

Xtra OIL COMPANY

2307 PACIFIC AVENUE
ALAMEDA, CA 94501
(510) 865-9503 FAX (510) 865-1889

December 14, 2016

Ms. Karel Detterman
Alameda County Environmental Health
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502

RECEIVED

By Alameda County Environmental Health 10:33 am, Dec 15, 2016

SUBJECT: SENSITIVE RECEPTOR SURVEY REPORT CERTIFICATION
County LOP Case Number RO 0002990
Auto Depot
4171 Broadway
Oakland, California

Dear Ms. Detterman:

You will find enclosed one copy of the following draft document prepared by P&D Environmental, Inc. for the subject site

- Sensitive Receptor Survey Report dated December 14, 2016 (document 0398.R4).

I declare under penalty of perjury that the contents and conclusions in the document are true and correct to the best of my knowledge.

Should you have any questions, please do not hesitate to contact me at (510) 865-9506.

Sincerely,

Xtra Oil Company



Keith Simas

Enclosure

0398.L9

P&D ENVIRONMENTAL, INC.

55 Santa Clara Ave, Suite 240
Oakland, CA 94610
(510) 658-6916

December 14, 2016
Report 0398.R4

Mr. Ted Simas
Mr. Keith Simas
Xtra Oil Company
2307 Pacific Ave.
Alameda, CA 94501

SUBJECT: SENSITIVE RECEPTOR SURVEY REPORT
County LOP Case Number RO 0002990
Auto Depot/Xtra Oil
4171 Broadway
Oakland, California

Gentlemen:

P&D Environmental, Inc. (P&D) has prepared this report documenting the results of a sensitive receptor survey for a 2,000-foot radius for the subject site. This report is written in response to a request from Ms. Karel Detterman of the Alameda County Department of Environmental Health (ACDEH) in an email dated May 29, 2015 requesting that a sensitive receptor survey be performed, including a well survey. Wells identified during this investigation are limited to wells that are not associated with groundwater contamination investigations.

A total of nine wells with uses other than contamination investigation monitoring or remediation wells or borings were identified within the study area. Based on the known extent of petroleum hydrocarbons in groundwater associated with the subject site, the southwesterly groundwater flow direction in the vicinity of the subject site, and the locations of wells identified during this evaluation, no wells were identified at locations either within the known extent of petroleum hydrocarbons in groundwater or at downgradient locations that could potentially be impacted in the future by petroleum hydrocarbons in groundwater associated with the subject site.

A U.S. Geological Survey topographic map showing the location of the subject site with a 2,000-foot radius circle around the site is attached with this report as Figure 1. The locations of wells identified in the study area other than groundwater monitoring wells associated with contamination investigations are also shown on Figure 1. All work was performed under the direct supervision of California Professional Geologist.

WELL SURVEY

Well information was obtained from the Alameda County Public Works Agency (ACPWA) on June 1, 2016 following submittal of a well completion report release agreement request form to the ACPWA. Based on a May 26, 2016 e-mail communication from Karel Detterman at the ACDEH, review of well completion reports available from the California Department of Water Resources was not required. Additionally, a search was performed for available well information on the California State Water Resources Control Board (SWRCB) GeoTracker GAMA website. The file review and search results are discussed below.

Alameda County Public Works Agency

P&D submitted a request to Mr. James Yoo of the ACPWA for available well information within a 2,000-foot radius of the subject site on May 26, 2016. On June 1, 2016 Mr. Yoo provided tables via e-mail to P&D that transmitted the findings of the ACPWA database search. Mr. Yoo stated in his transmittal that the search area was in Township 1S, Range 4W, and included all or part of Section 23 Tract H and Section 24 Tracts B, D, E, F, G, K, L, M, and P.

A total of 102 well records in the study area were included in the spreadsheet provided by ACPWA. Review of the ACPWA information showed that a total of nine wells, other than wells associated with contamination investigations, were identified at different locations within a 2,000-foot radius of the subject site.

Summary information regarding the nine wells identified as being within the search radius and not being associated with contamination investigations is provided in Table 1. All of the wells in Table 1 that were identified by ACPWA as being located in the study area are shown on Figure 1. The location and distance of the wells identified from the ACPWA data that are shown on Figure 1 are approximate and were identified by locating the site address provided by ACPWA and using the internet service Google Earth.

GEOTRACKER GAMA WEBSITE WELL SEARCH

A search was performed for available well information on the SWRCB GeoTracker GAMA website for the area located within 2,000 feet of the subject site on December 13, 2016. No wells were identified during the search other than groundwater monitoring wells related to contamination investigations.

WELL SURVEY REPORTS AT NEARBY SITES

Review of available files on GeoTracker for nearby sites identified a Well Survey Report for the Downtown Toyota facility located at 4145 Broadway (located adjacent to the subject site) dated March 4, 2010 prepared by RGA Environmental, Inc. (RGA). Additionally a Sensitive Receptor Survey for the 76 Service Station located at 3943

Broadway (located approximately 1,000 feet south of the subject site) dated February 8, 2007 prepared by TRC was also identified. Review of the RGA 2010 and TRC 2007 well search report results did not reveal any new wells that had not already been identified during the 2,000-foot radius ACPWA well search for the subject site (4171 Broadway).

SENSITIVE RECEPTORS

An internet search was performed on December 13, 2016 using the search functions at the internet services Yellow Pages, Mapquest and Yahoo for sensitive receptor facilities in the vicinity of 4145 Broadway, Oakland. Once the subject site address had been entered and a site vicinity map was obtained for each website, the “search nearby” field was used to search for each of the following types of facility: day care, daycare, nursery school, child care, childcare, preschool, pre-school, school, recreation center, hospital, convalescent home, and nursing home. The distance between the sites identified during the internet search and the subject site was measured using the internet service Google Earth by entering the facility addresses into the location search field and using the measuring tool to measure the distance from each facility to the subject site. Facilities located within 2,000-foot radius of the subject site that were identified during the internet search and the associated distances and direction from the subject site are summarized in Table 2. A total of sixteen facilities were identified within a 2,000-foot radius of the subject site. The closest facility is located 600 feet from the subject site.

ADDITIONAL REQUESTED INFORMATION

Additional information requested by the ACDEH in the email dated May 29, 2015 requesting that a sensitive receptor survey and well survey be performed included the following items.

Groundwater Classification

Review of the January 18, 2007 San Francisco Bay Regional Water Quality Control Board (RWQCB) Basin Plan identified the following beneficial uses for groundwater at and near the subject site.

- Municipal & domestic supply (MUN),
- Agricultural Supply (AGR),
- Industrial Service Supply (IND), and
- Industrial Process Supply (PROC)

Wetlands

Review of the January 18, 2007 RWQCB Basin Plan did not identify wetlands within a 2,000 foot radius of the subject site. The site vicinity is urbanized.

Surface Water Bodies

Nearby water surface bodies that are located downgradient from the subject property include Glen Echo Creek, located approximately 3,000 feet to the southeast of the site and Lake Merritt located approximately 7,200 feet to the south of the subject site.

Natural Resources

No natural resources were identified within a 2,000 foot radius of the subject site.

DISCUSSION AND RECOMMENDATIONS

A U.S. Geological Survey topographic map showing the location of the subject site with a 2,000-foot radius circle around the site is attached with this report as Figure 1. The locations of historical boreholes and a soil gas well at the subject site are shown in Figure 2. The currently known extent of Total Petroleum Hydrocarbons as Gasoline (TPH-G), Total Petroleum Hydrocarbons as Diesel (TPH-D), benzene, and naphthalene in groundwater is shown in Figures 3, 4, 5 and 6, respectively.

A total of nine wells other than contamination investigation monitoring wells or borings were identified within a 2,000-foot radius of the subject site (see Figure 1 and Table 1). Based on the southwesterly groundwater flow direction in the vicinity of the subject site and the known extent of petroleum hydrocarbons in groundwater associated with the subject site, none of the wells identified during the well search for the subject site (other than groundwater monitoring or remediation wells associated with contamination investigations) were identified at locations either within the known extent of petroleum hydrocarbons in groundwater or at downgradient locations that could potentially be impacted by petroleum hydrocarbons in groundwater associated with the subject site. Similarly, review of Table 2 shows that none of the sensitive receptors identified during the internet sensitive receptor search were identified at locations either within the known extent of petroleum hydrocarbons in groundwater or at downgradient locations that could potentially be impacted by petroleum hydrocarbons in groundwater associated with the subject site.

Based on the survey results P&D recommends that no further evaluation of sensitive receptors be performed other than the current investigation of the adjacent Downtown Toyota facility that is located to the west and south of the subject site.

DISTRIBUTION

A copy of this report will be uploaded to the ACDEH website, in accordance with ACDEH requirements. In addition, a copy of this report will be uploaded to the GeoTracker database.

LIMITATIONS

This report was prepared solely for the use of the Xtra Oil Company. The content and conclusions provided by P&D in this assessment are based on information collected during our investigation, which may include, but not be limited to, visual site inspections; interviews with site owner, regulatory agencies and other pertinent individuals; review of available public documents; subsurface exploration and our professional judgment based on said information at the time of preparation of this document. Any subsurface sample results and observations presented herein are considered to be representative of the area of investigation; however, geological conditions may vary between boreholes and may not necessarily apply to the general site as a whole. If future subsurface or other conditions are revealed which vary from these findings, the newly revealed conditions must be evaluated and may invalidate the findings of this report.

This report is issued with the understanding that it is the responsibility of the owner, or his representative, to ensure that the information contained herein is brought to the attention of the appropriate regulatory agencies, where required by law. Additionally, it is the sole responsibility of the owner to properly dispose of any hazardous materials or hazardous wastes left onsite, in accordance with existing laws and regulations.

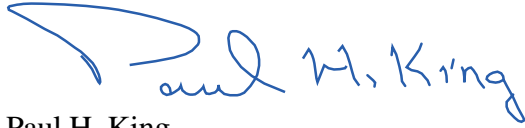
This report has been prepared in accordance with generally accepted practices using standards of care and diligence normally practiced by recognized consulting firms performing services of a similar nature. P&D is not responsible for the accuracy or completeness of information provided by other individuals or entities which is used in this report. This report presents our professional judgment based upon data and findings identified in this report and interpretation of such data based upon our experience and background, and no warranty, either express or implied, is made. The conclusions presented are based upon the current regulatory climate and may require revision if future regulatory changes occur.

December 14, 2016
Report 0398.R4

Should you have any questions, please do not hesitate to contact us at (510) 658-6916.

Sincerely,

P&D Environmental, Inc.



Paul H. King
Professional Geologist #5901
Expires: 12/31/17



Attachments:

Table 1 - Alameda County Public Works Agency Well Summary Information
Table 2 - Sensitive Receptors Located Within 2,000-Foot Radius of Subject Site

Figure 1 - Site Location Map Showing 2,000-Foot Search Radius

Figure 2 - Site Map

Figure 3 - Site Vicinity Aerial Photograph Showing TPH-D Groundwater Concentrations

Figure 4 - Site Vicinity Aerial Photograph Showing TPH-G Groundwater Concentrations

Figure 5 - Site Vicinity Aerial Photograph Showing Benzene Groundwater Concentrations

Figure 6 - Site Vicinity Aerial Photograph Showing Naphthalene Groundwater Concentrations

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TABLES

Table 1
Alameda County Public Works Agency Well Summary Information

	<u>State Well Number</u>	<u>Database</u>	<u>Well ID</u>	<u>Address</u>	<u>City</u>	<u>Owner</u>	<u>Drill Date</u>	<u>Total Well Depth (Ft)</u>	<u>Casing Diameter (In.)</u>	<u>Use</u>	<u>Distance From Site (Feet)</u>
1	1S/4W 24E4	ACPWA	Unk.	462 43rd Street	Oakland	Robert Westwood	9-1977	Unk.	4	Domestic	1,960
2	1S/4W 24E11	ACPWA	Unk.	42nd Street & Webster Street	Oakland	EBMUD	12-1997	130	5	Cathodic Protection	1,400
3	1S/4W 24E3	ACPWA	Unk.	42nd Street & Webster Street	Oakland	EBMUD	5-1975	50	Unk.	Cathodic Protection	1,400
4	1S/4W 24E2	ACPWA	Unk.	42nd Street & Manila Avenue	Oakland	EBMUD	5-1975	50	Unk.	Cathodic Protection	510
5	1S/4W 24E9	ACPWA	Unk.	42nd Street & Manila Avenue	Oakland	EBMUD	1-1998	130	5	Cathodic Protection	510
6	1S/4W 24E1	ACPWA	Unk.	360 42nd Street	Oakland	Ladies Relief Society	Unk.	65	12	Irrigation	820
7	1S/4W 24D1	ACPWA	Unk.	45th Street & Webster Street	Oakland	EBMUD	5-1975	53	Unk.	Cathodic Protection	1,700
8	1S/4W 24C	ACPWA	Unk.	4922 Desmond Street	Oakland	Len & Elizabeth Leonard	9-2009	23	11	Irrigation ¹	1,600
9	1S/4W 24L1	ACPWA	Unk.	4082 Piedmont Avenue	Oakland	John Bond	1979 ²	198	8	Irrigation	1,650
NOTES:											
ACPWA = Alameda County Public Works Agency											
Unk. = Unknown											
1 = ACPWA database lists Use as dry irrigation.											
2 = ACPWA database lists only 79 as drill date; 1979 is assumed.											

Table 2
Sensitive Receptors Located Within 2,000-foot radius of Subject Site

<u>Search Category</u>	<u>Facility Name</u>	<u>Facility Address</u>	<u>Approximate Distance and Direction from Site</u>	<u>Comments</u>		
Schools	Duck's Nest	250 41st Street, Oakland	720 feet SSE	Preschool		
Schools	Emerson Elementary School	4803 Lawton Ave., Oakland	1,500 feet NNW			
Schools	Piedmont Avenue Elementary School	4314 Piedmont Ave., Oakland	1,900 feet ESE			
Schools	Park Day School	360 42nd Street, Oakland	650 feet NWN			
Schools	St. Leo the Great School	4238 Howe St., Oakland	1,400 feet ESE	PreK-8th grade		
Schools	Oakland Technical Senior High School	4351 Broadway, Oakland	450 feet N			
Schools	Oakland International High School	4521 Webster St., Oakland	1,850 feet NNW			
Schools	Community School-The East Bay	215 Ridgeway Ave., Oakland	500 feet SSE	4th-8th grade; K-12th grade after school hours		
Rehabilitation Centers	Thunder Road Adolescent Chemical Dependency	390 40th St., Oakland	1,400 feet SW			
Hospitals	Kaiser Permanente/ Oakland Medical Center	280 W. MacArthur Blvd., Oakland	1,800 feet S			
Nursing Homes	Rounseville Rehabilitation Center	210 40th Street Way	950 feet SSE			
Nursing Homes	The Point at Rockridge	4500 Gilbert, Oakland	1,700 feet NE			
Nursing Homes	Opal Home Care	3917 Opal St., Oakland	1,370 feet SW			
Nursing Homes	Piedmont Gardens	110 41st St., Oakland	1,800 feet SSE			
Recreation Centers	Temescal Pool	371 45th St., Oakland	1,000 feet NNW			

FIGURES

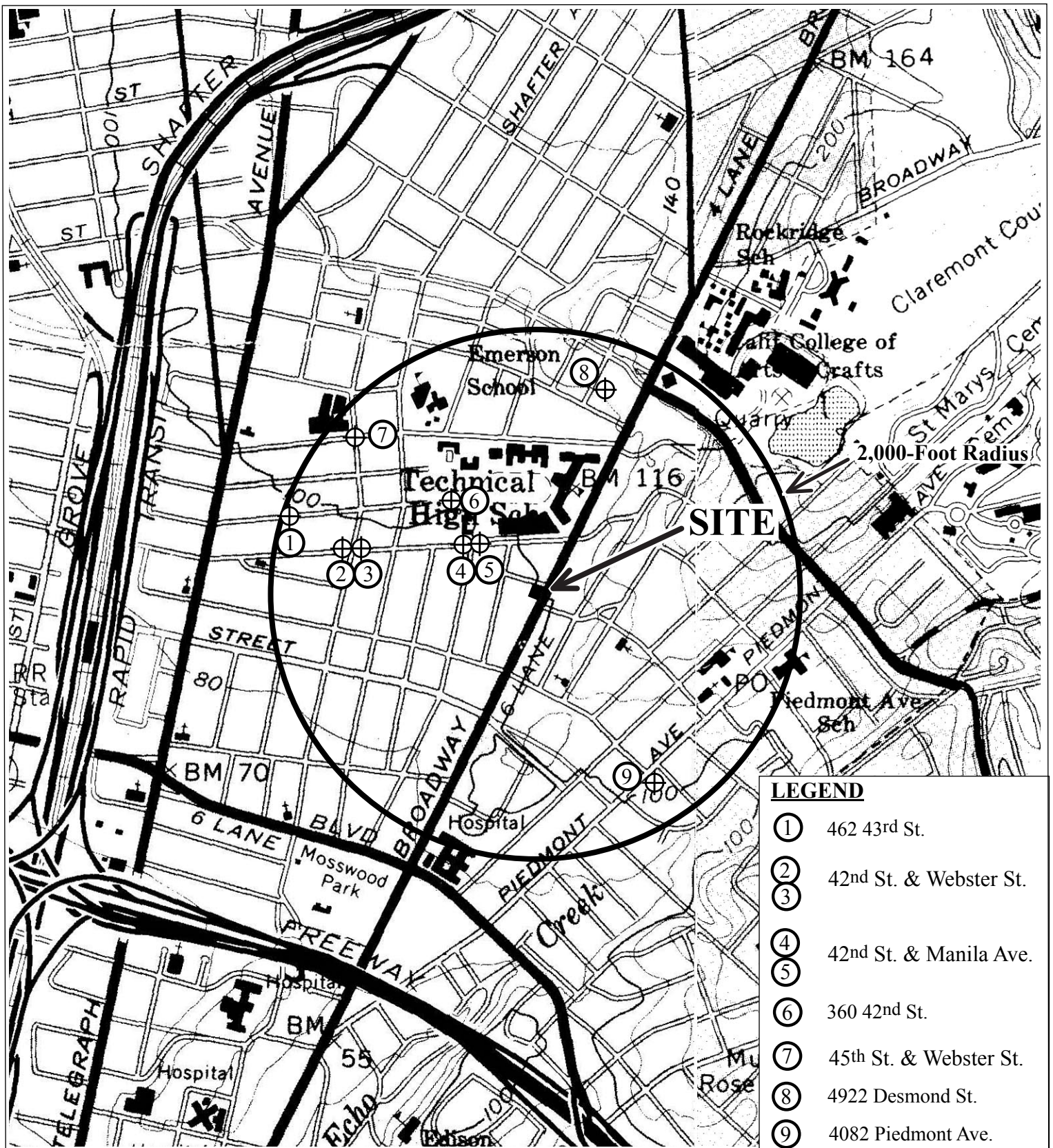
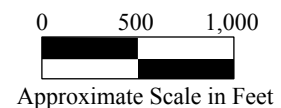


Figure 1
 Site Location Map Detail Showing Wells Located Within a 2,000-Foot Search Radius
 Auto Depot
 4171 Broadway
 Oakland, California

Base Map from:
 US Geological Survey
 Oakland West and Oakland East, California
 7.5 Minute Quadrangles
 Photorevised 1993

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 Oakland, CA 94610



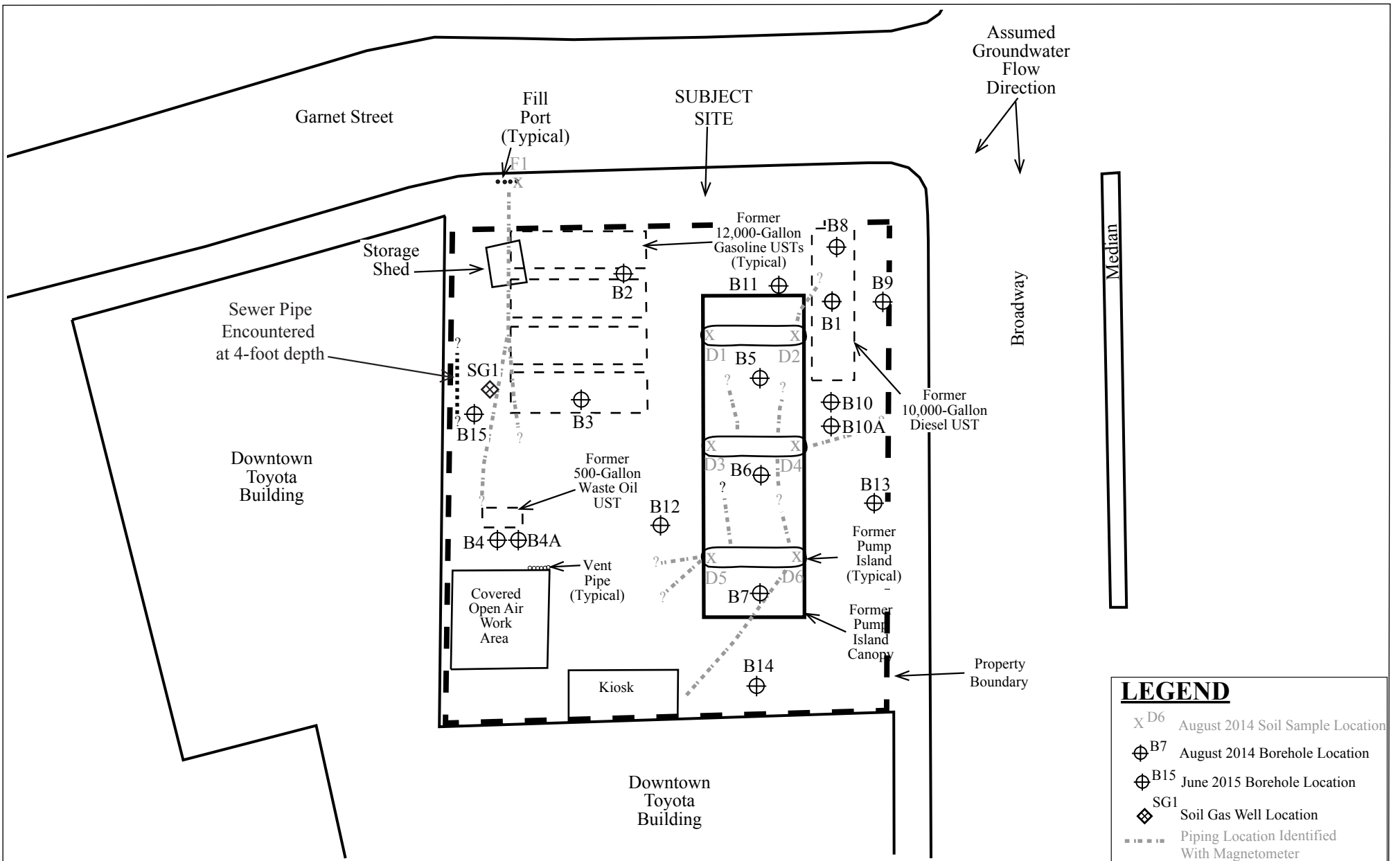
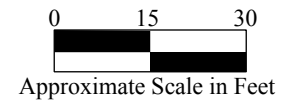


Figure 2
 Site Map
 Auto Depot
 4171 Broadway
 Oakland, California

Base Map from:
 Auqua Science Engineers, Inc., dated 12/31/1986,
 Google Earth, 2014

P&D Environmental, Inc.
 55 Santa Clara Avenue, Suite 240
 Oakland, CA 94610



LEGEND	
X D6	August 2014 Soil Sample Location
⊕ B7	August 2014 Borehole Location
⊕ B15	June 2015 Borehole Location
◆ SG1	Soil Gas Well Location
-----	Piping Location Identified With Magnetometer

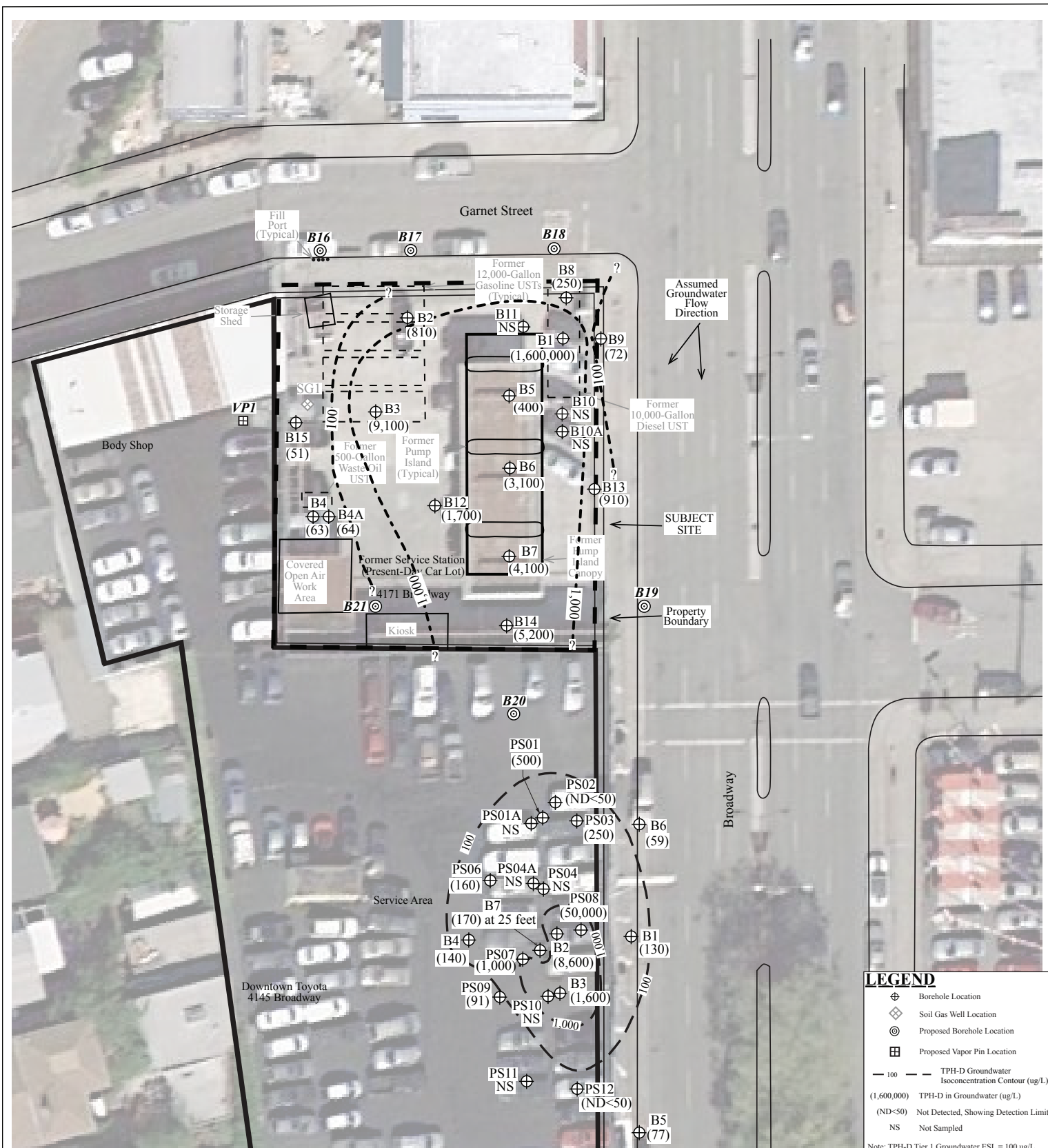
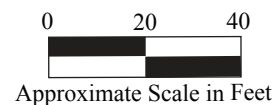
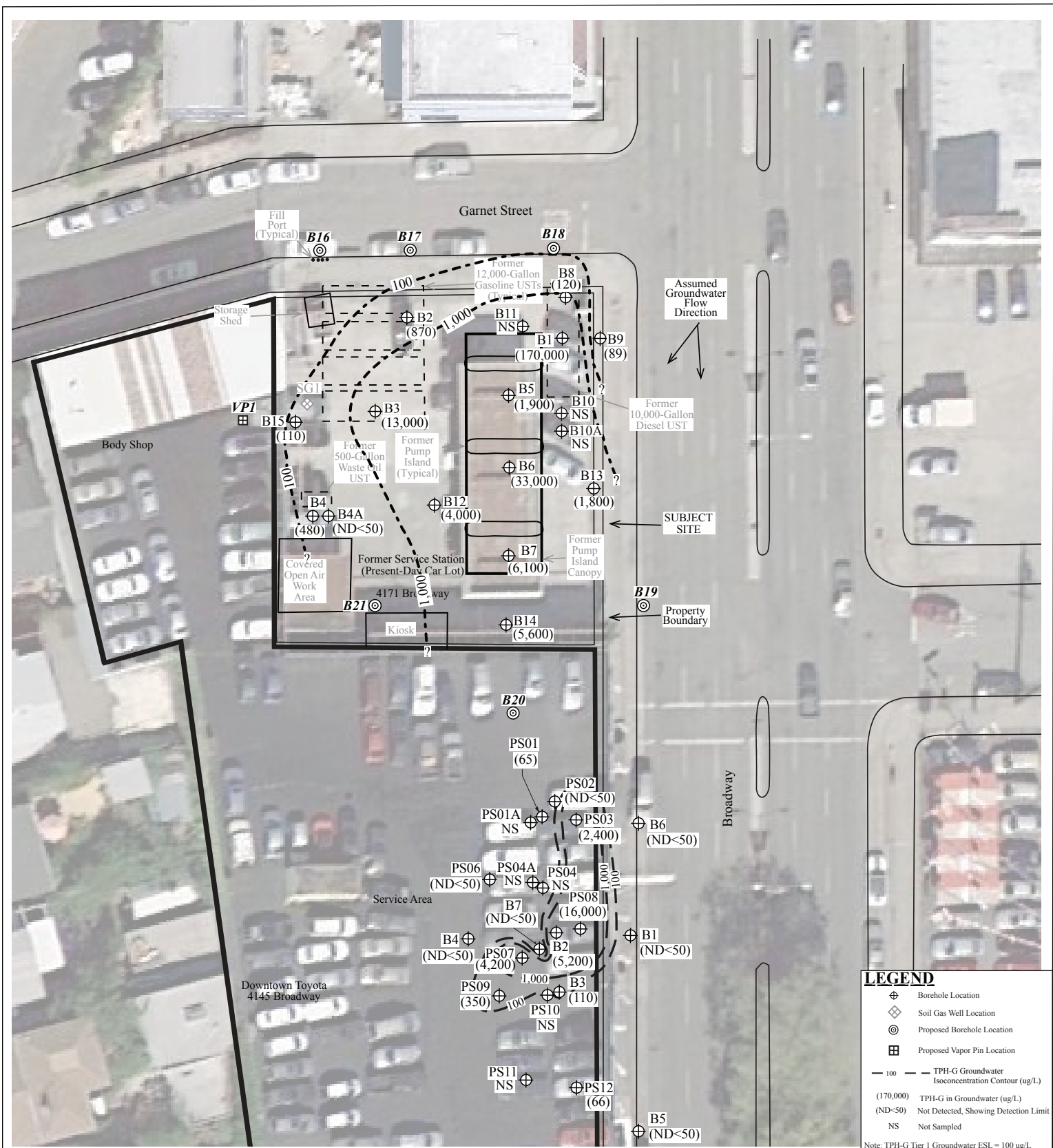


Figure 3
 Site Vicinity Aerial Photograph Showing TPH-D Groundwater Concentrations
 Auto Depot
 4171 Broadway
 Oakland, California

Base Map From:
 Andrew P. Anderson, Architect
 Doten Pontiac Site Plan, June 1966, and
 Google Earth, image dated October 2009

P&D Environmental, Inc.
 55 Santa Clara Avenue, Suite 240
 Oakland, CA 94610





LEGEND

- ⊕ Borehole Location
- ⊕ Soil Gas Well Location
- ⊙ Proposed Borehole Location
- ⊕ Proposed Vapor Pin Location
- TPH-G Groundwater Isoconcentration Contour (ug/L)
- (170,000) TPH-G in Groundwater (ug/L)
- (ND<50) Not Detected, Showing Detection Limit
- NS Not Sampled

Note: TPH-G Tier 1 Groundwater ESL = 100 ug/L

Figure 4
Site Vicinity Aerial Photograph Showing TPH-G Groundwater Concentrations
Auto Depot
4171 Broadway
Oakland, California

Base Map From:
 Andrew P. Anderson, Architect
 Doten Pontiac Site Plan, June 1966, and
 Google Earth, image dated October 2009

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 Oakland, CA 94610

0 20 40

 Approximate Scale in Feet

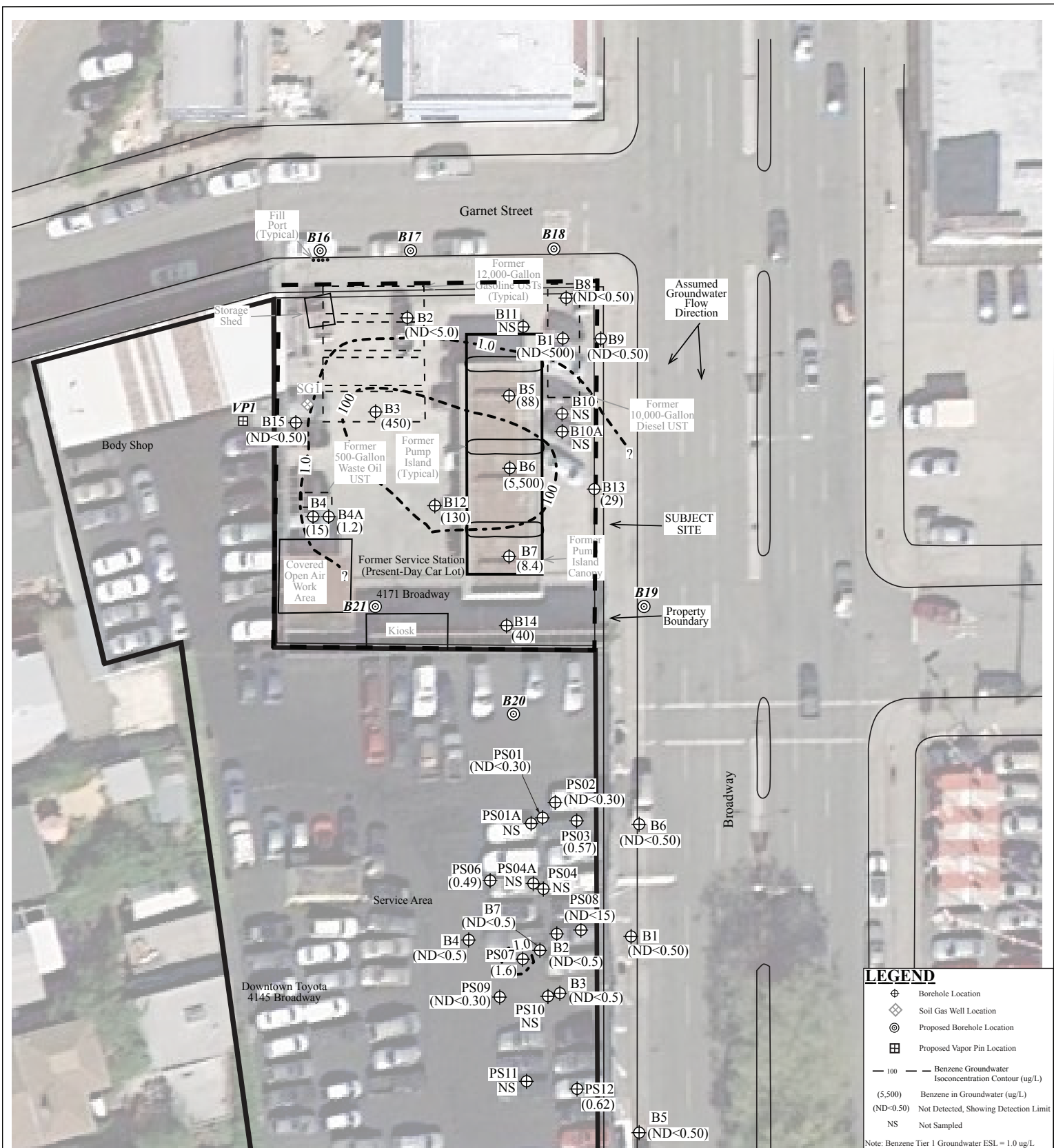
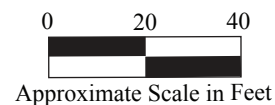


Figure 5
Site Vicinity Aerial Photograph Showing Benzene Groundwater Concentrations
Auto Depot
4171 Broadway
Oakland, California

Base Map From:
 Andrew P. Anderson, Architect
 Doten Pontiac Site Plan, June 1966, and
 Google Earth, image dated October 2009

P&D Environmental, Inc.
 55 Santa Clara Avenue, Suite 240
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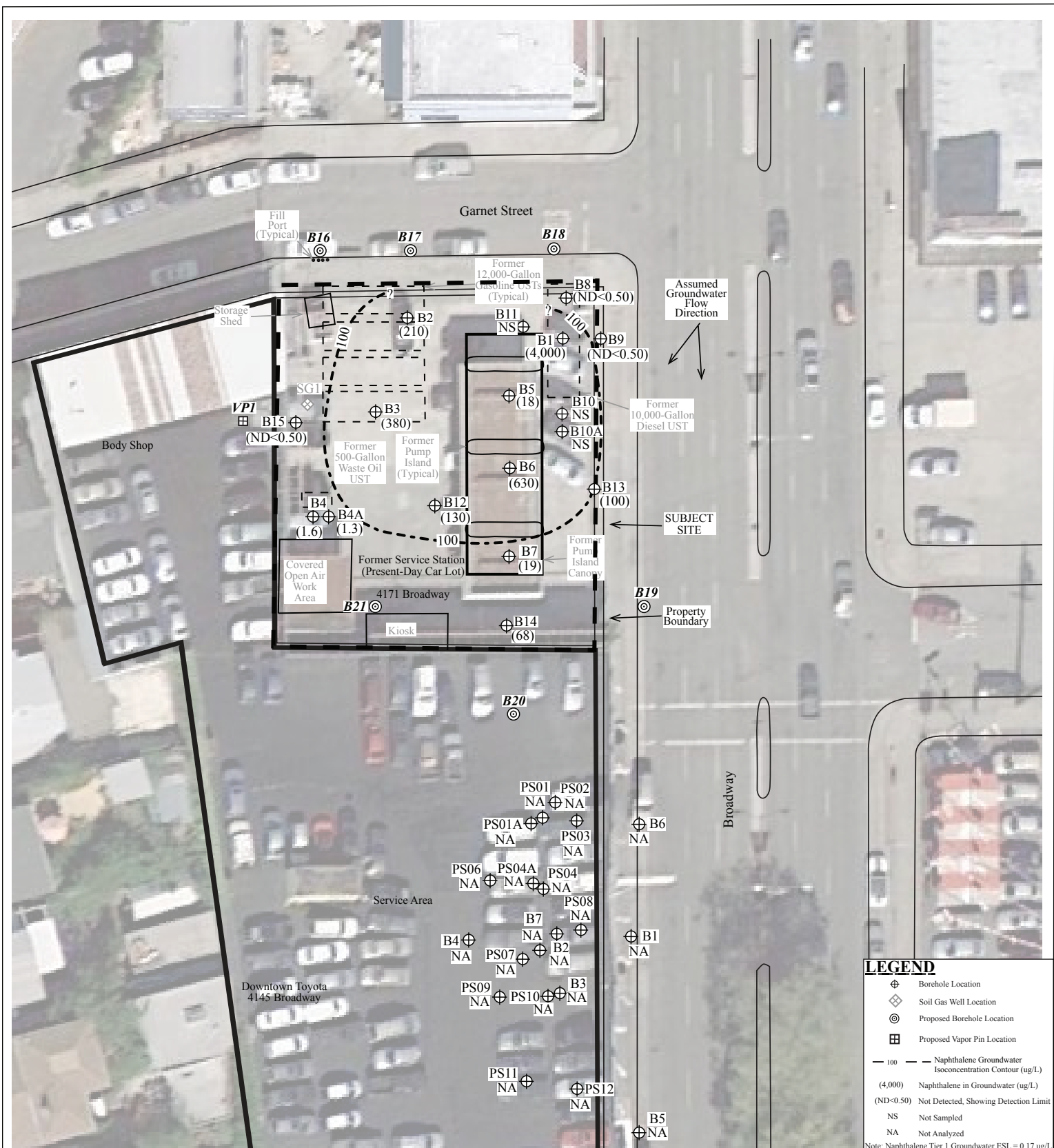


Figure 6
 Site Vicinity Aerial Photograph Showing Naphthalene Groundwater Concentrations
 Auto Depot
 4171 Broadway
 Oakland, California

Base Map From:
 Andrew P. Anderson, Architect
 Doten Pontiac Site Plan, June 1966, and
 Google Earth, image dated October 2009

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 55 Santa Clara Avenue, Suite 240
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