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By Alameda County Environmental Health at 2:25 pm, May 01, 2014

Brett Hunter Project Manager Marketing Business Unit Chevron Environmental Management Company 6101 Bollinger Canyon Road San Ramon, CA 94583 Tel (925) 790-6272 Fax (925) 549-1441 bhunter@chevron.com

Ms. Karel Detterman Alameda County Environmental Health (ACEH) 1131 Harbor Bay Parkway, Suite 250 Alameda, California 94502-6577

Re: Former Tidewater Service Station 373378 7600 MacArthur Boulevard Oakland, California

I have reviewed the attached report dated April 29, 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 Conestoga Rovers & Associates, upon who assistance and advice I have relied.

I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge.

Sincerely,

Jellian Holloway

Jillian Holloway Project Manager

Attachment: Geophysical Survey, Sanborn Map Review, and Addendum to Work Plan for Site Investigation



10969 Trade Center Drive, Suite 107 Rancho Cordova, California 95670 Telephone: (916) 889-8900 Fax: (916) 889-8999 www.CRAworld.com

April 29, 2014

Reference No. 062164

Ms. Karel Detterman Alameda County Environmental Health Department 1131 Harbor Bay Parkway Alameda, California 94502

Re: Geophysical Survey, Sanborn Map Review, and Addendum to Work Plan for Site Investigation Former Tidewater Service Station Chevron Site 373378/Phillips 66 Site 5677 7600 MacArthur Boulevard Oakland, California ACEH Case RO0003087

Dear Ms. Detterman:

Conestoga-Rovers & Associates (CRA) is submitting this report for the former Tidewater service station located at 7600 MacArthur Boulevard in Oakland, California (Figure 1) on behalf of Chevron Environmental Management Company (Chevron) and Phillips 66 Company (Phillips 66). On February 19, 2014, representatives from Alameda County Environmental Health Department (ACEH), Chevron, CRA, and the property owner (Avalon Nguyen Gardner Trust) had a conference call to discuss the scope of work proposed in CRA's November 15, 2013 *Work Plan for Site Investigation*. The ACEH prepared a letted dated March 3, 2014 (Attachment A), which summarized the call and requested that the following tasks be completed before approval of the work plan:

- 1. Claim the site on Geotracker
- 2. Request for information provide a complete copy of the Golden Gate Tank Removal, Inc. *Preliminary Site Characterization Report*, dated October 19, 2007, and a copy of a Phase I report prepared by AEI Consultants (date unknown)
- 3. Site access agreement
- 4. Geophysical survey and Sanborn map review
- 5. Provide information on future site use
- 6. Prepare a work plan addendum that includes clarification on the following items:
  - a. Applicability of rapid assessment methods
  - b. Shallow sampling and collection of representative soil samples

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- c. Justification for well screen intervals and groundwater monitoring and sampling
- d. Well receptor survey
- e. Extended site plan aerial photographic map
- f. Analysis for used oil constituents

Responses to these requested tasks are presented below.

# **Claim Site on Geotracker**

Chevron claimed the site in Geotracker on March 20, 2014, with CRA listed as the Authorized RP Agent. A copy of CRA's November 15, 2013, work plan has been uploaded to Geotracker, and all subsequent reports, data, and correspondence will be added to the database.

# **Request for Information**

### Golden Gate Tank Removal, Inc., Preliminary Site Characterization Report

CRA obtained a complete copy of the *Preliminary Site Characterization Report* from Golden Gate Tank Removal, Inc. (GGTR). A copy of the GGTR report has been uploaded to Geotracker, and submitted to ACEH to be included on the county's ftp website. The final report did not include copies of boring logs for B-1 through B-4, but descriptions of soil encountered in the borings is discussed on pages 3 and 4 of the report. In general, soil encountered above 9 feet below grade (fbg) consisted of silty sand and fine sand, and below 9 fbg to the maximum explored depth of 13 fbg, soil consisted of silty clay.

### AEI Consultants, "Phase I" Report

CRA contacted the property owner trustee, Ms. Hong Gardner, to request a copy of the AEI Consultants (AEI) report, which she did not have. CRA has contacted Mr. Peter McIntyre of AEI for a copy of the report. Mr. McIntyre is requesting approval from the original client to release a copy of the report. If approval is given and CRA obtains a copy of the report, it will be uploaded to Geotracker and submitted to ACEH for their database.



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# Site Access Agreement

An access agreement between Chevron and the property owner was executed and became effective as of March 28, 2014. A copy of the agreement is included as Attachment B.

# **Geophysical Survey and Sanborn Map Review**

# **Geophysical Survey**

On April 11, 2014, ULS Services Corporation (ULS) conducted a geophysical survey of the site to locate potential buried underground storage tanks (USTs), associated piping, and utilities at the former service station site. The methods used in the survey included analog real-time electromagnetic induction conductivity detection (EMICD), standard and time-domain pulse induction, magnetic gradiometer location (MGL), ground penetrating radar (GPR), and electromagnetic pipe and cable location (EMPCL). The site was surveyed on a grid pattern of 5 by 5 feet or less. The ULS report of findings is included as Attachment C.

During the survey several buried anomalies were identified, including three low to medium conductive anomalies and six high strength conductive and magnetic anomalies. The locations of the identified anomalies have been added to Figure 2. In addition, buried utility and unknown lineations were identified across the site and are shown on Figure 2. CRA will attempt to identify these buried anomalies during the site assessment work discussed below.

# Sanborn Map Review

CRA reviewed Sanborn fire insurance maps for the site vicinity. Fire insurance maps were developed for use by insurance companies to depict facilities, properties, and their uses for many commercial, industrial, and residential sections of cities throughout the United States. These maps provide prior land use history and assist in assessing whether there may be potential environmental impacts on or near the site. The Sanborn fire insurance maps consist of a uniform series of large scale maps, dating from 1925 to 1969, which often provide valuable insight into historical property uses. CRA retained Environmental Data Resources, Inc. (EDR) to provide historical Sanborn fire insurance maps covering the site and surrounding vicinity (Attachment D). The following Sanborn fire insurance maps were reviewed:



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**1925** – The former service station is not present on this map. The area to the south of Foothill Boulevard (later renamed MacArthur Boulevard) consisted of single-family residences. The parcels located directly southwest from the site were vacant.

**1926** – The site was vacant, as was the adjacent parcel to the northeast. The adjacent parcel to the southeast shows a single-family dwelling with a small garage behind it. The parcel across 76<sup>th</sup> Avenue was also vacant. The parcels across Foothill (MacArthur) Boulevard are not shown. A filling station was located at the eastern corner of Foothill Boulevard and 75<sup>th</sup> Avenue, one block northwest of the site.

**1950** – A service station was present on the site. Fuel storage tanks are not shown on the map. An office building was located in the southeast corner of the parcel. Foothill Boulevard had been renamed MacArthur Boulevard. The adjacent parcels to the northeast contained dwellings. The parcel across 76<sup>th</sup> Avenue contained a restaurant. The parcels across MacArthur Boulevard contained storefronts, a drugstore, and a bakery. An auto repair and fueling facility was located on the northern corner of MacArthur Boulevard and 75<sup>th</sup> Avenue, approximately two blocks northwest of the site. A service station was located on the southern corner of MacArthur Boulevard and 78<sup>th</sup> Avenue, approximately 2 blocks southeast of the site.

**1952** – The site and surrounding property remained unchanged since the 1950 map.

**1959** – The site and surrounding property remained relatively unchanged since the 1952 map, although the bakery across MacArthur Boulevard had become a storefront business.

**1960** – The site and surrounding property remained unchanged since the 1959 map.

**1961** – The site and surrounding property remained unchanged since the 1960 map, although the map did not show the properties southwest of MacArthur Boulevard.

**1965** – The site and surrounding property remained unchanged since the 1961 map.

**1966** – The map does not show the properties northeast of MacArthur Boulevard, including the site. The property south of the site remained relatively unchanged since the 1960 map, although a wallpaper and paints store was located at the western corner of MacArthur



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Boulevard and 76<sup>th</sup> Avenue, approximately 150 feet west of the site, and a paint store occupied one of the storefronts across MacArthur Boulevard from the site.

**1968** – The site and surrounding property remained unchanged since the 1966 map.

**1969** – The site and surrounding property remained unchanged since the 1968 map.

# **Future Site Use**

The future site use will likely be commercial, so investigation and cleanup will be conducted based on the existing commercial land use.

# Work Plan Addendum

CRA originally proposed advancing seven soil borings, and converting three of the borings to groundwater monitoring wells. Based on the results of the geophysical survey, CRA proposes to advance two additional soil borings (BH5 and BH6) in the northeast portion of the site. The proposed soil boring and monitoring well locations are shown on Figure 2. CRA will also attempt to identify the buried conductive anomalies by hand augering several borings in the areas of the anomalies to approximately 5 to 6 fbg. The hand auger borings will be abandoned by backfilling with native material.

CRA makes the following changes and clarifications to the *Work Plan for Site Investigation*, dated November 15, 2013, as requested by the ACEH.

### Rapid Assessment Methods

Rapid assessment technologies such as cone penetrometer testing (CPT) and Geoprobe allow for the collection of soil and groundwater samples quicker than by hollow-stem auger methods and generally at a lower cost, and can provide greater resolution in identifying soil, groundwater, and contamination contacts in the subsurface. In CRA's work plan, soil borings were proposed for advancement by hollow-stem auger. CRA is



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proposing the following change in that all soil borings will be initially advanced by Geoprobe.

The Geoprobe borings will be advanced to first encountered groundwater using push rods lined with 4-foot acetate liners. CRA estimates that groundwater will be encountered at approximately 25 fbg. If drilling refusal is encountered before groundwater is encountered, 5-inch diameter hollow stem augers will be utilized to complete the boreholes to groundwater. Once soil and groundwater samples have been collected, the borings will be filled with Portland Type I/II cement through a tremie pipe from the bottom to approximately 6 inches below grade and then filled with native soil to match the existing grade. Exact boring locations and final depths will be based on site and utility constraints and groundwater depth. CRA's *Standard Field Procedures for Soil Borings* is included as Attachment E.

Soil samples will be collected at approximately 5-foot intervals, and where indicators of petroleum hydrocarbons are observed. CRA will log soil using the ASTM D 2488 Unified Soil Classification System. Soil will be field-screened using a photo-ionization detector (PID). Select soil samples collected from each boring will be sealed and labeled, stored on ice in a laboratory-supplied cooler, and submitted to a California-certified laboratory under chain-of-custody for chemical analysis.

Grab-groundwater samples will be collected using a direct push technology groundwater sampler at each boring location. Groundwater samples will be collected using a disposal bailer. The samples will be decanted into clean laboratory-supplied containers, sealed and labeled, stored on ice in a laboratory-supplied cooler, and submitted to a California-certified laboratory under chain-of-custody for chemical analysis.

### Representative Shallow Soil Samples

In CRA's work plan, each boring location was to be cleared to 8 fbg using an air knife to assess for subsurface obstructions and utilities. Due to ACEH concern that the air knife would volatilize target compounds in soil, CRA will clear each boring using a hand auger.



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A soil sample will be collected at 5 fbg from each boring by driving a steel tube into disturbed sediments removed by the hand auger bucket. Soil samples below 8 fbg will be collected using the Geoprobe push rods lined with 4-foot acetate liners. Representative samples will be collected from each boring to provide sufficient data to satisfy the State Water Resources Control Board's Low-Threat Closure Policy.

### Well Screen Interval and Groundwater Monitoring and Sampling Program

For the three proposed monitoring wells, once each Geoprobe boring is advanced to first groundwater at the proposed well locations, and soil and groundwater sampling is completed, the depth to groundwater in each boring will be measured. Each boring will then be enlarged using 5-inch diameter hollow stem augers to a total depth of approximately 5 feet below the measured water level. Each monitoring well will be constructed of 2-inch diameter, Schedule 40 polyvinyl chloride (PVC) casing with a 10 foot long 0.010-inch machine-slotted screen interval centered on the measured depth of groundwater in each well boring. The filter pack will consist of #2/16 Monterey Sand placed in the annulus from the bottom of the boring to 1 foot above the screen interval. The remaining annulus will be sealed with 1 foot of bentonite above the filter pack and filled to approximately 1 fbg with Portland Type I/II cement. Each well will be completed with a traffic-rated well box and finished flush with existing grade.

The new monitoring wells will be sampled on a quarterly basis for the first year. After that, the sampling frequency will be reduced as appropriate.

### Well Survey

In the November 15, 2013 work plan, CRA proposed a review of Department of Water Resources (DWR) records to determine if any water supply wells are located within 2,000 feet of the site. As requested by the ACEH, CRA will also review Alameda County Public Works Agency (ACPWA) records as part of the well survey.



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## Plot Work Plan on Aerial Photo Areal Maps

Figure 3 presents an aerial photo extended site plan showing the site and immediate vicinity. This map will be included in all future reports.

### Analysis for Used Oil Constituents

Given the uncertainty in historical UST locations, ACEH has requested modifications to the laboratory analyses proposed in CRA's work plan. For the current proposed scope of work, and for all subsequent work as appropriate, soil and groundwater samples will be analyzed for the following constituents:

- Total petroleum hydrocarbons as diesel and gasoline by EPA Method 8015
- Total oil and grease by Method 1664A (HEM SGT) former hydraulic hoist area only, proposed borings BH3 and MW3
- Volatile organic compounds including fuel oxygenates by EPA Method 8260
- Polynuclear aromatic hydrocarbons including naphthalene by EPA Method 8270
- Wear metals (aluminum, barium, boron, cadmium, calcium, chromium, copper, iron, lead, magnesium, manganese, molybdenum, nickel, phosphorus, silicon, silver, sodium, sulphur, tin, titanium, vanadium, and zinc) by EPA Method 6010

# Schedule

CRA will begin the proposed work upon approval of the work plan and this addendum by the ACEH. CRA will submit a Site Investigation Report approximately 8 weeks following the receipt of all final analytical data reports.



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Please contact David Herzog at (916) 889-8902, or at dherzog@craworld.com if you have any questions or require additional information.

Yours truly,

# **CONESTOGA-ROVERS & ASSOCIATES**

an Hul

Laura Heberle

LH/cw/3 Encl.

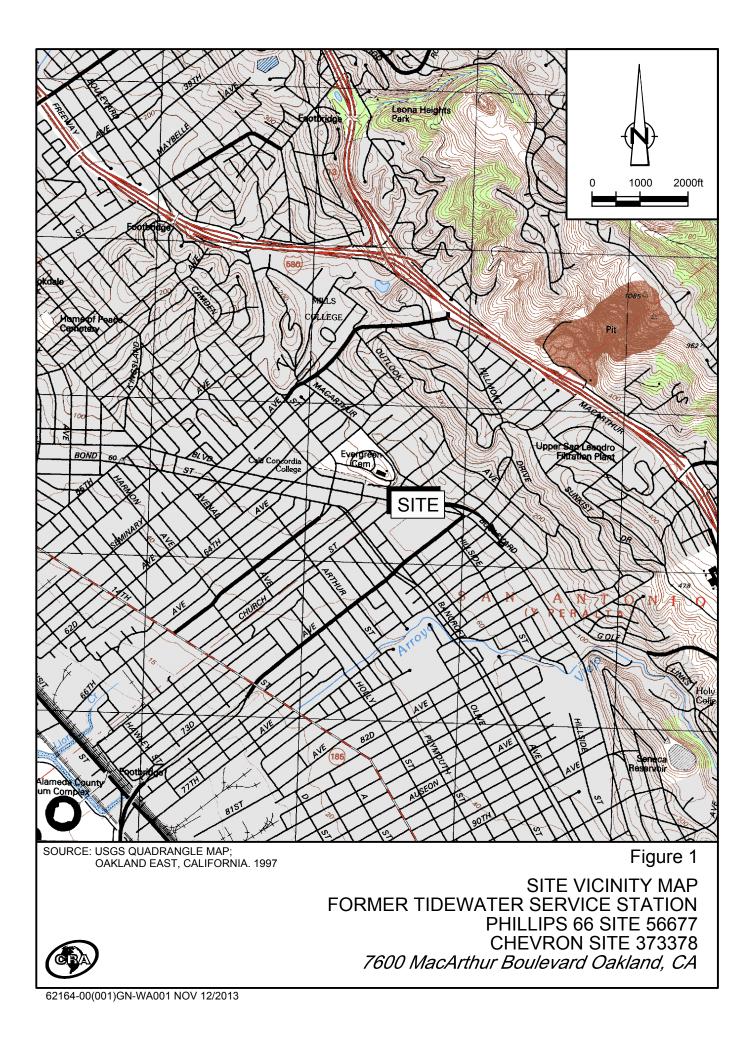
- Figure 1 Site Vicinity Map
- Figure 2 Site Plan
- Figure 3 Extended Site Plan
- Attachment A ACEH Correspondence
- Attachment B Site Access Agreement
- Attachment C ULS Geophysical Report
- Attachment D Sanborn Maps
- Attachment EStandard Field Procedures for Soil Boring Advancement and Monitoring<br/>Well Installation
- cc: Jillian Holloway, Chevron (electronic copy)
  Ed Ralston, Phillips 66 (electronic copy)
  Ms. Hong Gardner, 632 Via Rialto Road, Oakland, CA 94619

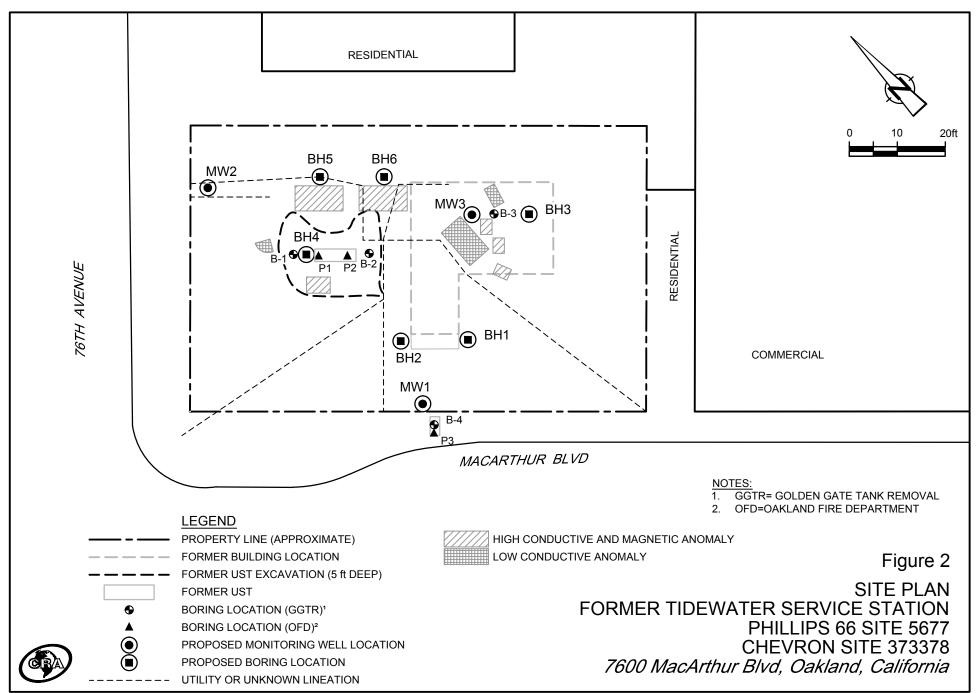


David W. Herzog, P.G. 7211

**Figures** 







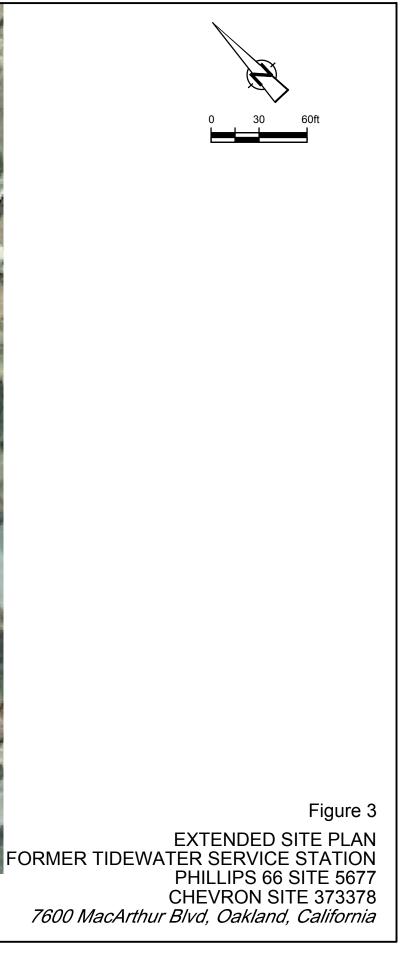
62164-2013.1(003)GN-WA001 APR 16/2014





SOURCE: TERRASERVER, 2013. NOTE: CALIFORNIA STATE PLANE COORDINATE SYSTEM NAD 83, ZONE 3.

62164-2013.1(003)GN-WA002 APR 23/2014



# Attachment A

**ACEH Correspondence** 



# Herzog, David

From:	Detterman, Karel, Env. Health [Karel.Detterman@acgov.org]
Sent:	Monday, March 03, 2014 2:51 PM
То:	'Hunter, Brett (BLHU)'; York, Kelly C; 'Hong jacqueline Gardner'; 'honggardner@yahoo.com';
	'R Miller'; 'JillianHolloway@chevron.com'
Cc:	Roe, Dilan, Env. Health; Herzog, David; Fischer, Alexis N
Subject:	Fuel Leak Case No. RO0003087, Hong Gardner Property, GeoTracker Global ID
	T1000003434, 7600 MacArthur Bivd., Oakland, CA
Attachments:	Attachment_1_and_ftpUploadInstructions_2012_07_25.pdf

Dear Ladies and Gentlemen:

Thank you for participating in a conference call on February 19, 2014 attended by representatives from Chevron, Conestoga-Rovers & Associates (CRA), Chevron's consultant, and the property owner.

Alameda County Environmental Health Department (ACEH) staff has reviewed the case file, including the *Work Plan for Site Investigation* (Work Plan) dated November 15, 2013 in conjunction with the State Water Resources Control Board's (SWRCB) Low Threat Underground Storage Tank Case Closure Policy (LTCP). The work plan was prepared and submitted on your behalf by CRA. Thank you for submitting the Work Plan.

The Work Plan, comprised of a Site Conceptual Model and a Data Gap Summary and Proposed Investigation, describes the proposed investigation consisting of installing seven soil borings or groundwater monitoring wells, soil and grab groundwater sampling, a well survey, a Sanborn map review, and an on-site geophysical survey.

Based on ACEH staff review of the work plan the proposed scope of work is conditionally approved for implementation provided that the proposed work is performed in a phased approach and the technical comments are addressed as described below. As discussed during the teleconference call, please conduct the Sanborn map review and geophysical survey first then submit the results of this work along with a Work Plan Addendum incorporating the elements described in Technical Comment 6 for approval prior to implementing the second phase of work. Please provide 72-hour advance written notification to this office (e-mail preferred to: <u>karel.detterman@acgov.org</u>) prior to the start of field activities.

### **TECHNICAL COMMENTS**

- 1. Claim Site On Geotracker As described in the Attachment 1, Responsible Party(ies) Legal Requirements/Obligations, all technical reports must be submitted to both the ACEH ftp website and the SWRCB GeoTracker website. To upload to the Geotracker website you will need to claim your site on GeoTracker and then upload the Work Plan and all future reports to the GeoTracker website. Pursuant to CCR Sections 2729 and 2729.1, all analytical data submitted in a report to a regulatory agency as part of the LUFT program, must be transmitted electronically to the SWRCB Geotracker website via the internet. Additionally, should groundwater wells be required, all permanent monitoring points utilized to collect groundwater samples (i.e. monitoring wells) and submitted in a report to a regulatory agency, samples (i.e. monitoring wells) and submitted in a report to a regulatory agency, samples (i.e. monitoring wells) and submitted in a report to within 1-meter accuracy, using NAD 83, and transmitted electronically to the SWRCB Geotracker website. Beginning July 1, 2005, electronic submittal of a complete copy of all reports (Leaking Underground Fuel Tank or Site Cleanup Program) is required in GeoTracker (in PDF format). Please upload all reports prepared after July 1, 2005 to the SWRCB's Geotracker database website in accordance with the above-cited regulation. Please additionally upload the SWRCB's to the ACEH ftp website.
- 2. Request for information The ACEH case file for the subject site contains only the electronic files listed on our web site at <u>http://www.acgov.org/aceh/lop/ust.htm</u>. You are requested to submit copies of all other reports, data, correspondence, etc. related to environmental investigations for this property (including Phase I reports) not currently contained in our case file by the date specified below. It appears that a Phase I Report may have been prepared for the site because the October 19, 2007 Report includes "Property Photographs" from an undated report prepared by AEI Consultants for the site.

Additionally, boring logs for soil borings B-1 through B-4 and laboratory analytical sheets for all soil samples collected from B-1 through B-4 are missing from the October 19, 2007 *Preliminary Site Characterization Report* by Golden Gate

Tank Removal, Inc. (GGTR). Please submit a complete version of the October 19, 2007 *Preliminary Site Characterization Report* by Golden Gate Tank Removal, Inc. by the date specified below.

- 3. Site Access Agreement During the February 19, 2014 conference call, Chevron representatives indicated that a site access agreement had been sent the previous week to the property owner. ACEH requests that the parties submit a signed access agreement to ACEH by the date specified below. Please note, that if you deny site access or do not respond by the date specified below, then this Agency and the Regional Water Quality Control Board may hold you legally responsible for the site investigation and cleanup of your property at your own expense. Since the costs for such investigations and cleanup are often high, allowing access to Chevron and their consultant is clearly more reasonable. Please submit a copy of the signed access agreement by April 4, 2014.
- 4. Geophysical Survey and Sanborn Map Review The work plan proposes to evaluate Sanborn maps and use geophysical methods to locate additional on-and off-site sources and UST system infrastructure remaining in the subsurface. ACEH requests extending the geophysical effort to include the hydraulic and other lifts, dispenser islands, product and vent lines, and subsurface structures associated with all generations of USTs. Please send Standard Operation Procedures (SOPs) for the geophysical survey to ACEH in an email prior to conducting the geophysical work and in accordance with the Technical Report Request below. Present the results of the geophysical survey in the Work Plan Addendum requested in Technical Comment 6.
- 5. Future Site use Since site cleanup goals are based on site use, ACEH requests submittal of any information on future site development or divestment to ACEH by the date specified below. If the requested information is not provided by the date specified below, investigation and cleanup will proceed on existing commercial land use.
- 6. Request for Work Plan Addendum The work plan addresses most of the elements of ACEH's November 21, 2012 directive letter however, clarification is requested on the items discussed below:
  - a. Rapid Assessment Methods As discussed in the meeting, ACEH recognizes that the site investigation may benefit from the use of rapid site assessment techniques (CPT or equivalent) to identify water bearing zones to facilitate optimal grab groundwater sample collection and screen intervals for new monitoring wells. It this approach is adapted, please present SOPs for the chosen rapid site assessment technique(s) in the Work Plan Addendum.
  - b. Representative Shallow Soil Samples The Work Plan proposes hand clearing or using an air knife to a depth of eight feet below grade surface (bgs) to clear for subsurface obstructions or utilities. Since ACEH is concerned that the use of an air knife will volatilize target compounds resulting in low-biased analytical results, please clear all boring locations by hand auguring. Please present a strategy to sample and analyze soil samples in the surface to five foot interval and the five to ten foot interval, at the groundwater interface, lithologic changes, and at areas of obvious impact to collect sufficient data to satisfy the SWRCB's LTCP's direct contact and outdoor air exposure media-specific criteria.
  - c. Well Screen Interval and Groundwater Monitoring and Sampling Program The Work Plan proposes to install monitoring wells with screen intervals from 20-30 feet bgs. Please provide justification for the screen interval selection and data quality objectives (DQO's) and support your rationale with appropriate technical justification (i.e. Practical Handbook of Environmental Site Characterization and Groundwater Monitoring, David M. Nielsen (editor), 2006, 2<sup>nd</sup> Edition or comparable technical guidance). Please note that if monitoring wells are installed, they are required to be sampled on a quarterly basis for a minimum of one year after installation, and that a reduced sampling interval may be appropriate thereafter.
  - d. Well Survey Please use records from both the Alameda County Public Works Agency (ACPWA) and California Department of Water Resources because information from these two sources is sufficiently different to warrant inclusion of both.
  - e. Plot Work Plan on Aerial Photo Areal Maps To help understand the site and vicinity, please also include in all future reports an extended site map using an aerial photographic base map to depict both the site and immediate vicinity.

f. Analysis for Waste Oil Constituents - ACEH generally concurs with the proposed analytical suite outlined in the Work Plan; however, due to uncertainty in historical UST locations, ACEH requests that analysis for chlorinated solvents, naphthalene, Polycyclic Aromatic Hydrocarbons (PAHs), wear metals, and fuel oxygenates by appropriate methods be performed on soil and groundwater samples collected during this and future investigations, depending on the results.

### TECHNICAL REPORT REQUEST

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

• March 19, 2014 – Claim site in Geotracker, Report upload, and Geotracker Submittal Notification Files to be named: RO3087\_CORRES\_L\_yyyy-mm-dd

• March 19, 2014 – Geophysical SOPs e-mailed and included with Work Plan Addendum and Geophysical Survey Results (requested below)

File to be named: RO3087\_WP\_yyyy-mm-dd

 March 26, 2014 – Environmental Reports including AEI Consultant's Phase I Report and the missing information from GGTR's 10/19/2007 *Preliminary Site Characterization Report* File(s) to be named: RO3087\_MISC\_R\_yyyy-mm-dd

- April 4, 2014 Signed Site Access Agreement File to be named: RO3087\_CORRES\_L\_yyyy-mm-dd
- April 4, 2014 Description of Future Site Use File to be named: RO3087\_CORRES\_L\_yyyy-mm-dd
- May 2, 2014 Work Plan Addendum and Geophysical Survey Results Files to be named: RO3087\_WP\_yyyy-mm-dd
- October 31, 2014 Soil and Groundwater Investigation Report File to be named: RO3087\_SWI\_R\_yyyy-mm-dd

These reports are being requested pursuant to California Health and Safety Code Section 25296.10. 23 CCR Sections 2652 through 2654, and 2721 through 2728 outline the responsibilities of a responsible party in response to an unauthorized release from a petroleum UST system, and require your compliance with this request.

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

Thank you for your cooperation. Should you have any questions or concerns regarding this correspondence or your case, please send me an e-mail message at <u>karel.detterman@acgov.org</u> or call me at (510) 567-6708.

Karel Detterman, PG Hazardous Materials Specialist Alameda County Environmental Health 1131 Harbor Bay Parkway Alameda, CA 94502 Direct: 510.567.6708 Fax: 510.337.9335 Email: karel.detterman@acgov.org

PDF copies of case files can be downloaded at:

# http://www.acgov.org/aceh/lop/ust.htm

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#### Attachment 1

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

#### **REPORT/DATA REQUESTS**

These reports/data are being requested pursuant to Division 7 of the California Water Code (Water Quality), Chapter 6.7 of Division 20 of the California Health and Safety Code (Underground Storage of Hazardous Substances), and Chapter 16 of Division 3 of Title 23 of the California Code of Regulations (Underground Storage Tank Regulations).

#### ELECTRONIC SUBMITTAL OF REPORTS

ACEH's Environmental Cleanup Oversight Programs (Local Oversight Program [LOP] for unauthorized releases from petroleum Underground Storage Tanks [USTs], and Site Cleanup Program [SCP] for unauthorized releases of non-petroleum hazardous substances) require submission of reports in electronic format pursuant to Chapter 3 of Division 7, Sections 13195 and 13197.5 of the California Water Code, and Chapter 30, Articles 1 and 2, Sections 3890 to 3895 of Division 3 of Title 23 of the California Code of Regulations (23 CCR). Instructions for submission of electronic documents to the ACEH FTP site are provided on the attached "Electronic Report Upload Instructions."

Submission of reports to the ACEH FTP site is in addition to requirements for electronic submittal of information (ESI) to the State Water Resources Control Board's (SWRCB) Geotracker website. In April 2001, the SWRCB adopted 23 CCR, Division 3, Chapter 16, Article 12, Sections 2729 and 2729.1 (Electronic Submission of Laboratory Data for UST Reports). Article 12 required electronic submittal of analytical laboratory data submitted in a report to a regulatory agency (effective September 1, 2001), and surveyed locations (latitude, longitude and elevation) of groundwater monitoring wells (effective January 1, 2002) in Electronic Deliverable Format (EDF) to Geotracker. Article 12 was subsequently repealed in 2004 and replaced with Article 30 (Electronic Submittal of Information) which expanded the ESI requirements to include electronic submittal of any report or data required by a regulatory agency from a cleanup site. The expanded ESI submittal requirements for petroleum UST sites subject to the requirements of 23 CCR, Division, 3, Chapter 16, Article 11, became effective December 16, 2004. All other electronic submittals required pursuant to Chapter 30 became effective January 1, 2005. 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, 7835, 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, 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	REVISION DATE: July 25, 2012
Oversight Programs	ISSUE DATE: July 5, 2005
(LOP and SCP)	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 (petroleum UST 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 <u>do not</u> submit reports as attachments to electronic mail.
- Entire report including cover letter must be submitted to the ftp site as a single Portable Document Format (PDF) with no password protection.
- It is preferable that reports be converted to PDF format from their original format, (e.g., Microsoft Word) rather than scanned.
- Signature pages and perjury statements must be included and have either original or electronic signature.
- <u>Do not</u> password protect the document. Once indexed and inserted into the correct electronic case file, the document will be secured in compliance with the County's current security standards and a password. Documents with password protection <u>will not</u> 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 <u>.loptoxic@acgov.org</u>
  - 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 ://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 <u>.loptoxic@acgov.org</u> 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 B

Site Access Agreement



### SITE ACCESS AGREEMENT

1.1

This SITE ACCESS AGREEMENT ("Agreement") is entered into by and between CHEVRON ENVIRONMENTAL MANAGEMENT COMPANY, a California corporation ("EMC") and HONG JACQUELINE NGUYEN GARDNER, TRUSTEE OF THE AVALON NGUYEN GARDNER LIVING TRUST UTA DATED 8/17/10 ("Owner").

### RECITALS

A. Owner holds record title to certain real property located at 7600 MacArthur Boulevard, in the City of Oakland, County of Alameda, State of California, APN 040-3410-040, as depicted on <u>Exhibit A</u> attached hereto and incorporated herein (the "Property").

B. EMC's affiliate, Texaco Downstream Properties Inc., or its dealer operated a retail service station on the Property, commonly referred to as Service Station No. 373378.

C. EMC seeks Owner's authorization to access the Property to conduct the Work, as defined in Section 1 (Rights Granted) below.

D. Owner is willing to grant EMC access to the Property for the above described purposes.

### **TERMS AND CONDITIONS**

NOW, THEREFORE, in consideration of the mutual covenants and promises herein, the parties hereby agree as follows:

1. <u>Rights Granted.</u> Owner hereby grants to EMC, its employees, agents, representatives, consultants, and contractors, a license over, under, and across the Property for the purpose of performing environmental work under government agency oversight or direction (the "Work"). The Work will be limited to the installation, maintenance, inspection, replacement, periodic sampling, and abandonment of borings and wells, and the use of those borings and wells for the introduction of compounds to facilitate bioremediation. Prior to the installation of any new equipment on the Property, EMC and Owner will work together to determine the appropriate location for new equipment. Owner agrees to cooperate with EMC, including executing additional documents, if necessary, in order to obtain permits or other documents from a government agency required to install, abandon, or remove EMC's equipment.

2. <u>Performance of the Work.</u> EMC will conduct and perform the Work in a prompt, safe, efficient, and workmanlike manner and in compliance with all applicable federal, state, or local laws, regulations or ordinances. EMC will perform all Work conducted under this Agreement at its sole cost and expense.

3. <u>Term.</u> This Agreement will terminate upon completion of the Work and any restoration obligation under Section 4 (Restoration).

4. <u>Restoration</u>. If entry onto the Property by EMC, or exercise by EMC of any of its rights or obligations under this Agreement, result in any physical damage to the Property (ordinary wear and tear excepted), EMC will promptly repair and restore the portions of the Property damaged to substantially the same condition as existed prior to the damage or exercise of such right or obligation.

5. <u>Indemnity.</u> EMC agrees to indemnify, defend, and hold harmless Owner, its agents, employees, successors, and assigns (the "Indemnified Parties") from and against any claims brought against any of the Indemnified Parties for personal injury or for physical damage to real or personal property arising out of the performance of the Work on the Property by EMC and its agents, consultants, and subconsultants, except to the extent that such claims are due to the reckless, negligent or intentional acts or omissions of the Indemnified Parties.

6. <u>Insurance</u>. EMC will require contractors who perform the Work under this Agreement to maintain liability insurance coverage in accordance with the contractors' service agreements.

7. <u>Liens.</u> EMC will discharge at once or bond or otherwise secure against all liens and attachments that are filed in connection with the Work, and will indemnify and save Owner and the Property harmless from and against any and all loss, damage, injury, liability, and claims thereof resulting directly from such liens and attachments.

8. <u>Notices.</u> Any notices required to be made under this Agreement will be made in writing to the address of the appropriate party as set forth below. All such notices will be deemed to have been duly given and received upon mailing or delivery by courier or personal delivery service. Notwithstanding the foregoing, communications pursuant to Section 0 (Agency Communications) may be delivered by email. Parties may alter or modify their notice address by delivery of written notice pursuant to the terms of this Agreement.

To EMC:	Chevron Environmental Management Company Marketing Business Unit 6101 Bollinger Canyon Road San Ramon, CA 94583 Attn.: Kelly Esters, Property Specialist, SS #373378 Phone: (925) 790-6480 Email: KEsters@Chevron.com
To Owner:	The Avalon Nguyen Gardner Living Trust UTA Dated 8/17/10 632 Via Rialto Road Oakland, CA 94619-3126 Attn.: Hong J. Gardner Phone: (510) 776-2304 Email: <u>honggardner@gmail.com</u>

9. <u>Agency Communications.</u> EMC will promptly notify Owner when final reports, laboratory test results, and other communications pertaining to the Property are uploaded to

GeoTracker (the State Water Resources Control Board's data management system). GeoTracker is located at geotracker.waterboards.ca.gov. Owner will provide EMC with copies of any communications to a government agency regarding the Work performed on the Property.

10. <u>Applicable Law.</u> This Agreement will be interpreted, and any dispute arising hereunder will be resolved, in accordance with the laws of the State of California, without reference to choice of law rules.

11. <u>Alternative Dispute Resolution (ADR)</u>. If a dispute arises between the parties relating to this Agreement, the parties agree to use the following procedure prior to pursuing other legal remedies:

11.1. A meeting between the parties will promptly be held in California, attended by individuals with decision-making authority regarding the dispute, who will attempt in good faith to negotiate a resolution of the dispute.

11.2. If within 15 days after the meeting, the parties have not succeeded in negotiating a resolution of the dispute, they agree to submit the dispute to mediation using a mediator who is mutually acceptable, and to bear equally the costs of the mediation.

11.3. The parties agree to participate in good faith in the mediation process related to their dispute for a period of 30 days from the commencement of mediation. If the parties are not successful in resolving the dispute through mediation, then:

- 11.3.1. if both parties agree, they may submit the matter to a binding arbitration or a private adjudicator; or
- 11.3.2. either party may initiate litigation upon 10 days advance written notice to the other party.

12. <u>Counterparts.</u> This Agreement may be executed in counterparts, both of which together will constitute one and the same agreement.

13. <u>Integration</u>. This document represents the entire agreement between the parties. This Agreement supersedes and replaces any and all prior agreements between the parties regarding the subject matter herein. No modification of the terms hereof will be effective unless in writing and duly executed by the authorized representatives of the respective parties.

14. <u>No Admission of Liability.</u> The parties acknowledge and agree that this Agreement, the act of entering into it, and any act or omission pursuant hereto will not be construed as an admission of any nature.

15. <u>Compliance with Laws.</u> Throughout the term of this Agreement, EMC and Owner will at all times comply fully with all applicable laws, ordinances, rules, and regulations of any governmental agency having jurisdiction over the Property.

16. <u>Binding Effect.</u> This Agreement will be binding upon and inure to the benefit of the parties hereto and their respective heirs, successors, and assigns. Owner will promptly notify

EMC of any transfer of its interest in the Property and will provide a copy of this Agreement to any and all transferees.

IN WITNESS WHEREOF, the parties have caused this Agreement to be executed and effective as of the last date set forth below.

EMC:

**OWNER:** 

۶,

Dated: \_\_\_\_\_\_ March\_\_, 2014

CHEVRON ENVIRONMENTAL MANAGEMENT COMPANY, a California corporation

By: // Male Name: Frank G. Soler

Its: Assistant Secretary

HONG JACQUELINE NGUYEN GARDNER, TRUSTEE OF THE AVALON NGUYEN GARDNER LIVING TRUST UTA DATED 8/17/10

Dated: 3/1 . 2014

K by Umgjæcquelisenguyen Bara Truster of Avalon Nguyen Gardner Living Trust UTA daled 8/17/2010

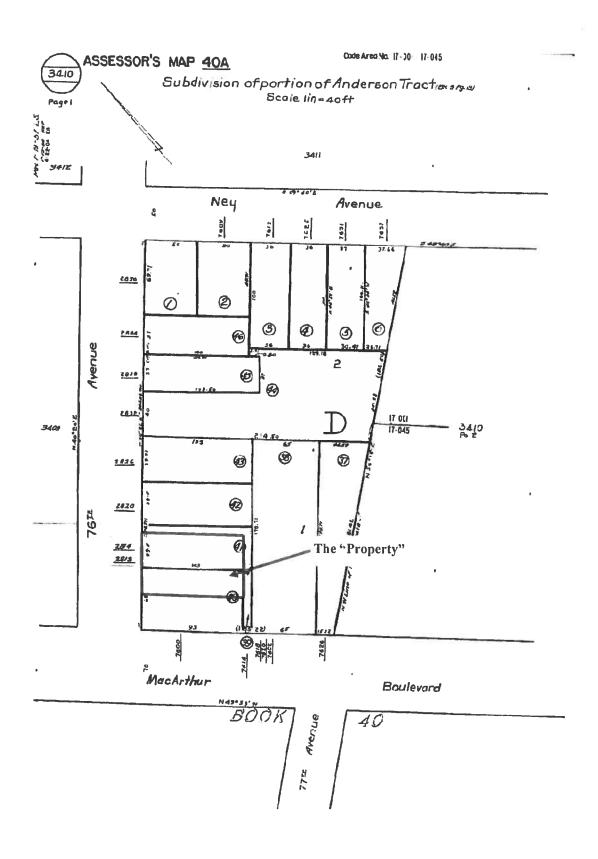
Service Station No. 373378

### EXHIBIT A

### TAX ASSESSOR'S MAP OR SITE PLAN DEPICTING LOCATION OF THE PROPERTY

4

### EXHIBIT "A"



# Attachment C

**ULS Geophysical Report** 



# ULS SERVICES CORPORATION



11 April 2014

David W. Herzog, M.Sc., P.G. Conestoga-Rovers & Associates 10969 Trade Center Drive, Suite 107 Rancho Cordova, California 95670

Subject: Report for Geophysical Services -Potential Buried USTs Survey and Utility Clearances 7600 MacArthur, Oakland, CA

Gentlemen:

This report documents the recent Geophysical Survey field work ULS Services Corp completed at the Subject site on 11 April 2014. A survey was performed to locate potential buried USTs, associated piping, and utilities at this former gasoline service station property. Methods and findings, including photo log and observations map follow.

7600 MACARTHUR, OAKLAND, CA 11 APRIL 2014

#### **SCOPE OF WORK**

A Geophysical Survey is conducted at this site to locate potential former USTs and associated piping that may have been left or abandoned in place. Work also includes location of active and inactive utilities.

#### **METHODS**

Methods utilized in performance of this work include: Visual Inspection, Analog Real - Time Electromagnetic Induction Conductivity Detection (EMICD), using both standard and time-domain pulse induction; Magnetic Gradiometer Location (MGL); Ground Penetrating Radar (GPR), and EM Pipe and Cable Location (EMPCL) methods.

EMIMD ground induction methods are employed to detect both 1) broad metal mass anomalies (Rectangular Surface Projections) or conductive zones that may be indicative of potential USTs, Septic tanks, dense conductive metal debris, steel reinforced concrete, piping, other building demo materials, drums, sumps or other unknown burial materials. A standard unit consisting of a *Fisher Gemini 2* Split Box Bar Suspended unit is utilized as well as *AR Pulse* Time-Domain Induction unit with a 1 meter Coil Antenna. Additionally, a handheld analog real time *Schonstedt* magnetic gradiometer is utilized. Ground Penetrating Radar (GPR) consisting of a *Mala 500* megahertz is utilized to further characterize EM anomalies. Finally EM Pipe and Cable methods, consisting of a *Radiodetection* RD 7000 transmitter – receiver set is utilized to locate potential conductive lineations that may be potential abandoned metallic UST piping or other utility piping and utilities. Both live line utility and ground induction methods are employed.

A two-way Cartesian grid pattern of five by five feet or less is walked across the site. Observations are marked on ground with survey paint simultaneously in real time as collected. Marked observation data collected is recorded both photographically and with a sub- meter WAAS enabled GPS receiver with real time automatic differential correction and plotted onto ESRI software based imagery.

7600 MACARTHUR, OAKLAND, CA 11 APRIL 2014

#### FINDINGS

#### **Observations**

#### Site Description

Site consists of a small vacant lot situated on the SE Corner of 76 Th Street and MacArthur, Oakland. Fencing encloses the West, North, and East sides, as well, as adjacent residences to the East and South. Sidewalks border the West and North Sides.

A small slightly raised concrete former building pad exists near the center of site with a lower concrete pad flush with surface, extending westward to the sidewalk. A second separated concrete pad area exists South-Southeast of the former building area. Old asphalt surfaces exist within NW and SW quadrants. Flat to undulated soil and grass areas exist to the North, South, and East sides of the former Building slab foundation.

There are no obvious surface indications of USTS such as fill collars or vent risers. The building slab and pad extension on west, suggest potential former canopy and fuel dispenser island area. A portion of the canopy apron has been removed, segmenting the apron and suggesting a potential excavation area – possibly dispenser island removal.

#### General EM - MAG and GPR Instrument Survey Results

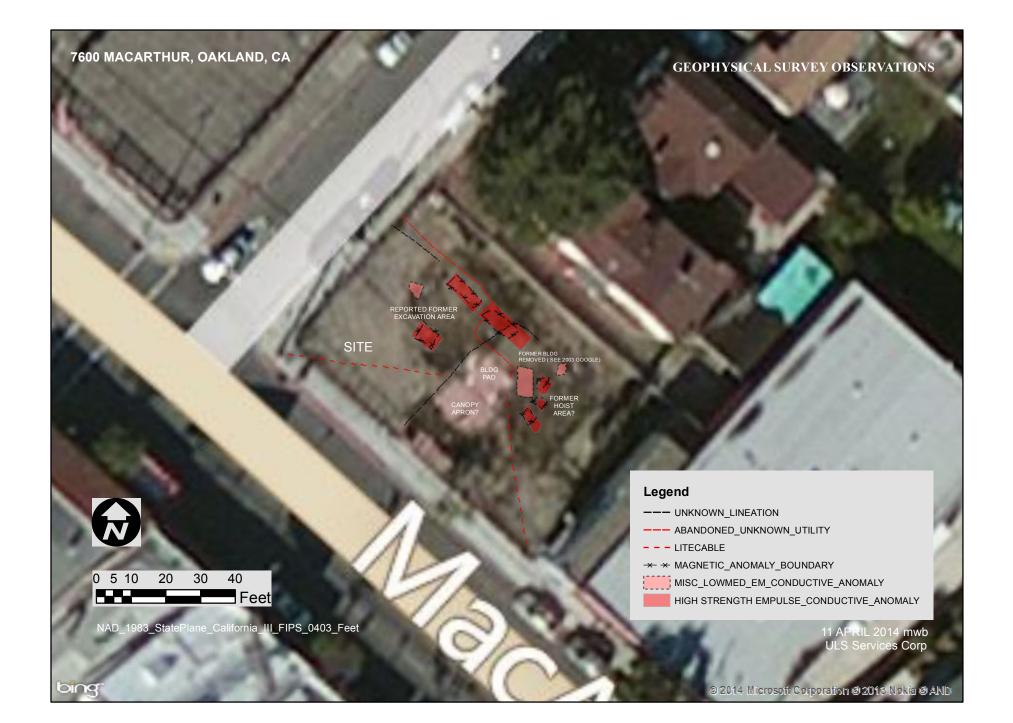
General ambient or background EM conditions at this site are categorized as being low to medium noisy. A gain setting of 5.5 to 6 out of 7.5 maximum is achieved using standard EM Induction unit. GPR response is very poor and non-effective. Penetration of only 2 to 3 feet is observed. No parabolic response is observed over known utilities or anomalies. Known clay to salty clay soils with high conductive properties in this region or area are most likely causing GPR signal attenuation and lack of refraction return. Results of EM Pulse Induction, Magnetic, and EM Pipe and Cable are all good.

Results of the initial standard EM Induction sweep indicate several EM Induction Conductive zones observed at the site, surrounding, and the former building to the NW, NE, East, and South. A total of nine zones are observed. Further observations and refinement from the EM Pulse Induction and Magnetic Surveys, indicate, that six of the nine zones are categorized as High Strength Conductive Pulse Anomalies with Magnetic Gradiometer signature response. The other three zones are smaller and are not observed with magnetic or pulse units or are low strength (**Refer to Imagery Map**). Of the six high strength anomalies, two are relatively large rectangular surface projection anomalies found along the back or NE and East side of the former building area. The two anomalies are found end to end in symmetry. A small anomaly exists near NW of building foundation, and three small anomalies are observed south of the former building foundation area.

Conductive lineation associated with the two abandoned parking light posts at NW and SW corners are observed, as well as unknown lineation along North side Canopy to back of building and a second from back of building foundation over to NE area of site near sidewalk.



CURRENT GOOGLE PRO STREET VIEW IMAGE





2003 GOOGLE PRO IMAGE SHOWING PORTION BLDG TO SOUTH SIDE (POTENTIAL GARAGE BAYS)

7600 MACARTHUR, OAKLAND, CA 11 APRIL 2014

#### **CONCLUSIONS and LIMITATIONS**

All EM and Magnetic anomalies are observed in the undulated soil areas surrounding the North, East, and South sides of former building foundation. A former UST excavation is reported north of building. Historical Google pro imagery suggests a portion of the building East and South of the former small raised building foundation may have existed, however, is now removed and consists of the soil area east and south of building foundation (Refer to 2003 Google Pro Image Attached). Examination of current imagery suggests that areas around the building foundation including an area segmenting the concrete apron west of building, have been excavated. Dark areas in contrast with surrounding features with irregular borders suggest this.

The two high strength rectangular surface projection conductive anomalies towards the East NE of former Building and within potential former excavation may indicate presence of metal mass USTs or other dense conductive debris left at the site.

The anomaly on south end of the two may fall partially or wholly where the back of the former building existed as shown on the Google Pro Image. If so, this anomaly may be buried foundation materials. The second anomaly falls north of the Building towards the reported former excavation or near it. The three smaller conductive anomalies on south side of former building may be associated with former hoist or building demo materials left in place, also near or within the former section of building removed and shown on Google Pro. There is no significant conductive response observed in the small excavated potential dispenser island area segmenting what appears to be apron pad area west of building. A single conductive lineation is observed along the north side edge of the canopy apron and runs to the back of the former building. It is unclear whether this is an old product line or abandoned pipe or utility.

As in any type of survey or investigation to determine characteristics below grade, careful exploratory excavation or drilling may be needed to further help determine a more accurate determination of the subsurface anomalies. Use of hand tools and air knifing is also useful to help as a safety measure. Review of previous reports and further consultations with previous owners may be helpful.

If you have any questions regarding this report please contact me at (206) 384-2857.

Sincerely,

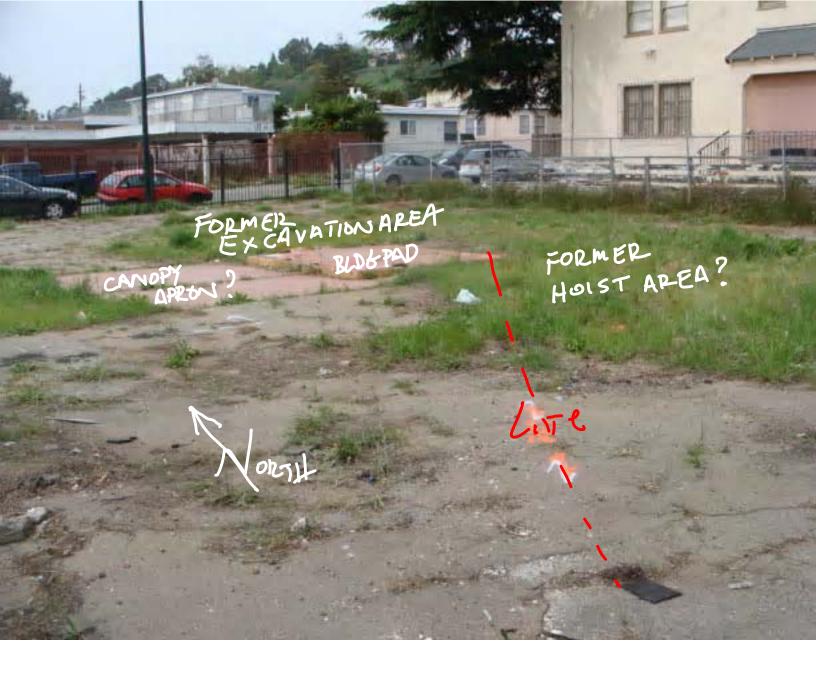
ULS SERVICES CORPORATION Geomarkout tradename

Michael W. Benedict CEO and Site Representative

Admin Office/Billing: PO Box 724 Pocatello, Idaho 83204 Seattle / Portland / SAC / Alaska / HWI – AS - GUAM Operations 1 - (866) 804- 5734 / San Diego – LA / Operations 1 - (800) 528-8206

EXPLORE SAFELY

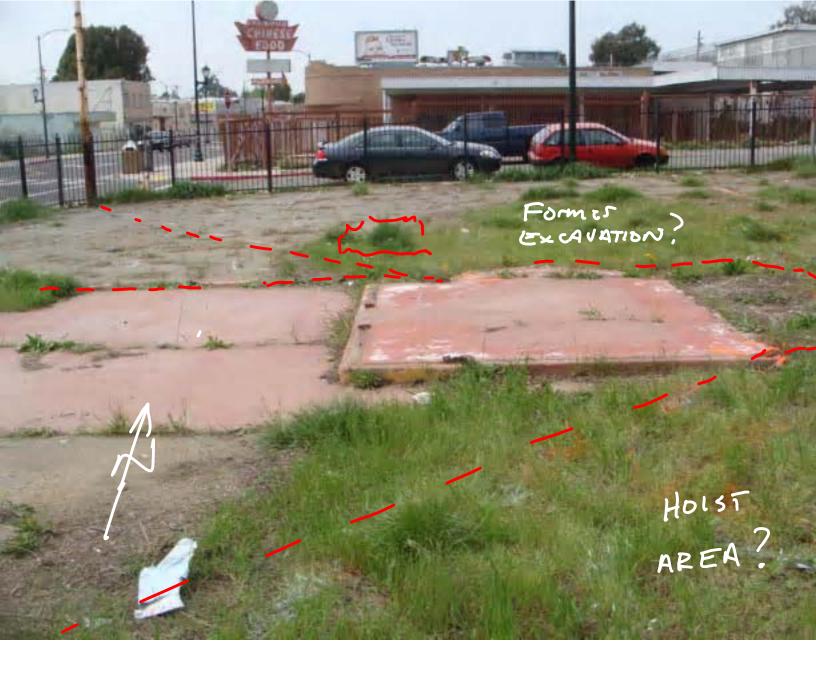


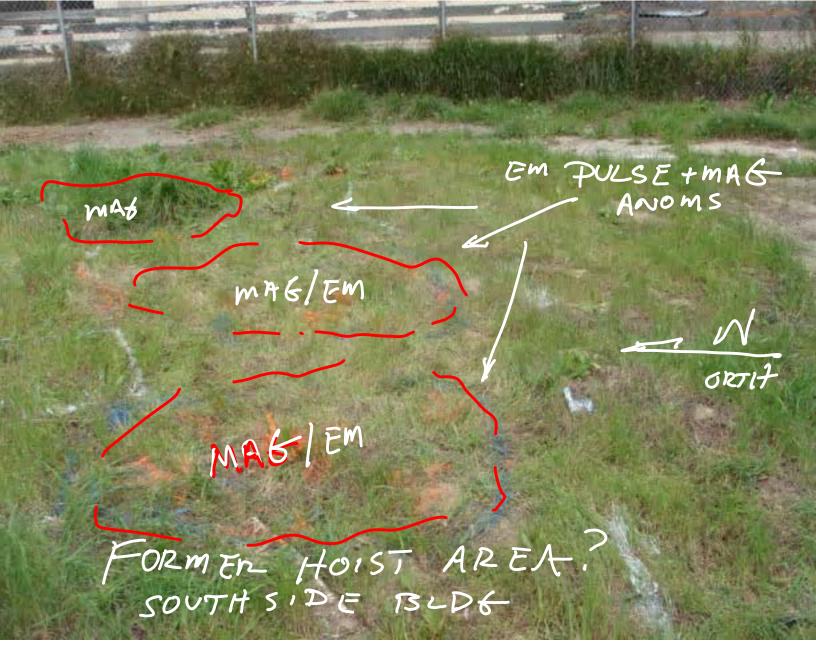


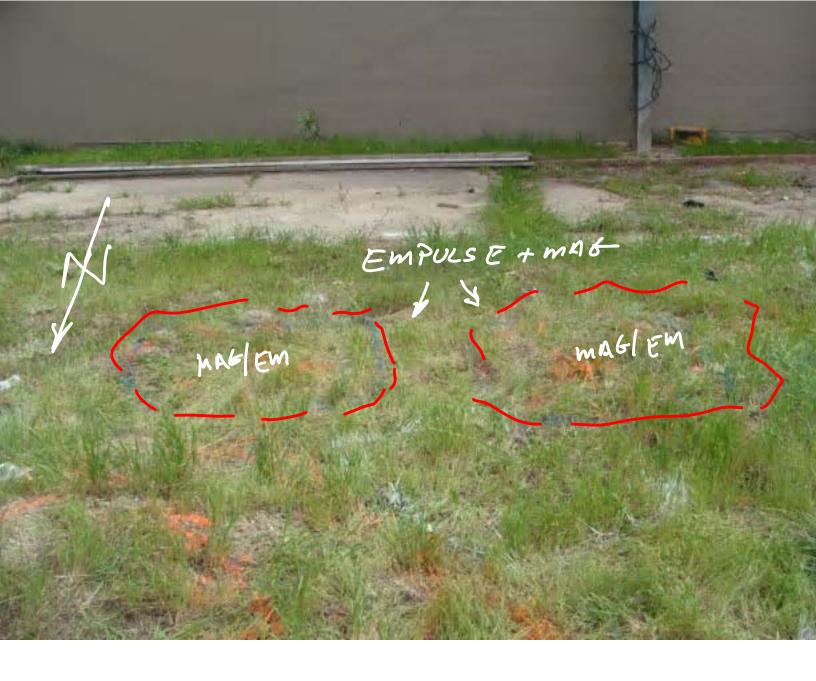














FORMER EXCAVETION?

EMPULSE + MAG

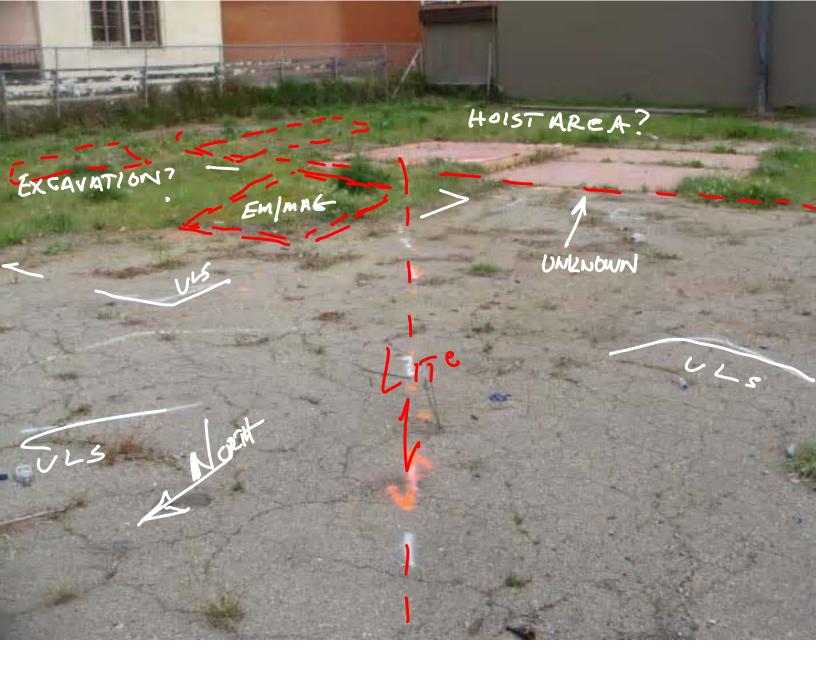
JULS AN UNKNOWN

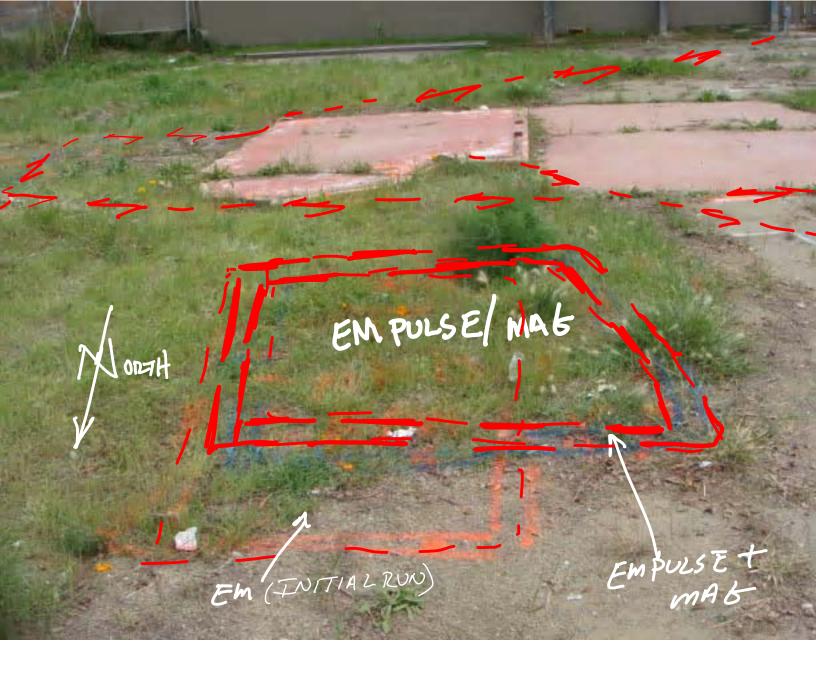
VLS

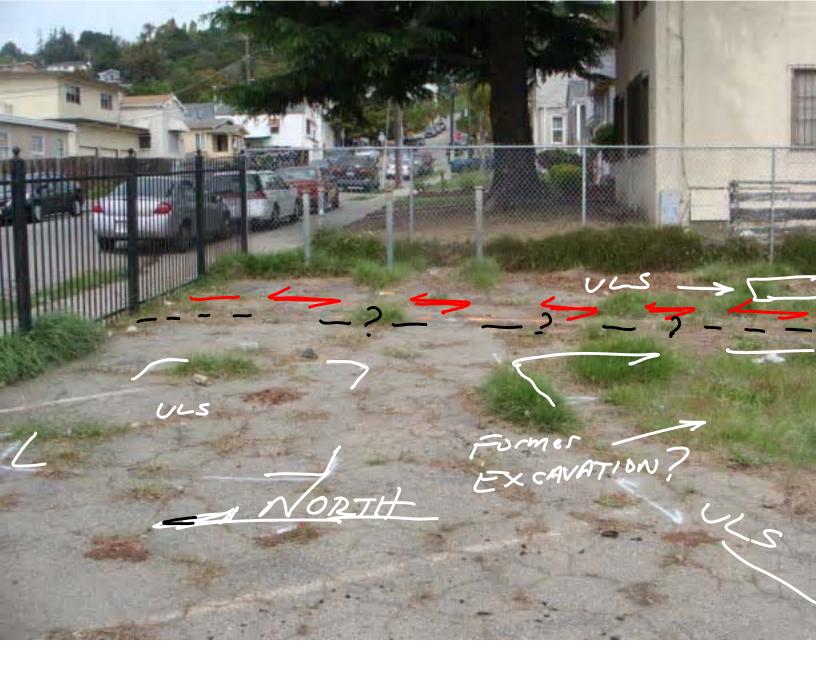
Former Dispensens AREA? UST?

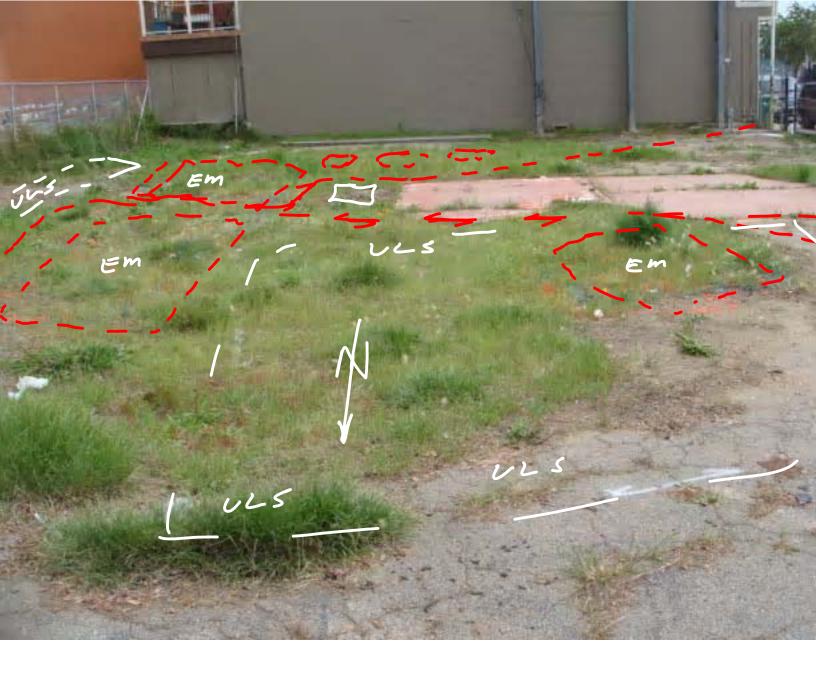
BLDE

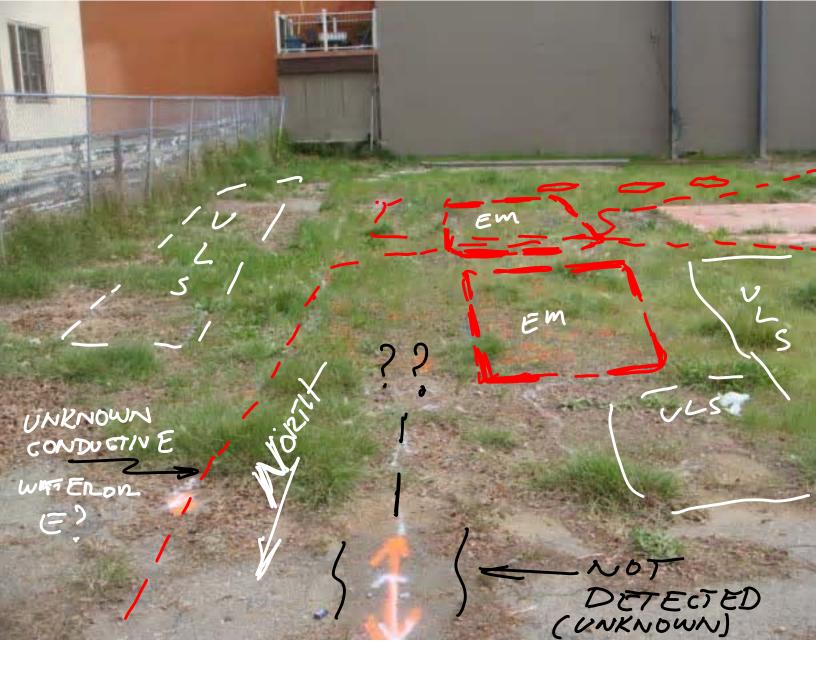
CANOPY?

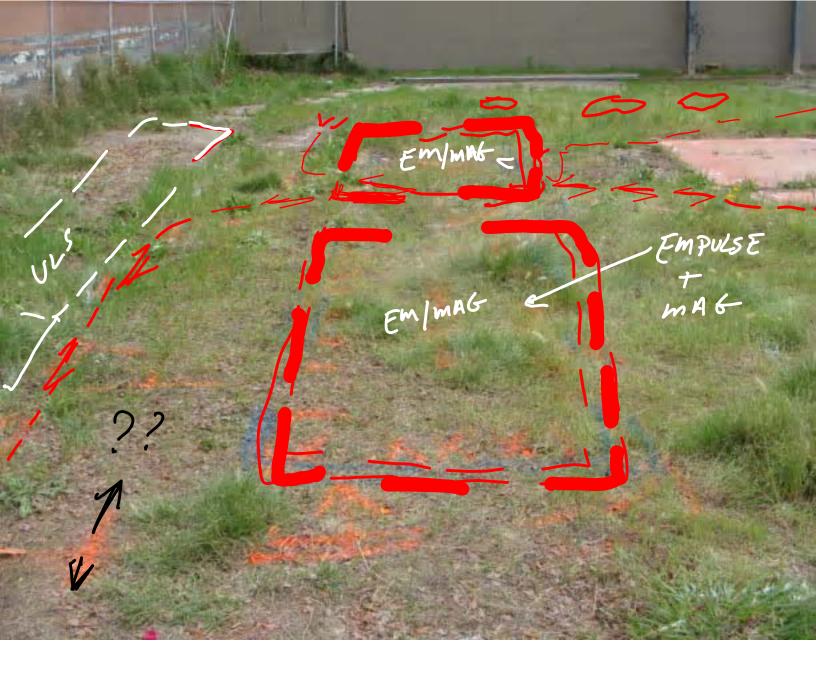






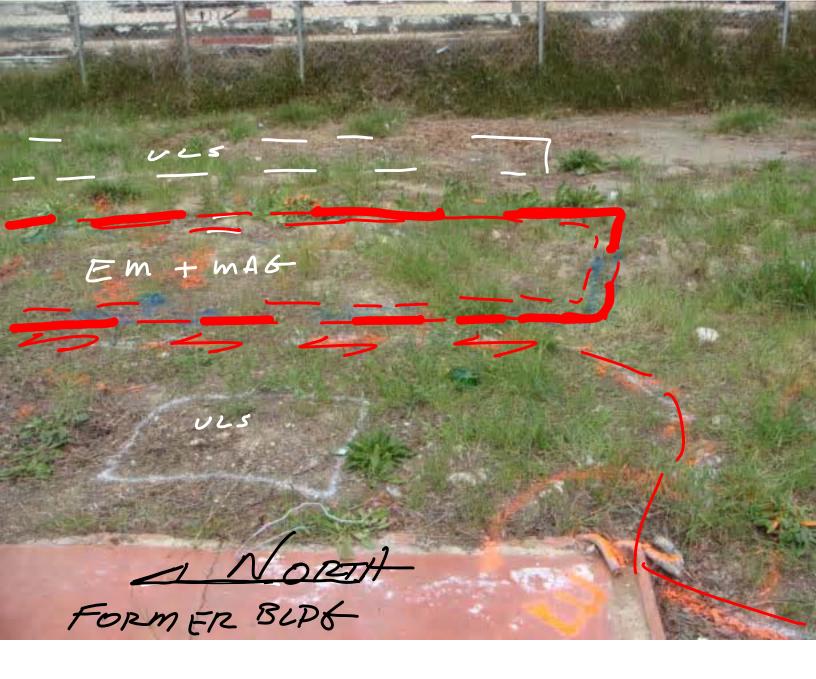


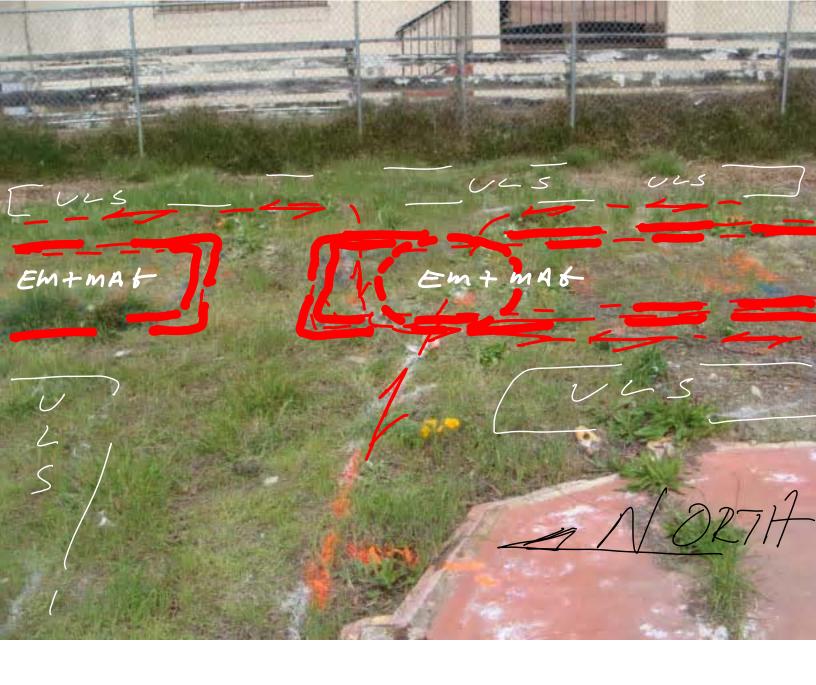


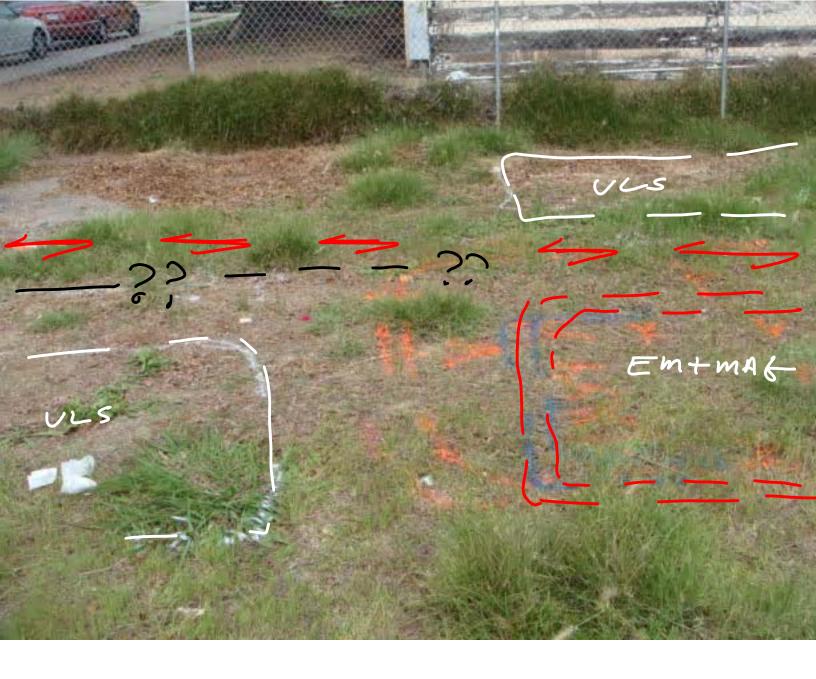














### Attachment D

Sanborn Maps



### 062164-2013-1 - Oakland, CA

7600 Mac Arthur Boulevard Oakland, CA 94605

Inquiry Number: 3893638.3 March 31, 2014

# **Certified Sanborn® Map Report**



6 Armstrong Road, 4th Floor Shelton, Connecticut 06484 Toll Free: 800.352.0050 www.edrnet.com

### Certified Sanborn® Map Report

#### 3/31/14

#### Site Name:

062164-2013-1 - Oakland, CA 7600 Mac Arthur Boulevard Oakland, CA 94605

### Client Name:

Conestoga-Rovers & 8615 West Bryn Mawr Ave Chicago, IL 60631

EDR Inquiry # 3893638.3 Contact: Sean Armbrust

EDR

The Sanborn Library has been searched by EDR and maps covering the target property location as provided by Conestoga-Rovers & Associates were identified for the years listed below. The Sanborn Library is the largest, most complete collection of fire insurance maps. The collection includes maps from Sanborn, Bromley, Perris & Browne, Hopkins, Barlow, and others. Only Environmental Data Resources Inc. (EDR) is authorized to grant rights for commercial reproduction of maps by the Sanborn Library LLC, the copyright holder for the collection. Results can be authenticated by visiting www.edrnet.com/sanborn.

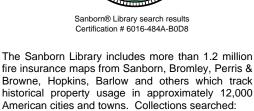
The Sanborn Library is continually enhanced with newly identified map archives. This report accesses all maps in the collection as of the day this report was generated.

#### Certified Sanborn Results:

Site Name: Address: City, State, Zip: Cross Street:	062164-2013-1 - Oakland, CA 7600 Mac Arthur Boulevard Oakland, CA 94605
P.O. #	NA
Project:	NA
Certification #	6016-484A-B0D8

#### Maps Provided:

1969	1959
1968	1952
1966	1950
1965	1926
1961	1925
1960	



Library of Congress
 University Publications of America
 EDR Private Collection

The Sanborn Library LLC Since 1866™

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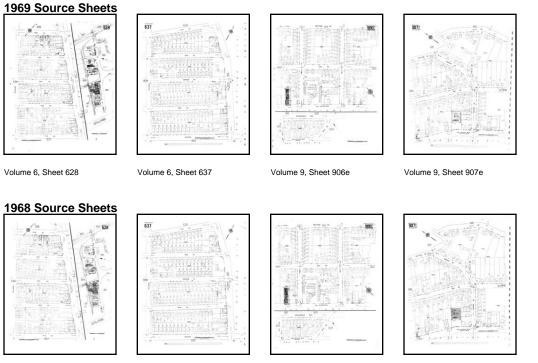
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### Sanborn Sheet Thumbnails

This Certified Sanborn Map Report is based upon the following Sanborn Fire Insurance map sheets.





Volume 6, Sheet 628

#### **1966 Source Sheets**





Volume 6, Sheet 637

Volume 6, Sheet 628

### 1965 Source Sheets



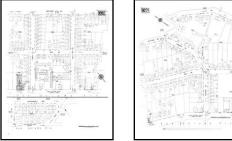
Volume 9, Sheet 906e

Volume 9, Sheet 907e

Volume 9, Sheet 906e

Volume 9, Sheet 907e

#### **1961 Source Sheets**

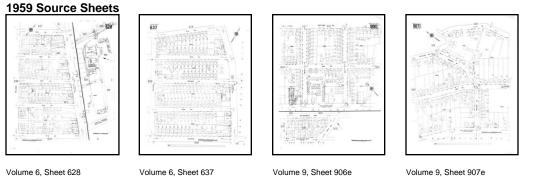


Volume 9, Sheet 906e

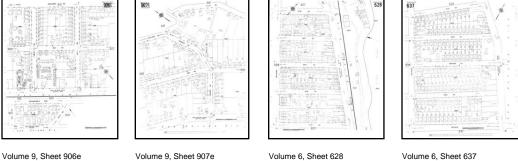
Volume 9, Sheet 907e

#### 1960 Source Sheets





#### **1952 Source Sheets**



Volume 6, Sheet 637

### 1950 Source Sheets









Volume 6, Sheet 628

Volume 6, Sheet 637

Volume 7, Sheet 746

Volume 7, Sheet 747

### 1926 Source Sheets





Volume 7, Sheet 747

#### 1925 Source Sheets

Volume 7, Sheet 746



Volume 6, Sheet 628

Volume 6, Sheet 637

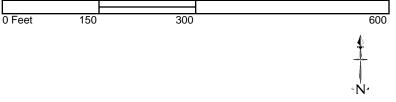


Outlined areas indicate map sheets within the collection.





Volume 6, Sheet 628 Volume 6, Sheet 637 Volume 9, Sheet 906e Volume 9, Sheet 907e



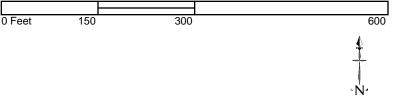


This Certified Sanborn Map combines the following sheet Outlined areas indicate map sheets within the collection.





Volume 6, Sheet 628 Volume 6, Sheet 637 Volume 9, Sheet 906e Volume 9, Sheet 907e

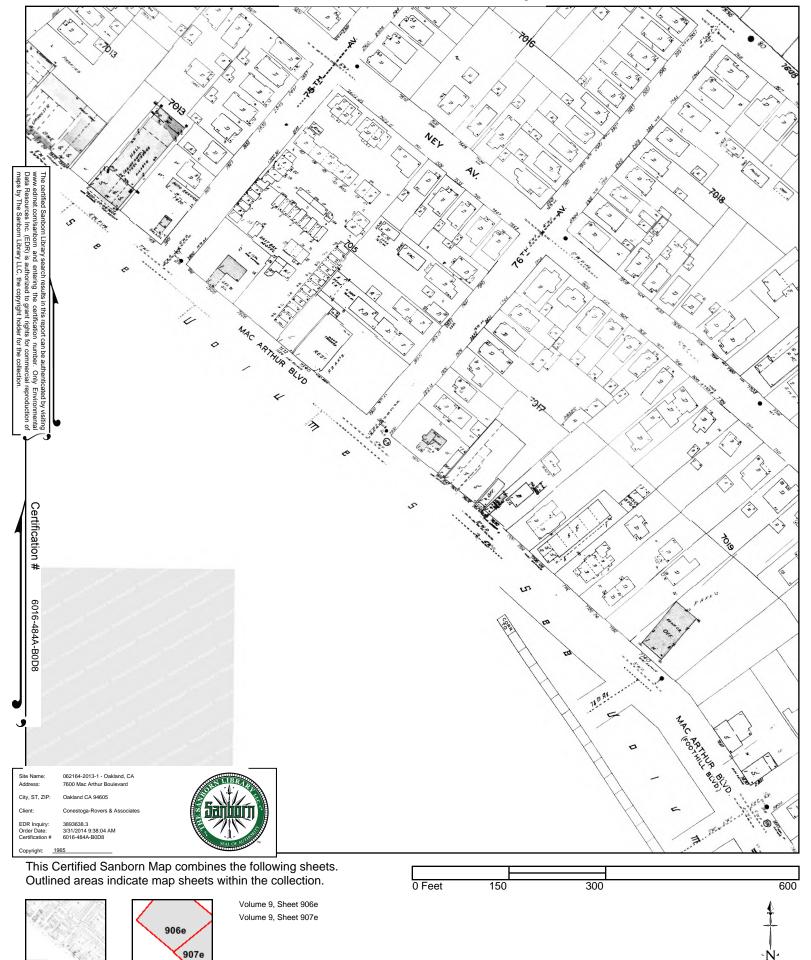


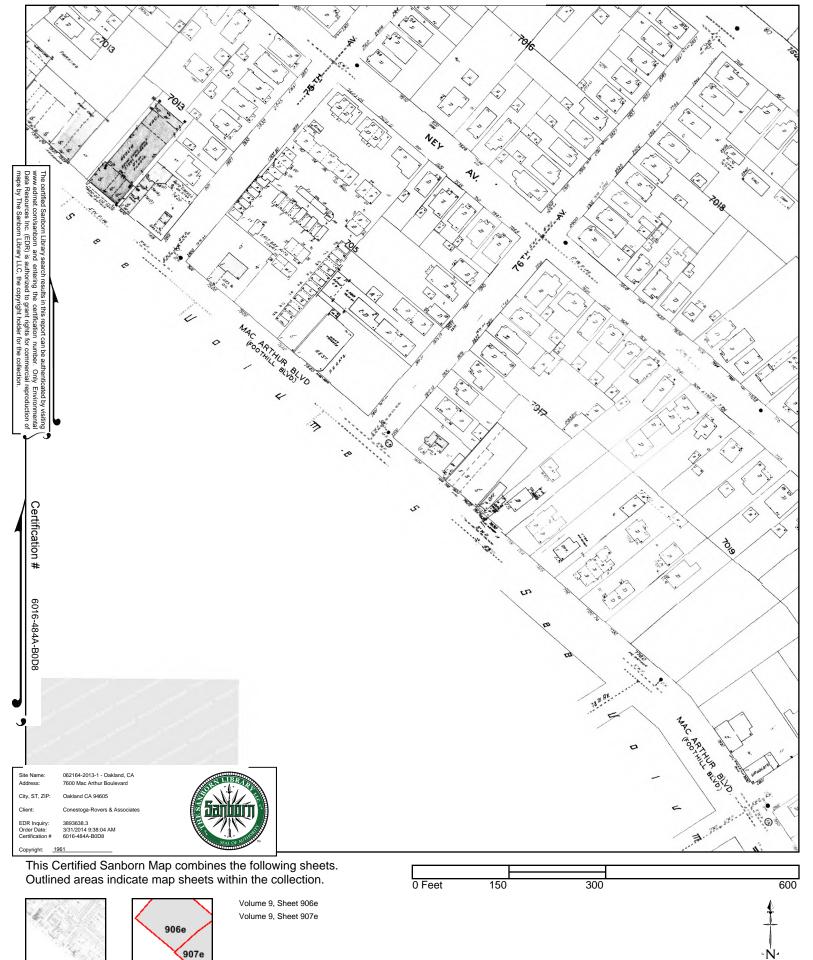


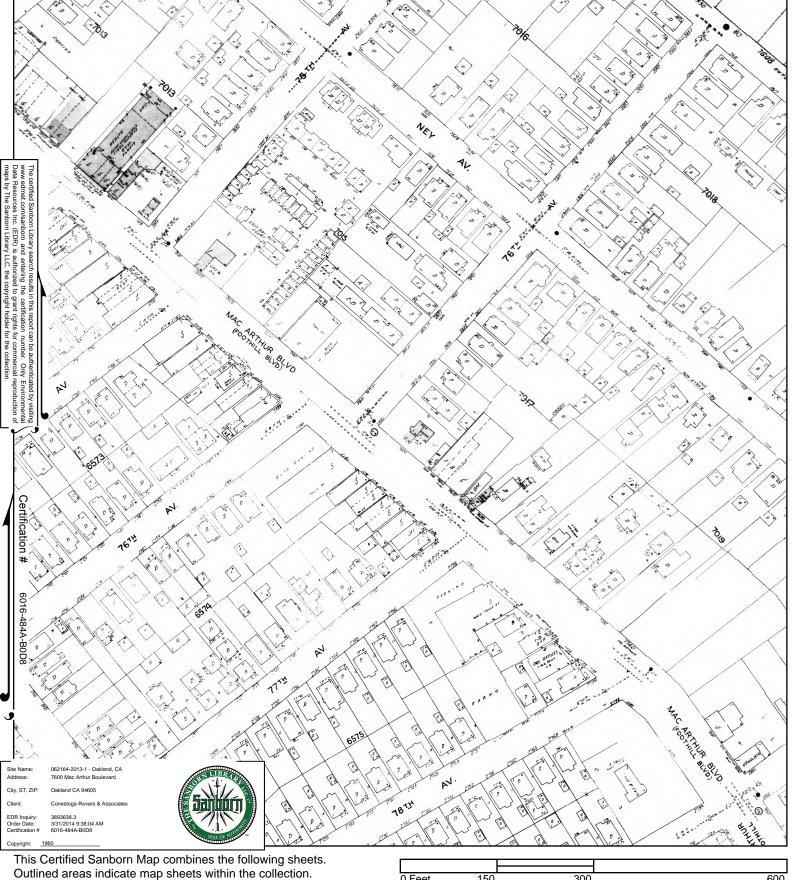




Volume 6, Sheet 628 Volume 6, Sheet 637

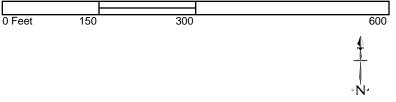








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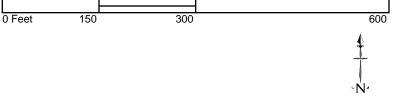


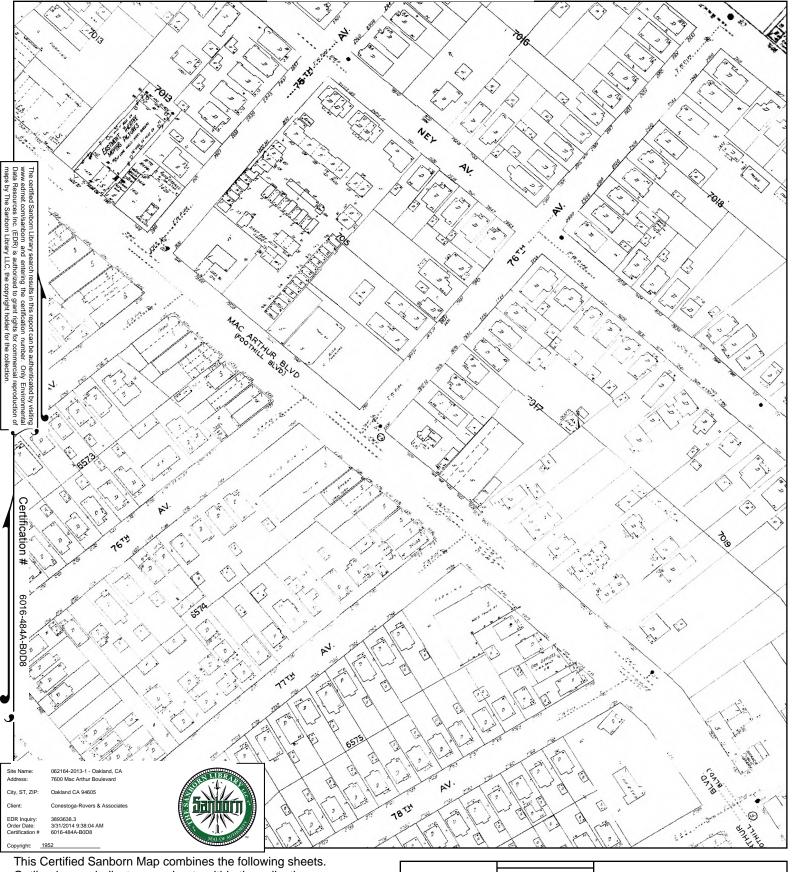






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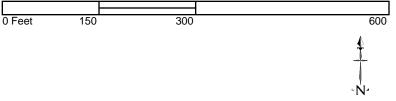


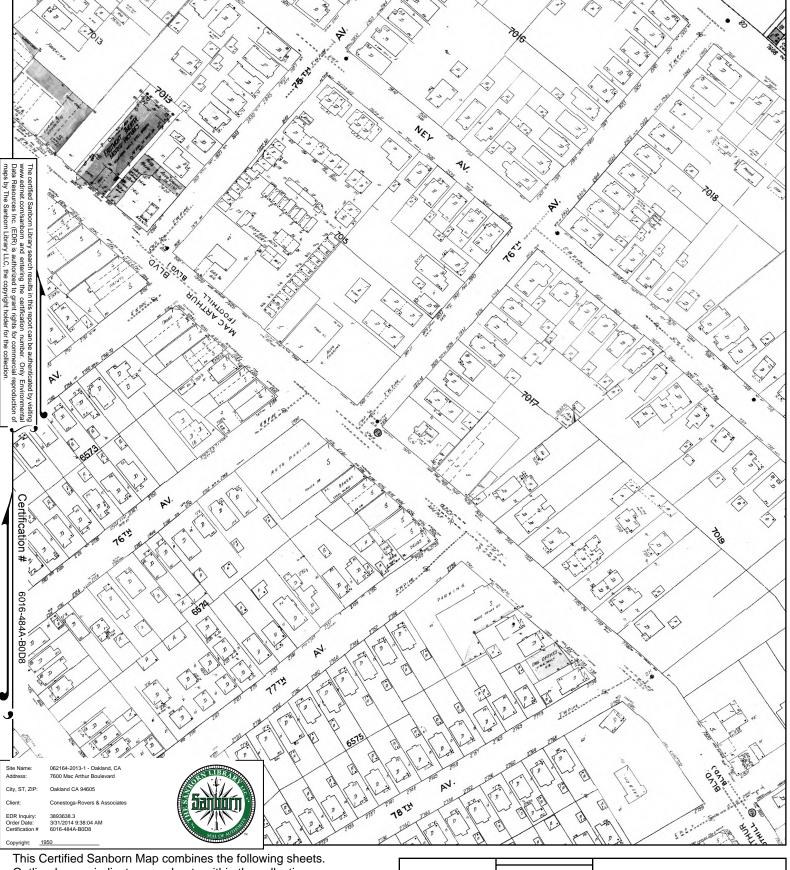
Outlined areas indicate map sheets within the collection.



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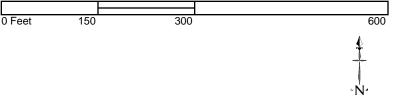


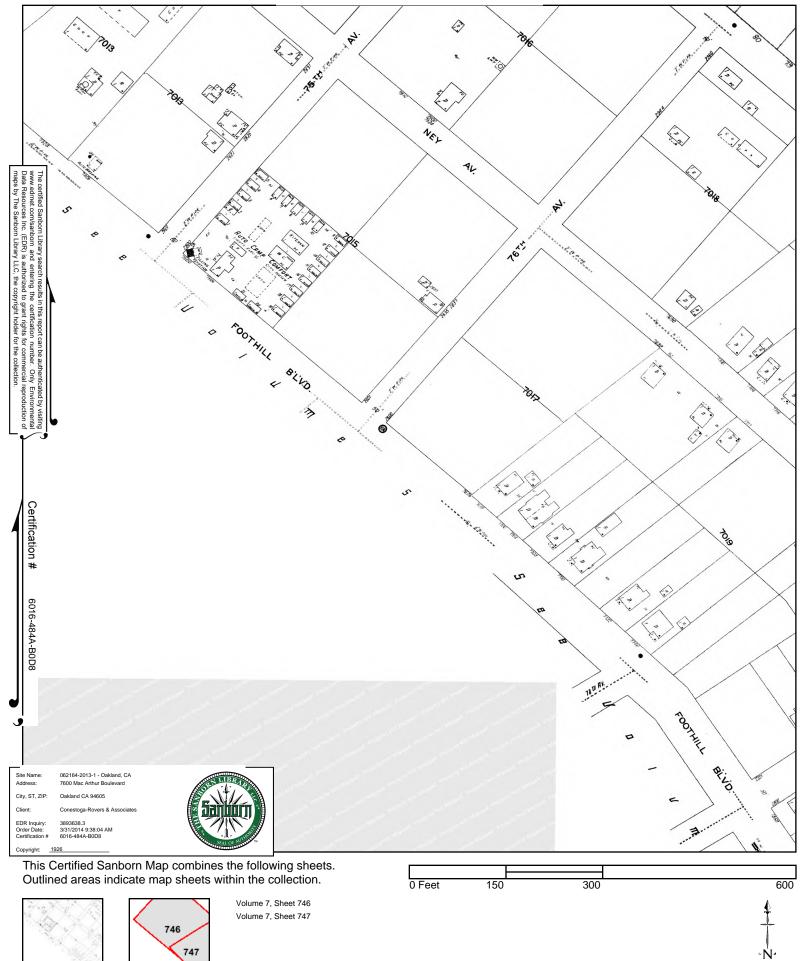
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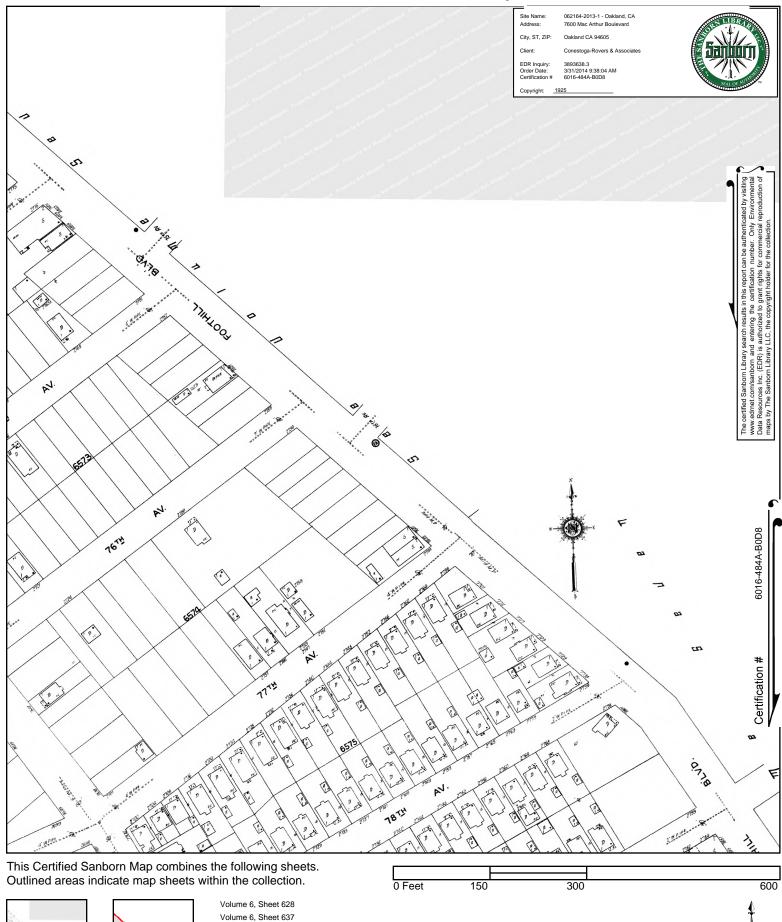




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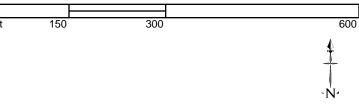








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## Attachment E

Standard Field Procedures for Soil Boring Advancement and Monitoring Well Installation



### STANDARD FIELD PROCEDURES FOR SOIL BORING ADVANCEMENT AND MONITORING WELL INSTALLATION

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.

### **DRILLING AND SAMPLING**

### 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 Unified Soil Classification System by a trained geologist working under the supervision of a California Professional Geologist (PG).

### Soil Boring and Sampling

Soil borings are typically drilled using hollow-stem augers or direct-push technologies such as the Geoprobe<sup>®</sup>. Prior to drilling, the first 8 ft of the boring are cleared using an air or water knife and vacuum extraction, or by hand auger. This minimizes the potential for impacting utilities.

Soil samples are collected at least every five feet 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°C on ice. Samples are transported under chain-of-custody to a State-certified analytical laboratory for analysis.

### 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 10 to 15 minutes, a portable volatile vapor analyzer measures volatile hydrocarbon vapor concentrations in the tube headspace, extracting the vapor through a slit in the cap. Soil may also be removed from the sample tube and placed in a plastic bag and sealed, and then the air space in the bag is measured after 10 to 15 minutes with a volatile vapor analyzer. 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<sup>®</sup> 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°C, and transported under chainof-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.

### MONITORING WELL INSTALLATION, DEVELOPMENT AND SAMPLING

### Well Construction and Surveying

Groundwater monitoring wells are installed to monitor groundwater quality and determine the groundwater elevation, flow direction and gradient. Well depths and screen lengths are based on groundwater depth, occurrence of hydrocarbons or other compounds in the borehole, stratigraphy and State and local regulatory guidelines. Well screens typically extend 5 to 15 feet below and 5 feet above the static water level at the time of drilling. However, the well screen will generally not extend into or through a clay layer that is at least three feet thick.

Well casing and screen are flush-threaded, Schedule 40 PVC. Screen slot size varies according to the sediments screened, but slots are generally 0.010 or 0.020 inches wide. A rinsed and graded sand occupies the annular space between the boring and the well screen to about one to two feet above the well screen. A two feet thick hydrated bentonite seal separates the sand from the overlying sanitary surface seal composed of Portland type I,II cement.

Well-heads are secured by locking well-caps inside traffic-rated vaults finished flush with the ground surface. A stovepipe may be installed between the well-head and the vault cap for additional security.

The well top-of-casing elevation is surveyed with respect to mean sea level and the well is surveyed for horizontal location with respect to an onsite or nearby offsite landmark.

### Well Development

Wells are generally developed using a combination of groundwater surging and extraction. Surging agitates the groundwater and dislodges fine sediments from the sand pack. After about ten minutes of surging, groundwater is extracted from the well using bailing, pumping and/or reverse air-lifting through an eductor pipe to remove the sediments from the well. Surging and extraction continue until at least ten well-casing volumes of groundwater are extracted and the sediment volume in the groundwater is negligible. This process usually occurs prior to installing the sanitary surface seal to ensure sand pack stabilization. If development occurs after surface seal installation, then development occurs 24 to 72 hours after seal installation to ensure that the Portland cement has set up correctly.

All equipment is steam-cleaned prior to use and air used for air-lifting is filtered to prevent oil entrained in the compressed air from entering the well. Wells that are developed using air-lift evacuation are not sampled until at least 24 hours after they are developed.

### **Groundwater Sampling**

Depending on local regulatory guidelines, three to four well-casing volumes of groundwater are purged prior to sampling. Purging continues until groundwater pH, conductivity, and temperature have stabilized. Groundwater samples are collected using bailers or pumps and 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°C and transported under chain-of-custody to the

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

#### Waste Handling and Disposal

Soil and groundwater generated during drilling and sampling activities is typically stored onsite in sealed 55-gallon drums. Each drum is labeled with the drum number, date of generation, suspected contents, generator identification and consultant contact. Representative samples are collected and composited and sent to the laboratory for analysis. Upon receipt of analytical results, the drums are transported to a licensed disposal facility.