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March 19, 2015

Alameda County Department of
Environmental Health
1131 Harbor Bay Parkway, 2nd Floor
Alameda, CA 94502

Attention: Keith Nowell

Subject: Data Gaps Work Plan
3924 Market Street, Oakland, California
ACEH RO# 0000490; Global ID: T0600101187

Ladies and Gentlemen:

Attached please find a copy of the *Data Gaps Work Plan* prepared by Gribi Associates. 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.

Very truly yours,



Scott Atthowe
Scott C. Atthowe Trust
3924 Market Street
Oakland, CA 94608



March 19, 2015

Alameda County Department of
Environmental Health
1131 Harbor Bay Parkway, 2nd Floor
Alameda, CA 94502

Attention: Keith Nowell

Subject: Data Gaps Work Plan
3924 Market Street, Oakland, California
ACEH RO# 0000490; Global ID: T0600101187

Ladies and Gentlemen:

Gribi Associates is pleased to submit this *Data Gaps Work Plan* on behalf of Mr. Scott Atthowe for the underground storage tank (UST) site located at 3924 Market Street, Oakland, California (Site) (see Figure 1 and Figure 2). This work plan includes: (1) A Site background summary; (2) A Site Conceptual Model (SCM); and (3) A work plan to address data gaps summarized in the SCM and as specified in the October 23, 2014 letter from Alameda County Department of Environmental Health (ACDEH).

1.0 SITE BACKGROUND

1.1 General Site Description

According to the USGS Oakland, West, California 7.5-Minute Quadrangle Map, the Site lies on a gently southwest-sloping plain approximately one mile east from San Francisco Bay. The elevation at the project site is approximately 60 feet above mean sea level. The Site is located in a mixed commercial, light industrial, and residential area of north Oakland. Based on site topography and location, we would expect groundwater flow in the site area to generally be to the west towards San Francisco Bay.

The Site comprises a nominally square-shaped land parcel measuring approximately 200 feet by 200 feet. The Site includes an irregularly-shaped building that covers most of the parcel and actually comprises an amalgamation of an older two-story brick building on the northwest side of the site and more recent single story concrete block building additions on the northeast and southeast sides of the site. The site building has concrete slab flooring throughout. The slab

flooring is slightly variable in elevation due to the different ages of construction. A few small concrete patches, possible floor drain remnants, are present in the concrete slab flooring. A partially-finished basement is present beneath the western side of the site building. This basement, which is currently used for storage, has concrete slab flooring. A floor drain is present in the basement that appears to have been part of a drainage system that transmitted water from various floor drains throughout the bakery northward to the storm drain or sewer beneath Market Street.

A covered loading dock located on the southwest side of the site has a concrete-slabbed ramp that extends approximately two to three feet below surface grade at the loading dock. The parking/loading yard on the southwest side of the Site is concrete-paved.

The Site is currently occupied by Atthowe Fine Arts Services, which uses the Site to pack, crate, and store fine art pieces. Most of the Site building is subdivided into different areas used to store variously-sized crated art pieces.

1.2 Brief Site History

The main Site building at 40th and Market Street was constructed in 1927 and was expanded south to 39th Street and east along 40th Street in 1957. The Site was occupied by Toscana Bakery from approximately 1928 to 1987. The bakery apparently included ovens in the middle of the Site building and a small boiler room on the north side of the Site building.

Mr. Scott Atthowe purchased the Site in 1993 and redeveloped it for his fine art services business. As part of this redevelopment, many abandoned bakery items, including ovens and various baking paraphernalia, were dismantled and removed. Mr. Atthowe recalled that the previous owners, Toscana Bakery, had indicated that there may have been a fuel oil underground storage tank (UST) located in the Site parking lot adjacent to the current covered loading dock area, and that this UST was removed by Toscana prior to his purchase of the Site.

An unused water supply well was present in the Atthowe Fine Arts office area on the south side of the Site until January 2015 (see Section 1.5 of this report). A 1991 Phase I Environmental Site Assessment report in for the Site, included in ACEH files, contains a DWR well log for this well. The well log indicates that the wells was constructed in May 1928 for Toscani Bakery at 899 40th Street and that the well is cased with approximately 54 feet of 10-inch diameter conductor casing and with 108 feet of 8-inch casing with 50 feet of perforations. The well log indicates primarily clays from 50 feet in depth (where the drilling company apparently took over the well drilling activities) to 18 feet total depth, with a gravel noted from 97 to 102 feet in depth. The well log includes no information about well production.

1.3 Site Environmental Conditions

The Site operated as a bakery from perhaps the mid-1920s until 1987. This facility included one 500-gallon fuel underground storage tank (UST), located in the Market Street sidewalk. A fuel dispenser associated with the UST was located adjacent to the Site building immediately east of the UST. The age of the UST is not known.

In March 1991, the 500-gallon UST and associated piping and dispenser were removed. Two soil samples collected from the UST excavation cavity at about 9 feet in depth and one soil sample collected at 2 feet below removed piping showed low levels (less than 25 milligrams per kilogram, mg/kg) of Total Petroleum Hydrocarbons as Gasoline and Diesel (TPH-G and TPH-D) and low levels (less than 0.5 mg/kg) of gasoline constituents Benzene, Toluene, Ethylbenzene, and Xylenes (BTEX).

In June 1991, the UST excavation cavity was over excavated vertically to about 14 feet in depth. Five soil samples were collected at about 13 feet in depth and showed no detectable TPH-D, up to 210 mg/kg of TPH-G, and low levels (less than 5 mg/kg) of BTEX. The over excavation cavity was backfilled with imported pea gravel.

In May and June 1995, three groundwater monitoring wells (MW-1, MW-2, and MW-3) were installed on the Site. MW-1 is located in an expected downgradient (west) direction from the former fuel dispenser, and wells MW-2 and MW-3 are located crossgradient and downgradient, respectively, from the former UST. Soil samples collected at about 10 feet in depth in each of the three wells showed very low to non-detectable levels of gasoline- and diesel-range hydrocarbons. Boring logs for the three wells show sand and gravel soils below approximately 14 feet in depth. Brown staining with moderate to strong odors are indicated below approximately 12 feet in depth on all three well boring logs, particularly in well boring MW-1. Quarterly groundwater sampling of the three wells for one year in 1995 and early 1996 showed very low to non-detectable levels of gasoline-range hydrocarbons and low to moderate levels of diesel-range hydrocarbons in the wells.

In August 1999, thick, black oily product was encountered in well MW-1, and in April 2000, this product was noted in all three wells. Laboratory analysis of the black oily product indicated it to be in the diesel- to motor oil-range, perhaps representing Bunker C heating oil. The report documenting these activities included a work scope to conduct historical records review to try to identify a heating oil source on the Site.

On April 12, 2001, the Alameda County Environmental Health (ACEH) issued a letter requesting a report summarizing the historical records review and a workplan to determine the extent of

the apparent heating oil release. ACEH issued follow-up directive letters on July 3, 2008, July 28, 2009, and September 10, 2010, generally requesting that the previously-requested work plan be submitted.

1.4 Recent Activities

On January 17, 2012, Gribi Associates personnel attempted to measure product thicknesses in the three site wells. However, the oily product in the three wells was too viscous to measure, using both a water/product interface probe and a disposable bailer. In both cases, the tool (interface probe or bailer) would not sink through the residue, but would simply comp to rest on top of it. With the bailer, only after dropping the bailer repeatedly from several feet above the residue, were we able to slowly extend the bailer into the product.

In all three wells, the dark brown to black viscous residue had a thickness of approximately 1.5 feet, and the groundwater beneath the sludge was clear. The residue had a crude oil hydrocarbon odor. In order to assess this residue, we collected a sample of product and water from MW-2 in a pint canning jar with sealing lid. This sample was labeled and chilled for transport to the laboratory under formal chain of custody. Because the product was semi-solid, the lab results were reported in milligrams per kilogram (mg/kg). Results of the lab analysis showed 890 mg/kg of TPH-G, 20,000 mg/kg of TPH-D, and 29,000 mg/kg of TPH-MO, with no detectable BTEX, SVOCs, or VOCs except 0.65 mg/kg of sec-Butylbenzene. The laboratory chromatogram for this sample indicates a very heavy hydrocarbon (C₂₀ -C₄₀ range).

On February 23, 2012, ForeSite conducted an electromagnetic survey to assess whether or not underground storage tanks (USTs) or other underground anomalies were present inside or outside the Site building. Thus, it appears that the fuel oil UST, if present in the past, was removed and is no longer present on the Site.

On November 21 and 22, 2013, nine soil borings, B-1 through B-9, were drilled on the Site and west-southwest from the Site (see Figure 3). Soils encountered in the borings were generally similar, consisting of dark grey to brown clays to approximately 14 feet in depth, followed by poorly sorted sands and silts to 20 feet, the total depth investigated. Slight to moderate hydrocarbon odors and staining were encountered in the sand layer below 14 feet in depth in borings B-1, B-3, B-4, and B-6. In boring B-2, located near the entrance to the covered loading dock, slight to moderate hydrocarbon odors and staining were encountered in clays from approximately eight feet to 14 feet in depth, and also in the uppermost sand from approximately 14 to 16 feet in depth. In boring B-5, located inside the covered loading dock area, slight hydrocarbon odors and staining were encountered from approximately four feet to 17 feet in depth. No significant hydrocarbon sheens were noted in water samples from any of the nine borings.

Slight to moderate concentrations (over 100 milligrams per kilogram, mg/kg) of TPH-D and TPH-MO were encountered in soil samples at about 15 feet depth in borings B-1, B-3, B-4, and B-6. Slight to moderate concentrations of TPH-D and TPH-MO were also encountered at about nine feet in depth in boring B-2. No detectable concentrations of Benzene were reported in any soil samples from the nine soil borings.

Moderate levels (over 1,000 micrograms per liter, ug/L) of TPH-D and TPH-MO were encountered in the grab groundwater samples from B-3 and B-4. Also, a moderate concentration (9,900 ug/L) of TPH-G was reported in the grab groundwater sample from boring B-4. No detectable concentrations of Benzene were reported in any of the groundwater samples from the nine soil borings.

1.5 Water Supply Well Sampling and Decommissioning

On January 10, 2015, the water supply well present in the Site office area was sampled and decommissioned in accordance with Alameda County Public Works Agency (ACPWA) permit requirements. A report sent to ACPWA which documents well decommissioning activities and including copies of the ACPWA permit, photos, and the lab report from pre-decommissioning well water sample, is included in Attachment A.

- A cutting torch was used to cut a hole measuring approximately two inches by four inches in the top of the well.
- The well was sampled using a ½-inch disposable PVC bailer. Water was poured directly from the bailer into laboratory-supplied containers, which were capped, labelled, and immediately placed in an iced cooler for transport to the analytical laboratory under formal chain of custody. The well water sample was analyzed for TPH-G, TPH-D, TPH-MO, VOCs, and PAHs by Sunstar Labs. The only detection in this water sample was 6.8 micrograms per liter (ug/L) of Benzene.
- A tape was used to measure the depth of the well. The measured depth of the well was 200 feet below top of well.
- Small diameter (¾-inch) Schedule 40 PVC pipe was extended to 200 feet in depth, and grout was pumped down through the tremie pipe, which was removed slowly as pumping proceeded.
- Displaced groundwater was pumped from the wellhead vault as grouting proceeded. Approximately eight drums of water was removed during grouting, and approximately

120 sacks of Portland cement were used to grout the well.

1.6 Sensitive Receptor Survey

Gribi Associates obtained well logs for the site vicinity from the California Department of Water Resources (DWR). We also requested well logs from Alameda County Public Works Agency, but have not received those logs yet. A review of the DWR logs indicates approximately 32 groundwater wells within 1,000 feet radius from the Site. These include the following:

- **Atthowe Fine Arts, 3924 Market Street (Site): 3 Monitoring Wells, 1 Water Supply Well.** Three groundwater monitoring wells (MW-1, MW-2, and MW-3) are present on the Site. The one water supply well was unused for at least two decades and was decommissioned in January 2015, as described in Section 1.5 of this report.
- **Neighborhood Laundromat, 3838 West Street, 700 ft east-southeast from Site; 3 Monitoring Wells.** Three shallow (15 feet bgs) 1-inch diameter groundwater monitoring wells are present on this site, which was granted regulatory closure in March 2004.
- **Fidelity Roof Company, 1075 40th Street, 850 feet west from Site; 10 Monitoring Wells.** These groundwater monitoring wells were decommissioned, and regulatory closure was granted for this site in May 2013.
- **California Linen, 989 41st Street, 900 ft northwest; 6 Monitoring Wells.** The six groundwater monitoring wells were decommissioned, and regulatory closure of this site was granted in November 2013.
- **Former Chevron Station, 890 West MacArthur Boulevard, 800 feet south-southwest, 8 Monitoring Wells.** Four of the eight wells have been decommissioned, leaving four groundwater monitoring wells on the site.
- **PG&E, Apgar and Market Streets, 550 feet south; 1 Cathodic Protection Well.** This is not a water supply or monitoring well.

Results of the well survey indicate no water supply wells within a 1,000-foot radius from the Site. Note that this well survey will be updated when we review well survey results from the Alameda County Public Works Agency.

2.0 SITE CONCEPTUAL MODEL

Gribi Associates prepared a Site Conceptual Model (SCM) for the Site which generally included an evaluation of contaminant sources, contaminant impacts, potential environmental and human health receptors, and investigative data gaps. This SCM is included as Attachment B. Some of the key elements of the SCM include the following:

- The contaminants of concern are primarily TPH-G, TPH-D and TPH-MO.
- The contaminant source, or sources, appears to be a fuel oil UST, or USTs, perhaps located in the current loading dock or building basement area.
- Contaminant impacts in soil appear to be fairly low, with maximum TPH-G, TPH-D, and TPH-MO concentrations of 2.4 mg/kg, 740 mg/kg and 910 mg/kg, respectively.
- Contaminant impacts in groundwater are limited primarily to dark brown, viscous free product in the apparent source area and extending a short distance southwest. Dissolved phase groundwater contaminants are limited to this area also. Maximum TPH-G, TPH-D, and TPH-MO concentrations encountered in the apparent source area are 9,900 ug/L, 4,700 ug/L, and 5,100 ug/L, respectively. No BTEX was encountered in groundwater samples during recent sampling events.
- Contaminant impacts in vapor have not been assessed.
- Potential human health receptors include future construction workers (direct exposure). Human exposure to outdoor and indoor volatile contaminant vapors is not expected to be a concern given the nonvolatile nature of the contaminants.
- Investigative data gaps include (1) the nature and extent of soil and groundwater contaminant impacts upgradient (northeast) in the apparent source area; (2) The lateral extend of soil hydrocarbon impacts downgradient (south-southwest) from the source area; (3) the nature and extent of vapor contaminant impacts beneath the Site building; (4) the nature of the product present in Site wells.

The work plan included herein attempts to address the investigative data gaps revealed in the SCM.

4.0 WORK PLAN TO CONDUCT ADDITIONAL INVESTIGATIVE ACTIVITIES

In order to address investigative data gaps, this work plan proposes: (1) The drilling and sampling of approximately two upgradient (north-northeast) soil borings and two downgradient (south-southwest) borings; (2) The collection of two soil gas samples adjacent to the Site building; and (3) The monitoring of Site wells, to include testing of both dissolved-phase groundwater and free product. All activities will be conducted in accordance with all applicable regulatory guidelines and statutes.

4.1 Prefield Activities

Prior to beginning field activities, a drilling permit will be obtained from the Alameda County Department of Public Works, and an encroachment permit will be obtained from the City of Oakland for borings on the public right-of-way.

Prior to implementing field activities, all drilling locations will be marked with white paint, and Underground Services Alert (USA) will be notified at least 48 hours prior to drilling. Also, a private underground utility locator will be retained to conduct an independent clearance of the proposed drilling locations.

Prior to initiating drilling activities, a Site Safety Plan will be prepared, and a tailgate safety meeting will be conducted with all site workers.

4.2 Location of Soil Borings and Soil Gas Samples

The proposed location of borings B-10 through B-13 and soil gas samples SG-1 and SG-2 are shown on Figure 4. Two borings, B-10 and B-11, will be located on the upgradient (north-northeast) side of the hydrocarbon plume, and two borings, B-12 and B-13, will be located on the downgradient (south-southwest) side of the hydrocarbon plume. Borings B-10 and B-11 will provide assessment of potential heating oil source areas, and borings B-12 and B-13 will attempt to define the downgradient extent of soil hydrocarbon impacts.

The two soil gas samples, SG-1 and SG-2, will be located adjacent to the Site building in the hydrocarbon plume area. The soil gas samples will provide assessment of potential vapor intrusion concerns.

4.3 Drilling and Sampling of Investigative Borings

Boring activities will be conducted by a State-licensed drilling contractor using direct-push coring equipment. The four investigative borings, B-10 through B-13, will be drilled to approximately 20 feet in depth (first encountered groundwater is expected at about 15 feet in depth) using direct-push hydraulically-driven soil coring equipment. Continuous soil cores will be collected to total depth in a clear plastic acetate tube, nested inside a stainless steel core barrel. After each four-foot core barrel is brought to the surface and exposed, the core will be sliced lengthwise to expose the soil core, examined, logged, and field screened for hydrocarbons by a qualified geologist using sight, smell, and an organic vapor monitor (OVM). Following completion, the investigative borings will be grouted to match existing grade using a

cement\ sand slurry. Soil cuttings generated during this investigation will be stored onsite in sealed DOT-approved containers.

Each soil core will first be sliced open lengthwise along the length of the acetate tube, allowing full examination and logging of the soil core prior to sampling. Soil samples will then be collected at five-foot intervals starting at approximately three feet in depth and from specific zones of interest. Soil samples will be collected in an acetate liner, which will be cut to the desired length (typically four to six inches), capped with Teflon tape and plastic end caps, labeled and placed in cold storage pending transport to a laboratory under formal chain-of-custody. All coring and sampling equipment will be thoroughly cleaned and decontaminated between each sample collection by triple rinsing first with water, then with dilute tri-sodium phosphate solution, and finally with distilled water. Cleaning rinseate will be contained onsite in a sealed drum pending laboratory results.

One grab groundwater sample will be collected from each boring at first encountered groundwater (expected at approximately 15 feet in depth). Grab groundwater samples will be collected from the open boring after placing 1-1/4-inch diameter well casing in the boring. Groundwater will then be sampled using a clean small diameter bailer, and poured directly into laboratory-supplied containers. Each sample container will then be tightly sealed, labeled, and placed in cold storage for transport to the laboratory under formal chain-of-custody.

4.4 Collection of Soil Gas Samples

Soil gas sampling at the two locations, SG-1 and SG-2, will generally include: (1) Installing a temporary vapor well to approximately 5.0 feet in depth; (2) Collecting one soil gas sample using an evacuated Summa canister; and (3) Repairing the ground surface to match existing conditions. All sampling activities will be conducted in accordance with *Guidance for the Evaluation and Mitigation of Subsurface Vapor Intrusion to Indoor Air* (DTSC, Final, October 2011) and *Advisory - Active Soil Gas Investigations* (DTSC, April 2012). Specific vapor sampling procedures are summarized as follows:

- The soil vapor sample will not be collected within 72 hours following a significant (>0.5 inches rain) precipitation event.
- A soil boring will be hand augered to approximately 5.5 feet in depth. During augering, soils will be logged and an attempt will be made to collect the soil gas sample in a permeable zone at above the groundwater table or as close to five feet in depth as possible.

- A temporary well will be constructed using 1/4-inch diameter Teflon tubing with a porous vapor point. The vapor point will be placed in the well boring at about six inches from the boring total depth, and filter sand will be placed around the point to approximately six inches above the vapor point (from approximately 5.5 feet to 4.5 feet in depth). At least six inches of dry granular bentonite will be placed above the sand pack, and the remainder of the borehole will be filled with “pourable” hydrated bentonite poured slowly from the surface.
- A “T” valve will be placed in line at the ground surface to allow for system purging and for pressure testing of the above ground portion of the sampling train. The sampling tubing will be attached to a 200-milliliter per minute maximum flow controller, then a one liter laboratory-supplied Summa Canister™ (evacuated to 29 inches mercury vacuum) with vacuum pressure gauge.
- After allowing the temporary vapor well to equilibrate for at least two hours, the well will be purged and sampled. A laboratory supplied purge/pressure test Summa Canister™ (evacuated to 29 inches mercury) will then be used to test vacuum pressure in the above ground portion of the sampling train. Sampling train vacuum pressure will be maintained for at least 10 minutes; if pressure drops occur, the system connections will be tightened and the pressure testing continued.
- The vapor well will then be purged of approximately three purge volumes using a dedicated Summa Canister.
- The entire probe and sampling train will be placed under a shroud and a leak test will be conducted. Helium from a compressed gas cylinder will be pumped into the shroud, and the helium concentration inside the shroud will be maintained at approximately 10,000 ppmV (the detection level for the ASTM Method D-1946 is 100 ppmV). Helium monitoring will be conducted using a Mark Radiodetection MGD-2002 helium detector with internal pump (or equivalent). For the sampling train leak test, the helium monitor will be attached to the purge tube and the T-valve opened. A positive reading of helium by the detector will indicate the presence of helium inside the sample train and, therefore, a leak in the sample train. If helium is detected, all connections in the sample train will be tightened and the leak test repeated until no helium was detected.
- The vapor sample will then be collected by opening the Summa canister and allowing the vapor to fill the canister until the vacuum pressure in the canister reaches approximately 20 percent of initial (approximately 5 to 6 inches mercury). The flow controller will be used so that the Summa Canister will fill slowly (200 ml per minute or less) to insure a representative soil vapor sample. Prior to, at start time, and during

sampling, periodic vacuum measurements will be recorded on a field data sheet, and initial and final vacuum pressures will be noted on chain-of-custody records.

- After completion of all sampling activities at each boring location, the ¼-inch Teflon tubing will be removed, and the borings will be grouted and re-surfaced to match existing surface grade. All waste materials will be properly contained and disposed of based on laboratory analytical results.

The vapor samples (filled Summa canisters) will be secured and transported to a California-certified analytical laboratory under formal chain-of-custody.

4.5 Sampling of Groundwater Monitoring Wells

Site wells MW-1, MW-2, and MW-3 will be purged and sampled. This will generally include, first, sampling the free product on the groundwater table (in two of the three wells), and then purging and sampling dissolved-phase groundwater beneath the free product. The product sample will be collected from wells MW-1 and MW-2 and will be collected using a large-opening disposable bailer (specifically designed for sludge and/or product). The bailer will be lowered only to the product itself, taking care to not extend the bailer a significant distance into the underlying groundwater. Product will be poured into a 50-ml glass jar (specified by analytical laboratory) and placed on ice for transport to the analytical laboratory under formal chain of custody.

The three groundwater monitoring wells will be purged and sampled using a peristaltic pump. In order attempt to take a representative dissolved-phase groundwater sample, the following procedures will be used:

- Threaded blank ¾-inch diameter PVC pipe will be extended to approximately 3 inches (no more than 6 inches) below the free product.
- Teflon ¼-inch diameter tubing will be extended through the PVC pipe to approximately two feet below the product.
- At least three well volumes will be purged from the well using a peristaltic pump. Purging will be conducted at a low purge rate (less than one-half gallon per minute) so that the water/product depth does not drop in the well.
- After pH, temperature, and conductivity have stabilized, groundwater will be poured directly into laboratory-supplied containers, sealed tightly, labelled, and placed in an iced cooler for transport to the analytical laboratory.

4.6 Laboratory Analysis of Soil, Water, Product, and Vapor Samples

Approximately 16 soil samples (four per boring) and seven water samples (one per boring and one per well) will be analyzed for the following parameters.

- USEPA 8260B Total Petroleum Hydrocarbons as Gasoline (TPH-G)
- USEPA 8260B Benzene, Toluene, Ethylbenzene, and Xylenes (BTEX)
- USEPA 8260B Oxygenates (DIPE, ETBE, MTBE, TAME, TBA)
- USEPA 8260B Naphthalene
- USEPA 8015B Total Petroleum Hydrocarbons-Carbon Chain
- USEPA 8270 SIM Polyaromatic Hydrocarbons (PAHs)

Also, the two collected product samples will be analyzed for the following parameters:

- SM 445D/2171 Kinematic Viscosity
- SM D1657 Density/Specific Gravity

In addition, the three vapor samples (SG-1, SG-2, and a duplicate) will be analyzed for the following parameters:

- USEPA TO-15 TPH-G and BTEX
- USEPA TO-17 TPH-D and Naphthalene
- ASTM Method D-1946 Fixed Gases (Helium, Oxygen, Carbon Dioxide, Nitrogen)
- RSK 175 Methane

All analyses will be conducted by California-certified analytical laboratories, with standard turnaround on results.

4.7 Preparation of Summary Report

A report summarizing investigative activities and results will be prepared for submittal to ACEH and to Geotracker. This report will describe all investigative methods and results, and will include tabulated laboratory results and graphical depictions of result.

5.0 PROJECT SCHEDULE

Subject to ACEH approval, the proposed investigative scope of work can be completed within approximately eight to ten weeks.

Alameda County Department of
Environmental Health
March 19, 2015
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We appreciate this opportunity to provide this work plan for your review. Please contact us if there are questions or if additional information is required.

Very truly yours,

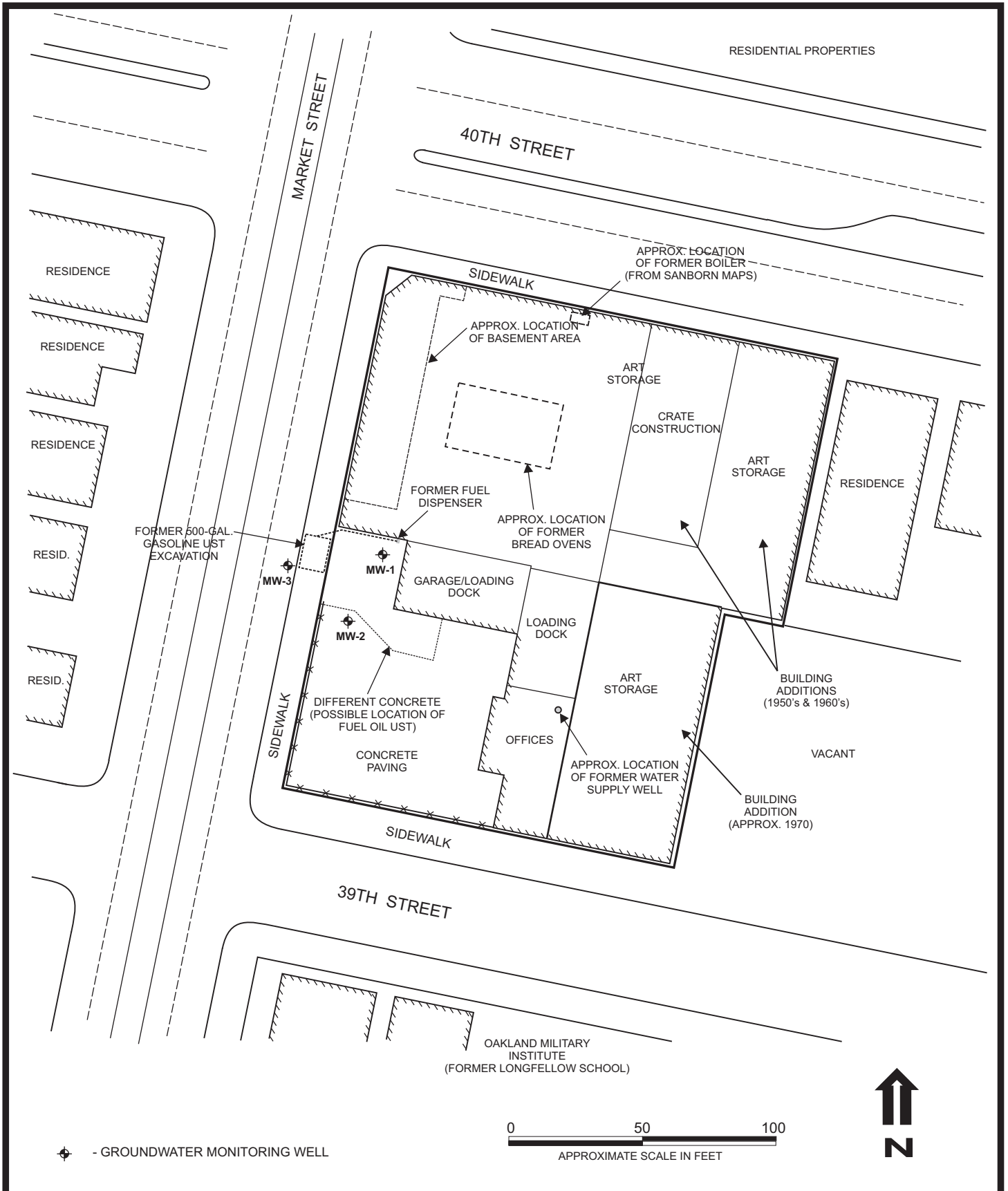


James E. Gribi
Professional Geologist
California No. 5843

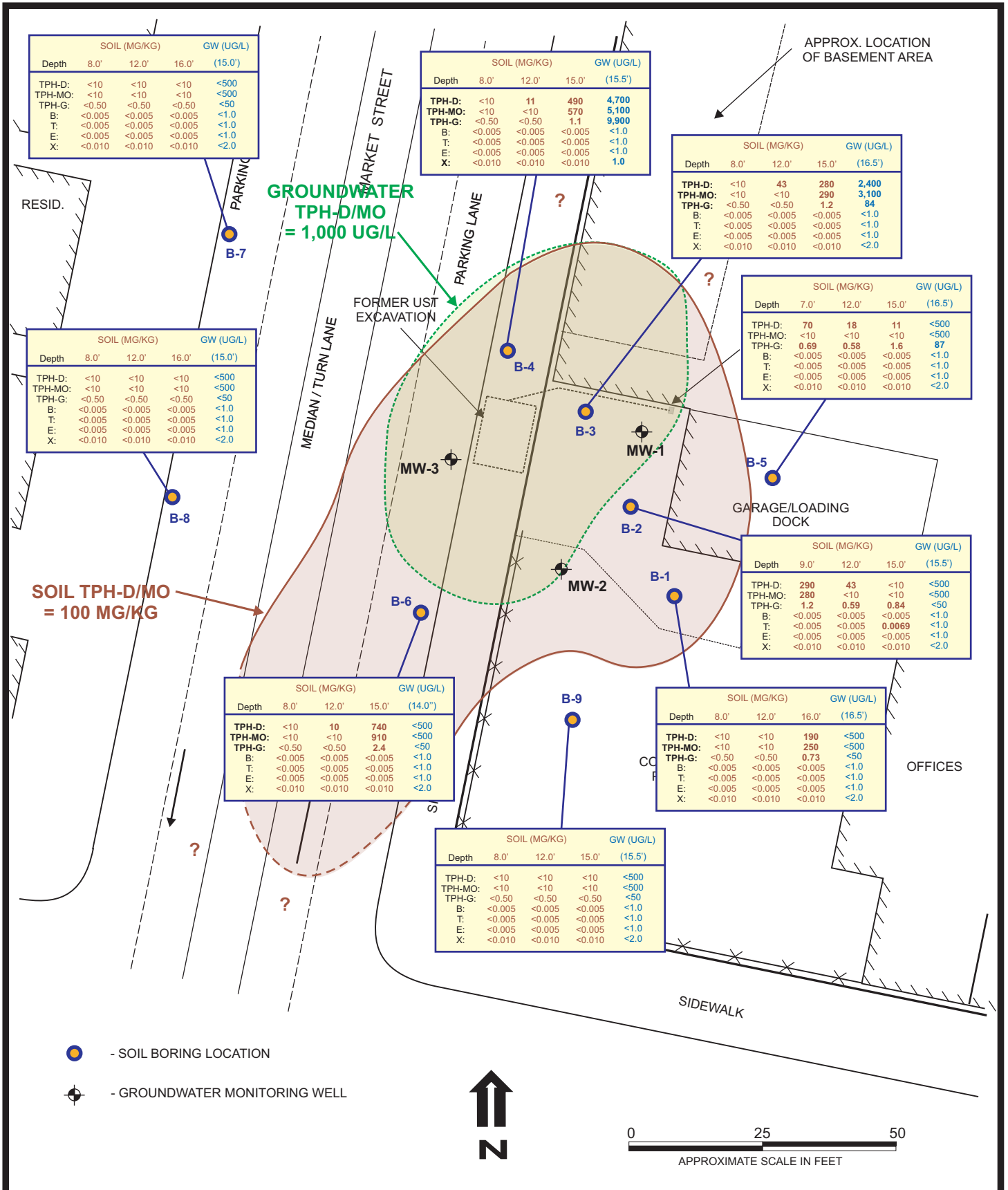


Enclosure

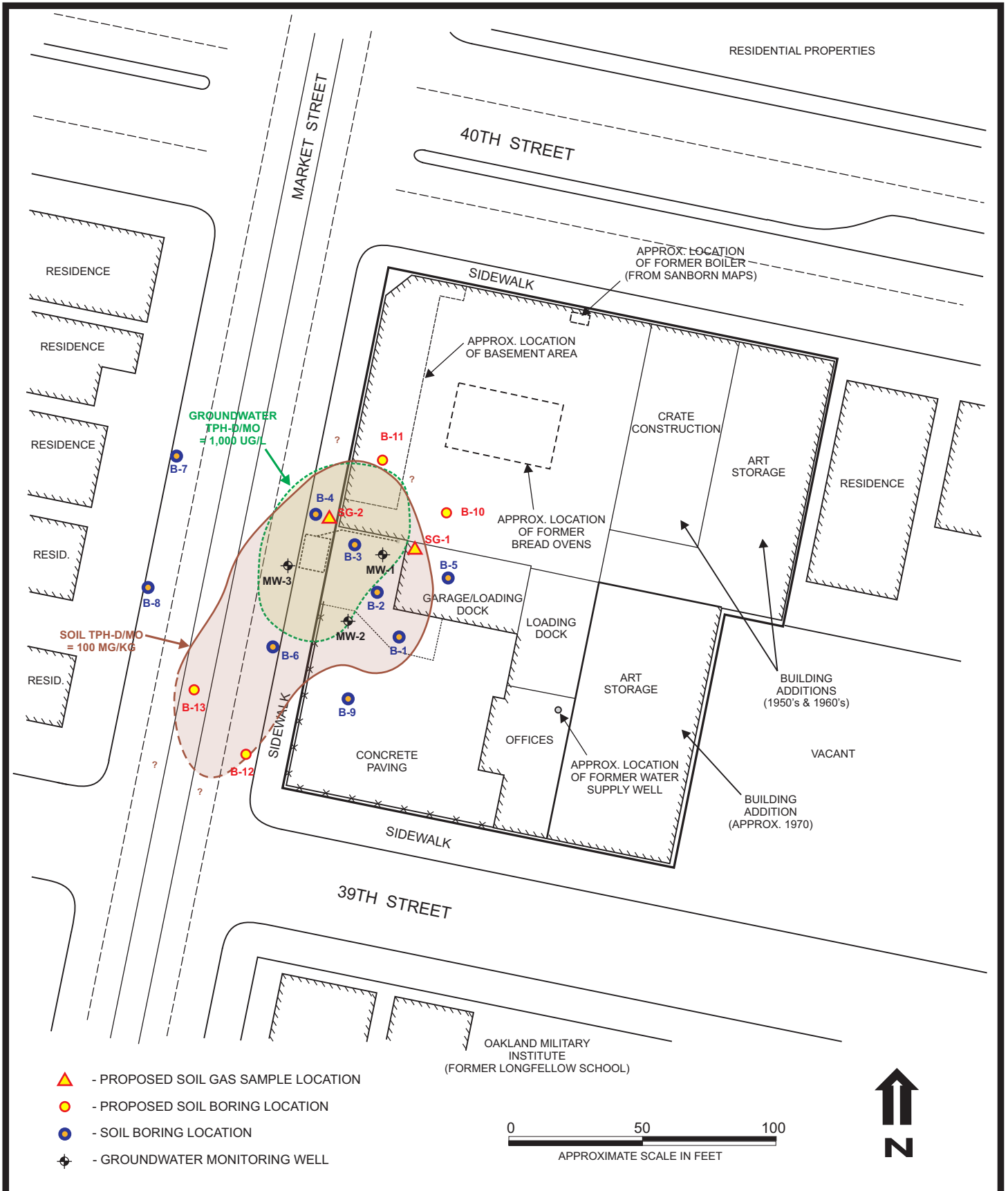
FIGURES



DESIGNED BY:	CHECKED BY: JEG	SITE PLAN	DATE: 03/19/2015	FIGURE: 2	
DRAWN BY: JEG	SCALE:				
		3924 MARKET STREET OAKLAND, CALIFORNIA			



DESIGNED BY:	CHECKED BY: JEG	SOIL & GROUNDWATER HYDROCARBON RESULTS	DATE: 03/19/2015	FIGURE: 3
DRAWN BY: JEG	SCALE:		GRIBI	
		3924 MARKET STREET OAKLAND, CALIFORNIA		



DESIGNED BY:	CHECKED BY: JEG	PROPOSED BORING LOCATIONS	DATE: 03/19/2015	FIGURE: 4
DRAWN BY: JEG	SCALE:		GRIBI	
		3924 MARKET STREET OAKLAND, CALIFORNIA		

ATTACHMENT A

**SITE WATER SUPPLY WELL
DECOMMISSIONING REPORT**



January 27, 2015

Alameda County
Public Works Agency
399 Elmhurst Street
Hayward, CA 94544-1395

Attention: Mr. James Yoo

Subject: Well Abandonment Report
3924 Market Street, Oakland, California
ACEH RO# 0000490; Global ID: T0600101187

Ladies and Gentlemen:

Gribi Associates is pleased to provide this letter report documenting the abandonment of 1 (one) water well on behalf of Mr. Scott Atthowe for the underground storage tank (UST) site located at 3924 Market Street, Oakland, California (see Figures 1 and 2). One 8-inch diameter water well was abandoned at the subject site property. Well abandonment activity was performed by Gregg Drilling, Inc., (C-57 License No. 485165) of Martinez, California. The one abandoned well is as follows:

Well Identification	Total Depth (feet)	Method of Abandonment	Date of Abandonment
Water Well	200.0	Grout	01/10/2015

Prior to abandoning the water well, Gribi Associates obtained drilling permit (W2015-0002) from Alameda County Public Works Agency. Copy of regulatory permit and the California Department of Water Resource Well Completion Report (e0252041) documenting the abandonment of the abovementioned well is included as Attachment A.

On January 10, 2015, the water supply well present in the Site office area was sampled and decommissioned in accordance with Alameda County Department of Public Works permit

requirements. These activities were conducted using the following procedures. Photos are included in Attachment B.

- A permit was obtained from ACDPW and Gregg Drilling was contracted to conduct well decommissioning activities.
- A cutting torch was used to cut a hole measuring approximately two inches by four inches in the top of the well.
- The well was sampled using a ½-inch disposable PVC bailer. Water was poured directly from the bailer into laboratory-supplied containers, which were capped, labelled, and immediately placed in an iced cooler for transport to the analytical laboratory under formal chain of custody. The well water sample was analyzed for TPH-G, TPH-D, TPH-MO, VOCs, and PAHs by Sunstar Labs. The only detection in this water sample was 6.8 micrograms per liter (µg/L) of Benzene. The laboratory data report is included in Attachment C.
- A tape was used to measure the depth of the well. The measured depth of the well was 200 feet below top of well.
- Small diameter (3/4-inch) Schedule 40 PVC pipe was extended to 200 feet in depth, and grout was pumped down through the tremie pipe, which was removed slowly as pumping proceeded.
- Displaced groundwater was pumped from the wellhead vault as grouting proceeded. Approximately eight drums of water was removed during grouting, and approximately 120 sacks of Portland cement were used to grout the well.

We appreciate the opportunity to present this report for your review. Please call if you have any questions or require additional information.

Very truly yours,



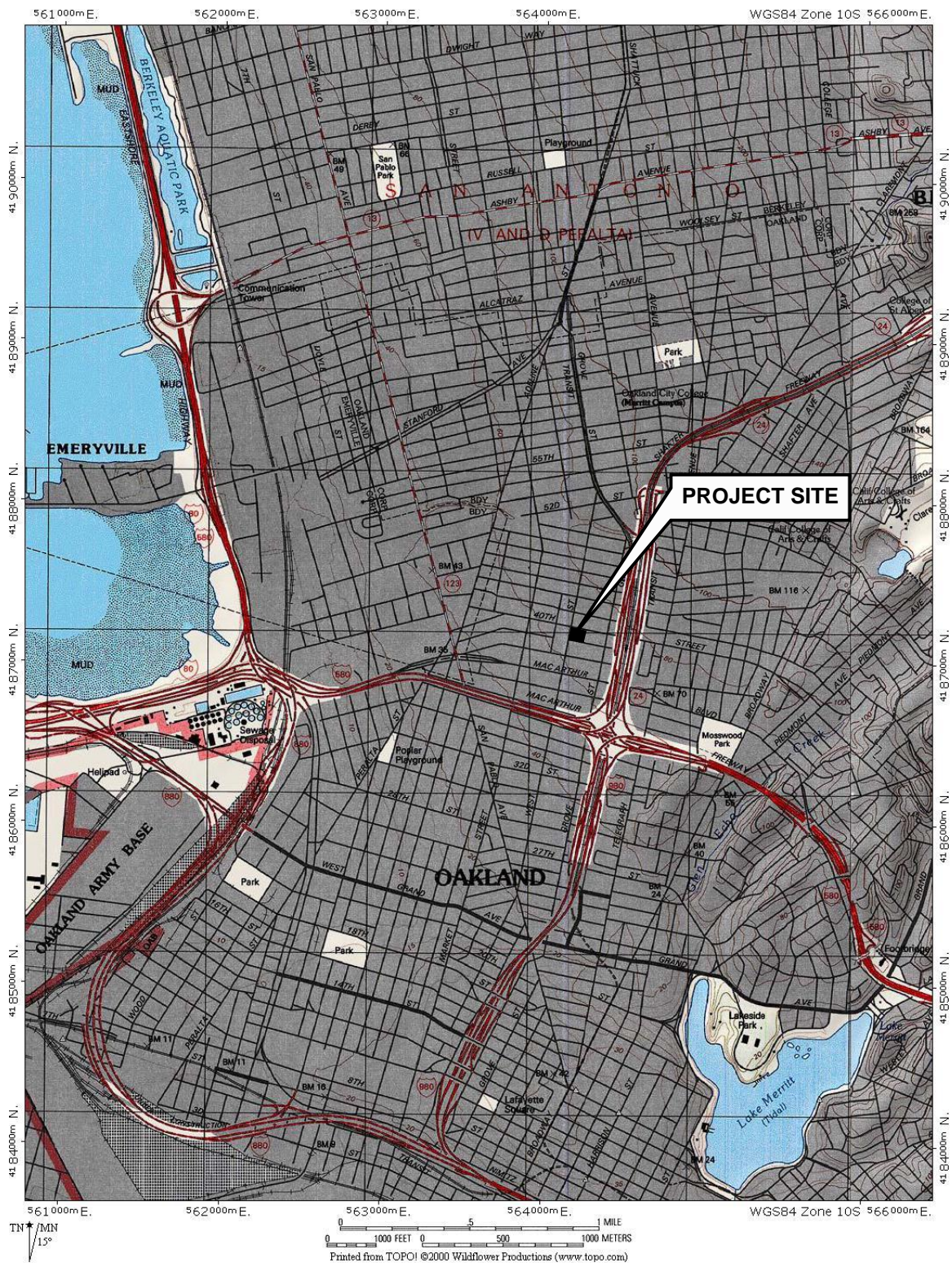
James E. Gribi
Professional Geologist
California No. 5843



Enclosure

c: Keith Nowell, Alameda County Environmental Health, 1131 Harbor Bay Parkway, 2nd Floor, Oakland, CA 94502
Scott Atthowe, 3924 Market Street, Oakland, CA 94608

FIGURES



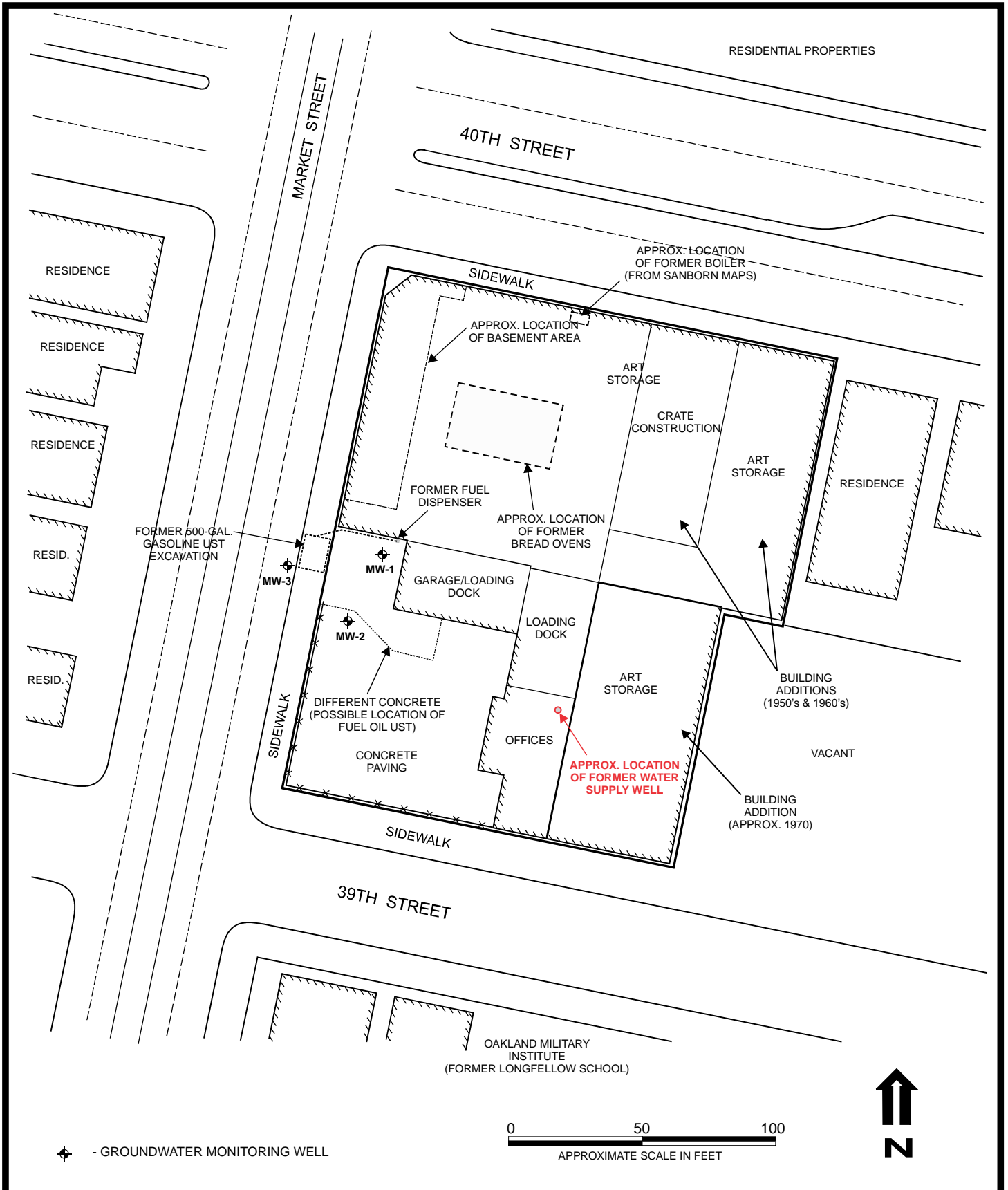
DESIGNED BY:	CHECKED BY: JEG
DRAWN BY: JEG	SCALE:
PROJECT NO:	

SITE VICINITY MAP

3924 MARKET STREET
OAKLAND, CALIFORNIA

DATE: 12/30/2013 FIGURE: 1





⊕ - GROUNDWATER MONITORING WELL

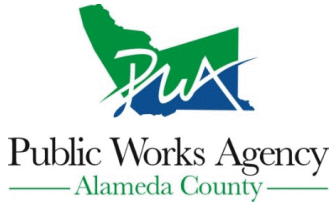


DESIGNED BY:	CHECKED BY: JEG	SITE PLAN	DATE: 12/30/2013	FIGURE: 2
DRAWN BY: JEG	SCALE:			
		3924 MARKET STREET OAKLAND, CALIFORNIA		

ATTACHMENT A

WCR & PERMIT

Alameda County Public Works Agency - Water Resources Well Permit



399 Elmhurst Street
Hayward, CA 94544-1395
Telephone: (510)670-6633 Fax:(510)782-1939

Application Approved on: 01/06/2015 By jamesy

Permit Numbers: W2015-0002
Permits Valid from 01/10/2015 to 01/11/2015

Application Id: 1419891503081
Site Location: 3924 Market Street
Project Start Date: 01/10/2015
Assigned Inspector: Contact NO INSPECTOR ASSIGNED at (510) 670-6633 or wells@acpwa.org

City of Project Site:Oakland

Completion Date:01/11/2015

Applicant: Gribi Associates - James Gribi
1090 Adams Street, Suite K, Benicia, CA 94510

Phone: 707-748-7743

Property Owner: Scott Atthowe
3924 Market Street, Oakland, CA 94111

Phone: 510-654-6816

Client: ** same as Property Owner **
Contact: Jim Gribi

Phone: 707-748-7743
Cell: 707-631-1505

Receipt Number: WR2015-0002	Total Due:	\$397.00
Payer Name : James E. Gribi	Total Amount Paid:	\$397.00
	Paid By: MC	PAID IN FULL

Works Requesting Permits:

Well Destruction-Water Supply - 1 Wells
Driller: Gregg Drilling - Lic #: 485165 - Method: tremi

Work Total: \$397.00

Specifications

Permit #	Issued Date	Expire Date	Owner Well Id	Hole Diam.	Casing Diam.	Seal Depth	Max. Depth	State Well #	Orig. Permit #	DWR #
W2015-0002	01/06/2015	04/10/2015	Water Well	12.00 in.	8.00 in.	50.00 ft	108.00 ft			

Specific Work Permit Conditions

1. Compliance with the above well-sealing specifications shall not exempt the well-sealing contractor from complying with appropriate state reporting-requirements related to well destruction (Sections 13750 through 13755 (Division 7, Chapter 10, Article 3) of the California Water Code). Contractor must complete State DWR Form 188 and mail original to the Alameda County Public Works Agency, Water Resources Section, within 60 days, including permit number and site map.
2. Permittee shall assume entire responsibility for all activities and uses under this permit and shall indemnify, defend and save the Alameda County Public Works Agency, its officers, agents, and employees free and harmless from any and all expense, cost, liability in connection with or resulting from the exercise of this Permit including, but not limited to, properly damage, personal injury and wrongful death.
3. Permittee, permittee's contractors, consultants or agents shall be responsible to assure that all material or waters generated during drilling, boring destruction, and/or other activities associated with this Permit will be safely handled, properly managed, and disposed of according to all applicable federal, state, and local statutes regulating such. In no case shall these materials and/or waters be allowed to enter, or potentially enter, on or off-site storm sewers, dry wells, or waterways or be allowed to move off the property where work is being completed.
4. Copy of approved drilling permit must be on site at all times. Failure to present or show proof of the approved permit application on site shall result in a fine of \$500.00.
5. The sealing material shall be a neat cement mixture composed one sack of portland cement (94 lbs.) to five to seven gallons of clean water, or a sand-grout mixture. Mixing of sand-grout mixture on site will be allowed. The sealing material

Alameda County Public Works Agency - Water Resources Well Permit

in all cases shall be placed by means of a tremie pipe lowered to within three feet of the bottom of the well. The sealing material shall be lowered down through the tremie pipe and placed in one continuous operation until the specified interval or well is filled. The end of the tremie pipe shall remain submerged in the sealing material at all times during placement.

6. Weekend work approved. Applicant shall document work and submit photos of the grouting. Applicant shall submit an email to wells@acpwa.org with the photos to close out the permit.

ATTACHMENT B

PHOTOS



ATTACHMENT C
LABORATORY DATA



25712 Commercentre Drive
Lake Forest, California 92630
949.297.5020 Phone
949.297.5027 Fax

21 January 2015

Jim Gribi
Gribi Associates
1090 Adam Street, Suite K
Benicia, CA 94510
RE: Atthowe-Market Street

Enclosed are the results of analyses for samples received by the laboratory on 01/13/15 09:20. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Katherine RunningCrane
Project Manager



25712 Commercentre Drive
 Lake Forest, California 92630
 949.297.5020 Phone
 949.297.5027 Fax

Gribi Associates 1090 Adam Street, Suite K Benicia CA, 94510	Project: Atthowe-Market Street Project Number: [none] Project Manager: Jim Gribi	Reported: 01/21/15 16:51
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WELL
T150069-01 (Water)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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SunStar Laboratories, Inc.

Extractable Petroleum Hydrocarbons by 8015C

C6-C12 (GRO)	ND	0.50	mg/l	1	5011405	01/14/15	01/14/15	EPA 8015C	
C13-C28 (DRO)	ND	0.50	"	"	"	"	"	"	
C29-C40 (MORO)	ND	0.50	"	"	"	"	"	"	
Surrogate: <i>p</i> -Terphenyl		80.8 %	65-135		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Benzene	6.8	0.50	ug/l	1	5011603	01/16/15	01/17/15	EPA 8260B	
Toluene	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
m,p-Xylene	ND	1.0	"	"	"	"	"	"	
o-Xylene	ND	0.50	"	"	"	"	"	"	
Tert-amyl methyl ether	ND	2.0	"	"	"	"	"	"	
Tert-butyl alcohol	ND	10	"	"	"	"	"	"	
Di-isopropyl ether	ND	2.0	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	2.0	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	1.0	"	"	"	"	"	"	
C6-C12 (GRO)	ND	50	"	"	"	"	"	"	
Surrogate: Toluene-d8		107 %	88.8-117		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		99.6 %	83.5-119		"	"	"	"	
Surrogate: Dibromofluoromethane		120 %	81.1-136		"	"	"	"	

Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring

Acenaphthene	ND	1.00	ug/l	1	5011406	01/14/15	01/19/15	EPA 8270C SIM	
Acenaphthylene	ND	1.00	"	"	"	"	"	"	
Anthracene	ND	1.00	"	"	"	"	"	"	
Benzo (a) anthracene	ND	1.00	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	1.00	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	1.00	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	1.00	"	"	"	"	"	"	
Benzo (a) pyrene	ND	1.00	"	"	"	"	"	"	
Chrysene	ND	1.00	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	1.00	"	"	"	"	"	"	

SunStar Laboratories, Inc.

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Katherine RunningCrane

Katherine RunningCrane, Project Manager



25712 Commercentre Drive
 Lake Forest, California 92630
 949.297.5020 Phone
 949.297.5027 Fax

Gribi Associates 1090 Adam Street, Suite K Benicia CA, 94510	Project: Atthowe-Market Street Project Number: [none] Project Manager: Jim Gribi	Reported: 01/21/15 16:51
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WELL
T150069-01 (Water)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
---------	--------	-----------------	-------	----------	-------	----------	----------	--------	-------

SunStar Laboratories, Inc.

Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring

Fluoranthene	ND	1.00	ug/l	1	5011406	01/14/15	01/19/15	EPA 8270C SIM	
Indeno (1,2,3-cd) pyrene	ND	1.00	"	"	"	"	"	"	
Fluorene	ND	1.00	"	"	"	"	"	"	
Naphthalene	ND	1.00	"	"	"	"	"	"	
Phenanthrene	ND	1.00	"	"	"	"	"	"	
Pyrene	ND	1.00	"	"	"	"	"	"	
<i>Surrogate: Terphenyl-d14</i>		69.4 %		33-141		"	"	"	"

SunStar Laboratories, Inc.

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Katherine RunningCrane

Katherine RunningCrane, Project Manager



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Gribi Associates 1090 Adam Street, Suite K Benicia CA, 94510	Project: Atthowe-Market Street Project Number: [none] Project Manager: Jim Gribi	Reported: 01/21/15 16:51
--	--	-----------------------------

Extractable Petroleum Hydrocarbons by 8015C - Quality Control
SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 5011405 - EPA 3510C GC

Blank (5011405-BLK1)			Prepared & Analyzed: 01/14/15							
C6-C12 (GRO)	ND	0.50	mg/l							
C13-C28 (DRO)	ND	0.50	"							
C29-C40 (MORO)	ND	0.50	"							
<i>Surrogate: p-Terphenyl</i>	3.24		"	4.00		80.9	65-135			

LCS (5011405-BS1)			Prepared & Analyzed: 01/14/15							
C13-C28 (DRO)	17.0	0.50	mg/l	20.0		85.2	75-125			
<i>Surrogate: p-Terphenyl</i>	3.33		"	4.00		83.3	65-135			

Matrix Spike (5011405-MS1)			Source: T150069-01		Prepared & Analyzed: 01/14/15					
C13-C28 (DRO)	17.2	0.50	mg/l	20.0	ND	86.1	75-125			
<i>Surrogate: p-Terphenyl</i>	3.02		"	4.00		75.5	65-135			

Matrix Spike Dup (5011405-MSD1)			Source: T150069-01		Prepared & Analyzed: 01/14/15					
C13-C28 (DRO)	17.4	0.50	mg/l	20.0	ND	87.0	75-125	0.972	20	
<i>Surrogate: p-Terphenyl</i>	3.12		"	4.00		78.0	65-135			

SunStar Laboratories, Inc.

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Katherine RunningCrane

Katherine RunningCrane, Project Manager



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 949.297.5027 Fax

Gribi Associates
 1090 Adam Street, Suite K
 Benicia CA, 94510

Project: Atthowe-Market Street
 Project Number: [none]
 Project Manager: Jim Gribi

Reported:
 01/21/15 16:51

Volatile Organic Compounds by EPA Method 8260B - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 5011603 - EPA 5030 GCMS

Blank (5011603-BLK1)

Prepared: 01/16/15 Analyzed: 01/17/15

Benzene	ND	0.50	ug/l							
Toluene	ND	0.50	"							
Ethylbenzene	ND	0.50	"							
m,p-Xylene	ND	1.0	"							
o-Xylene	ND	0.50	"							
Tert-amyl methyl ether	ND	2.0	"							
Tert-butyl alcohol	ND	10	"							
Di-isopropyl ether	ND	2.0	"							
Ethyl tert-butyl ether	ND	2.0	"							
Methyl tert-butyl ether	ND	1.0	"							
C6-C12 (GRO)	ND	50	"							
<i>Surrogate: Toluene-d8</i>	9.09		"	8.00		114	88.8-117			
<i>Surrogate: 4-Bromofluorobenzene</i>	7.37		"	8.00		92.1	83.5-119			
<i>Surrogate: Dibromofluoromethane</i>	8.57		"	8.00		107	81.1-136			

LCS (5011603-BS1)

Prepared: 01/16/15 Analyzed: 01/17/15

Chlorobenzene	17.7	1.0	ug/l	20.0		88.3	75-125			
1,1-Dichloroethene	23.6	1.0	"	20.0		118	75-125			
Trichloroethene	19.1	1.0	"	20.0		95.4	75-125			
Benzene	24.8	0.50	"	20.0		124	75-125			
Toluene	24.7	0.50	"	20.0		124	75-125			
<i>Surrogate: Toluene-d8</i>	9.09		"	8.00		114	88.8-117			
<i>Surrogate: 4-Bromofluorobenzene</i>	7.80		"	8.00		97.5	83.5-119			
<i>Surrogate: Dibromofluoromethane</i>	9.73		"	8.00		122	81.1-136			

Matrix Spike (5011603-MS1)

Source: T150084-01

Prepared: 01/16/15 Analyzed: 01/17/15

Chlorobenzene	15.9	1.0	ug/l	20.0	ND	79.7	75-125			
1,1-Dichloroethene	23.6	1.0	"	20.0	ND	118	75-125			
Trichloroethene	19.8	1.0	"	20.0	ND	99.1	75-125			
Benzene	24.8	0.50	"	20.0	ND	124	75-125			
Toluene	23.4	0.50	"	20.0	ND	117	75-125			
<i>Surrogate: Toluene-d8</i>	8.95		"	8.00		112	88.8-117			
<i>Surrogate: 4-Bromofluorobenzene</i>	7.95		"	8.00		99.4	83.5-119			
<i>Surrogate: Dibromofluoromethane</i>	10.5		"	8.00		132	81.1-136			

SunStar Laboratories, Inc.

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Katherine RunningCrane

Katherine RunningCrane, Project Manager



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Gribi Associates 1090 Adam Street, Suite K Benicia CA, 94510	Project: Atthowe-Market Street Project Number: [none] Project Manager: Jim Gribi	Reported: 01/21/15 16:51
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Volatile Organic Compounds by EPA Method 8260B - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 5011603 - EPA 5030 GCMS

Matrix Spike Dup (5011603-MSD1)	Source: T150084-01			Prepared: 01/16/15		Analyzed: 01/17/15				
Chlorobenzene	17.0	1.0	ug/l	20.0	ND	84.8	75-125	6.26	20	
1,1-Dichloroethene	24.8	1.0	"	20.0	ND	124	75-125	4.88	20	
Trichloroethene	20.6	1.0	"	20.0	ND	103	75-125	3.76	20	
Benzene	24.3	0.50	"	20.0	ND	121	75-125	2.16	20	
Toluene	24.6	0.50	"	20.0	ND	123	75-125	4.80	20	
Surrogate: Toluene-d8	8.56		"	8.00		107	88.8-117			
Surrogate: 4-Bromofluorobenzene	8.27		"	8.00		103	83.5-119			
Surrogate: Dibromofluoromethane	10.6		"	8.00		132	81.1-136			

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Katherine RunningCrane, Project Manager



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Gribi Associates 1090 Adam Street, Suite K Benicia CA, 94510	Project: Atthowe-Market Street Project Number: [none] Project Manager: Jim Gribi	Reported: 01/21/15 16:51
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Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring - Quality Control
SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 5011406 - EPA 3510C GCMS/ECD

Blank (5011406-BLK1)				Prepared: 01/14/15 Analyzed: 01/19/15						
Acenaphthene	ND	1.00	ug/l							
Acenaphthylene	ND	1.00	"							
Anthracene	ND	1.00	"							
Benzo (a) anthracene	ND	1.00	"							
Benzo (b) fluoranthene	1.56	1.00	"							B-ND
Benzo (k) fluoranthene	1.56	1.00	"							B-ND
Benzo (g,h,i) perylene	10.3	1.00	"							B-ND
Benzo (a) pyrene	2.16	1.00	"							B-ND
Chrysene	ND	1.00	"							
Dibenz (a,h) anthracene	8.08	1.00	"							B-ND
Fluoranthene	ND	1.00	"							
Fluorene	ND	1.00	"							
Indeno (1,2,3-cd) pyrene	7.06	1.00	"							B-ND
Naphthalene	ND	1.00	"							
Phenanthrene	ND	1.00	"							
Pyrene	ND	1.00	"							

<i>Surrogate: Terphenyl-dl4</i>	9.06		"	10.0		90.6	33-141			
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LCS (5011406-BS1)				Prepared: 01/14/15 Analyzed: 01/19/15						
Acenaphthene	6.78	1.00	ug/l	10.0		67.8	50-130			
Pyrene	8.04	1.00	"	10.0		80.4	50-130			

<i>Surrogate: Terphenyl-dl4</i>	9.28		"	10.0		92.8	33-141			
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Matrix Spike (5011406-MS1)				Source: T150069-01		Prepared: 01/14/15 Analyzed: 01/19/15				
Acenaphthene	7.08	1.00	ug/l	10.0	ND	70.8	50-130			
Pyrene	8.22	1.00	"	10.0	ND	82.2	50-130			

<i>Surrogate: Terphenyl-dl4</i>	7.54		"	10.0		75.4	33-141			
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SunStar Laboratories, Inc.

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Katherine RunningCrane

Katherine RunningCrane, Project Manager



25712 Commercentre Drive
 Lake Forest, California 92630
 949.297.5020 Phone
 949.297.5027 Fax

Gribi Associates 1090 Adam Street, Suite K Benicia CA, 94510	Project: Atthowe-Market Street Project Number: [none] Project Manager: Jim Gribi	Reported: 01/21/15 16:51
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Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring - Quality Control
SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 5011406 - EPA 3510C GCMS/ECD

Matrix Spike Dup (5011406-MSD1)

Source: T150069-01

Prepared: 01/14/15

Analyzed: 01/19/15

Acenaphthene	7.00	1.00	ug/l	10.0	ND	70.0	50-130	1.14	31	
Pyrene	8.26	1.00	"	10.0	ND	82.6	50-130	0.485	31	
Surrogate: Terphenyl-d14	7.86		"	10.0		78.6	33-141			

SunStar Laboratories, Inc.

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Katherine RunningCrane

Katherine RunningCrane, Project Manager



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949.297.5027 Fax

Gribi Associates
1090 Adam Street, Suite K
Benicia CA, 94510

Project: Atthowe-Market Street
Project Number: [none]
Project Manager: Jim Gribi

Reported:
01/21/15 16:51

Notes and Definitions

- B-ND The analyte is found in the method blank at a level greater than the reporting limit but the associated samples are ND. There is no impact on data.
- DET Analyte DETECTED
- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- dry Sample results reported on a dry weight basis
- RPD Relative Percent Difference

SunStar Laboratories, Inc.

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Katherine RunningCrane

Katherine RunningCrane, Project Manager

SAMPLE RECEIVING REVIEW SHEET

BATCH # 7150069

Client Name: GRIBI

Project: ATTHOME - MARKET ST.

Received by: SUNNY

Date/Time Received: 1.13.15 / 9:20

Delivered by: Client SunStar Courier GSO FedEx Other _____

Total number of coolers received 1 Temp criteria = 6°C > 0°C (no frozen containers)

Temperature: cooler #1 4.2 °C +/- the CF (- 0.2°C) = 4.0 °C corrected temperature

cooler #2 _____ °C +/- the CF (- 0.2°C) = _____ °C corrected temperature

cooler #3 _____ °C +/- the CF (- 0.2°C) = _____ °C corrected temperature

Samples outside temp. but received on ice, w/in 6 hours of final sampling. Yes No* N/A

Custody Seals Intact on Cooler/Sample Yes No* N/A

Sample Containers Intact Yes No*

Sample labels match COC ID's Yes No*

Total number of containers received match COC Yes No*

Proper containers received for analyses requested on COC Yes No*

Proper preservative indicated on COC/containers for analyses requested Yes No* N/A

Complete shipment received in good condition with correct temperatures, containers, labels, volumes preservatives and within method specified holding times. Yes No*

* Complete Non-Conformance Receiving Sheet if checked Cooler/Sample Review - Initials and date SL 1.13.15

Comments:

ATTACHMENT B
SITE CONCEPTUAL MODEL



March 19, 2015

Alameda County Department of
Environmental Health
1131 Harbor Bay Parkway, 2nd Floor
Alameda, CA 94502

Attention: Mark Detterman

Subject: Site Conceptual Model, 3924 Market Street, Oakland, California
ACEH RO# 0000490; Global ID: T0600101187

Ladies and Gentlemen:

Gribi Associates is pleased to submit this *Site Conceptual Model* on behalf San Pablo Avenue Venture for the property located at 3924 Market Street in Oakland, California. The following Site Conceptual Model (SCM) has been developed to assist in risk-based decision making. In developing the SCM, we have evaluated actual and potential contaminant sources, migratory pathways, and environmental receptors. This SCM is based on our understanding of currently-available data; where data is not available or is not representative, a data gap is noted. As part of this SCM, we have included data summary tables in Attachment 1 and narrative figures in Attachment 2.

In preparing the SCM, we have identified four investigative data gaps: (1) the nature and extent of soil and groundwater contaminant impacts upgradient (northeast) in the apparent source area; (2) The lateral extend of soil hydrocarbon impacts downgradient (south-southwest) from the source area; (3) the nature and extent of vapor contaminant impacts beneath the Site building; (4) the nature of the product present in Site wells.

We appreciate this opportunity to provide this report for your review. Please contact us if there are questions or if additional information is required.

Very truly yours,

James E. Gribi
Professional Geologist
California No. 5843



Enclosure

SITE CONCEPTUAL MODEL
3924 Market Street
Oakland, California

	SCM Sub-Element	Description	Figures & Tables Reference	Data Gap	How to Address
Geology and Hydrogeology	Regional	The Site is located along the southwestern margin of the Berkeley Alluvial Plain, which is a subarea of the East Bay Plain area (<i>East Bay Plain Groundwater Basin Beneficial Use Evaluation Report</i> , SFBRWQCB, June 1999). Alluvial deposits that generally consist of silts and clays containing thin sandy and gravelly lenses underlie the area. Estuarine mud, known as "Bay Mud," extends east of the San Francisco Bay where it interfingers with the surficial fluvial deposits. Important regional sands, such as the Merritt Sand, appear to exist intermittently beneath the Site. The depth to bedrock in the Berkeley Alluvial Plain varies from near zero on the north to 500 feet on the south end of the Plain. The Hayward fault defines the eastern boundary of the Berkeley Alluvial Plain and forms a geologic discontinuity. Bedrock in the East Bay Area is mostly Franciscan Complex melange, which includes marine sandstone and shale, chert, metavolcanics, serpentinized ultramafic rocks, and limestone.	Figure 1	None	n/a
	Site	Geology: Soils encountered in the borings generally consisted of clays down to approximately 15 feet in depth, followed by sands and silts to 20 feet, the total depth investigated. Hydrology: Water-saturated soils were generally encountered in and silts at about 16 feet in depth, and rose in the borings to approximately 13 feet in depth. Hydraulic gradient appears to be to the west-southwest. Groundwater elevations measured in 1995 and 1996 showed a westerly elevation gradient. The configuration of soil and groundwater hydrocarbon impacts in the nine borings from the November 2013 investigation indicate a southwesterly migration direction.	Figure 4, Figure 5, and Figure 6	None	n/a
Surface Water Bodies		The closest surface water bodies are culvertized creeks. Temescal Creek, the main drainage for the Site area, is located approximately 2,000 feet north-northeast from the Site at 53 rd Street.	Figure 1	None	n/a
Nearby Wells		The State Water Resources Control Board Geotracker GAMA website includes approximate locations of water supply wells in California. No water supply wells are shown within the immediate Oakland, Emeryville, or Berkeley areas. Also, DWR records indicate no water supply wells (other than the Site well, which has been decommissioned) within 1,000 feet from the Site. An unused water supply well was present in the Site office area. The DWR log indicates that the well was constructed in 1928 and is 108 feet deep, with approximately 50 feet of 10-inch conductor casing and 108 feet of 8-inch casing with 50 feet of perforations. This well was decommissioned in accordance with ACPWA permit requirements in January 2015. A water sample collected prior to decommissioning showed no significant concentrations of hydrocarbons or VOCs.	Figure 1 and Figure 2	None.	n/a.

SITE CONCEPTUAL MODEL
3924 Market Street
Oakland, California

	SCM Sub-Element	Description	Figures & Tables Reference	Data Gap	How to Address
Potential Sources	Onsite	<p>Former Gasoline USTs: One 500-gallon gasoline UST, located in the Market Street sidewalk in front of the Site, was removed in March 1991. Two soil samples collected from the UST excavation cavity at about 9 feet in depth and one soil sample collected at two feet below removed piping showed low levels (less than 25 milligrams per kilogram, mg/kg) of Total Petroleum Hydrocarbons as Gasoline and Diesel (TPH-G and TPH-D) and low levels (less than 0.5 mg/kg) of gasoline constituents Benzene, Toluene, Ethylbenzene, and Xylenes (BTEX). In June 1991, the UST excavation cavity was over excavated vertically to about 14 feet in depth. Five soil samples were collected at about 13 feet in depth and showed no detectable TPH-D, up to 210 mg/kg of TPH-G, and low levels (less than 5 mg/kg) of BTEX. The over excavation cavity was backfilled with imported pea gravel.</p> <p>Former Fuel Oil UST (or USTs): Based on field and laboratory analytical results, the source of COCs appears to have been a fuel oil UST (or USTs) located in the vicinity of borings B-2 and B-5. A review of historical records for the Site uncovered no direct evidence of a fuel oil UST present on the Site; however, the current Site owner, Scott Atthowe recalled that the previous owners, Toscana Bakery, had indicated that there may have been a fuel oil underground storage tank (UST) located in the site parking lot adjacent to the current covered loading dock area, and that this UST was removed by Toscana prior to his purchase of the Property in 1993.</p>	Figure 2 and Table 2 and Table 3.	Exact location of former fuel oil UST.	Two borings inside Site building are proposed.
Potential Sources	Offsite	Review of hazardous waste site lists and historical records for the Site and site vicinity indicates no potential offsite sources of contamination.	Figure 1, Figure 2.	None	n/a
Release Occurrence		<p>Former Gasoline UST (Market Street sidewalk): Soil and groundwater sampling at and adjacent to this former UST does not indicate significant releases either in soil or water.</p> <p>Former Fuel Oil UST (or USTs): Hydrocarbons associated with this release consists of heavy-range hydrocarbons (C²⁰ -C⁴⁰ range). The heavy hydrocarbon release was large enough to result in free product occurrence; however, over time it appears that the product may have degraded to a viscous, fairly insoluble product. Given the configuration of relatively large soil hydrocarbon plume and small groundwater hydrocarbon plume, it appears likely that: (1) Releases associated with these plumes occurred many decades ago; (2) At the time of these releases, the fuel oil was more mobile (less viscous) and, as such, able to migrate laterally; (3) These hydrocarbons subsequently degraded over several decades, losing mobility and effectively "locking" them in place..</p>	Figure 4, Figure 5, and Figure 6; Table 2 and Table 3.	Exact nature and extent of heavy hydrocarbon impacts.	<p>-Analyze product for density and product.</p> <p>-Additional borings are proposed northeast and southwest of source area.</p>
Constituents of Concern		The primary constituents of concern are heavier hydrocarbons (TPH-D and TPH-MO). No significant detections of gasoline and gasoline constituents (TPH-G and BTEX) have been encountered in soil or groundwater samples from site borings and wells.	Figure 4, Table 2 and Table 3.	None	n/a

SITE CONCEPTUAL MODEL
3924 Market Street
Oakland, California

	SCM Sub-Element	Description	Figures & Tables Reference	Data Gap	How to Address
Nature & Extent of Impacts	Impacts in Soil	Soil TPH-D/TPH-MO hydrocarbon impacts are limited primarily to a fairly thin (2-3 feet thick) layer within the sand layer below 14 feet in depth. These soil hydrocarbon impacts extend at least 75 feet to the south-southwest beneath Market Street and towards 39 th Street. The lateral extent of soil impact is not fully defined to the south.	Figure 4, Figure 5, Figure 6, and Figure 7; Table 2.	Extent of soil hydrocarbon impacts northeast and southwest of source area.	Four additional borings proposed, to include 2 upgradient and 2 downgradient.
	Impacts in Groundwater	The groundwater TPH-D/TPH-MO hydrocarbon plume is smaller than the soil hydrocarbon plume, extending perhaps 20 to 25 feet west-southwest from the presumed source area. The limited extent of groundwater hydrocarbon impacts is clearly due to the nature of the contaminants, which have low solubility in groundwater.	Figure 4, Figure 5, and Figure 6; Table 1, Table 3.	None	n/a
	Impacts in Vapor	Shallow soils beneath the site are clay-dominated, and COCs consist primarily of TPH-D/TPH-MO; thus, vapor hydrocarbon impacts are expected to be minimal. Biodegradation of hydrocarbons could result in secondary gases, of which Methane would pose the greatest concern.	Figure 7	Nature and extent of vapor hydrocarbon impacts beneath site building.	Two soil vapor samples proposed adjacent to site building.
Migration Pathways		A detailed conduit study was conducted for the Site. All identified below-ground utilities are above 12 feet in depth, while soil and groundwater impacts are below 14 feet in depth. Hence; underground utilities both on and surrounding the site do not represent preferential pathways for contaminant migration.	Figure 3	None	n/a
Potential Receptors & Risks	Onsite	Potential receptors include future construction workers, who could come into contact with heavy hydrocarbon-impacted soil and groundwater. Risks associated with these potential exposures are expected to be low given the depth of soil and groundwater impacts and non-volatile nature of hydrocarbon impacts. Potable water is and will be supplied by municipal sources for the foreseeable future. Hence, groundwater ingestion is not considered to be a potential receptor.	Figure 8	Vapor sampling required to confirm no vapor risks	See above
	Offsite	Potential receptors include future construction workers, who could come into contact with heavy hydrocarbon-impacted soil and groundwater. Risks associated with these potential exposures are expected to be low given the depth of soil and groundwater impacts and non-volatile nature of hydrocarbon impacts.	Figure 8	None	n/a

ATTACHMENT A

TABLES

Table 1 MONITORING WELL CONSTRUCTION DETAILS 3924 Market Street UST Site									
Well ID	Boring Depth ¹	Well Depth	Casing Diameter	Blank PVC Riser	PVC Screen ²	Grout Seal ³	Bentonite Seal	Filter Pack ⁴	TOC Elevation ⁵
MW-1	21.5	21	0.167 (2")	0-6	6-21	0.5-4	4-5	5-16	56.46
MW-2	24	24	0.167 (2")	0-9	9-24	0.5-7	7-8	8-24	57.41
MW-3	24	24	0.167 (2")	0-9	9-24	0.5-7	7-8	8-24	56.24

Table Notes:

1 = All measurements are in feet below top of casing.

2 = 0.020-inch slot size.

3 = Portland cement

4 = Lonestar No. 3 Silica Sand

5 = Top of Casing mean sea level elevation.

Table 2
CUMULATIVE SOIL LABORATORY ANALYTICAL RESULTS
3924 Market Street UST Site

Sample ID	Sample Date	Sample Depth	Concentration, milligrams per kilogram (mg/kg)						
			TPH-M	TPH-D	TPH-G	B	T	E	X
UST Removal, March 1991									
A1	3/29/91	8 ft	–	1.0	14	0.30	0.12	0.14	0.40
A2	3/29/91	10 ft	–	4.7	26	0.28	0.24	0.19	0.20
P1	3/29/91	2 ft	–	<1.0	6.3	0.20	0.11	0.042	0.012
UST Overexcavation, June 1991									
D-14	6/21/91	14 ft	–	<1.0	150	<0.005	0.20	0.51	2.0
F-12	6/21/91	12 ft	–	<10	67	0.03	0.13	0.27	0.75
G-13	6/21/91	13 ft	–	<1.0	27	0.01	0.04	0.1	0.27
H-13	6/21/91	13 ft	–	<10	9	0.01	0.02	0.04	0.08
I-13	6/21/91	13 ft	–	<10	210	0.4	0.6	1.0	2.0
Well Installation Activities, May 1995									
MW-1-8.5	5/25/95	8.5 ft	–	<10	<1.0	<0.005	<0.005	<0.005	<0.005
MW-2-10.5	5/25/95	10.5 ft	–	<10	<1.0	<0.005	<0.005	<0.005	<0.005
MW-3-11	5/26/95	11.0 ft	–	28	4	<0.005	0.011	<0.005	0.069
Soil Boring Investigation, November 2013									
B-1-8.0	11/22/13	8.0 ft	<10	71	210	<0.005	7.0	<0.005	6.78
B-1-12.0	11/22/13	12.0 ft	<10	<10	<10	<0.005	0.013	<0.005	<0.010
B-1-16.0	11/22/13	16.0 ft	<10	<10	<10	<0.005	<0.005	<0.005	<0.010
B-2-9.0	11/22/13	9.0 ft	280	290	1.2	<0.005	<0.005	<0.005	<0.010
B-2-12.0	11/22/13	12.0 ft	<10	43	0.59	<0.005	<0.005	<0.005	<0.010
B-2-15.0	11/22/13	15.0 ft	<10	<10	0.84	<0.005	0.0069	<0.005	<0.010
B-3-8.0	11/21/13	8.0 ft	<10	<10	<0.5	<0.005	<0.005	<0.005	<0.010
B-3-12.0	11/21/13	12.0 ft	<10	43	<0.5	<0.005	<0.005	<0.005	<0.010
B-3-15.0	11/21/13	15.0 ft	290	280	1.2	<0.005	<0.005	<0.005	<0.010
B-4-8.0	11/22/13	8.0 ft	<10	<10	<0.5	<0.005	<0.005	<0.005	<0.010
B-4-12.0	11/22/13	12.0 ft	<10	11	<0.5	<0.005	<0.005	<0.005	<0.010
B-4-15.0	11/22/13	15.0 ft	570	490	1.1	<0.005	<0.005	<0.005	<0.010
B-5-7.0	11/21/13	7.0 ft	<10	70	0.69	<0.005	<0.005	<0.005	<0.010
B-5-12.0	11/21/13	12.0 ft	<10	18	0.58	<0.005	<0.005	<0.005	<0.010
B-5-15.0	11/21/13	15.0 ft	<10	11	1.6	<0.005	<0.005	<0.005	<0.010
B-6-8.0	11/21/13	8.0 ft	<10	<10	<0.5	<0.005	<0.005	<0.005	<0.010
B-6-12.0	11/21/13	12.0 ft	<10	10	<0.5	<0.005	<0.005	<0.005	<0.010
B-6-15.0	11/21/13	15.0 ft	910	740	2.4	<0.005	<0.005	<0.005	<0.010
B-7-8.0	11/21/13	8.0 ft	<10	<10	<0.5	<0.005	<0.005	<0.005	<0.010
B-7-12.0	11/21/13	12.0 ft	<10	<10	<0.5	<0.005	<0.005	<0.005	<0.010
B-7-16.0	11/21/13	16.0 ft	<10	<10	<0.5	<0.005	<0.005	<0.005	<0.010
B-8-8.0	11/21/13	8.0 ft	<10	<10	<0.5	<0.005	<0.005	<0.005	<0.010
B-8-12.0	11/21/13	12.0 ft	<10	<10	<0.5	<0.005	<0.005	<0.005	<0.010
B-8-16.0	11/21/13	16.0 ft	<10	<10	<0.5	<0.005	<0.005	<0.005	<0.010

Table 2
CUMULATIVE SOIL LABORATORY ANALYTICAL RESULTS
 3924 Market Street UST Site

Sample ID	Sample Date	Sample Depth	Concentration, milligrams per kilogram (mg/kg)						
			TPH-M	TPH-D	TPH-G	B	T	E	X
B-9-8.0	11/22/13	8.0 ft	<10	<10	<0.5	<0.005	<0.005	<0.005	<0.010
B-9-12.0	11/22/13	12.0 ft	<10	<10	<0.5	<0.005	<0.005	<0.005	<0.010
B-9-16.0	11/22/13	16.0 ft	<10	<10	<0.5	<0.005	<0.005	<0.005	<0.010

TABLE NOTES

TPH-M = Total Petroleum Hydrocarbons as motor oil

TPH-D = Total Petroleum Hydrocarbons as diesel

TPH-G = Total Petroleum Hydrocarbons as gasoline

B = Benzene,

T = Toluene

E = Ethylbenzene

X = Xylenes

<1.0 = Not detected above the expressed value.

Table 3
CUMULATIVE GROUNDWATER LABORATORY ANALYTICAL RESULTS
 3924 Market Street UST Site

Well ID	Sample Date	GW Depth	GW Elev.	Concentration, micrograms per liter (ug/L)								
				TPH-M	TPH-D	TPH-G	B	T	E	X	MTBE	Other
MW-1 <56.46>	6/1/95	9.70	46.76	–	3,600	73	<0.5	1.0	<0.5	3.0	–	–
	9/6/95	10.70	45.76	–	10,000	<50	<0.5	<0.5	<0.5	<0.5	–	–
	12/7/95	11.36	45.10	–	940	260	<0.5	<0.5	<0.5	<0.5	–	–
	3/7/96	10.11	46.35	–	3,800	150	<0.5	<0.5	<0.5	<0.5	–	–
	6/19/96	11.90	44.56	–	2,000	220	<0.5	<0.5	<0.5	1.0	–	–
	4/19/00	10.9	45.56	–	–	–	–	–	–	–	–	–
	4/19/00	–	–	–	240,000(a)	320,000(a)	–	–	–	–	–	–
MW-2 <57.41>	6/1/95	11.59	45.82	–	<50	<50	<0.5	<0.5	<0.5	<0.5	–	–
	9/6/95	12.20	45.21	–	500	<50	<0.5	<0.5	<0.5	<0.5	–	–
	12/7/95	12.38	45.03	–	90	<50	<0.5	<0.5	<0.5	<0.5	–	–
	3/7/96	11.12	46.29	–	320	<50	<0.5	<0.5	<0.5	<0.5	–	–
	6/19/96	13.19	44.22	–	260	<50	<0.5	<0.5	<0.5	<0.5	–	–
	4/19/00	13.3	44.11	–	1,300	1,700	<50	<0.5	<0.5	<0.5	<2.5	–
	4/19/00	–	–	–	230,000(b)	330,000(b)	–	–	–	–	–	–
MW-3 <56.24>	6/1/95	11.53	44.71	–	370	72	1.0	0.6	<0.5	0.9	–	–
	9/6/95	11.92	44.32	–	2,800	<50	<0.5	<0.5	<0.5	<0.5	–	–
	12/7/95	12.05	44.19	–	<50	<50	<0.5	<0.5	<0.5	<0.5	–	–
	3/7/96	11.70	44.54	–	470	150	3.5	<0.5	<0.5	0.6	–	–
	6/19/96	12.54	43.70	–	420	<50	<0.5	<0.5	<0.5	<0.5	–	–
	4/19/00	13.4	42.84	–	8,900	14,000	1,800	<0.5	<0.5	<0.5	<0.5	<5.0
	4/19/00	–	–	–	230,000(b)	330,000(b)	–	–	–	–	–	–
Soil Boring Investigation, November 2013												
B-1-GW	11/22/13	(16.5)	–	<500	<500	<50	<1.0	<1.0	<1.0	<2.0		
B-2-GW	11/22/13	(15.5)	–	<500	<500	<50	<1.0	<1.0	<1.0	<2.0		
B-3-GW	11/21/13	(16.5)	–	3,100	2,400	84	<1.0	<1.0	<1.0	<2.0		
B-4-GW	11/22/13	(15.5)	–	5,100	4,700	9,900	<1.0	<1.0	<1.0	1.0		
B-5-GW	11/21/13	(16.5)	–	<500	<500	87	<1.0	<1.0	<1.0	<2.0		
B-6-GW	11/21/13	(14.0)	–	<500	<500	<50	<1.0	<1.0	<1.0	<2.0		
B-7-GW	11/21/13	(15.0)	–	<500	<500	<50	<1.0	<1.0	<1.0	<2.0		
B-8-GW	11/21/13	(15.0)	–	<500	<500	<50	<1.0	<1.0	<1.0	<2.0		
B-9-GW	11/22/13	(20-24)	–	<500	<500	<50	<1.0	<1.0	<1.0	<2.0		

TABLE NOTES

GW Depth = Groundwater depth, in feet below top of casing or ground surface.

GW Elev = Groundwater mean sea level elevation, in feet .

TPH-M = Total Petroleum Hydrocarbons as motor oil

TPH-D = Total Petroleum Hydrocarbons as diesel

TPH-G = Total Petroleum Hydrocarbons as gasoline

B = Benzene,

T = Toluene

E = Ethylbenzene

X = Xylenes

MTBE = Methyl tert-Butyl Ether

<250 = Not detected above the expressed value.

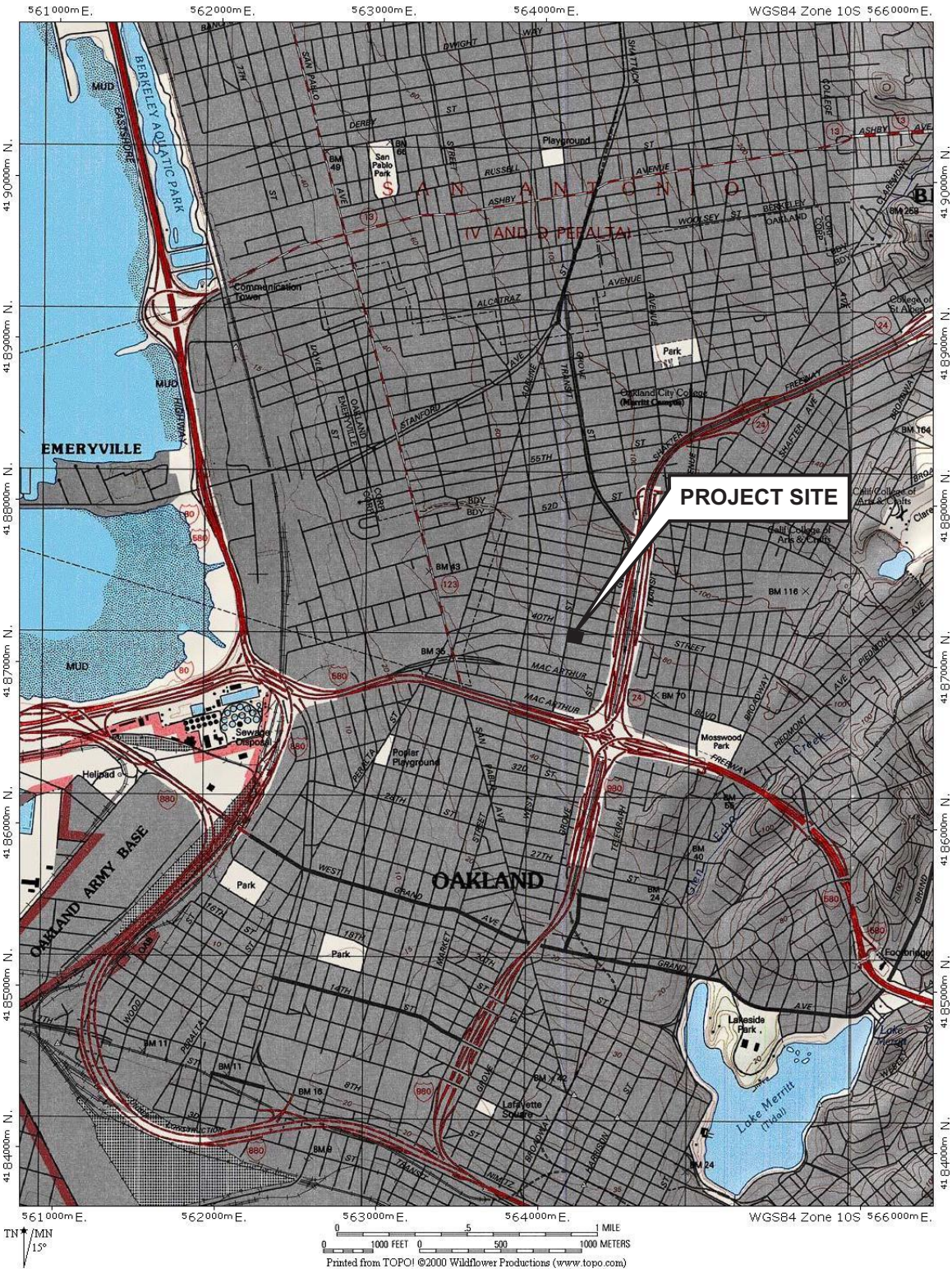
<56.46> = Top of casing mean sea level elevation.

(a) = Product in well; purged one gallon product; sampled product but not groundwater.

(b) = Approximately four inch of heavy product in well; sampled both product and underlying groundwater.

ATTACHMENT B

FIGURES



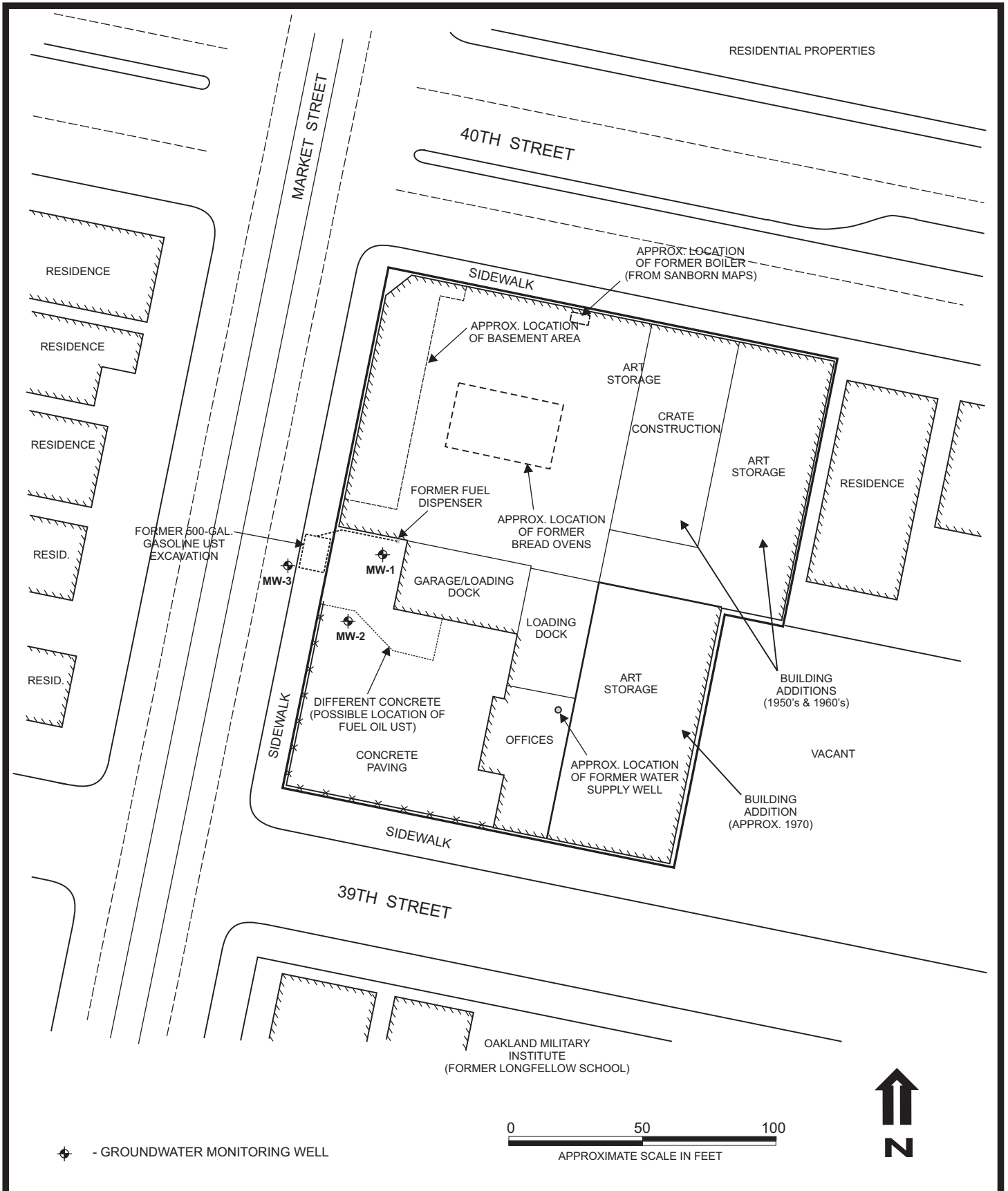
DESIGNED BY:	CHECKED BY: JEG
DRAWN BY: JEG	SCALE:
PROJECT NO:	

SITE VICINITY MAP

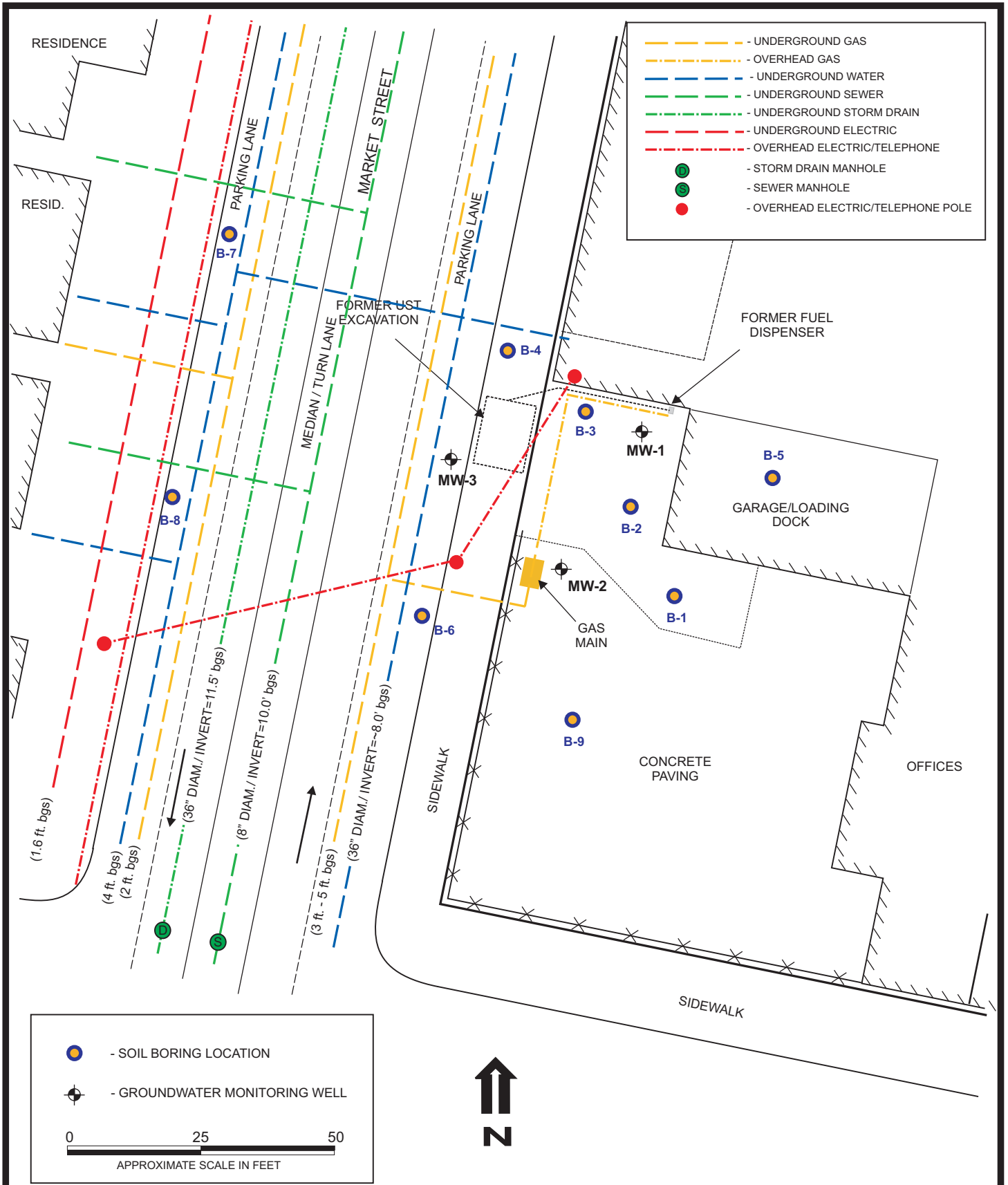
3924 MARKET STREET
OAKLAND, CALIFORNIA

DATE: 03/19/2015 FIGURE: 1

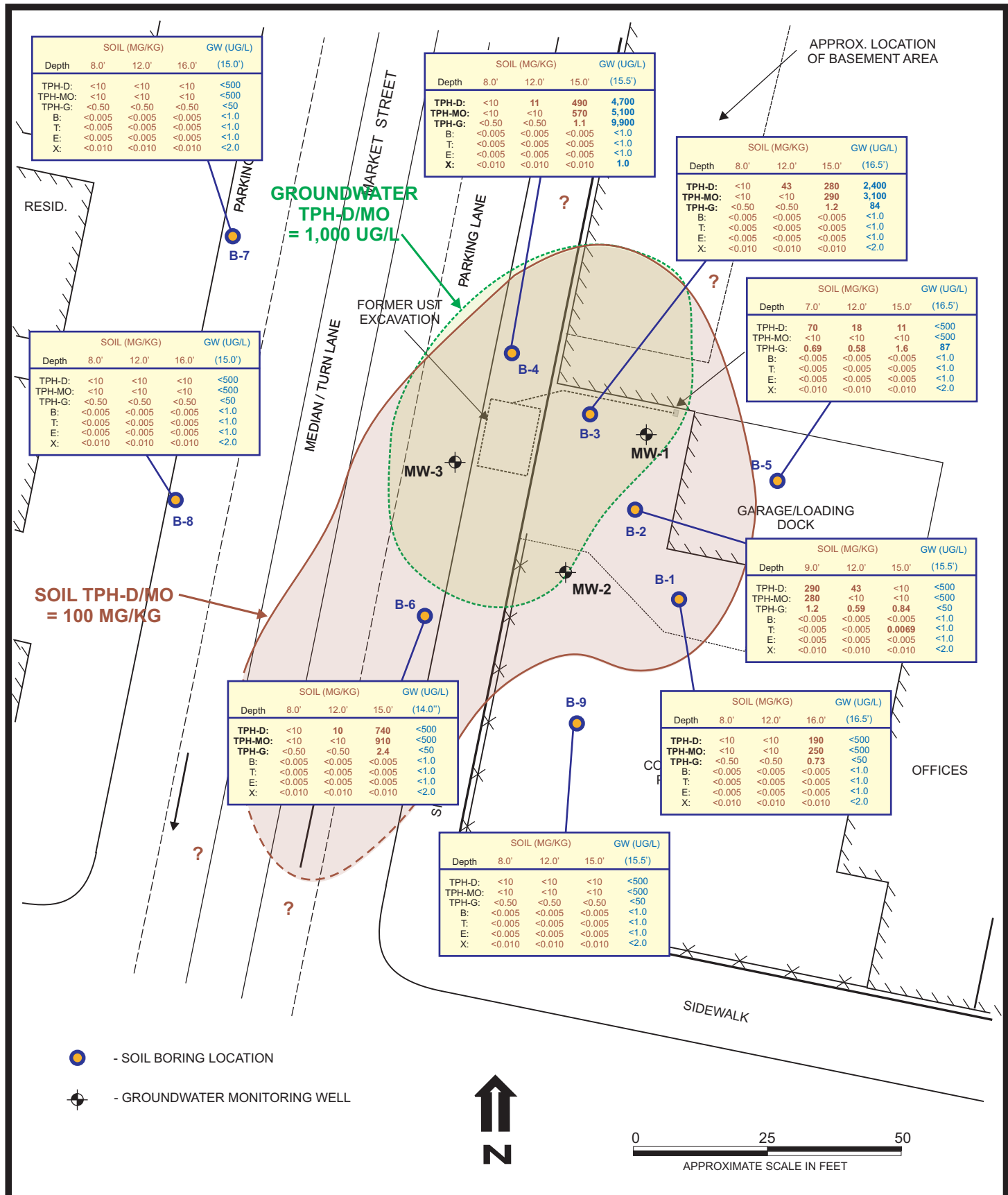




DESIGNED BY:	CHECKED BY: JEG	SITE PLAN	DATE: 03/19/2015	FIGURE: 2
DRAWN BY: JEG	SCALE:		GRIBI	
		3924 MARKET STREET OAKLAND, CALIFORNIA		



DESIGNED BY:	CHECKED BY: JEG	SOIL BORING & UTILITY LOCATIONS	DATE: 03/19/2015	FIGURE: 3
DRAWN BY: JEG	SCALE:		GRIBI	
		3924 MARKET STREET OAKLAND, CALIFORNIA		



Depth	SOIL (MG/KG)			GW (UG/L)
	8.0'	12.0'	16.0'	(15.0')
TPH-D:	<10	<10	<10	<500
TPH-MO:	<10	<10	<10	<500
TPH-G:	<0.50	<0.50	<0.50	<50
B:	<0.005	<0.005	<0.005	<1.0
T:	<0.005	<0.005	<0.005	<1.0
E:	<0.005	<0.005	<0.005	<1.0
X:	<0.010	<0.010	<0.010	<2.0

Depth	SOIL (MG/KG)			GW (UG/L)
	8.0'	12.0'	15.0'	(15.5')
TPH-D:	<10	11	490	4,700
TPH-MO:	<10	<10	570	5,100
TPH-G:	<0.50	<0.50	1.1	9,900
B:	<0.005	<0.005	<0.005	<1.0
T:	<0.005	<0.005	<0.005	<1.0
E:	<0.005	<0.005	<0.005	<1.0
X:	<0.010	<0.010	<0.010	<2.0

Depth	SOIL (MG/KG)			GW (UG/L)
	8.0'	12.0'	15.0'	(16.5')
TPH-D:	<10	43	280	2,400
TPH-MO:	<10	<10	290	3,100
TPH-G:	<0.50	<0.50	1.2	84
B:	<0.005	<0.005	<0.005	<1.0
T:	<0.005	<0.005	<0.005	<1.0
E:	<0.005	<0.005	<0.005	<1.0
X:	<0.010	<0.010	<0.010	<2.0

Depth	SOIL (MG/KG)			GW (UG/L)
	8.0'	12.0'	16.0'	(15.0')
TPH-D:	<10	<10	<10	<500
TPH-MO:	<10	<10	<10	<500
TPH-G:	<0.50	<0.50	<0.50	<50
B:	<0.005	<0.005	<0.005	<1.0
T:	<0.005	<0.005	<0.005	<1.0
E:	<0.005	<0.005	<0.005	<1.0
X:	<0.010	<0.010	<0.010	<2.0

Depth	SOIL (MG/KG)			GW (UG/L)
	7.0'	12.0'	15.0'	(16.5')
TPH-D:	70	18	11	<500
TPH-MO:	<10	<10	<10	<500
TPH-G:	0.69	0.58	1.6	87
B:	<0.005	<0.005	<0.005	<1.0
T:	<0.005	<0.005	<0.005	<1.0
E:	<0.005	<0.005	<0.005	<1.0
X:	<0.010	<0.010	<0.010	<2.0

Depth	SOIL (MG/KG)			GW (UG/L)
	9.0'	12.0'	15.0'	(15.5')
TPH-D:	290	43	<10	<500
TPH-MO:	280	<10	<10	<500
TPH-G:	1.2	0.59	0.84	<50
B:	<0.005	<0.005	<0.005	<1.0
T:	<0.005	<0.005	0.0069	<1.0
E:	<0.005	<0.005	<0.005	<1.0
X:	<0.010	<0.010	<0.010	<2.0

Depth	SOIL (MG/KG)			GW (UG/L)
	8.0'	12.0'	15.0'	(14.0')
TPH-D:	<10	10	740	<500
TPH-MO:	<10	<10	910	<500
TPH-G:	<0.50	<0.50	2.4	<50
B:	<0.005	<0.005	<0.005	<1.0
T:	<0.005	<0.005	<0.005	<1.0
E:	<0.005	<0.005	<0.005	<1.0
X:	<0.010	<0.010	<0.010	<2.0

Depth	SOIL (MG/KG)			GW (UG/L)
	8.0'	12.0'	16.0'	(16.5')
TPH-D:	<10	<10	190	<500
TPH-MO:	<10	<10	250	<500
TPH-G:	<0.50	<0.50	0.73	<50
B:	<0.005	<0.005	<0.005	<1.0
T:	<0.005	<0.005	<0.005	<1.0
E:	<0.005	<0.005	<0.005	<1.0
X:	<0.010	<0.010	<0.010	<2.0

Depth	SOIL (MG/KG)			GW (UG/L)
	8.0'	12.0'	15.0'	(15.5')
TPH-D:	<10	<10	<10	<500
TPH-MO:	<10	<10	<10	<500
TPH-G:	<0.50	<0.50	<0.50	<50
B:	<0.005	<0.005	<0.005	<1.0
T:	<0.005	<0.005	<0.005	<1.0
E:	<0.005	<0.005	<0.005	<1.0
X:	<0.010	<0.010	<0.010	<2.0

DESIGNED BY:	CHECKED BY: JEG
DRAWN BY: JEG	SCALE:

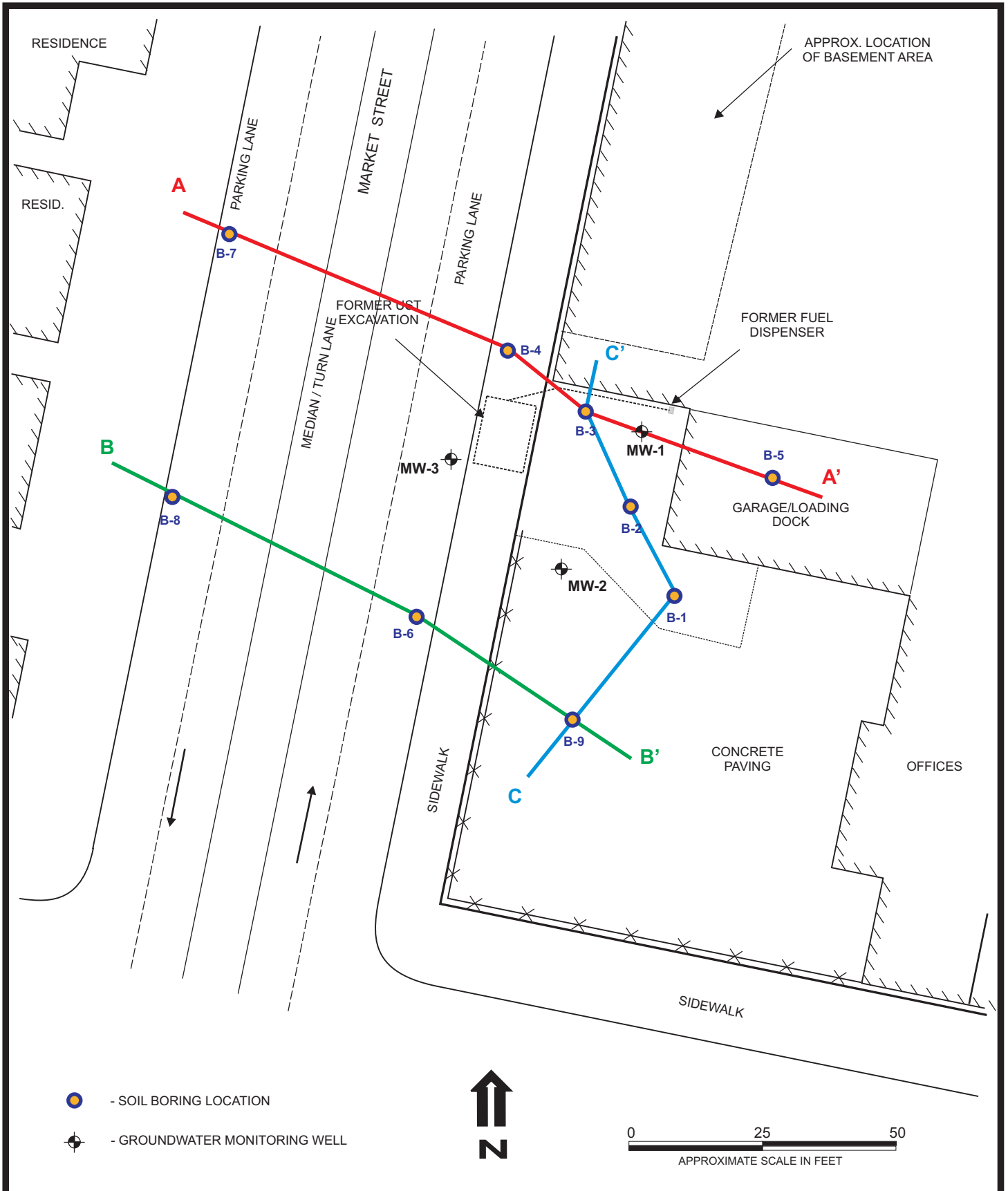
SOIL & GROUNDWATER HYDROCARBON RESULTS

3924 MARKET STREET
OAKLAND, CALIFORNIA

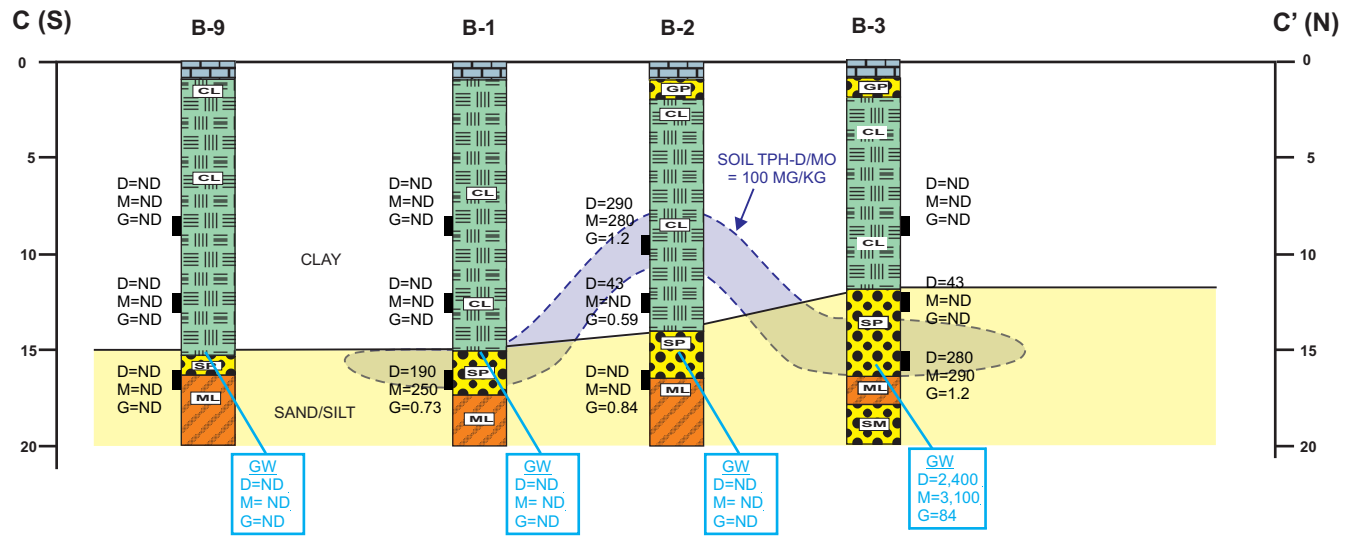
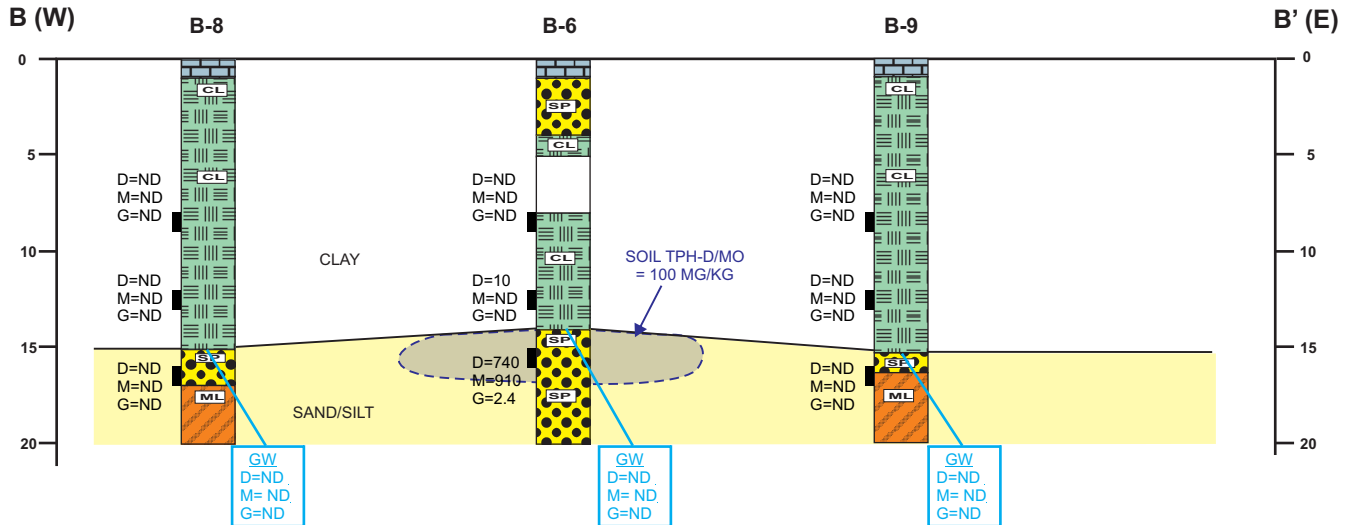
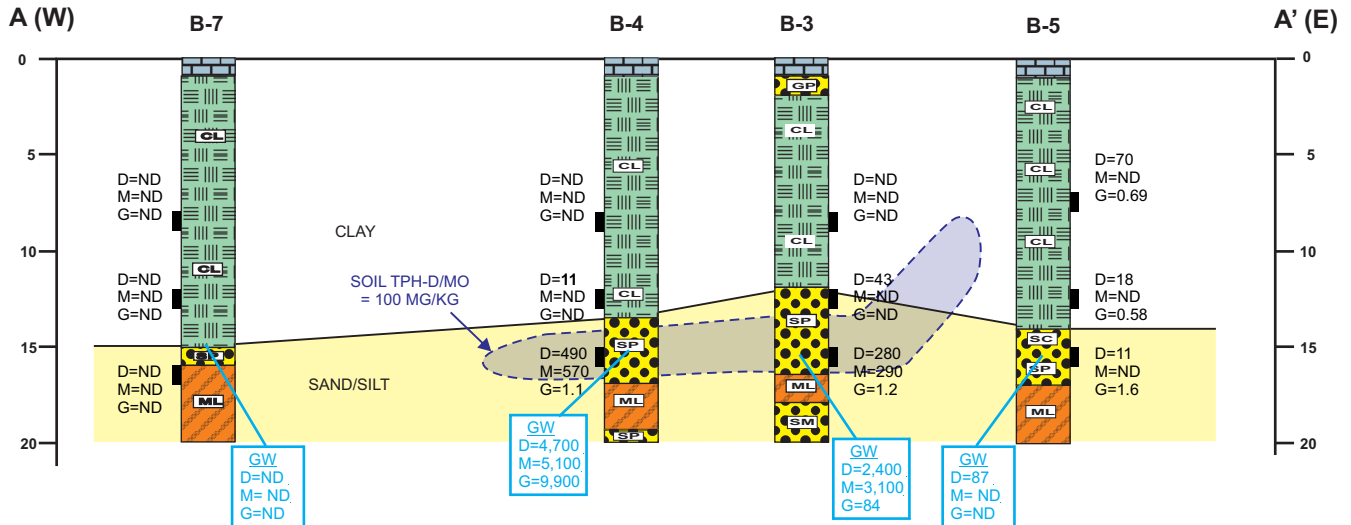
DATE: 03/19/2015

FIGURE: 4

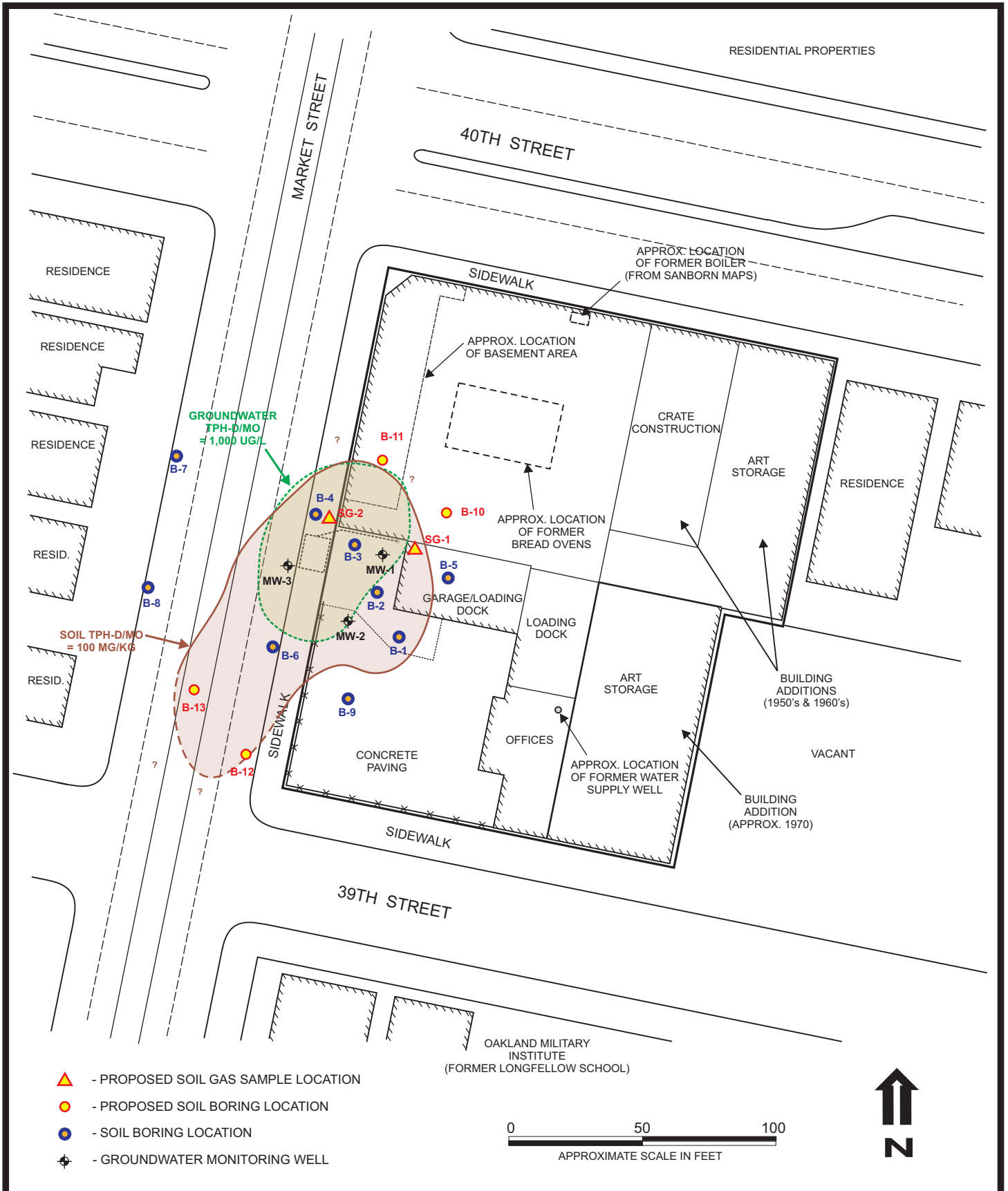




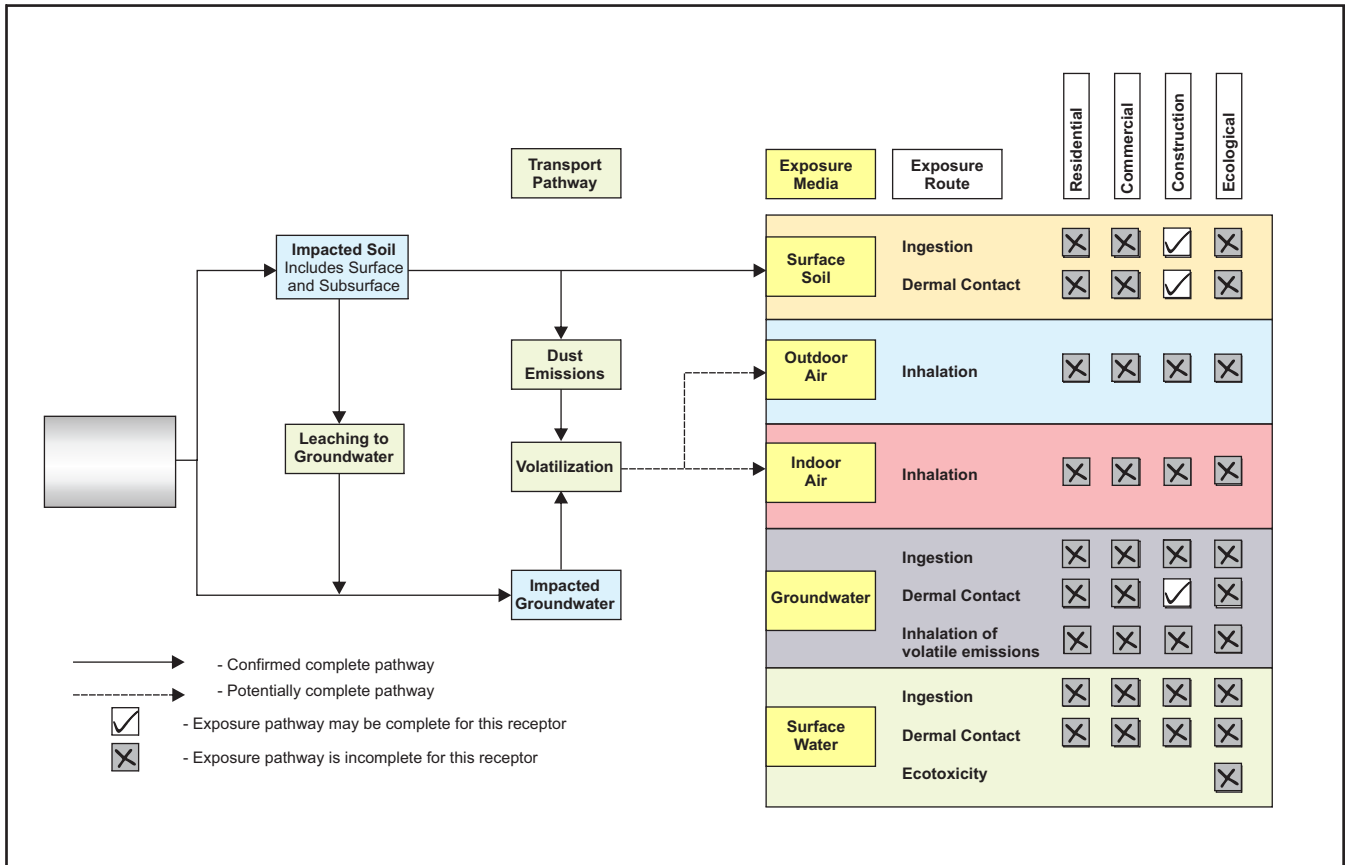
DESIGNED BY:	CHECKED BY: JEG	CROSS SECTION LOCATION MAP	DATE: 03/19/2015	FIGURE: 5
DRAWN BY: JEG	SCALE:		GRIBI	
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DESIGNED BY:	CHECKED BY: JEG	CROSS SECTIONS	DATE: 03/19/2015	FIGURE: 6
DRAWN BY: JEG	SCALE:		GRIBI	
		3924 MARKET STREET OAKLAND, CALIFORNIA		



DESIGNED BY:	CHECKED BY: JEG	PROPOSED BORING LOCATIONS	DATE: 03/19/2015	FIGURE: 7
DRAWN BY: JEG	SCALE:		GRIBI	
		3924 MARKET STREET OAKLAND, CALIFORNIA		



Notes

- 1) Soil exposure pathway is complete; however, both surface and subsurface soil concentrations are below ESLs. Thus, risk associated with soil exposure pathway expected to be low.
- 2) Soil impacted areas are completely paved with concrete or asphalt. Thus, soil exposure via ingestion or direct contact would only be expected in the event of construction-related activities on the site.