

Alexis Fischer Project Manager Marketing Business Unit **Chevron Environmental Management Company** 6101 Bollinger Canyon Road San Ramon, CA 94583 Tel (925)790-6441 afischer@chevron.com

RECEIVED

By Alameda County Environmental Health at 2:02 pm, Sep 29, 2014

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

Re: Chevron Service Station No. 94800 1700 Castro Street Oakland, CA

I have reviewed the attached report entitled Conceptual Site Model 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,

alip find

Alexis Fischer Project Manager

Attachment: Conceptual Site Model Addendum



5900 Hollis Street, Suite A Emeryville, California 94608 Telephone: (510) 420-0700 http://www.craworld.com

Fax: (510) 420-9170

Reference No. 060061

September 25, 2014

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

Re: Conceptual Site Model Addendum Chevron Service Station 94800 1700 Castro Street Oakland, California Fuel Leak Case No. RO0000342

Dear Mr. Detterman:

Conestoga-Rovers & Associates (CRA) is submitting this *Conceptual Site Model Addendum* for the site referenced above (Figure 1) on behalf of Chevron Environmental Management Company (CEMC). CRA previously submitted a *Conceptual Site Model and Closure Request* (CSM) dated April 11, 2014. In response to the CSM, Alameda County Environmental Health (ACEH) requested additional information to address their technical comments in a letter dated June 5, 2014 (Attachment A).

## 1.0 SITE BACKGROUND

The site is currently an active Chevron Service Station located on Castro Street between 17<sup>th</sup> and 18<sup>th</sup> Streets in Oakland, California (Figure 1, 2, and 3) in a primarily commercial and residential area. Interstate 980 is located west of the site across Castro Street and runs below site grade. In 2004, the station was remodeled and currently contains a mini-mart, five dispensers under a common canopy in the center of the site, and one 15,000-gallon and one 20,000-gallon underground storage tank (USTs) located in the southern corner of the site. Additional site background details are included in CRA's April 11, 2014 *CSM*.

## 2.0 TECHNICAL COMMENTS

## Low Threat Closure Policy (LTCP) General Criteria e (Site Conceptual Model)

CRA's April 11, 2014 *Conceptual Site Model and Closure Request* addressed the source of the unauthorized release, described soil, groundwater, and soil vapor conditions, local geology, hydrogeology, and identified potential receptors including water supply wells, surface water bodies, and structures and their inhabitants.

Equal Employment Opportunity Employer



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### a. Depiction of Former Heating Oil UST Location

ACEH requested the location of the former heating oil UST on the site plan and other report figures. The updated site plan was submitted to ACEH on May 30, 2014 and is included in this report on Figure 2. The soil sample collected during removal of the 700-gallon heating oil UST in 1987 contained 14 milligrams per kilogram (mg/kg) waste oil by EPA method 3510.<sup>1</sup> Based on the analytical data and location of the UST in the northern corner of the property, this former UST is not a significant source of residual hydrocarbons in soil and groundwater beneath the site.

## LTCP Media Specific Criteria for Groundwater

To satisfy the media-specific criteria for groundwater, the contaminant plume that exceeds water quality objectives must be stable or decreasing in aerial extent, and meet all the additional characteristics of one of the five classes of sites listed in the LTCP.

## a. Extent of Groundwater Plume

In their June 5, 2014 letter, ACEH mentions that the downgradient extent of methyl tertiary butyl ether (MTBE) in groundwater has not been adequately defined. Historically the highest dissolved MTBE has been detected in downgradient offsite well MW-7. No additional assessment has been completed downgradient of MW-7 due to the immediate location of Interstate 980.

As stated in CRA's CSM, no water supply wells were located in California Department of Water Resources (DWR) and Alameda County Public Works Agency (ACPWA) records within 2,000 feet of the site. The nearest downgradient well is approximately 5,300 feet southwest from the site. However, ACEH indicates that this area of Oakland is known to have early, unregistered water supply wells according to a Figure 5 from Regional Water Quality Control Board's June 1999 East Bay Plain Groundwater Basin Beneficial Use Evaluation Report, Alameda and Contra Costa Counties, California. The LTCP Groundwater Technical Guidance document indicates dissolved MTBE plumes have a maximum length of 1,046 feet. Therefore, CRA conducted a door-to-door survey for water wells within 1,050 feet west, northwest, and southwest of the site. In the area, 67 addresses were identified and a total of 112 well survey forms were mailed out on July 18, 2014 to both the property owners and properties residents. Of those 112, 35 were "return to sender" and 23 surveys were completed and returned. The list of recipients and the completed surveys are included as Attachment B. One returned guestionnaire indicated a water well is located on the property but the resident or property owner was unsure if it is still in use. The resident or property owner also indicated the water at the property is supplied by a municipal provider. Unfortunately, the responder did not note the address of the property/well. CRA

Reference No. 060061

<sup>&</sup>lt;sup>1</sup> Chevron USA February 4, 1987 Memorandum



Reference No. 060061

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mailed out a second set of questionnaires on August 12, 2014 in an attempt to increase the amount of responses and in hopes of identifying the potential water well location that was identified in the first mailing. Unfortunately we did not receive a response stating a well was present following the second mailing of questionnaires. As requested by ACEH, on September 16, 2014, CRA conducted a physical and aerial reconnaissance of the neighborhood and did not locate any evidence (pump house, stove pipe, etc.) of a water supply well.

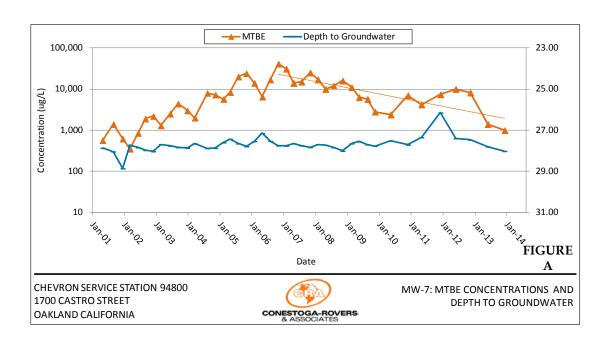
In 2014, CRA conducted a sensitive receptor survey. As stated above, no water supply wells are located within 2,000 feet of the site. The nearest well is an irrigation well located approximately 2,200 feet south (crossgradient) of the site. Other than water supply wells, potential receptors identified near the site are two schools, two day care centers, and one elder care center. The nearest sensitive receptor is, the San Pablo Residential Community located 550 feet northeast (upgradient). The nearest downgradient sensitive receptor is Lafayette Elementary School located 1,000 feet to the west on the opposite side of Highway 980. The nearest surface water body is Lake Merritt located 2,500 east (upgradient). Based on direction and distance, there is no threat of hydrocarbons originating from the site affecting these identified potential receptors. Additional details of the sensitive receptor survey are included in CRA's April 11, 2014 *CSM*.

Figure 3 depicts the consistent westerly groundwater flow, current dissolved MTBE plume, and average, 90<sup>th</sup> percentile, and maximum dissolved MTBE plume lengths according to the LTCP *Groundwater Technical Guidance* document. Locations of potential sensitive receptors are also depicted on the figure. The 90 percentile plume length of 550 feet, does not extend into the neighborhood on the other side of Interstate 980.

On May 30, 2014, well MW-7 was monitored and sampled. According to the Lancaster Analytical Report (Attachment C), 990 micrograms per liter ( $\mu$ g/L) MTBE was detected, which is two orders of magnitude less than the highest concentration detected of 41,000  $\mu$ g/L (2006), and consistent with the declining trend shown in Figure A below. ACEH noted that the 50  $\mu$ g/L detected in the previous sampling event was inconsistent with historical groundwater data; therefore, CRA removed the outlier data point from the trend analysis. Even without the anomalous low concentration, there is still a downward trend.



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### Revised Data Gap Investigation Work Plan and Focused Site Conceptual Model

CRA previously submitted a CSM dated April 11, 2014. Based on the data previously presented in the 2014 CSM, the door-to-door survey, and the second quarter groundwater monitoring and sampling data (Attachment C), this site meets all general and media-specific criteria of the LTCP; however there is a data gap of the location of the potential water supply well noted on one of the returned the door-to-door surveys.

### Groundwater Monitoring

As requested, groundwater monitoring and sampling will continue. On May 30, 2014, wells MW-1 through MW-4 and MW-7 were monitored and sampled. Results of the event will be presented in a separate Groundwater Monitoring and Sampling Report.

### 3.0 CLOSING

CRA will continue efforts to identify the location of the potential water supply well noted on one of the returned door-to-door surveys. CRA will provide an update of our efforts by December 12, 2014.



Reference No. 060061

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Please contact Nathan Lee at (925) 849-1003 if you have any questions or require additional information.

Regards,

CONESTOGA-ROVERS & ASSOCIATES



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**Kiersten Hoey** 

Branch Alilken

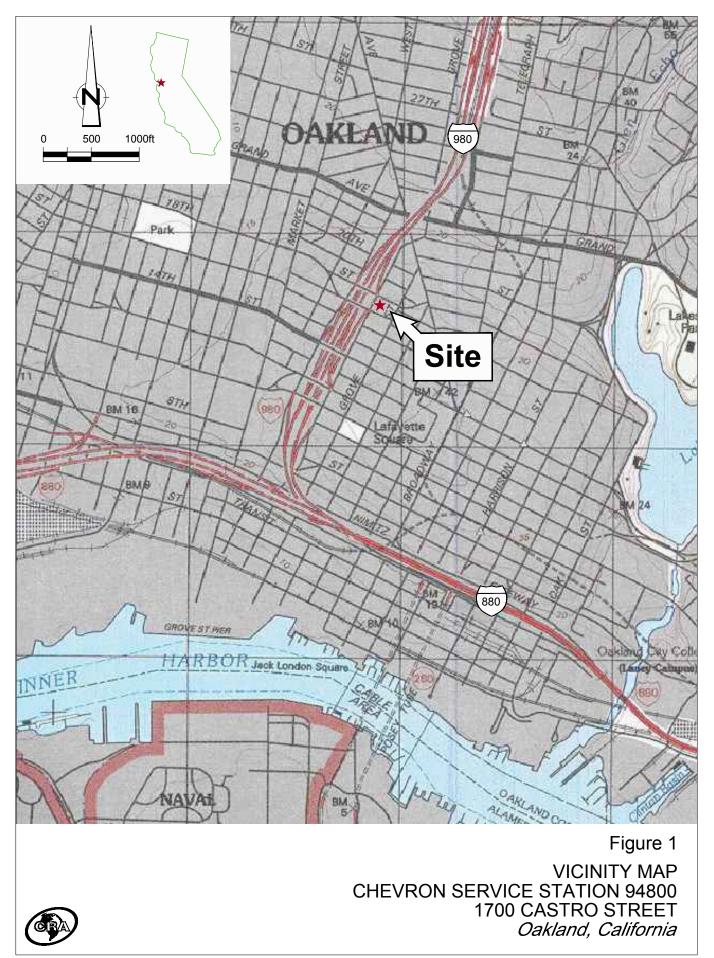
Brandon S. Wilken PG 7564

KH/mws/12 Encl.

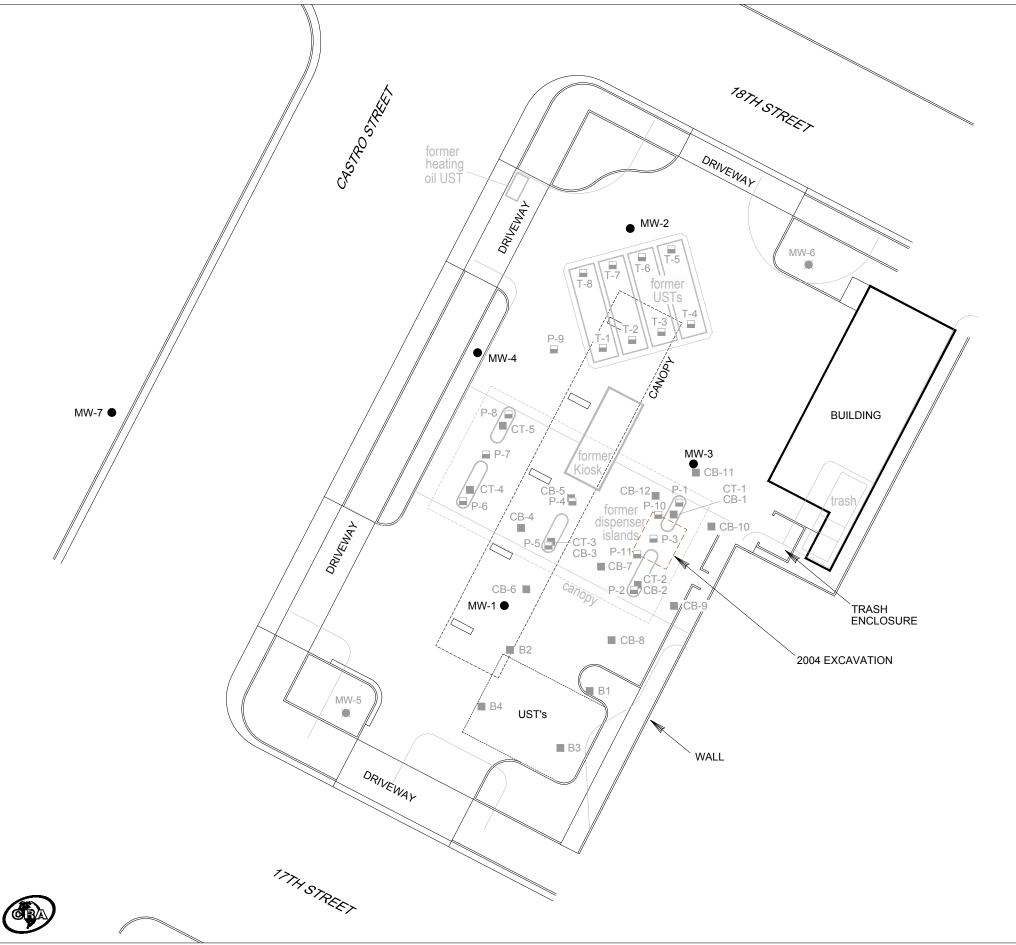
Figure 1	Vicinity Map
Figure 2	Site Plan
Figure 3	Potential Receptors and MTBE Groundwater Plume
Attachment A	Regulatory Letter
Attachment B	List of Door-to-Door Well Survey Recipients and Copies of Returned Surveys
Attachment C	Eurofins Lancaster Laboratory Analytical Report

cc: Ms. Alexis Fischer, Chevron (*electronic only*)

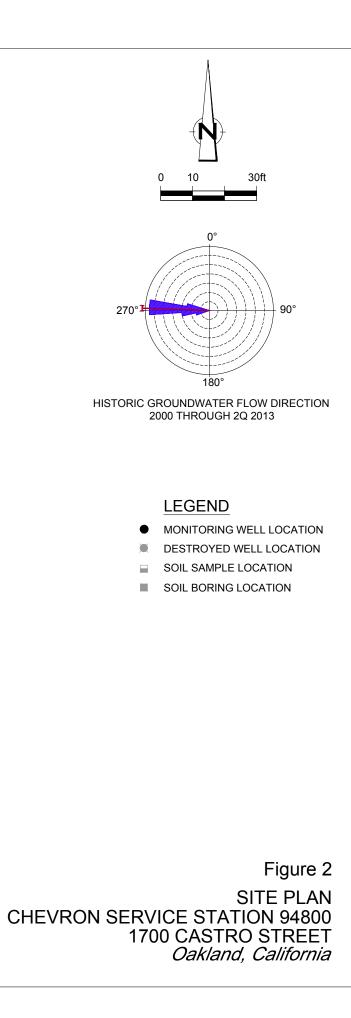
FIGURES

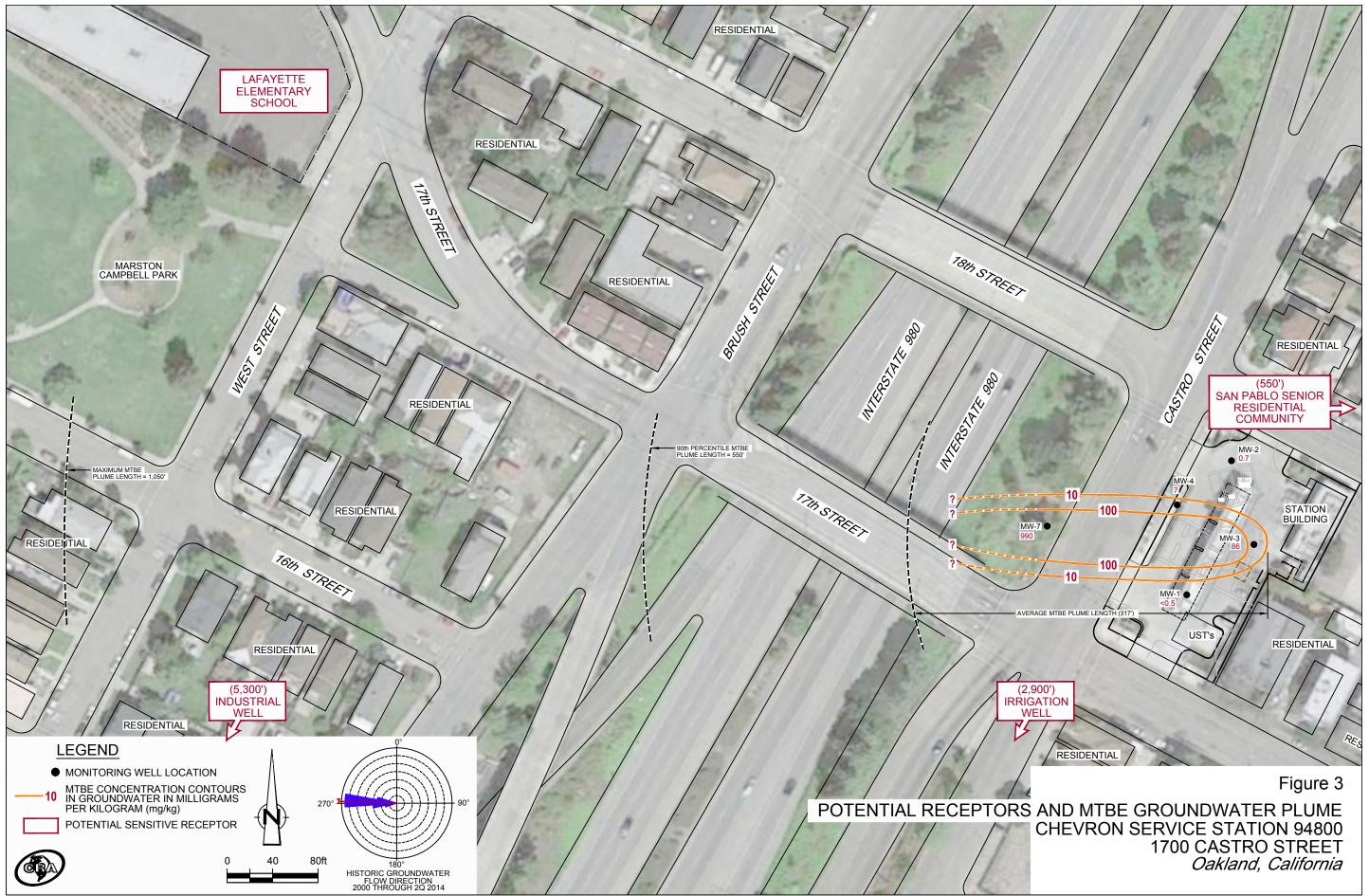


060061-95(012)GN-EM001 JAN 22/2014



060061-95(012)GN-EM002 MAY 29/2014





060061-95(012)GN-EM011 SEP 22/2014

**REGULATORY LETTER** 

## ALAMEDA COUNTY HEALTH CARE SERVICES



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

June 5, 2014

Ms. Alexis Fischer Chevron Environmental Management Co. 6101 Bollinger Canyon Road San Ramon, CA 94583 (sent via electronic mail to AFischer@chevron.com)

ALEX BRISCOE, Agency Director

AGENCY

# Subject: Request for Data Gap Work Plan; for Fuel Leak Case No. RO0000342; (Global ID # T0600102076); Chevron #9-4800, 1700 Castro Street, Oakland, CA 94612

Dear Ms. Fischer:

Alameda County Environmental Health (ACEH) staff has reviewed the case file including the *Conceptual Site Model and Closure Request*, dated April 11, 2014, and the *Second Semi-Annual 2013 Groundwater Monitoring and Sampling Report*, dated April 14, 2014. Both reports were prepared and submitted on your behalf by Conestoga-Rovers & Associates (CRA).

ACEH has evaluated the data and recommendations presented in the above-mentioned reports, in conjunction with the case files, to determine if the site is eligible for closure as a low risk site under the State Water Resources Control Board's (SWRCBs) Low Threat Underground Storage Tank Case Closure Policy (LTCP). Based on ACEH staff review, we have determined that the site fails to meet the LTCP General Criteria e (Conceptual Site Model; SCM), and the Media-Specific Criteria for Groundwater (see Geotracker for a copy of the review).

Therefore, at this juncture ACEH requests that you prepare a Revised Data Gap Investigation Work Plan that is supported by a focused Site Conceptual Model (SCM) to address the Technical Comments provided below.

### TECHNICAL COMMENTS

1. LTCP General Criteria e (Site Conceptual Model) – According to the LTCP, the SCM is a fundamental element of a comprehensive site investigation. The SCM establishes the source and attributes of the unauthorized release, describes all affected media (including soil, groundwater, and soil vapor as appropriate), describes local geology, hydrogeology and other physical site characteristics that affect contaminant environmental transport and fate, and identifies all confirmed and potential contaminant receptors (including water supply wells, surface water bodies, structures and their inhabitants). The SCM is relied upon by practitioners as a guide for investigative design and data collection. All relevant site characteristics identified by the SCM shall be assessed and supported by data so that the nature, extent and mobility of the release have been established to determine conformance with applicable criteria in this policy.

Our review of the case files indicates that insufficient data collection and analysis has not been presented to assess the nature, extent, and mobility of the release and to support compliance with Media Specific Criteria for Groundwater, and Direct Contact and Outdoor Air Exposure as described in this Technical Comment and Technical Comment 2 below.

a. Depiction of Former Heating Oil UST Location – The referenced SCM references the removal of an old 700-gallon heating oil underground storage tank (UST), but did not depict the location of the former UST. At the request of ACEH in a directive letter dated May 14, 2014, Chevron submitted the available information for the former heating oil UST which depicts the former location of the UST. It appears appropriate to update report figures to include the former location in order document the former location of the UST and the potential for residual contamination at the location.

 LTCP Media Specific Criteria for Groundwater – To satisfy the media-specific criteria for groundwater, the contaminant plume that exceeds water quality objectives must be stable or decreasing in areal extent, and meet all of the additional characteristics of one of the five classes of sites listed in the policy.

Our review of the case files indicates that insufficient data collection and analysis has been presented to support the requisite characteristics of plume stability or plume classification as follows:

a. Extent of Groundwater Plume – The downgradient extent of the methyl-tert-butyl either (MTBE) groundwater plume has not been adequately defined under the LTCP. Offsite and downgradient groundwater monitoring well MW-7 has historically contained the highest concentrations of MTBE in the site vicinity. The source of the MTBE plume appears to be in the vicinity of product line samples P-3 and P-10. Sample P-3 documented increasing concentrations of MTBE in soil between 5 and 10 feet below grade surface (bgs), with concentrations up to 19 milligrams per kilogram (mg/kg) at 10 feet bgs, before declining to 2.8 mg/kg at 14 feet bgs. While residual contamination appears to have been reduced with the overexcavation to 14 feet bgs, the residual contamination appears to continue to impact groundwater downgradient as documented by offsite well MW-7. This may explain why groundwater concentrations of MTBE do not appear to be substantially decreasing in well MW-7

While the concentration of MTBE in downgradient offsite well MW-7 was recently 50 micrograms per liter ( $\mu g/l$ ), this concentration is atypical from historic MTBE concentrations over the past 10 years and appears to be related to an atypically low groundwater elevation based on comparisons over a similar time period (please also see Technical Comment 5 below). Groundwater concentrations in well MW-7 in August 2004 and November 2012 were very similar (8,000 and 8,200  $\mu g/l$  MTBE) yet over this period of time MTBE concentrations fluctuated up to 41,000  $\mu g/l$  before returning to 8,000  $\mu g/l$ . Until this one recent event, MTBE concentrations consistently remained well over 1,000  $\mu g/l$  for over 10 years.

At the request of ACEH (directive letter dated August 15, 2013) the referenced SCM conducted a well survey. The well survey did not find water supply wells within 2,200 feet of the site. The closest well appears to be crossgradient, while the closest downgradient well appears to be at an approximate distance of 5,300 feet. However, review of Figure 5 from the *East Bay Plain Groundwater Basin Beneficial Use Evaluation Report, Alameda and Contra Costa Counties, CA,* San Francisco Regional Water Quality Control Board, dated June 1999, indicates that west Oakland has an exceptionally high incidence of early, apparently unregistered, water supply wells (see copy attached).

The LTCP groundwater Technical Guidance document indicates that MTBE plumes have an average length of 317 feet, that the 90<sup>th</sup> percentile plume has a length of 545 feet, and the maximum MTBE plume length is 1,046 feet. The distance to the first residential home west of I-980 is approximately 590 feet from the presumed source area. Because subsurface geology in the groundwater bearing zone is described in bore logs as predominantly homogeneous fine sand with limited fines, it appears appropriate to assume that the MTBE plume may approximate the maximum plume length at this site and vicinity.

Because of the conflict in vicinity well data, it appears appropriate to conduct a door to door neighborhood well survey within the area of the potential maximum plume extent, to determine that older residential wells are not in use, and are not likely to be converted to use in a disadvantaged neighborhood, especially as water supplies decline in a drought year. Please note that the drought may be the reason for the recent decline in groundwater elevation and MTBE concentrations at the site, and that these conditions may continue for a period of time.

Please present a strategy in the Revised Data Gap Work Plan (described in Technical Comment 3 below) to address the items discussed above.

3. Revised Data Gap Investigation Work Plan and Focused Site Conceptual Model – Please prepare Revised Data Gap Investigation Work Plan to address the technical comments listed above, by the date identified below. Please support the scope of work in the Revised Data Gap Investigation Work Plan with a focused SCM and Data Quality Objectives (DQOs) that relate the data collection to each LTCP Ms. Alexis Fischer RO00000342 June 5, 2014, Page 3

criteria. For example please clarify which scenario within each Media-Specific Criteria a sampling strategy is intended to apply to.

In order to expedite review, ACEH requests the focused SCM be presented in a tabular format that highlights the major SCM elements and associated data gaps, which need to be addressed to progress the site to case closure under the LTCP. Please see Attachment A "Site Conceptual Model Requisite Elements". Please sequence activities in the proposed revised data gap investigation scope of work to enable efficient data collection in the fewest mobilizations possible.

4. Groundwater Monitoring – As noted above, the recent decline of MTBE in downgradient offsite well MW-7 is atypical from the perspective of an extensive historic dataset, as is the depth of groundwater. The assumption that groundwater MTBE concentrations will remain at what are historically low concentrations does not appear to provide a significant factor of safety to potential downgradient well water owners should groundwater resources be utilized under drought or other conditions unbeknownst to others. It appears appropriate to temporarily resume groundwater monitoring in order to further investigate this anomalous data. Please submit a report by the date identified below.

#### **TECHNICAL REPORT REQUEST**

Please upload technical reports to the ACEH ftp site (Attention: Mark Detterman), and to the State Water Resources Control Board's Geotracker website, in accordance with the specified file naming convention below, according to the following schedule:

- July 18, 2014 First Semi-Annual 2014 Groundwater Monitoring and Sampling Report File to be named: RO342\_WELL\_DCM\_R\_yyyy-mm-dd
- August 1, 2014 Data Gap Investigation Plan and Focused Site Conceptual Model File to be named: RO342 WP\_SCM\_R\_yyyy-mm-dd
- 60 Days After Work Plan Approval Site Investigation Report
   File to be named: RO342\_SWI \_R\_yyyy-mm-dd

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.

Online case files are available for review at the following website: <u>http://www.acgov.org/aceh/index.htm</u>.

Should you have any questions, please contact me at (510) 567--6876 or send me an electronic mail message at mark.detterman@acgov.org.

Sincerely,

Digitally signed by Mark E. Detterman DN: cn=Mark E. Detterman, o, ou, email, c=US Date: 2014.06.05 11:43:53 -07'00'

Mark E. Detterman, PG, CEG Senior Hazardous Materials Specialist

Enclosures:

Attachment 1 - Responsible Party(ies) Legal Requirements/Obligations & ACEH Electronic Report Upload (ftp) Instructions

Attachment A – Site Conceptual Model Requisite Elements

Attachment B – Figure 5 from East Bay Plain Groundwater Basin Beneficial Use Evaluation Report, Alameda and Contra Costa Counties, CA, San Francisco Regional Water Quality Control Board, June 1999

Ms. Alexis Fischer RO00000342 June 5, 2014, Page 4

cc: Ms. Alexis Fischer, Chevron Environmental Management Company, 6101 Bollinger Canyon Road, San Ramon, CA 94583; (sent via email to <u>AFischer@chevron.com</u>)

Nathan Lee, Conestoga-Rovers & Assoc., 5900 Hollis Street, Suite A, Emeryville, CA 94608 (sent via electronic mail to <u>nlee@craworld.com</u>)

Kiersten Hoey, Conestoga-Rovers & Assoc., 5900 Hollis Street, Suite A, Emeryville, CA 94608 (sent via electronic mail to <u>KHoey@craworld.com</u>)

Leroy Griffin, Oakland Fire Department, 250 Frank H. Ogawa Plaza, Suite 3341, Oakland, CA 94612-2032 (sent via electronic mail to <u>lgriffin@oaklandnet.com</u>)

Dilan Roe (sent via electronic mail to <u>dilan.roe@acgov.org</u>) Mark Detterman, ACEH, (sent via electronic mail to <u>mark.detterman@acgov.org</u>) Geotracker, Electronic File

### Attachment 1

### Responsible Party(ies) Legal Requirements / Obligations

### REPORT REQUESTS

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). website for more information on these requirements Please visit the SWRCB (http://www.waterboards.ca.gov/water issues/programs/ust/electronic submittal/).

### 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.

### UNDERGROUND STORAGE TANK CLEANUP FUND

Please note that delays in investigation, later reports, or enforcement actions may result in your becoming ineligible to receive grant money from the state's Underground Storage Tank Cleanup Fund (Senate Bill 2004) to reimburse you for the cost of cleanup.

### 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.

Alameda County Environmental Cleanup	REVISION DATE: May 15, 2014
	ISSUE DATE: July 5, 2005
Oversight Programs (LOP and SLIC)	PREVIOUS REVISIONS: October 31, 2005; December 16, 2005; March 27, 2009; July 8, 2010, July 25, 2010
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

- Please do not submit reports as attachments to electronic mail.
- Entire report including cover letter must be submitted to the ftp site as a single portable document format (PDF) with no password protection.
- 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.
- <u>Do not</u> 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)

### 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 deh.loptoxic@acgov.org
  - 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 <a href="http://alcoftp1.acgov.org">http://alcoftp1.acgov.org</a>
    - (i) Note: Netscape, Safari, and Firefox browsers will not open the FTP site as they are NOT being supported at this time.
  - b) Click on Page located on the Command bar on upper right side of window, and then scroll down to Open FTP. Site in Windows Explorer.
  - 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 deh.loptoxic@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.

## Site Conceptual Model Requisite Elements

### Site Conceptual Model

The site conceptual model (SCM) is an essential decision-making and communication tool for all interested parties during the site characterization, remediation planning and implementation, and closure process. A SCM is a set of working hypotheses pertaining to all aspects of the contaminant release, including site geology, hydrogeology, release history, residual and dissolved contamination, attenuation mechanisms, pathways to nearby receptors, and likely magnitude of potential impacts to receptors.

The SCM is initially used to characterize the site and identify data gaps. As the investigation proceeds and the data gaps are filled, the working hypotheses are modified, and the overall SCM is refined and strengthened until it is said to be "validated". At this point, the focus of the SCM shifts from site characterization towards remedial technology evaluation and selection, and later remedy optimization, and forms the foundation for developing the most cost-effective corrective action plan to protect existing and potential receptors.

For ease of review, Alameda County Environmental Health (ACEH) requests utilization of tabular formats to (1) highlight the major SCM elements and their associated data gaps which need to be addressed to progress the site to case closure (see Table 1 of attached example), and (2) highlight the identified data gaps and proposed investigation activities (see Table 2 of the attached example). ACEH requests that the tables presenting the SCM elements, data gaps, and proposed investigation activities be updated as appropriate at each stage of the project and submitted with work plans, feasibility studies, corrective action plans, and requests for closures to support proposed work, conclusions, and/or recommendations.

The SCM should incorporate, but is not limited to, the topics listed below. Please support the SCM with the use of large-scaled maps and graphics, tables, and conceptual diagrams to illustrate key points. Please include an extended site map(s) utilizing an aerial photographic base map with sufficient resolution to show the facility, delineation of streets and property boundaries within the adjacent neighborhood, downgradient irrigation wells, and proposed locations of transects, monitoring wells, and soil vapor probes.

- a. Regional and local (on-site and off-site) geology and hydrogeology. Include a discussion of the surface geology (e.g., soil types, soil parameters, outcrops, faulting), subsurface geology (e.g., stratigraphy, continuity, and connectivity), and hydrogeology (e.g., water-bearing zones, hydrologic parameters, impermeable strata). Please include a structural contour map (top of unit) and isopach map for the aquitard that is presumed to separate your release from the deeper aquifer(s), cross sections, soil boring and monitoring well logs and locations, and copies of regional geologic maps.
- b. Analysis of the hydraulic flow system in the vicinity of the site. Include rose diagrams for depicting groundwater gradients. The rose diagram shall be plotted on groundwater elevation contour maps and updated in all future reports submitted for your site. Please address changes due to seasonal precipitation and groundwater pumping, and evaluate the potential interconnection between shallow and deep aquifers. Please include an analysis of vertical hydraulic gradients, and effects of pumping rates on hydraulic head from nearby water supply wells, if appropriate. Include hydraulic head in the different water bearing zones and hydrographs of all monitoring wells.
- c. Release history, including potential source(s) of releases, potential contaminants of concern (COC) associated with each potential release, confirmed source locations, confirmed release locations, and existing delineation of release areas. Address primary leak source(s) (e.g., a tank, sump, pipeline, etc.) and secondary sources (e.g., high-

### Site Conceptual Model (continued)

concentration contaminants in low-permeability lithologic soil units that sustain groundwater or vapor plumes). Include local and regional plan view maps that illustrate the location of sources (former facilities, piping, tanks, etc.).

- d. Plume (soil gas and groundwater) development and dynamics including aging of source(s), phase distribution (NAPL, dissolved, vapor, residual), diving plumes, attenuation mechanisms, migration routes, preferential pathways (geologic and anthropogenic), magnitude of chemicals of concern and spatial and temporal changes in concentrations, and contaminant fate and transport. Please include three-dimensional plume maps for groundwater and two-dimensional soil vapor plume plan view maps to provide an accurate depiction of the contaminant distribution of each COC.
- e. Summary tables of chemical concentrations in different media (i.e., soil, groundwater, and soil vapor). Please include applicable environmental screening levels on all tables. Include graphs of contaminant concentrations versus time.
- f. Current and historic facility structures (e.g., buildings, drain systems, sewer systems, underground utilities, etc.) and physical features including topographical features (e.g., hills, gradients, surface vegetation, or pavement) and surface water features (e.g. routes of drainage ditches, links to water bodies). Please include current and historic site maps.
- g. Current and historic site operations/processes (e.g., parts cleaning, chemical storage areas, manufacturing, etc.).
- h. Other contaminant release sites in the vicinity of the site. Hydrogeologic and contaminant data from those sites may prove helpful in testing certain hypotheses for the SCM. Include a summary of work and technical findings from nearby release sites, including the two adjacent closed LUFT sites, (i.e., Montgomery Ward site and the Quest Laboratory site).
- i. Land uses and exposure scenarios on the facility and adjacent properties. Include beneficial resources (e.g., groundwater classification, wetlands, natural resources, etc.), resource use locations (e.g., water supply wells, surface water intakes), subpopulation types and locations (e.g., schools, hospitals, day care centers, etc.), exposure scenarios (e.g. residential, industrial, recreational, farming), and exposure pathways, and potential threat to sensitive receptors. Include an analysis of the contaminant volatilization from the subsurface to indoor/outdoor air exposure route (i.e., vapor pathway). Please include copies of Sanborn maps and aerial photographs, as appropriate.
- j. Identification and listing of specific data gaps that require further investigation during subsequent phases of work. Proposed activities to investigate and fill data gaps identified.

## TABLE 1

## INITIAL SITE CONCEPTUAL MODEL

CSM Element	CSM Sub-	Description	Defe Can
CSM Element Geology and Hydrogeology	Element Regional	DescriptionThe site is in the northwest portion of the Livermore Valley, which consists of a structural trough within the Diablo Range and contains the Livermore Valley Groundwater Basin (referred to as "the Basin") (DWR, 2006). Several faults traverse the Basin, which act as barriers to groundwater flow, as evidenced by large differences in water levels between the upgradient and downgradient sides of these faults (DWR, 2006). The Basin is divided into 12 groundwater basins, which are defined by faults and non-water-bearing geologic units (DWR, 1974).The hydrogeology of the Basin consists of a thick sequence of fresh-water-bearing continental deposits from alluvial fans, outwash plains, and lacustrine environments to up to approximately 5,000 feet bgs (DWR, 2006). Three defined fresh-water bearing geologic units exist within the Basin: Holocene Valley Fill (up to approximately 400 feet bgs in the central portion of the Basin), the Plio-Pleistocene Livermore Formation (generally between approximately 400 and 4,000 feet bgs in the central portion of the Basin), and the 	
	Site	2006). <b>Geology:</b> Borings advanced at the site indicate that subsurface materials consist primarily of finer-grained deposits (clay, sandy clay, silt and sandy silt) with interbedded sand lenses to 20 feet below ground surface (bgs), the approximate depth to which these borings were advanced. The documented lithology for one on- site boring that was logged to approximately 45 feet bgs indicates that beyond approximately 20 feet bgs, fine-grained soils are present to approximately 45 feet bgs. A cone penetrometer technology test indicated the presence of sandier lenses from approximately 45 to 58 feet bgs and even coarser materials (interbedded with finer-grained materials) from approximately 58 feet to 75 feet bgs, the total depth drilled. The lithology documented at the site is similar to that reported at other nearby sites, specifically the Montgomery Ward site (7575 Dublin Boulevard), the Quest laboratory site (6511 Golden Gate Drive), the Shell-branded Service Station site (11989 Dublin Boulevard), and the Chevron site (7007 San Ramon Road). <i>Hydrogeology:</i> Shallow groundwater has been encountered at depths of approximately 9 to 15 feet bgs. The hydraulic gradient and groundwater flow direction have not been specifically evaluated at the site.	As noted, most borings at the site have been advanced to approximately 20 feet bgs, and one boring has been advanced and logged to 45 feet bgs; CPT data was collected to 75 feet bgs at one location. Lithologic data will be obtained from additional borings that will be advanced on site to further the understanding of the subsurface, especially with respect to deeper lithology. The on-site shallow groundwater horizontal gradient has not been confirmed. Additionally, it is not known if there may be a vertical component to the hydraulic
Surface Water Bodies		The closest surface water bodies are culverted creeks. Martin Canyon Creek flows from a gully west of the site, enters a culvert north of the site, and then bends to the south, passing approximately 1,000 feet east of the site before flowing into the Alamo Canal. Dublin Creek flows from a gully west of the site, enters a culvert approximately 750 feet south of the site, and then joins Martin Canyon Creek approximately 750 feet south of the site.	gradient. None
Nearby Wells		The State Water Resources Control Board's GeoTracker GAMA website includes information regarding the approximate locations of water supply wells in California. In the vicinity of the site, the closest water supply wells presented on this website are depicted approximately 2 miles southeast of the site; the locations shown are approximate (within 1 mile of actual location for California Department of Public Health supply wells and 0.5 mile for other supply wells). No water-producing wells were identified within 1/4 mile of the site in the well survey conducted for the Quest Laboratory site (6511 Golden Gate Drive; documented in 2009); information documented in a 2005 report for the Chevron site at 7007 San Ramon Road indicates that a water-producing well may exist within 1/2 mile of the site.	A formal well survey is needed to identify water- producing, monitoring, cathodic protection, and dewatering wells.

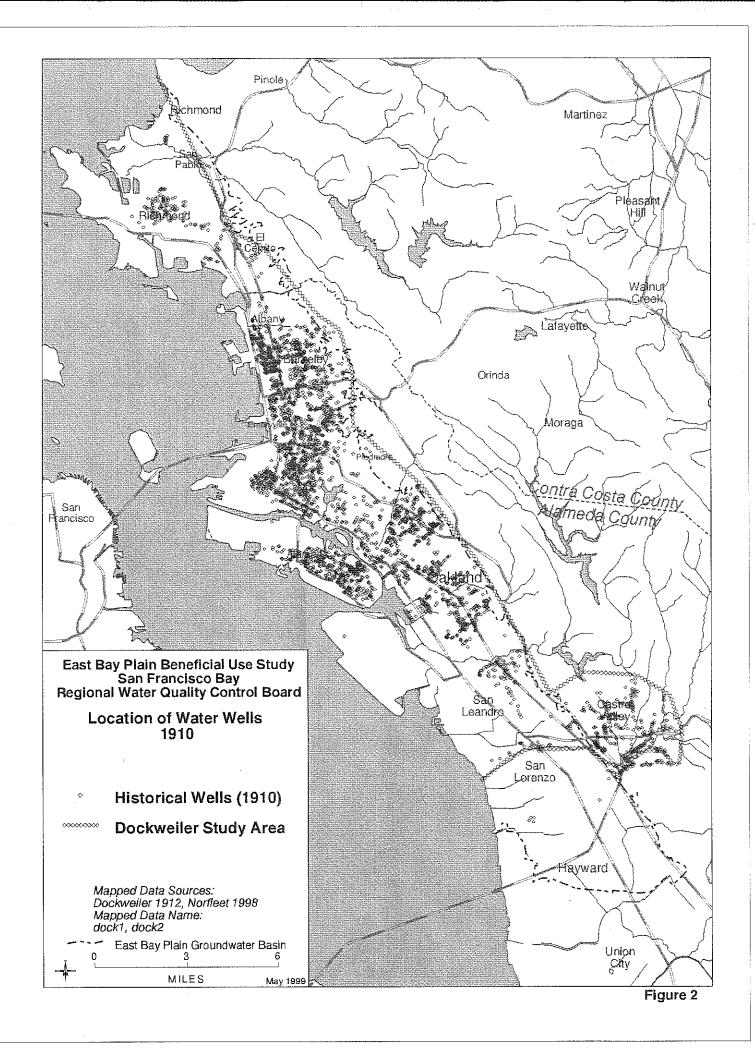
	How to Address
	NA
anced been as data e he blogy.	Two direct push borings and four multi-port wells will be advanced to depth (up to approximately 75 feet bgs) and soil lithology will be logged. See items 4 and 5 on Table 2.
ent wn if c	Shallow and deeper groundwater monitoring wells will be installed to provide information on lateral and vertical gradients. See Items 2 and 5 on Table 2.
	NA
	Obtain data regarding nearby, permitted wells from the California Department of Water Resources and Zone 7 Water Agency (Item 11 on Table 2).

## TABLE 2

## DATA GAPS AND PROPOSED INVESTIGATION

Item	Data Gap	Proposed Investigation	Rationale	
5	impacts to deeper groundwater. Evaluate deeper groundwater concentration trends over time.	Install four continuous multichannel tubing (CMT) groundwater monitoring wells (aka multi-port wells) to approximately 65 feet bgs in the northern parking lot with ports at three depths (monitoring well locations may be adjusted pending results of shallow grab groundwater samples; we will discuss any potential changes with ACEH before proceeding). Groundwater monitoring frequency to be determined. Soil samples will be collected only if there are field indications of impacts. Soil lithology will be logged. However, information regarding the moisture content of soil may not be reliable using sonic drilling technology (two borings will be logged using direct push technology; see Item 4, above).	One well is proposed at the western (upgradient) property boundary to confirm that there are no deeper groundwater impacts from upgradient. Two wells are proposed near the center of the northern parking lot to evaluate potential impacts in an area where deeper impacts, if any, would most likely to be found. One well is proposed at the eastern (downgradient) property boundary to confirm that there are no impacts extending off-site. Port depths will be chosen based on the locations of saturated soils (as logged in direct push borings; see Item 4, above), but are expected at approximately 15, 45, and 60 feet bgs.	G
	the downgradient direction (east).	8 feet bgs along the eastern property boundary. Based on the	Available data indicate that PCE and TCE are present in soil vapor in the eastern portion of the northern parking lot. Samples are proposed on approximately 50-foot intervals along the eastern property boundary to provide a transect of concentrations through the vapor plume. The depths of 4 and 8 feet bgs are chosen to provide data closest to the source (i.e., groundwater) while avoiding saturated soil, and also provide shallower data to help evaluate potential attenuation within the soil column. Two sets of nested vapor probes will be converted into vapor monitoring wells (by installing well boxes at ground surface); the locations of the permanent wells will be chosen based on the results of samples from the temporary probes.	S
		Advance two borings to approximately 20 feet bgs in the parking lot of the property east of the Crown site for collection of grab groundwater samples.	Two borings are proposed off-site, on the property east of the Crown site, just east of the building in the expected area of highest potential VOC concentrations.	G o; ai
8		be collected based on field indications of impacts (PID readings,	75 feet away. One of the borings will be advanced approximately 20 feet north of NM B-32 to provide data close to the highest concentration area. A second boring will be	
9	soil vapor in the south parcel of	Install four temporary soil vapor probes at approximately 5 feet bgs around boring SV-25, where PCE was detected in soil vapor at a low concentration.	PCE was detected in soil vapor sample SV-25 in the southern parcel, although was not detected in groundwater in that area. Three probes will be installed approximately 30 feet from of boring SV-25 to attempt to delineate the extent of impacts. A fourth probe is proposed west of the original sample, close to the property boundary and the location of mapped utility lines, which may be a potential conduit, to evaluate potential impacts from the west.	S
10		Ground penetrating radar (GPR) and other utility locating methodologies will be used, as appropriate, to further evaluate the presence of unknown utilities and structures at the site.	Utilities have been identified at the site that include an on-site sewer lateral and drain line, and shallow water, electric, and gas lines. Given the current understanding of the distribution of PCE in groundwater at the site, it is possible that other subsurface utilities, and specifically sewer laterals, exist that may act as a source or migration pathway for distribution of VOCs in the subsurface.	

Analysis
Groundwater: VOCs by EPA Method 8260, dissolved oxygen, oxidation/reduction potential, temperature, pH, and specific conductance.
Soil vapor : VOCs by EPA Method TO-15.
Groundwater: VOCs by EPA Method 8260, dissolved oxygen, oxidation/reduction potential, temperature, pH, and specific conductance.
Groundwater: VOCs by EPA Method 8260, dissolved oxygen, oxidation/reduction potential, temperature, pH, and specific conductance.
Soil: VOCs by EPA Method 8260 (soil samples to be collected using field preservation in accordance with EPA Method 5035).
Soil vapor : VOCs by EPA Method TO-15.
NA



LIST OF DOOR-TO-DOOR WELL SURVEY RECIPIENTS AND COPIES OF RETURNED SURVEYS

APN	Owner	Property address
3-47-17	Norris Taylor Trust	1824 West Street
5 47 17		Oakland CA 94612
3-47-18	REO Homes 2 LLC	510 3rd Street #102
5-47-10	NEO HOMES 2 LEC	Oakland CA 94607-3528
	Resident	777 19th Street
	Resident	Oakland CA 94612
2 47 10	Wilemma Bradley	PO Box 28504
3-47-19		Oakland CA 94612-1014
	Desident	773 19th Street
	Resident	
2 47 20 4	Ford D Johnson	Oakland CA 94612
3-47-20-1	Earl D Johnson	769 19th Street
=		Oakland CA 94612-1014
3-47-22-3	Anna Walker	755 19th Street
		Oakland CA 94612-1014
3-47-24-1	Astrud K Moxley & J S Lichty Jr.	1811 Brush Street
		Oakland CA 94612-1349
3-47-25	Paul Sanford & Kristen E Loomis	752 18th Street
		Oakland CA 94612-1017
3-47-26	David Harp	10 Harbor View Court
and 3-47- 27-2		San Rafael CA 94901-4211
	Resident	760 18th Street
		Oakland CA 94612-1017
3-47-28-3	Oak Center Homes Partnership LP	3413 30th Street
	·	San Diego CA 92104-4117
	Resident	774 18th Street
		Oakland CA 94612-1027
3-47-29	Lacye P Lawson Trust	781 18th Street
		Oakland CA 94612-1016
	Resident	778 18th Street
		Oakland CA 94612-1017
3-47-32-3	Oak Center Homes Partnership LP	3413 30th Street
5 17 52 5		San Diego CA 92104-4117
	Resident	1800 West Street
	heoraent	Oakland CA 94612-1039
3-47-34-2	Oak Center Homes Partnership LP	3413 30th Street
5 17 51 2		San Diego CA 92104-4117
	Resident	1816 West Street
	nesident	Oakland CA 94612-1039
3_/17_35	Fredrick Johnson	34 Clyde Street
J-+1-27		San Francisco CA 94107-1718
		Jah Francisco CA 94107-1718

APN	Owner	Property address
	Resident	1820 West Street
		Oakland CA 94612-1039
3-55-15-1	OAK CENTER HOMES PARTNERS L P	3413 30TH ST
		SAN DIEGO CA 92104-4117
	Resident	772 18TH ST
		OAKLAND CA 94612-1017
3-55-3	LACYE P LAWSON TR	781 18TH ST
		OAKLAND CA 94612-1016
3-55-5-2	CUI XU	1417 BENTON ST #D
		ALAMEDA CA 94501-2450
	Resident	1729 BRUSH ST
		OAKLAND CA 94612-1351
3-55-6-2	IGNACIO & GRACETINE GRIEGO TRUSTEES	18032 COLUMBIA DR
		CASTRO VALLEY CA 94552-1743
	Resident	1721 BRUSH ST
		OAKLAND CA 94612-1351
3-55-7-2	BEST PROPERTIES	678 14TH ST
		OAKLAND CA 94612-1243
	Resident	1715 BRUSH ST
		OAKLAND CA 94612-1354
3-55-35	OAK CENTER HOMES PARTNERS L P	3413 30TH ST
		SAN DIEGO CA 92104-4117
	Resident	1703 BRUSH ST
		OAKLAND CA 94612-1019
3-55-34	KENNETH QUAN & VINDY LEUNG	3890 RANCHO PALOMARES DR
		CASTRO VALLEY CA 94552-5406
	Resident	750 17TH ST
	Resident	OAKLAND CA 94612-1019
2 55 22	BEN W CHEN	4125 MAYBELLE AVE
5-55-55	BEN W CHEN	OAKLAND CA 94619-2217
	Resident	752 17TH ST
	Resident	OAKLAND CA 94612-1019
2 EE 22 1	KHALED SAEED	510 3RD ST #102
5-55-52-1	KHALED SAEED	
	Decident	OAKLAND CA 94607-3528
	Resident	1628 WEST
2 55 47		ST OAKLAND CA 94612-1036
3-55-17	REO HOMES 2 LLC	2036 MARKET ST
	Desident	OAKLAND CA 94607-3336
	Resident	783 17TH ST
		OAKLAND CA 94612-1018

APN	Owner	Property address
3-55-18	ROCKRIDGE PROPERTIES LLC	P O BOX 111
		PLEASANTON CA 94566-0011
	Resident	777 17TH ST
		OAKLAND CA 94612-1018
3-55-19	ROCKRIDGE PROPERTIES LLC	P O BOX 111
		PLEASANTON CA 94566-0011
	Resident	769 17TH ST
		OAKLAND CA 94612-1018
3-55-24-1	NICK C CHEN & JACK C CHEN	1080 HIAWATHA CT
and 3-55- 23-1		FREMONT CA 94539-6957
	Resident	758 16TH ST
		OAKLAND CA 94612-1098
3-55-26-1	OAK CENTER HOMES PARTNERS L P	3413 30TH ST
		SAN DIEGO CA 92104-4117
	Resident	770 16TH ST
		OAKLAND CA
3-55-27	PRICE M COBBS	1300 CLAY ST #600
		OAKLAND CA 94612-1427
	Resident	776 16TH ST
		OAKLAND CA 94612-1026
3-55-28	ANTOINETTE STUBBSHARDY & THOMAS E H	A 30831 BARRONS WAY
		UNION CITY CA 94587-2581
	Resident	784 16TH ST
		OAKLAND CA 94612-1026
3-55-29	MARIAN TALBOT	790 16TH ST
		OAKLAND CA 94612-1068
3-55-30	OAK CENTER HOMES PARTNERS L P	3413 30TH ST
		SAN DIEGO CA 92104-4117
	Resident	WEST ST
		OAKLAND CA 94612-1036
3-55-31	SHELIA ROSS	5839 TOOLEY ST
		SAN DIEGO CA 92114-1330
	Resident	1624 WEST ST
a <b></b> 4		OAKLAND CA 94612-1036
3-77-1	OAK CENTER HOMES PARTNERS L P	3413 30TH ST
	Desident	SAN DIEGO CA 92104-4117
	Resident	795 16TH ST
a == a		OAKLAND CA 94612-1025
3-77-2	MICHAEL HENDERSON	787 16TH ST
		OAKLAND CA 94612-1025

APN	Owner	Property address
3-77-4-3	OAK CENTER HOMES PARTNERS L P	3413 30TH ST
		SAN DIEGO CA 92104-4117
	Resident	775 16TH ST
		OAKLAND CA 94612-1025
3-77-6-1	ELOISE RUBIN TR	1023 MAGNOLIA ST
and 3-77- 10-3		OAKLAND CA 94607-2230
	Resident	765 16TH ST
		OAKLAND CA 94612-1025
3-77-13-1	BHUPINDARPAL SINGH & GURBIR SINGH	PO BOX 190374
	TRUSTEES	SAN FRANCISCO CA 94119-0374
	Resident	762 15TH ST
		OAKLAND CA 94612-1007
3-77-14	BERNIE WASHINGTON & VALERIE J WASHING	772 15TH ST
		OAKLAND CA 94612-1065
3-77-15	VELISA JOHNSONWALKER	776 15TH ST
		OAKLAND CA 94612-1056
3-77-40	BEN CARLICK & DEE A SAATHOFF	178 ALPINE TER
		SAN FRANCISCO CA 94117-3167
	Resident	780 15TH ST
		OAKLAND CA 94612-1056
3-77-39	ANGELA BESKE	784 15TH ST
		OAKLAND CA 94612-1056
3-77-17-1	OAK CENTER HOMES PARTNERS L P	3413 30TH ST
		SAN DIEGO CA 92104-4117
	Resident	788 15TH ST
		OAKLAND CA 94612-1056
3-77-18-2	VELISA JOHNSONWALKER	9116 RUSTY RIFLE AVE
		LAS VEGAS NV 89143-1166
	Resident	1514 WEST ST
		OAKLAND CA 94612
3-53-30-2	CITY OF OAKLAND	250 FRANK OGAWA PLAZA #4
	Marston Campbell Park	OAKLAND CA 94612-2033
3-51-10-1	Oakland Unified School District	1025 2nd Avenue #316
		Oakland CA 94606-2212
	Lafayette Elementary School	1702 Market Street
		Oakland CA 94607-2212
3-49-15-5	OAK CENTER HOMES PARTNERS L P	3413 30TH ST
		SAN DIEGO CA 92104-4117

APN	Owner	Property address
		1801 West Street
		Oakland CA 94612-4117
3-49-14	Winston Goertzgiffen	821 19th Street
		Oakland CA 94607-3311
3-37-5-3	Leonard W Kraft	2020 Brush Street
		Oakland CA 94612-1048
3-33-21	Erik C Moore	1923 West Street
		Oakland CA 94612-1040
3-33-22	Brothers & West LLC	2625 Alcatraz Avenue
		Bekeley CA 94705-2702
	Resident	1917 West Street
		Oakland CA 94612-1040
3-33-23	Zelte Carford Jr & Cubie D Carford	851 N Idaho Street
		San Mateo CA 94401-1122
		1915 West Street
		Oakland CA 94612-1040
3-33-24	Jimmy P Kim	131 Cambridge Ave
		San Leandro CA 94577-1823
	Resident	1905 West Street
		Oakland, CA 94612-1040
3-33-31	Yupao Hsu & Liao Lixia Yupao	1927 West Street
		Oakland CA 94612-1040
3-33-32	Lacey K Bubnash & christopher R Rhodes	1933 West Street
		Oakland CA 94612-1040
3-35-17	Tamra Rubin	2029 Brush Street
		Oakland CA 94612-1047
3-35-18-1	Gardner Kent	2235 River Ridge Road
		Deland FL 32720-4321
	Resident	2021 Brush Street
		Oakland CA 94612-1047
3-35-16	Gardner Kent	2235 River Ridge Road
		Deland FL 32720-4321
	Resident	765 21st Street
		Oakland CA 94612-1010
3-35-15	Ruby J Jenkins	769 21st Street
		Oakland CA 94612-1010
3-35-21	Darnell Robinson	770 20th St
		Oakland CA 94612-1024
3-35-22	Alberto Degracia	2788 Sunset Dune Way
		Hayward CA 94545-1192
	Resident	772 20th Street
		Oakland CA 94612-1024

APN	Owner	Property address
3-35-14	REO Homes LLC	510 3rd Street #102
		Oakland CA 94607-3528
		773 21st Street
		Oakland CA 94612-1010
3-35-23	Laurie Smith & D G Doyle	778 20th Street
		Oakland CA 94612-1024
3-35-24	Gwendolyn F Richardson Trust	782 20th Street
		Oakland CA 94612-1013
		782 20th Street
		Oakland CA 94612-1013
3-79-23-1	Dolores M Dixon Trust	1525 West Street
		Oakland CA 94612-1033
3-79-22-1	Robert Brigham	PO Box 10681
		Oakland CA 94610-0681
		1195 West Street
		Oakland CA 94612-1033
3-79-20-1	Gladys Freeman & Barbara J Freeman	1515 West Street
		Oakland CA 94612-1033
3-79-18-1	Efren Llacer Jr	689 24th Street
		Oakland CA 94612-1133
		1505 West Street
		Oakland CA 94612-1033



Reference No. 060061

- 2 -

### Please answer the following questions regarding your property at the above address:

YES /	NO	UNSURE
$\square$		
		$\square$
$\square$		

7

Is a water well installed on the property for drinking, irrigation, or other purposes?
 If "yes" to #1, is the well still in use? If not, please explain.
 Is drinking water at the property supplied either by a municipal provider such as a

village, city, or county water department, or by a private water company?

4) Are you aware of any nearby potable (drinking) water wells? If yes, please explain.

Comments:

Signature of property 14 Date: owner or manager:

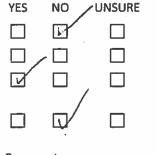
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Reference No. 060061

- 2 -

### Please answer the following questions regarding your property at the above address:



1) Is a water well installed on the property for drinking, irrigation, or other purposes?

- 2) If "yes" to #1, is the well still in use? If not, please explain.
- 3) Is drinking water at the property supplied either by a municipal provider such as a village, city, or county water department, or by a private water company?

4) Are you aware of any nearby potable (drinking) water wells? If yes, please explain.

Comments:

Signature of property 2014 owner or manager: Date:



14

Reference No. 060061

- 2 -

YES	NO	UNSURE	
	$\square$		1) Is a water well installed on the property for drinking, irrigation, or other purposes?
			<ol><li>If "yes" to #1, is the well still in use? If not, please explain.</li></ol>
ŞЬ			3) Is drinking water at the property supplied either by a municipal provider such as a village, city, or county water department, or by a private water company?
	E)		4) Are you aware of any nearby potable (drinking) water wells? If yes, please explain.
Comm	ents:	16	
Signati own	ure of pr er or ma	operty nager:	Bul Date: 1/28/2014



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Reference No. 060061

V

- 2 -

YES NO	UNSURE		
		1) Is a water well installed on the property for drinking, irrigation, or other purposes?	
		2) If "yes" to #1, is the well still in use? If not, please explain.	
		3) Is drinking water at the property supplied either by a municipal provider such as a village, city, or county water department, or by a private water company?	
		4) Are you aware of any nearby potable (drinking) water wells? If yes, please explain.	
Comments:			
Signature of pi owner or ma		Back Date: Ang 28,19	Ĺ



Reference No. 060061

- 2 -

		<ul> <li>2) If "yes" to #1, is the well still in use? If not, please explain.</li> <li>3) Is drinking water at the property supplied either by a municipal provider such as a village, city, or county water department, or by a private water company?</li> </ul>
	X	4) Are you aware of any nearby potable (drinking) water wells? If yes, please explain.
omment	:s:	



Reference No. 060061

- 2 -

rillage, city, or county water department, or by a private water company?
re you aware of any nearby potable (drinking) water wells? If yes, please explain.
A



Reference No. 060061

- 2 -

YES NO	UNSURE	
		1) Is a water well installed on the property for drinking, irrigation, or other purposes?
		2) If "yes" to #1, is the well still in use? If not, please explain.
		3) Is drinking water at the property supplied either by a municipal provider such as a village, city, or county water department, or by a private water company?
		4) Are you aware of any nearby potable (drinking) water wells? If yes, please explain.
Comments: Walter Much Signature of pr owner or ma		Here is concern about potable well hat is going on that doesn't upwey for the environment of aur for for the environment of aur for for the calling for Grave on. Date: 1/20/14



Reference No. 060061

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- 2 -

YES	NO	UNSURE	
	$\mathbf{A}$		1) Is a water well installed on the property for drinking, irrigation, or other purposes?
	Ĺ		2) If "yes" to #1, is the well still in use? If not, please explain.
X			3) Is drinking water at the property supplied either by a municipal provider such as a village, city, or county water department, or by a private water company?
		$\mathbf{X}$	4) Are you aware of any nearby potable (drinking) water wells? If yes, please explain.
Comm	ents:		
			···
	ure of pr er or ma		Date: 7/22/124



Reference No. 060061

- 2 -

YES	NO	UNSURE		
	X		1)	Is a water well installed on the property for drinking, irrigation, or other purposes?
			2)	If "yes" to #1, is the well still in use? If not, please explain.
X			3)	Is drinking water at the property supplied either by a municipal provider such as a village, city, or county water department, or by a private water company?
	X		4)	Are you aware of any nearby potable (drinking) water wells? If yes, please explain.
Comm	ents:			
Signature of property owner or manager:				Date: 7/21/14



1.8

Reference No. 060061

- 2 -

# Please answer the following questions regarding your property at the above address:

YES	NO	UNSURE	
	X		1) Is a water well installed on the property for drinking, irrigation, or other purposes?
			2) If "yes" to #1, is the well still in use? If not, please explain.
X			3) Is drinking water at the property supplied either by a municipal provider such as a village, city, or county water department, or by a private water company?
	X		4) Are you aware of any nearby potable (drinking) water wells? If yes, please explain.
Comm	ients: _		
Signat owr	ure of pa her or ma	roperty anager:	Ba Coli Date: 7/20/14

Worldwide Engineering, Environmental, Construction, and IT Services



1

į.

Reference No. 060061

- 2 -

YES	NO	UNSURE		
	ΣĪ		1) Is a water well installed on the property for drinking, irrigation, or other purposes?	
			2) If "yes" to #1, is the well still in use? If not, please explain.	
			3) Is drinking water at the property supplied either by a municipal provider such as a village, city, or county water department, or by a private water company?	
	×		4) Are you aware of any nearby potable (drinking) water wells? If yes, please explain.	
Comm	ents: _	<u> </u>		
Signature of property owner or manager: Date: Date:				



August 12, 2014

Reference No. 060061

## Leonard W Kraft 2020 Brush Street Oakland CA 94612-1048

Re:	Follow up Water Well Survey Questionnaire
	Chevron Service Station 94800
	1700 Castro Street
	Oakland, California
	Fuel Leak Case No. RO0000342

Occupant or Owner:

This is a follow up to the questionnaire previously mailed to you on July 18, 2014 regarding current and historic drinking water (potable) or irrigation wells at properties located within 1,000 feet of the site referenced above. Please assist us in evaluating wells within the area by answering the questions below and returning this letter by **August 28, 2014** using the enclosed postage-paid envelope.

If you have a well on your property, please confirm its location and use.

YES	NO	UNSURE	
	X		1) Is a water well installed on the property for drinking, irrigation, or other purposes?
			2) If "yes" to #1, is the well still in use? If not, please explain.
X			3) Is drinking water at the property supplied either by a municipal provider such as a village, city, or county water department, or by a private water company?
	X		4) Are you aware of any nearby potable (drinking) water wells? If yes, please explain.
Address	and use	e of water su	pply well:

Signature of property Date: 8/13/14 owner or occupant:

Thank you very much for your assistance with our study.

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	pper tar inty



August 12, 2014

Reference No. 060061

## SHELIA ROSS 5839 TOOLEY ST SAN DIEGO CA 92114-1330

Re:	Follow up Water Well Survey Questionnaire
	Chevron Service Station 94800
	1700 Castro Street
	Oakiand, California
	Fuel Leak Case No. RO0000342

Occupant or Owner:

This is a follow up to the questionnaire previously mailed to you on July 18, 2014 regarding current and historic drinking water (potable) or irrigation wells at properties located within 1,000 feet of the site referenced above. Please assist us in evaluating wells within the area by answering the questions below and returning this letter by **August 28, 2014** using the enclosed postage-paid envelope.

If you have a well on your property, please confirm its location and use.

YES	NO	UNSURE	
			1
			2
			3
	2		4

Is a water well installed on the property for drinking, irrigation, or other purposes?
 If "yes" to #1, is the well still in use? If not, please explain.

is drinking water at the property supplied either by a municipal provider such as a village, city, or county water department, or by a private water company?

4) Are you aware of any nearby potable (drinking) water wells? If yes, please explain.

Address and use of water supply well: \_\_\_\_

Signature of property owner or occupant: Delia Rosa Date: 0	aug. 28)0	301
---	-----------	-----

Thank you very much for your assistance with our study.



Reference No. 060061

August 12, 2014

Lacye P Lawson Trust 781 18th Street Oakland CA 94612-1016

Re:	Follow up Water Well Survey Questionnaire
	Chevron Service Station 94800
	1700 Castro Street
	Oakland, California
	Fuel Leak Case No. RO0000342

Occupant or Owner:

This is a follow up to the questionnaire previously mailed to you on July 18, 2014 regarding current and historic drinking water (potable) or irrigation wells at properties located within 1,000 feet of the site referenced above. Please assist us in evaluating wells within the area by answering the questions below and returning this letter by **August 28, 2014** using the enclosed postage-paid envelope.

If you have a well on your property, please confirm its location and use.

YES	NO	UNSURE	
	$\square$		1
			2
	X		3
	X		4

1) Is a water well installed on the property for drinking, irrigation, or other purposes?

If "yes" to #1, is the well still in use? If not, please explain.

) Is drinking water at the property supplied either by a municipal provider such as a village, city, or county water department, or by a private water company?

4) Are you aware of any nearby potable (drinking) water wells? If	it yes,	s, please e	xpiain.
---	---------	-------------	---------

Address and use of water supply well: \_

Signature of property owner or occupant:	Laup Adamsian	Date: 87 12-114
		)

Thank you very much for your assistance with our study.



Reference No. 060061

August 12, 2014

David Harp 10 Harbor View Court San Rafael CA 94901-4211

Re:	Follow up Water Well Survey Questionnaire
	Chevron Service Station 94800
	1700 Castro Street
	Oakland, California
	Fuel Leak Case No. RO0000342

Occupant or Owner:

This is a follow up to the questionnaire previously mailed to you on July 18, 2014 regarding current and historic drinking water (potable) or irrigation wells at properties located within 1,000 feet of the site referenced above. Please assist us in evaluating wells within the area by answering the questions below and returning this letter by **August 28, 2014** using the enclosed postage-paid envelope.

If you have a well on your property, please confirm its location and use.

YES	NO	UNSURE
	X	
X		
	N	

1) Is a water well installed on the property for drinking, irrigation, or other purposes?

2) If "yes" to #1, is the well still in use? If not, please explain.

3) Is drinking water at the property supplied either by a municipal provider such as a village, city, or county water department, or by a private water company?

4) Are you aware of any nearby potable (drinking) water wells? If yes, please explain.

Address and use of water supply well:

Signature of property owner or occupant:

Owner)

Date: 3/14/14

Thank you very much for your assistance with our study.



August 12, 2014

Reference No. 060061

## LACYE P LAWSON TR 781 18TH ST OAKLAND CA 94612-1016

Re:	Follow up Water Well Survey Questionnaire
	Chevron Service Station 94800
	1700 Castro Street
	Oakland, California
	Fuel Leak Case No. RO0000342

Occupant or Owner:

This is a follow up to the questionnaire previously mailed to you on July 18, 2014 regarding current and historic drinking water (potable) or irrigation wells at properties located within 1,000 feet of the site referenced above. Please assist us in evaluating wells within the area by answering the questions below and returning this letter by **August 28, 2014** using the enclosed postage-paid envelope.

If you have a well on your property, please confirm its location and use.

YES	NO	UNSURE
	R	
	Ð	
	<u>ل</u>	

Is a water well installed on the property for drinking, irrigation, or other purposes?
 If "yes" to #1, is the well still in use? If not, please explain.
 Is drinking water at the property supplied either by a municipal provider such as a

3) Is drinking water at the property supplied either by a municipal provider such as a village, city, or county water department, or by a private water company?

<ol><li>Are you aware of any nearby potable (drinking) water wells? If yes, please expl</li></ol>	ase explain.	' If yes, plea	water wells?	(drinking)	potable	/ nearby	you aware of any	Are	4)
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Address and use of water supply well: \_\_\_\_\_

Signature of property owner or occupant:	Loant	> Lamaon	<u></u>	Date: 8-13-14
	) 1	, (		

Thank you very much for your assistance with our study.

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Employment	Opportunity
Employer	



August 12, 2014

Reference No. 060061

BHUPINDARPAL SINGH & GURBIR SINGH TRUSTEES PO BOX 190374 SAN FRANCISCO CA 94119-0374

Re:	Follow up Water Well Survey Questionnaire
	Chevron Service Station 94800
	1700 Castro Street
	Oakland, California
	Fuel Leak Case No. RO0000342

Occupant or Owner:

This is a follow up to the questionnaire previously mailed to you on July 18, 2014 regarding current and historic drinking water (potable) or irrigation wells at properties located within 1,000 feet of the site referenced above. Please assist us in evaluating wells within the area by answering the questions below and returning this letter by **August 28, 2014** using the enclosed postage-paid envelope.

If you have a well on your property, please confirm its location and use.

YES	NO	UNSURE		
	X		1)	ł
Ξ,	Έ		2)	ľ
X			3)	Ŀ,
	Ă		4)	A
	/			

) Is a water well installed on the property for drinking, irrigation, or other purposes?
) If "yes" to #1, is the well still in use? If not, please explain.
) Is drinking water at the property supplied either by a municipal provider such as a village, city, or county water department, or by a private water company?

4) Are you aware of any nearby potable (drinking) water wells? If yes, please explain.

Address and use of water supply well:

Signature of property		
owner or occupant:	 Date:	

Thank you very much for your assistance with our study.

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Reference No. 060061 Al M

August 12, 2014

Wilemma Bradley PO Box 28504 Oakland CA 94612-1014

Re: Follow up Water Well Survey Questionnaire Chevron Service Station 94800 1700 Castro Street Oakland, California Fuel Leak Case No. RO0000342

Occupant or Owner:

This is a follow up to the questionnaire previously mailed to you on July 18, 2014 regarding current and historic drinking water (potable) or irrigation wells at properties located within 1,000 feet of the site referenced above. Please assist us in evaluating wells within the area by answering the questions below and returning this letter by **August 28, 2014** using the enclosed postage-paid envelope.

If you have a well on your property, please confirm its location and use.

YES	NO	<b>VUNSURE</b>
	Ø	
	9⁄	

1) Is a water well installed on the property for drinking, irrigation, or other purposes?

2) If "yes" to #1, is the well still in use? If not, please explain.

3) Is drinking water at the property supplied either by a municipal provider such as a village, city, or county water department, or by a private water company?

4) Are you aware of any nearby potable (drinking) water wells? If yes, please explain.

Address and use of wate	r supply well	
Signature of property owner or occupant:	Willanderfly	Date: 8/11/14

Thank you very much for your assistance with our study.



August 12, 2014

Reference No. 060061

ROCKRIDGE PROPERTIES LLC P O BOX 111 PLEASANTON CA 94566-0011

Re:	Follow up Water Well Survey Questionnaire
	Chevron Service Station 94800
	1700 Castro Street
	Oakland, California
	Fuel Leak Case No. RO0000342

Occupant or Owner:

owner or occupant:

This is a follow up to the questionnaire previously mailed to you on July 18, 2014 regarding current and historic drinking water (potable) or irrigation wells at properties located within 1,000 feet of the site referenced above. Please assist us in evaluating wells within the area by answering the questions below and returning this letter by **August 28, 2014** using the enclosed postage-paid envelope.

If you have a well on your property, please confirm its location and use.

YES	NO	UNSURE		
	X		1)	Is a water well installed on the property for drinking, irrigation, or other purposes?
	X		2)	If "yes" to #1, is the well still in use? If not, please explain.
	¥		3)	Is drinking water at the property supplied either by a municipal provider such as a village, city, or county water department, or by a private water company?
	X	Í	4)	Are you aware of any nearby potable (drinking) water wells? If yes, please explain.
Address	and use	of water su	pply	well:
Signat	ure of pr	operty		

Thank you very much for your assistance with our study.

Nancee

Equal Employment	Opportunity
Employer	

Date:



Reference No. 060061

August 12, 2014

Ruby J Jenkins 769 21st Street Oakland CA 94612-1010

Re:	Follow up Water Well Survey Questionnaire
	Chevron Service Station 94800
	1700 Castro Street
	Oakland, California
	Fuel Leak Case No. RO0000342

Occupant or Owner:

This is a follow up to the questionnaire previously mailed to you on July 18, 2014 regarding current and historic drinking water (potable) or irrigation wells at properties located within 1,000 feet of the site referenced above. Please assist us in evaluating wells within the area by answering the questions below and returning this letter by **August 28, 2014** using the enclosed postage-paid envelope.

If you have a well on your property, please confirm its location and use.

YES	NO	UNSURE	
			1
			2
đ			3
			4

1) is a water well installed on the property for drinking, irrigation, or other purposes?

2) If "yes" to #1, is the well still in use? If not, please explain.

3) Is drinking water at the property supplied either by a municipal provider such as a village, city, or county water department, or by a private water company?

4) Are you aware of any nearby potable (drinking) water wells? If yes, please explain.

Address and use of water supply well: \_\_\_\_

Signature of property owner or occupant:	1. lonia	Date: 8-13-2014

Thank you very much for your assistance with our study.

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Employer	



Reference No. 060061

August 12, 2014

Resident 770 16TH ST OAKLAND CA

Re:	Follow up Water Well Survey Questionnaire
	Chevron Service Station 94800
	1700 Castro Street
	Oakland, California
	Fuel Leak Case No. RO0000342

Occupant or Owner:

This is a follow up to the questionnaire previously mailed to you on July 18, 2014 regarding current and historic drinking water (potable) or irrigation wells at properties located within 1,000 feet of the site referenced above. Please assist us in evaluating wells within the area by answering the questions below and returning this letter by **August 28, 2014** using the enclosed postage-paid envelope.

If you have a well on your property, please confirm its location and use.

YES	NO	UNSURE
	N,	
$\checkmark$		

1) Is a water well installed on the property for drinking, irrigation, or other purposes?

2) If "yes" to #1, is the well still in use? If not, please explain.

3) Is drinking water at the property supplied either by a municipal provider such as a village, city, or county water department, or by a private water company?

4) Are you aware of any nearby potable (drinking) water wells? If yes, please explain.

Address and use of water supply well:

Signature of property Julms Date: owner or occupant:

Thank you very much for your assistance with our study.



Reference No. 060061

August 12, 2014

Gladys Freeman & Barbara J Freeman 1515 West Street Oakland CA 94612-1033

Re:	Follow up Water Well Survey Questionnaire
	Chevron Service Station 94800
	1700 Castro Street
	Oakland, California
	Fuel Leak Case No. RO0000342

Occupant or Owner:

This is a follow up to the questionnaire previously mailed to you on July 18, 2014 regarding current and historic drinking water (potable) or irrigation wells at properties located within 1,000 feet of the site referenced above. Please assist us in evaluating wells within the area by answering the questions below and returning this letter by August 28, 2014 using the enclosed postage-paid envelope.

If you have a well on your property, please confirm its location and use.

YES	NO	UNSURE
y		
	Y	

Is a water well installed on the property for drinking, irrigation, or other purposes?

If "yes" to #1, is the well still in use? If not, please explain.

3) Is drinking water at the property supplied either by a municipal provider such as a village, city, or county water department, or by a private water company?

Are you aware of any nearby potable (drinking) water wells? If yes, please explain.

Address and use of water supply well:

Signature of property heeman \_ Date: <u>8-21-2</u>014 owner or occupant:

Thank you very much for your assistance with our study.

I also mailed the first letter per your request.



August 12, 2014

Reference No. 060061

Tamra Rubin 2029 Brush Street Oakland CA 94612-1047

Re:	Follow up Water Well Survey Questionnaire
	Chevron Service Station 94800
	1700 Castro Street
	Oakland, California
	Fuel Leak Case No. RO0000342

Occupant or Owner:

This is a follow up to the questionnaire previously mailed to you on July 18, 2014 regarding current and historic drinking water (potable) or irrigation wells at properties located within 1,000 feet of the site referenced above. Please assist us in evaluating wells within the area by answering the questions below and returning this letter by **August 28, 2014** using the enclosed postage-paid envelope.

If you have a well on your property, please confirm its location and use.

YES	NO	UNSURE
		40

1) Is a water well installed on the property for drinking, irrigation, or other purposes?

2) If "yes" to #1, is the well still in use? If not, please explain.

3) Is drinking water at the property supplied either by a municipal provider such as a village, city, or county water department, or by a private water company?

4) Are you aware of any nearby potable (drinking) water wells? If yes, please explain.

Address and use of water supply well:

Signature of property owner or occupant:

Date: 9/19/2014

Thank you very much for your assistance with our study.

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Employer

ATTACHMENT C

EUROFINS LANCASTER LABORATORY ANALYTICAL REPORT





2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

## ANALYTICAL RESULTS

Prepared by:

Prepared for:

Eurofins Lancaster Laboratories Environmental 2425 New Holland Pike Lancaster, PA 17601 Chevron 6001 Bollinger Canyon Rd L4310 San Ramon CA 94583

September 10, 2014

Project: 94800

Submittal Date: 05/31/2014 Group Number: 1478465 PO Number: 0015156384 Release Number: FISCHER

State of Sample Origin: CA

Client Sample Description MW-1-W-140530 NA Water MW-2-W-140530 NA Water MW-3-W-140530 NA Water MW-4-W-140530 NA Water MW-7-W-140530 NA Water QA-T-140530 NA Water Lancaster Labs (LL) # 7483688 7483689 7483690 7483691 7483692 7483693

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

ELECTRONIC	Chevron c/o CRA	Attn: Report Contact
COPY TO		
ELECTRONIC	Blaine Tech Services, Inc.	Attn: Dustin Becker
COPY TO		
ELECTRONIC	Chevron	Attn: Anna Avina
COPY TO		
ELECTRONIC	CRA	Attn: Ian Hull
COPY TO		
ELECTRONIC	CRA	Attn: Nathan Lee
COPY TO		





2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

# Respectfully Submitted,

Mich n. Mel Nicole L. Maljovec Principal Specialist Group Leader

(717) 556-7259



Analysis Report

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

## Sample Description: MW-1-W-140530 NA Water Facility# 94800 BTST 1700 Castro St-Oakland T0600102076

## LL Sample # WW 7483688 LL Group # 1478465 Account # 10991

#### Project Name: 94800

Collected: 05/30/2014 08:45 by JO

Chevron 6001 Bollinger Canyon Rd L4310 San Ramon CA 94583

Submitted: 05/31/2014 10:00 Reported: 09/10/2014 13:50

### CS001

CAT No.	Analysis Name		CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor	
GC/MS	Volatiles	SW-846	8260B	ug/l	ug/l	ug/l		
10943	Benzene		71-43-2	N.D.	0.5	1	1	
10943	Ethylbenzene		100-41-4	N.D.	0.5	1	1	
10943	Methyl Tertiary But	yl Ether	1634-04-4	N.D.	0.5	1	1	
10943	Toluene		108-88-3	N.D.	0.5	1	1	
10943	Xylene (Total)		1330-20-7	N.D.	0.5	1	1	
GC Vol	latiles	SW-846	8015B	ug/l	ug/l	ug/l		
01728	TPH-GRO N. CA water	C6-C12	n.a.	N.D.	50	100	1	
GC Pet	croleum	SW-846	8015B	ug/l	ug/l	ug/l		
Hydrocarbons w/Si								
06610	TPH-DRO CA C10-C28 The reverse surroga	,		N.D. at <1%.	50	100	1	

#### General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Ti	me	Analyst	Dilution Factor
10943	BTEX/MTBE 8260 Water	SW-846 8260B	1	Z141551AA	06/04/2014	14:55	Daniel H Heller	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	Z141551AA	06/04/2014	14:55	Daniel H Heller	1
01728	TPH-GRO N. CA water C6- C12	SW-846 8015B	1	14156A20A	06/06/2014	21:45	Miranda P Tillinghast	1
01146	GC VOA Water Prep	SW-846 5030B	1	14156A20A	06/06/2014	21:45	Miranda P Tillinghast	1
06610	TPH-DRO CA C10-C28 w/ Si Gel	SW-846 8015B	1	141530033A	06/10/2014	16:41	Christine E Dolman	1
11180	Low Vol Ext(W) w/SG	SW-846 3510C	1	141530033A	06/03/2014	11:00	William H Saadeh	1



Analysis Report

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

## Sample Description: MW-2-W-140530 NA Water Facility# 94800 BTST 1700 Castro St-Oakland T0600102076

## LL Sample # WW 7483689 LL Group # 1478465 Account # 10991

#### Project Name: 94800

Collected: 05/30/2014 11:00 by JO

Chevron 6001 Bollinger Canyon Rd L4310 San Ramon CA 94583

Submitted: 05/31/2014 10:00 Reported: 09/10/2014 13:50

#### CS002

CAT No.	Analysis Name		CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor			
GC/MS	Volatiles	SW-846	8260B	ug/l	ug/l	ug/l				
10943	Benzene		71-43-2	N.D.	0.5	1	1			
10943	Ethylbenzene		100-41-4	N.D.	0.5	1	1			
10943	Methyl Tertiary Buty	yl Ether	1634-04-4	0.7 J	0.5	1	1			
10943	Toluene		108-88-3	N.D.	0.5	1	1			
10943	Xylene (Total)		1330-20-7	N.D.	0.5	1	1			
GC Vol	latiles	SW-846	8015B	ug/l	ug/l	ug/l				
01728	TPH-GRO N. CA water	C6-C12	n.a.	N.D.	50	100	1			
GC Pet	croleum	SW-846	8015B	ug/l	ug/l	ug/l				
Hydrod	Hydrocarbons w/Si									
06610	TPH-DRO CA C10-C28 The reverse surrogat	,		N.D. at <1%.	50	110	1			

#### General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Ti	me	Analyst	Dilution Factor
10943	BTEX/MTBE 8260 Water	SW-846 8260B	1	Z141551AA	06/04/2014	16:07	Daniel H Heller	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	Z141551AA	06/04/2014	16:07	Daniel H Heller	1
01728	TPH-GRO N. CA water C6- C12	SW-846 8015B	1	14156A20A	06/06/2014	22:08	Miranda P Tillinghast	1
01146	GC VOA Water Prep	SW-846 5030B	1	14156A20A	06/06/2014	22:08	Miranda P Tillinghast	1
06610	TPH-DRO CA C10-C28 w/ Si Gel	SW-846 8015B	1	141530033A	06/10/2014	17:02	Christine E Dolman	1
11180	Low Vol Ext(W) w/SG	SW-846 3510C	1	141530033A	06/03/2014	11:00	William H Saadeh	1



Analysis Report

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

## Sample Description: MW-3-W-140530 NA Water Facility# 94800 BTST 1700 Castro St-Oakland T0600102076

## LL Sample # WW 7483690 LL Group # 1478465 Account # 10991

#### Project Name: 94800

Collected: 05/30/2014 09:30 by JO

Submitted: 05/31/2014 10:00 Reported: 09/10/2014 13:50 Chevron 6001 Bollinger Canyon Rd L4310 San Ramon CA 94583

## CS003

CAT No.	Analysis Name		CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS	Volatiles	SW-846	8260B	ug/l	ug/l	ug/l	
10943	Benzene		71-43-2	1	0.5	1	1
10943	Ethylbenzene		100-41-4	N.D.	0.5	1	1
10943	Methyl Tertiary Buty	yl Ether	1634-04-4	86	0.5	1	1
10943	Toluene	-	108-88-3	N.D.	0.5	1	1
10943	Xylene (Total)		1330-20-7	2	0.5	1	1
GC Vol	latiles	SW-846	8015B	ug/l	ug/l	ug/l	
01728	TPH-GRO N. CA water	C6-C12	n.a.	190	50	100	1
	troleum	SW-846	8015B	ug/l	ug/l	ug/l	
Hydrod	carbons w/Si						
06610	TPH-DRO CA C10-C28 The reverse surrogat	,		N.D. at <1%.	50	100	1

#### General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Ti	me	Analyst	Dilution Factor
10943	BTEX/MTBE 8260 Water	SW-846 8260B	1	Z141551AA	06/04/2014	16:31	Daniel H Heller	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	Z141551AA	06/04/2014	16:31	Daniel H Heller	1
01728	TPH-GRO N. CA water C6- C12	SW-846 8015B	1	14157B20A	06/10/2014	03:35	Marie D Beamenderfer	1
01146	GC VOA Water Prep	SW-846 5030B	1	14157B20A	06/10/2014	03:35	Marie D Beamenderfer	1
06610	TPH-DRO CA C10-C28 w/ Si Gel	SW-846 8015B	1	141530033A	06/10/2014	17:24	Christine E Dolman	1
11180	Low Vol Ext(W) w/SG	SW-846 3510C	1	141530033A	06/03/2014	11:00	William H Saadeh	1



Analysis Report

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## Sample Description: MW-4-W-140530 NA Water Facility# 94800 BTST 1700 Castro St-Oakland T0600102076

## LL Sample # WW 7483691 LL Group # 1478465 Account # 10991

#### Project Name: 94800

Collected: 05/30/2014 10:30 by JO

Chevron 6001 Bollinger Canyon Rd L4310 San Ramon CA 94583

Submitted: 05/31/2014 10:00 Reported: 09/10/2014 13:50

#### CS004

CAT No.	Analysis Name		CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS	Volatiles SW	-846	8260B	ug/l	ug/l	ug/l	
10943	t-Amyl methyl ether		994-05-8	N.D.	0.5	1	1
10943	Benzene		71-43-2	N.D.	0.5	1	1
10943	t-Butyl alcohol		75-65-0	45	2	5	1
10943	Ethyl t-butyl ether		637-92-3	N.D.	0.5	1	1
10943	Ethylbenzene		100-41-4	N.D.	0.5	1	1
10943	di-Isopropyl ether		108-20-3	N.D.	0.5	1	1
10943	Methyl Tertiary Butyl B	Ether	1634-04-4	7	0.5	1	1
10943	Toluene		108-88-3	N.D.	0.5	1	1
10943	Xylene (Total)		1330-20-7	N.D.	0.5	1	1
GC Vo	latiles SW	-846	8015B	ug/l	ug/l	ug/l	
01728	TPH-GRO N. CA water C6-	-C12	n.a.	N.D.	50	100	1
		-846	8015B	ug/l	ug/l	ug/l	
06610	<b>Carbons w/Si</b> TPH-DRO CA C10-C28 w/ S The reverse surrogate,			N.D. t at <1%.	50	100	1

#### General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Ti	me	Analyst	Dilution Factor
10943	BTEX + 5 Oxygenates 8260 Water	SW-846 8260B	1	D141571AA	06/06/2014	13:59	Daniel H Heller	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	D141571AA	06/06/2014	13:59	Daniel H Heller	1
01728	TPH-GRO N. CA water C6- C12	SW-846 8015B	1	14157B20A	06/10/2014	03:57	Marie D Beamenderfer	1
01146	GC VOA Water Prep	SW-846 5030B	1	14157B20A	06/10/2014	03:57	Marie D Beamenderfer	1
06610	TPH-DRO CA C10-C28 w/ Si Gel	SW-846 8015B	1	141530033A	06/10/2014	17:46	Christine E Dolman	1
11180	Low Vol Ext(W) w/SG	SW-846 3510C	1	141530033A	06/03/2014	11:00	William H Saadeh	1



Analysis Report

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## Sample Description: MW-7-W-140530 NA Water Facility# 94800 BTST 1700 Castro St-Oakland T0600102076

## LL Sample # WW 7483692 LL Group # 1478465 Account # 10991

#### Project Name: 94800

Collected: 05/30/2014 10:00 by JO

Chevron 6001 Bollinger Canyon Rd L4310 San Ramon CA 94583

Submitted: 05/31/2014 10:00 Reported: 09/10/2014 13:50

#### CS007

CAT No.	Analysis Name		CAS Number	As Rec Result		As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS	Volatiles SW-	846	8260B	ug/l		ug/l	ug/l	
10943	t-Amyl methyl ether		994-05-8	22		0.5	1	1
10943	Benzene		71-43-2	N.D.		0.5	1	1
10943	t-Butyl alcohol		75-65-0	5	J	2	5	1
10943	Ethyl t-butyl ether		637-92-3	1		0.5	1	1
10943	Ethylbenzene		100-41-4	N.D.		0.5	1	1
10943	di-Isopropyl ether		108-20-3	N.D.		0.5	1	1
10943	Methyl Tertiary Butyl Et	ther	1634-04-4	990		0.5	1	1
10943	Toluene		108-88-3	N.D.		0.5	1	1
10943	Xylene (Total)		1330-20-7	N.D.		0.5	1	1
C Vol	latiles SW-	846	8015B	ug/l		ug/l	ug/l	
01728	TPH-GRO N. CA water C6-0	C12	n.a.	N.D.		50	100	1
		-846	8015B	ug/l		ug/l	ug/l	
<b>iyaroo</b> 06610	<b>Carbons w/Si</b> TPH-DRO CA C10-C28 w/ Si The reverse surrogate, o		n.a. acid, is present	N.D. t at <1%.		50	110	1

#### General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Ti	me	Analyst	Dilution Factor
10943	BTEX + 5 Oxygenates 8260 Water	SW-846 8260B	1	F141622AA	06/11/2014	07:25	Anita M Dale	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	F141622AA	06/11/2014	07:25	Anita M Dale	1
01728	TPH-GRO N. CA water C6- C12	SW-846 8015B	1	14157B20A	06/10/2014	04:19	Marie D Beamenderfer	1
01146	GC VOA Water Prep	SW-846 5030B	1	14157B20A	06/10/2014	04:19	Marie D Beamenderfer	1
06610	TPH-DRO CA C10-C28 w/ Si Gel	SW-846 8015B	1	141530033A	06/10/2014	18:07	Christine E Dolman	1
11180	Low Vol Ext(W) w/SG	SW-846 3510C	1	141530033A	06/03/2014	11:00	William H Saadeh	1



Analysis Report

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## Sample Description: QA-T-140530 NA Water Facility# 94800 BTST 1700 Castro St-Oakland T0600102076

## LL Sample # WW 7483693 LL Group # 1478465 Account # 10991

#### Project Name: 94800

Collected: 05/30/2014 08:00

Submitted: 05/31/2014 10:00 Reported: 09/10/2014 13:50 Chevron 6001 Bollinger Canyon Rd L4310 San Ramon CA 94583

## CSOQA

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS	Volatiles SW-84	5 8260B	ug/l	ug/l	ug/l	
10943	Benzene	71-43-2	N.D.	0.5	1	1
10943	Ethylbenzene	100-41-4	N.D.	0.5	1	1
10943	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1	1
10943	Toluene	108-88-3	N.D.	0.5	1	1
10943	Xylene (Total)	1330-20-7	N.D.	0.5	1	1
GC Vo	latiles SW-84	6 8015B	ug/l	ug/l	ug/l	
01728	TPH-GRO N. CA water C6-C12	n.a.	N.D.	50	100	1

### General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10943	BTEX/MTBE 8260 Water	SW-846 8260B	1	Z141551AA	06/04/2014 13	:19 Daniel H Heller	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	Z141551AA	06/04/2014 13	:19 Daniel H Heller	1
01728	TPH-GRO N. CA water C6- C12	SW-846 8015B	1	14157B20A	06/09/2014 23	:28 Marie D Beamenderfer	1
01146	GC VOA Water Prep	SW-846 5030B	1	14157B20A	06/09/2014 23	:28 Marie D Beamenderfer	1



Analysis Report

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# Quality Control Summary

Client Name: Chevron Reported: 09/10/14 at 01:50 PM Group Number: 1478465

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

## Laboratory Compliance Quality Control

Analysis Name	Blank <u>Result</u>	Blank MDL**	Blank <u>LOQ</u>	Report <u>Units</u>	LCS <u>%REC</u>	LCSD <u>%REC</u>	LCS/LCSD <u>Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Batch number: D141571AA	Sample num	ber(s): 74	183691						
t-Amyl methyl ether	N.D.	0.5	1	uq/l	85		75-120		
Benzene	N.D.	0.5	1	uq/l	93		78-120		
t-Butyl alcohol	N.D.	2.	5	uq/l	92		75-120		
Ethyl t-butyl ether	N.D.	0.5	1	uq/l	88		74-120		
Ethylbenzene	N.D.	0.5	1	ug/l	93		79-120		
di-Isopropyl ether	N.D.	0.5	1	ug/l	97		65-120		
Methyl Tertiary Butyl Ether	N.D.	0.5	1	ug/l	85		75-120		
Toluene	N.D.	0.5	1	ug/l	96		80-120		
Xylene (Total)	N.D.	0.5	1	ug/l	94		80-120		
Batch number: F141622AA	Sample num	ber(s): 74	183692						
t-Amyl methyl ether	N.D.	0.5	1	uq/l	100		75-120		
Benzene	N.D.	0.5	1	ug/l	102		78-120		
t-Butyl alcohol	N.D.	2.	5	ug/l	95		75-120		
Ethyl t-butyl ether	N.D.	0.5	1	ug/l	97		74-120		
Ethylbenzene	N.D.	0.5	1	ug/l	96		79-120		
di-Isopropyl ether	N.D.	0.5	1	ug/l	98		65-120		
Methyl Tertiary Butyl Ether	N.D.	0.5	1	ug/l	100		75-120		
Toluene	N.D.	0.5	1	ug/l	102		80-120		
Xylene (Total)	N.D.	0.5	1	ug/l	98		80-120		
Batch number: Z141551AA	Sample num	ber(s): 74	183688-748	3690,7483693	3				
Benzene	N.D.	0.5	1	ug/l	94		78-120		
Ethylbenzene	N.D.	0.5	1	ug/l	98		79-120		
Methyl Tertiary Butyl Ether	N.D.	0.5	1	ug/l	99		75-120		
Toluene	N.D.	0.5	1	ug/l	99		80-120		
Xylene (Total)	N.D.	0.5	1	ug/l	102		80-120		
Batch number: 14156A20A	Sample num	ber(s): 74	183688-748	3689					
TPH-GRO N. CA water C6-C12	N.D.	50.	100	ug/l	115	118	80-139	3	30
Batch number: 14157B20A	Sample num	ber(s): 74	183690-748	3693					
TPH-GRO N. CA water C6-C12	N.D.	50.	100	ug/l	116	118	80-139	2	30
Batch number: 141530033A	Sample num	ber(s): 74	183688-748	3692					
TPH-DRO CA C10-C28 w/ Si Gel	N.D.	50.	100	ug/l	65	67	43-120	2	20

## Sample Matrix Quality Control

\*- Outside of specification

\*\*-This limit was used in the evaluation of the final result for the blank

(1) The result for one or both determinations was less than five times the LOQ.

(2) The unspiked result was more than four times the spike added.





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# Quality Control Summary

Group Number: 1478465

Client Name: Chevron Reported: 09/10/14 at 01:50 PM Unspiked (UNSPK) = the sample used in conjunction with the matrix spike Background (BKG) = the sample used in conjunction with the duplicate

<u>Analysis Name</u>	MS <u>%REC</u>	MSD <u>%REC</u>	MS/MSD <u>Limits</u>	<u>RPD</u>	RPD <u>MAX</u>	BKG <u>Conc</u>	DUP <u>Conc</u>	DUP <u>RPD</u>	Dup RPD <u>Max</u>
Batch number: D141571AA	Sample	number(s)	: 7483691	UNSPK:	P4873	91			
t-Amyl methyl ether	83	90	65-117	8	30				
Benzene	95	99	72-134	4	30				
t-Butyl alcohol	90	102	67-119	12	30				
Ethyl t-butyl ether	89	93	74-122	4	30				
Ethylbenzene	97	104	71-134	7	30				
di-Isopropyl ether	98	104	70-129	6	30				
Methyl Tertiary Butyl Ether	83	87	72-126	5	30				
Toluene	98	105	80-125	6	30				
Xylene (Total)	99	107	79-125	8	30				
Batch number: F141622AA	Sample	number(s)	: 7483692	UNSPK:	P4908	12			
t-Amyl methyl ether	99	97	65-117	2	30				
Benzene	100	102	72-134	3	30				
t-Butyl alcohol	93	93	67-119	0	30				
Ethyl t-butyl ether	94	95	74-122	1	30				
Ethylbenzene	97	97	71-134	0	30				
di-Isopropyl ether	94	96	70-129	2	30				
Methyl Tertiary Butyl Ether	96	96	72-126	1	30				
Toluene	103	102	80-125	1	30				
Xylene (Total)	101	99	79-125	2	30				
Batch number: Z141551AA	Sample	number(s)	: 7483688	-748369	0,7483	693 UNSPK:	7483688		
Benzene	100	101	72-134	1	30				
Ethylbenzene	107	105	71-134	2	30				
Methyl Tertiary Butyl Ether	102	101	72-126	1	30				
Toluene	107	106	80-125	1	30				
Xylene (Total)	110	109	79-125	1	30				

## Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

	Name: UST VOCs by mber: D141571AA	8260B - Water		
	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
7483691	94	102	103	100
Blank	94	102	101	98
LCS	94	107	102	101
MS	93	102	101	102
MSD	93	104	101	102
Limits:	80-116	77-113	80-113	78-113
	Name: UST VOCs by mber: F141622AA	8260B - Water		
	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene

\*- Outside of specification

\*\*-This limit was used in the evaluation of the final result for the blank

(1) The result for one or both determinations was less than five times the LOQ.

(2) The unspiked result was more than four times the spike added.



# **Analysis Report**

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# Quality Control Summary

Client Name: Chevron Group Number: 1478465 Reported: 09/10/14 at 01:50 PM Surrogate Quality Control

7483692	98	100	100	98
Blank	96	99	102	97
LCS	97	103	99	97
MS	99	104	102	97
MSD	97	100	99	97
Limits:	80-116	77-113	80-113	78-113
	Name: UST VOCs by	7 8260B - Water		
Batch nu	mber: Z141551AA	1.0 Disklass alk as a d.	Talaana d0	
	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
7483688	104	101	100	95
7483689	104	101	100	96
7483690	101	102	102	97
7483693	102	100	100	96
Blank	102	100	101	98
LCS	100	100	101	100
MS	102	102	101	104
MSD	102	102	100	103
1102	100	101	100	100
Limits:	80-116	77-113	80-113	78-113
	Name: TPH-GRO N. mber: 14156A20A Trifluorotoluene-F	CA water C6-C12		
7483688	74			
7483689	78			
Blank	81			
LCS	83			
LCSD	84			
Limits:	63-135			
LIMIUS:	03-135			
	Name: TPH-GRO N.	CA water C6-C12		
Batch nu	mber: 14157B20A			
	Trifluorotoluene-F			
7483690	81			
7483691	80			
7483692	80			
7483693	87			
Blank	85			
LCS	85			
LCSD	86			
Limits:	63-135			
	Name: TPH-DRO CA mber: 141530033A Orthoterphenyl	C10-C28 w/ Si Gel		
7483688	84			

7483688 84 7483689 75

\*- Outside of specification

\*\*-This limit was used in the evaluation of the final result for the blank

(1) The result for one or both determinations was less than five times the LOQ.

(2) The unspiked result was more than four times the spike added.



# **Analysis Report**

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# Quality Control Summary

Client Name: Chevron Reported: 09/10/14 at 01:50 PM Group Number: 1478465

Surrogate Quality Control

7483690	84
7483691	77
7483692	78
Blank	76
LCS	82
LCSD	80

Limits: 46-131

\*- Outside of specification

<sup>\*\*-</sup>This limit was used in the evaluation of the final result for the blank

<sup>(1)</sup> The result for one or both determinations was less than five times the LOQ.

<sup>(2)</sup> The unspiked result was more than four times the spike added.

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Chevron Site Address	s: <u>1700 Cas</u>	stro St.,_		<u>CA</u> Consultant Con	tact: <u>Nathan Lee</u>									SE				Thiosulfate
Oakland, CA				Consultant Phone		-	HVOC	SCREEN				ALKALINITY		GREASE				N =HNO <sub>3</sub> B = NaOH
Chevron PM: <u>Alexis F</u>	ischer			Consultant Project				S S				ALKA		OIL &				$s = H_2SO_4 O =$ Other ACCT <sup>14</sup> 1099 1
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☑ Retail and Termina ☑ Construction/Retail		Unit (RTBU)	Job	Sampled By (Print	:): Jegnz						STLC	A 31(					·	10#1478465 Sample#
				Sampler Signature	e:		OXYGENATES	ORO				EPA		EPA				7483688-93
Charge Code: NWF NWRTB (WBS ELEMENTS SITE ASSESSMENT: A1L SITE MONITORING: OML	00SITE NU : REMEDIATIO	MBER-0- W	BS 10N <b>: R5L</b>	Lancaster Laboratories I Lancaster, PA Lab Contact: Nicole Maljovec	Other Lab	Temp. Blank Check Time Temp.	MTRFR OX	DRO E	MTBE 🗆	j, Mn, Na			CONDUCTIVITY				(Ered	Special Instructions Must meet lowest detection limits possible for 8260 Compounds, Silica Gel Clean Up required for DRO (10-
This is a LEGAL doc CORRE		<u>L</u> FIELDS MUS COMPLETE		2425 New Holland Pike, Lancaster, PA 17601 Phone No: (717)656-2300			8260B/GC/MS -G [] RTFX []	8015B GRO	BTEX 🗆	EPA 6010 Ca, Fe, K, Mg, Mn, Na	EPA6010/7000 TITLE 22 METALS	EPA150.1 PH 🗆	SM2510B SPECIFIC CON	418.1 TRPH	ETHAN	15 TPH-D D	XUCTERALAS	gram method)
	SAMPL	EID	1				8260	8	802	601	601	150	510	418	826	80	25	
Field Point Name	Matrix	Top Depth	Date (yymmdd)	Sample Time	# of Containers	Container Type	EPA TPH-	EPA	EPA 8021B	EPA	EPA	EPA	SM2	EPA	EPA 8260	EPA 8015		Notes/Comment s
Mw-1	ir		140530	6445	C	Mixed	$\sim$	$\times$										
MW-2			<u>1</u>	1100		-	X	X										
MW.3	A ALTERNATION			0930		Ne postava v v Dev	$\sim$	X										
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#### Lancaster Laboratories Environmental

# **Explanation of Symbols and Abbreviations**

The following defines common symbols and abbreviations used in reporting technical data:

RL	Reporting Limit	BMQL	Below Minimum Quantitation Level
N.D.	none detected	MPN	Most Probable Number
TNTC	Too Numerous To Count	CP Units	cobalt-chloroplatinate units
IU	International Units	NTU	nephelometric turbidity units
umhos/cm	micromhos/cm	ng	nanogram(s)
С	degrees Celsius	F	degrees Fahrenheit
meq	milliequivalents	lb.	pound(s)
g	gram(s)	kg	kilogram(s)
μg	microgram(s)	mg	milligram(s)
mL	milliliter(s)	Ĺ	liter(s)
m3	cubic meter(s)	μL	microliter(s)
		pg/L	picogram/liter

- < less than The number following the sign is the <u>limit of quantitation</u>, the smallest amount of analyte which can be reliably determined using this specific test.
- > greater than
- **ppm** parts per million One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
- ppb parts per billion
- **Dry weight basis** Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Data Qualifiers:

C - result confirmed by reanalysis.

**J** - estimated value – The result is  $\geq$  the Method Detection Limit (MDL) and < the Limit of Quantitation (LOQ).

U.S. EPA CLP Data Qualifiers:

# **Organic Qualifiers**

- A TIC is a possible aldol-condensation product
- **B** Analyte was also detected in the blank
- C Pesticide result confirmed by GC/MS
- **D** Compound quantitated on a diluted sample
- E Concentration exceeds the calibration range of the instrument
- **N** Presumptive evidence of a compound (TICs only)
- **P** Concentration difference between primary and confirmation columns >25%
- U Compound was not detected
- X,Y,Z Defined in case narrative

# Inorganic Qualifiers

- B Value is <CRDL, but ≥IDL
- **E** Estimated due to interference
- M Duplicate injection precision not met
- **N** Spike sample not within control limits
- **S** Method of standard additions (MSA) used for calculation
- U Compound was not detected
- W Post digestion spike out of control limits
- \* Duplicate analysis not within control limits
- + Correlation coefficient for MSA < 0.995

# Analytical test results meet all requirements of NELAC unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR part 136 Table II as "analyze immediately" are not performed within 15 minutes.

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