ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
ALEX BRISCOE, Agency Director

ENVIRONMENTAL HEALTH SERVICES
ENVIRONMENTAL PROTECTION
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577
(510) 567-6700
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May 23, 2013

Ms. Kelly Esters
Chevron Environmental Management Co.
6101 Bollinger Canyon Rd.
San Ramon, CA 94583
(sent via electronic mail to kesters@chevron.com)

Mr. Nisson Saidian
5733 Medallion Ct.
P.O. Box 6104
Castro Valley, CA 94552

Subject: Closure Request Response, Fuel Leak Case No. RO0000124 (Global ID # T0600102093), Chevron #9-9708, 5910 MacArthur Boulevard, Oakland, 94605

Dear Ms. Esters and Mr. Saidian:

Thank you for the recently submitted document entitled *Conceptual Site Model and Closure Request;* (RFC) dated March 29, 2013, which was prepared by Arcadis US, Inc, (Arcadis) for the subject site. With this submittal, Chevron requests case closure citing that current site conditions warrant case closure in accordance with the State Water Resources Control Board's (SWRCBs) Low Threat Underground Storage Tank Case Closure Policy (LTCP).

Alameda County Environmental Health (ACEH) staff has evaluated the request for case closure in conjunction with the site data and information in the RFC and contained in the case files and the following previously submitted reports prepared by Arcadis, Gettler-Ryan, Inc. (GRI), or Conestoga-Rovers and Associates, Inc. (CRA):

- *Site Assessment and Preferential Pathway Survey Report,* dated July 2012
- *Second Semiannual 2012 Groundwater Monitoring Report,* dated January 23, 2013
- *First Semi-Annual Event of June 7, 2010*, dated July 12, 2010, by GRI
- *Second Semi-Annual 2010 Groundwater Monitoring and Sampling Report,* dated January 20, 2011, by CRA

ACEH has also reviewed the following report from the Regal #404 / Huynh Property, ACEH Case Number RO0002959 and Geotracker Number SLT19761201, located at 5901 MacArthur Blvd, Oakland, CA:

- *Monitoring Well Installation & Additional Soil Investigation,* dated October 17, 2011, by OTG Enviroengineering Solutions, Inc.

Based on ACEH staff review, we have determined that the site fails to meet the LTCP General Criteria e, General Criteria f, (Site Conceptual Model), Media-Specific Criteria for Groundwater, and the Media-Specific Criteria for Direct Contact and Outdoor Air Exposure. ACEH's determination is based on an inadequate conceptual site model of the hydrogeology and contaminant transport mechanisms at the site and lack of supporting data and analysis to justify case closure under the LTCP. Specifically, the RFC states the site satisfies the characteristics of Class 5 of the LTCP Media-Specific Criteria for Groundwater. However, ACEH's review of the case files indicates that the site data and analysis fail to support the requisite characteristics of maximum plume length and distance to a surface water body to qualify under this classification. The RFC additionally states that the site satisfies the characteristics of Class 3.1 of the LTCP Media-Specific Criteria for Direct Contact and Outdoor Air Exposure. However, ACEH's review indicates insufficient soil sampling in the 0 to 5 and 5 to 10 foot depth zones has occurred at the site to characterize the fuel hydrocarbon release under the Direct Contact Media-Specific Criteria. Please note that with one exception (General Criteria f; as detailed below), ACEH is in general agreement

that sufficient soil sampling has occurred in the requisite two depth zones to characterize the waste oil release under the Direct Contact and Outdoor Air Exposure Media-Specific Criteria (see Attachment A for a copy of the LTCP checklist).

Therefore, at this juncture ACEH requests that you prepare a Data Investigation Work Plan that is supported by a focused updated Site Conceptual Model (SCM) to address the Technical Comments provided below and support case closure under the media-specific criteria for groundwater and direct contact in accordance with the schedule below.

This decision to deny closure is subject to appeal to the State Water Resources Control Board (SWRCB), pursuant to Section 25299.39.2(b) of the Health and Safety Code (Thompson-Richter Underground Storage Tank Reform Act - Senate Bill 562). Please contact the SWRCB Underground Storage Tank Program at (916) 341-5851 for information regarding the appeals process.

TECHNICAL COMMENTS

1. **General Criteria e - SCM Deficiencies –** The March 2013 SCM submitted for the subject site appears to be deficient in a number of aspects that directly affect site hydrology and plume length at the site. Our review of the case files indicates that insufficient data and analysis has been presented to support the SCM. This analysis considered the following site specific data:

    a. **Location and Depth of Utility Conduits –** While the SCM provided the location of a number of utilities beneath the site and in the site vicinity, the depth of the utilities were not investigated and can directly affect the downgradient plume extent by acting as groundwater contamination conduits. In particular the depth of the former Lion Creek Stream Channel, located beneath the site, was not investigated and is not known. This can directly affect the plume length and extent. Depth to groundwater has ranged between 8.37 and 15.22 feet below surface grade (bgs) since groundwater monitoring was initiated.

    b. **Lion Creek Channelization -** Review of the referenced soil and groundwater report for the Regal #404 / Huynh Property, located at 5901 MacArthur Boulevard indicates that the Lion Creek stream channel was abandoned in 2000 and was relocated to the north side of Seminary Avenue. The report clearly documents that the stream channel relocation directly affected groundwater flow at that site. The direction of groundwater flow changed from southwest and parallel to the former Lion Creek Stream Channel to westerly perpendicular to the stream channel. Review of documents associated with the Chevron site also shows a clear and direct change in groundwater flow direction. This is not accounted for in the Chevron SCM, and it is not clear how this may affect the groundwater plume. The report for the Regal #404 / Huynh Property also provides strong evidence for an upgradient component to hydrocarbon contamination at that site, similar to contamination emanating from the Chevron site (see Attachment B). This provides additional documentation that the plume extent is more extensive than suggested by site groundwater data. Additionally, the nature of the abandoned stream channel infill material (if any), and backfill material outside the former stream channel, remains uninvestigated beneath the site. Both areas of fill can affect groundwater flow.

    c. **Effect of Lion Creek Stream Channel(s) on BIOSCREEN Model -** The SCM included a BIOSCREEN modeling effort that found that the naphthalene groundwater plume would attenuate at an approximate distance of 464 feet (under 1,000 feet). The model does not account for the presence of the Lion Creek Stream Channel(s) conduits, or potential other utility conduits not fully investigated. Use of the BIOSCREEN model may be appropriate provided the presence of conduits, and downgradient groundwater concentrations, are incorporated into the modeling effort.

    d. **Cross-Section Deficiencies –** While the location of the one of the Lion Creek Stream Channels is reflected on site figures, cross-sections do not depict the former Lion Creek Stream Channel beneath the site, nor do they depict the nature of the fill material inside (if any) or outside the former stream channel. As noted above, both areas of fill can affect groundwater flow and contaminant distribution in the vicinity.

2. **General Criteria f – Secondary Source Has Been Removed to the Extent Practicable –** Removal of the waste oil UST is reported to have occurred at an unknown date prior to 1997. A report on the removal has apparently not been found or submitted. Soil and groundwater characterization in the vicinity around the former UST location has been undertaken; however, the former tank hold is uncharacterized and may contain residual contamination at concentrations of concern.

3. **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 and analysis has been presented to support the requisite characteristics of plume length, distance to a surface water body, or that the property owner may be willing to accept a land use restriction. This analysis considered the following site specific data:

   - Groundwater well MW-2 is located upgradient of, and in proximity to, the abandoned Lion Creek Stream Channel and appears to have been the most downgradient well at the site for a number of years. It is not clear if groundwater at this well is representative of site groundwater concentrations or steam channel water concentrations. Groundwater well MW-4 is located onsite, but across the abandoned stream channel from the hydrocarbon releases. It is not clear if groundwater concentrations in this well are representative of downgradient groundwater concentrations at a location upgradient of the stream channel or if significant dilution by stream channel waters has occurred at the location of MW-4. This is strongly suggested by groundwater concentrations (highest concentrations at the upgradient edge) and distribution of the dissolved-phase plume at the Regal / Huynh Property site (ACEH Case Number RO0002959, Geotracker No. SLT19761201, 5901 MacArthur Blvd, Oakland). ACEH recognizes that the Regal / Huynh Property site likely also contributes to the groundwater plume beneath that site.

   - A least two hydrocarbon releases appear to have occurred at the subject site, a waste oil and a fuel hydrocarbon (gasoline and diesel) release. Because of the onsite presence of the former Lion Creek Stream Channel, the downgradient extent or flow path of both plumes is not clearly defined.

   Consequently, please present a strategy in the Data Gap Investigation Work Plan described in Technical Comment 5 below to collect additional data to satisfy the additional characteristics of one of the five classes of sites listed in the policy.

   Alternatively, please provide justification of why the site satisfies the media-specific criteria for groundwater in a focused SCM (described in Technical Comment 5) that assures that threats to existing and anticipated beneficial uses of groundwater and surface water have been mitigated or are de minimis.

4. **LTCP Media Specific Criteria for Direct Contact and Outdoor Air Exposure -** To satisfy the media-specific criteria for direct contact and outdoor air exposure sufficient soil samples are required to have been collected and analyzed to determine if residual soil contamination meets the concentrations listed in Table 1 of the policy. Alternatively a site specific risk assessment can be conducted to demonstrate that the maximum concentrations in soil will have no significant risk to adversely affect human health, or the regulatory agency can determine the concentrations will have no significant risk or adversely affect human health.

   With one exception, the lack of analytical characterization of the former waste oil tank excavation, ACEH is in general agreement that sufficient soil samples have been collected to demonstrate that the waste oil release satisfies Table 1 of the LTCP (see Technical Comment 2 above). At present no soil samples have been collected in either the 0 to 5 or 5 to 10 foot depth zones downgradient of the fuel hydrocarbon USTs, and therefore ACEH is not in agreement that releases from those sources can be considered characterized for this release area under the LTCP.

Consequently, please present a strategy in the Data Gap Investigation Work Plan described in Technical Comment 5 below to collect additional data to satisfy the additional characteristics of one of the two classes of sites listed in the policy.

Alternatively, please provide justification of why the site satisfies the media-specific criteria for direct contact and outdoor air exposure in a focused SCM (described in Technical Comment 5) that assures that threats by residual shallow soil sources have been mitigated or are de minimis.

5. **Data Gap Investigation Work Plan and Site Conceptual Model –** Please prepare Data Gap Investigation Work Plan to address the technical comments listed above. Please support the scope of work in the Data Gap Investigation Work Plan with a focused SCM and Data Quality Objectives (DQOs) that relate the data collection to each LTCP criteria. For example please clarify which scenario within each Media-Specific Criteria a sampling strategy is intended to apply to. If the sampling strategy includes data collection to support the proposed site redevelopment, a description of that redevelopment should be included in the Data Gap Investigation Work Plan to support your sampling strategy so that ACEH can verify the appropriateness of the proposed sample locations.

   In order to expedite review, ACEH requests the 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 C "Site Conceptual Model Requisite Elements". Please sequence activities in the proposed Data Gap Investigation scope of work to enable efficient data collection in the fewest mobilizations possible.

6. **Path to Closure Project Schedule -** The State Water Resources Control Board passed Resolution No. 2012-0062 on November 6, 2012 which requires development of a "Path to Closure Plan" by December 31, 2013 that addresses the impediments to closure for the site. The Path to Closure must have milestone dates tied to calendar quarters which will achieve site cleanup and case closure in a timely and efficient manner and minimizes the cost of corrective action. Therefore, by the date listed below please prepare a Path to Closure Schedule (further detailed in Attachment D) for your site that incorporates the items identified by ACEH in the Technical Comments above as impediments to closure. ACEH staff utilizes a Data Gap Identification Tool (DGIT) while reviewing cases for compliance with the LTCP criteria and identification of impediments to closure. We encourage you to also utilize the DGIT to (1) evaluate your site and develop an efficient path to site closure by focusing data collection efforts, if necessary, on the LTCP criteria, and (2) assist and expedite ACEH staff review of work plans and request for closures. ACEH will provide the DGIT as a PDF form via e-mail upon request. ACEH will review the schedule to ensure that all key elements are included.

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 Attachment 1 and the following specified file naming convention and schedule:

- **July 29, 2013 –** Semi-Annual Groundwater Monitoring Report
  File to be named: RO124_WP_R_yyyy-mm-dd
- **August 2, 2013 –** Data Gap Investigation Plan and Focused Site Conceptual Model
  File to be named: RO124_WP_R_yyyy-mm-dd
- **August 2, 2013 –**Path to Closure Schedule
  File to be named: RO124_WP_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 does not appear on the cover page of this notification, ACEH is requesting you

provide your email address so that we can correspond with you quickly and efficiently regarding your case.

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 Detterman
DN: cn=Mark Detterman, o, ou, email=mark.detterman@acgov.org, c=US
Date: 2013.05.23 14:21:37 -07'00'

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

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

Attachment A – Geotracker LTCP Checklist
Attachment B – Figures 2, 5, 6 and 7; *Monitoring Well Installation & Additional Soil Investigations,* OTG Enviroengineering, Solutions, Inc, October 17, 2011
Attachment C – Site Conceptual Model Requisite Elements
Attachment D – Path to Closure Project Schedule Requisite Elements

cc: Melissa Blanchette, Arcadis US, Inc, 111 SW Columbia Street, Suite 670, Portland, OR 97201 (sent via electronic mail to Melissa.Blanchette@arcadis-us.com)

Donna Drogos, ACEH, (sent via electronic mail to donna.drogos@acgov.org)
Dilan Roe (sent via electronic mail to dilan.roe@acgov.org)
Mark Detterman, ACEH, (sent via electronic mail to mark.detterman@acgov.org)
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). Please visit the SWRCB website for more information on these requirements (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 Oversight Programs (LOP and SLIC)	**REVISION DATE:** July 20, 2010
	ISSUE DATE: July 5, 2005
	PREVIOUS REVISIONS: October 31, 2005; December 16, 2005; March 27, 2009; July 8, 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.**
- **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) Using Internet Explorer (IE4+), go to ftp://alcoftp1.acgov.org
      (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.

ATTACHMENT A

Geotracker LTCP Checklist

LTCP Checklist Go

GEOTRACKER HOME | MANAGE PROJECTS | REPORTS | SEARCH | LOGOUT

CHEVRON #9-9708 (T0600102093) - MAP THIS SITE

OPEN - ASSESSMENT & INTERIM REMEDIAL ACTION

5910 MACARTHUR BLVD
OAKLAND , CA 94605
ALAMEDA COUNTY

VIEW PRINTABLE CASE SUMMARY FOR THIS SITE

ACTIVITIES REPORT

PUBLIC WEBPAGE

CLEANUP OVERSIGHT AGENCIES
ALAMEDA COUNTY LOP *(LEAD)* - *CASE #: RO0000124*
CASEWORKER: *MARK DETTERMAN* - ***SUPERVISOR:*** *DONNA DROGOS*
SAN FRANCISCO BAY RWQCB (REGION 2) - *CASE #: 01-2277*
CASEWORKER: *Cherie McCaulou* - ***SUPERVISOR:*** *MARY ROSE CASSA*

CUF Claim #: 17878 **CUF Priority Assigned:** D **CUF Amount Paid:** $0

THIS PROJECT WAS LAST MODIFIED BY ***MARK DETTERMAN*** ON 5/23/2013 2:13:49 PM - HISTORY

THIS SITE HAS SUBMITTALS. CLICK HERE TO OPEN A NEW WINDOW WITH THE SUBMITTAL APPROVAL PAGE FOR THIS SITE.

CLOSURE POLICY ***THIS VERSION IS IN PROGRESS AS OF 5/23/2013*** ***CHECKLIST INITIATED ON 10/16/2012*** CLOSURE POLICY HISTORY

General Criteria - *The site satisfies the policy general criteria* - CLEAR SECTION ANSWERS **NO**

a. Is the unauthorized release located within the service area of a public water system? (●) YES ( ) NO
Name of Water System : EBMUD

b. The unauthorized release consists only of petroleum (info). (●) YES ( ) NO

c. The unauthorized ("primary") release from the UST system has been stopped. (●) YES ( ) NO

d. Free product has been removed to the maximum extent practicable (info). (●) FP Not Encountered ( ) YES ( ) NO

e. A conceptual site model that assesses the nature, extent, and mobility of the release has been developed (info). ( ) YES (●) NO

Description (Check all that Apply):
- [ ] **GW Not Evaluated**
- [x] **Groundwater Assessment Incomplete - Areal Extent of Contamination Not Defined**
- [ ] **Groundwater Assessment Incomplete - Depth of Contamination Not Defined**
- [x] **Hydrogeology Not Adequately Defined**
- [x] **Potential Receptors Not Identified**
- [x] **Soil Assessment Incomplete - Areal Extent Not Defined**
- [ ] **Soil Assessment Incomplete - Depth Unknown**
- [ ] **Soil Vapor Not Evaluated**
- [ ] **Other -**

f. Secondary source has been removed to the extent practicable (info). ( ) YES (●) NO

Impediment to Removing Secondary Source (Check all that Apply):
- [ ] **Remediation Has Not Been Attempted**
- [ ] **Remediation Was Designed Incorrectly**
- [ ] **Remediation Was Shut Off Prematurely**
- [ ] **Poor Remediation O&M**
- [x] **Other -** source removal undocumented

g. Soil or groundwater has been tested for MTBE and results reported in accordance with Health and Safety Code Section 25296.15. ( ) Not Required (●) YES ( ) NO

h. Does a nuisance exist, as defined by Water Code section 13050. ( ) YES (●) NO

1. Media-Specific Criteria: Groundwater - *The contaminant plume that exceeds water quality objectives is stable or decreasing in areal extent, and meets all of the additional characteristics of one of the five classes of sites listed below.* - CLEAR SECTION ANSWERS **NO**

EXEMPTION - Soil Only Case (Release has not Affected Groundwater - Info) ( ) YES (●) NO

Does the site meet any of the Groundwater specific criteria scenarios? ( ) YES (●) NO

ADDITIONAL QUESTIONS - Please indicate only those conditions that do not meet the policy criteria:

Plume Length (That Exceeds Water Quality Objectives) :
( ) ≥ 100 Feet and < 250 Feet ( ) ≥ 250 Feet and < 1,000 Feet ( ) ≥ 1,000 Feet (●) Unknown

Plume is Stable or Decreasing in AREAL Extent :
( ) No ( ) Unknown

Free Product in Groundwater :
( ) Yes ( ) No ( ) Unknown

Free Product Has Been Removed to the Maximum Extent Practicable :
( ) No ( ) Unknown

For sites with free product, the Plume Has Been Stable or Decreasing for 5-Years (info) :
( ) No ( ) Unknown

For sites with free product, owner Willing to Accept a Land Use Restriction (if required) :
( ) No (●) Unknown

Free Product Extends Offsite :
( ) Yes ( ) Unknown

Benzene Concentration :
( ) ≥ 1,000 µg/l and < 3,000 µg/l ( ) ≥ 3,000 µg/l ( ) Unknown

MTBE Concentration :
( ) ≥ 1,000 µg/l ( ) Unknown

Nearest Supply Well (From Plume Boundary) :
( ) ≤ 250 Feet ( ) > 250 Feet and ≤ 1,000 Feet ( ) Unknown

Nearest Surface Water Body (From Plume Boundary) :
(●) ≤ 250 Feet ( ) > 250 Feet and ≤ 1,000 Feet ( ) Unknown

2. Media Specific Criteria: Petroleum Vapor Intrusion to Indoor Air - *The site is considered low-threat for the vapor-intrusion-to-air pathway if site-specific conditions satisfy items 2a, 2b, or 2c* - CLEAR SECTION ANSWERS **YES**

EXEMPTION - Active Commercial Petroleum Fueling Facility (●) YES ( ) NO

3. Media Specific Criteria: Direct Contact and Outdoor Air Exposure - *The site is considered low-threat for direct contact and outdoor air exposure if it meets 1, 2, or 3 below.* - CLEAR SECTION ANSWERS **NO**

EXEMPTION - The upper 10 feet of soil is free of petroleum contamination ○ YES ◉ NO

Does the site meet any of the Direct Contact and Outdoor Air Exposure criteria scenarios? ○ YES ◉ NO

ADDITIONAL QUESTIONS - Please indicate only those conditions that do not meet the policy criteria:

Exposure Type :

○ Residential ○ Commercial ○ Utility Worker

Petroleum Constituents in Soil :

○ ≤ 5 Feet bgs ○ >5 Feet bgs and ≤10 Feet bgs ◉ Unknown

Soil Concentrations of Benzene :

○ > 1.9 mg/kg and ≤ 2.8 mg/kg ○ > 2.8 mg/kg and ≤ 8.2 mg/kg ○ > 8.2 mg/kg and ≤ 12 mg/kg ○ > 12 mg/kg and ≤ 14 mg/kg ○ > 14 mg/kg ◉ Unknown

Soil Concentrations of EthylBenzene :

○ > 21 mg/kg and ≤ 32 mg/kg ○ > 32 mg/kg and ≤ 89 mg/kg ○ > 89 mg/kg and ≤ 134 mg/kg ○ > 134 mg/kg and ≤ 314 mg/kg ○ > 314 mg/kg ◉ Unknown

Soil Concentrations of Naphthalene :

○ > 9.7 mg/kg and ≤ 45 mg/kg ○ > 45 mg/kg and ≤ 219 mg/kg ○ > 219 mg/kg ◉ Unknown

Soil Concentrations of PAH :

○ > 0.063 mg/kg and ≤ 0,68 mg/kg ○ > 0.68 mg/kg and ≤ 4.5 mg/kg ○ > 4.5 mg/kg ◉ Unknown

Area of Impacted Soil :

○ Area of Impacted Soil > 82 by 82 Feet ○ Unknown

Additional Information

Should this case be closed in spite of NOT meeting policy criteria? ○ YES ◉ NO

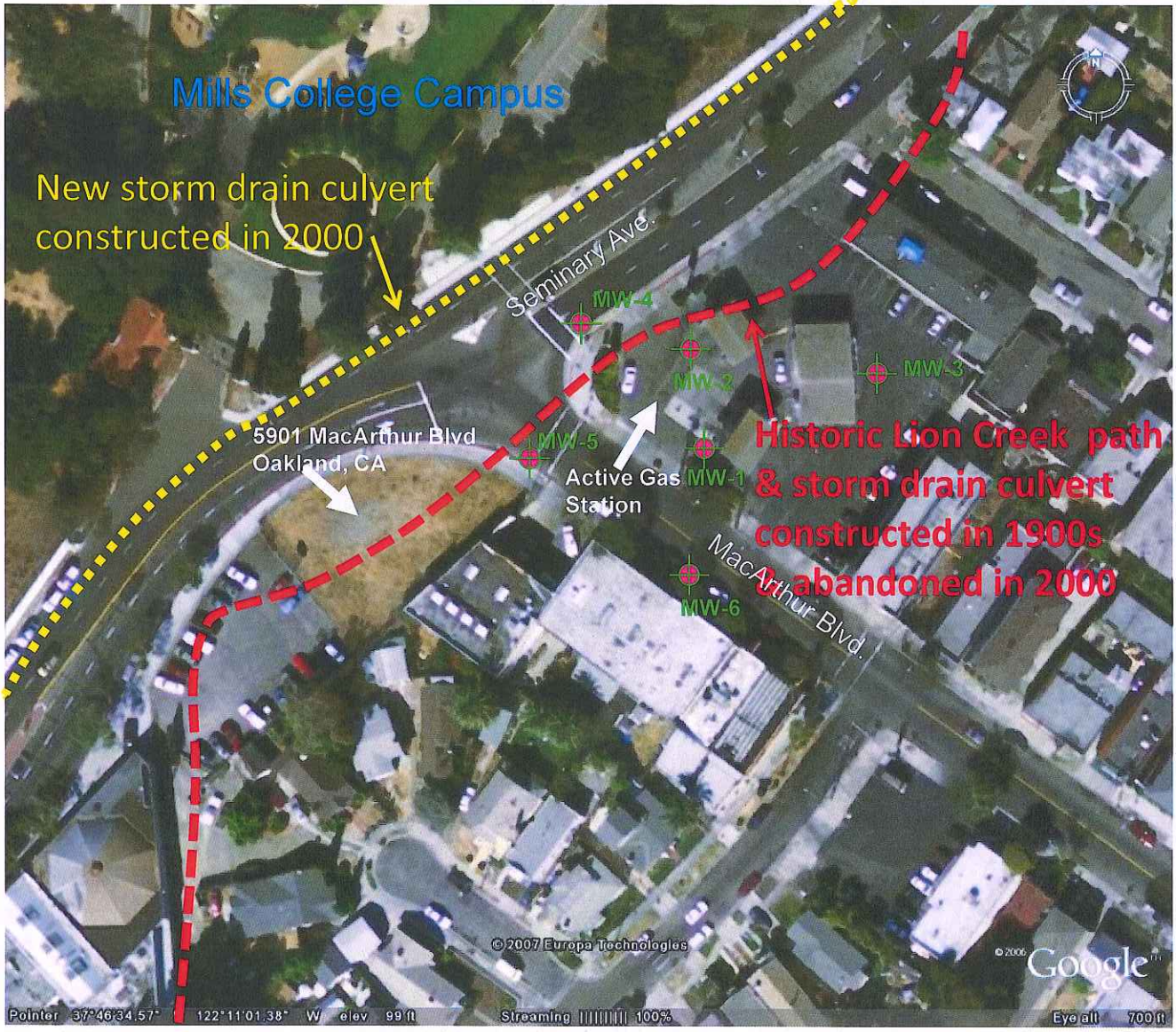
SPELL CHECK

Save in Progress Save as Final

LOGGED IN AS MARKDETT CONTACT GEOTRACKER HELP

ATTACHMENT B

Figures 2, 5, 6 and 7; *Monitoring Well Installation & Additional Soil Investigations,* OTG Enviroengineering, Solutions, Inc, October 17, 2011



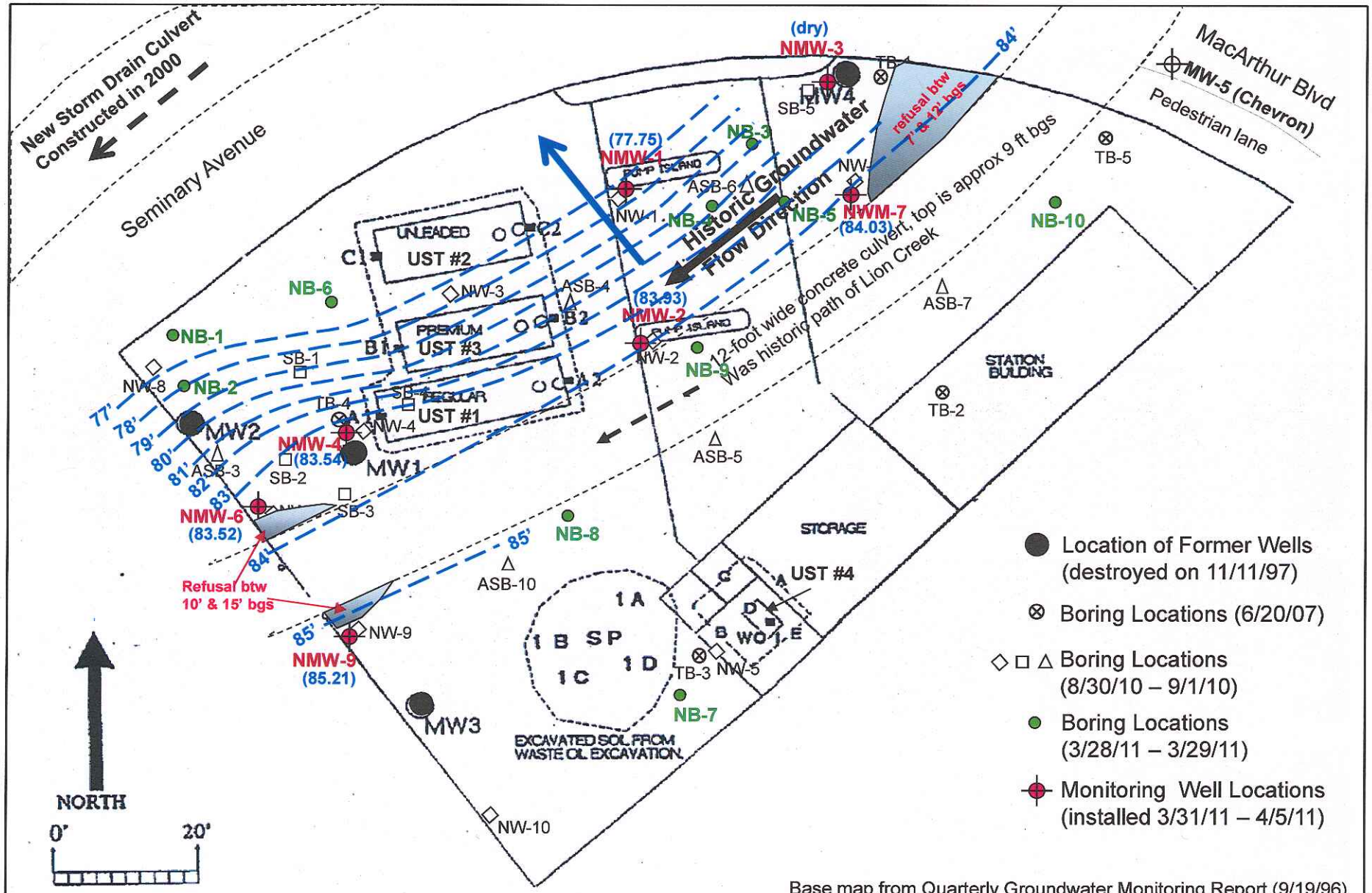
N

LEGEND:

Existing groundwater monitoring wells installed by the active gas station at 5910 MacArthur Blvd. (Chevron Service Station #9-9708)

October 2010

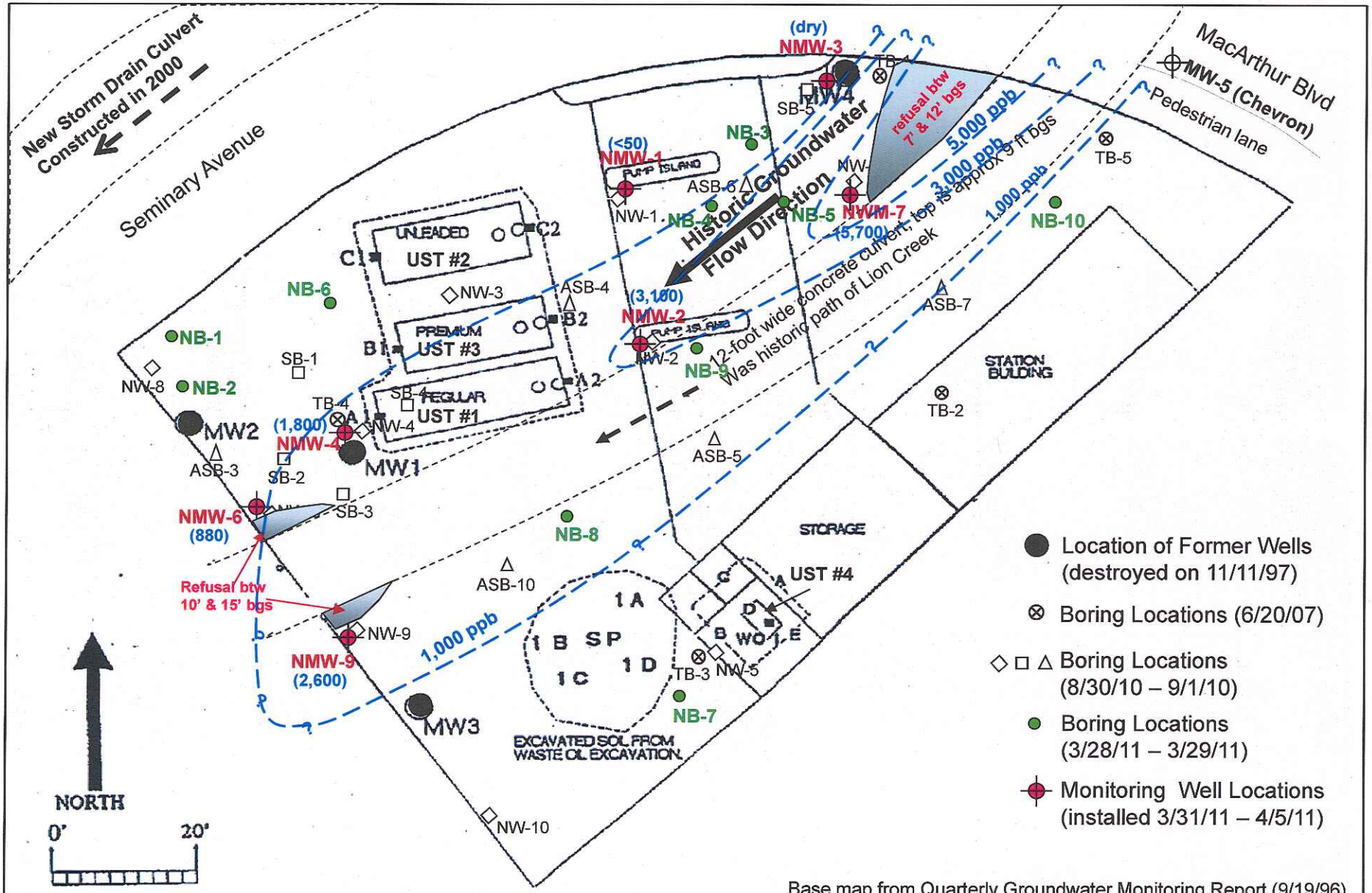
PROJECT NO. 10HCT02.2000	5901 MacArthur Blvd Oakland, CA	VICINITY AERIAL MAP & Locations of Storm Drain Culverts & Active Monitoring Wells from the Gas Station Across MacArthur Blvd.	FIGURE 2
OTG EnviroEngineering Solutions Inc.			



August 25, 2011

Base map from Quarterly Groundwater Monitoring Report (9/19/96) By Western Geo-Engineers

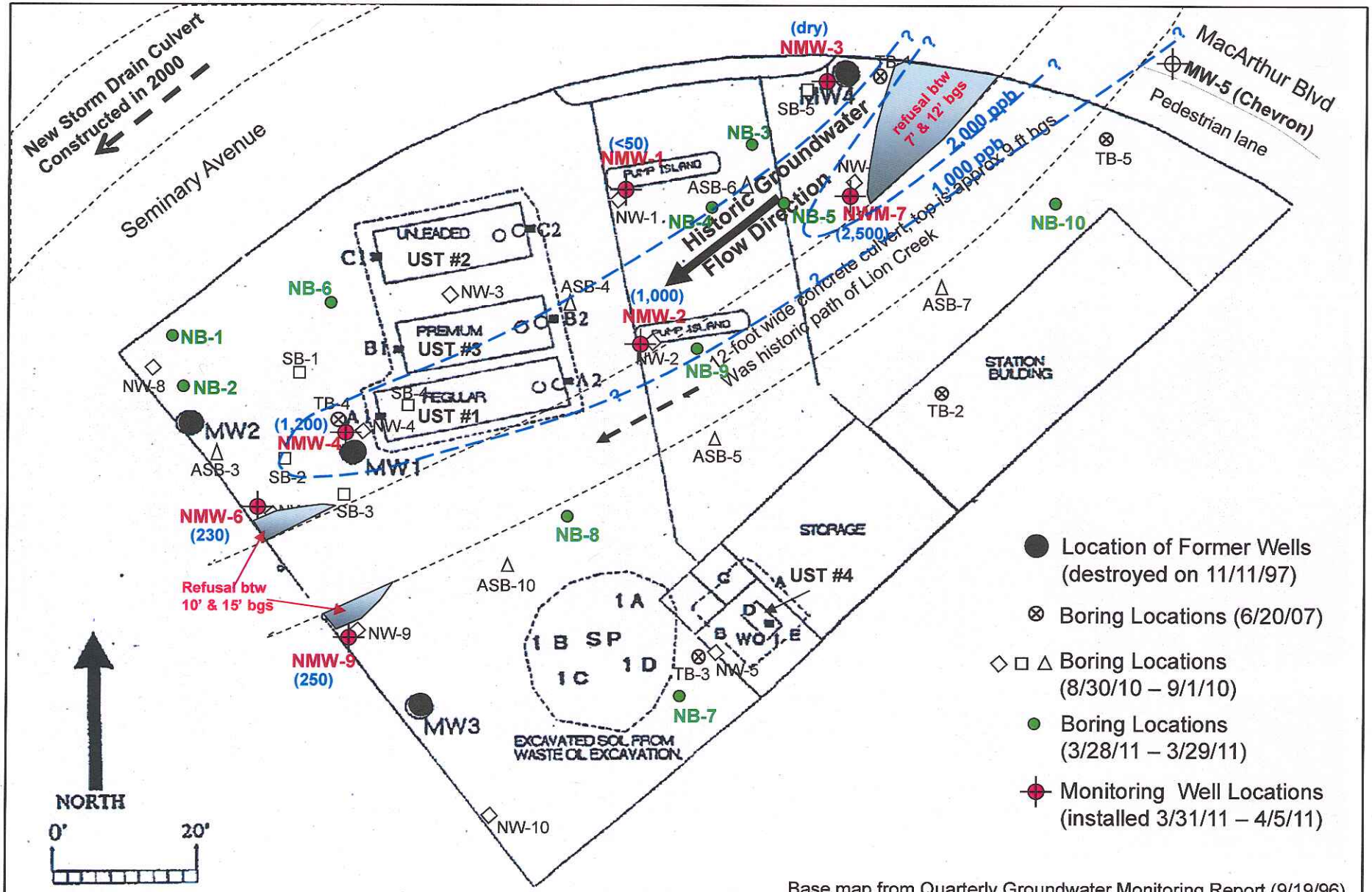
PROJECT # 11HCT03	5901 MacArthur Blvd Oakland, CA	Groundwater Elevation Contour Map (measurement on April 20, 2011)	FIGURE 5
OTG EnviroEngineering Solutions, Inc.			



August 25, 2011

Base map from Quarterly Groundwater Monitoring Report (9/19/96) By Western Geo-Engineers

PROJECT # 11HCT03	5901 MacArthur Blvd Oakland, CA	TPH-g (GRO) Concentration in Shallow Groundwater (ug/L, April 20, 2011 data)	FIGURE 6
OTG EnviroEngineering Solutions, Inc.			



August 25, 2011

Base map from Quarterly Groundwater Monitoring Report (9/19/96) By Western Geo-Engineers

PROJECT # 11HCT03	5901 MacArthur Blvd Oakland, CA	TPH-d (DRO) Concentration in Shallow Groundwater (ug/L, April 20, 2011 data)	FIGURE 7
OTG EnviroEngineering Solutions, Inc.			

ATTACHMENT C

Site Conceptual Model Requisite Elements

ATTACHMENT C

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-

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.

ATTACHMENT D

Path to Closure Project Schedule Requisite Elements

ATTACHMENT D

Path to Closure Project Schedule Requisite Elements

The State Water Resources Control Board passed Resolution No. 2012-0062 on November 6, 2012 which requires development of a "Path to Closure Plan" by December 31, 2013 that addresses the impediments to closure for the site. Please prepare a Path to Closure Schedule that has milestone dates tied to calendar quarters which will achieve site cleanup and case closure in a timely and efficient manner and minimizes the cost of corrective action. The complexity of the Path to Closure Schedule should be commensurate with the complexity of the site and tasks required to achieve case closure. ACEH will review the schedule to ensure appropriate key elements are included.

The Path to Closure Schedule should the following key environmental elements and milestones as appropriate:

- Preferential Pathway Study
- Soil, Groundwater, and Soil Vapor Investigations
- Initial, Updated, and Final/Validated SCMs
- Interim Remedial Actions
- Feasibility Study/Corrective Action Plan
- Pilot Tests
- Remedial Actions
- Soil Vapor and Groundwater Monitoring Well Installation and Monitoring
- Public Participation Program (Fact Sheet Preparation/Distribution/Public Comment Period, Community Meetings, etc.)
- Case Closure Tasks (Request for closure documents, ACEH Case Closure Summary Preparation and Review, Site Management Plan, Institutional Controls, Public Participation, Landowner Notification, Well Decommissioning, Waste Removal, and Reporting.)

Please include time for regulatory and RP in house review, permitting, off-site access agreements, and utility connections, etc.

For complex projects (i.e., redevelopment projects, etc.), please use a critical path methodology/tool to construct a schedule with sufficient detail to support a realistic and achievable Path to Closure Schedule. The schedule is to include at a minimum:

- Defined work breakdown structure including summary tasks required to accomplish the project objectives and required deliverables
- Summary task decomposition into smaller more manageable components that can be scheduled, monitored, and controlled
- Sequencing of activities to identify and document relationships among the project activities using logical relationships
- Identification of critical paths, linkages, predecessor and successor activities, leads and lags, and key milestones
- Identification of entity responsible for executing work
- Estimated activity durations (60-day ACEH review times are based on calendar days)