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Union Pacific Railroad

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January 6, 2015

Ms. Karel Detterman
Alameda County Health Care Services Agency
Environmental Health Services
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577

Subject: Submittal of the Revised Addendum to the Site
Conceptual Model Report and Data Gap Work Plan, 744
and 758 High Street, Oakland, California, Fuel Leak
Case No. RO1135 and GeoTracker Global ID T0600101305

Dear Ms. Detterman:

On behalf of Union Pacific Railroad (UPRR), enclosed is the Revised Addendum to the Site Conceptual Model Report and Data Gap Work Plan, which describes the plan to conduct additional investigation activities at the 744 and 758 High Street site in Oakland, California.

I declare, under penalty of perjury, that the information and recommendations contained in the attached document is true and correct to the best of my knowledge.

If you have any questions or comments after reviewing this material, please feel free to contact me by email at LAMANCUS@up.com or by phone at (916) 789-5184.

Sincerely,

A handwritten signature in cursive script that reads 'Lauren Mancuso'.

Lauren A. Mancuso
Manager of Site Remediation
Union Pacific Railroad Company

C: David Hodson/CH2M HILL



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January 6, 2015

Ms. Karel Detterman
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Alameda, California 94502-6577

Subject: Revised Addendum to the *Site Conceptual Model Report and Data Gap Work Plan, 744 and 758 High Street, Oakland, California*

Dear Ms. Detterman:

On behalf of Union Pacific Railroad Company (UPRR), CH2M HILL has prepared this revised addendum to the *Site Conceptual Model Report and Data Gap Work Plan (Work Plan)* (CH2M HILL, 2013a) for the former UPRR property located within the property currently located at 750 High Street, Oakland, California (the site). A site location map is attached as Figure 1. This revised addendum describes the proposed scope of work and procedures for conducting an additional sampling investigation at the site. The original version of this addendum was submitted to the Alameda County Health Care Services Agency Environmental Health Services (ACEH) on April 16, 2014. The ACEH provided verbal comments during a meeting on July 22, 2014, and emailed comments on August 20, 2014 (ACEH, 2014). This addendum presents revisions to the original addendum in response to ACEH comments. Revised project figures in response to comments are included in Attachment 1. The groundwater flow direction rose diagrams for two adjacent site are included as Attachment 2.

The *Site Conceptual Model Update and Soil and Groundwater Investigation Report (Site Investigation Report)* (CH2M HILL, 2013b) concluded that the current understanding of the nature and extent of soil and groundwater impacts at the site were inadequate to assess the need for remediation; additionally, it was recommended to pave an unpaved portion of the site to limit potential worker exposure to contaminants of potential concern (COPC) identified in shallow soil. The plan to pave the unpaved portion is currently under evaluation and will be submitted under separate cover. The objectives of the proposed additional investigation include:

- Obtain better vertical and lateral definition of COPCs to address data gaps as presented in the Site Investigation Report
- Install new groundwater monitoring wells to assess groundwater hydrogeology and potential impacts to groundwater
- Update the conceptual site model
- Obtain data to evaluate the need for soil or groundwater remedial action at the site

Site background information is presented in the Work Plan (CH2M HILL, 2013a) and Site Investigation Report (CH2M HILL, 2013b).

Scope of Work

This revised addendum proposes advancing 20 borings to depths ranging from 5 to 17 feet below ground surface (bgs) to collect soil and groundwater samples and install five groundwater monitoring wells. Proposed activities are located within the private property owned by Economy Lumber located at 750 High Street. Further details regarding drilling and sampling methodologies are described below.

Field Preparations

The following activities will be completed before fieldwork begins at the site:

- Update the site-specific health and safety plan
- Obtain a soil boring permit from Alameda County Public Works (ACPW)
- Obtain entry approval from the property owner
- Contact Underground Service Alert for utility clearance at least 3 working days before beginning boring advancement
- Conduct a subsurface survey using a private utility locator to identify underground utilities at the locations of the proposed borings
- Contact UPRR's fiber optic hotline and complete UPRR fiber optic notifications
- Notify ACEH of the field investigation schedule

Soil and Grab Groundwater Sampling

Twenty soil borings (GB030 through GB049) will be advanced using direct-push drilling to facilitate the collection of discrete soil and grab groundwater samples from the locations shown in Figure 2. The planned depths for these borings are presented in Table 1. The actual locations, drilling depths, and quantity and depths of soil and grab groundwater samples will be based on field conditions and observations.

Borings will be advanced with a track-mounted direct-push drill rig by Vironex of Concord, California (California C57 Drilling License #705927), under the oversight of CH2M HILL. Core samples will be retrieved to record soil lithology, screen soil samples using a photoionization detector (PID), and collect soil samples for laboratory analysis. Where drilling conditions permit, continuous core samples will be collected. The borings will be logged by a CH2M HILL geologist according to ASTM International D2488-06 (Standard Practice for Description and Identification of Soils [Visual-Manual Procedure]). Additionally, the following drilling activities will be conducted:

- Before and between drilling each boring, appropriate portions of the drilling rig, drilling tools, and any reusable sampling equipment will be decontaminated.
- Drill cuttings and equipment decontamination rinse water will be contained onsite in labeled 55-gallon steel drums in a secure temporary staging area. Investigation-derived waste (IDW) management is discussed in a subsequent section of this addendum.
- Soil borings will be abandoned in accordance with Alameda County requirements. Soil borings will be backfilled with neat cement from the bottom up using a tremie pipe.

Soil samples, grab groundwater samples, or both will be collected from borings for select laboratory analyses. Soil samples will be selected for laboratory analyses based on the general sampling depths specified in Table 1 and refined using field observations and PID field screening, if necessary. Soil samples for volatile organic compound (VOC) analysis will be collected using 5-gram Terra Core sampling devices. Soil samples for non-VOC analyses will be collected in pre-cleaned, laboratory-supplied glass jars. Where borings penetrate first-encountered groundwater with sufficient water for sampling, grab groundwater samples will be collected near the soil-water interface using temporary wells constructed from ¾-inch polyvinyl chloride (PVC) riser and factory-milled screens. The temporary well materials will be discarded and not reused between borings. Grab groundwater samples from temporary wells will be collected using a peristaltic pump and dedicated high-density polyethylene (HDPE) tubing. If necessary, groundwater may be collected using bailer or HDPE tubing with a check valve.

It is anticipated that an undetermined number of borings will not produce sufficient groundwater volume for laboratory analysis during one working day. At these locations, sample collection will take place as soon as sufficient groundwater is available and an ACPW variance will be requested to leave the boring open/ungROUTED for up to 48 hours to allow for groundwater infiltration. Borings left overnight or unattended will be clearly marked and adequately covered.

Monitoring Well Installation and Development

Five monitoring wells (MW-01 through MW-05) will be installed during the proposed field investigation. The proposed locations of monitoring wells MW-01 through MW-05 are shown in Figure 2, and rationales for the monitoring wells, possible soil sample selections, and initial groundwater sample analyses are presented in Table 1. Groundwater is anticipated to be encountered at depths ranging from 10 to 17 feet bgs. Boreholes for monitoring well installation will be advanced to the target depths using a track-mounted drill rig equipped with 8-inch hollow-stem augers by Vironex of Concord, California. The borings will be logged according to ASTM International D2488-06 by a CH2M HILL geologist. Wells will be constructed of 2-inch-diameter Schedule 40 flush-threaded PVC risers and screens. The perforated intervals will be constructed with 5 to 10 feet of 0.010-inch factory-milled slots across the upper water-bearing zone. The final screen length and placement will be determined by a geologist based on field conditions. A 4-inch-long threaded PVC bottom cap will be installed at the bottom of each well. Well construction diagrams are provided in Attachment 3.

During installation, the well casings will be suspended until the filter pack is placed. The filter pack will consist of a size number 3 silica sand placed from the base of the borehole to approximately 1 foot above the top of the screened interval. An approximately 1-foot-thick hydrated bentonite seal will be placed on top of the filter pack. The remaining borehole annulus was sealed with a neat cement grout, consisting of approximately 5 gallons of water per 94-pound sack of Portland cement placed from the bottom of the boring by tremie pipe, or a consistency determined by the ACPW inspector. The surface completion of the wells will include a flush-mount, 8-inch-diameter, traffic-rated road box set in concrete.

Development of monitoring wells will be attempted a minimum of 72 hours after completing well construction. The development procedure will include surging and bailing the well to remove the most silt-laden water, then surging and pumping until the monitored groundwater parameters of temperature, pH, and conductivity stabilize to within 10 percent of the previous reading or until a minimum volume of water equal to three wetted casing volumes has been removed.

Soil from the well installation and groundwater purged during well development will be placed in 55-gallon steel drums and labeled. The drums will be temporarily stored in a secure onsite location. The disposal of IDW is discussed in a subsequent section of this addendum.

Groundwater sampling of monitoring wells MW-01 through MW-05 will be conducted no sooner than 48 hours following the completion of well development and then quarterly for 1 year. The need for continued groundwater sampling from these monitoring wells will be evaluated in consultation with ACEH. Groundwater samples will be collected using low-flow sampling procedures with a peristaltic pump and dedicated high-density polyethylene tubing of the water column within the well. The sampling procedure will include purging the well at approximately 50 to 200 milliliters per minute until the monitored groundwater parameters (turbidity, temperature, pH, and conductivity) stabilize to within 10 percent for the final three readings, or until a volume of water equal to three wetted-casing volumes has been removed.

Laboratory Analysis of Samples

Soil and groundwater samples will be submitted under chain-of-custody to TestAmerica in Pleasanton, California (California ELAP No. 2496). Soil and groundwater samples will be analyzed for one or more of the following:

- Polychlorinated biphenyls by United States Environmental Protection Agency (EPA) Method 8082
- Metals by EPA Method 6010B
- Total petroleum hydrocarbons (TPH) (as diesel, motor oil, and gasoline) by EPA Modified Method 8015
- Semivolatile organic compounds (SVOCs) by EPA Method 8270C SIM

Field duplicates, equipment and trip blanks, and matrix spike/matrix spike duplicate (MS/MSD) samples will be collected and analyzed for quality assurance/quality control (QA/QC) purposes as presented in the Work Plan (CH2M HILL, 2013a).

Surveying

The horizontal positions of soil borings and groundwater monitoring wells will be established using real time kinematic measurements of global positioning system data referenced to the National Geodetic Survey Continuously Operating Reference Station network consistent with Geotracker requirements. The vertical control of monitoring wells will be established by surveying using differential leveling. The location and elevation of monitoring wells will be measured to North American Datum of 1983 (latitude and longitude) and National American Vertical Datum of 1988 (with a 1991 adjustment) (elevation) at vertical accuracies of 0.01 foot or less. All surveying data will be reviewed and approved for use by a California-licensed land surveyor.

Investigation-derived Waste Management

The IDW expected to be generated will include equipment decontamination rinsate, personal protective equipment, soil cuttings, and dedicated sampling equipment. The IDW is anticipated to be nonhazardous, and will be temporarily stored onsite in 55-gallon drums. The drums will be sealed and labeled to indicate the site name, drilling or sampling location(s), contents, and date. At the end of each day of field operations, the 55-gallon drum(s) of IDW will be transported to a fenced onsite temporary storage location.

Schedule and Reporting

The proposed fieldwork is scheduled to begin after approval by the ACEH and after permits and access permissions are obtained. The proposed field investigation will take approximately 7 days to complete. The ACEH and ACPW will be notified at least 1 week before fieldwork begins.

Results of the activities performed under this addendum will be presented in a report, which will provide the following information:

- A brief description of the site
- A summary of the fieldwork, including modifications to this addendum made in the field, and a map showing sampling locations
- Figures showing the site vicinity, sampling locations, and the distribution of COPCs in soil and groundwater
- Tables summarizing laboratory analytical data for soil and groundwater samples collected during the investigation and first groundwater monitoring event
- A data quality evaluation report
- A review and evaluation of the analytical data
- An update to the nature and extent of COPCs and the conceptual site model

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- Supporting documentation, such as chain-of-custody forms, analytical reports, lithologic logs, and sampling forms, and waste disposal documentation
- Recommendations, if applicable

Groundwater monitoring reports will be submitted after each of the remaining three quarters of groundwater monitoring.

Works Cited

Alameda County Health Care Services Agency Environmental Health Services (ACEH). 2014. Email from Karel Detterman/ACEH to Jim Diel/UPRR. Fuel Leak Case No. RO1135 and GeoTracker Global ID T0600101305, 744 and 758 High Street, Oakland, CA 94601. August 20.

California Regional Water Quality Control Board, San Francisco Bay Region (RWQCB). 2013. *Screening for Environmental Concerns at Sites with Contaminated Soil and Groundwater*. Interim Final. December.

CH2M HILL. 2013a. *Site Conceptual Model Report and Data Gap Work Plan, 744 and 758 High Street, Oakland, California*. March 29.

CH2M HILL. 2013b. *Site Conceptual Model Update and Soil and Groundwater Investigation Report, 744 and 758 High Street, Oakland, California*. November 8.

U.S. Environmental Protection Agency (USEPA). 2014. Region 9 Industrial Regional Screening Levels (RSLs). May.

Please contact me at (510) 316-2323 if you have any questions.

Sincerely,
CH2M HILL



David Hodson, P.E.
Project Manager

Enclosures:

Table 1

Figures 1 through 14

Attachment 1 Project Figures

Attachment 2 Groundwater Flow Direction Rose Diagram

Attachment 3 Well Construction Diagrams

Table

TABLE 1
Proposed Sampling Rationale
Revised Addendum to the Site Conceptual Model and Data Gap Work Plan
744 and 758 High Street, Oakland, California

Location ID	Location*	Constituents Detected Above Screening Levels from the Adjacent Sample Location(s) where Delineation is Proposed	Matrix	Sample Start Depth/Screen Interval (feet bgs)	PCBs	TPH-D/-MO	SVOCs	Metals	Rationale
GB030	North Area: At the location of previous soil boring GB003	Adjacent sample locations: D-1, GB001 through GB005 Soil: TPH, arsenic, copper, lead, several SVOCs, and benzene Groundwater: lead and several SVOCs	Soil	14 16			x x		This location is proposed in response to the first data gap identified in the Site Investigation Report (CH2M HILL, 2013b). Vertically delineate concentrations of SVOCs detected above screening levels in soil at 12 feet bgs at previous boring GB003. Delineation is generally complete for benzene, so additionally sampling and analysis for benzene is not recommended. Additionally, VOCs were not retained as a COPCs for the site (CH2M HILL, 2013b).
GB031	North Area: Approximately 25 feet northwest of previous soil boring GB001	Adjacent sample location: GB001 Soil: arsenic and benzo(a)pyrene Groundwater: No groundwater samples from GB001	Soil Water	1 4 WT			x x x		This location is proposed in response to the first and sixth data gaps identified in the Site Investigation Report (CH2M HILL, 2013b). Evaluate the presence of SVOCs in soil northwest of previous soil boring GB001, and in groundwater northwest of previous soil boring GB005. Arsenic analysis is not recommended because the maximum arsenic concentration (12 mg/kg) detected from samples collected at GB001 is near the screening level (11 mg/kg) and because arsenic was not retained as a COPC for the site (CH2M HILL, 2013b). Note: An attempt will be made to identify the location of the sanitary sewer pipeline. If the pipeline is located, consideration will be made to either move proposed boring GB031 or add an additional boring to address data gaps.
GB032	North Area: Approximately 20 feet northeast of previous soil boring GB002	Adjacent sample location: GB002 Soil: arsenic and benzo(a)pyrene Groundwater: No groundwater samples from GB002	Soil Water	1 4 WT			x x x		This location is proposed in response to the first and sixth data gaps identified in the Site Investigation Report (CH2M HILL, 2013b). Evaluate the presence of SVOCs in soil northeast of previous soil boring GB002, and in groundwater northeast of previous soil boring GB005. Arsenic analysis is not recommended because arsenic was not retained as a COPC for the site (CH2M HILL, 2013b). Note: An attempt will be made to identify the location of the sanitary sewer pipeline. If the pipeline is located, consideration will be made to either move proposed boring GB032 or add an additional boring to address data gaps.
GB033	North Area: Approximately 40 feet southeast of previous soil boring GB003 and GB005	Adjacent sample location: GB003 Soil: arsenic, copper, lead, TPH, and several SVOCs Groundwater: No groundwater samples from GB003	Soil Water	1 3 6 12 14 16 WT		x x x	x x x x x x	x x x	This location is proposed in response to the first data gap identified in the Site Investigation Report (CH2M HILL, 2013b). Evaluate the presence of metals, TPH, and SVOCs southeast of previous soil boring GB003, and SVOCs in groundwater southeast of GB005.
GB034 (offsite)	Central Area: Approximately 30 feet southwest of previous soil boring B-1	Adjacent sample location: B-1 Soil: arsenic, copper, lead, and zinc Groundwater: No groundwater samples from B-1	Soil	1 4	x x	x x	x x	x x	This location is proposed in response to the fourth data gap identified in the Site Investigation Report (CH2M HILL, 2013b). Evaluate the presence of metals, PCBs, and TPH southwest of previous soil boring B-1, composite surface soil sample No. 4-2, and Excavation A, respectively.
GB035	Central Area: At the previous location of soil boring GB008	Adjacent sample location: GB027 Soil: benzo(a)pyrene and diethylphthalate Groundwater: cobalt, nickel, TPH, PCBs, and several SVOCs	Water	WT	x	x	x	x	This location is proposed in response to the second and fourth data gaps identified in the Site Investigation Report (CH2M HILL, 2013b). Evaluate the presence of metals, PCBs, SVOCs, and TPH in groundwater northwest of GB027 and Excavation C. Soil samples are not recommended, because soil sampling at GB008 provides lateral delineation SVOCs detected at GB027.
GB036	Central Area: Approximately 40 feet southwest of previous soil boring GB029 and on the eastern margin of Excavation A	Adjacent sample location: GB029 Soil: arsenic, copper, lead, zinc, PCBs, TPH, and several SVOCs Groundwater: cobalt, mercury, nickel, zinc, TPH, and PCBs	Soil Water	1 4 WT	x x	x x	x x	x x	This location is proposed in response to the second data gap identified in the Site Investigation Report (CH2M HILL, 2013b). Evaluate the presence of metals, PCBs, SVOCs, and TPH in soil and metals, PCBs, and TPH in groundwater southwest of previous soil boring GB029 and east of Excavation A. Evaluate the presence of SVOCs in groundwater based on soil concentrations at previous soil boring GB029. Further evaluation of COPCs east of GB029 (offsite) is not proposed because of safety concerns posed by working in the high speed rail corridor.
GB037	Central Area: Approximately 40 feet northwest of previous soil boring GB029	Adjacent sample location: GB029 Soil: arsenic, copper, lead, zinc, PCBs, TPH, and several SVOCs Groundwater: cobalt, mercury, nickel, zinc, TPH, and PCBs	Soil Water	1 4 WT	x x	x x	x x	x x	This location is proposed in response to the second data gap identified in the Site Investigation Report (CH2M HILL, 2013b). Evaluate the presence of metals, PCBs, SVOCs, and TPH in soil and metals, PCBs, and TPH in groundwater northwest of previous soil boring GB029. Evaluate the presence of SVOCs in groundwater northwest of previous soil boring GB029 where sufficient groundwater volume for SVOC analyses was not available. Further evaluation of COPCs east of GB029 (offsite) is not proposed because of safety concerns posed by working in the high speed rail corridor.
GB038 (offsite)	Central Area: Approximately 45 feet southwest of previous soil boring GB010	Adjacent sample locations: GB010, GB011, GB012, and GB027 Soil: arsenic, nickel, TPH and several SVOCs Groundwater: cobalt, mercury, nickel, zinc, TPH, PCBs, and several SVOCs	Soil Water	1 5 9 WT		x x x	x x x		This location is proposed in response to the fourth data gap identified in the Site Investigation Report (CH2M HILL, 2013b). Evaluate the presence of: 1) SVOCs in soil southwest of previous soil borings GB010, GB011, and GB012; 2) SVOCs in groundwater based on concentrations in soil samples from previous soil borings GB010 through GB012; 3) TPH in soil west of previous soil borings GB010 and GB012, and in groundwater southwest of previous soil boring GB011; 4) metals in groundwater southwest of GB011 and GB027; and 5) PCBs in groundwater southwest of previous soil boring GB027. Arsenic and nickel analysis is not recommended because arsenic and nickel were not retained as a COPC for the site (CH2M HILL, 2013b).
GB039	South Area: Approximately 40 feet southeast of previous soil boring GB012	Adjacent sample locations: GB010, GB011, GB012, GB027, GB028, and MW-C-6 Soil: arsenic, nickel, TPH, and several SVOCs	Soil	1 5 9		x x x	x x x		This location is proposed in response to the fourth data gap identified in the Site Investigation Report (CH2M HILL, 2013b). Evaluate the presence of: 1) SVOCs in soil southeast of previous soil boring GB010; 2) SVOCs in groundwater based on concentrations in soil samples from GB012; 3) TPH in soil southeast of previous soil borings GB012 and in groundwater southeast of previous soil boring GB011; 4) metals in groundwater southeast of GB012; and

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		Groundwater: cobalt, mercury, nickel, zinc, TPH, PCBs, and several SVOCs		WT	x	x	x	x	5) PCBs in groundwater samples from previous soil boring GB027 to the northwest, previous soil boring GB028 to the northeast, previous monitoring well MW-C-6 to the southeast.
GB040	Central Area: At the location of previous soil boring GB007	Adjacent sample location: GB007 Soil: arsenic, lead, PCBs, TPH, and several SVOCs Groundwater: cobalt and nickel	Soil	4 8 15	x x				This location is proposed in response to the second and fourth data gaps identified in the Site Investigation Report (CH2M HILL, 2013b). Vertically delineate concentrations of SVOCs detected above screening levels in soil at 12 feet bgs at previous boring GB007. Further evaluation of COPCs east of GB007 is not proposed because of safety concerns posed by working in the high speed rail corridor (offsite) and insufficient working space within the interior of the building (onsite). PCBs and TPH are not recommended for soil analyses because vertical definition is already established. Groundwater sampling is not recommended because cobalt and nickel concentrations in the sample collected at boring GB007 are likely consistent with background levels.
GB041 (offsite)	Central Area: Approximately 40 feet southwest of previous soil boring GB009	Adjacent sample location: GB009 Soil: several SVOCs Groundwater: No groundwater samples from GB009	Soil	1 3 5 9	x x	x x x	x x	x	This location is proposed in response to the fourth data gap identified in the Site Investigation Report (CH2M HILL, 2013b). Evaluate the presence of: 1) SVOCs in soil southwest of previous soil boring GB009 and northwest of previous soil borings GB010 and GB011; 2) SVOCs in groundwater based on concentrations in soil samples from previous soil borings GB009 through GB011; 3) TPH in soil northwest of previous soil borings GB010 and in groundwater southwest and northwest of previous soil borings GB027 and GB011, respectively; 4) metals in groundwater southwest and northwest of previous soil borings GB027 and GB011, respectively; and 5) PCBs in groundwater southwest from previous soil boring GB027.
GB042	Central Area: Approximately 40 feet northeast of previous soil boring GB028	Adjacent sample location: GB028 Soil: Several metals, TPH, PCBs, and several SVOCs Groundwater: cobalt, nickel, zinc, TPH, PCBs, and several SVOCs	Soil	1 5 9	x x	x x	x x	x	This location is proposed in response to the second and fourth data gaps identified in the Site Investigation Report (CH2M HILL, 2013b). Evaluate the presence of metals, PCBs, SVOCs, and TPH detected in soil and groundwater northeast of previous soil boring GB028. TPH and PCB analysis is not recommended for soil samples collected beneath 5 feet bgs, because vertical delineation is established.
GB043 (offsite)	South Area: Approximately 40 feet south of previous soil boring GB026	Adjacent sample locations: GB026 and MW-C-6 Soil: copper, TPH, benzo(a)pyrene, and 1,2-dichloroethane Groundwater: nickel and PCBs	Soil	1 5 9	x x	x x	x x	x	This location is proposed in response to the third data gap identified in the Site Investigation Report (CH2M HILL, 2013b). Evaluate the presence of: 1) metals, SVOCs, and TPH in soil southwest of previous soil boring GB026; 2) metals in groundwater southwest of GB026; 3) TPH-diesel and TPH-motor oil in groundwater southwest of previous soil boring GB026 where detected in soil and insufficient groundwater volume was available to analyze for these constituents; 4) PCBs in groundwater southwest of former monitoring well MW-C-6; and 5) PCBs in soil southwest of previous soil boring C-8. VOC analysis for delineation of 1,2-dichloroethane in soil is not recommended because it was detected slightly above the screening level and VOCs are not considered COCs.
GB044	South Area: Approximately 50 feet northwest of previous soil boring GB015	Adjacent sample locations: C-17, C-18, and GB015 Soil: arsenic, copper, lead, nickel, zinc, TPH, PCBs, and several SVOCs Groundwater: No groundwater samples from C-17, C-18, and GB015	Soil	1 5	x x	x x	x x	x	This location is proposed in response to the second and third data gaps identified in the Site Investigation Report (CH2M HILL, 2013b). Evaluate the presence of metals, PCBs, SVOCs, and TPH in soil northwest of previous soil boring GB015. Evaluate the presence of metals, PCBs, SVOCs, and TPH in groundwater southeast of previous boring location GB028.
GB045	South Area: Step out from GB016, GB017, and GB018	Adjacent sample locations: GB016, GB017, and GB018 Soil: arsenic, cadmium, nickel, TPH, PCBs, and several SVOCs Groundwater: cobalt, copper, nickel, and TPH	Soil	1 4	x x	x x	x x	x	This location is proposed in response to the third data gap identified in the Site Investigation Report (CH2M HILL, 2013b). Evaluate the presence of: 1) SVOCs in soil east of previous soil borings GB016, GB017, and GB018; 2) PCBs in soil northeast of previous soil borings GB017; 3) metals in soil because of historical storage of scrap metal on bare soil along the site's southeastern fence line; 4) TPH easterly of previous soil borings GB016 and GB017; 5) metals and TPH in groundwater southeast of GB018; 6) SVOCs in groundwater because of the occurrence of SVOCs in soil at previous soil borings GB016, GB017, and GB018; and 7) PCBs in groundwater southeast of previous monitoring well MW-C-2, because of the occurrence in soil at GB017, and because of the historical storage of possibly PCB-containing scrap materials on bare soil along the site's southeastern fence line.
GB046 (offsite)	South Area: Step out from GB021	Adjacent sample location: GB021 Soil: several SVOCs Groundwater: No groundwater samples from C-17, C-18, and GB021	Soil	1 5 9	x x	x x	x x	x	This location is proposed in response to the third data gap identified in the Site Investigation Report (CH2M HILL, 2013b). Evaluate the presence of: 1) SVOCs in soil southwest of previous soil boring GB021; 2) TPH in groundwater southwest of previous soil boring GB024; 3) metals, TPH, and PCBs in soil and metals, PCBs, and SVOCs in groundwater because of possible historical storage of scrap materials on bare soil along the site's southwestern fence line and the occurrence of these constituents in the southern portion of the site.
GB047	South Area: Approximately 40 feet northeast of previous soil boring GB019	Adjacent sample location: C-3, C-19, and GB019 Soil: PCBs and benzo(a)pyrene Groundwater: No groundwater samples from C-3, C-19, and GB019	Soil	1 5 9	x x	x x	x x	x	This location is proposed in response to the third data gap identified in the Site Investigation Report (CH2M HILL, 2013b). Evaluate the presence of: 1) SVOCs in soil northeast of previous soil boring GB019; 2) PCBs and TPH in soil because of the occurrence of these constituents in the southern portion of the site and possible historical storage of scrap materials on bare soil along the site's southeastern fence line; 3) metals in soil because of the possible historical storage of scrap materials on bare soil along the site's southeastern fence line, and 4) PCBs, SVOCs, and PCBs in groundwater because of the occurrence of these constituents in soil within the southern portion of the site and possible historical storage of scrap materials on bare soil along the site's southeastern fence line.
		Adjacent sample location: GB024	Soil	1	x	x	x	x	This location is proposed in response to the third and fifth data gaps identified in the Site Investigation Report (CH2M HILL, 2013b).

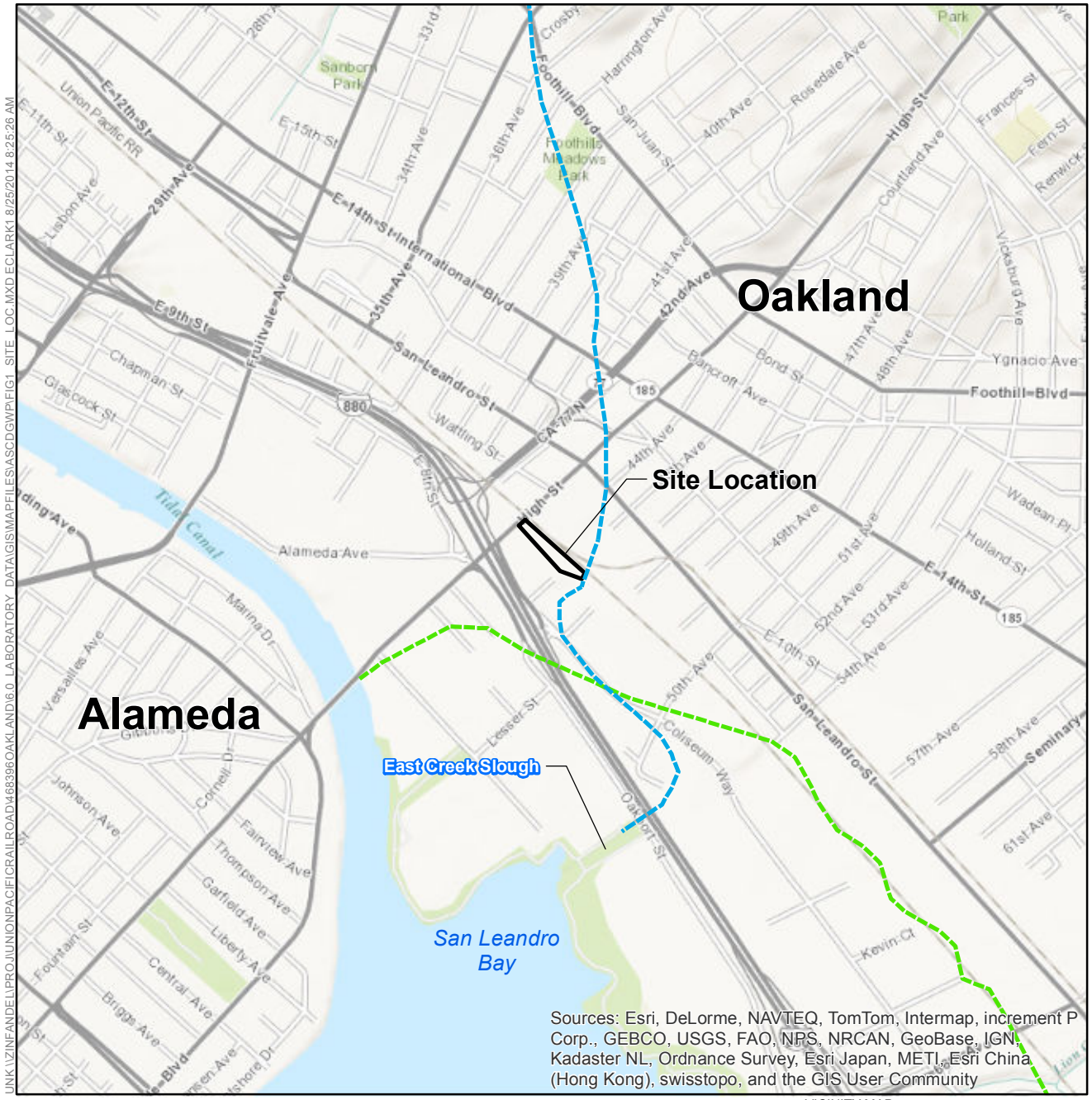
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Location ID	Location*	Constituents Detected Above Screening Levels from the Adjacent Sample Location(s) where Delineation is Proposed	Matrix	Sample Start Depth/Screen Interval (feet bgs)	PCBs	TPH-D/-MO	SVOCs	Metals	Rationale
GB048 (offsite)	South Area: Approximately 30 feet southwest of previous soil boring GB024	Soil: nickel, benzo(a)pyrene, and xylenes	Water	5	x	x	x	x	Evaluate the presence of: 1) SVOCs in soil southwest of the previous soil boring GB024; 2) PCBs and TPH in soil because of the occurrence of these constituents in the southern portion of the site and possible historical storage of scrap materials on bare soil along the site's southwestern fence line; 3) metals in soil because of possible historical storage of scrap materials on bare soil along the site's southwestern fence line; 4) TPH in groundwater southwest of previous soil boring GB024; and 5) metals, PCBs, and SVOCs in groundwater because of the occurrence of these constituents in soil within the southern portion of the site and possible historical storage of scrap materials on bare soil along the site's southwestern fence line. VOC analysis for delineation of xylenes in soil is not recommended because it was detected slightly above the screening level and VOCs are not considered COCs.
		Groundwater: cobalt, copper, lead, nickel, TPH, and xylenes		9			x	x	
				WT	x	x	x	x	
GB049	Approximately 35 feet northeast of previous monitoring well MW-C-5	Adjacent sample location: MW-C-5 and GB024	Soil	1	x	x	x	x	This location is proposed in response to the third data gap identified in the Site Investigation Report (CH2M HILL, 2013b). Evaluate the presence of PCBs, metals, SVOCs, and TPH in soil and groundwater in the northern corner of the southeastern portion of the site because of the occurrence of these constituents in soil and/or groundwater within the southern portion of the site and possible historical storage of scrap materials on bare soil along the site's southern fence line. VOC analysis for delineation of xylenes in soil is not recommended because it was detected slightly above the screening level and VOCs are not considered COCs.
		Soil: nickel, benzo(a)pyrene, and xylenes		5	x	x	x	x	
		Groundwater: cobalt, copper, lead, nickel, TPH, and xylenes	Water	9			x	x	
				WT	x	x	x	x	
MW-01	Central Area: Approximately 25' northwest of the former monitoring well MW-A-1	Adjacent sample location: MW-A-1	Soil	1	x	x	x	x	This location is proposed in response to the second data gap identified in the Site Investigation Report (CH2M HILL, 2013b). Evaluate the presence of metals, PCBs, SVOCs, and TPH in soil southeast of previous soil boring GB029, monitor groundwater gradients at the site, and evaluate the presence of metals, PCBs, SVOCs, and TPH in groundwater because of detections of these constituents at the previous soil boring GB029 and/or the previous monitoring well MW-A-1.
		Soil: No discrete soil samples collected at MW-A-1		5	x	x	x	x	
		Groundwater: several metals and TPH	Water	9	x	x	x	x	
				5-15	x	x	x	x	
MW-02	North Area: Location of previous soil boring GB004	Adjacent sample location: GB004 and GB005	Soil	6		x	x		This location is proposed in response to the first data gap identified in the Site Investigation Report (CH2M HILL, 2013b). Monitor groundwater gradients at the site and evaluate the presence of metals, SVOCs, and TPH detected in soil or groundwater at previous soil borings GB004 and GB005. Note: The proposed location for monitoring well MW-02 was moved from the middle portion of the site to the northern portion of the site to evaluate water quality trends and hydrogeological characteristics in the northern portion of the site. Due to proposed monitoring well MW-04 in the middle portion of the site, a monitoring well located at the previously proposed location for monitoring well MW-02 is not warranted at this time.
		Soil: TPH and several SVOCs		12		x	x		
		Groundwater: lead and several SVOCs	Water	6-16		x	x	x	
MW-03	South Area: Location of former monitoring well MW-C-2	Adjacent sample location: MW-C-2	Water	7-12 or 16-21	x	x	x	x	This location is proposed in response to the third data gap identified in the Site Investigation Report (CH2M HILL, 2013b). Monitor groundwater gradients at the site and evaluate: 1) metals and PCBs in groundwater at former monitoring well MW-C-2; 2) TPH in groundwater west of previous soil boring GB018, and 3) SVOCs in groundwater because of occurrences in soil near the proposed location.
MW-04	Central Area: Approximately 15 feet southeast of former monitoring well MW-B-2	Adjacent sample location: MW-B-2	Soil	Top of fill material (if present)	x	x	x	x	This location is proposed in response to the second data gap identified in the Site Investigation Report (CH2M HILL, 2013b). Monitor groundwater gradients at the site and evaluate metals, PCBs, SVOCs, and TPH in groundwater at former monitoring well MW-B-2 and southeast of previous soil boring GB027.
		Soil: No discrete soil samples collected at MW-B-2		4	x				
		Groundwater: lead and TPH	Water	8	x				
				5-15	x	x	x	x	
MW-05	South Area: Approximately 10 feet southeast of former monitoring well MW-C-5	Adjacent sample location: MW-C-5	Water	7-17	x	x	x	x	This location is proposed in response to the third and fifth data gaps identified in the Site Investigation Report (CH2M HILL, 2013b). Monitor groundwater gradients at the site and evaluate: 1) TPH detected in groundwater at previous soil boring GB024; and 2) metals, PCBs, and SVOCs in groundwater because of the occurrence of these constituents in soil within the southern portion of the site and possible historical storage of scrap materials on bare soil along the site's southern fence line.
		Soil: No discrete soil samples collected at MW-C-5							
		Groundwater: None							

*Sampling locations and depths, as well as the final number of samples, may change in the field on the basis of site conditions and results of field screening using a photoionization detector.




Notes:

- bgs = below ground surface
- PCB = polychlorinated biphenyl
- SVOC = semivolatile organic compound
- TPH = total petroleum hydrocarbons
- WT = water table



VICINITY MAP

LEGEND

-  Site Location
-  Approximate Location of Peralta Creek
-  Approximate Boundary of 1850 Tidal Marshes

Note:
Creek and historical shoreline features from Sowers and Richard (2009)

Reference:
Sowers, J.M., and C.M. Richard. 2009. Creek & Watershed Map of Oakland & Berkeley (Fourth Edition). Oakland Museum of California, Oakland, CA.
<http://www.museumca.org/creeks/images/TitleBlockOak.gif>.
Accessed on March 10, 2013.

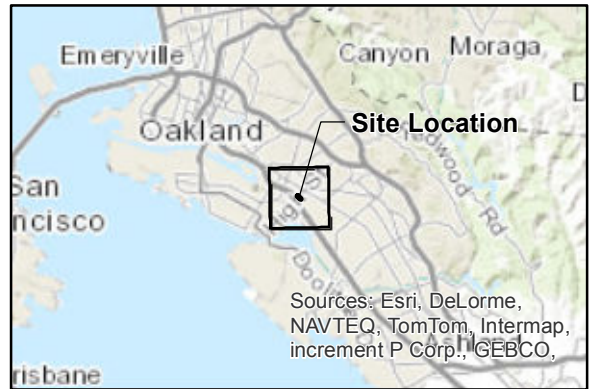
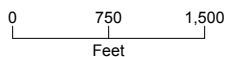
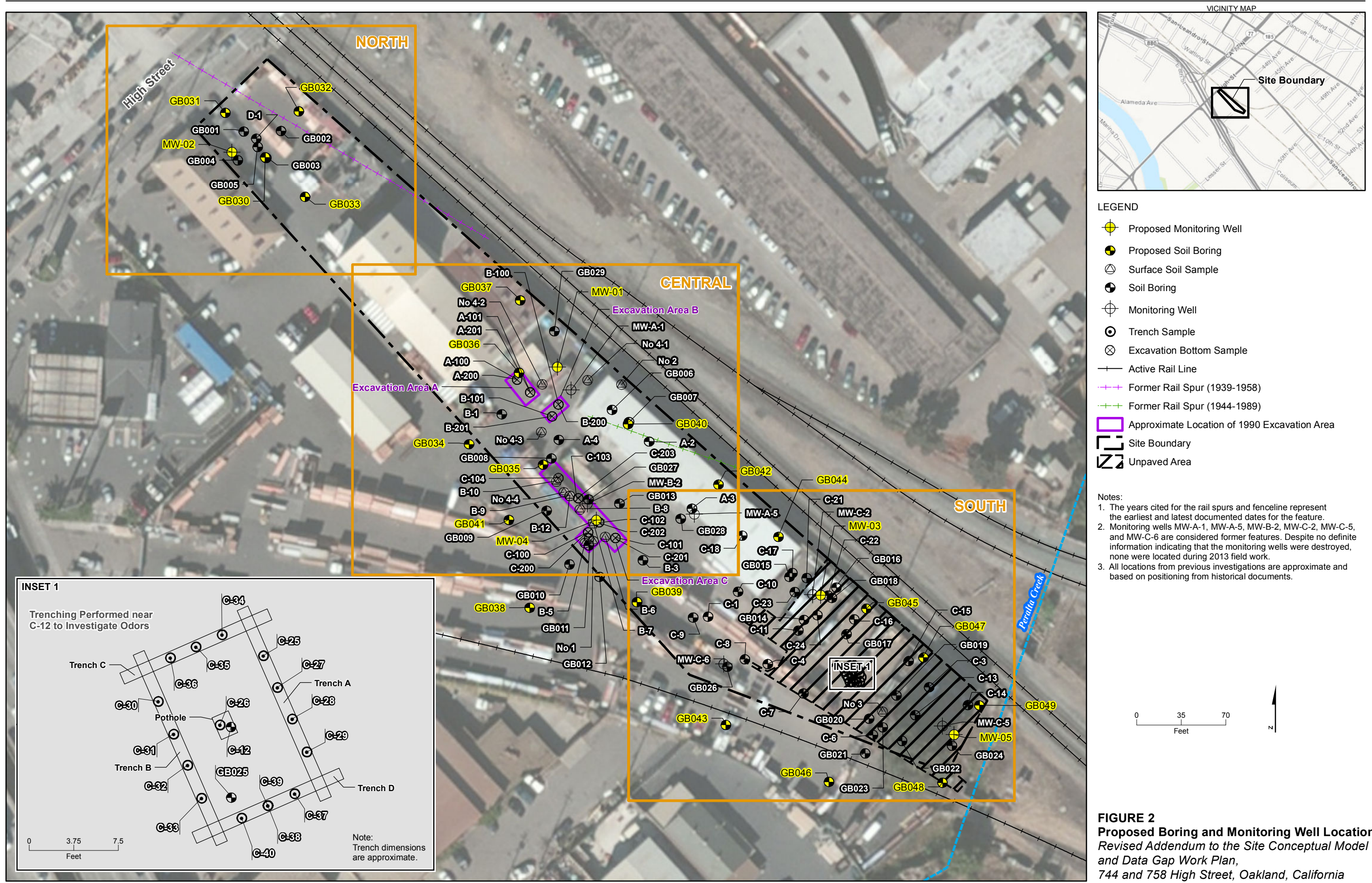
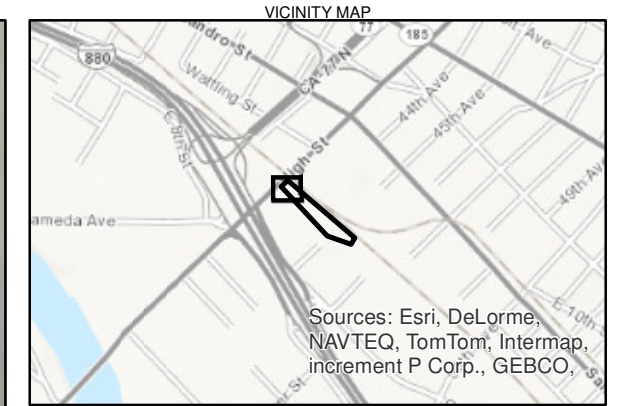


FIGURE 1
Site Location Map
Revised Addendum to the Site Conceptual Model and Data Gap Work Plan,
744 and 758 High Street, Oakland, California







LEGEND

- Proposed Monitoring Well
- Proposed Soil Boring
- Geoprobe Sample
- Soil Boring
- Constituent Concentrations Exceed Screening Levels
- Active Rail Line
- Former Rail Spur (1939-1958)
- Site Boundary

- Notes:**
1. S = Soil
W = Water
WT = Water Table
SVOCs = Semi Volatile Organic Compounds
TPH-D/-MO = Total Petroleum Hydrocarbon as Diesel/Motor Oil
 2. The years cited for the rail spurs and fenceline represent the earliest and latest documented dates for the feature.
 3. Monitoring wells MW-A-1, MW-A-5, MW-B-2, MW-C-2, MW-C-5, and MW-C-6 are considered former features. Despite no definite information indicating that the monitoring wells were destroyed, none were located during 2013 fieldwork.
 4. All locations from previous investigations are approximate and based on positioning from historical documents.
 5. **Red Label** = result exceeds screening levels.
 6. mg/kg = milligrams per kilogram.
 7. µg/L = micrograms per liter.
 8. J = estimated detected result.
 9. ESL = Environmental Screening Level (RWQCB, 2013)
 10. FD = field duplicate.
 11. Analyte Abbreviations:
A-12xx = Aroclor-12xx
PCB = Polychlorinated Biphenyls

Soil Sample Beginning Depth (feet bgs)	
Soil Sample Date (Month/Year)	
Sample Location ID	A-2
Soil Sample Concentration (mg/kg)	<63 (08/13; 18) M
Groundwater Sample Concentration (µg/L)	840 (08/13; 17) D
Groundwater Collection Date (Month/Year)	
Groundwater Collection Depth (feet bgs)	
Analyte Abbreviation	

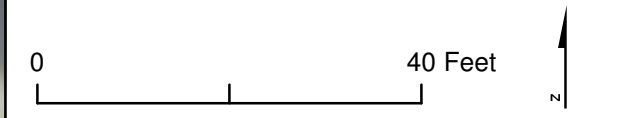
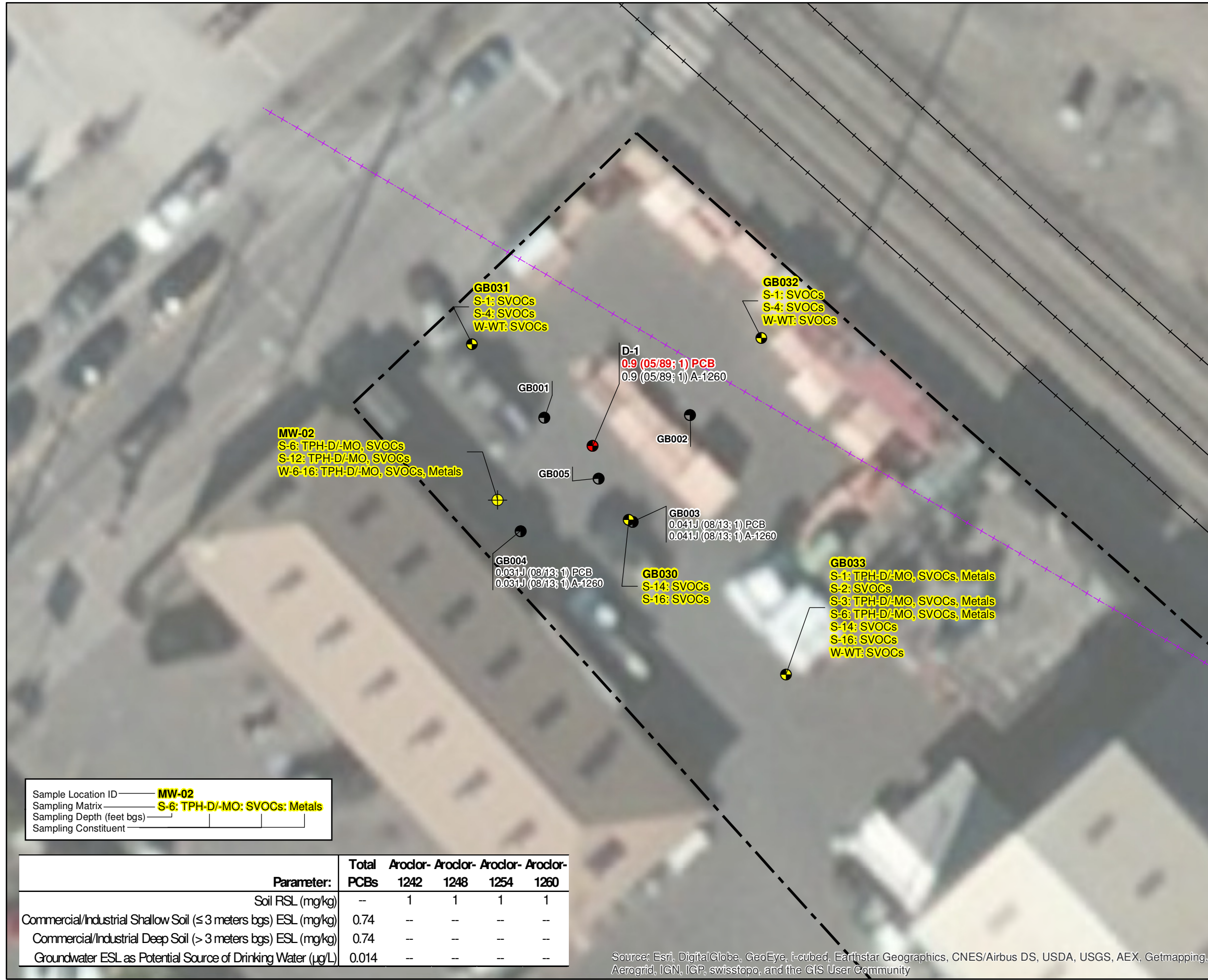


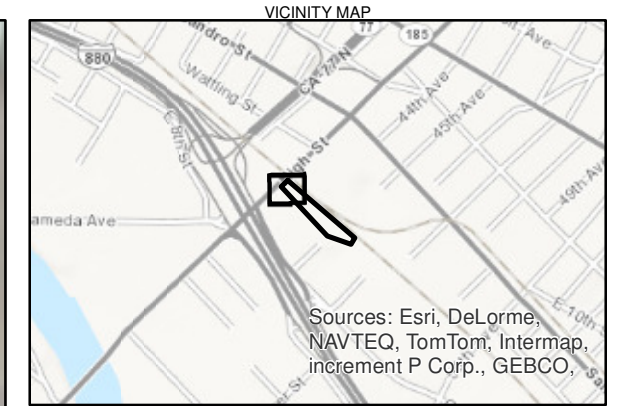
FIGURE 3
Soil and Groundwater Sample Results
 for Select Polychlorinated Biphenyls – North
 Revised Addendum to the Site Conceptual Model
 and Data Gap Work Plan,
 744 and 758 High Street, Oakland, California



Sample Location ID	MW-02
Sampling Matrix	S-6: TPH-D/-MO: SVOCs: Metals
Sampling Depth (feet bgs)	
Sampling Constituent	

Parameter:	Total PCBs	Aroclor-1242	Aroclor-1248	Aroclor-1254	Aroclor-1260
Soil RSL (mg/kg)	--	1	1	1	1
Commercial/Industrial Shallow Soil (≤ 3 meters bgs) ESL (mg/kg)	0.74	--	--	--	--
Commercial/Industrial Deep Soil (> 3 meters bgs) ESL (mg/kg)	0.74	--	--	--	--
Groundwater ESL as Potential Source of Drinking Water (µg/L)	0.014	--	--	--	--

Source: Esri, DigitalGlobe, GeoEye, i-cubed, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community



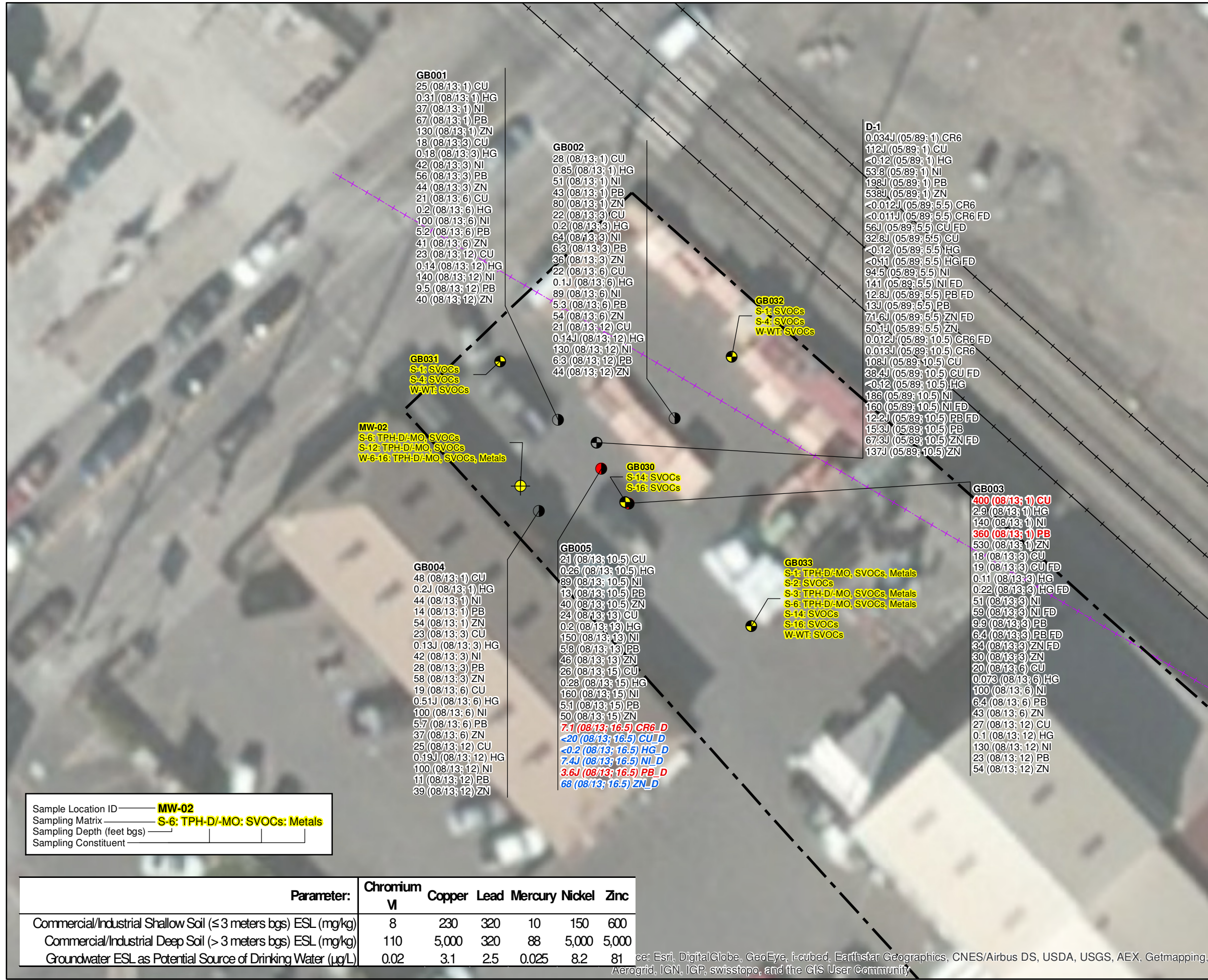
- LEGEND**
- Proposed Monitoring Well
 - Proposed Soil Boring
 - Geoprobe Sample
 - Soil Boring
 - Constituent Concentrations Exceed Screening Levels
 - Active Rail Line
 - Former Rail Spur (1939-1958)
 - Site Boundary

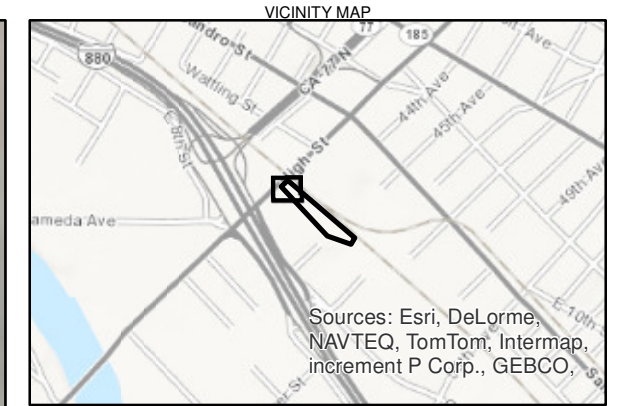
- Notes:**
1. S = Soil
W = Water
WT = Water Table
SVOCs = Semi Volatile Organic Compounds
TPH-D/-MO = Total Petroleum Hydrocarbon as Diesel/Motor Oil
 2. The years cited for the rail spurs and fenceline represent the earliest and latest documented dates for the feature.
 3. Monitoring wells MW-A-1, MW-A-5, MW-B-2, MW-C-2, MW-C-5, and MW-C-6 are considered former features. Despite no definite information indicating that the monitoring wells were destroyed, none were located during 2013 fieldwork.
 4. All locations from previous investigations are approximate and based on positioning from historical documents.
 5. **Red Label** = result exceeds screening levels.
 6. mg/kg = milligrams per kilogram.
 7. µg/L = micrograms per liter.
 8. J = estimated detected result.
 9. ESL = Environmental Screening Level (RWQCB, 2013)
 10. FD = field duplicate.
 11. The "D" suffix denotes filtered sample analyzed for dissolved metals. All pre-2013 groundwater samples are considered to be total metals.
 12. Analyte Abbreviations:
CrVI = Hexavalent Chromium Pb = Lead
Cu = Copper Ni = Nickel
Hg = Mercury Zn = Zinc

Soil Sample Beginning Depth (feet bgs)	
Soil Sample Date (Month/Year)	
Sample Location ID	A-2
Soil Sample Concentration (mg/kg)	<63 (08/13; 18) M
Groundwater Sample Concentration (µg/L)	840 (08/13; 17) D
Groundwater Collection Date (Month/Year)	
Groundwater Collection Depth (feet bgs)	
Analyte Abbreviation	



FIGURE 4
Soil and Groundwater Sample Results for Copper, Hexavalent Chromium, Lead, Nickel, Mercury, and Zinc - North
Revised Addendum to the Site Conceptual Model and Data Gap Work Plan, 744 and 758 High Street, Oakland, California





LEGEND

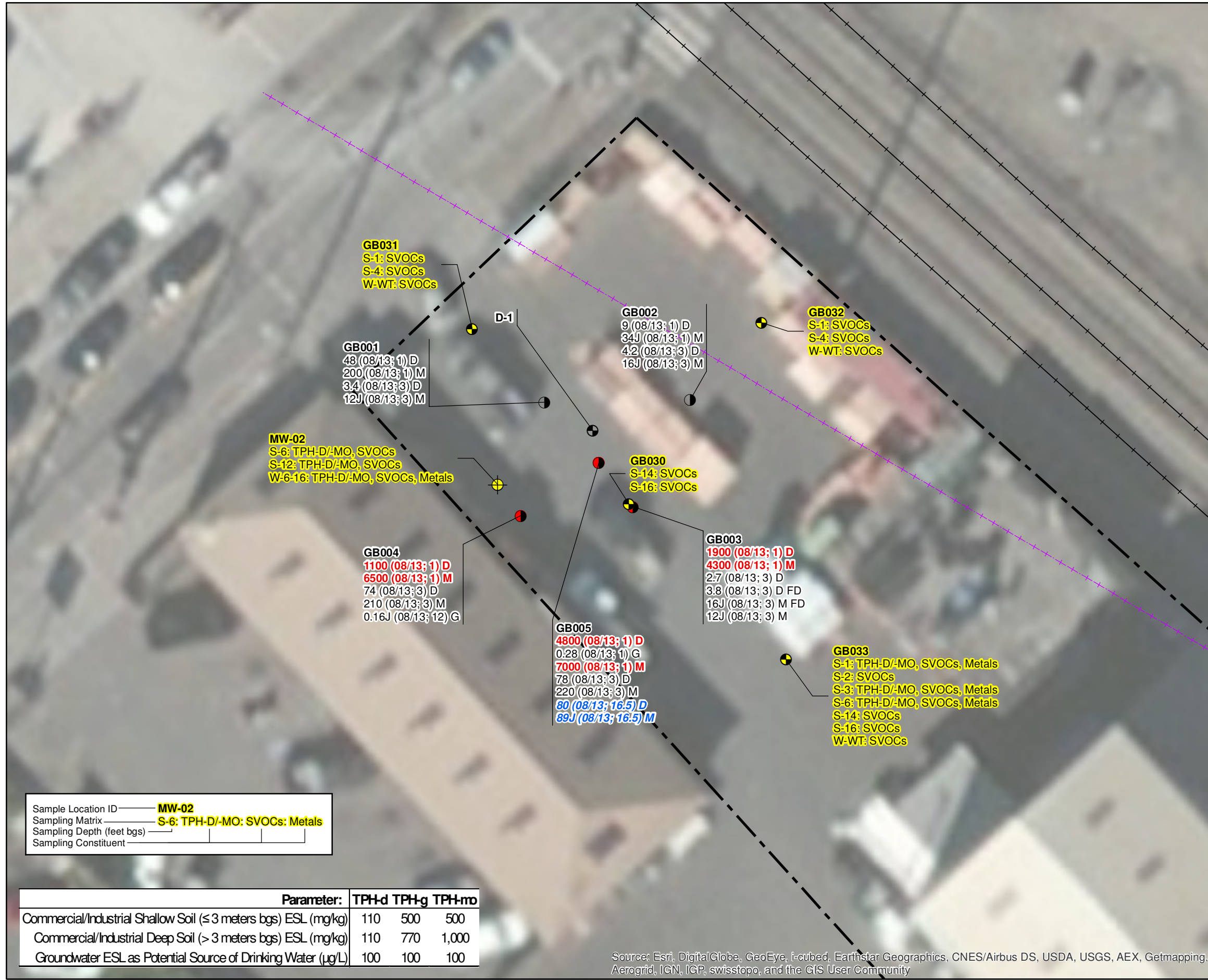
- Proposed Monitoring Well
- Proposed Soil Boring
- Geoprobe Sample
- Soil Boring
- Constituent Concentrations Exceed Screening Levels
- Active Rail Line
- Former Rail Spur (1939-1958)
- Site Boundary

- Notes:**
1. S = Soil
W = Water
WT = Water Table
SVOCs = Semi Volatile Organic Compounds
TPH-D/-MO = Total Petroleum Hydrocarbon as Diesel/Motor Oil
 2. The years cited for the rail spurs represent the earliest and latest documented dates for the feature.
 3. Monitoring wells MW-A-1, MW-A-5, MW-B-2, MW-C-2, MW-C-5, and MW-C-6 are considered former features. Despite no definite information indicating that the monitoring wells were destroyed, none were located during 2013 fieldwork.
 4. All locations from previous investigations are approximate and based on positioning from historical documents.
 5. An ESL has not been developed for TPH as a group. Historical TPH results were compared to the ESL for TPH-d because TPH-g is not a constituent of potential concern for the site.
 6. **Red Label** = result exceeds screening levels.
 7. mg/kg = milligrams per kilogram.
 8. µg/L = micrograms per liter.
 9. J = estimated detected result.
 10. FD = field duplicate.
 11. ESL = Environmental Screening Level (RWQCB, 2013)
 12. Analyte Abbreviations:
TPH = Total Petroleum Hydrocarbons
D = TPH as diesel
G = TPH as gasoline
M = TPH as motor oil

Soil Sample Beginning Depth (feet bgs) _____
 Soil Sample Date (Month/Year) _____
 Sample Location ID _____ **A-2**
 Soil Sample Concentration (mg/kg) _____ **<63 (08/13; 18) M**
 Groundwater Sample Concentration (µg/L) _____ **840 (08/13; 17) D**
 Groundwater Collection Date (Month/Year) _____
 Groundwater Collection Depth (feet bgs) _____
 Analyte Abbreviation _____

0 40 Feet

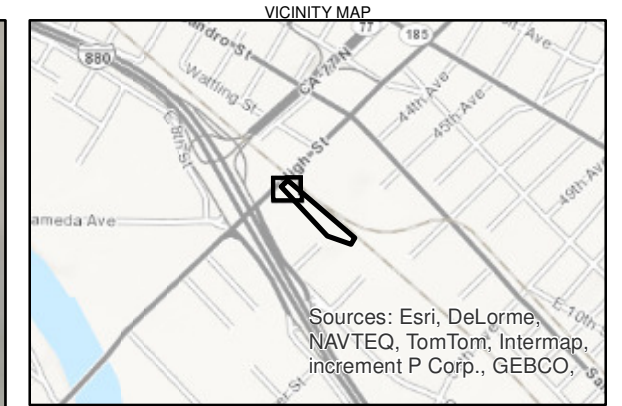
FIGURE 5
Soil and Groundwater Sample Results
 for Total Petroleum Hydrocarbons - North
 Revised Addendum to the Site Conceptual Model
 and Data Gap Work Plan,
 744 and 758 High Street, Oakland, California
CH2MHILL.



Sample Location ID	MW-02
Sampling Matrix	S-6: TPH-D/-MO: SVOCs: Metals
Sampling Depth (feet bgs)	
Sampling Constituent	

Parameter:	TPH-d	TPH-g	TPH-mo
Commercial/Industrial Shallow Soil (≤ 3 meters bgs) ESL (mg/kg)	110	500	500
Commercial/Industrial Deep Soil (> 3 meters bgs) ESL (mg/kg)	110	770	1,000
Groundwater ESL as Potential Source of Drinking Water (µg/L)	100	100	100

Source: Esri, DigitalGlobe, GeoEye, i-cubed, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community



LEGEND

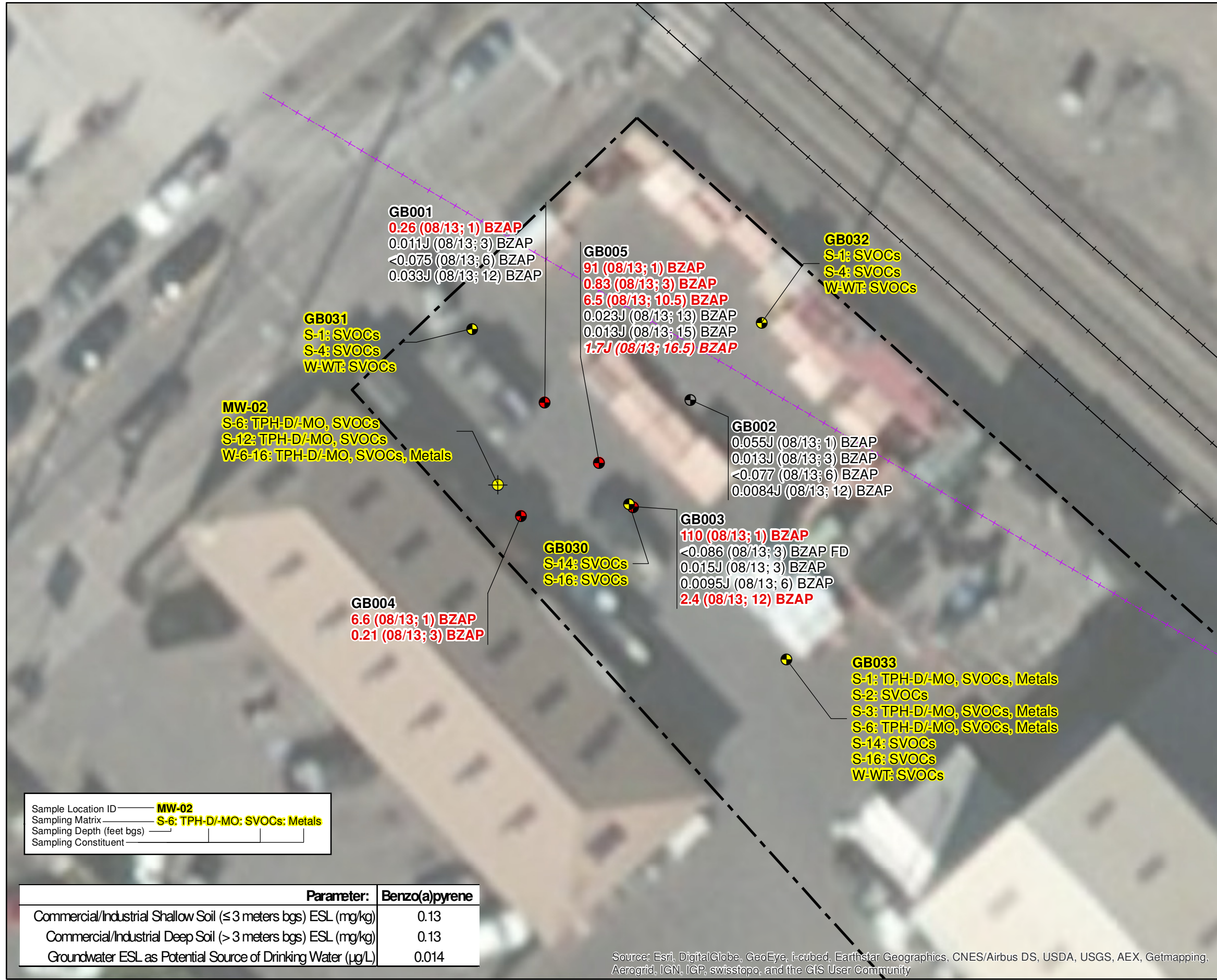
- Proposed Monitoring Well
- Proposed Soil Boring
- Soil Boring Sample
- Constituent Concentrations Exceed Screening Levels
- Active Rail Line
- Former Rail Spur (1939-1958)
- Site Boundary

- Notes:**
1. S = Soil
W = Water
WT = Water Table
SVOCs = Semi Volatile Organic Compounds
TPH-D/-MO = Total Petroleum Hydrocarbon as Diesel/Motor Oil
 2. The years cited for the rail spurs represent the earliest and latest documented dates for the feature.
 3. Monitoring wells MW-A-1, MW-A-5, MW-B-2, MW-C-2, MW-C-5, and MW-C-6 are considered former features. Despite no definite information indicating that the monitoring wells were destroyed, none were located during 2013 fieldwork.
 4. All locations from previous investigations are approximate and based on positioning from historical documents.
 5. **Red Label** = result exceeds screening levels.
 6. mg/kg = milligrams per kilogram.
 7. µg/L = micrograms per liter.
 8. J = estimated detected result.
 9. FD = field duplicate.
 10. ESL = Environmental Screening Level (RWQCB, 2013)
 11. Analyte Abbreviations:
BZAP = Benzo(a)pyrene

Soil Sample Beginning Depth (feet bgs)	
Soil Sample Date (Month/Year)	
Sample Location ID	A-2
Soil Sample Concentration (mg/kg)	<63 (08/13; 18) M
Groundwater Sample Concentration (µg/L)	840 (08/13; 17) D
Groundwater Collection Date (Month/Year)	
Groundwater Collection Depth (feet bgs)	
Analyte Abbreviation	



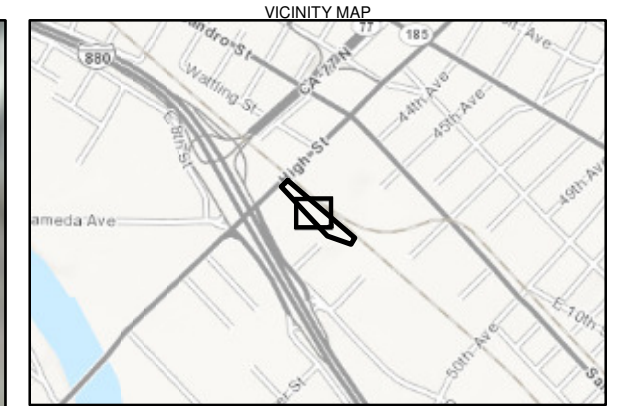
FIGURE 6
Soil and Groundwater Sample Results for Benzo(a)pyrene - North
 Revised Addendum to the Site Conceptual Model and Data Gap Work Plan,
 744 and 758 High Street, Oakland, California



Sample Location ID	MW-02
Sampling Matrix	S-6: TPH-D/-MO: SVOCs: Metals
Sampling Depth (feet bgs)	
Sampling Constituent	

Parameter:	Benzo(a)pyrene
Commercial/Industrial Shallow Soil (≤ 3 meters bgs) ESL (mg/kg)	0.13
Commercial/Industrial Deep Soil (> 3 meters bgs) ESL (mg/kg)	0.13
Groundwater ESL as Potential Source of Drinking Water (µg/L)	0.014

Source: Esri, DigitalGlobe, GeoEye, i-cubed, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community



LEGEND

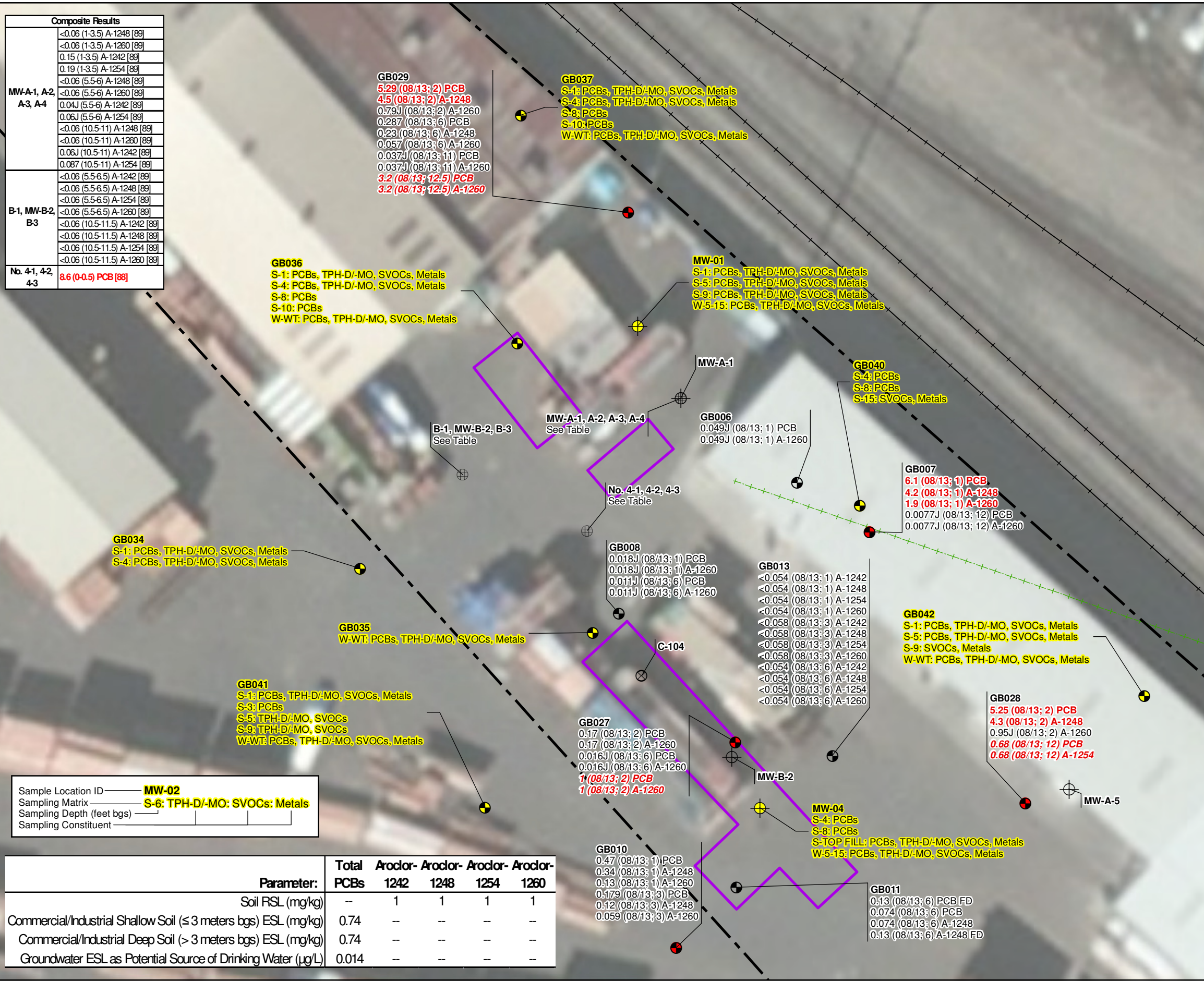
- Proposed Monitoring Well
- Proposed Soil Boring
- Composite Soil Sample
- Soil Boring Sample
- Monitoring Well
- Excavation Bottom Soil Sample
- Active Rail Line
- Former Rail Spur (1944-1989)
- Approximate Location of 1990 Excavation Area
- Site Boundary

- Notes:**
1. S = Soil
W = Water
WT = Water Table
SVOCs = Semi Volatile Organic Compounds
TPH-D/-MO = Total Petroleum Hydrocarbon as Diesel/Motor Oil
PCBs = Polychlorinated biphenyl
 2. The years cited for the rail spurs and fenceline represent the earliest and latest documented dates for the feature.
 3. Monitoring wells MW-A-1, MW-A-5, MW-B-2, MW-C-2, MW-C-5, and MW-C-6 are considered former features. Despite no definite information indicating that the monitoring wells were destroyed, none were located during 2013 fieldwork.
 4. All locations from previous investigations are approximate and based on positioning from historical documents.
 5. **Red Label** = result exceeds screening levels.
 6. mg/kg = milligrams per kilogram.
 7. µg/L = micrograms per liter.
 8. J = estimated detected result.
 9. ESL = Environmental Screening Level (RWQCB, 2013)
 10. FD = field duplicate.
 11. Analyte Abbreviations:
A-12xx = Aroclor-12xx
PCB = Polychlorinated Biphenyls

Soil Sample Beginning Depth (feet bgs) _____
 Soil Sample Date (Month/Year) _____
 Sample Location ID _____ **A-2** _____
 Soil Sample Concentration (mg/kg) _____ **<63 (08/13; 18) M** _____
 Groundwater Sample Concentration (µg/L) _____ **840 (08/13; 17) D** _____
 Groundwater Collection Date (Month/Year) _____
 Groundwater Collection Depth (feet bgs) _____
 Analyte Abbreviation _____

0 50 Feet

FIGURE 7
Soil and Groundwater Sample Results
 for Select Polychlorinated Biphenyls – Central
 Revised Addendum to the Site Conceptual Model
 and Data Gap Work Plan,
 744 and 758 High Street, Oakland, California

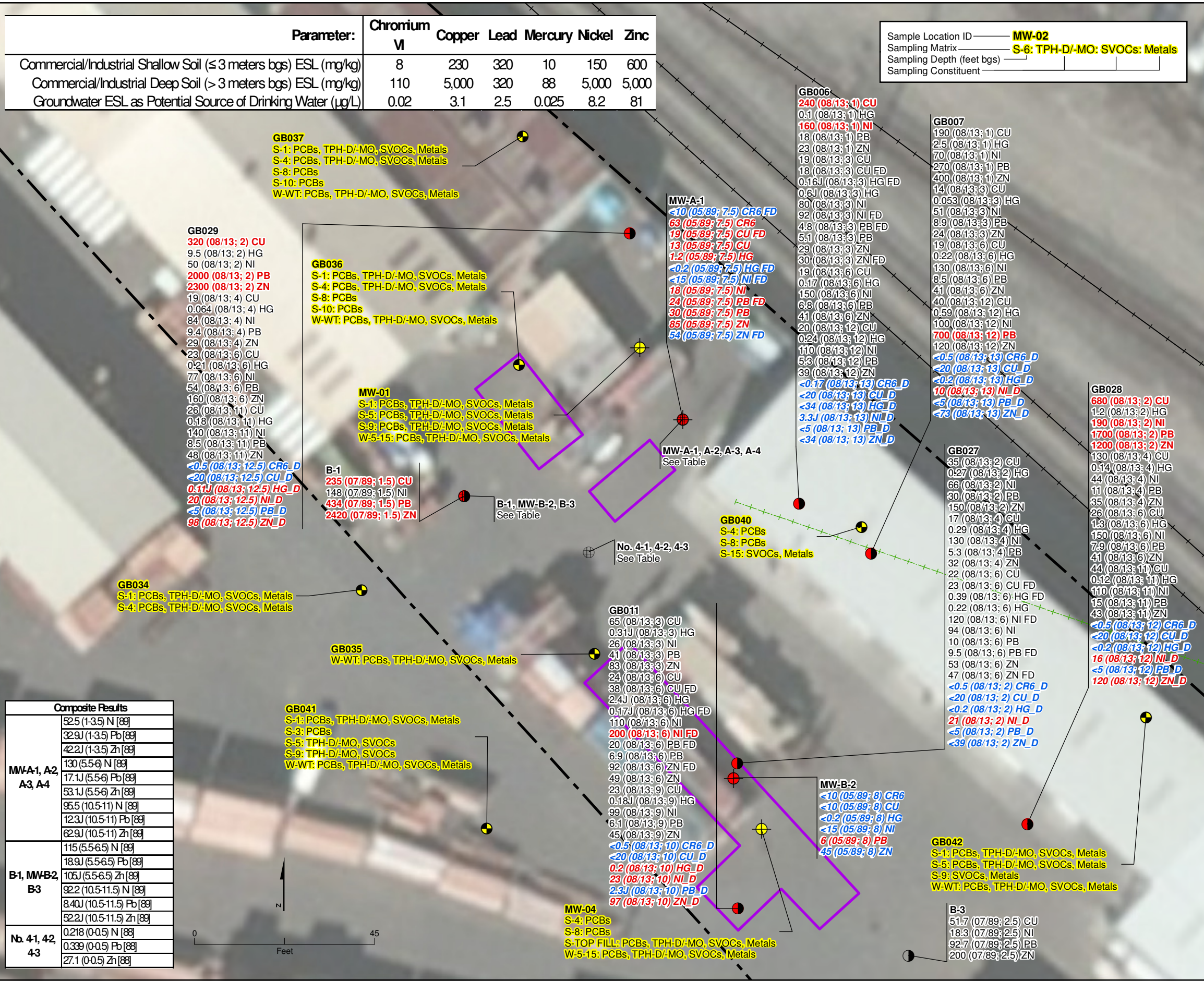


Composite Results

MW-A-1, A-2, A-3, A-4	<0.06 (1-3.5) A-1248 [89]
	<0.06 (1-3.5) A-1260 [89]
	0.15 (1-3.5) A-1242 [89]
	0.19 (1-3.5) A-1254 [89]
	<0.06 (5.5-6) A-1248 [89]
	<0.06 (5.5-6) A-1260 [89]
	0.04J (5.5-6) A-1242 [89]
	0.06J (5.5-6) A-1254 [89]
	<0.06 (10.5-11) A-1248 [89]
	<0.06 (10.5-11) A-1260 [89]
	0.06J (10.5-11) A-1242 [89]
	0.087 (10.5-11) A-1254 [89]
	<0.06 (5.5-6.5) A-1242 [89]
	<0.06 (5.5-6.5) A-1248 [89]
	<0.06 (5.5-6.5) A-1254 [89]
	<0.06 (5.5-6.5) A-1260 [89]
	<0.06 (10.5-11.5) A-1242 [89]
	<0.06 (10.5-11.5) A-1248 [89]
	<0.06 (10.5-11.5) A-1254 [89]
	<0.06 (10.5-11.5) A-1260 [89]
Nb. 4-1, 4-2, 4-3	8.6 (0-0.5) PCB [88]

Sample Location ID	MW-02
Sampling Matrix	S-6: TPH-D/-MO: SVOCs: Metals
Sampling Depth (feet bgs)	
Sampling Constituent	

Parameter:	Total PCBs	Aroclor-1242	Aroclor-1248	Aroclor-1254	Aroclor-1260
Soil RSL (mg/kg)	--	1	1	1	1
Commercial/Industrial Shallow Soil (≤ 3 meters bgs) ESL (mg/kg)	0.74	--	--	--	--
Commercial/Industrial Deep Soil (> 3 meters bgs) ESL (mg/kg)	0.74	--	--	--	--
Groundwater ESL as Potential Source of Drinking Water (µg/L)	0.014	--	--	--	--



Composite Results	
MW-A-1, A2, A3, A4	<6.0 (1-3.5) TPH[89]
B-1, MW-B2, B3	<6.0 (5.5-6) TPH[89]
	<6.0 (10.5-11) TPH[89]
	<6.0 (5.5-6.5) TPH[89]
	<6.0 (10.5-11.5) TPH[89]

GB037
 S-1: PCBs, TPH-D/MO, SVOCs, Metals
 S-4: PCBs, TPH-D/MO, SVOCs, Metals
 S-8: PCBs
 S-10: PCBs
 W-WT: PCBs, TPH-D/MO, SVOCs, Metals

MW-01
 S-1: PCBs, TPH-D/MO, SVOCs, Metals
 S-5: PCBs, TPH-D/MO, SVOCs, Metals
 S-9: PCBs, TPH-D/MO, SVOCs, Metals
 W-5-15: PCBs, TPH-D/MO, SVOCs, Metals

GB036
 S-1: PCBs, TPH-D/MO, SVOCs, Metals
 S-4: PCBs, TPH-D/MO, SVOCs, Metals
 S-8: PCBs
 S-10: PCBs
 W-WT: PCBs, TPH-D/MO, SVOCs, Metals

GB034
 S-1: PCBs, TPH-D/MO, SVOCs, Metals
 S-4: PCBs, TPH-D/MO, SVOCs, Metals

GB035
 W-WT: PCBs, TPH-D/MO, SVOCs, Metals

GB041
 S-1: PCBs, TPH-D/MO, SVOCs, Metals
 S-3: PCBs
 S-5: TPH-D/MO, SVOCs
 S-9: TPH-D/MO, SVOCs
 W-WT: PCBs, TPH-D/MO, SVOCs, Metals

Sample Location ID **MW-02**
 Sampling Matrix **S-6: TPH-D/MO: SVOCs: Metals**
 Sampling Depth (feet bgs) _____
 Sampling Constituent _____

Parameter:	TPH-d	TPH-g	TPH-mo
Commercial/Industrial Shallow Soil (< 3 meters bgs) ESL (mg/kg)	110	500	500
Commercial/Industrial Deep Soil (> 3 meters bgs) ESL (mg/kg)	110	770	1,000
Groundwater ESL as Potential Source of Drinking Water (µg/L)	100	100	100

GB029
 680 (08/13; 2) D
 0.47 (08/13; 2) G
 2100 (08/13; 2) M
 10J (08/13; 4) M
 98 (08/13; 6) D
 0.83 (08/13; 6) G
 620 (08/13; 6) M
 22 (08/13; 11) D
 0.37 (08/13; 11) G
 81 (08/13; 11) M
 490 (08/13; 12.5) D
 42J (08/13; 12.5) G
 1300 (08/13; 12.5) M

GB006
 250 (08/13; 1) D
 0.43 (08/13; 1) G
 510 (08/13; 1) M
 6.9 (08/13; 3) D
 7.4 (08/13; 3) D FD
 15J (08/13; 3) M
 12J (08/13; 3) M FD
 (08/13; 6) D
 (08/13; 12) D
 70 (08/13; 13) D
 110 (08/13; 13) M

GB027
 73 (08/13; 2) D
 310 (08/13; 2) M
 3.4J (08/13; 4) M
 19 (08/13; 6) D
 12 (08/13; 6) D FD
 120 (08/13; 6) M
 73 (08/13; 6) M FD
 990 (08/13; 2) D
 3400 (08/13; 2) M

GB009
 450 (08/13; 1) D
 1200 (08/13; 1) M
 16 (08/13; 3) D
 52J (08/13; 3) M
 10 (08/13; 6) D
 42J (08/13; 6) M

GB010
 4000 (08/13; 1) D
 0.13J (08/13; 1) G
 7100 (08/13; 1) M
 700 (08/13; 3) D
 0.41 (08/13; 3) G
 1500 (08/13; 3) M
 5.1 (08/13; 6) D
 27J (08/13; 6) M

GB011
 350 (08/13; 3) D
 1100 (08/13; 3) M
 8.1J (08/13; 6) D
 29J (08/13; 6) D FD
 74 (08/13; 6) M FD
 29J (08/13; 6) M
 34 (08/13; 9) D
 750 (08/13; 10) D
 340 (08/13; 10) M

MW-04
 S-4: PCBs
 S-8: PCBs
 S-TOP FILL: PCBs, TPH-D/MO, SVOCs, Metals
 W-5-15: PCBs, TPH-D/MO, SVOCs, Metals

GB013
 180 (08/13; 1) D
 8.3 (08/13; 1) G
 970 (08/13; 1) M
 2.4 (08/13; 3) D
 7.5J (08/13; 3) M
 150 (08/13; 6) D
 1000 (08/13; 6) M

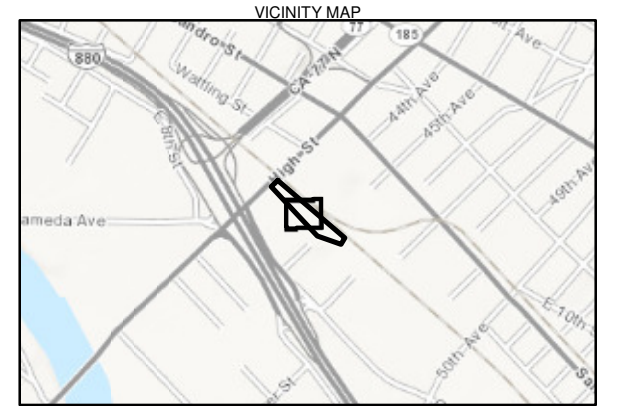
GB012
 2500 (08/13; 1) D
 0.22 (08/13; 1) G
 4700 (08/13; 1) M
 56 (08/13; 3) D
 100 (08/13; 3) M
 28 (08/13; 6) D
 130 (08/13; 6) M

GB042
 S-1: PCBs, TPH-D/MO, SVOCs, Metals
 S-5: PCBs, TPH-D/MO, SVOCs, Metals
 S-9: SVOCs, Metals
 W-WT: PCBs, TPH-D/MO, SVOCs, Metals

GB040
 S-4: PCBs
 S-8: PCBs
 S-15: SVOCs, Metals

GB007
 640 (08/13; 1) D
 0.5 (08/13; 1) G
 1500 (08/13; 1) M
 6 (08/13; 3) D
 20J (08/13; 3) M
 0.1J (08/13; 6) G
 3.3J (08/13; 6) M
 13 (08/13; 12) D
 25J (08/13; 12) M
 27J (08/13; 13) D

GB028
 1300 (08/13; 2) D
 0.25 (08/13; 2) G
 3500 (08/13; 2) M
 61 (08/13; 4) D
 97 (08/13; 4) M
 7J (08/13; 6) M
 2.9J (08/13; 6) M FD
 9J (08/13; 11) M
 380 (08/13; 12) D
 580 (08/13; 12) M



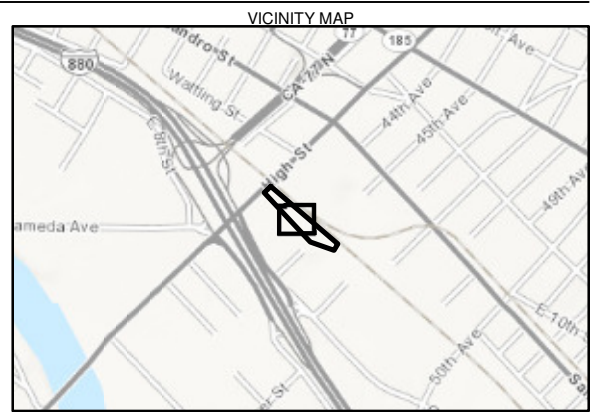
- LEGEND**
- ⊕ Proposed Monitoring Well
 - ⊙ Proposed Soil Boring
 - ⊕ Composite Sample
 - ⊙ Geoprobe Sample
 - ⊕ Monitoring Well
 - ⊗ Excavation Bottom Sample
 - Constituent Concentrations Exceed Screening Levels
 - Active Rail Line
 - Former Rail Spur (1944-1989)
 - Approximate Location of 1990 Excavation Area
 - ▭ Site Boundary

- Notes:**
1. S = Soil W = Water WT = Water Table
 SVOCs = Semi Volatile Organic Compounds
 TPH-D/MO = Total Petroleum Hydrocarbon as Diesel/Motor Oil
 PCBs = Polychlorinated biphenyl
 2. The years cited for the rail spurs represent the earliest and latest documented dates for the feature.
 3. Monitoring wells MW-A-1, MW-B-2, MW-C-2, MW-C-5, and MW-C-6 are considered former features. Despite no definite information indicating that the monitoring wells were destroyed, none were located during 2013 fieldwork.
 4. All locations from previous investigations are approximate and based on positioning from historical documents.
 5. An ESL has not been developed for TPH as a group. Historical TPH results were compared to the ESL for TPH-d because TPH-g is not a constituent of potential concern for the site.
 6. **Red Label** = result exceeds screening levels.
 7. mg/kg = milligrams per kilogram.
 8. µg/L = micrograms per liter.
 9. J = estimated detected result.
 10. FD = field duplicate.
 11. ESL = Environmental Screening Level (RWQCB, 2013)
 12. Analyte Abbreviations:
 TPH = Total Petroleum Hydrocarbons G = TPH as gasoline
 D = TPH as diesel M = TPH as motor oil

Soil Sample Beginning Depth (feet bgs) _____
 Soil Sample Date (Month/Year) _____
 Sample Location ID **A-2**
 Soil Sample Concentration (mg/kg) **<63 (08/13; 18) M**
 Groundwater Sample Concentration (µg/L) **840 (08/13; 17) D**
 Groundwater Collection Date (Month/Year) _____
 Groundwater Collection Depth (feet bgs) _____
 Analyte Abbreviation _____

FIGURE 9
Soil and Groundwater Sample Results
 for Total Petroleum Hydrocarbons - Central
 Revised Addendum to the Site Conceptual Model
 and Data Gap Work Plan,
 744 and 758 High Street, Oakland, California

Parameter:	Benzo(a)pyrene
Commercial/Industrial Shallow Soil (≤ 3 meters bgs) ESL (mg/kg)	0.13
Commercial/Industrial Deep Soil (> 3 meters bgs) ESL (mg/kg)	0.13
Groundwater ESL as Potential Source of Drinking Water (µg/L)	0.014



LEGEND

- Proposed Monitoring Well
- Proposed Soil Boring
- Soil Boring Sample
- Constituent Concentrations Exceed Screening Levels
- Active Rail Line
- Former Rail Spur (1944-1989)
- Approximate Location of 1990 Excavation Area
- Site Boundary

- Notes:**
1. S = Soil
W = Water
WT = Water Table
SVOCs = Semi Volatile Organic Compounds
TPH-D/-MO = Total Petroleum Hydrocarbon as Diesel/Motor Oil
PCBs = Polychlorinated biphenyl
 2. The years cited for the rail spurs represent the earliest and latest documented dates for the feature.
 3. Monitoring wells MW-A-1, MW-A-5, MW-B-2, MW-C-2, MW-C-5, and MW-C-6 are considered former features. Despite no definite information indicating that the monitoring wells were destroyed, none were located during 2013 fieldwork.
 4. All locations from previous investigations are approximate and based on positioning from historical documents.
 5. **Red Label** = result exceeds screening levels.
 6. mg/kg = milligrams per kilogram.
 7. µg/L = micrograms per liter.
 8. J = estimated detected result.
 9. FD = field duplicate.
 10. ESL = Environmental Screening Level (RWQCB, 2013)
 11. Analyte Abbreviations:
BZAP = Benzo(a)pyrene

Soil Sample Beginning Depth (feet bgs)	
Soil Sample Date (Month/Year)	
Sample Location ID	A-2
Soil Sample Concentration (mg/kg)	<63 (08/13; 18) M
Groundwater Sample Concentration (µg/L)	840 (08/13; 17) D
Groundwater Collection Date (Month/Year)	
Groundwater Collection Depth (feet bgs)	
Analyte Abbreviation	

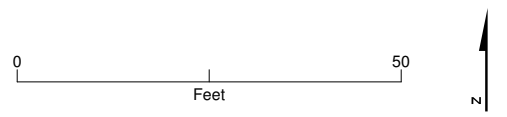
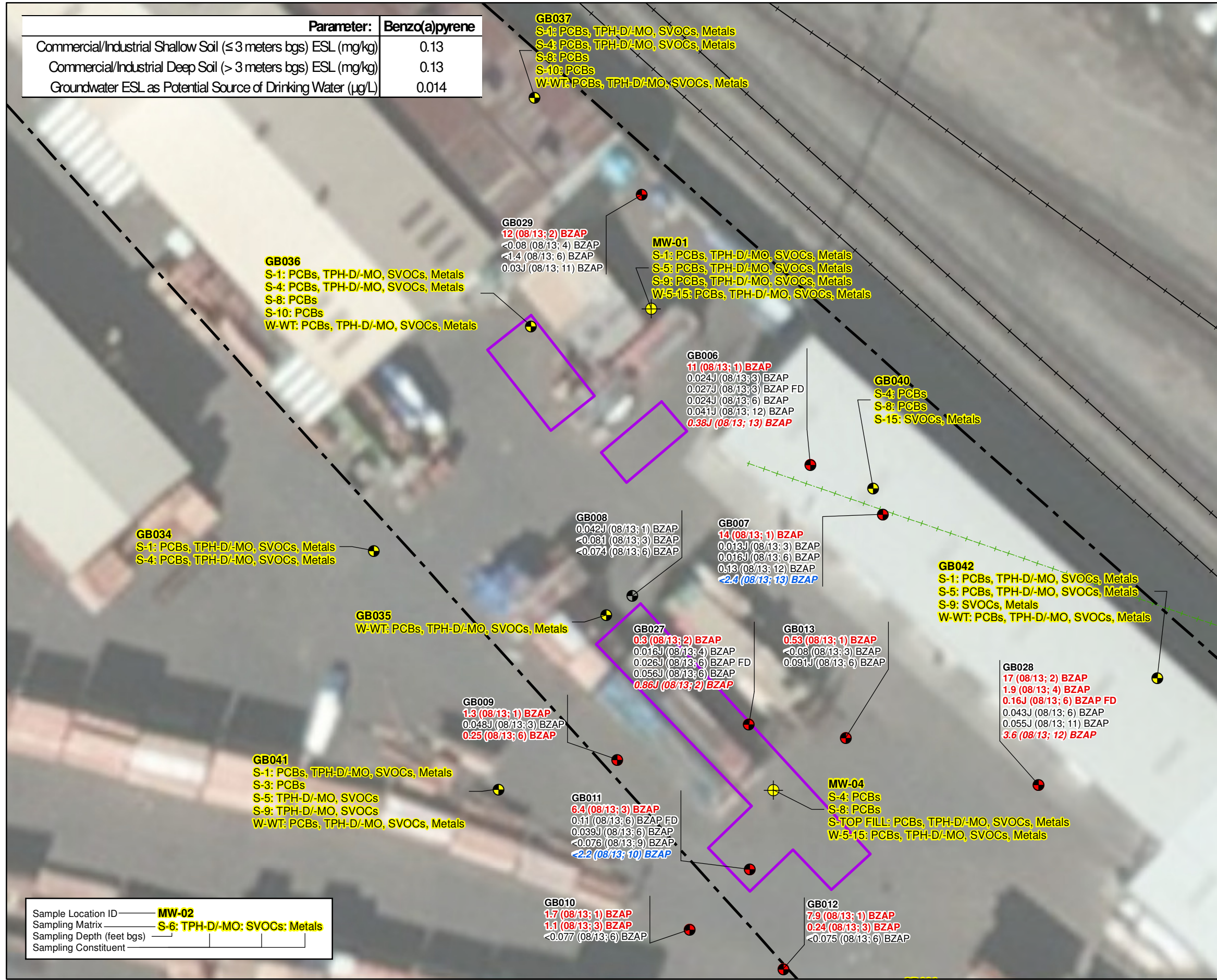
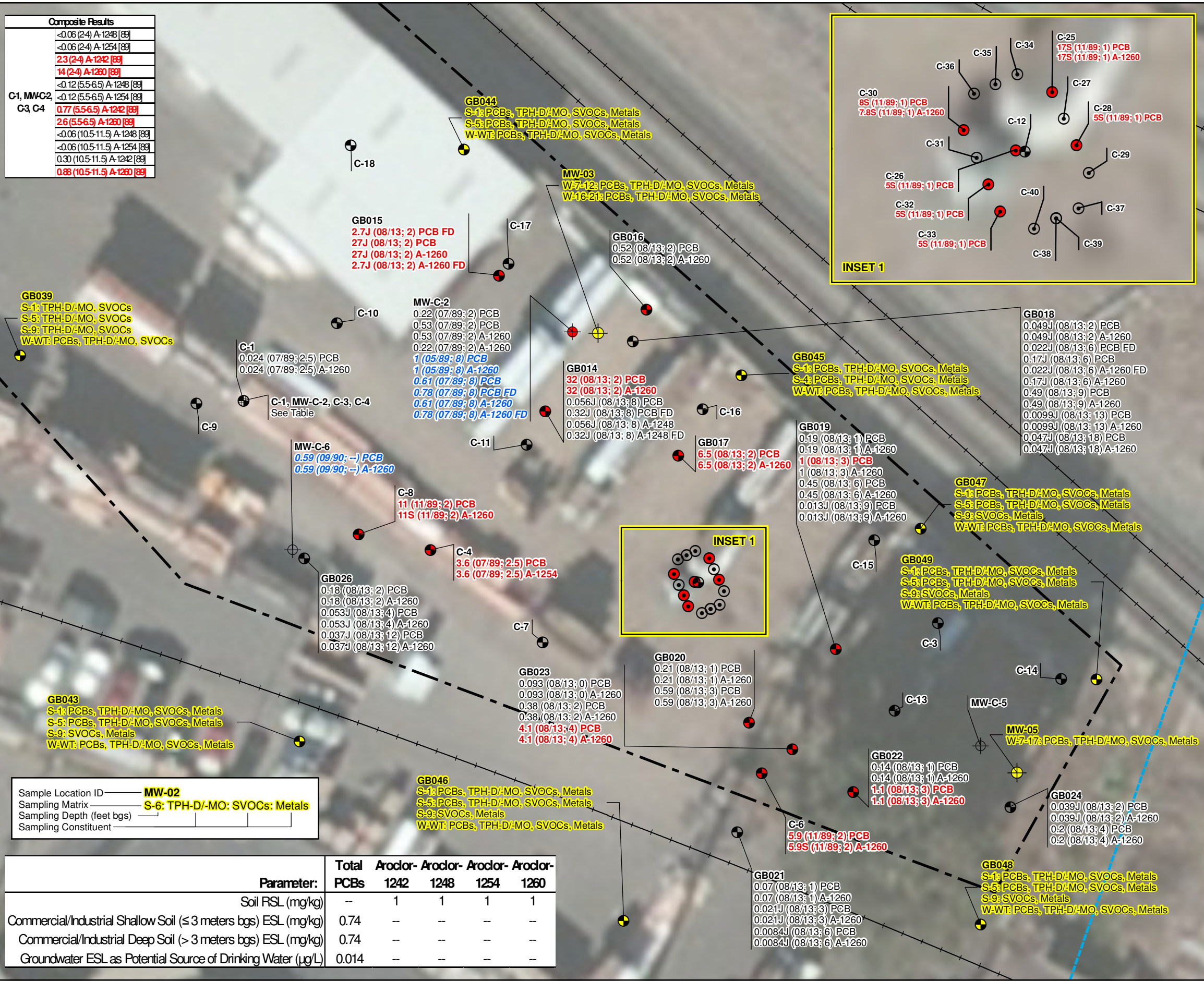


FIGURE 10
Soil and Groundwater Sample Results
 for Benzo(a)pyrene - Central
 Revised Addendum to the Site Conceptual Model
 and Data Gap Work Plan,
 744 and 758 High Street, Oakland, California



Sample Location ID	MW-02
Sampling Matrix	S-6: TPH-D/-MO: SVOCs: Metals
Sampling Depth (feet bgs)	
Sampling Constituent	

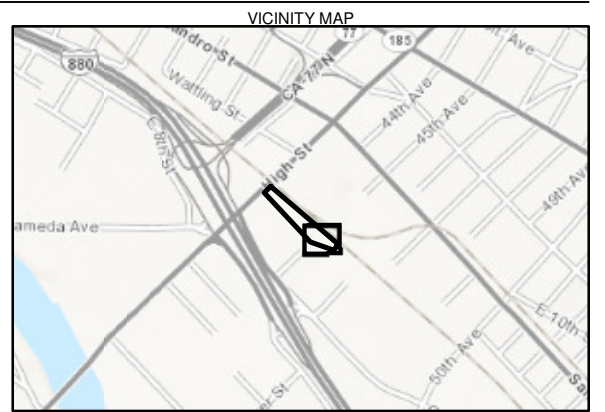


Composite Results

C1, MW-C2, C3, C4	<0.06 (2-4) A-1248 [89]
	<0.06 (2-4) A-1254 [89]
	2.3 (2-4) A-1242 [89]
	14 (2-4) A-1260 [89]
	<0.12 (5.5-6.5) A-1248 [89]
	<0.12 (5.5-6.5) A-1254 [89]
	0.77 (5.5-6.5) A-1242 [89]
	2.6 (5.5-6.5) A-1260 [89]
	<0.06 (10.5-11.5) A-1248 [89]
	<0.06 (10.5-11.5) A-1254 [89]
	0.30 (10.5-11.5) A-1242 [89]
	0.88 (10.5-11.5) A-1260 [89]

Sample Location ID	MW-02
Sampling Matrix	S-6: TPH-D/MO; SVOCs; Metals
Sampling Depth (feet bgs)	
Sampling Constituent	

Parameter:	Total PCBs	Aroclor-1242	Aroclor-1248	Aroclor-1254	Aroclor-1260
Soil RSL (mg/kg)	--	1	1	1	1
Commercial/Industrial Shallow Soil (≤ 3 meters bgs) ESL (mg/kg)	0.74	--	--	--	--
Commercial/Industrial Deep Soil (> 3 meters bgs) ESL (mg/kg)	0.74	--	--	--	--
Groundwater ESL as Potential Source of Drinking Water (µg/L)	0.014	--	--	--	--



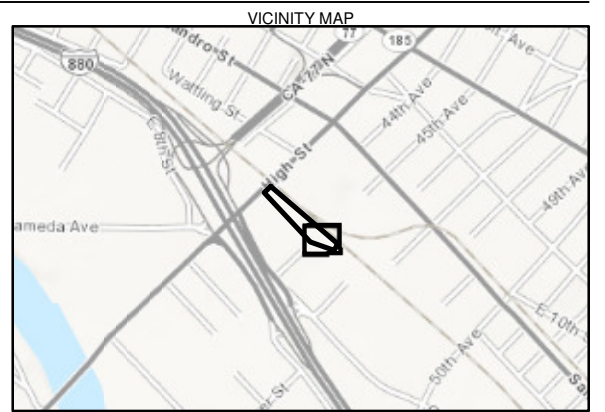
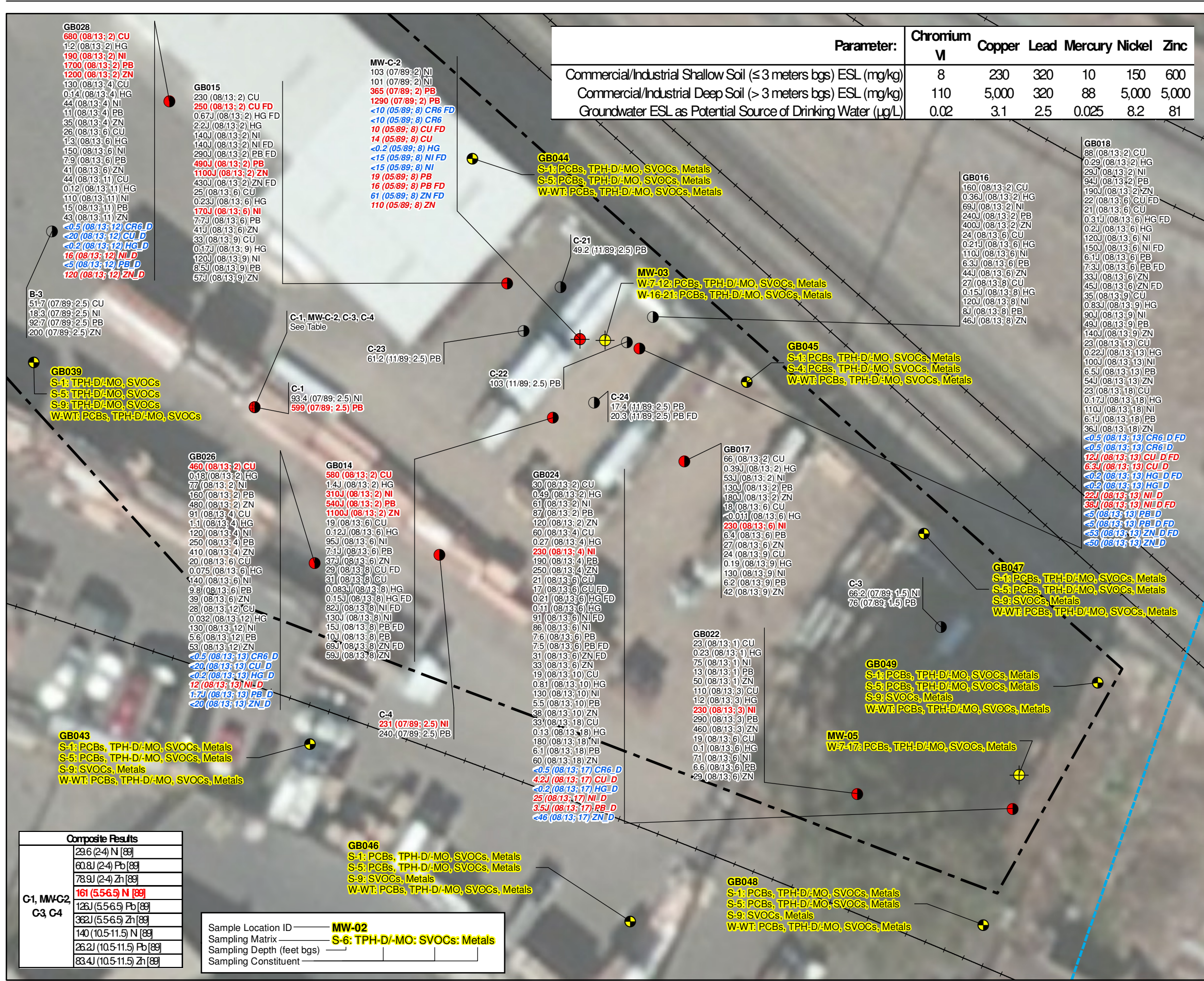
- LEGEND**
- Proposed Monitoring Well
 - Proposed Soil Boring
 - Geoprobe Sample
 - Surface Soil Sample
 - Soil Boring
 - Monitoring Well
 - Trench Sample
 - Excavation Bottom Sample
 - Constituent Concentrations Exceed Screening Levels
 - Active Rail Line
 - Site Boundary

- Notes:**
- S = Soil W = Water WT = Water Table
SVOCs = Semi Volatile Organic Compounds
TPH-D/MO = Total Petroleum Hydrocarbon as Diesel/Motor Oil
PCBs = Polychlorinated biphenyl
 - The years cited for the rail spurs and fence line represent the earliest and latest documented dates for the feature.
 - Monitoring wells MW-A-1, MW-A-5, MW-B-2, MW-C-2, MW-C-5, and MW-C-6 are considered former features. Despite no definite information indicating that the monitoring wells were destroyed, none were located during 2013 fieldwork.
 - All locations from previous investigations are approximate and based on positioning from historical documents.
 - Red Label = result exceeds screening levels.
 - mg/kg = milligrams per kilogram.
 - µg/L = micrograms per liter.
 - J = estimated detected result.
 - ESL = Environmental Screening Level (RWQCB, 2013)
 - FD = field duplicate.
 - Analyte Abbreviations:
A-12xx = Aroclor-12xx
PCB = Polychlorinated Biphenyls

Soil Sample Beginning Depth (feet bgs)	
Soil Sample Date (Month/Year)	
Sample Location ID	A-2
Soil Sample Concentration (mg/kg)	<63 (08/13; 18) M
Groundwater Sample Concentration (µg/L)	840 (08/13; 17) D
Groundwater Collection Date (Month/Year)	
Groundwater Collection Depth (feet bgs)	
Analyte Abbreviation	



FIGURE 11
Soil and Groundwater Sample Results for Select Polychlorinated Biphenyls – South Revised Addendum to the Site Conceptual Model and Data Gap Work Plan, 744 and 758 High Street, Oakland, California



- LEGEND**
- Proposed Monitoring Well
 - Proposed Soil Boring
 - Composite Sample
 - Geoprobe Sample
 - Monitoring Well
 - Constituent Concentrations Exceed Screening Levels
 - Active Rail Line
 - Site Boundary

- Notes:**
1. S = Soil W = Water WT = Water Table
SVOCs = Semi Volatile Organic Compounds
TPH-D/MO = Total Petroleum Hydrocarbon as Diesel/Motor Oil
PCBs = Polychlorinated biphenyl
 2. The years cited for the rail spurs and fence line represent the earliest and latest documented dates for the feature.
 3. Monitoring wells MW-A-1, MW-A-5, MW-B-2, MW-C-2, MW-C-5, and MW-C-6 are considered former features. Despite no definite information indicating that the monitoring wells were destroyed, none were located during 2013 fieldwork.
 4. All locations from previous investigations are approximate and based on positioning from historical documents.
 5. **Red Label** = result exceeds screening levels.
 6. mg/kg = milligrams per kilogram.
 7. µg/L = micrograms per liter.
 8. J = estimated detected result.
 9. ESL = Environmental Screening Level (RWQCB, 2013)
 10. FD = field duplicate.
 11. The "D" suffix denotes filtered sample analyzed for dissolved metals. All pre-2013 groundwater samples are considered to be total metals.
 12. Analyte Abbreviations:
CrVI = Hexavalent Chromium Ni = Nickel
Cu = Copper Pb = Lead
Hg = Mercury Zn = Zinc

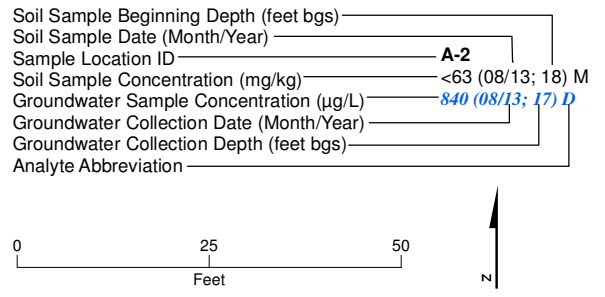
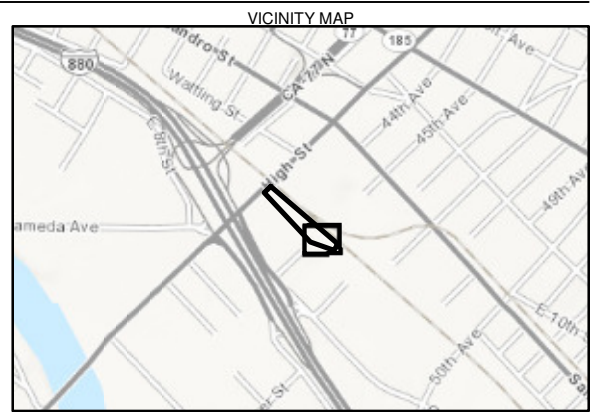
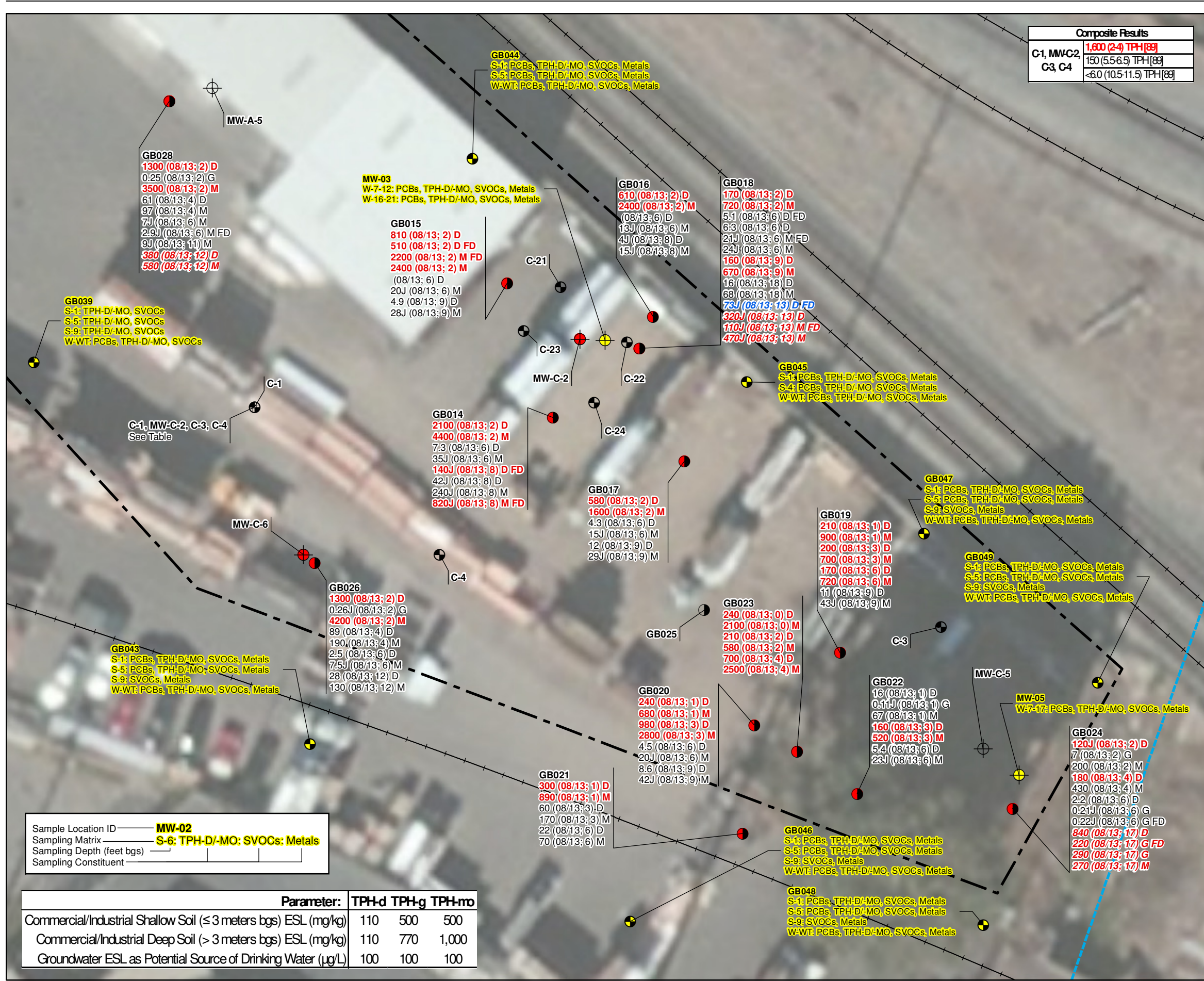


FIGURE 12
Soil and Groundwater Sample Results for Copper, Hexavalent Chromium, Lead, Nickel, Mercury, and Zinc – South
 Revised Addendum to the Site Conceptual Model and Data Gap Work Plan,
 744 and 758 High Street, Oakland, California
CH2MHILL.



- LEGEND**
- Proposed Monitoring Well
 - Proposed Soil Boring
 - Composite Sample
 - Geoprobe Sample
 - Soil Boring
 - Monitoring Well
 - Constituent Concentrations Exceeded Screening Levels
 - Active Rail Line
 - Site Boundary

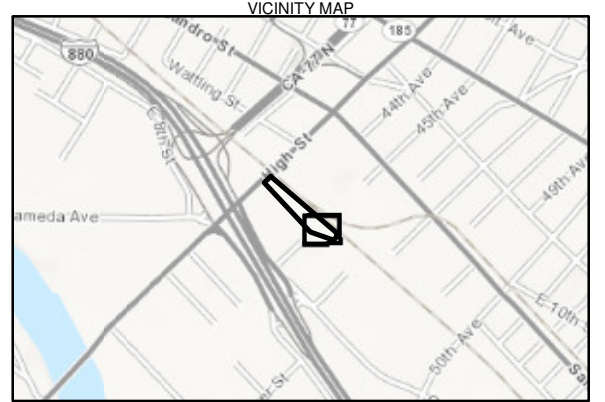
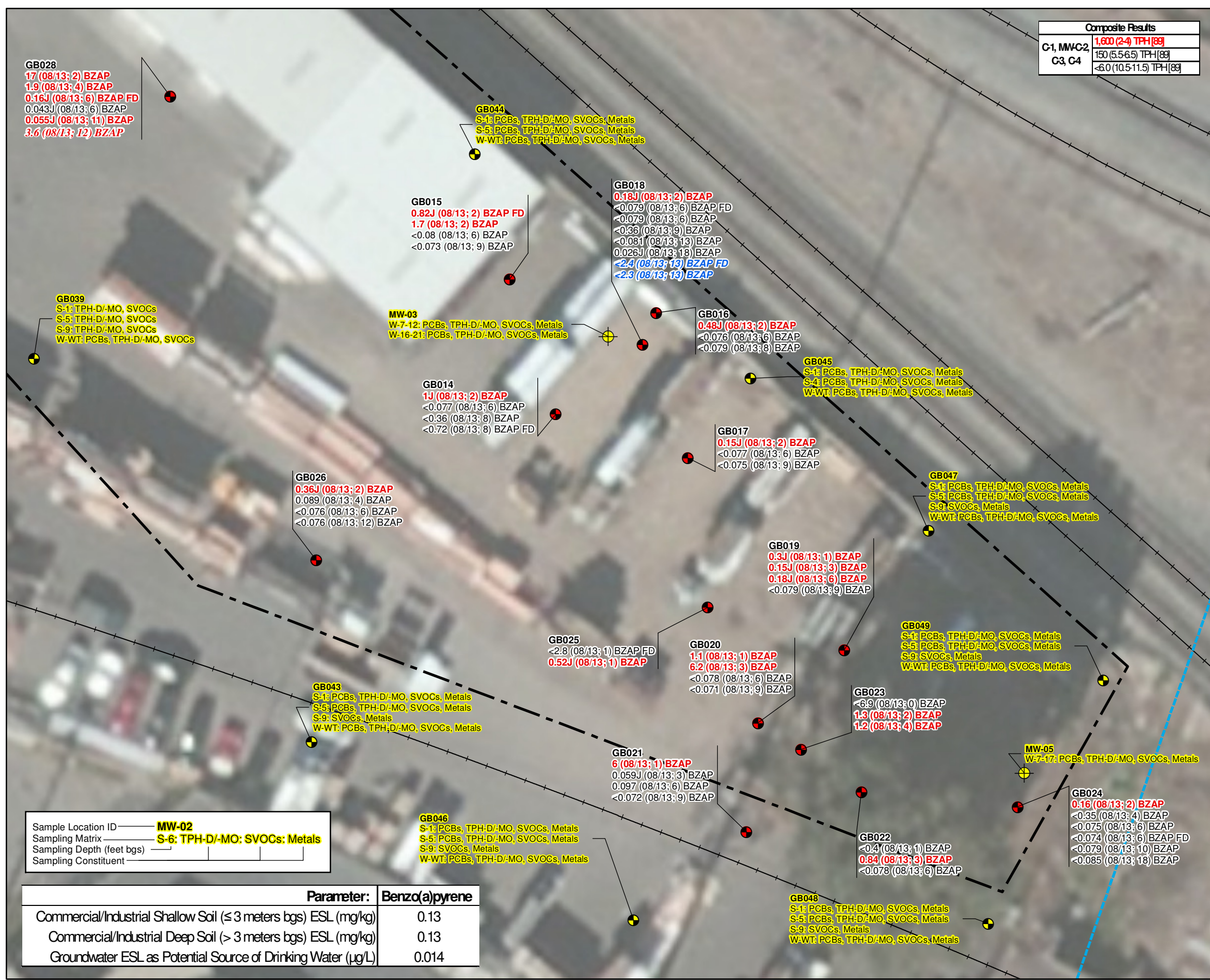
- Notes:**
1. S = Soil W = Water WT = Water Table
SVOCs = Semi Volatile Organic Compounds
TPH-D/MO = Total Petroleum Hydrocarbon as Diesel/Motor Oil
PCBs = Polychlorinated biphenyl
 2. The years cited for the rail spurs represent the earliest and latest documented dates for the feature.
 3. Monitoring wells MW-A-1, MW-A-5, MW-B-2, MW-C-2, MW-C-5, and MW-C-6 are considered former features. Despite no definite information indicating that the monitoring wells were destroyed, none were located during 2013 fieldwork.
 4. All locations from previous investigations are approximate and based on positioning from historical documents.
 5. An ESL has not been developed for TPH as a group. Historical TPH results were compared to the ESL for TPH-d because TPH-g is not a constituent of potential concern for the site.
 6. **Red Label** = result exceeds screening levels.
 7. mg/kg = milligrams per kilogram.
 8. µg/L = micrograms per liter.
 9. J = estimated detected result.
 10. FD = field duplicate.
 11. ESL = Environmental Screening Level (RWQCB, 2013)
 12. Analyte Abbreviations:
TPH = Total Petroleum Hydrocarbons M = TPH as motor oil
D = TPH as diesel G = TPH as gasoline

Soil Sample Beginning Depth (feet bgs)	
Soil Sample Date (Month/Year)	
Sample Location ID	A-2
Soil Sample Concentration (mg/kg)	<63 (08/13; 18) M
Groundwater Sample Concentration (µg/L)	840 (08/13; 17) D
Groundwater Collection Date (Month/Year)	
Groundwater Collection Depth (feet bgs)	
Analyte Abbreviation	

Sample Location ID	MW-02
Sampling Matrix	S-6: TPH-D/MO: SVOCs: Metals
Sampling Depth (feet bgs)	
Sampling Constituent	

Parameter:	TPH-d	TPH-g	TPH-mo
Commercial/Industrial Shallow Soil (<= 3 meters bgs) ESL (mg/kg)	110	500	500
Commercial/Industrial Deep Soil (> 3 meters bgs) ESL (mg/kg)	110	770	1,000
Groundwater ESL as Potential Source of Drinking Water (µg/L)	100	100	100

FIGURE 13
Soil and Groundwater Sample Results
 for Total Petroleum Hydrocarbons - South
 Revised Addendum to the Site Conceptual Model
 and Data Gap Work Plan,
 744 and 758 High Street, Oakland, California



- LEGEND**
- Proposed Monitoring Well
 - Proposed Soil Boring
 - Soil Boring Sample
 - Constituent Concentrations Exceed Screening Levels
 - Active Rail Line
 - Site Boundary

- Notes:**
1. S = Soil
W = Water
WT = Water Table
SVOCs = Semi Volatile Organic Compounds
TPH-D/-MO = Total Petroleum Hydrocarbon as Diesel/Motor Oil
PCBs = Polychlorinated biphenyl
 2. The years cited for the rail spurs represent the earliest and latest documented dates for the feature.
 3. Monitoring wells MW-A-1, MW-A-5, MW-B-2, MW-C-2, MW-C-5, and MW-C-6 are considered former features. Despite no definite information indicating that the monitoring wells were destroyed, none were located during 2013 fieldwork.
 4. All locations from previous investigations are approximate and based on positioning from historical documents.
 5. **Red Label** = result exceeds screening levels.
 6. mg/kg = milligrams per kilogram.
 7. µg/L = micrograms per liter.
 8. J = estimated detected result.
 9. FD = field duplicate.
 10. ESL = Environmental Screening Level (RWQCB, 2013)
 11. Analyte Abbreviations:
BZAP = Benzo(a)pyrene

Soil Sample Beginning Depth (feet bgs)	
Soil Sample Date (Month/Year)	
Sample Location ID	A-2
Soil Sample Concentration (mg/kg)	<63 (08/13; 18) M
Groundwater Sample Concentration (µg/L)	840 (08/13; 17) D
Groundwater Collection Date (Month/Year)	
Groundwater Collection Depth (feet bgs)	
Analyte Abbreviation	

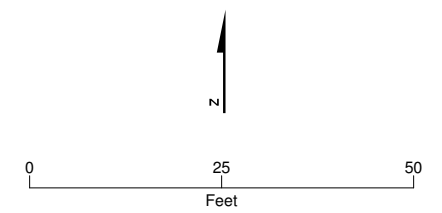


FIGURE 14
Soil and Groundwater Sample Results for Benzo(a)pyrene - South
 Revised Addendum to the Site Conceptual Model and Data Gap Work Plan,
 744 and 758 High Street, Oakland, California



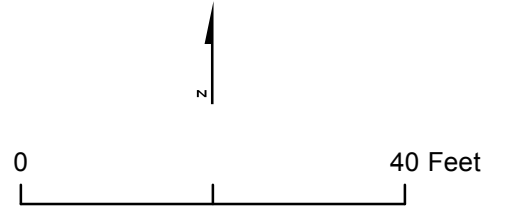
LEGEND

- Geoprobe Sample
- ⊗ Soil Boring
- Sampling Event**
- 1989 Phase I Boring Sample
- Active Rail Line
- Former Rail Spur (1939-1958)
- ▭ Site Boundary

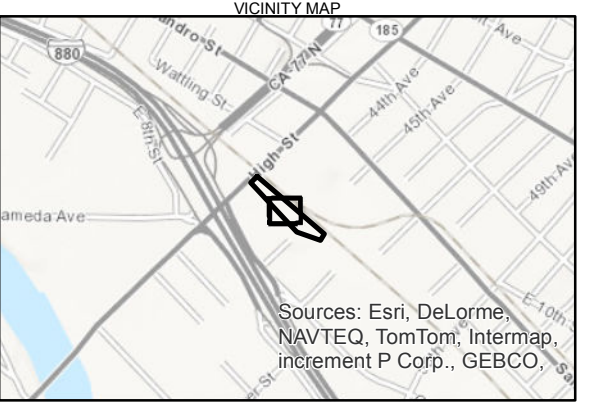
- Notes:**
1. The years cited for the rail spurs and fenceline represent the earliest and latest documented dates for the feature.
 2. All locations from previous investigations are approximate and based on positioning from historical documents.

Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, i-cubed, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

Sources: Esri, DeLorme, NAVTEQ, TomTom, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, and the GIS User Community



ATTACHMENT 1
FIGURE 1
Sampling Locations and Excavations – North 744 and 758 High Street, Oakland, California



LEGEND

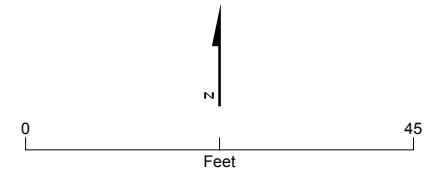
- Geoprobe Sample
- ⊗ Surface Soil Sample
- ⊕ Soil Boring
- ⊕ Monitoring Well
- ⊙ Trench Sample
- ⊗ Excavation Bottom Sample

Sampling Event

- 1988 Surface Sampling Location
- 1989 Phase I Boring Sample
- 1989 Phase II Surface Soil Sample
- 1989 Phase I Monitoring Well/Boring Sample
- 1990 Excavation Confirmation Sampling Location

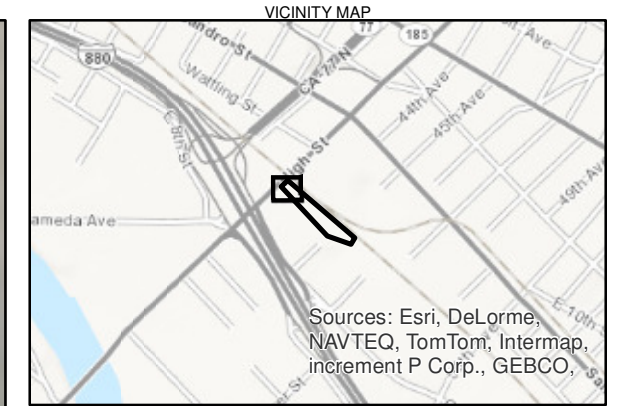
- Active Rail Line
- - - Former Rail Spur (1944-1989)
- ▭ Approximate Location of 1990 Excavation Area
- ▭ Site Boundary

- Notes:**
- The years cited for the rail spurs and fenceline represent the earliest and latest documented dates for the feature.
 - Monitoring wells MW-A-1, MW-A-5, MW-B-2, MW-C-2, MW-C-5, and MW-C-6 are considered former features. Despite no definite information indicating that the monitoring wells were destroyed, none were located during a site visit on February 13, 2013.
 - All locations from previous investigations are approximate and based on positioning from historical documents.



Source: Esri, DigitalGlobe, GeoEye, i-cubed, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

**ATTACHMENT 1
FIGURE 2
Sampling Locations and Excavations – Middle
744 and 758 High Street, Oakland, California**

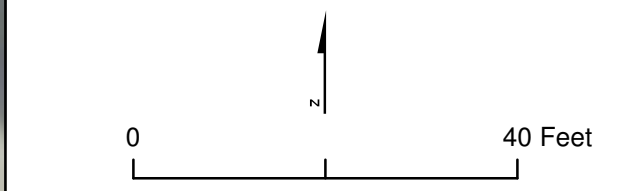


LEGEND

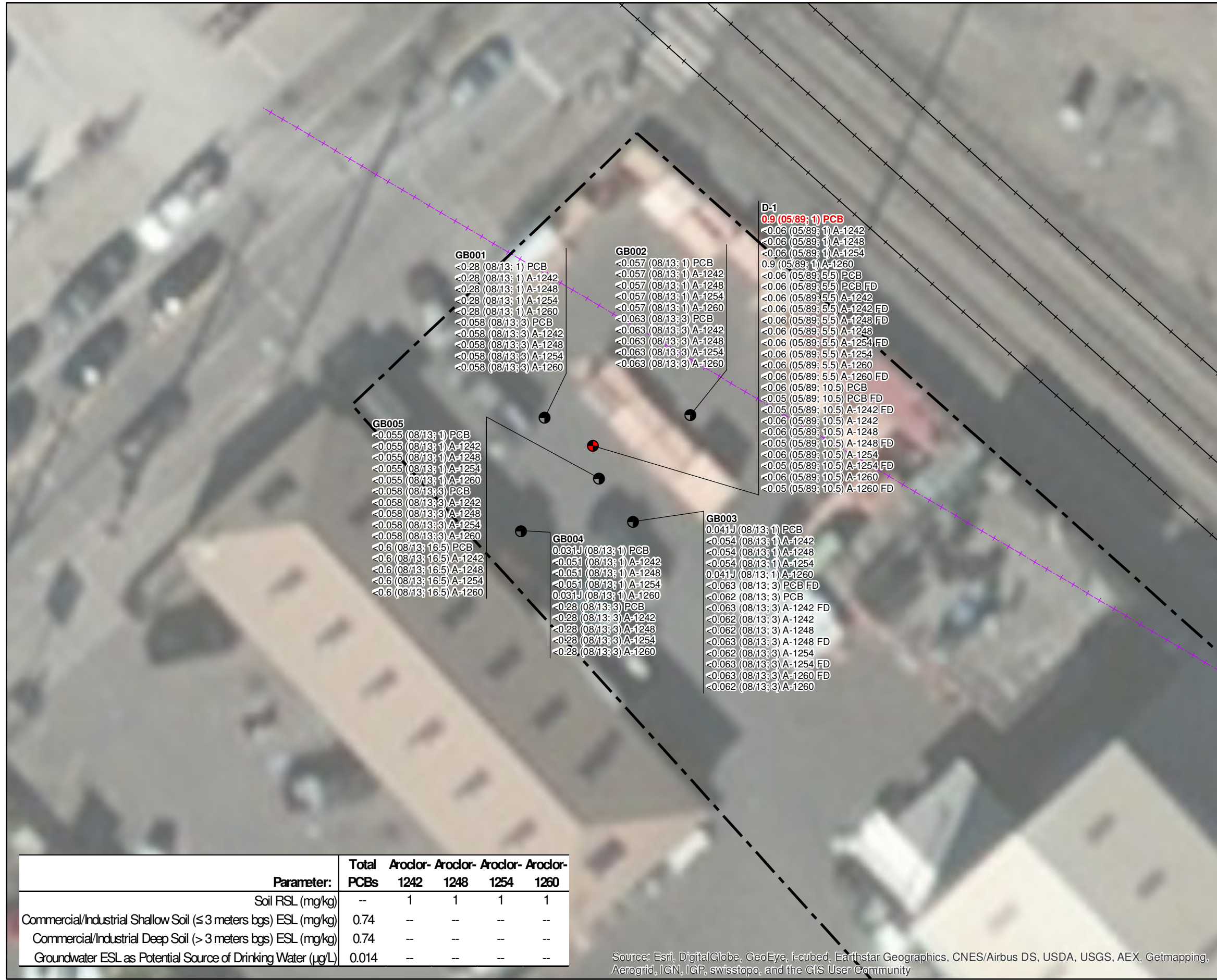
- Geoprobe Sample
- Soil Boring
- Active Rail Line
- Former Rail Spur (1939-1958)
- Site Boundary

- Notes:**
1. < = not detected at or above the indicated concentration.
 2. The years cited for the rail spurs and fenceline represent the earliest and latest documented dates for the feature.
 3. Monitoring wells MW-A-1, MW-A-5, MW-B-2, MW-C-2, MW-C-5, and MW-C-6 are considered former features. Despite no definite information indicating that the monitoring wells were destroyed, none were located during 2013 fieldwork.
 4. All locations from previous investigations are approximate and based on positioning from historical documents.
 5. **Red Label** = result exceeds screening levels.
 6. mg/kg = milligrams per kilogram.
 7. µg/L = micrograms per liter.
 8. J = estimated detected result.
 9. ESL = Environmental Screening Level (RWQCB, 2013)
 10. FD = field duplicate.
 11. Analyte Abbreviations:
A-12xx = Aroclor-12xx
PCB = Polychlorinated Biphenyls

Soil Sample Beginning Depth (feet bgs)	
Soil Sample Date (Month/Year)	
Sample Location ID	A-2
Soil Sample Concentration (mg/kg)	<63 (08/13; 18) M
Groundwater Sample Concentration (µg/L)	840 (08/13; 17) D
Groundwater Collection Date (Month/Year)	
Groundwater Collection Depth (feet bgs)	
Analyte Abbreviation	



**ATTACHMENT 1
FIGURE 4
Soil and Groundwater Sample Results
for Select Polychlorinated Biphenyls – North
744 and 758 High Street, Oakland, California**



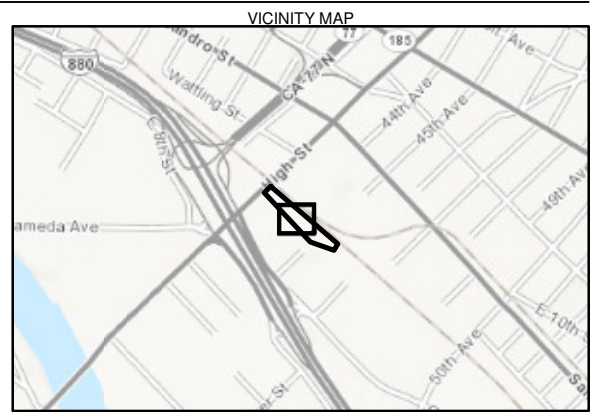
Parameter:	Total PCBs	Aroclor-1242	Aroclor-1248	Aroclor-1254	Aroclor-1260
Soil RSL (mg/kg)	--	1	1	1	1
Commercial/Industrial Shallow Soil (≤ 3 meters bgs) ESL (mg/kg)	0.74	--	--	--	--
Commercial/Industrial Deep Soil (> 3 meters bgs) ESL (mg/kg)	0.74	--	--	--	--
Groundwater ESL as Potential Source of Drinking Water (µg/L)	0.014	--	--	--	--

Source: Esri, DigitalGlobe, GeoEye, i-cubed, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community



Parameter:	Total PCBs	Aroclor-1242	Aroclor-1248	Aroclor-1254	Aroclor-1260
Soil RSL (mg/kg)	--	1	1	1	1
Commercial/Industrial Shallow Soil (≤ 3 meters bgs) ESL (mg/kg)	0.74	--	--	--	--
Commercial/Industrial Deep Soil (> 3 meters bgs) ESL (mg/kg)	0.74	--	--	--	--
Groundwater ESL as Potential Source of Drinking Water (µg/L)	0.014	--	--	--	--

Composite Results	
MW-A-1, A-2, A-3, A-4	<0.06 (1-3.5) A-1248 [89]
	<0.06 (1-3.5) A-1260 [89]
	0.15 (1-3.5) A-1242 [89]
	0.19 (1-3.5) A-1254 [89]
	<0.06 (5.5-6) A-1248 [89]
	<0.06 (5.5-6) A-1260 [89]
	0.04J (5.5-6) A-1242 [89]
	0.06J (5.5-6) A-1254 [89]
	<0.06 (10.5-11) A-1248 [89]
	<0.06 (10.5-11) A-1260 [89]
B-1, MW-B-2, B-3	<0.06 (5.5-6.5) A-1248 [89]
	<0.06 (5.5-6.5) A-1248 [89]
	<0.06 (5.5-6.5) A-1254 [89]
	<0.06 (5.5-6.5) A-1260 [89]
	<0.06 (10.5-11.5) A-1242 [89]
	<0.06 (10.5-11.5) A-1248 [89]
	<0.06 (10.5-11.5) A-1254 [89]
	<0.06 (10.5-11.5) A-1260 [89]
	<0.06 (10.5-11.5) A-1242 [89]
	<0.06 (10.5-11.5) A-1260 [89]
Nb. 4-1, 4-2, 4-3	8.6 (0.5) PCB [89]

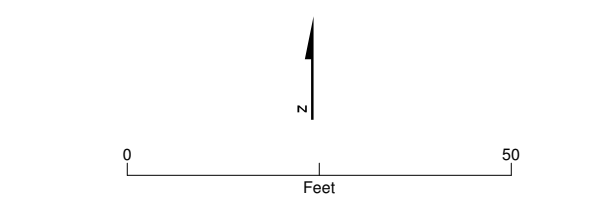


LEGEND

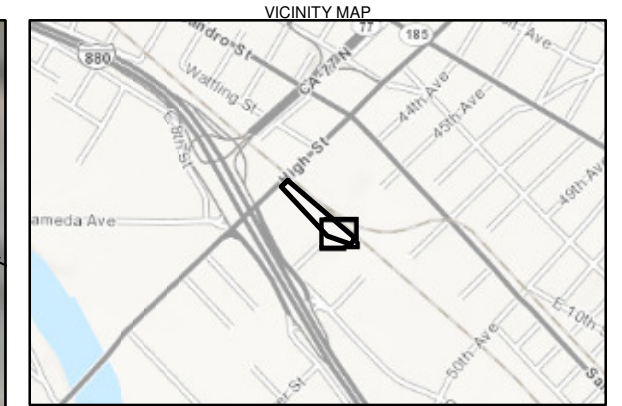
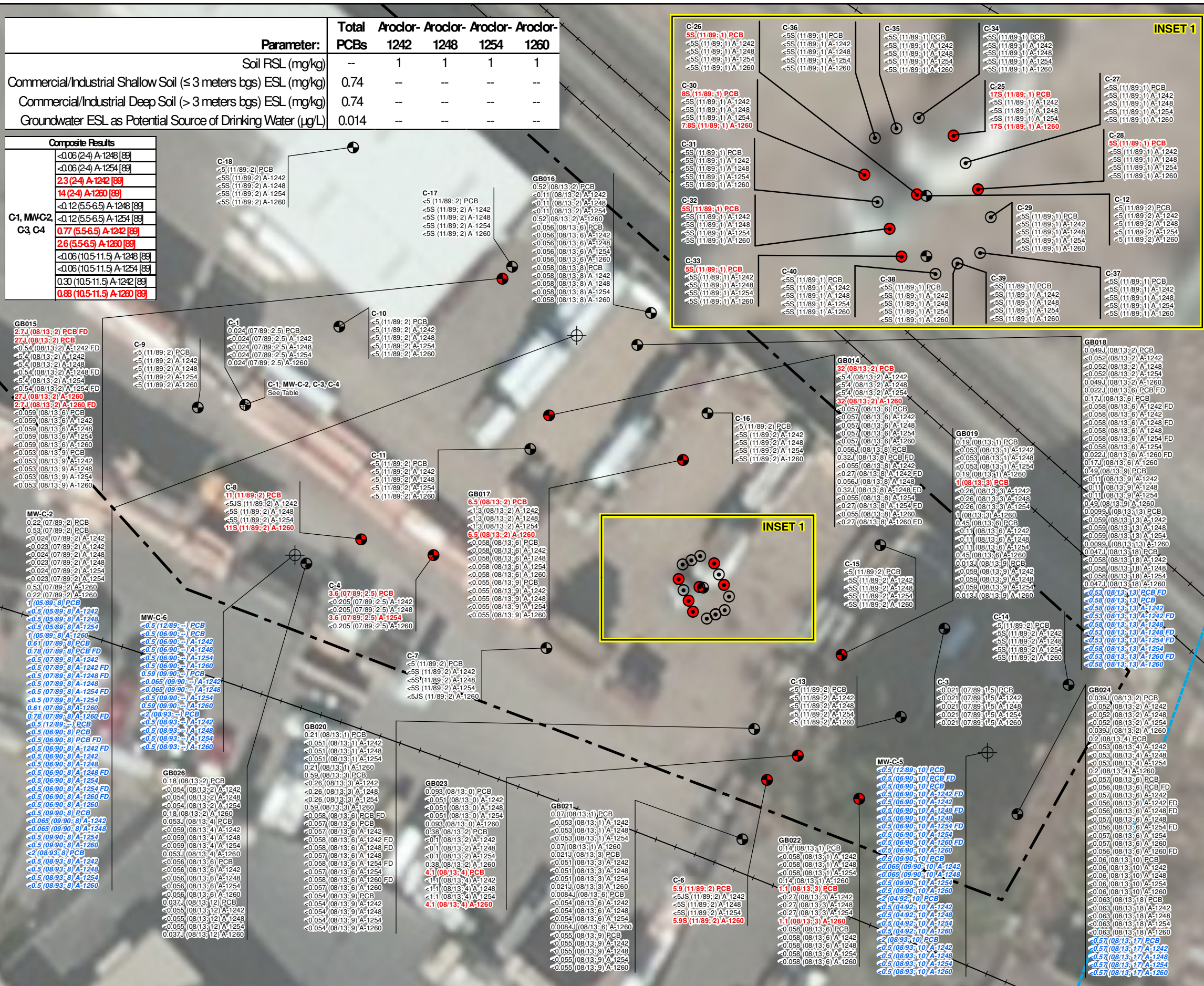
- ⊕ Composite Soil Sample
- Soil Boring Sample
- ⊕ Monitoring Well
- ⊗ Excavation Bottom Soil Sample
- Active Rail Line
- Former Rail Spur (1944-1989)
- Approximate Location of 1990 Excavation Area
- ▭ Site Boundary

- Notes:**
- < = not detected at or above the indicated concentration.
 - The years cited for the rail spurs and fence line represent the earliest and latest documented dates for the feature.
 - Monitoring wells MW-A-1, MW-A-5, MW-B-2, MW-C-2, MW-C-5, and MW-C-6 are considered former features. Despite no definite information indicating that the monitoring wells were destroyed, none were located during 2013 fieldwork.
 - All locations from previous investigations are approximate and based on positioning from historical documents.
 - Red Label** = result exceeds screening levels.
 - mg/kg = milligrams per kilogram.
 - µg/L = micrograms per liter.
 - J = estimated detected result.
 - ESL = Environmental Screening Level (RWQCB, 2013)
 - FD = field duplicate.
 - Analyte Abbreviations:
A-12xx = Aroclor-12xx
PCB = Polychlorinated Biphenyls

Soil Sample Beginning Depth (feet bgs)	Soil Sample Date (Month/Year)	Sample Location ID	Soil Sample Concentration (mg/kg)	Groundwater Sample Concentration (µg/L)	Groundwater Collection Date (Month/Year)	Groundwater Collection Depth (feet bgs)	Analyte Abbreviation
		A-2	<63 (08/13; 18) M	840 (08/13; 17) D			

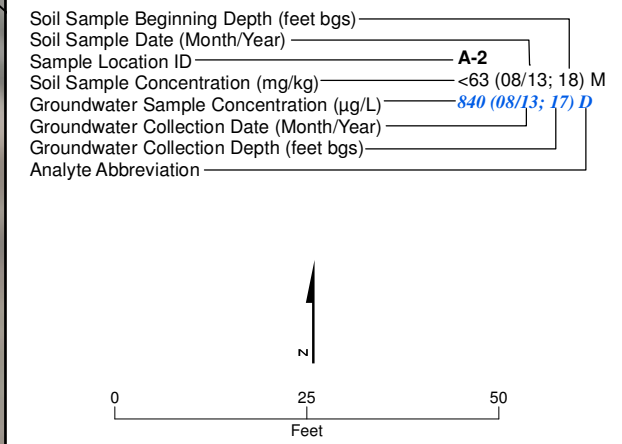


ATTACHMENT 1
FIGURE 5
Soil and Groundwater Sample Results for Select Polychlorinated Biphenyls – Central 744 and 758 High Street, Oakland, California

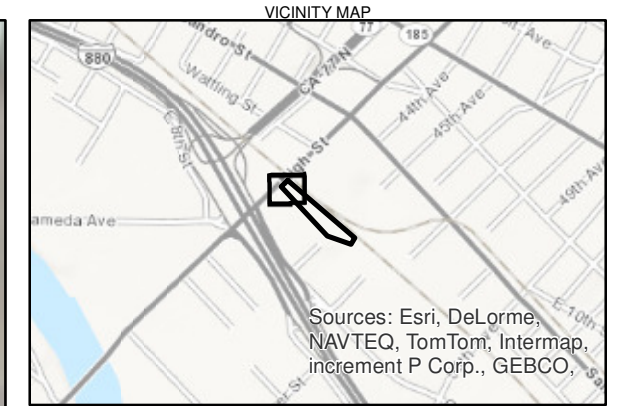


- LEGEND**
- Geoprobe Sample
 - Surface Soil Sample
 - ⊕ Soil Boring
 - ⊕ Monitoring Well
 - ⊕ Trench Sample
 - ⊕ Excavation Bottom Sample
 - Active Rail Line
 - ▭ Site Boundary
- Notes:**
1. < = not detected at or above the indicated concentration.
 2. The years cited for the rail spurs and fence line represent the earliest and latest documented dates for the feature.
 3. Monitoring wells MW-A-1, MW-A-5, MW-B-2, MW-C-2, MW-C-5, and MW-C-6 are considered former features. Despite no definite information indicating that the monitoring wells were destroyed, none were located during 2013 fieldwork.
 4. All locations from previous investigations are approximate and based on positioning from historical documents.
 5. **Red Label** = result exceeds screening levels.
 6. mg/kg = milligrams per kilogram.
 7. µg/L = micrograms per liter.
 8. J = estimated detected result.
 9. ESL = Environmental Screening Level (RWQCB, 2013)
 10. FD = field duplicate.
 11. Analyte Abbreviations:
A-12xx = Aroclor-12xx
PCB = Polychlorinated Biphenyls

- Soil Sample Beginning Depth (feet bgs) _____
- Soil Sample Date (Month/Year) _____
- Sample Location ID _____ **A-2**
- Soil Sample Concentration (mg/kg) _____ **<63 (08/13; 18) M**
- Groundwater Sample Concentration (µg/L) _____ **840 (08/13; 17) D**
- Groundwater Collection Date (Month/Year) _____
- Groundwater Collection Depth (feet bgs) _____
- Analyte Abbreviation _____

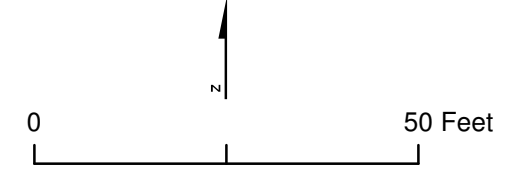
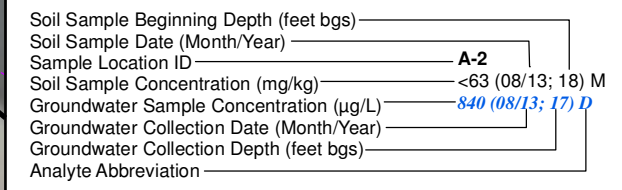


ATTACHMENT 1
FIGURE 6
Soil and Groundwater Sample Results
for Select Polychlorinated Biphenyls – South
744 and 758 High Street, Oakland, California

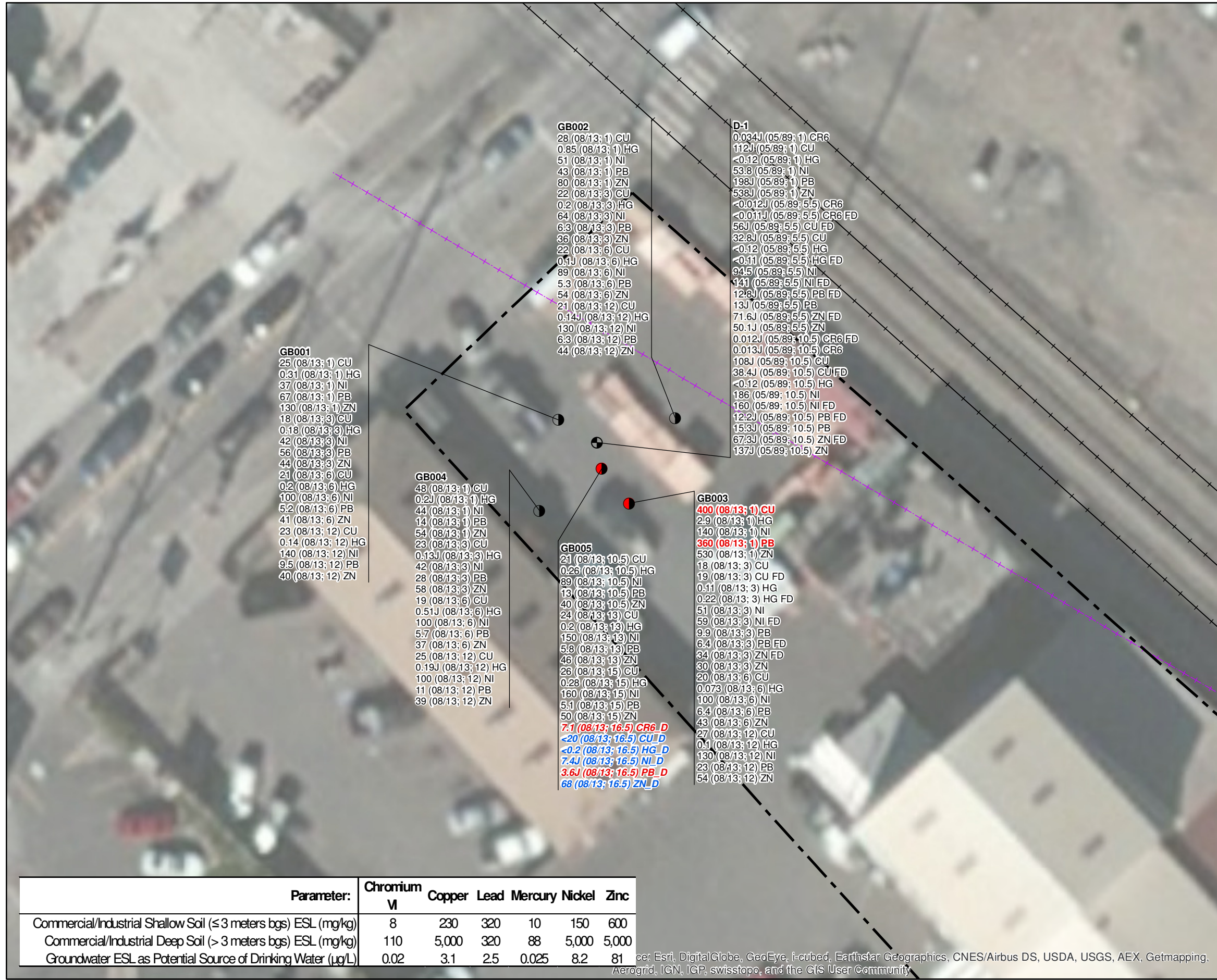


- LEGEND**
- Geoprobe Sample
 - ⊙ Soil Boring
 - Active Rail Line
 - Former Rail Spur (1939-1958)
 - ▭ Site Boundary

- Notes:**
1. < = not detected at or above the indicated concentration.
 2. The years cited for the rail spurs and fenceline represent the earliest and latest documented dates for the feature.
 3. Monitoring wells MW-A-1, MW-A-5, MW-B-2, MW-C-2, MW-C-5, and MW-C-6 are considered former features. Despite no definite information indicating that the monitoring wells were destroyed, none were located during 2013 fieldwork.
 4. All locations from previous investigations are approximate and based on positioning from historical documents.
 5. **Red Label** = result exceeds screening levels.
 6. mg/kg = milligrams per kilogram.
 7. µg/L = micrograms per liter.
 8. J = estimated detected result.
 9. ESL = Environmental Screening Level (RWQCB, 2013)
 10. FD = field duplicate.
 11. The "D" suffix denotes filtered sample analyzed for dissolved metals. All pre-2013 groundwater samples are considered to be total metals.
 12. Analyte Abbreviations:
 CrVI = Hexavalent Chromium
 Cu = Copper
 Hg = Mercury
 Ni = Nickel
 Pb = Lead
 Zn = Zinc



**ATTACHMENT 1
 FIGURE 7
 Soil and Groundwater Sample Results
 for Copper, Hexavalent Chromium, Lead,
 Nickel, Mercury, and Zinc - North
 744 and 758 High Street, Oakland, California**



Parameter:	Chromium VI	Copper	Lead	Mercury	Nickel	Zinc
Commercial/Industrial Shallow Soil (≤3 meters bgs) ESL (mg/kg)	8	230	320	10	150	600
Commercial/Industrial Deep Soil (> 3 meters bgs) ESL (mg/kg)	110	5,000	320	88	5,000	5,000
Groundwater ESL as Potential Source of Drinking Water (µg/L)	0.02	3.1	2.5	0.025	8.2	81

Source: Esri, DigitalGlobe, GeoEye, i-cubed, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

Parameter:	Chromium VI	Copper	Lead	Mercury	Nickel	Zinc
Commercial/Industrial Shallow Soil (≤ 3 meters bgs) ESL (mg/kg)	8	230	320	10	150	600
Commercial/Industrial Deep Soil (> 3 meters bgs) ESL (mg/kg)	110	5,000	320	88	5,000	5,000
Groundwater ESL as Potential Source of Drinking Water (µg/L)	0.02	3.1	2.5	0.025	8.2	81

GB029
320 (08/13; 2) CU
 9.5 (08/13; 2) HG
 50 (08/13; 2) NI
2000 (08/13; 2) PB
2300 (08/13; 2) ZN
 19 (08/13; 4) CU
 0.064 (08/13; 4) HG
 84 (08/13; 4) NI
 9.4 (08/13; 4) PB
 29 (08/13; 4) ZN
 23 (08/13; 6) CU
 0.21 (08/13; 6) HG
 77 (08/13; 6) NI
 54 (08/13; 6) PB
 160 (08/13; 6) ZN
 26 (08/13; 11) CU
 0.18 (08/13; 11) HG
 140 (08/13; 11) NI
 8.5 (08/13; 11) PB
 48 (08/13; 11) ZN
<0.5 (08/13; 12.5) CR6_D
<20 (08/13; 12.5) CU_D
0.11J (08/13; 12.5) HG_D
20 (08/13; 12.5) NI_D
<5 (08/13; 12.5) PB_D
98 (08/13; 12.5) ZN_D

B-1
235 (07/89; 1.5) CU
 148 (07/89; 1.5) NI
434 (07/89; 1.5) PB
2420 (07/89; 1.5) ZN

MW-A-1
<10 (05/89; 7.5) CR6_FD
63 (05/89; 7.5) CR6
19 (05/89; 7.5) CU_FD
13 (05/89; 7.5) CU
1.2 (05/89; 7.5) HG
<0.2 (05/89; 7.5) HG_FD
<15 (05/89; 7.5) NI_FD
18 (05/89; 7.5) NI
24 (05/89; 7.5) PB_FD
30 (05/89; 7.5) PB
85 (05/89; 7.5) ZN
54 (05/89; 7.5) ZN_FD

GB006
240 (08/13; 1) CU
 0.1 (08/13; 1) HG
160 (08/13; 1) NI
 18 (08/13; 1) PB
 23 (08/13; 1) ZN
 19 (08/13; 3) CU
 18 (08/13; 3) CU_FD
 0.16J (08/13; 3) HG_FD
 0.6J (08/13; 3) HG
 80 (08/13; 3) NI
 92 (08/13; 3) NI_FD
 4.8 (08/13; 3) PB_FD
 5.1 (08/13; 3) PB
 29 (08/13; 3) ZN
 30 (08/13; 3) ZN_FD
 19 (08/13; 6) CU
 0.17 (08/13; 6) HG
 150 (08/13; 6) NI
 6.8 (08/13; 6) PB
 41 (08/13; 6) ZN
 20 (08/13; 12) CU
 0.24 (08/13; 12) HG
 110 (08/13; 12) NI
 5.3 (08/13; 12) PB
 39 (08/13; 12) ZN
<0.17 (08/13; 13) CR6_D
<20 (08/13; 13) CU_D
<34 (08/13; 13) HG_D
3.3J (08/13; 13) NI_D
<5 (08/13; 13) PB_D
<34 (08/13; 13) ZN_D

GB007
 190 (08/13; 1) CU
 2.5 (08/13; 1) HG
 70 (08/13; 1) NI
 270 (08/13; 1) PB
 400 (08/13; 1) ZN
 14 (08/13; 3) CU
 0.053 (08/13; 3) HG
 51 (08/13; 3) NI
 8.9 (08/13; 3) PB
 24 (08/13; 3) ZN
 19 (08/13; 6) CU
 0.22 (08/13; 6) HG
 130 (08/13; 6) NI
 8.5 (08/13; 6) PB
 41 (08/13; 6) ZN
 40 (08/13; 12) CU
 0.59 (08/13; 12) HG
 100 (08/13; 12) NI
700 (08/13; 12) PB
<0.5 (08/13; 13) CR6_D
<20 (08/13; 13) CU_D
<0.2 (08/13; 13) HG_D
10 (08/13; 13) NI_D
<5 (08/13; 13) PB_D
<73 (08/13; 13) ZN_D

GB027
 35 (08/13; 2) CU
 0.27 (08/13; 2) HG
 66 (08/13; 2) NI
 30 (08/13; 2) PB
 150 (08/13; 2) ZN
 17 (08/13; 4) CU
 0.29 (08/13; 4) HG
 130 (08/13; 4) NI
 5.3 (08/13; 4) PB
 32 (08/13; 4) ZN
 22 (08/13; 6) CU
 23 (08/13; 6) CU_FD
 0.39 (08/13; 6) HG_FD
 0.22 (08/13; 6) HG
 120 (08/13; 6) NI_FD
 94 (08/13; 6) NI
 10 (08/13; 6) PB
 9.5 (08/13; 6) PB_FD
 53 (08/13; 6) ZN
 47 (08/13; 6) ZN_FD
<0.5 (08/13; 2) CR6_D
<20 (08/13; 2) CU_D
<0.2 (08/13; 2) HG_D
21 (08/13; 2) NI_D
<5 (08/13; 2) PB_D
<39 (08/13; 2) ZN_D

GB028
680 (08/13; 2) CU
 1.2 (08/13; 2) HG
190 (08/13; 2) NI
1700 (08/13; 2) PB
1200 (08/13; 2) ZN
 130 (08/13; 4) CU
 0.14 (08/13; 4) HG
 44 (08/13; 4) NI
 11 (08/13; 4) PB
 35 (08/13; 4) ZN
 26 (08/13; 6) CU
 1.3 (08/13; 6) HG
 150 (08/13; 6) NI
 7.9 (08/13; 6) PB
 41 (08/13; 6) ZN
 44 (08/13; 11) CU
 0.12 (08/13; 11) HG
 110 (08/13; 11) NI
 15 (08/13; 11) PB
 43 (08/13; 11) ZN
<0.5 (08/13; 12) CR6_D
<20 (08/13; 12) CU_D
<0.2 (08/13; 12) HG_D
16 (08/13; 12) NI_D
<5 (08/13; 12) PB_D
120 (08/13; 12) ZN_D

No. 4-1, 4-2, 4-3
 See Table

B-1, MW-B-2, B-3
 See Table

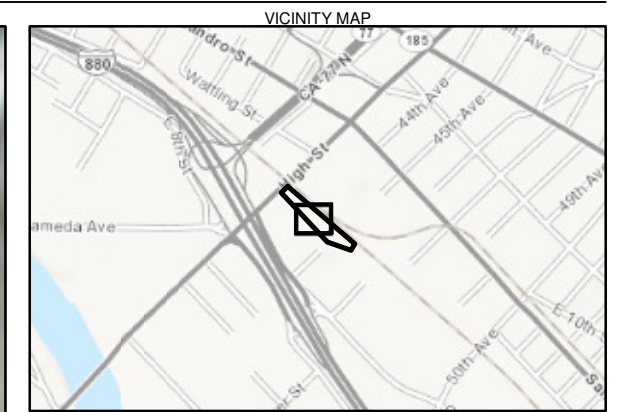
MW-A-1, A-2, A-3, A-4
 See Table

GB011
 65 (08/13; 3) CU
 0.31J (08/13; 3) HG
 26 (08/13; 3) NI
 41 (08/13; 3) PB
 83 (08/13; 3) ZN
 24 (08/13; 6) CU
 38 (08/13; 6) CU_FD
 2.4J (08/13; 6) HG
 0.17J (08/13; 6) HG_FD
 110 (08/13; 6) NI
200 (08/13; 6) NI_FD
 20 (08/13; 6) PB_FD
 6.9 (08/13; 6) PB
 92 (08/13; 6) ZN_FD
 49 (08/13; 6) ZN
 23 (08/13; 9) CU
 0.18J (08/13; 9) HG
 99 (08/13; 9) NI
 6.1 (08/13; 9) PB
 45 (08/13; 9) ZN
<0.5 (08/13; 10) CR6_D
<20 (08/13; 10) CU_D
0.2 (08/13; 10) HG_D
23 (08/13; 10) NI_D
2.3J (08/13; 10) PB_D
97 (08/13; 10) ZN_D

MW-B-2
<10 (05/89; 8) CR6
<10 (05/89; 8) CU
<0.2 (05/89; 8) HG
<15 (05/89; 8) NI
6 (05/89; 8) PB
45 (05/89; 8) ZN

B-3
 51.7 (07/89; 2.5) CU
 18.3 (07/89; 2.5) NI
 92.7 (07/89; 2.5) PB
 200 (07/89; 2.5) ZN

Composite Results	
MW-A-1, A2, A3, A4	52.5 (1-3.5) N [89]
	32.9J (1-3.5) Pb [89]
	42.2J (1-3.5) Zn [89]
	130 (5.5-6) N [89]
	17.1J (5.5-6) Pb [89]
	53.1J (5.5-6) Zn [89]
	95.5 (10.5-11) N [89]
	12.3J (10.5-11) Pb [89]
	62.9J (10.5-11) Zn [89]
	115 (5.5-6.5) N [89]
B-1, MW-B2, B3	18.9J (5.5-6.5) Pb [89]
	105J (5.5-6.5) Zn [89]
	92.2 (10.5-11.5) N [89]
No. 4-1, 42, 43	8.40J (10.5-11.5) Pb [89]
	52.2J (10.5-11.5) Zn [89]
	0.218 (0-0.5) N [88]
	0.339 (0-0.5) Pb [88]
	27.1 (0-0.5) Zn [88]



LEGEND

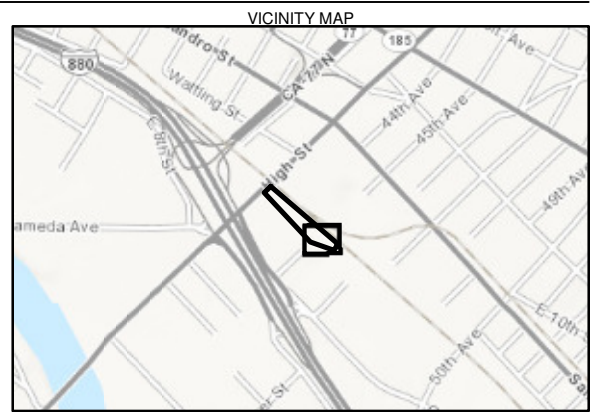
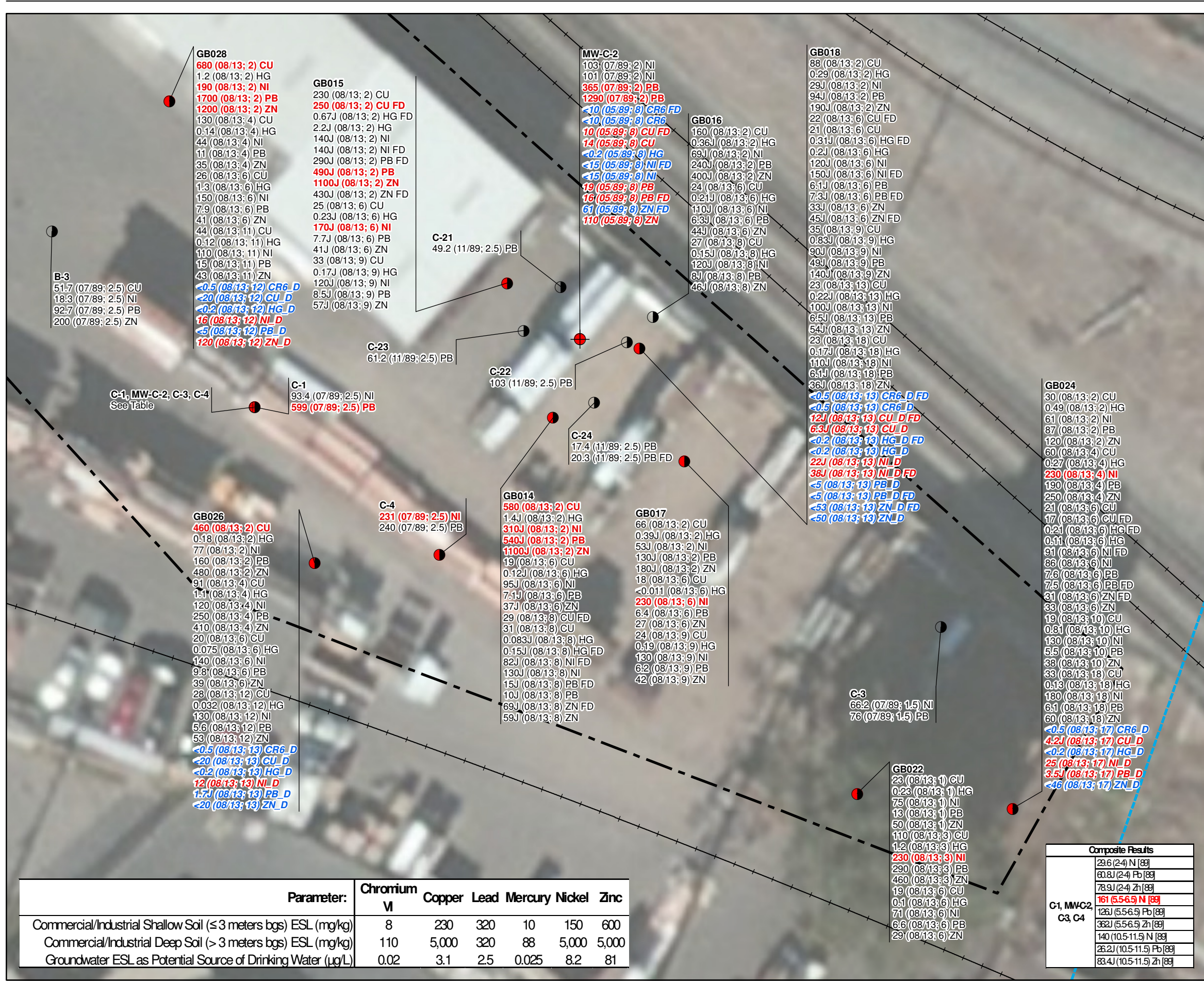
- Composite Sample
- Geoprobe Sample
- Monitoring Well
- Active Rail Line
- Former Rail Spur (1944-1989)
- Approximate Location of 1990 Excavation Area
- Site Boundary

- Notes:**
- < = not detected at or above the indicated concentration.
 - The years cited for the rail spurs and fenceline represent the earliest and latest documented dates for the feature.
 - Monitoring wells MW-A-1, MW-A-5, MW-B-2, MW-C-2, MW-C-5, and MW-C-6 are considered former features. Despite no definite information indicating that the monitoring wells were destroyed, none were located during 2013 fieldwork.
 - All locations from previous investigations are approximate and based on positioning from historical documents.
 - Red Label** = result exceeds screening levels.
 - mg/kg = milligrams per kilogram.
 - µg/L = micrograms per liter.
 - J = estimated detected result.
 - ESL = Environmental Screening Level (RWQCB, 2013)
 - FD = field duplicate.
 - The "D" suffix denotes filtered sample analyzed for dissolved metals. All pre-2013 groundwater samples are considered to be total metals.
 - Analyte Abbreviations:
 CrVI = Hexavalent Chromium
 Cu = Copper
 Hg = Mercury
 Ni = Nickel
 Pb = Lead
 Zn = Zinc

Soil Sample Beginning Depth (feet bgs) _____
 Soil Sample Date (Month/Year) _____
 Sample Location ID _____ **A-2**
 Soil Sample Concentration (mg/kg) _____ **<63 (08/13; 18) M**
 Groundwater Sample Concentration (µg/L) _____ **840 (08/13; 17) D**
 Groundwater Collection Date (Month/Year) _____
 Groundwater Collection Depth (feet bgs) _____
 Analyte Abbreviation _____

0 45 Feet

ATTACHMENT 1
FIGURE 8
Soil and Groundwater Sample Results for Copper, Hexavalent Chromium, Lead, Nickel, Mercury, and Zinc – Central 744 and 758 High Street, Oakland, California



- LEGEND**
- Composite Sample
 - Geoprobe Sample
 - Monitoring Well
 - Active Rail Line
 - Site Boundary

- Notes:**
1. < = not detected at or above the indicated concentration.
 2. The years cited for the rail spurs and fenceline represent the earliest and latest documented dates for the feature.
 3. Monitoring wells MW-A-1, MW-A-5, MW-B-2, MW-C-2, MW-C-5, and MW-C-6 are considered former features. Despite no definite information indicating that the monitoring wells were destroyed, none were located during 2013 fieldwork.
 4. All locations from previous investigations are approximate and based on positioning from historical documents.
 5. **Red Label** = result exceeds screening levels.
 6. mg/kg = milligrams per kilogram.
 7. µg/L = micrograms per liter.
 8. J = estimated detected result.
 9. ESL = Environmental Screening Level (RWQCB, 2013)
 10. FD = field duplicate.
 11. The "_D" suffix denotes filtered sample analyzed for dissolved metals. All pre-2013 groundwater samples are considered to be total metals.
 12. Analyte Abbreviations:
 CrVI = Hexavalent Chromium
 Cu = Copper
 Hg = Mercury
 Ni = Nickel
 Pb = Lead
 Zn = Zinc

Soil Sample Beginning Depth (feet bgs) _____

Soil Sample Date (Month/Year) _____

Sample Location ID _____ **A-2**

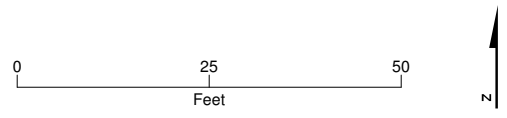
Soil Sample Concentration (mg/kg) _____ **<63 (08/13; 18) M**

Groundwater Sample Concentration (µg/L) _____ **840 (08/13; 17) D**

Groundwater Collection Date (Month/Year) _____

Groundwater Collection Depth (feet bgs) _____

Analyte Abbreviation _____

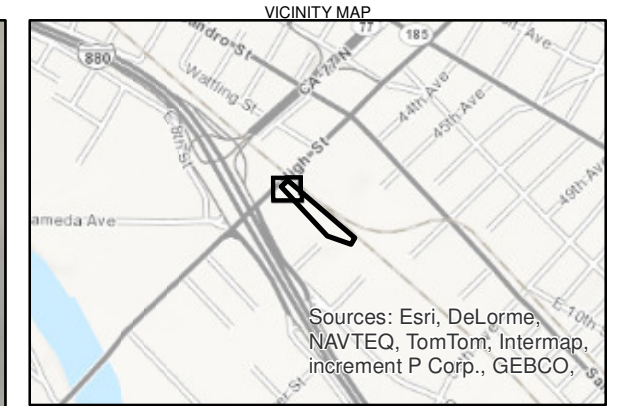


ATTACHMENT 1
FIGURE 9
Soil and Groundwater Sample Results
for Copper, Hexavalent Chromium, Lead,
Nickel, Mercury, and Zinc – South
744 and 758 High Street, Oakland, California

Parameter:	Chromium VI	Copper	Lead	Mercury	Nickel	Zinc
Commercial/Industrial Shallow Soil (≤3 meters bgs) ESL (mg/kg)	8	230	320	10	150	600
Commercial/Industrial Deep Soil (>3 meters bgs) ESL (mg/kg)	110	5,000	320	88	5,000	5,000
Groundwater ESL as Potential Source of Drinking Water (µg/L)	0.02	3.1	2.5	0.025	8.2	81

Composite Results

29.6 (2-4) N [89]
60.8J (2-4) Pb [89]
78.9J (2-4) Zn [89]
161 (5.5-6.5) N [89]
126J (5.5-6.5) Pb [89]
362J (5.5-6.5) Zn [89]
140 (10.5-11.5) N [89]
26.2J (10.5-11.5) Pb [89]
83.4J (10.5-11.5) Zn [89]

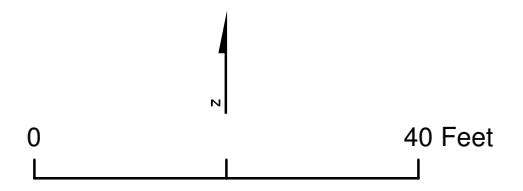


LEGEND

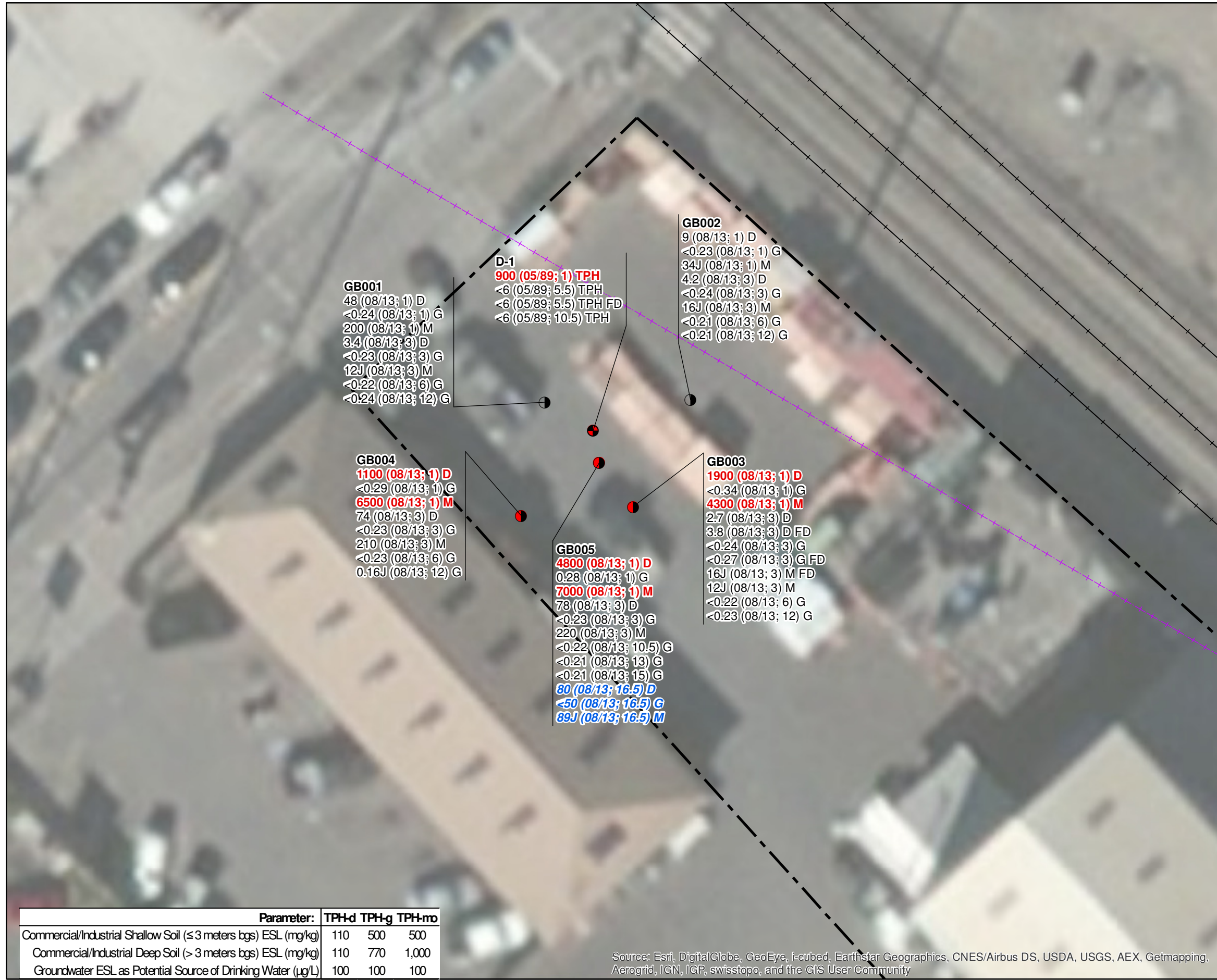
- Geoprobe Sample
- Soil Boring
- Active Rail Line
- Former Rail Spur (1939-1958)
- ▭ Site Boundary

- Notes:**
1. < = not detected at or above the indicated concentration.
 2. The years cited for the rail spurs represent the earliest and latest documented dates for the feature.
 3. Monitoring wells MW-A-1, MW-A-5, MW-B-2, MW-C-2, MW-C-5, and MW-C-6 are considered former features. Despite no definite information indicating that the monitoring wells were destroyed, none were located during 2013 fieldwork.
 4. All locations from previous investigations are approximate and based on positioning from historical documents.
 5. An ESL has not been developed for TPH as a group. Historical TPH results were compared to the ESL for TPH-d because TPH-g is not a constituent of potential concern for the site.
 6. **Red Label** = result exceeds screening levels.
 7. mg/kg = milligrams per kilogram.
 8. µg/L = micrograms per liter.
 9. J = estimated detected result.
 10. FD = field duplicate.
 11. ESL = Environmental Screening Level (RWQCB, 2013)
 12. Analyte Abbreviations:
 TPH = Total Petroleum Hydrocarbons
 D = TPH as diesel
 G = TPH as gasoline
 M = TPH as motor oil

Soil Sample Beginning Depth (feet bgs)	
Soil Sample Date (Month/Year)	
Sample Location ID	A-2
Soil Sample Concentration (mg/kg)	<63 (08/13; 18) M
Groundwater Sample Concentration (µg/L)	840 (08/13; 17) D
Groundwater Collection Date (Month/Year)	
Groundwater Collection Depth (feet bgs)	
Analyte Abbreviation	



ATTACHMENT 1
FIGURE 10
Soil and Groundwater Sample Results
for Total Petroleum Hydrocarbons - North
744 and 758 High Street, Oakland, California

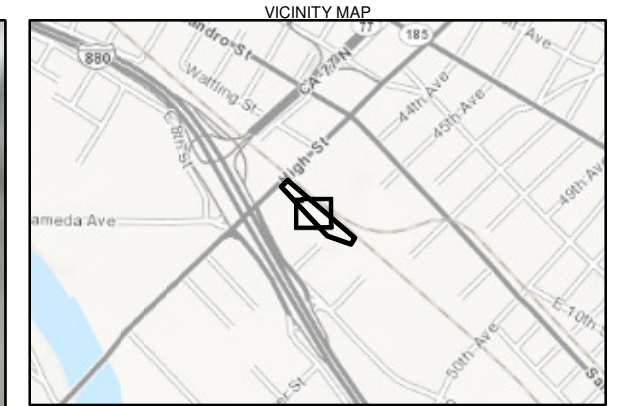
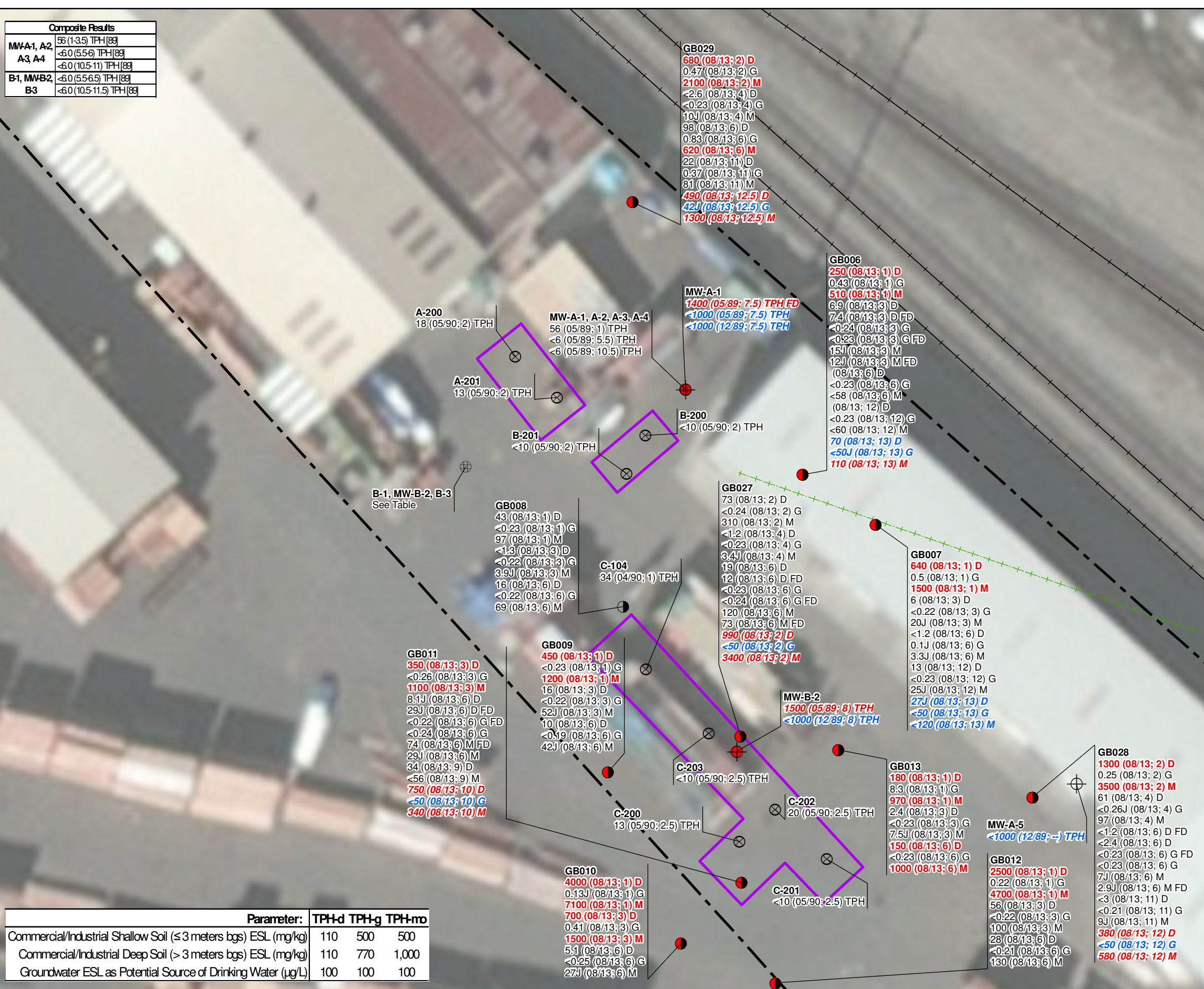


Parameter:	TPH-d	TPH-g	TPH-mo
Commercial/Industrial Shallow Soil (≤3 meters bgs) ESL (mg/kg)	110	500	500
Commercial/Industrial Deep Soil (> 3 meters bgs) ESL (mg/kg)	110	770	1,000
Groundwater ESL as Potential Source of Drinking Water (µg/L)	100	100	100

Source: Esri, DigitalGlobe, GeoEye, i-cubed, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

Composite Results	
MW-A1, A2	56 (1-3.5) TPH [89]
A3, A4	<6.0 (5.5-6) TPH [89]
	<6.0 (10.5-11) TPH [89]
B-1, MW-B-2, B-3	<6.0 (5.5-6.5) TPH [89]
	<6.0 (10.5-11.5) TPH [89]

Parameter:	TPH-d	TPH-g	TPH-mo
Commercial/Industrial Shallow Soil (≤3 meters bgs) ESL (mg/kg)	110	500	500
Commercial/Industrial Deep Soil (> 3 meters bgs) ESL (mg/kg)	110	770	1,000
Groundwater ESL as Potential Source of Drinking Water (µg/L)	100	100	100



LEGEND

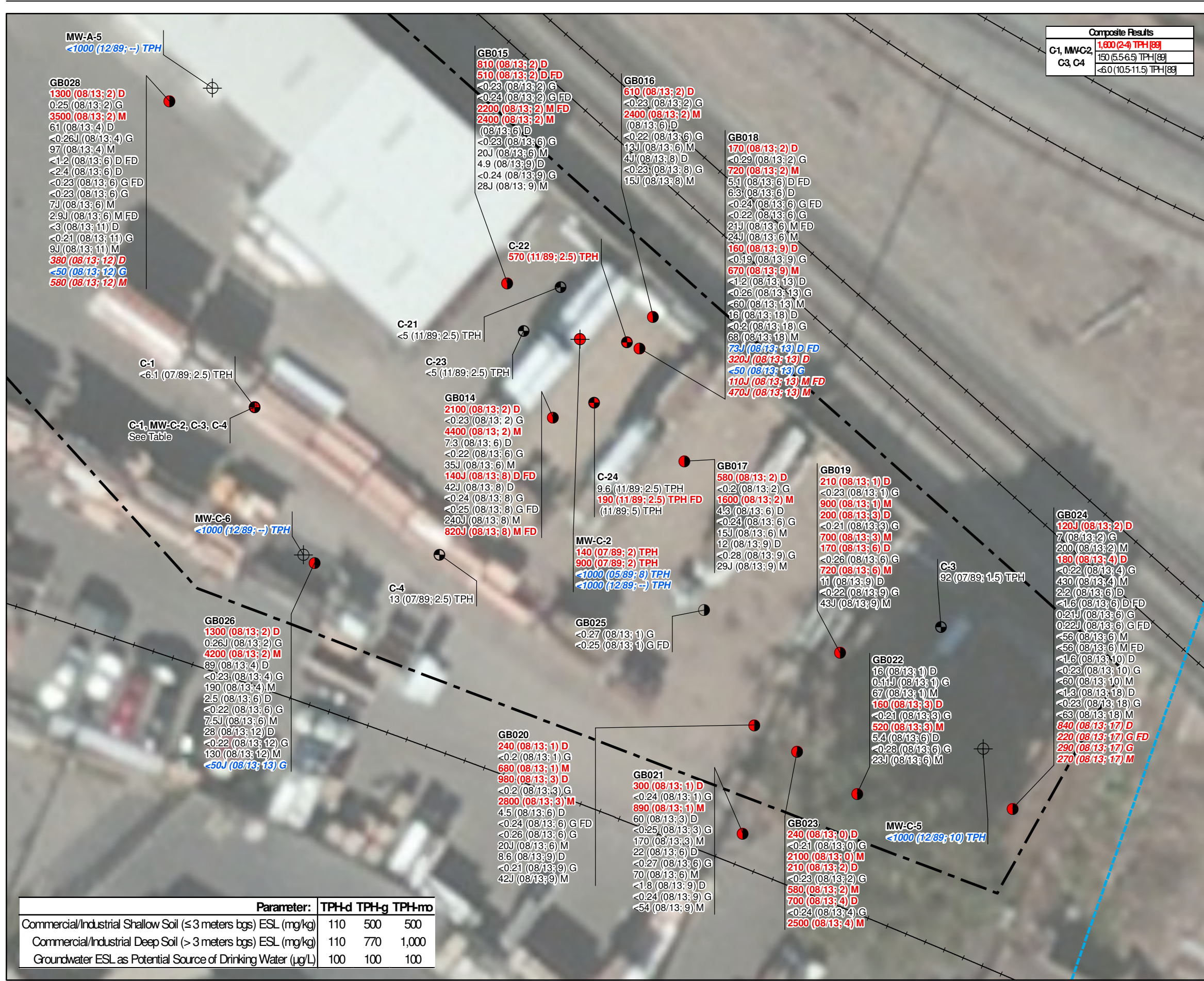
- ⊕ Composite Sample
- Geoprobe Sample
- ⊕ Monitoring Well
- ⊗ Excavation Bottom Sample
- Active Rail Line
- Former Rail Spur (1944-1989)
- Approximate Location of 1990 Excavation Area
- ▭ Site Boundary

- Notes:**
- < = not detected at or above the indicated concentration.
 - The years cited for the rail spurs represent the earliest and latest documented dates for the feature.
 - Monitoring wells MW-A-1, MW-A-5, MW-B-2, MW-C-2, MW-C-5, and MW-C-6 are considered former features. Despite no definite information indicating that the monitoring wells were destroyed, none were located during 2013 fieldwork.
 - All locations from previous investigations are approximate and based on positioning from historical documents.
 - An ESL has not been developed for TPH as a group. Historical TPH results were compared to the ESL for TPH-d because TPH-g is not a constituent of potential concern for the site.
 - Red Label** = result exceeds screening levels.
 - mg/kg = milligrams per kilogram.
 - µg/L = micrograms per liter.
 - J = estimated detected result.
 - FD = field duplicate.
 - ESL = Environmental Screening Level (RWQCB, 2013)
 - Analyte Abbreviations:
 TPH = Total Petroleum Hydrocarbons
 D = TPH as diesel
 G = TPH as gasoline
 M = TPH as motor oil

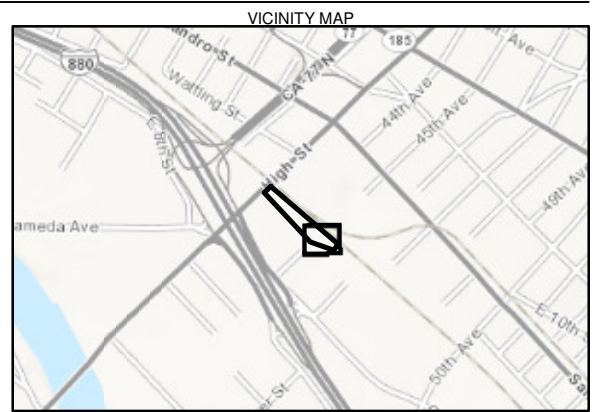
Soil Sample Beginning Depth (feet bgs) _____
 Soil Sample Date (Month/Year) _____
 Sample Location ID _____ **A-2**
 Soil Sample Concentration (mg/kg) _____ **<63 (08/13; 18) M**
 Groundwater Sample Concentration (µg/L) _____ **840 (08/13; 17) D**
 Groundwater Collection Date (Month/Year) _____
 Groundwater Collection Depth (feet bgs) _____
 Analyte Abbreviation _____

0 50 Feet

ATTACHMENT 1
FIGURE 11
Soil and Groundwater Sample Results
for Total Petroleum Hydrocarbons - Central
744 and 758 High Street, Oakland, California



Composite Results	
C-1, MW-C-2, C-3, C-4	1,600 (2-4) TPH (89)
	150 (5.5-6.5) TPH (89)
	<60 (10.5-11.5) TPH (89)



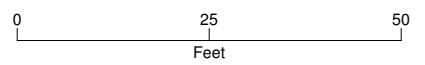
LEGEND

- ⊕ Composite Sample
- Geoprobe Sample
- ⊕ Soil Boring
- ⊕ Monitoring Well
- Active Rail Line
- ▭ Site Boundary

Notes:

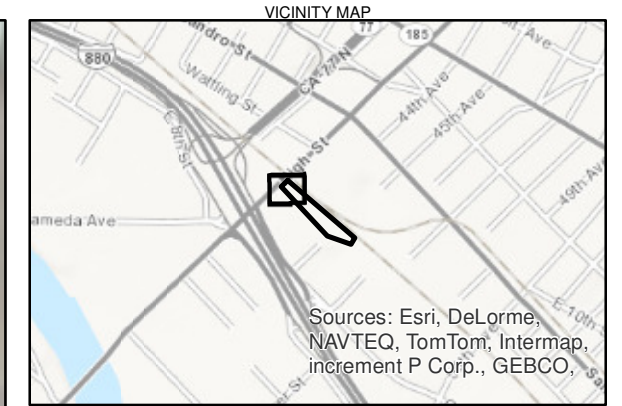
1. < = not detected at or above the indicated concentration.
2. The years cited for the rail spurs represent the earliest and latest documented dates for the feature.
3. Monitoring wells MW-A-1, MW-A-5, MW-B-2, MW-C-2, MW-C-5, and MW-C-6 are considered former features. Despite no definite information indicating that the monitoring wells were destroyed, none were located during 2013 fieldwork.
4. All locations from previous investigations are approximate and based on positioning from historical documents.
5. An ESL has not been developed for TPH as a group. Historical TPH results were compared to the ESL for TPH-d because TPH-g is not a constituent of potential concern for the site.
6. **Red Label** = result exceeds screening levels.
7. mg/kg = milligrams per kilogram.
8. µg/L = micrograms per liter.
9. J = estimated detected result.
10. FD = field duplicate.
11. ESL = Environmental Screening Level (RWQCB, 2013)
12. Analyte Abbreviations:
 TPH = Total Petroleum Hydrocarbons
 D = TPH as diesel
 G = TPH as gasoline
 M = TPH as motor oil

Soil Sample Beginning Depth (feet bgs)	
Soil Sample Date (Month/Year)	
Sample Location ID	A-2
Soil Sample Concentration (mg/kg)	<63 (08/13; 18) M
Groundwater Sample Concentration (µg/L)	840 (08/13; 17) D
Groundwater Collection Date (Month/Year)	
Groundwater Collection Depth (feet bgs)	
Analyte Abbreviation	



ATTACHMENT 1
FIGURE 12
Soil and Groundwater Sample Results
for Total Petroleum Hydrocarbons - South
744 and 758 High Street, Oakland, California

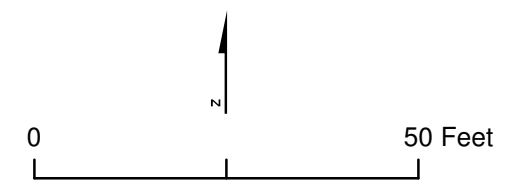
Parameter:	TPH-d	TPH-g	TPH-mo
Commercial/Industrial Shallow Soil (≤3 meters bgs) ESL (mg/kg)	110	500	500
Commercial/Industrial Deep Soil (> 3 meters bgs) ESL (mg/kg)	110	770	1,000
Groundwater ESL as Potential Source of Drinking Water (µg/L)	100	100	100



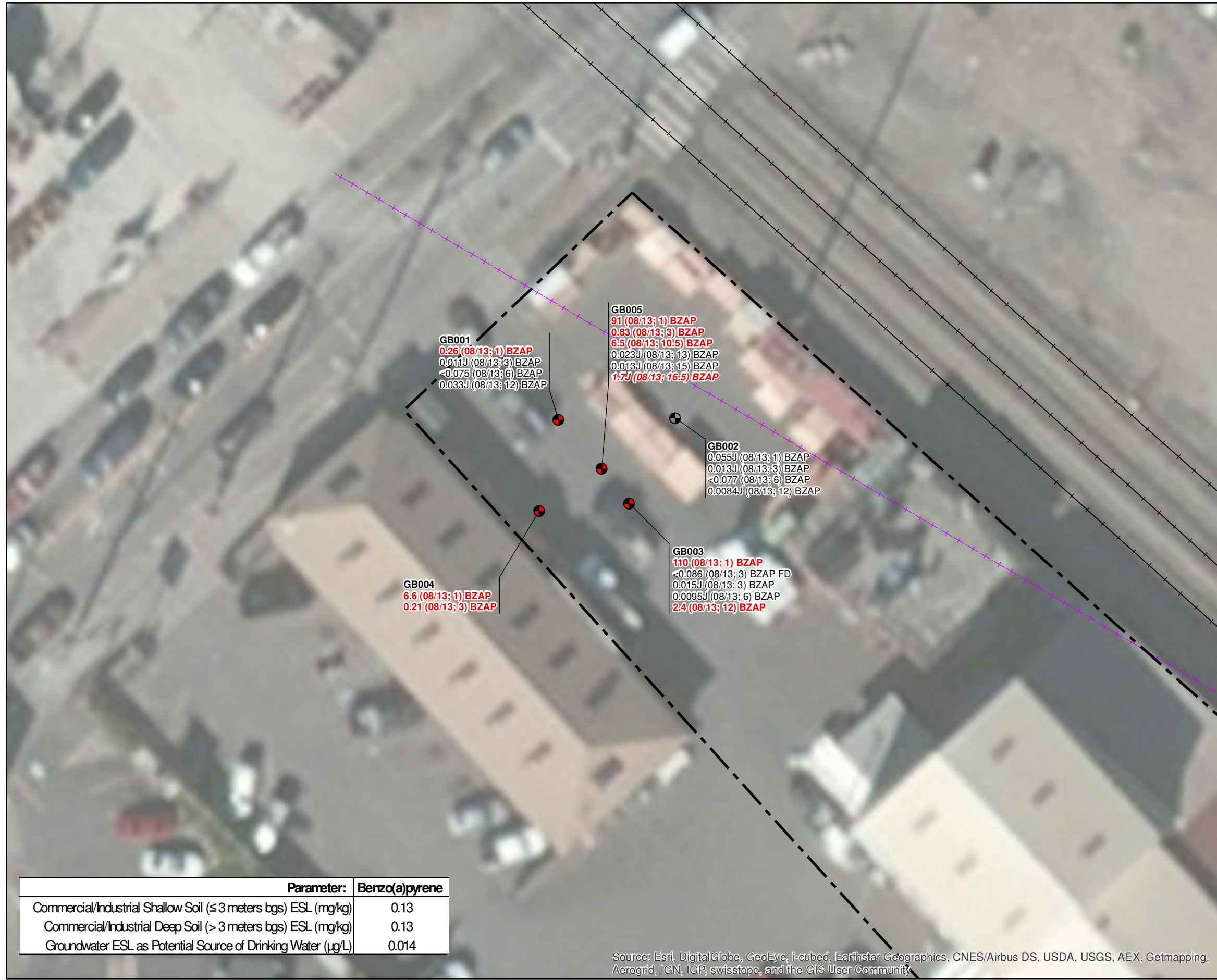
- LEGEND**
- Soil Boring Sample
 - Active Rail Line
 - Former Rail Spur (1939-1958)
 - Site Boundary

- Notes:**
1. < = not detected at or above the indicated concentration.
 2. The years cited for the rail spurs represent the earliest and latest documented dates for the feature.
 3. Monitoring wells MW-A-1, MW-A-5, MW-B-2, MW-C-2, MW-C-5, and MW-C-6 are considered former features. Despite no definite information indicating that the monitoring wells were destroyed, none were located during 2013 fieldwork.
 4. All locations from previous investigations are approximate and based on positioning from historical documents.
 5. **Red Label** = result exceeds screening levels.
 6. mg/kg = milligrams per kilogram.
 7. µg/L = micrograms per liter.
 8. J = estimated detected result.
 9. FD = field duplicate.
 10. ESL = Environmental Screening Level (RWQCB, 2013)
 11. Analyte Abbreviations:
BZAP = Benzo(a)pyrene

Soil Sample Beginning Depth (feet bgs)	
Soil Sample Date (Month/Year)	
Sample Location ID	A-2
Soil Sample Concentration (mg/kg)	<63 (08/13; 18) M
Groundwater Sample Concentration (µg/L)	840 (08/13; 17) D
Groundwater Collection Date (Month/Year)	
Groundwater Collection Depth (feet bgs)	
Analyte Abbreviation	

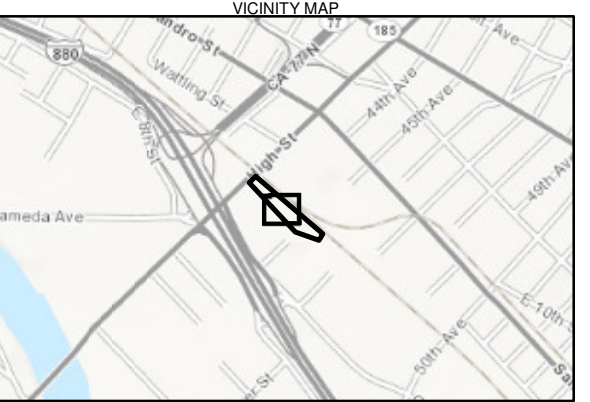
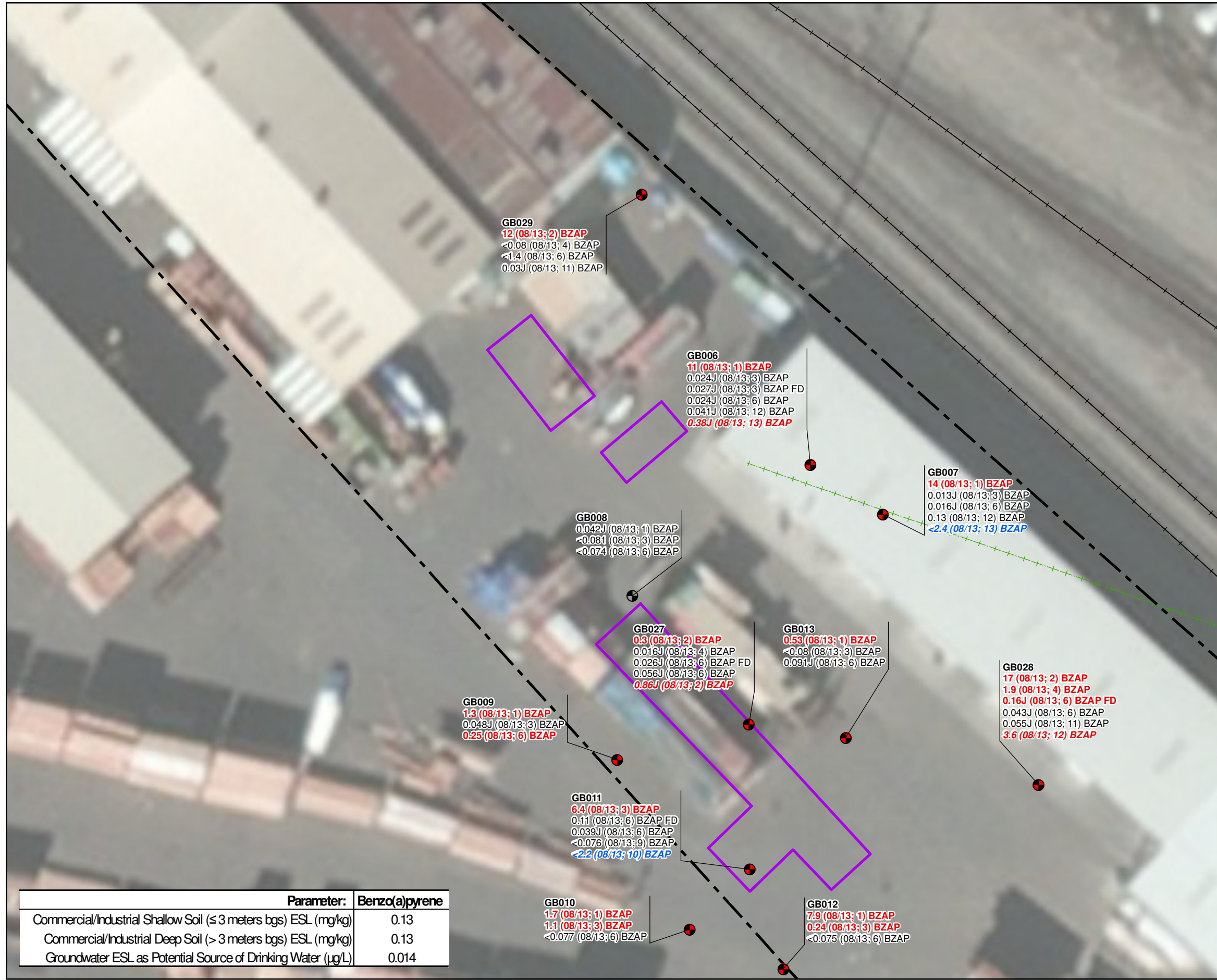


ATTACHMENT 1
FIGURE 13
Soil and Groundwater Sample Results for Benzo(a)pyrene - North
 744 and 758 High Street, Oakland, California



Parameter:	Benzo(a)pyrene
Commercial/Industrial Shallow Soil (≤ 3 meters bgs) ESL (mg/kg)	0.13
Commercial/Industrial Deep Soil (> 3 meters bgs) ESL (mg/kg)	0.13
Groundwater ESL as Potential Source of Drinking Water (µg/L)	0.014

Source: Esri, DigitalGlobe, GeoEye, i-cubed, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

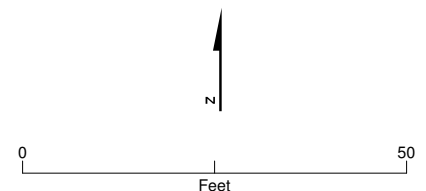


LEGEND

- Soil Boring Sample
- Active Rail Line
- Former Rail Spur (1944-1989)
- Approximate Location of 1990 Excavation Area
- Site Boundary

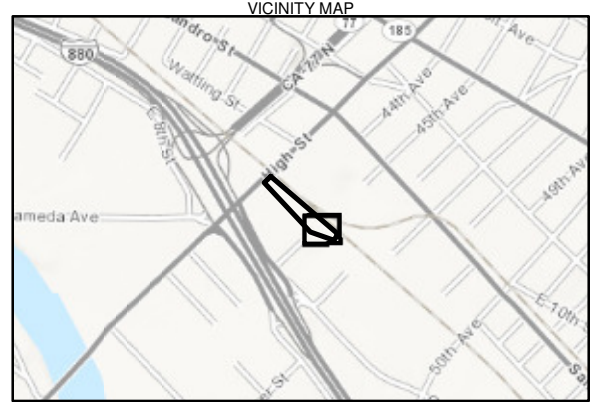
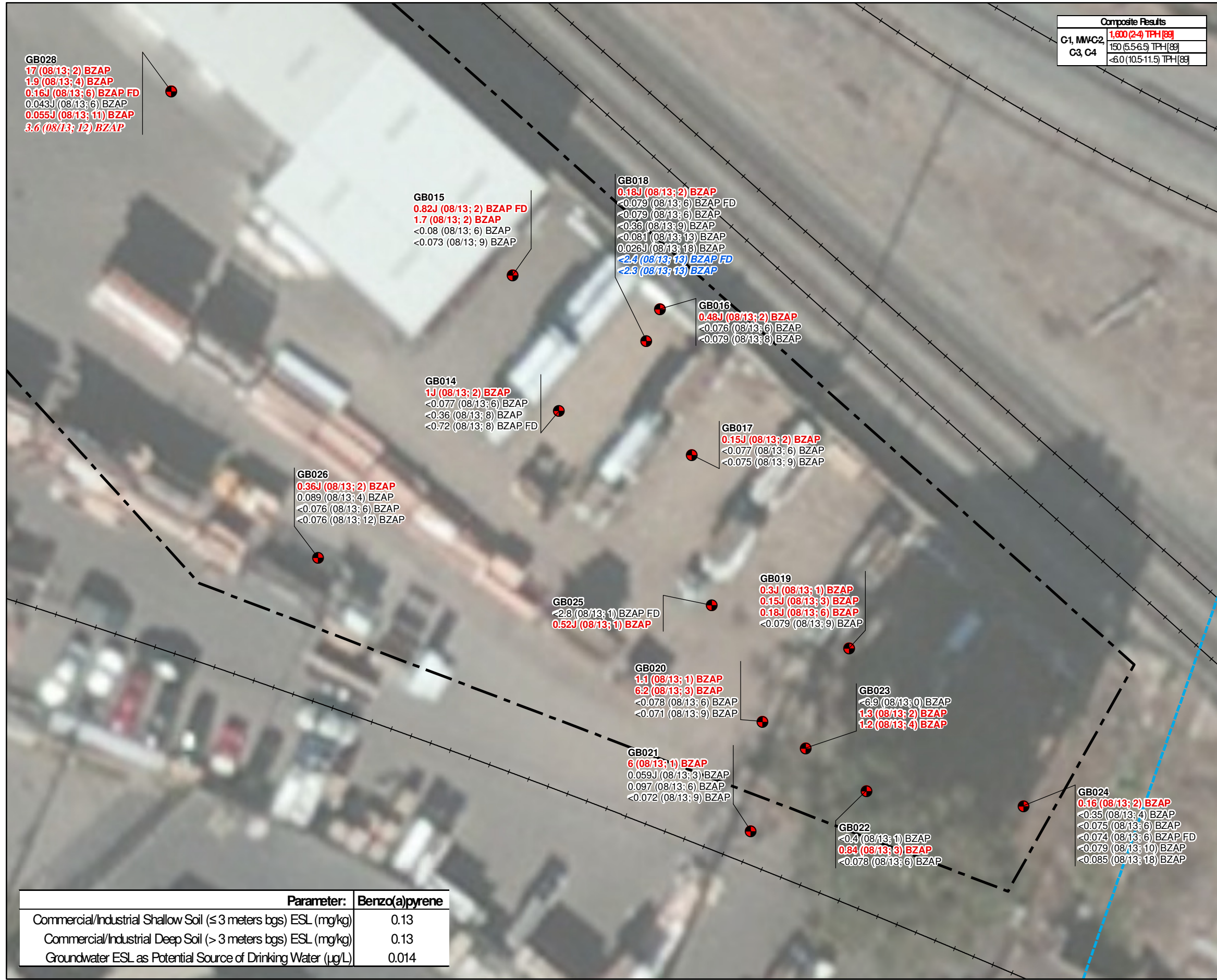
- Notes:**
1. < = not detected at or above the indicated concentration.
 2. The years cited for the rail spurs represent the earliest and latest documented dates for the feature.
 3. Monitoring wells MW-A-1, MW-A-5, MW-B-2, MW-C-2, MW-C-5, and MW-C-6 are considered former features. Despite no definite information indicating that the monitoring wells were destroyed, none were located during 2013 fieldwork.
 4. All locations from previous investigations are approximate and based on positioning from historical documents.
 5. **Red Label** = result exceeds screening levels.
 6. mg/kg = milligrams per kilogram.
 7. µg/L = micrograms per liter.
 8. J = estimated detected result.
 9. FD = field duplicate.
 10. ESL = Environmental Screening Level (RWQCB, 2013)
 11. Analyte Abbreviations:
BZAP = Benzo(a)pyrene

Soil Sample Beginning Depth (feet bgs)	
Soil Sample Date (Month/Year)	
Sample Location ID	A-2
Soil Sample Concentration (mg/kg)	<63 (08/13; 18) M
Groundwater Sample Concentration (µg/L)	840 (08/13; 17) D
Groundwater Collection Date (Month/Year)	
Groundwater Collection Depth (feet bgs)	
Analyte Abbreviation	



Parameter:	Benzo(a)pyrene
Commercial/Industrial Shallow Soil (≤ 3 meters bgs) ESL (mg/kg)	0.13
Commercial/Industrial Deep Soil (> 3 meters bgs) ESL (mg/kg)	0.13
Groundwater ESL as Potential Source of Drinking Water (µg/L)	0.014

ATTACHMENT 1
FIGURE 14
Soil and Groundwater Sample Results
for Benzo(a)pyrene - Central
744 and 758 High Street, Oakland, California



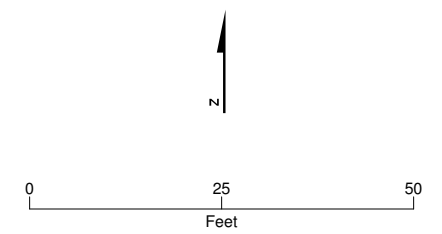
LEGEND

- Soil Boring Sample
- Active Rail Line
- Site Boundary

Notes:

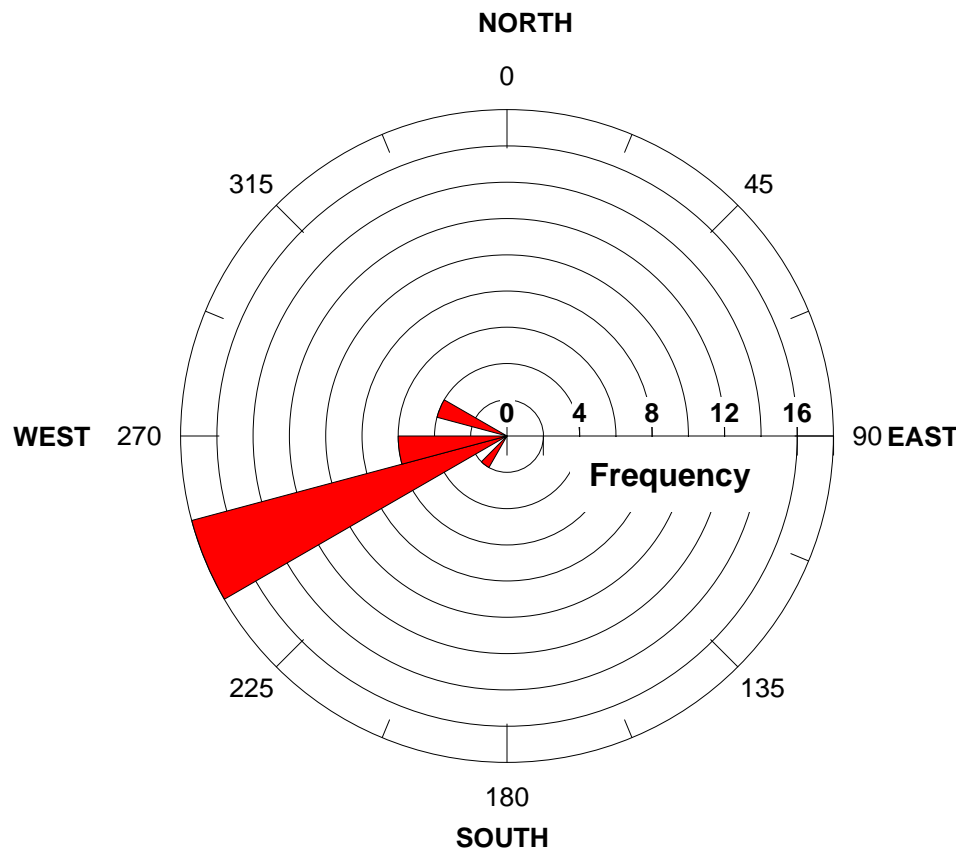
1. < = not detected at or above the indicated concentration.
2. The years cited for the rail spurs represent the earliest and latest documented dates for the feature.
3. Monitoring wells MW-A-1, MW-A-5, MW-B-2, MW-C-2, MW-C-5, and MW-C-6 are considered former features. Despite no definite information indicating that the monitoring wells were destroyed, none were located during 2013 fieldwork.
4. All locations from previous investigations are approximate and based on positioning from historical documents.
5. **Red Label** = result exceeds screening levels.
6. mg/kg = milligrams per kilogram.
7. µg/L = micrograms per liter.
8. J = estimated detected result.
9. FD = field duplicate.
10. ESL = Environmental Screening Level (RWQCB, 2013)
11. Analyte Abbreviations:
BZAP = Benzo(a)pyrene

Soil Sample Beginning Depth (feet bgs) _____
 Soil Sample Date (Month/Year) _____
 Sample Location ID _____ **A-2** _____
 Soil Sample Concentration (mg/kg) _____ **<63 (08/13; 18) M** _____
 Groundwater Sample Concentration (µg/L) _____ **840 (08/13; 17) D** _____
 Groundwater Collection Date (Month/Year) _____
 Groundwater Collection Depth (feet bgs) _____
 Analyte Abbreviation _____

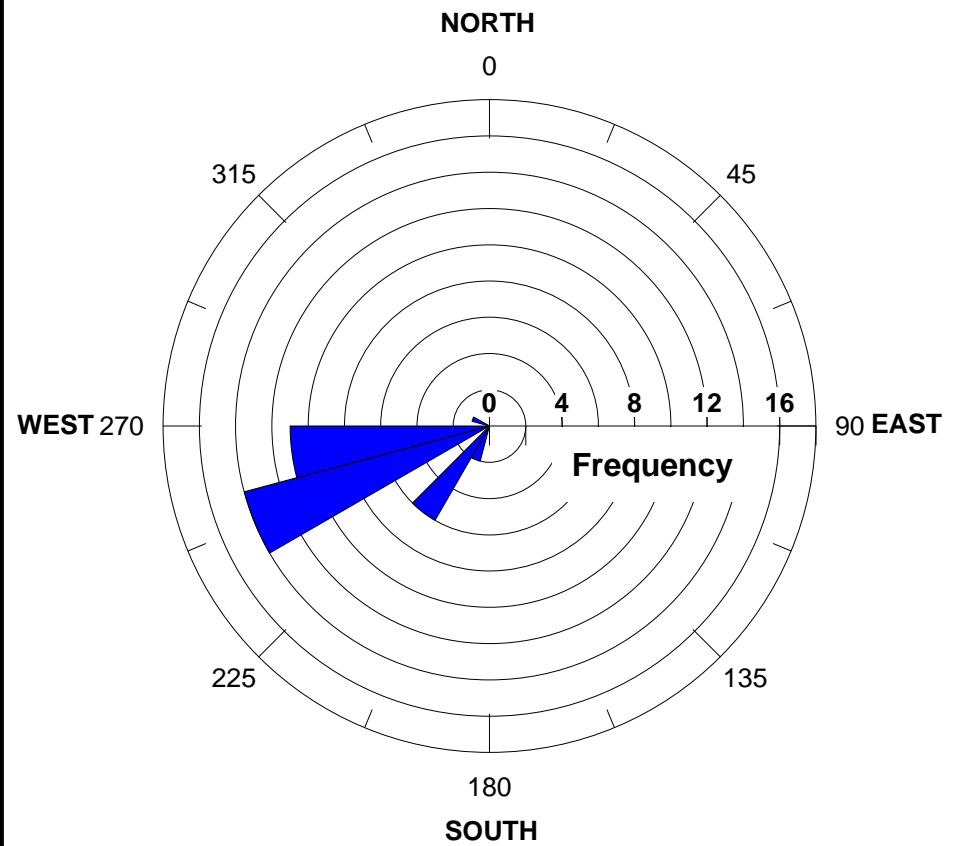


Parameter:	Benzo(a)pyrene
Commercial/Industrial Shallow Soil (≤ 3 meters bgs) ESL (mg/kg)	0.13
Commercial/Industrial Deep Soil (> 3 meters bgs) ESL (mg/kg)	0.13
Groundwater ESL as Potential Source of Drinking Water (µg/L)	0.014

ATTACHMENT 1
FIGURE 15
Soil and Groundwater Sample Results
for Benzo(a)pyrene - South
 744 and 758 High Street, Oakland, California



**Groundwater Flow Direction Rose Diagram
Clorox Company Oakland Plant,
850 42nd Avenue, Oakland, California
April 1, 2010 through April, 2014**



**Groundwater Flow Direction Rose Diagram
Former Exxon RAS #73006,
720 High Street, Oakland, California
March 11, 2003 through November 13, 2013**

**Attachment 2
Groundwater Flow Direction Rose Diagrams for Adjacent Sites
744 and 758 High Street, Oakland, California**



CH2MHILL

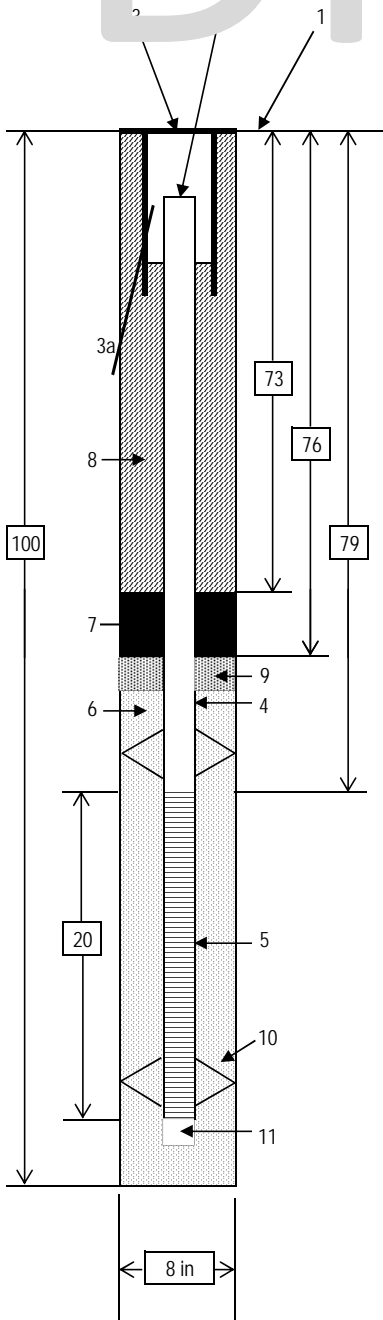
PROJECT NUMBER: _____

MONITORING WELL: _____

SHEET 1 OF 1

WELL COMPLETION DIAGRAM

PROJECT NAME:	_____		LOCATION:	_____	
GROUND SURFACE ELEVATION:	_____	DRILLING CONTRACTOR:	_____		
DRILLING METHOD AND EQUIPMENT:	_____				
WATER LEVELS, DATE AND TIME:	_____	START DATE & TIME:	_____	DRILL FINISH DATE & TIME:	_____
			LOGGER:	_____	



1. Ground elevation of well	TBD (NAVD88)
2. Top of Casing Elevation	TBD (NAVD88)
3. Wellhead protection cover type:	12-inch traffic rated
a) Drain tube installed (Yes/No)?:	No
b) Concrete cover dimensions:	_____
4. Diameter and type of well casing:	2-inch diameter Schedule 40 PVC blank
5. Type and slot size of screen:	2-inch diameter factory slotted Schedule 40 PVC 0.010-inch apertures
6. Type of Filter Pack:	
a) Type of material:	Silica Sand #2/16
b) Quantity used:	50-pound bags
7. Type of seal:	
a) Type of material:	1/4 inch Bentonite pellets
b) Quantity used:	50-pound bag
8. Grout:	
a) Grout mix used:	Bentonite-Cement Slurry
b) Method of placement:	Freefall
c) Quantity of well casing grout:	_____ gallons (___bags)
9. Transition sand	Silca Sand #0/30
a) Quantity used	50-pound bags
10. Centralizers	
a) Quantity used	_____
b) Placement (bgs)	_____
11. PVC Sump	2-inch diameter Schedule 40 PVC

Notes:
bgs = below ground surface
ft = feet
PVC = polyvinyl chloride
NAVD88 = North American Vertical Datum of 1988

NOT TO SCALE