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January 7, 2014

Alameda County Health Care Services Agency
Environmental Health Services
Environmental Protection
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502-6577

Re: **76 Service Station #1156 (Chevron Site #351645)**
4276 MacArthur Boulevard, Oakland, California

ACEH Fuel Leak Case No. RO0000409
RWQCB Case No. 01-2474
GeoTracker Global ID T0600102279

I have reviewed the attached Work Plan for Sub-Slab Vapor, Indoor Air, and Outdoor Air Sampling and Vapor Intrusion Evaluation dated January 2014.

I agree with the conclusions and recommendations presented in the referenced work plan. The information in this work plan is accurate to the best of my knowledge and all local Agency/Regional Board guidelines have been followed. This report was prepared by AECOM, upon whose assistance and advice I have relied.

This letter is submitted pursuant to the requirements of California Water Code Section 13257(b)(1) and the regulating implementation entitled Appendix A pertaining thereto.

I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge.

Sincerely,

Nicole Arceneaux
Project Manager

Attachment: *Work Plan for Sub-Slab Vapor, Indoor Air, and Outdoor Air Sampling and Vapor Intrusion Evaluation*

Prepared for:
EMC
San Ramon, California

Prepared by:
AECOM
Camarillo, California
January 2014

Work Plan for Sub-Slab Vapor, Indoor Air, and Outdoor Air Sampling and Vapor Intrusion Evaluation for the Oakland Veterinary Hospital Located at 4258 MacArthur Boulevard, Oakland, California

ACEH Case No. RO0000409
RWQCB Case No. 01-2474

76 Service Station No. 1156 (351645)
4276 MacArthur Boulevard
Oakland, California

AECOM

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76 Service Station No. 1156 (351645)
4276 MacArthur Boulevard
Oakland, California

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1.0 Introduction

On behalf of Chevron Environmental Management Company, for itself and as Attorney-in-Fact for Union Oil Company of California (hereinafter "EMC"), AECOM has prepared this work plan in association with Alameda County Environmental Health (ACEH) Case No. RO0000409, for 76 Service Station No. 1156 (351645), located at 4276 MacArthur Boulevard, Oakland, California (**Figure 1**). This work plan has been prepared for the investigation of potential vapor intrusion into the adjacent Oakland Veterinary Hospital (OVH) building located at 4258 MacArthur Boulevard in Oakland, California (**Figure 2**).

1.1 Background

Elevated concentrations of petroleum hydrocarbons were previously detected in soil vapor along the northwest portion of the 76 service station site and the southeast portion of the OVH site (Delta 2009; AECOM 2013a; 2013b). Based on the concentrations detected on the OVH property (SV-1 and SV-2) and the results of risk assessment modeling, additional sampling for soil vapor intrusion was recommended for the OVH building (AECOM 2013b). The objective of the work described herein is to determine if a complete vapor intrusion pathway exists in the OVH building with regard to petroleum hydrocarbons detected for the soil vapor wells located adjacent to the OVH building.

This scope of work was developed using EMC protocols and regulatory guidance documents, including the California Environmental Protection Agency (CalEPA) Department of Toxic Substances Control's (DTSC's) *Final Guidance for the Evaluation and Mitigation of Subsurface Vapor Intrusion to Indoor Air* (CalEPA 2011).

1.2 Site Location and Description

The site is located at the north corner of the intersection between MacArthur Boulevard and High Street in an urbanized area of Oakland, California at the base of the San Leandro Hills. The OVH abuts the site to the northwest.

The site vicinity consists of mixed commercial and residential development. A drug store is located beyond the OVH to the northwest. Single-family dwellings border the site to the northeast. An apartment building and commercial businesses (cleaners, tax service, and two restaurants) are present across High Street to the southeast. A parking lot is located southeast of the site on the southeastern corner of the MacArthur Boulevard and High Street intersection (Former Chevron No. 9-3676, case closed in September 1999). A vacant lot is located south of the subject site at the south corner of the MacArthur Boulevard and High Street intersection. A vacant lot (Former Shell Service Station No. 13-5701, open case) is also located across MacArthur Boulevard to the southwest of the subject site.

Based on site survey data, surface elevations at the site range from 179.42 feet above mean sea level (amsl) at MW-4B to 173.12 feet amsl at MW-9B (Morrow Surveying 2013). To note: The elevation at the northeast site boundary is noticeably higher than at MW-4B. Additionally, the elevation at MW-5 is 169.67 feet amsl. MW-5 is located in the street in front of the OVH site (adjacent to the northwest of the station site). To summarize, the southwest portion of the station site is at least 8 feet lower in elevation than the northeast portion; and the west corner is approximately 4 feet lower in elevation than the south corner.

Based on the lithology observed during previous investigations, the subsurface is predominantly fine-grained material made up of clays and silty sands with varying percentages of sands and gravels.

2.0 Proposed Scope of Work

AECOM proposes to conduct a soil vapor and indoor/outdoor air investigation at the OVH property. The investigation will consist of installing and sampling one sub-slab vapor probe (SS-1), collecting one indoor air sample (IA-1), and collecting one ambient outdoor air sample (OA-1). The locations of the proposed sample locations are shown on **Figure 2**. No sub-slab vapor or indoor air samples will be collected at the station site, as it is an active gasoline fueling facility and no additional assessment is necessary (ACEH 2013).

AECOM anticipates commencing the work described herein within 60 days of receipt of regulatory acceptance of this work plan, and contingent upon successful completion of an access agreement with the OVH. A report will be submitted within 45 days of completion of the fieldwork.

2.1 Pre-Field Activities

Prior to installing and sampling the sub-slab vapor probe, AECOM will perform an inspection of the veterinary facility to determine the approximate locations of sewers, floor drains, joints in the floor slab, and utility lines beneath the concrete slab. This inspection will also help to identify potential sources of cross-contamination, to mitigate health and safety risks, and to screen the facility for any indoor sources of volatile organic compounds (VOCs). AECOM will review any utility and as-built drawings made available by the property owner and/or occupant. AECOM will mark and identify the proposed probe locations and request an underground utility line clearance at least 48 hours in advance of any subsurface activities. In addition, AECOM will contract with a private utility line locating service to establish that there are no obstructions near the proposed probe area.

Common household products can contain VOCs and could cause false positives to be detected in the indoor air sample. Therefore, AECOM will request that, to the extent possible, smoking, cleaning, painting, solvent use, cosmetic application, or hydrocarbon storage be eliminated inside the building for at least 24 hours preceding the sampling event. AECOM will inventory, and review with the current occupant, any identified potential indoor air sources of VOCs. AECOM will document (photographs and/or written inventory) potential indoor air sources of VOCs.VOC screening will be performed before the start of vapor probe installation, and during sample collection, using a photoionization detector (PID) calibrated to a factory-supplied 10 parts per million (ppm) isobutylene gas standard and appropriate detection limit (as low as 1 part per billion VOCs).

2.2 Field Activities

Field activities will be performed under the supervision of a State of California Professional Geologist. At the commencement of field activities, AECOM will perform the following tasks:

- Conduct a tailgate safety meeting at the site.
- Review the contents of the Health and Safety Plan (HASP) and Task Hazards Analyses (THAs) with all AECOM and subcontracted workers and review the requirements mandated by the EMC Operational Excellence and Safety Program.
- Set up and demarcate an Exclusion Zone around the work area for each sample location to preclude access by anyone whose entry is unauthorized.
- AECOM will keep written documentation of field conditions (e.g., temperature, wind direction, degree of cloud cover, etc.) during sampling and drilling. AECOM will maintain detailed field records of

activities, conditions, and sampling processes, including names of field personnel, dates and times, etc.

AECOM field activities will be conducted in accordance with the DTSC's vapor intrusion guidance (CalEPA 2011). Leak detection procedures during sub-slab vapor well sampling will be conducted following the New York State Department of Health's (NYSDOH's) guidance document, in conjunction with EMC-specific protocol's (NYSDOH 2006).

To produce comparable results, sampling of the sub-slab vapor, indoor air, and outdoor air will be completed contemporaneously.

2.2.1 Sub-Slab Vapor Probe Installation

The sub-slab vapor probe is intended for semi-permanent to permanent use, but can be abandoned by sealing the installed point with cement. A shallow 1-inch-deep, 7/8-inch-diameter outer hole is drilled into the concrete slab. A smaller, 5/16-inch-diameter inner hole is then drilled through the concrete slab and 3 inches into the sub-slab material to prevent obstruction of the probe by gravelly material. **Figure 3** provides an illustration of the sub-slab vapor probe construction detail.

Cuttings will be vacuumed from the sample probe hole before installation of the probe. Once the concrete slab thickness is established, stainless-steel tubing will be cut to ensure that probe tubing does not reach the bottom of the hole. The surface end of a ¼-inch-outside-diameter and 1/8-inch-inside-diameter new stainless-steel tube is attached to a stainless-steel Swagelok® fitting with Teflon® tape. The assembly is set in the hole, flush with the surface, and has a recessed stainless-steel plug screwed into the Swagelok® fitting so as not to interfere with the day-to-day use of the building. Quick-drying Portland cement will be used to seal the tubing into the drill hole and annular space (keeping it flush with the ground surface) and allowed to cure for 24 hours before the start of sampling. The 24-hour period will allow adequate time for equilibration and the cement seal to cure before sampling.

2.2.2 Sub-Slab Probe Sampling Procedures

AECOM will collect one sub-slab vapor sample from the sub-slab vapor probe (SS-1). The sub-slab vapor sample collection procedure is described below.

2.2.2.1 Sampling Equipment

The samples will be collected in a stainless-steel, gas-tight, opaque Summa™ canister with a passivated, glass-lined internal surface, provided by the analytical laboratory. The canister will be certified clean by the laboratory. The canister will be field-verified to have a vacuum of at least 25, and up to 29.9, inches of mercury (inHg) before sampling. A 1-liter Summa™ canister (laboratory certified at 100% level) will be used for collecting the sub-slab vapor sample.

All gauges and flow control manifolds will be connected by laboratory-supplied chromatography-grade, stainless-steel tubing, and dedicated, flexible-nylon or Teflon®, airtight tubing that has a low capacity for adsorbing VOCs. A sample train will be assembled using 0.25-inch-outer-diameter nylon tubing for all vapor sampling at this site. Swagelok®-type connectors will be used for all connections between tubing and other sampling components.

A vacuum will be created to draw the soil vapor to the surface. The vacuum will be created by a battery-powered pump vacuum, with the sample collection point on the intake side of the pump to prevent any contaminants present in the pump from being drawn into the sample. A two-way valve and "T" fitting will be

used to isolate the pump from a separate tube that is connected to the vapor sample canister. **Figure 4** shows a typical equipment sampling apparatus for sub-slab vapor sampling.

2.2.2.2 Leak Testing

Leakage of atmospheric air into the sampling equipment during sampling can compromise sample integrity and dilute measured soil vapor hydrocarbon concentrations. Sampling equipment will be thoroughly inspected to ensure tight fittings between all components and checked for leaks prior to sampling. Sample equipment consists of a sample train which includes a purge pump, Summa™ canister with flow restrictor, and vacuum gage. To minimize the potential for leakage, the soil vapor sampling rate will be kept at less than (<) 200 milliliters per minute (mL/min) using a laboratory-supplied flow regulator. The vacuum pump will be turned on and the second Swagelock® valve that is placed after the flow regulator will be opened while the first Swagelock® valve is closed to the sample probe, and the valve on the sample Summa™ canister also will remain closed (**Figure 4**).

Laboratory-grade helium is the tracer gas that will be used to test for air leakage into the sampling system for the purpose of sample integrity verification. The leak testing will be conducted in general accordance with NYSDOH guidance on the use of a tracer gas (NYSDOH 2006). A clear plastic container will be used as the chamber or helium shroud and will have three ports of entry/exit. The chamber will then be placed over the sub-slab sample point and sealed to ground surface by use of weather seal stripping or similar material. Helium from a cylinder will be applied as necessary to the helium shroud (to maintain approximately 10% by volume) from one port, and monitored with a helium detector that will be inserted at a second port. The final port will have nylon or Teflon® tubing exiting and will be connected to the vacuum pump for purging and leak testing. The portable helium detector will be used to measure the helium tracer gas concentration in the discharge containment bag (Tedlar bag) placed at the discharge end of the purge pump. Leakage in the sample train is indicated by the presence of helium in the discharge containment bag. When helium is detected, the sample train fittings will be tightened. This procedure will be repeated until no leaks are detected in the sample train. Helium will be applied, as necessary, to the shroud during both the purging and sampling procedures to maintain a relatively uniform, known concentration of gas for leak testing.

Helium concentrations measured from the helium detector during the sampling will be used to assess the amount of leakage, if any, during sampling. Laboratory analysis and field measurements will be used to estimate a leakage percentage. A sample will be considered valid and acceptable for risk evaluation if the tracer gas (helium) concentration in the soil vapor sample is less than 5% of that maintained in the shroud (CalEPA 2012).

2.2.2.3 Purging

Prior to collecting a sub-slab vapor sample, the sampling tubes will be purged using a battery-powered, flow-calibrated purge pump to ensure that the vapor samples collected will be representative of actual sub-slab vapor concentrations. Field notes containing dimensions and specifications of the above- and below-ground tubing length, and inner diameter will be used to calculate the purge volume. Additionally, the volume of the sand pack will be included in the purge volume calculation. The flow rate for purging will be the same as the flow rate used for subsequent sampling (<200 mL/min). For this sub-slab vapor sampling event, three purge volumes will be purged before sampling. The purge test data (calculated purge volume, purging rate, and duration of purging) will be recorded on field data sheets.

2.2.2.4 Sample Collection

Immediately following purging and leak-testing, the sample will be collected by opening the Summa™ canister valve to draw the soil vapor sample into the canister. The vacuum and flow rates will be kept at a minimum to limit enhanced volatilization of VOCs. Vacuum and flow rate readings will be obtained

periodically to evaluate the fill rate of the Summa™ canister. The laboratory will be instructed to set the flow controller to a rate greater than (>) 10 mL/min and <200 mL/min.

The sample time interval for sub-slab vapor samples is approximately 30 minutes per sample and flow rates cannot exceed 200 mL/min. A 1-Liter Summa™ canister will be kept at approximately 26.6 mL/min for 30 minutes to complete the sample. The vacuum gauge on the flow controller will be constantly monitored to ensure the vacuum in the Summa™ canister is decreasing with time. The valve will be closed when the Summa™ canister gauge measures approximately 5 inHg vacuum. The final Summa™ canister vacuum will be measured in the field and upon receipt at the laboratory to evaluate sample integrity following shipment.

Helium will continue to be added to the shroud as needed and monitored during sampling to minimize outside ambient air influences. New, unused disposable nitrile gloves will be used prior to the collection of the sub-slab vapor sample.

2.2.3 Indoor Air and Ambient Outdoor Air Sample Collection

One indoor air sample (IA-1) will be collected from the same vicinity as the sub-slab sample. One ambient outdoor air sample (OA-1) will be collected for laboratory analysis from outside of the OVH building. The proposed sample locations are indicated on **Figure 2**. The indoor air sample will be collected to determine the concentration of VOCs in the building at the time as the sub-slab vapor collection. The outdoor air sample will be collected to characterize the contribution from ambient outdoor air to indoor air. The outdoor air sampling at the OVH property will begin 1 hour prior to indoor air sampling and will continue to at least 30 minutes prior to the end of the indoor air sampling period.

2.2.3.1 Indoor Air Sample Procedure

The time-integrated indoor air sample will be collected using a 6-liter Summa® canister obtained from a California certified laboratory. All Summa™ canisters will be certified-clean at the 100% quality control (QC) level, fitted with a vacuum gauge, and under a vacuum of >25 inHg. The canisters will be fitted with a laboratory-calibrated flow controller (11.5 mL/min) to collect an air sample at a constant flow rate over an approximate 8-hour period. The canister vacuum shall be recorded prior to sampling, periodically during the filling period, and at the conclusion of the sampling interval. The canister used to collect the indoor air sample shall be placed at 3 to 5 feet above the floor to provide a sample representative of the breathing zone.

2.2.3.2 Outdoor Air Sample

The time-integrated ambient outdoor air sample will be collected using a 6-liter Summa™ canister obtained from a California-certified laboratory. The Summa™ canister will be certified-clean at the 100% QC level, fitted with a vacuum gauge, and under a vacuum of >25 inHg. The canister will be fitted with a laboratory-calibrated flow controller (11.5 mL/min) to collect an ambient outdoor air sample at a constant flow rate over an approximate 8-hour period. The canister vacuum shall be recorded prior to sampling, periodically during the filling period, and at the conclusion of the sampling interval. The proposed sample location is indicated on **Figure 2**. The exact sample location will be determined during the pre-fieldwork site visit and using data from the National Weather Service, as the outdoor air sample should be collected on the upwind side of the veterinary hospital building, from 5 to 15 feet from an exterior wall, and protected from the elements. The canister will be placed 3 to 5 feet above ground level.

2.3 Quality Control Samples

2.3.1 Duplicate Samples

One duplicate sample will be obtained for each day of sub-slab vapor sampling, or for 10% of the samples collected, whichever is greater. AECOM anticipates that one duplicate sample will be required. AECOM proposes collecting the duplicate sample from SS-1. The duplicate sample will be obtained by using a splitter (such as a T-fitting) located between the flow controller and sample canisters with separate sample tubes connecting the splitter to two Summa™ canisters. The flow controller must be set such that the flow rate from the sampling probe is <200 mL/min, doubling the sample time required because two canisters are filled simultaneously.

2.3.2 Equipment Blanks

One equipment blank will be collected for each day of sampling just prior to sampling activities by collecting a sample of clean air or nitrogen through the probe materials before installation in the ground. Clean stainless-steel, Nylon or Teflon tubing and a certified regulator will be used, in conjunction with a 100% QC-level Summa canister. No trip blanks are necessary with the use of 100%-certified Summa™ canisters.

2.4 Investigation-Derived Waste

No investigation-derived waste (IDW) is expected to be generated during execution of the scope of work presented herein. No soil cuttings will be generated during probe installation.

3.0 Laboratory Analysis

Samples will be labeled following standard chain of custody (COC) protocols, including noting the final canister vacuums and the serial numbers of canisters and flow controllers. AECOM will document sampling activities, including sampling times, conditions, and any deviations in procedure on field sheets. Samples will be transported under COC protocols within 24 hours using ground transport to a State of California-certified laboratory. Samples will NOT be chilled because contaminants may condense at low temperatures.

Sub-slab vapor, indoor air, and outdoor air samples will be analyzed for total petroleum hydrocarbons as gasoline; benzene, toluene, ethyl benzene, total xylenes (BTEX); methyl tertiary butyl ether; and naphthalene using United States Environmental Protection Agency Method (modified) TO-15 APH (air-phase petroleum hydrocarbon) Fractions (Sp)-Full list + Naph + APH. Sub-slab vapor samples will also be analyzed for oxygen, carbon dioxide, helium, nitrogen, and methane by ASTM Method D1946 modified. All analytical results for this investigation will be reported in micrograms per cubic meter.

4.0 Vapor Intrusion Pathway Evaluation and Risk Analysis

4.1 Objective

AECOM proposes to evaluate the potential vapor intrusion pathway at the OVH building following EMC's best practices approach and in accordance with CalEPA and DTSC guidance (CalEPA 2005; 2011; 2012). As discussed in Section 2.0, sub-slab vapor and indoor air will be sampled within the OVH building, in addition to ambient outdoor air outside of the OVH building, to evaluate whether there is a potentially complete vapor intrusion pathway at this building. These data will be evaluated as discussed in this section.

As discussed in Section 1.1, measurable concentrations of petroleum hydrocarbons were detected in soil vapor samples collected on September 8 and 9, 2010, on the northwest side of the service station (Delta 2010). The OVH is located on the property adjacent to and downgradient of the service station site on the northwest side. Therefore, the vapor intrusion evaluation is being performed to determine whether a complete vapor intrusion pathway exists for volatile petroleum hydrocarbons originating from soil vapor on the service station site.

There are existing single-family residences located to the east of the service station site. However, these are upgradient and uphill from the service station. Existing soil vapor data on the service station site indicate diminishing soil vapor concentrations in this direction. Therefore, investigation of these residences is not warranted.

4.2 Evaluation of Sub-Slab Vapor, Indoor Air, and Ambient Outdoor Air

There are many sources for non-petroleum-related background VOCs inside buildings. Materials and substances commonly found in commercial and residential settings contain VOCs that may be detected by indoor air testing. Some examples of these substances include, but are not limited to, paints, paint thinners, dry-erase markers, gasoline-powered machinery, building materials, cleaning products, dry cleaned clothing, and cigarette smoke. In particular, this location is a veterinary hospital and may use gaseous substances as anesthetics in animal care (e.g., isofluorane). Therefore, indoor air samples may measure BTEX and other petroleum hydrocarbon compounds related to indoor air (i.e., background) sources and unrelated to a subsurface petroleum hydrocarbon source. Comparing measured indoor air concentrations against the most conservative screening values (i.e., California Human Health Screening Levels [CHHSLs]) does not provide enough information to interpret whether the source of the indoor air VOCs is due to vapor intrusion or an indoor air source. Instead, indoor air concentrations must be compared to both ambient outdoor air and sub-slab vapor concentrations to determine whether external sources are contributing to the presence of VOCs in indoor air.

Indoor air VOC concentrations will be compared to sub-slab vapor and ambient outdoor air concentrations to determine whether there is sufficient evidence of a complete vapor intrusion pathway. Sufficient evidence of a complete vapor intrusion pathway will be obtained if indoor air samples contain significantly greater concentrations of petroleum hydrocarbon VOCs (e.g., BTEX) than ambient outdoor air and the normal range of typical indoor air (i.e., background) concentrations, and also contain significantly lower concentrations of petroleum hydrocarbon VOCs than sub-slab soil vapor. Indoor air concentrations will be considered significantly lower than sub-slab soil vapor concentrations if they are at least approximately 10 times lower than sub-slab vapor concentrations, consistent with an attenuation factor of 0.1 for a building with a slab-on-grade foundation in a commercial setting. The use of an attenuation factor of 0.1 is 2 times more conservative than DTSC's default attenuation factor of 0.05 for the same building/exposure scenario (CalEPA 2011).

5.0 Data Reporting

AECOM will submit a report to EMC and ACEH documenting the results of the investigation and risk analysis, and will include conclusions and recommendations. The report will be prepared under the supervision of, and signed by, a State of California Professional Geologist or Engineer. AECOM will submit electronic files necessary to comply with ACEH and State of California GeoTracker requirements.

6.0 References

Alameda County Environmental Health Services. 2013. Case File Review for Fuel Leak Case No. RO0000409 and GeoTracker Global ID T0600102279, Unocal #1156, 4276 MacArthur Boulevard, Oakland, CA 94619. June 10.

AECOM. 2013a. *Report on Vapor Intrusion Investigation,* dated April 2013. Submitted to ACEH.

AECOM. 2013b. *Report on Vapor Intrusion Investigation and Risk Assessment for the Oakland Veterinary Hospital Located at 4258 MacArthur Boulevard, Oakland,* dated October 15, 2013. Submitted to ACEH.

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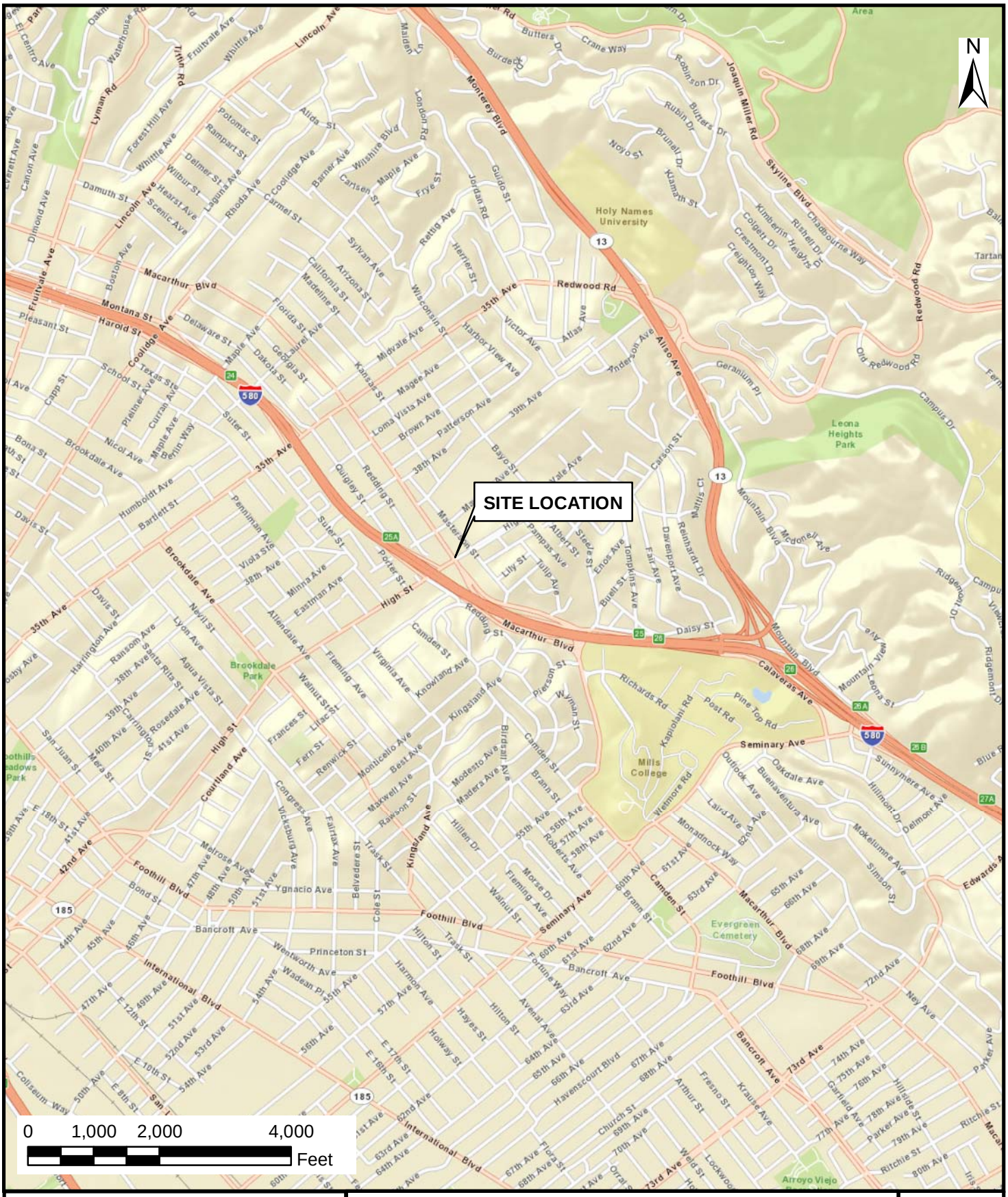
Figures

Figures



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1220 AVENIDA ACASO
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PHONE: 805.388.3775
FAX: 805.388.3577
WEB: HTTP://WWW.AECOM.COM

SITE LOCATION MAP

76 Service Station No. 1156 (351645)
4276 MacArthur Boulevard
Oakland, California

FIGURE NUMBER:
1

DRAWN BY:	DATE:	PROJECT NUMBER:	SHEET NUMBER:
M. Scop	5/2/2012	60249149	1 of 1

Source:
Delta Consultants, Site Map with Historical Sampling Locations, Dated 06/26/2010
MW and SVW well locations from Morrow Surveying Land Surveyors, 8/24/2010

REVISIONS			
NO.:	DESCRIPTION:	DATE:	BY:

DESIGNED BY:	DRAWN BY:	CHECKED BY:	APPROVED BY:
B. Evans	M. Scop	B. Evans	B. Evans

AECOM
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CAMARILLO, CALIFORNIA 93012
PHONE: (805) 388-3775
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SITE PLAN WITH PROPOSED SAMPLE LOCATIONS

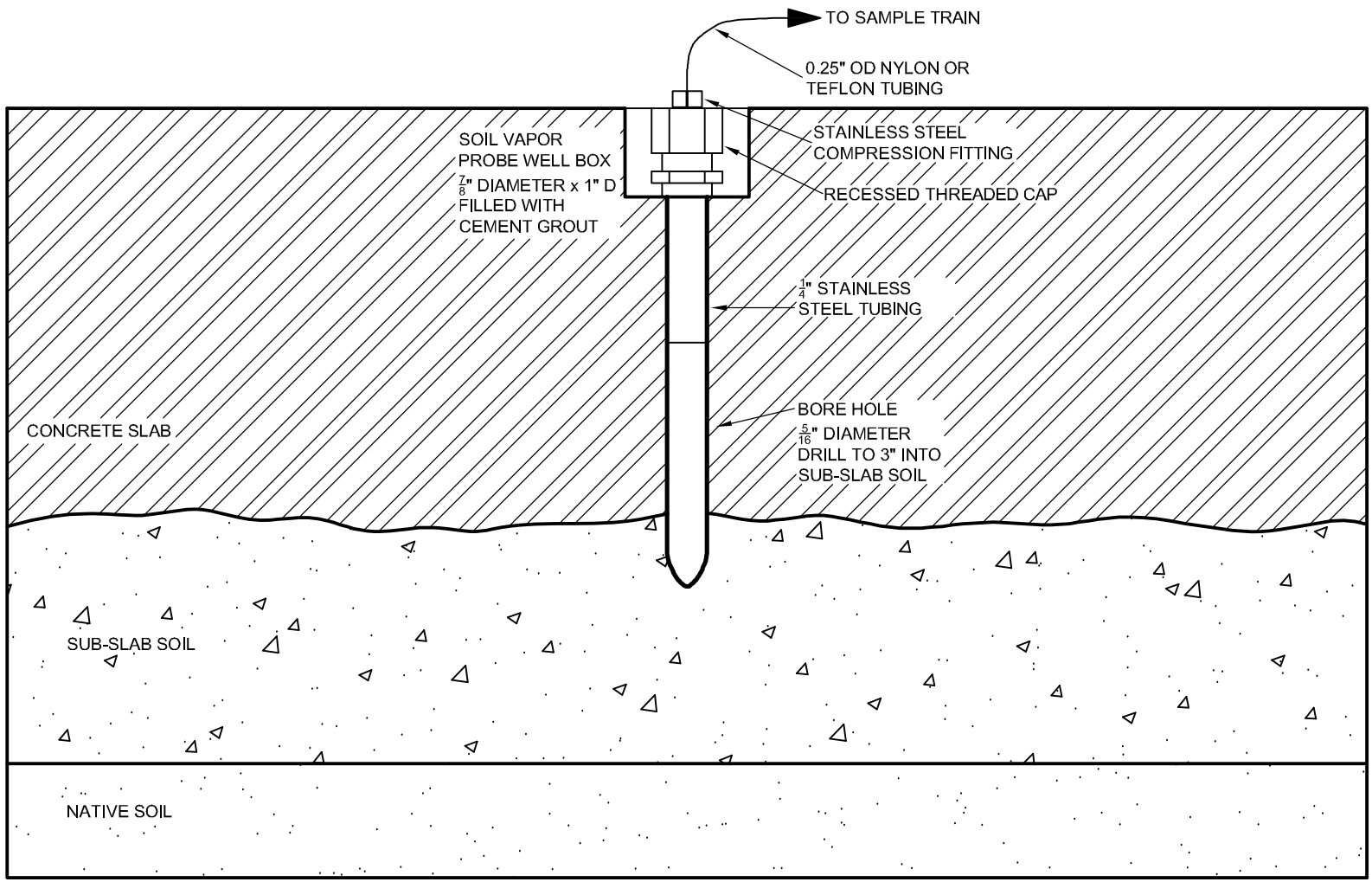
Chevron Site #351645 (76 Service Station #1156)
4276 MacArthur Boulevard
Oakland, California

SCALE:	DATE:	PROJECT NUMBER:
1" = 30'	12/16/2013	60283732

FIGURE NUMBER:
2

SHEET NUMBER:
X

FILENAME: J:\Client–Projects\76_Products\351645–Oakland\7.0_Deliverables\7.2_CADD–Graphics\2012 2Q Vapor Intrusion Work Plan\Figure 2 Sample Locations–Dec2013.dwg



SUB-SLAB VAPOR PROBE DETAIL

Chevron Site #351645 (76 Service Station #1156)
4276 MacArthur Boulevard
Oakland, California

FIGURE NUMBER: 3

AECOM
1220 AVENIDA ACASO
CAMARILLO, CALIFORNIA 93012
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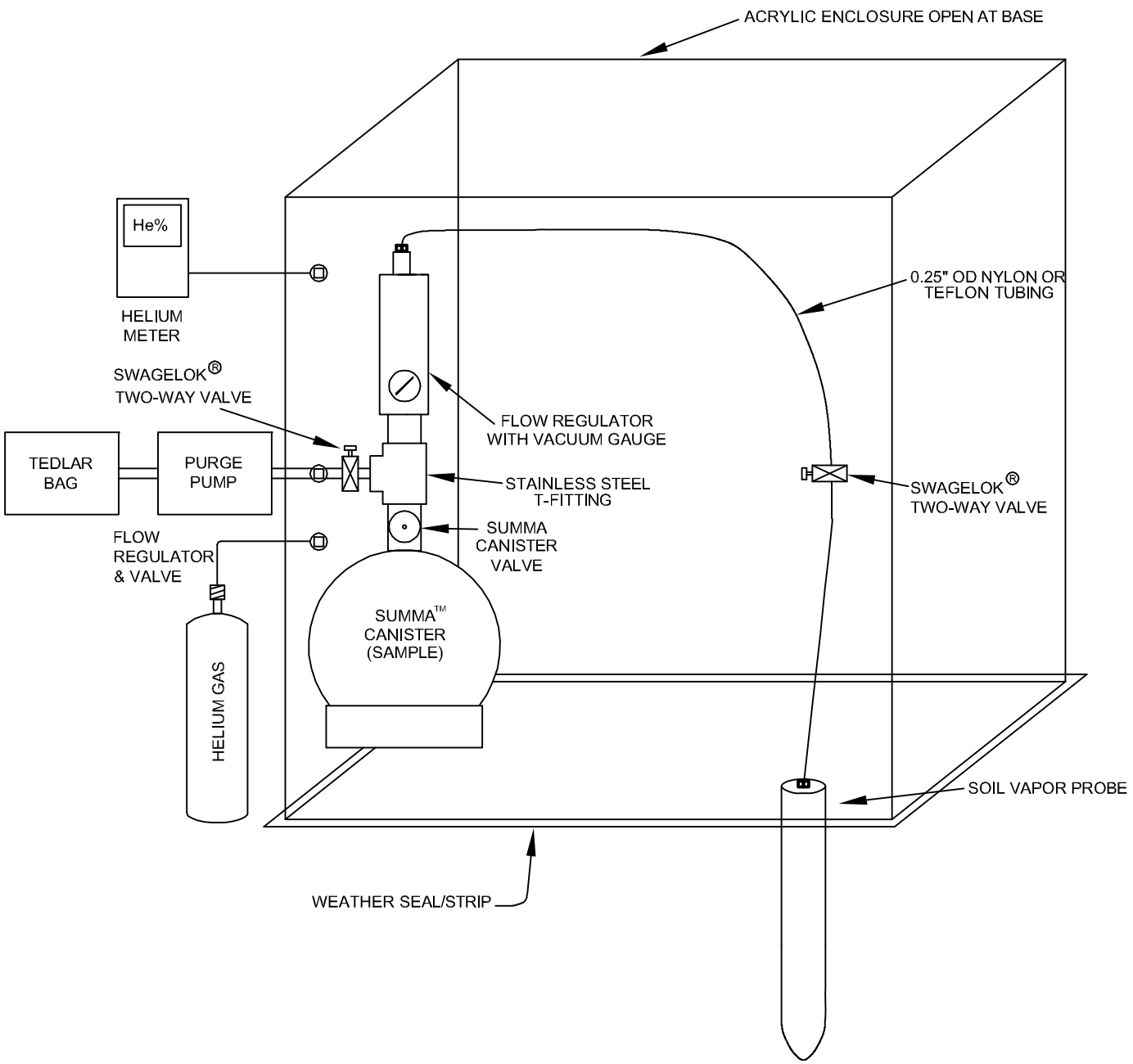
DRAWN BY:	DATE:	PROJECT NUMBER:	SHEET NUMBER:
M. Scop	5/3/2012	60264254 - A10	X

FILENAME: J:\Client-Projects\76_Products\351645-Oakland\7.0_Deliverables\7.2_CADD-Graphics\Vapor Intrusion Work Plan 2012\VAPOR_PROBE_DETAIL.dwg



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AECOM
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SUB-SLAB VAPOR SAMPLING APPARATUS

Chevron Site #351645 (76 Service Station #1156)
4276 MacArthur Boulevard
Oakland, California

FIGURE NUMBER:
4

DRAWN BY:	DATE:	PROJECT NUMBER:	SHEET NUMBER:
M. Scop	5/9/2012	60264254 - A10	1