Timothy L. Bishop
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April 28, 2014

Alameda County Health Care Services Agency
Environmental Health Services
Environmental Protection
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502-6577

Re: **Unocal No. 3538 (351642)**
411 West MacArthur Boulevard, Oakland, California
Fuel Leak Case No. RO0000251
GeoTracker Global ID # T0600101472

I have reviewed the attached report dated April 28, 2014.

I agree with the conclusions and recommendations presented in the referenced report. The information in this report is accurate to the best of my knowledge and all local Agency/Regional Board guidelines have been followed. This report was prepared by AECOM, upon whose assistance and advice I have relied.

This letter is submitted pursuant to the requirements of California Water Code Section 13257(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,

Tim Bishop
Project Manager

Attachment: Groundwater Investigation Work Plan by AECOM

AECOM
2020 L Street, suite 400
Sacramento, CA 95811

916.414.5800 tel
916.414.5850 fax

April 28, 2014

Mr. Keith Nowell
Alameda County Health Care Services Agency
Environmental Health Services
Environmental Protection
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502-6577

Subject: Groundwater Investigation Work Plan
Unocal No. 3538 (351642)
411 West MacArthur Boulevard, Oakland, California
Fuel Leak Case No. RO0000251
Geotracker Global ID # T0600101472

Dear Mr. Nowell,

On behalf of Chevron Environmental Management Company's (EMC's) affiliate, Union Oil Company of California (hereinafter "EMC"), AECOM is pleased to present this groundwater investigation work plan for the above-referenced site. In email correspondence dated March 12, 2013, Alameda County Environmental Health (ACEH) generally concurred with AECOM's proposed activities to address the remaining site data gaps but requested adding a fourth boring location 75 feet to the west of the westernmost location. A tabular version of this groundwater investigation work plan is included as **Attachment A**.

INTRODUCTION

Site Location

The site is located at located at 411 West MacArthur Boulevard, Oakland, California (**Figure 1**). The locations of former and current site features are illustrated on **Figure 2**.

SCOPE OF WORK

Based on the remaining site data gaps AECOM will advance four soil borings, and collect two discrete groundwater grab samples at each location, to evaluate and delineate down-gradient groundwater conditions.

Pre-field Activities

AECOM will prepare a site-specific health and safety plan (HASP), to address potential physical and chemical hazards associated with the scope of work at the site and other health and safety considerations. In addition, task hazard analyses (THAs) will be prepared that evaluate and provide mitigation measures for site-specific hazards that may be encountered during the work. The HASP and THAs will be reviewed and approved by AECOM Safety, Health and Environment Management and EMC prior to commencement of field activities. All work conducted by AECOM and any subcontractors will be performed in accordance with the HASP and THAs.

AECOM will obtain any required permits prior to the start of fieldwork. AECOM will mark the proposed soil boring locations and request an underground utility line clearance and markout from Underground Surface Alert at least 48 hours in advance of any subsurface activities, as required by law, to identify any man-made underground hazards. In addition, a private utility line locating service will be contracted to clear a 10-foot-diameter circle around each boring location. Should the private locator detect any subsurface anomalies, the boring location will be moved so the anomaly is outside of the 10-foot circle. All soil boring locations will be cleared of subsurface lines using hand-digging techniques to a diameter 120% larger than the drilling tool diameter and 8 feet in depth. During fieldwork activities, should there be a problem clearing a boring, the location may be moved within the cleared area to continue the boring advancement.

Field Work

Field activities will be performed under the supervision of a State of California Professional Geologist. At the commencement of field activities, AECOM will perform the following tasks:

- Conduct a “tailgate” safety meeting;
- Review the contents of the HASP and THAs with all AECOM and subcontractor workers, and review the requirements mandated by the EMC operational excellence and safety program; and
- Set up and demarcate an Exclusion Zone around the work areas for each soil boring location to preclude access by anyone whose entry is unauthorized.
- Supervise and lead the performance of the groundwater investigation field activities.
- Inspect former station building to confirm that no hydraulic hoists, or evidence of them.

Soil Assessment

AECOM proposes to advance four soil borings to approximately 30 feet bgs (**Figure 3**). The soil borings will be advanced using hand-auger techniques to 8 feet below ground surface (bgs) and then advanced with direct push technology to the depths for groundwater sample collection detailed below. AECOM’s field geologist will continuously log the soil lithology, record photoionization detector (PID) readings, and note field observations. The boreholes will be backfilled and the surface patched in accordance with permit requirements. If there is soil encountered with a PID reading over 50 parts per million (ppm), a soil sample will be collected and submitted for analysis. The samples will be analyzed for total petroleum hydrocarbons as gasoline (TPHg), benzene, toluene, ethylbenzene, total xylenes (BTEX), and fuel oxygenates using Environmental Protection Agency (EPA) Method 8260B. AECOM will electronically report the analytical data to the ACEH and GeoTracker information systems in accordance with applicable reporting requirements.

Groundwater Assessment

AECOM will collect two discrete groundwater samples from each soil boring to delineate the lateral extent of downgradient groundwater impacts. The targeted depth ranges are 17 to 20 feet bgs and 27 to 30 feet bgs. The depth may be modified in the field based on the observed saturated soil conditions at each soil borings. The hydropunch sampler will be opened to allow groundwater to enter the sampler. A small volume of groundwater will be purged to remove suspended sediment

and then a sample will be collected using a disposable bailer directly into the laboratory supplied sample containers.

The groundwater samples will be submitted to a California State-certified laboratory using standard chain-of-custody and sample preservation methods. The samples will be analyzed forTPHg, BTEX and fuel oxygenates using EPA Method 8260B. AECOM will electronically report the analytical data to the GeoTracker database.

Waste Characterization and Disposal

Field personnel will store and label all soil cuttings, water, and decontamination water in 55-gallon, Department of Transportation-approved drums. Upon receipt of laboratory analytical results, the waste will be transported to licensed disposal facilities under waste manifest documentation.

Reporting

AECOM will submit a report summarizing the investigation results approximately 12 weeks after the completion of the work. The report will also be uploaded to the GeoTracker database to comply with state requirements. AECOM will submit well completion reports to the Department of Water Resources.

If you have any questions regarding this project, please contact James Harms of AECOM at (916) 414-5800.

Sincerely,

James Harms
Project Manager

Tiina Couture, PE# 57193
Project Engineer

4/28/14

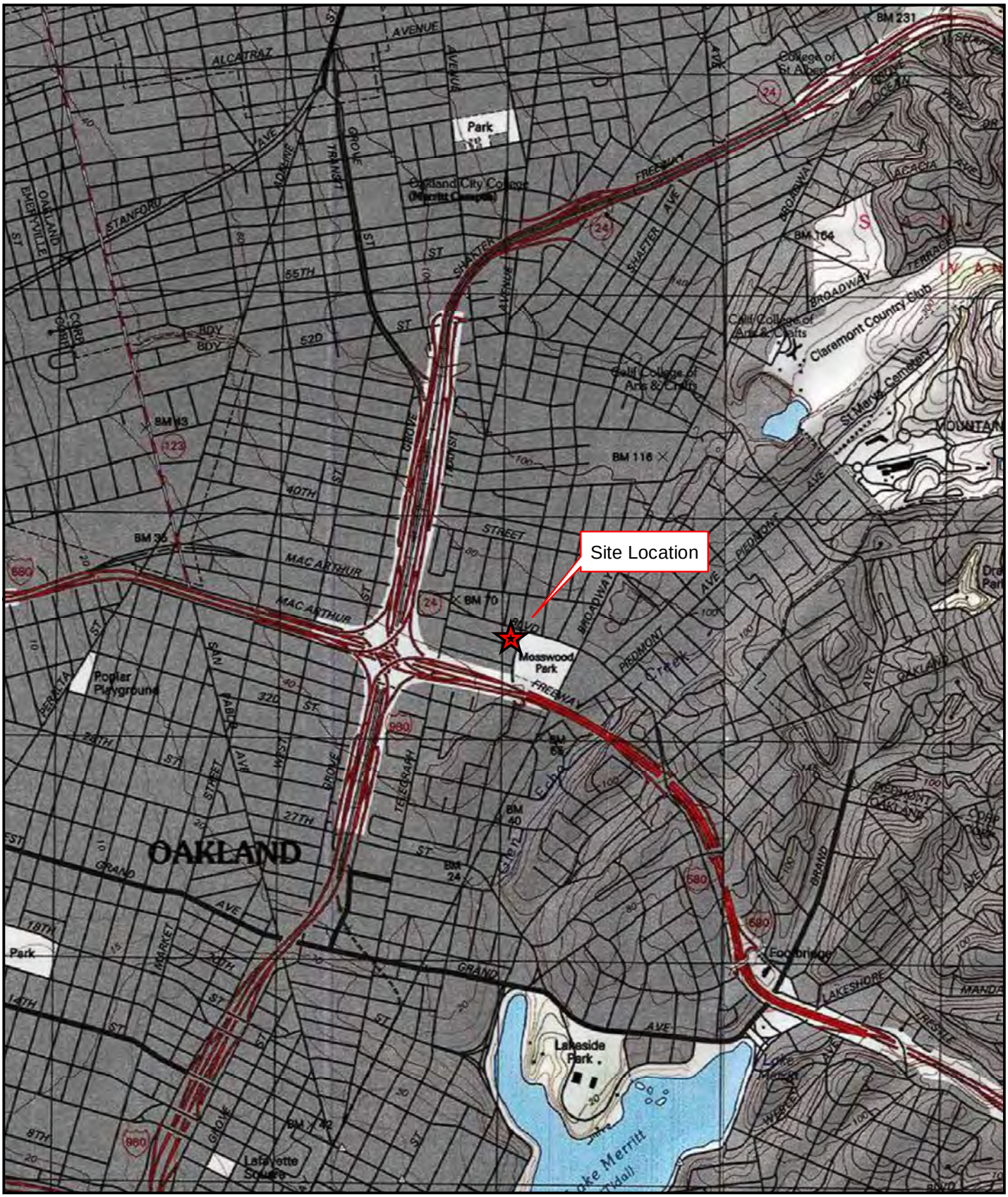
cc: Tim Bishop EMC (via electronic copy)
Mr. Kevin Ma & Mr. Arthur Yu, property owner (via paper copy)

Enclosures:
Figures:
Figure 1 Site Location Map
Figure 2 Site Plan
Figure 3 Groundwater Elevation Map, First Semi-Annual 2013

Attachments

Attachment A Tabular Groundwater Investigation Work Plan

Figures



Map Source: ESRI Data Resource Center 2013.

0.5 0.25 0 0.5 Miles

AECOM
2020 L Street
Sacramento, CA 95811
916.414.5800

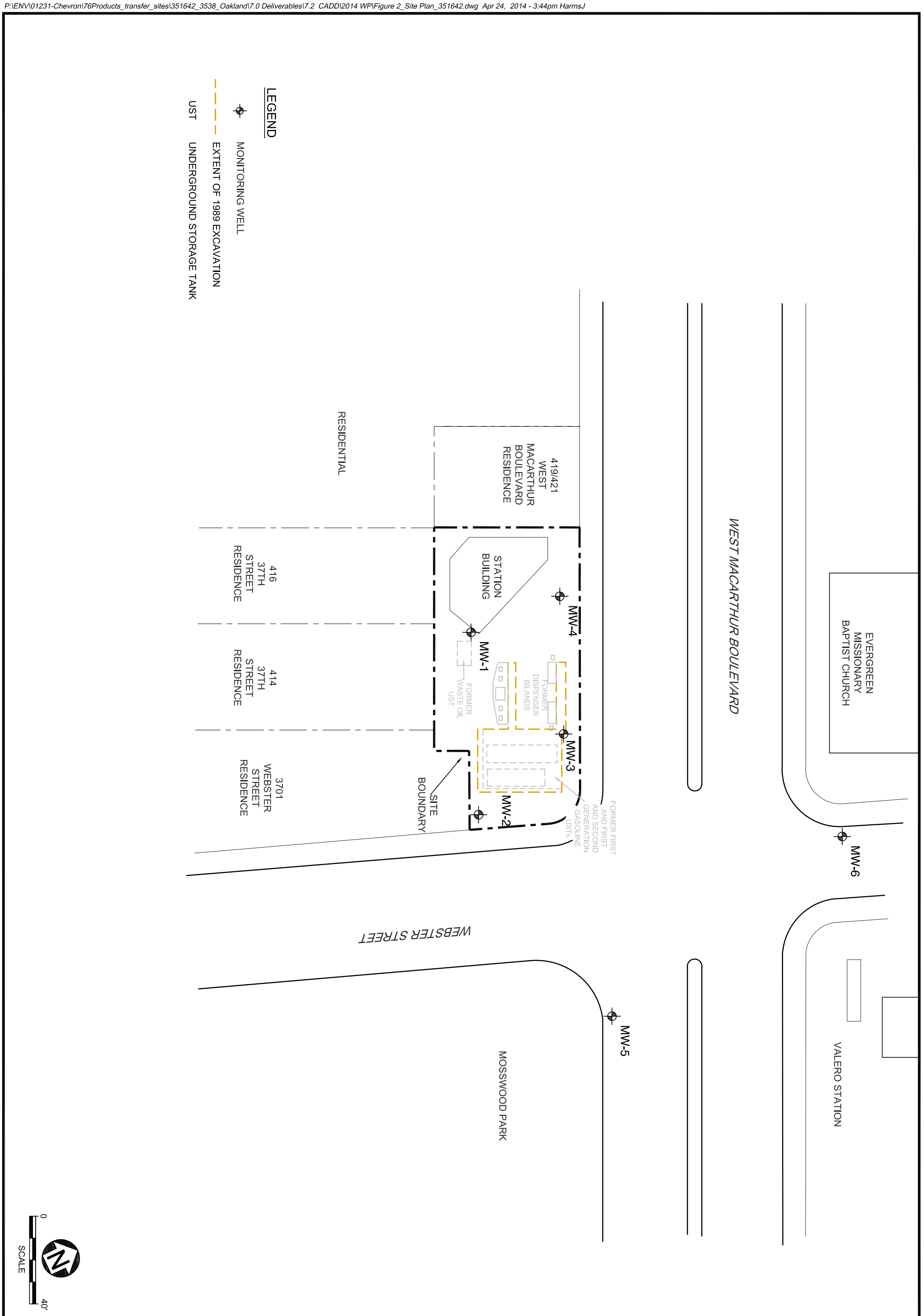
RO251, Unocal No.3538 (351642)
411 West MacArthur Boulevard,
Oakland, California

Site Location Map

DATE:9/9/13 | DRWN: JH | Revision: 0

Figure 1

Path: P:\ENV\01231-Chevron\76Products_transfer_sites\351642_3538_Oakland\7.0 Deliverables\7.2_CADD\GIS\Figure 1_site_location_351642.mxd



Site Plan

Unocal No. 3538 (351642)
411 West MacArthur Blvd., Oakland, California

SCALE:	DATE:	PROJECT NUMBER:
1" = 40'	4/24/2014	60284077

FIGURE NUMBER: 2

SHEET NUMBER: 1 of 1

AECOM TECHNICAL SERVICES
2020 L STREET, SUITE 400
SACRAMENTO, CALIFORNIA 95811
PHONE: (916) 414-5800
FAX: (916) 414-5850
WEB: HTTP://WWW.AECOM.COM

DESIGNED BY:	REVISIONS			
	NO.:	DESCRIPTION:	DATE:	BY:
DRAWN BY: JH				
CHECKED BY: TC				
APPROVED BY: JH				

Map Source: ESRI Data Resource Center 2013.

0 75 150 Feet

AECOM
2020 L Street
Sacramento, CA 95811
916.414.5800

RO251, Unocal No.3538 (351642)
411 West MacArthur Boulevard,
Oakland, California

Proposed Groundwater Sample Locations

DATE:4/24/14 | DRWN: JH | Revision: 0

Figure 3

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Attachment A

Tabular Groundwater Investigation Work Plan

Attachment A
Tabular Groundwater Investigation Work Plan
RO 251, Unocal No. 3538 (351642)
411 West MacArthur Boulevard, Oakland,

Item	Data Gaps	Proposed Investigation	Rationale	Analysis
1	Two off-site, downgradient soil borings, SB-6 and SB-7, were proposed in a work plan submitted in May 2009 to further delineate downgradient hydrocarbon concentrations. Due to permitting and access agreement issues, these soil borings were not drilled.	Four borings (HP-1a/b through HP-4a/b) will be advanced with a direct push technology rig to depth (up to approximately 30 feet bgs) and hydropunch samples will be collected from each location as shown on **Figure 3**. Soil lithology will be logged continuously using the Unified Soil Classification System protocols and samples will be collected for laboratory analysis. The soil samples will be field screened for organic vapors using a photoionization detector (PID). Soil containing PID readings above 50 parts per million will be collected for laboratory analysis. The hydopunch sampler will be advanced and opened at two distinct 3-foot screened intervals from approximately 17 to 20 feet bgs and 27 to 30 feet bgs. The exact intervals will be determined based on field observations with the intent of collecting one sample near the top of the water table and another in the coarser grained material near the bottom of the boring. The well locations will be surveyed in with a high accuracy (10 centimeter) Global Positioning System (GPS) instrument. A small amount of groundwater will be purged to limit the amount of suspended sediment within the groundwater samples. The wells will then be sampled with a disposable bailer directly into labortory supplied sampling containers. Temperature, pH, conductivity, and turbidity readings will be collected at each sampling location.	Off-site soil boring SB-1 was advanced in March 2006. total purgeable petroleum hydrocarbons, benzene, and MTBE were detected in groundwater grab samples at 120, 11, and 30 µg/L, respectively. The proposed investigation will help to further define the plume length and establish under which scenario of the LTCP Media-Specific Criteria for Groundwater the site falls.	*Groundwater:* TPHg, BTEX, and fuel oxygenates by EPA Method 8260 *Soil:* TPHg, BTEX, and fuel oxygenates by EPA Method 8260 (samples to be collected using field preservation in accordance with EPA Method 5035)
2	Confirm that hydraulic hoists were not present in the former station building and additional sources for impacts are not present	Visual inspection of former service station building currently used for alternator sales and distribution.	Past reports do not address the car repair operations; however, no site as-built drawings indicate any in building equipment.	Not Applicable