Technical Memorandum

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From:	Donald J. Gruber, Senior Hydrogeologist		
Date:	April 4, 2016		
Subject:	Depth-Discrete Groundwater Sampling Results, 2013 and 2015, Jervis B. Webb Company Superfund Site, South Gate, Los Angeles County, California		
Contract / TO:	EP-S9-08-03/TO 0071	**Gilbane DCN:**	07163.0072.0021

1.0 Introduction

This technical memorandum documents results of groundwater sampling activities conducted at the Jervis B. Webb Company Superfund Site (JW Superfund Site), South Gate, Los Angeles County, California, in 2013 and 2015. The 2015 sampling activities were conducted as part of the remedial investigation/feasibility study at the JW Superfund Site and implemented in accordance with *Final Sampling and Analysis Plan, Remedial Investigation/ Feasibility Study, Jervis B. Webb Company Superfund Site, South Gate, Los Angeles County, California* (JW Final SAP; Gilbane, 2015a). The 2013 sampling activities were conducted as part of the supplemental remedial investigation for the Southern Avenue Industrial Area (SAIA) Superfund Site (ITSI Gilbane Company, 2012).

The JW Superfund Site is comprised of two adjacent parcels: 5030 Firestone Boulevard (Firestone parcel) and 9301 Rayo Avenue (Rayo parcel). Initial investigations conducted in the late 1990s by the Jervis B. Webb Company identified a source of volatile organic compounds (VOCs) in soil and groundwater at the Firestone parcel (**Figure 1**).

Depth-discrete groundwater samples were collected from 18 locations to further characterize the upgradient, on-site, cross-gradient, and downgradient extent of VOCs beneath the JW Superfund Site. The groundwater characterization information will be used to further define the site conceptual model and identify locations for monitoring wells to confirm the groundwater sampling results described in this technical memorandum. A total of 96 normal and duplicate groundwater samples were collected at various depths below ground surface (bgs) from 18 cone penetrometer test (CPT)/HydroPunch borings (JW-CPT01 through JW-CPT18; **Figure 1**).

2.0 Geologic and Hydrogeologic Conditions

The geologic and hydrogeologic conditions encountered at the JW Superfund Site and cross-gradient/downgradient sites, including the Cooper Drum Superfund Site, SAIA Superfund Site, and the Former Dial Site (**Figure 1**), are briefly described below.

- The Bellflower Aquiclude extends from the ground surface to a depth of approximately 60 feet bgs and is composed primarily of fine-grained sediments (silts and clays; DWR, 1961)
- A laterally continuous layer of silty sand exists within the Bellflower Aquiclude between approximately 32 feet and 40 feet bgs and contains perched groundwater. (Deeper perched groundwater [45 feet to 50 feet bgs] also has been noted at other Superfund sites in the vicinity of the JW Superfund Site.) It is also noted that during drought conditions (1998 and 2015), the perched aquifer has been observed to be dry.
- The Gaspur Aquifer underlies the Bellflower Aquiclude and is composed of alluvial sands, gravels, silts, and some clays (DWR, 1961). The bottom of the Gaspur Aquifer is approximately 110 feet to 120 feet bgs in the vicinity of the JW Superfund Site, although as noted below, the extent of the Gaspur Aquifer appears to diminish to the north and northeast along Firestone Boulevard. The potentiometric surface for the Gaspur Aquifer occurs at approximately 50 feet bgs, with a south to slightly southeast groundwater flow direction/gradient. Groundwater elevation contour maps produced by Haley & Aldrich, Inc. (2014), Erler & Kalinowski, Inc. (1998) and Emcon Associates (1993) are included in **Attachment 1**.
- The Gaspur Aquifer has been divided into generally three depth intervals (shallow, intermediate, and lower) for reporting groundwater monitoring data from the SAIA Superfund Site and the adjacent Cooper Drum Superfund Site. Water elevations in the monitoring wells within the shallow, intermediate, and lower zones of the Gaspur Aquifer at these two sites are generally similar, indicating hydraulic connectivity among all three zones.
- The Exposition Aquifer underlies the Gaspur Aquifer at a depth of approximately 120 feet bgs and is generally separated from the Gaspur Aquifer by a layer of low-permeability silts and clays. A downward vertical gradient has been observed between these two aquifers. Regional flow direction in the Exposition Aquifer tends to be southerly; however, water-level data from the five existing monitoring wells completed in the upper Exposition Aquifer in the vicinity of the SAIA Superfund Site do not show a consistent flow direction.

Please note that the north to northeast extent of the Gaspur Aquifer is in the vicinity of Firestone Boulevard and Los Angeles River (DWR, 1961). The decreasing number or lack of sandy layers in the CPT borings on Firestone Boulevard appear to confirm the absence or diminishing extent of the Gaspur Aquifer in this area.

3.0 Background

Groundwater contamination has been reported in the Gaspur Aquifer from operations associated with the JW Superfund Site, the SAIA Superfund Site, and the Cooper Drum Superfund Site. Initial investigations conducted on and downgradient from the sites have identified the presence of potentially comingling VOC plumes in groundwater. Based on the potentiometric maps (or groundwater elevation contour maps) presented in this technical memorandum for the Gaspur Aquifer, the JW Superfund Site appears to be directly upgradient of the SAIA Superfund Site VOC plume, and to a lesser extent, upgradient of the Cooper Drum Superfund Site VOC plume. Five monitoring wells (JWMW-01 through JWMW-05) were installed in the shallow Gaspur Aquifer in 1998 on the JW Superfund Site (Figure 1) under the oversight of the Los Angeles Regional Water Quality Control Board (LARWQCB) . The source area on the SAIA Superfund Site is approximately 250 feet south of SAIAHP18. The Cooper Drum Superfund Site main source is approximately 400 feet south of JW-CPT12 in the area of MW-2 (Figure 1). A brief summary of previous investigations conducted at the JW Superfund Site, SAIA Superfund Site, and Cooper Drum Superfund Site is presented in **Attachment 2.**

Also included in **Attachment 2** are the most recent figures from two technical memoranda presenting groundwater results from SAIA Superfund Site remedial investigation/feasibility study (ITSI Gilbane Company, 2013; and Gilbane, 2015b),

4.0 Cone Penetrometer Test/HydroPunch Activities

In general, this technical memorandum focuses on groundwater sampling results collected in the vicinity of the 18 new CPT/HydroPunch borings, the two HydroPunch borings on the ELG Metals property (SAIAHP17 and SAIAHP18), and the boring to the east of the ELG Metals property (**Figure 1**; SAIACPT02).

Field activities for CPT/HydroPunch groundwater sampling from JW-CPT01 through JW-CPT03 were conducted from March 25 through March 27, 2013. Field activities for JW-CPT04 through JW-CPT14 groundwater sampling were conducted from June 15 through June 29, 2015, and groundwater sampling from JW-CPT15 through JW-CPT18 was conducted from October 26 through October 29, 2015. JW-CPT01 (**Figure 1**) was located on the Firestone parcel at the

location of the VOC source area. JW-CPT02 and JW-CPT03 were located downgradient of the source area. These three locations were completed to evaluate and further characterize on-site conditions, especially at the depths below the shallow Gaspur Aquifer and down to the upper portion of the Exposition Aquifer. Locations JW-CPT04 through JW-CPT08 were completed to evaluate the potential for contaminant migration onto the JW Superfund Site from upgradient sources and to evaluate background conditions. Locations JW-CPT09 and JW-CPT10 were completed to evaluate and further characterize current background and cross-gradient lateral and vertical groundwater contaminant conditions east of the JW Superfund Site (**Figure 1**). Locations JW-CPT11 through JW-CPT14 were completed to characterize lateral and vertical groundwater contaminant conditions downgradient and west of the JW Superfund Site and evaluate conditions between the Cooper Drum Superfund Site VOC plume and the JW Superfund Site VOC plume. JW-CPT14 was also used to evaluate current conditions at CPT-12 (Cooper Drum Superfund Site) that showed 4,400 micrograms per liter (ug/L) of trichloroethene (TCE) in the shallow Gaspur Aquifer in 2000. Locations JW-CPT15 through JW-CPT18 were completed to characterize lateral and vertical groundwater contaminant conditions downgradient and east of the JW Superfund Site. The CPT logs completed for the 2013 and 2015 field events are included in **Attachment 3**.

The HydroPunch sampling conducted during these field events included collecting groundwater from the perched zone (if present); the shallow, intermediate, and lower Gaspur Aquifer; and, a sample from the top of the Exposition Aquifer. HydroPunch sample results from these field events are presented in **Table 1**. It is noted that due to existing drought conditions at the time these samples were collected, the upper portion of the perched zone was dry at all of the sampling locations. The depth of the attempted sampling in the perched aquifer ranged from 45 feet to 52 feet bgs. In addition, the 64-foot sample at JW-CPT06 did not provide sufficient water for sample collection.

All samples were processed in accordance with the required sample collection, preservation, and chain-of-custody procedures as specified in the JW Final SAP (Gilbane, 2015a). The samples were sent to KAP Technologies, Inc. (KAP), Spring, Texas, for analysis per the U.S. Environmental Protection Agency (EPA) Contract Laboratory Program (CLP). Analyses were

completed using CLP SOM02.2 trace volatile method for VOCs and CLP SOM01.2 semivolatile organic analysis SVOL selected ion monitoring method for 1,4-dioxane (1,4-D). Two samples (JW-CPT13-60 and JW-CPT14-60) had high pH and were analyzed beyond the 7-day holding time for unpreserved samples. These two samples were analyzed; however, all detected results were J-flagged and non-detect results were rejected, as indicated in **Table 1**.

The analytical values discussed in this technical memorandum have been subject to Tier 1B data validation. EPA has also completed a Tier 3 data validation on 10% of the analytical data associated with these field events. Further details regarding sample collection, analytical, and quality-control requirements are presented in the JW Final SAP.

5.0 Groundwater Sampling Results

Figure 2a, **Figure 3a**, **Figure 4a**, and **Figure 5a** present results for the VOCs, as represented by TCE and cis-1,2-dichloroethene (cis-1,2-DCE) in the three zones (shallow, intermediate, lower) of the Gaspur Aquifer and the Exposition Aquifer, respectively. **Figure 2b**, **Figure 3b**, **Figure 4b**, and **Figure 5b** present results for 1,2-dichloroethane (1,2-DCA) and the semivolatile organic compound (SVOC) 1,4-D in the three Gaspur Aquifer zones and the Exposition Aquifer, respectively. Other VOCs in excess of their respective California Division of Drinking Water maximum contaminant levels (MCLs) or notification level (NL) are shown in Table 1 (California State Water Resources Control Board, Division of Drinking Water, 2014 [MCLs]; 2015 [NLs]). **Figure 2a** and **Figure 2b** also include the latest sampling results (2011) from the five existing monitoring wells on the JW Superfund Site. These wells are completed in the shallow Gaspur Aquifer. Note: Current values for MCLs and NLs are presented in **Table 1**.

5.1 JW Superfund Site Groundwater Contaminant Plume

The figures and discussion presented in this section interpret the lateral and vertical extent of groundwater contamination associated with the JW Superfund Site. Groundwater contamination migrating from the JW Superfund Site appears to follow a southerly flow direction in the Gaspur Aquifer. Flow direction in the Exposition Aquifer is reported to be southwest (Water Replenishment District, 2015), but has not been established beneath the JW Superfund Site.

In general, the Gaspur Aquifer has been shown to be anaerobic, indicating reducing conditions in the aquifer. TCE and comparatively higher ratios of cis-1,2-DCE–to–TCE concentrations have been observed in the Gaspur Aquifer beneath Cooper Drum Superfund Site and SAIA Superfund Site, suggesting natural chemical degradation of these compounds at these two sites. TCE and cis-1,2-DCE concentrations presented below indicate that similar conditions are observed beneath the JW Superfund Site.

Shallow Gaspur Aquifer – As shown on **Figure 2a**, high concentrations of TCE (>1,000 ug/L) are present across the JW Superfund Site. This concentration pattern is generally consistent with previous sample results (ENSR, 1997) which have shown high levels in the source area at MW-1 (up to 28,000 ug/L of TCE) and near the southern boundary of the JW Superfund Site at JWMW-4 (up to 2,400 ug/L of TCE).

Upgradient sample locations along Firestone Boulevard show concentrations of VOCs two to three orders of magnitude lower at all four sampled locations. At two locations, TCE is slightly above the MCL (6.8 ug/L and an estimated value of 19J ug/L at the other location). A fifth location was dry.

A similar pattern of lower concentrations of VOCs (two to three orders of magnitude lower as compared to on-site concentrations) is also shown in the eight downgradient sample locations west and east of Rayo Avenue. Concentrations ranged from <0.5 ug/L and up to 16 ug/L of TCE. Historic sample results are presented on **Figure 2a** for CPT-12, which was sampled in 2000 as part of Cooper Drum Superfund Site remedial investigation. Sample results from 62 feet and 73 feet bgs are presented on **Figure 2a**. In addition, more recent results (June 2015) from Cooper Drum Superfund Site well MW-19 are also presented on **Figure 2a**. Sampling results from 2000 indicate TCE concentrations were up to 6,700 ug/L. Similarly, the 72 feet bgs sample from CPT-12 showed concentrations of TCE up to 4,400 ug/L in 2000. The more recent results from JW-CPT14 (which is adjacent to CPT-12) and MW-19 show much lower concentrations, suggesting vertical migration of VOCs into the deeper portion of Gaspur Aquifer in this area downgradient from the JW Superfund Site.

Finally, the results at the two most-downgradient sample locations (SAIAHP17 and SAIAHP18) appear to be related to the VOC contamination migrating from the JW Superfund Site. It is also possible that these concentrations originate from another source of VOC contamination. Further east at SAIACPT02, low VOC concentrations are present, possibly characterizing the eastern extent of contamination from the JW Superfund Site.

As shown on **Figure 2b**, relatively higher concentrations of 1,4-D at the on-site sample locations suggest there is a source of 1,4-D beneath the JW Superfund Site. However, slightly lower concentrations above the NL are upgradient and downgradient of the JW Superfund Site. 1,2-DCA was detected at 8 locations above the MCL. The four upgradient locations sampled on Firestone Boulevard were non-detect. The highest downgradient concentration (32 ug/L) was at SAIAHP17 on the ELG Metals property.

Intermediate Gaspur Aquifer – As shown on **Figure 3a,** on-site sample locations showed much lower VOC concentrations as compared to the shallow zone. The highest concentrations were near the source area (JW-CPT01; 23 ug/L of TCE). All upgradient locations on Firestone Boulevard were non-detect with the exception of two samples reported below the detection level (J-flagged).

Six out of the eight off-site and downgradient locations east and west of Rayo Avenue were either non-detect or less than the MCL. The two locations nearest Rayo Avenue (JW-CPT14 and JW-CPT15) were above the MCL, with the highest VOC concentration of cis-1,2-DCE at 20 ug/L. The highest VOC concentration was 170 ug/L of cis-1,2-DCE at the most-downgradient location (SAIAHP18). The high cis-1,2-DCE concentration at SAIAHP18 further suggests downgradient vertical migration of the VOC plume in this area.

As shown on **Figure 3b**, 1,2-DCA was detected above the MCL at all locations with the exception of two locations (JW-CPT04 and JW-CPT13). Higher concentrations were generally found off site at upgradient and downgradient locations, and cross-gradient locations to the east of the JW Superfund Site. 1,4-D was detected at all locations with the exception of five locations that were non-detect. 1,4-D concentrations were much lower than those detected in the shallow zone. The two highest concentrations were upgradient at JW-CPT05 (3 ug/L) and downgradient at SAIAHP18 (6.8 ug/L).

Lower Gaspur Aquifer – As shown on **Figure 4a**, VOC concentrations at all locations were either non-detect, reported below the detection limit, or below the MCL, with the exception of the two most-downgradient locations, SAIAHP17 and SAIAHP18. The highest concentrations were at SAIAHP18 (TCE, 410 ug/L; cis-1,2-DCE, 960 ug/L).

As shown on **Figure 4b**, 1,2-DCA was detected at nearly all locations above the MCL. The exceptions were the three onsite locations which were either non-detect or below the detection level (J-flagged). The two highest 1,2-DCA concentrations were 30 ug/L at cross-gradient location JW-CPT09 and 52 ug/L at downgradient location SAIAHP18. Concentrations of 1,4-D were non-detect or below the detection level (J-flagged) at 14 locations, including the on-site locations. The highest upgradient concentration was 5.6 ug/L (JW-CPT06). The highest downgradient location was 13 ug/L (SAIAHP18).

Exposition Aquifer – As shown on **Figure 5a**, VOCs concentrations were non-detect at 16 locations. Of the six locations with positive concentrations, three locations were on site. The highest concentration was on site at JW-CPT03 (1.9 ug/L of TCE). As shown on **Figure 5b**, l,2-DCA was detected at eight locations. Five of these locations were above the MCL and ranged in concentration from 0.66 ug/L to 9.4 ug/L. The two highest concentrations were located upgradient on Firestone Boulevard. 1,4-D was non-detect at 15 locations. The highest concentration from the five locations with positive detections was 7.1 ug/L at downgradient location SAIAHP17.

6.0 Conclusions and Recommendations

Conclusions and recommendations based on the data collected from the 2015 CPT/HydroPunch sampling are provided below. The purpose of the sampling was to further characterize the JW Superfund Site plume, characterizing upgradient conditions; defining the vertical and lateral extent of the plume on, and downgradient of, the JW Superfund Site; and evaluating any comingling with the Cooper Drum Superfund Site plume and the SAIA Superfund Site plume.

Jervis B. Webb Company Superfund Site Plume

- High concentrations of VOCs (>1,000 ug/L) present in the shallow Gaspur Aquifer beneath the JW Superfund Site indicate the presence of a groundwater plume. TCE

concentrations in the intermediate Gaspur Aquifer decrease by two to three orders of magnitude downgradient of the site, and are slightly above the MCL (11 ug/L to 23 ug/L). Residual VOC contamination below the MCL or non-detect values are present in the lower Gaspur Aquifer and the Exposition Aquifer.

- Downgradient of the JW Superfund Site, VOC concentrations above the MCLs are present in all three zones of the Gaspur Aquifer. Due to downward migration of the contamination as the plume moves downgradient, the highest concentrations are present in the lower Gaspur Aquifer at the most-downgradient sample locations (SAIAHP17 and SAIAHP18). TCE concentrations in the Exposition Aquifer are either less than MCLs or non-detect. Based on the apparent continuity of VOC concentrations from the JW Superfund Site plume southward (downgradient), the downgradient extent of this VOC plume is likely beneath the SAIA Superfund Site and cannot be delineated due to comingling with the SAIA Superfund Site VOC plume.
- The off-site western lateral extent of the JW Superfund Site plume above MCLs appears to be between borings JW-CPT13 and JW-CPT14 and is confined to the shallow and intermediate Gaspur Aquifer at these "mid-plume" locations. Further downgradient of JW-CPT13 and JW-CPT14, the plume may comingle with the Cooper Drum Superfund Site plume. The eastern lateral extent appears to be between borings JW-CPT17 and JW-CPT18 and is also confined to the shallow and intermediate Gaspur Aquifer at these "mid-plume" locations.
- Upgradient of the JW Superfund Site plume, concentrations of VOCs above the MCL (up to 19 ug/L of TCE) are present in the shallow Gaspur Aquifer, suggesting the presence of low-level sources of VOCs upgradient of the JW Superfund Site plume. Generally, non-detect concentrations of VOCs (except for 1,2-DCA; see discussion in next bullet) are found in the lower zones of the Gaspur Aquifer and the Exposition Aquifer. Concentrations of VOCs that decrease with depth could also be related to the diminishing extent of the Gaspur aquifer in this area and the presence of more fine-grained material from the Bellflower Aquiclude.
- 1,2-DCA has generally been detected at most locations in all zones of the Gaspur Aquifer and, to a lesser extent, in the Exposition Aquifer. 1,2-DCA was detected at five locations

in the Exposition Aquifer. The source of 1,2-DCA does not appear to be related to the JW Superfund Site. The higher concentrations appear to be east of the JW Superfund Site and are present at upgradient, cross-gradient to the east, and downgradient locations.

- The non-VOC 1,4-D appears to be related to the JW Superfund Site based on high concentrations present on shallow groundwater beneath the site (5.9 ug/L to 130 ug/L in the shallow zone); however, this compound is also present at lower concentrations at upgradient locations, indicating other off-site sources. The extent of 1,4-D above the NL is generally confined to the Gaspur Aquifer with one detection above the NL in the Exposition Aquifer (downgradient location SAIAHP17).

Gilbane recommends that two additional CPT/HydroPunch groundwater sampling locations be completed to further characterize the downgradient extent of the JW Superfund Site plume between JW-CPT14 and JW-CPT15 (**Figure 6**). Analytical results from these two proposed CPT/HydroPunch locations and the HydroPunch analytical results presented in this technical memorandum will confirm the vertical migration of the JW plume in these downgradient locations.

Two upgradient monitoring wells, three mid-plume monitoring wells and two downgradient wells are recommended to confirm flow direction and characterize the extent of the JW Superfund Site plume. It is recommended these wells will be triple-completion wells screened in the three depth zones of the Gaspur Aquifer. Two additional (JWMW-11 and JWMW-14) locations will be single-completion wells screened in the upper portion of the Exposition Aquifer (**Figure 6**).

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TABLE

Table 1	HydroPunch Groundwater Sample Results for VOCs and SVOCs, 2013 and 2015

FIGURES

Figure 1	Groundwater Monitoring Well and CPT Locations
Figure 2a	Trichloroethene and cis-1,2-Dichloroethene Results - Shallow Gaspur Aquifer
Figure 2b	1,2-Dichloroethane and 1,4-Dioxane Results- Shallow Gaspur Aquifer
Figure 3a	Trichloroethene and cis-1,2-Dichloroethene Results - Intermediate Gaspur Aquifer
Figure 3b	1,2-Dichloroethane and 1,4-Dioxane Results- Intermediate Gaspur Aquifer
Figure 4a	Trichloroethene and cis-1,2-Dichloroethene Results - Lower Gaspur Aquifer
Figure 4b	1,2-Dichloroethane and 1,4-Dioxane Results- Lower Gaspur Aquifer
Figure 5a	Trichloroethene and cis-1,2-Dichloroethene Results - Exposition Aquifer
Figure 5b	1,2-Dichloroethane and 1,4-Dioxane Results- Exposition Aquifer
Figure 6	Proposed Monitoring Well and CPT/HydroPunch Locations

ATTACHMENTS

Attachment 1	Groundwater Elevation Contour Maps
Attachment 2	Summary of Previous Investigations at the JW Superfund Site
Attachment 3	Cone Penetrometer Testing Logs

TABLE

Table 1 HydroPunch Groundwater Sample Results for VOCs and SVOCs, 2013 and 2015
Jervis B. Webb Company Superfund Site, South Gate, California

Location	Sample ID	Sample Date	Sample Type	Sample Depth (bgs)	Tetrachloroethene	Trichloroethene	cis-1,2-Dichloroethene	1,1-Dichloroethene	trans-1,2-Dichloroethene	Vinyl Chloride	1,1-Dichloroethane	1,2-Dichloroethane	Benzene	1,2-Dichloropropane	1,4-Dioxane (p-Dioxane)	1,2,3-Trichloropropane	Toluene
JW-CPT01	JW-CPT01-50	03/27/2013	N	66	3.9 J	3,300	59	<25	7.4 J	<25	16 J	<25	<25	<25	32	<25	<25
JW-CPT01	JW-CPT01-51	03/27/2013	FD	66	3.6 J	3,200	58	<25	7.3 J	<25	15 J	<25	<25	<25	33	<25	<25
JW-CPT01	JW-CPT01-70	03/27/2013	N	90	0.19 J	23	0.18 J	<0.5	<0.5	<0.5	0.054 J	2.3	<0.5	<0.5	<0.5	0.13 J	<0.5
JW-CPT01	JW-CPT01-90	03/27/2013	N	104	<0.5	3.7	0.2 J	<0.5	<0.5	<0.5	<0.5	4.8	0.29 J	<0.5	0.52	0.15 J	<0.5
JW-CPT01	JW-CPT01-110	03/27/2013	N	125	<0.5	1.1	<0.5	<0.5	<0.5	<0.5	<0.5	0.25 J	<0.5	<0.5	<0.5	<0.5	<0.5
JW-CPT02	JW-CPT02-50	03/26/2013	N	64	<50	5,000 J	170	<50	16 J	<50	17 J	<50	<50	<50	34	<50	<50
JW-CPT02	JW-CPT02-70	03/26/2013	N	80	<0.5	11	0.34 J	<0.5	<0.5	<0.5	<0.5	0.082 J	<0.5	<0.5	0.81	<0.5	0.11 J
JW-CPT02	JW-CPT02-90	03/26/2013	N	100	<0.5	4	0.49 J	<0.5	<0.5	<0.5	<0.5	4.8	<0.5	<0.5	<0.5	0.14 J	0.084 J
JW-CPT02	JW-CPT02-110	03/26/2013	N	124	<0.5	0.31 J	<0.5	<0.5	<0.5	<0.5	<0.5	0.25 J	<0.5	<0.5	<0.5	<0.5	0.065 J
JW-CPT03	JW-CPT03-50	03/25/2013	N	66	<20	1,100	190	<20	13 J	<20	6 J	<20	<20	<20	12	<20	<20
JW-CPT03	JW-CPT03-51	03/25/2013	FD	66	<20	1,200	200	<20	14 J	<20	5.9 J	<20	<20	<20	11	<20	<20
JW-CPT03	JW-CPT03-70	03/25/2013	N	86	<0.5	2	0.43 J	<0.5	<0.5	<0.5	<0.5	<0.5	0.26 J	<0.5	<0.5	<0.5	<0.5
JW-CPT03	JW-CPT03-90	03/25/2013	N	99	<0.5	0.23 J	0.12 J	<0.5	<0.5	0.072 J	<0.5	2.7	0.32 J	0.16 J	<0.5	0.21 J	<0.5
JW-CPT03	JW-CPT03-110	03/25/2013	N	132	<0.5	1.9	0.39 J	<0.5	<0.5	<0.5	<0.5	<0.5	0.34 J	<0.5	<0.5	<0.5	<0.5
JW-CPT04	JW-CPT04-60	06/15/2015	N	68	<0.5	1.2	2.1	<0.5	<0.5	<0.5	2	<0.5	<0.5	<0.5	7.9 J	<0.5	<0.5
JW-CPT04	JW-CPT04-61	06/15/2015	FD	69	<0.5	0.82	1.8	<0.5	<0.5	<0.5	1.6	<0.5	<0.5	<0.5	6	<0.5	<0.5
JW-CPT04	JW-CPT04-75	06/16/2015	N	84	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
JW-CPT04	JW-CPT04-90	06/16/2015	N	96	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.2	<0.5	<0.5	<0.5	<0.5	<0.5
JW-CPT04	JW-CPT04-130	06/16/2015	N	132	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
JW-CPT05	JW-CPT05-60	06/16/2015	N	69	<0.5	6.8	0.71	3.8	<0.5	<0.5	2.8	<0.5	<0.5	<0.5	16	<0.5	<0.5
JW-CPT05	JW-CPT05-75	06/16/2015	N	84	<0.5	0.32 J	<0.5	<0.5	<0.5	<0.5	0.67	1.8	<0.5	<0.5	3	<0.5	<0.5
JW-CPT05	JW-CPT05-90	06/17/2015	N	98	<0.5	0.2 J	0.21 J	<0.5	<0.5	<0.5	<0.5	3.6	<0.5	<0.5	0.44 J	<0.5	<0.5
JW-CPT05	JW-CPT05-91	06/17/2015	FD	99	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	3.7	<0.5	<0.5	<0.5	<0.5	<0.5
JW-CPT05	JW-CPT05-105	06/17/2015	N	112	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	4.1	<0.5	0.28 J	0.9	<0.5	<0.5
JW-CPT05	JW-CPT05-130	06/17/2015	N	132	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.7	0.66	<0.5	<0.5	<0.5	<0.5
JW-CPT06	JW-CPT06-75	06/19/2015	N	84	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	4.1	<0.5	<0.5	<0.5	<0.5	<0.5
JW-CPT06	JW-CPT06-90	06/19/2015	N	96	<0.5	0.69	0.34 J	<0.5	<0.5	<0.5	<0.5	5.6	<0.5	<0.5	5.6	<0.5	<0.5
JW-CPT06	JW-CPT06-105	06/19/2015	N	106	<0.5	1.4	0.57	0.29 J	<0.5	<0.5	<0.5	14	<0.5	0.34 J	3.4	<0.5	<0.5
JW-CPT06	JW-CPT06-130	06/19/2015	N	128	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
JW-CPT07	JW-CPT07-60	06/18/2015	N	60	<0.5	19 J	1.6 J	1.7 J	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
JW-CPT07	JW-CPT07-75	06/18/2015	N	75	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	5.1 J	<0.5	<0.5	<0.5	<0.5	<0.5
JW-CPT07	JW-CPT07-76	06/18/2015	FD	76	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	4.4 J	<0.5	<0.5	<0.5	<0.5	<0.5
JW-CPT07	JW-CPT07-90	06/19/2015	N	90	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	3.4 J	<0.5	<0.5	<0.5	<0.5	<0.5
JW-CPT07	JW-CPT07-105	06/19/2015	N	104	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	3.6	<0.5	<0.5	<0.5	<0.5	<0.5
JW-CPT07	JW-CPT07-130	06/19/2015	N	128	<0.5	0.39 J	0.71	<0.5	<0.5	<0.5	<0.5	9.4	<0.5	<0.5	<0.5	<0.5	<0.5
JW-CPT08	JW-CPT08-60	06/17/2015	N	65	<0.5	2.6	1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
JW-CPT08	JW-CPT08-75	06/17/2015	N	78	<0.5	<0.5	0.39 J	<0.5	<0.5	<0.5	<0.5	15	<0.5	<0.5	1	<0.5	<0.5

Table 1 HydroPunch Groundwater Sample Results for VOCs and SVOCs, 2013 and 2015
Jervis B. Webb Company Superfund Site, South Gate, California

Location	Sample ID	Sample Date	Sample Type	Sample Depth (bgs)	Tetrachloroethene	Trichloroethene	cis-1,2-Dichloroethene	1,1-Dichloroethene	trans-1,2-Dichloroethene	Vinyl Chloride	1,1-Dichloroethane	1,2-Dichloroethane	Benzene	1,2-Dichloropropane	1,4-Dioxane (p-Dioxane)	1,2,3-Trichloropropane	Toluene
JW-CPT08	JW-CPT08-90	06/17/2015	N	96	<0.5	**0.54**	**1.5**	<0.5	<0.5	<0.5	<0.5	**5**	<0.5	<0.5	<0.5	<0.5	<0.5
JW-CPT08	JW-CPT08-105	06/18/2015	N	108	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	**5.8**	<0.5	<0.5	**1.6 J**	<0.5	<0.5
JW-CPT08	JW-CPT08-106	06/18/2015	FD	109	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	**6.2**	<0.5	<0.5	**3.4 J**	<0.5	<0.5
JW-CPT08	JW-CPT08-130	06/18/2015	N	124	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
JW-CPT09	JW-CPT09-60	06/23/2015	N	64	<0.5	<0.5	**0.5**	<0.5	<0.5	<0.5	<0.5	**0.82**	<0.5	<0.5	**0.89**	<0.5	<0.5
JW-CPT09	JW-CPT09-75	06/23/2015	N	76	<0.5	<0.5	**2.2**	<0.5	<0.5	<0.5	<0.5	**6.4**	<0.5	<0.5	<0.5	<0.5	<0.5
JW-CPT09	JW-CPT09-90	06/23/2015	N	92	<0.5	<0.5	**0.54**	<0.5	<0.5	<0.5	<0.5	**30**	<0.5	**0.61**	**1.6**	<0.5	<0.5
JW-CPT09	JW-CPT09-105	06/23/2015	N	116	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	NA	<0.5	<0.5
JW-CPT09	JW-CPT09-130	06/23/2015	N	130	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
JW-CPT10	JW-CPT10-60	06/22/2015	N	57	<0.5	**7.7**	**3.1**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.74	<0.5	<0.5
JW-CPT10	JW-CPT10-75	06/22/2015	N	68	<0.5	**3.1**	**1.7**	<0.5	<0.5	<0.5	<0.5	**6.9**	<0.5	<0.5	<0.5	<0.5	<0.5
JW-CPT10	JW-CPT10-76	06/22/2015	FD	69	<0.5	**3 J**	**1.8 J**	<0.5	<0.5	<0.5	<0.5	**7.2 J**	<0.5	<0.5	<0.5	<0.5	<0.5
JW-CPT10	JW-CPT10-90	06/22/2015	N	84	<0.5	**0.79**	**1.7**	<0.5	<0.5	<0.5	<0.5	**7.2**	<0.5	<0.5	<0.9	<0.5	<0.5
JW-CPT10	JW-CPT10-105	06/22/2015	N	98	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	**8.9**	<0.5	**0.45 J**	<0.5	<0.5	<0.5
JW-CPT10	JW-CPT10-130	06/22/2015	N	120	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.9	<0.5	<0.5
JW-CPT11	JW-CPT11-45	06/29/2015	N	63	<0.5	<0.5	**5.4**	<0.5	<0.5	<0.5	<0.5	<0.5	**11**	<0.5	**2.4**	<0.5	**0.23 J**
JW-CPT11	JW-CPT11-60	06/29/2015	N	78	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	**0.97**	<0.5	<0.5
JW-CPT11	JW-CPT11-75	06/29/2015	N	88	<0.5	<0.5	**0.6**	<0.5	<0.5	<0.5	<0.5	**4.2**	<0.5	<0.5	**0.63**	<0.5	<0.5
JW-CPT11	JW-CPT11-90	06/29/2015	N	102	<0.5	<0.5	**0.94**	<0.5	<0.5	<0.5	<0.5	**2**	**0.48 J**	<0.5	**0.65**	<0.5	<0.5
JW-CPT11	JW-CPT11-105	06/29/2015	N	116	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	**0.67**	<0.5	**0.21 J**
JW-CPT11	JW-CPT11-130	06/29/2015	N	132	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	**0.96**	<0.5	<0.5
JW-CPT12	JW-CPT12-74	06/26/2015	FD	73	<0.5	**10 J**	**2 J**	<0.5	<0.5	<0.5	**0.7**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
JW-CPT12	JW-CPT12-75	06/26/2015	N	74	<0.5	**16 J**	**3 J**	<0.5	<0.5	<0.5	**0.96**	<0.5	<0.5	<0.5	**3.3 J**	<0.5	<0.5
JW-CPT12	JW-CPT12-90	06/26/2015	N	92	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	**1.9**	<0.5	<0.5	<0.5	<0.5	<0.5
JW-CPT12	JW-CPT12-105	06/26/2015	N	108	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	**1.9**	<0.5	<0.5	**0.49 J**	<0.5	<0.5
JW-CPT12	JW-CPT12-130	06/26/2015	N	132	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	**0.65**	<0.5	<0.5
JW-CPT13	JW-CPT13-60	06/25/2015	N	60	R	R	R	R	R	R	R	**3.1 J**	R	R	**0.45 J**	R	R
JW-CPT13	JW-CPT13-75	06/25/2015	N	73	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	**0.98 J**	<0.5	<0.5	<0.5	<0.5	<0.5
JW-CPT13	JW-CPT13-90	06/25/2015	N	91	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	**1.1**	<0.5	<0.5
JW-CPT13	JW-CPT13-91	06/25/2015	FD	92	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	**0.8**	<0.5	<0.5
JW-CPT13	JW-CPT13-105	06/25/2015	N	102	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	**1.3 J**	<0.5	<0.5	<0.5	<0.5	<0.5
JW-CPT13	JW-CPT13-130	06/25/2015	N	130	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
JW-CPT14	JW-CPT14-60	06/24/2015	N	62	R	**8.6 J**	**3.8 J**	R	R	R	R	R	**9.5 J**	R	**0.71**	R	R
JW-CPT14	JW-CPT14-75	06/24/2015	N	75	<0.5	**8.1 J**	**2.7 J**	**2.4 J**	<0.5	<0.5	**0.83 J**	**17 J**	<0.5	<0.5	**0.89**	<0.5	<0.5
JW-CPT14	JW-CPT14-90	06/24/2015	N	90	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
JW-CPT14	JW-CPT14-105	06/24/2015	N	102	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	**1.7 J**	<0.5	<0.5	**1.1**	<0.5	<0.5
JW-CPT14	JW-CPT14-130	06/24/2015	N	130	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

Table 1 HydroPunch Groundwater Sample Results for VOCs and SVOCs, 2013 and 2015
Jervis B. Webb Company Superfund Site, South Gate, California

Location	Sample ID	Sample Date	Sample Type	Sample Depth (bgs)	Tetrachloroethene	Trichloroethene	cis-1,2-Dichloroethene	1,1-Dichloroethene	trans-1,2-Dichloroethene	Vinyl Chloride	1,1-Dichloroethane	1,2-Dichloroethane	Benzene	1,2-Dichloropropane	1,4-Dioxane (p-Dioxane)	1,2,3-Trichloropropane	Toluene
JW-CPT15	JW-CPT15-60	10/26/2015	N	67	<0.5	**9.1**	**4.5**	**0.73**	**1.9**	<0.5	**0.45 J**	<0.5	<0.5	<0.5	**5.8**	<0.5	<0.5
JW-CPT15	JW-CPT15-75	10/26/2015	N	79	<0.5	**9.9**	**20**	**0.82**	**5.3**	<0.5	<0.5	**0.77**	<0.5	<0.5	**1.6**	<0.5	<0.5
JW-CPT15	JW-CPT15-92	10/27/2015	N	92	<0.5	**0.24 J**	**1.2**	<0.5	<0.5	<0.5	<0.5	**10**	<0.5	**0.27 J**	**0.56**	<0.5	<0.5
JW-CPT15	JW-CPT15-106	10/26/2015	N	106	<0.5	<0.5	**0.26 J**	<0.5	<0.5	<0.5	<0.5	**7.4**	<0.5	**0.44 J**	**0.26 J**	<0.5	<0.5
JW-CPT15	JW-CPT15-107	10/26/2015	FD	107	<0.5	<0.5	**0.34 J**	<0.5	<0.5	<0.5	<0.5	**7.5**	<0.5	**0.36 J**	**0.35 J**	<0.5	<0.5
JW-CPT15	JW-CPT15-128	10/26/2015	N	128	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	NA	<0.5	<0.5
JW-CPT16	JW-CPT16-60	10/27/2015	N	66	<0.5	**1.9**	**3.1**	**0.22 J**	**0.55**	<0.5	<0.5	**0.76**	<0.5	<0.5	**0.3 J**	<0.5	<0.5
JW-CPT16	JW-CPT16-75	10/27/2015	N	80	<0.5	**1.4**	**2.3**	<0.5	**0.16 J**	<0.5	<0.5	**1.1**	<0.5	<0.5	**0.55**	<0.5	<0.5
JW-CPT16	JW-CPT16-90	10/27/2015	N	92	<0.5	**0.21 J**	<0.5	<0.5	<0.5	<0.5	<0.5	**5.3**	<0.5	**0.23 J**	**0.39 J**	<0.5	<0.5
JW-CPT16	JW-CPT16-105	10/27/2015	N	108	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	**0.42 J**	<0.5	<0.5	<0.5	<0.5	<0.5
JW-CPT16	JW-CPT16-130	10/27/2015	N	124	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	**0.4 J**	<0.5	<0.5	<0.5	<0.5	<0.5
JW-CPT17	JW-CPT17-60	10/28/2015	N	65	<0.5	**13**	**7.7**	**1.4 J**	**0.79**	<0.5	**1.2**	**1.3**	<0.5	<0.5	**0.8**	<0.5	<0.5
JW-CPT17	JW-CPT17-75	10/28/2015	N	82	<0.5	<0.5	**0.75**	<0.5	<0.5	<0.5	**0.46 J**	**2.2**	<0.5	**0.49 J**	**1.2**	<0.5	<0.5
JW-CPT17	JW-CPT17-91	10/28/2015	N	91	<0.5	**0.6**	**2.1**	<0.5	<0.5	<0.5	<0.5	**12**	<0.5	**0.38 J**	**0.42 J**	<0.5	<0.5
JW-CPT17	JW-CPT17-92	10/28/2015	FD	92	<0.5	**0.71**	**2.3**	<0.5	<0.5	<0.5	<0.5	**12**	<0.5	**0.37 J**	**0.54**	<0.5	<0.5
JW-CPT17	JW-CPT17-105	10/28/2015	N	102	<0.5	**0.33 J**	**0.34 J**	<0.5	<0.5	<0.5	<0.5	**4.2**	**0.93**	**0.53**	<0.5	<0.5	<0.5
JW-CPT17	JW-CPT17-130	10/28/2015	N	118	<0.5	**0.35 J**	<0.5	<0.5	<0.5	<0.5	<0.5	**0.22 J**	<0.5	<0.5	<0.5	<0.5	<0.5
JW-CPT18	JW-CPT18-60	10/29/2015	N	68	<0.5	<0.5	**0.53**	**0.26 J**	<0.5	<0.5	**1**	**0.4 J**	<0.5	<0.5	**1.6**	<0.5	<0.5
JW-CPT18	JW-CPT18-75	10/29/2015	N	84	<0.5	<0.5	**1**	<0.5	<0.5	<0.5	<0.5	**15**	<0.5	<0.5	**0.57**	<0.5	<0.5
JW-CPT18	JW-CPT18-90	10/29/2015	N	93	<0.5	<0.5	**1**	<0.5	<0.5	<0.5	<0.5	**16**	<0.5	**0.22 J**	**0.73**	<0.5	<0.5
JW-CPT18	JW-CPT18-91	10/29/2015	FD	94	<0.5	**0.26 J**	**1.1**	<0.5	<0.5	<0.5	<0.5	**18**	<0.5	<0.5	**0.37 J**	<0.5	<0.5
JW-CPT18	JW-CPT18-130	10/29/2015	N	119	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	**1.6**	<0.5	<0.5	<0.5	<0.5	<0.5
Screening Criteria																	
MCL* (ug/L)					5	5	6	6	10	0.5	5	0.5	1	5	1[3]	0.005[3]	150

exceeds California MCL

* Based on State Water Resources Control Board maximum contaminant levels (MCLs; California Division of Drinking Water, 2014).

Notes:

1) Results reported in micrograms per liter (ug/L).

2) Concentrations detected at or above laboratory reporting limits are shown in bold font.

3) Based on California Department of Public Health Notification Level.

Abbreviations:

<#.# = not detected at the indicated reporting limit

bgs = feet below ground surface

FD = field duplicate

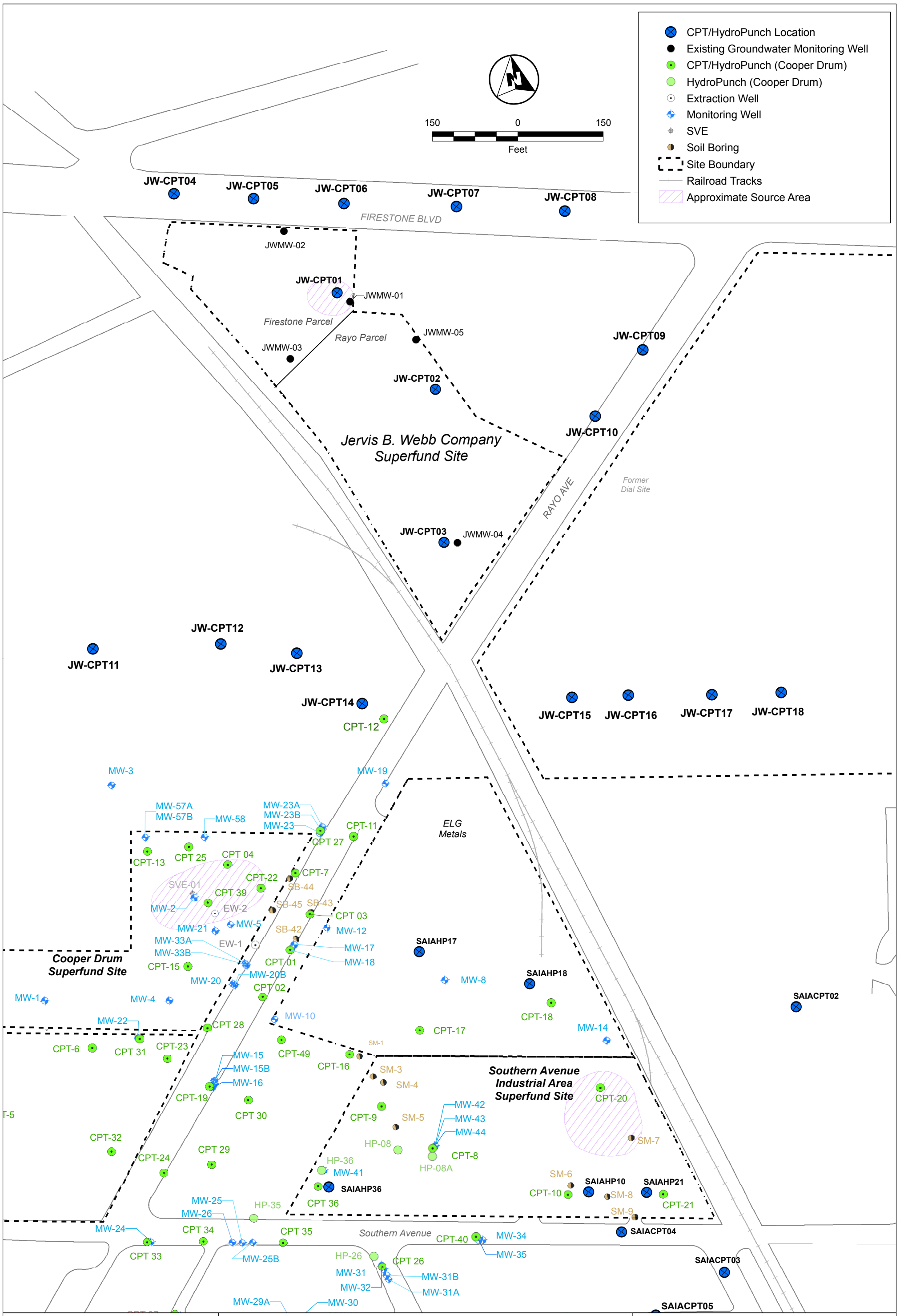
J = estimated value

Table 1 HydroPunch Groundwater Sample Results for VOCs and SVOCs, 2013 and 2015
Jervis B. Webb Company Superfund Site, South Gate, California

Location	Sample ID	Sample Date	Sample Type	Sample Depth (bgs)	Tetrachloroethene	Trichloroethene	cis-1,2-Dichloroethene	1,1-Dichloroethene	trans-1,2-Dichloroethene	Vinyl Chloride	1,1-Dichloroethane	1,2-Dichloroethane	Benzene	1,2-Dichloropropane	1,4-Dioxane (p-Dioxane)	1,2,3-Trichloropropane	Toluene

MCL = maximum contaminant level
N = normal sample
NA = not analyzed
NS = no MCLs available
R = rejected result due to data quality control failure
SVOC = semivolatile organic compound
VOC = volatile organic compound

FIGURES



Jervis B. Webb Company Superfund Site
Depth-Discrete Groundwater Sampling Results 2013 and 2015
South Gate, Los Angeles County, California
US Environmental Protection Agency

Figure 1

Groundwater Monitoring Well and CPT Locations

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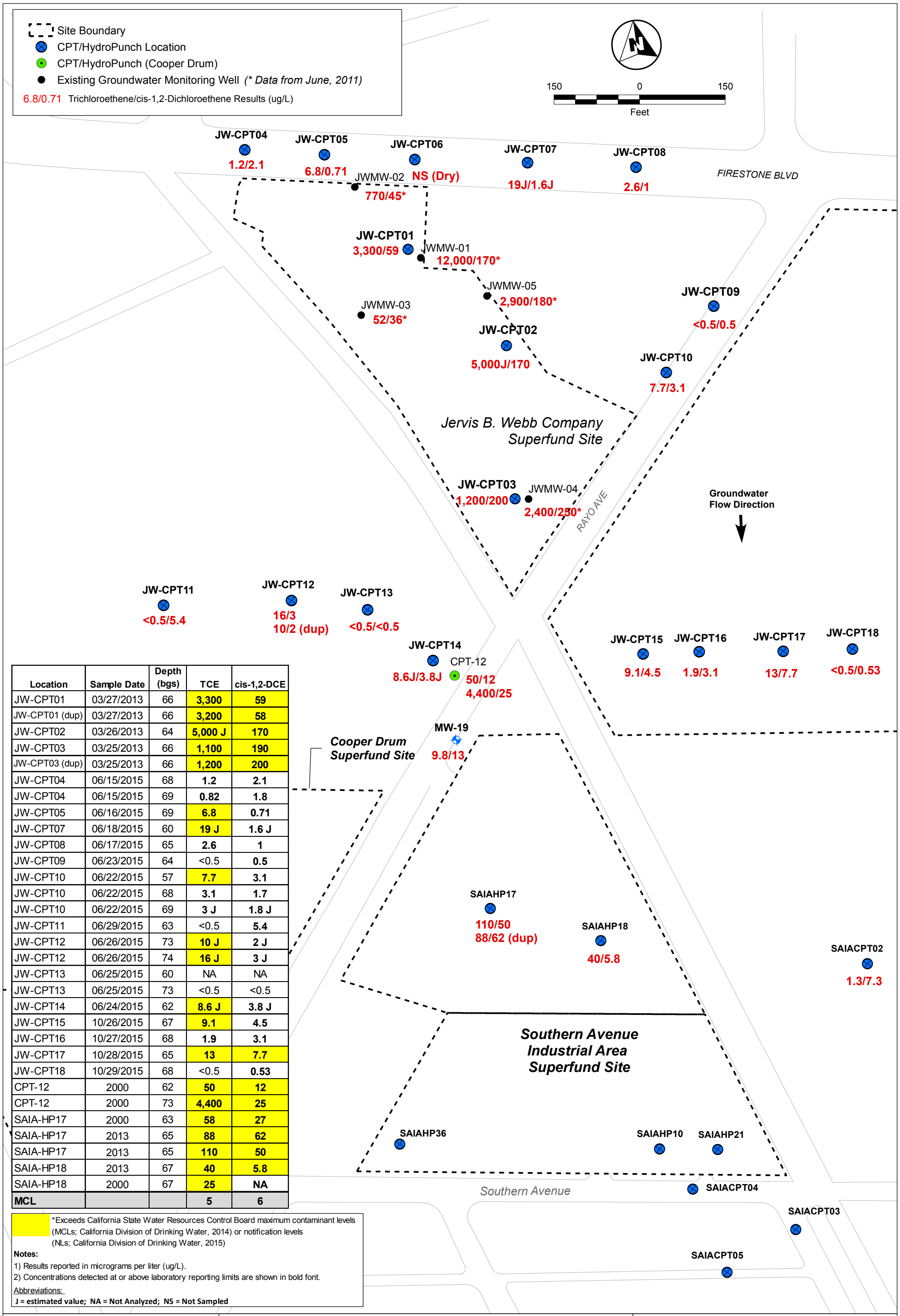

Location	Sample Date	Depth (bgs)	TCE	cis-1,2-DCE
JW-CPT01	03/27/2013	66	**3,300**	**59**
JW-CPT01 (dup)	03/27/2013	66	**3,200**	**58**
JW-CPT02	03/26/2013	64	**5,000 J**	**170**
JW-CPT03	03/25/2013	66	**1,100**	**190**
JW-CPT03 (dup)	03/25/2013	66	**1,200**	**200**
JW-CPT04	06/15/2015	68	**1.2**	**2.1**
JW-CPT04	06/15/2015	69	**0.82**	**1.8**
JW-CPT05	06/16/2015	69	**6.8**	**0.71**
JW-CPT07	06/18/2015	60	**19 J**	**1.6 J**
JW-CPT08	06/17/2015	65	**2.6**	**1**
JW-CPT09	06/23/2015	64	<0.5	**0.5**
JW-CPT10	06/22/2015	57	**7.7**	**3.1**
JW-CPT10	06/22/2015	68	**3.1**	**1.7**
JW-CPT10	06/22/2015	69	**3 J**	**1.8 J**
JW-CPT11	06/29/2015	63	<0.5	**5.4**
JW-CPT12	06/26/2015	73	**10 J**	**2 J**
JW-CPT12	06/26/2015	74	**16 J**	**3 J**
JW-CPT13	06/25/2015	60	NA	NA
JW-CPT13	06/25/2015	73	<0.5	<0.5
JW-CPT14	06/24/2015	62	**8.6 J**	**3.8 J**
JW-CPT15	10/26/2015	67	**9.1**	**4.5**
JW-CPT16	10/27/2015	68	**1.9**	**3.1**
JW-CPT17	10/28/2015	65	**13**	**7.7**
JW-CPT18	10/29/2015	68	<0.5	**0.53**
CPT-12	2000	62	**50**	**12**
CPT-12	2000	73	**4,400**	**25**
SAIA-HP17	2000	63	**58**	**27**
SAIA-HP17	2013	65	**88**	**62**
SAIA-HP17	2013	65	**110**	**50**
SAIA-HP18	2013	67	**40**	**5.8**
SAIA-HP18	2000	67	**25**	**NA**
MCL			**5**	**6**

*Exceeds California State Water Resources Control Board maximum contaminant levels (MCLs; California Division of Drinking Water, 2014) or notification levels (NLs; California Division of Drinking Water, 2015)

Notes:

1) Results reported in micrograms per liter (ug/L).

2) Concentrations detected at or above laboratory reporting limits are shown in bold font.

Abbreviations:

J = estimated value; NA = Not Analyzed; NS = Not Sampled

Jervis B. Webb Company Superfund Site
Depth-Discrete Groundwater Sampling Results 2013 and 2015
South Gate, Los Angeles County, California
US Environmental Protection Agency

Figure 2a
Trichloroethene and
cis-1,2-Dichloroethene Results
Shallow Gaspur Aquifer

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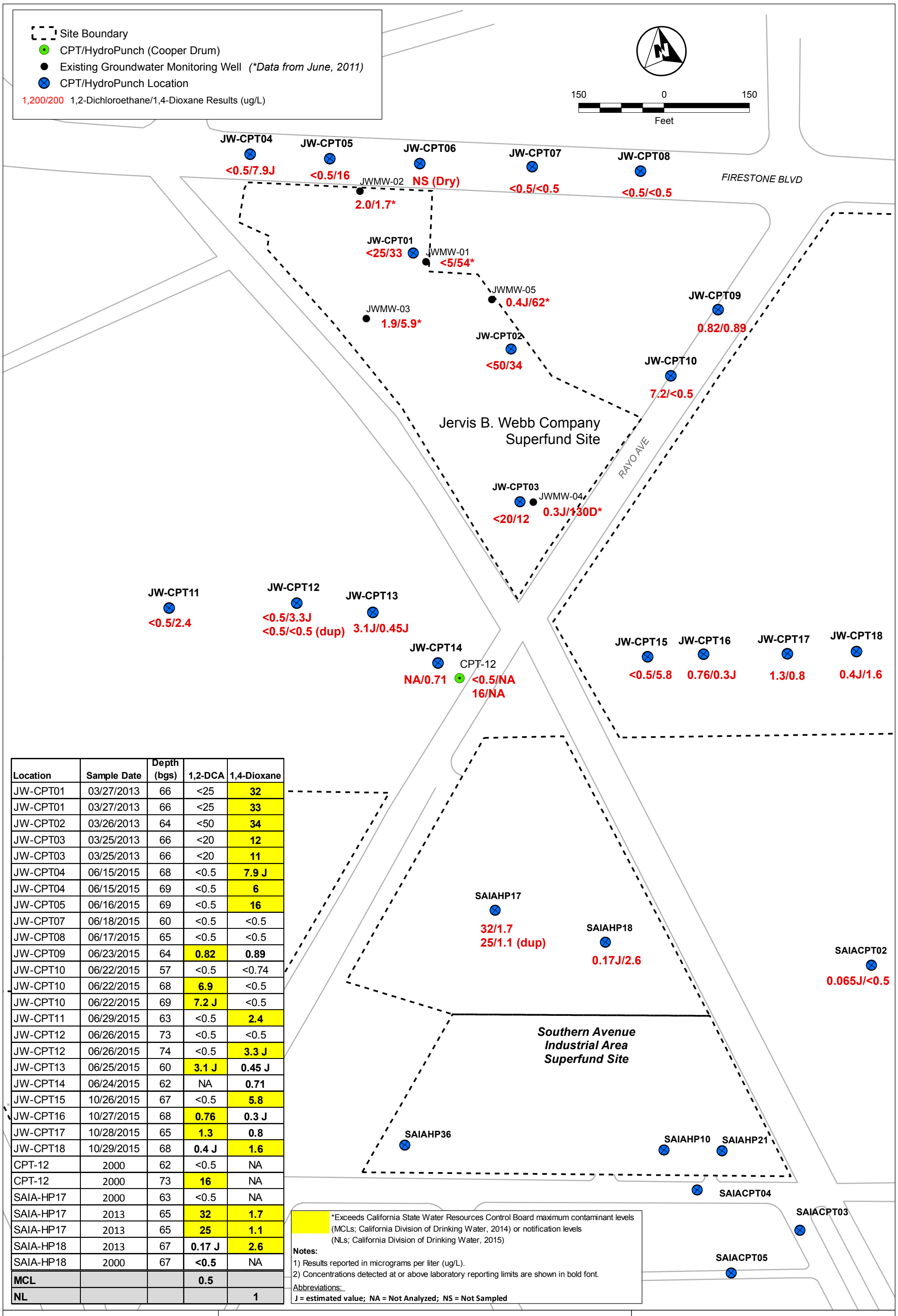

Location	Sample Date	Depth (bgs)	1,2-DCA	1,4-Dioxane
JW-CPT01	03/27/2013	66	<25	**32**
JW-CPT01	03/27/2013	66	<25	**33**
JW-CPT02	03/26/2013	64	<50	**34**
JW-CPT03	03/25/2013	66	<20	**12**
JW-CPT03	03/25/2013	66	<20	**11**
JW-CPT04	06/15/2015	68	<0.5	**7.9 J**
JW-CPT04	06/15/2015	69	<0.5	**6**
JW-CPT05	06/16/2015	69	<0.5	**16**
JW-CPT07	06/18/2015	60	<0.5	<0.5
JW-CPT08	06/17/2015	65	<0.5	<0.5
JW-CPT09	06/23/2015	64	**0.82**	**0.89**
JW-CPT10	06/22/2015	57	<0.5	<0.74
JW-CPT10	06/22/2015	68	**6.9**	<0.5
JW-CPT10	06/22/2015	69	**7.2 J**	<0.5
JW-CPT11	06/29/2015	63	<0.5	**2.4**
JW-CPT12	06/26/2015	73	<0.5	<0.5
JW-CPT12	06/26/2015	74	<0.5	**3.3 J**
JW-CPT13	06/25/2015	60	**3.1 J**	**0.45 J**
JW-CPT14	06/24/2015	62	NA	**0.71**
JW-CPT15	10/26/2015	67	<0.5	**5.8**
JW-CPT16	10/27/2015	68	**0.76**	**0.3 J**
JW-CPT17	10/28/2015	65	**1.3**	**0.8**
JW-CPT18	10/29/2015	68	**0.4 J**	**1.6**
CPT-12	2000	62	<0.5	NA
CPT-12	2000	73	**16**	NA
SAIA-HP17	2000	63	<0.5	NA
SAIA-HP17	2013	65	**32**	**1.7**
SAIA-HP17	2013	65	**25**	**1.1**
SAIA-HP18	2013	67	**0.17 J**	**2.6**
SAIA-HP18	2000	67	**<0.5**	NA
MCL			**0.5**	
NL				**1**

*Exceeds California State Water Resources Control Board maximum contaminant levels (MCLs; California Division of Drinking Water, 2014) or notification levels (NLs; California Division of Drinking Water, 2015)

Notes:

1) Results reported in micrograms per liter (ug/L).

2) Concentrations detected at or above laboratory reporting limits are shown in bold font.

Abbreviations:

J = estimated value; NA = Not Analyzed; NS = Not Sampled

Jervis B. Webb Company
Depth-Discrete Groundwater Sampling Results 2013 and 2015
Los Angeles County, California
US Environmental Protection Agency

Figure 2b
1,2-Dichloroethane and 1,4-Dioxane Results
Shallow Gaspur Aquifer

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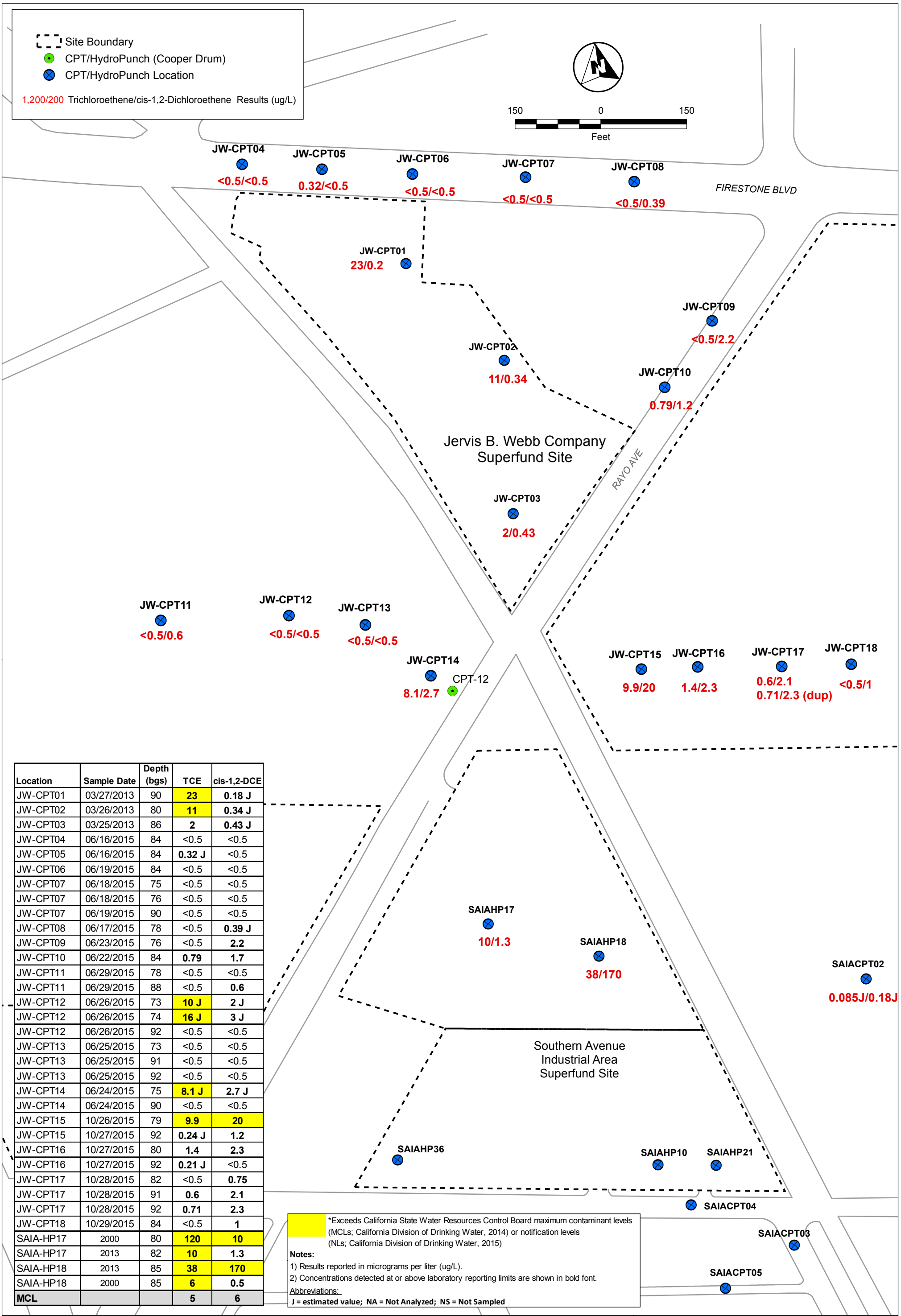

Location	Sample Date	Depth (bgs)	TCE	cis-1,2-DCE
JW-CPT01	03/27/2013	90	**23**	**0.18 J**
JW-CPT02	03/26/2013	80	**11**	**0.34 J**
JW-CPT03	03/25/2013	86	**2**	**0.43 J**
JW-CPT04	06/16/2015	84	<0.5	<0.5
JW-CPT05	06/16/2015	84	**0.32 J**	<0.5
JW-CPT06	06/19/2015	84	<0.5	<0.5
JW-CPT07	06/18/2015	75	<0.5	<0.5
JW-CPT07	06/18/2015	76	<0.5	<0.5
JW-CPT07	06/19/2015	90	<0.5	<0.5
JW-CPT08	06/17/2015	78	<0.5	**0.39 J**
JW-CPT09	06/23/2015	76	<0.5	**2.2**
JW-CPT10	06/22/2015	84	**0.79**	**1.7**
JW-CPT11	06/29/2015	78	<0.5	<0.5
JW-CPT11	06/29/2015	88	<0.5	**0.6**
JW-CPT12	06/26/2015	73	**10 J**	**2 J**
JW-CPT12	06/26/2015	74	**16 J**	**3 J**
JW-CPT12	06/26/2015	92	<0.5	<0.5
JW-CPT13	06/25/2015	73	<0.5	<0.5
JW-CPT13	06/25/2015	91	<0.5	<0.5
JW-CPT13	06/25/2015	92	<0.5	<0.5
JW-CPT14	06/24/2015	75	**8.1 J**	**2.7 J**
JW-CPT14	06/24/2015	90	<0.5	<0.5
JW-CPT15	10/26/2015	79	**9.9**	**20**
JW-CPT15	10/27/2015	92	**0.24 J**	**1.2**
JW-CPT16	10/27/2015	80	**1.4**	**2.3**
JW-CPT16	10/27/2015	92	**0.21 J**	<0.5
JW-CPT17	10/28/2015	82	<0.5	**0.75**
JW-CPT17	10/28/2015	91	**0.6**	**2.1**
JW-CPT17	10/28/2015	92	**0.71**	**2.3**
JW-CPT18	10/29/2015	84	<0.5	**1**
SAIA-HP17	2000	80	**120**	**10**
SAIA-HP17	2013	82	**10**	**1.3**
SAIA-HP18	2013	85	**38**	**170**
SAIA-HP18	2000	85	**6**	**0.5**
MCL			**5**	**6**

*Exceeds California State Water Resources Control Board maximum contaminant levels (MCLs; California Division of Drinking Water, 2014) or notification levels (NLs; California Division of Drinking Water, 2015)

Notes:

1) Results reported in micrograms per liter (ug/L).

2) Concentrations detected at or above laboratory reporting limits are shown in bold font.

Abbreviations:

J = estimated value; NA = Not Analyzed; NS = Not Sampled

Jervis B. Webb Company Superfund Site
Depth-Discrete Groundwater Sampling Results 2013 and 2015
South Gate, Los Angeles County, California
US Environmental Protection Agency

Figure 3a
Trichloroethene and
cis-1,2-Dichloroethene Results
Intermediate Gaspur Aquifer

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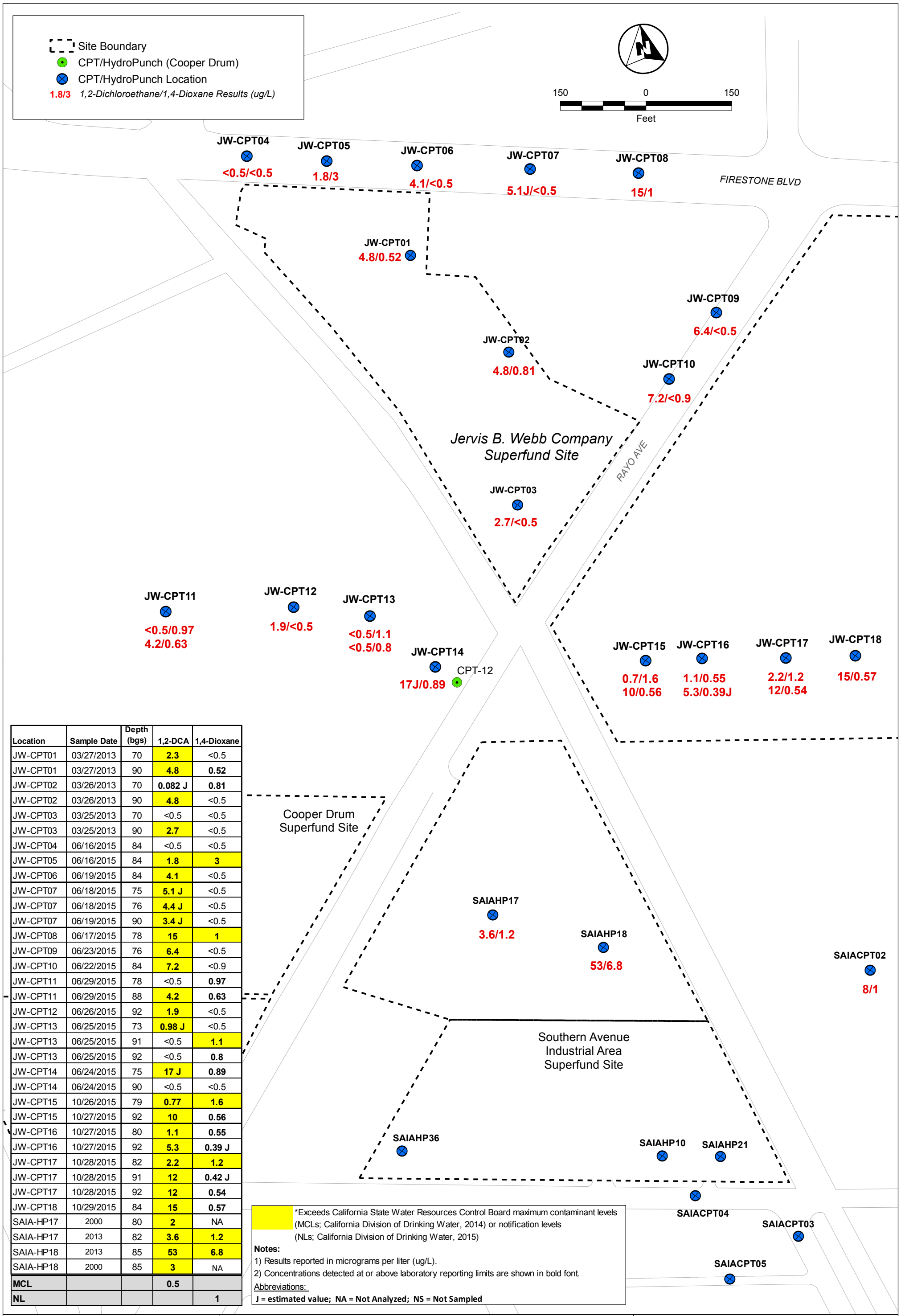

Location	Sample Date	Depth (bgs)	1,2-DCA	1,4-Dioxane
JW-CPT01	03/27/2013	70	**2.3**	<0.5
JW-CPT01	03/27/2013	90	**4.8**	**0.52**
JW-CPT02	03/26/2013	70	**0.082 J**	**0.81**
JW-CPT02	03/26/2013	90	**4.8**	<0.5
JW-CPT03	03/25/2013	70	<0.5	<0.5
JW-CPT03	03/25/2013	90	**2.7**	<0.5
JW-CPT04	06/16/2015	84	<0.5	<0.5
JW-CPT05	06/16/2015	84	**1.8**	**3**
JW-CPT06	06/19/2015	84	**4.1**	<0.5
JW-CPT07	06/18/2015	75	**5.1 J**	<0.5
JW-CPT07	06/18/2015	76	**4.4 J**	<0.5
JW-CPT07	06/19/2015	90	**3.4 J**	<0.5
JW-CPT08	06/17/2015	78	**15**	**1**
JW-CPT09	06/23/2015	76	**6.4**	<0.5
JW-CPT10	06/22/2015	84	**7.2**	<0.9
JW-CPT11	06/29/2015	78	<0.5	**0.97**
JW-CPT11	06/29/2015	88	**4.2**	**0.63**
JW-CPT12	06/26/2015	92	**1.9**	<0.5
JW-CPT13	06/25/2015	73	**0.98 J**	<0.5
JW-CPT13	06/25/2015	91	<0.5	**1.1**
JW-CPT13	06/25/2015	92	<0.5	**0.8**
JW-CPT14	06/24/2015	75	**17 J**	**0.89**
JW-CPT14	06/24/2015	90	<0.5	<0.5
JW-CPT15	10/26/2015	79	**0.77**	**1.6**
JW-CPT15	10/27/2015	92	**10**	**0.56**
JW-CPT16	10/27/2015	80	**1.1**	**0.55**
JW-CPT16	10/27/2015	92	**5.3**	**0.39 J**
JW-CPT17	10/28/2015	82	**2.2**	**1.2**
JW-CPT17	10/28/2015	91	**12**	**0.42 J**
JW-CPT17	10/28/2015	92	**12**	**0.54**
JW-CPT18	10/29/2015	84	**15**	**0.57**
SAIA-HP17	2000	80	**2**	NA
SAIA-HP17	2013	82	**3.6**	**1.2**
SAIA-HP18	2013	85	**53**	**6.8**
SAIA-HP18	2000	85	**3**	NA
MCL			**0.5**	
NL				**1**

*Exceeds California State Water Resources Control Board maximum contaminant levels (MCLs; California Division of Drinking Water, 2014) or notification levels (NLs; California Division of Drinking Water, 2015)

Notes:

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Jervis B. Webb Company Superfund Site
Depth-Discrete Groundwater Sampling Results 2013 and 2015
South Gate, Los Angeles County, California
US Environmental Protection Agency

Figure 3b
1,2-Dichloroethane and 1,4-Dioxane Results
Intermediate Gaspur Aquifer

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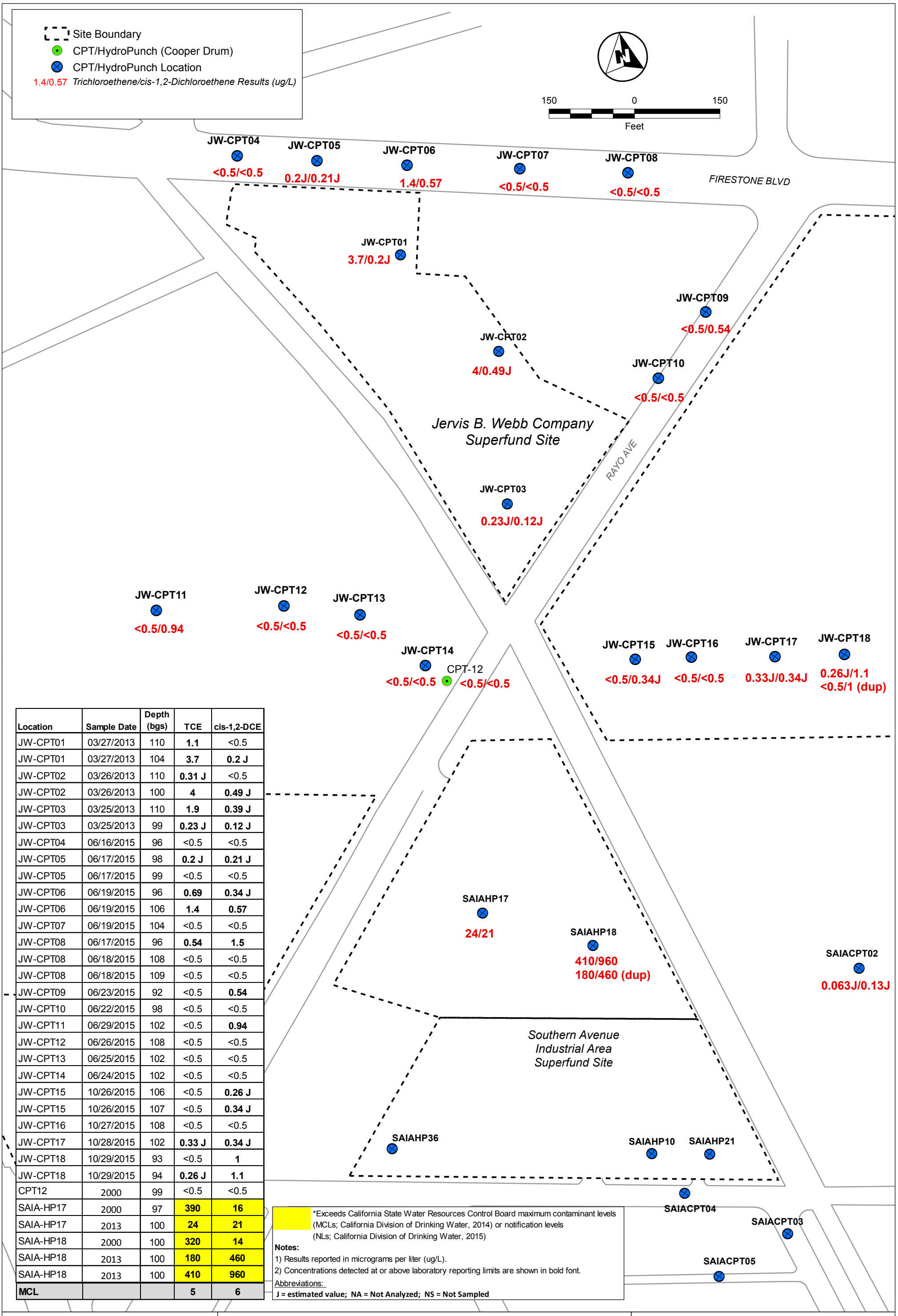

Location	Sample Date	Depth (bgs)	TCE	cis-1,2-DCE
JW-CPT01	03/27/2013	110	**1.1**	<0.5
JW-CPT01	03/27/2013	104	**3.7**	**0.2 J**
JW-CPT02	03/26/2013	110	**0.31 J**	<0.5
JW-CPT02	03/26/2013	100	**4**	**0.49 J**
JW-CPT03	03/25/2013	110	**1.9**	**0.39 J**
JW-CPT03	03/25/2013	99	**0.23 J**	**0.12 J**
JW-CPT04	06/16/2015	96	<0.5	<0.5
JW-CPT05	06/17/2015	98	**0.2 J**	**0.21 J**
JW-CPT05	06/17/2015	99	<0.5	<0.5
JW-CPT06	06/19/2015	96	**0.69**	**0.34 J**
JW-CPT06	06/19/2015	106	**1.4**	**0.57**
JW-CPT07	06/19/2015	104	<0.5	<0.5
JW-CPT08	06/17/2015	96	**0.54**	**1.5**
JW-CPT08	06/18/2015	108	<0.5	<0.5
JW-CPT08	06/18/2015	109	<0.5	<0.5
JW-CPT09	06/23/2015	92	<0.5	**0.54**
JW-CPT10	06/22/2015	98	<0.5	<0.5
JW-CPT11	06/29/2015	102	<0.5	**0.94**
JW-CPT12	06/26/2015	108	<0.5	<0.5
JW-CPT13	06/25/2015	102	<0.5	<0.5
JW-CPT14	06/24/2015	102	<0.5	<0.5
JW-CPT15	10/26/2015	106	<0.5	**0.26 J**
JW-CPT15	10/26/2015	107	<0.5	**0.34 J**
JW-CPT16	10/27/2015	108	<0.5	<0.5
JW-CPT17	10/28/2015	102	**0.33 J**	**0.34 J**
JW-CPT18	10/29/2015	93	<0.5	**1**
JW-CPT18	10/29/2015	94	**0.26 J**	**1.1**
CPT12	2000	99	<0.5	<0.5
SAIA-HP17	2000	97	**390**	**16**
SAIA-HP17	2013	100	**24**	**21**
SAIA-HP18	2000	100	**320**	**14**
SAIA-HP18	2013	100	**180**	**460**
SAIA-HP18	2013	100	**410**	**960**
MCL			**5**	**6**

*Exceeds California State Water Resources Control Board maximum contaminant levels (MCLs; California Division of Drinking Water, 2014) or notification levels (NLs; California Division of Drinking Water, 2015)

Notes:

1) Results reported in micrograms per liter (ug/L).

2) Concentrations detected at or above laboratory reporting limits are shown in bold font.

Abbreviations:

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Jervis B. Webb Company Superfund Site
Depth-Discrete Groundwater Sampling Results 2013 and 2015
South Gate, Los Angeles County, California
US Environmental Protection Agency

Figure 4a
Trichloroethene and
cis-1,2-Dichloroethene Results
Lower Gaspur Aquifer

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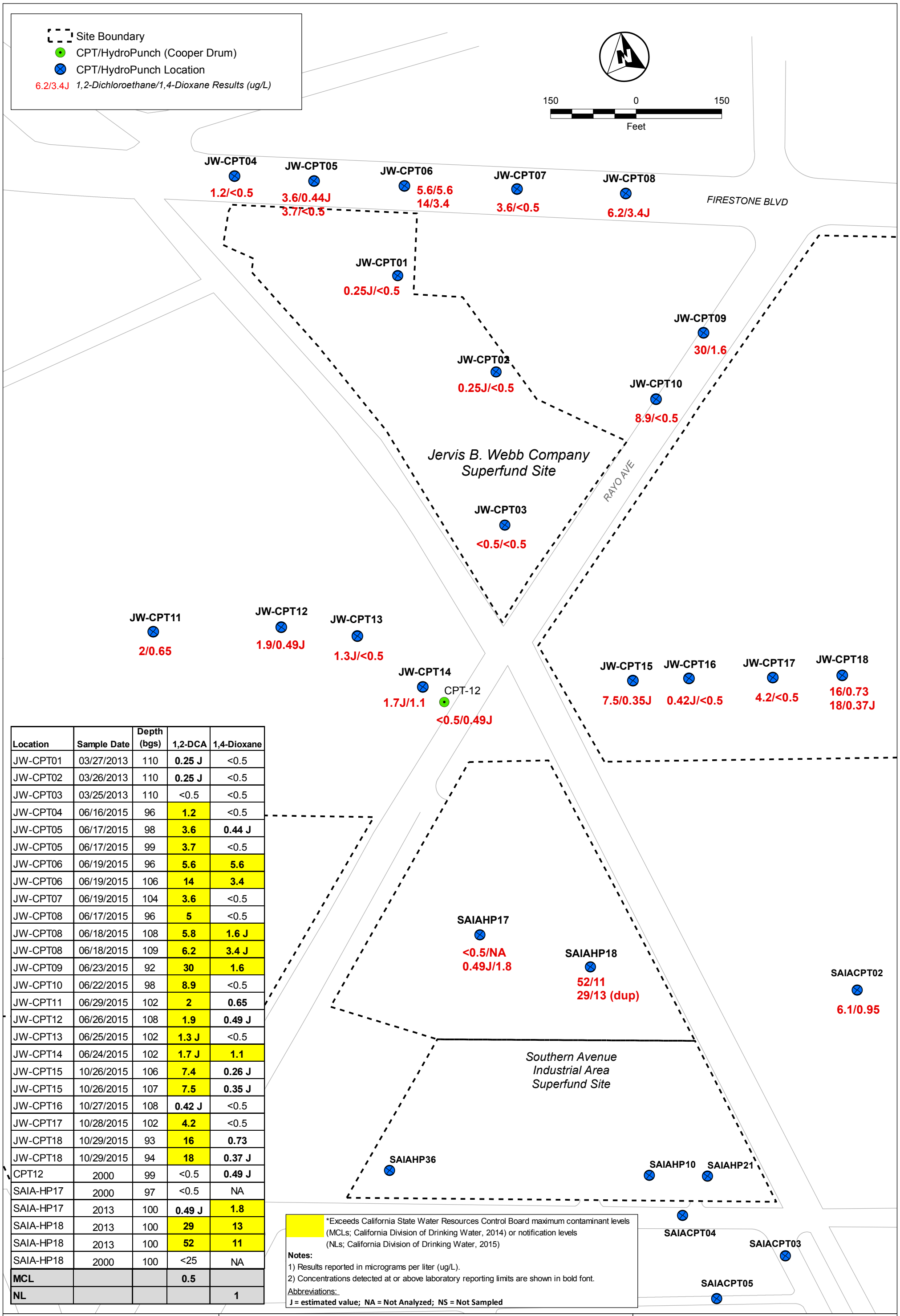

Location	Sample Date	Depth (bgs)	1,2-DCA	1,4-Dioxane
JW-CPT01	03/27/2013	110	**0.25 J**	<0.5
JW-CPT02	03/26/2013	110	**0.25 J**	<0.5
JW-CPT03	03/25/2013	110	<0.5	<0.5
JW-CPT04	06/16/2015	96	**1.2**	<0.5
JW-CPT05	06/17/2015	98	**3.6**	**0.44 J**
JW-CPT05	06/17/2015	99	**3.7**	<0.5
JW-CPT06	06/19/2015	96	**5.6**	**5.6**
JW-CPT06	06/19/2015	106	**14**	**3.4**
JW-CPT07	06/19/2015	104	**3.6**	<0.5
JW-CPT08	06/17/2015	96	**5**	<0.5
JW-CPT08	06/18/2015	108	**5.8**	**1.6 J**
JW-CPT08	06/18/2015	109	**6.2**	**3.4 J**
JW-CPT09	06/23/2015	92	**30**	**1.6**
JW-CPT10	06/22/2015	98	**8.9**	<0.5
JW-CPT11	06/29/2015	102	**2**	**0.65**
JW-CPT12	06/26/2015	108	**1.9**	**0.49 J**
JW-CPT13	06/25/2015	102	**1.3 J**	<0.5
JW-CPT14	06/24/2015	102	**1.7 J**	**1.1**
JW-CPT15	10/26/2015	106	**7.4**	**0.26 J**
JW-CPT15	10/26/2015	107	**7.5**	**0.35 J**
JW-CPT16	10/27/2015	108	**0.42 J**	<0.5
JW-CPT17	10/28/2015	102	**4.2**	<0.5
JW-CPT18	10/29/2015	93	**16**	**0.73**
JW-CPT18	10/29/2015	94	**18**	**0.37 J**
CPT12	2000	99	<0.5	**0.49 J**
SAIA-HP17	2000	97	<0.5	NA
SAIA-HP17	2013	100	**0.49 J**	**1.8**
SAIA-HP18	2013	100	**29**	**13**
SAIA-HP18	2013	100	**52**	**11**
SAIA-HP18	2000	100	<25	NA
MCL			**0.5**	
NL				**1**

*Exceeds California State Water Resources Control Board maximum contaminant levels (MCLs; California Division of Drinking Water, 2014) or notification levels (NLs; California Division of Drinking Water, 2015)

Notes:
1) Results reported in micrograms per liter (ug/L).
2) Concentrations detected at or above laboratory reporting limits are shown in bold font.

Abbreviations:
J = estimated value; NA = Not Analyzed; NS = Not Sampled

Jervis B. Webb Company Superfund Site
Depth-Discrete Groundwater Sampling Results 2013 and 2015
South Gate, Los Angeles County, California
US Environmental Protection Agency

Figure 4b
1,2-Dichloroethane and
1,4-Dioxane Results Results
Lower Gaspur Aquifer

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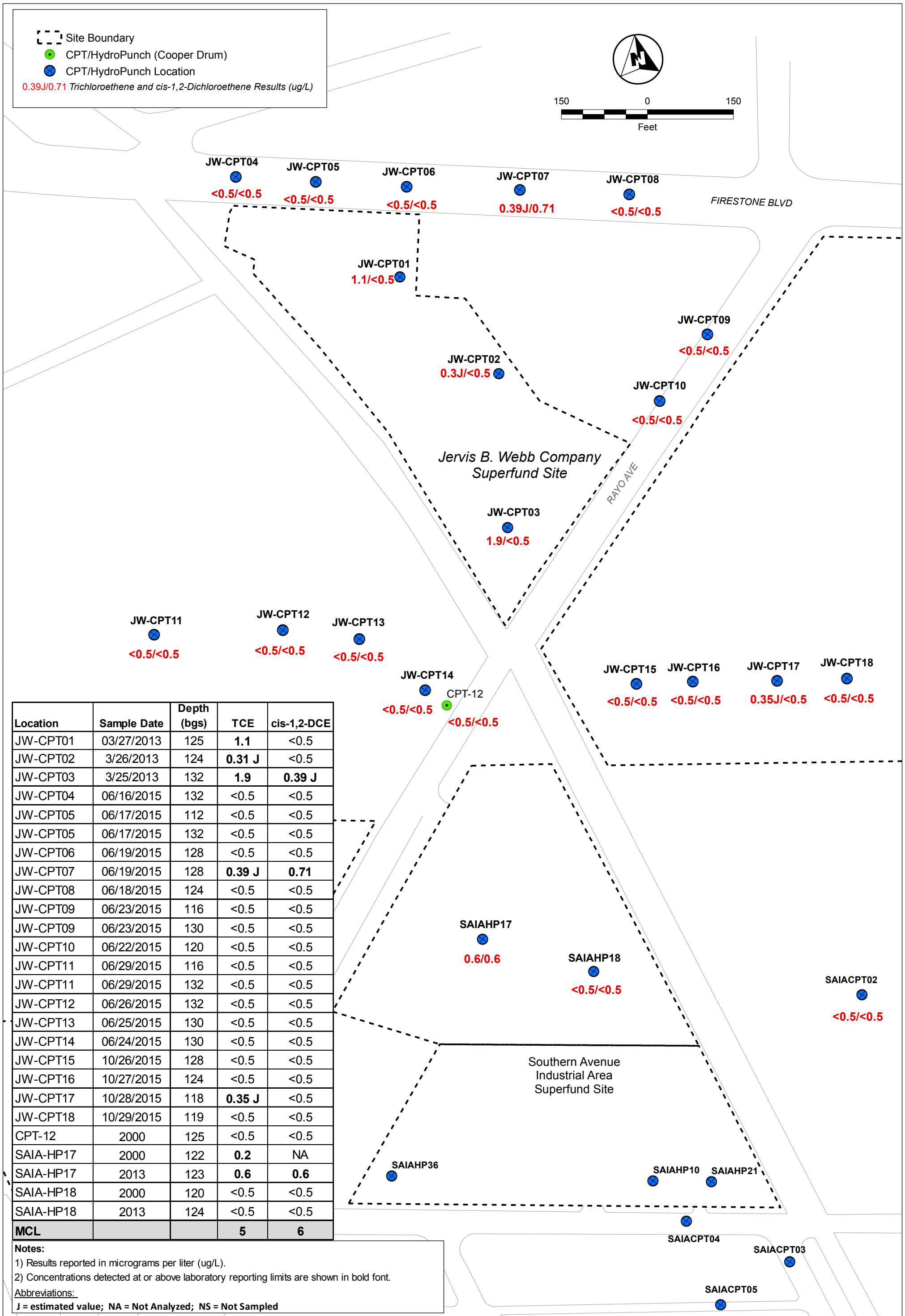

Location	Sample Date	Depth (bgs)	TCE	cis-1,2-DCE
JW-CPT01	03/27/2013	125	**1.1**	<0.5
JW-CPT02	3/26/2013	124	**0.31 J**	<0.5
JW-CPT03	3/25/2013	132	**1.9**	**0.39 J**
JW-CPT04	06/16/2015	132	<0.5	<0.5
JW-CPT05	06/17/2015	112	<0.5	<0.5
JW-CPT05	06/17/2015	132	<0.5	<0.5
JW-CPT06	06/19/2015	128	<0.5	<0.5
JW-CPT07	06/19/2015	128	**0.39 J**	**0.71**
JW-CPT08	06/18/2015	124	<0.5	<0.5
JW-CPT09	06/23/2015	116	<0.5	<0.5
JW-CPT09	06/23/2015	130	<0.5	<0.5
JW-CPT10	06/22/2015	120	<0.5	<0.5
JW-CPT11	06/29/2015	116	<0.5	<0.5
JW-CPT11	06/29/2015	132	<0.5	<0.5
JW-CPT12	06/26/2015	132	<0.5	<0.5
JW-CPT13	06/25/2015	130	<0.5	<0.5
JW-CPT14	06/24/2015	130	<0.5	<0.5
JW-CPT15	10/26/2015	128	<0.5	<0.5
JW-CPT16	10/27/2015	124	<0.5	<0.5
JW-CPT17	10/28/2015	118	**0.35 J**	<0.5
JW-CPT18	10/29/2015	119	<0.5	<0.5
CPT-12	2000	125	<0.5	<0.5
SAIA-HP17	2000	122	**0.2**	NA
SAIA-HP17	2013	123	**0.6**	**0.6**
SAIA-HP18	2000	120	<0.5	<0.5
SAIA-HP18	2013	124	<0.5	<0.5
MCL			**5**	**6**

Notes:
1) Results reported in micrograms per liter (ug/L).
2) Concentrations detected at or above laboratory reporting limits are shown in bold font.
Abbreviations:
J = estimated value; NA = Not Analyzed; NS = Not Sampled

Jervis B. Webb Company Superfund Site
Depth-Discrete Groundwater Sampling Results 2013 and 2015
South Gate, Los Angeles County, California
US Environmental Protection Agency

Figure 5a
Trichloroethene and
cis-1,2-Dichloroethene Results
Exposition Aquifer

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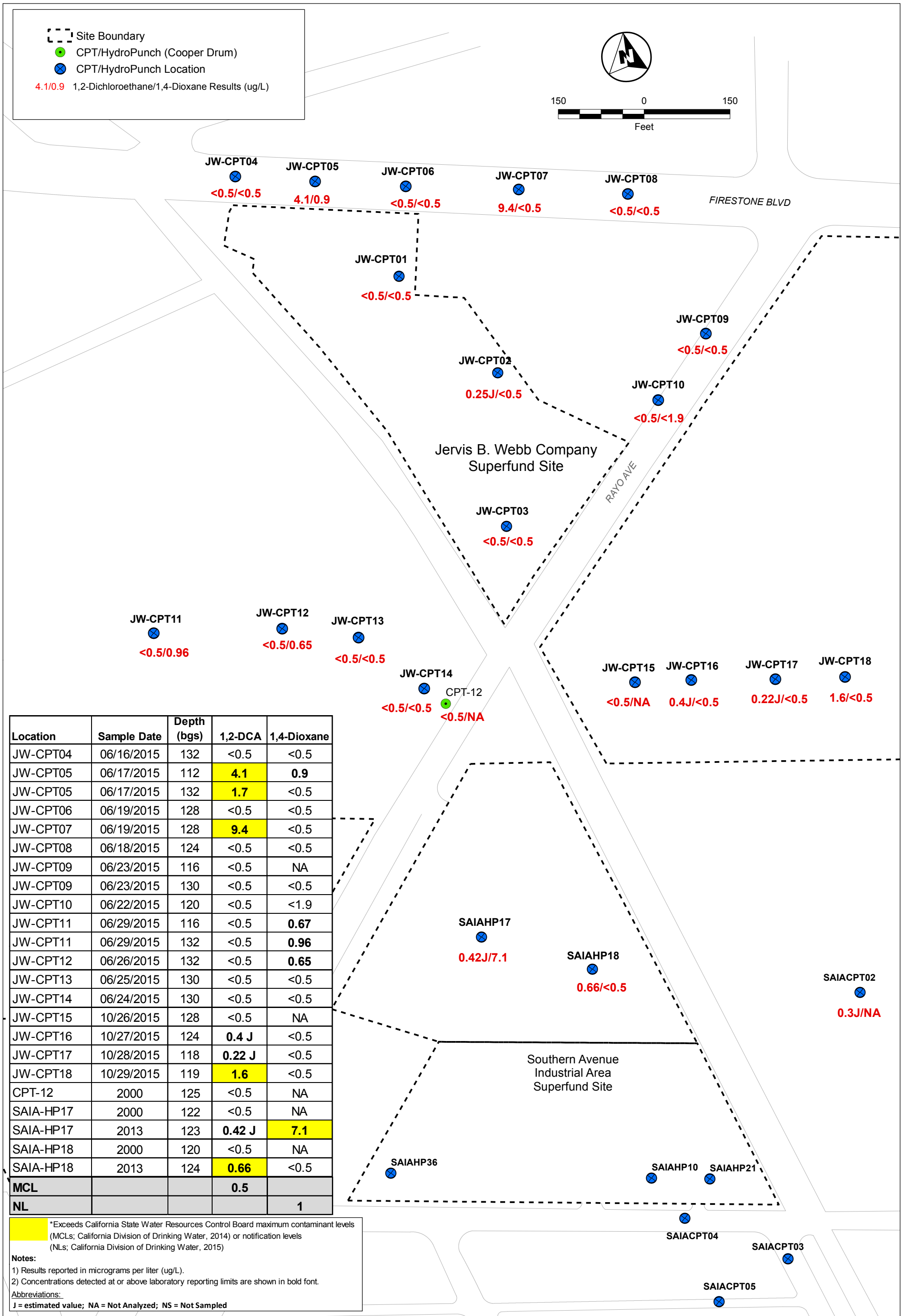

Location	Sample Date	Depth (bgs)	1,2-DCA	1,4-Dioxane
JW-CPT04	06/16/2015	132	<0.5	<0.5
JW-CPT05	06/17/2015	112	**4.1**	**0.9**
JW-CPT05	06/17/2015	132	**1.7**	<0.5
JW-CPT06	06/19/2015	128	<0.5	<0.5
JW-CPT07	06/19/2015	128	**9.4**	<0.5
JW-CPT08	06/18/2015	124	<0.5	<0.5
JW-CPT09	06/23/2015	116	<0.5	NA
JW-CPT09	06/23/2015	130	<0.5	<0.5
JW-CPT10	06/22/2015	120	<0.5	<1.9
JW-CPT11	06/29/2015	116	<0.5	**0.67**
JW-CPT11	06/29/2015	132	<0.5	**0.96**
JW-CPT12	06/26/2015	132	<0.5	**0.65**
JW-CPT13	06/25/2015	130	<0.5	<0.5
JW-CPT14	06/24/2015	130	<0.5	<0.5
JW-CPT15	10/26/2015	128	<0.5	NA
JW-CPT16	10/27/2015	124	**0.4 J**	<0.5
JW-CPT17	10/28/2015	118	**0.22 J**	<0.5
JW-CPT18	10/29/2015	119	**1.6**	<0.5
CPT-12	2000	125	<0.5	NA
SAIA-HP17	2000	122	<0.5	NA
SAIA-HP17	2013	123	**0.42 J**	**7.1**
SAIA-HP18	2000	120	<0.5	NA
SAIA-HP18	2013	124	**0.66**	<0.5
MCL			**0.5**	
NL				**1**

*Exceeds California State Water Resources Control Board maximum contaminant levels (MCLs; California Division of Drinking Water, 2014) or notification levels (NLs; California Division of Drinking Water, 2015)

Notes:

1) Results reported in micrograms per liter (ug/L).

2) Concentrations detected at or above laboratory reporting limits are shown in bold font.

Abbreviations:

J = estimated value; NA = Not Analyzed; NS = Not Sampled

Jervis B. Webb Company Superfund Site
Depth-Discrete Groundwater Sampling Results 2013 and 2015
South Gate, Los Angeles County, California
US Environmental Protection Agency

Figure 5b
1,2-Dichloroethane and
1,4-Dioxane Results Results
Exposition Aquifer

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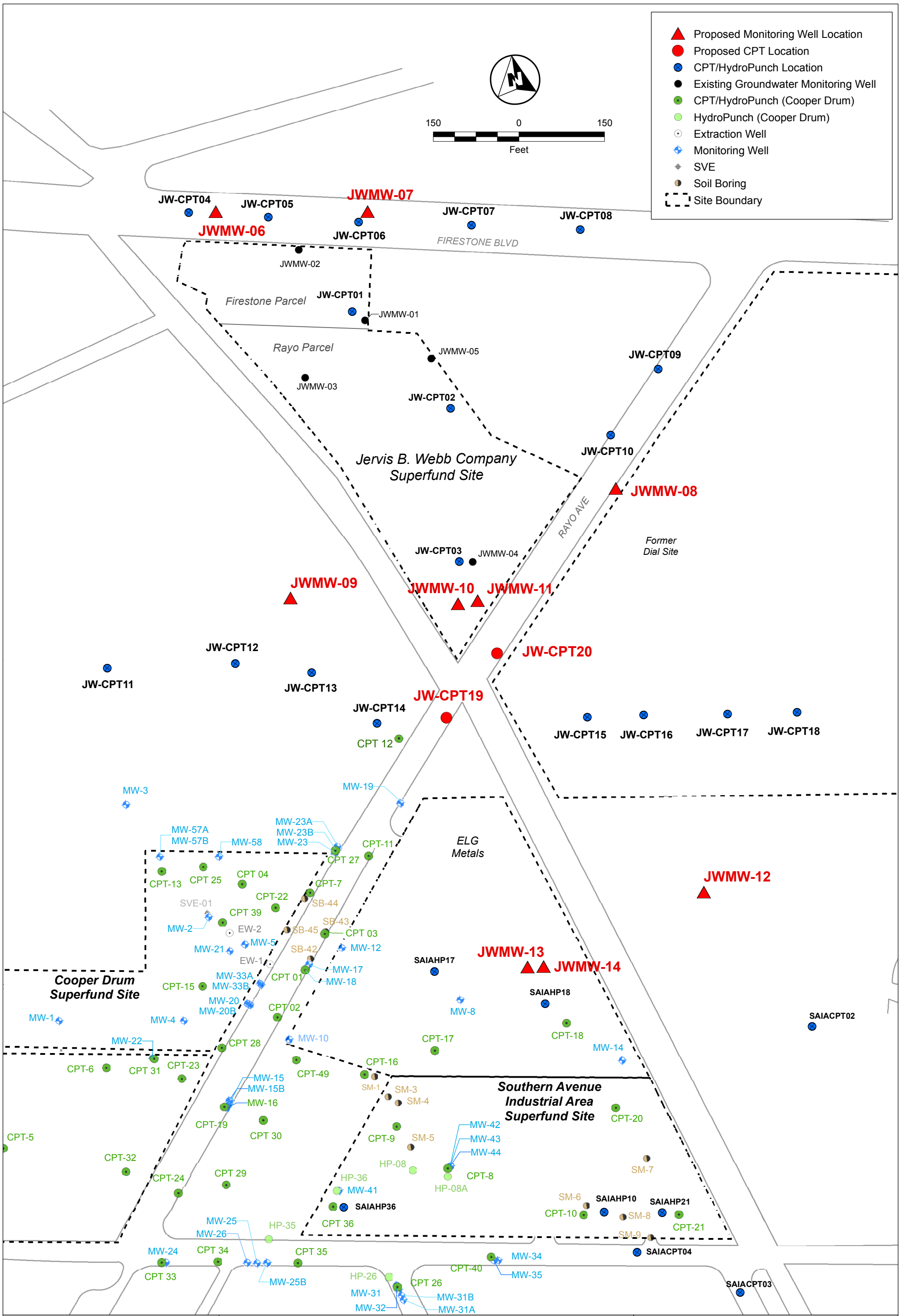


Jervis B. Webb Company Superfund Site
Depth-Discrete Groundwater Sampling Results 2013 and 2015
South Gate, Los Angeles County, California
US Environmental Protection Agency

Figure 6
Proposed Monitoring Well
and CPT/HydroPunch Locations

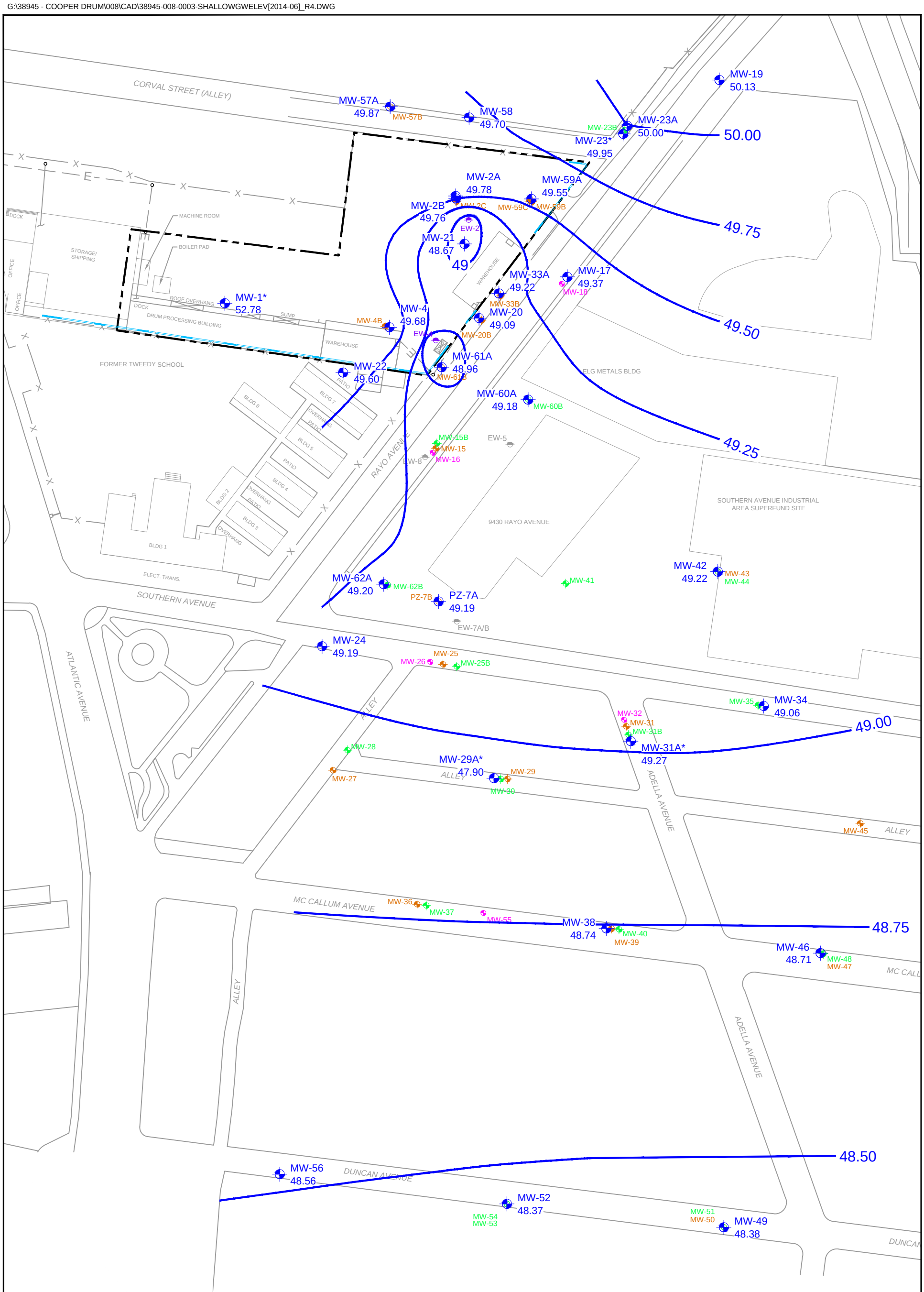
C:\ArcGIS\EPA\Jervis_Webb\PROJECTS\TM_GW_Results_2015\Figure_6_Proposed.mxd 3/30/2016 [23:37 PM] LCARR, Gilbane

Attachment 1

Groundwater Elevation Contour Maps

Groundwater Elevation Contour Maps, June 2014, Shallow Gaspur, Intermediate Gaspur, and Lower Gaspur and Exposition Aquifer, Cooper Drum Company Superfund Site (Haley & Aldrich, 2014; Groundwater Contour Maps, The Dial Corporation (EMCON Associates, 1993); Elevation of Groundwater Table, Concentrations of Trichloroethene, and Analytical Results for Monitoring Well Groundwater Samples, Jervis B. Webb Company (Erler & Kallnowski, Inc., 1999)

G:\38945 - COOPER DRUM\008\CAD\38945-008-0003-SHALLOWGWELEV[2014-06]_R4.DWG



GROUNDWATER ELEVATION CONTOUR IN FEET ABOVE MEAN SEA LEVEL (MSL)

SITE BOUNDARY

BLOCK WALL

WELL SCREEN INTERCEPTS THE EXPOSITION AQUIFER

EXISTING EXTRACTION WELL

EXISTING EXTRACTION WELL (NOT OPERATIONAL)

NOTES:

1. ALL LOCATIONS AND DIMENSIONS ARE APPROXIMATE
2. GROUNDWATER ELEVATION MEASUREMENTS MADE ON 9 JUNE 2014.
3. CONTOURS ARE BASED ONLY ON GROUNDWATER ELEVATION VALUES FOR THE SHALLOW GASPUR AQUIFER.
4. * : WELL WAS NOT USED FOR CONTOURING

HALEY & ALDRICH

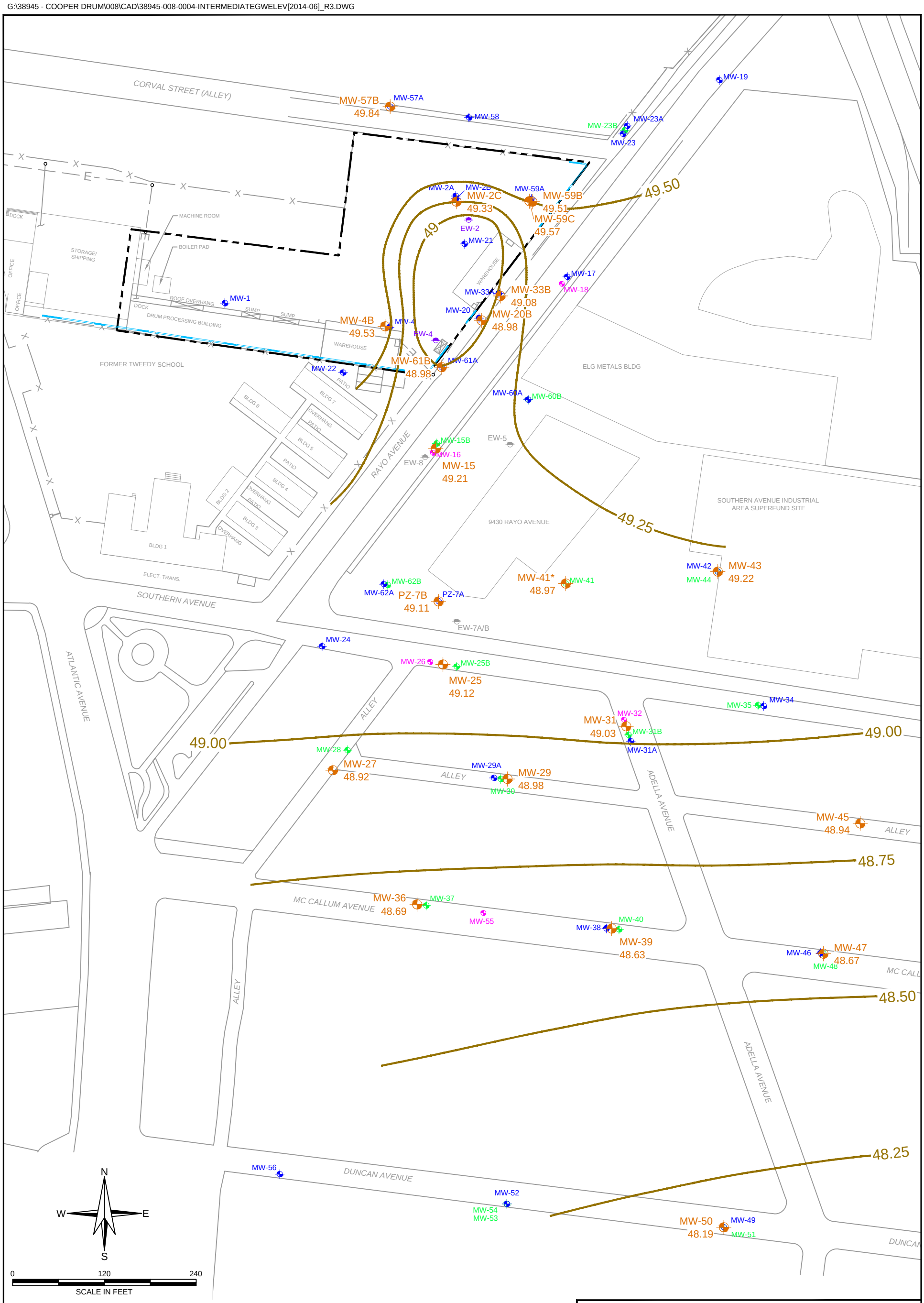
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

SHALLOW GASPUR
GROUNDWATER ELEVATION MAP
JUNE 2014

SCALE: AS SHOWN
AUGUST 2014

FIGURE 3

G:\38945 - COOPER DRUM\008\CAD\38945-008-0004-INTERMEDIATEGWELEV[2014-06]_R3.DWG



LEGEND:

- WELL SCREEN INTERCEPTS THE SHALLOW GASPUR AQUIFER
- WELL SCREEN INTERCEPTS THE INTERMEDIATE GASPUR AQUIFER
- WELL SCREEN INTERCEPTS THE LOWER GASPUR AQUIFER
- WELL SCREEN INTERCEPTS THE EXPOSITION AQUIFER
- EXISTING EXTRACTION WELL
- EXISTING EXTRACTION WELL (NOT OPERATIONAL)
- 52 GROUNDWATER ELEVATION CONTOUR IN FEET ABOVE MEAN SEA LEVEL (MSL)
- SITE BOUNDARY
- BLOCK WALL

NOTES:

1. ALL LOCATIONS AND DIMENSIONS ARE APPROXIMATE
2. GROUNDWATER ELEVATION MEASUREMENTS MADE ON 9 JUNE 2014.
3. CONTOURS ARE BASED ONLY ON GROUNDWATER ELEVATION VALUES FOR THE INTERMEDIATE GASPUR AQUIFER.

HALEY & ALDRICH

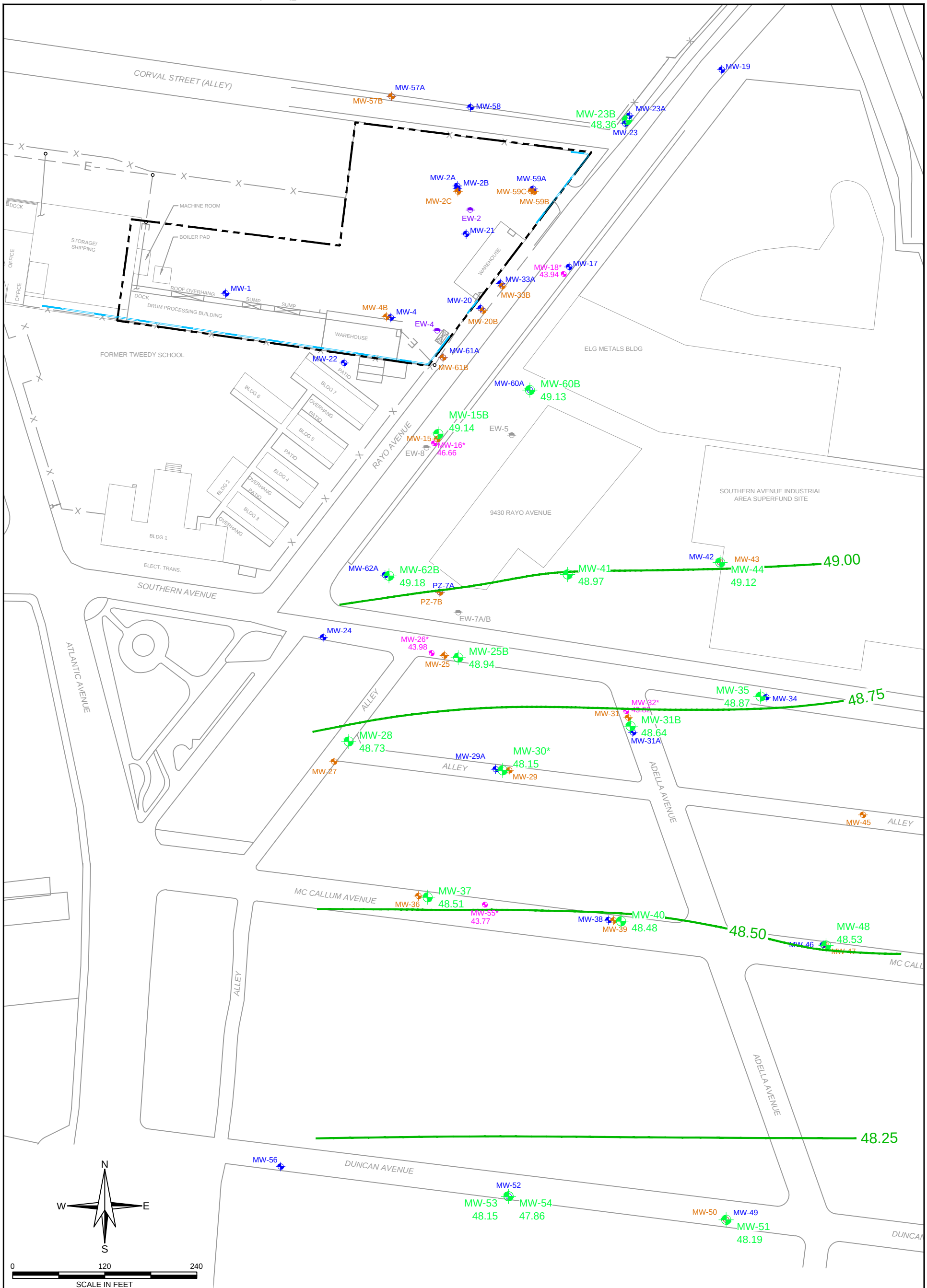
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

INTERMEDIATE GASPUR GROUNDWATER ELEVATION MAP JUNE 2014

SCALE: AS SHOWN
AUGUST 2014

FIGURE 4

G:\38945 - COOPER DRUM\008\CAD\38945-008-0005-LOWERGWELEV[2014-06]_R2.DWG



LEGEND:

- WELL SCREEN INTERCEPTS THE SHALLOW GASPUR AQUIFER
- WELL SCREEN INTERCEPTS THE INTERMEDIATE GASPUR AQUIFER
- WELL SCREEN INTERCEPTS THE LOWER GASPUR AQUIFER
- WELL SCREEN INTERCEPTS THE EXPOSITION AQUIFER
- EXISTING EXTRACTION WELL
- EXISTING EXTRACTION WELL (NOT OPERATIONAL)
- 52 GROUNDWATER ELEVATION CONTOUR IN FEET ABOVE MEAN SEA LEVEL (MSL)
- SITE BOUNDARY
- BLOCK WALL

NOTES:

1. ALL LOCATIONS AND DIMENSIONS ARE APPROXIMATE
2. GROUNDWATER ELEVATION MEASUREMENTS MADE ON 9 JUNE 2014.
3. CONTOURS ARE BASED ONLY ON GROUNDWATER ELEVATION VALUES FOR THE LOWER GASPUR AQUIFER.
4. * : WELL WAS NOT USED FOR CONTOURING

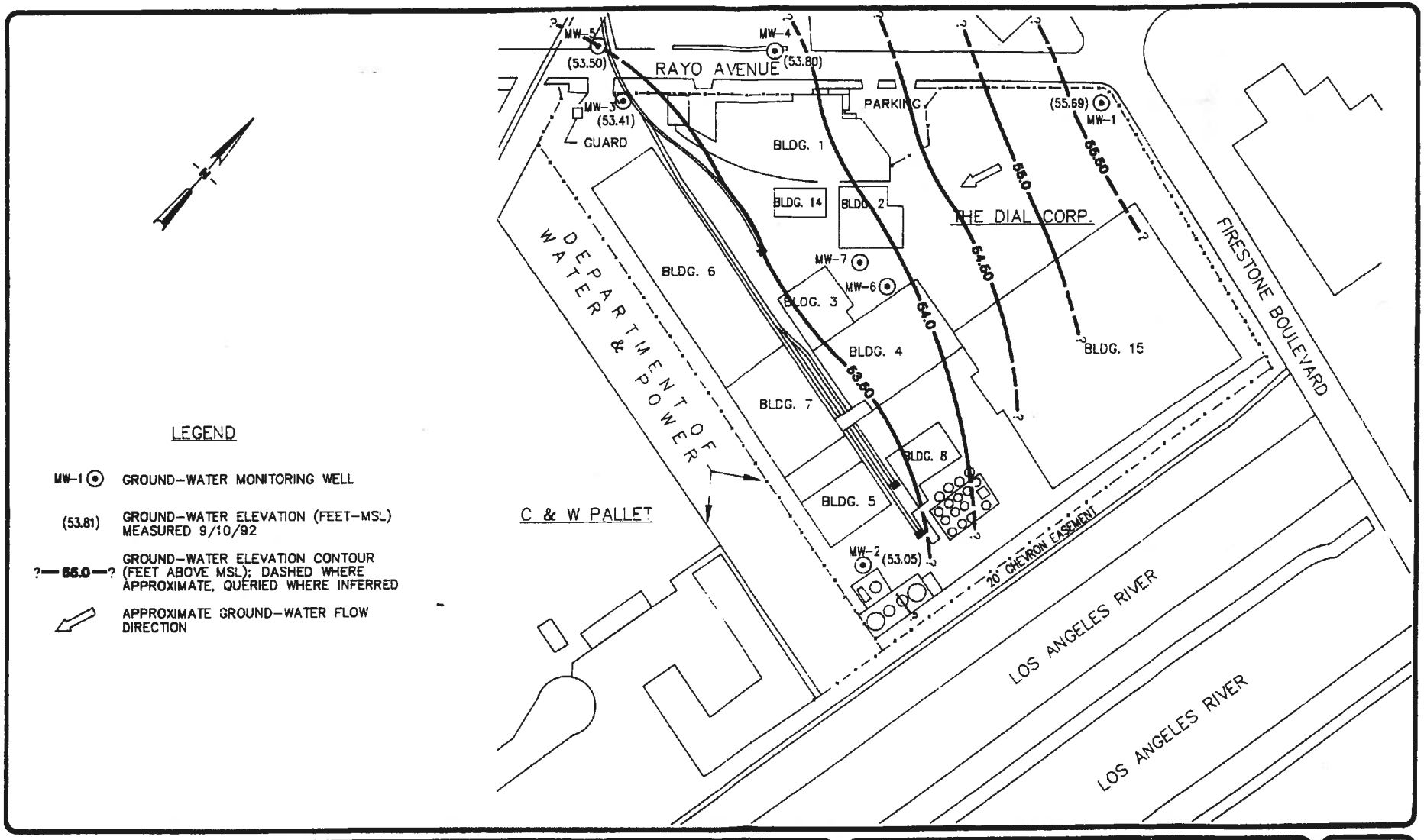
HALEY & ALDRICH

COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

LOWER GASPUR AND EXPOSITION AQUIFER GROUNDWATER ELEVATION MAP - JUNE 2014

SCALE: AS SHOWN
AUGUST 2014

FIGURE 5



EMCON Associates

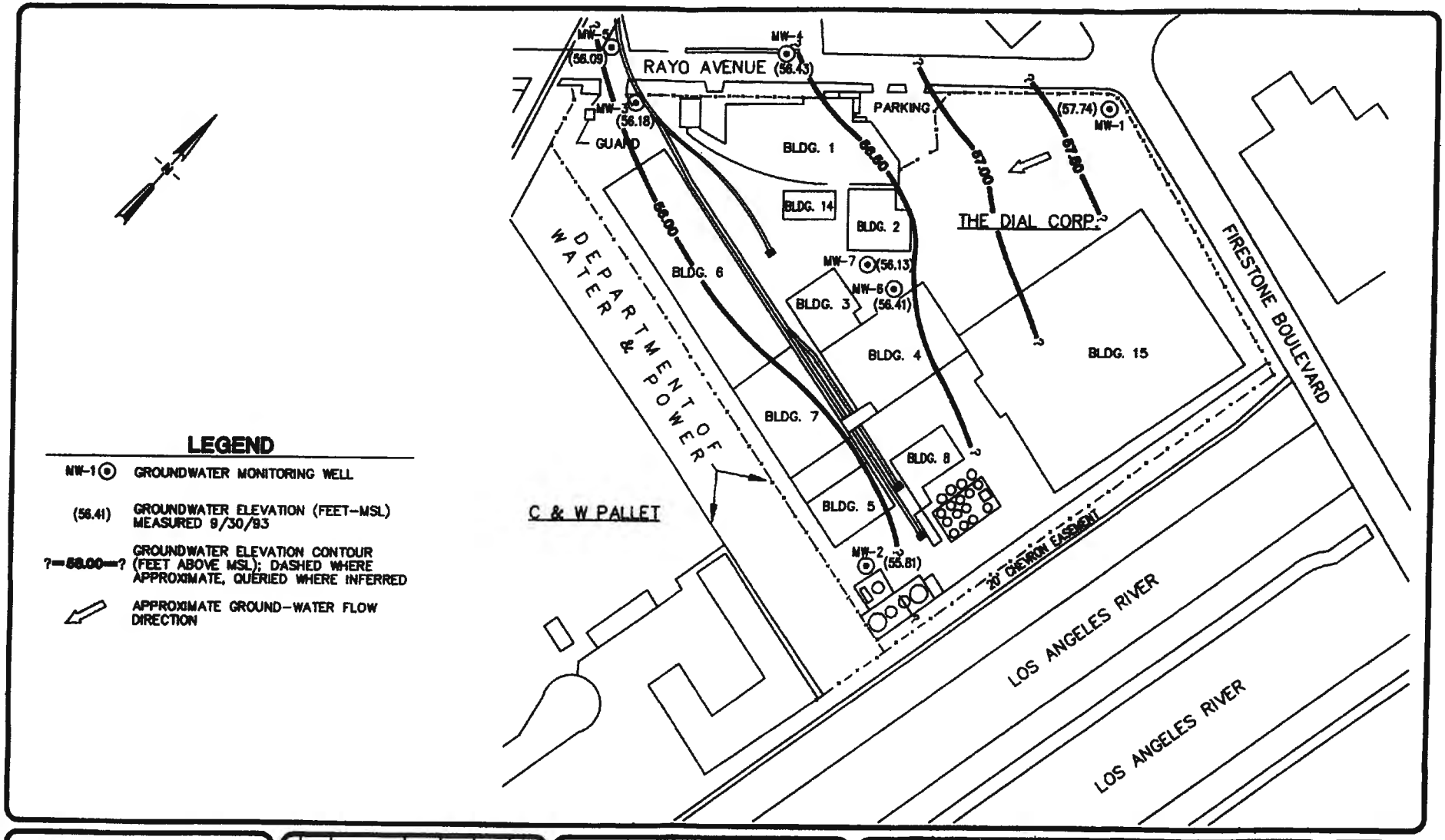
SCALE

THE DIAL CORPORATION
9300 RAYO AVENUE
SOUTH GATE, CALIFORNIA

GROUND-WATER CONTOUR MAP

FIGURE 6

PROJECT NO. H93-01.03



EMCON Associates

SCALE

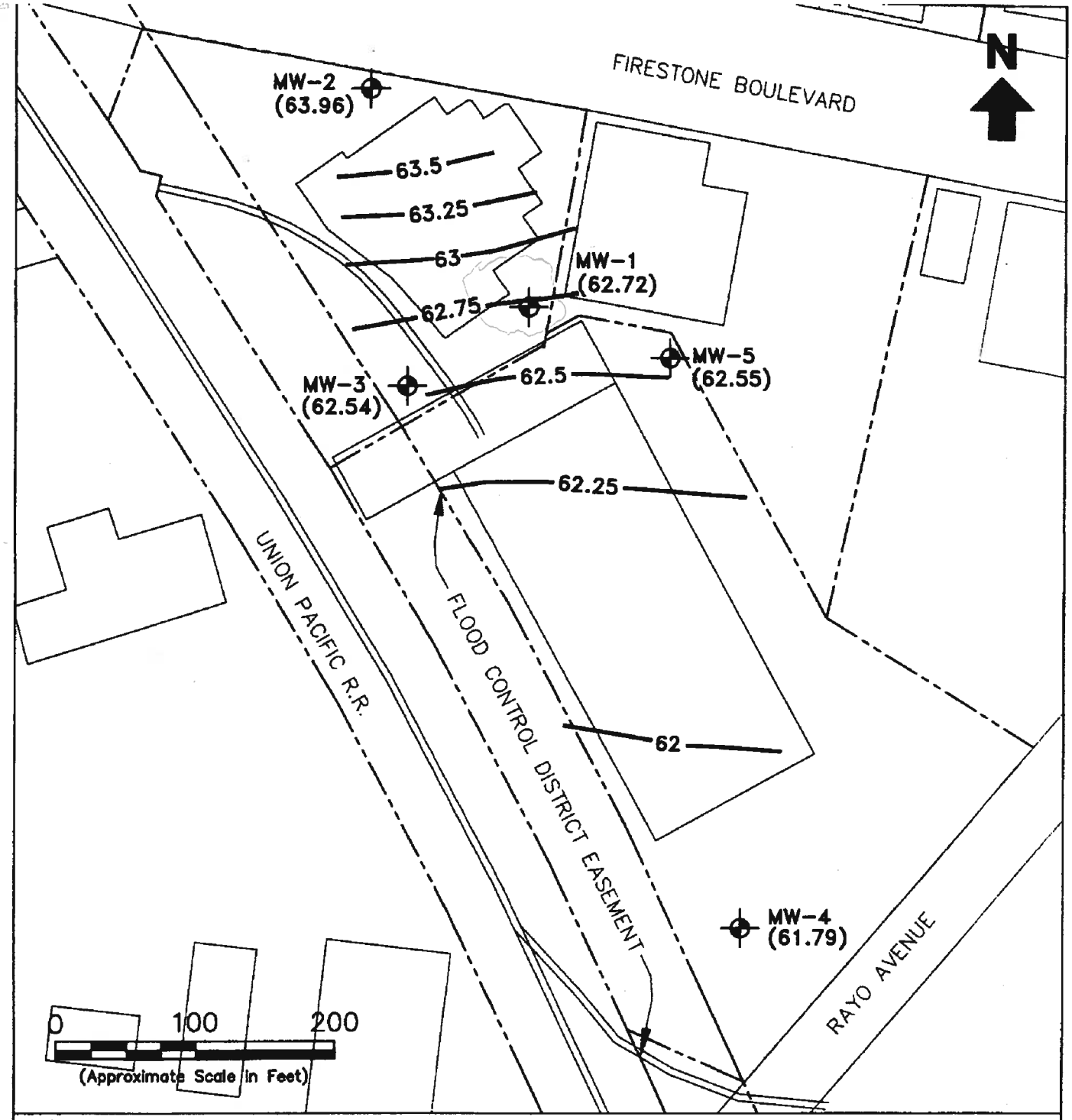
THE DIAL CORPORATION
9300 RAYO AVENUE
SOUTH GATE, CALIFORNIA

GROUNDWATER CONTOUR MAP

FIGURE 2

PROJECT NO. 0H93-001.05

H930105.DWG



LEGEND

Contour Representing the Elevation of the Groundwater Table in Feet Above Mean Sea Level (msl)

MW-3 (62.61) Groundwater Monitoring Well with Groundwater Elevation (msl)

Property Line/Boundary

Notes:

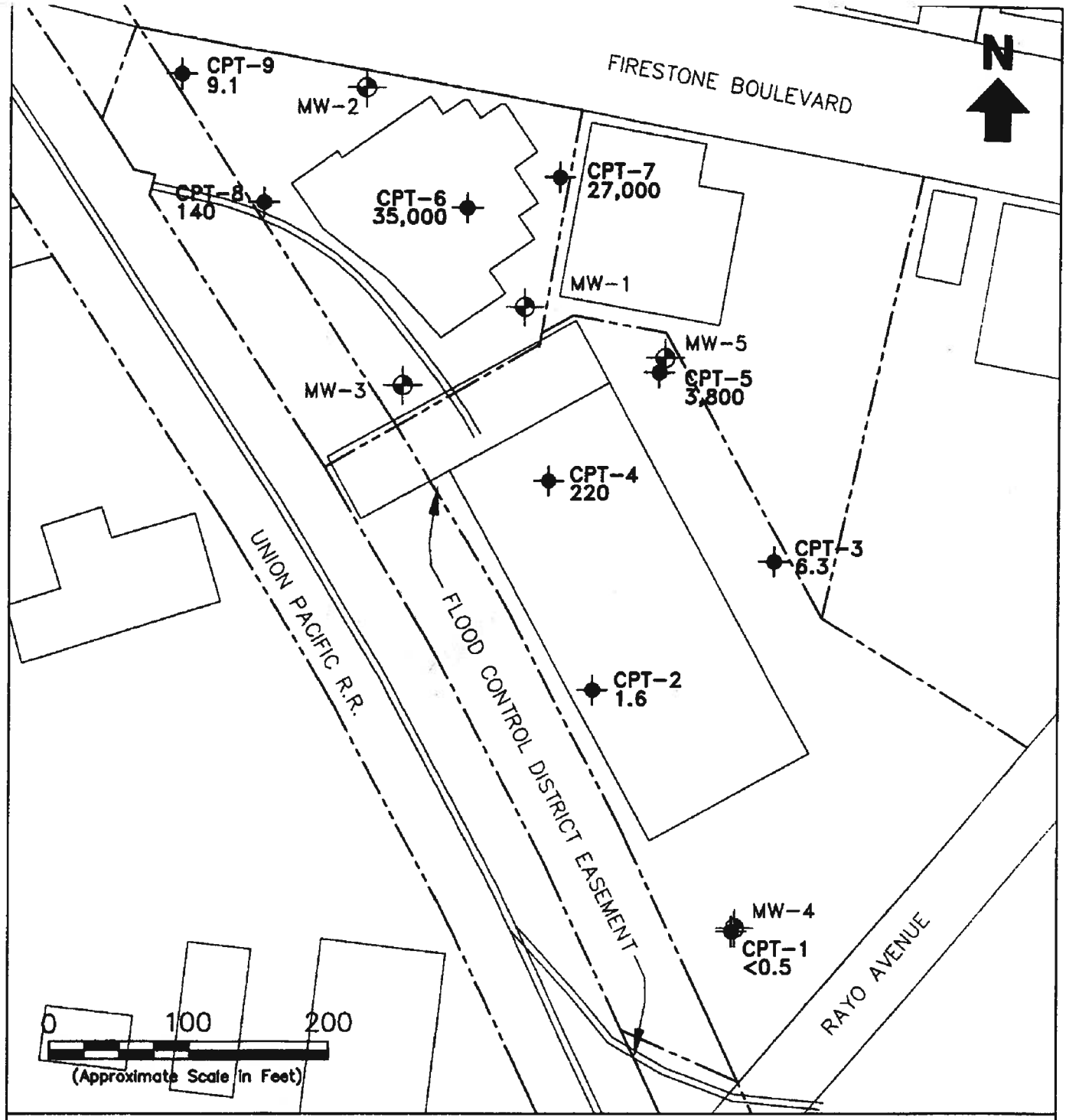
1. All locations are approximate.

Erler & Kalinowski, Inc.

Elevation of the Groundwater Table on 21 December 1998

Jervis B. Webb Company
South Gate, California
January 1999
EKI 961025.02

Figure 5



LEGEND

- PIPP Groundwater Sample Location
- Groundwater Monitoring Well
- Property Line/Boundary

Notes:

1. All locations are approximate.
2. Concentrations shown in units of micrograms per liter.

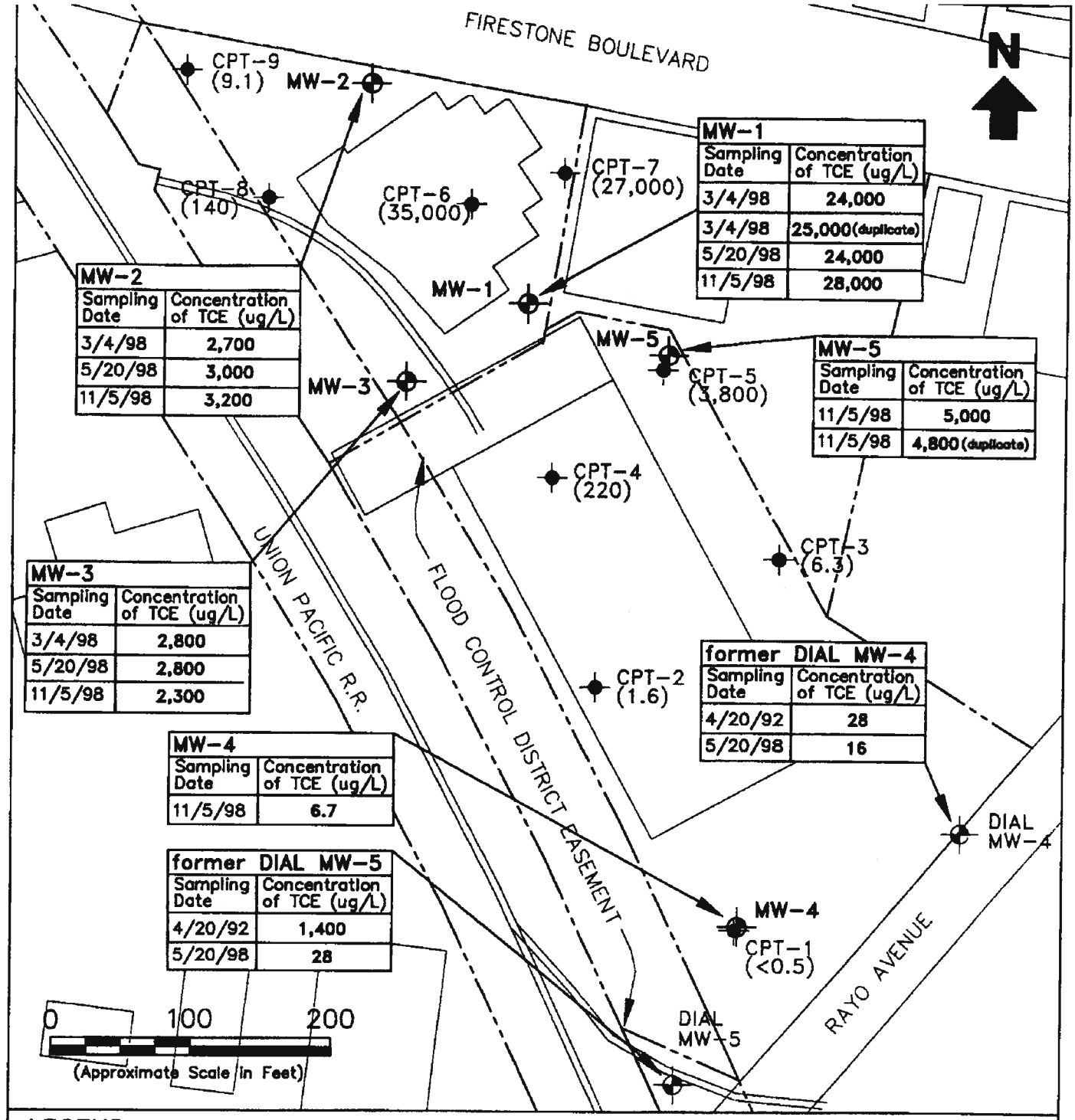
Erler & Kalinowski, Inc.

Concentrations of Trichloroethene Detected in PIPP Groundwater Samples

Jervis B. Webb Company
South Gate, California

January 1999
EKI 961025.02

Figure 6



MW-1	
Sampling Date	Concentration of TCE (ug/L)
3/4/98	24,000
3/4/98	25,000 (duplicate)
5/20/98	24,000
11/5/98	28,000

MW-2	
Sampling Date	Concentration of TCE (ug/L)
3/4/98	2,700
5/20/98	3,000
11/5/98	3,200

MW-5	
Sampling Date	Concentration of TCE (ug/L)
11/5/98	5,000
11/5/98	4,800 (duplicate)

MW-3	
Sampling Date	Concentration of TCE (ug/L)
3/4/98	2,800
5/20/98	2,800
11/5/98	2,300

former DIAL MW-4	
Sampling Date	Concentration of TCE (ug/L)
4/20/92	28
5/20/98	16

MW-4	
Sampling Date	Concentration of TCE (ug/L)
11/5/98	6.7

former DIAL MW-5	
Sampling Date	Concentration of TCE (ug/L)
4/20/92	1,400
5/20/98	28

LEGEND

Groundwater Monitoring Well

CPT-4 (220) PIPP Groundwater Sample Location with TCE Concentration from PIPP Sample

——-—— Property Line/Boundary

Notes:

1. All locations are approximate.
2. Groundwater sampling at former Dial Corporation wells MW-4 and MW-5 performed by Emcon on 20 April 1992 and Erler & Kalinowski on 20 May 1998.
3. PIPP samples of groundwater collected on 1 and 2 October 1998.

TCE = trichloroethene ug/L = micrograms per liter

Erler & Kalinowski, Inc.

Concentrations of Trichloroethene Detected in Monitoring Well Groundwater Samples

Jervis B. Webb Company
South Gate, California

January 1999
EKI 961025.02

Figure 7

TABLE 5

Analytical Results for Monitoring Well Groundwater Samples

Additional Groundwater Investigation and Quarterly Monitoring Report for October to December 1998

Jervis B. Webb Company, 5030 Firestone Boulevard, South Gate, California

Well ID	Sample Number	Sample Date	Analyte Concentration										
			Benzene (ug/L)	Toluene (ug/L)	Xylenes (ug/L)	1,1-DCA (ug/L)	1,2-DCA (ug/L)	1,1-DCE (ug/L)	c-1,2-DCE (ug/L)	t-1,2-DCE (ug/L)	PCE (ug/L)	TCE (ug/L)	TDS (mg/L)
MW-1	MW-1-0304	3/4/98	<0.5	<0.5	<0.5	<0.5	<0.5	220	130	<0.5	140	24,000	--
	MW-1-0304DUP	3/4/98	<0.5	<0.5	<0.5	<0.5	<0.5	210	150	<0.5	160	25,000	--
	MW-1-0520	5/20/98	<125	<125	<125	<125	<125	160	130	<125	<125	24,000	1,500
	MW-1	11/5/98	<125	<125	<125	<125	<125	140	160	<125	170	28,000	--
MW-2	MW-2-0304	3/4/98	<0.5	<0.5	<0.5	13	<0.5	34	65	<0.5	<0.5	2,700	--
	MW-2-0520	5/20/98	<10	<10	<10	14	<0.5	38	68	<10	<10	3,000	2,500
	MW-2	11/5/98	<10	<10	<10	13	<10	36	68	<10	<10	3,200	2,600
MW-3	MW-3-0304	3/4/98	<0.5	13	<0.5	14	<0.5	82	200	<0.5	<0.5	2,800	--
	MW-3-0520	5/20/98	<10	<10	<10	13	<0.5	58	230	15	<10	2,800	1,100
	MW-3	11/5/98	<10	<10	<10	11	<10	66	240	18	<10	2,300	--
MW-4	MW-4	11/5/98	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.67	<0.5	<0.5	6.7	3,600
MW-5	MW-5	11/5/98	<25	<25	<25	<25	<25	42	380	30	<25	5,000	--
	MW-5-DUP	11/5/98	<25	<25	<25	<25	<25	40	360	29	<25	4,800	--
California MCL			1	150	1750	5	0.5	6	6	10	5	5	

NOTES: Abbreviations:

xylenes = total xylene isomers
1,1-DCA = 1,1-dichloroethane
1,1-DCE = 1,1-dichloroethene
1,2-DCA = 1,2-dichloroethane
c-1,2-DCE = cis-1,2-dichloroethene
t-1,2-DCE = trans-1,2-dichloroethene
VOCs = volatile organic compounds

PCE = tetrachloroethene
TCE = trichloroethene
1,1,1-TCA = 1,1,1-trichloroethane
TDS = total dissolved solids
ug/L = micrograms per liter
mg/L = milligrams per liter
-- indicates not analyzed

1. Analyses performed by Orange Coast Analytical, Inc. using EPA Method 8260 for VOCs and EPA Method 160.1 for TDS.
2. California maximum contaminant levels ("MCLs") are as reported in the Drinking Water Standards and Health Advisories Table by U.S. EPA Region IX, dated June 1998.

TABLE 1

Well Construction Details

Additional Groundwater Investigation and
Quarterly Monitoring Report for October to December 1998
Jervis B. Webb Company, 5030 Firestone Boulevard, South Gate, California

Well ID	Installation Date	Boring Depth (ft bgs)	Boring Diameter (inches)	Casing Diameter (inches)	Perforated Interval (ft bgs)	Casing Material	Screen Material	Perforation Size (inches)	Filter Pack Material	Surface Completion
MW-1	2/25/98	73	10-1/4	4	40 - 70	PVC	PVC	0.010	#1C Lonestar	12" EMCO
MW-2	2/25/98	73	10-1/4	4	40 - 70	PVC	PVC	0.010	#1C Lonestar	12" EMCO
MW-3	2/25/98	73	10-1/4	4	40 - 70	PVC	PVC	0.010	#1C Lonestar	12" EMCO
MW-4	10/28/98	71	10-1/4	4	40 - 70	PVC	PVC	0.010	#1C Lonestar	12" EMCO
MW-5	10/28/98	71	10-1/4	4	40 - 70	PVC	PVC	0.010	#1C Lonestar	12" EMCO

NOTES: Abbreviations: ft bgs = feet beneath the ground surface
PVC = polyvinyl chloride

Attachment 2

Summary of Previous Investigations at the JW Superfund Site

Summary of Previous Investigations at the JW Superfund Site

A summary of previous investigations and results of those investigations conducted at the JW Superfund Site is presented below.

- On May 18, 1979, a Notice of Violation was issued to Blake Rivet Company (Blake) by the Sanitation District of Los Angeles County for heavy metals discharge (total chromium was detected at 34 milligrams per liter). In 1981, permit number 5181 was voided because Blake was no longer in business. In 1992, a city of South Gate, California, inspector visited the Firestone parcel and reported that all manufacturing equipment had been removed and the floor drains and clarifier had been filled with sand and concrete.
- In 1996, a 6,500-gallon concrete containment structure and a 250-gallon open-bottom sump were removed from the Rayo parcel by Erler & Kalinowski, Inc. (EKI) on behalf of the Jervis Webb Company. No petroleum hydrocarbons, volatile organic compounds (VOCs), or elevated concentrations of metals were detected in soil samples collected from beneath the containment structure. A 1- to 2-inch-thick paint layer was observed on gravel fill material at the base of the sump. Soil samples collected from beneath the sump contained elevated levels of lead (1,600 milligrams per kilogram [mg/kg]), chromium (16 mg/kg), and arsenic (3.1 mg/kg). Soil was excavated from the former location of the sump to 10 feet below ground surface (bgs). In addition, oil-stained soil was removed from a 15-foot section of an unlined utility trench located near the sump. One confirmation soil sample collected from the utility trench contained 16,000 mg/kg of petroleum hydrocarbons.
- In 1996, the Los Angeles County Department of Public Works issued a No Further Action letter for the Rayo parcel.
- In October 1997, 14 soil borings were completed at the Firestone parcel by EKI. Soil borings drilled inside the building were sampled to 10 feet bgs. Borings drilled outside the building were sampled to 20 feet bgs. VOCs were detected at concentrations of up to 270 mg/kg around the clarifier outside of the building.
- In December 1997, five soil borings were drilled on the Firestone parcel by EKI. Trichloroethene (TCE) and tetrachloroethene (perchloroethene [PCE]) were detected at depths ranging from 46 feet to 65 feet bgs beneath the clarifier and anodizing areas.
- In 1998, five groundwater monitoring wells were installed (by EKI)—three on the Firestone parcel [JWMW-1, JWMW-2, and JWMW-3] and two on the Rayo parcel [JWMW-4 and JWMW-5]). TCE was recorded in the water sample collected from JWMW-1 at 28,000 micrograms per liter (ug/L). A variety of other VOCs also were reported in lower concentrations from MW-1 (PCE at 200 ug/L; cis-1,2-dichloroethene; trans-1,2-dichloroethene; 1,1-dichloroethane; acetone; benzene; xylenes; toluene; and methyl ethyl ketone).
- In 1999, the clarifier on the Firestone parcel was removed and four soil vapor extraction wells and four vapor-monitoring probes were installed to extract and treat VOCs in soil. These activities were conducted by EKI. The VOC extraction system was operational from March 2000 to October 2001 and removed 177 pounds of VOCs. Confirmation soil

samples collected in September 2001 detected concentrations of VOCs up to 630 micrograms per kilogram.

- In January 2002, the Los Angeles Regional Water Quality Control Board issued a No Further Action determination for soil at the Firestone parcel with the stipulation that the property owner (Jervis Webb of California) continue groundwater monitoring.
- CalEPA, Department of Toxic Substances Control (DTSC) submitted a Consent Order to the property owners in May 2007 to characterize and remediate site contaminants. Site investigation and cleanup activities were assumed by the U.S. Environmental Protection Agency (EPA) in September 2011.
- The JW Superfund Site was placed on the EPA National Priorities List on May 10, 2012.

A summary of the results of previous investigations conducted at the adjacent Southern Avenue Industrial Area (SAIA) Superfund Site and the Cooper Drum Superfund Site is presented below.

- Cooper Drum Superfund Site Remedial Investigation – March 1999 and October 2000 (URS Group, Inc., 2002).

  Groundwater contamination beneath the SAIA Superfund Site was discovered by EPA during a remedial investigation of the adjacent Cooper Drum Superfund Site. Depth-discrete groundwater sampling results from cone penetrometer test/HydroPunch (CPT/HP) borings (CPT-8 to CPT-10, CPT-20, and CPT-21) drilled on the SAIA Superfund Site to delineate the extent of the Cooper Drum Superfund Site groundwater plume indicated a groundwater plume of VOCs (TCE and cis-1,2-dichloroethene [cis-1,2-DCE]) beneath the southeastern portion of the SAIA Superfund Site.

- EPA Preliminary Assessment/Site Inspection (PA/SI) – 2002 (Weston Solutions, Inc., 2003).

  Results of a PA/SI completed at the SAIA Superfund Site indicated that three areas of environmental concern exist on the SAIA Superfund Site (the location of three former aboveground storage tanks [ASTs], an underground sump, and an underground storage tank [UST]). Soil and groundwater samples collected on and off of the SAIA Superfund Site during the PA/SI were impacted with VOCs. The investigation indicated a release of cis-1,2-DCE and TCE to soil and groundwater beneath and downgradient from the SAIA Superfund Site, and attributed the release to past operations at the SAIA Superfund Site.

- Seam Master Phase I Environmental Assessment – November 2002 (The Source Group, Inc., 2002).

  Results of an assessment, performed for the SAIA Superfund Site property owner (Ms. Joyce Brody), indicated that areas on the SAIA Superfund Site posed environmental concern. These areas included several sumps containing oil and water; three abandoned concrete-lined pits previously used for AST secondary containment; a UST at the southern perimeter of the SAIA Superfund Site; and an

abandoned sump located south of a warehouse structure adjacent to a railroad spur along the eastern perimeter of the SAIA Superfund Site.

- Site Evaluation, Seam Master Industries (Lindmark Engineering, 2007).

  This site evaluation was performed for the SAIA Superfund Site tenant (Seam Master Industries). The site evaluation (which included some additional soil sampling at an existing machine shop) found contamination similar to those identified in the above evaluations, and summarized/evaluated the results of previous investigations and the handling of any hazardous chemicals by Seam Master Industries.

- Field activities as part of the remedial design and eventual cleanup of the Cooper Drum Superfund Site from 2003-2009 (URS Group, Inc., 2007 and Innovative Technical Solutions Incorporated [ITSI], 2010).

  As part of these field activities, EPA drilled additional CPT/HP borings and installed monitoring wells on and downgradient from the SAIA Superfund Site to define the areas of plume comingling. The estimated areas of the plumes and comingling are presented in *Remedial Design Technical Memorandum for Field Sampling Results Addendum No. 4, Monitoring Well Installations, Pumping Test, and Groundwater Sampling Results, April/May 2009, Cooper Drum Company Superfund Site*, (ITSI, 2010). The 2009 well installation event included constructing four triple-completion wells and one single-completion well in the Gaspur Aquifer on and downgradient from the SAIA Superfund Site (MW-42, MW-43, MW-44, MW-45, MW-46, MW-47, MW-48, MW-49, MW-50, MW-51, MW-52, MW-53, and MW-54 [**Figure 1**]).

- Proposed Monitoring Well Locations, Southern Avenue Industrial Area Superfund Site, Remedial Investigation/Feasibility Study, South Gate, California Technical Memorandum – August 2013 (ITSI Gilbane Company, 2013).

  EPA conducted a CPT/HP study to determine the most appropriate locations for the permanent wells to be installed on and downgradient from the SAIA Superfund Site. A total of 20 CPT/HP borings were installed and sampled. Eight existing wells on the SAIA Superfund Site property and off site also were sampled. Sample locations included upgradient (i.e., ELG Metals and the JW Superfund Site), cross-gradient, and downgradient locations (**Figure 3 and Figure 4** included with this **Attachment 2**). When possible, samples were collected from the perched aquifer; the shallow, intermediate, and lower zones of the Gaspur Aquifer; and the Exposition Aquifer. A detailed discussion of the sampling results is presented in the technical memorandum cited above. Overall, the study found that significant VOC concentrations (>1,000 ug/L) were present at upgradient off-site, on-site, and downgradient off-site locations, with the highest VOC concentrations detected in the shallow Gaspur Aquifer in the

southeastern portion of the SAIA Superfund Site. Significant VOC concentrations (> 1,000 ug/L) also were detected in the intermediate and lower Gaspur Aquifer. Samples collected from the Exposition Aquifer indicated the presence of VOCs at concentrations below the corresponding California State Water Resources Control Board (SWRCB) maximum contaminant levels (MCLs; SWRCB, 2014), with the exception of samples from SAIA-HP10 and SAIA-CPT10, which were above the MCLs. Samples collected from the perched aquifer also indicated the presence of VOCs at concentrations less than MCLs, with the exception of two on-site locations (SAIAHP10 and SAIAHP21; **Figure 1** from the technical memorandum) and one downgradient location (SAIACPT05; **Figure 1** from the technical memorandum), which contained VOC concentrations above MCLs.

- Groundwater Monitoring Results, March/August 2014, Southern Avenue Industrial Area Superfund Site Remedial Investigation/Feasibility Study, South Gate, California Technical Memorandum – March 2015 (Gilbane Federal, 2015b).

A network of existing and newly installed monitoring wells was sampled during March and August 2014. The March 2014 event included sampling of 20 new wells and eight existing wells (Figure 1 from the technical memorandum, *Soil and Soil Gas Monitoring Results, April 2013, Southern Avenue Industrial Area Superfund Site Remedial Investigation/Feasibility Study, South Gate, California* [ITSI Gilbane Company, 2014] included with this attachment). The August 2014 event included sampling the 20 new wells that were installed at the SAIA Superfund Site between February 18 and March 5, 2014. The 2014 technical memorandum cited above provided a preliminary evaluation of the new groundwater data to assess any potential data gaps prior to preparation of the SAIA Remedial Investigation Report. Data collected was used to assess the magnitude of remaining on-site sources and the extent of ongoing contaminant migration away from the SAIA Superfund Site. The data were also used to further define groundwater flow directions in the Gaspur Aquifer on and downgradient from the SAIA Superfund Site.

The lateral extent of the VOC plume emanating from on-site and upgradient sources from the SAIA Superfund Site remained unclear (Figure 2, Figure 3, Figure 4, and Figure 5 from the 2014 SAIA technical memorandum included with this attachment). To further assess the extent of groundwater contamination downgradient of the SAIA Superfund Site, five CPT/HP locations were proposed.

- Five CPT/HP borings, just south of Tweedy Boulevard on Los Angeles Unified School District (LAUSD) property, bounded by Burtis Street to the east and approximately 200 feet west of Adella Avenue, are necessary to better define the extent of groundwater contamination in the Gaspur Aquifer migrating downgradient from the JW Superfund Site (Figure 6 from the 2014 technical memorandum included with this attachment).
- Two CPT/HP borings located approximately 400 feet south of Tweedy Boulevard, approximately 50 feet west of Adella Avenue and approximately 250 feet east of Adella Avenue, to further define the

potential southern extent of groundwater contamination migrating downgradient from the SAIA Superfund Site in the Gaspur Aquifer. Results from CPT boring logs at these locations will further define the aquifer conditions beneath the LAUSD property.The wells on the LAUSD property are completed in two perched groundwater zones and only the shallow Gaspur Aquifer; therefore, conditions in the deeper zones of the Gaspur Aquifer are undefined.

- Groundwater Monitoring Results, July 2015, Southern Avenue Industrial Area Superfund Site Remedial Investigation/Feasibility Study, South Gate, California Technical Memorandum – March 2016 (Gilbane Federal, 2016).

  As described above, 7 CPT/Hydropunch borings were installed on the LAUSD property to further characterize the downgradient extent of the VOC plume migrating from the SAIA. Figures 2 through Figure 5 (included in this attachment) present results for the VOCs TCE and cis-1,2- DCE, and the non-VOC 1,4-D in the aquifer zones beneath SAIA and the LAUSD property. Figure 2 presents results for the perched zone and the shallow Gaspur Aquifer. Figure 3 presents results for the intermediate Gaspur Aquifer. Figure 4 presents results for the lower Gaspur Aquifer and Figure 5 presents results for the Exposition Aquifer. The data tables presented on Figure 2 through Figure 5 also include historic data from the site, results of recent LAUSD sampling (Accord Engineering, 2015), a 2012 EPA investigation upgradient of the LAUSD property (Weston, 2012) and the March 2014 round of groundwater monitoring well sampling results for the SAIA RI (Gilbane, 2015). Both TCE and cis-1,2-DCE are detected beneath the LAUSD property and are representative of the VOC plume migrating from SAIA. Based on these results the following conclusions and recommendations were drawn.

  Concentrations of TCE and cis-1,2-DCE exceeding their respective MCLs have been detected in groundwater beneath the LAUSD property and cis-1,2-DCE is locally detected at high concentrations (up to 770 ug/L). Trans-1,2-DCE is also detected but at lower concentrations (up to 36 ug/L) in groundwater beneath the LAUSD property. In addition, 1,4-D has been detected in excess of the NL in groundwater beneath the LAUSD property but is generally not detected or detected at trace concentrations. Based on the data from this field event and review of data from LAUSD sampling events (Accord Engineering, 2015), there are two relatively shallow VOC groundwater source areas in the central western and south eastern portions of the LAUSD site. In addition, a non-VOC source (1,4-dioxane) is present in the southwest area of the LAUSD site.

  The lateral and vertical extent of the VOC plume emanating from SAIA is undefined in the intermediate and lower Gaspur Aquifer and the deeper Exposition Aquifer. The highest VOC concentrations reported for the 2015 CPT/HydroPunch locations are detected in the central western area of the LAUSD property adjacent to Tweedy Boulevard and to the south adjacent to Chakemco Street. VOCconcentrations may be decreasing at the southernmost sampling locations.

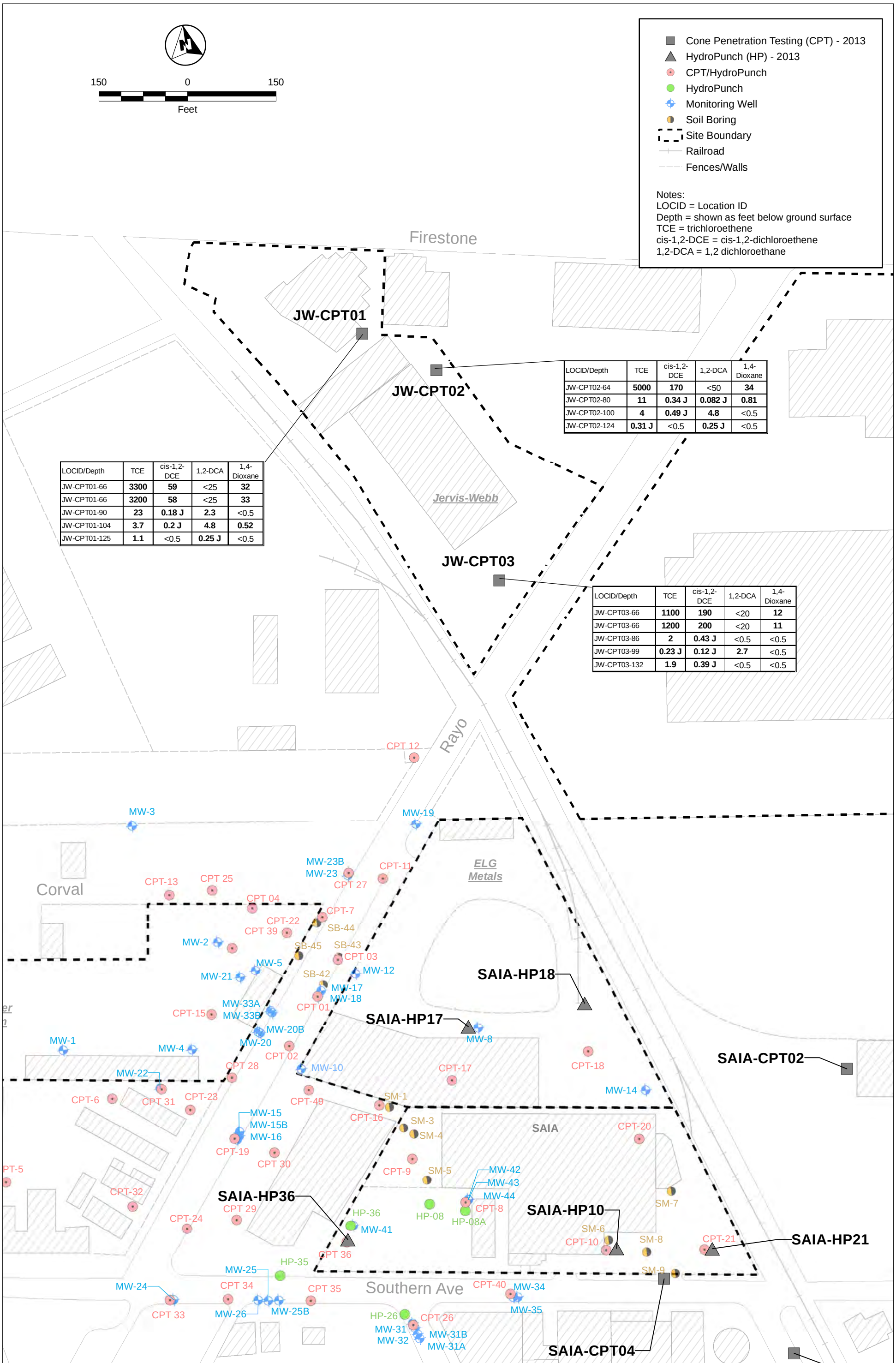
  Based on data included in the technical memorandum, it is likely that much of the contamination underlying the LAUSD property in the lower Gaspur Aquifer and the

Exposition Aquifer is migrating from the SAIA site. This is demonstrated by the presence of higher groundwater contamination concentrations in the lower Gaspur Aquifer and Exposition Aquifer when compared to the shallow and intermediate Gaspur Aquifer.

Additional monitoring wells are necessary to confirm the results of this CPT/HydroPunch sampling event and to further characterize the downgradient extent of the SAIA plume. Upon confirmation of the groundwater sampling results, additional monitoring will likely be needed to define the vertical extent of groundwater contamination. In addition, potential commingling of groundwater contaminants from source areas on LAUSD with the SAIA contaminant plume should be evaluated. To assess these conditions, the following multiple-completion and single-point groundwater monitoring well locations were proposed (Figure 6).

- One triple-completion monitoring well (shallow, intermediate, and lower Gaspur Aquifer) and one single-point groundwater monitoring well (Exposition Aquifer) directly adjacent to the SAIA- CPT14 location on the LAUSD site. This well pair will add four groundwater data collection points approximately 800 feet downgradient of SAIA-MW05A, MW05B, and MW05C (Gaspur Aquifer) and SAIA-MW08 (Exposition Aquifer) to further delineate the SAIA groundwater contaminant plume and also address any potential commingling with the LAUSD groundwater contaminant plume.
- One triple-completion monitoring well (shallow, intermediate, and lower Gaspur Aquifer) in the public right-of-way on Chakemco Street located approximately 450 feet east of Atlantic Avenue. This well will characterize the western extent of the SAIA plume in the Gaspur Aquifer. In addition, this well, in conjunction with the previously recommended well, will refine the potential for commingling of the LAUSD groundwater contamination in the area of LAUSD wells 010-MW1A, 010-MW1B, 011-MW1A, 011-MW1B, and 011-MW1C.
- One triple-completion groundwater monitoring well (shallow, intermediate, and lower Gaspur Aquifer) and one single-point groundwater monitoring well (Exposition Aquifer) in the public right-of-way located on Aldrich Road approximately 100 feet west of Adella Avenue. This well pair will also add four groundwater data collection points in the downgradient area of the SAIA groundwater contaminant plume to characterize the lateral extent of the SAIA plume.

CPT/HydroPunch Locations and Analytical Results, Jervis Webb Property, (Figure 3) and Proposed Groundwater Monitoring Well Locations (Figure 4). (ITSI Gilbane Company, 2013)



LOCID/Depth	TCE	cis-1,2-DCE	1,2-DCA	1,4-Dioxane
JW-CPT01-66	**3300**	**59**	<25	**32**
JW-CPT01-66	**3200**	**58**	<25	**33**
JW-CPT01-90	**23**	**0.18 J**	**2.3**	<0.5
JW-CPT01-104	**3.7**	**0.2 J**	**4.8**	**0.52**
JW-CPT01-125	**1.1**	<0.5	**0.25 J**	<0.5

LOCID/Depth	TCE	cis-1,2-DCE	1,2-DCA	1,4-Dioxane
JW-CPT02-64	**5000**	**170**	<50	**34**
JW-CPT02-80	**11**	**0.34 J**	**0.082 J**	**0.81**
JW-CPT02-100	**4**	**0.49 J**	**4.8**	<0.5
JW-CPT02-124	**0.31 J**	<0.5	**0.25 J**	<0.5

LOCID/Depth	TCE	cis-1,2-DCE	1,2-DCA	1,4-Dioxane
JW-CPT03-66	**1100**	**190**	<20	**12**
JW-CPT03-66	**1200**	**200**	<20	**11**
JW-CPT03-86	**2**	**0.43 J**	<0.5	<0.5
JW-CPT03-99	**0.23 J**	**0.12 J**	**2.7**	<0.5
JW-CPT03-132	**1.9**	**0.39 J**	<0.5	<0.5

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LOS ANGELES COUNTY, CALIFORNIA
US ENVIRONMENTAL PROTECTION AGENCY

FIGURE 3
CPT/HYDROPUNCH LOCATIONS AND ANALYTICAL DATA RESULTS
JERVIS-WEBB PROPERTY
MARCH 2013

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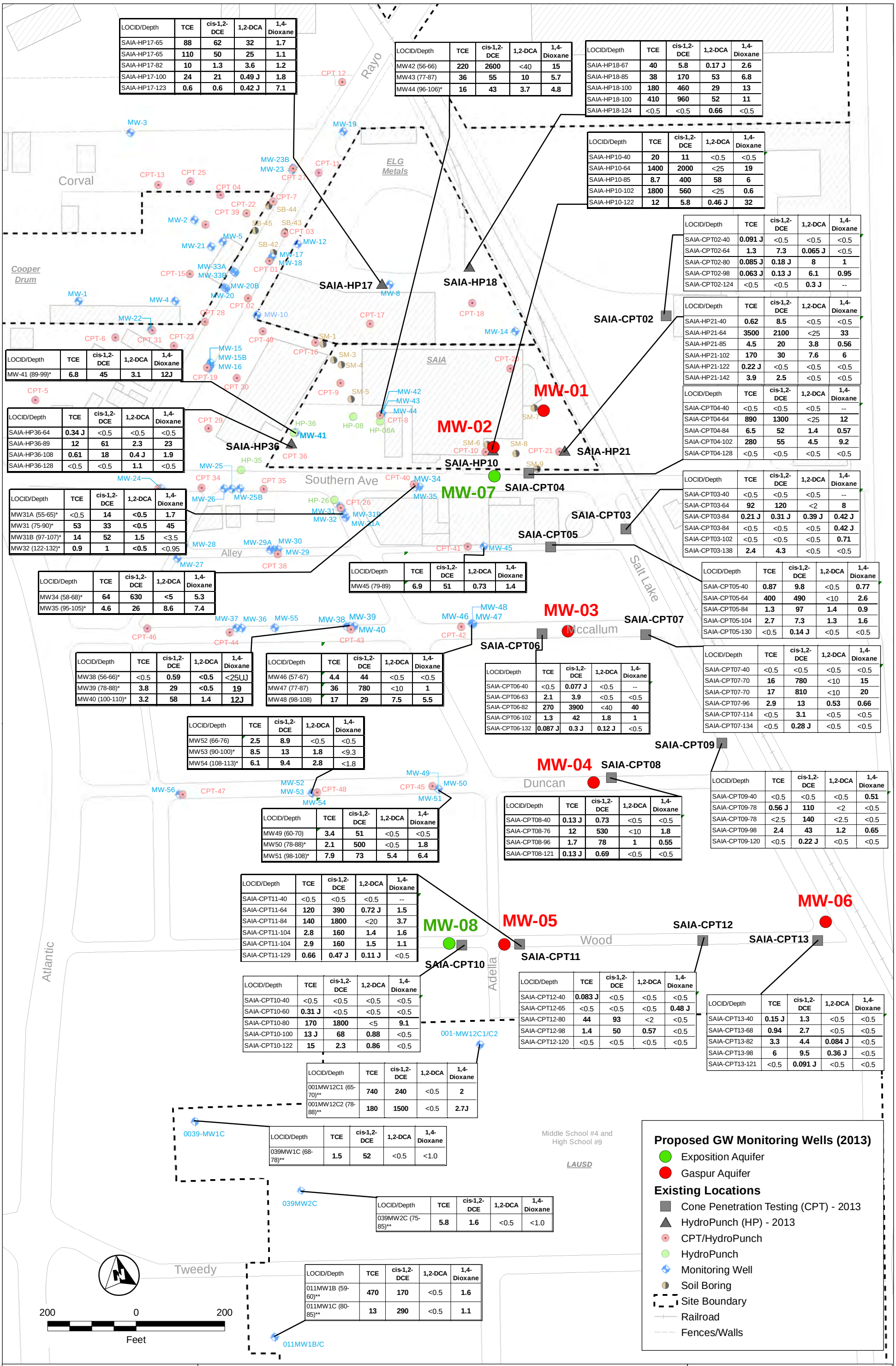

LOCID/Depth	TCE	cis-1,2-DCE	1,2-DCA	1,4-Dioxane
SAIA-HP17-65	88	62	32	1.7
SAIA-HP17-65	110	50	25	1.1
SAIA-HP17-82	10	1.3	3.6	1.2
SAIA-HP17-100	24	21	0.49 J	1.8
SAIA-HP17-123	0.6	0.6	0.42 J	7.1

LOCID/Depth	TCE	cis-1,2-DCE	1,2-DCA	1,4-Dioxane
MW42 (56-66)	220	2600	<40	15
MW43 (77-87)	36	55	10	5.7
MW44 (96-106)*	16	43	3.7	4.8

LOCID/Depth	TCE	cis-1,2-DCE	1,2-DCA	1,4-Dioxane
SAIA-HP18-67	40	5.8	0.17 J	2.6
SAIA-HP18-85	38	170	53	6.8
SAIA-HP18-100	180	460	29	13
SAIA-HP18-100	410	960	52	11
SAIA-HP18-124	<0.5	<0.5	0.66	<0.5

LOCID/Depth	TCE	cis-1,2-DCE	1,2-DCA	1,4-Dioxane
SAIA-HP10-40	20	11	<0.5	<0.5
SAIA-HP10-64	1400	2000	<25	19
SAIA-HP10-85	8.7	400	58	6
SAIA-HP10-102	1800	560	<25	0.6
SAIA-HP10-122	12	5.8	0.46 J	32

LOCID/Depth	TCE	cis-1,2-DCE	1,2-DCA	1,4-Dioxane
SAIA-CPT02-40	0.091 J	<0.5	<0.5	<0.5
SAIA-CPT02-64	1.3	7.3	0.065 J	<0.5
SAIA-CPT02-80	0.085 J	0.18 J	8	1
SAIA-CPT02-98	0.063 J	0.13 J	6.1	0.95
SAIA-CPT02-124	<0.5	<0.5	0.3 J	--

LOCID/Depth	TCE	cis-1,2-DCE	1,2-DCA	1,4-Dioxane
SAIA-HP21-40	0.62	8.5	<0.5	<0.5
SAIA-HP21-64	3500	2100	<25	33
SAIA-HP21-85	4.5	20	3.8	0.56
SAIA-HP21-102	170	30	7.6	6
SAIA-HP21-122	0.22 J	<0.5	<0.5	<0.5
SAIA-HP21-142	3.9	2.5	<0.5	<0.5

LOCID/Depth	TCE	cis-1,2-DCE	1,2-DCA	1,4-Dioxane
SAIA-CPT04-40	<0.5	<0.5	<0.5	--
SAIA-CPT04-64	890	1300	<25	12
SAIA-CPT04-84	6.5	52	1.4	0.57
SAIA-CPT04-102	280	55	4.5	9.2
SAIA-CPT04-128	<0.5	<0.5	<0.5	<0.5

LOCID/Depth	TCE	cis-1,2-DCE	1,2-DCA	1,4-Dioxane
SAIA-CPT03-40	<0.5	<0.5	<0.5	--
SAIA-CPT03-64	92	120	<2	8
SAIA-CPT03-84	0.21 J	0.31 J	0.39 J	0.42 J
SAIA-CPT03-84	<0.5	<0.5	<0.5	0.42 J
SAIA-CPT03-102	<0.5	<0.5	<0.5	0.71
SAIA-CPT03-138	2.4	4.3	<0.5	<0.5

LOCID/Depth	TCE	cis-1,2-DCE	1,2-DCA	1,4-Dioxane
SAIA-CPT05-40	0.87	9.8	<0.5	0.77
SAIA-CPT05-64	400	490	<10	2.6
SAIA-CPT05-84	1.3	97	1.4	0.9
SAIA-CPT05-104	2.7	7.3	1.3	1.6
SAIA-CPT05-130	<0.5	0.14 J	<0.5	<0.5

LOCID/Depth	TCE	cis-1,2-DCE	1,2-DCA	1,4-Dioxane
SAIA-CPT07-40	<0.5	<0.5	<0.5	<0.5
SAIA-CPT07-70	16	780	<10	15
SAIA-CPT07-70	17	810	<10	20
SAIA-CPT07-96	2.9	13	0.53	0.66
SAIA-CPT07-114	<0.5	3.1	<0.5	<0.5
SAIA-CPT07-134	<0.5	0.28 J	<0.5	<0.5

LOCID/Depth	TCE	cis-1,2-DCE	1,2-DCA	1,4-Dioxane
MW-41 (89-99)*	6.8	45	3.1	12J

LOCID/Depth	TCE	cis-1,2-DCE	1,2-DCA	1,4-Dioxane
SAIA-HP36-64	0.34 J	<0.5	<0.5	<0.5
SAIA-HP36-89	12	61	2.3	23
SAIA-HP36-108	0.61	18	0.4 J	1.9
SAIA-HP36-128	<0.5	<0.5	1.1	<0.5

LOCID/Depth	TCE	cis-1,2-DCE	1,2-DCA	1,4-Dioxane
MW31A (55-65)*	<0.5	14	<0.5	1.7
MW31 (75-90)*	53	33	<0.5	45
MW31B (97-107)*	14	52	1.5	<3.5
MW32 (122-132)*	0.9	1	<0.5	<0.95

LOCID/Depth	TCE	cis-1,2-DCE	1,2-DCA	1,4-Dioxane
MW34 (58-68)*	64	630	<5	5.3
MW35 (95-105)*	4.6	26	8.6	7.4

LOCID/Depth	TCE	cis-1,2-DCE	1,2-DCA	1,4-Dioxane
MW45 (79-89)	6.9	51	0.73	1.4

LOCID/Depth	TCE	cis-1,2-DCE	1,2-DCA	1,4-Dioxane
MW38 (56-66)*	<0.5	0.59	<0.5	<25UJ
MW39 (78-88)*	3.8	29	<0.5	19
MW40 (100-110)*	3.2	58	1.4	12J

LOCID/Depth	TCE	cis-1,2-DCE	1,2-DCA	1,4-Dioxane
MW46 (57-67)	4.4	44	<0.5	<0.5
MW47 (77-87)	36	780	<10	1
MW48 (98-108)	17	29	7.5	5.5

LOCID/Depth	TCE	cis-1,2-DCE	1,2-DCA	1,4-Dioxane
SAIA-CPT06-40	<0.5	0.077 J	<0.5	--
SAIA-CPT06-63	2.1	3.9	<0.5	<0.5
SAIA-CPT06-82	270	3900	<40	40
SAIA-CPT06-102	1.3	42	1.8	1
SAIA-CPT06-132	0.087 J	0.3 J	0.12 J	<0.5

LOCID/Depth	TCE	cis-1,2-DCE	1,2-DCA	1,4-Dioxane
MW52 (66-76)	2.5	8.9	<0.5	<0.5
MW53 (90-100)*	8.5	13	1.8	<9.3
MW54 (108-113)*	6.1	9.4	2.8	<1.8

LOCID/Depth	TCE	cis-1,2-DCE	1,2-DCA	1,4-Dioxane
MW49 (60-70)	3.4	51	<0.5	<0.5
MW50 (78-88)*	2.1	500	<0.5	1.8
MW51 (98-108)*	7.9	73	5.4	6.4

LOCID/Depth	TCE	cis-1,2-DCE	1,2-DCA	1,4-Dioxane
SAIA-CPT08-40	0.13 J	0.73	<0.5	<0.5
SAIA-CPT08-76	12	530	<10	1.8
SAIA-CPT08-96	1.7	78	1	0.55
SAIA-CPT08-121	0.13 J	0.69	<0.5	<0.5

LOCID/Depth	TCE	cis-1,2-DCE	1,2-DCA	1,4-Dioxane
SAIA-CPT09-40	<0.5	<0.5	<0.5	0.51
SAIA-CPT09-78	0.56 J	110	<2	<0.5
SAIA-CPT09-78	<2.5	140	<2.5	<0.5
SAIA-CPT09-98	2.4	43	1.2	0.65
SAIA-CPT09-120	<0.5	0.22 J	<0.5	<0.5

LOCID/Depth	TCE	cis-1,2-DCE	1,2-DCA	1,4-Dioxane
SAIA-CPT11-40	<0.5	<0.5	<0.5	--
SAIA-CPT11-64	120	390	0.72 J	1.5
SAIA-CPT11-84	140	1800	<20	3.7
SAIA-CPT11-104	2.8	160	1.4	1.6
SAIA-CPT11-104	2.9	160	1.5	1.1
SAIA-CPT11-129	0.66	0.47 J	0.11 J	<0.5

LOCID/Depth	TCE	cis-1,2-DCE	1,2-DCA	1,4-Dioxane
SAIA-CPT10-40	<0.5	<0.5	<0.5	<0.5
SAIA-CPT10-60	0.31 J	<0.5	<0.5	<0.5
SAIA-CPT10-80	170	1800	<5	9.1
SAIA-CPT10-100	13 J	68	0.88	<0.5
SAIA-CPT10-122	15	2.3	0.86	<0.5

LOCID/Depth	TCE	cis-1,2-DCE	1,2-DCA	1,4-Dioxane
SAIA-CPT12-40	0.083 J	<0.5	<0.5	<0.5
SAIA-CPT12-65	<0.5	<0.5	<0.5	0.48 J
SAIA-CPT12-80	44	93	<2	<0.5
SAIA-CPT12-98	1.4	50	0.57	<0.5
SAIA-CPT12-120	<0.5	<0.5	<0.5	<0.5

LOCID/Depth	TCE	cis-1,2-DCE	1,2-DCA	1,4-Dioxane
SAIA-CPT13-40	0.15 J	1.3	<0.5	<0.5
SAIA-CPT13-68	0.94	2.7	<0.5	<0.5
SAIA-CPT13-82	3.3	4.4	0.084 J	<0.5
SAIA-CPT13-98	6	9.5	0.36 J	<0.5
SAIA-CPT13-121	<0.5	0.091 J	<0.5	<0.5

LOCID/Depth	TCE	cis-1,2-DCE	1,2-DCA	1,4-Dioxane
001MW12C1 (65-70)**	740	240	<0.5	2
001MW12C2 (78-88)**	180	1500	<0.5	2.7J

LOCID/Depth	TCE	cis-1,2-DCE	1,2-DCA	1,4-Dioxane
039MW1C (68-78)**	1.5	52	<0.5	<1.0

LOCID/Depth	TCE	cis-1,2-DCE	1,2-DCA	1,4-Dioxane
039MW2C (75-85)**	5.8	1.6	<0.5	<1.0

LOCID/Depth	TCE	cis-1,2-DCE	1,2-DCA	1,4-Dioxane
011MW1B (59-60)**	470	170	<0.5	1.6
011MW1C (80-85)**	13	290	<0.5	1.1

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SOUTHERN AVENUE INDUSTRIAL AREA
HYDROPUNCH AND CPT INSTALLATION 2013
LOS ANGELES COUNTY, CALIFORNIA
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FIGURE 4

PROPOSED GROUNDWATER MONITORING WELL LOCATIONS

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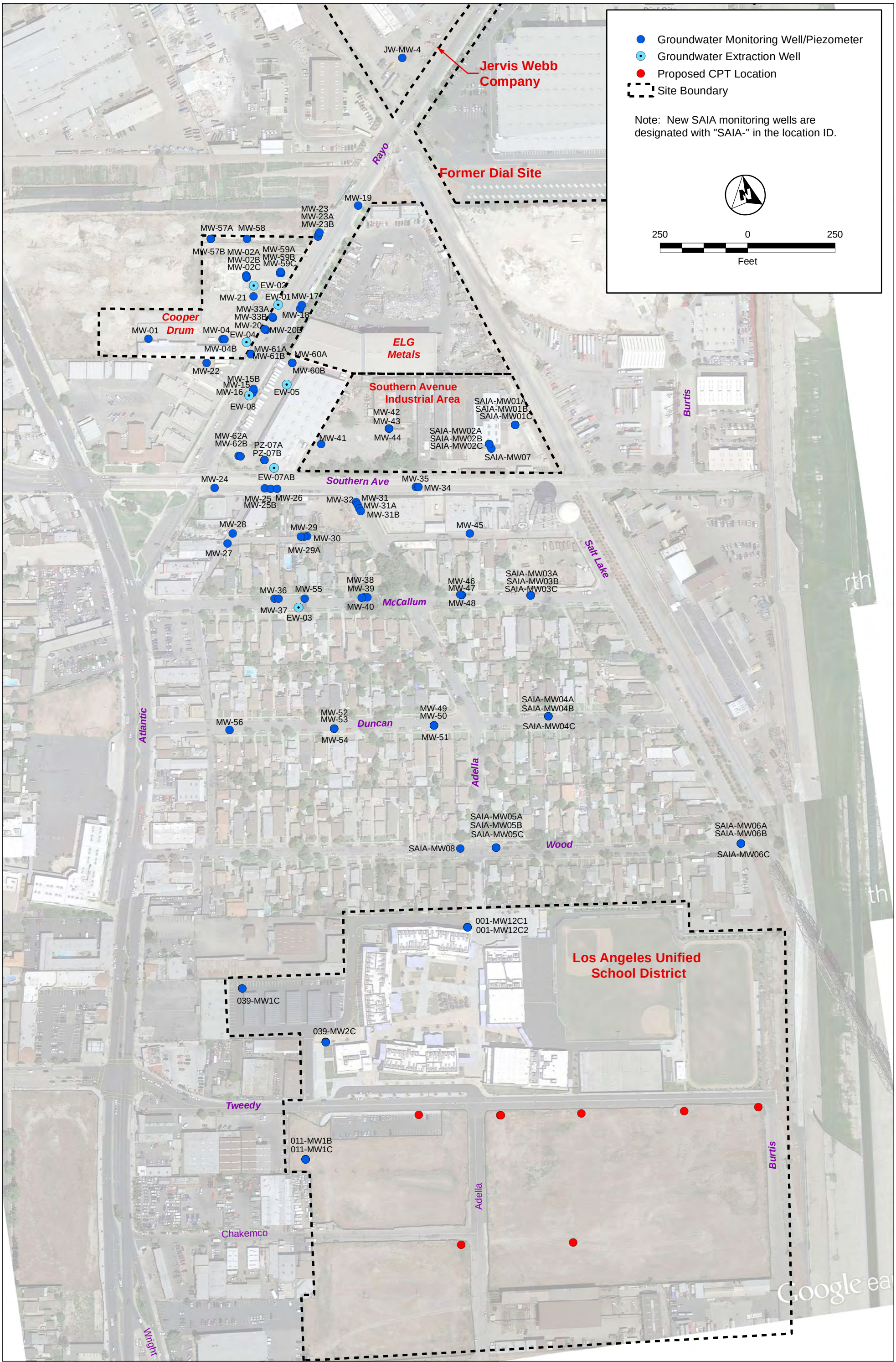
Groundwater Monitoring Well and Extraction Well Locations (Figure 1), Groundwater Results 2014, Shallow Gaspur Aquifer (Figure 2), Groundwater Results 2014, Intermediate Gaspur Aquifer (Figure 3), Groundwater Results 2014, Lower Gaspur Aquifer (Figure 4), Groundwater Results 2014, Exposition Aquifer (Figure 5), Proposed CPT Locations (Figure 6), Table 1, Monitor Well Sampling VOC Analytical Results March/August 2014. (Gilbane Federal, 2015b)



United States Environmental Protection Agency

Gilbane

SOUTHERN AVENUE INDUSTRIAL AREA
GROUNDWATER TECHNICAL MEMORANDUM
LOS ANGELES COUNTY, CALIFORNIA
US ENVIRONMENTAL PROTECTION AGENCY

FIGURE 1

GROUNDWATER MONITORING AND EXTRACTION WELL LOCATIONS

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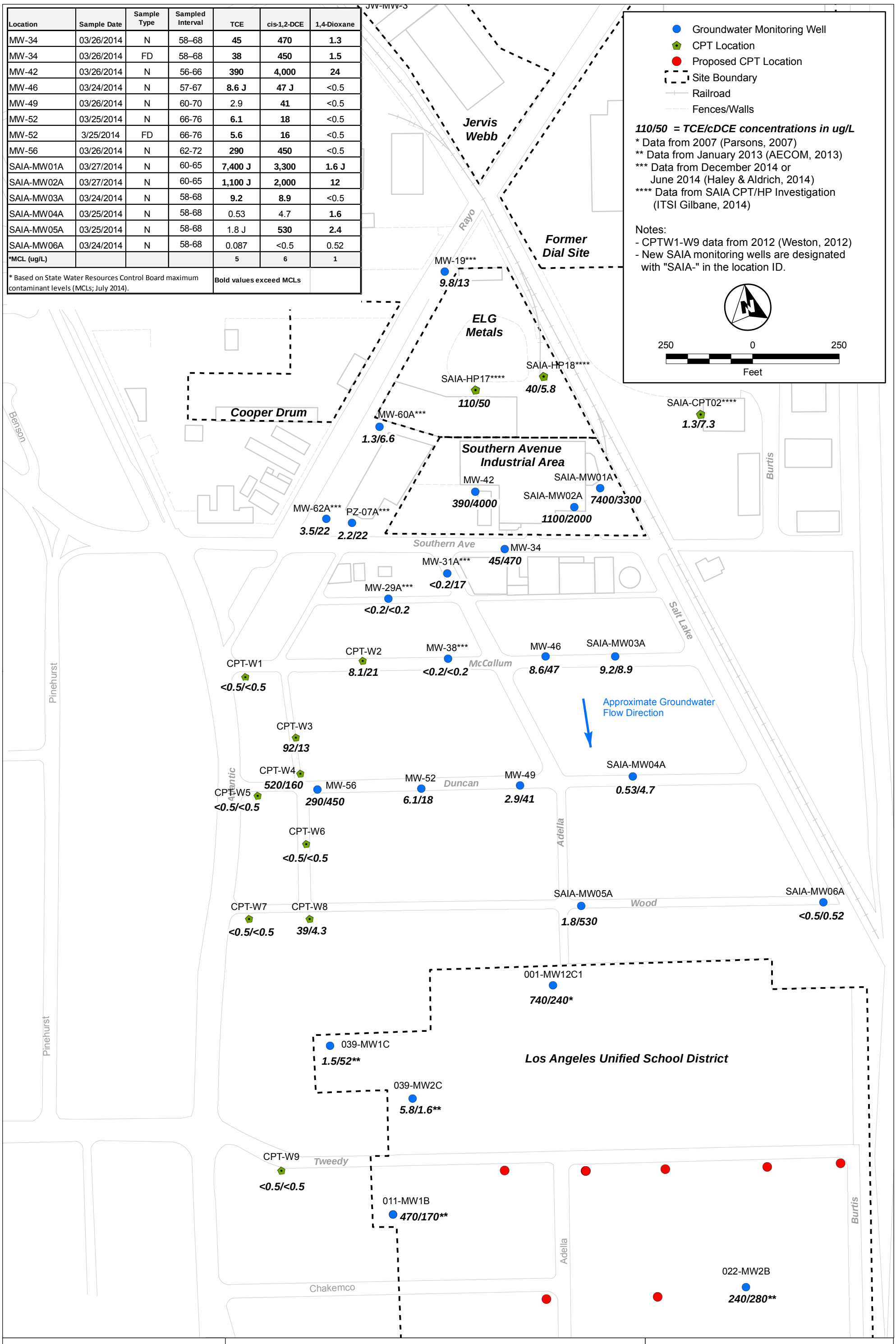
Location	Sample Date	Sample Type	Sampled Interval	TCE	cis-1,2-DCE	1,4-Dioxane
MW-34	03/26/2014	N	58–68	**45**	**470**	**1.3**
MW-34	03/26/2014	FD	58–68	**38**	**450**	**1.5**
MW-42	03/26/2014	N	56-66	**390**	**4,000**	**24**
MW-46	03/24/2014	N	57-67	**8.6 J**	**47 J**	<0.5
MW-49	03/26/2014	N	60-70	2.9	**41**	<0.5
MW-52	03/25/2014	N	66-76	**6.1**	**18**	<0.5
MW-52	3/25/2014	FD	66-76	**5.6**	**16**	<0.5
MW-56	03/26/2014	N	62-72	**290**	**450**	<0.5
SAIA-MW01A	03/27/2014	N	60-65	**7,400 J**	**3,300**	**1.6 J**
SAIA-MW02A	03/27/2014	N	60-65	**1,100 J**	**2,000**	**12**
SAIA-MW03A	03/24/2014	N	58-68	**9.2**	**8.9**	<0.5
SAIA-MW04A	03/25/2014	N	58-68	0.53	4.7	**1.6**
SAIA-MW05A	03/25/2014	N	58-68	1.8 J	**530**	**2.4**
SAIA-MW06A	03/24/2014	N	58-68	0.087	<0.5	0.52
*MCL (ug/L)				5	6	1

* Based on State Water Resources Control Board maximum contaminant levels (MCLs; July 2014).

Bold values exceed MCLs



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SOUTHERN AVENUE INDUSTRIAL AREA
GROUNDWATER TECHNICAL MEMORANDUM
LOS ANGELES COUNTY, CALIFORNIA
US ENVIRONMENTAL PROTECTION AGENCY

FIGURE 2

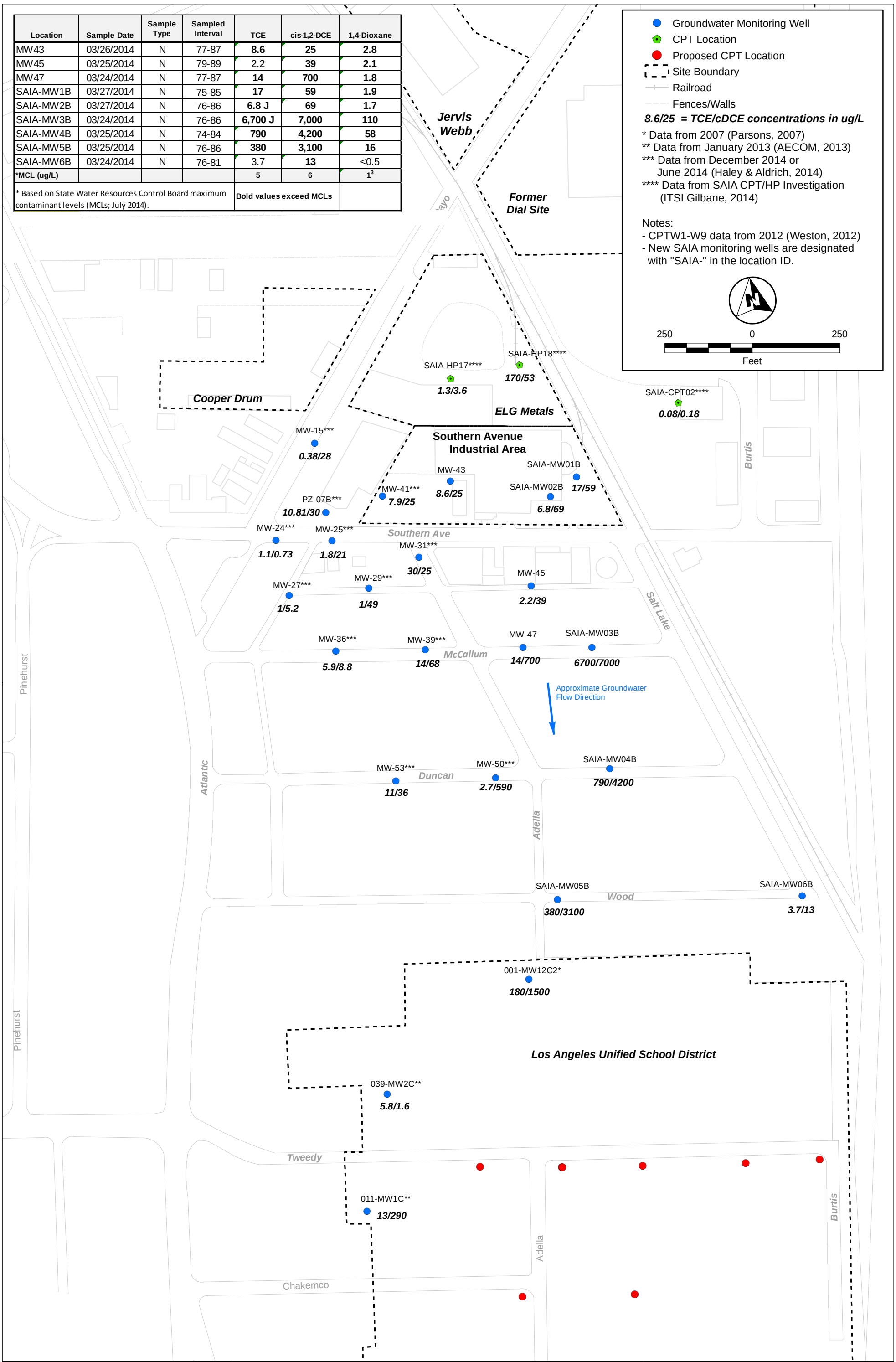
GROUNDWATER RESULTS 2014
SHALLOW GASPUR AQUIFER

G:\ArcGIS\EPA\SAIA\PROJECTS\GW_data_transmittal_2014\Figure_2_shallow_aquifer_results.mxd 11/6/2014 [10:52 AM] LCARR, Gilbane

Location	Sample Date	Sample Type	Sampled Interval	TCE	cis-1,2-DCE	1,4-Dioxane
MW43	03/26/2014	N	77-87	**8.6**	**25**	**2.8**
MW45	03/25/2014	N	79-89	2.2	**39**	**2.1**
MW47	03/24/2014	N	77-87	**14**	**700**	**1.8**
SAIA-MW1B	03/27/2014	N	75-85	**17**	**59**	**1.9**
SAIA-MW2B	03/27/2014	N	76-86	**6.8 J**	**69**	**1.7**
SAIA-MW3B	03/24/2014	N	76-86	**6,700 J**	**7,000**	**110**
SAIA-MW4B	03/25/2014	N	74-84	**790**	**4,200**	**58**
SAIA-MW5B	03/25/2014	N	76-86	**380**	**3,100**	**16**
SAIA-MW6B	03/24/2014	N	76-81	3.7	**13**	<0.5
*MCL (ug/L)				5	6	1[3]

* Based on State Water Resources Control Board maximum contaminant levels (MCLs; July 2014).

Bold values exceed MCLs



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SOUTHERN AVENUE INDUSTRIAL AREA
GROUNDWATER TECHNICAL MEMORANDUM
LOS ANGELES COUNTY, CALIFORNIA
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FIGURE 3

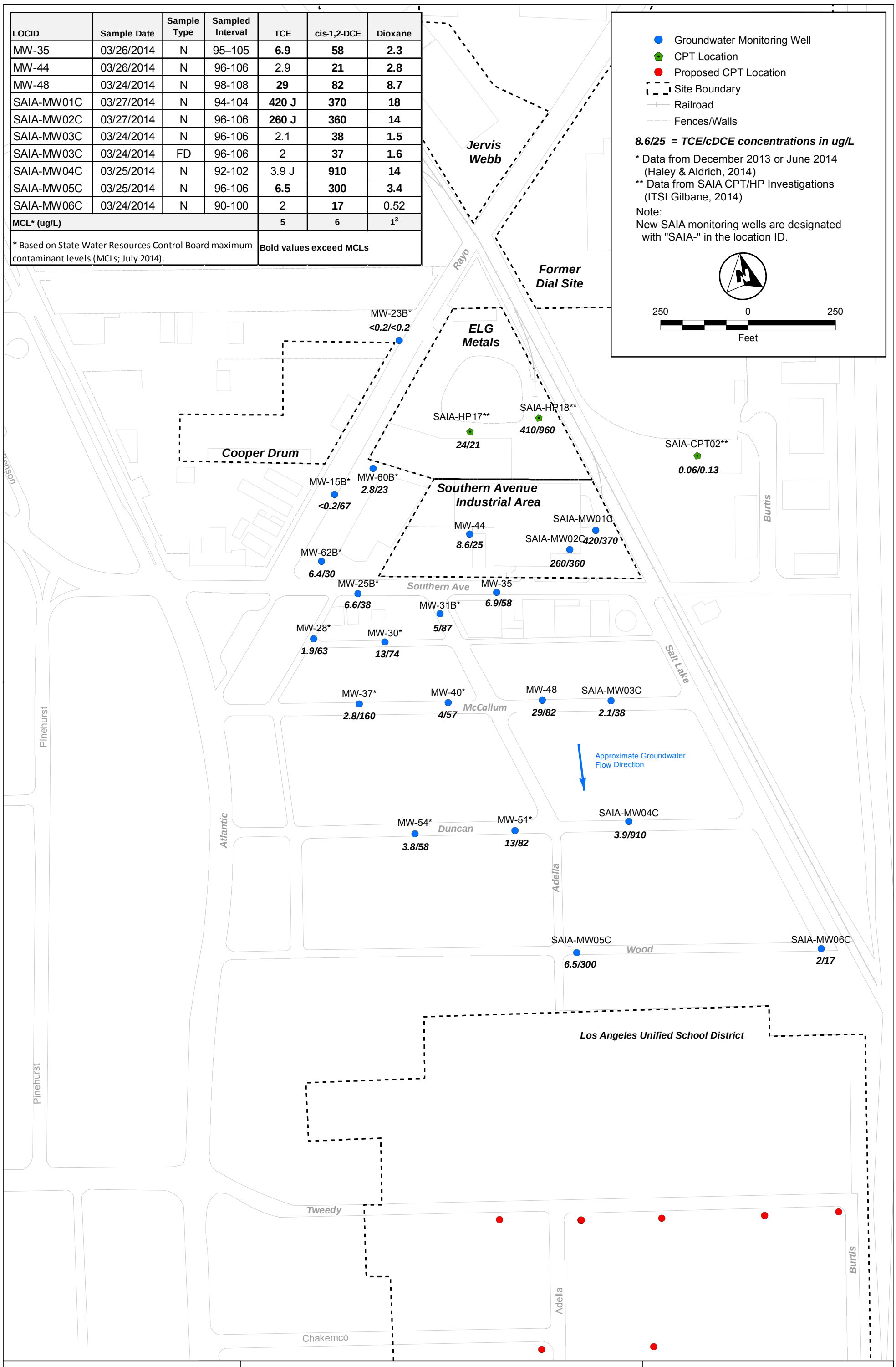
GROUNDWATER RESULTS 2014
INTERMEDIATE GASPUR AQUIFER

G:\ArcGIS\EPA\SAIA\PROJECTS\GW_data_transmittal_2014\Figure_3_mid_aquifer_results.mxd 11/6/2014 [10:54 AM] LCARR, Gilbane

LOCID	Sample Date	Sample Type	Sampled Interval	TCE	cis-1,2-DCE	Dioxane
MW-35	03/26/2014	N	95–105	**6.9**	**58**	**2.3**
MW-44	03/26/2014	N	96-106	2.9	**21**	**2.8**
MW-48	03/24/2014	N	98-108	**29**	**82**	**8.7**
SAIA-MW01C	03/27/2014	N	94-104	**420 J**	**370**	**18**
SAIA-MW02C	03/27/2014	N	96-106	**260 J**	**360**	**14**
SAIA-MW03C	03/24/2014	N	96-106	2.1	**38**	**1.5**
SAIA-MW03C	03/24/2014	FD	96-106	2	**37**	**1.6**
SAIA-MW04C	03/25/2014	N	92-102	3.9 J	**910**	**14**
SAIA-MW05C	03/25/2014	N	96-106	**6.5**	**300**	**3.4**
SAIA-MW06C	03/24/2014	N	90-100	2	**17**	0.52
MCL* (ug/L)				**5**	**6**	**1[3]**

* Based on State Water Resources Control Board maximum contaminant levels (MCLs; July 2014).

Bold values exceed MCLs



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GROUNDWATER TECHNICAL MEMORANDUM
LOS ANGELES COUNTY, CALIFORNIA
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FIGURE 4

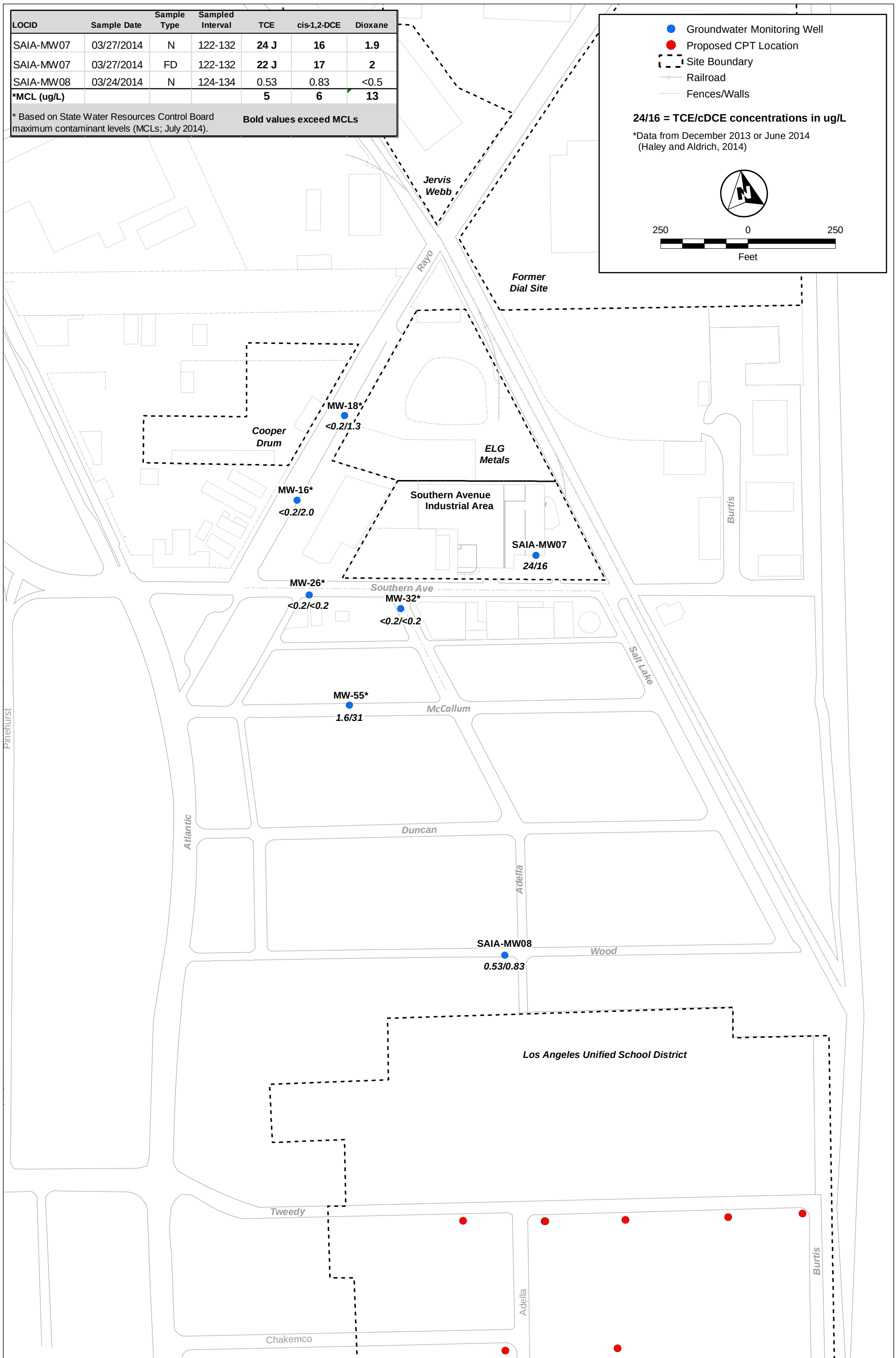
GROUNDWATER RESULTS 2014
LOWER GASPUR AQUIFER

G:\ArcGIS\EPA\SAIA\PROJECTS\GW_data_transmittal_2014\Figure_4_deep_aquifer_results.mxd 11/6/2014 [10:41 AM] LCARR, Gilbane

LOCID	Sample Date	Sample Type	Sampled Interval	TCE	cis-1,2-DCE	Dioxane
SAIA-MW07	03/27/2014	N	122-132	**24 J**	**16**	**1.9**
SAIA-MW07	03/27/2014	FD	122-132	**22 J**	**17**	**2**
SAIA-MW08	03/24/2014	N	124-134	0.53	0.83	<0.5
***MCL (ug/L)**				**5**	**6**	**13**

* Based on State Water Resources Control Board maximum contaminant levels (MCLs; July 2014).

Bold values exceed MCLs



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LOS ANGELES COUNTY, CALIFORNIA
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FIGURE 5

GROUNDWATER RESULTS 2014
EXPOSITION AQUIFER

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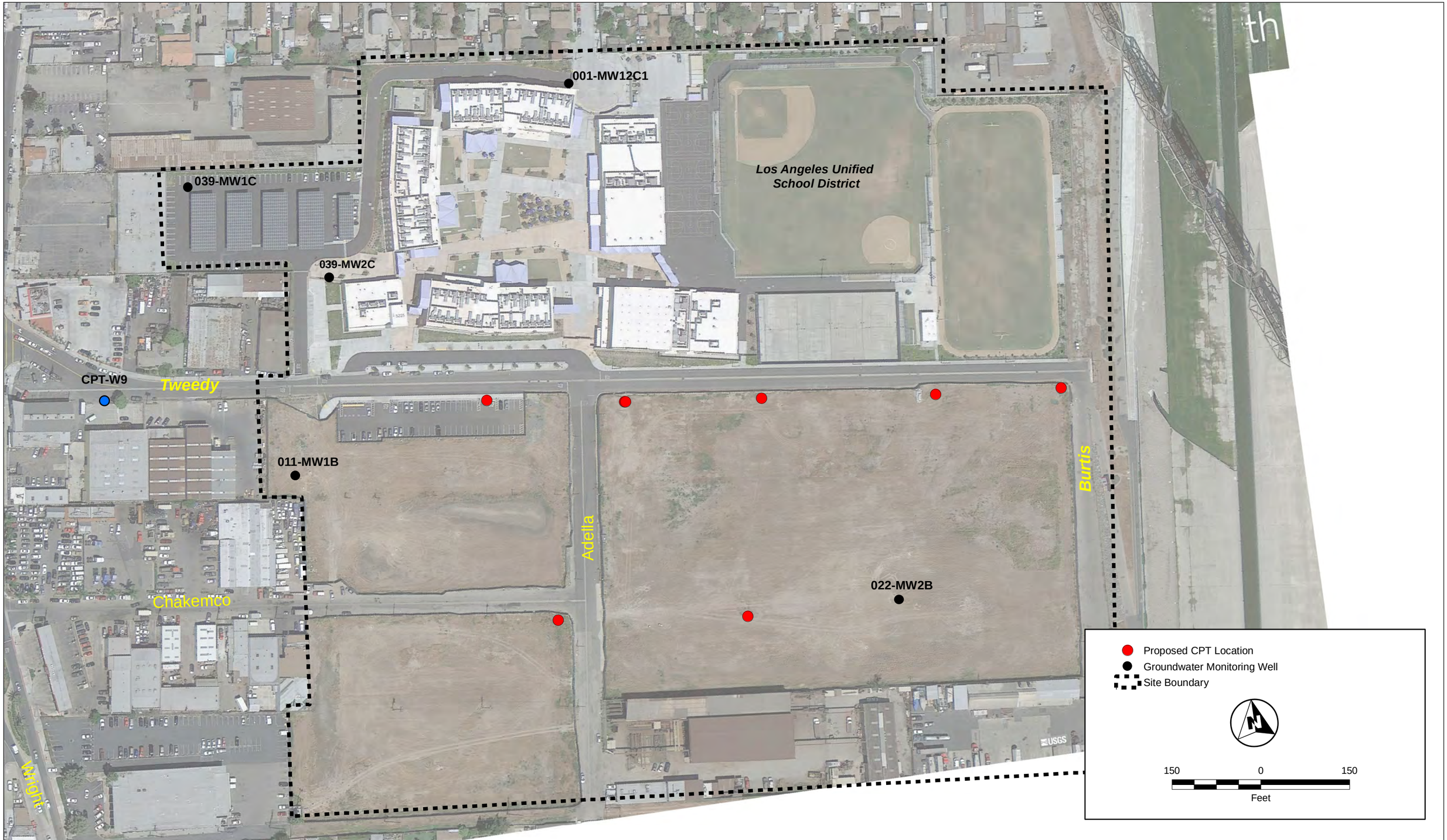

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SOUTHERN AVENUE INDUSTRIAL AREA
GROUNDWATER TECHNICAL MEMORANDUM
LOS ANGELES COUNTY, CALIFORNIA
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FIGURE 6

PROPOSED CPT LOCATIONS

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Table 1
Monitor Well Sampling VOC Analytical Results March/August 2014
Southern Avenue Industrial Area Superfund Site, South Gate, CA

Location	Sample ID	Sample Date	Sample Type	Sample Depth	Tetrachloroethene	Trichloroethene	cis-1,2-Dichloroethene	1,1-Dichloroethene	trans-1,2-Dichloroethene	Vinyl Chloride	1,1-Dichloroethane	1,2-Dichloroethane	Benzene	1,2-Dichloropropane	1,4-Dioxane (p-Dioxane)	1,2,3-Trichloropropane	Toluene
MW34	MW34-0314	03/26/2014	N	58–68	<2.5	45	470	<2.5	25	<2.5	1.6 J	<2.5	<2.5	<2.5	1.3	<2.5	<2.5
MW34	MW934-0314	03/26/2014	FD	58–68	<2	38	450	<2	20	<2	1.3 J	<2	<2	<2	1.5	<2	<2
MW35	MW35-0314	03/26/2014	N	95–105	<0.5	6.9	58	<0.5	5.5	<0.5	0.33 J	5.8	<0.5	<0.5	2.3	<0.5	<0.5
MW42	MW42-0314	03/26/2014	N	56-66	<10	390	4,000	<10	75	<10	25	<10	<10	<10	24	<10	<10
MW43	MW43-0314	03/26/2014	N	77-87	<0.5	8.6	25	<0.5	1.4	<0.5	0.22 J	7.6	<0.5	<0.5	2.8	<0.5	<0.5
MW44	MW44-0314	03/26/2014	N	96-106	<0.5	2.9	21	<0.5	1.5	<0.5	0.2 J	4	<0.5	<0.5	2.8	<0.5	<0.5
MW45	MW45-0314	03/25/2014	N	79-89	<0.5	2.2	39	<0.5	3.7	<0.5	0.21	0.84	<0.5	<0.5	2.1	<0.5	<0.5
MW46	MW46-0314	03/24/2014	N	57-67	<0.5	8.6 J	47 J	<0.5	3.7 J	<0.5	0.097 J	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MW47	MW47-0314	03/24/2014	N	77-87	<4	14	700	<4	47	<4	1.3 J	<4	<4	<4	1.8	<4	<4
MW48	MW48-0314	03/24/2014	N	98-108	<0.5	29	82	2.1	5.5	<0.5	1.6	6.9	<0.5	0.12	8.7	<0.5	<0.5
MW49	MW49-0314	03/26/2014	N	60-70	<0.5	2.9	41	<0.5	3.4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MW52	MW52-0314	03/25/2014	N	66-76	<0.5	6.1	18	<0.5	5	<0.5	<0.5	<0.5	2.4	<0.5	<0.5	<0.5	<0.5
MW52	MW952-0314	03/25/2014	FD	66-76	<0.5	5.6	16	<0.5	4.2	<0.5	<0.5	<0.5	2.1	<0.5	<0.5	<0.5	<0.5
MW56	MW56-0314	03/26/2014	N	62-72	<2	290	450	<2	15	<2	<2	<2	<2	<2	<0.5	<2	<2
SAIA-MW1A	SAIA-MW1A-0314	03/27/2014	N	60-65	<100	7,400 J	3,300	<100	71 J	<100	21 J	<100	<100	<100	1.6 J	<100	<100
	SAIA-MW1A-0814	08/25/2014	N	60-65	0.42 J	4,800	6,900	16	96 J	<360	17	<0.5	0.29 J	<0.5	1.4	<0.5	0.51
SAIA-MW1B	SAIA-MW1B-0314	03/27/2014	N	75-85	<0.5	17	59	<0.5	4.6	<0.5	0.25	0.48 J	<0.5	<0.5	1.9	<0.5	<0.5
	SAIA-MW1B-0814	08/25/2014	N	75-85	<0.5	4.3	51	<0.5	4.6	<0.5	0.19 J	0.52	<0.5	0.097 J	2.6	<0.5	<0.5
SAIA-MW1C	SAIA-MW1C-0314	03/27/2014	N	94-104	<4	420 J	370	<4	34	<4	3.9 J	35	<4	<4	18	<4	<4
	SAIA-MW1C-0814	08/25/2014	N	94-104	<0.5	210	560	6.5	47	1.4	4.2	52	3.7	0.1 J	22	<0.5	<0.5
SAIA-MW2A	SAIA-MW2A-0314	03/27/2014	N	60-65	<10	1,100 J	2,000	<10	74	<10	4.8 J	<10	<10	<10	12	<10	<10
	SAIA-MW2A-0814	08/25/2014	N	60-65	<0.5	1,300	2,500	7.7	110 J	5.5	7.2	0.25 J	0.35 J	<0.5	16	<0.5	<0.5
	SAIA-MW92A-0814	08/25/2014	FD	60-65	<0.5	1,300	2,400	7.7	120 J	5.3	7	<0.5	0.35 J	<0.5	15	<0.5	<0.5
SAIA-MW2B	SAIA-MW2B-0314	03/27/2014	N	76-86	<0.5	6.8 J	69	<0.5	7.2	<0.5	<0.5	6.6	<0.5	<0.5	1.7	<0.5	<0.5
	SAIA-MW2B-0814	08/25/2014	N	76-86	<0.5	2.8	51	0.5	5.9	0.75	0.11 J	5.1	0.2 J	0.23 J	1.3	<0.5	<0.5
SAIA-MW2C	SAIA-MW2C-0314	03/27/2014	N	96-106	<2	260 J	360	4.7	28	<2	3	32	6.1	0.19	14	<2	<2
	SAIA-MW2C-0814	08/25/2014	N	96-106	<0.5	200	370	5.2	33	3.3	2.8	34	4.7	<0.5	20	<0.5	<0.5
SAIA-MW3A	SAIA-MW3A-0314	03/24/2014	N	58-68	<0.5	9.2	8.9	<0.5	0.2	<0.5	0.13	<0.5	<0.5	<0.5	<0.5	<0.5	0.073
	SAIA-MW3A-0814	08/26/2014	N	58-68	<0.5	3.6	5.8	<0.5	0.15 J	<0.5	<0.5	<0.5	<0.5	<0.5	<0.46	<0.5	1.3
SAIA-MW3B	SAIA-MW3B-0314	03/24/2014	N	76-86	<25	6,700 J	7,000	18 J	120	<25	49	<25	<25	<25	110	<25	<25
	SAIA-MW3B-0814	08/26/2014	N	76-86	<0.5	6,600	9,100	20	230 J	47	72	2.1	1.5	<0.5	86	<0.5	1.1
SAIA-MW3C	SAIA-MW3C-0314	03/24/2014	N	96-106	<0.5	2.1	38	<0.5	2.5	<0.5	0.2	1.8	<0.5	0.23	1.5	<0.5	<0.5
	SAIA-MW93C-0314	03/24/2014	FD	96-106	<0.5	2	37	<0.5	2.5	<0.5	0.2	1.6	<0.5	0.25	1.6	<0.5	<0.5
	SAIA-MW3C-0814	08/26/2014	N	96-106	<0.5	6	27	<0.5	2.6	6.1	0.25 J	2.1	0.085 J	0.27 J	<0.46	<0.5	<0.5
SAIA-MW4A	SAIA-MW4A-0314	03/25/2014	N	58-68	<0.5	0.53	4.7	<0.5	0.19	<0.5	0.32	<0.5	<0.5	<0.5	1.6	<0.5	<0.5
	SAIA-MW4A-0814	08/26/2014	N	58-68	<0.5	0.19 J	0.72	<0.5	<0.5	<0.5	0.34 J	<0.5	<0.5	<0.5	1.8	<0.5	<0.5

Table 1
Monitor Well Sampling VOC Analytical Results March/August 2014
Southern Avenue Industrial Area Superfund Site, South Gate, CA

Location	Sample ID	Sample Date	Sample Type	Sample Depth	Tetrachloroethene	Trichloroethene	cis-1,2-Dichloroethene	1,1-Dichloroethene	trans-1,2-Dichloroethene	Vinyl Chloride	1,1-Dichloroethane	1,2-Dichloroethane	Benzene	1,2-Dichloropropane	1,4-Dioxane (p-Dioxane)	1,2,3-Trichloropropane	Toluene
SAIA-MW4B	SAIA-MW4B-0314	03/25/2014	N	74-84	<25	**790**	**4,200**	<25	**130**	<25	**15 J**	<25	<25	<25	**58**	<25	<25
	SAIA-MW4B-0814	08/26/2014	N	74-84	<0.5	**150 J**	**4,800**	**6.6**	**180 J**	**6.5**	**18**	**0.72**	**0.55**	<0.5	**60**	<0.5	<0.5
	SAIA-MW94B-0814	08/26/2014	FD	74-84	<0.5	**150 J**	**4,800**	**6.6**	**180 J**	**6.5**	**18**	**0.69**	**0.55**	<0.5	**59**	<0.5	<0.5
SAIA-MW4C	SAIA-MW4C-0314	03/25/2014	N	92-102	<10	**3.9 J**	**910**	<10	**53**	<10	**3.6 J**	<10	<10	<10	**14**	<10	<10
	SAIA-MW4C-0814	08/26/2014	N	92-102	<0.5	**3.4**	**910**	**1.3**	**73**	**11**	**4.1**	**2.1**	**0.19 J**	**0.3 J**	**11**	<0.5	**1.1**
SAIA-MW5A	SAIA-MW5A-0314	03/25/2014	N	58-68	<5	**1.8 J**	**530**	<5	**21**	<5	<5	<5	<5	<5	**2.4**	<5	**1.4 J**
	SAIA-MW5A-0814	08/27/2014	N	58-68	<0.5	**1.9**	**520**	**0.89**	**24 J**	**0.72**	**0.42 J**	<0.5	<0.5	<0.5	**2.3**	<0.5	**0.77**
SAIA-MW5B	SAIA-MW5B-0314	03/25/2014	N	76-86	<25	**380**	**3,100**	<25	**98**	<25	<25	<25	<25	<25	**16**	<25	**8.9 J**
	SAIA-MW5B-0814	08/27/2014	N	76-86	<0.5	**99 J**	**3,600**	**5.5**	**120 J**	**4.5**	**9.5**	**0.52**	**0.36 J**	<0.5	**23**	<0.5	**1.2**
SAIA-MW5C	SAIA-MW5C-0314	03/25/2014	N	96-106	<4	**6.5**	**300**	<4	**21**	<4	<4	**2 J**	<4	<4	**3.4**	<4	<4
	SAIA-MW5C-0814	08/27/2014	N	96-106	<0.5	**4.8**	**320**	**0.8**	**25**	<0.5	**0.64**	**1.9**	**0.18 J**	**0.26 J**	**3.2**	<0.5	<0.5
SAIA-MW6A	SAIA-MW6A-0314	03/24/2014	N	58-68	<0.5	**0.087**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	**0.52**	<0.5	<0.5
	SAIA-MW6A-0814	08/27/2014	N	58-68	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	**0.53**	<0.5	**0.68**
SAIA-MW6B	SAIA-MW6B-0314	03/24/2014	N	76-81	<0.5	**3.7**	**13**	<0.5	**3.9**	<0.5	<0.5	**0.12**	<0.5	<0.5	<0.5	<0.5	**0.069**
	SAIA-MW6B-0814	08/27/2014	N	76-81	<0.5	**3.6**	**14**	<0.5	**5.1**	<0.5	<0.5	<0.5	<0.5	<0.5	**0.26 J**	<0.5	**0.99**
SAIA-MW6C	SAIA-MW6C-0314	03/24/2014	N	90-100	<0.5	**2**	**17**	<0.5	**2.3**	<0.5	<0.5	**0.2**	<0.5	<0.5	**0.52**	<0.5	**0.075**
	SAIA-MW6C-0814	08/27/2014	N	90-100	<0.5	**2.4**	**21**	<0.5	**2.8**	<0.5	<0.5	<0.5	<0.5	<0.5	**0.52**	<0.5	<0.5
SAIA-MW7	SAIA-MW7-0314	03/27/2014	N	122-132	<0.5	**24 J**	**16**	<0.5	**1.1**	<0.5	**0.3**	**0.96**	<0.5	<0.5	**1.9**	<0.5	<0.5
	SAIA-MW97-0314	03/27/2014	FD	122-132	<0.5	**22 J**	**17**	<0.5	**1.1**	<0.5	**0.37**	**1.1**	<0.5	<0.5	**2**	<0.5	<0.5
	SAIA-MW7-0814	08/25/2014	N	122-132	<0.5	**22**	**57**	**0.65**	**2.5**	**1.3**	**0.67**	**1.6**	**0.14 J**	<0.5	**3.6**	<0.5	<0.5
SAIA-MW8	SAIA-MW8-0314	03/24/2014	N	124-134	<0.5	**0.53**	**0.83**	<0.5	**0.08**	<0.5	<0.5	**0.18**	<0.5	<0.5	<0.5	<0.5	**0.18**
	SAIA-MW8-0814	08/25/2014	N	124-134	<0.5	**3.9**	**1.9**	<0.5	**0.2 J**	<0.5	<0.5	**0.62**	<0.5	<0.5	**0.16 J**	<0.5	<0.5
Screening Criteria																	
MCL* (ug/L)					5	5	6	6	10	0.5	5	0.5	1	5	1[3]	0.005[3]	150

exceeds California's MCLs

* Based on State Water Resources Control Board maximum contaminan levels (MCLs; July 2014).

Notes:

1) Results reported in micrograms per liter (ug/L).

2) Concentrations detected at or above laboratory reporting limits are shown in bold font.

3) Based on Department of Public Health California Notification Level.

4) Data from August 2014 has not been validated and should be considered to be preliminary data.

Abbreviations:

FD = Field duplicate

Groundwater Monitoring Well and CPT Locations (Figure 1), Groundwater Results 2014 and 2015 Perched Zone and Shallow Gaspur Aquifer (Figure 2), Groundwater Results 2014 and 2015 Intermediate Gaspur Aquifer (Figure 3), Groundwater Results 2014 and 2015 Lower Gaspur Aquifer (Figure 4), Groundwater Results 2014 and 2015 Exposition Aquifer (Figure 5), Proposed Groundwater Monitoring Well Locations (Figure 6), Table 1, HydroPunch Groundwater Sampling Results for VOCs and SVOCs, June 2015. (Gilbane Federal, 2016)

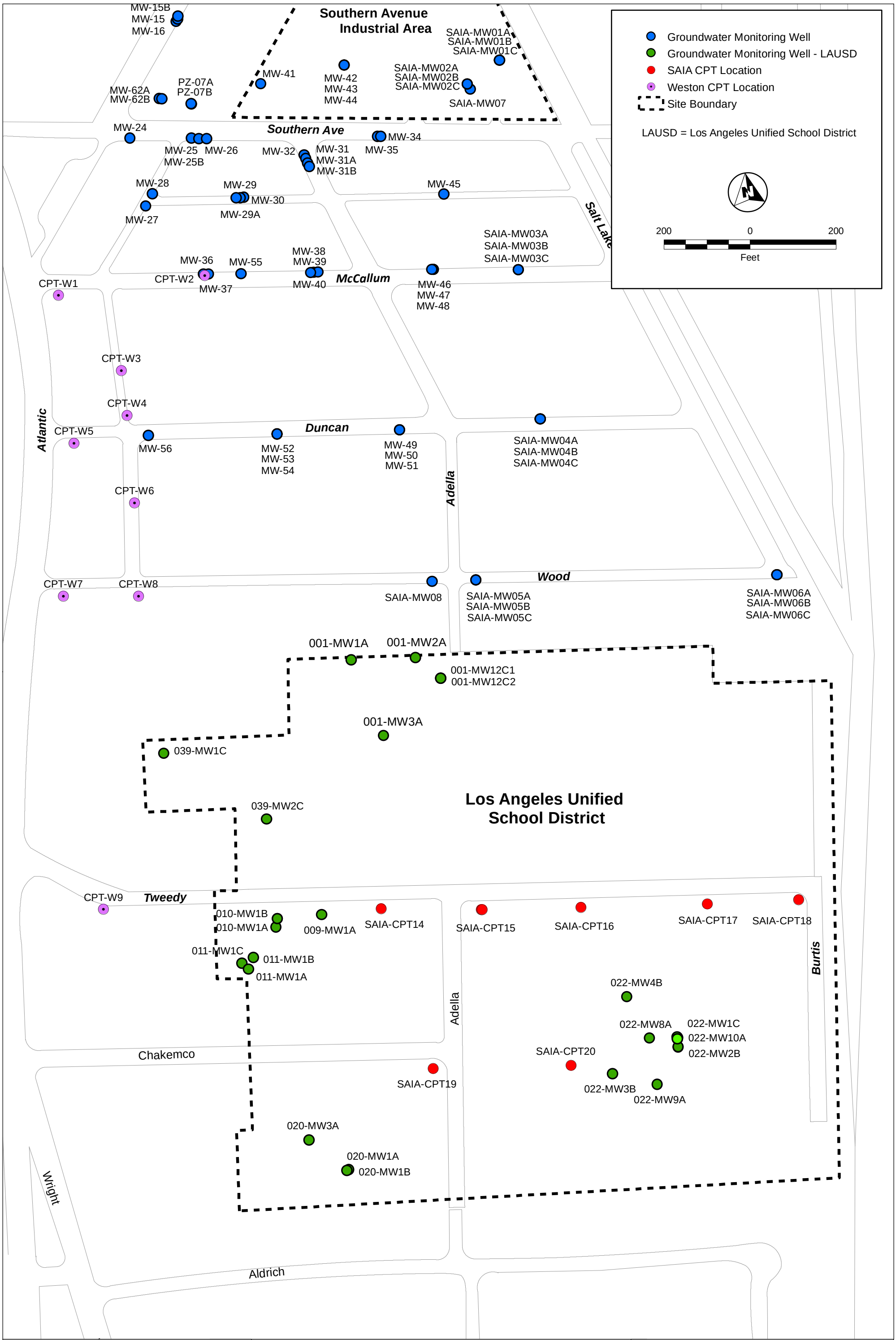

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Figure 1

Groundwater Monitoring Well and CPT Locations

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Location	Sample Date	Sample Type	Sampled Interval	TCE	cis-1,2-DCE	1,4-Dioxane
MW-34	03/26/2014	N	58–68	45	470	1.3
MW-34	03/26/2014	FD	58–68	38	450	1.5
MW-42	03/26/2014	N	56-66	390	4,000	24
MW-46	03/24/2014	N	57-67	8.6 J	47 J	<0.5
MW-49	03/26/2014	N	60-70	2.9	41	<0.5
MW-52	03/25/2014	N	66-76	6.1	18	<0.5
MW-52	3/25/2014	FD	66-76	5.6	16	<0.5
MW-56	03/26/2014	N	62-72	290	450	<0.5
SAIA-MW01A	3/27/2014	N	60-65	7,400 J	3,300	1.6 J
SAIA-MW02A	3/27/2014	N	60-65	1,100 J	2,000	12
SAIA-MW03A	3/24/2014	N	58-68	9.2	8.9	<0.5
SAIA-MW04A	3/25/2014	N	58-68	0.53	4.7	1.6
SAIA-MW05A	3/25/2014	N	58-68	1.8 J	530	2.4
SAIA-MW06A	3/24/2014	N	58-68	0.087	<0.5	0.52
SAIA-CPT14	7/23/2015	N	60	<0.5	<0.5	<0.5
SAIA-CPT15	7/29/2015	N	48	<0.5	0.65	<0.5
SAIA-CPT15	7/28/2015	N	57	<0.5	<0.5	<0.5
SAIA-CPT16	7/30/2015	N	48	<0.5	<0.5	<0.5
SAIA-CPT16	7/29/2015	N	56	<0.5	<0.5	0.31J
SAIA-CPT17	7/31/2015	N	48	0.46J	2	0.68
SAIA-CPT17	7/30/2015	N	67	0.59	6.9	14
SAIA-CPT18	7/31/2015	N	49	0.27J	<0.5	0.51
SAIA-CPT18	7/31/2015	N	68	0.97	1.5	<0.5
SAIA-CPT19	7/27/2015	N	48	<0.5	<0.5	1.6
SAIA-CPT19	7/24/2015	N	70	<0.5	20	<0.5
SAIA-CPT20	7/24/2015	N	50	<0.5	<0.5	0.35J
SAIA-CPT20	7/24/2015	N	69	1.5	9.5	0.62
010-MW1A	2/18/2015	N	30-40	47	9.3	<1.0
010-MW1B	2/18/2015	N	60-65	34	87	<1.0
011-MW1A	2/18/2015	N	31-41	170	18	<1.0
011-MW1B	2/18/2015	N	59-69	280	140	<1.0
020-MW1A	2/20/2015	N	30-40	<0.5	<0.5	260
020-MW1B	2/17/1015	N	55-60	<0.5	470	na
020-MW3A	2/19/2015	N	37-47	<0.5	<0.5	960
022-MW1C	2/19/2015	N	66-76	2.8	9.2	na
022-MW8A	2/20/2015	N	29-39	34	35	na
022-MW9A	2/20/2015	N	31-41	14	46	na
022-MW2B	2/19/2015	N	50-55	6.1	1300	na
022-MW3B	2/20/2015	N	49-54	<0.5	0.69	na
022-MW4B	2/20/2015	N	52-57	2.5	2.9	na
039-MW1C	2/20/2015	N	68-78	1.7	38	<1.0
*MCL (ug/L)				5	6	1**

* Based on California Division of Drinking Water (2014) maximum contaminant levels.

**Based on Department of Public Health California Notification Level

Notes:

1) Results in highlighted cells exceed California's MCLs

2) Results reported in micrograms per liter (ug/L).

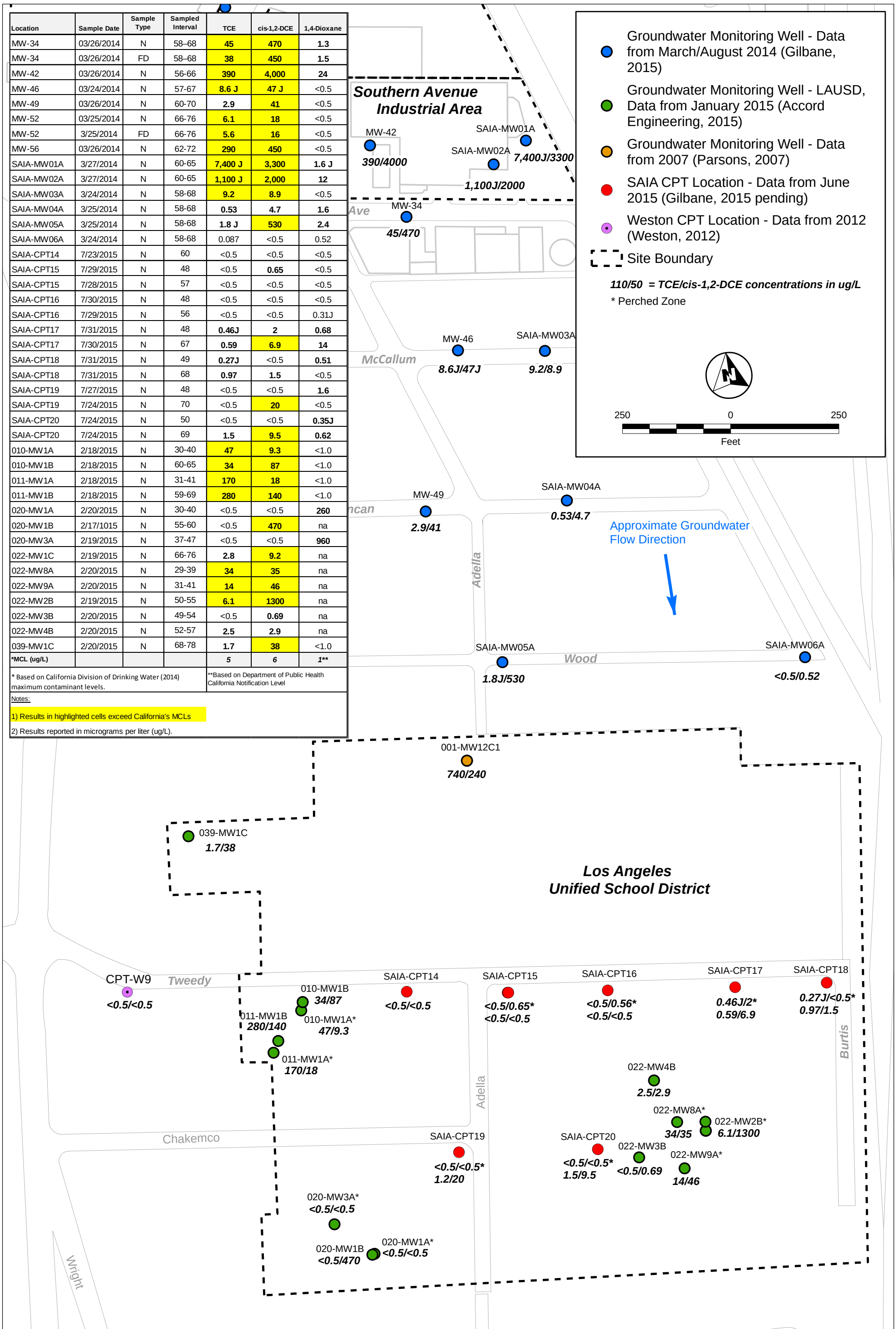

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Figure 2

Groundwater Results - 2014 and 2015 Perched Zone and Shallow Gaspur Aquifer

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Location	Sample Date	Sample Type	Sampled Interval	TCE	cis-1,2-DCE	1,4-Dioxane
MW43	3/26/2014	N	77-87	8.6	25	2.8
MW45	3/25/2014	N	79-89	2.2	39	2.1
MW47	3/24/2014	N	77-87	14	700	1.8
SAIA-MW1B	3/27/2014	N	75-85	17	59	1.9
SAIA-MW2B	3/27/2014	N	76-86	6.8 J	69	1.7
SAIA-MW3B	3/24/2014	N	76-86	6,700 J	7,000	110
SAIA-MW4B	3/25/2014	N	74-84	790	4,200	58
SAIA-MW5B	3/25/2014	N	76-86	380	3,100	16
SAIA-MW6B	/24/2014	N	76-81	3.7	13	<0.5
SAIA-CPT14	7/2302015	N	76	2.7	130	<0.5
SAIA-CPT14	7/2302015	FD	77	3.1	140	0.37J
SAIA-CPT15	7/28/2015	N	75	5	180	<0.5
SAIA-CPT16	7/29/2015	N	74	1.4	9.8	<0.5
SAIA-CPT16	7/29/2015	N	80	7.8	72	<0.5
SAIA-CPT17	7/30/2015	N	74	13	37	2.1J
SAIA-CPT17	7/30/2015	FD	75	14	40	1.4J
SAIA-CPT18	7/31/2015	N	84	0.61	8	0.6
SAIA-CPT19	7/24/2015	N	90	0.52	46	<0.5
SAIA-CPT20	7/27/2015	N	88	2	20	0.35J
SAIA-CPT20	7/27/2015	FD	89	2	18	0.42J
011-MW1C	2/18/2015	N	80-85	5.4	160	na
039-MW2C	2/19/2015	N	74-84	2.1	5.5	na
*MCL (ug/L)				5	6	1**

* Based on California Division of Drinking Water (2014) maximum contaminant levels.

**Based on Department of Public Health California Notification Level

Notes:

1) Results in highlighted cells exceed California's MCLs

2) Results reported in micrograms per liter (ug/L).

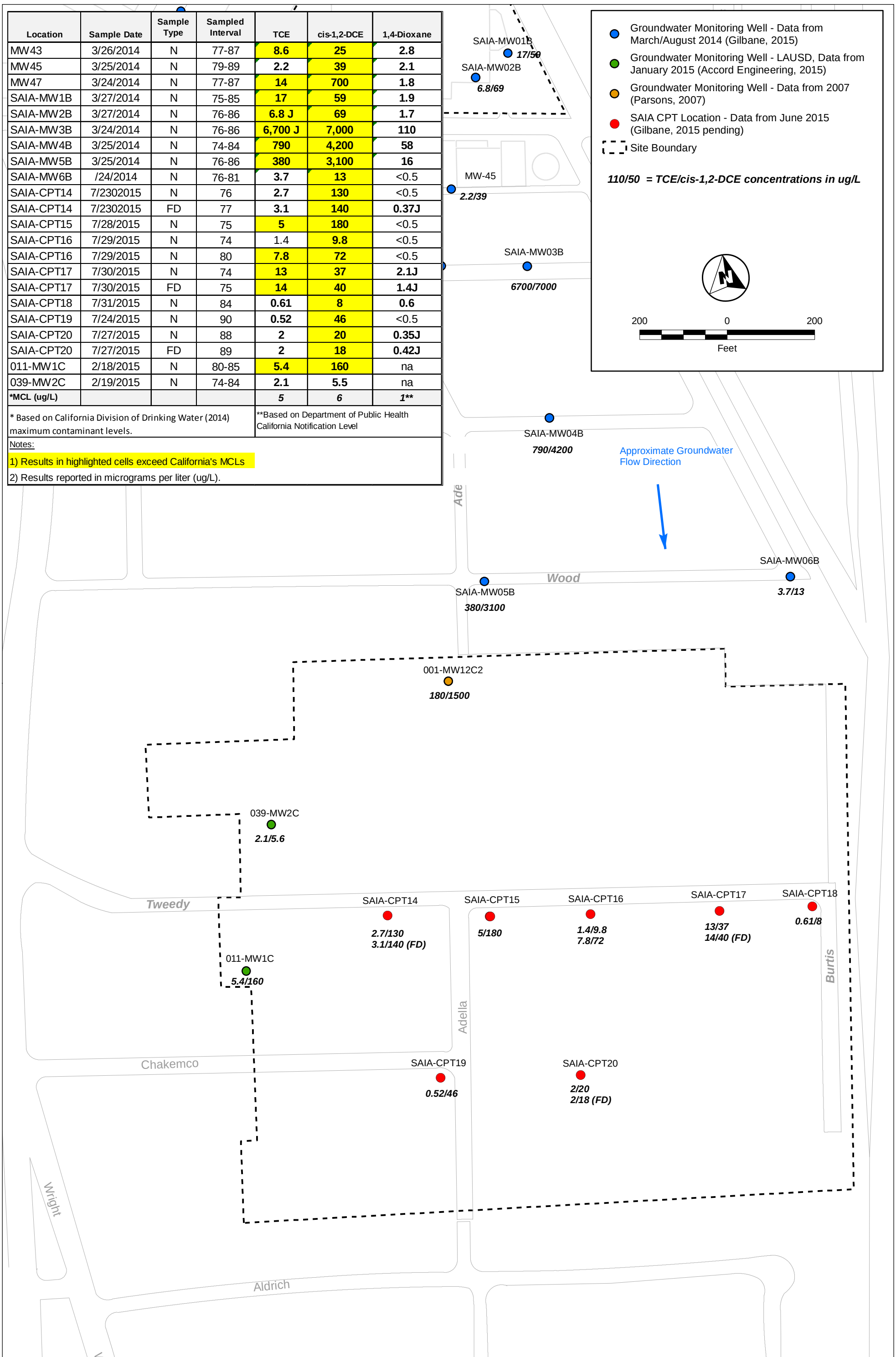

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Figure 3

Groundwater Results - 2014 and 2015
Intermediate Gaspur Aquifer

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LOCID	Sample Date	Sample Type	Sampled Interval	TCE	cis-1,2-DCE	Dioxane
MW-35	3/26/2014	N	95–105	**6.9**	**58**	**2.3**
MW-44	3/26/2014	N	96-106	2.9	**21**	**2.8**
MW-48	3/24/2014	N	98-108	**29**	**82**	**8.7**
SAIA-MW01C	3/27/2014	N	94-104	**420 J**	**370**	**18**
SAIA-MW02C	3/27/2014	N	96-106	**260 J**	**360**	**14**
SAIA-MW03C	3/24/2014	N	96-106	2.1	**38**	**1.5**
SAIA-MW03C	3/24/2014	FD	96-106	2	**37**	**1.6**
SAIA-MW04C	03/25/2014	N	92-102	3.9 J	**910**	**14**
SAIA-MW05C	3/25/2014	N	96-106	**6.5**	**300**	**3.4**
SAIA-MW06C	3/24/2014	N	90-100	2	**17**	0.52
SAIA-CPT14	7/23/2015	N	100	<2.5	**440**	<0.5
SAIA-CPT15	7/28/2015	N	89	**5**	**180**	<0.5
SAIA-CPT15	7/28/2015	FD	90	**2.4**	**250**	<0.5
SAIA-CPT15	7/28/2015	N	104	**2.2J**	**270**	<0.5
SAIA-CPT16	7/29/2015	N	107	**0.94**	**120**	<0.5
SAIA-CPT17	7/30/2015	N	92	**2.5**	**11**	<0.5
SAIA-CPT17	7/30/2015	N	105	**2**	**29**	<0.5
SAIA-CPT18	7/31/2015	N	102	**0.64**	**11**	<0.5
SAIA-CPT19	7/24/2015	N	104	**1.1**	**44**	<0.5
SAIA-CPT19	7/24/2015	N	118	**33**	**46**	<0.5
SAIA-CPT20	7/27/2015	N	105	**0.55**	**7.5**	<0.5
***MCL (ug/L)**				***5***	***6***	***1*****

* Based on California Division of Drinking Water (2014) maximum contaminant levels.

**Based on Department of Public Health California Notification Level

Notes:

1) Results in highlighted cells exceed California's MCLs

2) Results reported in micrograms per liter (ug/L).

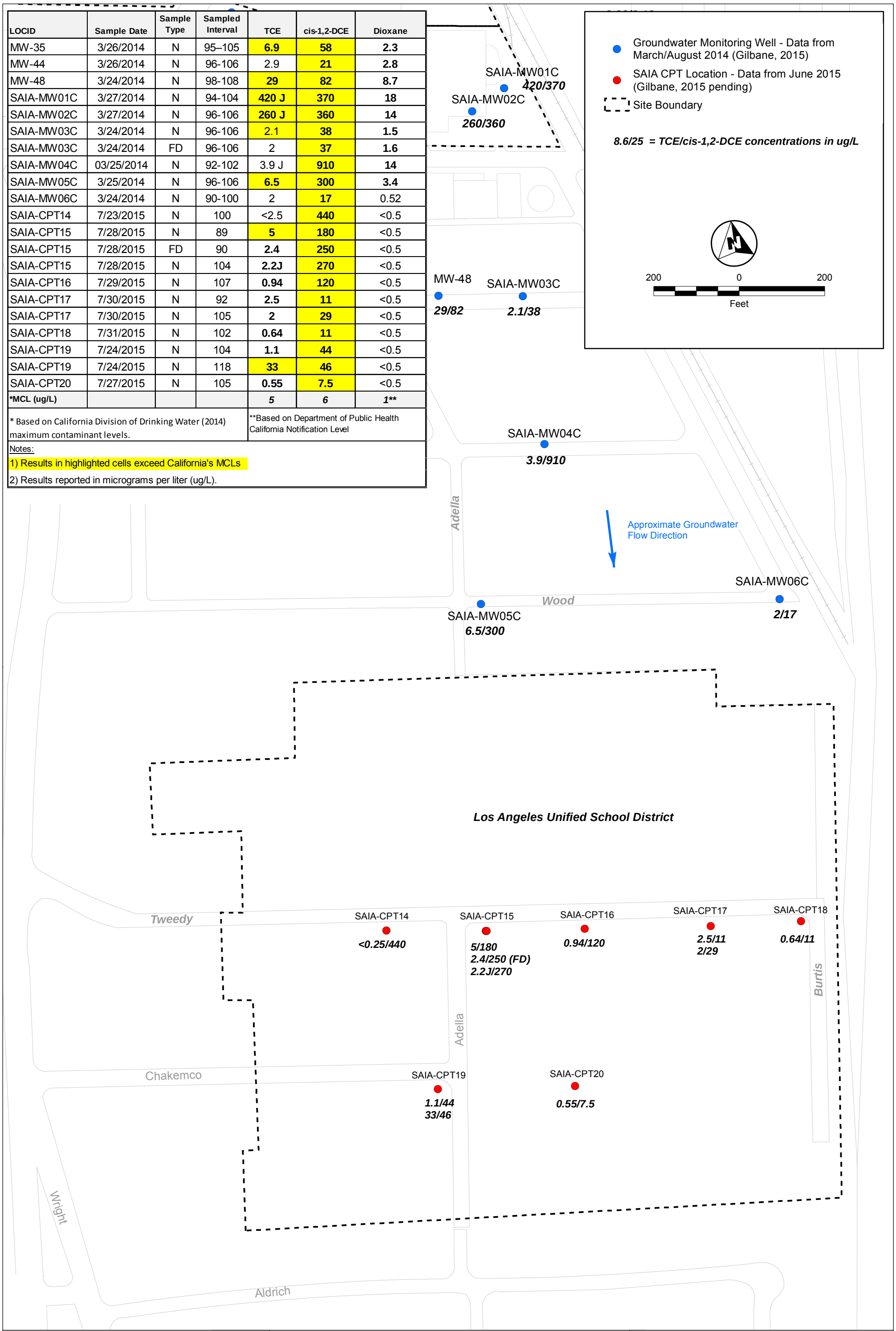

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Figure 4

Groundwater Results - 2014 and 2015
Lower Gaspur Aquifer

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LOCID	Sample Date	Sample Type	Sampled Interval	TCE	cis-1,2-DCE	Dioxane
SAIA-MW07	3/27/2014	N	122-132	**24 J**	**16**	**1.9**
SAIA-MW07	3/27/2014	FD	122-132	**22 J**	**17**	**2**
SAIA-MW08	3/24/2014	N	124-134	0.53	0.83	<0.5
SAIA-CPT14	7/23/2015	N	124	<5	**770**	**0.27J**
SAIA-CPT15	7/28/2015	N	131	**4.1**	**150**	<0.5
SAIA-CPT16	7/29/2015	N	127	**1.2**	**6.4**	<0.5
SAIA-CPT17	7/30/2015	N	128	<0.5	<0.5	<0.5
SAIA-CPT18	7/31/2015	N	125	0.53	**1.1**	<0.5
SAIA-CPT19	7/24/2015	N	132	**8**	**530**	**0.87**
SAIA-CPT20	7/27/2015	N	132	**0.42J**	**45**	<0.5
***MCL (ug/L)**				***5***	***6***	***13***

* Based on California Division of Drinking Water (2014) maximum contaminant levels.

**Based on Department of Public Health California Notification Level

Notes:

1) Results in highlighted cells exceed California's MCLs

2) Results reported in micrograms per liter (ug/L).

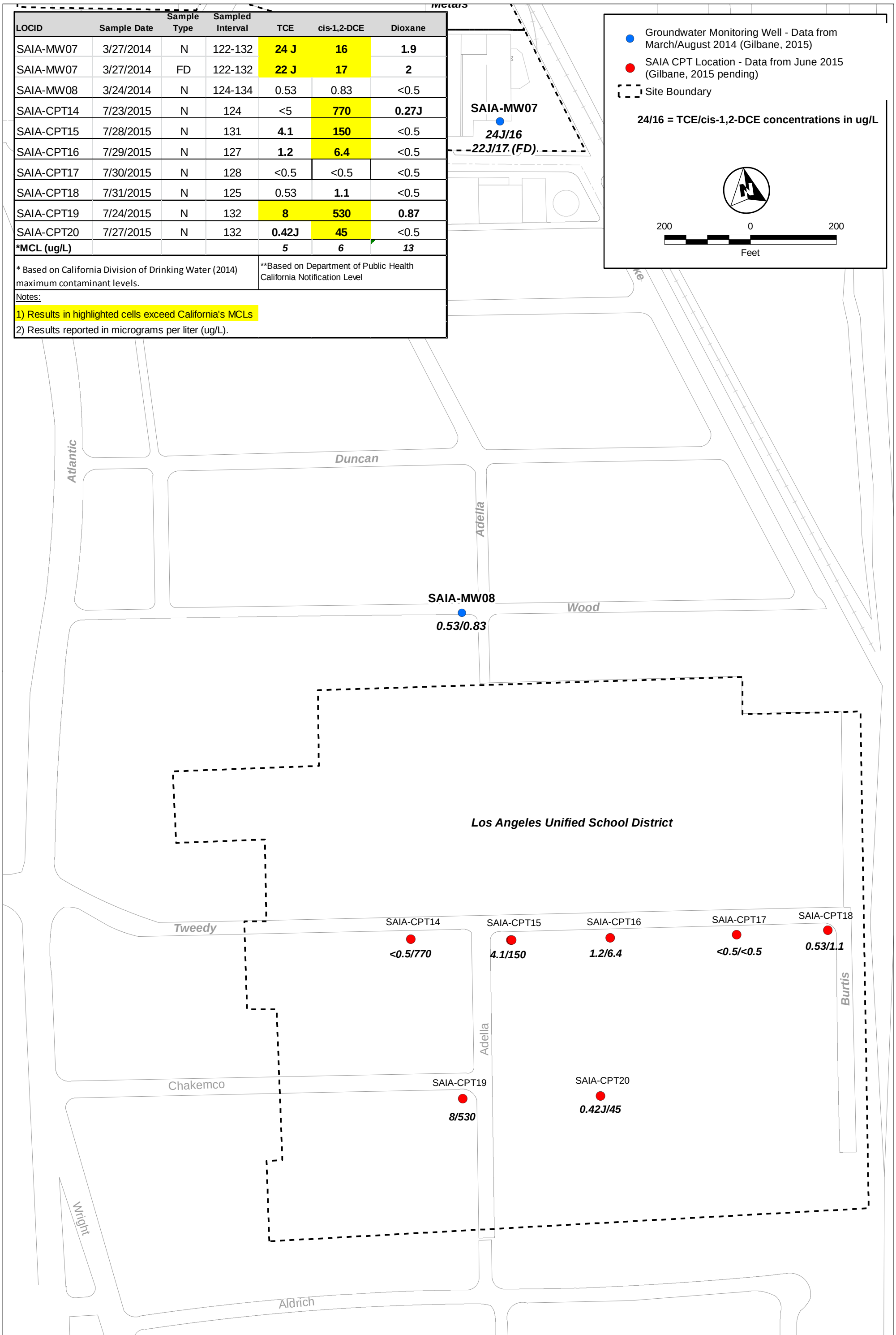

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Figure 5

Groundwater Results - 2014 and 2015 Exposition Aquifer

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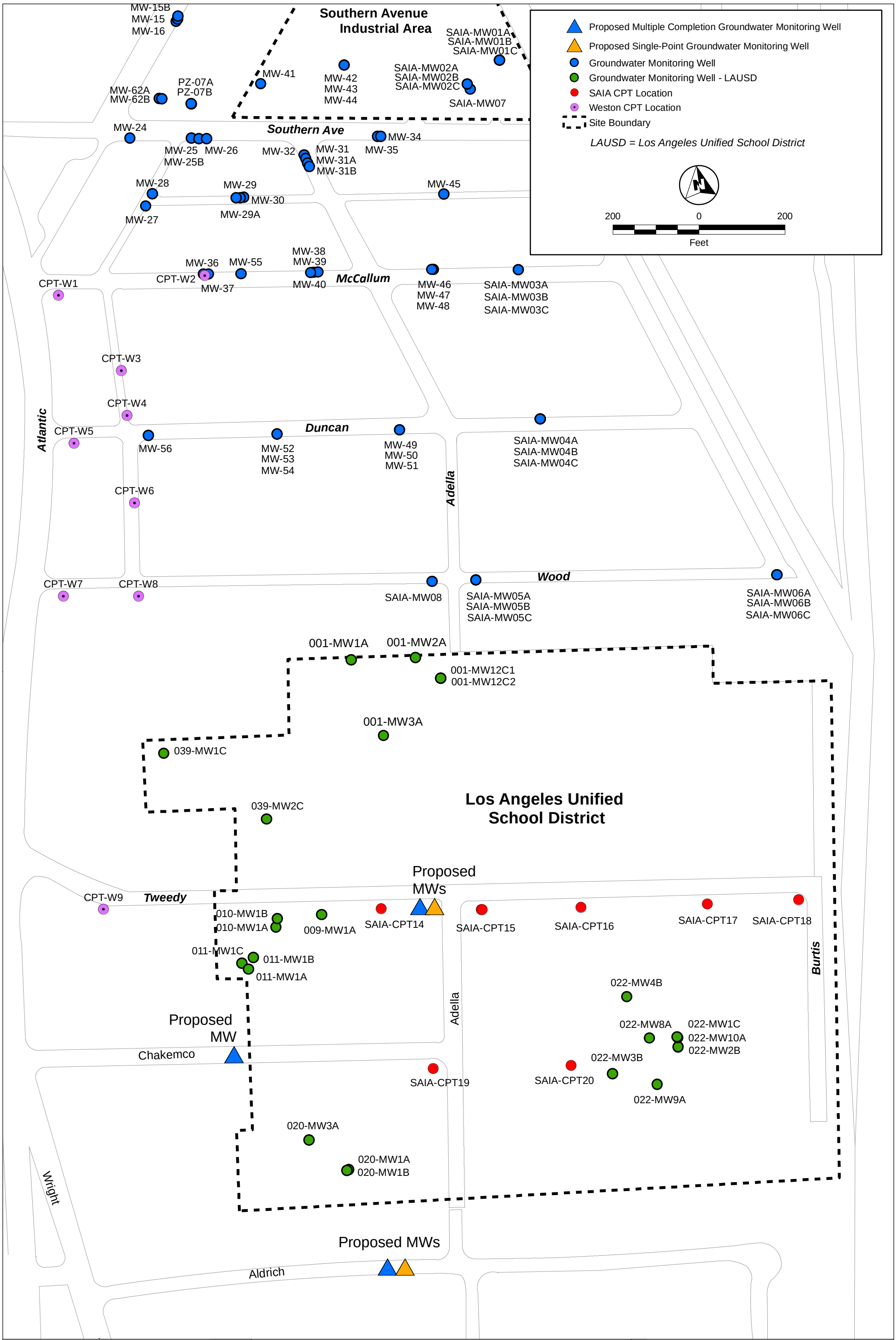

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Figure 6

Proposed Groundwater Monitoring Well Locations

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Table 1
HydroPunch Groundwater Sample Results for VOCs and SVOCs, July 2015
Southern Avenue Industrial Area Superfund Site, South Gate, California

Location	Sample ID	Sample Date	Sample Type	Sample Depth (bgs)	Tetrachloroethene	Trichloroethene	cis-1,2-Dichloroethene	1,1-Dichloroethene	trans-1,2-Dichloroethene	Vinyl Chloride	1,1-Dichloroethane	1,2-Dichloroethane	Benzene	1,2-Dichloropropane	1,4-Dioxane (p-Dioxane)	1,2,3-Trichloropropane	Toluene
SAIA-CPT14	SAIA-CPT14-60	07/23/2015	N	60	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
SAIA-CPT14	SAIA-CPT14-75	07/23/2015	N	76	<0.5	**2.7**	**130**	<0.5	**7.1**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
SAIA-CPT14	SAIA-CPT14-76	07/23/2015	FD	77	<0.5	**3.1**	**140**	<0.5	**8.4**	<0.5	<0.5	<0.5	<0.5	<0.5	**0.37 J**	<0.5	<0.5
SAIA-CPT14	SAIA-CPT14-90	07/23/2015	N	100	<2.5	<2.5	**440**	<2.5	**36**	<2.5	<2.5	<2.5	<2.5	<2.5	<0.5	<2.5	<2.5
SAIA-CPT14	SAIA-CPT14-130	07/23/2015	N	124	<5	<5	**770**	<5	**33**	<5	<5	<5	<5	<5	**0.27 J**	<5	<5
SAIA-CPT15	SAIA-CPT15-45	07/29/2015	N	48	<0.5	<0.5	**0.65**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
SAIA-CPT15	SAIA-CPT15-60	07/28/2015	N	57	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
SAIA-CPT15	SAIA-CPT15-75	07/28/2015	N	75	<0.5	**5**	**180**	<0.5	**19**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
SAIA-CPT15	SAIA-CPT15-90	07/28/2015	N	89	<2	**2.4**	**250**	<2	**25**	<2	<2	<2	<2	<2	<0.5	<2	<2
SAIA-CPT15	SAIA-CPT15-91	07/28/2015	FD	90	<2.5	**2.2 J**	**270**	<2.5	**24**	<2.5	<2.5	<2.5	<2.5	<2.5	<0.5	<2.5	<2.5
SAIA-CPT15	SAIA-CPT15-105	07/28/2015	N	104	<0.5	**0.87**	**120**	<0.5	**11**	<0.5	<0.5	**0.4 J**	<0.5	<0.5	<0.5	<0.5	<0.5
SAIA-CPT15	SAIA-CPT15-130	07/28/2015	N	131	<0.5	**4.1**	**150**	<0.5	**3.4**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
SAIA-CPT16	SAIA-CPT16-45	07/30/2015	N	48	<0.5	<0.5	**0.56**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	--	<0.5	<0.5
SAIA-CPT16	SAIA-CPT16-60	07/29/2015	N	56	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	**0.31 J**	<0.5	<0.5
SAIA-CPT16	SAIA-CPT16-75	07/29/2015	N	70	<0.5	**1.4**	**9.8**	<0.5	**2**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
SAIA-CPT16	SAIA-CPT16-90	07/29/2015	N	80	<0.5	**7.8**	**72**	<0.5	**16**	<0.5	<0.5	**0.23 J**	<0.5	<0.5	<0.5	<0.5	<0.5
SAIA-CPT16	SAIA-CPT16-105	07/29/2015	N	107	<0.5	**0.94**	**120**	<0.5	**14**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
SAIA-CPT16	SAIA-CPT16-130	07/29/2015	N	127	<0.5	**1.2**	**6.4**	<0.5	**0.4 J**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
SAIA-CPT17	SAIA-CPT17-45	07/31/2015	N	48	<0.5	**0.46 J**	**2**	**3.5**	**0.39 J**	<0.5	**3**	<0.5	<0.5	<0.5	**0.68**	<0.5	<0.5
SAIA-CPT17	SAIA-CPT17-60	07/30/2015	N	61	<0.5	**0.59**	**6.9**	**4.9**	**0.57**	<0.5	**7.7**	<0.5	<0.5	<0.5	**14**	<0.5	<0.5
SAIA-CPT17	SAIA-CPT17-75	07/30/2015	N	74	<0.5	**13**	**37**	**3.4**	**5.1**	<0.5	**1.3**	<0.5	<0.5	<0.5	**2.1 J**	<0.5	<0.5
SAIA-CPT17	SAIA-CPT17-76	07/30/2015	FD	75	<0.5	**14**	**40**	**3.6**	**5.6**	<0.5	**1.4**	<0.5	<0.5	<0.5	**1.4 J**	<0.5	<0.5
SAIA-CPT17	SAIA-CPT17-90	07/30/2015	N	92	<0.5	**2.5**	**11**	<0.5	**1.2**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
SAIA-CPT17	SAIA-CPT17-105	07/30/2015	N	105	<0.5	**2**	**29**	<0.5	**4.7**	<0.5	<0.5	**0.3 J**	<0.5	<0.5	<0.5	<0.5	<0.5
SAIA-CPT17	SAIA-CPT17-130	07/30/2015	N	128	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
SAIA-CPT18	SAIA-CPT18-45	07/31/2015	N	49	<0.5	**0.27 J**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	**0.51**	<0.5	<0.5
SAIA-CPT18	SAIA-CPT18-60	07/31/2015	N	68	<0.5	**0.97**	**1.5**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
SAIA-CPT18	SAIA-CPT18-75	07/31/2015	N	84	<0.5	**0.61**	**8**	<0.5	**0.61**	<0.5	<0.5	<0.5	<0.5	<0.5	**0.6**	<0.5	<0.5
SAIA-CPT18	SAIA-CPT18-105	07/31/2015	N	102	<0.5	**0.64**	**11**	<0.5	**1.4**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
SAIA-CPT18	SAIA-CPT18-130	07/31/2015	N	125	<0.5	**0.53**	**1.1**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	**1.1**	<0.5	<0.5
SAIA-CPT19	SAIA-CPT19-45	07/27/2015	N	48	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	**1.6**	<0.5	<0.5
SAIA-CPT19	SAIA-CPT19-60	07/24/2015	N	70	<0.5	**1.2**	**20**	<0.5	**6.7**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
SAIA-CPT19	SAIA-CPT19-75	07/24/2015	N	90	<0.5	**0.52**	**46**	<0.5	**11**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
SAIA-CPT19	SAIA-CPT19-90	07/24/2015	N	104	<0.5	**1.1**	**44**	<0.5	**13**	<0.5	<0.5	**0.26 J**	<0.5	<0.5	<0.5	<0.5	<0.5
SAIA-CPT19	SAIA-CPT19-105	07/24/2015	N	118	<0.5	**33**	**46**	<0.5	**3.6**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

Location	Sample ID	Sample Date	Sample Type	Sample Depth (bgs)	Tetrachloroethene	Trichloroethene	cis-1,2-Dichloroethene	1,1-Dichloroethene	trans-1,2-Dichloroethene	Vinyl Chloride	1,1-Dichloroethane	1,2-Dichloroethane	Benzene	1,2-Dichloropropane	1,4-Dioxane (p-Dioxane)	1,2,3-Trichloropropane	Toluene
SAIA-CPT19	SAIA-CPT19-130	07/24/2015	N	132	<2.5	**8**	**530**	<2.5	**26**	<2.5	<2.5	<2.5	<2.5	<2.5	**0.87**	<2.5	<2.5
SAIA-CPT20	SAIA-CPT20-45	07/28/2015	N	50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	**0.35 J**	<0.5	<0.5
SAIA-CPT20	SAIA-CPT20-60	07/27/2015	N	69	<0.5	**1.5**	**9.5**	<0.5	**2**	<0.5	<0.5	<0.5	<0.5	<0.5	**0.62**	<0.5	<0.5
SAIA-CPT20	SAIA-CPT20-75	07/27/2015	N	88	<0.5	**2**	**20**	<0.5	**3.5**	<0.5	<0.5	<0.5	<0.5	<0.5	**0.35 J**	<0.5	<0.5
SAIA-CPT20	SAIA-CPT20-76	07/27/2015	FD	89	<0.5	**2**	**18**	<0.5	**3.6**	<0.5	<0.5	<0.5	<0.5	<0.5	**0.42 J**	<0.5	<0.5
SAIA-CPT20	SAIA-CPT20-105	07/27/2015	N	105	<0.5	**0.55**	**7.5**	<0.5	**1.2**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
SAIA-CPT20	SAIA-CPT20-130	07/27/2015	N	132	<0.5	**0.42 J**	**45**	<0.5	**7.6**	<0.5	<0.5	**0.35 J**	<0.5	<0.5	--	<0.5	<0.5
Screening Criteria																	
MCL* (ug/L)					5	5	6	6	10	0.5	5	0.5	1	5	1[3]	0.005[3]	150

exceeds California MCL

* Based on State Water Resources Control Board maximum contaminant levels (MCLs; California Division of Drinking Water, 2014).

Notes:

1) Results reported in micrograms per liter (ug/L).

2) Concentrations detected at or above laboratory reporting limits are shown in bold font.

3) Based on California Department of Public Health Notification Level.

Abbreviations:

<#.# = not detected at the indicated reporting limit

bgs = feet below ground surface

FD = field duplicate

J = estimated value

N = normal sample

NS = no MCLs available

SVOC = semivolatile organic compound

VOC = volatile organic compound

-- = not analyzed

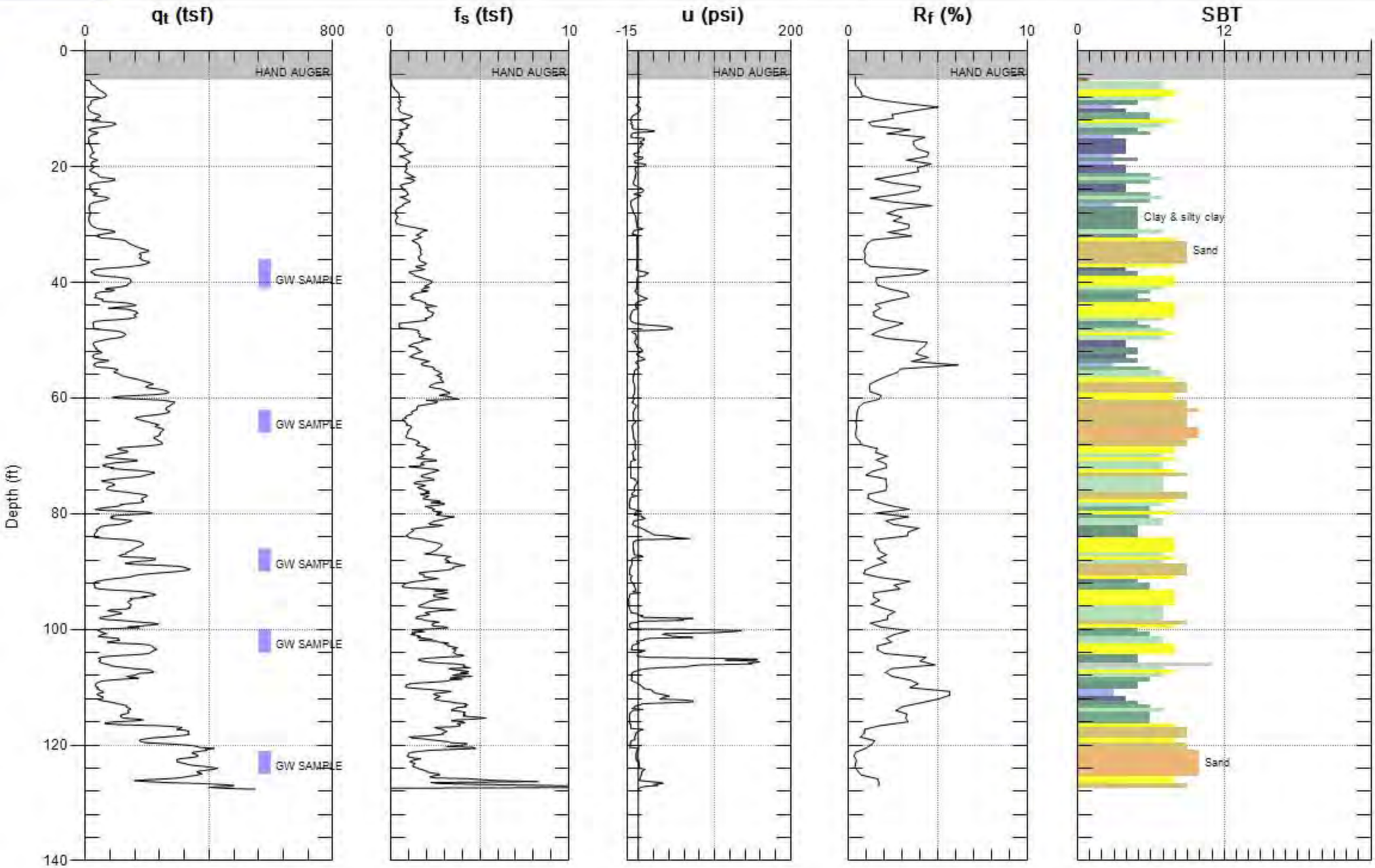
Attachment 3

Cone Penetrometer Testing Logs

GREGG ITSI

Site: SOUTHERN AVE.
Sounding: JW-CPT-1

Engineer: D.GRUBER
Date: 3/27/2013 08:08



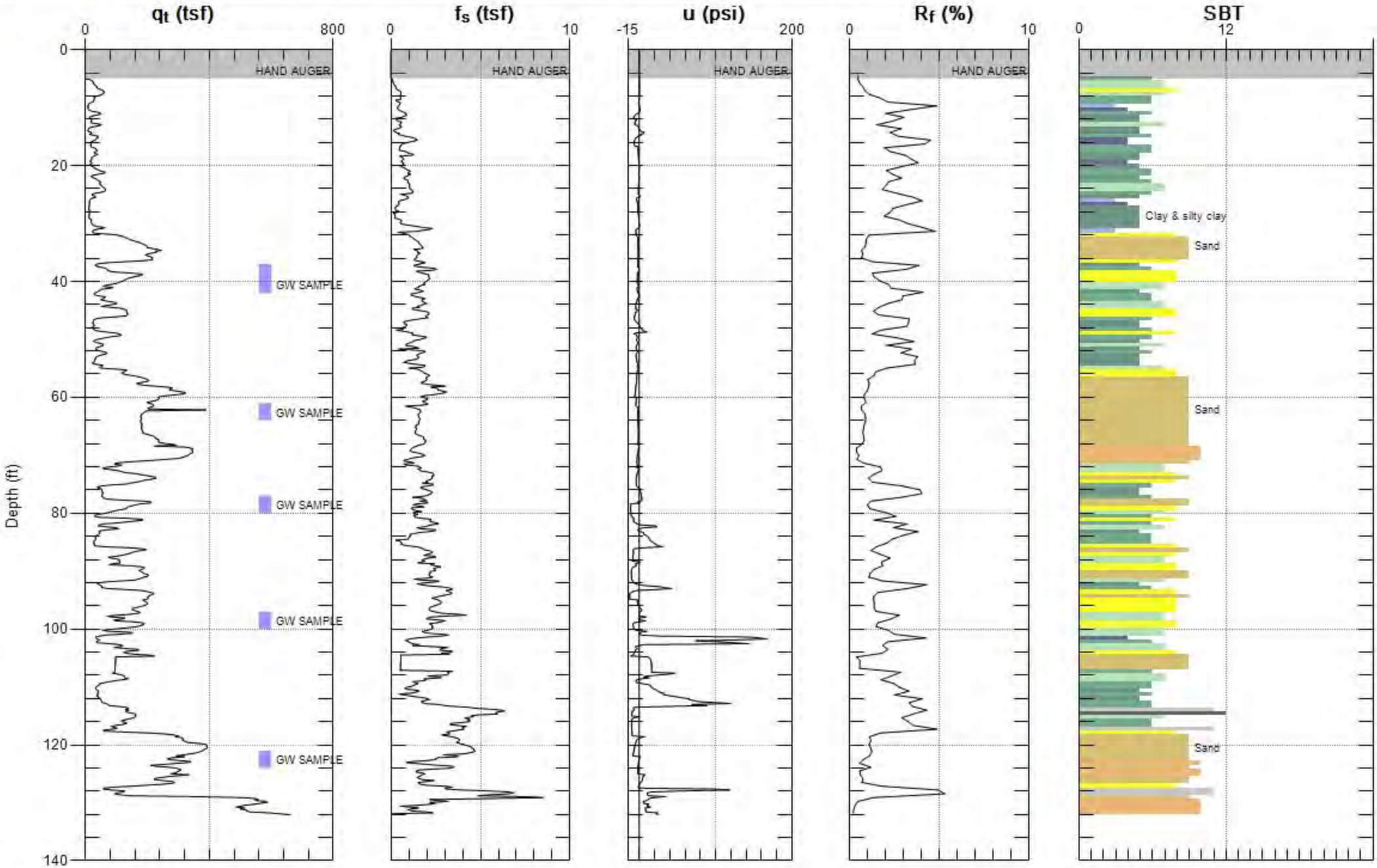
Max. Depth: 127.625 (ft)
Avg. Interval: 0.656 (ft)

SBT: Soil Behavior Type (Robertson 1990)

GREGG ITSI

Site: SOUTHERN AVE.
Sounding: JW-CPT-2

Engineer: D.GRUBER
Date: 3/26/2013 07:33



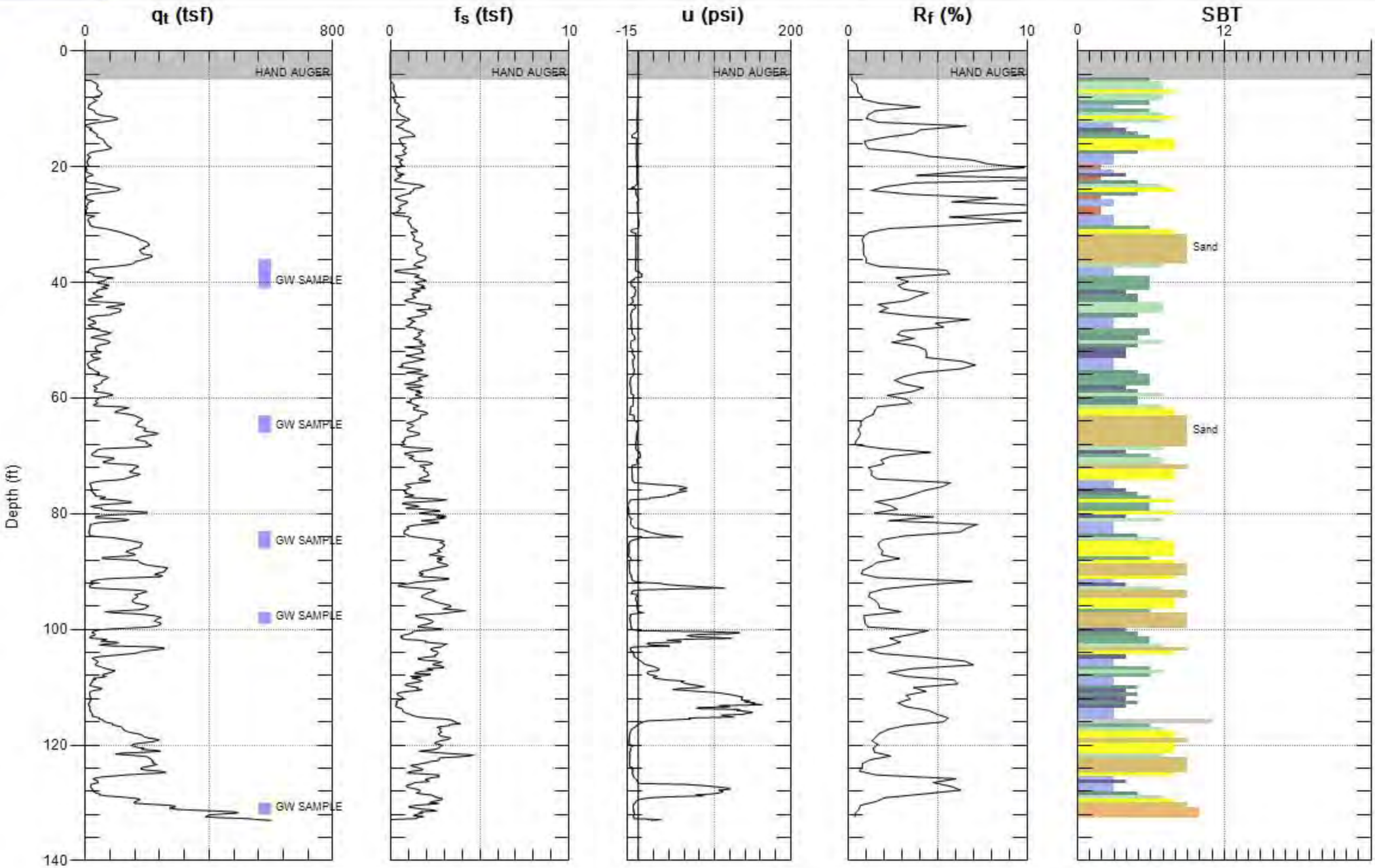
Max. Depth: 132.054 (ft)
Avg. Interval: 0.656 (ft)

SBT: Soil Behavior Type (Robertson 1990)

GREGG ITSI

Site: SOUTHERN AVE.
Sounding: JW-CPT-3

Engineer: D.GRUBER
Date: 3/25/2013 07:42



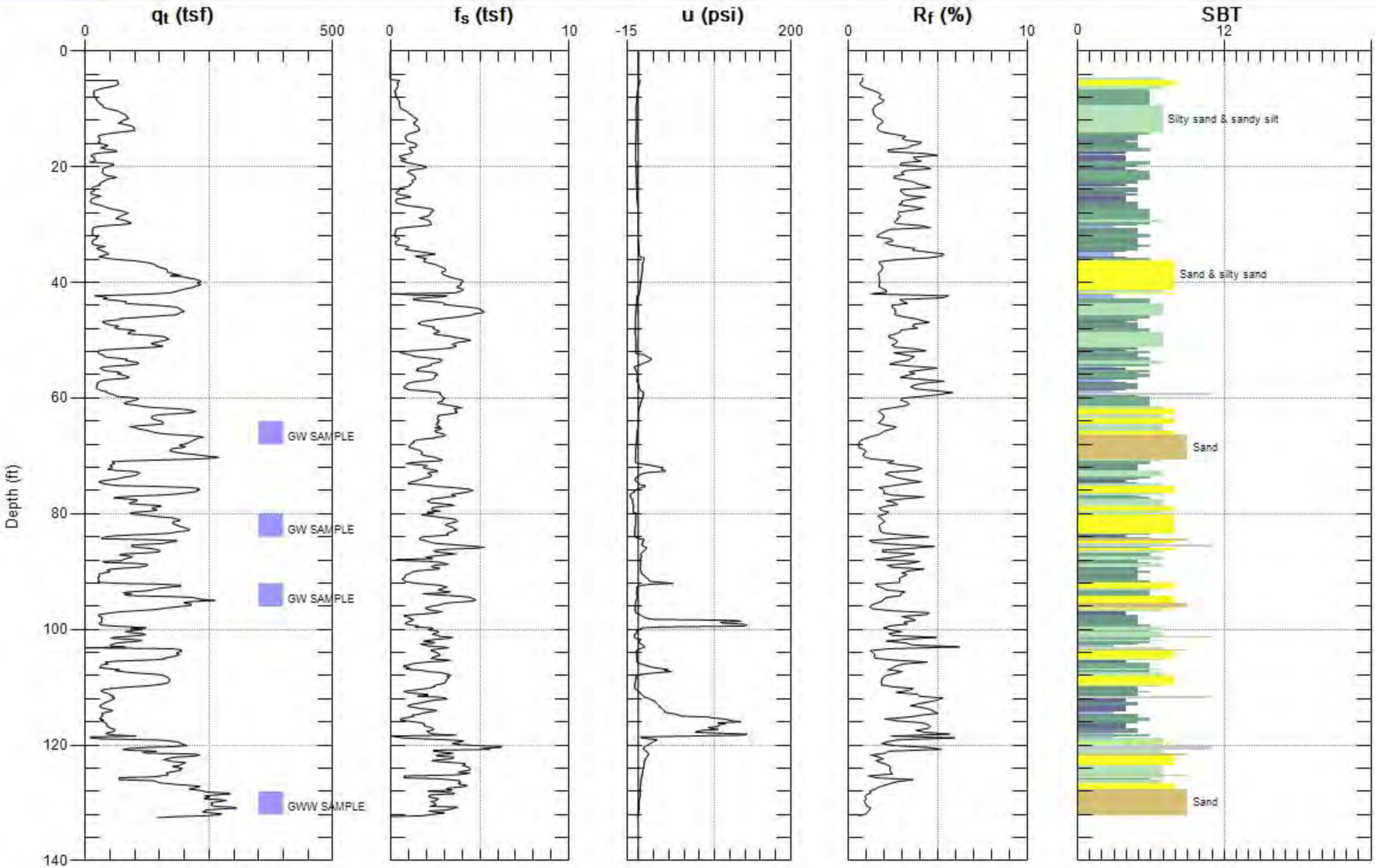
Max. Depth: 133.038 (ft)
Avg. Interval: 0.656 (ft)

SBT: Soil Behavior Type (Robertson 1990)

GILBANE

Site: JERVIS WEBB
Sounding: CPT-4

Engineer: P. PHILLIPS
Date: 6/15/2015 08:37



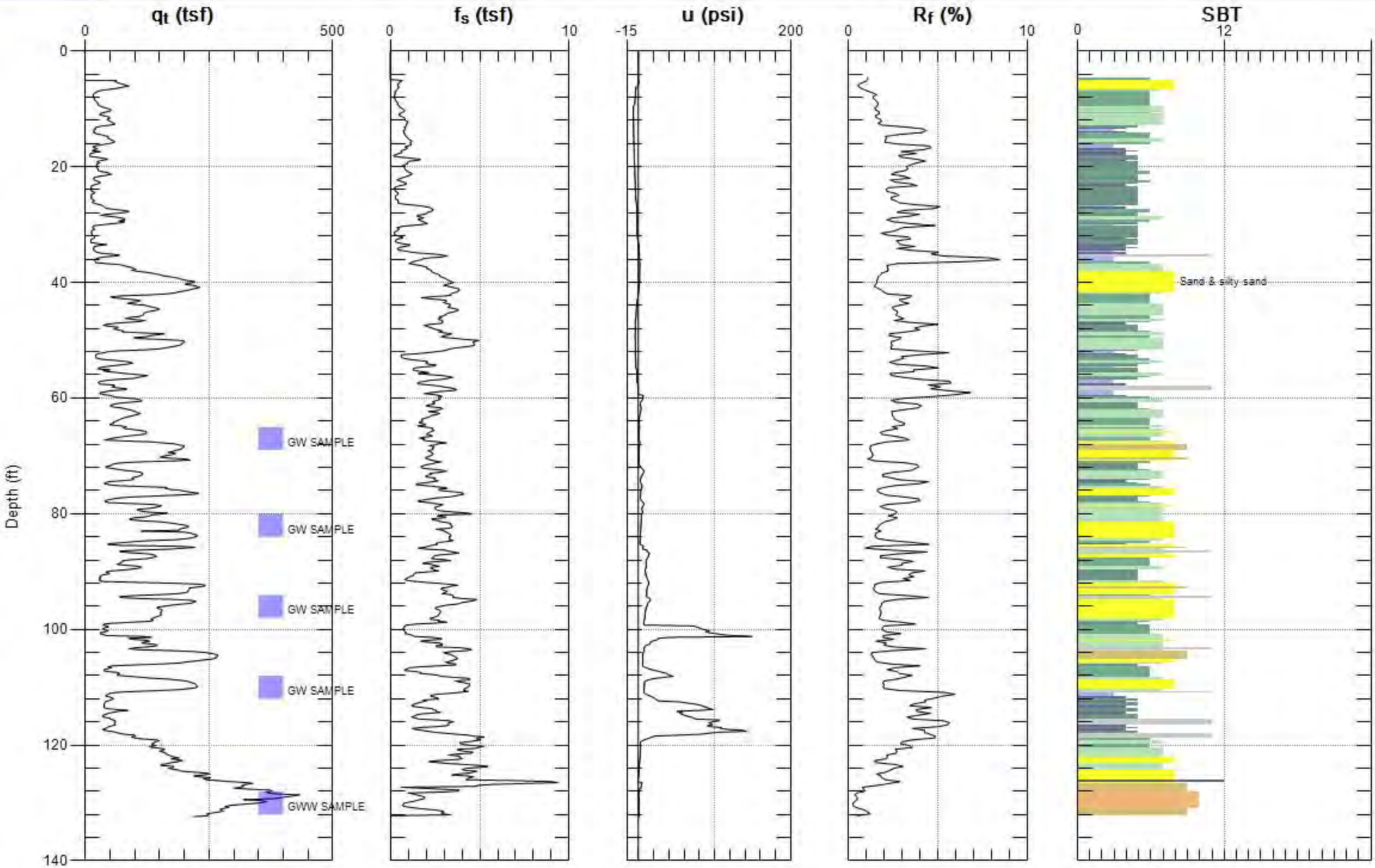
Max. Depth: 132.546 (ft)
Avg. Interval: 0.328 (ft)

SBT: Soil Behavior Type (Robertson 1990)

GILBANE

Site: JERVIS WEBB
Sounding: CPT-5

Engineer: P. PHILLIPS
Date: 6/16/2015 08:10



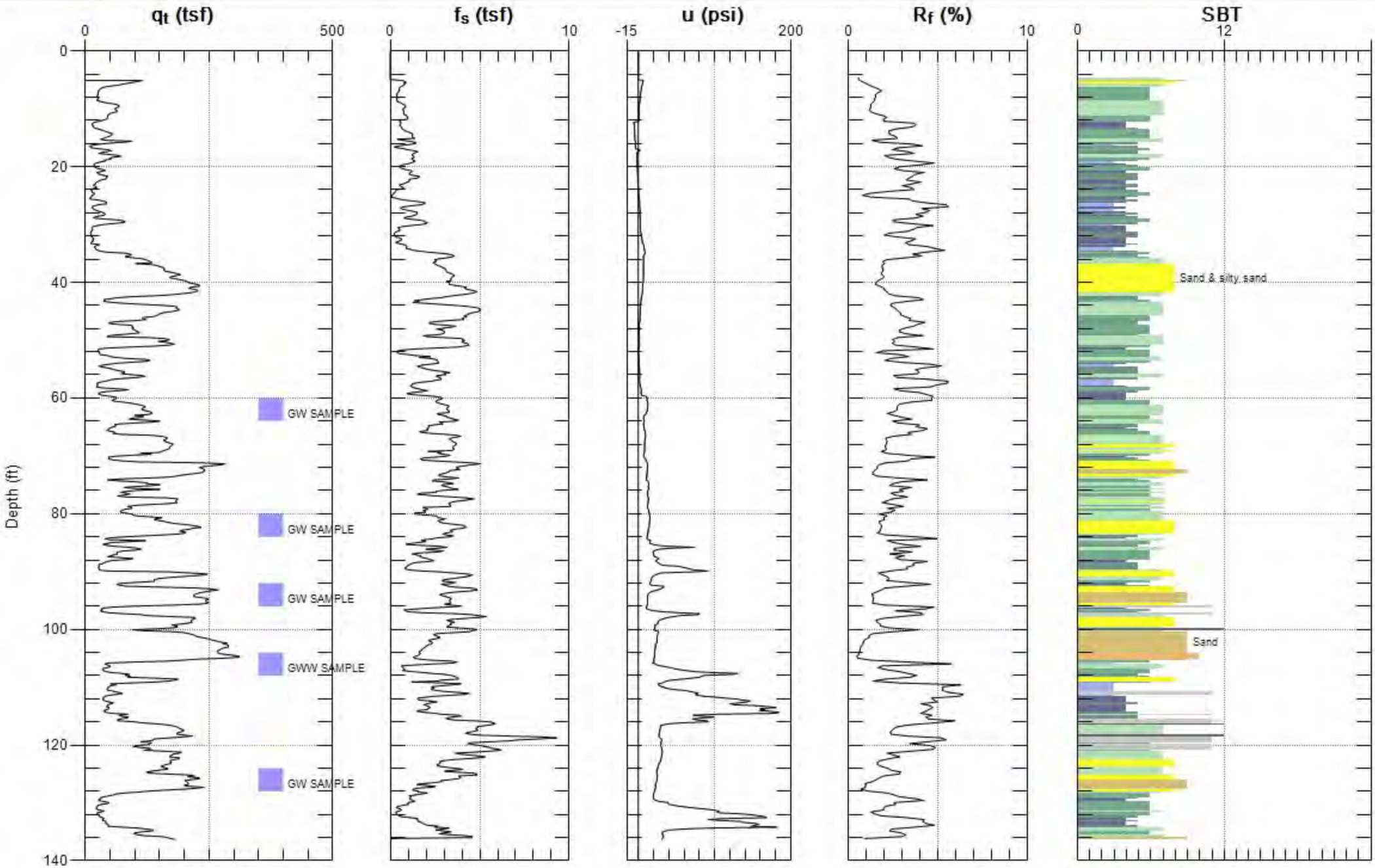
Max. Depth: 132.382 (ft)
Avg. Interval: 0.328 (ft)

SBT: Soil Behavior Type (Robertson 1990)

GILBANE

Site: JERVIS WEBB
Sounding: CPT-6

Engineer: P. PHILLIPS
Date: 6/18/2015 06:10



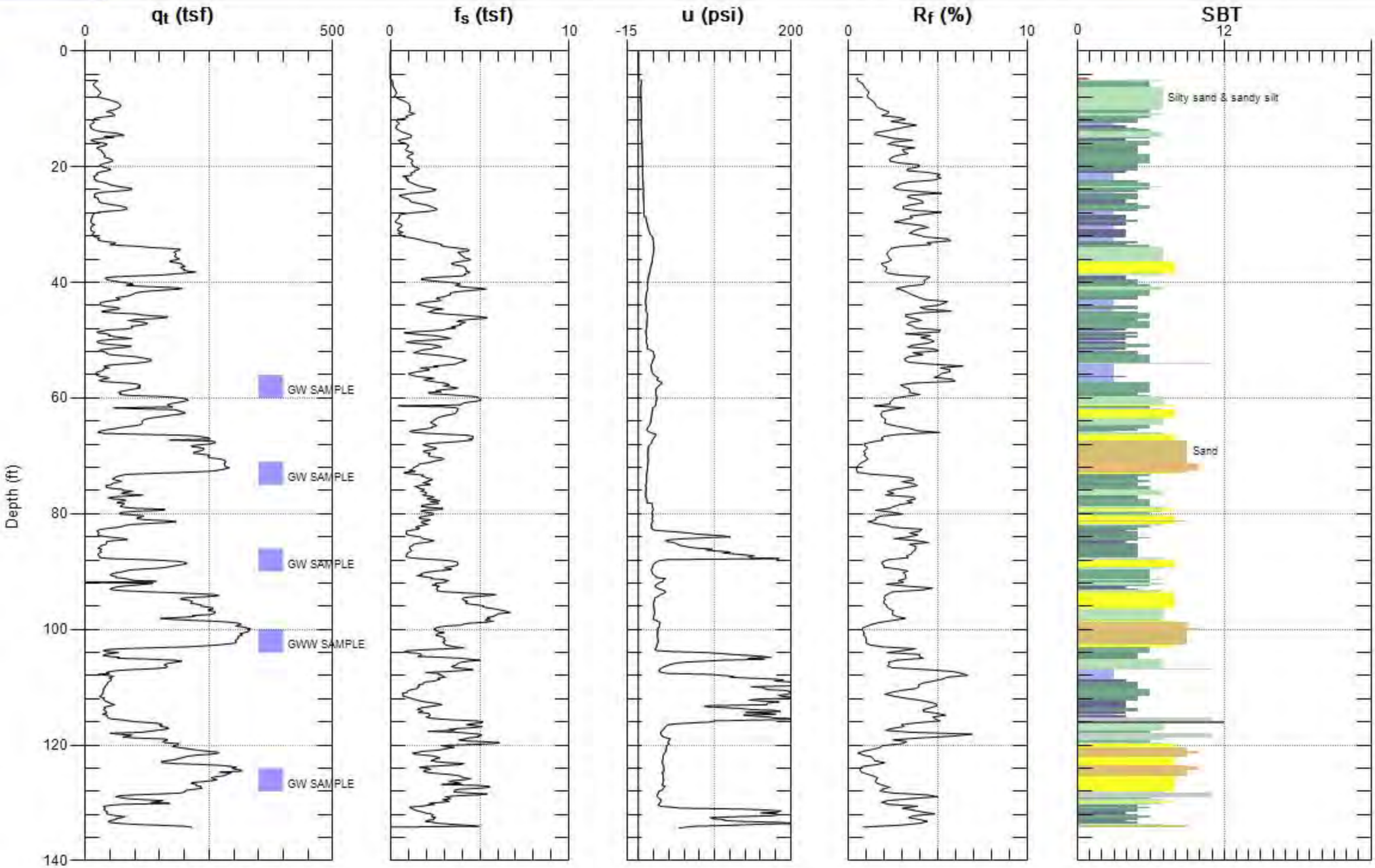
Max. Depth: 136.319 (ft)
Avg. Interval: 0.328 (ft)

SBT: Soil Behavior Type (Robertson 1990)

GILBANE

Site: JERVIS WEBB
Sounding: CPT-7

Engineer: P. PHILLIPS
Date: 6/18/2015 07:11



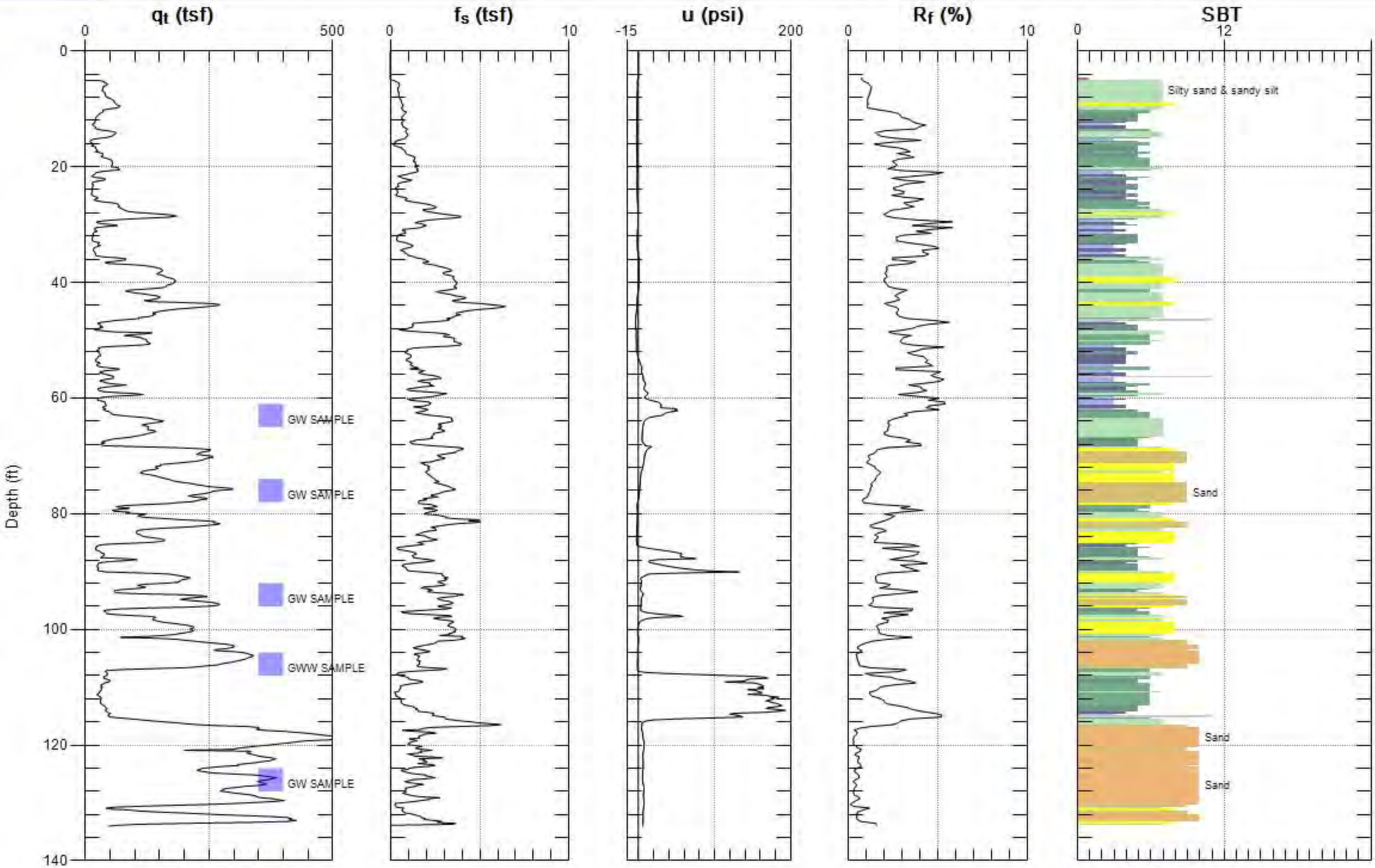
Max. Depth: 134.350 (ft)
Avg. Interval: 0.328 (ft)

SBT: Soil Behavior Type (Robertson 1990)

GILBANE

Site: JERVIS WEBB
Sounding: CPT-8

Engineer: P. PHILLIPS
Date: 6/17/2015 07:32



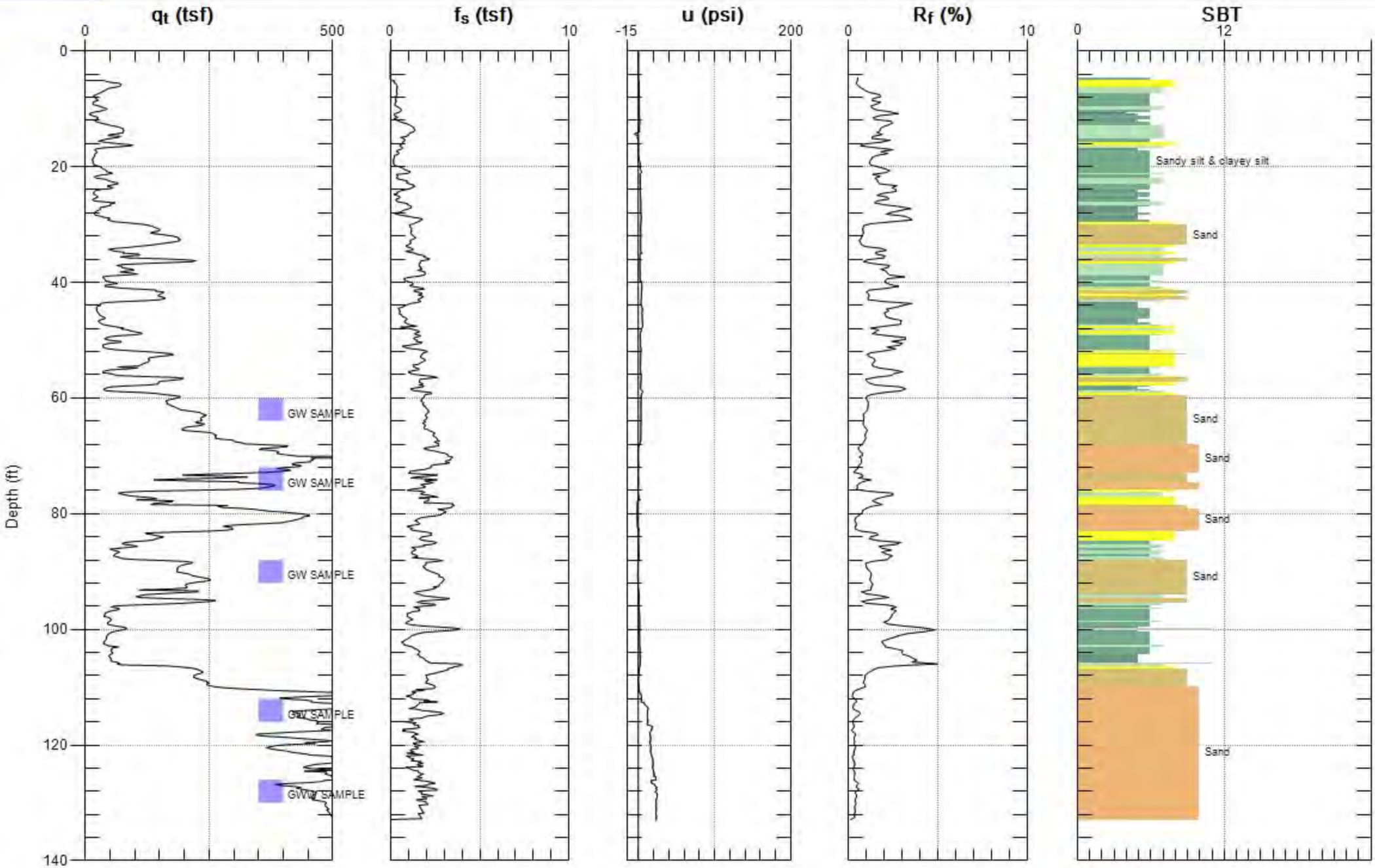
Max. Depth: 134.022 (ft)
Avg. Interval: 0.328 (ft)

SBT: Soil Behavior Type (Robertson 1990)

GILBANE

Site: JERVIS WEBB
Sounding: CPT-9

Engineer: P. PHILLIPS
Date: 6/23/2015 07:11



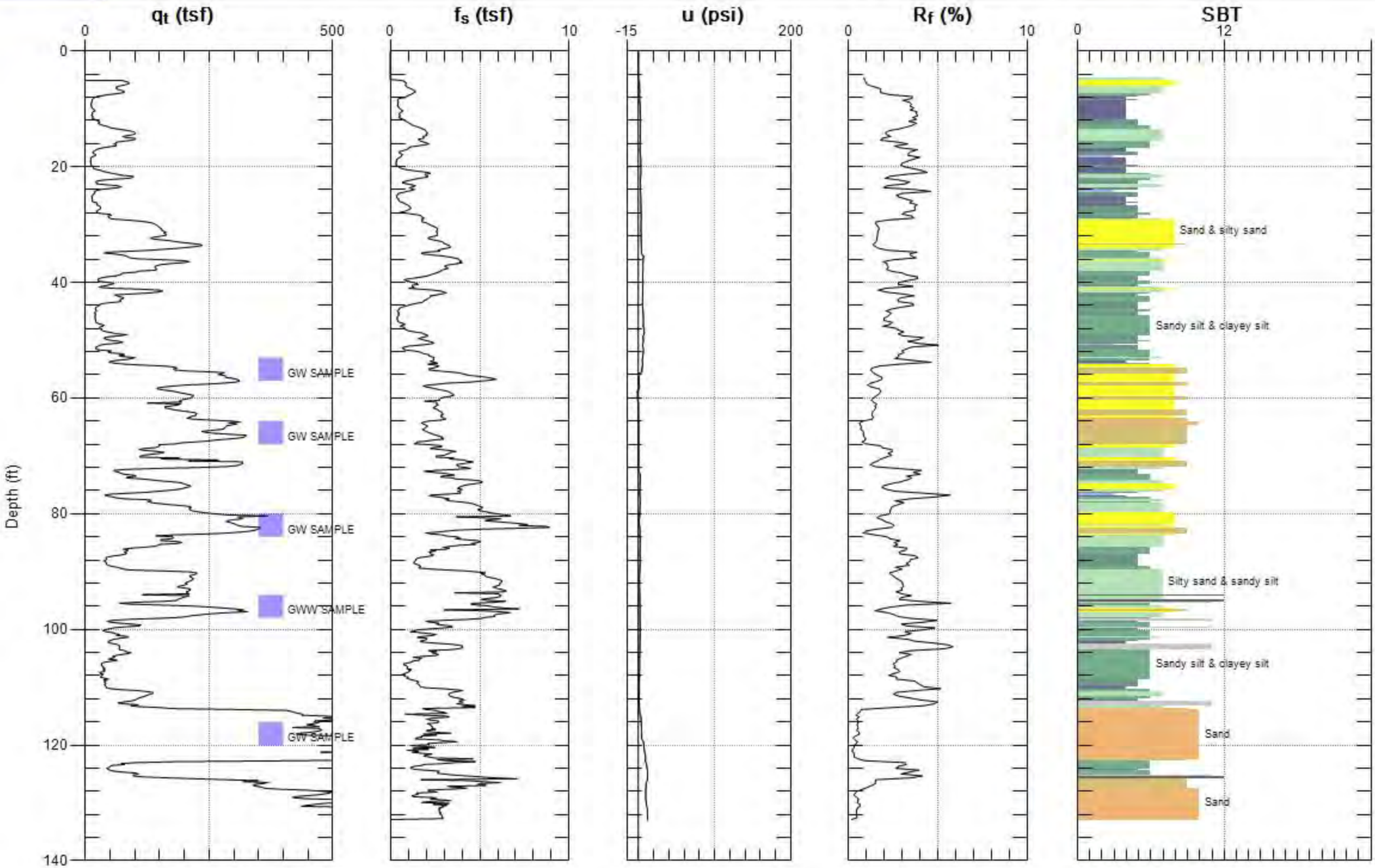
Max. Depth: 133.038 (ft)
Avg. Interval: 0.328 (ft)

SBT: Soil Behavior Type (Robertson 1990)

GILBANE

Site: JERVIS WEBB
Sounding: CPT-10

Engineer: P. PHILLIPS
Date: 6/22/2015 07:05



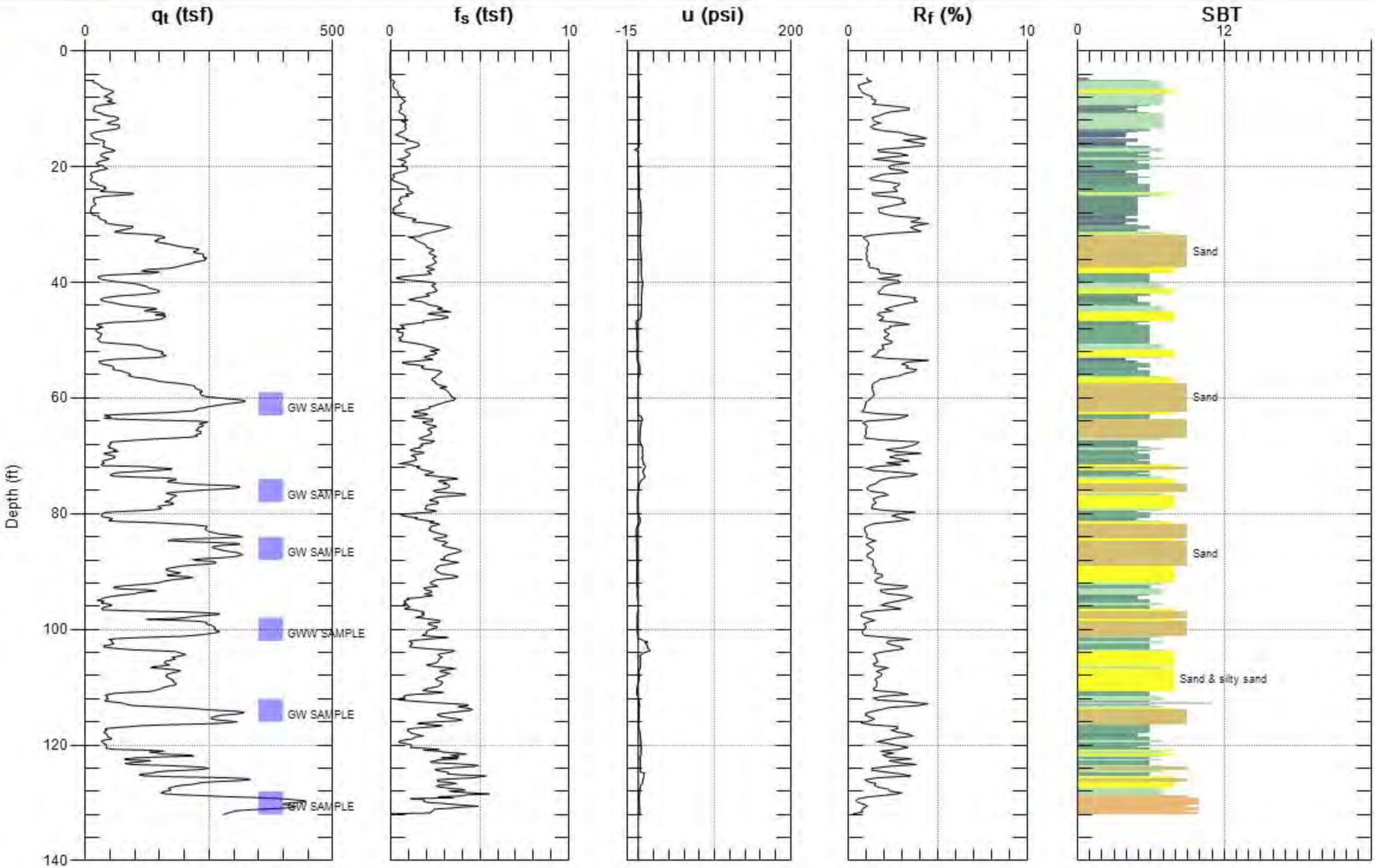
Max. Depth: 133.038 (ft)
Avg. Interval: 0.328 (ft)

SBT: Soil Behavior Type (Robertson 1990)

GILBANE

Site: JERVIS WEBB
Sounding: CPT-11

Engineer: P. PHILLIPS
Date: 6/29/2015 07:35



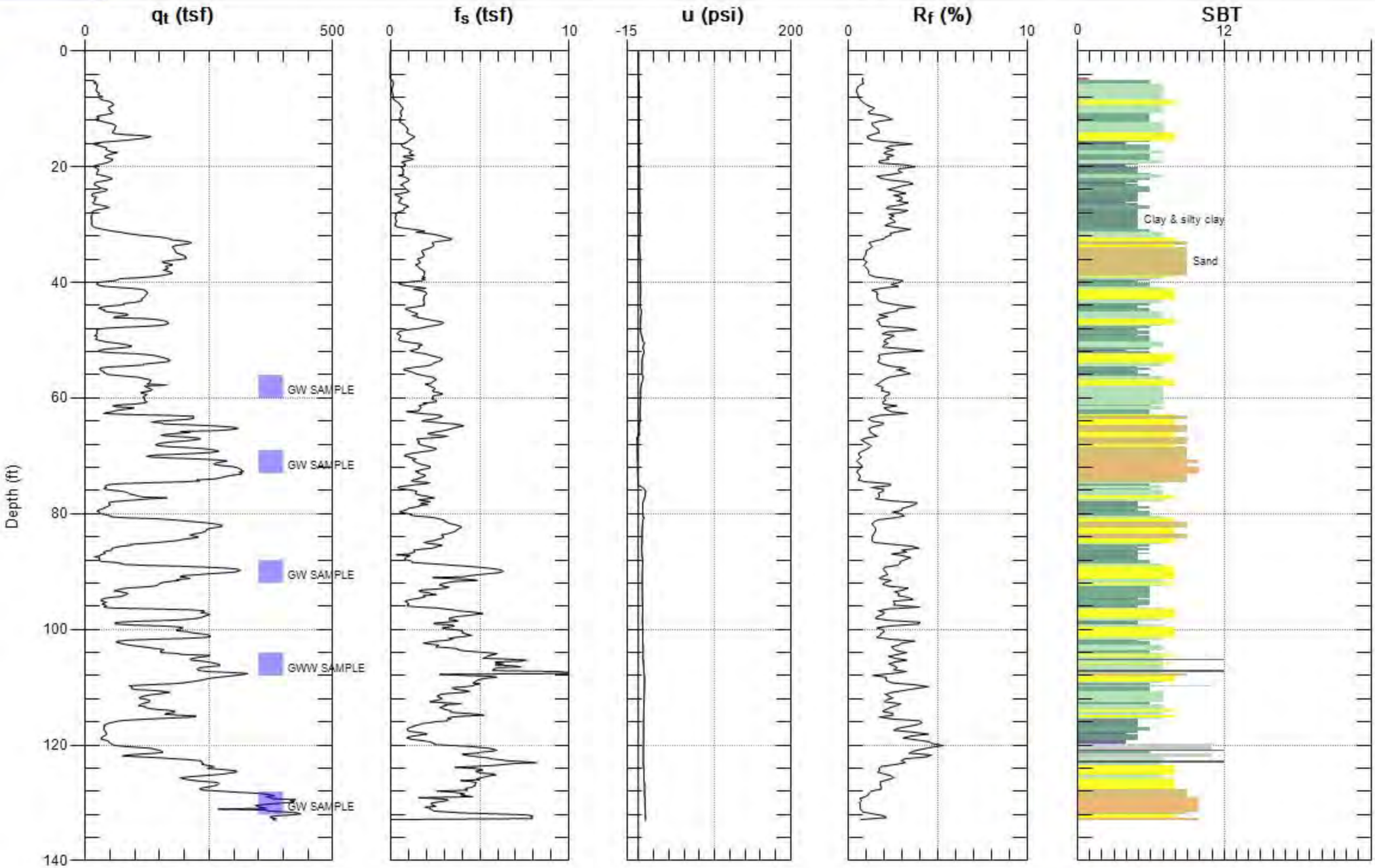
Max. Depth: 132.054 (ft)
Avg. Interval: 0.328 (ft)

SBT: Soil Behavior Type (Robertson 1990)

GILBANE

Site: JERVIS WEBB
Sounding: CPT-12

Engineer: P. PHILLIPS
Date: 6/26/2015 07:06



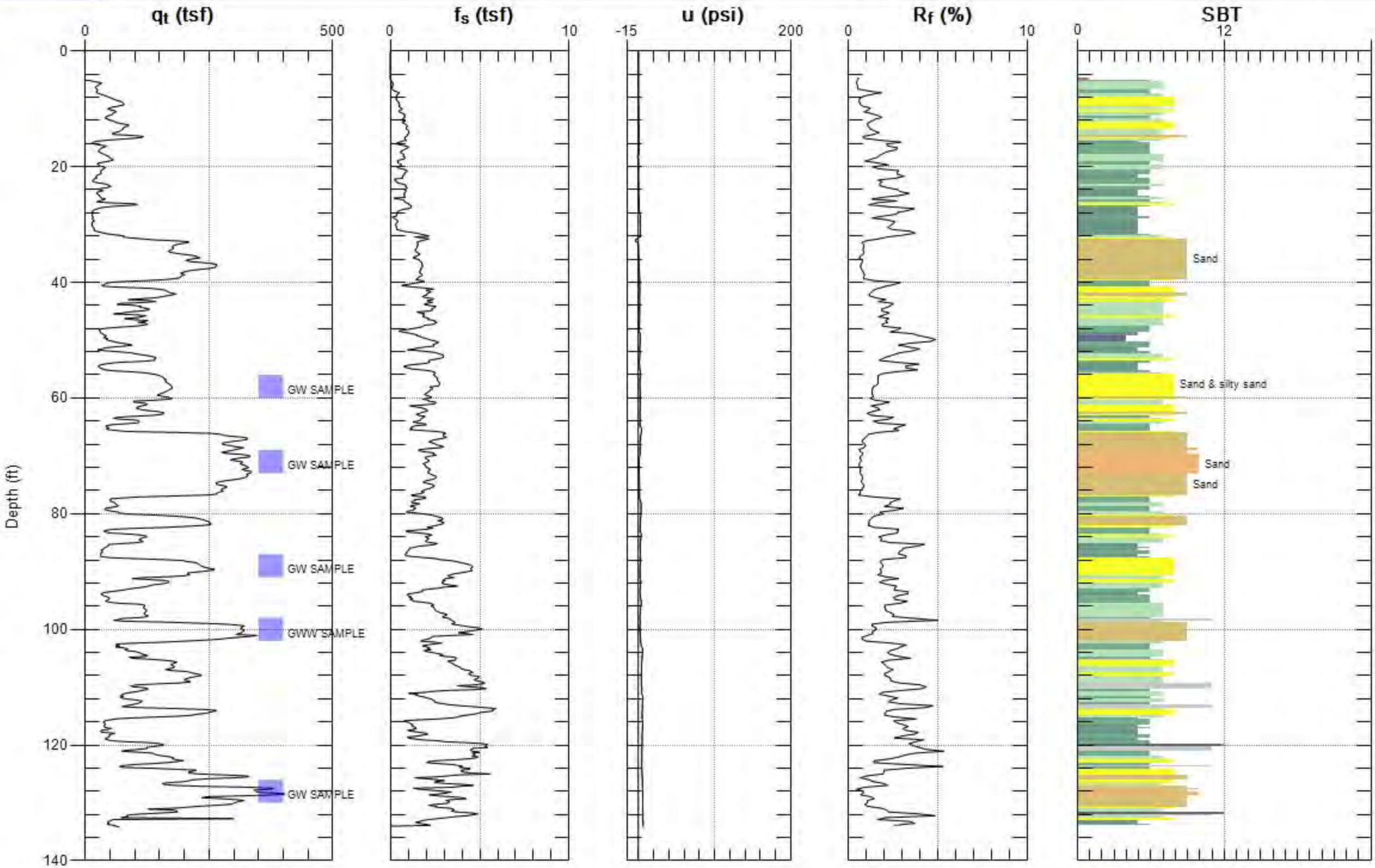
Max. Depth: 133.038 (ft)
Avg. Interval: 0.328 (ft)

SBT: Soil Behavior Type (Robertson 1990)

GILBANE

Site: JERVIS WEBB
Sounding: CPT-13

Engineer: P. PHILLIPS
Date: 6/25/2015 07:23



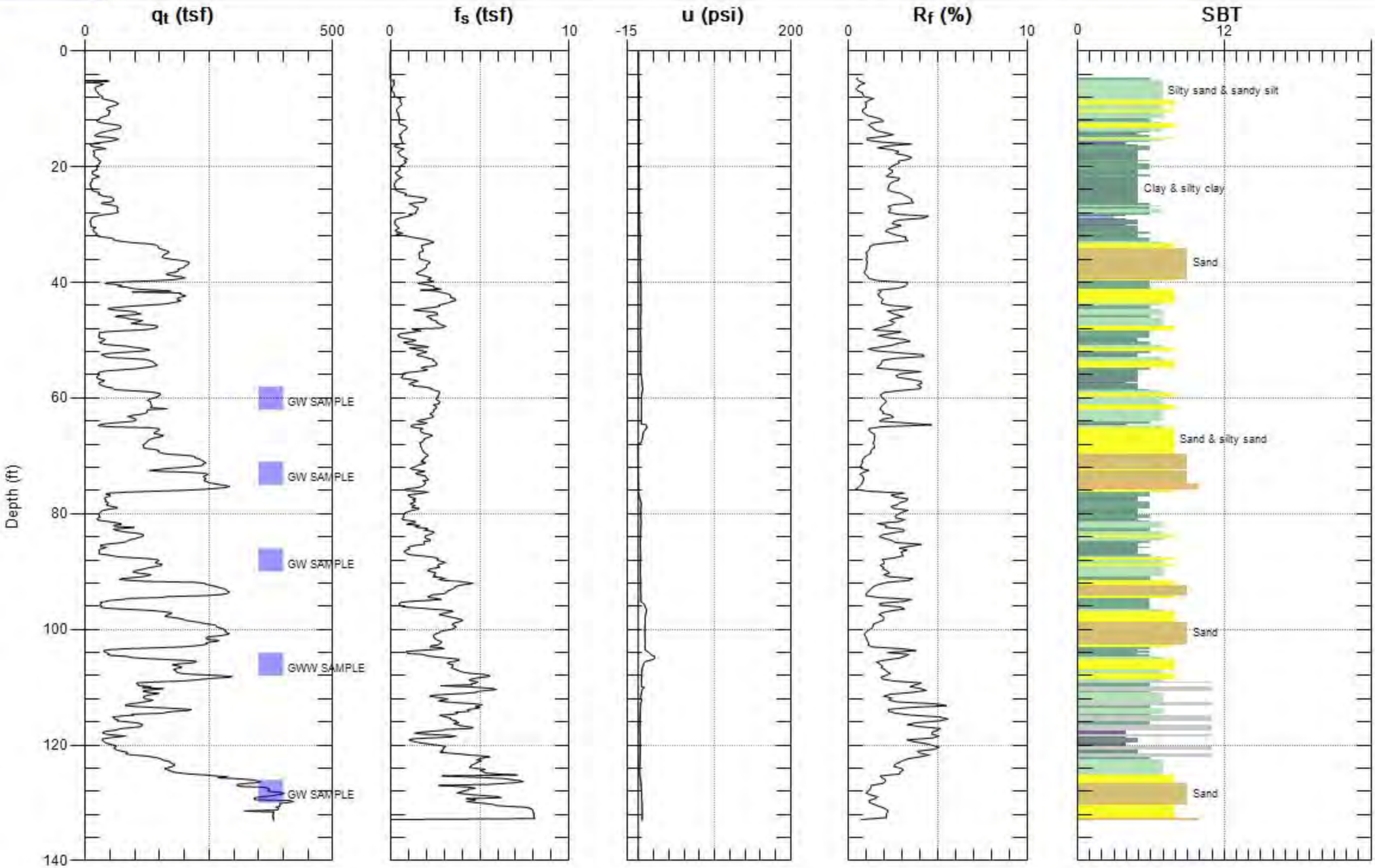
Max. Depth: 134.186 (ft)
Avg. Interval: 0.328 (ft)

SBT: Soil Behavior Type (Robertson 1990)

GILBANE

Site: JERVIS WEBB
Sounding: CPT-14

Engineer: P. PHILLIPS
Date: 6/24/2015 07:24



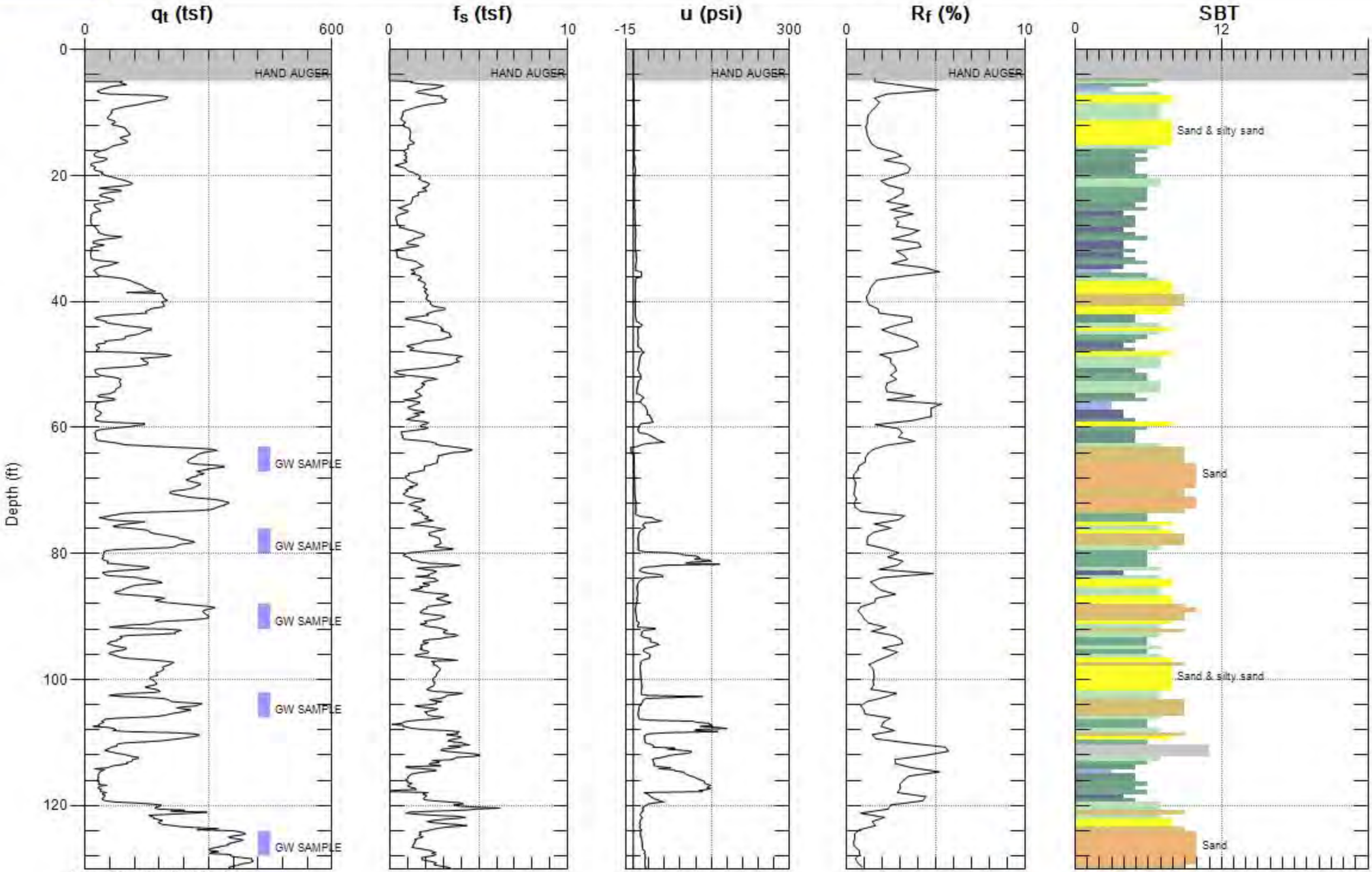
Max. Depth: 133.038 (ft)
Avg. Interval: 0.328 (ft)

SBT: Soil Behavior Type (Robertson 1990)

GILBANE FEDERAL

Site: JERVIS B. WEBB
Sounding: CPT-15

Engineer: P.PHILLIPS
Date: 10/26/2015 09:01



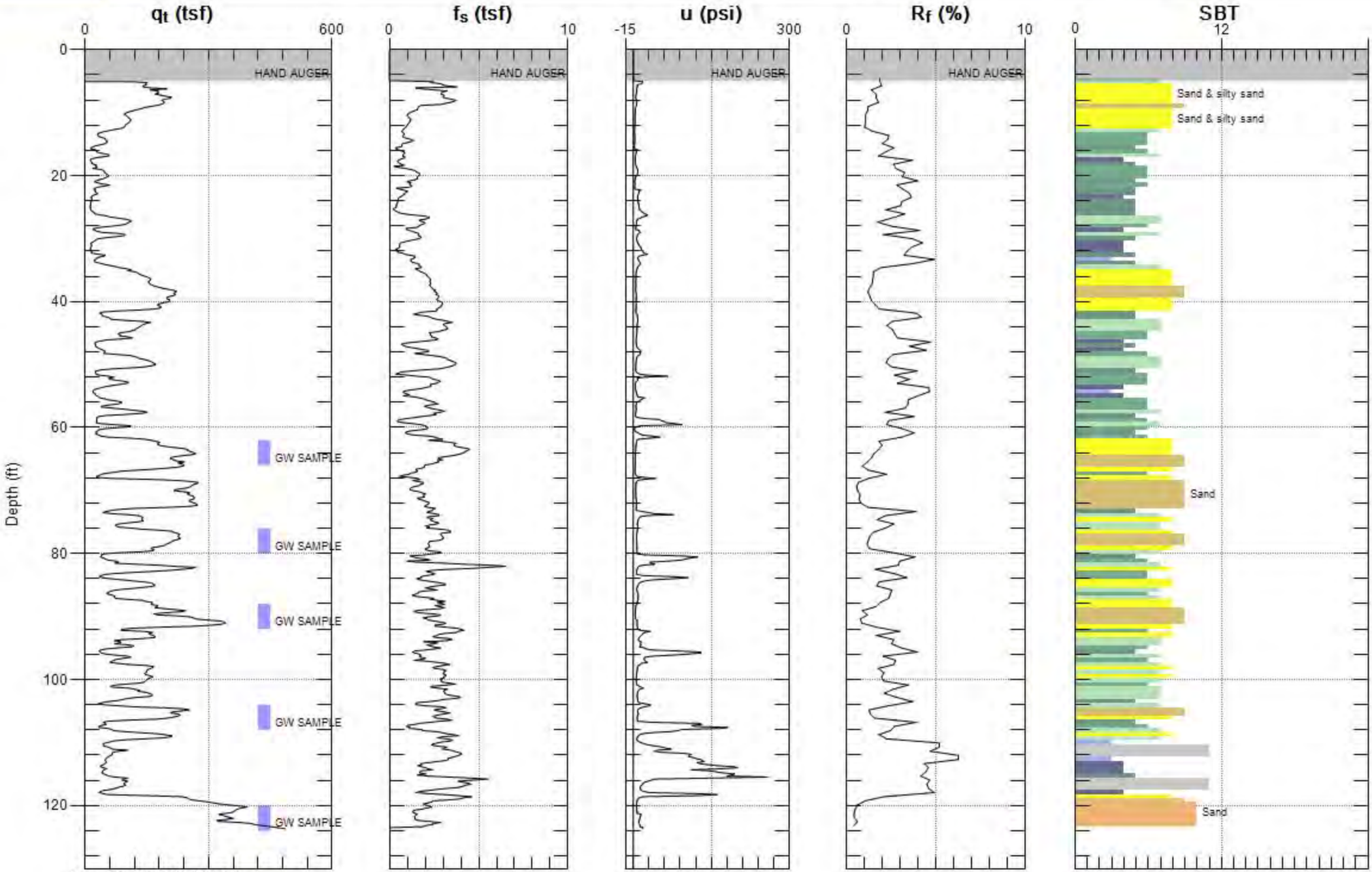
Max. Depth: 130.085 (ft)
Avg. Interval: 0.656 (ft)

SBT: Soil Behavior Type (Robertson 1990)

GILBANE FEDERAL

Site: JERVIS B. WEBB
Sounding: CPT-16

Engineer: P.PHILLIPS
Date: 10/27/2015 09:50



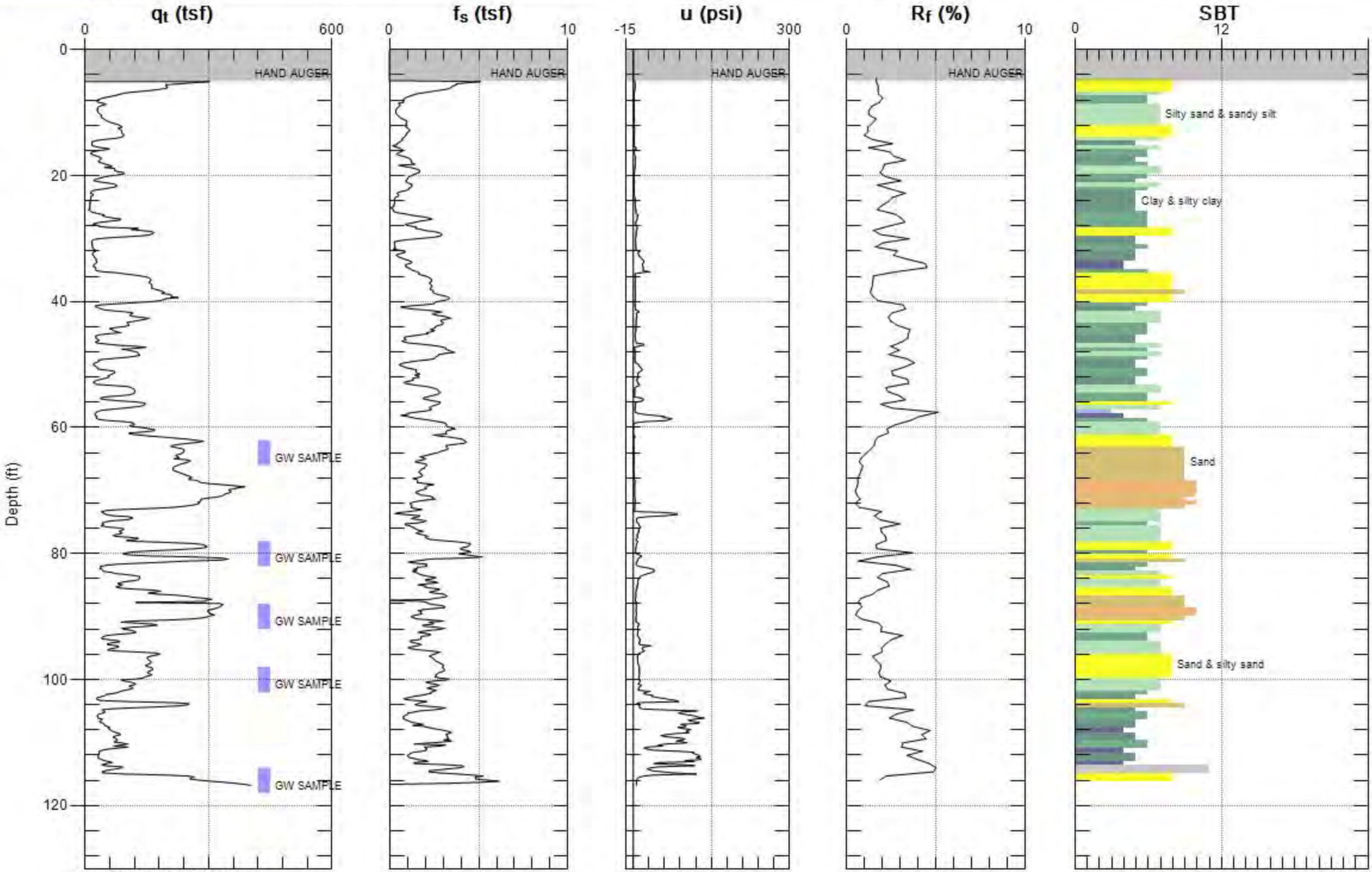
Max. Depth: 123.688 (ft)
Avg. Interval: 0.656 (ft)

SBT: Soil Behavior Type (Robertson 1990)

GILBANE FEDERAL

Site: JERVIS B. WEBB
Sounding: CPT-17

Engineer: P.PHILLIPS
Date: 10/28/2015 07:55



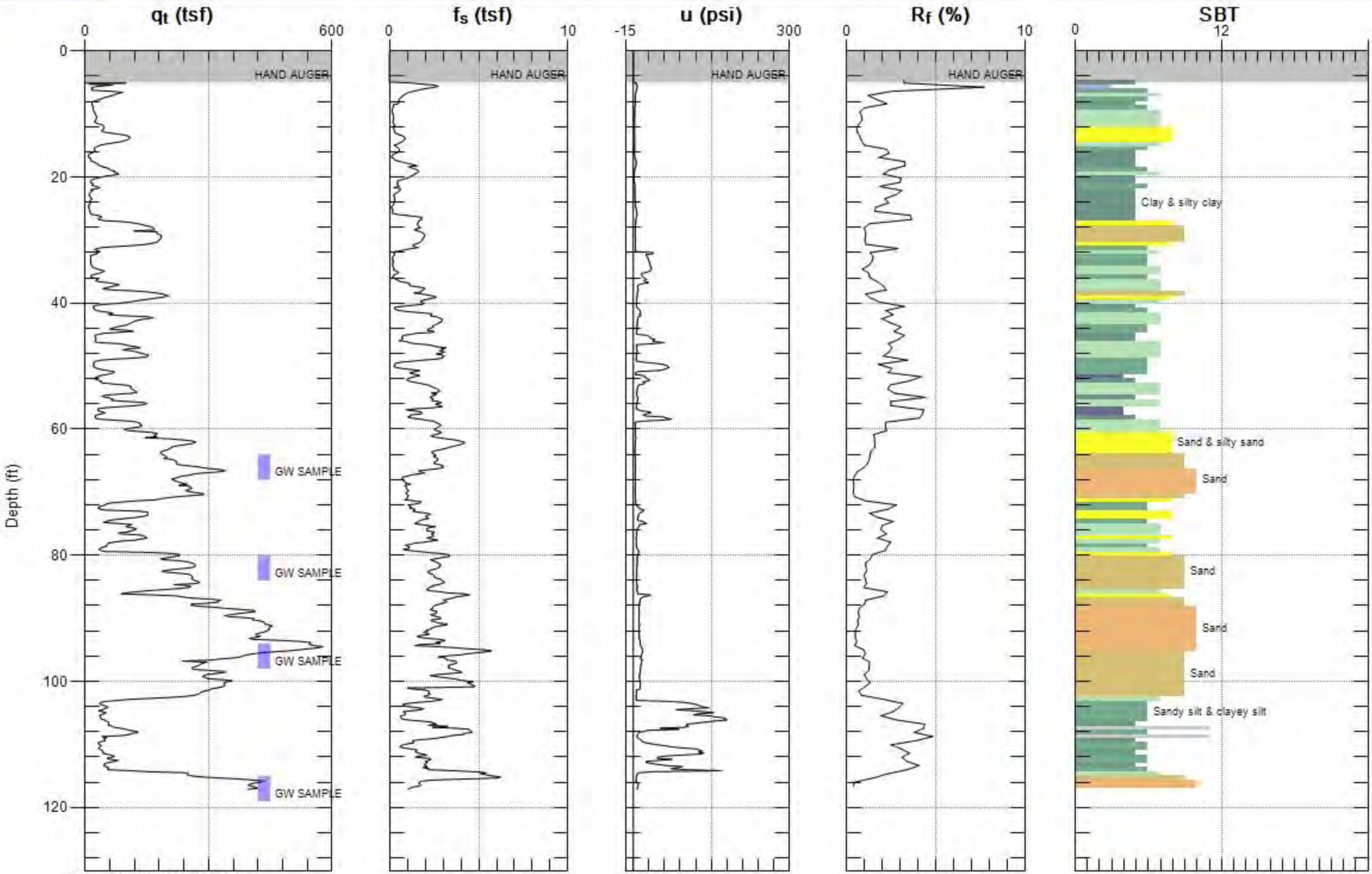
Max. Depth: 116.798 (ft)
Avg. Interval: 0.656 (ft)

SBT: Soil Behavior Type (Robertson 1990)

GILBANE FEDERAL

Site: JERVIS B. WEBB
Sounding: CPT-18

Engineer: P.PHILLIPS
Date: 10/29/2015 07:44



Max. Depth: 117.126 (ft)
Avg. Interval: 0.656 (ft)

SBT: Soil Behavior Type (Robertson 1990)