**Carryl MacLeod**
Project Manager, Marketing Business Unit

**RECEIVED**
*By Alameda County Environmental Health 11:32 am, Dec 07, 2017*

Alameda County Department of Environmental Health
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577

**Re: Response to Case Closure Denial and Directive for Work Plan Addendum**
Former Chevron Service Station No. 94612
3616 San Leandro Avenue,
Oakland, CA
ACDEH Case No. RO233

I have read and acknowledge the content, recommendations and/or conclusions contained in the attached document submitted on my behalf to ACDEH's FTP server and the SWRCB's GeoTracker website.

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,

Carryl MacLeod
Project Manager

**Chevron Environmental Management Company**
6001 Bollinger Canyon Road, San Ramon, CA 94583
Tel 925 842 3201
CarrylMacLeod@chevron.com

AECOM
1220 Avenida Acaso
Camarillo
California 93012
USA
aecom.com

December 7, 2017

**External References:**
GeoTracker ID: T0600100333
ACDEH Case No. RO233
RWQCB Case No. 01-0362

Mr. Mark E. Detterman, PG, CEG
Senior Hazardous Materials Specialist
Alameda County Department of Environmental Health
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502
*(via electronic mail and internet uploads)*

**AECOM Reference:** Chevron Site No. 94612, 3616 San Leandro Street, Oakland, California, 94601

**Subject:** Response to Case Closure Denial and Directive for Work Plan Addendum Submittal

Dear Mr. Detterman:

Chevron Environmental Management Company (CEMC) received your *Response to Request for Closure* letter, dated October 6, 2017 (**Attachment A**). In that letter, Alameda County Department of Environmental Health (ACDEH) denied case closure (based on a determination that the site failed to meet the media-specific criteria for groundwater), and requested submittal of a Work Plan Addendum to move the case to closure. The letter specifically stated previous directive letters and work plans (by reference) should be referred to for further details, and that the Work Plan Addendum should include the following:

1. Utilization and reference of the Low-threat Underground Storage Tank Case Closure Policy (LTCP) *Technical Justification for Groundwater Media-Specific Criteria* document as an alternative method to estimate the maximum downgradient dissolved-phase total petroleum hydrocarbons as gasoline (TPH-g) plume length;
2. Investigation of the onsite residual contaminant distribution beneath the site rather than offsite;
3. Incorporation of previous work plan modifications into the Addendum;
4. Update of the sensitive receptor survey to include basements within 1,000 feet of the potential TPH-g groundwater plume, due to the potential for basements to intercept shallow groundwater; and
5. Identification of water production wells using the Alameda County Public Works Agency (ACPWA) well database.

The ACDEH letter directed that the Work Plan Addendum be submitted by December 8, 2017. As State Water Resources Control Board (SWRCB) staff are directed to automatically review an underground storage tank (UST) case closure denial within 6 months of the date of the denial by the Local Oversight Program (i.e., ACDEH), CEMC respectfully requests that the due date for the Work Plan Addendum be extended to 60 days after receipt of a determination from SWRCB. Further, CEMC would appreciate the opportunity to discuss the site conceptual model with SWRCB and ACDEH as part of their review and prior to a determination.

In the meantime, the following comments and information are offered regarding the above-requested items:

1. CEMC contends that use of the maximum plume length for TPH-g (855 feet), as defined by the LTCP *Technical Justification* document, is inappropriate. Section 4.1 of that document states that “the length of a plume is the maximum extent from the point of release of any petroleum-related constituent in groundwater that exceeds the WQOs [water quality objectives]. The plume boundary is where the constituent(s) furthest from the point of release concentration level equals the WQOs.” Section 4.1 also states that “a plume is considered stable or decreasing if a contaminant mass has expanded to its maximum extent: the distance from the release where attenuation exceeds migration.” As TPH-g is the only petroleum-related constituent

that exceeds WQOs at the site, it appears that ACDEH is using it as the benchmark for plume delineation. Additionally, hydrographs presented in the second quarter 2017 semiannual groundwater monitoring report indicate historical dissolved-phase TPH-g concentrations with stable to decreasing trends (**Attachment B**).

Section 2.3 of the *Technical Justification* document provides a table of the average, 90th percentile, and maximum plume lengths for benzene, methyl tertiary butyl ether (MTBE), and TPH-g. The average, 90th percentile, and maximum plume lengths identified for TPH-g are 248 feet, 413 feet, and 855 feet, respectively. A table note indicates that "TPH-g is shown for comparison purposes only. The [LTCP] does not set criteria for TPH." Section 4.1 of the document further states that "a total separation distance from the source area to the receptor of about 500 feet should be protective for 90% of plumes from UST sites, and a total separation distance from the source area to the receptor of about 1,000 feet should be protective for virtually all plumes from UST sites." CEMC contends that a plume length no greater than the average (248 feet), as referenced in the *Technical Justification* document, should be applied at the site, based on the low to non-detect concentrations of specific petroleum-hydrocarbon constituents (e.g., benzene, toluene, ethylbenzene, and xylenes [BTEX] and MTBE) (**Figure 1**).

2. and 3. In the October 6, 2017, letter, ACDEH generally agrees that the site meets the groundwater-specific criteria of the LTCP with regard to groundwater concentrations, except for "a consistent and clear increasing concentration trend in the downgradient direction onsite," based on an increase in TPH-g concentrations "in the downgradient direction onsite from well MW-3 to MW-2 or VH-1."

A rose diagram of the site groundwater flow direction shows a predominant trend toward the south-southwest. The former USTs were located in the western area of the site; thus, VH-1 and MW-2 are located generally down-gradient (to the south-southwest) of the former USTs and dispenser islands, and MW-3 is located generally up- to cross-gradient (east-northeast), of these former source areas. Although MW-3 is located in the vicinity of a former waste-oil UST, it is unlikely that a waste-oil UST would have contributed more significantly to TPH-g concentrations in groundwater than gasoline USTs or dispenser islands. It is reasonable to expect that TPH-g concentrations in groundwater would be higher at wells located in closer proximity to and/or down-gradient of the former gasoline UST/dispenser island source areas.

The former service station features were removed from the site in 1976, and groundwater monitoring began in 1988, nearly 30 years ago. The historical groundwater monitoring data clearly show stable TPH-g concentration trends in groundwater at each of the onsite wells. Benzene and MTBE concentrations clearly show a decreasing trend. In fact, dissolved-phase benzene concentrations never exceeded 1,000 micrograms per liter (µg/L), except for five instances at VH-1 from August 1988 to May 1993 (with a maximum of 3,300 µg/L), and two instances at MW-2 from August 1993 to August 1994 (with a maximum of 1,300 µg/L). During the June 2017 groundwater sampling event, benzene was detected in the groundwater sample collected from VH-1 at 5 µg/L, and not detected above the laboratory detection limit in the groundwater samples collected from MW-2 through MW-4. Dissolved-phase MTBE concentrations have never exceeded 590 µg/L. During the June 2017 groundwater sampling event, MTBE was detected in the groundwater samples collected from VH-1 and MW-3 at 2 µg/L and 1 µg/L, respectively, and was not detected above the laboratory detection limit in the groundwater samples collected from MW-2 and MW-4.

The ACDEH letter also states that "the vertical extent of soil contamination may not be defined" due to the "consistent detection of odors and PID responses with depth (at 16 to 20 feet bgs)." A summary of boring log data is provided in **Table 1** below, which shows that the depth to water was predominantly less than 14 feet.

**Table 1. Summary of Boring Log Data**

| Boring Name | Year Drilled | Depth to Water | Total Depth | Comments |
|---|---|---|---|---|
| B-1 | 1988 | 14 feet | 21.5 feet | "Strong gasoline odor" @ 20 feet |
| B-2 | 1988 | 14 feet | 26.5 feet | "Strong gasoline odor" @ 20.5 feet |
| B-3 | 1988 | 9 feet | 21.5 feet | "Strong gasoline odor" @ 20.5 feet |
| VH-1 | 1988 | 23 feet*<br>13 feet# | 30 feet | "No odor" noted throughout<br>* day of drilling<br># day after drilling |
| MW-2 | 1993 | 9 feet*<br>8 feet# | 20.5 feet | Photoionization detector readings(PID): 146 parts per million (ppm) at (@) 5 feet, 9.1 ppm @ 10 feet, 2,800 ppm @ 15 feet ("strong hydrocarbon odor"), 1,050 ppm @ 19 feet ("slight hydrocarbon odor")<br>* day of drilling<br># 6 weeks later |
| MW-3 | 1993 | 9 feet*<br>7 feet# | 20.5 feet | PID: 12.3 ppm @ 5 feet, 8.6 ppm @ 10 feet ("no hydrocarbon odor"), 188 ppm @ 15 feet<br>* day of drilling<br># 6 weeks later |
| MW-4 | 1995 | 15 feet*<br>9 feet# | 21.5 feet | PID: 0 ppm at 7 ("no odor"), 11 ppm ("no hydrocarbon odor"), 11 ppm @ 21 feet; "no hydrocarbon odor" @ 14 feet; "slight hydrocarbon odor" @ 18 feet; "hydrocarbon odor" @ 21 feet<br>* day of drilling<br># "static" the same day |
| SB-1 | 1995 | 15 feet*<br>18 feet# | 21.5 feet | PID: 0 ppm @ 6.5 and 11.5 feet; 9 ppm @ 16.5 feet, and 2.75 ppm or 170 ppm @ 21.5 feet; "slight hydrocarbon odor" @ 19 feet<br>* day of drilling<br># "static" the same day |
| GP-1 | 2001 | Not encountered | 16 feet | PID: 30 ppm @ 6 feet, 0 ppm @ 9 and 11 feet, 1,413 ppm @ 15 feet; no odors noted |
| GP-2 | 2001 | Not encountered | 15 feet | PID: 0 ppm @ 6 and 8.5 feet, 20 ppm @ 12.5 feet, and 0 ppm @ 15 feet; "saturated" @ 12.5 feet; "refusal" @ 15 feet; no odors noted |
| GP-3 | 2001 | Not encountered | 15 feet | PID: 11 ppm @ 5.5, 0 ppm @ 8.5, 12.5, and 14.5 feet; "saturated" @ 14.5 feet; "refusal" @ 15 feet; no odors noted |
| HA-1 | 2002 | 10 feet | 10 feet | "Saturated" @ 7.5 feet; "grab groundwater sample" @ 10 feet; no PIDs, no odors noted |
| HA-2 | 2002 | 9.5 feet | 9.5 feet | "Saturated" @ 1 foot and 6.5 feet; "grab groundwater sample" @ 10 feet; no odors noted |
| HA-3 | 2002 | 10 feet | 10 feet | "Saturated" @ 1 foot and 7 feet; "grab groundwater sample" @ 9.5 feet; no odors noted |
| VP-1 | 2008 | Not encountered | 6 feet | PID: 0 ppm @ 3.5 feet; no odors noted |
| VP-2 | 2008 | Not encountered | 6 feet | PID: 0 ppm @ 3.5 feet; no odors noted |
| VP-3 | 2008 | 10.5 feet | 12 feet | PID: 0 ppm @ 3.5, 7.5, and 11.5 feet; no odors noted |
| VP-4 | 2008 | 10.5 feet | 11.5 feet | PID: 0 ppm @ 3.5, 7.5, and 11.5 feet; no odors noted |
| SB-2 | 2008 | 10.5 feet | 12 feet | PID: 0 ppm @ 4, 8, and 12 feet; no odors noted |
| SB-3 | 2008 | 10.5 feet | 12 feet | PID: 0 ppm @ 4, 8, and 12 feet; no odors noted |
| SB-4 | 2008 | 10.5 feet | 12 feet | PID: 0 ppm @ 4, 8, and 12 feet; no odors noted |

CEMC contends that the odors and PID readings at approximately 16 to 20 feet are likely to be associated with groundwater impacts rather than soil impacts, based on the fact that the depth to water has been predominantly less than 14 feet since 1988.

4. A review of Google Maps Street View from February 2017 shows two structures with basements, or partial basements, located across San Leandro Street southwest of the site. The structure at 3617 San Leandro Street appears to be a business (Favro Construction, Inc.) with several structures present, two of which may include a basement/partial basement. The structure at 3607 San Leandro Street appears to be a residence with a partial basement. A structure at 3627 San Leandro Street appears to be a commercial/light industrial-type building with no basement. Section 3.8 of the Technical Justification document discusses "nuisance" scenarios, "where remaining contamination in groundwater is not a risk to human health or the environment but is a nuisance (e.g., dewatering in basement at adjoining property)." The LTCP defines a nuisance in accordance with Water Code Section 13050, which is anything that meets all three of the following requirements:

    - Is injurious to health, or is indecent or offensive to the senses, or an obstruction to the free use of property, so as to interfere with the comfortable enjoyment of life or property.
    - Affects at the same time an entire community or neighborhood, or any considerable number of person, although the extent of the annoyance of damage inflicted upon individuals may be unequal.
    - Occur during, or as a result of, the treatment or disposal of wastes [meaning a petroleum release].

    Based on the above LTCP description, the site is not a nuisance. Additionally, in June and July of 2015, CEMC sent access agreement packages to property owners Mr. Floyd Benigni for 3627 San Leandro Street, and Mr. Peter Favro et al. for 3617 San Leandro Street, requesting access to their properties for environmental assessment activities. The property owners were non-responsive. In May 2016, ACDEH sent letters to both property owners describing that a service station was formerly located directly across the street, that a release had occurred, that soil and groundwater beneath the site had been impacted, and requesting that CEMC be provided access to their property to investigate the extent of the release. Had these property owners been experiencing issues with interception of petroleum hydrocarbon-impacted shallow groundwater in their basements (if present), it seems unlikely that they would not have taken the opportunity to have it addressed by CEMC.

    AECOM spoke to Ms. Donna Favro-Stickle (property owner representative for 3607 and 3617 San Leandro Street) on November 28, 2017, regarding if a basement was present at either of those locations. Ms. Favro-Stickle confirmed that there is a basement at 3617 San Leandro Street, but made no mention of issues regarding shallow groundwater in the basement. Ms. Favro-Stickle was unwilling to provide additional information regarding the basement condition or use, or confirm if one was present at 3607 San Leandro Street. AECOM attempted to contact (via telephone on November 28, 2017) the owner of 3627 San Leandro Street, Mr. Floyd Benigni, for confirmation of no basements present on that property. AECOM's call was not returned. No other research was conducted regarding basements within 1,000 feet of the potential TPH-g groundwater plume.

5. On November 20, 2017, AECOM submitted a request to ACPWA for well information within a 0.5-mile radius of the site. Based on the results of the search, numerous wells are, or have been located within the search area. The majority of wells have been abandoned, destroyed, or are monitoring/remediation wells associated with environmental cleanup projects. Domestic and/or municipal wells were not identified within the search radius. Three irrigation wells were identified within the search radius with the following location information and distance from the subject site:

    - 39th Avenue / 82 2nd Avenue – This well location could not be confirmed, as 39th and 2nd Avenues do not cross. 39th Avenue is as close as approximately 750 feet southeast (crossgradient) of the site, and 2nd Avenue is located approximately 2.5 miles northwest (crossgradient) of the site.
    - 1500 34th Avenue – This address is associated with a church. The exact location of the well could not be determined from aerial imagery, but the church contains abundant vegetation on the property,

- 1500 34th Avenue – This address is associated with a church. The exact location of the well could not be determined from aerial imagery, but the church contains abundant vegetation on the property, and an irrigation well at this location appears reasonable. The church is located approximately 1,500 feet north (up-to-crossgradient) of the subject site.
- 3801 East 8th Street – The property associated with this address appears to be an abandoned parking area. Evidence of a well could not be confirmed from aerial imagery. This property is located approximately 1,600 feet south/southeast (down-to-cross gradient) of the site.

Based on the above information, and information previously provided by Stantec, the groundwater impacts at the site are not expected to have impacted domestic, municipal, or irrigation wells within a ½-mile radius of the site.

In conclusion, CEMC renews its request for case closure. In lieu of case closure, CEMC reiterates its above request that the due date for the Work Plan Addendum be extended to 60 days after receipt of a determination from SWRCB regarding their review of the ACDEH case closure denial. CEMC also requests to meet with ACDEH during this review time to discuss the site conditions and if there are data gaps.

Please do not hesitate to contact either of the undersigned with any questions or comments.

Sincerely,

Brenda Evans

Brenda Evans
Senior Project Manager
AECOM
805-233-3988
brenda.evans@aecom.com

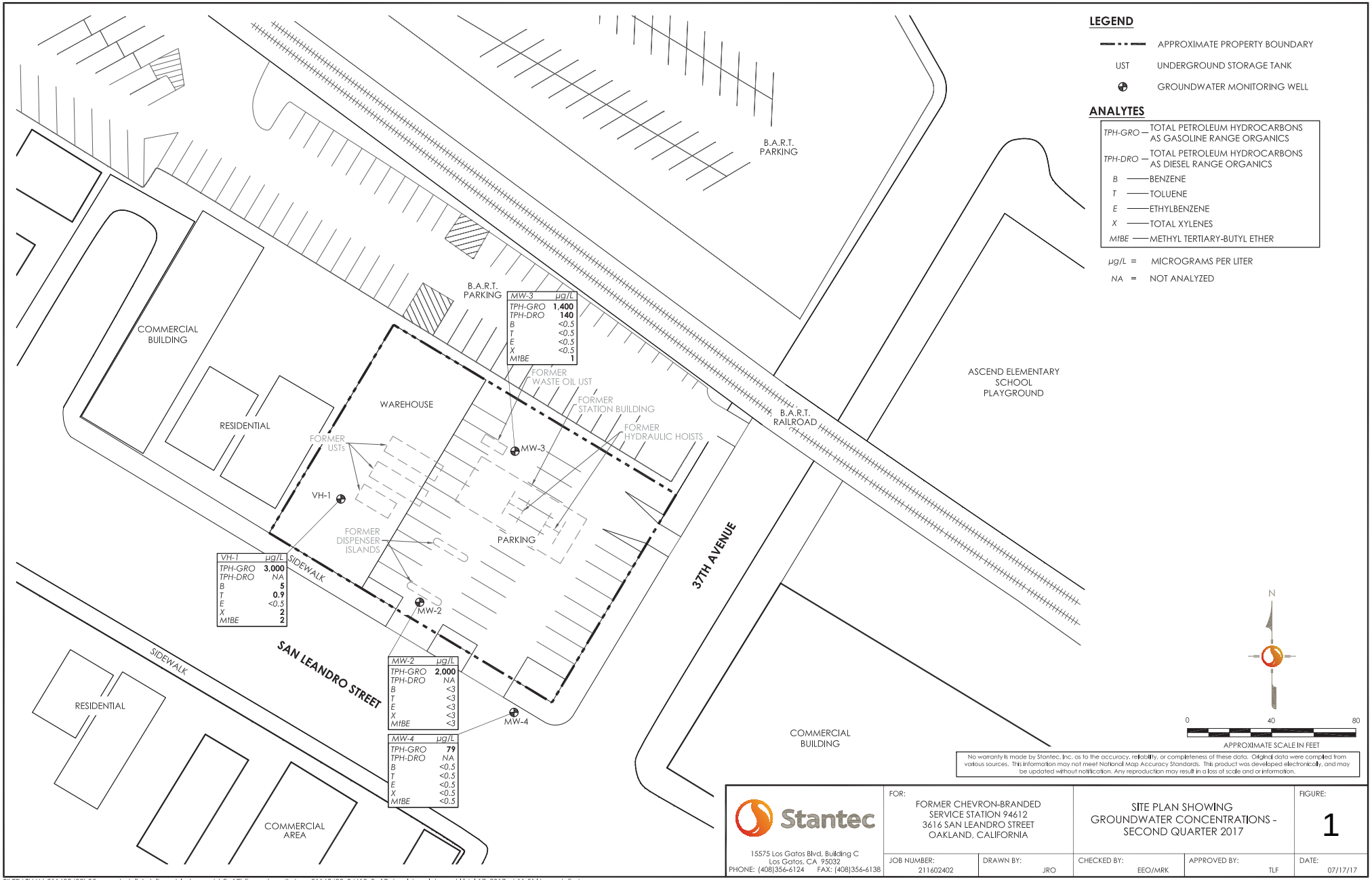
Dana Files, PG
Senior Project Geologist
AECOM
805-764-4053
dana.files@aecom.com


12-7-17

ccs: Ms. Carryl MacLeod, Chevron (*via electronic mail to cmacleod@chevron.com*)
Ms. Jana Ratto Armstrong, c/o Ratto Land Company (property owner) (*via electronic mail*)
Mr. Terry McIlraith, c/o Vivian McIlraith Trust (property owner) (*via U.S. Mail*)
Ms. Dilan Roe, ACDEH (*via electronic mail to dilan.roe@acgov.org*)
Mr. Paresh Khatri, ACDEH (*via electronic mail to paresh.khatri@acgov.org*)
ACDEH electronic file
GeoTracker

Enclosures:

Figure 1. Site Plan Showing Groundwater Concentrations – Second Quarter 2017
Attachment A. ACDEH Letter Dated October 6, 2017
Attachment B. Hydrographs

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Stantec
15575 Los Gatos Blvd, Building C
Los Gatos, CA 95032
PHONE: (408)356-6124 FAX: (408)356-6138

FOR:
FORMER CHEVRON-BRANDED SERVICE STATION 94612
3616 SAN LEANDRO STREET
OAKLAND, CALIFORNIA

SITE PLAN SHOWING GROUNDWATER CONCENTRATIONS - SECOND QUARTER 2017

FIGURE: 1

| JOB NUMBER: | DRAWN BY: | CHECKED BY: | APPROVED BY: | DATE: |
|---|---|---|---|---|
| 211602402 | JRO | EEO/MRK | TLF | 07/17/17 |

FILEPATH:U:\211602402\05_report_deliv\deliverables\reports\2q17\figures\cad\dwg_21162402_94612_2q17.dwg| Jopalekopsahl | Jul 17, 2017 at 11:51 | Layout: fig4_gwc

# Attachment A

# ACDEH Letter Dated October 6, 2017

ALAMEDA COUNTY
**HEALTH CARE SERVICES**
AGENCY
REBECCA GEBHART, Interim Director

DEPARTMENT OF ENVIRONMENTAL HEALTH
LOCAL OVERSIGHT PROGRAM (LOP)
For Hazardous Materials Releases
1131 HARBOR BAY PARKWAY
ALAMEDA, CA 94502
(510) 567-6700
FAX (510) 337-9335

October 6, 2017

Ms. Carryl MacLeod
Chevron Environmental Management Co.
6101 Bollinger Canyon Road
San Ramon, CA 94583
(Sent via electronic mail to:
CMacLeod@chevron.com)

Mr. John Ratto
Ratto Land Company
P.O. Box 6104
Oakland, CA 94603-0104

Ms. Vivian McIlraith
Vivian L. McIlraith Trust
407 Castello Road
Lafayette, CA 94549

Subject: Response to Request for Closure, Fuel Leak Case No. RO0000233 (Global ID # T0600100333), Chevron #9-4612, 3616 San Leandro Street, Oakland, 94601

Dear Mesdames MacLeod and McIlraith, and Mr. Ratto:

Alameda County Department of Environmental Health (ACDEH) staff has reviewed the case file for the above referenced site including the report entitled *First Quarter 2017 Semi-Annual Groundwater Monitoring Report*, dated August 4, 2017, and the *Request for Case Closure*, (RFC) dated August 11, 2017. The reports were submitted on your behalf by Stantec Consulting Services, Inc. (Stantec). Thank you for the reports.

As you will recall, and as discussed in ACDEH's June 7, 2017 letter, the site has an atypical distribution of contamination, in that more elevated Photoionization Detector (PID) responses and odors are not at the groundwater interface at approximately 8 to 10 feet below grade surface (bgs), but at a depth of approximately 16 to 20 feet bgs. Deeper soils that documented elevated PID or odor responses have not been previously submitted for analytical testing. As a result of the data gap review, two downgradient soil bores were proposed in the *Site Conceptual Model and Data Gap Work Plan*, dated February 28, 2014, in order to collect grab groundwater samples to define the extent of groundwater contamination in a deep granular layer downgradient of the subject site, and ACDEH requested several modifications to the scope of work.

Attempts to place the two proposed soil bores have been hindered by the presence of a high pressure gas line across San Leandro Street, and a lack of progress in obtaining access to private property slightly further downgradient.

The previous directive letter dated June 7, 2017, ACDEH identified potential alternative methods to move the case towards closure. This included use of the Low Threat Closure Policy (LTCP) *Technical Justification for Groundwater Media-Specific Criteria* (State Water Board, April 24, 2012) to identify a search area for wells, surface water bodies, basements, and other potential sensitive receptors; the onsite investigation of apparently residual contamination at depth to obtain vertical soil contamination delineation; and the generation of a work plan addendum to incorporate all previously requested changes and potential changes to be identified and proposed.

In regards to the RFC, ACDEH has evaluated site data, 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 ACDEH staff review, we have determined that the site fails to meet the Media-Specific Criteria for Groundwater (see Geotracker for an updated LTCP checklist).

Based on the review of the case file ACDEH requests that you address the following technical comments and send us the documents requested below.

**TECHNICAL COMMENTS**

1. **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 definition or plume classification as follows:

   a. **Upgradient Sources –** In the Request for Closure and previous documents, four upgradient sources were identified as potential contributors to groundwater contamination at the subject site, as follows:

      a. Tony's Express Auto Service; RO0000265; T0600101680; case closed January 2011;

      b. Shell #13-5682; RO0000867; T0600101256; case closed April 1998; and RO0002986; T1000000424; case closed March 2010 and revisited in August 2014;

      c. Fruitvale BART; RO0002490; T06019732174; SCP case open

      d. Fruitvale Transit Village; Regional Board Case # 01S0639; SL0600154423; Case pending closure

   ACDEH's review of the analytical data at each of these sites finds that groundwater concentrations at the downgradient extent of each of the sites is either, substantially less than groundwater concentrations at the upgradient edge of the subject site at MW-3, or approximately equal to the concentrations in MW-3, but separated by 6 to 7 years of time which does not account for the potential for biodegradation over the intervening period of time, or over the distance between the cases.

   Additionally, based on ACDEHs review of the rose diagram for the subject site, two and potentially three, of the cases do not appear to be upgradient, but rather cross-gradient.

   ACDEH notes that investigation and documentation of the onsite flow of offsite groundwater contamination substantial enough to affect case closure has not been proposed or investigated at the site and may be a data gap if this remains a concern.

   b. **Groundwater Concentrations –** ACDEH is in agreement that, in general, groundwater concentrations are stable and meet this portion of the Criteria. However, with one exception, review of onsite groundwater concentrations for Total Petroleum Hydrocarbons as gasoline (TPHg) indicates a consistent and clear increasing concentration trend in the downgradient direction onsite over a not insubstantial period of time (a minimum of 10 years, back to at least February 2007). The most recent data from the referenced groundwater monitoring report is consistent with this observation, and TPHg concentrations increase in the downgradient direction onsite from well MW-3 to MW-2 or VH-1. These recent concentrations ranged from 1,400 micrograms per liter (µg/l), to 2,000 µg/l, to 3,000 µg/l, respectively. As noted above, the single exception is for the period between May 2014 and May 2016 at VH-1. TPHg concentrations in well VH-1 decreased during this period from those in upgradient well MW-3; however, concentrations in well MW-2 were consistently higher than those in well MW-3 during this brief period. Thus, consistent with multiple previously sampling events, the downgradient wells do not currently define the downgradient extent of groundwater TPHg contamination (please see Technical Comment 1c below as well).

   c. **Extent of Groundwater Plume –** The referenced RFC states that grab groundwater from offsite bores HA-1, HA-2, and HA-3 define the downgradient extent of groundwater contamination. Due to the consistent detection of odors and PID responses with depth (at 16 to 20 feet bgs) as discussed above, the vertical extent of soil contamination may not be defined, and the vertical and downgradient extent of the groundwater plume is not defined by the shallow groundwater sampled

by bores HA-1 to HA-3 with maximum sampling depths of 10 feet bgs. The consistent increasing TPHg concentration in the downgradient direction in onsite wells, screened variously between 5 or 7 feet to 20 or 30 feet, documents the downgradient extent of the groundwater TPHg plume has not been sufficiently defined. The proposed offsite downgradient bores have been intended to potentially satisfy this portion of the Groundwater-Media Specific Criteria.

Therefore, as requested in the previous directive letter dated June 7, 2017 ACDEH requests the submittal of a Work Plan Addendum, by the date identified below, to propose and incorporate alternative methods in moving the case to closure. Please refer to that letter for further details; however, ACDEH requests the use of the LTCP *Technical Justification for Groundwater Media-Specific Criteria* and the maximum TPHg plume length as defined by that document, investigation of the onsite residual contaminant distribution beneath the site rather than offsite, and the incorporation of previous work plan modifications into the addendum. Please update the sensitive receptor survey to include basements within 1,000 feet of the potential TPHg groundwater plume map (see *Technical Justification for Groundwater Media-Specific Criteria)* due to the potential for basements to intercept shallow groundwater, and identify water production wells installed since the well survey conducted nearly 25 years ago in 1993. The use of the Alameda County Public Works Agency (ACPWA) well database to augment the previous Department of Water Resources (DWR) well survey is appropriate.

2. **Groundwater Monitoring –** Groundwater at the subject site was last monitored in June 2017. Please continue the semi-annual groundwater monitoring and sampling interval. The frequency may be reduced pending a review of analytical results. Please submit the semi-annual report by the date requested below.

## SUBMITTAL ACKNOWLEDGEMENT STATEMENT

Please note that ACDEH has updated Attachment 1 with regard to report submittals to ACDEH. ACDEH will now be requiring a Submittal Acknowledgement Statement, replacing the Perjury Statement, as a cover letter signed by the Responsible Party (RP). The language for the Submittal Acknowledgement Statement is as follows:

*I have read and acknowledge the content, recommendations and/or conclusions contained in the attached document or report submitted on my behalf to ACDEH's FTP server and the SWRCB's Geotracker Website.*

Please make this change to your submittals to ACDEH.

## TECHNICAL REPORT REQUEST

Please upload technical reports to the ACDEH 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:

- **December 8, 2017 –** Work Plan Addendum
  File to be named: RO233_WP_ADDEND_R_yyyy-mm-dd
- **March 2, 2018 –** Second 2017 Semi-Annual Groundwater Monitoring Report
  File to be named: RO233_GWM_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: http://www.acgov.org/aceh/index.htm. If your email address is not listed on the first page of this letter, or in the list of cc's listed below, ACDEH is requesting your email address to help expedite communications and to help lower overall costs.

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

Sincerely,

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

Enclosures: Attachment 1 – Responsible Party (ies) Legal Requirements / Obligations
Electronic Report Upload (ftp) Instructions

cc: Travis Flora, Stantec Consulting Services, Inc, 15575 Los Gatos Blvd, Building C, Los Gatos, CA 95032; (Sent via electronic mail to: travis.flora@stantec.com)

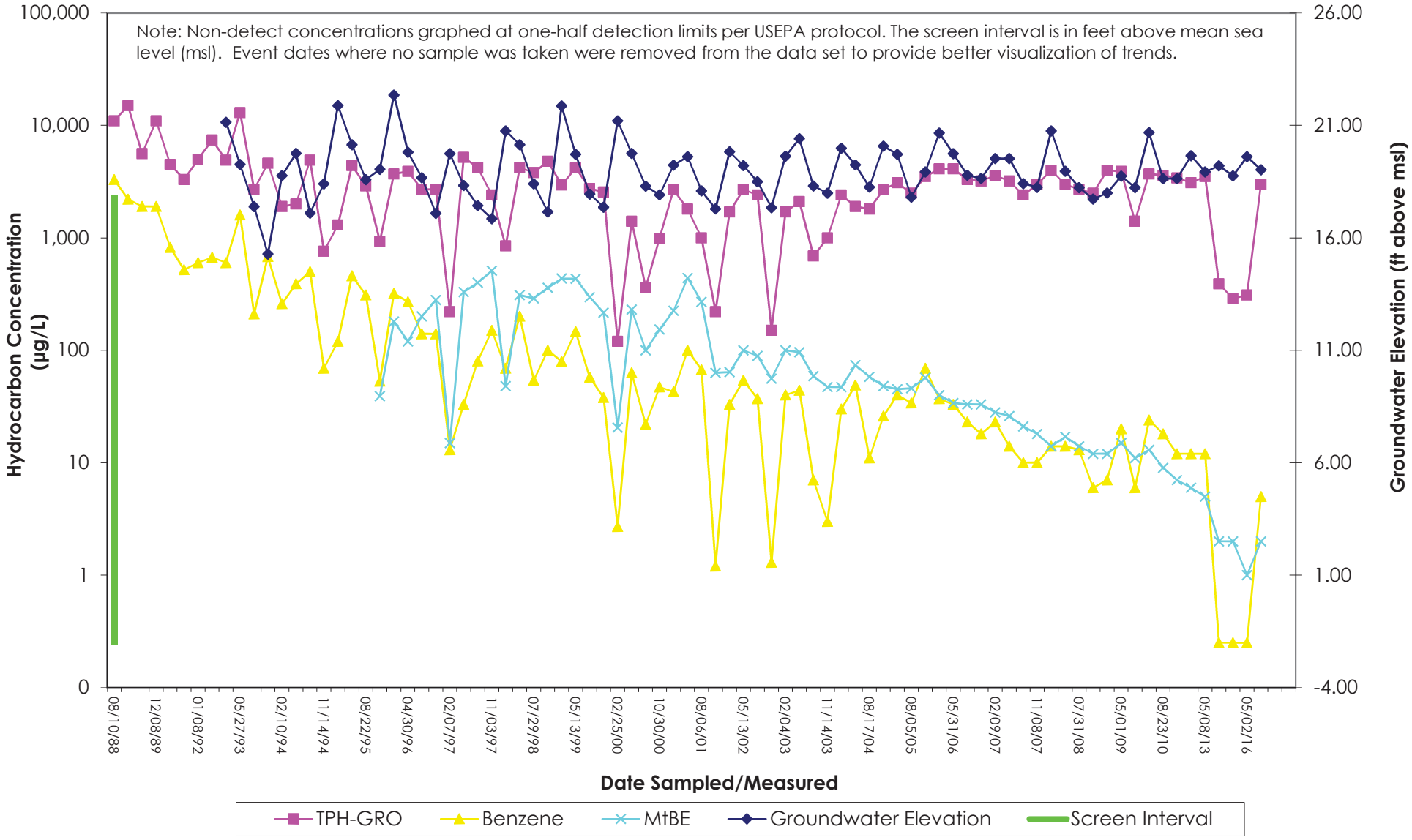
Dilan Roe, ACDEH; (Sent via electronic mail to: dilan.roe@acgov.org)
Paresh Khatri, ACDEH; (Sent via electronic mail to: paresh.khatri@acgov.org)
Mark Detterman, ACDEH; (Sent via electronic mail to: mark.detterman@acgov.org)
Electronic File, GeoTracker

# Attachment B

# Hydrographs

## VH-1 TPH-GRO, Benzene, & MtBE Concentrations and Groundwater Elevations vs. Time

Former Chevron-branded Service Station 94612
3616 San Leandro Street
Oakland, California

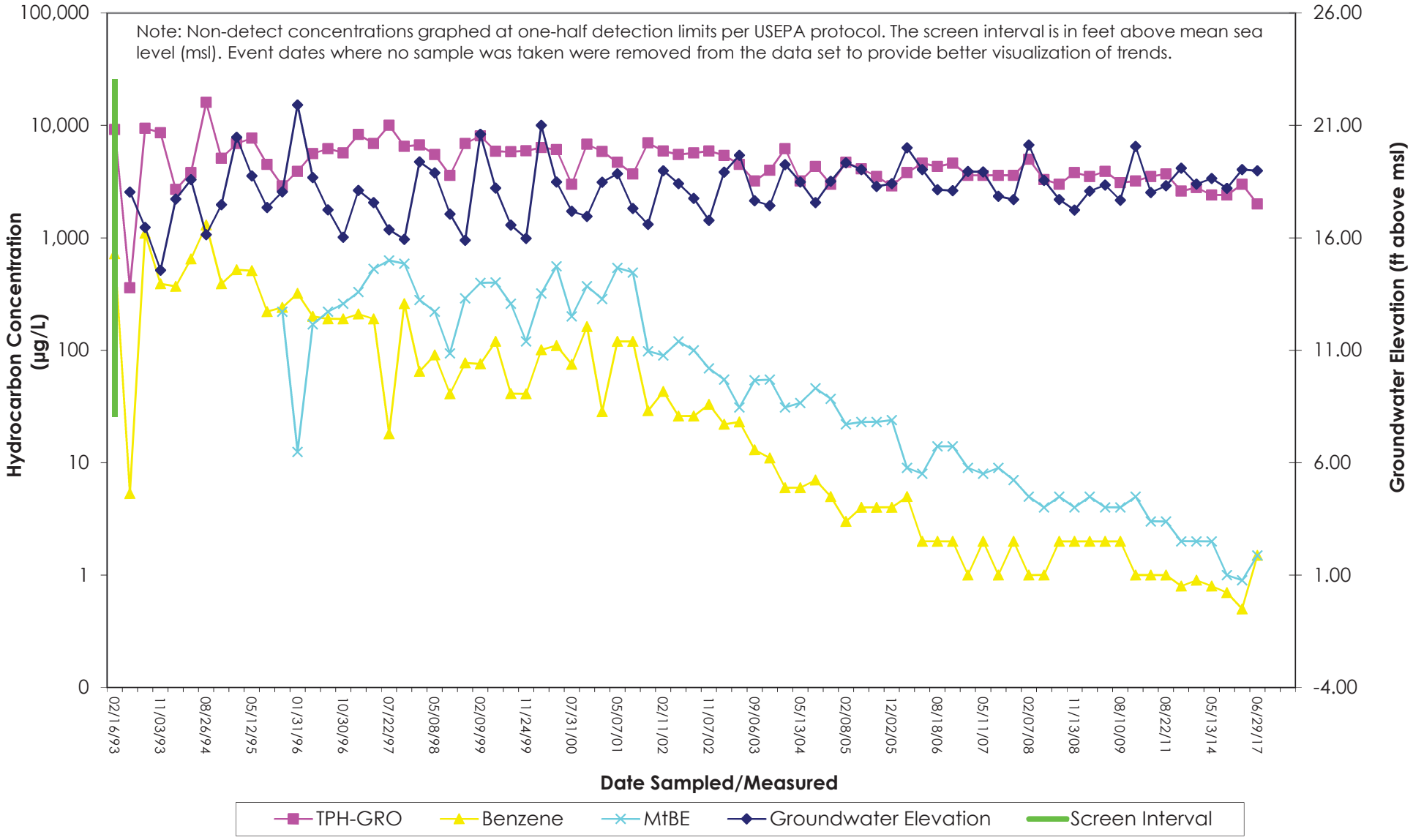


**MW-2 TPH-GRO, Benzene, & MtBE Concentrations and Groundwater Elevations vs. Time**

Former Chevron-branded Service Station 94612

3616 San Leandro Street

Oakland, California

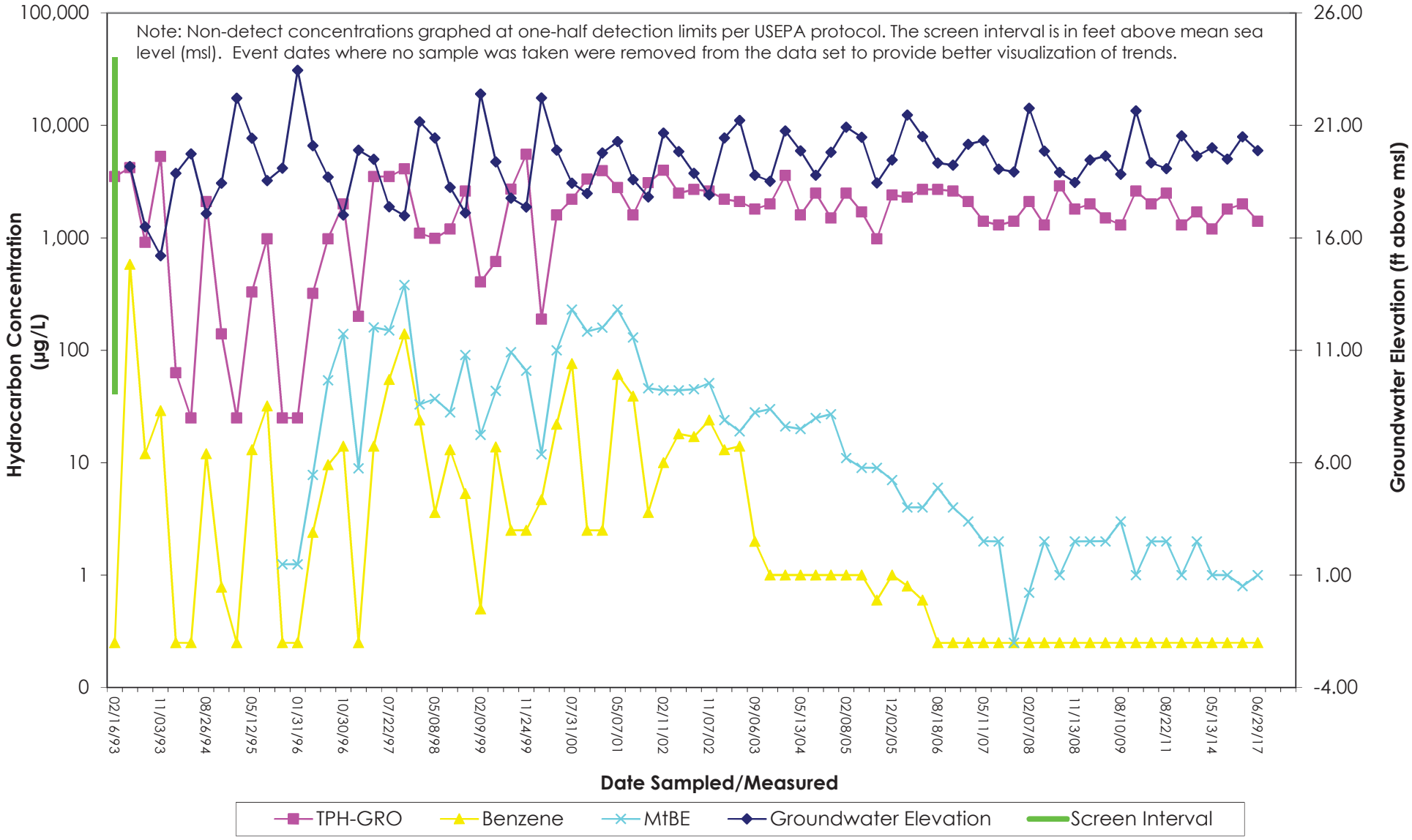


**MW-3 TPH-GRO, Benzene, & MtBE Concentrations and Groundwater Elevations vs. Time**

Former Chevron-branded Service Station 94612

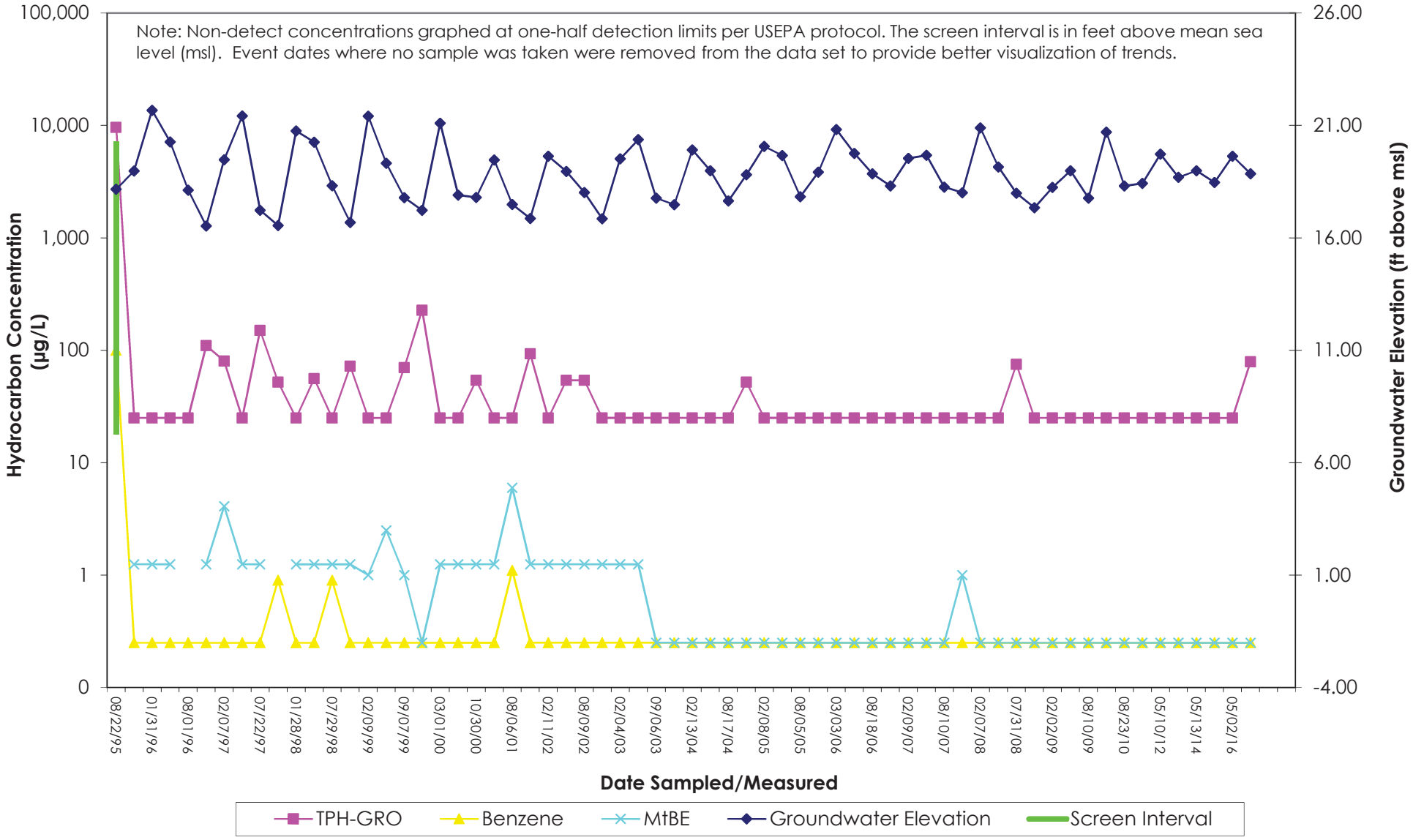
3616 San Leandro Street

Oakland, California



## MW-4 TPH-GRO, Benzene, & MtBE Concentrations and Groundwater Elevations vs. Time

Former Chevron-branded Service Station 94612
3616 San Leandro Street
Oakland, California




cht_94612_2q17_hydrographs.xlsx

Stantec Consulting Services Inc.