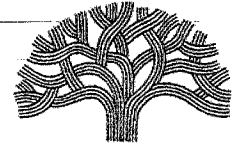


# CITY OF OAKLAND



DALZIEL BUILDING • 250 FRANK H. OGAWA PLAZA • SUITE 5301 • OAKLAND, CALIFORNIA 94612-2034

Public Works Agency  
Environmental Services Division

FAX (510) 238-7286  
TDD (510) 238-3254

**RECEIVED**

By Alameda County Environmental Health at 12:00 pm, Aug 01, 2014

July 31, 2014

Keith Nowell PG, CHG  
Hazardous Materials Specialist  
Alameda County Environmental Health  
1131 Harbor Bay Parkway  
Alameda, CA 94502-6540

Subject: City of Oakland, Municipal Service Center 7101 Edgewater Drive Oakland, California Fuel Leak Case RO293 -Work Plan for Data Gaps Investigation

Dear Mr. Nowell:

Enclosed is the Work Plan for additional investigations to address data gaps identified for the Municipal Service Center (7101 Edgewater Drive in Oakland, California) site ("the Site"). This document was prepared based on our January 6<sup>th</sup> meeting with you and Dilan Roe, as well as your emails dated January 7, 2014 and July 23, 2014.

I certify under penalty of law that this document and all attachments are prepared by Arcadis, Inc under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who managed the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

If you have any questions or comments, please call Mr. Chuck Pardini of ARCADIS at (510) 596-9536 or me at (510) 238-6361.

Sincerely,

A handwritten signature in black ink, appearing to read "Gopal Nair".

Gopal Nair

Enclosure



An American Public Works Association Accredited Agency

Mr. Keith Nowell PG, CHG  
Hazardous Materials Specialist  
Alameda County Environmental Health  
1131 Harbor Bay Parkway  
Alameda, CA 94502-6540

ENVIRONMENT

Subject:  
City of Oakland, Municipal Service Center 7101 Edgewater Drive Oakland,  
California Fuel Leak Case RO293 – Work Plan to Address Data Gaps

Date:  
July 31, 2014

Dear Mr. Nowell:

Contact:  
Chuck Pardini

Enclosed is the work plan *Data Gaps Summary and Proposed Investigation for the City of Oakland, Municipal Service Center 7101 Edgewater Drive in Oakland, California Fuel Leak Case RO293*. Table 5-2 describes the data gaps that were discussed during meetings that took place on January 6 and March 25, 2014, and submitted as Table 5-1 to Alameda County Environmental Health (ACEH) on February 14, 2014. It also includes proposed investigation activities to address each of the identified data gaps at the Municipal Service Center.

Phone:  
(510) 596-9536

Email:  
Chuck.Pardini@arcadis-  
us.com

If you have any questions or comments, please call Mr. Chuck Pardini at (510) 596-9536 or Gopal Nair at (510) 238-6361.

Our ref:  
EM012222.0007

Sincerely,



Charles Pardini, P.G.  
Vice President, Principal Geologist (6444)



Attachment

Imagine the result

**Table 5-2  
Data Gaps Summary and Proposed Investigation**

Municipal Service Center 7101 Edgewater Drive Oakland, California (Figure 1)

Item	Data Gap Item #	Proposed Investigation	Rationale	Analyses
1a.	<p><b>Conduit Study</b> The precise locations of the elements of the storm drain system, the sanitary sewer system, and the conveyance piping are unknown.</p>	<p>The November 2004 Conduit study by Ninyo &amp; Moore will be reviewed to assess the locations of the subsurface storm drain and sanitary sewer systems.</p> <p>Additional utility surveys will be conducted if the Conduit study by Ninyo &amp; Moore is assessed to be inadequate. A private third-party utility locator will be contracted to identify underground utilities. Magnetic, electromagnetic, sonic/acoustic, ground penetrating radar (GPR) and live line detector techniques will be used to detect, trace, and map buried utilities.</p>	<p>These potential preferential pathways may be located in portions of the Site that intersect areas with impacted groundwater, thus potentially acting as a conduit for contaminant migration.</p>	NA
2	<p><b>Monitoring Well Network Assessment</b></p>			
2a.	<p>Wells MW-1 and RW-D8 have submerged well screens (average groundwater elevation is greater than the top of the well's screened interval).</p> <p>MW-1 is located in a portion of the Site where light non-aqueous phase</p>	<p>Collect in-situ groundwater samples from temporary wells at two locations southwest of RW-D8 (equidistant between RW-D8 and RW-C1) and two locations east of MW-1 (equidistant between MW-1 and RW-D9) to assess the potential presence of free product and groundwater quality between the Plume D and Plume C areas and the area west of the Plume D (Figure 2).</p> <ul style="list-style-type: none"> <li>• The temporary wells will be installed using direct push rig technology to approximately 15 to 20 feet bgs (below ground surface)</li> <li>• Soil will be logged continuously and samples may be collected based on field observations and photoionization detector (PID) readings.</li> </ul>	<p>Historically LNAPL has been observed in Plume C and Plume D. The temporary wells will be located in between the two plumes to assess the potential presence of free product. Two additional borings will be located west of Plume D (between wells MW-1 and RW-D9) to evaluate the potential presence of LNAPL and groundwater quality.</p>	<p>Groundwater (and soil): TPH-d, TPH-mo and TPH-g by EPA Method 8015, and BTEX by EPA Method 8260.</p>

Item	Data Gap Item #	Proposed Investigation	Rationale	Analyses
	<p>liquid (LNAPL) has not been detected. Chemical concentrations have decreased over time and current water-quality results do not suggest that LNAPL is present.</p> <p>RW-D8 is located in a portion of the Site where LNAPL has been present. (the identified Plume D area). The potential presence of LNAPL cannot be assessed adequately in well RW-D8.</p>	<ul style="list-style-type: none"> <li>The temporary wells will be constructed such that they screen across the water table based on field observation and measurement from nearby wells RW-D8 and RW-C1.</li> <li>If LNAPL is not present in the temporary wells, grab groundwater samples will be collected from each temporary well and submitted under chain-of-custody protocol to Curtis &amp; Tompkins, Ltd., Analytical Laboratories (C&amp;T), a California Department of Health Services-certified environmental laboratory located in Berkeley, California.</li> <li>A monitoring well, or wells, may be recommended based on the results of this assessment.</li> </ul>		
2b.	<p>Remediation wells RW-D6 through RW-D11 are screened over a 15-foot interval. As a result, groundwater samples collected from these wells may be diluted.</p>	<p>Collect groundwater samples from wells OB-D1 and OB-D2 which are located near, and downgradient, of remediation wells RW-D6 through RW-D11 (Figure 2). The screens in these two wells are 10 feet in length.</p> <ul style="list-style-type: none"> <li>Depth to groundwater and depth to LNAPL will be measured using an electric oil/water interface probe</li> <li>A polyvinyl chloride (PVC) sampling bailer will be used to purge a minimum of three well-casing volumes of groundwater and the wells will be allowed to recover to at least 80 percent of their original static groundwater levels before they are sampled, or at least two hours of recovery time, whichever comes first. Dissolved oxygen, temperature, pH, conductivity, and oxidation-reduction potential will be measured for each well volume purged. Additionally,</li> </ul>	<p>Collecting groundwater samples from wells OB-D1 and OB-D2 will provide adequate groundwater quality data in this portion of the Site. In addition, groundwater data obtained from wells OB-D1 and OB-D2 will be compared to data previously collected from remediation wells RW-D6 through RW-D11 to assess if the groundwater samples collected from RW-D6 through RW-D11 may have been diluted.</p>	<p>TPH-d, TPH-mo and TPH-g by EPA Method 8015, and BTEX by EPA Method 8260.</p>

Item	Data Gap Item #	Proposed Investigation	Rationale	Analyses
		<p>characteristics of the water (color, turbidity, odor, sheen) will be noted on the field data sheets</p> <ul style="list-style-type: none"> <li>The samples will be secured in a chilled cooler and transported to C&amp;T</li> </ul>		
2c.	Top-of-casing elevations are not available for the following wells: MW-3, MW-18, OB-A1, RW-D6 through RW-D11, and RW-1.	The top of casing and ground surface elevation, as well as the northing and easting for these wells, will be surveyed by a California-licensed land surveyor.	<p>These data will allow the groundwater elevation data from these wells to be used to better assess conditions at the Site and allows for more precision in assessing groundwater flow direction.</p> <p>These data will be provided to the Department of Water Resources (DWR)</p>	NA
2d.	Potential obstruction in well OB-C1	<p>Conduct a field assessment of the well condition and propose action to fix the well.</p> <p>A downhole camera will be used to inspect the sidewalls of the well. Deterioration, obstruction, perforation blockage, or other physical damage to the casing or screen will be noted. The well will be repaired based on the condition of the well. The well may be abandoned and re-installed, if needed.</p>	Potential obstruction prohibits groundwater elevation and water-quality data from being obtained at this location.	NA
2e.	Lack of water in well MW-16 and the presence of a black, tar-like coating on the casing of this well	<p>Abandon and replace well MW-16 to an appropriate depth. Prior to abandonment, MW-16 will be inspected and depth to water at this location will be measured to confirm that it is no longer an appropriate monitoring point. If well MW-16 is deemed to no longer be appropriate for groundwater monitoring, the following will be conducted:</p> <ul style="list-style-type: none"> <li>MW-16 will be abandoned by over-drilling to its total depth using a hollow stem auger rig equipped with a 12-inch outer diameter auger,</li> </ul>	<p>During the most recent sampling event (July 2013), the well appeared to be dry, in addition, black, tar-like coating was observed on the casing of this well.</p> <p>Well MW-16 was completed at a depth approximately five feet less than nearby, downgradient well MW-17 (Figure 2). Based on this and the presence of the black, tar-like coating on the casing of this well, it is likely no</p>	TPH-d, TPH-mo and TPH-g by EPA Method 8015, and BTEX by EPA Method 8260.

Item	Data Gap Item #	Proposed Investigation	Rationale	Analyses
		<p>which has a greater diameter than the current wellbore diameter of approximately 8 inches. Neat cement grout (Portland Type I/II) will be placed into the borehole to the ground surface.</p> <ul style="list-style-type: none"> <li>• A new replacement well will be installed approximately 5 to 10 feet rom the original location. The actual well construction will depend on field observation, but will likely be installed with a ten-foot screen that screens across the water table. The well filter pack will be constructed by emplacing #2/12 Monterey Sand will be placed in the well annulus from the bottom of the wellbore to approximately two feet above the screen interval. One to two feet of hydrated bentonite will be emplaced above the sand as the well seal. After allowing the bentonite to hydrate, neat cement grout (Portland Type I/II) will be placed into the well annulus to the ground surface. The well will be secured with a traffic-rated well box and locking well cap.</li> </ul> <p>The newly installed monitoring wells will be developed using a combination of surging, bailing, and pumping. A surge block will be moved up and down across the screened interval to remove fine-grained deposits from the formation near the monitoring well and boring wall and from the filter pack material. After surging the monitoring well, a bailer will be used to remove water containing suspended sediments from the casing. Additional purging activities will be conducted with a submersible pump placed near the bottom of the well. The final development task consists of pumping the well at a steady flow rate while monitoring groundwater parameters (including pH, temperature, conductivity, turbidity and dissolved oxygen) using a water quality meter with a flow-through cell. Pumping continues until ten casing-volumes of water are removed and consecutive groundwater parameter readings have</p>	<p>longer an appropriate monitoring point.</p>	

Item	Data Gap Item #	Proposed Investigation	Rationale	Analyses
		stabilized to within 10%. The well will then be sampled.		
3.	<b>Plume Delineation</b>		Provides additional data that will advance the case toward closure.	
3a.	The lateral extent of affected groundwater near former plume D is not adequately defined	<p>Monitor and collect groundwater samples from wells MW-18; RW-D1; RW-D2, RW-D7; OB-D1, and OB-D2. These wells will be monitored and sampled using similar method described in item 2b</p> <p>Collect in-situ groundwater samples from temporary wells at three locations north, east and southeast of RW-D6 to assess the potential impact in groundwater (Figure 2). These temporary wells will be installed and sampled using similar method described in item 2a</p>	LNAPL was historically present in the former Plume D but was no longer observed after October 2009. To assess the lateral extent of affected groundwater by LNAPL, groundwater samples will be collected from adjacent wells, including RW-D1, RW-D7, RW-D10 which were last sampled in November 2008 and wells RW-D2, OB-D1, OB-D2, which have never been sampled. Three additional grab water samples east and southeast of plume D are also proposed to further assess the up- and cross gradient of the plume (Figure 2).	TPH-d, TPH-mo and TPH-g by EPA Method 8015, and BTEX by EPA Method 8260.
3b.	The lateral extent of affected groundwater in the north, east, and south near former plume C is not adequately defined	Monitor the following wells for LNAPL and groundwater quality: RWC1; RW-C2, OB-C1 (see Data Gap 2d). These wells will be monitored and sampled using similar method described in item 2b.	LNAPL was historically present in the former plume C but was no longer observed after April 2010. To assess the lateral extent of affected groundwater; samples will be collected from well RW-C2, which have never been collected, and wells RW-C1 and RW-C3 which were last sampled in November 2008.	TPH-d, TPH-mo and TPH-g by EPA Method 8015, and BTEX by EPA Method 8260.
3c.	The lateral and downgradient extent of affected groundwater north,	Advance 10 borings to approximately 15 to 20 feet bgs for the collection of grab groundwater samples, as presented in Figure 2:	Analytical results for samples from existing wells do not define the lateral extent of affected groundwater associated with former plumes A and	TPH-d, TPH-mo and TPH-g by EPA Method 8015,

Item	Data Gap Item #	Proposed Investigation	Rationale	Analyses
	south and west near former plumes A and B is not adequately defined.	<ul style="list-style-type: none"> <li>• north, south, and west of MW-11,</li> <li>• north of well RW-B3, and</li> <li>• south and east of RW-B4.</li> </ul> <p>The proposed grab groundwater sample locations are distributed at approximately 100 to 120 feet from existing wells or other proposed locations such that the lateral extent of the groundwater plume can be defined. If field observations warrant, (i.e. PID readings and visual observations), additional borings may be completed as stepout locations. Borings will be installed and groundwater samples will be collected using similar method discussed in item 2a.</p> <p>Replace well MW-16 (dry well) and install a new well that screens across the water table, as described in Data Gap 2e.</p>	B in this area of the Site. Additional boring locations are proposed to monitor for LNAPL and groundwater quality	and BTEX by EPA Method 8260.
3d.	Further assess the nature and extent of LNAPL. LNAPL has not been present in the wells at the site since 2009.	<p>Soil borings are proposed to be advanced near wells that formerly exhibited LNAPL to assess the lateral extent of the LNAPL, as presented in Figure 3.</p> <ul style="list-style-type: none"> <li>• The borings will be advanced using direct-push probing equipment to an approximate total depth of 15 to 20 feet bgs. Soil samples will be collected continuously in 5-foot long acetate liners, logged for stratigraphic characteristics, and field screened for the presence of VOCs using a PID.</li> <li>• Selected soil samples (where PID readings are elevated) will be field tested using the OIL-IN-SOIL™ field screening test kit (an oliophillic dye). Soil will be added to the container provided in the test kit; water will be added to a pre-set line on the label and the container will be shaken to release the dyes. A colored ring or spots indicates the presence of TPH at or above 2,500 ppm. A Styrofoam ball turning pink indicates hydrocarbon concentrations down to 500 ppm</li> </ul>	<p>Soil borings will be drilled near wells in which LNAPL was measured to assess if product is in the soil matrix or near locations where LNAPL has been measured.</p> <p>This will also further assess the lateral and vertical extent of affected soil and groundwater at the site.</p>	TPH-d, TPH-mo and TPH-g by EPA Method 8015, and BTEX by EPA Method 8260.



Item	Data Gap Item #	Proposed Investigation	Rationale	Analyses
		<ul style="list-style-type: none"> <li>Based on the field screening test above, soil samples with potential LNAPL impact will be collected and submitted to C&amp;T for confirmation</li> </ul>		
4.	Mass Removal	No action is proposed in this work plan but will be included in the Revised Report.		
5.	Hydrographs	No action is proposed in this work plan but will be included in the Revised Report.		
6.	Historical Groundwater Contour Maps	No action is proposed in this work plan but will be included in the Revised Report.		
7.	The potential impact of on-site contaminants to Damon Slough is unknown. In addition, the physical features of Damon Slough are unknown	<p>To determine if Site impacts have affected Damon Slough, chemical data from the Site and physical features of the slough will be inspected:</p> <ul style="list-style-type: none"> <li>Historical chemical concentration data collected from wells MW-2 and MW-10 (located between impacted portions of the Site and Damon Slough) will be analyzed to evaluate potential plume migration to the slough. If data suggests such potential, a surface water sample from Damon Slough may be collected for laboratory analysis</li> <li>The physical features of the slough will be inspected visually and documented in photographs. If needed, a boat may be rented to measure the depth in the middle of the slough</li> </ul>	Data will be used to show if Site impacts have affected Damon Slough	

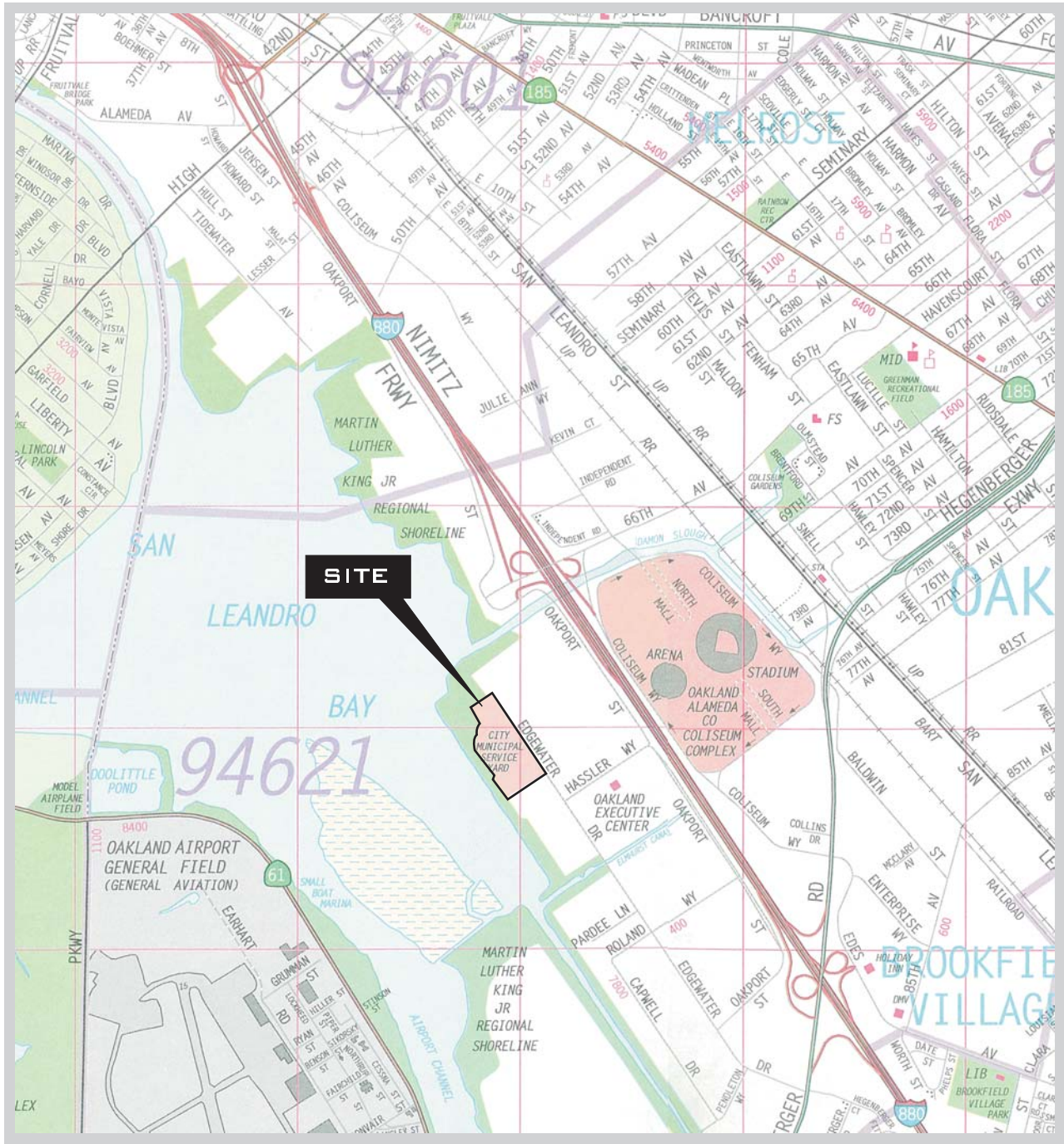
Item	Data Gap Item #	Proposed Investigation	Rationale	Analyses
8.	<b>Soil Tables</b>			
8a.	The soil data set does not adequately characterize the contamination in all areas of the Site	<p>A total of 33 soil borings are proposed to be advanced across the site (including soil borings for LNAPL delineation – Data Gap 3d). Figures 4a and 4b present the locations of the proposed soil borings on a site map with historical soil data. Soil sampling will be conducted adjacent to previously sampled locations. The locations were selected based on historical soil data in close proximity to the source area with soil concentrations exceeding the environmental screening levels (ESLs). The results of the soil sampling will be used to assess current soil conditions. The soil sampling results will also be used to update the conceptual site model (CSM) with more current site data. If field observations warrant, (i.e. PID readings and visual observations), additional soil borings may be completed as stepout locations.</p> <ul style="list-style-type: none"> <li>• The borings will be advanced using direct-push probing equipment to an approximate total depth of up to 15 to 20 feet bgs (depending on the depth of the previously advanced boring) by a C-57 licensed drilling contractor. Soil samples will be collected continuously in 4-foot (or 5-foot) long acetate liners, logged for stratigraphic characteristics, and field screened for the presence of VOCs using a PID.</li> <li>• The precise sampling depths will be determined based on the field and PID observation, and historical data where impacted soil was detected. A minimum of ten shallow samples (0 to 2 feet bgs) will be collected from representative locations for potential risk evaluation and to address Low-Threat UST Case Closure Policy media-specific criteria of direct contact and outdoor air exposure</li> <li>• Soil samples will be collected using stainless steel sleeve or 4-oz soil jars, and submitted under chain-of-custody protocol to C&amp;T</li> </ul>	Soil data will be used to evaluate current concentrations of chemicals of concern in soil.	Soil (and Groundwater): TPH-d, TPH-mo and TPH-g by EPA Method 8015, and BTEX by EPA Method 8260. PAHs at selected locations by USEPA Method 8270

Item	Data Gap Item #	Proposed Investigation	Rationale	Analyses
		<p>In order to differentiate polycyclic aromatic hydrocarbons (PAHs) in the fill materials from PAHs in the petroleum hydrocarbon impacted soil, soil samples will also be collected from locations in the fill area outside the currently defined plume as presented in Figures 3a and 3b (locations circled in blue). These samples will be analyzed for PAHs in addition to TPH-d, TPH-mo and TPH-g and BTEX. The exact sampling locations are subject to change by the field team based on field observation of LNAPL since these samples are proposed to be collected outside of the plume area.</p>		
9.	Asphalt Pit and UST #14 (waste latex and joint sealer)	No action is proposed in this work plan but will be included in the Revised Report.		
10.	Cross Sections (subsurface features will be identified, including dikes, utilities/trenches, stream channels, piping/trench, soil and groundwater data, USTs, excavations, the Fill/native material boundary, and other features)	No action is proposed in this work plan but will be included in the Revised Report.		
11.	Plan Views	No action is proposed in this work plan but will be included in the Revised Report.		

Item	Data Gap Item #	Proposed Investigation	Rationale	Analyses
12.	Current UST System Details	No action is proposed in this work plan but will be included in the Revised Report.		
13.	Human health risk assessment (bounding vapor intrusion uncertainty)	No action is proposed in this work plan but will be included in the Revised Report.		
14.	Site Development (Coliseum EIR and plans for site)	No action is proposed in this work plan but will be included in the Revised Report.		



**Figures**



APPROXIMATE SCALE IN FEET

MUNICIPAL SERVICE CENTER  
7101 EDGEWATER DRIVE, OAKLAND, CALIFORNIA

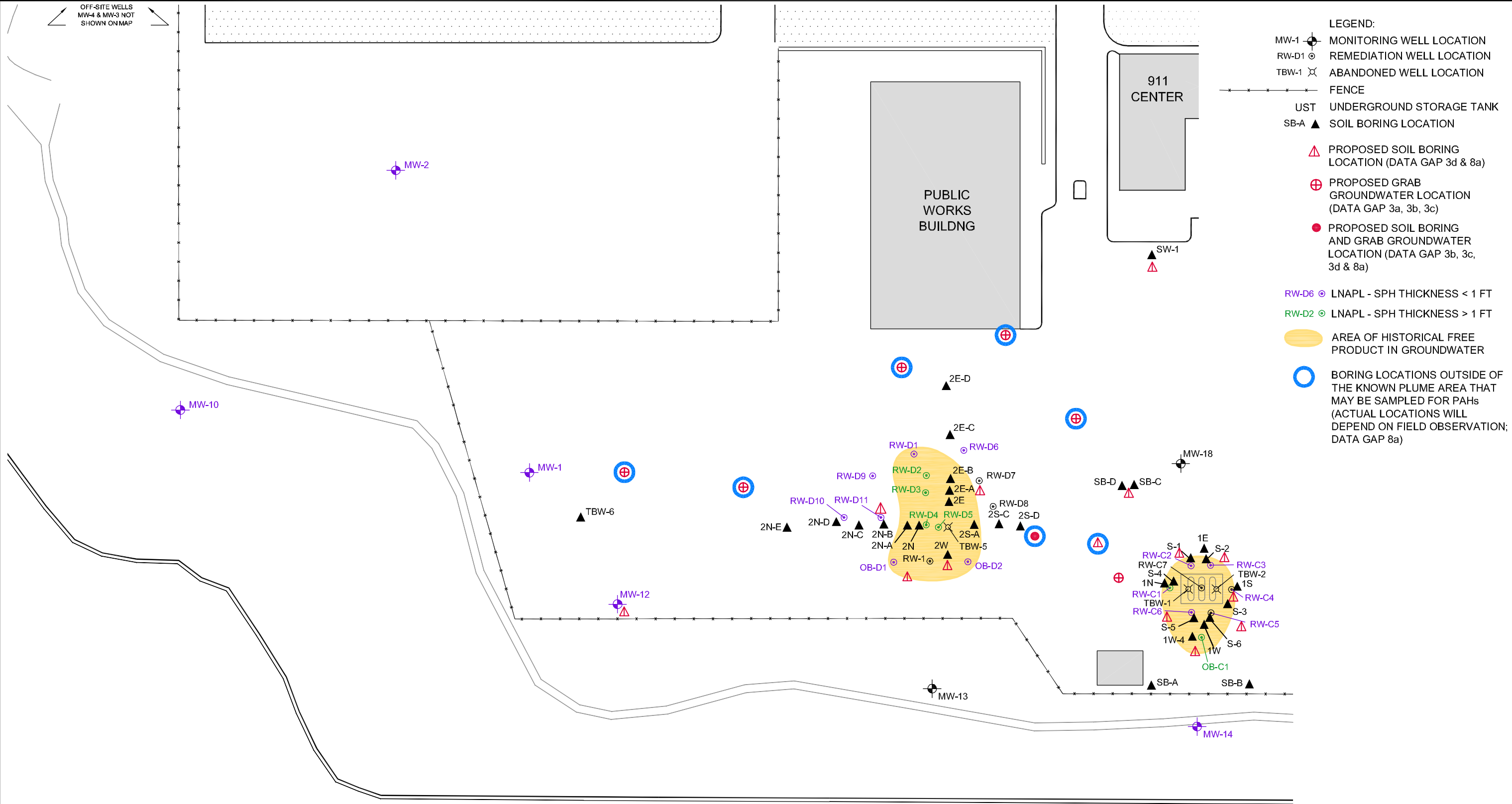
**SITE VICINITY MAP**



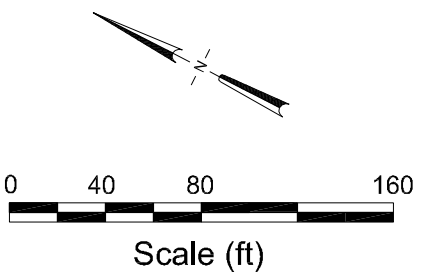
FIGURE  
**1**



CITY:\Read\DIV\GROUP\F\Read\ DB\Read\ LD\Opt\ PIC\Opt\ PM\Read\ TMI\Opt\ LYR\Option\OFF\REF\*  
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- LEGEND:**
- MW-1 MONITORING WELL LOCATION
  - RW-D1 REMEDIATION WELL LOCATION
  - TBW-1 ABANDONED WELL LOCATION
  - FENCE
  - UST UNDERGROUND STORAGE TANK
  - SB-A SOIL BORING LOCATION
  - PROPOSED SOIL BORING LOCATION (DATA GAP 3d & 8a)
  - PROPOSED GRAB GROUNDWATER LOCATION (DATA GAP 3a, 3b, 3c)
  - PROPOSED SOIL BORING AND GRAB GROUNDWATER LOCATION (DATA GAP 3b, 3c, 3d & 8a)
  - RW-D6 LNAPL - SPH THICKNESS < 1 FT
  - RW-D2 LNAPL - SPH THICKNESS > 1 FT
  - AREA OF HISTORICAL FREE PRODUCT IN GROUNDWATER
  - BORING LOCATIONS OUTSIDE OF THE KNOWN PLUME AREA THAT MAY BE SAMPLED FOR PAHs (ACTUAL LOCATIONS WILL DEPEND ON FIELD OBSERVATION; DATA GAP 8a)



MUNICIPAL SERVICE CENTER  
 7101 EDGEWATER DRIVE, OAKLAND, CALIFORNIA

**PROPOSED SOIL BORING LOCATION  
 AND SITE MAP WITH  
 LNAPL 2004 THROUGH 2006**

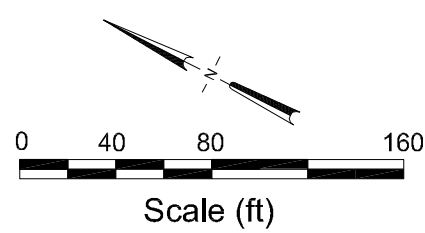
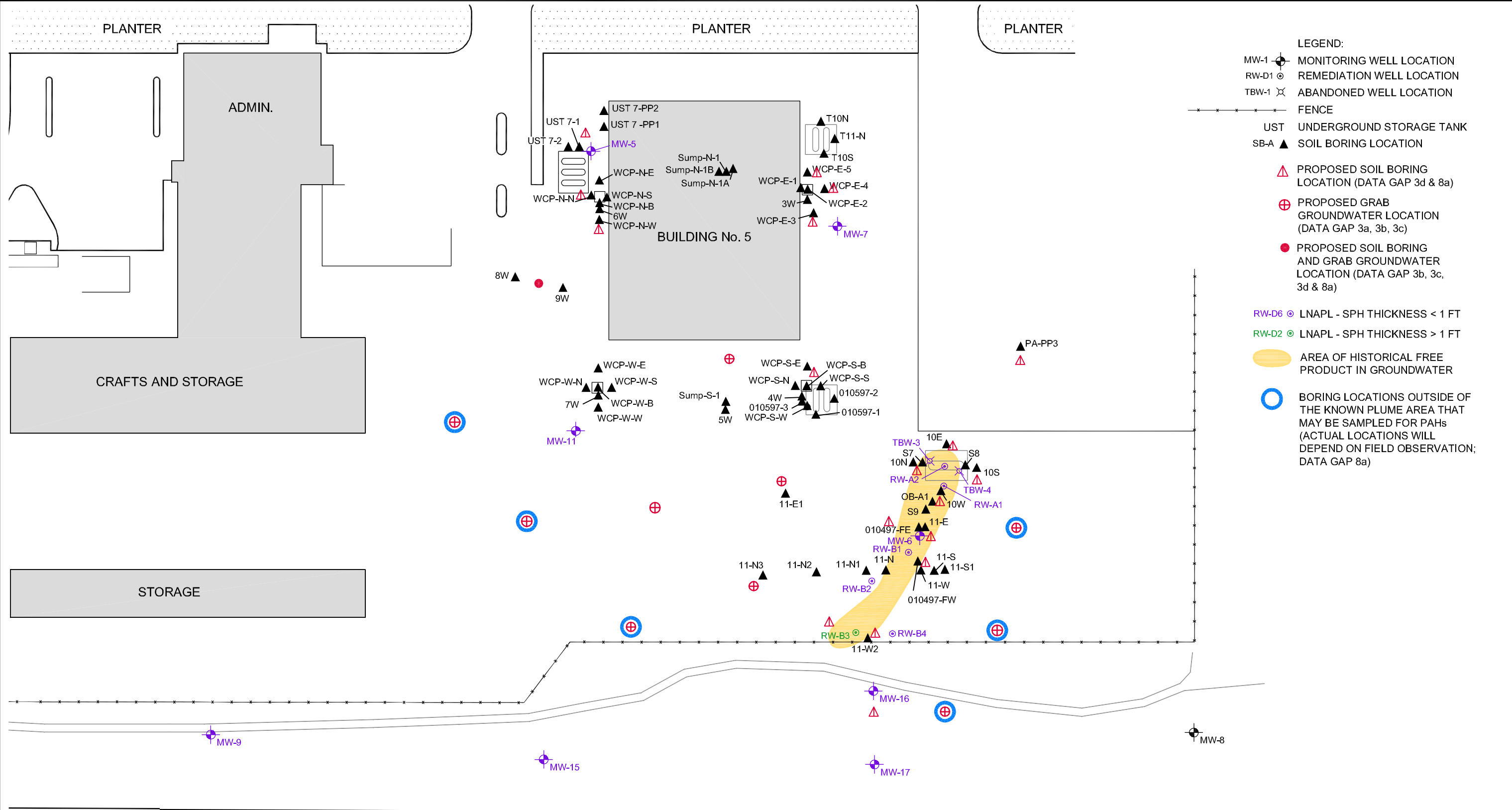
**ARCADIS**

FIGURE **3A**

Source: CAMBRIA



CITY:\Read\ DIV\GROUP\Read\ DB\Read\ LD\Opt\ PIC\Opt\ PM\Read\ TMS\Opt\ LYS\Opt\NON\OFF\REF\*  
 G:\EN\CAD\Emery\11\ACT\EM012222\004\0000\1\Proposed\Lois 7-2014\DWG\EM012222\_B03.dwg LAYOUT: 3B SAVED: 7/30/2014 3:06 PM ACADVER: 7/30/2014 4:32 PM BY: REYES, ALEC PLOTSTYLETABLE: ARCADIS.CTB PLOTTED: 7/30/2014 4:32 PM



SAN LEANDRO BAY

MUNICIPAL SERVICE CENTER  
7101 EDGEWATER DRIVE, OAKLAND, CALIFORNIA

**PROPOSED SOIL BORING LOCATION  
AND SITE MAP WITH  
LNAPL 2004 THROUGH 2006**

**ARCADIS**

FIGURE **3B**

Source: CAMBRIA

CITY:\Read\ DIV\GROUP\Read\ DB\Read\ LD\Op\ PIC\Op\ PM\Read\ TMs\Op\ LYS\Op\NON-REF\ GAE\WCA3\Emery\le\ACT\EM012222\004\00001\Proposed Lons 7-2014\DWG\EM012222\_BM4.dwg LAYOUT: 4A SAVED: 7/30/2014 3:12 PM ACADVER: 18.1S (LMS TECH) PAGES: 10 PLOTSETUP: --- PLOTSTYLETABLE: ARCADIS.CTB PLOTTED: 7/30/2014 4:03 PM BY: REYES, ALEC

OFF-SITE WELLS  
MW-4 & MW-3 NOT  
SHOWN ON MAP

MW-4	MW-3
6	6
9/29/1989	9/29/1989
2.5	6.4
--	--
--	--
<0.05	<0.05

MW-2
8
9/29/1989
2
--
--
<0.05

MW-1
6
9/29/1989
--
--
<0.05

RW-D9
11
4/3/2007
950
3.3
--
<2.0

RW-D10
7
4/4/2007
180
38
--
<50
<b>2.2</b>

2N-E
8
7/20/2000
60
84
--
57
0.21

MW-12		
6	11	14
12/1/1999	12/1/1999	12/1/1999
1.4	1.1	<0.1
<b>399</b>	37	<10
69	<4	<10
<b>5200</b>	<0	140
<0.001	<0.001	<0.001

RW-1			
6	10	18	20
12/1/1999	12/1/1999	12/1/1999	12/1/1999
<b>1800</b>	<0.1	0.11	0.1
<b>2900</b>	22	26	<10
<10	<20	<20	<10
<50	200	800	90
<1	<0.001	0.0019	0.002

2W
7
7/20/2000
<b>1600</b>
<b>2000</b>
--
<b>1500</b>
<b>2.3</b>

MW-13		
10	20	25
12/2/1999	12/2/1999	12/2/1999
<0.1	<0.1	<0.1
20	<b>790</b>	<b>800</b>
<4	<10	<10
240	<b>11000</b>	<b>13000</b>
<0.001	<0.001	<0.001

MW-14	
10	15
12/2/1999	12/2/1999
<0.1	.31
<10	<b>230</b>
<10	<10
400	<b>1400</b>
<0.001	<0.001

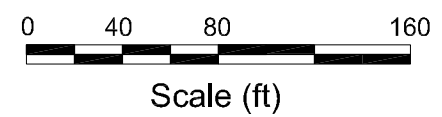
LEGEND:

- MW-1 MONITORING WELL LOCATION
- RW-D1 REMEDIATION WELL LOCATION
- TBW-1 ABANDONED WELL LOCATION
- FENCE
- UST UNDERGROUND STORAGE TANK
- SB-A SOIL BORING LOCATION

Sample ID	
Depth	Depth of Sample in feet below ground surface
Date	Date of Sample
TPH-g	Total Petroleum Hydrocarbons as Gasoline (mg/kg)
TPH-d	Total Petroleum Hydrocarbons as Diesel (mg/kg)
TPH-k	Total Petroleum Hydrocarbons as Kerosene (mg/kg)
TPH-mo	Total Petroleum Hydrocarbons as Motor Oil (mg/kg)
B	Benzene (mg/kg)

**BOLD** CONCENTRATION EXCEEDS THE RWQCB ENVIRONMENTAL SCREENING LEVEL FOR SITES WHERE GROUNDWATER IS NOT A CURRENT OR POTENTIAL DRINKING WATER RESOURCE

- PROPOSED SOIL BORING LOCATION (DATA GAP 3d & 8a)
- PROPOSED GRAB GROUNDWATER LOCATION (DATA GAP 3a, 3b, 3c)
- PROPOSED SOIL BORING AND GRAB GROUNDWATER LOCATION (DATA GAP 3b, 3c, 3d & 8a)
- BORING LOCATIONS OUTSIDE OF THE KNOWN PLUME AREA THAT MAY BE SAMPLED FOR PAHs (ACTUAL LOCATIONS WILL DEPEND ON FIELD OBSERVATION; DATA GAP 8a)



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**PROPOSED SOIL BORING LOCATIONS AND SITE MAP WITH SOIL DATA**



Source: CAMBRIA

