

RECEIVED

By Alameda County Environmental Health 11:00 am, May 23, 2017

May 22, 2017

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

Attention: Keith Nowell

Subject: Workplan for Plume Delineation
3924 Market Street, Oakland, California
ACEH RO# 0000490; Global ID: T0600101187

Ladies and Gentlemen:

Attached please find a copy of the *Workplan for Plume Delineation*, prepared by Gribi Associates. I have read and acknowledge the content, recommendations and/or conclusions contained in the attached document or report submitted on my behalf to ACDEH's FTP server and the SWRCB's GeoTracker website."

Very truly yours,



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



May 22, 2017

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

Attention: Keith Nowell

Subject: Workplan for Plume Delineation
3924 Market Street, Oakland, California
ACEH RO# 0000490; Global ID: T0600101187

Ladies and Gentlemen:

Gribi Associates is pleased to submit this *Workplan for Plume Delineation* 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). In accordance with the May 11, 2017 email correspondence from Alameda County Department of Environmental Health (ACDEH), this workplan proposes the drilling and sampling of three investigative borings on the upgradient (northeast) side of the Site.

1.0 BACKGROUND

Previous investigations between 1991 and 2015 identified fairly immobile diesel/motor oil range hydrocarbons in soil and groundwater on the west side of the Site. These hydrocarbon impacts are likely the result of fuel oil releases related to former ovens at the former Toscana Bakery, which operated on the Site from the mid-1920s until 1987.

The Site was previously evaluated for regulatory closure under the *Low-Threat Underground Storage Tank Case Closure Policy* (LTCP). As indicated in the May 11, 2017 email from ACDEH, the Site does not meet the LTCP Groundwater Specific criteria because the hydrocarbon plume has not been defined in the upgradient (northeast) direction.

2.0 WORKPLAN ELEMENTS

In order to address the LTCP Groundwater Specific criteria, this workplan proposes the drilling and sampling of approximately three upgradient (north-northeast) soil borings. All activities will be conducted in accordance with all applicable regulatory guidelines and statutes.

2.1 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.

2.2 Location of Soil Borings

The proposed boring location are shown on Figure 4. Borings B-14, B-15, and B-16 will be located on the 40th Street right-of-way (sidewalk or parking lane, depending on utility clearances), on the upgradient (north-northeast) side of the Site. Results from these borings will serve to define the upgradient side of the Site hydrocarbon plume.

2.3 Drilling and Sampling of Investigative Borings

Boring activities will be conducted by a State-licensed drilling contractor using direct-push coring equipment. Investigative borings B-14, B-15, and B-16 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 scientist using sight, smell, and an organic vapor monitor (OVM).

Soil samples will then be collected at five-foot intervals starting at approximately 5 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.

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

2.4 Laboratory Analysis of Soil and Water Samples

Approximately 12 soil samples (four per boring) and three water samples (one per boring) 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

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

2.5 Preparation of Summary Report

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

2.6 Project Schedule

Subject to ACDEH approval, the proposed investigative scope of work can be completed within approximately four to six weeks.

Alameda County Department of
Environmental Health
May 22, 2017
Page 4

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,

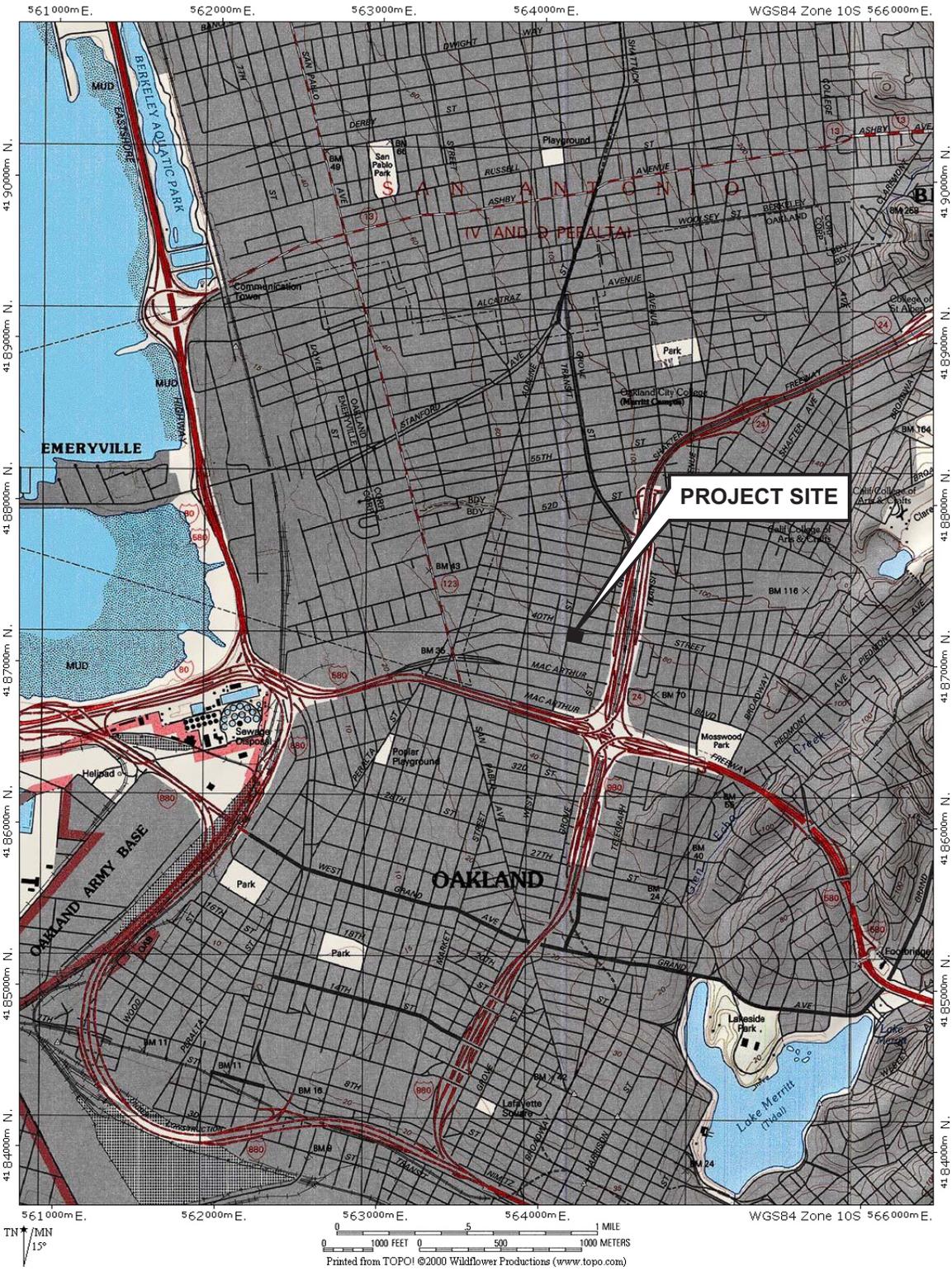


James E. Gribi
Professional Geologist
California No. 5843



Enclosure

FIGURES



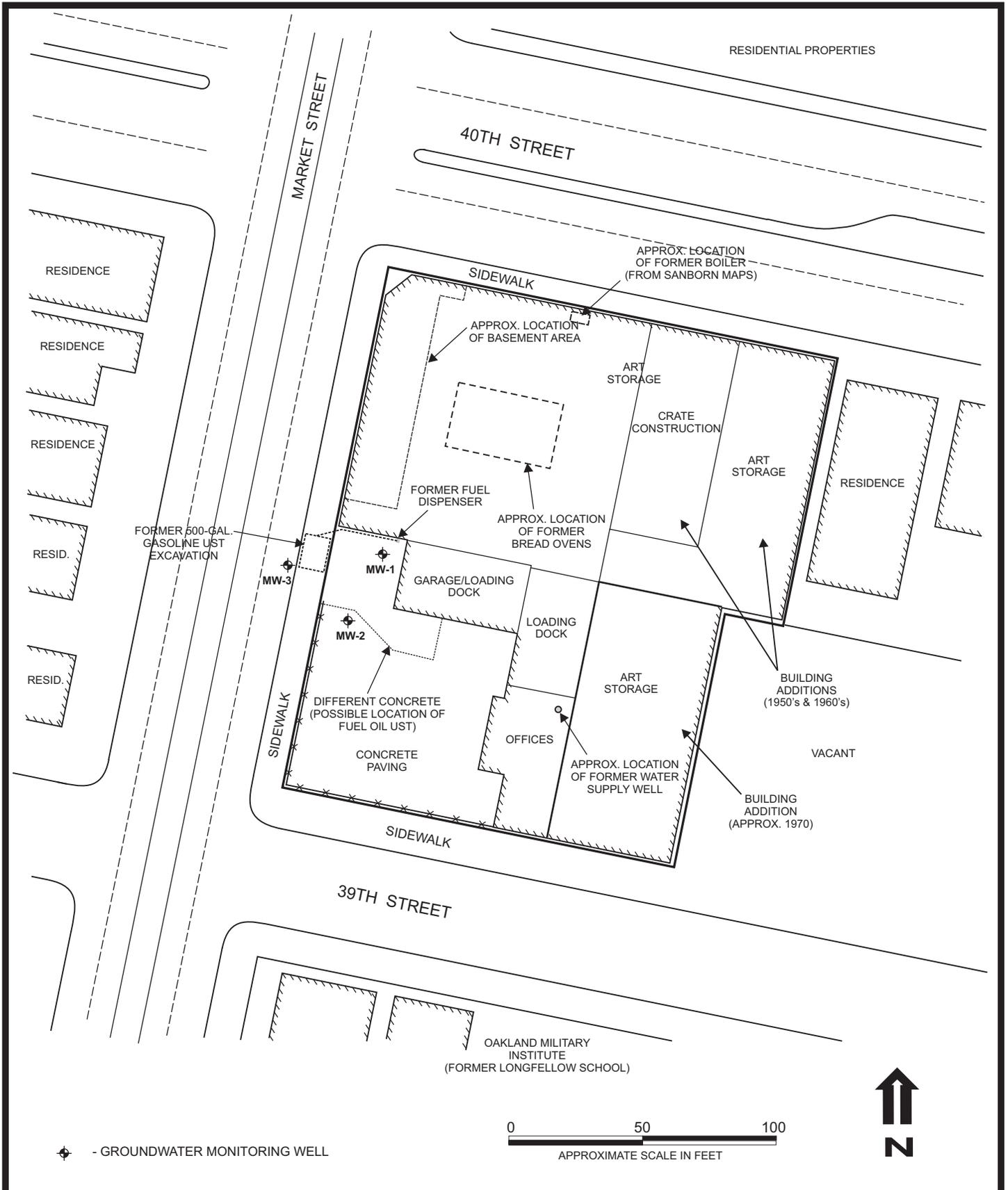
DESIGNED BY:	CHECKED BY: JEG
DRAWN BY: JEG	SCALE:
PROJECT NO:	

SITE VICINITY MAP

3924 MARKET STREET
OAKLAND, CALIFORNIA

DATE: 05/22/2017 FIGURE: 1





DESIGNED BY:	CHECKED BY: JEG	SITE PLAN	DATE: 05/22/2017	FIGURE: 2
DRAWN BY: JEG	SCALE:		GRIBI	
		3924 MARKET STREET OAKLAND, CALIFORNIA		

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

SOIL (MG/KG)		GW (UG/L)	
Depth	8.0'	12.0'	15.0' (15.5')
TPH-D:	<10	11	490
TPH-MO:	<10	<10	570
TPH-G:	<0.50	<0.50	1.1
B:	<0.005	<0.005	<0.005
T:	<0.005	<0.005	<0.005
E:	<0.005	<0.005	<0.005
X:	<0.010	<0.010	<0.010

SOIL (MG/KG)		GW (UG/L)	
Depth	9.0'	11.0'	13.0' 15.0' 17.0' (15.5')
TPH-D:	<10	73	130
TPH-MO:	<10	32	86
TPH-G:	<0.50	<0.50	<0.50
B:	<0.005	<0.005	<0.005
T:	<0.005	<0.005	<0.005
E:	<0.005	<0.005	<0.005
X:	<0.010	<0.010	<0.010

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

SOIL (MG/KG)		GW (UG/L)	
Depth	2.0'	4.0'	6.0' 8.0' 10.0' 12.0' 15.0' 18.0' 19.5' 21.0' (15.5')
TPH-D:	<10	<10	<10
TPH-MO:	<10	<10	<10
TPH-G:	<0.50	<0.50	<0.50
B:	<0.005	<0.005	<0.005
T:	<0.005	<0.005	<0.005
E:	<0.005	<0.005	<0.005
X:	<0.010	<0.010	<0.010

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

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

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

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

SOIL (MG/KG)		GW (UG/L)	
Depth	7.5'	11.5'	15.5' 19.0' (18.0')
TPH-D:	<10	<10	<10
TPH-MO:	<10	<10	<10
TPH-G:	<0.50	<0.50	<0.50
B:	<0.005	<0.005	<0.005
T:	<0.005	<0.005	<0.005
E:	<0.005	<0.005	<0.005
X:	<0.010	<0.010	<0.010

SOIL (MG/KG)		GW (UG/L)	
Depth	7.5'	11.5'	15.5' 19.0' 24.0' (18.5')
TPH-D:	<10	<10	<10
TPH-MO:	<10	<10	<10
TPH-G:	<0.50	<0.50	<0.50
B:	<0.005	<0.005	<0.005
T:	<0.005	<0.005	<0.005
E:	<0.005	<0.005	<0.005
X:	<0.010	<0.010	<0.010

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

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

- ▲ - SOIL GAS SAMPLE LOCATION (GRIBI, 07/2015)
- - SOIL BORING LOCATION (GRIBI, 2013, 2015)
- ⊕ - GROUNDWATER MONITORING WELL



DESIGNED BY: _____ CHECKED BY: JEG

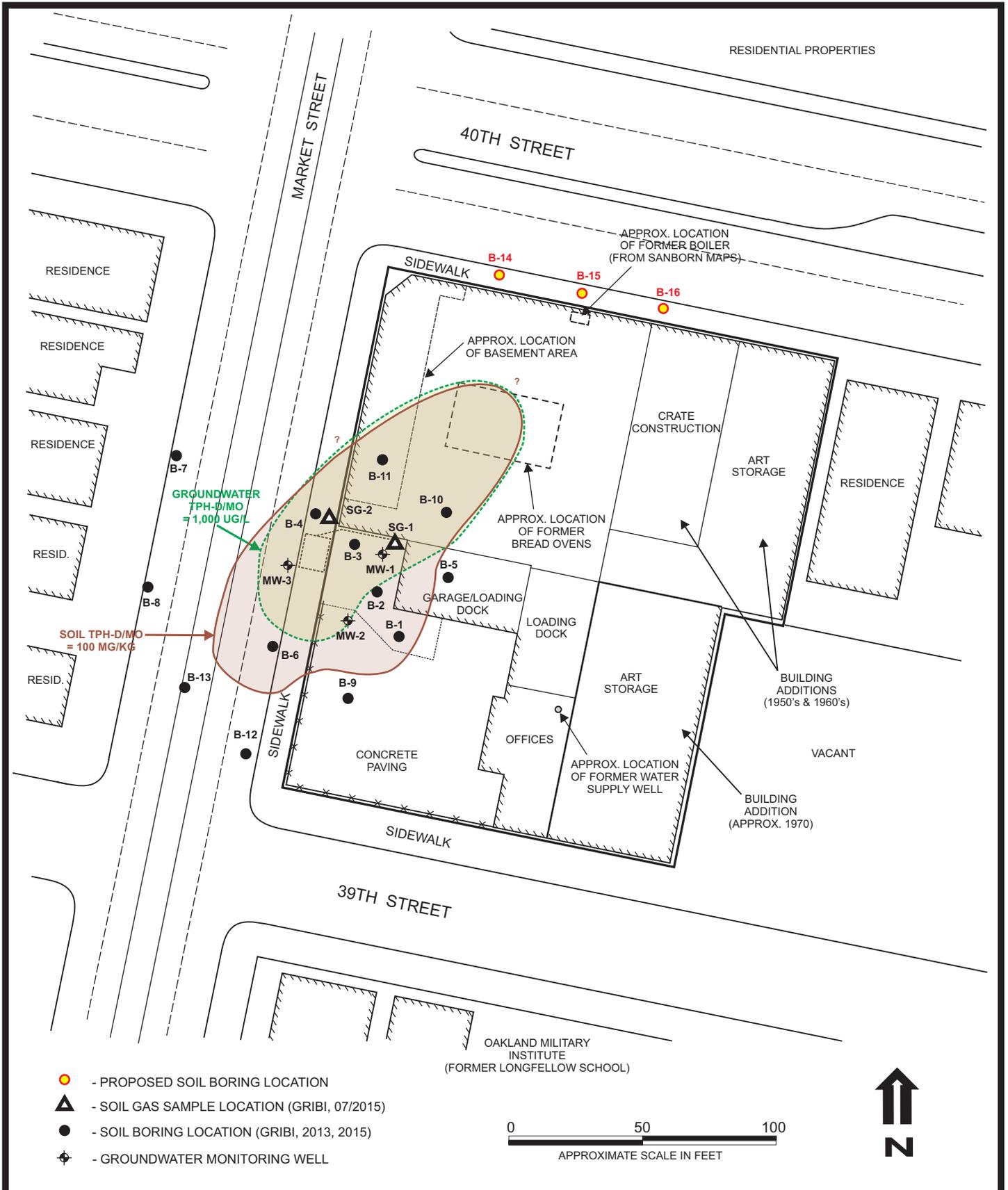
DRAWN BY: JEG SCALE: _____

SOIL & GRAB GROUNDWATER HYDROCARBON RESULTS

3924 MARKET STREET
OAKLAND, CALIFORNIA

DATE: 05/22/2017 FIGURE: 3





DESIGNED BY:	CHECKED BY: JEG	PROPOSED SOIL BORING LOCATIONS	DATE: 05/22/2017	FIGURE: 4
DRAWN BY: JEG	SCALE:		GRIBI	
		3924 MARKET STREET OAKLAND, CALIFORNIA		