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Alameda County
Environmental Health

Mike Bauer
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Chevron Environmental Management Company
145 S. State College Blvd
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Tel (714) 671-3200
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April 1, 2010

Mr. Jerry Wickham
Alameda County Environmental Health
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502-6577

Re: Former Signal Oil Marine Storage and Distribution Facility
(Former Chevron Bulk Plant 20-6127)
2301-2311 Blanding Avenue
Alameda, California
LOP Case RO0002466

Dear Mr. Wickham:

The purpose of this letter is to verify that as a representative for Chevron Environmental Management Company (Chevron), I reviewed, and concur with, the comments in the *Revised Vapor Sampling Plan* for the referenced facility, prepared on behalf of Chevron by Conestoga-Rovers & Associates.

Please feel free to contact me at (714) 671-3207 if you have any questions.

Sincerely,

Mike Bauer
Project Manager

CONESTOGA-ROVERS
& ASSOCIATES

10969 Trade Center Drive, Suite 106, Rancho Cordova, CA 95670
Telephone: 916-889-8900 Facsimile: 916-889-8999
www.CRAworld.com

April 1,2010 Reference No. 631916

Mr. Jerry Wickham
Alameda County Environmental Health (ACEH)
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502-6577

Re: Revised Vapor Sampling Plan
Former Signal Oil Marine Storage and Distribution Facility
(Former Chevron Bulk Plant 20-6127)
2301-2311 Blanding Avenue
Alameda, California
LOP Case RO0002466

Dear Mr. Wickham:

This letter documents our telephone discussion on March 16, 2010 regarding vapor sampling at the site referenced above. In correspondence dated February 5, 2010 (Attachment A), ACEH requested that quarterly vapor sampling of the six vapor wells and seven sub-slab vapor probes be conducted for a period of one year to further evaluate temporal variability and the need for further sub-slab and indoor air sampling at the site.

Per our March 16, 2010 discussion, we agreed to the following revisions:

- The vapor wells and the sub-slab vapor points will be sampled twice; once in approximately April, and again in approximately November (before and after the rainy season)
- An indoor and outdoor air survey will also be conducted during each vapor sampling event

Indoor and outdoor air sampling will be performed concurrently with the sub-slab vapor probe sampling. All air samples will be collected over an 8-hour period in 100 percent certified clean 6-liter Summa™ canisters within the breathing zone, approximately 3 to 5 feet off the ground. At least one sample will be collected from each of the four suites where the sub-slab vapor probes are located.

Indoor air sampling will be conducted in an environment that is representative of normal use by the occupants. Any heating or cooling systems will be operated normally. As commonly acknowledged, numerous sources for petroleum related chemicals exist in normal living spaces. The presence of these sources may contribute to indoor air sampling results and make it difficult to determine whether chemicals detected in indoor air are present due to vapor transport from the subsurface or from other potential sources. In order to address this issue, a survey of the four suites will be made prior to conducting indoor air sampling and an inventory

of potential VOC contributors will be noted on the Building Survey Form (Attachment B) from the California Environmental Protection Agency and Department of Toxic Substances Control's *Guidance for the Evaluation and Mitigation of Subsurface Vapor Intrusion to Indoor Air – Interim Final* dated December 15, 2004 and revised February 7, 2005. At the discretion of the tenant, significant potential sources may be removed prior to indoor air sampling.

Ambient air samples will be collected simultaneously with the indoor air samples in the upwind direction of the suites, approximately 5 to 15 feet from the building. Background samples are used to determine if the chemicals of concern are present in the ambient environment, and if present, whether they may be contributing to any indoor concentrations.

Final placement of the indoor and outdoor ambient air samples is dependant upon the layout of the individual suites and will be determined in the field.

Vapor samples will be analyzed for the following:

- TPHg, BTEX, and naphthalene by EPA Method TO-15 for the sub-slab samples and by EPA Method TO-15 SIM for the indoor and outdoor air samples
- Oxygen, carbon dioxide, nitrogen, methane and helium by ASTM D-1946

CRA will also collect the following data:

- predominant wind direction
- types of industries in the area that could have potential air releases
- permits issued in the surrounding neighborhood by the local air district
- location of utility corridors

We appreciate your assistance on this project. If you have any questions regarding the location of the sub-slab sampling locations, please contact me at (916) 889-8908.

Sincerely,

CONESTOGA-ROVERS & ASSOCIATES

Brian Silva

Greg Barclay, P.G. 6260

PROFESSIONAL GEOLOGIST
GREG BARCLAY
No. 6260
STATE OF CALIFORNIA

BS/jt/5
Encl.

Attachment A ACEH February 5, 2010 Letter
Attachment B Building Survey Form

cc: Mike Bauer, Chevron (*electronic only*)
Julie Beck Ball
Peter Reinhold Beck
Monroe Wingate
Tom Foley, Gallagher & Miersch

ATTACHMENT A

ACEH CORRESPONDENCE DATED FEBRUARY 5, 2010

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
ALEX BRISCOE, Agency Director

ENVIRONMENTAL HEALTH SERVICES
ENVIRONMENTAL PROTECTION
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577
(510) 567-6700
FAX (510) 337-9335

February 5, 2010

Mr. Mike Bauer
Chevron Environmental Management Company
145 S. State College Blvd.
Brea, CA 92821

Ms. Julie Beck Ball
Mr. Peter Reinhold Beck
2720 Broderick Street
San Francisco, CA 94123

Subject: SLIC Case No. RO0002466 and Geotracker Global ID T06019744728, Park Street Landing 2301-2337 Blanding Avenue, Alameda, CA 94501 – Site Investigation Review

Dear Mr. Bauer and Ms. Ball:

Alameda County Environmental Health (ACEH) staff has reviewed the Spills, Leaks, Investigations, and Cleanups (SLIC) case file for the above referenced site including the recently submitted documents entitled, "*Soil Vapor Sampling Report*," dated December 2, 2009 and "*Fourth Quarter 2009 Groundwater Monitoring Report*," dated November 20, 2009. Both reports were prepared on Chevron's behalf by Conestoga-Rovers & Associates.

The "*Soil Vapor Sampling Report*," presents results from sub-slab vapor probe installation and vapor sampling conducted on October 22, 2009. Sub-slab vapor probes VP-9 through VP-13 were re-installed due to ambient air leaks detected during the initial sampling of the probes on July 24, 2009. Total petroleum hydrocarbons as gasoline (TPHg) and benzene were detected in sub-slab soil vapor samples at concentrations up to 2,100 and 16 micrograms per cubic meter ($\mu g/m^3$), respectively. Based on the sub-slab vapor sampling results obtained, we request additional investigation as discussed in the technical comments below. We request that you address the following technical comments and submit the reports requested below.

TECHNICAL COMMENTS

1. **Sub-Slab Sampling Methods.** Subslab vapor samples VP-9 through VP-13 were collected without purging. We request that future subslab vapor samples be collected following the guidance in the document prepared by the U.S. Environmental Protection Agency entitled, "*Draft Standard Operating Procedures (SOP) for Installation of Sub-Slab Vapor Probes and Sampling Using EPA Method TO-15 to Support Vapor Intrusion Investigations*," which recommends purging two liters from subslab vapor probes using two dedicated 1-liter Tedlar bags. This guidance document was included as Appendix E to the March 11, 2009 Work Plan for the sub-slab vapor probe installation and sampling but apparently was not applied during sub-slab sampling at the site.

2. **Comparison of Sub-slab Vapor Sampling Results to ESLs.** The "*Soil Vapor Sampling Report*," dated December 2, 2009 cites a comparison of the sub-slab sampling results to Environmental Screening Levels (ESLs) in concluding that there appears to be no human health risk due to vapor intrusion to indoor air. We do not concur with this method for evaluating the results. The ESLs cited are for soil vapor samples that are typically collected at a depth of 5 feet and incorporate an attenuation factor for soil based on the distance between the slab of the building and the soil vapor sample. Since, sub-slab samples are collected immediately below the slab, screening levels that incorporate an attenuation factor for a vertical interval of soil are clearly not applicable. The Department of Toxic Substances Control provides a default attenuation factor of 0.01 (Guidance for the Evaluation and Mitigation of Subsurface Vapor Intrusion to Indoor Air, DTSC December 15, 2004) for subslab samples to account for attenuation by the building slab. Therefore, the appropriate approach is to apply an attenuation factor of 0.01 to the subslab sample results and compare the data to indoor air goals. As an example, applying an attenuation factor of 0.01 to the subslab sample results for VP-10 results in an estimated indoor air concentration for TPHg of 21 $\mu g/m^3$ (2,100 $\mu g/m^3$ x 0.01) which exceeds the indoor air goal of 14 $\mu g/m^3$ for noncarcinogenic risk. For benzene, applying an attenuation factor of 0.01 to the subslab sample results for VP-10 results in an estimated indoor air concentration of 0.16 $\mu g/m^3$ (16 $\mu g/m^3$ x 0.01) which exceeds the indoor air goal of 0.14 $\mu g/m^3$ for carcinogenic risk. Although these results do not necessarily indicate that a significant risk of vapor intrusion exists at the site, the results clearly indicate that further investigation is needed. At a minimum, we request that you sample the existing sub-slab and soil vapor probes on a quarterly basis. These data will be used to evaluate temporal variability and the need for further sub-slab and indoor air sampling at the site. We do not concur with the proposal to destroy subslab vapor probes VP-7 through VP-13. Please present the results of quarterly vapor monitoring in the quarterly monitoring reports requested. You may also propose additional investigation of the potential for vapor intrusion that includes actions in addition to quarterly vapor sampling.

3. **Temporal Variability of Soil Vapor Sampling Results.** In some cases, there appears to be significant variability in the analytical results between the 7/24/2009 and 10/22/2009 sampling events. The variability of the sampling results must be considered in evaluating whether there is a potential for vapor intrusion and further supports the need for additional investigation.

4. **Groundwater Monitoring Conclusions.** We concur with the proposal to continue quarterly groundwater monitoring. Please present the results from quarterly groundwater monitoring in the reports requested below. However, it is not clear that the collection of surface water samples at CS-2 provides meaningful information to help assess whether petroleum hydrocarbons from the site discharge to the Alameda Canal. Therefore, sampling of CS-2 may be suspended at this time.

5. **Evaluation of Shallow Groundwater.** In correspondence dated October 17, 2007, we questioned the representativeness of the groundwater monitoring data for well MW-1 and requested additional sampling of shallow groundwater in the area of well MW-1. Two shallow groundwater samples were proposed in the area of well MW-1 (SB-17 and SB-18). TPHg, TPHd, and benzene were detected in the grab groundwater sample from boring SB-18 at concentrations of 3,800, 19,000, and 590 µg/L. The concentrations detected in the grab groundwater sample from SB-18 are significantly higher than the concentrations detected in groundwater from MW-1. This further indicates that the data collected from well MW-1 may not accurately reflect shallow groundwater quality at the site and also indicates

that fuel hydrocarbons are likely discharging to the Alameda Canal. Unfortunately, a groundwater sample was not collected from boring SB-17. The March 11, 2009 "Work Plan for Additional Investigation," proposed the installation of five monitoring wells. One of the proposed wells was downgradient from well MW-1 and would have provided additional data to assess the representativeness of MW-1 results and to help assess potential discharges to the Alameda Canal. The proposed well could not be installed due to subsurface obstructions at approximately 3 to 4 feet bgs. As a result, the evaluation of shallow groundwater and the potential for discharges to Alameda Canal remains incomplete. We request that you make additional attempts to install the proposed well downgradient from MW-1 or propose additional investigation to address this data gap. Please submit a Well Installation Report for the proposed well downgradient from MW-1 or a Work Plan for additional investigation activities to assess potential discharges to Alameda Canal no later than May 12, 2010.

TECHNICAL REPORT REQUEST

Please submit technical reports to Alameda County Environmental Health (Attention: Jerry Wickham), according to the following schedule:

- **30 days after end of each quarter** – Quarterly Soil Vapor and Groundwater Monitoring Report
- **May 12, 2010** – Well Installation Report or Work Plan to Assess Potential Discharges to Alameda Canal

These reports are being requested pursuant to California Health and Safety Code Section 25296.10. 23 CCR Sections 2652 through 2654, and 2721 through 2728 outline the responsibilities of a responsible party in response to an unauthorized release from a petroleum UST system, and require your compliance with this request.

ELECTRONIC SUBMITTAL OF REPORTS

ACEH's Environmental Cleanup Oversight Programs (LOP and SLIC) require submission of reports in electronic form. The electronic copy replaces paper copies and is expected to be used for all public information requests, regulatory review, and compliance/enforcement activities. Instructions for submission of electronic documents to the Alameda County Environmental Cleanup Oversight Program FTP site are provided on the attached "Electronic Report Upload Instructions." Submission of reports to the Alameda County FTP site is an addition to existing requirements for electronic submittal of information to the State Water Resources Control Board (SWRCB) Geotracker website. In September 2004, the SWRCB adopted regulations that require electronic submittal of information for all groundwater cleanup programs. For several years, responsible parties for cleanup of leaks from underground storage tanks (USTs) have been required to submit groundwater analytical data, surveyed locations of monitoring wells, and other data to the Geotracker database over the Internet. Beginning July 1, 2005, these same reporting requirements were added to Spills, Leaks, Investigations, and Cleanup (SLIC) sites. Beginning July 1, 2005, electronic submittal of a complete copy of all reports for all sites is required in Geotracker (in PDF format). Please visit the SWRCB website for more information on these requirements (http://www.swrcb.ca.gov/ust/cleanup/electronic_reporting).

PERJURY STATEMENT

All work plans, technical reports, or technical documents submitted to ACEH must be accompanied by a cover letter from the responsible party that states, at a minimum, the following: "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." This letter must be signed by an officer or legally authorized representative of your company. Please include a cover letter satisfying these requirements with all future reports and technical documents submitted for this fuel leak case.

PROFESSIONAL CERTIFICATION & CONCLUSIONS/RECOMMENDATIONS

The California Business and Professions Code (Sections 6735, 6835, and 7835.1) requires that work plans and technical or implementation reports containing geologic or engineering evaluations and/or judgments be performed under the direction of an appropriately registered or certified professional. For your submittal to be considered a valid technical report, you are to present site specific data, data interpretations, and recommendations prepared by an appropriately licensed professional and include the professional registration stamp, signature, and statement of professional certification. Please ensure all that all technical reports submitted for this fuel leak case meet this requirement.

AGENCY OVERSIGHT

If it appears as though significant delays are occurring or reports are not submitted as requested, we will consider referring your case to the Regional Board or other appropriate agency, including the County District Attorney, for possible enforcement actions. California Health and Safety Code, Section 25299.76 authorizes enforcement including administrative action or monetary penalties of up to $10,000 per day for each day of violation.

If you have any questions, please call me at (510) 567-6791 or send me an electronic mail message at jerry.wickham@acgov.org.

Sincerely,

Jerry Wickham

Digitally signed by Jerry Wickham
DN: cn=Jerry Wickham, o, ou, email=jerry.wickham@acgov.org, c=US
Date: 2010.02.08 15:51:10 -08'00'

Jerry Wickham, California PG 3766, CEG 1177, and CHG 297
Senior Hazardous Materials Specialist

Enclosure: ACEH Electronic Report Upload (ftp) Instructions

cc: Mr. Brian Silva, Conestoga-Rovers & Associates, 10969 Trade Center Drive, Suite 107, Rancho Cordova, CA 95670 (*Sent via E-mail to: bsilva@craworld.com*)

Donna Drogos, ACEH (*Sent via E-mail to: donna.drogos@acgov.org*)
Jerry Wickham, ACEH
Geotracker, File

Alameda County Environmental Cleanup Oversight Programs (LOP and SLIC)	**ISSUE DATE:** July 5, 2005
	REVISION DATE: March 27, 2009
	PREVIOUS REVISIONS: December 16, 2005, October 31, 2005
SECTION: Miscellaneous Administrative Topics & Procedures	**SUBJECT:** Electronic Report Upload (ftp) Instructions

The Alameda County Environmental Cleanup Oversight Programs (LOP and SLIC) require submission of all reports in electronic form to the county's ftp site. Paper copies of reports will no longer be accepted. The electronic copy replaces the paper copy and will be used for all public information requests, regulatory review, and compliance/enforcement activities.

REQUIREMENTS

- Entire report including cover letter must be submitted to the ftp site as **a single portable document format (PDF) with no password protection**. (Please do not submit reports as attachments to electronic mail.)
- It is **preferable** that reports be converted to PDF format from their original format, (e.g., Microsoft Word) rather than scanned.
- Signature pages and perjury statements **must** be included and have either original or electronic signature.
- **Do not password protect the document**. Once indexed and inserted into the correct electronic case file, the document will be secured in compliance with the County's current security standards and a password. **Documents with password protection will not be accepted**.
- Each page in the PDF document should be rotated in the direction that will make it easiest to read on a computer monitor.
- Reports must be named and saved using the following naming convention:
  RO#_Report Name_Year-Month-Date (e.g., RO#5555_WorkPlan_2005-06-14)

Additional Recommendations

- A separate copy of the tables in the document should be submitted by e-mail to your Caseworker in **Excel** format. These are for use by assigned Caseworker only.

Submission Instructions

1) Obtain User Name and Password:
   a) Contact the Alameda County Environmental Health Department to obtain a User Name and Password to upload files to the ftp site.
      i) Send an e-mail to dehloptoxic@acgov.org
         Or
      ii) Send a fax on company letterhead to (510) 337-9335, to the attention of My Le Huynh.
   b) In the subject line of your request, be sure to include **"ftp PASSWORD REQUEST"** and in the body of your request, include the **Contact Information, Site Addresses**, and the **Case Numbers (RO# available in Geotracker) you will be posting for**.

2) Upload Files to the ftp Site
   a) Using Internet Explorer (IE4+), go to ftp://alcoftp1.acgov.org
      (i) Note: Netscape and Firefox browsers will not open the FTP site.
   b) Click on File, then on Login As.
   c) Enter your User Name and Password. (Note: Both are Case Sensitive.)
   d) Open "My Computer" on your computer and navigate to the file(s) you wish to upload to the ftp site.
   e) With both "My Computer" and the ftp site open in separate windows, drag and drop the file(s) from "My Computer" to the ftp window.

3) Send E-mail Notifications to the Environmental Cleanup Oversight Programs
   a) Send email to dehloptoxic@acgov.org notify us that you have placed a report on our ftp site.
   b) Copy your Caseworker on the e-mail. Your Caseworker's e-mail address is the entire first name then a period and entire last name @acgov.org. (e.g., firstname.lastname@acgov.org)
   c) The subject line of the e-mail must start with the RO# followed by **Report Upload**. (e.g., Subject: RO1234 Report Upload) If site is a new case without an RO# use the street address instead.
   d) If your document meets the above requirements and you follow the submission instructions, you will receive a notification by email indicating that your document was successfully uploaded to the ftp site.

ATTACHMENT B

BUILDING SURVEY FORM

APPENDIX K - BUILDING SURVEY FORM

This form must be completed for each building involved in an indoor air investigation.

Preparer's name _____ Date prepared _____

Preparer's affiliation _____

Telephone number _____

1. **OCCUPANT** Name _____

Address _____

_____

City _____

Home telephone number _____

Office telephone number _____

2. **OWNER OR LANDLORD** Name _____
(If different than occupant)

Address _____

_____

Telephone number _____

A. Type of Building Construction

Type (circle appropriate responses): Single Family Multiple Dwelling Commercial

Ranch	Two-family
Raised Ranch	Duplex
Split Level	Office
Colonial	Warehouse
Mobile Home	Strip Mall
Apartment Building:	Number of Units _____
Other _____	

Building Age _____ Number of stories _____

Area of the Building (square feet) _____

Is the building insulated? yes / no How sealed is the building?_____

Number of elevators in the building _____

Condition of the elevator pits (sealed, open earth, etc.) _____

General description of building construction materials _____

_____

B. Foundation Characteristics (circle all that apply)

1. Full basement, crawlspace, slab on grade, other _____
2. Basement floor description: concrete, dirt, wood, other _____
   a. The basement is: wet, damp, dry _____
   b. Sump present? yes / no _____Water in sump? yes / no ____
   c. The basement is: finished, unfinished _____
   d. Is the basement sealed? Provide a description _____

      _____
3. Concrete floor description: unsealed, painted, covered; with _____
4. Foundation walls: poured concrete, block, stone, wood, other _____
5. Identify all potential soil gas entry points and their size (e.g., cracks, voids, pipes, utility ports, sumps, drain holes, etc.). Include these points on the building diagram.

C. Heating, Ventilation, and Air Conditioning (circle all that apply)

1. The type of heating system(s):

Hot Air Circulation	Heat Pump
Hot Water Radiation	Unvented Kerosene Heater
Steam Radiation	Wood Stove
Electric Baseboard	Other (specify) _____

2. The type of fuel used: Natural Gas, Fuel Oil, Electric, Wood, Coal, Solar

   Other (specify) _____
3. Location of heating system: _____
4. Is there air-conditioning? yes / no Central Air or Window Units?

Specify the location _____

5. Are there air distribution ducts present? yes / no

6. Describe the supply and cold air return duct work including whether there is a cold air return and comment on the tightness of duct joints.
   _____

7. Is there a whole house fan? yes / no _____
   What is the rated size of the fan? _____

8. Temperature settings inside during sampling. Note day and night temperatures.
   a. Daytime temperature(s) _____
   b. Nighttime temperature(s) _____
      (Note times if system cycles during non-occupied hours during the day)

9. Estimate the average time doors and windows are open to allow fresh outside air into the building. Note rooms that frequently have open windows or doors.
   _____

D. Potential Indoor Sources of Pollution

1. Is the laundry room located inside the home? yes / no

2. Has the house ever had a fire? yes / no

2. Is there an attached garage? yes / no

3. Is a vehicle normally parked in the garage? yes / no

4. Is there a kerosene heater present? yes / no

5. Is there a workshop, hobby or craft area in the residence? yes / no

6. An inventory of all products used or stored in the home should be performed. Any products that contain volatile organic compounds or chemicals similar to the target compounds should be listed. The attached product inventory form should be used for this purpose.

7. Is there a kitchen exhaust fan? yes / no Where is it vented? _____

8. Is the stove gas or electric? _____ Is the oven gas or electric? _____

9. Is there an automatic dishwasher? yes / no

10. Is smoking allowed in the building? yes / no

11. Has the house ever been fumigated or sprayed for pests? If yes, give date, type and location of treatment.
    _____

E. Water and Sewage (Circle the appropriate response)

Source of Water

Public Water Drilled Well Driven Well Dug Well Other (Specify) _____

Water Well Specifications

Well Diameter _____ Grouted or Ungrouted _____

Well Depth _____ Type of Storage Tank _____

Depth to Bedrock _____ Size of Storage Tank _____

Feet of Casing _____ Describe type(s) of Treatment _____

Water Quality

Taste and/or odor problems with water? yes / no If so, describe _____

Is the water chlorinated, brominated, or ozonated? yes / no _____

How long has the taste and/or odor problem been present? _____

Sewage Disposal: Public Sewer Septic Tank Leach Field Other (Specify) _____

Distance from well to septic system _____ Type of septic tank additives _____

F. Plan View

Sketch each floor and if applicable, indicate air sampling locations, possible indoor air pollution sources, preferential pathways and field instrument readings.

G. Potential Outdoor Sources of Pollution

Draw a diagram of the area surrounding the building being sampled. If applicable, provide information on the spill locations (if known), potential air contamination sources (industries, service stations, repair shops, retail shops, landfills, etc.), outdoor air sampling locations, and field instrument readings.

Also, on the diagram, indicate barometric pressure, weather conditions, ambient and indoor temperatures, compass direction, wind direction and speed during sampling, the locations of the water wells, septic systems, and utility corridors if applicable, and a statement to help locate the site on a topographical map.