000	
Acetone	ND	24000	5000	
Benzene	1600000	8000	5000	
Benzyl Chloride	ND	39000	5000	
Bromodichloromethane	ND	17000	5000	
Bromoform	ND	26000	5000	
Bromomethane	ND	9700	5000	
Carbon Disulfide	ND	31000	5000	
Carbon Tetrachloride	ND	16000	5000	
Chlorobenzene	ND	12000	5000	
Chloroethane	ND	6600	5000	
Chloroform	ND	12000	5000	
Chloromethane	ND	5200	5000	
Dibromochloromethane	ND	21000	5000	
Dichlorodifluoromethane	ND	12000	5000	
Ethylbenzene	810000	11000	5000	
Hexachloro-1,3-Butadiene	ND	80000	5000	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

AllWest Environmental, Inc.
 2141 Mission Street, Suite 100
 San Francisco, CA 94110-6331

Date Received: 02/10/16
 Work Order: 16-02-0790
 Preparation: N/A
 Method: EPA TO-15
 Units: ug/m3

Project: Hollis / 15179.23

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
Methylene Chloride	ND	87000	5000	
Styrene	ND	32000	5000	
Tetrachloroethene	ND	17000	5000	
Toluene	1300000	9400	5000	
t-1,2-Dichloroethene	ND	9900	5000	
Trichloroethene	ND	13000	5000	
Trichlorofluoromethane	ND	28000	5000	
Vinyl Acetate	ND	35000	5000	
Vinyl Chloride	ND	6400	5000	
c-1,3-Dichloropropene	ND	11000	5000	
c-1,2-Dichloroethene	ND	9900	5000	
o-Xylene	770000	11000	5000	
t-1,3-Dichloropropene	ND	23000	5000	
p/m-Xylene	2800000	43000	5000	
Methyl-t-Butyl Ether (MTBE)	990000	36000	5000	
Isopropanol	160000	61000	5000	
1,1-Difluoroethane	ND	27000	5000	
Naphthalene	ND	130000	5000	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>	
1,4-Bromofluorobenzene	100	68-134		
1,2-Dichloroethane-d4	108	67-133		
Toluene-d8	101	70-130		



 Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

AllWest Environmental, Inc.
2141 Mission Street, Suite 100
San Francisco, CA 94110-6331

Date Received: 02/10/16
Work Order: 16-02-0790
Preparation: N/A
Method: EPA TO-15
Units: ug/m3

Project: Hollis / 15179.23

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SVP-6	16-02-0790-7-A	02/08/16 10:15	Air	GC/MS KKK	N/A	02/11/16 04:41	160210L01

Parameter	Result	RL	DF	Qualifiers
1,1,1-Trichloroethane	ND	1700	625	
1,1,2,2-Tetrachloroethane	ND	4300	625	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	7200	625	
1,1,2-Trichloroethane	ND	1700	625	
1,1-Dichloroethane	1300	1300	625	
1,1-Dichloroethene	ND	1200	625	
1,2,4-Trimethylbenzene	38000	4600	625	
1,2-Dibromoethane	ND	2400	625	
Dichlorotetrafluoroethane	ND	8700	625	
1,2-Dichlorobenzene	ND	1900	625	
1,2-Dichloroethane	2500	1300	625	
1,2-Dichloropropane	ND	1400	625	
1,3,5-Trimethylbenzene	13000	1500	625	
1,3-Dichlorobenzene	ND	1900	625	
1,4-Dichlorobenzene	ND	1900	625	
2-Butanone	ND	2800	625	
2-Hexanone	ND	3800	625	
4-Ethyltoluene	14000	1500	625	
4-Methyl-2-Pentanone	ND	3800	625	
Acetone	ND	3000	625	
Benzene	130000	1000	625	
Benzyl Chloride	ND	4900	625	
Bromodichloromethane	ND	2100	625	
Bromoform	ND	3200	625	
Bromomethane	ND	1200	625	
Carbon Disulfide	ND	3900	625	
Carbon Tetrachloride	ND	2000	625	
Chlorobenzene	ND	1400	625	
Chloroethane	ND	820	625	
Chloroform	ND	1500	625	
Chloromethane	ND	650	625	
Dibromochloromethane	ND	2700	625	
Dichlorodifluoromethane	ND	1500	625	
Ethylbenzene	66000	1400	625	
Hexachloro-1,3-Butadiene	ND	10000	625	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



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Analytical Report

AllWest Environmental, Inc.
2141 Mission Street, Suite 100
San Francisco, CA 94110-6331

Date Received: 02/10/16
Work Order: 16-02-0790
Preparation: N/A
Method: EPA TO-15
Units: ug/m3

Project: Hollis / 15179.23

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
Methylene Chloride	ND	11000	625	
Styrene	ND	4000	625	
Tetrachloroethene	ND	2100	625	
t-1,2-Dichloroethene	ND	1200	625	
Trichloroethene	ND	1700	625	
Trichlorofluoromethane	ND	3500	625	
Vinyl Acetate	ND	4400	625	
Vinyl Chloride	ND	800	625	
c-1,3-Dichloropropene	ND	1400	625	
c-1,2-Dichloroethene	ND	1200	625	
o-Xylene	71000	1400	625	
t-1,3-Dichloropropene	ND	2800	625	
p/m-Xylene	230000	5400	625	
Methyl-t-Butyl Ether (MTBE)	6900	4500	625	
Isopropanol	ND	7700	625	
1,1-Difluoroethane	ND	3400	625	
Naphthalene	ND	16000	625	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
1,4-Bromofluorobenzene	105	68-134	
1,2-Dichloroethane-d4	108	67-133	
Toluene-d8	101	70-130	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SVP-6	16-02-0790-7-A	02/08/16 10:15	Air	GC/MS KKK	N/A	02/11/16 19:20	160211L01

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
Toluene	220000	2400	1250	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
1,4-Bromofluorobenzene	106	68-134	
1,2-Dichloroethane-d4	107	67-133	
Toluene-d8	98	70-130	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

AllWest Environmental, Inc.
 2141 Mission Street, Suite 100
 San Francisco, CA 94110-6331

Date Received: 02/10/16
 Work Order: 16-02-0790
 Preparation: N/A
 Method: EPA TO-15
 Units: ug/m3

Project: Hollis / 15179.23

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	095-01-021-16536	N/A	Air	GC/MS KKK	N/A	02/10/16 14:36	160210L01

Parameter	Result	RL	DF	Qualifiers
1,1,1-Trichloroethane	ND	2.7	1.00	
1,1,2,2-Tetrachloroethane	ND	6.9	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	11	1.00	
1,1,2-Trichloroethane	ND	2.7	1.00	
1,1-Dichloroethane	ND	2.0	1.00	
1,1-Dichloroethene	ND	2.0	1.00	
1,2,4-Trimethylbenzene	ND	7.4	1.00	
1,2-Dibromoethane	ND	3.8	1.00	
Dichlorotetrafluoroethane	ND	14	1.00	
1,2-Dichlorobenzene	ND	3.0	1.00	
1,2-Dichloroethane	ND	2.0	1.00	
1,2-Dichloropropane	ND	2.3	1.00	
1,3,5-Trimethylbenzene	ND	2.5	1.00	
1,3-Dichlorobenzene	ND	3.0	1.00	
1,4-Dichlorobenzene	ND	3.0	1.00	
2-Butanone	ND	4.4	1.00	
2-Hexanone	ND	6.1	1.00	
4-Ethyltoluene	ND	2.5	1.00	
4-Methyl-2-Pentanone	ND	6.1	1.00	
Acetone	ND	4.8	1.00	
Benzyl Chloride	ND	7.8	1.00	
Bromodichloromethane	ND	3.4	1.00	
Bromoform	ND	5.2	1.00	
Bromomethane	ND	1.9	1.00	
Carbon Disulfide	ND	6.2	1.00	
Carbon Tetrachloride	ND	3.1	1.00	
Chlorobenzene	ND	2.3	1.00	
Chloroethane	ND	1.3	1.00	
Chloroform	ND	2.4	1.00	
Chloromethane	ND	1.0	1.00	
Dibromochloromethane	ND	4.3	1.00	
Dichlorodifluoromethane	ND	2.5	1.00	
Ethylbenzene	ND	2.2	1.00	
Hexachloro-1,3-Butadiene	ND	16	1.00	
Methylene Chloride	ND	17	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

AllWest Environmental, Inc.
2141 Mission Street, Suite 100
San Francisco, CA 94110-6331

Date Received: 02/10/16
Work Order: 16-02-0790
Preparation: N/A
Method: EPA TO-15
Units: ug/m3

Project: Hollis / 15179.23

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
Styrene	ND	6.4	1.00	
Tetrachloroethene	ND	3.4	1.00	
t-1,2-Dichloroethene	ND	2.0	1.00	
Trichloroethene	ND	2.7	1.00	
Trichlorofluoromethane	ND	5.6	1.00	
Vinyl Acetate	ND	7.0	1.00	
Vinyl Chloride	ND	1.3	1.00	
c-1,3-Dichloropropene	ND	2.3	1.00	
c-1,2-Dichloroethene	ND	2.0	1.00	
o-Xylene	ND	2.2	1.00	
t-1,3-Dichloropropene	ND	4.5	1.00	
p/m-Xylene	ND	8.7	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	7.2	1.00	
Isopropanol	ND	12	1.00	
1,1-Difluoroethane	ND	5.4	1.00	
Benzene	ND	1.6	1.00	
Naphthalene	ND	26	1.00	
Toluene	ND	1.9	1.00	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
1,4-Bromofluorobenzene	101	68-134	
1,2-Dichloroethane-d4	107	67-133	
Toluene-d8	101	70-130	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



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Analytical Report

AllWest Environmental, Inc.
2141 Mission Street, Suite 100
San Francisco, CA 94110-6331

Date Received: 02/10/16
Work Order: 16-02-0790
Preparation: N/A
Method: EPA TO-15
Units: ug/m3

Project: Hollis / 15179.23

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	095-01-021-16545	N/A	Air	GC/MS KKK	N/A	02/11/16 15:51	160211L01

Parameter	Result	RL	DF	Qualifiers
1,1,1-Trichloroethane	ND	2.7	1.00	
1,1,2,2-Tetrachloroethane	ND	6.9	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	11	1.00	
1,1,2-Trichloroethane	ND	2.7	1.00	
1,1-Dichloroethane	ND	2.0	1.00	
1,1-Dichloroethene	ND	2.0	1.00	
1,2,4-Trimethylbenzene	ND	7.4	1.00	
1,2-Dibromoethane	ND	3.8	1.00	
Dichlorotetrafluoroethane	ND	14	1.00	
1,2-Dichlorobenzene	ND	3.0	1.00	
1,2-Dichloroethane	ND	2.0	1.00	
1,2-Dichloropropane	ND	2.3	1.00	
1,3,5-Trimethylbenzene	ND	2.5	1.00	
1,3-Dichlorobenzene	ND	3.0	1.00	
1,4-Dichlorobenzene	ND	3.0	1.00	
2-Butanone	ND	4.4	1.00	
2-Hexanone	ND	6.1	1.00	
4-Ethyltoluene	ND	2.5	1.00	
4-Methyl-2-Pentanone	ND	6.1	1.00	
Acetone	ND	4.8	1.00	
Benzene	ND	1.6	1.00	
Benzyl Chloride	ND	7.8	1.00	
Bromodichloromethane	ND	3.4	1.00	
Bromoform	ND	5.2	1.00	
Bromomethane	ND	1.9	1.00	
Carbon Disulfide	ND	6.2	1.00	
Carbon Tetrachloride	ND	3.1	1.00	
Chlorobenzene	ND	2.3	1.00	
Chloroethane	ND	1.3	1.00	
Chloroform	ND	2.4	1.00	
Chloromethane	ND	1.0	1.00	
Dibromochloromethane	ND	4.3	1.00	
Dichlorodifluoromethane	ND	2.5	1.00	
Ethylbenzene	ND	2.2	1.00	
Hexachloro-1,3-Butadiene	ND	16	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

AllWest Environmental, Inc.
2141 Mission Street, Suite 100
San Francisco, CA 94110-6331

Date Received: 02/10/16
Work Order: 16-02-0790
Preparation: N/A
Method: EPA TO-15
Units: ug/m3

Project: Hollis / 15179.23

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
Methylene Chloride	ND	17	1.00	
Styrene	ND	6.4	1.00	
Tetrachloroethene	ND	3.4	1.00	
Toluene	ND	1.9	1.00	
t-1,2-Dichloroethene	ND	2.0	1.00	
Trichloroethene	ND	2.7	1.00	
Trichlorofluoromethane	ND	5.6	1.00	
Vinyl Acetate	ND	7.0	1.00	
Vinyl Chloride	ND	1.3	1.00	
c-1,3-Dichloropropene	ND	2.3	1.00	
c-1,2-Dichloroethene	ND	2.0	1.00	
o-Xylene	ND	2.2	1.00	
t-1,3-Dichloropropene	ND	4.5	1.00	
p/m-Xylene	ND	8.7	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	7.2	1.00	
Isopropanol	ND	12	1.00	
1,1-Difluoroethane	ND	5.4	1.00	
Naphthalene	ND	26	1.00	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>	
1,4-Bromofluorobenzene	99	68-134		
1,2-Dichloroethane-d4	105	67-133		
Toluene-d8	101	70-130		



Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



Calscience

Analytical Report

AllWest Environmental, Inc.
2141 Mission Street, Suite 100
San Francisco, CA 94110-6331

Date Received: 02/10/16
Work Order: 16-02-0790
Preparation: N/A
Method: EPA TO-3M
Units: ug/m3

Project: Hollis / 15179.23

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SVP-1	16-02-0790-1-A	02/05/16 13:31	Air	GC 13	N/A	02/10/16 13:42	160210L01
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
TPH as Gasoline		330000000		1400000		200	
SVP-7	16-02-0790-2-A	02/05/16 12:12	Air	GC 13	N/A	02/10/16 14:45	160210L01
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
TPH as Gasoline		220000		7000		1.00	
SVP-2	16-02-0790-3-A	02/05/16 17:08	Air	GC 13	N/A	02/10/16 15:08	160210L01
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
TPH as Gasoline		13000000		70000		10.0	
SVP-3	16-02-0790-4-A	02/06/16 12:58	Air	GC 13	N/A	02/10/16 16:18	160210L01
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
TPH as Gasoline		910000000		3500000		500	
SVP-4	16-02-0790-5-A	02/08/16 07:30	Air	GC 13	N/A	02/10/16 15:19	160210L01
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
TPH as Gasoline		10000000		70000		10.0	
SVP-5	16-02-0790-6-A	02/08/16 09:22	Air	GC 13	N/A	02/10/16 15:45	160210L01
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
TPH as Gasoline		84000000		350000		50.0	
SVP-6	16-02-0790-7-A	02/08/16 10:15	Air	GC 13	N/A	02/10/16 16:51	160210L01
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
TPH as Gasoline		13000000		70000		10.0	
Method Blank	098-01-005-6944	N/A	Air	GC 13	N/A	02/10/16 10:02	160210L01
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
TPH as Gasoline		ND		7000		1.00	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



Calscience

Quality Control - Sample Duplicate

AllWest Environmental, Inc.
2141 Mission Street, Suite 100
San Francisco, CA 94110-6331

Date Received: 02/10/16
Work Order: 16-02-0790
Preparation: N/A
Method: EPA TO-3M

Project: Hollis / 15179.23

Page 1 of 1

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	Duplicate Batch Number
16-02-0791-1	Sample	Air	GC 13	N/A	02/10/16 12:10	160210D02
16-02-0791-1	Sample Duplicate	Air	GC 13	N/A	02/10/16 12:22	160210D02

Parameter	Sample Conc.	DUP Conc.	RPD	RPD CL	Qualifiers
TPH as Gasoline	7851000	8148000	4	0-20	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - LCS/LCSD

AllWest Environmental, Inc.
2141 Mission Street, Suite 100
San Francisco, CA 94110-6331

Date Received: 02/10/16
Work Order: 16-02-0790
Preparation: N/A
Method: ASTM D-1946

Project: Hollis / 15179.23

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Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number			
099-16-444-350	LCS	Air	GC 65	N/A	02/10/16 10:30	160210L01			
099-16-444-350	LCSD	Air	GC 65	N/A	02/10/16 10:47	160210L01			
Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Methane	4.500	4.183	93	4.183	93	80-120	0	0-30	
Carbon Dioxide	15.00	15.24	102	15.50	103	80-120	2	0-30	
Oxygen (+ Argon)	4.010	3.851	96	3.843	96	80-120	0	0-30	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - LCS/LCSD

AllWest Environmental, Inc.
2141 Mission Street, Suite 100
San Francisco, CA 94110-6331

Date Received: 02/10/16
Work Order: 16-02-0790
Preparation: N/A
Method: ASTM D-1946

Project: Hollis / 15179.23

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Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number			
099-16-444-354	LCS	Air	GC 65	N/A	02/16/16 10:03	160216L01			
099-16-444-354	LCSD	Air	GC 65	N/A	02/16/16 10:20	160216L01			
Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Methane	4.500	4.138	92	4.121	92	80-120	0	0-30	
Carbon Dioxide	15.00	14.87	99	15.10	101	80-120	2	0-30	
Oxygen (+ Argon)	4.010	4.011	100	3.890	97	80-120	3	0-30	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - LCS/LCSD

AllWest Environmental, Inc.
2141 Mission Street, Suite 100
San Francisco, CA 94110-6331

Date Received: 02/10/16
Work Order: 16-02-0790
Preparation: N/A
Method: ASTM D-1946 (M)

Project: Hollis / 15179.23

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Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number			
099-12-872-905	LCS	Air	GC 55	N/A	02/10/16 09:51	160210L01			
099-12-872-905	LCSD	Air	GC 55	N/A	02/10/16 10:13	160210L01			
Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Helium	1.000	0.8937	89	0.9262	93	80-120	4	0-30	
Hydrogen	1.000	0.8930	89	0.9243	92	80-120	3	0-30	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - LCS/LCSD

AllWest Environmental, Inc.
2141 Mission Street, Suite 100
San Francisco, CA 94110-6331

Date Received: 02/10/16
Work Order: 16-02-0790
Preparation: N/A
Method: EPA TO-15

Project: Hollis / 15179.23

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Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number				
095-01-021-16536	LCS	Air	GC/MS KKK	N/A	02/10/16 11:51	160210L01				
095-01-021-16536	LCSD	Air	GC/MS KKK	N/A	02/10/16 12:46	160210L01				
Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
1,1,1-Trichloroethane	136.4	133.7	98	132.6	97	70-130	60-140	1	0-30	
1,1,2,2-Tetrachloroethane	171.6	168.0	98	169.1	99	63-130	52-141	1	0-30	
1,1,2-Trichloro-1,2,2-Trifluoroethane	191.6	193.9	101	192.7	101	70-136	59-147	1	0-30	
1,1,2-Trichloroethane	136.4	144.6	106	144.2	106	70-130	60-140	0	0-30	
1,1-Dichloroethane	101.2	102.6	101	101.8	101	70-130	60-140	1	0-30	
1,1-Dichloroethene	99.12	97.56	98	96.31	97	70-135	59-146	1	0-30	
1,2,4-Trimethylbenzene	122.9	124.4	101	126.6	103	60-132	48-144	2	0-30	
1,2-Dibromoethane	192.1	195.8	102	197.4	103	70-133	60-144	1	0-30	
Dichlorotetrafluoroethane	174.8	182.1	104	178.8	102	51-135	37-149	2	0-30	
1,2-Dichlorobenzene	150.3	139.5	93	143.0	95	48-138	33-153	3	0-30	
1,2-Dichloroethane	101.2	107.9	107	106.1	105	70-132	60-142	2	0-30	
1,2-Dichloropropane	115.5	117.8	102	117.5	102	70-130	60-140	0	0-30	
1,3,5-Trimethylbenzene	122.9	118.2	96	118.8	97	62-130	51-141	0	0-30	
1,3-Dichlorobenzene	150.3	145.9	97	147.2	98	56-134	43-147	1	0-30	
1,4-Dichlorobenzene	150.3	143.1	95	143.2	95	52-136	38-150	0	0-30	
2-Butanone	73.73	80.11	109	79.26	108	66-132	55-143	1	0-30	
2-Hexanone	102.4	101.9	100	103.3	101	70-136	59-147	1	0-30	
4-Ethyltoluene	122.9	120.8	98	121.2	99	68-130	58-140	0	0-30	
4-Methyl-2-Pentanone	102.4	106.6	104	106.0	103	70-130	60-140	1	0-30	
Acetone	59.39	60.22	101	60.32	102	67-133	56-144	0	0-30	
Benzyl Chloride	129.4	114.8	89	117.0	90	38-158	18-178	2	0-30	
Bromodichloromethane	167.5	180.7	108	179.7	107	70-130	60-140	1	0-30	
Bromoform	258.4	269.1	104	269.2	104	63-147	49-161	0	0-30	
Bromomethane	97.08	120.3	124	119.0	123	70-139	58-150	1	0-30	
Carbon Disulfide	77.85	84.18	108	83.89	108	68-146	55-159	0	0-30	
Carbon Tetrachloride	157.3	160.4	102	159.6	101	70-136	59-147	0	0-30	
Chlorobenzene	115.1	114.5	99	115.6	100	70-130	60-140	1	0-30	
Chloroethane	65.96	82.72	125	82.78	125	65-149	51-163	0	0-30	
Chloroform	122.1	123.0	101	122.0	100	70-130	60-140	1	0-30	
Chloromethane	51.63	63.58	123	60.24	117	69-141	57-153	5	0-30	
Dibromochloromethane	213.0	216.2	102	217.8	102	70-138	59-149	1	0-30	
Dichlorodifluoromethane	123.6	129.4	105	127.4	103	67-139	55-151	2	0-30	
Ethylbenzene	108.6	109.2	101	110.2	102	70-130	60-140	1	0-30	
Hexachloro-1,3-Butadiene	266.6	295.3	111	307.1	115	44-146	27-163	4	0-30	
Methylene Chloride	86.84	79.81	92	79.46	92	69-130	59-140	0	0-30	
Styrene	106.5	100.8	95	101.0	95	65-131	54-142	0	0-30	

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - LCS/LCSD

AllWest Environmental, Inc.
2141 Mission Street, Suite 100
San Francisco, CA 94110-6331

Date Received: 02/10/16
Work Order: 16-02-0790
Preparation: N/A
Method: EPA TO-15

Project: Hollis / 15179.23

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Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
Tetrachloroethene	169.6	160.6	95	164.2	97	70-130	60-140	2	0-30	
t-1,2-Dichloroethene	99.12	99.86	101	98.92	100	70-130	60-140	1	0-30	
Trichloroethene	134.3	135.4	101	135.3	101	70-130	60-140	0	0-30	
Trichlorofluoromethane	140.5	150.5	107	150.0	107	63-141	50-154	0	0-30	
Vinyl Acetate	88.03	87.17	99	86.04	98	58-130	46-142	1	0-30	
Vinyl Chloride	63.91	79.67	125	78.02	122	70-134	59-145	2	0-30	
c-1,3-Dichloropropene	113.5	121.5	107	121.0	107	70-130	60-140	0	0-30	
c-1,2-Dichloroethene	99.12	94.70	96	94.62	95	70-130	60-140	0	0-30	
o-Xylene	108.6	109.4	101	110.4	102	69-130	59-140	1	0-30	
t-1,3-Dichloropropene	113.5	126.2	111	125.8	111	70-147	57-160	0	0-30	
p/m-Xylene	217.1	223.4	103	224.1	103	70-132	60-142	0	0-30	
Methyl-t-Butyl Ether (MTBE)	90.13	91.56	102	91.02	101	68-130	58-140	1	0-30	
Isopropanol	61.45	60.06	98	59.87	97	57-135	44-148	0	0-30	
1,1-Difluoroethane	67.54	76.19	113	75.60	112	70-131	60-141	1	0-30	
Benzene	79.87	79.32	99	79.11	99	70-130	60-140	0	0-30	
Naphthalene	131.1	148.9	114	154.1	118	24-144	4-164	3	0-30	
Toluene	94.21	91.70	97	93.25	99	70-130	60-140	2	0-30	

Total number of LCS compounds: 53

Total number of ME compounds: 0

Total number of ME compounds allowed: 3

LCS ME CL validation result: Pass

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - LCS/LCSD

AllWest Environmental, Inc.
2141 Mission Street, Suite 100
San Francisco, CA 94110-6331

Date Received: 02/10/16
Work Order: 16-02-0790
Preparation: N/A
Method: EPA TO-15

Project: Hollis / 15179.23

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Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number				
095-01-021-16545	LCS	Air	GC/MS KKK	N/A	02/11/16 12:59	160211L01				
095-01-021-16545	LCSD	Air	GC/MS KKK	N/A	02/11/16 13:54	160211L01				
Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
1,1,1-Trichloroethane	136.4	132.2	97	130.8	96	70-130	60-140	1	0-30	
1,1,2,2-Tetrachloroethane	171.6	171.3	100	166.2	97	63-130	52-141	3	0-30	
1,1,2-Trichloro-1,2,2-Trifluoroethane	191.6	192.4	100	191.8	100	70-136	59-147	0	0-30	
1,1,2-Trichloroethane	136.4	143.2	105	140.5	103	70-130	60-140	2	0-30	
1,1-Dichloroethane	101.2	102.0	101	101.2	100	70-130	60-140	1	0-30	
1,1-Dichloroethene	99.12	95.65	96	94.94	96	70-135	59-146	1	0-30	
1,2,4-Trimethylbenzene	122.9	132.8	108	125.0	102	60-132	48-144	6	0-30	
1,2-Dibromoethane	192.1	198.2	103	193.7	101	70-133	60-144	2	0-30	
Dichlorotetrafluoroethane	174.8	178.8	102	177.4	101	51-135	37-149	1	0-30	
1,2-Dichlorobenzene	150.3	151.6	101	142.1	95	48-138	33-153	6	0-30	
1,2-Dichloroethane	101.2	106.1	105	105.1	104	70-132	60-142	1	0-30	
1,2-Dichloropropane	115.5	117.9	102	115.8	100	70-130	60-140	2	0-30	
1,3,5-Trimethylbenzene	122.9	122.6	100	117.4	96	62-130	51-141	4	0-30	
1,3-Dichlorobenzene	150.3	154.7	103	146.4	97	56-134	43-147	6	0-30	
1,4-Dichlorobenzene	150.3	153.5	102	143.9	96	52-136	38-150	6	0-30	
2-Butanone	73.73	78.69	107	78.38	106	66-132	55-143	0	0-30	
2-Hexanone	102.4	104.9	102	101.8	99	70-136	59-147	3	0-30	
4-Ethyltoluene	122.9	123.6	101	119.5	97	68-130	58-140	3	0-30	
4-Methyl-2-Pentanone	102.4	106.5	104	104.3	102	70-130	60-140	2	0-30	
Acetone	59.39	59.09	99	59.26	100	67-133	56-144	0	0-30	
Benzene	79.87	78.73	99	77.45	97	70-130	60-140	2	0-30	
Benzyl Chloride	129.4	123.8	96	114.9	89	38-158	18-178	7	0-30	
Bromodichloromethane	167.5	179.3	107	176.8	106	70-130	60-140	1	0-30	
Bromoform	258.4	269.1	104	262.6	102	63-147	49-161	2	0-30	
Bromomethane	97.08	109.9	113	117.4	121	70-139	58-150	7	0-30	
Carbon Disulfide	77.85	83.37	107	83.36	107	68-146	55-159	0	0-30	
Carbon Tetrachloride	157.3	158.9	101	157.0	100	70-136	59-147	1	0-30	
Chlorobenzene	115.1	116.3	101	113.8	99	70-130	60-140	2	0-30	
Chloroethane	65.96	70.41	107	82.97	126	65-149	51-163	16	0-30	
Chloroform	122.1	121.2	99	120.2	98	70-130	60-140	1	0-30	
Chloromethane	51.63	56.32	109	60.63	117	69-141	57-153	7	0-30	
Dibromochloromethane	213.0	218.3	103	212.7	100	70-138	59-149	3	0-30	
Dichlorodifluoromethane	123.6	127.1	103	126.3	102	67-139	55-151	1	0-30	
Ethylbenzene	108.6	110.1	101	108.3	100	70-130	60-140	2	0-30	
Hexachloro-1,3-Butadiene	266.6	301.5	113	298.3	112	44-146	27-163	1	0-30	
Methylene Chloride	86.84	79.63	92	78.74	91	69-130	59-140	1	0-30	

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - LCS/LCSD

AllWest Environmental, Inc.
2141 Mission Street, Suite 100
San Francisco, CA 94110-6331

Date Received: 02/10/16
Work Order: 16-02-0790
Preparation: N/A
Method: EPA TO-15

Project: Hollis / 15179.23

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Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
Styrene	106.5	101.4	95	99.86	94	65-131	54-142	2	0-30	
Tetrachloroethene	169.6	165.5	98	161.0	95	70-130	60-140	3	0-30	
Toluene	94.21	93.11	99	91.32	97	70-130	60-140	2	0-30	
t-1,2-Dichloroethene	99.12	98.61	99	98.22	99	70-130	60-140	0	0-30	
Trichloroethene	134.3	134.3	100	131.8	98	70-130	60-140	2	0-30	
Trichlorofluoromethane	140.5	148.3	106	147.4	105	63-141	50-154	1	0-30	
Vinyl Acetate	88.03	85.45	97	85.05	97	58-130	46-142	0	0-30	
Vinyl Chloride	63.91	78.74	123	78.43	123	70-134	59-145	0	0-30	
c-1,3-Dichloropropene	113.5	121.4	107	119.3	105	70-130	60-140	2	0-30	
c-1,2-Dichloroethene	99.12	93.51	94	93.61	94	70-130	60-140	0	0-30	
o-Xylene	108.6	109.2	101	107.9	99	69-130	59-140	1	0-30	
t-1,3-Dichloropropene	113.5	125.8	111	124.1	109	70-147	57-160	1	0-30	
p/m-Xylene	217.1	224.8	104	220.9	102	70-132	60-142	2	0-30	
Methyl-t-Butyl Ether (MTBE)	90.13	90.40	100	90.34	100	68-130	58-140	0	0-30	
Isopropanol	61.45	60.54	99	59.53	97	57-135	44-148	2	0-30	
1,1-Difluoroethane	67.54	75.23	111	74.41	110	70-131	60-141	1	0-30	
Naphthalene	131.1	151.6	116	149.5	114	24-144	4-164	1	0-30	

Total number of LCS compounds: 53

Total number of ME compounds: 0

Total number of ME compounds allowed: 3

LCS ME CL validation result: Pass

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - LCS

AllWest Environmental, Inc.
2141 Mission Street, Suite 100
San Francisco, CA 94110-6331

Date Received: 02/10/16
Work Order: 16-02-0790
Preparation: N/A
Method: EPA TO-3M

Project: Hollis / 15179.23

Page 8 of 8

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
098-01-005-6944	LCS	Air	GC 13	N/A	02/10/16 09:46	160210L01
<u>Parameter</u>		<u>Spike Added</u>	<u>Conc. Recovered</u>	<u>LCS %Rec.</u>	<u>%Rec. CL</u>	<u>Qualifiers</u>
TPH as Gasoline		932500	901300	97	80-120	



Return to Contents

RPD: Relative Percent Difference. CL: Control Limits

Summa Canister Vacuum Summary

Work Order: 16-02-0790

Page 1 of 1

Sample Name	Vacuum Out	Vacuum In	Equipment	Description
SVP-1	-29.50 in Hg	-1.90 in Hg	LC680	Summa Canister 1L
SVP-7	-29.50 in Hg	-4.20 in Hg	LC894	Summa Canister 1L
SVP-2	-29.50 in Hg	-3.20 in Hg	LC1053	Summa Canister 1L
SVP-3	-29.50 in Hg	-3.00 in Hg	SLC138	Summa Canister 1L
SVP-4	-29.50 in Hg	-21.00 in Hg	LC569	Summa Canister 1L
SVP-5	-29.50 in Hg	-22.00 in Hg	LC778	Summa Canister 1L
SVP-6	-29.50 in Hg	-4.50 in Hg	LC207	Summa Canister 1L
SVP-6-AMBIENT-HE	-29.50 in Hg	-9.00 in Hg	LC072	Summa Canister 1L

Glossary of Terms and Qualifiers

Work Order: 16-02-0790

Page 1 of 1

<u>Qualifiers</u>	<u>Definition</u>
*	See applicable analysis comment.
<	Less than the indicated value.
>	Greater than the indicated value.
1	Surrogate compound recovery was out of control due to a required sample dilution. Therefore, the sample data was reported without further clarification.
2	Surrogate compound recovery was out of control due to matrix interference. The associated method blank surrogate spike compound was in control and, therefore, the sample data was reported without further clarification.
3	Recovery of the Matrix Spike (MS) or Matrix Spike Duplicate (MSD) compound was out of control due to suspected matrix interference. The associated LCS recovery was in control.
4	The MS/MSD RPD was out of control due to suspected matrix interference.
5	The PDS/PDSD or PES/PESD associated with this batch of samples was out of control due to suspected matrix interference.
6	Surrogate recovery below the acceptance limit.
7	Surrogate recovery above the acceptance limit.
B	Analyte was present in the associated method blank.
BU	Sample analyzed after holding time expired.
BV	Sample received after holding time expired.
CI	See case narrative.
E	Concentration exceeds the calibration range.
ET	Sample was extracted past end of recommended max. holding time.
HD	The chromatographic pattern was inconsistent with the profile of the reference fuel standard.
HDH	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but heavier hydrocarbons were also present (or detected).
HDL	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but lighter hydrocarbons were also present (or detected).
J	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
JA	Analyte positively identified but quantitation is an estimate.
ME	LCS Recovery Percentage is within Marginal Exceedance (ME) Control Limit range (+/- 4 SD from the mean).
ND	Parameter not detected at the indicated reporting limit.
Q	Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration by a factor of four or greater.
SG	The sample extract was subjected to Silica Gel treatment prior to analysis.
X	% Recovery and/or RPD out-of-range.
Z	Analyte presence was not confirmed by second column or GC/MS analysis.
	Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are reported on a wet weight basis.
	Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of <= 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.
	A calculated total result (Example: Total Pesticides) is the summation of each component concentration and/or, if "J" flags are reported, estimated concentration. Component concentrations showing not detected (ND) are summed into the calculated total result as zero concentrations.



Calscience

7440 Lincoln Way, Garden Grove, CA 92841-1427 • (714) 895-5494
For courier service / sample drop off information, contact us@eurofins.com or call us.

LABORATORY CLIENT:

ALLWEST ENVIRONMENTAL

ADDRESS:

2141 MISSION ST., STE 100

CITY: SAN FRANCISCO

STATE: CA

ZIP: 94110

TEL: (415) 391-2510

E-MAIL: LEONARD@ALLWEST.COM / SARA@ALLWEST.COM

TURNAROUND TIME (Rush surcharges may apply to any TAT not "STANDARD"):

SAME DAY 24 HR 48 HR 72 HR 5 DAYS STANDARD

EDD: Mg/m³

COELTEDF OTHER

SPECIAL INSTRUCTIONS:

SVP-4: SAMPLE PURGE WAS DONE OVER MULTIPLE DAYS
START 2/6/16: 1354 STOP 2/6/16: 1604
2/8/16: 0710 2/8/16: 0730

IF INSUFFICIENT SAMPLE VOLUME
USE FOLLOWING SCALE FOR
PRIORITY: 1 - TO-15
2 - TO-3
3 - ASTM D1946 (He)
4 - ASTM D1946 (O₂, CH₄, CO₂)

AIR CHAIN-OF-CUSTODY RECORD

WO NO. / LAB USE ONLY

16-02-0790

DATE: 2/5-9/2016
PAGE: 1 OF 1

CLIENT PROJECT NAME / NO.:

HOLLIS

P.O. NO.:

15179.23

PROJECT CONTACT:

LEONARD NILES

LAB CONTACT OR QUOTE NO.:

PROJECT ADDRESS:

6655 HOLLIS ST. #

SAMPLER(S); (PRINT)

SARA BLOOM

CITY:

EMERYVILLE CA

STATE:

CA

ZIP:

CA

REQUESTED ANALYSES

TO-15 (VOCs + METHANES)
TO-3 (PH-9)
ASTM D1946 (He)
ASTM D1946 (O₂, CH₄, CO₂)

LAB USE ONLY	SAMPLE ID	FIELD ID / POINT OF COLLECTION	MATRIX	SAMPLING EQUIPMENT			START SAMPLING INFORMATION			STOP SAMPLING INFORMATION			Canister Pressure (in Hg)	Time (24 hr clock)	Date	Canister Pressure (in Hg)	Time (24 hr clock)	Date	Requested Analytes
				Media ID	Canister Size 6L or 1L	Flow Controller ID	Date	Time (24 hr clock)	Canister Pressure (in Hg)	Date	Time (24 hr clock)	Canister Pressure (in Hg)							
1	SVP-1	SVP-1	SV	LC680	1L	SGM249	2/5/16	1325	30	2/5/16	1331	5"	X	X	2/5/16	1331	5"	X	X
2	SVP-7	SVP-7	SV	LC894	1L	SGM247	2/5/16	1204	30	2/5/16	1212	5	X	X	2/5/16	1212	5	X	X
3	SVP-2	SVP-2	SV	LC1053	1L	SGM248	2/5/16	1540	ABOVE 30	2/5/16	1605	16.5	X	X	2/5/16	1605	16.5	X	X
4	SVP-3	SVP-3	SV	SLC138	1L	SGM007	2/6/16	1252	30	2/5/16	1258	5	X	X	2/5/16	1258	5	X	X
5	SVP-4	SVP-4	SV	LC569	1L	SGM145	2/6/16	*	30	2/6/16	*	23	X	X	2/6/16	*	23	X	X
6	SVP-5	SVP-5	SV	LC778	1L	SGM011	2/6/16	0822	30	2/6/16	0922	24	X	X	2/6/16	0922	24	X	X
7	SVP-6	SVP-6	SV	LC207	1L	SGM184	2/6/16	1010	30	2/6/16	1015	5	X	X	2/6/16	1015	5	X	X
8	SVP-6-AMBIENT	SVP-6-Ambient	SV	LC072	1L	SGM223	2/6/16	1010	30	2/6/16	1015	10.5	X	X	2/6/16	1015	10.5	X	X
	-He	-He																	

Relinquished by: (Signature) *Sara Bloom* Date: 02/10/16

Relinquished by: (Signature) _____ Date: _____

Relinquished by: (Signature) _____ Date: _____



0790

2/9/2016



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2/9/2016



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2/9/2016



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ALAN KEMP
5063 COMMERCIAL CIRCLE
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CONCORD, CA 94520

Tracking #: 530855125

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SAMPLE RECEIVING
7440 LINCOLN WAY
GARDEN GROVE, CA 92841

ORC **A**
GARDEN GROVE

COD: \$0.00
Weight: 0 lb(s)
Reference:
ALL WEST
Delivery Instructions:

D92845A



Signature Type: REQUIRED

48063644

Print Date: 2/9/2016 1:34 PM

Package 3 of 3

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SAMPLE RECEIPT CHECKLIST

COOLER 0 OF 0

CLIENT: ALL West

DATE: 02 / 10 / 2016

TEMPERATURE: (Criteria: 0.0°C – 6.0°C, not frozen except sediment/tissue)

Thermometer ID: SC4B (CF: +0.3°C); Temperature (w/o CF): _____ °C (w/ CF): _____ °C; Blank Sample

Sample(s) outside temperature criteria (PM/APM contacted by: _____)

Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling

Sample(s) received at ambient temperature; placed on ice for transport by courier

Ambient Temperature: Air Filter

Checked by: 836

CUSTODY SEAL:

BOX

Cooler Present and Intact

Present but Not Intact

Not Present

N/A

Checked by: 836

Sample(s) Present and Intact

Present but Not Intact

Not Present

N/A

Checked by: 310

SAMPLE CONDITION:

Yes No N/A

Chain-of-Custody (COC) document(s) received with samples

COC document(s) received complete

Sampling date Sampling time Matrix Number of containers

No analysis requested Not relinquished No relinquished date No relinquished time

Sampler's name indicated on COC

Sample container label(s) consistent with COC

Sample container(s) intact and in good condition

Proper containers for analyses requested

Sufficient volume/mass for analyses requested

Samples received within holding time

Aqueous samples for certain analyses received within 15-minute holding time

pH Residual Chlorine Dissolved Sulfide Dissolved Oxygen

Proper preservation chemical(s) noted on COC and/or sample container

Unpreserved aqueous sample(s) received for certain analyses

Volatile Organics Total Metals Dissolved Metals

Container(s) for certain analysis free of headspace

Volatile Organics Dissolved Gases (RSK-175) Dissolved Oxygen (SM 4500)

Carbon Dioxide (SM 4500) Ferrous Iron (SM 3500) Hydrogen Sulfide (Hach)

Tedlar™ bag(s) free of condensation

CONTAINER TYPE:

(Trip Blank Lot Number: _____)

Aqueous: VOA VOA_h VOA_{na2} 100PJ 100PJ_{na2} 125AGB 125AGB_h 125AGB_p 125PB

125PB_{znna} 250AGB 250CGB 250CGB_s 250PB 250PB_n 500AGB 500AGJ 500AGJ_s

500PB 1AGB 1AGB_{na2} 1AGB_s 1PB 1PB_{na} _____ _____ _____

Solid: 4ozCGJ 8ozCGJ 16ozCGJ Sleeve (_____) EnCores® (_____) TerraCores® (_____) _____

Air: Tedlar™ Canister Sorbent Tube PUF _____ Other Matrix (____): _____ _____

Container: A = Amber, B = Bottle, C = Clear, E = Envelope, G = Glass, J = Jar, P = Plastic, and Z = Ziploc/Resealable Bag

Preservative: b = buffered, f = filtered, h = HCl, n = HNO₃, na = NaOH, na₂ = Na₂S₂O₃, p = H₃PO₄,

Labeled/Checked by: 300

s = H₂SO₄, u = ultra-pure, znna = Zn(CH₃CO₂)₂ + NaOH

Reviewed by: 836

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Vikas Patel

From: Leonard Niles <leonard@allwest1.com>
Sent: Friday, February 12, 2016 11:34 AM
To: Erick Ovalle
Cc: Vikas Patel; 'Sara Bloom'
Subject: RE: Sample receipt confirmation / 16-02-0790 / Hollis / 15179.23

Erick,

Sample SVP-4 was started 2/6/16 at 1354 and ended 2/8/16 at 0730. The sample was temporarily stopped from 1604 on 2/6/16 to 0710 on 2/8/16. This was in the Special Instructions section on the COC, sorry for the confusion. I don't know where the 2/5/16 ending date came from, that isn't on the COC for that sample.

Len

Leonard Niles, P.G., C.H.G.
Senior Project Manager
AllWest Environmental, Inc.

2141 Mission Street, Suite 100
San Francisco, CA 94110
office (415) 391-2510 x204
fax (415) 391-2008
Leonard@AllWest1.com



From: Erick Ovalle [<mailto:ErickOvalle@eurofinsUS.com>]
Sent: Thursday, February 11, 2016 10:22 AM
To: 'Leonard Niles'; Sara Bloom
Cc: Vikas Patel
Subject: Sample receipt confirmation / 16-02-0790 / Hollis / 15179.23

Sample receipt confirmation attached. Please review and advise of any changes required.

Sample 4 (SVP-4) has a starting date of 02/06/16 and an ending time of 02/05/16. Please confirm the date that the sample ended.

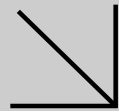
Please call with any questions or concerns.

Best Regards,
Erick Ovalle
Project Manager Assistant

Eurofins Calscience, Inc.
7440 Lincoln Way
Garden Grove, CA 92841-1427



Calscience



WORK ORDER NUMBER: 16-05-1214

The difference is service



AIR | SOIL | WATER | MARINE CHEMISTRY

Analytical Report For

Client: AllWest Environmental, Inc.

Client Project Name: Hollis Emeryville / 16076.23.28

Attention: Leonard Niles
2141 Mission Street, Suite 100
San Francisco, CA 94110-6331

Vikas Patel

Approved for release on 05/24/2016 by:
Vikas Patel
Project Manager

ResultLink ▶

Email your PM ▶



Eurofins Calscience, Inc. (Calscience) certifies that the test results provided in this report meet all NELAC requirements for parameters for which accreditation is required or available. Any exceptions to NELAC requirements are noted in the case narrative. The original report of subcontracted analyses, if any, is attached to this report. The results in this report are limited to the sample(s) tested and any reproduction thereof must be made in its entirety. The client or recipient of this report is specifically prohibited from making material changes to said report and, to the extent that such changes are made, Calscience is not responsible, legally or otherwise. The client or recipient agrees to indemnify Calscience for any defense to any litigation which may arise.

Contents

Client Project Name: Hollis Emeryville / 16076.23.28

Work Order Number: 16-05-1214

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Condition Upon Receipt:

Samples were received under Chain-of-Custody (COC) on 05/17/16. They were assigned to Work Order 16-05-1214.

Unless otherwise noted on the Sample Receiving forms all samples were received in good condition and within the recommended EPA temperature criteria for the methods noted on the COC. The COC and Sample Receiving Documents are integral elements of the analytical report and are presented at the back of the report.

Holding Times:

All samples were analyzed within prescribed holding times (HT) and/or in accordance with the Calscience Sample Acceptance Policy unless otherwise noted in the analytical report and/or comprehensive case narrative, if required.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of ≤ 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

Quality Control:

All quality control parameters (QC) were within established control limits except where noted in the QC summary forms or described further within this report.

Subcontractor Information:

Unless otherwise noted below (or on the subcontract form), no samples were subcontracted.

Additional Comments:

Air - Sorbent-extracted air methods (EPA TO-4A, EPA TO-10, EPA TO-13A, EPA TO-17): Analytical results are converted from mass/sample basis to mass/volume basis using client-supplied air volumes.

Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are always reported on a wet weight basis.



Calscience

Sample Summary

Client: AllWest Environmental, Inc. 2141 Mission Street, Suite 100 San Francisco, CA 94110-6331	Work Order: 16-05-1214 Project Name: Hollis Emeryville / 16076.23.28 PO Number: Date/Time Received: 05/17/16 11:25 Number of Containers: 5
-------------------------------------------------------------------------------------------------------	--------------------------------------------------------------------------------------------------------------------------------------------------------

Attn: Leonard Niles

Sample Identification	Lab Number	Collection Date and Time	Number of Containers	Matrix
SVP-12	16-05-1214-1	05/12/16 15:41	1	Air
SVP-13	16-05-1214-2	05/13/16 09:42	1	Air
SVP-14	16-05-1214-3	05/13/16 11:07	1	Air
SVP-15	16-05-1214-4	05/13/16 12:50	1	Air
SVP-16	16-05-1214-5	05/13/16 14:10	1	Air

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Calscience

Detections Summary

Client: AllWest Environmental, Inc.
2141 Mission Street, Suite 100
San Francisco, CA 94110-6331

Work Order: 16-05-1214
Project Name: Hollis Emeryville / 16076.23.28
Received: 05/17/16

Attn: Leonard Niles

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Client SampleID

Analyte	Result	Qualifiers	RL	Units	Method	Extraction
SVP-12 (16-05-1214-1)						
Carbon Dioxide	2.49		0.500	%v	ASTM D-1946	N/A
Oxygen (+ Argon)	19.2		0.500	%v	ASTM D-1946	N/A
Helium	0.0920		0.0100	%v	ASTM D-1946 (M)	N/A
Acetone	22		4.8	ug/m3	EPA TO-15	N/A
Tetrachloroethene	19		3.4	ug/m3	EPA TO-15	N/A
Toluene	3.2		1.9	ug/m3	EPA TO-15	N/A
Isopropanol	51		12	ug/m3	EPA TO-15	N/A
Ethanol	9.6		9.4	ug/m3	EPA TO-15	N/A
SVP-13 (16-05-1214-2)						
Carbon Dioxide	7.88		0.500	%v	ASTM D-1946	N/A
Oxygen (+ Argon)	15.4		0.500	%v	ASTM D-1946	N/A
Helium	0.807		0.0100	%v	ASTM D-1946 (M)	N/A
Acetone	26		4.8	ug/m3	EPA TO-15	N/A
Tetrachloroethene	4.5		3.4	ug/m3	EPA TO-15	N/A
Toluene	2.2		1.9	ug/m3	EPA TO-15	N/A
Isopropanol	37		12	ug/m3	EPA TO-15	N/A
Ethanol	11		9.4	ug/m3	EPA TO-15	N/A
SVP-14 (16-05-1214-3)						
Carbon Dioxide	3.64		0.500	%v	ASTM D-1946	N/A
Oxygen (+ Argon)	18.4		0.500	%v	ASTM D-1946	N/A
Helium	0.0301		0.0100	%v	ASTM D-1946 (M)	N/A
1,2,4-Trimethylbenzene	8.9		7.4	ug/m3	EPA TO-15	N/A
4-Ethyltoluene	3.7		2.5	ug/m3	EPA TO-15	N/A
Acetone	8.9		4.8	ug/m3	EPA TO-15	N/A
Benzene	12		1.6	ug/m3	EPA TO-15	N/A
Ethylbenzene	11		2.2	ug/m3	EPA TO-15	N/A
Tetrachloroethene	11		3.4	ug/m3	EPA TO-15	N/A
Toluene	31		1.9	ug/m3	EPA TO-15	N/A
o-Xylene	8.1		2.2	ug/m3	EPA TO-15	N/A
p/m-Xylene	46		8.7	ug/m3	EPA TO-15	N/A
Ethanol	14		9.4	ug/m3	EPA TO-15	N/A
SVP-15 (16-05-1214-4)						
Carbon Dioxide	2.53		0.500	%v	ASTM D-1946	N/A
Oxygen (+ Argon)	17.0		0.500	%v	ASTM D-1946	N/A
Helium	0.0232		0.0100	%v	ASTM D-1946 (M)	N/A
Acetone	11		4.8	ug/m3	EPA TO-15	N/A
Isopropanol	16		12	ug/m3	EPA TO-15	N/A
Ethanol	24		9.4	ug/m3	EPA TO-15	N/A

* MDL is shown



Calscience

Detections Summary

Client: AllWest Environmental, Inc.
2141 Mission Street, Suite 100
San Francisco, CA 94110-6331

Work Order: 16-05-1214
Project Name: Hollis Emeryville / 16076.23.28
Received: 05/17/16

Attn: Leonard Niles

Page 2 of 2

Client SampleID

<u>Analyte</u>	<u>Result</u>	<u>Qualifiers</u>	<u>RL</u>	<u>Units</u>	<u>Method</u>	<u>Extraction</u>
SVP-16 (16-05-1214-5)						
Carbon Dioxide	12.4		0.500	%v	ASTM D-1946	N/A
Oxygen (+ Argon)	7.54		0.500	%v	ASTM D-1946	N/A
Helium	0.149		0.0100	%v	ASTM D-1946 (M)	N/A
Toluene	5.6		1.9	ug/m3	EPA TO-15	N/A
Tert-Butyl Alcohol (TBA)	6.4		6.1	ug/m3	EPA TO-15	N/A

Subcontracted analyses, if any, are not included in this summary.

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* MDL is shown

Analytical Report

AllWest Environmental, Inc.
2141 Mission Street, Suite 100
San Francisco, CA 94110-6331

Date Received: 05/17/16
Work Order: 16-05-1214
Preparation: N/A
Method: ASTM D-1946
Units: %v

Project: Hollis Emeryville / 16076.23.28

Page 1 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SVP-12	16-05-1214-1-A	05/12/16 15:41	Air	GC 65	N/A	05/18/16 15:54	160518L01
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Methane		ND		0.500		1.00	
Carbon Dioxide		2.49		0.500		1.00	
Oxygen (+ Argon)		19.2		0.500		1.00	
SVP-13	16-05-1214-2-A	05/13/16 09:42	Air	GC 65	N/A	05/18/16 16:14	160518L01
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Methane		ND		0.500		1.00	
Carbon Dioxide		7.88		0.500		1.00	
Oxygen (+ Argon)		15.4		0.500		1.00	
SVP-14	16-05-1214-3-A	05/13/16 11:07	Air	GC 65	N/A	05/18/16 16:35	160518L01
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Methane		ND		0.500		1.00	
Carbon Dioxide		3.64		0.500		1.00	
Oxygen (+ Argon)		18.4		0.500		1.00	
SVP-15	16-05-1214-4-A	05/13/16 12:50	Air	GC 65	N/A	05/18/16 17:10	160518L01
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Methane		ND		0.500		1.00	
Carbon Dioxide		2.53		0.500		1.00	
Oxygen (+ Argon)		17.0		0.500		1.00	
SVP-16	16-05-1214-5-A	05/13/16 14:10	Air	GC 65	N/A	05/18/16 17:32	160518L01
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Methane		ND		0.500		1.00	
Carbon Dioxide		12.4		0.500		1.00	
Oxygen (+ Argon)		7.54		0.500		1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

AllWest Environmental, Inc.
2141 Mission Street, Suite 100
San Francisco, CA 94110-6331

Date Received: 05/17/16
Work Order: 16-05-1214
Preparation: N/A
Method: ASTM D-1946
Units: %v

Project: Hollis Emeryville / 16076.23.28

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-16-444-400	N/A	Air	GC 65	N/A	05/18/16 10:55	160518L01

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
Methane	ND	0.500	1.00	
Carbon Dioxide	ND	0.500	1.00	
Oxygen (+ Argon)	ND	0.500	1.00	



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Analytical Report

AllWest Environmental, Inc.
2141 Mission Street, Suite 100
San Francisco, CA 94110-6331

Date Received: 05/17/16
Work Order: 16-05-1214
Preparation: N/A
Method: ASTM D-1946 (M)
Units: %v

Project: Hollis Emeryville / 16076.23.28

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SVP-12	16-05-1214-1-A	05/12/16 15:41	Air	GC 55	N/A	05/18/16 22:33	160518L01
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Helium		0.0920		0.0100		1.00	
SVP-13	16-05-1214-2-A	05/13/16 09:42	Air	GC 55	N/A	05/18/16 22:06	160518L01
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Helium		0.807		0.0100		1.00	
SVP-14	16-05-1214-3-A	05/13/16 11:07	Air	GC 55	N/A	05/18/16 19:28	160518L01
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Helium		0.0301		0.0100		1.00	
SVP-15	16-05-1214-4-A	05/13/16 12:50	Air	GC 55	N/A	05/18/16 18:27	160518L01
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Helium		0.0232		0.0100		1.00	
SVP-16	16-05-1214-5-A	05/13/16 14:10	Air	GC 55	N/A	05/18/15 17:33	160518L01
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Helium		0.149		0.0100		1.00	
Method Blank	099-12-872-938	N/A	Air	GC 55	N/A	05/18/15 10:40	160518L01
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Helium		ND		0.0100		1.00	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

AllWest Environmental, Inc.
2141 Mission Street, Suite 100
San Francisco, CA 94110-6331

Date Received: 05/17/16
Work Order: 16-05-1214
Preparation: N/A
Method: EPA TO-15
Units: ug/m3

Project: Hollis Emeryville / 16076.23.28

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SVP-12	16-05-1214-1-A	05/12/16 15:41	Air	GC/MS II	N/A	05/22/16 06:05	160521L02

Parameter	Result	RL	DF	Qualifiers
1,1,1-Trichloroethane	ND	2.7	1.00	
1,1,2,2-Tetrachloroethane	ND	6.9	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	11	1.00	
1,1,2-Trichloroethane	ND	2.7	1.00	
1,1-Dichloroethane	ND	2.0	1.00	
1,1-Dichloroethene	ND	2.0	1.00	
1,2,4-Trimethylbenzene	ND	7.4	1.00	
1,2-Dibromoethane	ND	3.8	1.00	
Dichlorotetrafluoroethane	ND	14	1.00	
1,2-Dichlorobenzene	ND	3.0	1.00	
1,2-Dichloroethane	ND	2.0	1.00	
1,2-Dichloropropane	ND	2.3	1.00	
1,3,5-Trimethylbenzene	ND	2.5	1.00	
1,3-Dichlorobenzene	ND	3.0	1.00	
1,4-Dichlorobenzene	ND	3.0	1.00	
2-Butanone	ND	4.4	1.00	
2-Hexanone	ND	6.1	1.00	
4-Ethyltoluene	ND	2.5	1.00	
4-Methyl-2-Pentanone	ND	6.1	1.00	
Acetone	22	4.8	1.00	
Benzene	ND	1.6	1.00	
Benzyl Chloride	ND	7.8	1.00	
Bromodichloromethane	ND	3.4	1.00	
Bromoform	ND	5.2	1.00	
Bromomethane	ND	1.9	1.00	
Carbon Disulfide	ND	6.2	1.00	
Carbon Tetrachloride	ND	3.1	1.00	
Chlorobenzene	ND	2.3	1.00	
Chloroethane	ND	1.3	1.00	
Chloroform	ND	2.4	1.00	
Chloromethane	ND	1.0	1.00	
Dibromochloromethane	ND	4.3	1.00	
Dichlorodifluoromethane	ND	2.5	1.00	
Ethylbenzene	ND	2.2	1.00	
Hexachloro-1,3-Butadiene	ND	16	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

AllWest Environmental, Inc.
 2141 Mission Street, Suite 100
 San Francisco, CA 94110-6331

Date Received: 05/17/16
 Work Order: 16-05-1214
 Preparation: N/A
 Method: EPA TO-15
 Units: ug/m3

Project: Hollis Emeryville / 16076.23.28

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
Methylene Chloride	ND	17	1.00	
Styrene	ND	6.4	1.00	
Tetrachloroethene	19	3.4	1.00	
Toluene	3.2	1.9	1.00	
t-1,2-Dichloroethene	ND	2.0	1.00	
Trichloroethene	ND	2.7	1.00	
Trichlorofluoromethane	ND	5.6	1.00	
Vinyl Acetate	ND	7.0	1.00	
Vinyl Chloride	ND	1.3	1.00	
c-1,3-Dichloropropene	ND	2.3	1.00	
c-1,2-Dichloroethene	ND	2.0	1.00	
o-Xylene	ND	2.2	1.00	
t-1,3-Dichloropropene	ND	4.5	1.00	
p/m-Xylene	ND	8.7	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	7.2	1.00	
Isopropanol	51	12	1.00	
1,1-Difluoroethane	ND	5.4	1.00	
Diisopropyl Ether (DIPE)	ND	8.4	1.00	
Ethanol	9.6	9.4	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	8.4	1.00	
Naphthalene	ND	26	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	8.4	1.00	
Tert-Butyl Alcohol (TBA)	ND	6.1	1.00	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>	
1,4-Bromofluorobenzene	89	68-134		
1,2-Dichloroethane-d4	103	67-133		
Toluene-d8	88	70-130		



 Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



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Analytical Report

AllWest Environmental, Inc.
2141 Mission Street, Suite 100
San Francisco, CA 94110-6331

Date Received: 05/17/16
Work Order: 16-05-1214
Preparation: N/A
Method: EPA TO-15
Units: ug/m3

Project: Hollis Emeryville / 16076.23.28

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SVP-13	16-05-1214-2-A	05/13/16 09:42	Air	GC/MS II	N/A	05/22/16 06:57	160521L02

Parameter	Result	RL	DF	Qualifiers
1,1,1-Trichloroethane	ND	2.7	1.00	
1,1,2,2-Tetrachloroethane	ND	6.9	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	11	1.00	
1,1,2-Trichloroethane	ND	2.7	1.00	
1,1-Dichloroethane	ND	2.0	1.00	
1,1-Dichloroethene	ND	2.0	1.00	
1,2,4-Trimethylbenzene	ND	7.4	1.00	
1,2-Dibromoethane	ND	3.8	1.00	
Dichlorotetrafluoroethane	ND	14	1.00	
1,2-Dichlorobenzene	ND	3.0	1.00	
1,2-Dichloroethane	ND	2.0	1.00	
1,2-Dichloropropane	ND	2.3	1.00	
1,3,5-Trimethylbenzene	ND	2.5	1.00	
1,3-Dichlorobenzene	ND	3.0	1.00	
1,4-Dichlorobenzene	ND	3.0	1.00	
2-Butanone	ND	4.4	1.00	
2-Hexanone	ND	6.1	1.00	
4-Ethyltoluene	ND	2.5	1.00	
4-Methyl-2-Pentanone	ND	6.1	1.00	
Acetone	26	4.8	1.00	
Benzene	ND	1.6	1.00	
Benzyl Chloride	ND	7.8	1.00	
Bromodichloromethane	ND	3.4	1.00	
Bromoform	ND	5.2	1.00	
Bromomethane	ND	1.9	1.00	
Carbon Disulfide	ND	6.2	1.00	
Carbon Tetrachloride	ND	3.1	1.00	
Chlorobenzene	ND	2.3	1.00	
Chloroethane	ND	1.3	1.00	
Chloroform	ND	2.4	1.00	
Chloromethane	ND	1.0	1.00	
Dibromochloromethane	ND	4.3	1.00	
Dichlorodifluoromethane	ND	2.5	1.00	
Ethylbenzene	ND	2.2	1.00	
Hexachloro-1,3-Butadiene	ND	16	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

AllWest Environmental, Inc.
 2141 Mission Street, Suite 100
 San Francisco, CA 94110-6331

Date Received: 05/17/16
 Work Order: 16-05-1214
 Preparation: N/A
 Method: EPA TO-15
 Units: ug/m3

Project: Hollis Emeryville / 16076.23.28

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
Methylene Chloride	ND	17	1.00	
Styrene	ND	6.4	1.00	
Tetrachloroethene	4.5	3.4	1.00	
Toluene	2.2	1.9	1.00	
t-1,2-Dichloroethene	ND	2.0	1.00	
Trichloroethene	ND	2.7	1.00	
Trichlorofluoromethane	ND	5.6	1.00	
Vinyl Acetate	ND	7.0	1.00	
Vinyl Chloride	ND	1.3	1.00	
c-1,3-Dichloropropene	ND	2.3	1.00	
c-1,2-Dichloroethene	ND	2.0	1.00	
o-Xylene	ND	2.2	1.00	
t-1,3-Dichloropropene	ND	4.5	1.00	
p/m-Xylene	ND	8.7	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	7.2	1.00	
Isopropanol	37	12	1.00	
1,1-Difluoroethane	ND	5.4	1.00	
Diisopropyl Ether (DIPE)	ND	8.4	1.00	
Ethanol	11	9.4	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	8.4	1.00	
Naphthalene	ND	26	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	8.4	1.00	
Tert-Butyl Alcohol (TBA)	ND	6.1	1.00	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>	
1,4-Bromofluorobenzene	91	68-134		
1,2-Dichloroethane-d4	104	67-133		
Toluene-d8	88	70-130		

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



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Analytical Report

AllWest Environmental, Inc.
2141 Mission Street, Suite 100
San Francisco, CA 94110-6331

Date Received: 05/17/16
Work Order: 16-05-1214
Preparation: N/A
Method: EPA TO-15
Units: ug/m3

Project: Hollis Emeryville / 16076.23.28

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SVP-14	16-05-1214-3-A	05/13/16 11:07	Air	GC/MS II	N/A	05/22/16 07:48	160521L02

Parameter	Result	RL	DF	Qualifiers
1,1,1-Trichloroethane	ND	2.7	1.00	
1,1,2,2-Tetrachloroethane	ND	6.9	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	11	1.00	
1,1,2-Trichloroethane	ND	2.7	1.00	
1,1-Dichloroethane	ND	2.0	1.00	
1,1-Dichloroethene	ND	2.0	1.00	
1,2,4-Trimethylbenzene	8.9	7.4	1.00	
1,2-Dibromoethane	ND	3.8	1.00	
Dichlorotetrafluoroethane	ND	14	1.00	
1,2-Dichlorobenzene	ND	3.0	1.00	
1,2-Dichloroethane	ND	2.0	1.00	
1,2-Dichloropropane	ND	2.3	1.00	
1,3,5-Trimethylbenzene	ND	2.5	1.00	
1,3-Dichlorobenzene	ND	3.0	1.00	
1,4-Dichlorobenzene	ND	3.0	1.00	
2-Butanone	ND	4.4	1.00	
2-Hexanone	ND	6.1	1.00	
4-Ethyltoluene	3.7	2.5	1.00	
4-Methyl-2-Pentanone	ND	6.1	1.00	
Acetone	8.9	4.8	1.00	
Benzene	12	1.6	1.00	
Benzyl Chloride	ND	7.8	1.00	
Bromodichloromethane	ND	3.4	1.00	
Bromoform	ND	5.2	1.00	
Bromomethane	ND	1.9	1.00	
Carbon Disulfide	ND	6.2	1.00	
Carbon Tetrachloride	ND	3.1	1.00	
Chlorobenzene	ND	2.3	1.00	
Chloroethane	ND	1.3	1.00	
Chloroform	ND	2.4	1.00	
Chloromethane	ND	1.0	1.00	
Dibromochloromethane	ND	4.3	1.00	
Dichlorodifluoromethane	ND	2.5	1.00	
Ethylbenzene	11	2.2	1.00	
Hexachloro-1,3-Butadiene	ND	16	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

AllWest Environmental, Inc.
 2141 Mission Street, Suite 100
 San Francisco, CA 94110-6331

Date Received: 05/17/16
 Work Order: 16-05-1214
 Preparation: N/A
 Method: EPA TO-15
 Units: ug/m3

Project: Hollis Emeryville / 16076.23.28

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
Methylene Chloride	ND	17	1.00	
Styrene	ND	6.4	1.00	
Tetrachloroethene	11	3.4	1.00	
Toluene	31	1.9	1.00	
t-1,2-Dichloroethene	ND	2.0	1.00	
Trichloroethene	ND	2.7	1.00	
Trichlorofluoromethane	ND	5.6	1.00	
Vinyl Acetate	ND	7.0	1.00	
Vinyl Chloride	ND	1.3	1.00	
c-1,3-Dichloropropene	ND	2.3	1.00	
c-1,2-Dichloroethene	ND	2.0	1.00	
o-Xylene	8.1	2.2	1.00	
t-1,3-Dichloropropene	ND	4.5	1.00	
p/m-Xylene	46	8.7	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	7.2	1.00	
Isopropanol	ND	12	1.00	
1,1-Difluoroethane	ND	5.4	1.00	
Diisopropyl Ether (DIPE)	ND	8.4	1.00	
Ethanol	14	9.4	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	8.4	1.00	
Naphthalene	ND	26	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	8.4	1.00	
Tert-Butyl Alcohol (TBA)	ND	6.1	1.00	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>	
1,4-Bromofluorobenzene	95	68-134		
1,2-Dichloroethane-d4	103	67-133		
Toluene-d8	88	70-130		

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



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Analytical Report

AllWest Environmental, Inc.
2141 Mission Street, Suite 100
San Francisco, CA 94110-6331

Date Received: 05/17/16
Work Order: 16-05-1214
Preparation: N/A
Method: EPA TO-15
Units: ug/m3

Project: Hollis Emeryville / 16076.23.28

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SVP-15	16-05-1214-4-A	05/13/16 12:50	Air	GC/MS II	N/A	05/22/16 08:41	160521L02

Parameter	Result	RL	DF	Qualifiers
1,1,1-Trichloroethane	ND	2.7	1.00	
1,1,2,2-Tetrachloroethane	ND	6.9	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	11	1.00	
1,1,2-Trichloroethane	ND	2.7	1.00	
1,1-Dichloroethane	ND	2.0	1.00	
1,1-Dichloroethene	ND	2.0	1.00	
1,2,4-Trimethylbenzene	ND	7.4	1.00	
1,2-Dibromoethane	ND	3.8	1.00	
Dichlorotetrafluoroethane	ND	14	1.00	
1,2-Dichlorobenzene	ND	3.0	1.00	
1,2-Dichloroethane	ND	2.0	1.00	
1,2-Dichloropropane	ND	2.3	1.00	
1,3,5-Trimethylbenzene	ND	2.5	1.00	
1,3-Dichlorobenzene	ND	3.0	1.00	
1,4-Dichlorobenzene	ND	3.0	1.00	
2-Butanone	ND	4.4	1.00	
2-Hexanone	ND	6.1	1.00	
4-Ethyltoluene	ND	2.5	1.00	
4-Methyl-2-Pentanone	ND	6.1	1.00	
Acetone	11	4.8	1.00	
Benzene	ND	1.6	1.00	
Benzyl Chloride	ND	7.8	1.00	
Bromodichloromethane	ND	3.4	1.00	
Bromoform	ND	5.2	1.00	
Bromomethane	ND	1.9	1.00	
Carbon Disulfide	ND	6.2	1.00	
Carbon Tetrachloride	ND	3.1	1.00	
Chlorobenzene	ND	2.3	1.00	
Chloroethane	ND	1.3	1.00	
Chloroform	ND	2.4	1.00	
Chloromethane	ND	1.0	1.00	
Dibromochloromethane	ND	4.3	1.00	
Dichlorodifluoromethane	ND	2.5	1.00	
Ethylbenzene	ND	2.2	1.00	
Hexachloro-1,3-Butadiene	ND	16	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

AllWest Environmental, Inc.
 2141 Mission Street, Suite 100
 San Francisco, CA 94110-6331

Date Received: 05/17/16
 Work Order: 16-05-1214
 Preparation: N/A
 Method: EPA TO-15
 Units: ug/m3

Project: Hollis Emeryville / 16076.23.28

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
Methylene Chloride	ND	17	1.00	
Styrene	ND	6.4	1.00	
Tetrachloroethene	ND	3.4	1.00	
Toluene	ND	1.9	1.00	
t-1,2-Dichloroethene	ND	2.0	1.00	
Trichloroethene	ND	2.7	1.00	
Trichlorofluoromethane	ND	5.6	1.00	
Vinyl Acetate	ND	7.0	1.00	
Vinyl Chloride	ND	1.3	1.00	
c-1,3-Dichloropropene	ND	2.3	1.00	
c-1,2-Dichloroethene	ND	2.0	1.00	
o-Xylene	ND	2.2	1.00	
t-1,3-Dichloropropene	ND	4.5	1.00	
p/m-Xylene	ND	8.7	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	7.2	1.00	
Isopropanol	16	12	1.00	
1,1-Difluoroethane	ND	5.4	1.00	
Diisopropyl Ether (DIPE)	ND	8.4	1.00	
Ethanol	24	9.4	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	8.4	1.00	
Naphthalene	ND	26	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	8.4	1.00	
Tert-Butyl Alcohol (TBA)	ND	6.1	1.00	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
1,4-Bromofluorobenzene	101	68-134	
1,2-Dichloroethane-d4	98	67-133	
Toluene-d8	86	70-130	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

AllWest Environmental, Inc.
2141 Mission Street, Suite 100
San Francisco, CA 94110-6331

Date Received: 05/17/16
Work Order: 16-05-1214
Preparation: N/A
Method: EPA TO-15
Units: ug/m3

Project: Hollis Emeryville / 16076.23.28

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SVP-16	16-05-1214-5-A	05/13/16 14:10	Air	GC/MS II	N/A	05/22/16 09:35	160521L02

Parameter	Result	RL	DF	Qualifiers
1,1,1-Trichloroethane	ND	2.7	1.00	
1,1,2,2-Tetrachloroethane	ND	6.9	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	11	1.00	
1,1,2-Trichloroethane	ND	2.7	1.00	
1,1-Dichloroethane	ND	2.0	1.00	
1,1-Dichloroethene	ND	2.0	1.00	
1,2,4-Trimethylbenzene	ND	7.4	1.00	
1,2-Dibromoethane	ND	3.8	1.00	
Dichlorotetrafluoroethane	ND	14	1.00	
1,2-Dichlorobenzene	ND	3.0	1.00	
1,2-Dichloroethane	ND	2.0	1.00	
1,2-Dichloropropane	ND	2.3	1.00	
1,3,5-Trimethylbenzene	ND	2.5	1.00	
1,3-Dichlorobenzene	ND	3.0	1.00	
1,4-Dichlorobenzene	ND	3.0	1.00	
2-Butanone	ND	4.4	1.00	
2-Hexanone	ND	6.1	1.00	
4-Ethyltoluene	ND	2.5	1.00	
4-Methyl-2-Pentanone	ND	6.1	1.00	
Acetone	ND	4.8	1.00	
Benzene	ND	1.6	1.00	
Benzyl Chloride	ND	7.8	1.00	
Bromodichloromethane	ND	3.4	1.00	
Bromoform	ND	5.2	1.00	
Bromomethane	ND	1.9	1.00	
Carbon Disulfide	ND	6.2	1.00	
Carbon Tetrachloride	ND	3.1	1.00	
Chlorobenzene	ND	2.3	1.00	
Chloroethane	ND	1.3	1.00	
Chloroform	ND	2.4	1.00	
Chloromethane	ND	1.0	1.00	
Dibromochloromethane	ND	4.3	1.00	
Dichlorodifluoromethane	ND	2.5	1.00	
Ethylbenzene	ND	2.2	1.00	
Hexachloro-1,3-Butadiene	ND	16	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

AllWest Environmental, Inc.
 2141 Mission Street, Suite 100
 San Francisco, CA 94110-6331

Date Received: 05/17/16
 Work Order: 16-05-1214
 Preparation: N/A
 Method: EPA TO-15
 Units: ug/m3

Project: Hollis Emeryville / 16076.23.28

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
Methylene Chloride	ND	17	1.00	
Styrene	ND	6.4	1.00	
Tetrachloroethene	ND	3.4	1.00	
Toluene	5.6	1.9	1.00	
t-1,2-Dichloroethene	ND	2.0	1.00	
Trichloroethene	ND	2.7	1.00	
Trichlorofluoromethane	ND	5.6	1.00	
Vinyl Acetate	ND	7.0	1.00	
Vinyl Chloride	ND	1.3	1.00	
c-1,3-Dichloropropene	ND	2.3	1.00	
c-1,2-Dichloroethene	ND	2.0	1.00	
o-Xylene	ND	2.2	1.00	
t-1,3-Dichloropropene	ND	4.5	1.00	
p/m-Xylene	ND	8.7	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	7.2	1.00	
Isopropanol	ND	12	1.00	
1,1-Difluoroethane	ND	5.4	1.00	
Diisopropyl Ether (DIPE)	ND	8.4	1.00	
Ethanol	ND	9.4	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	8.4	1.00	
Naphthalene	ND	26	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	8.4	1.00	
Tert-Butyl Alcohol (TBA)	6.4	6.1	1.00	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
1,4-Bromofluorobenzene	88	68-134	
1,2-Dichloroethane-d4	100	67-133	
Toluene-d8	87	70-130	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

AllWest Environmental, Inc.
2141 Mission Street, Suite 100
San Francisco, CA 94110-6331

Date Received: 05/17/16
Work Order: 16-05-1214
Preparation: N/A
Method: EPA TO-15
Units: ug/m3

Project: Hollis Emeryville / 16076.23.28

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	095-01-021-16918	N/A	Air	GC/MS II	N/A	05/21/16 18:16	160521L02

Parameter	Result	RL	DF	Qualifiers
1,1,1-Trichloroethane	ND	2.7	1.00	
1,1,2,2-Tetrachloroethane	ND	6.9	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	11	1.00	
1,1,2-Trichloroethane	ND	2.7	1.00	
1,1-Dichloroethane	ND	2.0	1.00	
1,1-Dichloroethene	ND	2.0	1.00	
1,2,4-Trimethylbenzene	ND	7.4	1.00	
1,2-Dibromoethane	ND	3.8	1.00	
Dichlorotetrafluoroethane	ND	14	1.00	
1,2-Dichlorobenzene	ND	3.0	1.00	
1,2-Dichloroethane	ND	2.0	1.00	
1,2-Dichloropropane	ND	2.3	1.00	
1,3,5-Trimethylbenzene	ND	2.5	1.00	
1,3-Dichlorobenzene	ND	3.0	1.00	
1,4-Dichlorobenzene	ND	3.0	1.00	
2-Butanone	ND	4.4	1.00	
2-Hexanone	ND	6.1	1.00	
4-Ethyltoluene	ND	2.5	1.00	
4-Methyl-2-Pentanone	ND	6.1	1.00	
Acetone	ND	4.8	1.00	
Benzene	ND	1.6	1.00	
Benzyl Chloride	ND	7.8	1.00	
Bromodichloromethane	ND	3.4	1.00	
Bromoform	ND	5.2	1.00	
Bromomethane	ND	1.9	1.00	
Carbon Disulfide	ND	6.2	1.00	
Carbon Tetrachloride	ND	3.1	1.00	
Chlorobenzene	ND	2.3	1.00	
Chloroethane	ND	1.3	1.00	
Chloroform	ND	2.4	1.00	
Chloromethane	ND	1.0	1.00	
Dibromochloromethane	ND	4.3	1.00	
Dichlorodifluoromethane	ND	2.5	1.00	
Ethylbenzene	ND	2.2	1.00	
Hexachloro-1,3-Butadiene	ND	16	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

AllWest Environmental, Inc.
 2141 Mission Street, Suite 100
 San Francisco, CA 94110-6331

Date Received: 05/17/16
 Work Order: 16-05-1214
 Preparation: N/A
 Method: EPA TO-15
 Units: ug/m3

Project: Hollis Emeryville / 16076.23.28

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
Methylene Chloride	ND	17	1.00	
Styrene	ND	6.4	1.00	
Tetrachloroethene	ND	3.4	1.00	
Toluene	ND	1.9	1.00	
t-1,2-Dichloroethene	ND	2.0	1.00	
Trichloroethene	ND	2.7	1.00	
Trichlorofluoromethane	ND	5.6	1.00	
Vinyl Acetate	ND	7.0	1.00	
Vinyl Chloride	ND	1.3	1.00	
c-1,3-Dichloropropene	ND	2.3	1.00	
c-1,2-Dichloroethene	ND	2.0	1.00	
o-Xylene	ND	2.2	1.00	
t-1,3-Dichloropropene	ND	4.5	1.00	
p/m-Xylene	ND	8.7	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	7.2	1.00	
Isopropanol	ND	12	1.00	
1,1-Difluoroethane	ND	5.4	1.00	
Diisopropyl Ether (DIPE)	ND	8.4	1.00	
Ethanol	ND	9.4	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	8.4	1.00	
Naphthalene	ND	26	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	8.4	1.00	
Tert-Butyl Alcohol (TBA)	ND	6.1	1.00	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
1,4-Bromofluorobenzene	88	68-134	
1,2-Dichloroethane-d4	103	67-133	
Toluene-d8	90	70-130	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



Calscience

Analytical Report

AllWest Environmental, Inc.
2141 Mission Street, Suite 100
San Francisco, CA 94110-6331

Date Received: 05/17/16
Work Order: 16-05-1214
Preparation: N/A
Method: EPA TO-3M
Units: ug/m3

Project: Hollis Emeryville / 16076.23.28

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SVP-12	16-05-1214-1-A	05/12/16 15:41	Air	GC 13	N/A	05/18/16 09:49	160518L01
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
TPH as Gasoline		ND		7000		1.00	
SVP-13	16-05-1214-2-A	05/13/16 09:42	Air	GC 13	N/A	05/18/16 10:01	160518L01
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
TPH as Gasoline		ND		7000		1.00	
SVP-14	16-05-1214-3-A	05/13/16 11:07	Air	GC 13	N/A	05/18/16 10:15	160518L01
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
TPH as Gasoline		ND		7000		1.00	
SVP-15	16-05-1214-4-A	05/13/16 12:50	Air	GC 13	N/A	05/18/16 10:25	160518L01
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
TPH as Gasoline		ND		7000		1.00	
SVP-16	16-05-1214-5-A	05/13/16 14:10	Air	GC 13	N/A	05/18/16 10:35	160518L01
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
TPH as Gasoline		ND		7000		1.00	
Method Blank	098-01-005-7132	N/A	Air	GC 13	N/A	05/18/16 09:34	160518L01
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
TPH as Gasoline		ND		7000		1.00	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



Calscience

Quality Control - Sample Duplicate

AllWest Environmental, Inc.
2141 Mission Street, Suite 100
San Francisco, CA 94110-6331

Date Received: 05/17/16
Work Order: 16-05-1214
Preparation: N/A
Method: EPA TO-3M

Project: Hollis Emeryville / 16076.23.28

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Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	Duplicate Batch Number
16-05-1303-1	Sample	Air	GC 13	N/A	05/18/16 15:13	160518D01
16-05-1303-1	Sample Duplicate	Air	GC 13	N/A	05/18/16 15:27	160518D01
<u>Parameter</u>		<u>Sample Conc.</u>	<u>DUP Conc.</u>	<u>RPD</u>	<u>RPD CL</u>	<u>Qualifiers</u>
TPH as Gasoline		336100	376900	11	0-20	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - LCS/LCSD

AllWest Environmental, Inc.
2141 Mission Street, Suite 100
San Francisco, CA 94110-6331

Date Received: 05/17/16
Work Order: 16-05-1214
Preparation: N/A
Method: ASTM D-1946

Project: Hollis Emeryville / 16076.23.28

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Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-16-444-400	LCS	Air	GC 65	N/A	05/18/16 10:10	160518L01
099-16-444-400	LCSD	Air	GC 65	N/A	05/18/16 10:36	160518L01

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Methane	4.500	3.650	81	3.657	81	80-120	0	0-30	
Carbon Dioxide	15.00	14.66	98	15.01	100	80-120	2	0-30	
Carbon Monoxide	6.990	7.050	101	7.032	101	80-120	0	0-30	
Oxygen (+ Argon)	4.010	3.950	99	3.900	97	80-120	1	0-30	
Nitrogen	69.50	65.01	94	64.64	93	80-120	1	0-30	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - LCS/LCSD

AllWest Environmental, Inc.
2141 Mission Street, Suite 100
San Francisco, CA 94110-6331

Date Received: 05/17/16
Work Order: 16-05-1214
Preparation: N/A
Method: ASTM D-1946 (M)

Project: Hollis Emeryville / 16076.23.28

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Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-872-938	LCS	Air	GC 55	N/A	05/18/16 09:42	160518L01
099-12-872-938	LCSD	Air	GC 55	N/A	05/18/15 10:09	160518L01

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Helium	1.000	0.9601	96	0.9729	97	80-120	1	0-30	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - LCS/LCSD

AllWest Environmental, Inc.
2141 Mission Street, Suite 100
San Francisco, CA 94110-6331

Date Received: 05/17/16
Work Order: 16-05-1214
Preparation: N/A
Method: EPA TO-15

Project: Hollis Emeryville / 16076.23.28

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Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number				
095-01-021-16918	LCS	Air	GC/MS II	N/A	05/21/16 15:13	160521L02				
095-01-021-16918	LCSD	Air	GC/MS II	N/A	05/21/16 16:04	160521L02				
Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
1,1,1-Trichloroethane	136.4	140.4	103	138.6	102	70-130	60-140	1	0-30	
1,1,2,2-Tetrachloroethane	171.6	160.6	94	152.8	89	63-130	52-141	5	0-30	
1,1,2-Trichloro-1,2,2-Trifluoroethane	191.6	201.6	105	199.1	104	70-136	59-147	1	0-30	
1,1,2-Trichloroethane	136.4	130.4	96	128.9	94	70-130	60-140	1	0-30	
1,1-Dichloroethane	101.2	92.50	91	91.18	90	70-130	60-140	1	0-30	
1,1-Dichloroethene	99.12	103.9	105	101.6	103	70-135	59-146	2	0-30	
1,2,4-Trimethylbenzene	122.9	131.1	107	125.2	102	60-132	48-144	5	0-30	
1,2-Dibromoethane	192.1	200.6	104	191.0	99	70-133	60-144	5	0-30	
Dichlorotetrafluoroethane	174.8	194.6	111	190.0	109	51-135	37-149	2	0-30	
1,2-Dichlorobenzene	150.3	179.5	119	167.8	112	48-138	33-153	7	0-30	
1,2-Dichloroethane	101.2	107.8	107	106.7	105	70-132	60-142	1	0-30	
1,2-Dichloropropane	115.5	100.8	87	99.78	86	70-130	60-140	1	0-30	
1,3,5-Trimethylbenzene	122.9	130.2	106	124.9	102	62-130	51-141	4	0-30	
1,3-Dichlorobenzene	150.3	185.5	123	175.8	117	56-134	43-147	5	0-30	
1,4-Dichlorobenzene	150.3	178.5	119	166.8	111	52-136	38-150	7	0-30	
2-Butanone	73.73	68.52	93	67.27	91	66-132	55-143	2	0-30	
2-Hexanone	102.4	102.3	100	97.57	95	70-136	59-147	5	0-30	
4-Ethyltoluene	122.9	129.6	105	124.0	101	68-130	58-140	4	0-30	
4-Methyl-2-Pentanone	102.4	98.25	96	96.54	94	70-130	60-140	2	0-30	
Acetone	59.39	56.17	95	56.18	95	67-133	56-144	0	0-30	
Benzene	79.87	75.55	95	74.72	94	70-130	60-140	1	0-30	
Benzyl Chloride	129.4	134.3	104	123.6	95	38-158	18-178	8	0-30	
Bromodichloromethane	167.5	175.2	105	172.7	103	70-130	60-140	1	0-30	
Bromoform	258.4	336.0	130	320.6	124	63-147	49-161	5	0-30	
Bromomethane	97.08	97.46	100	95.71	99	70-139	58-150	2	0-30	
Carbon Disulfide	77.85	67.17	86	66.36	85	68-146	55-159	1	0-30	
Carbon Tetrachloride	157.3	174.9	111	172.4	110	70-136	59-147	1	0-30	
Chlorobenzene	115.1	114.7	100	110.1	96	70-130	60-140	4	0-30	
Chloroethane	65.96	66.75	101	65.12	99	65-149	51-163	2	0-30	
Chloroform	122.1	118.1	97	116.4	95	70-130	60-140	1	0-30	
Chloromethane	51.63	50.29	97	48.35	94	69-141	57-153	4	0-30	
Dibromochloromethane	213.0	235.0	110	225.6	106	70-138	59-149	4	0-30	
Dichlorodifluoromethane	123.6	120.1	97	117.9	95	67-139	55-151	2	0-30	
Ethylbenzene	108.6	108.5	100	104.1	96	70-130	60-140	4	0-30	
Hexachloro-1,3-Butadiene	266.6	392.2	147	329.6	124	44-146	27-163	17	0-30	ME
Methylene Chloride	86.84	80.34	93	80.10	92	69-130	59-140	0	0-30	

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - LCS/LCSD

AllWest Environmental, Inc.
2141 Mission Street, Suite 100
San Francisco, CA 94110-6331

Date Received: 05/17/16
Work Order: 16-05-1214
Preparation: N/A
Method: EPA TO-15

Project: Hollis Emeryville / 16076.23.28

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Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
Styrene	106.5	108.5	102	103.5	97	65-131	54-142	5	0-30	
Tetrachloroethene	169.6	208.8	123	201.1	119	70-130	60-140	4	0-30	
Toluene	94.21	84.12	89	80.75	86	70-130	60-140	4	0-30	
t-1,2-Dichloroethene	99.12	89.14	90	87.38	88	70-130	60-140	2	0-30	
Trichloroethene	134.3	138.3	103	136.2	101	70-130	60-140	2	0-30	
Trichlorofluoromethane	140.5	164.7	117	160.8	115	63-141	50-154	2	0-30	
Vinyl Acetate	88.03	78.68	89	77.09	88	58-130	46-142	2	0-30	
Vinyl Chloride	63.91	63.45	99	61.33	96	70-134	59-145	3	0-30	
c-1,3-Dichloropropene	113.5	120.6	106	118.9	105	70-130	60-140	1	0-30	
c-1,2-Dichloroethene	99.12	89.50	90	87.64	88	70-130	60-140	2	0-30	
o-Xylene	108.6	104.6	96	100.2	92	69-130	59-140	4	0-30	
t-1,3-Dichloropropene	113.5	130.2	115	128.1	113	70-147	57-160	2	0-30	
p/m-Xylene	217.1	216.9	100	208.9	96	70-132	60-142	4	0-30	
Methyl-t-Butyl Ether (MTBE)	90.13	95.31	106	93.58	104	68-130	58-140	2	0-30	
Isopropanol	61.45	58.54	95	58.03	94	57-135	44-148	1	0-30	
1,1-Difluoroethane	67.54	60.53	90	59.26	88	70-131	60-141	2	0-30	
Diisopropyl Ether (DIPE)	104.5	88.71	85	87.58	84	63-130	52-141	1	0-30	
Ethanol	188.4	177.8	94	178.4	95	37-139	20-156	0	0-30	
Ethyl-t-Butyl Ether (ETBE)	104.5	101.1	97	99.83	96	67-130	56-140	1	0-30	
Naphthalene	131.1	139.7	107	114.0	87	24-144	4-164	20	0-30	
Tert-Amyl-Methyl Ether (TAME)	104.5	105.5	101	104.4	100	69-130	59-140	1	0-30	
Tert-Butyl Alcohol (TBA)	151.6	154.6	102	153.4	101	66-144	53-157	1	0-30	

Total number of LCS compounds: 58

Total number of ME compounds: 1

Total number of ME compounds allowed: 3

LCS ME CL validation result: Pass

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits

Quality Control - LCS

AllWest Environmental, Inc.
2141 Mission Street, Suite 100
San Francisco, CA 94110-6331

Date Received: 05/17/16
Work Order: 16-05-1214
Preparation: N/A
Method: EPA TO-3M

Project: Hollis Emeryville / 16076.23.28

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Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
098-01-005-7132	LCS	Air	GC 13	N/A	05/18/16 09:21	160518L01
<u>Parameter</u>		<u>Spike Added</u>	<u>Conc. Recovered</u>	<u>LCS %Rec.</u>	<u>%Rec. CL</u>	<u>Qualifiers</u>
TPH as Gasoline		932500	847100	91	80-120	

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RPD: Relative Percent Difference. CL: Control Limits

Summa Canister Vacuum Summary

Work Order: 16-05-1214

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Sample Name	Vacuum Out	Vacuum In	Equipment	Description
SVP-12	-29.50 in Hg	-4.00 in Hg	D104	Summa Canister 6L
SVP-13	-29.50 in Hg	-5.50 in Hg	SIM054	Summa Canister 6L
SVP-14	-29.50 in Hg	-3.20 in Hg	D182	Summa Canister 6L
SVP-15	-29.50 in Hg	-5.30 in Hg	D243	Summa Canister 6L
SVP-16	-29.50 in Hg	-4.80 in Hg	D596	Summa Canister 6L

Sample Analysis Summary Report

Work Order: 16-05-1214

Page 1 of 1

<u>Method</u>	<u>Extraction</u>	<u>Chemist ID</u>	<u>Instrument</u>	<u>Analytical Location</u>
ASTM D-1946	N/A	929	GC 65	2
ASTM D-1946	N/A	1074	GC 65	2
ASTM D-1946 (M)	N/A	460	GC 55	2
ASTM D-1946 (M)	N/A	1074	GC 55	2
EPA TO-15	N/A	866	GC/MS II	2
EPA TO-3M	N/A	1078	GC 13	2

Glossary of Terms and Qualifiers

Work Order: 16-05-1214

Page 1 of 1

<u>Qualifiers</u>	<u>Definition</u>
*	See applicable analysis comment.
<	Less than the indicated value.
>	Greater than the indicated value.
1	Surrogate compound recovery was out of control due to a required sample dilution. Therefore, the sample data was reported without further clarification.
2	Surrogate compound recovery was out of control due to matrix interference. The associated method blank surrogate spike compound was in control and, therefore, the sample data was reported without further clarification.
3	Recovery of the Matrix Spike (MS) or Matrix Spike Duplicate (MSD) compound was out of control due to suspected matrix interference. The associated LCS recovery was in control.
4	The MS/MSD RPD was out of control due to suspected matrix interference.
5	The PDS/PDSD or PES/PESD associated with this batch of samples was out of control due to suspected matrix interference.
6	Surrogate recovery below the acceptance limit.
7	Surrogate recovery above the acceptance limit.
B	Analyte was present in the associated method blank.
BU	Sample analyzed after holding time expired.
BV	Sample received after holding time expired.
CI	See case narrative.
E	Concentration exceeds the calibration range.
ET	Sample was extracted past end of recommended max. holding time.
HD	The chromatographic pattern was inconsistent with the profile of the reference fuel standard.
HDH	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but heavier hydrocarbons were also present (or detected).
HDL	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but lighter hydrocarbons were also present (or detected).
J	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
JA	Analyte positively identified but quantitation is an estimate.
ME	LCS Recovery Percentage is within Marginal Exceedance (ME) Control Limit range (+/- 4 SD from the mean).
ND	Parameter not detected at the indicated reporting limit.
Q	Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration by a factor of four or greater.
SG	The sample extract was subjected to Silica Gel treatment prior to analysis.
X	% Recovery and/or RPD out-of-range.
Z	Analyte presence was not confirmed by second column or GC/MS analysis.
	Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are reported on a wet weight basis.
	Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of <= 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.
	A calculated total result (Example: Total Pesticides) is the summation of each component concentration and/or, if "J" flags are reported, estimated concentration. Component concentrations showing not detected (ND) are summed into the calculated total result as zero concentrations.

1214



800-322-5555 www.gso.com

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DARLENE TORIO
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STE 100
SAN FRANCISCO, CA 94110

Tracking #: 531931965

PDS



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GARDEN GROVE

COD: \$0.00
Weight: 0 lb(s)
Reference:
16076.23.28

Delivery Instructions:

Signature Type: REQUIRED

D92845A



51865043

Print Date: 5/16/2016 10:39 AM

SAMPLE RECEIPT CHECKLIST

COOLER 0 OF 0

CLIENT: Allwest Env'l.

DATE: 05/17/2016

TEMPERATURE: (Criteria: 0.0°C – 6.0°C, not frozen except sediment/tissue)

Thermometer ID: SC2A (CF: 0.0°C); Temperature (w/o CF): _____ °C (w/ CF): _____ °C; Blank Sample

Sample(s) outside temperature criteria (PM/APM contacted by: _____)

Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling

Sample(s) received at ambient temperature; placed on ice for transport by courier

Ambient Temperature: Air Filter

Checked by: 836

CUSTODY SEAL:

Cooler Present and Intact Present but Not Intact Not Present N/A

Checked by: 836

Sample(s) Present and Intact Present but Not Intact Not Present N/A

Checked by: 300

SAMPLE CONDITION:

Chain-of-Custody (COC) document(s) received with samples Yes No N/A

COC document(s) received complete Yes No N/A

Sampling date Sampling time Matrix Number of containers

No analysis requested Not relinquished No relinquished date No relinquished time

Sampler's name indicated on COC Yes No N/A

Sample container label(s) consistent with COC Yes No N/A

Sample container(s) intact and in good condition Yes No N/A

Proper containers for analyses requested Yes No N/A

Sufficient volume/mass for analyses requested Yes No N/A

Samples received within holding time Yes No N/A

Aqueous samples for certain analyses received within 15-minute holding time

pH Residual Chlorine Dissolved Sulfide Dissolved Oxygen Yes No N/A

Proper preservation chemical(s) noted on COC and/or sample container Yes No N/A

Unpreserved aqueous sample(s) received for certain analyses

Volatile Organics Total Metals Dissolved Metals

Container(s) for certain analysis free of headspace Yes No N/A

Volatile Organics Dissolved Gases (RSK-175) Dissolved Oxygen (SM 4500)

Carbon Dioxide (SM 4500) Ferrous Iron (SM 3500) Hydrogen Sulfide (Hach)

Tedlar™ bag(s) free of condensation Yes No N/A

CONTAINER TYPE:

(Trip Blank Lot Number: _____)

Aqueous: VOA VOA_h VOA_{na2} 100PJ 100PJ_{na2} 125AGB 125AGB_h 125AGB_p 125PB

125PB_{z_{na}} 250AGB 250CGB 250CGB_s 250PB 250PB_n 500AGB 500AGJ 500AGJ_s

500PB 1AGB 1AGB_{na2} 1AGB_s 1PB 1PB_{na} _____ _____ _____ _____

Solid: 4ozCGJ 8ozCGJ 16ozCGJ Sleeve (_____) EnCores® (_____) TerraCores® (_____) _____

Air: Tedlar™ Canister Sorbent Tube PUF _____ Other Matrix (____): _____ _____

Container: A = Amber, B = Bottle, C = Clear, E = Envelope, G = Glass, J = Jar, P = Plastic, and Z = Ziploc/Resealable Bag

Preservative: b = buffered, f = filtered, h = HCl, n = HNO₃, na = NaOH, na₂ = Na₂S₂O₃, p = H₃PO₄, Labeled/Checked by: 300

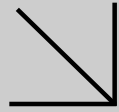
s = H₂SO₄, u = ultra-pure, z_{na} = Zn(CH₃CO₂)₂ + NaOH

Reviewed by: 836

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Calscience



WORK ORDER NUMBER: 16-05-1215

The difference is service



AIR | SOIL | WATER | MARINE CHEMISTRY

Analytical Report For

Client: AllWest Environmental, Inc.

Client Project Name: Hollis Emeryville / 16076.23.28

Attention: Leonard Niles
2141 Mission Street, Suite 100
San Francisco, CA 94110-6331

Vikas Patel

Approved for release on 05/25/2016 by:
Vikas Patel
Project Manager

ResultLink ▶

Email your PM ▶



Eurofins Calscience, Inc. (Calscience) certifies that the test results provided in this report meet all NELAC requirements for parameters for which accreditation is required or available. Any exceptions to NELAC requirements are noted in the case narrative. The original report of subcontracted analyses, if any, is attached to this report. The results in this report are limited to the sample(s) tested and any reproduction thereof must be made in its entirety. The client or recipient of this report is specifically prohibited from making material changes to said report and, to the extent that such changes are made, Calscience is not responsible, legally or otherwise. The client or recipient agrees to indemnify Calscience for any defense to any litigation which may arise.

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 Work Order Number: 16-05-1215

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Condition Upon Receipt:

Samples were received under Chain-of-Custody (COC) on 05/17/16. They were assigned to Work Order 16-05-1215.

Unless otherwise noted on the Sample Receiving forms all samples were received in good condition and within the recommended EPA temperature criteria for the methods noted on the COC. The COC and Sample Receiving Documents are integral elements of the analytical report and are presented at the back of the report.

Holding Times:

All samples were analyzed within prescribed holding times (HT) and/or in accordance with the Calscience Sample Acceptance Policy unless otherwise noted in the analytical report and/or comprehensive case narrative, if required.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of ≤ 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

Quality Control:

All quality control parameters (QC) were within established control limits except where noted in the QC summary forms or described further within this report.

Subcontractor Information:

Unless otherwise noted below (or on the subcontract form), no samples were subcontracted.

Additional Comments:

Air - Sorbent-extracted air methods (EPA TO-4A, EPA TO-10, EPA TO-13A, EPA TO-17): Analytical results are converted from mass/sample basis to mass/volume basis using client-supplied air volumes.

Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are always reported on a wet weight basis.



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Sample Summary

Client: AllWest Environmental, Inc.	Work Order:	16-05-1215
2141 Mission Street, Suite 100	Project Name:	Hollis Emeryville / 16076.23.28
San Francisco, CA 94110-6331	PO Number:	
	Date/Time Received:	05/17/16 11:25
	Number of Containers:	6

Attn: Leonard Niles

Sample Identification	Lab Number	Collection Date and Time	Number of Containers	Matrix
IAQ-6	16-05-1215-1	05/13/16 15:43	1	Air
IAQ-7	16-05-1215-2	05/13/16 15:54	1	Air
IAQ-8	16-05-1215-3	05/13/16 16:15	1	Air
IAQ-9	16-05-1215-4	05/13/16 16:21	1	Air
IAQ-10	16-05-1215-5	05/13/16 16:35	1	Air
OAA-2	16-05-1215-6	05/13/16 16:06	1	Air

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Calscience

Detections Summary

Client: AllWest Environmental, Inc.
2141 Mission Street, Suite 100
San Francisco, CA 94110-6331

Work Order: 16-05-1215
Project Name: Hollis Emeryville / 16076.23.28
Received: 05/17/16

Attn: Leonard Niles

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Client SampleID

Analyte	Result	Qualifiers	RL	Units	Method	Extraction
IAQ-6 (16-05-1215-1)						
Dichlorodifluoromethane	1.4		0.12	ug/m3	EPA TO-15 SIM	N/A
Chloromethane	0.94		0.052	ug/m3	EPA TO-15 SIM	N/A
Trichlorofluoromethane	1.2		0.14	ug/m3	EPA TO-15 SIM	N/A
Methylene Chloride	3.1		0.087	ug/m3	EPA TO-15 SIM	N/A
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.51		0.19	ug/m3	EPA TO-15 SIM	N/A
1,2,4-Trimethylbenzene	0.44		0.25	ug/m3	EPA TO-15 SIM	N/A
1,3,5-Trimethylbenzene	0.13		0.12	ug/m3	EPA TO-15 SIM	N/A
Benzene	0.41		0.080	ug/m3	EPA TO-15 SIM	N/A
Carbon Tetrachloride	0.42		0.063	ug/m3	EPA TO-15 SIM	N/A
Toluene	1.1		0.19	ug/m3	EPA TO-15 SIM	N/A
Ethylbenzene	0.21		0.11	ug/m3	EPA TO-15 SIM	N/A
p/m-Xylene	0.80		0.11	ug/m3	EPA TO-15 SIM	N/A
o-Xylene	0.36		0.11	ug/m3	EPA TO-15 SIM	N/A
Naphthalene	0.17		0.052	ug/m3	EPA TO-15 SIM	N/A
TPH as Gasoline	1000		930	ug/m3	EPA TO-3M	N/A
IAQ-7 (16-05-1215-2)						
Dichlorodifluoromethane	1.4		0.12	ug/m3	EPA TO-15 SIM	N/A
Chloromethane	0.99		0.052	ug/m3	EPA TO-15 SIM	N/A
Trichlorofluoromethane	1.1		0.14	ug/m3	EPA TO-15 SIM	N/A
Methylene Chloride	2.6		0.087	ug/m3	EPA TO-15 SIM	N/A
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.46		0.19	ug/m3	EPA TO-15 SIM	N/A
Chloroform	0.53		0.12	ug/m3	EPA TO-15 SIM	N/A
Benzene	0.30		0.080	ug/m3	EPA TO-15 SIM	N/A
Carbon Tetrachloride	0.38		0.063	ug/m3	EPA TO-15 SIM	N/A
Toluene	0.94		0.19	ug/m3	EPA TO-15 SIM	N/A
Trichloroethene	0.17		0.13	ug/m3	EPA TO-15 SIM	N/A
Ethylbenzene	0.13		0.11	ug/m3	EPA TO-15 SIM	N/A
p/m-Xylene	0.44		0.11	ug/m3	EPA TO-15 SIM	N/A
o-Xylene	0.22		0.11	ug/m3	EPA TO-15 SIM	N/A
Naphthalene	0.092		0.052	ug/m3	EPA TO-15 SIM	N/A
TPH as Gasoline	1200		930	ug/m3	EPA TO-3M	N/A


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* MDL is shown



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Detections Summary

Client: AllWest Environmental, Inc.
2141 Mission Street, Suite 100
San Francisco, CA 94110-6331

Work Order: 16-05-1215
Project Name: Hollis Emeryville / 16076.23.28
Received: 05/17/16

Attn: Leonard Niles

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Client SampleID

Analyte	Result	Qualifiers	RL	Units	Method	Extraction
IAQ-8 (16-05-1215-3)						
Dichlorodifluoromethane	1.5		0.12	ug/m3	EPA TO-15 SIM	N/A
Chloromethane	0.95		0.052	ug/m3	EPA TO-15 SIM	N/A
Trichlorofluoromethane	1.2		0.14	ug/m3	EPA TO-15 SIM	N/A
Methylene Chloride	0.32		0.087	ug/m3	EPA TO-15 SIM	N/A
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.52		0.19	ug/m3	EPA TO-15 SIM	N/A
Benzene	0.54		0.080	ug/m3	EPA TO-15 SIM	N/A
Carbon Tetrachloride	0.42		0.063	ug/m3	EPA TO-15 SIM	N/A
Toluene	0.36		0.19	ug/m3	EPA TO-15 SIM	N/A
p/m-Xylene	0.26		0.11	ug/m3	EPA TO-15 SIM	N/A
o-Xylene	0.16		0.11	ug/m3	EPA TO-15 SIM	N/A
TPH as Gasoline	1200		930	ug/m3	EPA TO-3M	N/A
IAQ-9 (16-05-1215-4)						
Dichlorodifluoromethane	1.4		0.12	ug/m3	EPA TO-15 SIM	N/A
Chloromethane	1.0		0.052	ug/m3	EPA TO-15 SIM	N/A
Trichlorofluoromethane	1.3		0.14	ug/m3	EPA TO-15 SIM	N/A
Methylene Chloride	0.33		0.087	ug/m3	EPA TO-15 SIM	N/A
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.54		0.19	ug/m3	EPA TO-15 SIM	N/A
Benzene	0.55		0.080	ug/m3	EPA TO-15 SIM	N/A
Carbon Tetrachloride	0.43		0.063	ug/m3	EPA TO-15 SIM	N/A
Toluene	0.50		0.19	ug/m3	EPA TO-15 SIM	N/A
Ethylbenzene	0.13		0.11	ug/m3	EPA TO-15 SIM	N/A
p/m-Xylene	0.49		0.11	ug/m3	EPA TO-15 SIM	N/A
o-Xylene	0.31		0.11	ug/m3	EPA TO-15 SIM	N/A
Naphthalene	0.057		0.052	ug/m3	EPA TO-15 SIM	N/A
TPH as Gasoline	1400		930	ug/m3	EPA TO-3M	N/A
IAQ-10 (16-05-1215-5)						
Dichlorodifluoromethane	1.6		0.12	ug/m3	EPA TO-15 SIM	N/A
Chloromethane	0.94		0.052	ug/m3	EPA TO-15 SIM	N/A
Trichlorofluoromethane	1.2		0.14	ug/m3	EPA TO-15 SIM	N/A
Methylene Chloride	0.28		0.087	ug/m3	EPA TO-15 SIM	N/A
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.51		0.19	ug/m3	EPA TO-15 SIM	N/A
Benzene	0.40		0.080	ug/m3	EPA TO-15 SIM	N/A
Carbon Tetrachloride	0.40		0.063	ug/m3	EPA TO-15 SIM	N/A
Toluene	0.37		0.19	ug/m3	EPA TO-15 SIM	N/A
Ethylbenzene	0.28		0.11	ug/m3	EPA TO-15 SIM	N/A
p/m-Xylene	1.3		0.11	ug/m3	EPA TO-15 SIM	N/A
o-Xylene	0.91		0.11	ug/m3	EPA TO-15 SIM	N/A
TPH as Gasoline	1100		930	ug/m3	EPA TO-3M	N/A

* MDL is shown

Detections Summary

Client: AllWest Environmental, Inc.
 2141 Mission Street, Suite 100
 San Francisco, CA 94110-6331

Work Order: 16-05-1215
 Project Name: Hollis Emeryville / 16076.23.28
 Received: 05/17/16

Attn: Leonard Niles

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Client SampleID

<u>Analyte</u>	<u>Result</u>	<u>Qualifiers</u>	<u>RL</u>	<u>Units</u>	<u>Method</u>	<u>Extraction</u>
OAA-2 (16-05-1215-6)						
Dichlorodifluoromethane	1.4		0.12	ug/m3	EPA TO-15 SIM	N/A
Chloromethane	1.1		0.052	ug/m3	EPA TO-15 SIM	N/A
Trichlorofluoromethane	1.1		0.14	ug/m3	EPA TO-15 SIM	N/A
Methylene Chloride	0.27		0.087	ug/m3	EPA TO-15 SIM	N/A
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.49		0.19	ug/m3	EPA TO-15 SIM	N/A
Benzene	0.30		0.080	ug/m3	EPA TO-15 SIM	N/A
Carbon Tetrachloride	0.40		0.063	ug/m3	EPA TO-15 SIM	N/A
Toluene	0.53		0.19	ug/m3	EPA TO-15 SIM	N/A
Ethylbenzene	0.12		0.11	ug/m3	EPA TO-15 SIM	N/A
p/m-Xylene	0.38		0.11	ug/m3	EPA TO-15 SIM	N/A
o-Xylene	0.16		0.11	ug/m3	EPA TO-15 SIM	N/A
TPH as Gasoline	970		930	ug/m3	EPA TO-3M	N/A

Subcontracted analyses, if any, are not included in this summary.

Analytical Report

AllWest Environmental, Inc.
 2141 Mission Street, Suite 100
 San Francisco, CA 94110-6331

Date Received: 05/17/16
 Work Order: 16-05-1215
 Preparation: N/A
 Method: EPA TO-15 SIM
 Units: ug/m3

Project: Hollis Emeryville / 16076.23.28

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IAQ-6	16-05-1215-1-A	05/13/16 15:43	Air	GC/MS KK	N/A	05/18/16 22:50	160518L01

Parameter	Result	RL	DF	Qualifiers
Dichlorodifluoromethane	1.4	0.12	1.00	
Chloromethane	0.94	0.052	1.00	
Vinyl Chloride	ND	0.026	1.00	
Chloroethane	ND	0.066	1.00	
Trichlorofluoromethane	1.2	0.14	1.00	
1,1-Dichloroethene	ND	0.099	1.00	
Methylene Chloride	3.1	0.087	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.51	0.19	1.00	
t-1,2-Dichloroethene	ND	0.099	1.00	
1,1-Dichloroethane	ND	0.10	1.00	
c-1,2-Dichloroethene	ND	0.099	1.00	
Chloroform	ND	0.12	1.00	
1,2-Dichloroethane	ND	0.10	1.00	
1,1,1-Trichloroethane	ND	0.14	1.00	
1,2,4-Trimethylbenzene	0.44	0.25	1.00	
1,3,5-Trimethylbenzene	0.13	0.12	1.00	
4-Ethyltoluene	ND	0.25	1.00	
Chlorobenzene	ND	0.12	1.00	
1,1-Difluoroethane	ND	0.68	1.00	
Benzene	0.41	0.080	1.00	
Carbon Tetrachloride	0.42	0.063	1.00	
Bromodichloromethane	ND	0.17	1.00	
1,1,2-Trichloroethane	ND	0.14	1.00	
Toluene	1.1	0.19	1.00	
Dibromochloromethane	ND	0.21	1.00	
Trichloroethene	ND	0.13	1.00	
Tetrachloroethene	ND	0.17	1.00	
Ethylbenzene	0.21	0.11	1.00	
p/m-Xylene	0.80	0.11	1.00	
1,1,2,2-Tetrachloroethane	ND	0.17	1.00	
o-Xylene	0.36	0.11	1.00	
Hexachloro-1,3-Butadiene	ND	0.27	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	0.090	1.00	
Naphthalene	0.17	0.052	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

AllWest Environmental, Inc.
 2141 Mission Street, Suite 100
 San Francisco, CA 94110-6331

Date Received: 05/17/16
 Work Order: 16-05-1215
 Preparation: N/A
 Method: EPA TO-15 SIM
 Units: ug/m3

Project: Hollis Emeryville / 16076.23.28

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
1,4-Bromofluorobenzene	85	45-153	
1,2-Dichloroethane-d4	101	37-163	
Toluene-d8	91	73-121	



Calscience

Analytical Report

AllWest Environmental, Inc.
2141 Mission Street, Suite 100
San Francisco, CA 94110-6331

Date Received: 05/17/16
Work Order: 16-05-1215
Preparation: N/A
Method: EPA TO-15 SIM
Units: ug/m3

Project: Hollis Emeryville / 16076.23.28

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IAQ-7	16-05-1215-2-A	05/13/16 15:54	Air	GC/MS KK	N/A	05/18/16 23:49	160518L01

Parameter	Result	RL	DF	Qualifiers
Dichlorodifluoromethane	1.4	0.12	1.00	
Chloromethane	0.99	0.052	1.00	
Vinyl Chloride	ND	0.026	1.00	
Chloroethane	ND	0.066	1.00	
Trichlorofluoromethane	1.1	0.14	1.00	
1,1-Dichloroethene	ND	0.099	1.00	
Methylene Chloride	2.6	0.087	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.46	0.19	1.00	
t-1,2-Dichloroethene	ND	0.099	1.00	
1,1-Dichloroethane	ND	0.10	1.00	
c-1,2-Dichloroethene	ND	0.099	1.00	
Chloroform	0.53	0.12	1.00	
1,2-Dichloroethane	ND	0.10	1.00	
1,1,1-Trichloroethane	ND	0.14	1.00	
1,2,4-Trimethylbenzene	ND	0.25	1.00	
1,3,5-Trimethylbenzene	ND	0.12	1.00	
4-Ethyltoluene	ND	0.25	1.00	
Chlorobenzene	ND	0.12	1.00	
1,1-Difluoroethane	ND	0.68	1.00	
Benzene	0.30	0.080	1.00	
Carbon Tetrachloride	0.38	0.063	1.00	
Bromodichloromethane	ND	0.17	1.00	
1,1,2-Trichloroethane	ND	0.14	1.00	
Toluene	0.94	0.19	1.00	
Dibromochloromethane	ND	0.21	1.00	
Trichloroethene	0.17	0.13	1.00	
Tetrachloroethene	ND	0.17	1.00	
Ethylbenzene	0.13	0.11	1.00	
p/m-Xylene	0.44	0.11	1.00	
1,1,2,2-Tetrachloroethane	ND	0.17	1.00	
o-Xylene	0.22	0.11	1.00	
Hexachloro-1,3-Butadiene	ND	0.27	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	0.090	1.00	
Naphthalene	0.092	0.052	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

AllWest Environmental, Inc.
2141 Mission Street, Suite 100
San Francisco, CA 94110-6331

Date Received: 05/17/16
Work Order: 16-05-1215
Preparation: N/A
Method: EPA TO-15 SIM
Units: ug/m3

Project: Hollis Emeryville / 16076.23.28

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
1,4-Bromofluorobenzene	89	45-153	
1,2-Dichloroethane-d4	102	37-163	
Toluene-d8	90	73-121	



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Analytical Report

AllWest Environmental, Inc.
2141 Mission Street, Suite 100
San Francisco, CA 94110-6331

Date Received: 05/17/16
Work Order: 16-05-1215
Preparation: N/A
Method: EPA TO-15 SIM
Units: ug/m3

Project: Hollis Emeryville / 16076.23.28

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IAQ-8	16-05-1215-3-A	05/13/16 16:15	Air	GC/MS KK	N/A	05/19/16 00:44	160518L01

Parameter	Result	RL	DF	Qualifiers
Dichlorodifluoromethane	1.5	0.12	1.00	
Chloromethane	0.95	0.052	1.00	
Vinyl Chloride	ND	0.026	1.00	
Chloroethane	ND	0.066	1.00	
Trichlorofluoromethane	1.2	0.14	1.00	
1,1-Dichloroethene	ND	0.099	1.00	
Methylene Chloride	0.32	0.087	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.52	0.19	1.00	
t-1,2-Dichloroethene	ND	0.099	1.00	
1,1-Dichloroethane	ND	0.10	1.00	
c-1,2-Dichloroethene	ND	0.099	1.00	
Chloroform	ND	0.12	1.00	
1,2-Dichloroethane	ND	0.10	1.00	
1,1,1-Trichloroethane	ND	0.14	1.00	
1,2,4-Trimethylbenzene	ND	0.25	1.00	
1,3,5-Trimethylbenzene	ND	0.12	1.00	
4-Ethyltoluene	ND	0.25	1.00	
Chlorobenzene	ND	0.12	1.00	
1,1-Difluoroethane	ND	0.68	1.00	
Benzene	0.54	0.080	1.00	
Carbon Tetrachloride	0.42	0.063	1.00	
Bromodichloromethane	ND	0.17	1.00	
1,1,2-Trichloroethane	ND	0.14	1.00	
Toluene	0.36	0.19	1.00	
Dibromochloromethane	ND	0.21	1.00	
Trichloroethene	ND	0.13	1.00	
Tetrachloroethene	ND	0.17	1.00	
Ethylbenzene	ND	0.11	1.00	
p/m-Xylene	0.26	0.11	1.00	
1,1,2,2-Tetrachloroethane	ND	0.17	1.00	
o-Xylene	0.16	0.11	1.00	
Hexachloro-1,3-Butadiene	ND	0.27	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	0.090	1.00	
Naphthalene	ND	0.052	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

AllWest Environmental, Inc.
 2141 Mission Street, Suite 100
 San Francisco, CA 94110-6331

Date Received: 05/17/16
 Work Order: 16-05-1215
 Preparation: N/A
 Method: EPA TO-15 SIM
 Units: ug/m3

Project: Hollis Emeryville / 16076.23.28

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
1,4-Bromofluorobenzene	86	45-153	
1,2-Dichloroethane-d4	102	37-163	
Toluene-d8	93	73-121	

Analytical Report

AllWest Environmental, Inc.
2141 Mission Street, Suite 100
San Francisco, CA 94110-6331

Date Received: 05/17/16
Work Order: 16-05-1215
Preparation: N/A
Method: EPA TO-15 SIM
Units: ug/m3

Project: Hollis Emeryville / 16076.23.28

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IAQ-9	16-05-1215-4-A	05/13/16 16:21	Air	GC/MS KK	N/A	05/19/16 01:41	160518L01

Parameter	Result	RL	DF	Qualifiers
Dichlorodifluoromethane	1.4	0.12	1.00	
Chloromethane	1.0	0.052	1.00	
Vinyl Chloride	ND	0.026	1.00	
Chloroethane	ND	0.066	1.00	
Trichlorofluoromethane	1.3	0.14	1.00	
1,1-Dichloroethene	ND	0.099	1.00	
Methylene Chloride	0.33	0.087	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.54	0.19	1.00	
t-1,2-Dichloroethene	ND	0.099	1.00	
1,1-Dichloroethane	ND	0.10	1.00	
c-1,2-Dichloroethene	ND	0.099	1.00	
Chloroform	ND	0.12	1.00	
1,2-Dichloroethane	ND	0.10	1.00	
1,1,1-Trichloroethane	ND	0.14	1.00	
1,2,4-Trimethylbenzene	ND	0.25	1.00	
1,3,5-Trimethylbenzene	ND	0.12	1.00	
4-Ethyltoluene	ND	0.25	1.00	
Chlorobenzene	ND	0.12	1.00	
1,1-Difluoroethane	ND	0.68	1.00	
Benzene	0.55	0.080	1.00	
Carbon Tetrachloride	0.43	0.063	1.00	
Bromodichloromethane	ND	0.17	1.00	
1,1,2-Trichloroethane	ND	0.14	1.00	
Toluene	0.50	0.19	1.00	
Dibromochloromethane	ND	0.21	1.00	
Trichloroethene	ND	0.13	1.00	
Tetrachloroethene	ND	0.17	1.00	
Ethylbenzene	0.13	0.11	1.00	
p/m-Xylene	0.49	0.11	1.00	
1,1,2,2-Tetrachloroethane	ND	0.17	1.00	
o-Xylene	0.31	0.11	1.00	
Hexachloro-1,3-Butadiene	ND	0.27	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	0.090	1.00	
Naphthalene	0.057	0.052	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

AllWest Environmental, Inc.
 2141 Mission Street, Suite 100
 San Francisco, CA 94110-6331

Date Received: 05/17/16
 Work Order: 16-05-1215
 Preparation: N/A
 Method: EPA TO-15 SIM
 Units: ug/m3

Project: Hollis Emeryville / 16076.23.28

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
1,4-Bromofluorobenzene	82	45-153	
1,2-Dichloroethane-d4	100	37-163	
Toluene-d8	92	73-121	

Analytical Report

AllWest Environmental, Inc.
2141 Mission Street, Suite 100
San Francisco, CA 94110-6331

Date Received: 05/17/16
Work Order: 16-05-1215
Preparation: N/A
Method: EPA TO-15 SIM
Units: ug/m3

Project: Hollis Emeryville / 16076.23.28

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IAQ-10	16-05-1215-5-A	05/13/16 16:35	Air	GC/MS KK	N/A	05/19/16 02:35	160518L01

Parameter	Result	RL	DF	Qualifiers
Dichlorodifluoromethane	1.6	0.12	1.00	
Chloromethane	0.94	0.052	1.00	
Vinyl Chloride	ND	0.026	1.00	
Chloroethane	ND	0.066	1.00	
Trichlorofluoromethane	1.2	0.14	1.00	
1,1-Dichloroethene	ND	0.099	1.00	
Methylene Chloride	0.28	0.087	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.51	0.19	1.00	
t-1,2-Dichloroethene	ND	0.099	1.00	
1,1-Dichloroethane	ND	0.10	1.00	
c-1,2-Dichloroethene	ND	0.099	1.00	
Chloroform	ND	0.12	1.00	
1,2-Dichloroethane	ND	0.10	1.00	
1,1,1-Trichloroethane	ND	0.14	1.00	
1,2,4-Trimethylbenzene	ND	0.25	1.00	
1,3,5-Trimethylbenzene	ND	0.12	1.00	
4-Ethyltoluene	ND	0.25	1.00	
Chlorobenzene	ND	0.12	1.00	
1,1-Difluoroethane	ND	0.68	1.00	
Benzene	0.40	0.080	1.00	
Carbon Tetrachloride	0.40	0.063	1.00	
Bromodichloromethane	ND	0.17	1.00	
1,1,2-Trichloroethane	ND	0.14	1.00	
Toluene	0.37	0.19	1.00	
Dibromochloromethane	ND	0.21	1.00	
Trichloroethene	ND	0.13	1.00	
Tetrachloroethene	ND	0.17	1.00	
Ethylbenzene	0.28	0.11	1.00	
p/m-Xylene	1.3	0.11	1.00	
1,1,2,2-Tetrachloroethane	ND	0.17	1.00	
o-Xylene	0.91	0.11	1.00	
Hexachloro-1,3-Butadiene	ND	0.27	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	0.090	1.00	
Naphthalene	ND	0.052	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

AllWest Environmental, Inc.
 2141 Mission Street, Suite 100
 San Francisco, CA 94110-6331

Date Received: 05/17/16
 Work Order: 16-05-1215
 Preparation: N/A
 Method: EPA TO-15 SIM
 Units: ug/m3

Project: Hollis Emeryville / 16076.23.28

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
1,4-Bromofluorobenzene	91	45-153	
1,2-Dichloroethane-d4	103	37-163	
Toluene-d8	94	73-121	



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Analytical Report

AllWest Environmental, Inc.
2141 Mission Street, Suite 100
San Francisco, CA 94110-6331

Date Received: 05/17/16
Work Order: 16-05-1215
Preparation: N/A
Method: EPA TO-15 SIM
Units: ug/m3

Project: Hollis Emeryville / 16076.23.28

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
OAA-2	16-05-1215-6-A	05/13/16 16:06	Air	GC/MS KK	N/A	05/19/16 03:31	160518L01

Parameter	Result	RL	DF	Qualifiers
Dichlorodifluoromethane	1.4	0.12	1.00	
Chloromethane	1.1	0.052	1.00	
Vinyl Chloride	ND	0.026	1.00	
Chloroethane	ND	0.066	1.00	
Trichlorofluoromethane	1.1	0.14	1.00	
1,1-Dichloroethene	ND	0.099	1.00	
Methylene Chloride	0.27	0.087	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.49	0.19	1.00	
t-1,2-Dichloroethene	ND	0.099	1.00	
1,1-Dichloroethane	ND	0.10	1.00	
c-1,2-Dichloroethene	ND	0.099	1.00	
Chloroform	ND	0.12	1.00	
1,2-Dichloroethane	ND	0.10	1.00	
1,1,1-Trichloroethane	ND	0.14	1.00	
1,2,4-Trimethylbenzene	ND	0.25	1.00	
1,3,5-Trimethylbenzene	ND	0.12	1.00	
4-Ethyltoluene	ND	0.25	1.00	
Chlorobenzene	ND	0.12	1.00	
1,1-Difluoroethane	ND	0.68	1.00	
Benzene	0.30	0.080	1.00	
Carbon Tetrachloride	0.40	0.063	1.00	
Bromodichloromethane	ND	0.17	1.00	
1,1,2-Trichloroethane	ND	0.14	1.00	
Toluene	0.53	0.19	1.00	
Dibromochloromethane	ND	0.21	1.00	
Trichloroethene	ND	0.13	1.00	
Tetrachloroethene	ND	0.17	1.00	
Ethylbenzene	0.12	0.11	1.00	
p/m-Xylene	0.38	0.11	1.00	
1,1,2,2-Tetrachloroethane	ND	0.17	1.00	
o-Xylene	0.16	0.11	1.00	
Hexachloro-1,3-Butadiene	ND	0.27	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	0.090	1.00	
Naphthalene	ND	0.052	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

AllWest Environmental, Inc.
2141 Mission Street, Suite 100
San Francisco, CA 94110-6331

Date Received: 05/17/16
Work Order: 16-05-1215
Preparation: N/A
Method: EPA TO-15 SIM
Units: ug/m3

Project: Hollis Emeryville / 16076.23.28

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
1,4-Bromofluorobenzene	88	45-153	
1,2-Dichloroethane-d4	96	37-163	
Toluene-d8	94	73-121	

Analytical Report

AllWest Environmental, Inc.
2141 Mission Street, Suite 100
San Francisco, CA 94110-6331

Date Received: 05/17/16
Work Order: 16-05-1215
Preparation: N/A
Method: EPA TO-15 SIM
Units: ug/m3

Project: Hollis Emeryville / 16076.23.28

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	095-01-052-1563	N/A	Air	GC/MS KK	N/A	05/18/16 20:49	160518L01

Parameter	Result	RL	DF	Qualifiers
Dichlorodifluoromethane	ND	0.12	1.00	
Chloromethane	ND	0.052	1.00	
Vinyl Chloride	ND	0.026	1.00	
Chloroethane	ND	0.066	1.00	
Trichlorofluoromethane	ND	0.14	1.00	
1,1-Dichloroethene	ND	0.099	1.00	
Methylene Chloride	ND	0.087	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	0.19	1.00	
t-1,2-Dichloroethene	ND	0.099	1.00	
1,1-Dichloroethane	ND	0.10	1.00	
c-1,2-Dichloroethene	ND	0.099	1.00	
Chloroform	ND	0.12	1.00	
1,2-Dichloroethane	ND	0.10	1.00	
1,1,1-Trichloroethane	ND	0.14	1.00	
1,2,4-Trimethylbenzene	ND	0.25	1.00	
1,3,5-Trimethylbenzene	ND	0.12	1.00	
4-Ethyltoluene	ND	0.25	1.00	
Chlorobenzene	ND	0.12	1.00	
1,1-Difluoroethane	ND	0.68	1.00	
Benzene	ND	0.080	1.00	
Carbon Tetrachloride	ND	0.063	1.00	
Bromodichloromethane	ND	0.17	1.00	
1,1,2-Trichloroethane	ND	0.14	1.00	
Toluene	ND	0.19	1.00	
Dibromochloromethane	ND	0.21	1.00	
Trichloroethene	ND	0.13	1.00	
Tetrachloroethene	ND	0.17	1.00	
Ethylbenzene	ND	0.11	1.00	
p/m-Xylene	ND	0.11	1.00	
1,1,2,2-Tetrachloroethane	ND	0.17	1.00	
o-Xylene	ND	0.11	1.00	
Hexachloro-1,3-Butadiene	ND	0.27	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	0.090	1.00	
Naphthalene	ND	0.052	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

AllWest Environmental, Inc.
 2141 Mission Street, Suite 100
 San Francisco, CA 94110-6331

Date Received: 05/17/16
 Work Order: 16-05-1215
 Preparation: N/A
 Method: EPA TO-15 SIM
 Units: ug/m3

Project: Hollis Emeryville / 16076.23.28

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
1,4-Bromofluorobenzene	81	45-153	
1,2-Dichloroethane-d4	98	37-163	
Toluene-d8	101	73-121	



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Analytical Report

AllWest Environmental, Inc.
2141 Mission Street, Suite 100
San Francisco, CA 94110-6331

Date Received: 05/17/16
Work Order: 16-05-1215
Preparation: N/A
Method: EPA TO-3M
Units: ug/m3

Project: Hollis Emeryville / 16076.23.28

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IAQ-6	16-05-1215-1-A	05/13/16 15:43	Air	GC 13	N/A	05/18/16 10:48	160518L02
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
TPH as Gasoline		1000		930		1.00	
IAQ-7	16-05-1215-2-A	05/13/16 15:54	Air	GC 13	N/A	05/18/16 10:58	160518L02
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
TPH as Gasoline		1200		930		1.00	
IAQ-8	16-05-1215-3-A	05/13/16 16:15	Air	GC 13	N/A	05/18/16 11:08	160518L02
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
TPH as Gasoline		1200		930		1.00	
IAQ-9	16-05-1215-4-A	05/13/16 16:21	Air	GC 13	N/A	05/18/16 11:24	160518L02
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
TPH as Gasoline		1400		930		1.00	
IAQ-10	16-05-1215-5-A	05/13/16 16:35	Air	GC 13	N/A	05/18/16 11:36	160518L02
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
TPH as Gasoline		1100		930		1.00	
OAA-2	16-05-1215-6-A	05/13/16 16:06	Air	GC 13	N/A	05/18/16 11:51	160518L02
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
TPH as Gasoline		970		930		1.00	
Method Blank	099-15-709-17	N/A	Air	GC 13	N/A	05/18/16 09:34	160518L02
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
TPH as Gasoline		ND		930		1.00	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



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Quality Control - Sample Duplicate

AllWest Environmental, Inc.
2141 Mission Street, Suite 100
San Francisco, CA 94110-6331

Date Received: 05/17/16
Work Order: 16-05-1215
Preparation: N/A
Method: EPA TO-3M

Project: Hollis Emeryville / 16076.23.28

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Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	Duplicate Batch Number
IAQ-6	Sample	Air	GC 13	N/A	05/18/16 10:48	160518D02
IAQ-6	Sample Duplicate	Air	GC 13	N/A	05/18/16 13:40	160518D02

<u>Parameter</u>	<u>Sample Conc.</u>	<u>DUP Conc.</u>	<u>RPD</u>	<u>RPD CL</u>	<u>Qualifiers</u>
TPH as Gasoline	1021	1196	16	0-20	



Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



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Quality Control - LCS/LCSD

AllWest Environmental, Inc.
2141 Mission Street, Suite 100
San Francisco, CA 94110-6331

Date Received: 05/17/16
Work Order: 16-05-1215
Preparation: N/A
Method: EPA TO-15 SIM

Project: Hollis Emeryville / 16076.23.28

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Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number				
095-01-052-1563	LCS	Air	GC/MS KK	N/A	05/18/16 19:06	160518L01				
095-01-052-1563	LCSD	Air	GC/MS KK	N/A	05/18/16 19:58	160518L01				
Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
Dichlorodifluoromethane	2.473	1.744	71	2.182	88	50-150	33-167	22	0-30	
Chloromethane	1.033	0.8194	79	0.8068	78	50-150	33-167	2	0-30	
Vinyl Chloride	1.278	0.9315	73	1.157	91	44-140	28-156	22	0-33	
Chloroethane	1.319	1.166	88	1.193	90	50-150	33-167	2	0-30	
Trichlorofluoromethane	2.809	2.599	93	2.640	94	50-150	33-167	2	0-30	
1,1-Dichloroethene	1.982	1.836	93	1.840	93	50-150	33-167	0	0-30	
Methylene Chloride	1.737	1.446	83	1.458	84	50-150	33-167	1	0-30	
1,1,2-Trichloro-1,2,2-Trifluoroethane	3.832	3.546	93	3.580	93	50-150	33-167	1	0-30	
t-1,2-Dichloroethene	1.982	1.770	89	1.772	89	50-150	33-167	0	0-30	
1,1-Dichloroethane	2.024	1.753	87	1.625	80	50-150	33-167	8	0-30	
c-1,2-Dichloroethene	1.982	1.538	78	1.544	78	35-165	13-187	0	0-35	
Chloroform	2.441	1.949	80	1.967	81	50-150	33-167	1	0-30	
1,2-Dichloroethane	2.024	1.664	82	1.668	82	28-166	5-189	0	0-40	
1,1,1-Trichloroethane	2.728	2.309	85	2.332	86	50-150	33-167	1	0-30	
1,2,4-Trimethylbenzene	2.458	2.009	82	2.004	82	50-150	33-167	0	0-30	
1,3,5-Trimethylbenzene	2.458	2.229	91	2.253	92	50-150	33-167	1	0-30	
4-Ethyltoluene	2.458	2.121	86	2.152	88	50-150	33-167	1	0-30	
Chlorobenzene	2.302	1.926	84	1.926	84	50-150	33-167	0	0-30	
1,1-Difluoroethane	1.351	1.411	104	1.068	79	50-150	33-167	28	0-30	
Benzene	1.597	1.274	80	1.283	80	27-153	6-174	1	0-34	
Carbon Tetrachloride	3.146	2.651	84	2.667	85	7-187	0-217	1	0-31	
Bromodichloromethane	3.350	2.820	84	2.814	84	50-150	33-167	0	0-30	
1,1,2-Trichloroethane	2.728	2.262	83	2.273	83	27-171	3-195	0	0-38	
Toluene	1.884	1.509	80	1.501	80	28-154	7-175	1	0-42	
Dibromochloromethane	4.259	3.673	86	3.665	86	50-150	33-167	0	0-30	
Trichloroethene	2.687	2.146	80	2.186	81	43-139	27-155	2	0-31	
Tetrachloroethene	3.391	2.952	87	2.921	86	34-154	14-174	1	0-33	
Ethylbenzene	2.171	1.820	84	1.808	83	27-153	6-174	1	0-46	
p/m-Xylene	4.342	3.838	88	3.822	88	21-165	0-189	0	0-51	
1,1,2,2-Tetrachloroethane	3.433	3.015	88	3.025	88	50-150	33-167	0	0-30	
o-Xylene	2.171	1.957	90	1.961	90	22-160	0-183	0	0-48	
Hexachloro-1,3-Butadiene	5.333	5.691	107	5.961	112	50-150	33-167	5	0-30	
Methyl-t-Butyl Ether (MTBE)	1.803	1.782	99	1.432	79	50-150	33-167	22	0-30	
Naphthalene	2.621	3.170	121	3.292	126	40-190	15-215	4	0-30	

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - LCS/LCSD

AllWest Environmental, Inc.
2141 Mission Street, Suite 100
San Francisco, CA 94110-6331

Date Received: 05/17/16
Work Order: 16-05-1215
Preparation: N/A
Method: EPA TO-15 SIM

Project: Hollis Emeryville / 16076.23.28

Page 2 of 3

Total number of LCS compounds: 34
Total number of ME compounds: 0
Total number of ME compounds allowed: 2
LCS ME CL validation result: Pass


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RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - LCS

AllWest Environmental, Inc.
2141 Mission Street, Suite 100
San Francisco, CA 94110-6331

Date Received: 05/17/16
Work Order: 16-05-1215
Preparation: N/A
Method: EPA TO-3M

Project: Hollis Emeryville / 16076.23.28

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Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
099-15-709-17	LCS	Air	GC 13	N/A	05/18/16 09:21	160518L02
<u>Parameter</u>		<u>Spike Added</u>	<u>Conc. Recovered</u>	<u>LCS %Rec.</u>	<u>%Rec. CL</u>	<u>Qualifiers</u>
TPH as Gasoline		932500	831000	89	80-120	



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RPD: Relative Percent Difference. CL: Control Limits

Summa Canister Vacuum Summary

Work Order: 16-05-1215

Page 1 of 1

Sample Name	Vacuum Out	Vacuum In	Equipment	Description
IAQ-6	-29.50 in Hg	-4.00 in Hg	D673	Summa Canister 6L
IAQ-7	-29.50 in Hg	-10.20 in Hg	D206	Summa Canister 6L
IAQ-8	-29.50 in Hg	-5.40 in Hg	SIM088	Summa Canister 6L
IAQ-9	-29.50 in Hg	-7.00 in Hg	D794	Summa Canister 6L
IAQ-10	-29.50 in Hg	-4.30 in Hg	SIM008	Summa Canister 6L
OAA-2	-29.50 in Hg	-5.60 in Hg	D251	Summa Canister 6L

Sample Analysis Summary Report

Work Order: 16-05-1215

Page 1 of 1

<u>Method</u>	<u>Extraction</u>	<u>Chemist ID</u>	<u>Instrument</u>	<u>Analytical Location</u>
EPA TO-15 SIM	N/A	326	GC/MS KK	2
EPA TO-3M	N/A	1078	GC 13	2

Glossary of Terms and Qualifiers

Work Order: 16-05-1215

Page 1 of 1

<u>Qualifiers</u>	<u>Definition</u>
*	See applicable analysis comment.
<	Less than the indicated value.
>	Greater than the indicated value.
1	Surrogate compound recovery was out of control due to a required sample dilution. Therefore, the sample data was reported without further clarification.
2	Surrogate compound recovery was out of control due to matrix interference. The associated method blank surrogate spike compound was in control and, therefore, the sample data was reported without further clarification.
3	Recovery of the Matrix Spike (MS) or Matrix Spike Duplicate (MSD) compound was out of control due to suspected matrix interference. The associated LCS recovery was in control.
4	The MS/MSD RPD was out of control due to suspected matrix interference.
5	The PDS/PDSD or PES/PESD associated with this batch of samples was out of control due to suspected matrix interference.
6	Surrogate recovery below the acceptance limit.
7	Surrogate recovery above the acceptance limit.
B	Analyte was present in the associated method blank.
BU	Sample analyzed after holding time expired.
BV	Sample received after holding time expired.
CI	See case narrative.
E	Concentration exceeds the calibration range.
ET	Sample was extracted past end of recommended max. holding time.
HD	The chromatographic pattern was inconsistent with the profile of the reference fuel standard.
HDH	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but heavier hydrocarbons were also present (or detected).
HDL	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but lighter hydrocarbons were also present (or detected).
J	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
JA	Analyte positively identified but quantitation is an estimate.
ME	LCS Recovery Percentage is within Marginal Exceedance (ME) Control Limit range (+/- 4 SD from the mean).
ND	Parameter not detected at the indicated reporting limit.
Q	Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration by a factor of four or greater.
SG	The sample extract was subjected to Silica Gel treatment prior to analysis.
X	% Recovery and/or RPD out-of-range.
Z	Analyte presence was not confirmed by second column or GC/MS analysis.
	Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are reported on a wet weight basis.
	Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of <= 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.
	A calculated total result (Example: Total Pesticides) is the summation of each component concentration and/or, if "J" flags are reported, estimated concentration. Component concentrations showing not detected (ND) are summed into the calculated total result as zero concentrations.

1215



800-322-5555 www.gso.com

Ship From
ALLWEST ENVIRONMENTAL
DARLENE TORIO
2141 MISSION ST
STE 100
SAN FRANCISCO, CA 94110

Tracking #: 531931963

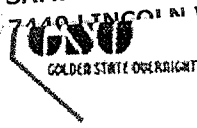
PDS



Ship To
EUROFINS CALSCIENCE, INC.
SAMPLE RECEIVING
7440 LINCOLN WAY

ORC

A



800-322-5555 www.gso.com

Ship From
ALLWEST ENVIRONMENTAL
DARLENE TORIO
2141 MISSION ST
STE 100
SAN FRANCISCO, CA 94110

Tracking #: 531931964

PDS



Ship To
EUROFINS CALSCIENCE, INC.
SAMPLE RECEIVING
7440 LINCOLN WAY
GARDEN GROVE, CA 92841

ORC

A

GARDEN GROVE

COD: \$0.00
Weight: 0 lb(s)
Reference:
16076.23.28
Delivery Instructions:

D92845A



Signature Type: REQUIRED

51865041

Print Date: 5/16/2016 10:39 AM

SAMPLE RECEIPT CHECKLIST

COOLER 0 OF 0

CLIENT: Allwest Env'l.

DATE: 05/17/2016

TEMPERATURE: (Criteria: 0.0°C – 6.0°C, not frozen except sediment/tissue)

Thermometer ID: SC2A (CF: 0.0°C); Temperature (w/o CF): _____°C (w/ CF): _____°C; Blank Sample

Sample(s) outside temperature criteria (PM/APM contacted by: _____)

Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling

Sample(s) received at ambient temperature; placed on ice for transport by courier

Ambient Temperature: Air Filter

Checked by: SJC

CUSTODY SEAL:

Cooler Present and Intact Present but Not Intact Not Present N/A

Checked by: SJC

Sample(s) Present and Intact Present but Not Intact Not Present N/A

Checked by: 300

SAMPLE CONDITION:

Chain-of-Custody (COC) document(s) received with samples Yes No N/A

COC document(s) received complete Yes No N/A

Sampling date Sampling time Matrix Number of containers

No analysis requested Not relinquished No relinquished date No relinquished time

Sampler's name indicated on COC Yes No N/A

Sample container label(s) consistent with COC Yes No N/A

Sample container(s) intact and in good condition Yes No N/A

Proper containers for analyses requested Yes No N/A

Sufficient volume/mass for analyses requested Yes No N/A

Samples received within holding time Yes No N/A

Aqueous samples for certain analyses received within 15-minute holding time

pH Residual Chlorine Dissolved Sulfide Dissolved Oxygen Yes No N/A

Proper preservation chemical(s) noted on COC and/or sample container Yes No N/A

Unpreserved aqueous sample(s) received for certain analyses

Volatile Organics Total Metals Dissolved Metals

Container(s) for certain analysis free of headspace Yes No N/A

Volatile Organics Dissolved Gases (RSK-175) Dissolved Oxygen (SM 4500)

Carbon Dioxide (SM 4500) Ferrous Iron (SM 3500) Hydrogen Sulfide (Hach)

Tedlar™ bag(s) free of condensation Yes No N/A

CONTAINER TYPE:

(Trip Blank Lot Number: _____)

Aqueous: VOA VOA_h VOA_{na2} 100PJ 100PJ_{na2} 125AGB 125AGB_h 125AGB_p 125PB

125PB_{z_{na}} 250AGB 250CGB 250CGB_s 250PB 250PB_n 500AGB 500AG_J 500AG_{J_s}

500PB 1AGB 1AGB_{na2} 1AGB_s 1PB 1PB_{na} _____ _____ _____ _____

Solid: 4ozCGJ 8ozCGJ 16ozCGJ Sleeve (_____) EnCores® (_____) TerraCores® (_____) _____

Air: Tedlar™ Canister Sorbent Tube PUF _____ Other Matrix (____): _____ _____

Container: A = Amber, B = Bottle, C = Clear, E = Envelope, G = Glass, J = Jar, P = Plastic, and Z = Ziploc/Resealable Bag

Preservative: b = buffered, f = filtered, h = HCl, n = HNO₃, na = NaOH, na₂ = Na₂S₂O₃, p = H₃PO₄,

Labeled/Checked by: 300

s = H₂SO₄, u = ultra-pure, z_{na} = Zn(CH₃CO₂)₂ + NaOH

Reviewed by: SJC

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Vikas Patel

From: Leonard Niles <leonard@allwest1.com>
Sent: Thursday, May 19, 2016 7:12 AM
To: Erick Ovalle
Cc: Vikas Patel; 'Sara Bloom'
Subject: RE: Sample receipt confirmation / 16-05-1215 / Hollis Emeryville / 16076.23.28

Eric,

The correct sample ID should be IAQ-7. The "IAQ-WBTH" was an earlier designation that should have been changed.

Thanks,
Len

Leonard Niles, P.G., C.H.G.
Senior Project Manager
AllWest Environmental, Inc.

2141 Mission Street, Suite 100
San Francisco, CA 94110
office (415) 391-2510 x204
fax (415) 391-2008
Leonard@AllWest1.com



From: Erick Ovalle [<mailto:ErickOvalle@eurofinsUS.com>]
Sent: Wednesday, May 18, 2016 11:04 AM
To: 'Leonard Niles'; Sara Bloom
Cc: Vikas Patel
Subject: Sample receipt confirmation / 16-05-1215 / Hollis Emeryville / 16076.23.28

Sample receipt confirmation attached. Please review and advise of any changes required.

APPENDIX G



APPLICATION FOR AUTHORIZATION TO USE

REPORT TITLE: DATA GAP INVESTIGATION REPORT

6655 Hollis St. & 1471 67th St.
Emeryville, CA 94608

PROJECT NUMBER: 16076.23

To: AllWest Environmental, Inc.
2141 Mission Street, Suite 100
San Francisco, CA 94110

From (Applicant): _____

(Please clearly identify name and address of person/entity applying for permission to use or copy this document)

Ladies and Gentlemen:

Applicant states they have thoroughly reviewed the report and had the opportunity to discuss with AllWest the report's methodology, findings and conclusion(s).

Applicant hereby applies for permission to rely upon AllWest's work product, as described above, for the purpose of (state here the purpose for which you wish to rely upon the work product):

Applicant only can accept and rely upon AllWest work product under the strict understanding that Applicant is bound by all provisions in the General Conditions to the Work Authorization Agreement provided below. Every report, recommendation, finding, or conclusion issued by AllWest shall be subject to the limitations stated in the Agreement and subject report(s). If this is agreeable, please sign below and return one copy of this letter to us along with the applicable fees. Upon receipt and if acceptable, our signed letter will be returned. AllWest may withhold permission at its sole discretion or require additional re-use fees or terms.

FEES: A \$1,650 coordination and reliance fee, payable in advance, will apply. If desired, for an additional \$150 report reproduction fee, we will reissue the report in the name of the Applicant; the report date, however, will remain the same. All checks will be returned if your request for reliance is not approved.

REQUESTED BY

APPROVED BY

Applicant Company

AllWest Environmental, Inc.

Print Name and Title

Print Name and Title

Signature and Date

Signature and Date

GENERAL CONDITIONS TO THE WORK AUTHORIZATION AGREEMENT

It is hereby agreed that the Client retains AllWest to provide services as set forth in the Work Authorization attached hereto (the "Work"). This contract shall be controlled by the following terms and conditions, and these terms and conditions shall also control any further assignments performed pursuant to this Work Authorization. Client's signature on this Work Authorization constitutes Client's agreement to the all terms to this contract, including these General Conditions.

FEES AND COSTS

1. AllWest shall charge for work performed by its personnel at the rates identified in the Work Authorization. These rates are subject to reasonable increases by AllWest upon giving Client 30 days advance notice. Reimbursable Costs will be charged to the Client in addition to the fees for the basic services under this Agreement and all Additional Services (defined below) under the Agreement. Reimbursable Costs include, but are not limited to, expenses for travel, including transportation, meals, lodging, long distance telephone and other related expenses, as well as the costs of reproduction of all drawings for the Client's use, costs for specifications and type-written reports, permit and approval fees, automobile travel reimbursement, costs and fees of subcontractors, and soil and other materials testing. No overtime is accrued for time spent in travel. All costs incurred which relate to the services or materials provided by a contractor or subcontractor to AllWest shall be invoiced by AllWest on the basis of cost plus twenty percent (20%). Automobile travel reimbursement shall be at the rate of fifty- eight cents (\$0.58) per mile. All other reimbursable costs shall be invoiced and billed by AllWest at the rate of 1.1 times the direct cost to AllWest. Reimbursable costs will be charged to the client only as outlined in the Work Authorization if the scope of work is for Phase I Environmental Site Assessment, Property Condition Assessment, Seismic Assessment or ALTA survey. Invoices for work performed shall be submitted monthly. Payment will be due upon receipt of invoice. Client shall pay interest on the balance of unpaid invoices which are overdue by more than 30 days, at a rate of 18% per annum as well as all attorney fees and costs incurred by AllWest to secure payment of unpaid invoices. AllWest may waive such fees at its sole discretion.

STANDARD OF CARE

2. AllWest will perform its work in accordance with the standard of care of its industry, as it is at the time of the work being performed, and applicable in the locale of the work being performed. AllWest makes no other warranties, express or implied regarding its work.

LIMITATION OF REMEDIES

3. Client expressly agrees that to the fullest extent permitted by law, Client's remedies for any liability incurred by AllWest, and/or its employees or agents, for any and all claims arising from AllWest's services, shall be \$50,000 or its fees, whichever is greater.

Client may request a higher limitation of remedies, but must do so in writing. Upon such written request, AllWest may agree to increase this limit in exchange for a mutually negotiated higher fee commensurate with the increased risk to AllWest. Any such agreed increase in fee and limitation of remedies amount must be memorialized by written agreement which expressly amends the terms of this clause.

As used in this section, the term "limitation of remedies" shall apply to claims of any kind, including, but not limited to, claims brought in contract, tort, strict liability, or otherwise, for any and all injuries, claims, losses, expenses, or damages whatsoever arising out of or in any way related to AllWest's services or the services of AllWest's subcontractors, consultants, agents, officers, directors, and employees from any cause(s). AllWest shall not be liable for any claims of loss of profits or any other indirect, incidental, or consequential damages of any nature whatsoever. Client & AllWest have specifically negotiated this limitation.

INDEMNIFICATION

4. Notwithstanding any other provision of this Agreement, Client agrees, to the fullest extent permitted by law, to waive any claim against, release from any liability or responsibility for, and , indemnify and hold harmless AllWest, its employees, agents and sub-consultants (collectively, Consultant) from and against any and all damages, liabilities, claims, actions or costs of any kind, including reasonable attorney's fees and defense costs, arising or alleged to arise out of or to be in any way connected with the Project or the performance or non-performance of Consultant of any services under this Agreement, excepting only any such liabilities determined by a court or other forum of competent jurisdiction to have been caused by the negligence or willful misconduct of Consultant. This provision shall be in addition to any rights of indemnity that Consultant may have under the law and shall survive and remain in effect following the termination of this Agreement for any reason. Should any part of this provision be determined to be unenforceable, AllWest and Client agree that the rest of the provision shall apply to the maximum extent permitted by law. The Client's duty to defend AllWest shall arise immediately upon tender of any matter potentially covered by the above obligations to indemnify and hold harmless.

MEDIATION & JUDICIAL REFERENCE

5. In an effort to resolve any conflicts or disputes that arise regarding the performance of this agreement, the Client & AllWest agree that all such disputes shall be submitted to non-binding mediation, using a mutually agreed upon mediation service experienced in the resolution of construction disputes. Unless the parties mutually agree otherwise, such mediation shall be a condition precedent to the initiation of any other adjudicative proceedings. It is further agreed that any dispute that is not settled pursuant to such mediation shall be adjudicated by a court appointed referee in accordance with the Judicial Reference procedures as set forth in California Code of Civil Procedure Section 638 et seq. The parties hereby mutually agree to waive any right to a trial by jury regarding any dispute arising out of this agreement.

The parties further agree to include a similar mediation, Judicial Reference & waiver of jury trial provision in their agreements with other independent contractors & consultants retained for the project and require them to similarly agree to these dispute resolution procedures. The cost of said Mediation shall be split equally between the parties. This agreement to mediate shall be specifically enforceable under the prevailing law of the jurisdiction in which this agreement was signed.

HAZARDOUS WASTE

6. Client acknowledges that AllWest and its sub-contractors have played no part in the creation of any hazardous waste, pollution sources, nuisance, or chemical or industrial disposal problem, which may exist, and that AllWest has been retained for the sole purpose of performing the services set out in the scope of work within this Agreement, which may include, but is not necessarily limited to such services as assisting the Client in assessing any problem which may exist and in assisting the

Client in formulating a remedial program. Client acknowledges that while necessary for investigations, commonly used exploration methods employed by AllWest may penetrate through contaminated materials and serve as a connecting passageway between the contaminated material and an uncontaminated aquifer or groundwater, possibly inducing cross contamination. While back-filling with grout or other means, according to a state of practice design is intended to provide a seal against such passageway, it is recognized that such a seal may be imperfect and that there is an inherent risk in drilling borings of performing other exploration methods in a hazardous waste site.

AllWest will not sign or execute hazardous waste manifests or other waste tracking documents on behalf of Client unless Client specifically establishes AllWest as an express agent of Client under a written agency agreement approved by AllWest. In addition, Client agrees that AllWest shall not be required to sign any documents, no matter requested by whom, that would have the effect of AllWest providing any form of certification, guarantee, or warranty as to any matter or to opine on conditions for which the existence AllWest cannot ascertain. Client also agrees that it shall never seek or otherwise attempt to have AllWest provide any form of such certification, guarantee or warranty in exchange for resolution of any disputes between Client and AllWest, or as a condition precedent to making payment to AllWest for fees and costs owing under this Agreement.

Client understands and agrees that AllWest is not, and has no responsibility as, a generator, operator, treater, storer, transporter, arranger or disposer of hazardous or toxic substances found or identified at the site, including investigation-derived waste. The Client shall undertake and arrange for the removal, treatment, storage, disposal and/or treatment of hazardous material and investigation derived waste (such as drill cuttings) and further, assumes full responsibility for such wastes to the complete exclusion of any responsibility, duty or obligation upon AllWest. AllWest's responsibilities shall be limited to recommendations regarding such matters and assistance with appropriate arrangements if authorized by Client.

FORCE MAJUERE

7. Neither party shall be responsible for damages or delays in performance under this Agreement caused by acts of God, strikes, lockouts, accidents or other events or condition (other than financial inability) beyond the other Party's reasonable control.

TERMINATION

8. This Agreement may be terminated by either party upon ten (10) days' written notice should the other party substantially fail to perform in accordance with its duties and responsibilities as set forth in this Agreement and such failure to perform is through no fault of the party initiating the termination. Client agrees that if it chooses to terminate AllWest for convenience, and AllWest has otherwise satisfactorily performed its obligations under this Agreement to that point, AllWest shall be paid no less than eighty percent (80%) of the contract price, provided, however, that if AllWest shall have completed more than eighty percent of the Work at the time of said termination, AllWest shall be compensated as provided in the Work Authorization for all services performed prior to the termination date which fall within the scope of work described in the Work Authorization and may as well, at its sole discretion and in accordance with said Schedule of Fees, charge Client, and Client agrees to pay AllWest's reasonable costs and labor in winding up its files and removing equipment and other materials from the Project.

Upon notice of termination by Client to AllWest, AllWest may issue notice of such termination to other consultants, contractors, subcontractors and to governing agencies having jurisdiction over the Project, and take such other actions as are reasonably necessary in order to give notice that AllWest is no longer associated with the Project and to protect AllWest from claims of liability from the work of others.

DOCUMENTS

9. Any documents prepared by AllWest, including, but not limited to proposals, project specifications, drawings, calculations, plans and maps, and any ideas and designs incorporated therein, as well as any reproduction of the above are instruments of service and shall remain the property of AllWest and AllWest retains copyrights to these instruments of service. AllWest grants to Client a non-exclusive license to use these instruments of service for the purpose of completing and maintaining the Project. The Client shall be permitted to retain a copy of any instruments of service, but Client expressly agrees and acknowledges that the instruments of service may not be used by the Client on other projects, or for any other purpose, except the project for which they were prepared, unless Client first obtains a written agreement expanding the license to such use from AllWest, and with appropriate compensation to AllWest. Client further agrees that such instruments of service shall not be provided to any third parties without the express written permission of AllWest.

Client shall furnish, or cause to be furnished to AllWest all documents and information known to Client that relate to the identity, location, quantity, nature, or characteristics of any asbestos, PCBs, or any other hazardous materials or waste at, on or under the site. In addition, Client will furnish or cause to be furnished such reports, data, studies, plans, specifications, documents and other information on surface or subsurface site conditions, e.g., underground tanks, pipelines and buried utilities, required by AllWest for proper performance of its services. IF Client fails to provide AllWest with all hazardous material subject matter reports including geotechnical assessments in its possession during the period that AllWest is actively providing its services (including up to 30 days after its final invoice), Client shall release AllWest from any and all liability for risks and damages the Client incurs resulting from its reliance on AllWest's professional opinion. AllWest shall be entitled to rely upon Client - provided documents and information in performing the services required in this Agreement; however, AllWest assumes no responsibility or liability for the accuracy or completeness of Client-provided documents. Client-provided documents will remain the property of the Client.

ACCESS TO PROJECT

10. Client grants to AllWest the right of access and entry to the Project at all times necessary for AllWest to perform the Work. If Client is not the owner of the Project, then Client represents that Client has full authority to grant access and right of entry to AllWest for the purpose of AllWest's performance of the Work. This right of access and entry extends fully to any agents, employees, contractors or subcontractors of AllWest upon reasonable proof of association with AllWest. Client's failure to provide such timely access and permission shall constitute a material breach of this Agreement excusing AllWest from performance of its duties under this Agreement.

CONFIDENTIAL INFORMATION

11. Both Client and AllWest understand that in conjunction with AllWest's performance of the Work on the project, both Client and AllWest may receive or be exposed to Proprietary Information of the other. As used herein, the term "Proprietary Information" refers to any and all information of a confidential, proprietary or secret nature which may be either applicable to, or relate in any way to: (a) the personal, financial or other affairs of the business of each of the Parties, or (b) the

research and development or investigations of each of the Parties. Proprietary Information includes, for example and without limitation, trade secrets, processes, formulas, data, know-how, improvements, inventions, techniques, software technical data, developments, research projects, plans for future development, marketing plans and strategies. Each of the Parties agrees that all Proprietary Information of the other party is and shall remain exclusively the property of that other party. The parties further acknowledge that the Proprietary Information of the other party is a special, valuable and unique asset of that party, and each of the Parties agrees that at all times during the terms of this Agreement and thereafter to keep in confidence and trust all Proprietary Information of the other party, whether such Proprietary Information was obtained or developed by the other party before, during or after the term of this Agreement. Each of the Parties agrees not to sell, distribute, disclose or use in any other unauthorized manner the Proprietary Information of the other party. AllWest further agrees that it will not sell, distribute or disclose information or the results of any testing obtained by AllWest during the performance of the Work without the prior written approval of Client unless required to do so by federal, state or local statute, ordinance or regulation.

INDEPENDENT CONTRACTOR

12. Both Client and AllWest agree that AllWest is an independent contractor in the performance of the Work under this Agreement. All persons or parties employed by AllWest in connection with the Work are the agents, employees or subcontractors of AllWest and not of Client. Accordingly, AllWest shall be responsible for payment of all taxes arising out of AllWest's activities in performing the Work under this Agreement.

ENTIRE AGREEMENT

13. This Agreement contains the entire agreement between the Parties pertaining to the subject matter contained in it and supersedes and replaces in its entirety all prior and contemporaneous proposals, agreements, representations and understandings of the Parties. The Parties have carefully read and understand the contents of this Agreement and sign their names to the same as their own free act.

INTEGRATION

14. This is a fully integrated Agreement. The terms of this Agreement may be modified only by a writing signed by both Parties. The terms of this Agreement were fully negotiated by the Parties and shall not be construed for or against the Client or AllWest but shall be interpreted in accordance with the general meaning of the language in an effort to reach the intended result.

MODIFICATION / WAIVER / PARTIAL INVALIDITY

15. Failure on the part of either party to complain of any act or omission of the other, or to declare the other party in default, shall not constitute a waiver by such party of its rights hereunder. If any provision of this Agreement or its application be unenforceable to any extent, the Parties agree that the remainder of this Agreement shall not be affected and shall be enforced to the greatest extent permitted by law.

INUREMENT / TITLES

16. Subject to any restrictions on transfers, assignments and encumbrances set forth herein, this Agreement shall inure to the benefit of and be binding upon the undersigned Parties and their respective heirs, executors, legal representatives, successors and assigns. Paragraph titles or captions contained in this Agreement are inserted only as a matter of convenience, and for reference only, and in no way limit, define or extend the provisions of any paragraph. , et al., incurred in that action or proceeding, in addition to any other relief to which it or they may be entitled.

AUTHORITY

17. Each of the persons executing this Agreement on behalf of a corporation does hereby covenant and warrant that the corporation is duly authorized and existing under the laws of its respective state of incorporation, that the corporation has and is qualified to do business in its respective state of incorporation, that the corporation has the full right and authority to enter into this Agreement, and that each person signing on behalf of the corporation is authorized to do so. If the Client is a joint venture, limited liability company or a partnership, the signatories below warrant that said entity is properly and duly organized and existing under the laws of the state of its formation and pursuant to the organizational and operating document of the entity, and the laws of the state of its formation, said signatory has authority act on behalf of and commit the entity to this Agreement.

COUNTERPARTS

18. This Agreement may be signed in counterparts by each of the Parties hereto and, taken together, the signed counterparts shall constitute a single document.

THIRD PARTY BENEFICIARIES / CONTROLLING LAW

19. There are no intended third party beneficiaries of this Agreement. The services, data & opinions expressed by AllWest are for the sole use of the client, are for a particular project and may not be relied upon by anyone other than the client. This Agreement shall be controlled by the laws of the State of California and any action by either party to enforce this Agreement shall be brought in San Francisco County, California.

TIME BAR TO LEGAL ACTION

20. Any legal actions by either party against the other related to this Agreement, shall be barred after one year has passed from the time the claimant knew or should have known of its claim, and under no circumstances shall be initiated after two years have passed from the date by which AllWest completes its services.