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Atlantic Richfield Company

Charles Carmel
Operations Project Manager

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March 5, 2014

Re: Work Plan for Groundwater Investigation and Vapor Intrusion Assessment
Former Richfield Oil Company Station #596-A, 1900 Webster Street, Oakland, Alameda County, California, ACEH Case #RO0003100

"I declare, that to the best of my knowledge at the present time, that the information and/or recommendations contained in the attached document are true and correct.

Submitted by,

Charles Carmel
Operations Project Manager

Attachment

WORK PLAN FOR
ADDITIONAL GROUNDWATER INVESTIGATION
AND
VAPOR INTRUSION ASSESSMENT
Former Richfield Oil Company Station #596-A
1900 Webster Street
Oakland, Alameda County, California
ACEH Case #RO0003100

Prepared for:

Mr. Chuck Carmel
Atlantic Richfield Company
P.O. Box 1257
San Ramon, CA 94583

Prepared by:

Broadbent & Associates, Inc.
875 Cotting Lane, Suite G
Vacaville, California 95688
(707) 455-7290

March 5, 2014

Project No. 14-10-103

BROADBENT
875 Cotting Ln., Suite G, Vacaville, CA 95688
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broadbentinc.com

CREATING SOLUTIONS. BUILDING TRUST.

March 5, 2014

Project # 14-10-103

Atlantic Richfield Company
P.O. Box 1257
San Ramon, CA 94583
Submitted via ENFOS

Attn.: Mr. Chuck Carmel

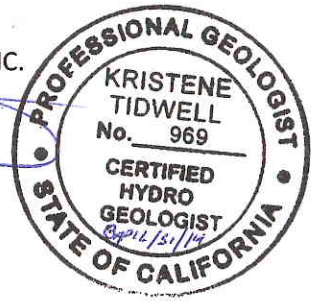
Re: Work Plan for Groundwater Investigation and Vapor Intrusion Assessment
Former Richfield Oil Company Station #596-A, 1900 Webster Street, Oakland, Alameda County, California, ACEH Case #RO0003100

Dear Mr. Carmel:

Broadbent & Associates, Inc. (Broadbent) is pleased to submit this *Work Plan forAdditional Groundwater Investigation and Vapor Intrusion Assessment* (Work Plan) on behalf of Former Atlantic Richfield Company (a BP affiliated company) for Station #596-A located at 1900 Webster Street, Oakland, Alameda County, California (Site). This Work Plan presents a description of proposed activities to install soil borings and perform a vapor intrusion assessment in order to evaluate residual petroleum hydrocarbon contamination.

Please do not hesitate to contact me at (707) 455-7290.

Sincerely,
BROADBENT & ASSOCIATES, INC.



Kristene Tidwell, P.G., C. Hg.
Senior Geologist

cc: Mr. Karel Detterman, Alameda County Environmental Health (submitted via ACEH ftp site)
Mr. Edgar M Buttner, Edgar M Buttner Trust, 121 Saint James Dr., Piedmont, CA 94611
Cheri McCaulou, San Francisco Bay Regional Water Quality Control Board, 1515 Clay Street, Suite#1400, Oakland, CA 94612
Electronic copy uploaded to GeoTracker

WORK PLAN FOR OFFSITE GROUNDWATER INVESTIGATION AND VAPOR INTRUSION ASSESSMENT

Former Richfield Oil Company Station #596-A
1900 Webster Street
Oakland, Alameda County, California
ACEH Case # RO00003100

TABLE OF CONTENTS

DRAWINGS

APPENDICES

WORK PLAN FOR OFFSITE GROUNDWATER INVESTIGATION AND VAPOR INTRUSION ASSESSMENT

Former Richfield Oil Company Station #596-A
1900 Webster Street
Oakland, Alameda County, California
ACEH Case # RO0003100

1.0 INTRODUCTION

Broadbent & Associates, Inc. (Broadbent) has prepared this *Work Plan for Offsite Groundwater Investigation and Vapor Intrusion Assessment* (Work Plan) on behalf of the Former Atlantic Richfield Company (ARC; a BP affiliated company) for Station #596-A located at 1900 Webster Street, in Oakland, Alameda County, California (Site). A Site Location Map is presented as Drawing 1.

This Work Plan was prepared in response to a letter dated October 9, 2013, from Alameda County Environmental Health (ACEH) identifying ARC as the responsible party for the investigation and cleanup of the Site. A copy of this letter is provided in Appendix A. This Work Plan proposes installing five soil borings to assess the extent of the of the residual petroleum hydrocarbon impacts to the soil. Additionally, a soil vapor assessment is proposed to evaluate risks to the potential current building occupants. A Site description, background, proposed activities and proposed schedule are presented in the following Sections.

2.0 SITE DESCRIPTION AND BACKGROUND

The Site is currently occupied by the Lake Merritt Dental and Ikon Office Solutions located on the northeast corner of Webster Street and 19th Street in Oakland, Alameda County, California (Drawing 2). The property totals approximately 0.138 acre and the building is constructed slab-on grade with no evidence of a basement or other sub-grade areas (AEI, 2011). The Site is located in a commercial area along Webster Street in central Oakland and is approximately 0.17-mile west of Lake Merrit (SCHUTZE, 2012). To the north of the Site is a Physical Therapy Innovations company and to the east of the property is an open parking lot that separates the Site from Copymat Oakland.

On May 2, 2011 AEI conducted a Phase I Environmental Site Assessment and according to their review the Site was historically occupied by a gasoline service station from approximately 1940 to 1966. The former gasoline service station was demolished and cleared in 1966, but no records were on file with the Oakland Building Department, Alameda County Environmental Health Services Department or Oakland Fire Department regarding removal of the underground storage tanks (USTs). Additionally, no documentation was found whether soil samples were collected and analyzed for presence of petroleum hydrocarbon contamination following the demolition of the station (AEI, 2011).

On July 20, 2011, AEI advanced three soil borings (SB-1 through SB-3) and collected five soil and three groundwater samples from all three locations, which the locations can be seen on Drawing 2. Total Petroleum Hydrocarbons as Gasoline (TPH-g) in soil was reported in samples SB-3-16 and SB-3-20 at concentrations of 8.3 milligrams per kilograms (mg/kg) and 42 mg/kg, respectively. Total Petroleum Hydrocarbons as Diesel (TPH-d) in soil was reported in SB-2-16, SB-3-16, SB-3-20 at concentrations of 7.7 mg/kg, 6.5 mg/kg and 8.7 mg/kg, respectively. Total Petroleum Hydrocarbons as Motor Oil (TPH-mo) in soil was reported above laboratory reporting limit in SB-2-16 at a concentration of 25 mg/kg. TPH-g and TPH-d in groundwater samples were reported at 59,000 micrograms per liter (µg/L) and 200,000 µg/L respectively in SB-3. Historic soil and groundwater laboratory analytical results from this investigation are included in Appendix B (AEI, 2011).

On August 22, 2012, SCHUTZE & Associates, Inc. (SCHUTZE) performed a Limited Phase II Subsurface Investigation by advancing two soil borings to 16.5 and 18 ft bgs in the interior of the south tenant space. TPH-g was detected in groundwater samples B1-18-W and B2-16.5-W at respective concentrations of 400 and 6,000 µg/L. TPH-d was detected in groundwater samples B1-18-W and B-2-16.5-W at respective concentrations of 1,100 and 3,800 µg/L. Ethylbenzene and Xylenes were detected in the groundwater sample from B2-16.5-W at concentrations of 210 and 680 µg/L, respectively. Benzene, toluene and MTBE were not detected in soil and groundwater samples. The results from this Limited Phase II Subsurface Investigation can be found in Appendix B (SCHUTZE, 2012).

3.0 GEOLOGY AND HYDROGEOLOGY

3.1 Regional Setting

According to the United States Geological Survey (USGS) San Francisco Bay Quadrangle Geologic Map, the area surrounding the subject property is underlain by Holocene era alluvium which is commonly characterized by light-grey to grayish-brown or yellowish-brown gravel, sand, silt and clay. Texture varies from cobble gravel to clay, mixed or interbedded laterally and vertically in places (AEI, 2011).

Based on a review of the USGS Oakland West, CA Quadrangle Topographic Map, the Site property is situated approximately 27 feet above mean sea level, and the local topography slopes to the north-northeast. The nearest surface water is Lake Merritt, located approximately 0.18 miles east of the property (AEI, 2011).

According to the *East Bay Plain Groundwater Basin Beneficial Use Evaluation Report* (California Regional Water Quality Control Board – San Francisco Bay Region/SFRWQCB, June 1999), the Site is located within the Oakland Sub-Area of the East Bay Plain of the San Francisco Basin. The Oakland Sub-Area contains a sequence of alluvial fan deposits. The alluvial fill thickness ranges from 300 to 700 feet deep and there are no well-defined aquitards such as estuarine muds. The largest and deepest wells in this sub-area have historically pumped one to two million gallons per day at depths greater than 200 feet. Overall, sustainable yields are low due in part to low recharge potential. The Merrit sand in West Oakland was an important part of the early water supply for the City of Oakland. It is shallow (up to 60 feet), but before the turn of the last century, septic systems contaminated the water supply wells.

Throughout most of the Alameda County portion of the East Bay Plain, from Hayward north to Albany, water level contours show that the general direction of groundwater flow is from east to west or from the Hayward Fault to the San Francisco Bay. Groundwater flow direction generally correlates to topography. Flow direction and velocity are also influenced by buried stream channels that typically are oriented in an east to west direction.

3.2 Site-Specific Conditions

Based on the reports by AEI and SCHUTZE, groundwater was encountered at an approximate depth range of 13.5 bgs in B-1 to 21.36 bgs in SB-3. The groundwater gradient direction associated with the Site is unable to be determined with given information but it can be inferred that it is possibly flowing to the north-northeast direction due to the topography sloping to the northeast direction as mentioned above. Based on review of geologic boring logs by AEI, soil beneath the Site encountered consisted of fine to medium grained poorly graded sand, clayey sands, sandy silt and clay. First-encountered groundwater was in the clayey silt layer located 15 bgs. Soil Boring logs are presented in Appendix C.

4.0 PROPOSED SOIL BORING INSTALLATION ACTIVITIES

The purpose of this proposed investigation is to collect data in order to further evaluate current subsurface Site conditions including the presence and extent of residual hydrocarbon impacts in soil and groundwater. The objectives are to collect high quality and representative data to achieve this purpose.

The current magnitude and extent of the impact of the surrounding area are not able to be determined from the results from the previous investigations. In order to characterize the extent of the impact, five new soil borings (SB-4 thru SB-7) are being proposed. The proposed soil borings will help assess the upgradient and downgradient extent of the plume. The proposed new soil boring locations are presented in Drawing 3. These soil boring locations are tentative and are subject to change due to access and utility clearance.

4.1 Preliminary Activities, Local Permitting, and Notification

Prior to initiating field activities, Broadbent will obtain the necessary drilling and well permits from Alameda County Public Works Agency (ACPWA), prepare a site-specific Health and Safety Plan (HASP) for the proposed work and clear the proposed boring locations of conflicts with subsurface utilities. The utility clearance will include notifying Underground Service Alert (USA) of the pending work a minimum of 48 hours prior to initiating the field investigation, utilizing a private utility locator to additionally clear boring locations of underground utilities. Boreholes will be physically cleared to 6.5 feet bgs using hand auger or air knife methods consistent with BP's and Broadbent's Defined Practice for Ground Disturbance.

The Site-specific HASP will be prepared for use by field personnel implementing this Work Plan. The HASP will address hazards associated with drilling activities and potential exposure pathways, which project personnel may encounter during proposed soil boring installation. A copy of the HASP will be available on-site during work. The subcontractor(s) performing field activities will be provided with a copy of the HASP prior to initiating work and daily safety tailgate meetings will also be conducted to review hazards and drilling safety associated with execution of the work.

4.2 Soil Borings

The proposed borings will be completed under the direct supervision of Broadbent field personnel. A California C-57 licensed drilling company will provide a drill rig equipped with direct push drilling technology for soil boring installation. The borings will be advanced to an approximate total depth of 20 to 25 ft bgs, based on first encountered water from the historic soil boring logs. Each boring will be direct pushed and inspected for lithology, presence of first-encountered groundwater and identification of potential contamination. Select soil samples will be collected at the capillary fringe, and up to two feet below the first encountered water in order to account for historic changes in water level. Additionally, shallow soil sampling (approximately 3 and 7 feet bgs) will be conducted for the proposed borings near the source area (SB-6; Drawing 3). All soil samples will be submitted for laboratory analytical testing. Soil cores will be classified according to the Unified Soil Classification System (USCS), and will be additionally logged using visual and manual methods for parameters including odor, staining, color, grain size, and moisture content. Field screening for hydrocarbons will include use of a photo-ionization detector (PID) measurements. Collected soil sample cores will be sealed with Teflon sheets, capped, and placed in a chilled cooler. Samples will be then be submitted to TestAmerica Laboratory

(TestAmerica) of Irvine, California, a state-certified analytical laboratory, under standard chain-of-custody protocol.

One grab-groundwater sample will be collected from each borehole to capture first encountered groundwater. These samples will be collected using a hydropunch-type sampler. If slow groundwater recharge is encountered, an open-hole groundwater sample will be collected. Groundwater samples will be decanted from the sampling device (tubing or small bailer) into laboratory-supplied containers, capped, and placed in a chilled cooler. Samples will be then be submitted to TestAmerica under standard chain-of-custody protocol.

Soil and groundwater samples will be analyzed for the following: Gasoline-Range Organics (GRO, C6-C12) and Diesel-Range Organics (DRO, C10-C28) by EPA Method 8015M; Benzene, Toluene, Ethylbenzene, Total Xylenes (BTEX), Naphthalene,
Methyl Tertiary butyl Ether (MTBE), Tertiary-amyl methyl ether (TAME), Ethy tertiary-butyl ether (ETBE), Diisopropyl ether (DIPE) and Tertiary-butyl alcohol (TBA) by EPA Method 8260B.

Excess soil and water produced during investigation activities will be temporarily stored on-site in 55-gallon drums, pending characterization for proper disposal. Broadbent will coordinate the transportation and disposal of all IDR to the appropriate California-regulated facilities.

5.0 PROPOSED VAPOR INTRUSION ASSESSMENT ACTIVITIES

The purpose of this proposed vapor intrusion assessment is to collect data in order to evaluate current subsurface Site conditions including the presence and extent of residual hydrocarbon impacts in soil vapor. The objectives are to collect high quality and representative data to achieve this purpose.

The proposed soil vapor points are to determine whether there is a vapor intrusion risk associated with the historic release. In order to evaluate this potential risk, one soil vapor location with two soil vapor probe points at two different depths is proposed (Drawing 3). The location of the proposed soil vapor points have been specifically selected to evaluate the risk to current building tenants. All soil vapor sampling activities will be performed in accordance with The California Department of Toxic Substances Control's (DTCS's) *Advisory – Active Soil Gas Investigations* (DTSC, 2012)**.**

5.1 Preliminary Activities, Local Permitting, and Notification

Broadbent will carry out preliminary field activities that will include obtaining the necessary permits for soil vapor probes from ACPWA, the proposed work in the site-specific HASP and clearing the proposed installation locations of conflicts with subsurface utilities. The utility clearance will include notifying Underground Service Alert (USA) of the pending work a minimum of 48 hours prior to initiating the field investigation, and procuring the services of a private utility locating company to confirm the absence of underground utilities at each soil vapor probe location. Soil vapor probe locations will be physically cleared using a hand auger or air knife methods consistent with BP's and Broadbent's Defined Practice for Ground Disturbance.

Concurrent with preliminary activities, a survey of the Site building will be performed in order to determine any vapor intrusion risk associated with potential residual hydrocarbons in soil vapor. The survey will include reviewing available building plans, foundation characteristics, floor integrity, and building ventilation characteristics. This data gathered will be included in the assessment of potential vapor intrusion risks to onsite tenants.

5.2 Soil Vapor Probe Borings

Two soil vapor probes will be installed at the location shown in Drawing 3: An "A" soil vapor probe will be constructed with the probe installed at 3.5 ft bgs, and a "B" soil vapor probe will be constructed with the probe installed at 5.5 ft bgs. The two depth intervals are being proposed in order to assess the potential bioattenuation of residual hydrocarbons in soil vapor. Specific bioattenuation indicator parameters will be measured in each interval to determine the presence and length of any zone of bioattenuation.

In lieu of nested multi-level wells, each soil vapor boring will be constructed to a specific depth within its own boring, thus minimizing the potential for short-circuiting. Therefore there will be a SG-1A and SG-1B in front of the building in order to quantify risks to current building occupants. This location is intended to evaluate risk to the residences of the building. Each probe will be horizontally separated by at least three feet at each location. Proposed soil vapor probe boring locations are shown in Drawing 3.

5.3 Soil Vapor Probe Construction

Soil vapor probes will be constructed by attaching a 6-inch long soil vapor probe tip to a 0.125-inch diameter nylon tubing (i.e. NylaFlow) extending approximately two feet above the surface. The soil vapor probe tips will be constructed of double-woven stainless steel wire screen with a 0.057-inch pore diameter, equipped with stainless-steel end fittings. Each soil vapor probe will be embedded within the middle of a one-foot thick sand filter pack of #2/12 sorted sand, topped with one-half foot of dry powdered Bentonite clay below a minimum of one-half foot of hydrated powdered Bentonite clay, and completed with a traffic-rated well vault at the surface set with neat cement concrete surface seal to match the existing grade. Care will be taken to prevent the tubing and Swagelok fittings at their ends from being damaged or kinked when coiled back into the well vaults.

5.4 Soil Vapor Probe Sampling

Sampling will occur at least one month after installation of the soil vapor probes to allow them time for the concrete to cure and the disturbed subsurface conditions to equilibrate. In addition, soil vapor sampling shall not be performed during or immediately after a rainfall event of 0.5 inches or more. If a rainfall event of this magnitude occurs within 24 hours of the scheduled soil vapor sampling activities, the field work shall be rescheduled.

After setting up a secure and barricaded work area, the soil vapor sampling train will be assembled. The Swagelok fitting at the end of the implant's tubing will be connected to an inline vacuum gauge with a tee then to a 100-cubic centimeter (cc) calibrated syringe with three-way valve at the tip. Coming off the tee for the sample will be a one-liter Summa canister, supplied by the laboratory under high vacuum (-30 inches Mercury, in. Hg) and leak checked and batch-certified to be free of contaminants. With the valve of the soil vapor probe closed and the valve to the Summa canister closed, the sampling train will be checked for leaks during a "shut-in" leak test by applying with the calibrated syringe a vacuum of -15 in.Hg for a period of five minutes (-15 in.Hg is fifty percent above the standard threshold of -10 in.Hg considered representative of "No Flow" conditions). When the applied vacuum does not drop during the shut-in test, the sampling train assembly will be considered leak-tested tight.

After the shut-in leak test, the closed valve of the soil vapor probe will be opened and the sampling train slowly purged of one calculated interior volume using the calibrated syringe. The calculated interior volume shall include the aboveground tubing and appurtenances and below-ground tubing and probe tip, but not the pore space within the filter pack. The main purpose in waiting to sample for at least one month after installation is to allow the soil vapor in the fine sand filter pack to equilibrate to the soil vapor in the undisturbed soil surrounding the implant location. In the tight permeable soils anticipated to be encountered at this Site, the first soil vapor drawn in from outside the implant tubing will be most representative and likely contain higher concentrations than would be encountered through excessive purging.

Following the completion of purging, a clear-plastic shroud will be setup over the sampling train to contain the chemical tracer/leak-check compound (i.e. Helium gas) that will be released within. The shroud will be placed to completely cover the soil vapor sampling implant wellhead, its aboveground tubing, and the tubing, fittings, and sample Summa canister that will make up the sampling train. Once setup, Helium gas will be released via tubing under the shroud. A Radiodetection Model MGD-2002 Helium detector (or equivalent) will be used to monitor the concentration within the shroud by placing its sensor probe within. Prior to and during sampling, a positive-pressure concentration of approximately 20 percent Helium will be maintained within the shroud using the compressed gas cylinder's flow regulator. Helium concentrations within the shroud will be recorded in the field notes at one-minute intervals.

Once a positive-pressure Helium atmosphere is created under the shroud, the valve to the Summa canister will be opened and the sample collected. The sampling rates into the Summa canisters will be fixed by laboratory-supplied critical orifice assemblies (i.e. mini flow regulators) with a 0.0060 inch orifice allowing approximately 200 standard cc per minute (cc/min). Samples will be collected into the Summa canisters until the vacuum has dropped from the initial laboratory-supplied vacuum of -30 in.Hg to -5 in.Hg. Sample start times, end times, starting vacuums, ending vacuums and Helium concentrations during sampling will be recorded in the field notes.

5.5 Laboratory Analysis of Soil Vapor Samples

Collected samples will be submitted to a state-certified analytical laboratory under standard chain-of-custody protocol. At the laboratory, soil vapor samples will be analyzed for GRO by EPA Method TO-3 and for BTEX, Naphthalene and MTBE by EPA Method TO-15. Soil vapor samples will also be analyzed for Oxygen (O_2) and Argon, Carbon Dioxide (CO_2), Methane (CH_4), and Helium (tracer/leak-check compound) by Modified ASTM D-1946. Laboratory analyses for soil vapor samples will be performed in accordance with EPA standard holding times for Summa canisters.

6.0 INVESTIGATION REPORTING

Upon completion of field activities described above and compilation of field data, a report will be prepared and submitted to ACEH and the State GeoTracker database (including the required individual GeoTracker upload files). A *Soil Investigation and Vapor Assessment Report* will be prepared summarizing the soil boring and soil vapor probe installation. The report will document fieldwork and analytical data and will include the following information:

- Scope of Work
- Lithologic boring/well construction logs (GEO_BORE files)

- Site map showing soil boring and soil vapor probe locations (GEO_MAP file)
- Location survey data for the soil vapor probes (GEO_XY and GEO_Z files)
- Text and tabulated investigation results (GEO_WELL files)
- Laboratory reports and chain-of-custody records (EDFs)
- Significance of detected petroleum hydrocarbons
- Recommendations for future activities, if warranted

Recommendations for the next phase of work, if applicable, will be included in this report, as noted above. These recommendations may include, but are not limited to, a preferential pathway study, further downgradient groundwater assessment, vertical assessment of petroleum hydrocarbons in groundwater and additional soil vapor sampling. These recommendations, and any others, will be carefully considered upon completion of the scope of work proposed herein.

7.0 PROPOSED SCHEDULE

The proposed schedule for the work described above shall proceed as follows:

- Soil Boring Installation – Soil boring installation activities will begin immediately and are anticipated to be completed within 75 calendar days following approval of this Work Plan.
- Vapor Intrusion Assessment – Soil vapor probe installation and sampling activities will begin immediately and are anticipated to be completed within 75 calendar days following approval of this Work Plan.
- Soil Investigation and Vapor Intrusion Assessment Report – A summary report of soil vapor probe installation and sampling activities is proposed to be submitted within 45 calendar days following completion of the soil boring and soil vapor probe installation activities, above (i.e., within 120 calendar days of Work Plan approval).

8.0 LIMITATIONS

Broadbent will do its best to alert the client of matters which, in the opinion of Broadbent, require immediate attention to protect public health, safety and the environment. Broadbent will make every effort to advise the client of matters which should be reported to government regulatory agencies. However, the client is solely responsible for reporting such matters, and Broadbent shall not be held liable in the event that the proper agency is not notified. Our services will be performed in accordance with generally accepted practice at the time work commences. Results and recommendations will be based on review of available documentation and written or verbal correspondence with appropriate regulatory agencies, laboratory results, observations of field personnel and the points investigated. No warranty is expressed or implied.

9.0 REFERENCES

ACEH, October 9, 2013. *Notice of Responsibility.* Submittted to Mr. Chuck Carmel for Atlantic Richfield Company, by Mr. Ariu Levi.

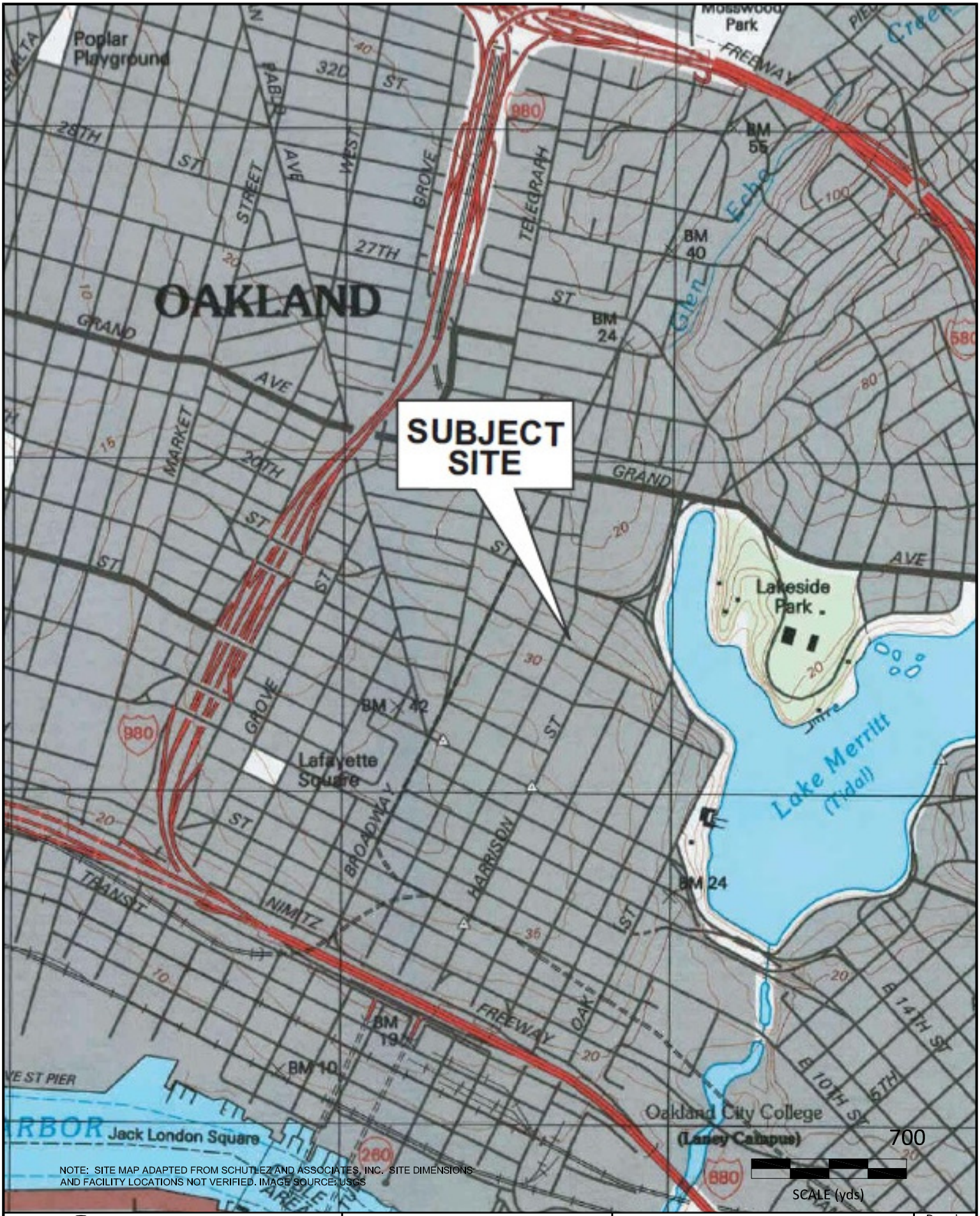
AEI Consultants, Inc., August 8, 2011. Phase II *Subsurface Investigation,* 1900 Webster Street, Oakland, California. Prepared for Dr. Farah Rana.

SCHUTZE & Associates, Inc., September 21,2012. *Phase I Environmental Site Assessment and Limited Phase I Subsurface Investigation,* 1900 Webster Street, Oakland, California. Prepared for Mr. Ted Buttner.

R.W. Graymer, 2000, Geologic map and map database of the Oakland metropolitan area, Alameda, Contra Costa, and San Francisco Counties, California: U.S. Geological Survey Miscellaneous Field Studies MF–2342, scale 1:50,000. (Available at http://pubs.usgs.gov/mf/2000/2342/.)

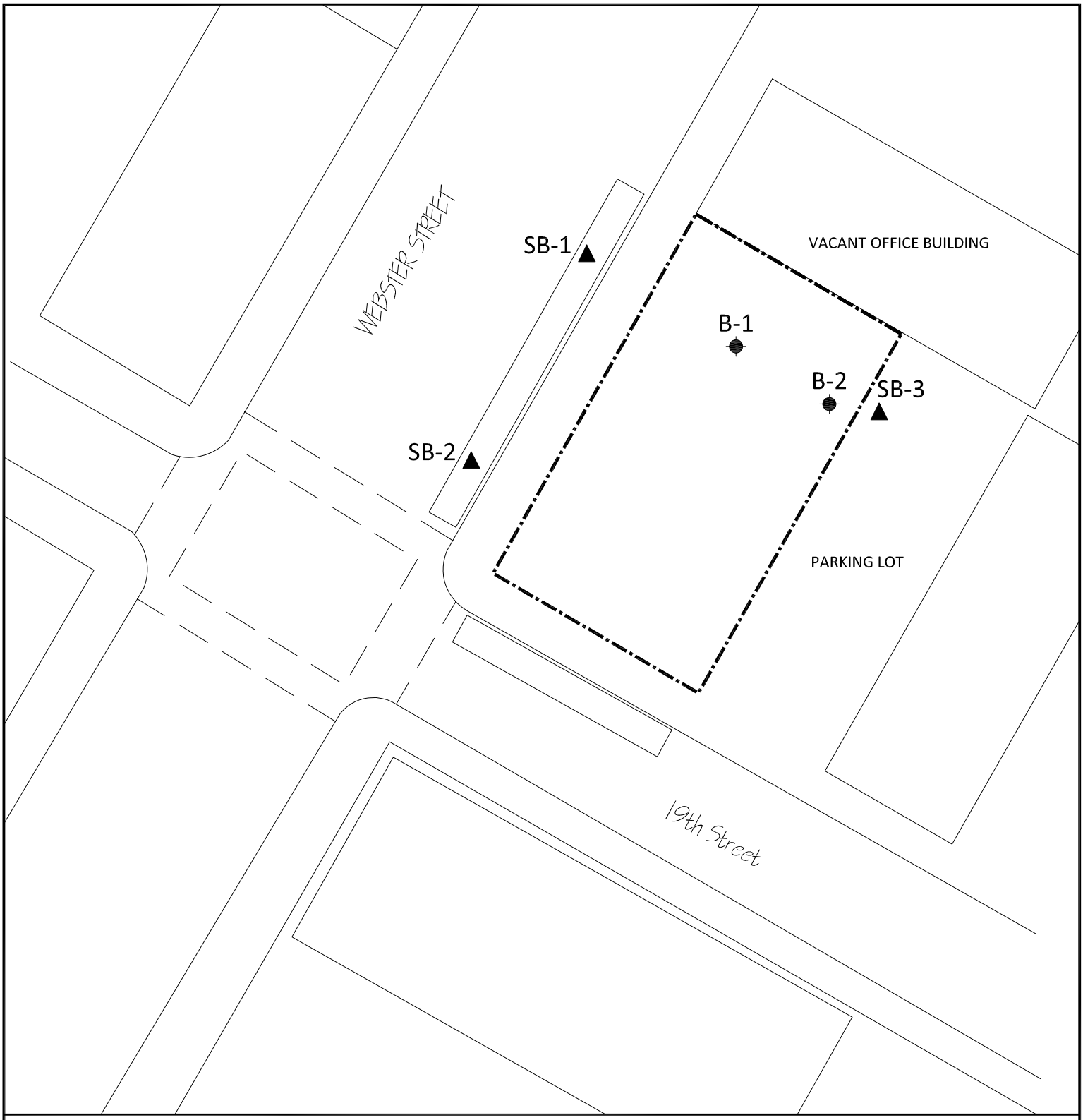
Regional Water Quality Control Board, San Francisco Bay Region, Groundwater Committee, June 1999. *Easy Bay Plain Groundwater Basin Beneficial Use Evaluation Report, Alameda and Contra Costa Counties, CA.*

California Department of Toxic Substances Control (DTSC), April 2012. *Advisory – Active Soil Gas Investigastions.*



NOTE: SITE MAP ADAPTED FROM SCHUTLEZ AND ASSOCIATES, INC. SITE DIMENSIONS AND FACILITY LOCATIONS NOT VERIFIED. IMAGE SOURCE: USGS

BROADBENT 875 Cotting Ln, Suite G Vacaville, California 95688 Project No.: 14-10-103 Date: 1/28/2014	Station #596-A 1900 Webster Street Oakland, California	Site Location Map	Drawing 1



LEGEND

- 2011 AEI Soil Boring Locations
- 2012 AEI Soil Boring Locations
- Subject Property

0 40 80

SCALE (ft)

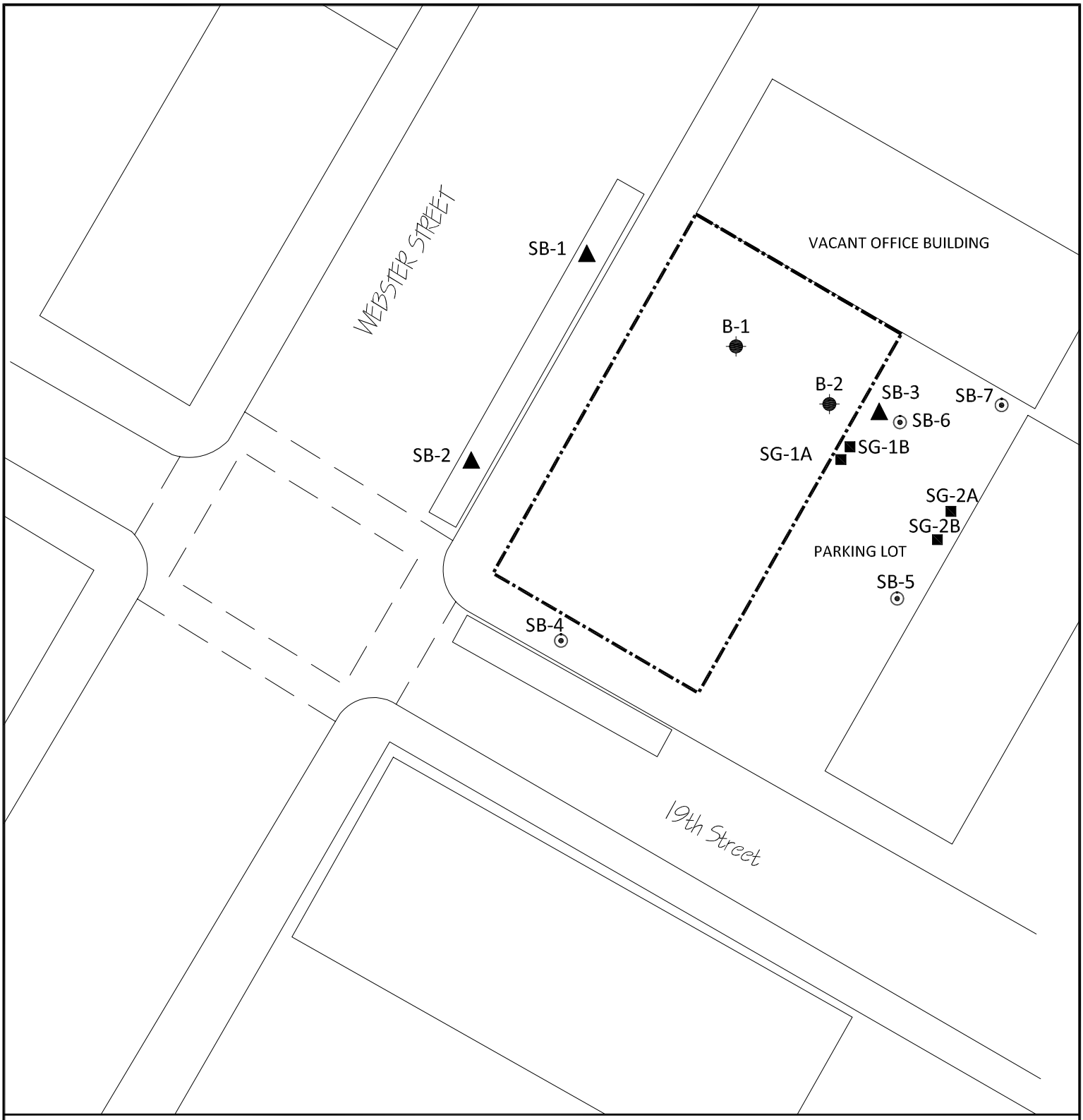
N

BROADBENT
875 Cotting Ln, Suite G
Vacaville, California 95688
Project No.: 14-10-103 Date: 01/28/14

Station #596-A
1900 Webster Street
Oakland, California

Site Map with Historic Boring Locations

Drawing
2



LEGEND

- 2011 AEI Soil Boring Locations
- 2012 AEI Soil Boring Locations
- Proposed Soil Boring Locations
- Proposed Soil Vapor Points Locations
- Subject Property

0 40 80

SCALE (ft)

N

BROADBENT
875 Cotting Ln, Suite G
Vacaville, California 95688
Project No.: 14-10-103 Date: 01/28/14

Station #596-A
1900 Webster Street
Oakland, California

Site Map with
Proposed Soil Borings and
Soil Vapor Points

Drawing
3

APPENDIX A

Copy of Alameda County Environmental Health Letter

ALAMEDA COUNTY
HEALTH CARE SERVICES

AGENCY

ENVIRONMENTAL HEALTH DEPARTMENT
OFFICE OF THE DIRECTOR
1131 HARBOR BAY PARKWAY
ALAMEDA, CA 94502-6577
(510) 567-6700
FAX (510) 337-9335

Certified Mail #: 7009 2820 0001 4359 7634

October 9, 2013

NOTICE OF RESPONSIBILITY

Site Name & Address:
BUTTNER PROPERTY
1900 WEBSTER ST
OAKLAND, CA 94612

Local ID: **RO0003100**
Related ID: **NA**
RWQCB ID: **NA**
Global ID: **T10000004348**

Responsible Party:

CHUCK CARMEL
ARCO
PO Box 1257
SAN RAMON CA 94583

Date First Reported: 8/9/2012
Substance: 12034, 8, 8006619 Multiple Releases
Funding for Oversight: LOPS - LOP State Fund
Multiple RPs?: Yes

Pursuant to sections 25297.1 and 25297.15 of the Health and Safety Code, you are hereby notified that the above site has been placed in the Local Oversight Program and the individual(s) or entity(ies) shown above, or on the attached list, has (have) been identified as the party(ies) responsible for investigation and cleanup of the above site. Section 25297.15 further requires the primary or active Responsible Party to notify all current record owners of fee title before the local agency considers cleanup or site closure proposals or issues a closure letter. For purposes of implementing section 25297.15, this agency has identified EDGAR M BUTTNER TRUST as the primary or active Responsible Party. It is the responsibility of the primary or active Responsible Party to submit a letter to this agency, within 20 calendar days of receipt of this notice that identifies all current record owners of fee title. It is also the responsibility of the primary or active Responsible Party to certify to the local agency that the required notifications have been made at the time a cleanup or site closure proposal is made or before the local agency makes a determination that no further action is required. If property ownership changes in the future, you must notify this local agency within 20 calendar days from when you are informed of the change.

Any action or inaction by this local agency associated with corrective action, including responsible party identification, is subject to petition to the State Water Resources Control Board. Petitions must be filed within 30 days from the date of the action/inaction. To obtain petition procedures, please FAX your request to the State Water Board at (916) 341-5808 or telephone (916) 341-5752.

Pursuant to section 25296.10(c)(6) of the Health and Safety Code, a responsible party may request the designation of an administering agency when required to conduct corrective action. Please contact this office for further information about the designation process.

Please contact your caseworker Karel Detterman, at this office at (510) 567-6708 if you have questions regarding your site.

Date: 10/9/13

ARIU LEVI, Director
Contract Project Director

Action: Add
Reason: NEW

Attachment A: Responsible Parties Data Sheet

cc: Sally Meza, SWRCB (email: smeza@waterboards.ca.gov) | Donna Drogos (email: donna.drogos@acgov.org), File

ALAMEDA COUNTY ENVIRONMENTAL HEALTH
LUFT LOCAL OVERSIGHT PROGRAM

ATTACHMENT A - RESPONSIBLE PARTIES DATA SHEET

October 9, 2013

Site Name & Address:
BUTTNER PROPERTY
1900 WEBSTER ST
OAKLAND, CA 94612

Local ID:	**RO0003100**
Related ID:	**NA**
RWQCB ID:	**NA**
Global ID:	**T10000004348**

All Responsible Parties

RP has been named a Primary RP - EDGAR M BUTTNER
EDGAR M BUTTNER TRUST
121 SAINT JAMES DR | PIEDMONT, CA 94611-3603 | Phone (925) 862-2019

RP has been named a Primary RP -
WEBSTER EQUITY, LLC
1440 BROADWAY, SUITE 405 | OAKLAND, CA 94612--202 | No Phone Number Listed

RP has been named a Primary RP - CHUCK CARMEL
ARCO
PO Box 1257 SAN RAMON CA 94583 | No Phone Number Listed

Responsible Party Identification Background

Alameda County Environmental Health (ACEH) names a "Responsible Party," as defined under 23 C.C.R Sec. 2720. Section 2720 defines a responsible party 4 ways. An RP can be:

1. "Any person who owns or operates an underground storage tank used for the storage of any hazardous substance."

2. "In the case of any underground storage tank no longer in use, any person who owned or operated the underground storage tank immediately before the discontinuation of its use."

3. "Any owner of property where an unauthorized release of a hazardous substance from an underground storage tank has occurred."

4. "Any person who had or has control over an underground storage tank at the time of or following an unauthorized release of a hazardous substance."

ACEH has named the responsible parties for this site as detailed below.

ATTACHMENT A - RESPONSIBLE PARTIES DATA SHEET (Continued)

October 9, 2013

Responsible Party Identification

Existence of Unauthorized Release

In July 2011 three soil borings were advanced around the site building. Concentrations up to 42 parts per million (ppm) Total Petroleum Hydrocarbons as gasoline (TPHg), 8.7 ppm Total Petroleum Hydrocarbons as diesel (TPHd), and 25 ppm Total Petroleum Hydrocarbons as motor oil (TPHmo) were detected in soil samples from the borings and 59,000 parts per billion (ppb) TPHg and 200,000 ppb TPHd were documented in grab groundwater samples from the borings. These detections in soil and groundwater indicate that an unauthorized release has occurred from the underground storage tank (UST) system at the site.

Responsible Part Identification:

A 1939 permit was issued to demolish the on-site residence and build a gasoline service station. Historical city directories list the subject site as a Richfield Service Station from 1940 through 1966. The Richfield Oil Corporation was succeeded by Atlantic Refining Company, Atlantic Richfield Company (ARCO), and then BP. BP, as a successor to the Richfield Oil Company, is a responsible party because they owned or operated an underground storage tank used for the storage of any hazardous substance (Definition 1), they owned and operated the USTs immediately before the discontinuation of their use (Definition 2), and had control of USTs at the time of or following an unauthorized release (Definition 4).

Ownership of the property was maintained by the individual, trustee, or the trust of Edgar M. Buttner from June 1968 to October 2012. The individual, trustee, or the trust of Edgar M. Buttner is a responsible party for the site because they owned the property where an unauthorized release of a hazardous substance from a UST occurred (Definition 3).

The Webster Equity, LLC purchased the property in October 2012. The Webster Equity, LLC is a responsible party because they own a property where an unauthorized release of a hazardous substance from an UST has occurred (Definition 3).

APPENDIX B

Historic Soil and Groundwater Laboratory Analytical Results

Table 1: Soil Analytical Data
1900 Webster Street, Oakland, CA - AEI Project # 297305

Sample ID	Date	Depth (feet bgs)	TPH-g mg/kg	TPH-d mg/kg	TPH-mo mg/kg	MTBE mg/kg	Benzene mg/kg	Toluene mg/kg	Ethylbenzene mg/kg	Xylenes mg/kg
SB-1-16	7/20/2011	16	<1.0	<1.0	<5.0	<0.05	<0.005	<0.005	<0.005	<0.005
SB-2-16	7/20/2011	16	<1.0	**7.7**	**25**	<0.05	<0.005	<0.005	<0.005	<0.005
SB-2-18	7/21/2011	18	<1.0	<1.0	<5.0	<0.05	<0.005	<0.005	<0.005	<0.005
SB-3-16	7/20/2011	16	**8.3**	**6.5**	<5.0	<0.05	<0.005	**0.041**	<0.005	**0.04**
SB-3-20	7/20/2011	20	**42**	**8.7**	<5.0	<0.50	<0.050	<0.050	**0.06**	**0.12**
RL			1.0	1.0	5.0	0.05	0.005	0.005	0.005	0.005
ESL			83	83	2,500	0.023	0.04	2.9	3.3	2.3

NOTES:

mg/kg = milligrams per kilogram

TPH-g = total petroleum hydrocarbons as gasoline

TPH-d = total petroleum hydrocarbons as diesel

TPH-mo = total petroleum hydrocarbons as motor oil

Benzene, toluene, ethylbenzene, xylenes using by Method 8021B

MTBE = methyl tert-butyl ether using EPA Method 8021B

bgs = below ground surface

RL = detection limit for dilution factor of 1

ESL = Shallow Soil Environmental Screening Levels for Drinking Water San Francisco Bay Regional Water Quality Control Board

TPH-d/mo by EPA Method 8015B

TPH-g, BTEX & MTBE by EPA Method 8021B

Table 2: Groundwater Analytical Data
1900 Webster Street, Oakland, CA - AEI Project # 297305

Sample ID	Date	TPH-g µg/L	TPH-d µg/L	TPH-mo µg/L	MTBE µg/L	Benzene µg/L	Toluene µg/L	Ethylbenzene µg/L	Xylenes µg/L
SB-1-W	7/20/2011	<50	<50	<250	<5.0	<0.5	**0.50**	<0.5	**0.97**
SB-2-W	7/20/2011	<50	<50	<250	<5.0	<0.5	<0.5	<0.5	**1.0**
SB-3-W	7/20/2011	**59,000**	**200,000**	**<10,000**	<250	**89**	**82**	**430**	**1,600**
RL		50	50	250	5.0	1.0	40	30	20
ESL		100	100	100	1,800	46	130	43	100

NOTES:

µg/L = micrograms per liter or parts per billion (ppb)

TPH-g = total petroleum hydrocarbons as gasoline

TPH-d = total petroleum hydrocarbons as diesel

TPH-mo = total petroleum hydrocarbons as motor oil

MTBE = methyl tertiary-butyl ether

RL=Laboratory reporting limit (with no dilution)

ESL =Groundwater Environmental Screening Levels for Drinking Water, San Francisco Bay Regional Water Quality Control Board

TPH-d/mo by EPA Method 8015B

TPH-g, BTEX & MTBE by EPA Method 8021B

TABLE 7
Analytical Results
1900 Webster Street, Oakland, California

Sample ID	Matrix	Unit	TPH				MBTEX				
			TPH-g	TPH-d	TPH-mo [1]	TPH-dro [1]	MTBE	Benzene	Toluene	Ethylbenzene	Total Xylenes
B1-18-W	W	µg/L	**400**	**1,100**	**<250**	**<250**	<0.5	<0.5	<0.5	<0.5	<0.5
B2-16.5-W			**6,000**	**3,800**	**<250**	**<250**	<12.0	<12.0	<12.0	**210**	**680**
ESL (Table F-1b)			210	210	210	210	1,800	46	130	43	100
B1-8”	S	mg/kg	<1.0	5.0	<5.0	<5.0	<0.05	<0.005	<0.005	<0.005	<0.005
B2-6’			<1.0	1.8	<5.0	<5.0	<0.05	<0.005	<0.005	<0.005	0.012
ESL (Table B-2)			180	180	2,500	2,500	8.4	0.27	9.3	4.7	11

TPH-g, -d, -mo, -dro = Total petroleum hydrocarbons as gasoline, diesel, motor oil, hydraulic oil; MBTEX = MTBE, benzene, toluene, ethylbenzene and xylenes; MTBE = Methyl tert-butyl ether; W = Water; S = Soil; µg/L = micrograms per liter; mg/kg = milligrams per kilogram; ESL = California Regional Water Quality Control Board Environmental Screening Level; Table F-1b = Groundwater screening levels (groundwater is not a current or potential drinking water resource); Table B-2 = Shallow soil screening levels, commercial/industrial land use (groundwater is not a current or potential drinking water resource).

[1] McCampbell Analytical, Inc. states in the laboratory report (Appendix F) that the TPH contamination detected is primarily gasoline and diesel.

APPENDIX C

Soil Boring Logs

Project: Pacific Health Clinic
Project Location: 1900 Webster Street, Oakland, CA 94612
Project Number: 297305

Log of Boring SB-1

Sheet 1 of 1

Date(s) Drilled July 20, 2011	**Logged By** Harmony TomSun	**Checked By** Peter McIntyre
Drilling Method Direct Push	**Drill Bit Size/Type**	**Total Depth of Borehole** 20 feet bgs
Drill Rig Type GeoProbe	**Drilling Contractor** RSI Drilling	**Approximate Surface Elevation**
Groundwater Level and Date Measured 15.93 feet ATD	**Sampling Method(s)** Tube	**Hammer Data**
Borehole Backfill Neat Cement	**Location**	

Elevation (feet)	Depth (feet)	Sample Type	Sample Number	PID Reading, ppm	USCS Symbol	Graphic Log	MATERIAL DESCRIPTION	Well Log	REMARKS AND OTHER TESTS
	0				SM		Silty sand, dark brown 3/3 7.5YR, fine to medium grained sand, moderately loose, <10% fine grained gravel		
	5				SM		Sand, light yellowish brown 6/4 10YR, fine grained sand, <10% very fine grained gravel, moderately loose		
		X	SB-1-7	2.7	SM		fine to medium grained sand		
	10				SC		Clayey sand, light brownish gray 6/2 10YR, fine grained sand, cohesive, moist		
		X	SB-1-12	5.3			poorly graded medium grained sand		
	15				ML		Clayey silt, dark greenish gray 4/1 5G, cohesive, slight plasticity, moist to wet		
		X	SB-1-16	122.1					
	20	X	SB-1-20	36.3			Bottom of Boring at 20 feet bgs		
	25								
	30								

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Project: Pacific Health Clinic
Project Location: 1900 Webster Street, Oakland, CA 94612
Project Number: 297305

Log of Boring SB-2

Sheet 1 of 1

Date(s) Drilled July 20, 2011	**Logged By** Harmony TomSun	**Checked By** Peter McIntyre
Drilling Method Direct Push	**Drill Bit Size/Type**	**Total Depth of Borehole** 20 feet bgs
Drill Rig Type GeoProbe	**Drilling Contractor** RSI Drilling	**Approximate Surface Elevation**
Groundwater Level and Date Measured 17.14 feet ATD	**Sampling Method(s)** Tube	**Hammer Data**
Borehole Backfill Neat Cement	**Location**	

Elevation (feet)	Depth (feet)	Sample Type	Sample Number	PID Reading, ppm	USCS Symbol	Graphic Log	MATERIAL DESCRIPTION	Well Log	REMARKS AND OTHER TESTS
	0				SM		Silty sand, dark reddish brown 3/3 5YR, fine to medium grained sand, moderately loose, <10% fine grained gravel		
	5				SM		Sand, yellowish brown 5/8 10YR, fine grained sand, <10% very fine grained gravel, poorly graded sand and gravel, moderately loose		
			SB-2-8	<1	SM		Sand, yellowish brown 5/4 10YR, medium grained, <20% clay, friable		
	10				SM		Sand, reddish yellow 7/8 5YR, very fine to fine grained sand, <20% silt, poorly graded, hard, friable		
			SB-2-11	<1	SM		poorly graded medium grained sand		
	15				ML		Clayey silt, light yellowish brown 6/4 10YR mottled dark greenish gray 4/1 5G, cohesive, slight plasticity, moist to wet		
			SB-2-16	83.4					
			SB-2-18	245.3					
	20		SB-2-20	7.2			Bottom of Boring at 20 feet bgs		
	25								
	30								

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Project: Pacific Health Clinic
Project Location: 1900 Webster Street, Oakland, CA 94612
Project Number: 297305

Log of Boring SB-3

Sheet 1 of 1

Date(s) Drilled July 20, 2011	**Logged By** Harmony TomSun	**Checked By** Peter McIntyre
Drilling Method Direct Push	**Drill Bit Size/Type**	**Total Depth of Borehole** 24 feet bgs
Drill Rig Type GeoProbe	**Drilling Contractor** RSI Drilling	**Approximate Surface Elevation**
Groundwater Level and Date Measured 21.36 feet ATD	**Sampling Method(s)** Tube	**Hammer Data**
Borehole Backfill Neat Cement	**Location**	

Elevation (feet)	Depth (feet)	Sample Type	Sample Number	PID Reading, ppm	USCS Symbol	Graphic Log	MATERIAL DESCRIPTION	Well Log	REMARKS AND OTHER TESTS
	0				SM		Silty sand, dark brown 3/3 7.5YR mottled yellowish red 5/8 5YR, fine to medium grained sand, <10% fine grained gravel, tight, no plasticity		
		X	SB-3-4	<1					
	5				SM		Sand, yellowish red 4/6 5YR, fine to medium grained sand, <10% very fine grained gravel, poorly graded sand and gravel, friable		
		X	SB-3-8	<1	SM		Silty sand, light brown 6/3 7.5YR, medium grained, friable		
	10								
		X	SB-3-12	9.4	SC		Clayey sand, light yellowish brown 6/4 10YR, very fine to fine grained sand, <10% silt, moderate plasticity		
	15								
		X	SB-3-16	57.8	ML		Clayey silt, grayish green 5/2 5G, <10% fine grained sand, tight, slight platsicity, moist		
					ML		Clayey silt, light yellowish brown 6/4 10YR mottled dark greenish gray 4/1 5G, cohesive, slight plasticity, moist to wet		
	20	X	SB-3-20	63.1					
		X	SB-3-24	3.2					
	25						Bottom of Boring at 24 feet bgs		
	30								

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