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By Alameda County Environmental Health at 4:55 pm, Jun 05, 2014

Alexis Fischer
Project Manager
Marketing Business Unit

**Chevron Environmental
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afischer@chevron.com

Alameda County Health Care Services
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577

Re: Former Texaco Service Station No.359766
2700 23rd Avenue
Oakland, CA

I have reviewed the attached *Site Conceptual Model and Gap Analysis Addendum*.

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

This letter is submitted pursuant to the requirements of California Water Code Section 13267(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,

A handwritten signature in blue ink that reads "Alexis Fischer".

Alexis Fischer
Project Manager

Attachment: Site Conceptual Model and Gap Analysis Addendum



**CONESTOGA-ROVERS
& ASSOCIATES**

2300 Clayton Road, Suite 920, Concord, California
94520

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www.CRAworld.com

May 30, 2014

Reference No. 062086

Ms. Karel Detterman
Alameda County Environmental Health Services
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502-6577

Re: Site Conceptual Model and Gap Analysis Addendum
Former Texaco Services Station No. 359766
2700 23rd Avenue
Oakland, CA
Fuel Leak Case No. RO0003098

Dear Ms. Detterman:

On behalf of Chevron Environmental Management Company (EMC), Conestoga-Rovers & Associates (CRA) is submitting this *Site Conceptual Model and Gap Analysis Addendum* as requested by Alameda County Environmental Health (ACEH) in a meeting with EMC and CRA on April 24, 2014. ACEH requested the installation and sampling of soil vapor probes to be added to the field activities proposed in CRA's *Site Conceptual Model and Gap Analysis Table* dated September 30, 2013. Enclosed are the updated site plan (Figure 2), showing the proposed soil vapor probes, borings, and well locations, and the *Standard Field Procedures for Vapor Probe Installation and Sampling at Chevron Sites*. CRA will immediately commence with coordinating this field work and will present the data in a Conceptual Site Model and Data Gap Work Plan by August 31, 2014.

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**CONESTOGA-ROVERS
& ASSOCIATES**

May 30, 2014

Reference No. 062086

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If you have any questions or concerns, please contact the Mr. Nathan Lee at 925-849-1003 or via email at nlee@CRAWorld.com.

Regards,

CONESTOGA-ROVERS & ASSOCIATES



A handwritten signature in blue ink that reads 'Nathan Lee'.

Nathan Lee, PG 8486

NL/mws/1

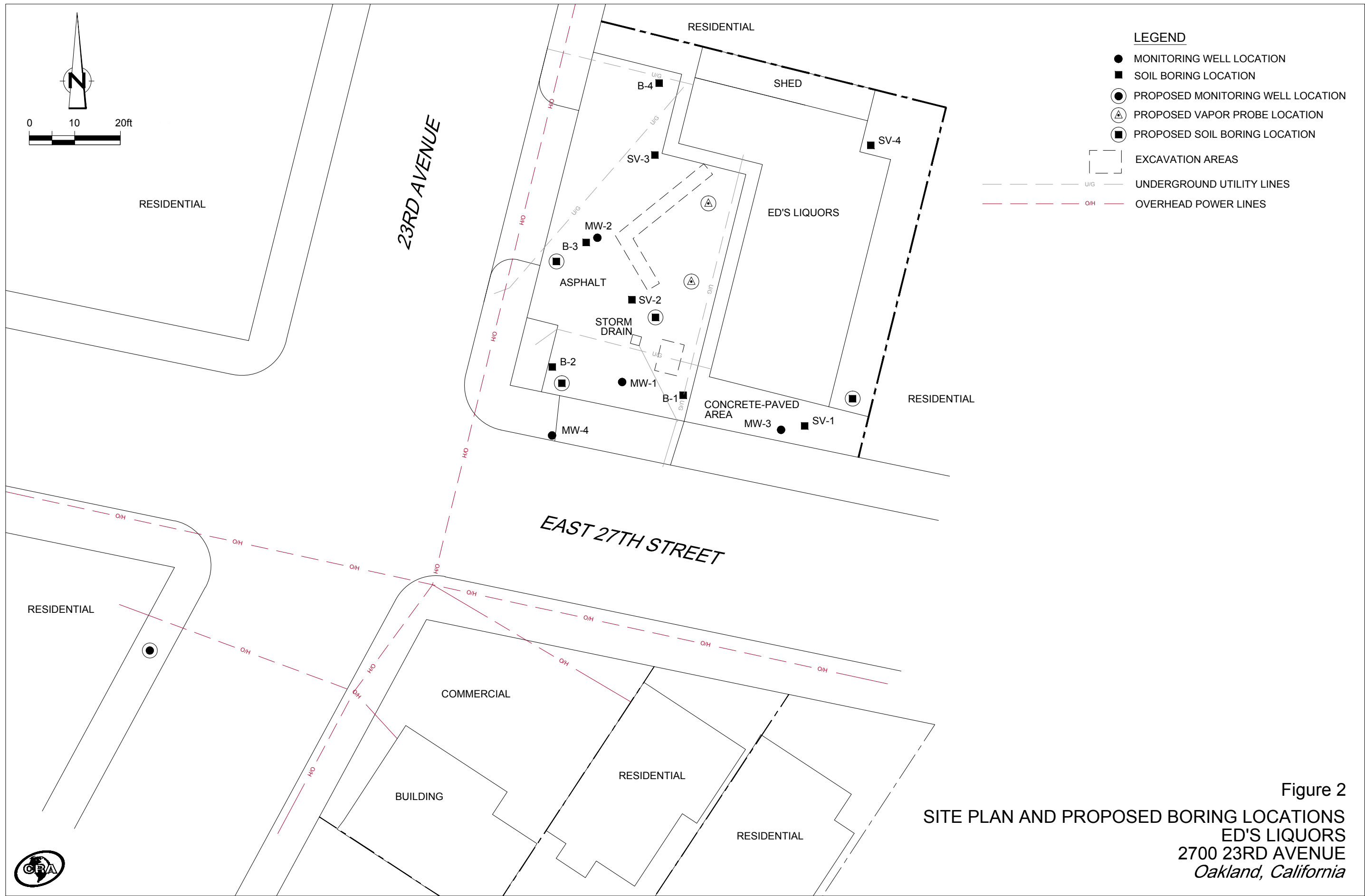
Encl.

Updated Figure 2
Attachment

Site Plan and Proposed Boring Locations
Standard Field Procedures for Vapor Probe Installation and Sampling at Chevron Sites

cc: Ms. Alexis Fischer, Chevron (*electronic copy*)
Pedro and Marina Pulildo, Property Owner

FIGURE



ATTACHMENT A

STANDARD FIELD PROCEDURES FOR VAPOR PROBE INSTALLATION AND SAMPLING
AT CHEVRON SITES

STANDARD FIELD PROCEDURES FOR SOIL VAPOR PROBE INSTALLATION AND SAMPLING AT CHEVRON SITES

This document describes Conestoga-Rovers & Associates' standard field procedures for soil vapor probe installation and sampling. These procedures are designed to comply with Federal, State and local regulatory guidelines. Specific field procedures are summarized below.

Objectives

Soil vapor samples are collected and analyzed to assess whether vapor-phase subsurface contaminants pose a threat to human health or the environment.

Shallow Soil Vapor Probe Installation

The shallow soil vapor probe method for soil vapor sampling utilizes a hand auger or drill rig to advance a boring for the installation of a soil vapor sampling probe. Soil vapor probes facilitate the collection of in-situ vapor samples. Once the boring is advanced to the final depth, #2/12 filter pack is poured through a tremie pipe to fill the bottom 6 inches of the boring. A permeable, stainless-steel probe tip is connected to ¼-inch outside diameter Teflon tubing via a push-to-connect fitting. The probe tip is then placed approximately 6 inches from the bottom of the boring and covered by 6 inches of #2/16 filter sand. A 12 inch layer of dry granular bentonite is placed on top of the filter pack. Pre-hydrated granular bentonite is then poured to fill the borehole. The tube is labeled, capped, and placed within a traditional well box finished flush to grade. Soil vapor samples will be collected no sooner than 48 hours after installation of the soil vapor probe to allow adequate time for representative soil vapors to accumulate. Soil vapor sample collection will not be scheduled until after a minimum of three consecutive precipitation-free days and irrigation onsite has ceased.

Purging

At least three purge volumes of vapor are removed from the soil vapor probe prior to sampling. The purge volume is defined as the amount of air within the probe and tubing. Purging is performed using the vacuum of a dedicated Summa canister, a flow regulator set to the same flow rate used for sampling, and vacuum gauges. Immediately after purging, soil vapor samples will be collected using the appropriate size Summa canister with attached flow regulator and sediment filter.

Sampling Soil Vapor Probes

Samples will be collected using a SUMMA™ canister connected to the sampling tube of each vapor probe. Prior to collecting soil vapor samples, the initial vacuum of the canisters is measured and recorded on the chain-of-custody. The vacuum of the SUMMA™ canister is used to draw the soil vapor through the flow controller until a negative pressure of approximately 5-inches of mercury is observed on the vacuum gauge and recorded on the

chain-of-custody. The flow controllers should be set to 100-200 milliliters per minute. Field duplicates should be collected for every day of sampling and/or for every 10 samples collected.

In accordance with the DTSC guidance document titled *Advisory-Active Soil Gas Investigations*, dated March 2010, leak testing is necessary during sampling. Helium is recommended, although shaving cream is acceptable. Helium is pumped into a shroud that contains the entire sampling apparatus and the soil vapor probe well vault. A helium meter is used to quantify the percentage helium in the shroud during sampling.

Vapor Sample Storage, Handling and Transport

Samples are stored and transported under chain-of-custody to a state-certified analytic laboratory. Samples should never be cooled due to the possibility of condensation within the canister.

Soil Vapor Probe Destruction

The soil vapor probes will be preserved until they are no longer needed for risk evaluation purposes. At that time, they will be destroyed by extracting the tubing, hand augering to remove the sand and bentonite, and backfilling the boring with neat cement. The boring will be patched with asphalt or concrete, as appropriate.