Carryl MacLeod
Project Manager, Marketing Business Unit

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

RECEIVED
By Alameda County Environmental Health 10:31 am, Sep 01, 2017

Re: Former Chevron Service Station No. 90019
210 Grand Avenue
Oakland, California
ACEH Case RO0000137

I have read and acknowledge the content, recommendations and/or conclusions contained in the attached *Work Plan for Storm Drain Conduit Sampling* 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

Attachment: *Work Plan for Storm Drain Conduit Sampling*

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

September 1, 2017 Reference No. 632327D

Mr. Mark Detterman, P.G., C.E.G.
Alameda County Department of Environmental Health (ACDEH)
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502-6577

Re: Work Plan for Storm Drain Conduit Sampling
Former Chevron Service Station 90019
210 Grand Avenue
Oakland, California
Case No. RO0000137

Dear Mr. Detterman:

GHD is submitting this *Work Plan for Storm Drain Conduit Sampling* at the site referenced above (Figure 1) on behalf of Chevron Environmental Management Company (CEMC). The purpose of this work is to further assess if the storm drain in Grand Avenue is a conduit for hydrocarbon migration and sample water within the storm drain backfill to evaluate potential hydrocarbon unit discharge concentration loads to Glen Echo Creek. This work is being performed as requested by the Alameda County Department of Environmental Health (ACDEH) in their letter dated June 14, 2017 (Attachment A). Site background and scope of work for one hand auger soil boring and grab-groundwater sampling is outlined below.

1. Site Description and Background

The site was formally a Chevron-branded service station located on the northwest corner of the intersection of Grand Avenue and Bay Place (Figure 1). The majority of the site is currently occupied by a paved parking lot for the Downtown Oakland Senior Center; however, the eastern portion of the site is now covered by the southbound lanes of Bay Place (Figure 2). The date the site was first developed as a service station is unknown, although based on historical aerial photographs, the site appears to have included a service station as early as 1946 with a triangular building in a Y-shaped configuration. This configuration is also shown on an older Chevron site survey and facility plan (date unknown), in which a station building and two canopies formed a Y-shape. Between 1946 and 1958, a portion of the western side of the site became part of Montecito Avenue, as this road was reconfigured to intersect perpendicular to Grand Avenue. By 1968, the station appeared to have been reconstructed into the most recent configuration (Figure 2). In June 1990, the station was demolished and all facilities were removed. In 1992, the property was acquired by the City of Oakland, and the existing parking lot was constructed over the western portion of the site in the mid-1990s. Bay Place was expanded over the eastern portion of the site. Montecito Avenue was closed at Bay Place and its southernmost portion, between Bay Place and Grand Avenue, was incorporated into the Veteran's Memorial Building property (existing senior center) and converted to a parking lot and landscaping. No structures are present on the original service station property.

GHD
5900 Hollis Street Suite A Emeryville California 94608 USA
T 510 420 0700 **F** 510 420 9170 **W** www.ghd.com

Surrounding land use is primarily commercial with some residential further from the site. St. Paul's Episcopal Church is located across Bay Place to the east of the site. The Downtown Oakland Senior Center is located to the northwest of the site. To the south and southeast of the site, across Grand Avenue, is Lakeside Park, located on the shores of Lake Merritt, an estuarine urban surface water body. Lake Merritt, at its closest point, is approximately 225 feet southwest of the site. The site is relatively flat at an approximate elevation of 8 feet above mean sea level (msl). Depth to groundwater beneath the site typically ranges between 4 and 6 fbg. Groundwater flow direction varies between northwest and southwest, but typically flows toward the west.

A 12-inch diameter storm drain line is located adjacent to the site, with an associated storm drain catch basin near boring B-6 and downgradient of well MW-5. Storm runoff that enters the catch basin travels west-northwest from the site in a 12-inch diameter pipe, which becomes a 30-inch diameter pipe that terminates at Glen Echo Creek 220 feet west-northwest of the site, which empties into Lake Merritt. The catch basin, storm drain, and Glen Echo Creek locations are illustrated on Figure 3. The City of Oakland Public Works department was unable to provide the exact construction of the storm drain but predicted it was likely made of concrete and the trench backfilled with ¾-inch gravel (baserock). In 2014, during the advancement of boring B-6, Conestoga Rovers and Associates (CRA) measured the depth of the catch basin to be 6 fbg, therefore the bottom of the trench is estimated to be approximately 5 fbg. Cross sections illustrating lithology, groundwater depth fluctuations, and utility depths are included on Figures 4 and 5.

Dissolved hydrocarbon concentrations detected in boring B-6, located adjacent to the catch basin, and well MW-5, located approximately 40 feet upgradient of the storm drain exceed San Francisco Regional Water Quality Control Board (SF-RWQCB) aquatic environmental screening levels (ESLs). However, CRA's September 26, 2014 *Hydrocarbon Transport Model and Soil and Groundwater Management Plan* fate and transport evaluation concluded there is no significant risk posed by remaining hydrocarbons in soil and groundwater beneath this site. Based on mass flux calculations, the total petroleum hydrocarbons as gasoline (TPHg), benzene, and ethylbenzene concentrations predicted to enter the creek from the site are well below the SF-RWQCB aquatic ESLs and do not pose a significant threat.

2. Work Plan for Soil Boring

Groundwater in well MW-5 has historically ranged from approximately 1 to 12 fbg, but is typically between 4 and 6 fbg, and therefore groundwater intermittently encounters the storm drain trench. To determine if the storm drain is a potential direct conduit to Echo Creek during high groundwater months, GHD proposes advancing one hand auger boring to approximately 5 feet below grade in the fill around the storm drain, and if groundwater is encountered, collect one grab-groundwater sample (Figure 2).

2.1 Site Health and Safety Plan

GHD will prepare a site-specific health and safety plan to protect site workers. The plan will be reviewed and signed by site workers and visitors. The plan will be kept onsite during the field work.

2.2 Permits

GHD will obtain a drilling permit from Alameda County Department of Public Works and excavation and obstruction permits from the City of Oakland prior to advancing the soil boring.

2.3 Underground Utility Location and Borehole Clearance

Underground Service Alert will be contacted to notify utility companies to mark their utilities at the site in the immediate vicinity of the drilling areas. Additionally, GHD will contract a licensed geophysicist to conduct a geophysical survey in the proposed boring location to confirm utility locations before drilling.

2.4 Soil Logging and Sampling

One hand auger boring will be advanced to approximately 5 fbg or to first encountered groundwater in the fill around the storm drain. The boring will not be advanced deeper than the storm drain trench. If groundwater is encountered in the boring, one grab-groundwater sample will be collected using a disposable bailer and dispensed into laboratory supplied containers. GHD will log collected soils (likely fill) using the ASTM D 2488 Unified Soil Classification System. Soil will be field screened using a photo ionization detector (PID). If a groundwater sample is collected, it sample will be sealed, capped, labeled, logged on a chain of custody form, placed on ice, and transported to a Chevron and State approved laboratory for analysis. The boring will be backfilled with the trench fill removed by the hand auger and completed with concrete to match the existing grade. GHD's *Standard Field Procedures for Soil Borings* is included as Attachment B.

2.5 Chemical Analysis

The grab-groundwater sample will be analyzed for:

- TPHg by EPA Method 8015B modified
- Benzene, toluene, ethylbenzene, xylenes (BTEX), methyl tertiary butyl ether (MTBE) and naphthalene by EPA Method 8260B

2.6 Reporting

Upon completion of field activities and review of the analytical results, GHD will prepare an investigation report that, at a minimum, will contain:

- Descriptions of drilling and sampling methods
- Boring log

- Tabulated grab-groundwater and groundwater analytical results
- A figure illustrating the boring location
- Groundwater gradient and plume maps
- Analytical reports and chain of custody forms
- Soil disposal methods
- Evaluation of the storm drain as a preferential pathway
- Conclusions and recommendations

3. Closing

GHD will conduct the storm drain conduit sampling following approval of the work plan by the ACDEH. After approval, GHD will obtain the necessary permits, meet with utility service providers if needed, and schedule a drilling subcontractor. GHD will submit a report approximately eight weeks after receiving the laboratory analytical reports.

The First Semi-Annual 2017 Groundwater Rebound Monitoring Report requested in ACDEH's June 14, 2017 letter was submitted on June 22, 2017.

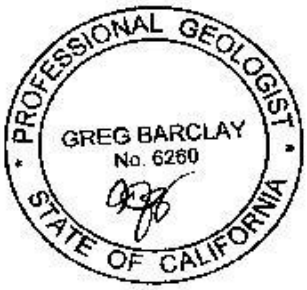
Please contact Chevron Project Manager Carryl MacLeod at (925) 842-3201 or GHD Project Manager Kiersten Hoey at (510) 420-3347 if you have any questions or require additional information.

Sincerely,

GHD

Kiersten Hoey

Greg Barclay PG 6260



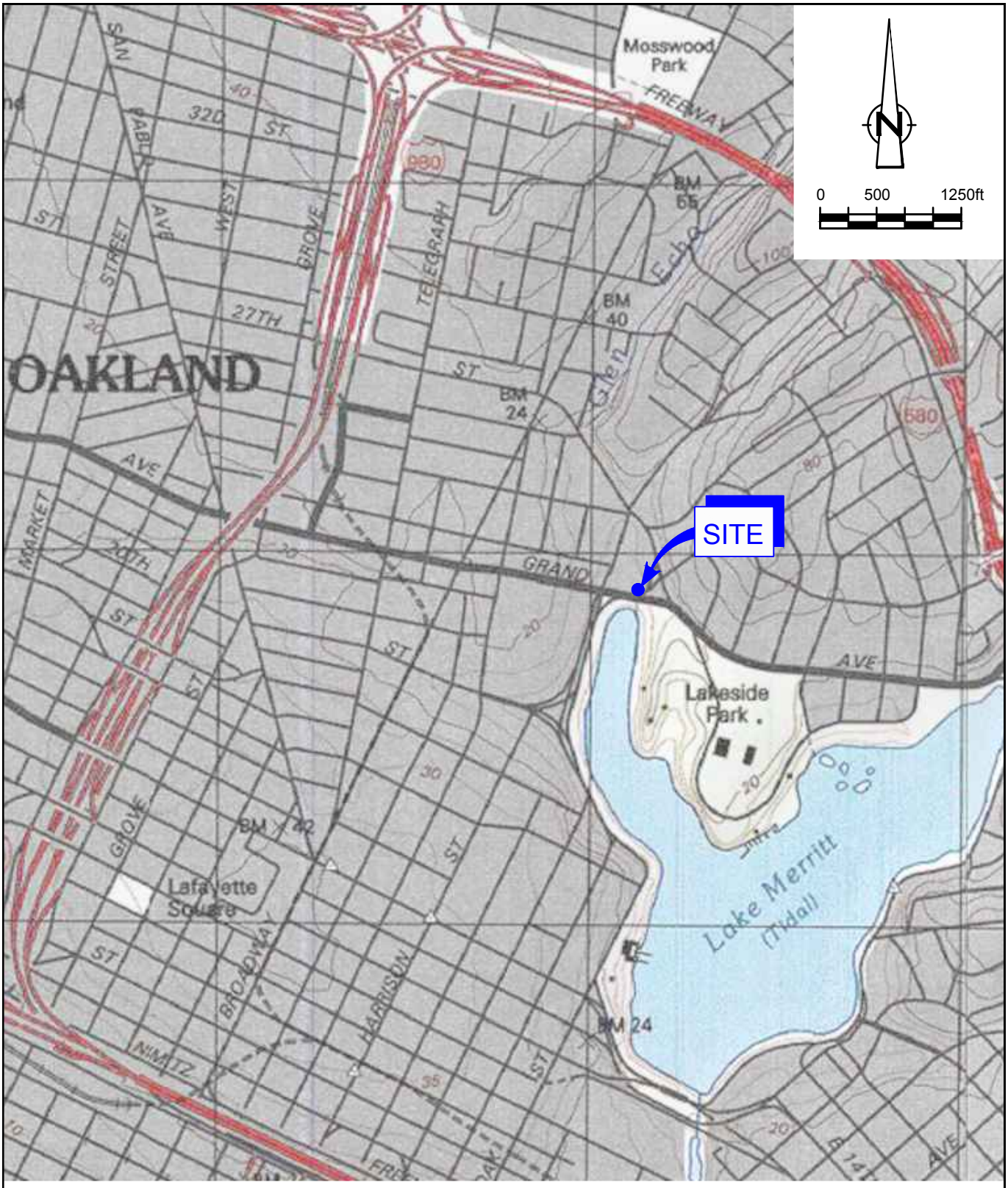
KH/cw/19
Encl.

Figure 1	Vicinity Map
Figure 2	Site Plan
Figure 3	Expanded Site Plan
Figure 4	Geologic Cross Section A-A’
Figure 5	Geologic Cross Section B-B’

Attachment A	Regulatory Agency Correspondence
Attachment B	Standard Operating Procedures for Soil Borings

cc: Ms. Carryl MacLeod, Chevron EMC (*electronic copy*)
Mr. Anthony Reese, City of Oakland

Figures



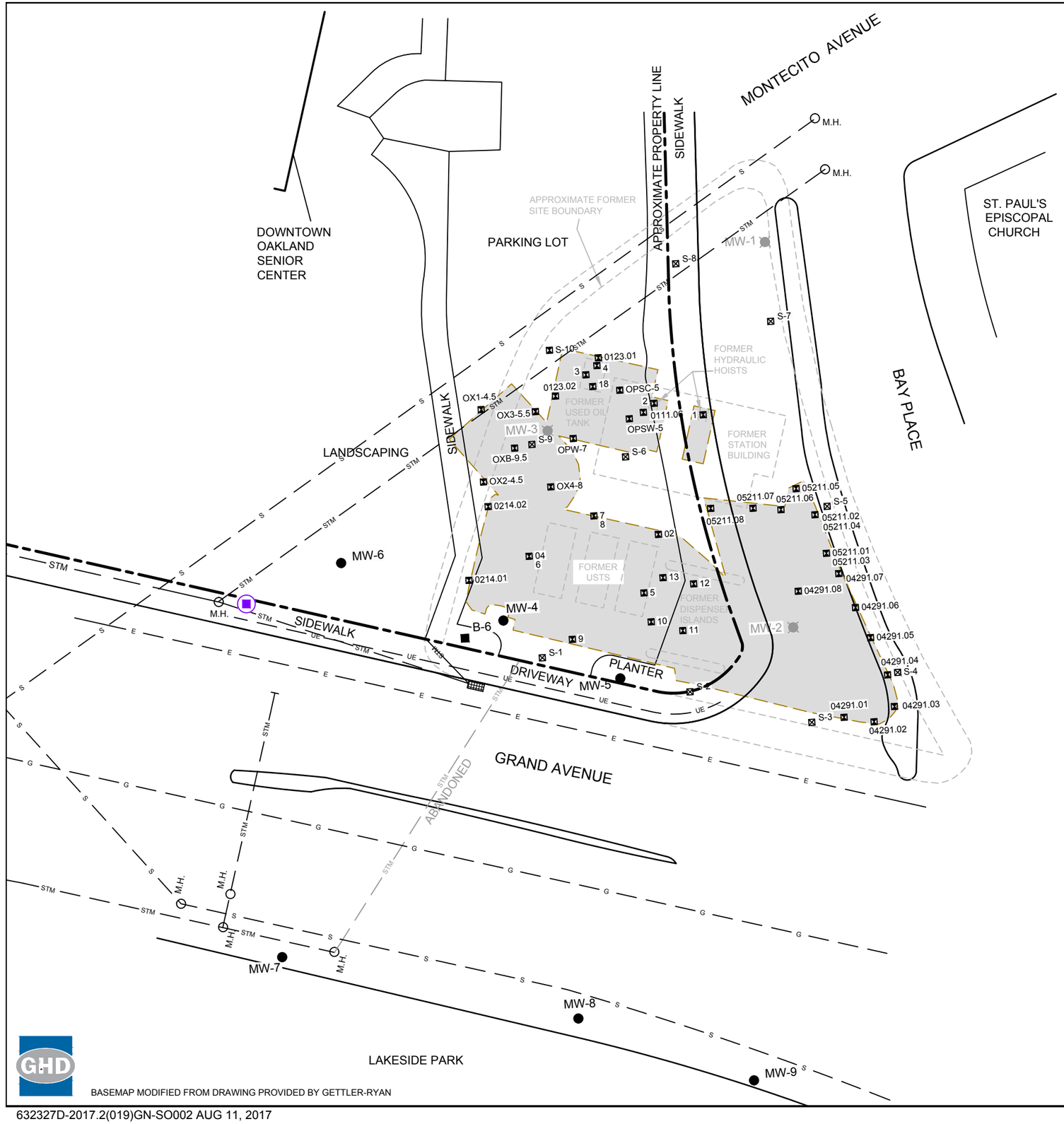
SOURCE: TOPO MAPS.

Figure 1

VICINITY MAP
FORMER CHEVRON SERVICE STATION 90019
210 GRAND AVENUE
Oakland, California

OAKLAND
CALIFORNIA

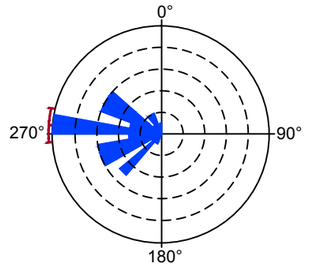
632327D-2017.2(019)GN-SO001 AUG 7, 2017



0 10 30ft

LEGEND

- PROPOSED SOIL BORING LOCATION
- MW-4 MONITORING WELL LOCATION
- MW-1 DESTROYED MONITORING WELL LOCATION
- B-6 BORING LOCATION
- 4 APPROXIMATE EXCAVATION SOIL SAMPLE LOCATION
- S-1 APPROXIMATE SHALLOW SOIL SAMPLE LOCATION (1995)
- APPROXIMATE EXTENT OF EXCAVATION (DEPTH VARIES)
- STM APPROXIMATE LOCATION OF STORM DRAINS
- S APPROXIMATE LOCATION OF SANITARY SEWER PIPING
- G APPROXIMATE LOCATION OF NATURAL GAS LINE
- E APPROXIMATE LOCATION OF MAIN ELECTRICAL LINE
- UE APPROXIMATE LOCATION OF STREET LIGHT ELECTRICAL LINE
- M.H. MANHOLE
- STORM DRAIN INLET



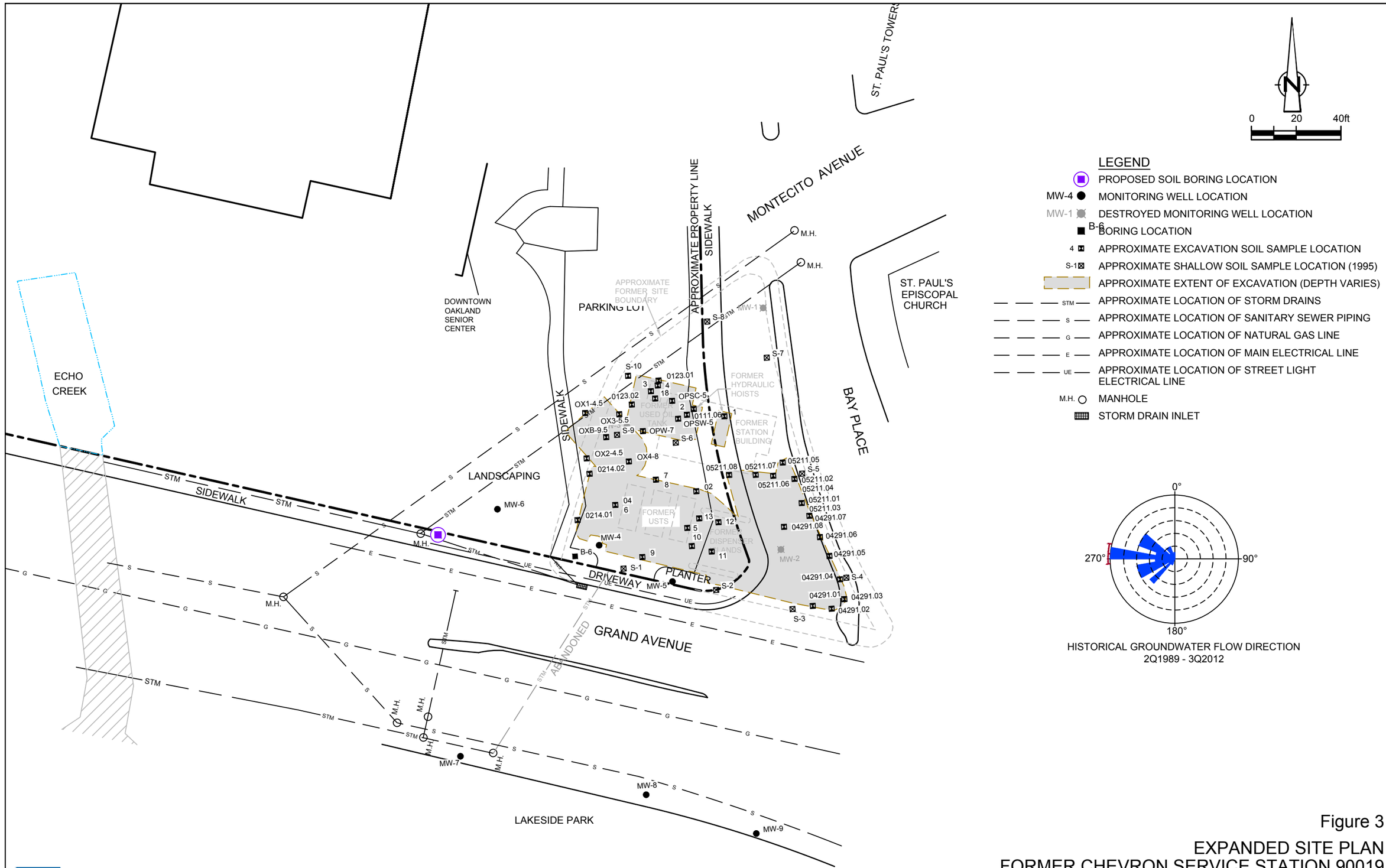
HISTORICAL GROUNDWATER FLOW DIRECTION
2Q1989 - 3Q2012

BASEMAP MODIFIED FROM DRAWING PROVIDED BY GETTLER-RYAN

632327D-2017.2(019)GN-SO002 AUG 11, 2017

Figure 2

SITE PLAN
FORMER CHEVRON SERVICE STATION 90019
210 GRAND AVENUE
Oakland, California



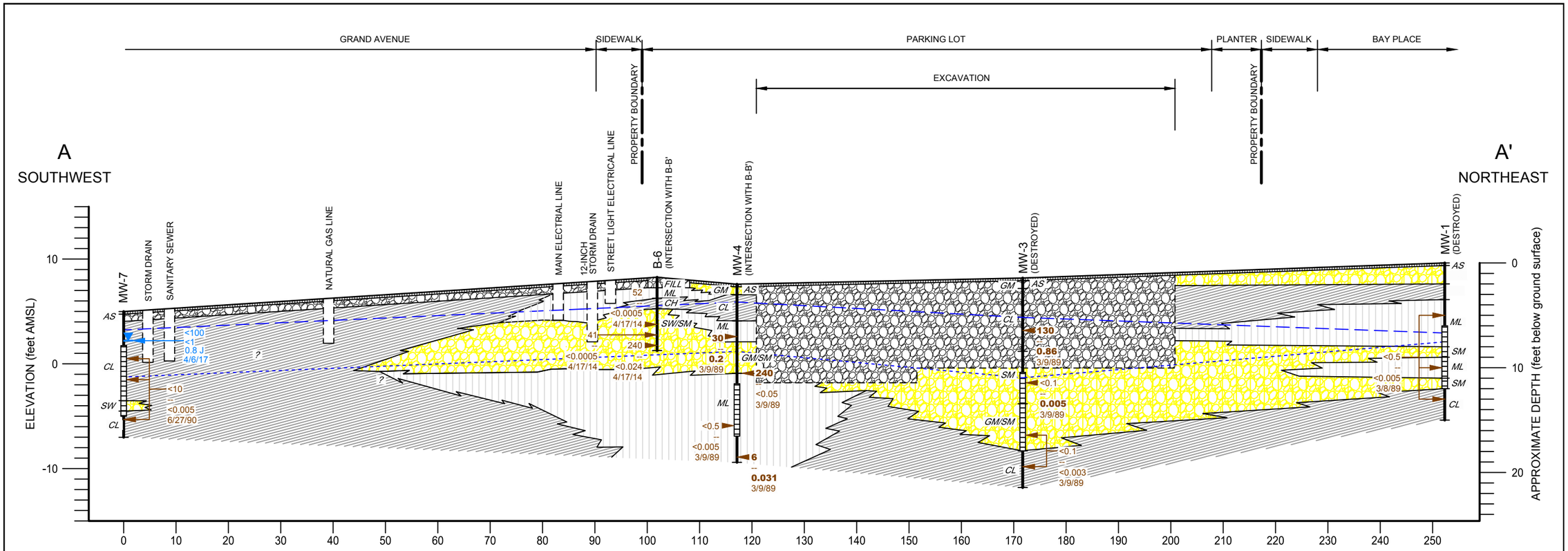
HISTORICAL GROUNDWATER FLOW DIRECTION
2Q1989 - 3Q2012

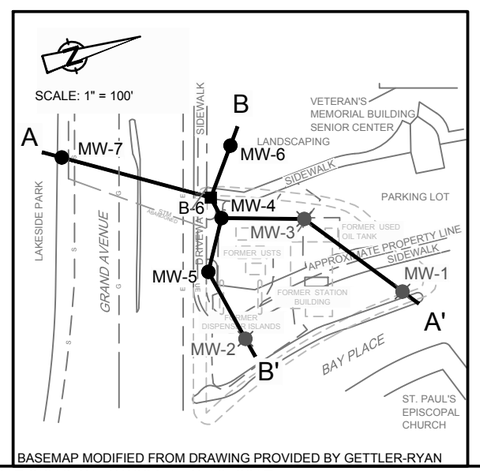
Figure 3

EXPANDED SITE PLAN
FORMER CHEVRON SERVICE STATION 90019
210 GRAND AVENUE
Oakland, California

BASEMAP MODIFIED FROM DRAWING PROVIDED BY GETTLER-RYAN

632327D-2017.2(019)GN-SO003 AUG 11, 2017





BASEMAP MODIFIED FROM DRAWING PROVIDED BY GETTLER-RYAN

LEGEND

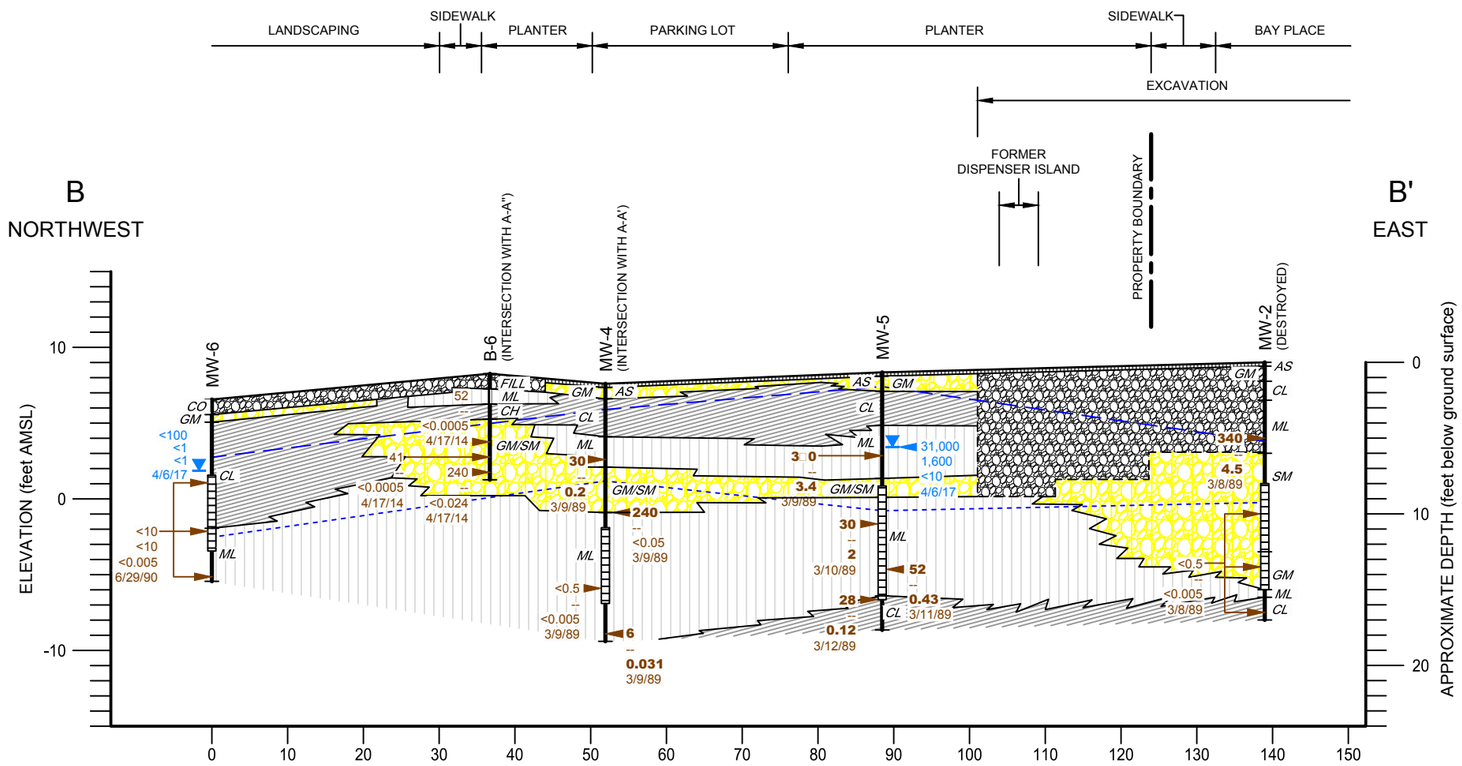
- MW-4 — WELL DESIGNATION
- GROUND SURFACE
- OBSERVATION WELL INSTALLATION
- STRATIGRAPHIC BOUNDARY
- CL — TYPICAL SOIL CLASSIFICATION
- SCREENED INTERVAL
- BOTTOM OF BORING
- APPROXIMATE SOIL SAMPLE LOCATION
- TPHg / TPHd / BENZENE / DATE — HYDROCARBON CONCENTRATIONS IN SOIL (mg/kg)
- APPROXIMATE GROUNDWATER SAMPLE LOCATION
- TPHg / BENZENE / MTBE / DATE — HYDROCARBON CONCENTRATIONS IN GROUNDWATER (µg/L)
- GROUNDWATER DEPTH (4/6/17)

- *FILL*
- *AS* - ASPHALT
- *CL/CH* - INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, GRAVELLY CLAYS, SANDY CLAYS, SILTY CLAYS, LEAN CLAYS, INORGANIC CLAY OF HIGH PLASTICITY
- *ML* - INORGANIC SILTS, VERY FINE SANDS, SILTY OR CLAYEY FINE SANDS, CLAYEY SILTS WITH SLIGHT PLASTICITY
- *GM/SM/SW* - SILTY GRAVEL AND SILTY SANDS, SAND-SILT MIXTURES - WELL-GRADED SAND, GRAVELLY SANDS, LITTLE OR NO FINES

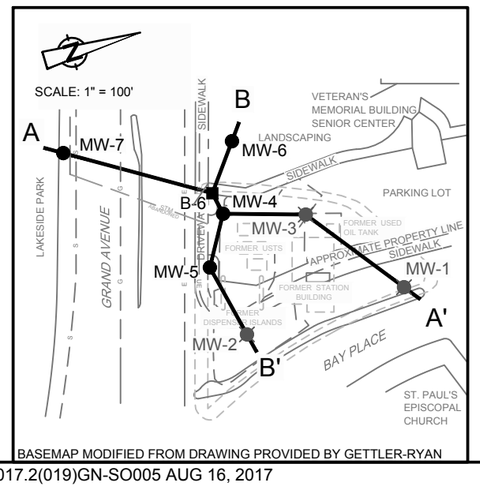
- (NS) NOT SAMPLED
- -- NOT ANALYZED
- < NOT DETECTED AT OR ABOVE STATED REPORTING LIMITS
- J ESTIMATED VALUE
- HIGHEST GROUNDWATER ELEVATION
- LOWEST GROUNDWATER ELEVATION

Figure 4

GEOLOGIC CROSS SECTION A-A'
FORMER CHEVRON SERVICE STATION 90019
210 GRAND AVENUE
Oakland, California



SCALE: HORZ. 1" = 20'
VERT. 1" = 10'



BASEMAP MODIFIED FROM DRAWING PROVIDED BY GETTLER-RYAN

LEGEND

- MW-4 — WELL DESIGNATION
- GROUND SURFACE
- OBSERVATION WELL INSTALLATION
- STRATIGRAPHIC BOUNDARY
- CL — TYPICAL SOIL CLASSIFICATION
- SCREENED INTERVAL
- BOTTOM OF BORING
- APPROXIMATE SOIL SAMPLE LOCATION
- TPHg / TPHd / BENZENE / DATE — HYDROCARBON CONCENTRATIONS IN SOIL (mg/kg)
- APPROXIMATE GROUNDWATER SAMPLE LOCATION
- TPHg / BENZENE / MTBE / DATE — HYDROCARBON CONCENTRATIONS IN GROUNDWATER (µg/L)
- GROUNDWATER DEPTH (4/6/17)

- *FILL*
- *AS* - ASPHALT
- *CL* - INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, GRAVELLY CLAYS, SANDY CLAYS, SILTY CLAYS, LEAN CLAYS
- *ML* - INORGANIC SILTS, VERY FINE SANDS, SILTY OR CLAYEY FINE SANDS, CLAYEY SILTS WITH SLIGHT PLASTICITY
- *GM/SM/SW* - SILTY GRAVEL AND SILTY SANDS, SAND-SILT MIXTURES - WELL-GRADED SAND, GRAVELLY SANDS, LITTLE OR NO FINES
- (NS) NOT SAMPLED
- -- NOT ANALYZED
- < NOT DETECTED AT OR ABOVE STATED REPORTING LIMITS
- HIGHEST GROUNDWATER ELEVATION
- LOWEST GROUNDWATER ELEVATION (GROUNDWATER ELEVATION DATA FOR MW-5 IN 1993 NOT USED DUE TO GROUNDWATER EXTRACTION)

Figure 5

GEOLOGIC CROSS SECTION B-B'
FORMER CHEVRON SERVICE STATION 90019
210 GRAND AVENUE
Oakland, California

Attachment A
Regulatory Agency Correspondence

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

June 14, 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. Mark Johannes Arniola
City of Oakland
250 Frank Ogawa Plaza, Suite 5301
Oakland, CA 94612
(Sent via electronic mail to:
marniola@oaklandnet.com)

Subject: Glen Echo Discharges and Non-Drought Monitoring; Fuel Leak Case No. RO0000137 and Geotracker Global ID T0600100313, Chevron #9-0019, 210 Grand Avenue, Oakland, CA 94610

Dear Ms. MacLeod and Mr. Arniola:

Alameda County Department of Environmental Health (ADCEH) has reviewed the case file, including the *Groundwater Rebound Monitoring Report,* dated August 10, 2016, which was prepared and submitted on your behalf by GHD Services, Inc. (GHD).

Thank you for the report and for attempting to directly sample the storm drain outlet. The discharge point is approximately 190 feet directly downgradient to the west from the former western edge of the site, and at a distance of approximately 215 feet west of a storm drain inlet. Based on available data, the storm drain utility, along with a gravelly unit observed in bores for MW-4, MW-5, and B-6, appears to provide a direct conduit to the creek. At the time of the attempt in June 2016, the outlet was below the level of the creek surface and could not be sampled discretely.

Due to the significant winter rains this past winter, to further the understanding of the site in non-drought conditions, ACDEH requests that you address the following technical comments and send us the documents requested below.

TECHNICAL COMMENTS

1. **Groundwater Rebound Monitoring Sampling** – Due to substantial rises in groundwater elevations across the county, ACDEH requests all wells at the site be sampled for potential groundwater concentration rebound during non-drought conditions. Please submit a report by the date identified below.

2. **Storm Drain Conduit Sampling** – Review of the referenced report indicates that groundwater concentrations in well MW-5 remained below groundwater concentrations used to calculate potential storm drain discharge concentrations at Glen Echo Creek. The potential concentrations calculated by GHD did not appear to exceed freshwater Environmental Screening Levels (ESLs) at the discharge point for the system at Glen Echo Creek (*Amended SGMP and Memo Regarding Mass and Hydrocarbon Migration Calculations,* dated February 19, 2015, Conestoga-Rovers & Associates, now GHD).

   However, because a storm drain discharge represents an actual ecologic receptor risk, ACDEH requests the generation of a work plan to sample water which is representative of the storm drain conduit water, within the utility corridor and the gravelly unit, prior to discharge, to determine storm drain and gravelly unit discharge concentration loads prior to Glen Echo Creek. Please submit a work plan by the date identified below.

TECHNICAL REPORT REQUEST

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

- **August 4, 2017** – Groundwater Monitoring Report
  File to be named: RO137_GWM_R_yyyy-mm-dd
- **September 1, 2017** – Work Plan
  File to be named: RO137_WP_R_yyyy-mm-dd

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

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,

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

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

cc: Kiersten Hoey, GHD, 5900 Hollis Street, Suite A, Emeryville, CA 94608
(Sent via electronic mail to: Kiersten.hoey@ghd.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 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

Alameda County Department of Environmental Health's (ACDEH) Environmental Cleanup Oversight Programs, Local Oversight Program (LOP) and Site Cleanup Program (SCP) 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 File Transfer Protocol (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 SCP sites. Beginning July 1, 2005, electronic submittal of a complete copy of all reports for all sites is required in GeoTracker (in PDF format). Please visit the SWRCB website (http://www.waterboards.ca.gov/water_issues/programs/ust/electronic_submittal/) for more information on these requirements.

ACKNOWLEDGEMENT STATEMENT

All work plans, technical reports, or technical documents submitted to ACDEH must be accompanied by a cover letter from the responsible party that states, at a minimum, the following: "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." 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 6731, 6735, and 7835) 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 licensed 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 case meet this requirement. Additional information is available on the Board of Professional Engineers, Land Surveyors, and Geologists website at: http://www.bpelsg.ca.gov/laws/index.shtml.

UNDERGROUND STORAGE TANK CLEANUP FUND

Please note that delays in investigation, late 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 Oversight Programs (LOP and SCP)	**REVISION DATE:** December 1, 2016
	ISSUE DATE: July 5, 2005
	PREVIOUS REVISIONS: October 31, 2005; December 16, 2005; March 27, 2009; July 8, 2010, July 25, 2010; May 15, 2014, November 29, 2016
SECTION: Miscellaneous Administrative Topics & Procedures	**SUBJECT:** Electronic Report Upload (ftp) Instructions

The Alameda County Environmental Cleanup Oversight Programs (LOP and SCP) 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.**
- **Do not password protect the document**. Once indexed and inserted into the correct electronic case file, the document will be secured in compliance with the County's current security standards and a password. **Documents with password protection will not be accepted**.
- Each page in the PDF document should be rotated in the direction that will make it easiest to read on a computer monitor.
- Reports must be named and saved using the following naming convention:

  RO#_Report Name_Year-Month-Date (e.g., RO#5555_WorkPlan_2005-06-14)

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) Open File Explorer using the Windows  key + E keyboard shortcut.
      i) Note: Netscape, Safari, and Firefox browsers will not open the FTP site as they are NOT being supported at this time.
   b) On the address bar, type in ftp://alcoftp1.acgov.org.
   c) Enter your User Name and Password. (Note: Both are Case Sensitive)
   d) Click Log On.
   e) Open "My Computer" on your computer and navigate to the file(s) you wish to upload to the ftp site.
   f) 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.
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Attachment B
Standard Operating Procedures for Soil Borings

Attachment B STANDARD FIELD PROCEDURES FOR SOIL BORING

This document presents standard field methods for drilling and sampling soil borings and installing, developing, and sampling groundwater monitoring wells. These procedures are designed to comply with Federal, State and local regulatory guidelines. Specific field procedures are summarized below.

SOIL BORINGS

Objectives

Soil samples are collected to characterize subsurface lithology, assess whether the soils exhibit obvious hydrocarbon or other compound vapor or staining, and to collect samples for analysis at a State-certified laboratory. All borings are logged using the ASTM D2488-06 Unified Soil Classification System by a trained geologist working under the supervision of a California Professional Geologist (PG).

Soil Boring and Sampling

Prior to drilling, the first 8 feet of the boring are cleared using an air or water knife and vacuum extraction or hand auger. This minimizes the potential for impacting utilities. Soil borings are typically drilled using hollow-stem augers or direct-push technologies such as the Geoprobe®. Soil samples are collected at least every five ft to characterize the subsurface sediments and for possible chemical analysis. Additional soil samples are collected near the water table and at lithologic changes. Samples are collected using lined split-barrel or equivalent samplers driven into undisturbed sediments at the bottom of the borehole.

Drilling and sampling equipment is steam-cleaned prior to drilling and between borings to prevent cross-contamination. Sampling equipment is washed between samples with trisodium phosphate or an equivalent EPA-approved detergent.

Sample Analysis

Sampling tubes chosen for analysis are trimmed of excess soil and capped with Teflon tape and plastic end caps. Soil samples are labeled and stored at or below 4^{o} C on either crushed or dry ice, depending upon local regulations. Samples are transported under chain-of-custody to a State-certified analytic laboratory.

Field Screening

One of the remaining tubes is partially emptied leaving about one-third of the soil in the tube. The tube is capped with plastic end caps and set aside to allow hydrocarbons to volatilize from the soil. After ten to fifteen minutes, a portable volatile vapor analyzer measures volatile hydrocarbon vapor concentrations in the tube headspace, extracting the vapor through a slit in the cap. Volatile vapor analyzer measurements are used along with the field observations, odors, stratigraphy and groundwater depth to select soil samples for analysis.

Water Sampling

Water samples, if they are collected from the boring, are either collected using a driven Hydropunch® type sampler or are collected from the open borehole using bailers. The groundwater samples are decanted into the appropriate containers supplied by the analytic laboratory. Samples are labeled, placed in protective foam sleeves, stored on crushed ice at or below 4^{o}C, and transported under chain-of-custody to

the laboratory. Laboratory-supplied trip blanks accompany the samples and are analyzed to check for cross-contamination. An equipment blank may be analyzed if non-dedicated sampling equipment is used.

Grouting

If the borings are not completed as wells, the borings are filled to the ground surface with cement grout poured or pumped through a tremie pipe.