



September 29, 2017

Mr. Keith Nowell
Alameda County Environmental Health
1131 Harbor Bay Parkway
Alameda, CA 94502-6577

RE: Response to July 14, 2017 Technical Comments, Balco Properties LLC, 2855 Mandela Parkway, Oakland, California (Fuel Leak Case Number RO0000378)

Dear Mr. Nowell:

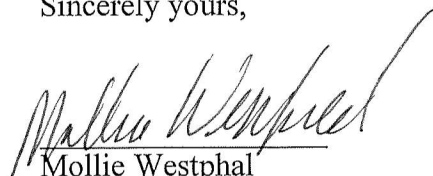
The property located 2855 Mandela Parkway in Oakland, California (the site) has been under the jurisdiction of Alameda County Department of Environmental Health's (ACDEH) Local Oversight Program (LOP) Fuel Leak Case Number RO0000378 since December 2001. Balco Properties LLC (Balco) has been working with ACDEH after acquiring the Site in 2006. A brief summary of recent correspondence between Balco and the ACDEH is summarized as follows:

Trihydro Corporation (Trihydro), on behalf of Balco, submitted an Additional Site Investigation Report to ACDEH, dated December 21, 2016. In a letter dated June 16, 2017, ACDEH requested a meeting with Balco and Trihydro to discuss site conditions and the path forward. A meeting between ACDEH, Balco, and Trihydro took place on July 12, 2017, at which the December 2016 report was discussed, along with the history of activities at the site. ACDEH, in a letter dated July 14, 2017, presented a number of technical comments regarding the site.

Please find an enclosed Response to July 14, 2017 Technical Comments. Balco appreciates ACDEH's continued assistance with this project. If you have any questions regarding this Additional Site Investigation Report, please free to call me at (510) 763-2911 or Matt Jones (Trihydro Corporation) at (360) 312-9109.

I have read and acknowledge the content, recommendations, and/or conclusions contained in the attached document *Response to July 14, 2017 Technical Comments, 2855 Mandela Parkway, Oakland, California*, submitted on my behalf to ACDEH's FTP server and the SWRCB's GeoTracker website.

Sincerely yours,



Mollie Westphal
Balco Properties, LLC

21B-001-002



September 15, 2017

RECEIVED

By Alameda County Environmental Health 10:54 am, Oct 16, 2017

Mr. Keith Nowell, PG, CHG
Alameda County Health Care Services Agency
1131 Harbor Bay Parkway
Alameda, CA 94502

RE: Response to July 14, 2017 Technical Comments – Fuel Leak Case No. RO0000378 and Geotracker Global ID T0600101522, Wareham Property Development, 2855 Mandela Parkway, Oakland, CA 94607

Dear Mr. Nowell:

This letter transmits Trihydro Corporation's (Trihydro) Response to Comments, on behalf of Balco Properties, addressing comments made in the letter from Alameda County Department of Environmental Health (ACDEH) dated July 14, 2017 regarding the property at 2855 Mandela Parkway in Oakland, California (Figure 1), currently owned by Balco Properties (Balco). Current corrective action activities are conducted pursuant to ACEH's Local Oversight Program (LOP) via Fuel Leak Case Number RO0000378. Balco has been working with ACEH since 2006, after acquiring the property.

Trihydro, on behalf of Balco, submitted an Additional Site Investigation Report to ACDEH, dated December 21, 2016. In a letter dated June 16, 2017, ACDEH requested a meeting with Balco and Trihydro to discuss site conditions and the path forward. A meeting between ACDEH, Balco, and Trihydro took place on July 12, 2017, at which the December 2016 report was discussed, along with the history of activities at the site. ACDEH, in a letter dated July 14, 2017, presented a number of technical comments regarding the site. ACDEH's comments, along with our responses, are summarized below:

ACDEH Comment 1:

Electronic Submittal of Information – In our letter dated June 16, 2017, ACDEH requested submittal of documents to the State Water Resources Control Board's (SWRCB) GeoTracker website. As discussed in the meeting, the case remains out of compliance with electronic submittals to GeoTracker. Missing submittals include EDF(s), GEO_MAP(s), GEO_BORES, GEO_WELL(s), GEO_XY, and GEO_Z files, thus rendering the site to a non-compliant status pursuant to California Code of Regulations, Title 23, Division 3, Chapter 30, Articles 1 and 2, Sections 3890 to 3895. Failure to comply may result in your case becoming ineligible for reimbursement through the SWRCB's Underground Storage Tank Cleanup Fund. We request you upload the requisite documents to bring the case in to compliance with state regulations. A link to the GeoTracker information page regarding document submittals is provided below. http://www.swrcb.ca.gov/water_issues/programs/ust/electronic_submittal/report_rqmts.shtml

Response to Comment 1:

Trihydro uploaded available electronic data to Geotracker, and submitted a list of documents uploaded to ACDEH via email on August 16, 2017. As noted in the email, EDFs for some lab reports



Mr. Keith Nowell, PG, CHG
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were not available, and were requested from the analytical laboratories. EDF's for additional data collected by Trihydro will be uploaded following receipt of the files from the laboratories.

ACDEH Comment 2:

Unauthorized Release Report – A review of the case file indicates an Underground Storage Tank (UST) Site- Unauthorized Release / Contamination Report (URF) form has not been submitted for the subject fuel leak case. ACDEH requests submittal of a completed URF by the date specified below. A copy of the URF may be found at the following SWRCB website:

http://www.swrcb.ca.gov/ust/forms/docs/unauth_release.pdf.

Please complete the URF and provide to ACDEH either as an electronic mail attachment or via land mail addressed to the attention of Keith Nowell.

Response to Comment 2:

An Unauthorized Release Report was completed and sent to Mr. Keith Nowell via email on July 31, 2017.

ACDEH Comment 3:

Well Survey – As indicated in Technical Comment 1 above and as discussed in the meeting, GeoTracker does not contain location data for permanent sample points. Each permanent fixed point sample location is required to be surveyed, with locational information for these sampling points submitted to GeoTracker using the GEO_XY file. The longitude and latitude locational data is required to be in sub-meter field location accuracy. Transient sampling points that are sampled for less than 30 days are not required to be surveyed. The relative elevations of locations on the site (inter-site well elevations) are to be measured within 0.01 foot and submitted in the GEO_Z file using the North American Vertical Datum of 1988 (NAVD 88). Please note that the location data will need to be uploaded prior to submittal of GEO_WELL data.

Response to Comment 3:

Trihydro, on behalf of Balco, retained a licensed professional surveyor, who surveyed the locations and elevations of permanent groundwater monitoring wells (TR-4 through TR-7, TR-10, and TR-11) and the permanent soil vapor well SVW-1 on August 29, 2017 (Figure 2). The GEO_XY file was uploaded to Geotracker on September 5, 2017. One well, recovery well RW-1 was located, but was not accessible due to the tenant's configuration, and an attempt to survey this well will be made at a later date. Discussions with the tenant to get access to the well are ongoing.

ACDEH Comment 4:

Data Tables – At present there are no comprehensive data summary tables for soil, groundwater, grab-groundwater (GGW) and soil gas analyses. ACDEH requests preparation of comprehensive data tables



summarizing chemical concentrations for each media. Additionally, ACDEH requests inclusion of the depth to water data for each groundwater sampling event. Note that at least one figure should depict all sample collection locations.

Response to Comment 4:

Comprehensive data summary tables for various media (soil, groundwater, grab groundwater, soil gas) have been prepared, and are being submitted to ACDEH as Tables 1 through 5. Historical sample locations are shown on Figure 2.

ACDEH Comment 5:

***Data Presentation** – A contaminant iso-concentration plume map was reviewed at the meeting. The data compiled for the map was collected over several years, includes data for wells screened at different intervals, and may not reflect current conditions. Therefore, ACDEH requests preparation of a plume map(s) prepared using current data for wells grouped having similar well screen intervals. Please provide the map(s) in the RTC requested below.*

Response to Comment 5:

Figure 3 shows concentrations of benzene and total petroleum hydrocarbons as gasoline and as diesel in groundwater samples collected during 2016. No other constituents were detected above San Francisco Bay Regional Water Quality Control Board Environmental Screening Levels. No groundwater samples were collected from monitoring wells where light non-aqueous phase liquid (LNAPL) was present. Well screen intervals for grab groundwater samples were consistent with well screen intervals of permanent monitoring wells installed onsite. Figure 3 also shows the approximate footprint of LNAPL in the subsurface based on 2016 Ultra-Violet Optical Screening Tool (UVOST) zones of fluorescence greater than 2 % response emitter (%RE) and presence of LNAPL in monitoring wells.

A cross-section showing the distribution of LNAPL in the subsurface based on UVOST responses greater than 2 %RE in comparison to screen intervals for monitoring wells is included as Figure 4. The vertical and lateral extent of LNAPL appears limited to the low permeability Bay Mud sediments, does not extend into the deeper sand, and is centered on monitoring well TR-10, which contained the most LNAPL during 2016. Monitoring wells are generally screened across the low-permeability Bay Mud sediments and intercept LNAPL where present. Wells TR-4 and TR-10 have screens that also extend upward into the shallow higher-permeability fill. UVOST results from borings UV-10 and UV-11 appear to constrain the lateral extent of LNAPL in the area of TR-10, and suggest that LNAPL is not migrating in that area.



ACDEH Comment 6:

Preferential Pathways – Due to the shallow depth to water and the presence of LNAPL and dissolved phase contaminants, ACDEH requests an evaluation of the depth of nearby utilities relative to the depth of the contaminant plume. Please include the location of the storm water out fall for storm water collected at the site. Please present the preferential pathways findings in the RTC requested below

Response to Comment 6:

Attempts have been made to acquire municipal utility location information from the City of Oakland, and locations and depths of main storm conduit are shown on Figure 3. Additional attempts made to obtain underground utility and lateral information specific to the site building were unsuccessful. However, requests for additional utility information are ongoing, and figures will be potentially updated upon receipt of additional information. The plume extent is based on 2016 observations of LNAPL in monitoring wells and 2016 UVOST logs of zones of fluorescence greater than 2% response emitter.

ACDEH Comment 7:

UVOST – The SWI states UVOST detector responses greater than 10 percent response emitter (%RE) suggests the presence of free-phase LNAPL and that the fluorescence response of an LNAPL sample, collected from monitoring well TR-4, was compared to the calibration standard. The report does not explain how the 10%RE was derived as Table 4 of the SWI (listed as Table 8 in the Table of Contents) reports %RE of greater than 2 without documenting the significance of either the 2% or 10% values. Additionally, the data in Table 4 does not agree with the column headers. ACDEH request a clarification of the calibration procedures and Table 4 in addition to an explanation of the significance of the 10% and 2% RE in the RTC requested below.

Response to Comment 7:

UVOST detector equipment was calibrated in the field using a pre-packaged vendor specific calibration solution of a known composition. An LNAPL sample was collected from monitoring well TR-4, placed against the sapphire window on the UVOST probe, and the response compared to the calibration standard. The response of the TR-4 LNAPL was 152.8 %RE and was 149.0 %RE for the calibration standard. The TR-4 LNAPL had a similar waveform to that of a weathered gasoline and was consistent with the waveform measured during downhole advancement of the UVOST probe, suggesting the LNAPL composition is relatively consistent across the site.

UVOST detections less than or equal to 2 %RE are attributed to background noise according to the equipment operator. Zones of fluorescence above this 2 %RE background were listed on Table 4, which has been revised per the above comment. The three-dimensional distribution of these UVOST detections above 2% (background) were shown on Figure 6 of the Additional Site Investigation Report and compared to the predicted footprint based on presence of LNAPL in monitoring wells and



benzene concentrations in groundwater. All UVOST borings had responses greater than 2 %RE, but some were above background at very discrete vertical intervals. Therefore, UVOST detector response logs were reviewed in detail to help understand the footprint of the main body of LNAPL. In general, UVOST responses between 2 %RE and 10 %RE occurred in borings at very discrete intervals in UV-3 (0.99 ft bgs), UV-4 (2.04 ft bgs), UV-5 (0 to 1 and 17 ft bgs), and UV-8 (0 to 0.8 ft bgs). In general UVOST responses greater than 10 % RE occurred in borings over larger vertical intervals in UV-1, UV-2, UV-6, UV-9, and UV-11 and were therefore assumed to be more representative of the majority of the LNAPL body.

ACDEH Comment 8:

Space 9 – The September 25, 1990 Phase I Site Assessment (Phase I) conducted by Harding Lawson Associates (HLA) reported an underground storage tank (UST) was located in a vacant 9,200-square-foot (sq-ft) suite identified as Space 9. The Phase I document in the ACDEH case file does not include a figure identifying the Space 9 location within the 142,915 sq-ft building. Additionally, a reference to a 1941 drawing is stated to depict the location of former fuel pump dispenser. Both the UST and the fuel dispenser are reported to have been located within the building footprint. ACDEH requests an effort be made to determine the location of Space 9 for an identification of the tank and if the area is adequately characterized. Additionally, please make a determination if the Space 9 UST is associated with the fuel dispenser identified in the 1941 drawing should the location of the UST be identified. Please present the finding regarding this Technical Comment in the RTC requested below.

Response to Comment 8:

Trihydro's review of the 1990 Phase I Site Assessment referenced in the comment found Plate 2, the figure which the text indicated showed the location of "Space 9", to be missing from the document. On August 29, 2017, a Trihydro field geologist performed a visual inspection of the southern portion of the building at 2855 Mandela Parkway. No indications of current UST (e.g. fill pipes, vent pipes) were observed, and no areas of scarred or cut concrete (suggesting excavation or removal of a UST) were observed. A photo log of the areas where the visual inspection was performed is included as Attachment A.

ACDEH Comment 9:

Methane – It has been the experience of ACDEH that mature LNAPL releases typically anaerobically degrade through the methanogenesis process. The SWI included soil vapor monitoring and the analysis for methane. Little or no methane was reported. ACDEH requests performing methane monitoring of the vapor in the groundwater monitoring well wellheads with the use of a handheld methane gas monitoring instrument. Please present the results of the monitoring in the RTC requested below. Adding wellhead methane monitoring to the groundwater monitoring events will be discussed at the meeting indicated below.



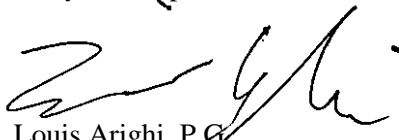
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Response to Comment 9:

In combination with the survey of well locations on August 29, 2017, a Trihydro field geologist measured methane concentrations within the well casing. After the well monument lids were removed, the well cap was removed, and the tip of the influent tube on a Landtec GEM 2000 landfill gas monitor was inserted into the top of the well casing. Methane concentrations were recorded at their stabilized values, and stabilized methane concentrations are summarized in Table 1 of Attachment B. Stabilized methane concentrations varied between 0% and 5.8%.

Trihydro and Balco anticipates working with ACDEH to schedule a meeting to discuss a path forward for the site. Balco and Trihydro appreciate ACDEH's assistance with this project. Please don't hesitate to contact either of the undersigned with questions at (925) 270-4674.

Sincerely,
Trihydro Corporation



Louis Arighi, P.G.
Project Manager



Matthew Jones, P.G.
Project Director

21B-001-002

Attachments

cc: Balco Properties

TABLES

**TABLE 1. MONITORING WELL CONSTRUCTION DETAILS
2855 MANDELA PARKWAY, OAKLAND, CALIFORNIA**

Installation date	Well ID	Abandonment date	Total depth	Screened interval	TOC elevation
		(if abandoned)		(ft-bgs)	
5/11/1999	TR-1	5/12/1999	12	2.5-12	7.59
5/11/1999	TR-2	5/12/1999	12	2.5-12	9.06
5/11/1999	TR-3	5/12/1999	12	0-12	7.34
6/22/1999	TR-4	-	20.5	2.25-20.5	7.2
6/23/1999	TR-5	-	20.5	2.25-20.5	6.9
6/22/1999	TR-6	-	20.5	2.25-20.5	7.3
6/4/2001	TR-7	-	22	5.0-20.0	UNK
8/10/2001	TR-8	-	20	5.0-20.0	UNK
6/5/2001	TR-9	-	16	6.0-16.0	UNK
7/7/2004	TR-10 ¹	-	20	5.0-20.0	9.95
7/7/2004	TR-11 ¹	-	20	5.0-20.0	9.38
12/23/2005	RW-1 ¹	-	9	UNK	UNK
12/23/2005	RW-2 ¹	-	9.4	UNK	UNK

Notes:

ft-bgs - feet below ground surface

TOC - top of casing

- not applicable

¹ - details estimated from field notes, no published boring log or description available

UNK - unknown

**TABLE 2. MONITORING WELL GAUGING DATA
2855 MANDELA PARKWAY, OAKLAND, CALIFORNIA**

Well	Date	Measuring Point Elevation (ft-amsl)	Total Depth (ft-bmp)	Depth to Water (ft-bmp)	Depth to Product (ft-bmp)	Product Thickness (ft-bmp)	Water Table Elevation (ft-amsl)
RW-1	12/23/2005	UNK	9	0.6	ND	--	NA
	3/10/2006	UNK	9	0.16	ND	--	NA
	3/13/2006	UNK	9	0.41	ND	--	NA
	3/21/2006	UNK	9	0	ND	--	NA
	3/29/2006	UNK	9	0	ND	--	NA
	3/31/2006	UNK	9	0.2	ND	--	NA
	4/27/2006	UNK	9	1.07	ND	--	NA
	5/15/2006	UNK	9	1.45	ND	--	NA
	7/11/2006	UNK	9	1.95	ND	--	NA
	9/12/2006	UNK	9	2.33	ND	--	NA
	9/21/2006	UNK	9	2.38	ND	--	NA
	10/3/2006	UNK	9	2.34	ND	--	NA
	10/13/2006	UNK	9	2.1	ND	--	NA
	10/20/2006	UNK	9	2.23	ND	--	NA
	10/24/2006	UNK	9	2.29	ND	--	NA
	10/9/2007	UNK	9	3.74	ND	--	NA
	10/29/2007	UNK	9	2.3	ND	--	NA
	11/20/2007	UNK	9	2.18	ND	--	NA
	12/28/2007	UNK	9	1.12	ND	--	NA
	2/22/2008	UNK	9	0	ND	--	NA
	3/19/2008	UNK	9	1.61	ND	--	NA
	4/9/2008	UNK	9	1.85	ND	--	NA
	5/5/2008	UNK	9	1.99	ND	--	NA
5/23/2008	UNK	9	2.11	ND	--	NA	
6/16/2008	UNK	9	2.32	ND	--	NA	
RW-2	12/23/2005	UNK	9.4	0.7	ND	--	NA
	2/13/2005	UNK	9.4	2	ND	--	NA
	3/10/2006	UNK	9.4	0.16	ND	--	NA
	3/13/2006	UNK	9.4	0.42	ND	--	NA
	3/21/2006	UNK	9.4	0.2	ND	--	NA
	3/29/2006	UNK	9.4	0	ND	--	NA
	3/31/2006	UNK	9.4	0.25	ND	--	NA
	4/27/2006	UNK	9.4	1.06	ND	--	NA
	5/15/2006	UNK	9.4	1.51	ND	--	NA
	7/11/2006	UNK	9.4	2.02	ND	--	NA
	9/12/2006	UNK	9.4	2.47	ND	--	NA
	9/21/2006	UNK	9.4	2.57	ND	--	NA
	10/3/2006	UNK	9.4	2.55	ND	--	NA
10/13/2006	UNK	9.4	2.23	ND	--	NA	

**TABLE 2. MONITORING WELL GAUGING DATA
2855 MANDELA PARKWAY, OAKLAND, CALIFORNIA**

Well	Date	Measuring Point Elevation (ft-amsl)	Total Depth (ft-bmp)	Depth to Water (ft-bmp)	Depth to Product (ft-bmp)	Product Thickness (ft-bmp)	Water Table Elevation (ft-amsl)
	10/20/2006	UNK	9.4	2.36	ND	--	NA
	10/24/2006	UNK	9.4	2.41	ND	--	NA
	10/9/2007	UNK	9.4	2.83	ND	--	NA
	10/29/2007	UNK	9.4	2.37	ND	--	NA
	11/20/2007	UNK	9.4	2.24	ND	--	NA
	12/28/2007	UNK	9.4	0.85	ND	--	NA
	2/22/2008	UNK	9.4	0	ND	--	NA
	3/19/2008	UNK	9.4	1.71	ND	--	NA
	4/9/2008	UNK	9.4	1.96	ND	--	NA
	5/5/2008	UNK	9.4	2.11	ND	--	NA
	5/23/2008	UNK	9.4	2.24	ND	--	NA
	6/16/2008	UNK	9.4	2.46	ND	--	NA
TR-4	6/22/1999	9.59	20.5	10.71	ND	--	-1.12
	6/23/1999	9.59	20.5	9.71	ND	--	-0.12
	6/24/1999	9.59	20.5	9.21	ND	--	0.38
	6/25/1999	9.59	20.5	9.26	ND	--	0.33
	6/28/1999	9.59	20.5	9.27	ND	--	0.32
	6/29/1999	9.59	20.5	9.32	ND	--	0.27
	7/2/1999	9.59	20.5	9.21	ND	--	0.38
	10/4/1999	9.59	20.5	11.49	8.81	2.68	0.08
	10/6/1999	9.59	20.5	11.54	7.85	3.69	0.78
	10/8/1999	9.59	20.5	11.56	8.84	2.72	0.04
	10/11/1999	9.59	20.5	11.56	8.79	2.77	0.08
	10/13/1999	9.59	20.5	11.6	8.77	2.83	0.08
	10/20/1999	9.59	20.5	11.76	8.83	2.93	0.00
	10/25/1999	9.59	20.5	10.06	9.49	0.57	-0.05
	10/27/1999	9.59	20.5	9.74	9.61	0.13	-0.05
	10/29/1999	9.59	20.5	9.64	9.56	0.08	0.01
	7/11/2006	9.59	20.5	6.77	3.82	2.95	5.00
	10/24/2006	9.59	20.5	5.95	5.6	0.35	3.90
	10/9/2007	9.59	20.5	5.82	5.66	0.16	3.89
	10/29/2007	9.59	20.5	5.53	5.37	0.16	4.18
	11/20/2007	9.59	20.5	5.45	5.3	0.15	4.25
	12/28/2007	9.59	20.5	5.21	5.15	0.06	4.42
	2/22/2008	9.59	20.5	4.49	4.44	0.05	5.14
	3/19/2008	9.59	20.5	4.85	4.83	0.02	4.75
	4/9/2008	9.59	20.5	4.96	4.95	0.01	4.64
	5/5/2008	9.59	20.5	5.09	5.08	0.01	4.51
	5/23/2008	9.59	20.5	5.11	5.1	0.01	4.49

**TABLE 2. MONITORING WELL GAUGING DATA
2855 MANDELA PARKWAY, OAKLAND, CALIFORNIA**

Well	Date	Measuring Point Elevation (ft-amsl)	Total Depth (ft-bmp)	Depth to Water (ft-bmp)	Depth to Product (ft-bmp)	Product Thickness (ft-bmp)	Water Table Elevation (ft-amsl)
TR-5	6/16/2008	9.59	20.5	5.28	5.27	0.01	4.32
	9/24/2008	9.59	20.5	5.41	5.38	0.03	4.20
	5/16/2016	9.59	20.5	3.75	ND	--	5.84
	6/23/1999	9.29	20.5	11.61	ND	--	-2.32
	6/24/1999	9.29	20.5	8.83	8.31	0.52	0.84
	6/25/1999	9.29	20.5	9.28	8.29	0.99	0.74
	6/28/1999	9.29	20.5	9.81	8.15	1.66	0.71
	6/29/1999	9.29	20.5	9.56	8.27	1.29	0.68
	7/2/1999	9.29	20.5	7.92	ND	--	1.37
	10/4/1999	9.29	20.5	15.04	7.58	7.46	-0.23
	10/6/1999	9.29	20.5	15.02	7.54	7.48	-0.19
	10/8/1999	9.29	20.5	15.04	7.53	7.51	-0.19
	10/11/1999	9.29	20.5	15.03	7.45	7.58	-0.13
	10/13/1999	9.29	20.5	15.04	7.42	7.62	-0.11
	10/20/1999	9.29	20.5	15.09	7.52	7.57	-0.20
	10/25/1999	9.29	20.5	12.87	8.31	4.56	-0.21
	10/27/1999	9.29	20.5	10.49	9.16	1.33	-0.22
	10/29/1999	9.29	20.5	10.36	9.31	1.05	-0.29
	8/1/2006	9.29	20.5	10.88	7.58	3.3	0.85
	8/4/2006	9.29	20.5	8.72	8.03	0.69	1.08
	8/10/2006	9.29	20.5	8.82	8.13	0.69	0.98
	8/25/2006	9.29	20.5	8.17	ND	--	1.12
	9/12/2006	9.29	20.5	9.03	8.39	0.64	0.73
	9/21/2006	9.29	20.5	9.07	8.48	0.59	0.66
	10/3/2006	9.29	20.5	9.11	8.4	0.71	0.71
	10/13/2006	9.29	20.5	9.02	8.38	0.64	0.74
	10/20/2006	9.29	20.5	9.16	8.56	0.6	0.57
	10/24/2006	9.29	20.5	9.15	8.58	0.57	0.56
	10/9/2007	9.29	20.5	8.66	8.65	0.01	0.64
	10/29/2007	9.29	20.5	8.9	8.5	0.4	0.69
	11/20/2007	9.29	20.5	8.71	8.51	0.2	0.73
	12/28/2007	9.29	20.5	8.22	8.04	0.18	1.20
	2/22/2008	9.29	20.5	7.47	7.28	0.19	1.96
	3/19/2008	9.29	20.5	8.3	8.25	0.05	1.03
	4/9/2008	9.29	20.5	8.43	8.42	0.01	0.87
	5/5/2008	9.29	20.5	8.58	8.57	0.01	0.72
5/23/2008	9.29	20.5	8.41	8.4	0.01	0.89	
6/16/2008	9.29	20.5	8.71	8.68	0.03	0.60	
9/24/2008	9.29	20.5	8.86	ND	--	0.43	

**TABLE 2. MONITORING WELL GAUGING DATA
2855 MANDELA PARKWAY, OAKLAND, CALIFORNIA**

Well	Date	Measuring Point Elevation (ft-amsl)	Total Depth (ft-bmp)	Depth to Water (ft-bmp)	Depth to Product (ft-bmp)	Product Thickness (ft-bmp)	Water Table Elevation (ft-amsl)
TR-6	5/16/2016	9.29	20.5	7.36	7.36	0	1.93
	6/22/1999	9.89	20.5	11.35	9.96	1.39	-0.43
	6/23/1999	9.89	20.5	17.38	7.54	9.84	-0.21
	6/24/1999	9.89	20.5	18.52	7.12	11.4	-0.19
	6/25/1999	9.89	20.5	14.51	8.59	5.92	-0.24
	6/28/1999	9.89	20.5	17.55	7.54	10.01	-0.25
	6/29/1999	9.89	20.5	14.17	8.77	5.4	-0.28
	7/2/1999	9.89	20.5	17.09	4.61	12.48	2.04
	10/4/1999	9.89	20.5	18.37	7.8	10.57	-0.66
	10/6/1999	9.89	20.5	12.47	9.91	2.56	-0.69
	10/8/1999	9.89	20.5	NM	10.44	--	NA
	10/11/1999	9.89	20.5	NM	10.54	--	NA
	10/13/1999	9.89	20.5	10.74	10.53	0.21	-0.69
	10/20/1999	9.89	20.5	11.08	10.49	0.59	-0.75
	10/25/1999	9.89	20.5	10.81	10.61	0.2	-0.77
	10/27/1999	9.89	20.5	10.79	10.73	0.06	-0.86
	10/29/1999	9.89	20.5	10.69	10.65	0.04	-0.77
	7/11/2006	9.89	20.5	13.35	7.77	5.58	0.67
	7/26/2006	9.89	20.5	9.25	8.86	0.39	0.93
	10/24/2006	9.89	20.5	10.05	9.48	0.57	0.26
	10/9/2007	9.89	20.5	10.24	9.46	0.78	0.23
	10/29/2007	9.89	20.5	9.77	9.31	0.46	0.46
	11/20/2007	9.89	20.5	9.56	9.31	0.25	0.52
	12/28/2007	9.89	20.5	9.23	8.96	0.27	0.86
	2/22/2008	9.89	20.5	8.72	8.54	0.18	1.30
	3/19/2008	9.89	20.5	9.31	9.11	0.2	0.73
	4/9/2008	9.89	20.5	9.47	9.31	0.16	0.54
5/5/2008	9.89	20.5	9.53	9.42	0.11	0.44	
5/23/2008	9.89	20.5	9.48	9.37	0.11	0.49	
6/16/2008	9.89	20.5	9.7	9.54	0.16	0.31	
9/24/2008	9.89	20.5	10.02	9.78	0.24	0.05	
5/16/2016	9.89	20.5	8.81	8.05	0.76	1.64	
TR-7	5/16/2016	UNK	22	3.81	ND	--	NA
TR-10	8/25/2006	9.95	22	16.3	9.73	6.57	-1.49
	9/21/2006	9.95	22	9.49	ND	--	0.46
	10/3/2006	9.95	22	9.25	ND	--	0.70
	10/9/2007	9.95	22	16.43	8.98	7.45	-0.97
	10/29/2007	9.95	22	12.83	10.25	2.58	-0.97
	11/20/2007	9.95	22	11.6	10.59	1.01	-0.90

**TABLE 2. MONITORING WELL GAUGING DATA
2855 MANDELA PARKWAY, OAKLAND, CALIFORNIA**

Well	Date	Measuring Point Elevation (ft-amsl)	Total Depth (ft-bmp)	Depth to Water (ft-bmp)	Depth to Product (ft-bmp)	Product Thickness (ft-bmp)	Water Table Elevation (ft-amsl)
	12/28/2007	9.95	22	10.8	9.97	0.83	-0.24
	3/19/2008	9.95	22	11.57	11.14	0.43	-1.30
	4/9/2008	9.95	22	12.24	11.88	0.36	-2.02
	5/5/2008	9.95	22	12.04	11.7	0.34	-1.84
	5/23/2008	9.95	22	12.51	12.02	0.49	-2.20
	6/16/2008	9.95	22	12.04	11.59	0.45	-1.76
	9/24/2008	9.95	22	12.35	11.22	1.13	-1.56
	5/16/2016	9.95	22	ND	9.35	9.35	NA
TR-11	10/24/2006	9.38	20	10.62	ND	--	-1.24
	10/9/2007	9.38	20	10.97	ND	--	-1.59
	10/29/2007	9.38	20	10.17	ND	--	-0.79
	11/20/2007	9.38	20	9.07	ND	--	0.31
	12/28/2007	9.38	20	8.49	ND	--	0.89
	3/19/2008	9.38	20	8.1	ND	--	1.28
	4/9/2008	9.38	20	8.02	ND	--	1.36
	5/5/2008	9.38	20	8.51	ND	--	0.87
	5/23/2008	9.38	20	8.51	ND	--	0.87
	6/16/2008	9.38	20	8.52	ND	--	0.86
	9/24/2008	9.38	20	9.25	ND	--	0.13
	5/16/2016	9.38	20	12.06	12.05	0.01	-2.67

**TABLE 3A. SOIL QUALITY SUMMARY, SELECTED VOCs AND SVOCS
2855 MANDELA PARKWAY SITE, OAKLAND, CALIFORNIA**

Analyte concentration (mg/kg)

Date sampled	Sample Location	Sample depth (ft-bgs)	Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE	Naphthalene	2-methylnaphthalene	Chlorobenzene
6/20/1991	1	2.5	< 0.0025	< 0.0025	< 0.0025	< 0.0025	NA	ND	ND	ND
6/20/1991	2	2.5	< 0.0025	< 0.0025	< 0.0025	< 0.0025	NA	ND	ND	ND
6/20/1991	6	6.5	0.93	1.3	0.89	2.5	NA	0.87	0.44	0.012
6/20/1991	7	2.5	1.1	0.2	1.8	5.7	NA	NA	NA	NA
6/20/1991	8	[composite]	< 0.0025	< 0.0025	0.5	3.6	NA	NA	NA	NA
6/19/1992	B-1	5	0.77	0.028	0.28	0.99	NA	NA	NA	NA
6/19/1992	B-1	10	7	41	21	96	NA	NA	NA	NA
6/19/1992	B-1	15	0.056	0.2	0.055	0.24	NA	NA	NA	NA
6/19/1992	B-2	5	0.57	< 0.080	< 0.080	< 0.080	NA	NA	NA	NA
6/19/1992	B-2	10	25	100	35	150	NA	NA	NA	NA
6/19/1992	B-3	5	6.9	18	5.8	21	NA	NA	NA	NA
6/19/1992	B-3	10	34	170	61	250	NA	15	11	NA
8/3/1998	SB-1	5	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	NA	NA	NA
8/3/1998	SB-1	10	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	NA	NA	NA
8/3/1998	SB-2	5	1.2	2	6.3	13	< 0.005	NA	NA	NA
8/3/1998	SB-2	11	13	17	2.1	8.6	< 0.005	NA	NA	NA
8/3/1998	SB-3	5	7.2	15	3	11	< 0.005	NA	NA	NA
8/3/1998	SB-3	10	9.1	14	5	17	< 0.005	NA	NA	NA
8/3/1998	SB-4	5	3.1	0.49	2.9	2.9	< 0.005	NA	NA	NA
8/3/1998	SB-4	11	1.6	0.12	1.1	4.3	< 0.005	NA	NA	NA
8/3/1998	SB-4	15	0.019	< 0.005	< 0.005	< 0.005	< 0.005	NA	NA	NA
8/3/1998	SB-5	5	0.56	0.011	0.46	0.041	< 0.005	NA	NA	NA
8/3/1998	SB-5	10	0.04	0.76	0.13	0.59	< 0.005	NA	NA	NA
8/3/1998	SB-6	5	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	NA	NA	NA
8/3/1998	SB-7	5	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	NA	NA	NA
6/22/1999	TR-4	5.5	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	NA	NA	NA
6/22/1999	TR-5	5.5	24	92	40	170	5.1	NA	NA	NA
6/22/1999	TR-6	6.0	2.2	2.9	1.3	2.6	< 0.62	NA	NA	NA
11/16/1999	SB-25	3.5	< 0.0050	< 0.0050	< 0.0050	< 0.0050	NA	NA	NA	NA
11/16/1999	SB-28	6.0	< 0.0050	< 0.0050	< 0.0050	< 0.0050	NA	NA	NA	NA
11/16/1999	SB-28	16	< 0.0050	< 0.0050	< 0.0050	< 0.0050	NA	NA	NA	NA
11/16/1999	SB-31	5.0	< 0.0050	< 0.0050	< 0.0050	< 0.0050	NA	NA	NA	NA
12/2/1999	SB-33A	5.5	< 0.0050	< 0.0050	< 0.0050	< 0.0050	NA	NA	NA	NA
12/2/1999	SB-34	3.0	< 0.0050	< 0.0050	< 0.0050	< 0.0050	NA	NA	NA	NA
Construction Worker Soil Screening Level			24	4,100	480	2,400	3,700	350	670	1,100
Tier 1 ESLs			0.044	2.9	1.4	2.3	0.023	0.033	0.25	1.5

Notes:

VOC - volatile organic compound

SVOC - semi-volatile organic compound

mg/kg - milligrams per kilogram

ESL - Environmental Screening Level

Construction Worker Screening Level from Environmental Screening Levels, San Francisco Bay Regional Water Quality Control Board, February 2016

Tier 1 ESL values from Environmental Screening Levels, San Francisco Bay Regional Water Quality Control Board, February 2016

ft-bgs - feet below ground surface

MTBE - methyl tert-butyl ether

< 0.080 - Not detected above the laboratory reporting limit

NA - Not Analyzed

bold - value exceeding the Commercial/Industrial Environmental Screening Level

**TABLE 3B. SOIL QUALITY SUMMARY, HYDROCARBONS
2855 MANDELA PARKWAY SITE, OAKLAND, CALIFORNIA**

Date sampled	Sample Location	Sample depth (ft-bgs)	Analyte concentration (mg/kg)				O&G
			TPH-g	TPH-d	TPH-k	TPH-mo	
6/20/1991	1	2.5	< 1	< 1	-	14	85
6/20/1991	2	2.5	16	11	-	32	370
6/20/1991	6	6.5	41	12	-	14	120
6/20/1991	7	2.5	240	1,800	-	2,000	NA
6/20/1991	8	[composite]	81	230	-	410	NA
6/19/1992	B-1	5	7	< 1	< 1	NA	NA
6/19/1992	B-1	10	960	4	**	NA	NA
6/19/1992	B-1	15	1	< 1	< 1	NA	NA
6/19/1992	B-2	5	< 20	< 1	< 1	NA	NA
6/19/1992	B-2	10	1,500	2	**	NA	NA
6/19/1992	B-3	5	300	80	**	NA	NA
6/19/1992	B-3	10	2,800	24	**	NA	NA
8/3/1998	SB-1	5	< 1.0	NA	NA	NA	NA
8/3/1998	SB-1	10	< 1.0	NA	NA	NA	NA
8/3/1998	SB-2	5	130	NA	NA	NA	NA
8/3/1998	SB-2	11	52	NA	NA	NA	NA
8/3/1998	SB-3	5	68	NA	NA	NA	NA
8/3/1998	SB-3	10	99	NA	NA	NA	NA
8/3/1998	SB-4	5	21	NA	NA	NA	NA
8/3/1998	SB-4	11	42	NA	NA	NA	NA
8/3/1998	SB-4	15	< 1.0	NA	NA	NA	NA
8/3/1998	SB-5	5	2.7	NA	NA	NA	NA
8/3/1998	SB-5	10	3.4	NA	NA	NA	NA
8/3/1998	SB-6	5	< 1.0	NA	NA	NA	NA
8/3/1998	SB-7	5	< 1.0	NA	NA	NA	NA
6/22/1999	TR-4	5.5	< 1.0	NA	NA	NA	NA
6/22/1999	TR-5	5.5	2,100	NA	NA	NA	NA
6/22/1999	TR-6	6	36	NA	NA	NA	NA
11/16/1999	SB-25	3.5	< 1.0	NA	NA	NA	NA
11/16/1999	SB-28	6	< 1.0	NA	NA	NA	NA
11/16/1999	SB-28	16	< 1.0	NA	NA	NA	NA
11/16/1999	SB-31	5	< 1.0	NA	NA	NA	NA
12/2/1999	SB-33A	5.5	< 1.0	NA	NA	NA	NA
12/2/1999	SB-34	3	< 1.0	NA	NA	NA	NA
Tier 1 ESLs			100	230	NE	5,100	NE

Notes:

mg/kg - milligrams per kilogram

ft-bgs - feet below ground surface

TPH-g - Total Petroleum Hydrocarbons quantified as gasoline

TPH-d - Total Petroleum Hydrocarbons quantified as diesel

TPH-k - Total Petroleum Hydrocarbons quantified as kerosene

TPH-mo - Total Petroleum Hydrocarbons quantified as motor oil

O&G - total oil and grease

bold = value exceeding the applicable Environmental Screening Level

< 1 - not detected above the detection limit

** - out of kerosene range, quantitated in diesel range

ESL = Environmental Screening Level

NE - value not established

Tier 1 ESL values from Environmental Screening Levels, San Francisco Bay Regional Water Quality Control Board, February 2016

**TABLE 3C. SOIL QUALITY SUMMARY, METALS
2855 MANDELA PARKWAY SITE, OAKLAND, CALIFORNIA**

Analyte concentration (mg/kg)

Date sampled	Sample Location	Sample depth (ft-bgs)	Cadmium	Chromium	Lead	Organic Lead	Nickel	Zinc
6/20/1991	1	2.5	ND	30	2.9	NA	27	19
6/20/1991	2	2.5	ND	50	20	NA	48	42
6/20/1991	6	6.5	ND	65	5.1	NA	70	57
6/20/1991	7	2.5	NA	NA	NA	NA	NA	NA
6/20/1991	8	[composite]	NA	NA	NA	NA	NA	NA
6/19/1992	B-1	5	NA	NA	NA	NA	NA	NA
6/19/1992	B-1	10	NA	NA	NA	NA	NA	NA
6/19/1992	B-1	15	NA	NA	NA	NA	NA	NA
6/19/1992	B-2	5	NA	NA	NA	NA	NA	NA
6/19/1992	B-2	10	NA	NA	NA	NA	NA	NA
6/19/1992	B-3	5	NA	NA	NA	NA	NA	NA
6/19/1992	B-3	10	NA	NA	NA	0.65	NA	NA
Tier 1 ESLs			--	2,500	320	320 ¹	150	600

Notes:

mg/kg - milligrams per kilogram

ft-bgs - feet below ground surface

NA - Not analyzed

¹ - Value for lead, no value for organic lead listed

ESL - Environmental Screening Level

Tier 1 ESL values from *Update to Environmental Screening Levels*, San Francisco Bay Regional Water Quality Control Board, December 2013, Table B (Commerical/Industrial values)

**TABLE 4A. GROUNDWATER QUALITY SUMMARY, VOCS IN GRAB GROUNDWATER
2855 MANDELA PARKWAY SITE, OAKLAND, CALIFORNIA**

Date sampled	Sample Location	Sample depth (ft-bgs)	Analyte concentration (ug/l)						Total xylenes	MTBE	All Other VOCs
			Benzene	Toluene	Ethylbenzene	Isopropylbenzene	N-Propylbenzene	sec-Butylbenzene			
8/3/1998	SB-1	4	1	1	< 0.5	NA	NA	NA	1.2	< 0.5	NA
8/3/1998	SB-2	4	44,000	38,000	5,900	NA	NA	NA	24,000	< 50	NA
8/3/1998	SB-4	7.5	16,000	12,000	3,200	NA	NA	NA	11,000	< 50	NA
8/3/1998	SB-5	7.5	11,000	17,000	3,600	NA	NA	NA	20,000	< 250	NA
8/3/1998	SB-6	8	3.1	9.0	3.3	NA	NA	NA	16.0	< 0.5	NA
8/3/1998	SB-7	6.5	1.1	2.1	1.9	NA	NA	NA	6.4	< 0.5	NA
10/28/1998	SB-10	11	8,400	10,000	2,800	NA	NA	NA	13,000	< 200	NA
10/29/1998	SB-11	7	81	1.3	4.9	NA	NA	NA	18	< 1	NA
11/30/1998	SB-13	7.5	88	100	85	NA	NA	NA	160	< 80	NA
11/30/1998	SB-14	7.5	< 0.5	< 0.5	< 0.5	NA	NA	NA	< 0.5	14	NA
11/30/1998	SB-15	7	< 0.5	< 0.5	< 0.5	NA	NA	NA	< 0.5	< 5.0	NA
11/30/1998	SB-16	8	17,000	24,000	2,700	NA	NA	NA	11,000	< 1,300	NA
11/30/1998	SB-17	7.5	2,500	6,700	1,600	NA	NA	NA	6,200	< 690	NA
11/30/1998	SB-18	7	< 0.5	< 0.5	0.67	NA	NA	NA	< 0.5	< 5.0	NA
5/11/1999	TR-2	0-12	340	630	< 10	NA	NA	NA	270	< 100	NA
5/11/1999	TR-3	0-12	< 0.50	< 0.50	2.6	NA	NA	NA	< 0.50	< 5.0	NA
5/11/1999	SB-17	0-12	< 0.50	0.93	< 0.50	NA	NA	NA	2.7	< 5.0	NA
5/11/1999	SB-19	0-12	< 0.50	< 0.50	< 0.50	NA	NA	NA	< 0.50	< 5.0	NA
5/11/1999	SB-20	0-12	12	38	< 0.50	NA	NA	NA	30	< 5.0	NA
5/11/1999	SB-21	0-12	40,000	120,000	57,000	NA	NA	NA	240,000	< 10,000	NA
5/11/1999	SB-22	0-12	< 0.50	2.2	< 0.50	NA	NA	NA	< 0.50	< 5.0	NA
5/11/1999	SB-23	0-12	5,000	11,000	2,800	NA	NA	NA	11,000	< 500	NA
5/11/1999	SB-24	0-12	6,400	9,200	2,700	NA	NA	NA	9,400	< 1,000	NA
11/16/1999	SB-26	0-16	< 0.50	< 0.50	< 0.50	NA	NA	NA	< 0.50	NA	NA
11/16/1999	SB-27	0-16	1.8	< 0.50	1.1	NA	NA	NA	< 0.50	NA	NA
11/16/1999	SB-28 (F/BM)	0-8	< 0.50	< 0.50	< 0.50	NA	NA	NA	< 0.50	NA	NA
12/2/1999	SB-29	0-24	< 0.50	< 0.50	< 0.50	NA	NA	NA	< 0.50	NA	NA
12/2/1999	SB-30	0-24	< 0.50	< 0.50	< 0.50	NA	NA	NA	< 0.50	NA	NA
11/16/1999	SB-31 (F/BM)	0-8	< 0.50	< 0.50	< 0.50	NA	NA	NA	< 0.50	NA	NA
11/16/1999	SB-31	0-16	< 0.50	< 0.50	< 0.50	NA	NA	NA	< 0.50	NA	NA
12/2/1999	SB-32	0-28	< 0.50	< 0.50	< 0.50	NA	NA	NA	< 0.50	NA	NA
11/16/1999	SB-33	0-16	31	71	16	NA	NA	NA	68	NA	NA
12/2/1999	SB-33A (F/BM)	0-8	< 0.50	< 0.50	< 0.50	NA	NA	NA	< 0.50	NA	NA
6/8/2016	TSB-1	9-14	< 0.50	< 0.50	< 0.50	<0.5	<1	ND(1.0) UJ	NA	NA	ND
6/9/2016	TSB-3	5-10	< 0.50	< 0.50	< 0.50	<0.5	<1	ND(1.0) UJ	NA	NA	ND
6/9/2016	TSB-4	2-12	< 0.50	< 0.50	< 0.50	14 J-	24 J-	2.4 J-	NA	NA	ND
6/9/2016	TSB-5	2-12	< 0.50	< 0.50	< 0.50	<0.5	<1	ND(1.0) UJ	NA	NA	ND
Tier 1 ESLs			1	40	13	NE	NE	NE	20	5	

Notes:
VOC - volatile organic compound
ug/L - micrograms per liter
ft-bgs - feet below ground surface
MTBE - methyl tert-butyl ether
< 0.5 - Not detected above the laboratory reporting limit, noted
bold = value exceeding the Commercial/Industrial Environmental Screening Level
F/BM - perched water sample collected at the fill/Bay Mud interface
ND - Not detected
NA - Not Analyzed
ESL = Environmental Screening Level
Tier 1 ESL values from *Environmental Screening Levels*, San Francisco Bay Regional Water Quality Control Board, February 2016
NE - ESL value not established
J- - Estimated concentration, possibly biased low
UJ - Estimated reporting limit

**TABLE 4B. GROUNDWATER QUALITY SUMMARY, HYDROCARBONS IN GRAB GROUNDWATER
2855 MANDELA PARKWAY SITE, OAKLAND, CALIFORNIA**

Date sampled	Sample Location	Sample depth (ft-bgs)	Analyte concentration (ug/L)		
			TPH-g	TPH-d	TPH-mo
8/3/1998	SB-1	4	< 50	NA	NA
8/4/1998	SB-2	4	160,000	NA	NA
8/5/1998	SB-4	7.5	63,000	NA	NA
8/6/1998	SB-5	7.5	72,000	NA	NA
8/7/1998	SB-6	8	63	NA	NA
8/8/1998	SB-7	6.5	< 50	NA	NA
10/28/1998	SB-10	11	98,000	NA	NA
10/29/1998	SB-11	7	780	NA	NA
11/30/1998	SB-13	7.5	1,800	NA	NA
11/30/1998	SB-14	7.5	< 50	NA	NA
11/30/1998	SB-15	7	< 50	NA	NA
11/30/1998	SB-16	8	110,000	NA	NA
11/30/1998	SB-17	7.5	43,000	NA	NA
11/30/1998	SB-18	7	< 50	NA	NA
5/11/1999	SB-17	0-12	< 50	NA	NA
5/11/1999	SB-19	0-12	< 50	NA	NA
5/11/1999	SB-20	0-12	160	NA	NA
5/11/1999	SB-21	0-12	360,000	NA	NA
5/11/1999	SB-22	0-12	< 50	NA	NA
5/11/1999	SB-23	0-12	11,000	NA	NA
5/11/1999	SB-24	0-12	71,000	NA	NA
11/16/1999	SB-26	0-16	< 50	NA	NA
11/16/1999	SB-27 ¹	0-16	120	NA	NA
11/16/1999	SB-28 (F/BM)	0-8	< 50	NA	NA
12/2/1999	SB-29	0-24	< 50	NA	NA
12/2/1999	SB-30	0-24	< 50	NA	NA
11/16/1999	SB-31 (F/BM)	0-8	< 50	NA	NA
11/16/1999	SB-31	0-16	< 50	NA	NA
12/2/1999	SB-32	0-28	< 50	NA	NA
11/16/1999	SB-33	0-16	450	NA	NA
12/2/1999	SB-33A (F/BM)	0-8	< 50	NA	NA
6/8/2016	TSB-1	9-14	< 50 UJ	NA	NM
6/9/2016	TSB-3	5-10	< 50 UJ	NA	NM
6/9/2016	TSB-4	2-12	360 J-	160	<130
6/9/2016	TSB-5	2-12	< 50 UJ	<170 UJ	<350 UJ
Tier 1 ESLs			100	100	NE

Notes:

ug/L - micrograms per liter

ft-bgs - feet below ground surface

TPH-g - Total Petroleum Hydrocarbons quantified as gasoline

TPH-d - Total Petroleum Hydrocarbons quantified as diesel

TPH-mo - Total Petroleum Hydrocarbons quantified as motor oil

< 50 - Not detected above the laboratory reporting limit, noted

NA - Not analyzed

bold = value exceeding the Commercial/Industrial Environmental Screening Level

¹ - Laboratory noted TPH-g result for SB-27 did not match the standard for gasoline

F/BM - perched water sample collected at the fill/Bay Mud interface

ESL = Environmental Screening Level

Tier 1 ESL values from Environmental Screening Levels, San Francisco Bay Regional Water Quality Control Board, February 2016

NE - ESL value not established

J- - Estimated concentration, possibly biased low

UJ - Estimated reporting limit

**TABLE 4C. GROUNDWATER QUALITY SUMMARY, VOCs IN GROUNDWATER
2855 MANDELA PARKWAY SITE, OAKLAND, CALIFORNIA**

Analyte concentration (ug/l)

Date sampled	Sample Location	Well screen interval (ft-bgs)	Depth to water (DTW)	Benzene	Toluene	Ethylbenzene	Total xylenes	MTBE	1,2,4-trimethylbenzene	1,3,5-trimethylbenzene	n-butylbenzene	n-propylbenzene	sec-Butylbenzene	Isopropylbenzene	Naphthalene	Diisopropylether	Other VOCs
5/11/1999	TR-2	0-12	3.32	340	630	< 10	270	< 100	NA	NA	NA	NA	NA	NA	NA	NA	NA
5/11/1999	TR-3	0-12	2.17	< 0.5	< 0.5	2.6	< 0.5	< 5.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
10/9/2007	RW-1	UNK	3.74	4.3	< 0.5	2.6	< 0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10/9/2007	RW-2	UNK	2.83	29	4.3	13	3.58	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
9/24/2008	TR-4	2.25-20.5	5.41	670	170	1,400	1,800	< 50	2,500	680	89	290	NA	110	400	< 50	ND
9/24/2008	TR-5	2.25-20.5	8.86	5,500	1,900	350	1,400	< 100	1,200	390	< 100	130	NA	< 100	150	< 100	ND
9/24/2008	TR-6	2.25-20.5	10.02	8,400	17,000	6,300	25,000	< 500	4,200	1,100	< 500	< 500	NA	< 500	930	< 500	ND
9/24/2008	TR-10	5.0-20.0	12.35	10,000	13,000	2,500	13,000	< 500	2,600	660	< 500	< 500	NA	< 500	660	< 500	ND
9/24/2008	TR-11	5.0-20.0	9.25	< 0.5	1.0	0.6	1.4	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	NA	< 0.5	< 0.5	1.7	ND
5/16/2016	TR-4	2.25-20.5	3.75	170	6.5	5.6	NA	NA	NA	NA	NA	40	ND(10)	16	ND	ND	ND
5/17/2016	TR-7	5.0-20.0	3.81	<0.5	<0.5	0.6	NA	NA	NA	NA	NA	3.1	ND(1.0)	1.9	ND	ND	ND
Tier 1 ESLs				1	40	13	20	5	NE	NE	NE	NE	NE	NE	0.17	NE	

Notes:

VOC - volatile organic compound

ug/L - micrograms per liter

ft-bgs - feet below ground surface

MTBE - methyl tert-butyl ether

< 0.5 - Not detected above the laboratory reporting limit, noted

NA - not analyzed

ND - not detected above laboratory reporting limits

bold = value exceeding the Commercial/Industrial Environmental Screening Level

ESL = Environmental Screening Level

Tier 1 ESL values from Environmental Screening Levels, San Francisco Bay Regional Water Quality Control Board, February 2016

NE - value not established

**TABLE 4D. GROUNDWATER QUALITY SUMMARY, HYDROCARBONS IN GROUNDWATER
2855 MANDELA PARKWAY SITE, OAKLAND, CALIFORNIA**

Date sampled	Sample Location	Well screen interval (ft-bgs)	Depth to Water (DTW)	Analyte concentration (ug/L)			Organic lead
				TPH-g	TPH-d	TPH-mo	
5/11/1999	TR-2	0-12	3.32	2600	NA	NA	NA
5/11/1999	TR-3	0-12	2.17	< 50	NA	NA	NA
10/9/2007	RW-1	-	3.74	78	NA	NA	< 300
10/9/2007	RW-2	-	2.83	320	NA	NA	< 300
9/24/2008	TR-4	2.25-20.5	5.41	39,000	10,000	NA	NA
9/24/2008	TR-5	2.25-20.5	8.86	34,000	8,100	NA	NA
9/24/2008	TR-6	2.25-20.5	10.02	290,000	73,000	NA	NA
9/24/2008	TR-10	5.0-20.0	12.35	130,000	26,000	NA	NA
9/24/2008	TR-11	5.0-20.0	9.25	< 50	< 50	NA	NA
4/16/2016	TR-4	2.25-20.5	3.75	2300	740	730	NA
4/17/2016	TR-7	5.0-20.0	3.81	<50	58	<100	NA
Tier 1 ESLs				100	100	NE	2.5

Notes:

ug/L - micrograms per liter

ft-bgs - feet below ground surface

TPH-g - total petroleum hydrocarbons quantified as gasoline

TPH-d - total petroleum hydrocarbons quantified as diesel

NA - not analyzed

< 50 - not detected above the laboratory reporting limit, noted

bold - value exceeding the Commercial/Industrial Environmental Screening Level

- no screen interval data found

ESL - Environmental Screening Level

Tier 1 ESL values from Environmental Screening Levels, San Francisco Bay Regional Water Quality Control Board, February 2016

NE - value not established

**TABLE 5B. SOIL VAPOR QUALITY SUMMARY, HYDROCARBONS
2855 MANDELA PARKWAY SITE, OAKLAND, CALIFORNIA**

Date Sampled	Sample Location	Sample depth (ft-bgs)	Analyte concentration (ug/L)
			TPH-g
6/17/1992	SG-01	5	763
6/17/1992	SG-02	5	< 1.0
6/17/1992	SG-03	5	286
6/17/1992	SG-04	5	< 1.0
6/17/1992	SG-05	5	163
6/17/1992	SG-06	5	123
6/17/1992	SG-07	5	53
6/17/1992	SG-08	5	38
6/17/1992	SG-09	5	< 1.0
6/17/1992	SG-10	5	127
6/17/1992	SG-11	5	66
6/17/1992	SG-12	5	< 1.0
6/17/1992	SG-13	5	131
6/17/1992	SG-14	5	178
6/17/1992	SG-15	5	50
6/17/1992	SG-16	5	28
6/17/1992	SG-17	5	< 1.0
Tier 1 ESLs			2.50E+06

Notes:

ug/L - micrograms per liter

ft-bgs - feet below ground surface

< 1.0 - Not detected above the laboratory reporting limit

ESL = Environmental Screening Level

Tier 1 ESL values from *Update to Environmental Screening Levels*, San Francisco Bay Regional Water Quality Control Board, December 2013, Table E (Commercial/Industrial values)

**TABLE 5C. INDOOR AIR QUALITY SUMMARY, VOCS
2855 MANDELA PARKWAY SITE, OAKLAND, CALIFORNIA**

		Analyte concentration (ug/m3)												
Date Sampled	Sample Location	Freon 12	Chloromethane	Freon 11	Methylene Chloride	1,1,1-trichloroethane	Benzene	1,2-dichloroethane	Toluene	Ethylbenzene	m,p-xylene	o-xylene	Styrene	
11/12/2000	A-1	6.6	2.5	1.2	2.0	0.82 J	10	< 0.61	56	4.4	17	4.3	0.96	
11/12/2000	A-2	6.1	1.2	1.2	2.2	1.1	8.0	< 0.65	42	3.4	12	3.4	< 0.68	
11/12/2000	A-3	6.1	1.4	1.1	5.8	1.3	7.4	< 0.66	18	2.0	6.4	1.9	< 0.70	
11/12/2000	A-4	5.8	2.2	1.1	5.5	1.3	6.5	0.72	18	1.8	8.0	2.4	< 0.73	
11/12/2000	A-5	4.8	1.3	1.2	0.70	< 0.93	3.7	< 0.69	6.4	0.82	2.8	1.2	< 0.73	
11/12/2000	A-6	6.0	1.3	< 1.0	0.61 J	< 0.97	2.9	< 0.72	4.4	< 0.77	2.2	1.3	< 0.76	
Tier 1 ESLs		--	390	--	26	2.20E+04	0.420	0.58	1.30E+03	4.9	440 ¹	440 ¹	3.90E+03	

**TABLE 5C. INDOOR AIR QUALITY SUMMARY, VOCS
2855 MANDELA PARKWAY SITE, OAKLAND, CALIFORNIA**

Analyte concentration (ug/m3)

1,3,5-Trimethylbenzene	1,2,4-trimethylbenzene	1,2-dichlorobenzene	Acetone	2-propanol	Methyl Ethyl Ketone	Hexane	1,4-Dioxane	Cyclohexane	Ethanol	MTBE	Heptane
0.96	3.5	< 0.91	18	5.5	< 2.2	11	< 2.7	4.6	12	5.4	4.9
0.78 J	2.8	< 0.96	16	5.6	< 2.4	9.8	< 2.9	3.7	12	4.4	3.7
< 0.80	0.92	3	15	4.4	3.0	5.2	< 2.9	2.9	16	7.7	< 0.34
0.87	2.8	< 1.0	14	2.1 J	< 2.5	4.4	6.1	< 2.9	14	6.6	< 3.5
< 0.84	< 0.84	< 1.0	11	< 2.1	< 2.5	< 3.0	< 3.1	< 2.9	8.1	< 3.1	< 3.5
< 0.87	1.1	< 1.1	14	< 2.2	< 2.6	< 3.1	8.6	< 3.1	3.6	< 3.2	< 3.6
--	--	8.80E+02	1.40E+05	--	2.20E+04	--	1.60	--	--	47	--

Notes:

ug/m3 - micrograms per cubic meter

MTBE - methyl tert-butyl ether

< 0.91 - Not detected above the laboratory reporting limit

J - estimated value

bold = value exceeding the Commercial/Industrial Environmental Screening Level

Sample A-4 was collected as a field duplicate of A-3. Samples A-5 and A-6 were collected outdoors as ambient background samples

-- No ESL established

ESL = Environmental Screening Level

Tier 1 ESL values from *Update to Environmental Screening Levels*, San Francisco Bay Regional Water Quality Control Board, December 2013, Table E (Commercial/Industrial values)

¹ - ESL is for total xylenes

FIGURES

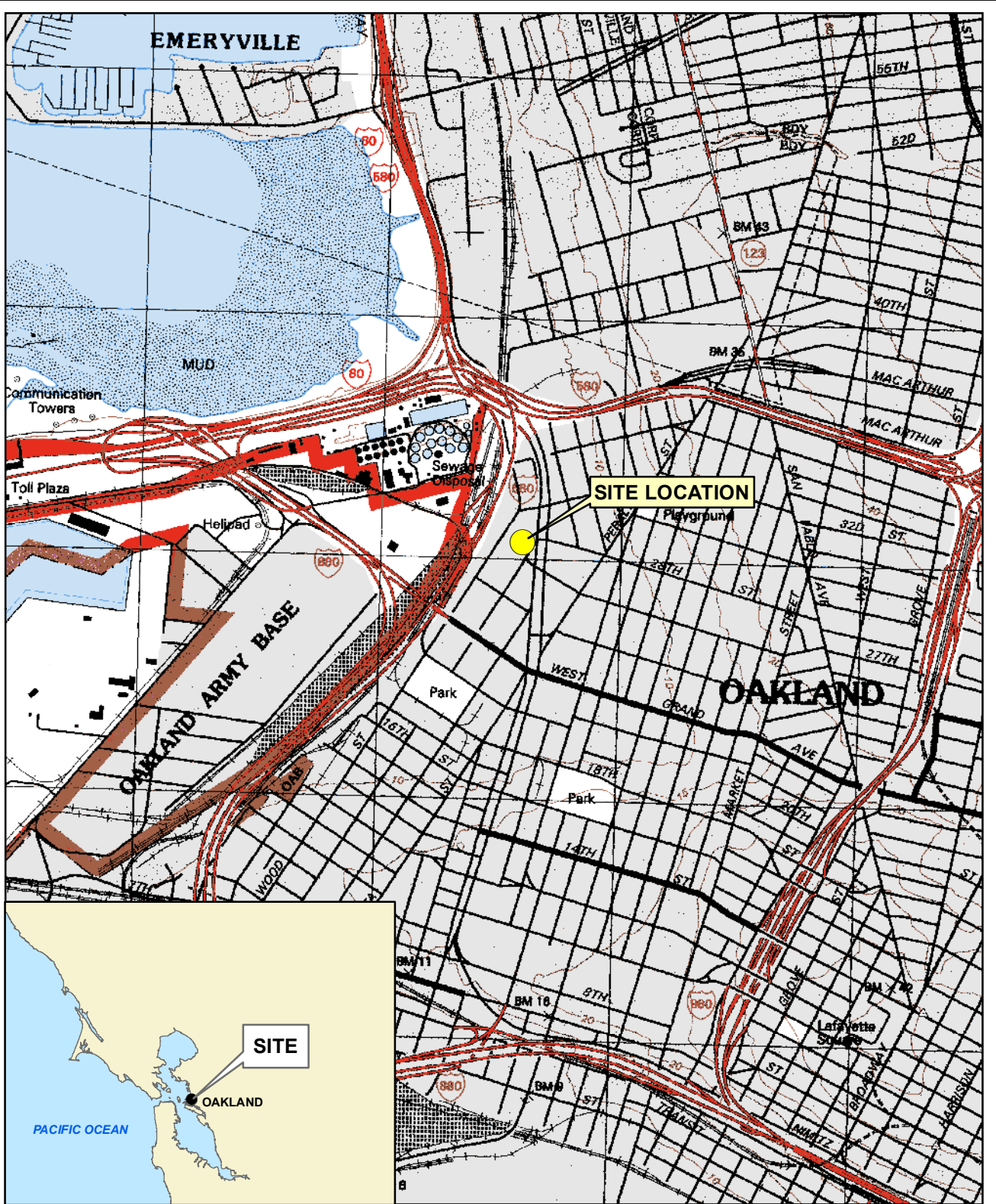
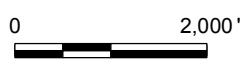


FIGURE 1

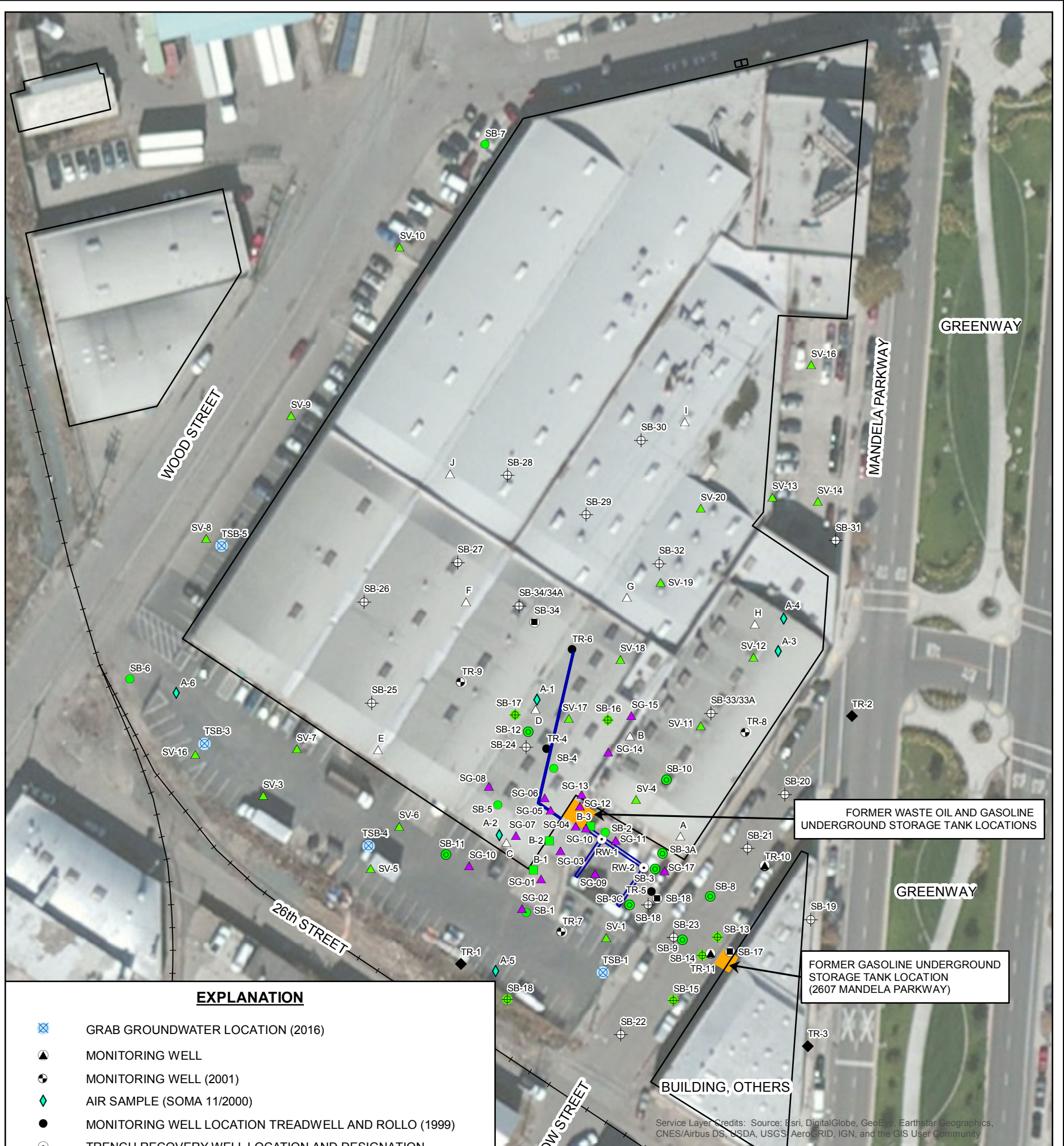
SITE LOCATION

**2855 MANDELA PARKWAY
OAKLAND, CALIFORNIA**



SOURCE: USGS 7.5' QUAD SHEET
OAKLAND WEST, CA, 1993

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FORMER WASTE OIL AND GASOLINE UNDERGROUND STORAGE TANK LOCATIONS

FORMER GASOLINE UNDERGROUND STORAGE TANK LOCATION (2607 MANDELA PARKWAY)

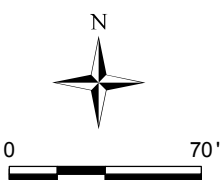
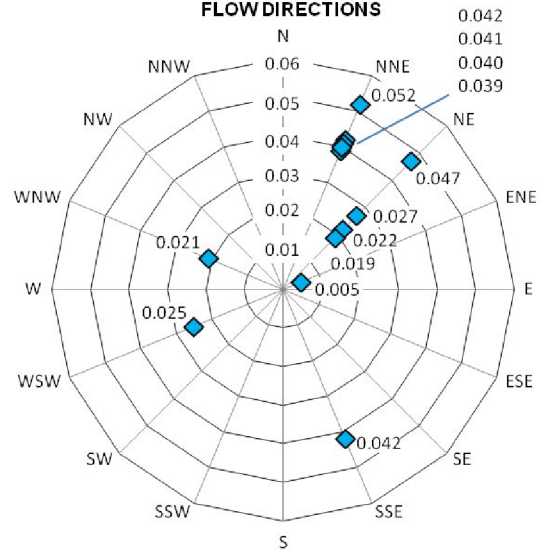
BUILDING, OTHERS

Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

EXPLANATION

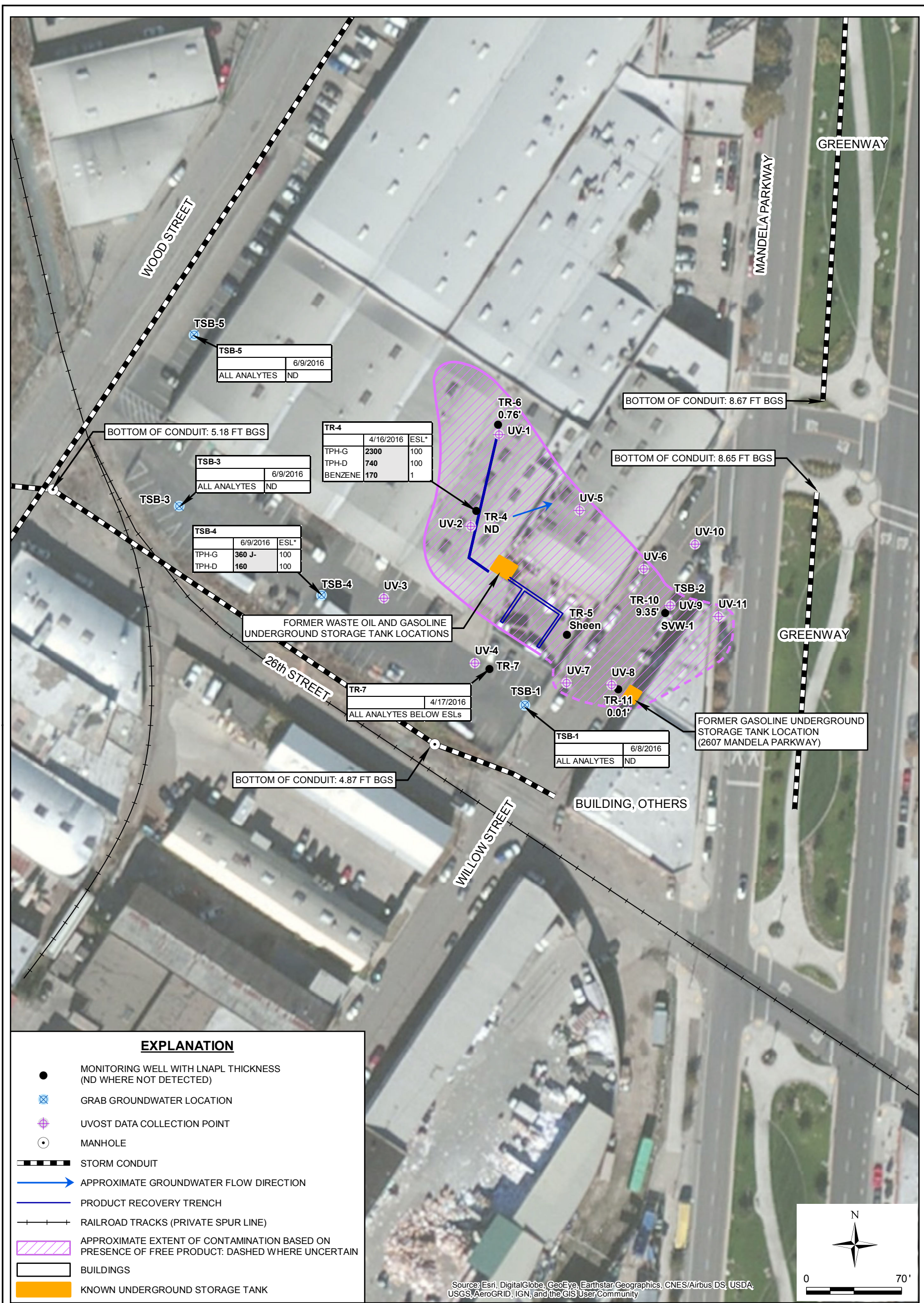
- GRAB GROUNDWATER LOCATION (2016)
- MONITORING WELL
- MONITORING WELL (2001)
- AIR SAMPLE (SOMA 11/2000)
- MONITORING WELL LOCATION TREADWELL AND ROLLO (1999)
- TRENCH RECOVERY WELL LOCATION AND DESIGNATION
- SOIL BORING LOCATION AND DESIGNATION (1999)
- TEMPORARY PIEZOMETER LOCATION AND DESIGNATION (1999)
- SOIL VAPOR SAMPLING POINT LOCATION AND DESIGNATION (INSTALLED IN 2001)
- BORING LOCATION TREADWELL AND ROLLO (1999)
- SOIL BORING LOCATION AND DESIGNATION (06/92)
- SOIL VAPOR SAMPLING POINT LOCATION AND DESIGNATION (08/98)
- SOIL BORING LOCATION AND DESIGNATION (08/98)
- SOIL BORING LOCATION AND DESIGNATION (10/98)
- SOIL BORING LOCATION AND DESIGNATION (11/98)
- SOIL VAPOR SAMPLE (ATEC 07/92)
- PRODUCT RECOVERY TRENCH
- RAILROAD TRACKS (PRIVATE SPUR LINE)
- BUILDINGS
- KNOWN UNDERGROUND STORAGE TANK

ROSE DIAGRAM OF GROUNDWATER FLOW DIRECTIONS



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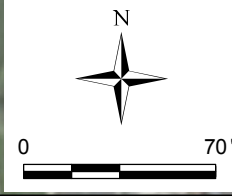
FIGURE 2
SITE MAP
HISTORICAL SAMPLE LOCATIONS AND
MONITORING WELL NETWORK
2855 MANDELA PARKWAY
OAKLAND, CALIFORNIA



EXPLANATION

- MONITORING WELL WITH LNAPL THICKNESS (ND WHERE NOT DETECTED)
- ⊗ GRAB GROUNDWATER LOCATION
- ⊕ UVOST DATA COLLECTION POINT
- MANHOLE
- STORM CONDUIT
- APPROXIMATE GROUNDWATER FLOW DIRECTION
- PRODUCT RECOVERY TRENCH
- RAILROAD TRACKS (PRIVATE SPUR LINE)
- ▨ APPROXIMATE EXTENT OF CONTAMINATION BASED ON PRESENCE OF FREE PRODUCT: DASHED WHERE UNCERTAIN
- ▭ BUILDINGS
- KNOWN UNDERGROUND STORAGE TANK

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



NOTES:

1. FT BGS = FEET BELOW GROUND SURFACE.
2. LNAPL = LIGHT NON-AQUEOUS PHASE LIQUID.
3. CONCENTRATIONS ARE REPORTED IN MICROGRAMS PER LITER (µg/L).
4. TPH-G = TOTAL PETROLEUM HYDROCARBONS QUANTIFIED AS GASOLINE
5. TPH-D = TOTAL PETROLEUM HYDROCARBONS QUANTIFIED AS DIESEL
6. J- = ESTIMATED CONCENTRATION, POSSIBLY BIASED LOW
7. UVOST = ULTRA VIOLET OPTICAL SCANNING TOOL.
8. * ESL = SFRWQCB GROUNDWATER ENVIRONMENTAL SCREENING LEVEL.
9. BOLDDED VALUES DESIGNATE A REPORTED DETECTION.
10. VALUES SHADED GRAY DESIGNATE A DETECTION IN EXCEEDANCE OF SFRWQCB ESL.
11. SFRWQCB = SAN FRANCISCO BAY REGIONAL WATER QUALITY CONTROL BOARD.

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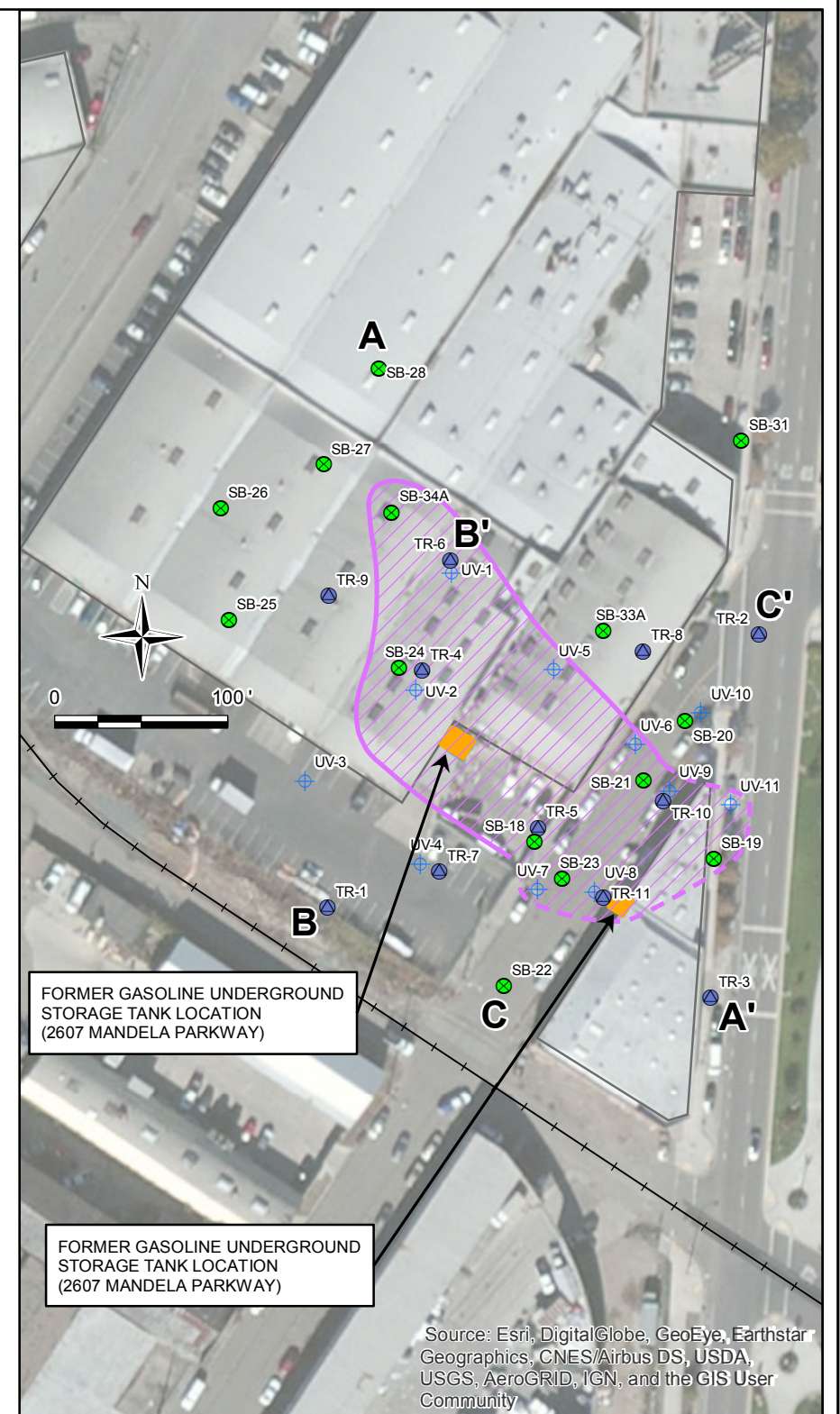
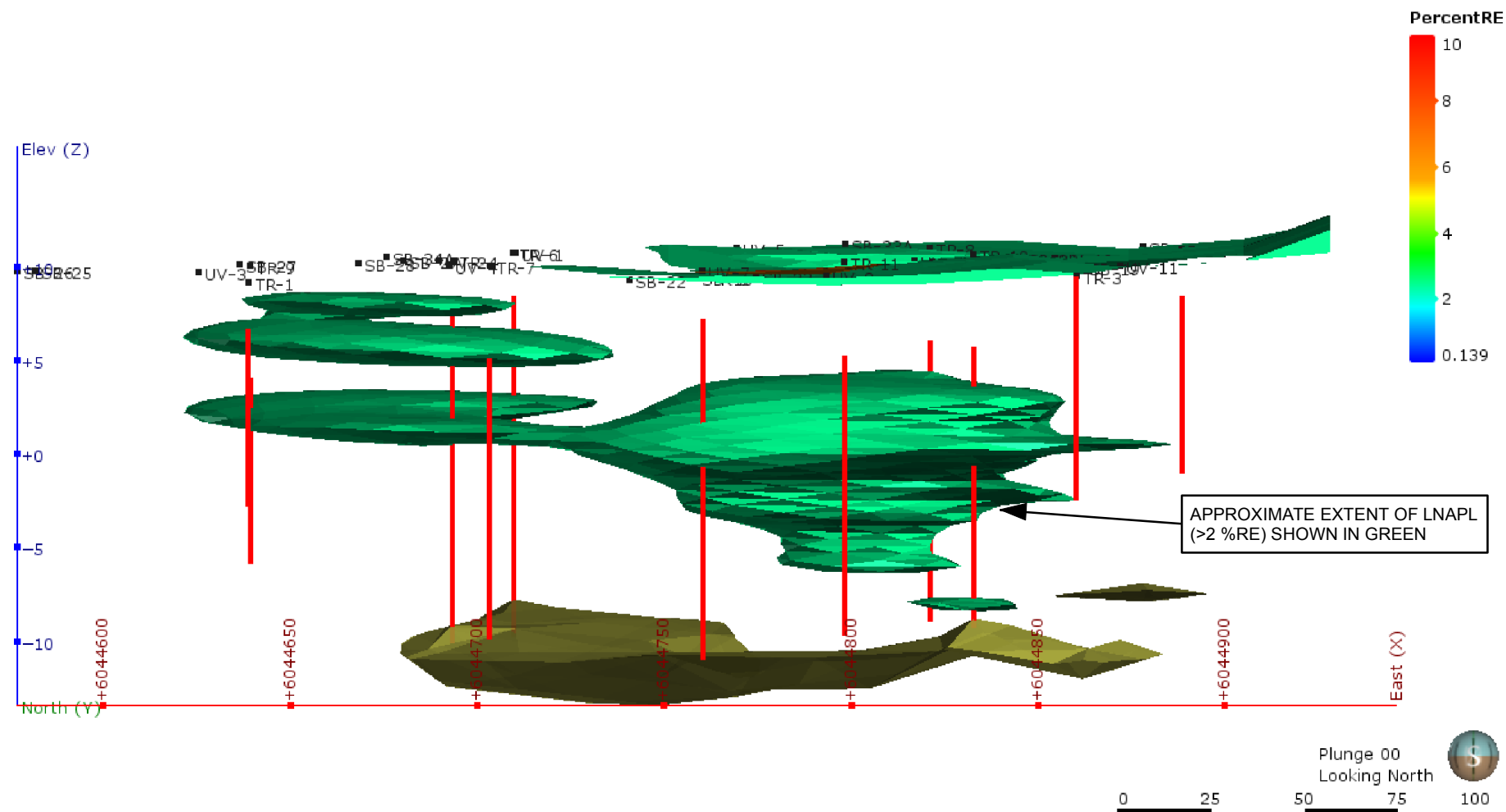
FIGURE 3

**2016 LNAPL PLUME AND
GROUNDWATER CONCENTRATIONS**

**2855 MANDELA PARKWAY
OAKLAND, CALIFORNIA**

Drawn By: DH	Checked By: LA	Scale: 1" = 70'	Date: 9/15/17
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File: Balco_CurrentPlume_Fig3.mxd



EXPLANATION

- UVOST BORING
- MONITORING WELL
- SOIL BORING
- APPROXIMATE EXTENT OF CONTAMINATION BASED ON PRESENCE OF FREE PRODUCT: DASHED WHERE UNCERTAIN
- RAILROAD TRACKS (PRIVATE SPUR LINE)
- KNOWN UNDERGROUND STORAGE TANK
- BUILDINGS

NOTES

1. 5X VERTICAL EXAGGERATION
2. SAND LAYER SHOWN IN BROWN
3. MONITORING WELL SCREENED INTERVALS SHOWN IN RED
4. LNAPL - LIGHT NON-AQUEOUS PHASE LIQUID
5. %RE - PERCENT RESPONSE EMITTER
6. SHALLOW UVOST RESPONSE LIKELY RELATED TO NOISE

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FIGURE 4

3D UVOST PERCENT RESPONSE EMITTER AND MONITORING WELL SCREENED INTERVALS

**2855 MANDELA PARKWAY
OAKLAND, CALIFORNIA**

ATTACHMENT A



Photo #1
MacArthur Company warehouse loading dock. 08/29/2017
Looking north



Photo #2
Warehouse fire water piping. 08/29/2017
Looking northeast



Photo #3
Carpet warehouse loading dock. 08/29/2017
Looking northeast



Photo #4
Carpet warehouse loading area
Looking north

ATTACHMENT B

**TABLE 1. WELLHEAD METHANE SUMMARY
2855 MANDELA PARKWAY, OAKLAND, CALIFORNIA**

Date Measured	Sample Location	Sample depth	Methane (%)	CO2 (%)	Oxygen (%)	Elapsed time (minutes)
8/29/2017	TR-4	TOC	2.4	2.6	16	3
8/29/2017	TR-5	TOC	3.1	0.7	19.9	5
8/29/2017	TR-6	TOC	2.6	8.8	2.7	11
8/29/2017	TR-7	TOC	0	0.2	20.9	NA
8/29/2017	TR-9	TOC	0	0.2	20.9	NA
8/29/2017	TR-10	TOC	5.8	1.1	20.9	NA
8/29/2017	TR-11	TOC	3	1	20.9	9
LEL			4.4			

Notes:

% - percent

TOC - top of casing

Elapsed time - elapsed time between peak reading and stabilized reading

>> - above meter resolution

LEL - lower explosive limit