

January 31, 2017

Mr. Keith Nowell  
Alameda County Health Care Services Agency  
1131 Harbor Bay Parkway, Ste. 250  
Alameda, CA 94502-6577  
[keith.nowell@acgov.org](mailto:keith.nowell@acgov.org)

**RECEIVED**

By Alameda County Environmental Health 1:32 pm, Feb 03, 2017

Subject: **Request for Low Threat Closure**  
3101 35<sup>th</sup> Avenue, Oakland, CA  
Fuel Leak Case No. RO0003164; Global ID T10000006539

Dear Mr. Nowell,

I declare, under penalty of perjury, that the information and/or recommendations contained in the attached *Request for Low Threat Closure* are true and correct to the best of my knowledge.

Sincerely,



Ms. Mona Hsieh  
Responsible Party Representative



January 31, 2017

Alameda County Health Care Services Agency  
Environmental Protection  
Attn: Mr. Keith Nowell  
1131 Harbor Bay Parkway, Ste. 250  
Alameda, California 94502  
[keith.nowell@acgov.org](mailto:keith.nowell@acgov.org)

**Subject: Request for Low Threat Closure**  
Green Oak Builders – RO0003164  
3101 35<sup>th</sup> Avenue, Oakland, California

Dear Mr. Nowell,

On January 18, 2017, Almar Environmental (Almar), the Alameda County Environmental Health Department (ACEH), and the Responsible Party (RP), attended a meeting to discuss the possibility of closing the above referenced fuel release case under the State Water Resource Control Board's (SWRCB's) Low Threat Closure Policy (LTCP). In order for the case to qualify for closure, all general and media-specific criteria of the LTCP must be met. As such, in the following sections each criteria of the LTCP is addressed. Additionally, as requested by the ACEH, a map showing a general over view of neighboring LUFT sites (Figure 2) and a plume length map (Figure 3) are included.

#### **LTCP General Criteria**

There are eight specific general criteria (identified as a through h) of the LTCP that must be satisfied prior to closure. The following is a list of each of these eight criteria and whether they have been satisfied or not:

- a. The unauthorized release is located within the service area of a public water system.
  - **Yes**, this criteria has been met.
- b. The unauthorized release consists only of petroleum.
  - **Yes**, this criteria has been met. The main constituent of concern (COC) appears to be benzene and, to a lesser extent, total petroleum hydrocarbons as gasoline (TPHg). It should be noted, however, that PCE (a chlorinated solvent) has also been detected in soil gas at the site (Table 3).
- c. The unauthorized ("primary") release from the UST system has been stopped.
  - **Yes**, this criteria has been met. All known USTs and associated pipes and appurtenant structures have been removed.
- d. Free product has been removed to the maximum extent practicable.
  - **Yes**, this criteria appears has been met. No free product was encountered during tank removal activities or during any historical subsurface investigations at the site
- e. A conceptual site model that assesses the nature, extent, and mobility of the release has been developed.

**Almar Environmental**

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- **Yes**, an initial site conceptual model (SCM) was prepared for the site. The SCM was prepared and presented as part of Almar's *Data Gap Investigation Workplan and Site Conceptual Model* document. A copy of this document can be found on file with the ACHCSA and online within the SWRCB's Geotracker database at the following link:  
[http://geotracker.waterboards.ca.gov/esi/uploads/geo\\_report/1214311718/T10000006539.PDF](http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/1214311718/T10000006539.PDF)
- f. Secondary source has been removed to the extent practicable.
  - **Yes**, this criteria appears has been met. "Secondary source" is defined as petroleum-impacted soil or groundwater located at or immediately beneath the point of release from the primary source. Based upon the results of historical soil and water investigations, little or no secondary source remains in the subsurface soils and groundwater at the site (Tables 1 through 3).
- g. Soil and groundwater have been tested for MtBE and results reported in accordance with Health and Safety Code section 25296.15.
  - **Yes**, this criteria appears has been met. Soil and groundwater samples collected during historical investigations were tested for MtBE. MtBE was not detected above laboratory test limits in any of the samples submitted for analysis (Tables 1 through 3).
- h. Nuisance as defined by Water Code section 13050 does not exist at the site.
  - **Yes**, this criteria appears has been met, as no nuisances as defined by the policy are known to exist at the site.

### **Media-Specific Criteria**

To simplify implementation, the LTCP has identified three media-specific criteria which must be addressed and satisfied. The three media-specific criteria are: 1.) Groundwater, 2.) Vapor Intrusion to Indoor Air, and 3.) Direct Contact and Outdoor Air Exposure. Each of these three criteria are addressed below.

#### 1.) Groundwater-Specific Criteria

To satisfy the media-specific criteria for groundwater, the contaminant plume that exceeds water quality objectives must be stable or decreasing in areal extent, and meet all of the additional characteristics of one of the five classes of groundwater sites listed in the LTCP. Which of the five classes the site falls under is determined by plume length, free product status, the location of the nearest water supply well or surface water body, and the dissolved concentrations of benzene and MtBE. Based upon the results of this current investigation the site appears to meet groundwater criteria scenario 1 because:

- A.) The contaminant plume that exceeds water quality objectives appears to be less than 100 feet (as defined by offsite downgradient well RW-14, see Figure 3),
- B.) There in no free product, and
- C.) The nearest existing water supply well or surface water body is greater than 250 feet away.

#### 2.) Petroleum Vapor Intrusion to Indoor Air

Exposure to petroleum vapors migrating from soil or groundwater to indoor air may pose unacceptable human health risks. Because buildings for human occupancy (residential) are reasonably expected to be constructed in the future, the vapor intrusion risks to indoor air must be addressed. These vapor intrusion concerns were addressed as part of this historical soil vapor investigations conducted at the site. Based upon the results, the site appears to meet the criteria of Scenario 4 (Appendix 4) of the LTCP. The site meets this criteria because: 1.) a bioattenuation zone (as defined by the LTCP) is present and 2.) all measured soil gas concentrations are less than the minimum required concentrations for benzene, ethylbenzene, and naphthalene (see Table 4). Therefore, this media-specific criteria has been met.

### 3.) Direct Contact and Outdoor Air Exposure

The LTCP describes conditions where direct contact with contaminated soil or inhalation of contaminants volatilized to outdoor air poses a low threat to human health. Table 1 of the LTCP describes concentrations of constituents (specifically, benzene, ethylbenzene, naphthalene, and PAHs) in soil that will have no significant risk of adversely affecting human health. A total of 15 soil samples from various depths were collected during this current investigation and analyzed for the contaminants of concern. 19 additional historical soil samples were collected during previous investigations at the site. None of the subsurface samples were found to contain concentrations exceeding those described in Table 1 of the LTCP (see tables 1A, 1B, and 2). Therefore, this condition of the LTCP has been satisfied.

### **Recommendations**

Based on the historical data collected and the above conclusions, Almar makes the following recommendations:

- The fuel release case should be reviewed by the local oversight agency for case closure under the RWQCB's Low Threat Closure Policy.
- Although the fuel release case appears to qualify for closure under the LTCP, PCE is known to exist in soil gas at the site at concentrations exceeding residential screening levels. Plans are in place to redevelop the subject site into a multi tenant commercial/residential property. To further address the PCE soil gas contamination, and its potential intrusion into the proposed new development, the responsible party should enter the ACEH's Volunteer Remedial Action Program (VRAP).

### **Closing Statement**

To the best of our knowledge, all statements made in this report are true and correct. This report is based on data provided by the client and others and a review of historical reports. No warranty whatsoever is made that this Work Plan Addendum addresses all contamination found on the site.

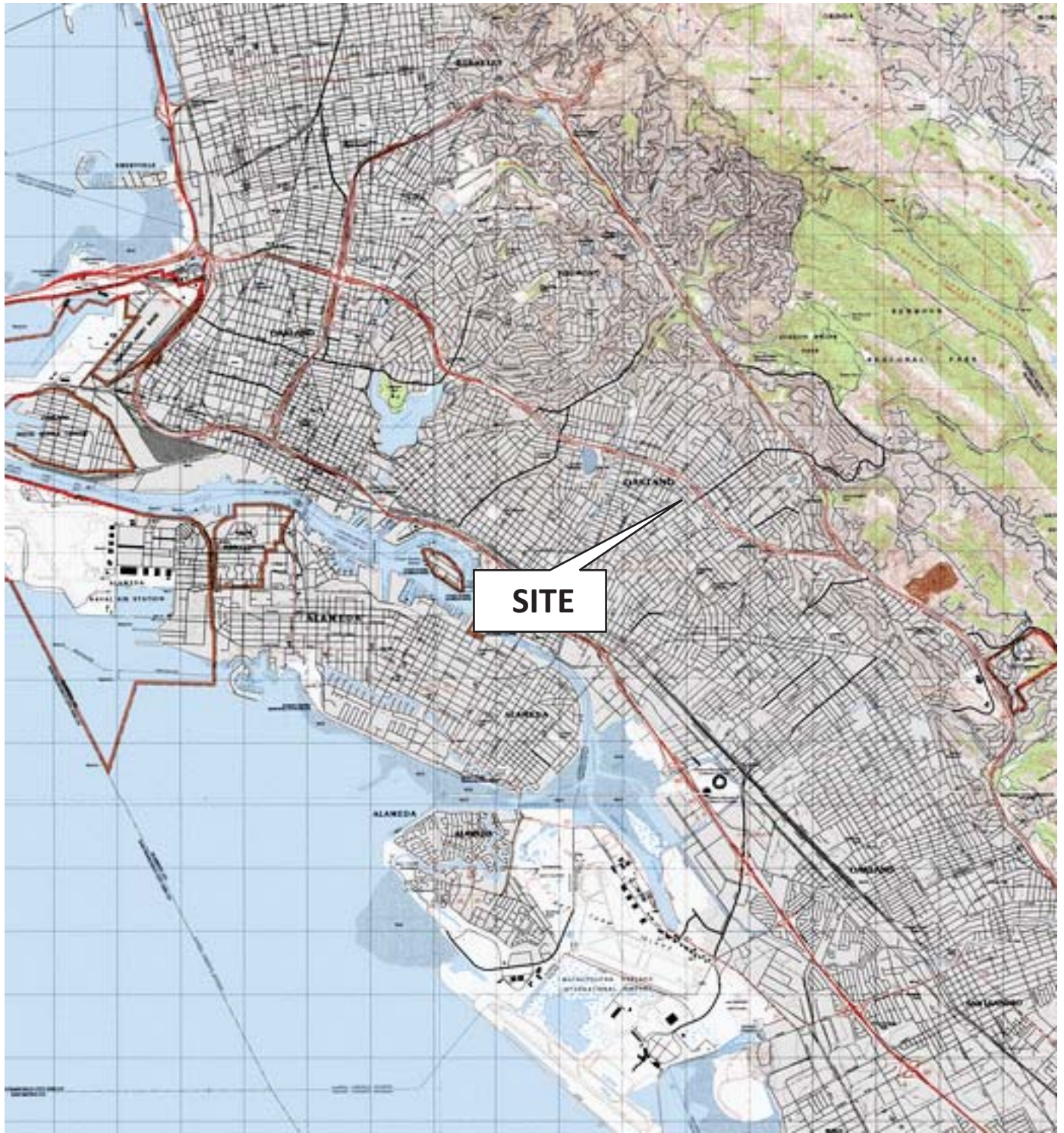
If you have any further questions or require any further information, please do not hesitate to contact us.

Respectfully submitted,

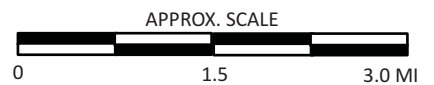


Forrest N. Cook  
Owner/Principal Scientist  
Almar Environmental  
California Professional Geologist #8201 (exp 9/18)

## FIGURES



SOURCE: USGS 1:24,000 SCALE SERIES OAKLAND EAST, CA QUAD



3101 35th AVENUE  
OAKLAND, CALIFORNIA

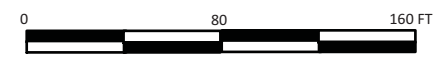
SITE VICINITY TOPO MAP

FIGURE

1



SOURCE: GOOGLE EARTH, 2017

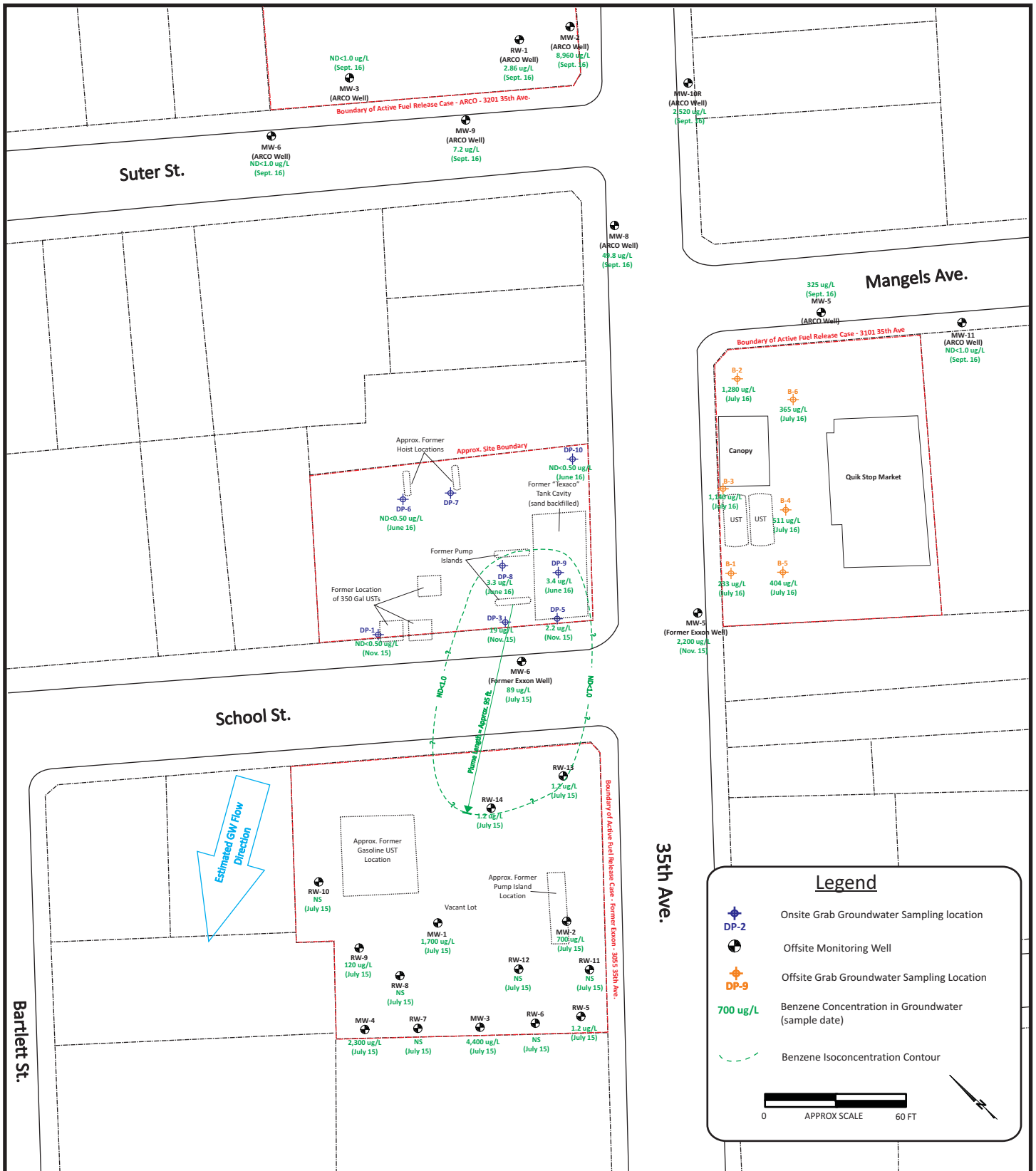


3101 35TH AVE.  
OAKLAND, CALIFORNIA

FIGURE

AERIAL PHOTOGRAPH SHOWING  
SITE AREA AND NEIGHBORING LUFT SITES

2



3101 35th AVENUE  
OAKLAND, CALIFORNIA






EXTENDED SITE MAP SHOWING  
ESTIMATED PLUME LENGTH

FIGURE

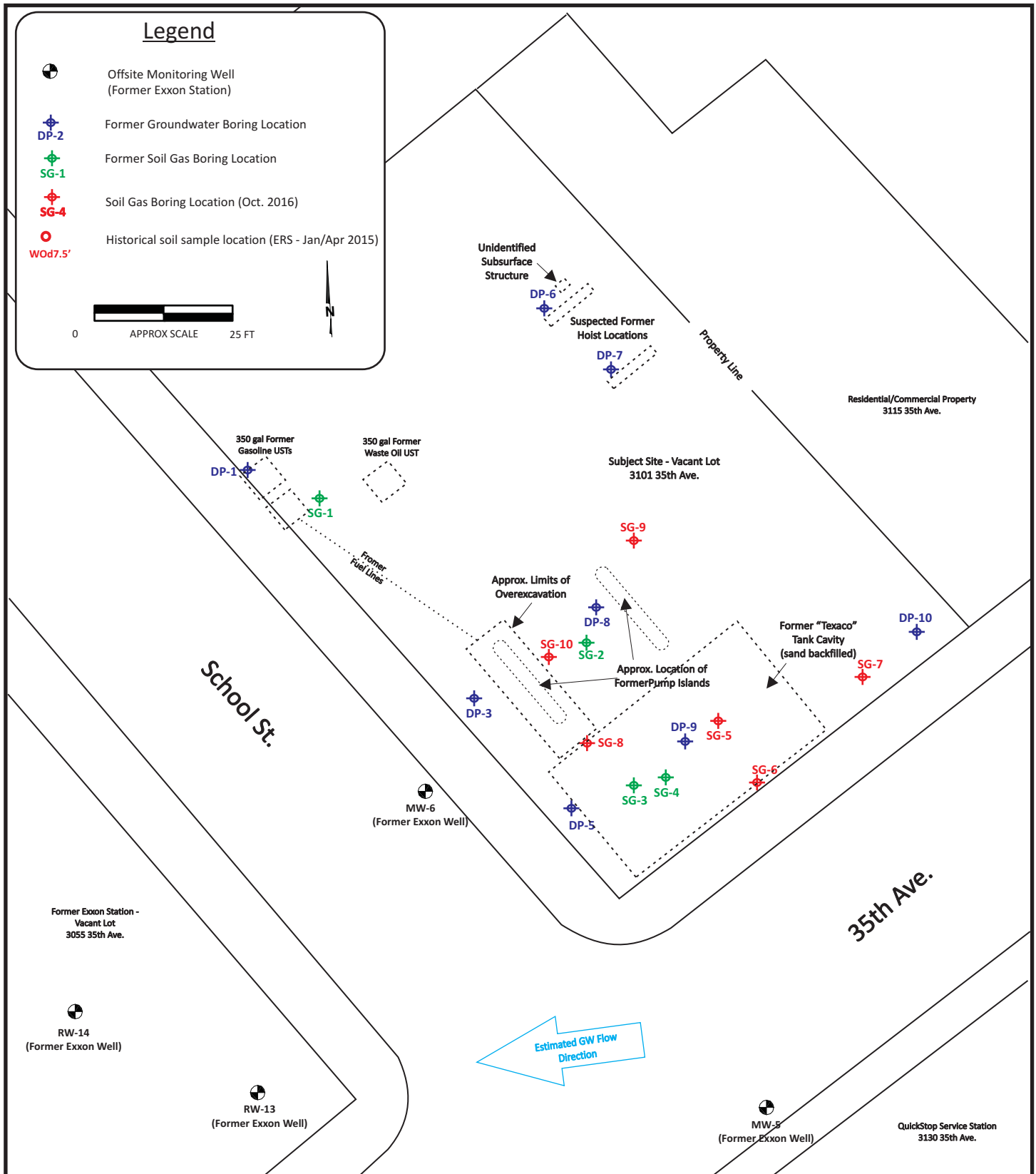
3



**Legend**

-  Offsite Monitoring Well (Former Exxon Station)
-  Former Groundwater Boring Location
-  Former Soil Gas Boring Location
-  Soil Gas Boring Location (Oct. 2016)
-  Historical soil sample location (ERS - Jan/Apr 2015)

0      APPROX SCALE      25 FT



3101 35th AVENUE  
OAKLAND, CALIFORNIA

DETAILED SITE MAP SHOWING  
HISTORICAL SAMPLING LOCATIONS

FIGURE

4

## TABLES

**TABLE 1A**  
**SUMMARY OF HISTORICAL SOIL ANALYTICAL DATA - Hydrocarbons and VOCs**  
**3101 35th Avenue**  
**Oakland, California**

Sample ID	Sample Depth (ft.)	Sample Date	TPHg	TPHd	TPHmo	B	T	E	X	MtBE	Naph.	TBA	Other VOCs
			(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)
WO d 7.5'	7.5	01/27/15	ND<0.25	ND<1.0	ND<1.0	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.010	---	All ND
T1 d 9'	9.0	01/27/15	ND<0.25	---	---	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	---	---	All ND
T2 d 9'	9.0	01/27/15	ND<0.25	---	---	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	---	---	All ND
Disp. SW d 3'	3.0	01/27/15	<b>230</b>	---	---	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	---	---	All ND
Disp. NW d 3'	3.0	01/27/15	<b>850</b>	---	---	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	---	---	All ND
Disp. SE d 3.5'	3.5	01/27/15	ND<0.25	---	---	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	---	---	All ND
Disp. NE d 3'	3.0	01/27/15	ND<0.25	---	---	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	---	---	All ND
SW TP d 9.5'	9.5	01/27/15	<b>180</b>	---	---	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	---	---	All ND
Dispenser SP	stopckpile	01/27/15	ND<0.25	---	---	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	---	---	All ND
Main TP SP	Stockpile	01/27/15	ND<0.25	---	---	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	---	---	All ND
WO SP	Stockpile	01/27/15	<b>32</b>	<b>84</b>	<b>360</b>	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	<b>0.71</b>	---	All ND
Disp.Ad5'	5.0	04/16/15	<b>46</b>	---	---	ND<0.005	ND<0.005	ND<0.005	<b>0.069</b>	ND<0.05	---	---	---
Disp.Bd4'	4.0	04/16/15	<b>1.1</b>	---	---	ND<0.005	ND<0.005	ND<0.005	ND<0.050	ND<0.05	---	---	---
Disp.Cd5'	5.0	04/16/15	<b>77</b>	---	---	ND<0.001	ND<0.001	<b>0.17</b>	<b>0.22</b>	ND<0.10	---	---	---
Disp.Dd5'	5.0	04/16/15	<b>110</b>	---	---	ND<0.05	<b>0.21</b>	<b>0.87</b>	<b>0.16</b>	ND<0.05	---	---	---
Disp.Ed5'	5.0	04/16/15	<b>21</b>	---	---	ND<0.05	<b>0.031</b>	<b>0.012</b>	<b>0.16</b>	ND<0.05	---	---	---
Disp.Fd5'	5.0	04/16/15	<b>68</b>	---	---	ND<0.05	ND<0.005	ND<0.005	<b>0.035</b>	ND<0.05	---	---	---
Disp.Gd4'	4.0	04/16/15	ND<1.0	---	---	ND<0.05	ND<0.005	ND<0.005	ND<0.050	ND<0.05	---	---	---
Disp.Hd4'	4.0	04/16/15	<b>68</b>	---	---	ND<0.05	<b>0.34</b>	ND<0.050	<b>0.093</b>	ND<0.05	---	---	---
ESL Residential			<b>770</b>	<b>240</b>	<b>11,000</b>	<b>0.250</b>	<b>1,000</b>	<b>5.5</b>	<b>600</b>	<b>44</b>	<b>1.9</b>	---	<b>varies</b>
LTCP Residential (0' to 5')			---	---	---	<b>1.9</b>	---	<b>21.0</b>	---	---	<b>9.7</b>	---	<b>varies</b>
LTCP Residential (5' to 10')			---	---	---	<b>2.8</b>	---	<b>32.0</b>	---	---	<b>9.7</b>	---	<b>varies</b>

Continued.

**TABLE 1A**  
**SUMMARY OF HISTORICAL SOIL ANALYTICAL DATA - Hydrocarbons and VOCs**  
**3101 35th Avenue**  
**Oakland, California**

Sample ID	Sample Depth (ft.)	Sample Date	TPHg	TPHd	TPHmo	B	T	E	X	MtBE	Naphth.	TBA	Other VOCs
			(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)
DP-1d5.0	5.0	11/02/15	ND<0.20	---	---	ND<0.005	ND<0.005	ND<0.005	ND<0.010	ND<0.005	ND<0.005	ND<0.050	---
DP-1d10.0	10.0	11/02/15	ND<0.20	---	---	ND<0.005	ND<0.005	ND<0.005	ND<0.010	ND<0.005	ND<0.005	ND<0.050	---
DP-1d15.0	15.0	11/02/15	ND<0.20	---	---	ND<0.005	ND<0.005	ND<0.005	ND<0.010	ND<0.005	ND<0.005	ND<0.050	---
DP-3d5.0	5.0	11/02/15	ND<0.20	---	---	ND<0.005	ND<0.005	ND<0.005	ND<0.010	ND<0.005	ND<0.005	ND<0.050	---
DP-3d10.0	10.0	11/02/15	<b>12</b>	---	---	ND<0.005	ND<0.005	ND<0.005	ND<0.010	ND<0.005	ND<0.005	ND<0.050	---
DP-3d20.0	20.0	11/02/15	<b>0.73</b>	---	---	<b>0.0023</b>	<b>0.013</b>	ND<0.005	ND<0.010	ND<0.005	ND<0.005	ND<0.050	---
DP-3d30.0	30.0	11/02/15	ND<0.20	---	---	ND<0.005	ND<0.005	ND<0.005	ND<0.010	ND<0.005	ND<0.005	ND<0.050	---
DP-5d5.0	5.0	11/02/15	ND<0.20	---	---	ND<0.005	ND<0.005	ND<0.005	ND<0.010	ND<0.005	ND<0.005	ND<0.050	---
DP-5d10.0	10.0	11/02/15	<b>6.1</b>	---	---	ND<0.005	ND<0.005	ND<0.005	ND<0.010	ND<0.005	ND<0.005	ND<0.050	---
DP-5d15.0	15.0	11/02/15	<b>0.30</b>	---	---	ND<0.005	ND<0.005	ND<0.005	ND<0.010	ND<0.005	ND<0.005	ND<0.050	---
DP-5d20.0	20.0	11/02/15	<b>18</b>	---	---	ND<0.005	ND<0.005	ND<0.005	ND<0.010	ND<0.005	ND<0.005	ND<0.050	---
DP-5d30.0	30.0	11/02/15	ND<0.20	---	---	ND<0.005	ND<0.005	ND<0.005	ND<0.010	ND<0.005	ND<0.005	ND<0.050	---
SG-1d5.0	5.0	11/02/15	<b>0.065</b>	---	---	ND<0.005	ND<0.005	ND<0.005	ND<0.010	ND<0.005	ND<0.005	ND<0.050	---
SG-2d5.0	5.0	11/02/15	ND<0.20	---	---	ND<0.005	ND<0.005	ND<0.005	ND<0.010	ND<0.005	ND<0.005	ND<0.050	---
SG-3d5.0	5.0	11/02/15	ND<0.20	---	---	ND<0.005	ND<0.005	ND<0.005	ND<0.010	ND<0.005	ND<0.005	ND<0.050	---
<b>ESL Residential</b>			<b>770</b>	<b>240</b>	<b>11,000</b>	<b>0.250</b>	<b>1,000</b>	<b>5.5</b>	<b>600</b>	<b>44</b>	<b>1.9</b>	<b>---</b>	<b>varies</b>
<b>LTCP Residential (0' to 5')</b>			<b>---</b>	<b>---</b>	<b>---</b>	<b>1.9</b>	<b>---</b>	<b>21.0</b>	<b>---</b>	<b>---</b>	<b>9.7</b>	<b>---</b>	<b>varies</b>
<b>LTCP Residential (5' to 10')</b>			<b>---</b>	<b>---</b>	<b>---</b>	<b>2.8</b>	<b>---</b>	<b>32.0</b>	<b>---</b>	<b>---</b>	<b>9.7</b>	<b>---</b>	<b>varies</b>

Continued.

**TABLE 1A**  
**SUMMARY OF HISTORICAL SOIL ANALYTICAL DATA - Hydrocarbons and VOCs**  
**3101 35th Avenue**  
**Oakland, California**

Sample ID	Sample Depth (ft.)	Sample Date	TPHg (mg/Kg)	TPHd (mg/Kg)	TPHmo (mg/Kg)	B (mg/Kg)	T (mg/Kg)	E (mg/Kg)	X (mg/Kg)	MtBE (mg/Kg)	Naph. (mg/Kg)	TBA (mg/Kg)	Other VOCs (mg/Kg)
SG-4d5.0	5.0	05/31/16	ND<0.20	---	---	ND<0.005	ND<0.005	ND<0.005	ND<0.010	ND<0.005	ND<0.005	ND<0.050	All ND
DP-6d5.0	5.0	05/31/16	ND<0.20	ND<10.0	<b>42</b>	ND<0.005	ND<0.005	ND<0.005	ND<0.010	ND<0.005	ND<0.005	ND<0.050	All ND
DP-6d10.0	10.0	05/31/16	ND<0.20	ND<10.0	ND<20.0	ND<0.005	ND<0.005	ND<0.005	ND<0.010	ND<0.005	ND<0.005	ND<0.050	All ND
DP-7d5.0	5.0	05/31/16	ND<0.20	ND<10.0	ND<20.0	ND<0.005	ND<0.005	ND<0.005	ND<0.010	ND<0.005	ND<0.005	ND<0.050	All ND
DP-7d10.0	10.0	05/31/16	ND<0.20	ND<10.0	ND<20.0	ND<0.005	ND<0.005	ND<0.005	ND<0.010	ND<0.005	ND<0.005	ND<0.050	All ND
DP-8d5.0	5.0	05/31/16	ND<0.20	---	---	ND<0.005	ND<0.005	ND<0.005	ND<0.010	ND<0.005	ND<0.005	ND<0.050	All ND
DP-8d10.0	10.0	05/31/16	ND<0.20	---	---	ND<0.005	ND<0.005	ND<0.005	ND<0.010	ND<0.005	ND<0.005	ND<0.050	All ND
DP-9d5.0	5.0	05/31/16	ND<0.20	ND<10.0	ND<20.0	ND<0.005	ND<0.005	ND<0.005	ND<0.010	ND<0.005	ND<0.005	ND<0.050	All ND
DP-9d8.0	8.0	05/31/16	<b>3.2</b>	ND<10.0	ND<20.0	ND<0.005	ND<0.005	ND<0.005	ND<0.010	ND<0.005	ND<0.005	ND<0.050	All ND <sup>1</sup>
DP-9d15.0	15.0	05/31/16	<b>1.0</b>	ND<10.0	ND<20.0	ND<0.005	ND<0.005	ND<0.005	ND<0.010	ND<0.005	ND<0.005	ND<0.050	All ND
DP-10d5.0	5.0	05/31/16	ND<0.20	ND<10.0	ND<20.0	ND<0.005	ND<0.005	ND<0.005	ND<0.010	ND<0.005	ND<0.005	ND<0.050	All ND
DP-10d10.0	10.0	05/31/16	ND<0.20	ND<10.0	ND<20.0	ND<0.005	ND<0.005	ND<0.005	ND<0.010	ND<0.005	ND<0.005	ND<0.050	All ND
<b>ESL Residential</b>			<b>770</b>	<b>240</b>	<b>11,000</b>	<b>0.250</b>	<b>1,000</b>	<b>5.5</b>	<b>600</b>	<b>44</b>	<b>1.9</b>	---	<b>varies</b>
<b>LTCP Residential (0' to 5')</b>			---	---	---	<b>1.9</b>	---	<b>21.0</b>	---	---	<b>9.7</b>	---	<b>varies</b>
<b>LTCP Residential (5' to 10')</b>			---	---	---	<b>2.8</b>	---	<b>32.0</b>	---	---	<b>9.7</b>	---	<b>varies</b>

**Notes:**

11/25/14 & 4/16/15 samples collected by ERS

1 = n-Butylbenzene @ 0.022 mg/Kg & sec-Butylbenzen @ 0.0096mg/Kg

--- = Parameter not analyzed

<0.5 / ND = Not present at or above practical laboratory detection limit

mg/Kg = micrograms per kilogram = parts per million = ppm

ESLs = RWQCB Environmental Screening Levels - Feb. 2016 (Table S-1: Res. Shallow Soil Exposure)

LTCP = Low Threat Closure Policy - Table 1: Concentrations of Petroleum Constituents in soil

that will have no significant risk of adversely affecting human health

TPHg = Total Petroleum Hydrocarbons as gasoline

TPHd = Total Petroleum Hydrocarbons as diesel

TPHmo = Total Petroleum Hydrocarbons as motor oil

B = Benzene

MtBE = Methyl-t-butyl ether

**Bolded Value** =detected concentration

T = Toluene

TBA = tert Butyl Alcohol

**Shaded Value** = concentration exceeds either ESL or LTCP value

E = Ethylbenzene

X = Total Xylenes

**TABLE 1B**  
**SUMMARY OF HISTORICAL SOIL ANALYTICAL DATA - PAHs**  
**3101 35th Avenue**  
**Oakland, California**

Sample ID	WO d 7.5'	WO SP	DP-6d5.0	DP-6d10.0	DP-7d5.0	DP-7d10.0	LTCP Res.	LTCP Res.	Res.
Sample Depth	7.5 ft bgs	Stockpile	5.0 ft bgs	10 ft bgs	5.0 ft bgs	10 ft bgs	0 to 5 ft bgs	5 to 10 ft bgs	ESL
Sample Date	01/27/15	01/27/15	05/31/16	05/31/16	05/31/16	05/31/16	(mg/Kg)	(mg/Kg)	(mg/Kg)
Units	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)
Acenaphthene	ND<0.010	ND<0.010	ND<0.10	ND<0.10	ND<0.10	ND<0.10	0.063	NA	16
Acenaphthylene	ND<0.010	ND<0.010	ND<0.10	ND<0.10	ND<0.10	ND<0.10	0.063	NA	13
Anthracene	ND<0.010	ND<0.010	ND<0.10	ND<0.10	ND<0.10	ND<0.10	0.063	NA	2.8
Benzo[a]anthracene	ND<0.010	ND<0.010	ND<0.10	ND<0.10	ND<0.10	ND<0.10	0.063	NA	0.7
Benzo[b]fluoranthene	ND<0.010	ND<0.010	ND<0.10	ND<0.10	ND<0.10	ND<0.10	0.063	NA	0.7
Benzo[k]fluoranthene	ND<0.010	ND<0.010	ND<0.10	ND<0.10	ND<0.10	ND<0.10	0.063	NA	2.6
Benzo[a]pyrene	ND<0.010	ND<0.010	ND<0.10	ND<0.10	ND<0.10	ND<0.10	0.063	NA	0.07
Benzo[g,h,i]perylene	ND<0.010	ND<0.010	ND<0.10	ND<0.10	ND<0.10	ND<0.10	0.063	NA	2.5
Chrysene	ND<0.010	ND<0.010	ND<0.10	ND<0.10	ND<0.10	ND<0.10	0.063	NA	3.8
Dibenzo[a,h]anthracene	ND<0.010	ND<0.010	ND<0.10	ND<0.10	ND<0.10	ND<0.10	0.063	NA	0.07
Fluoranthene	ND<0.010	ND<0.010	ND<0.10	ND<0.10	ND<0.10	ND<0.10	0.063	NA	60
Fluorene	ND<0.010	ND<0.010	ND<0.10	ND<0.10	ND<0.10	ND<0.10	0.063	NA	8.9
Indeno[1,2,3-cd]pyrene	ND<0.010	ND<0.010	ND<0.10	ND<0.10	ND<0.10	ND<0.10	0.063	NA	0.7
1-Methylnaphthalene	ND<0.010	<b>0.66</b>	ND<0.10	ND<0.10	ND<0.10	ND<0.10	0.063	NA	NA
2-Methylnaphthalene	ND<0.010	<b>1.2</b>	ND<0.10	ND<0.10	ND<0.10	ND<0.10	0.063	NA	0.25
Napthalene	ND<0.010	<b>0.71</b>	ND<0.10	ND<0.10	ND<0.10	ND<0.10	9.7	9.7	1.2
Phenanthrene	ND<0.010	ND<0.010	ND<0.10	ND<0.10	ND<0.10	ND<0.10	0.063	NA	11
Pyrene	ND<0.010	ND<0.010	ND<0.10	ND<0.10	ND<0.10	ND<0.10	0.063	NA	85

**Notes:**

- = Parameter not analyzed
- <0.5 / ND = Not present at or above reporting detection limit
- mg/Kg = micrograms per kilogram = parts per million = ppm
- ESLs = RWQCB Environmental Screening Levels - Feb. 2016 (Table S-1: Res. Shallow Soil Exposure)
- Bolded Value** =detected concentration
- Shaded Value** = concentration exceeds either ESL or LTCP value
- PAH = polynuclear aromatic hydrocarbons

**TABLE 1C**  
**SUMMARY OF HISTORICAL SOIL ANALYTICAL DATA - Metals**  
**3101 35th Avenue**  
**Oakland, California**

Sample ID	Sample Depth (ft)	Sample Date	Sb (mg/Kg)	As (mg/Kg)	Ba (mg/Kg)	Be (mg/Kg)	Cd (mg/Kg)	Cr (mg/Kg)	Co (mg/Kg)	Cu (mg/Kg)	Pb (mg/Kg)	Hg (mg/Kg)	Mo (mg/Kg)	Ni (mg/Kg)	Se (mg/Kg)	Ag (mg/Kg)	Tl (mg/Kg)	V (mg/Kg)	Zn (mg/Kg)
WO d 7.5'	7.5	01/27/15	---	---	---	---	ND<0.25	46	---	---	6.9	---	---	100	---	---	---	---	120
T1 d 9'	9.0	01/27/15	---	---	---	---	---	---	---	---	6.5	---	---	---	---	---	---	---	---
T2 d 9'	9.0	01/27/15	---	---	---	---	---	---	---	---	9.7	---	---	---	---	---	---	---	---
Disp. SW	3.0	01/27/15	---	---	---	---	---	---	---	---	25	---	---	---	---	---	---	---	---
Disp. NW	3.0	01/27/15	---	---	---	---	---	---	---	---	35	---	---	---	---	---	---	---	---
Disp. SE d	3.5	01/27/15	---	---	---	---	---	---	---	---	13	---	---	---	---	---	---	---	---
Disp. NE d	3.0	01/27/15	---	---	---	---	---	---	---	---	8.3	---	---	---	---	---	---	---	---
SW TP d	9.5	01/27/15	---	---	---	---	---	---	---	---	18	---	---	---	---	---	---	---	---
Dispenser	stopckpile	01/27/15	---	---	---	---	---	---	---	---	170	---	---	---	---	---	---	---	---
Main TP	Stockpile	01/27/15	---	---	---	---	---	---	---	---	43	---	---	---	---	---	---	---	---
WO SP	Stockpile	01/27/15	---	---	---	---	0.32	52	---	---	65	---	---	80	---	---	---	---	160
DP-6d5.0	5.0	05/31/16	ND<4.4	5.3	160	0.43	ND<0.44	54	10	78	6.7	0.099	0.52	67	ND<4.4	0.3	ND<4.4	52	92
DP-6d10.0	10.0	05/31/16	ND<5.0	9.1	240	0.45	ND<0.50	51	15	81	8.2	0.19	0.26	72	ND<5.0	0.35	ND<5.0	70	100
DP-7d5.0	5.0	05/31/16	ND<5.0	10	220	0.4	ND<0.50	54	17	67	11	0.082	0.35	91	ND<5.0	0.3	ND<5.0	62	99
DP-7d10.0	10	05/31/16	ND<5.0	7.7	220	0.4	ND<0.50	57	17	83	8.1	0.16	0.35	70	ND<5.0	0.31	ND<5.0	74	110
ESL Residential			31	0.067	15,000	0.083	0.014	NA	0.23	3100	80	13	390	820	390	6900	0.78	140,000	23,000
TTLC			500	500	10,000	75	100	500	8,000	2,500	1,000	20	3,500	2,000	100	500	700	2,400	5,000

**Notes:**  
 Sb = Antimony                      Cr = Chromium (total)                      Mo = Molybdenum                      V = Vanadium  
 As = Arsenic                          Co = Cobalt                                      Ni = Nickel                                      Z = Zinc  
 Ba = Barium                            Cu = Copper                                      Se = Selenium  
 Be = Beryllium                        Pb = Lead                                        Ag = Silver  
 Ca = Cadmium                         Hg = Mercury                                  Tl = Thallium

<0.5 / ND = Not present at or above reporting detection limit  
 mg/Kg = milligrams per kilogram = parts per million = ppm  
 ESLs = RWQCB Environmental Screening Levels - Feb. 2016 (Table S-1: Res. Shallow Soil Exposure)  
 TTLC = Total Threshold Limit Concentration

Bolded Value = a detected concentration  
 Shaded Value = concentration detected above corresponding TTLC

**TABLE 2**  
**SUMMARY OF HISTORICAL GROUNDWATER ANALYTICAL DATA**  
**3101 35th Avenue**  
**Oakland, California**

Sample ID	Sample Date	TPHg (ug/L)	TPHd (ug/L)	TPHmo (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MtBE (ug/L)	Naphth. (ug/L)	TBA (ug/L)	PCE (ug/L)	Other VOCs (ug/L)	Metals* (ug/L)
DP-1	11/03/15	ND<50	---	---	ND<0.50	<b>0.11</b>	ND<0.50	ND<1.0	ND<0.50	ND<0.50	ND<10	---	---	---
DP-3	11/03/15	<b>1,000</b>	---	---	<b>19</b>	<b>1.1</b>	<b>34</b>	<b>5.1</b>	ND<0.50	<b>7.2</b>	ND<10	---	---	---
DP-5	11/03/15	<b>3,700</b>	---	---	<b>2.2</b>	<b>1.5</b>	<b>1.4</b>	<b>5.5</b>	ND<0.50	<b>2.6</b>	ND<10	---	---	---
DP-6	06/01/16	ND<50	ND<200	<b>500</b>	ND<0.50	ND<0.50	ND<0.50	ND<1.0	ND<0.50	ND<0.50	---	ND<0.50	All ND	All ND
DP-8	06/01/16	<b>57</b>	---	---	<b>3.3</b>	ND<0.50	<b>1.9</b>	ND<1.0	ND<0.50	ND<0.50	---	ND<0.50	All ND <sup>1</sup>	---
DP-9	06/01/16	<b>330</b>	---	---	<b>3.4</b>	ND<0.50	<b>2.5</b>	ND<1.0	ND<0.50	ND<0.50	---	ND<0.50	All ND <sup>2</sup>	---
DP-10	06/01/16	ND<50	---	---	ND<0.50	ND<0.50	ND<0.50	ND<1.0	ND<0.50	ND<0.50	---	ND<0.50	All ND	---
<b>Tier 1 ESL</b>		<b>100</b>	<b>100</b>	<b>50,000</b>	<b>1.0</b>	<b>40</b>	<b>13</b>	<b>20</b>	<b>5.0</b>	<b>0.12</b>	<b>12.0</b>	<b>3.0</b>	<b>varies</b>	<b>varies</b>

**Notes:**

All samples collected as "grab" groundwater samples

--- = Parameter not analyzed

<0.5 / ND = Not present at or above laboratory practical quantitation limit

ug/L = micrograms per Liter = parts per billion = ppb

Tier 1 ESL = RWQCB Environmental Screening Level (February 2016)

LTCP = Low Threat Closure Policy - Table 1: Concentrations of Petroleum Constituents in soil that will have no significant risk of adversely affecting human health

TPHg = Total Petroleum Hydrocarbons as gasoline

TPHd = Total Petroleum Hydrocarbons as diesel

TPHmo = Total Petroleum Hydrocarbons as motor oil

B = Benzene                      Naphth. = Naphthalene

T = Toluene                      MtBE = Methyl-t-butyl ether

E = Ethylbenzene              TBA = tert Butyl Alcohol

X = Total Xylenes              PCE = tetrachloroethene

1 = Isopropylbenzene @ 0.70 ug/L & n-Propylbenzene @ 1.2 ug/L

2 = n-Butylbenzene & sec-Butylbenzene @ 1.0 ug/L, & Isopropylbenzene = 2.2 ug/L

n-Propylbenzene = 3.4 ug/L & 1,3,5-Trimethylbenzene = 2.0 ug/L

Metals\* = Cd, Cr, Pb, Ni, & Zn

**Bolded Value** =detected concentration

**Shaded Value** = concentration exceeds either ESL or LTCP value



**TABLE 3**  
**SUMMARY OF HISTORICAL SOIL VAPOR ANALYTICAL DATA**  
**3101 35th Ave.**  
**Oakland, California**

SAMPLE ID	Sample Depth (ft.)	Sample Date	Oxygen (O <sub>2</sub> )	Helium	TPHg (C6-C12)	Tetrahydrofuran	Carbon Disulfide	n-Hexane	Chloroform	Benzene	Toluene	Ethylbenzene	Xylenes (total)	Isopropanol	PCE	Naphthalene	Other VOCs
			Mol%	Mol%	(µg/m <sup>3</sup> )	(µg/m <sup>3</sup> )	(µg/m <sup>3</sup> )	(µg/m <sup>3</sup> )	(µg/m <sup>3</sup> )	(µg/m <sup>3</sup> )	(µg/m <sup>3</sup> )	(µg/m <sup>3</sup> )	(µg/m <sup>3</sup> )	(µg/m <sup>3</sup> )	(µg/m <sup>3</sup> )	(µg/m <sup>3</sup> )	(µg/m <sup>3</sup> )
SG-1	5.0	11/09/15	2.6	ND<0.47	460	80	47	ND<2.3	16	10	28	ND<2.3	ND<2.3	ND<2.3	ND<2.3	ND<2.3	<MDL
SG-2	5.0	11/09/15	4.1	ND<0.45	96,000	190	140	70	ND<14	61	91	ND<14	74	ND<14	ND<14	ND<14	<MDL <sup>1</sup>
SG-3	5.0	11/09/15	15	ND<0.19	210	22	12	ND<0.97	ND<0.97	3.3	7.8	ND<0.97	ND<0.97	ND<0.97	160	ND<3.9	<MDL
SG-4	5.0	06/01/16	17	ND<0.21	4,200	9.2	ND<3.3	130	ND<5.1	ND<3.4	4.4	ND<4.8	ND<4.6	ND<10	310	ND<22	<MDL <sup>2</sup>
SG-5	5.0	10/10/16	16	ND<0.20	2,100	20	ND<3.1	24	11	6.8	11	ND<4.3	7.6	ND<9.8	310	ND<21	<MDL <sup>3</sup>
SG-6	5.0	10/10/16	17	ND<0.19	240	12	ND<3.0	ND<3.5	ND<4.7	ND<3.1	4.1	ND<4.2	ND<8.4	ND<9.4	160	ND<20	<MDL
SG-7	5.0	10/10/16	9.8	ND<0.19	240,000	67	91	ND<68	410	ND<62	290	ND<84	120	ND<190	ND<130	ND<410	<MDL
SG-8	5.0	10/10/16	17	ND<0.18	390	21	ND<2.8	ND<3.2	ND<4.4	ND<2.9	6.9	ND<4.1	ND<7.8	12	190	ND<19	<MDL
SG-9	5.0	10/10/16	6.5	ND<0.20	130,000	ND<58	ND<61	ND<69	140	ND<63	ND<74	ND<86	ND<172	ND<190	260	ND<410	<MDL
SG-10	5.0	10/10/16	5.9	ND<0.21	140,000	ND<62	110	ND<74	170	ND<67	ND<79	ND<91	ND<182	ND<210	ND<140	ND<440	<MDL
<b>Residential ESL</b>			NA	NA	300,000	NA	NA	NA	61	48	160,000	560	52,000	NA	240	41	Varies
<b>Comm/Ind ESL</b>			NA	NA	2,500,000	NA	NA	NA	530	420	1,300,000	4,900	440,000	NA	2,100	360	Varies
<b>Residential CHHSL</b>			NA	NA	NA	NA	NA	NA	NA	36.2	135,000	NA	319,000	NA	180	31.9	Varies
<b>Comm/Ind CHHSL</b>			NA	NA	NA	NA	NA	NA	NA	122	378,000	NA	887,000	NA	603	106	Varies
<b>LTCP w/Bioattenuation</b>			NA	NA	NA	NA	NA	NA	NA	85,000	NA	1,000,000	NA	NA	NA	93,000	Varies
<b>LTCP w/o Bioattenuation</b>			NA	NA	NA	NA	NA	NA	NA	85	NA	1,100	NA	NA	NA	93	Varies

**Notes:**

--- = Parameter not Sampled  
 NA = Not analyzed or Not established  
 <0.5 / ND = Not present at or above reporting detection limit  
 ug/m3 = micrograms per cubic meter = ppmv  
 ESLs = RWQCB Environmental Screening Levels - Feb. 2016 (Table SG-1: Vapor Intrusion: Human Health Risk Levels)  
 CHHSL = California Human Health Screening Level - January 2005  
 LTCP = Low Threat Closure Policy (Appendix 4 - Scenerio 4)  
**Bold** = detected concentration  
**Shaded Value** = concentration exceeds either ESL or LTCP value

<MDL<sup>1</sup> = 1,2,4-Trimethylbenzene at 73 ug/m3  
 <MDL<sup>2</sup> = Acetone at 73 ug/m3 & Cyclyhexane at 180 ug/m3 & n-heptane at 51 ug/m3  
 <MDL<sup>3</sup> = n-heptane at 8.9 ug/m3