July 11, 2016

Mr. Shahir Haddad
Division Chief
Schools Evaluation and Brownfields Outreach Branch
Brownfields and Environmental Restoration Program
California Department of Toxic Substances Control
5796 Corporate Avenue
Cypress, California 90630

Subject: Ocean Charter School Proposed New Elementary School at 12870 Panama Street, Los Angeles, California 90066; Submittal of Phase I Environmental Site Assessment (ESA)

Dear Mr. Haddad:

Ocean Charter School (OCS) has retained PlaceWorks to assist with the environmental review and approval process for a property it recently acquired for purposes of constructing a new charter school. The property is located at 12870 Panama Street, Los Angeles, California 90066 ("Site"). OCS intends to construct and operate a span school serving grades K-8 at the Site and, because the project will use State bond funds, is seeking the California Department of Toxic Substances Control's (DTSC's) oversight pursuant to California Education Code (CEC) Section 17210 et seq.

An initial Phase I Environmental Site Assessment (ESA) was prepared for the Site as a due diligence activity for the proposed property acquisition (Alta Environmental, 2015a). Two Phase II investigations were subsequently conducted to further assess the recognized environmental conditions (RECs) identified in the Phase I ESA (Alta Environmental, 2015b; 2015c). Because the original Phase I ESA was more than six months old by the time the property was acquired, an updated Phase I ESA report was prepared to initiate the DTSC approval process (Alta Environmental, 2016). These reports comprise the body of environmental information available for the Site for which we are now requesting the DTSC's review and approval. Per DTSC procedures for the submittal of Phase I ESAs, enclosed please find one hardcopy and one electronic copy (CD with .pdf files) of the following reports/documents:

1. Alta Environmental. 2015a. Phase I Environmental Site Assessment Report, 12870 Panama Street, Los Angeles, California 90006. Prepared for McGuireWoods, LLP. Project No. MCGU-15-5327. July 29, 2015 [draft].

2. Alta Environmental. 2016. Phase I Environmental Site Assessment Report Update, 12870 Panama Street, Los Angeles, California 90006. Prepared for Ocean Charter School. Project No. OCSC-16-6110. June 30, 2016. [includes the following reports in Appendix F]:

   - Alta Environmental. 2015b. Phase II Environmental Site Assessment, 12870 Panama Street, Los Angeles, California 90006. Project No. MCGU-15-5422. September 9, 2015.

   - Alta Environmental. 2015c. Additional Site Assessment, 12870 Panama Street, Los Angeles, California 90006. Project No. MCGU-15-5506. October 22, 2015.

3. Alta Environmental. 2015d. Letter Report to the Los Angeles Fire Department re: Groundwater Assessment Results, Former Underground Storage Tank Site, 12870 Panama Street, Los Angeles, California 90066. December 10, 2015.

4. PlaceWorks. 2016. Technical Memorandum re: Methane Testing, 12870 Panama Street, Los Angeles, California 90066. July 5, 2016.

5. All Environmental Inc. (AEI). 1996. Underground Storage Tank Closure, Teledyne Electronic Technologies, 12870 Panama Street, Los Angeles, California. Prepared for Teledyne Electronic Technologies. Project No. 96-B011. March 27, 1996.

6. Los Angeles City Fire Department. "No Further Action" Letter for UST Closure. April 1, 1996.

7. Los Angeles Regional Water Quality Control Board. "No Further Action" Letter for Current Site Conditions. January 7, 2016.

The purpose of this cover letter is to introduce the DTSC to the project and assist in its review. Background information and summaries of the information contained in the above-listed documents are provided in the following sections. PlaceWorks has also provided interpretations of the available data, as appropriate, based on its independent third-party review.

1.0 Site Description and History

The Site is located at 12870 Panama Street, Los Angeles, California 90066. It comprises two Los Angeles County Tax Assessor Parcels (APNs 4223-008-003 and 4223-008-004) that total approximately 2.15 acres in size. The Site is situated in a mixed commercial and residential neighborhood in the community of Del Rey. It is bounded by Panama Street to the north, Teledyne Reynolds to the east, E-Z Storage to the south, and former (now vacant) Teledyne Microelectronic Technologies buildings to the west (Figure 2). The Site is about 700 feet north of State Route 90 (the Marina Freeway) and approximately 0.8 mile east of the Marina Del Rey small-boat harbor (Figure 2). Ballona Creek is about 0.25 mile to the southeast and the Ballona Wetlands Ecological Reserve is about 0.3 mile to the south. Regional access to the Site is from SR-90 via Culver Boulevard. The zoning designations for the Site are M1-1 Limited Industrial and M2-1 Light Industrial.

The Site currently is developed with a 17,178-square-foot one-story administration building, four accessory buildings (including a former facilities maintenance building), and associated storage sheds and storage areas (Figure 3). The remaining areas of the Site are paved with asphalt and concrete and used for parking. The entire Site is surrounded by chain-link fencing and is accessed via four perimeter gates. Teledyne Technologies Incorporated (Teledyne) is in the process of relocating its operations and the Site is currently in transition from a business administration use to that of a vacant property.

According to the Phase I ESA report, the Site was used for agriculture as early as 1928. Between 1954 and the early 1970s, it was occupied by The Sprague Electric Company facility, a business that apparently designed radio noise filters. After this time, a catering company began using the Site for business operations and vehicle maintenance involving a 250-gallon waste oil underground storage tank (UST), two subsurface hydraulic hoists, and a wastewater clarifier. By 1981, the property was owned and operated by Teledyne for business administration and to support its electronics and aerospace manufacturing operations on the adjacent off-site property to the west (12922 Panama Street). General facilities maintenance support for the neighboring facility ceased in 2013 and a

portion of the administration building was repurposed for planned use as a microelectronic circuit prototype laboratory. However, the laboratory was never brought online.

2.0 Project Description

OCS is a Los Angeles Unified School District (LAUSD)-approved charter school serving grades K-8. OCS's student population is currently split between two campuses that are 3 miles apart. Students in grades K-3 are housed on the Mar Vista Campus on Culver Boulevard while grades 4-8 are housed on the Prop 39 Westchester High School Campus. The project would consolidate these existing schools within a newly-constructed campus. As currently envisioned, the new charter school would have 19 classrooms for 532 students, along with an administration/kitchen/multipurpose building, lunch shelters, a turf play field, and an underground parking lot.

3.0 Initial Phase I ESA

Alta Environmental prepared an initial Phase I ESA for the Site, dated July 29, 2015 (Alta Environmental, 2015a). The Phase I ESA was prepared in conformance with the scope and limitations of ASTM E1527-13 and the United States Environmental Protection Agency (USEPA) All Appropriate Inquiries (AAI) standards. Recognized environmental conditions (RECs) that were identified in the Phase I ESA report are summarized below:

Historical Site Uses:

- Former 250-gallon waste oil underground storage tank (UST), which was identified as a historical REC due to the issuance of a "no further action" (NFA) letter from the Los Angeles City Fire Department (LAFD), dated April 1, 1996. [Note: After additional assessment of the waste oil UST in August and September 2015 (see Section 4.0), the Los Angeles Regional Water Quality Control Board (RWQCB) issued a second NFA letter on January 7, 2016.]

- Two former subsurface hydraulic vehicle lifts

- A former wastewater clarifier.

Historical Off-Site Property Use:

- Former electronics and aerospace manufacturing facility on the property that adjoins the Site to the southwest (12922 Panama Street).

Alta Environmental recommended further investigation of the Site to assess potential impacts associated with the identified RECs. Although not specifically identified as a REC, Alta Environmental also recommended that the subsurface investigation include the eastern, upgradient side of the Site to assess potential impacts associated with the reported historical usage of solvents and tin/lead electroplating activities at the adjoining property to the northeast (12820 Panama Street).

4.0 Phase II ESA

Alta Environmental conducted a Phase II ESA at the Site to assess the RECs identified in the Phase I ESA report, as well as potential impacts from the off-site property to the northeast that had not been specifically identified as a REC (Alta Environmental, 2015b). The assessment involved the

completion of twelve borings (B1 to B12) to depths ranging from 10.5 to 14 feet below ground surface (bgs). Soil samples were collected at depths of 2.5, 5, and 10 feet bgs from each boring and variably analyzed for total petroleum hydrocarbons as gasoline (TPH-g), diesel (TPH-d), and motor oil (TPH-o) by USEPA Method 8015M; volatile organic compounds (VOCs) by USEPA Method 8260B; Title 22 metals by USEPA Methods 6010B/7471A; polycyclic aromatic hydrocarbons (PAHs) by USEPA Method 8310; and/or polychlorinated biphenyls (PCBs) by USEPA Method 8082.

Soil gas probes were installed at depths of 5 and 10 feet bgs in nine of the borings (B4 to B12) and soil gas samples were collected and analyzed for VOCs by USEPA Method 8260B using a mobile laboratory. Groundwater was encountered in five borings at depths ranging from 9.5 to 10.5 feet bgs. Groundwater grab samples were collected from three of the borings (B5, B8, and B11) and analyzed for TPH-g, TPH-d, and TPH-o by USEPA Method 8015M and VOCs by USEPA Method 8260B. Sample location figures and data summary tables for the Phase II ESA investigation are provided in Attachment A.

4.1 Soil Matrix Results

- VOCs -- Eight VOCs were detected in soil samples as follows: acetone, benzene, 2-butanone (MEK), carbon disulfide, chloromethane, tetrachloroethene (PCE), trichloroethene (TCE), and tert-butyl alcohol (TBA). The maximum VOC concentrations in soil are compared to various regulatory screening levels for the protection of human health for a conservative residential land use scenario and for the protection of groundwater in the following table:

Comparison of Maximum VOC Concentrations in Soil to Various Screening Levels

VOC	Maximum Concentration (µg/kg)	USEPA RSL (µg/kg)	DTSC SL (µg/kg)	SF RWQCB ESL (µg/kg)
Acetone	64	6.1E+07	--	500
Benzene	0.65J	1,200	330	44
MEK	5.7J	--	--	4,500
Carbon Disulfide	0.26J	--	--	--
Chloromethane	0.24J	--	--	20,000
PCE	1.2	2,400	600	550
TCE	2.4	940	--	460
TBA	5.8J	--	--	75

µg/kg = microgram/kilogram
"—" Residential screening level not available
USEPA RSL = United States Environmental Protection Agency Regional Screening Level (residential human health), November 2015.
DTSC SL = Department of Toxic Substances Control Screening Level (residential human health*), HERO Human Health Risk Assessment Note No. 3*, October 2015.
SF RWQCB ESL = San Francisco Regional Water Quality Control Board Environmental Screening Level for the protection of human health and groundwater, *Screening for Environmental Concerns at Sites with Contaminated Soil and Groundwater*, Table A-1 – Shallow Soil Screening Levels for Residential Land Use, December 2013.

Alta Environmental concluded that the VOCs were detected at trace concentrations below USEPA RSLs for an industrial/commercial land use scenario and below Los Angeles Regional Water Quality Control Board (RWQCB) screening levels for the protection of groundwater. As demonstrated in the preceding table, the VOC concentrations are also below screening levels established for the protection of human health for a residential land use scenario. Therefore, PlaceWorks concurs that the VOCs in soil do not pose a significant risk.

- Metals -- With one exception, metal concentrations in soil appear to be present at naturally-occurring background concentrations and are below levels of regulatory concern. Arsenic was detected in one 5-foot sample (boring B7) at a concentration of 17.1 mg/kg, which exceeds the screening level of 12 mg/kg currently used by the DTSC for school sites. Arsenic was not detected in the 10-foot bgs sample from the same boring, indicating that the elevated arsenic concentration is vertically bounded and, based on its relatively low concentration, likely is not laterally extensive. The maximum concentration of lead (24.4 mg/kg) was below the screening level of 80 mg/kg currently used by the DTSC for school sites.

- TPH – TPH-g was not detected in any of the soil samples. TPH-d and TPH-o were detected at maximum concentrations of 19 and 120 mg/kg, respectively. These concentrations are compared to San Francisco and Los Angeles RWQCB Environmental Screening Levels for the protection of human health and groundwater in the following table:

Comparison of Maximum TPH Concentrations in Soil to Various Screening Levels

TPH	Maximum Concentration (mg/kg)	SF RWQCB ESL (Human Health) (mg/kg)	SF RWQCB ESL (Groundwater) (mg/kg)	LA RWQCB SL (Groundwater) (mg/kg)
TPH-g	ND	770	100	100
TPH-d	19	240	100	100
TPH-o	120	10,000	100	1,000

mg/kg = milligram/kilogram
SF RWQCB ESL = San Francisco Regional Water Quality Control Board Environmental Screening Level for the protection of human health and groundwater, *Screening for Environmental Concerns at Sites with Contaminated Soil and Groundwater*, Table A-1 – Shallow Soil Screening Levels for Residential Land Use, December 2013.
LA RWQCB SL = Los Angeles Regional Water Quality Control Board Screening Level for the protection of groundwater, *Interim Site Assessment & Cleanup Guidebook*, Table 4-1 – Maximum Screening Levels for TPH, BTEX, and MTBE Above Drinking Water Aquifers, April 27, 2004 [revised]

As indicated in the preceding table, the TPH-o concentration of 120 mg/kg slightly exceeds the San Francisco RWQCB ESL of 100 mg/kg for the protection of groundwater. This concentration was detected in the 5-foot bgs soil sample from boring B4, which was used to investigate the former waste oil UST. The Los Angeles RWQCB reviewed the soil and associated groundwater data and, in its January 7, 2016 NFA letter, concluded that the "residual concentrations of fuel constituents pose a low threat to human health, and soil and groundwater quality beneath the Site" (see Section 8.0).

- PCBs – PCBs were not detected in the two soil samples analyzed for this chemical parameter.

- PAHs – One PAH, benzo(k)fluoranthene, was detected at a concentration of 38 ug/kg in the 5-foot sample from boring B4. When its toxicity equivalency factor (TEQ) of 0.01 is applied, the benzo(a)pyrene equivalent (B[a]P) value of 0.00038 mg/kg is considerably below the concentration of 0.9 mg/kg generally considered to be representative for background soils in Southern California (Environ, 2009). Therefore, PAHs in soil do not pose a significant risk.

4.2 Soil Gas Results

Six VOCs were detected in soil gas samples as follows: benzene, ethylbenzene, PCE, toluene, TCE, and xylenes. In the table on the following page, PlaceWorks has compared the maximum concentrations of VOCs in soil gas to four screening levels used by the USEPA and the State of California for residential development.

Screening levels used for the evaluation of VOCs in soil gas are as follows:

- Residential California Human Health Screening Level (CHHSL) – As identified by the Office of Environmental Health Hazard Assessment (OEHHA) in Table 2, "Soil Gas Screening Numbers for Volatile Chemicals Below Buildings Constructed with Engineered Fill Below Sub-Slab Gravel," dated September 23, 2010. Screening levels based on soil gas data collected <5 feet bgs and intended for evaluation of potential vapor intrusion into buildings and subsequent impacts to indoor air.

- Residential San Francisco RWQCB Environmental Screening Level (ESL) -- As identified in Table E-2 of the San Francisco RWQCB publication *Screening for Concerns at Sites with Contaminated Soil and Groundwater*, dated December 2013. Assumes that soil gas data are collected from a depth <5 feet bgs and that very permeable (e.g., sandy) fill material could be present beneath future buildings following redevelopment.

- Residential Attenuated USEPA Regional Screening Level (RSL) – Calculated by dividing the more conservative of either the USEPA's current regional screening level (RSL) for indoor air (November 2015) or the DTSC's screening level (SL) for ambient air (*Human and Ecological Risk Office [HERO] Health Risk Assessment Note 3*, Table 3, October 2015) by an attenuation factor of 0.001 for future residential buildings to determine corresponding soil gas concentrations, as recommended in Table 2 of DTSC's *Vapor Intrusion Guidance Document*, dated October 2011.

- Residential Johnson & Ettinger (J&E) Model Screening Level – Screening levels resulting from running the J&E vapor intrusion model (USEPA Screen Version 2.0; DTSC Modification December 2014) for soil gas concentrations at 5 feet bgs. Model input relied on conservative default assumptions recommended by the USEPA and DTSC. Model output spreadsheets that support the screening levels are provided in Attachment B.

Comparison of Maximum VOC Concentrations in Soil Gas to Various Screening Levels

VOC	Maximum Concentration (µg/L)	DTSC CHHSL (µg/L)	SF RWQCB ESL (µg/L)	Attenuated USEPA RSL (µg/L)	J&E Model (µg/L)
Benzene	**0.093**	0.085	0.042	0.097	0.073
Ethylbenzene	0.094J	1.1	0.49	1.1	0.97
PCE	**0.47**	0.47	0.21	0.48	0.49
Toluene	0.37	320	160	310	254
TCE	0.29	1.3	0.30	0.48	0.59
Xylenes	0.27	740	52	100	90

µg/L = microgram/liter
Concentration in **bold** exceeds one or more screening level.

As indicated in the preceding table, the maximum concentrations of benzene and PCE in soil gas narrowly exceeded one or more of the screening levels used for the protection of human health via the indoor air vapor intrusion pathway. To further assess the significance of these findings, the cumulative human health risk and hazard for all six VOCs in soil gas were calculated using the conservative J&E default model for a residential land use scenario. Model output spreadsheets that contain the results are provided in Attachment B and summarized on the following page.

Human Health Risk and Hazard Via the Vapor Intrusion Pathway

VOC	Maximum Concentration (µg/L)	Sample Depth (ft bgs)	Cancer Health Risk	Non-Cancer Health Hazard
Benzene	0.093	5	1.3E-06	4.1E-02
Ethylbenzene	0.094J	5	1.0E-07	1.1E-04
PCE	0.47	5	1.0E-06	1.3E-02
Toluene	0.37	5	NA	1.5E-03
TCE	0.29	5	5.1E-07	1.7E-01
Xylenes	0.27	5	NA	3.1E-03
		Total	**2.9E-06**	**0.23**
		Applicable DTSC Thresholds for Residential Land Use	**1.0E-06**	**1.0**

µg/L = microgram/liter
NA = Not applicable; VOC is not a carcinogen.

As seen in the preceding table, a noncancer hazard index (HI) of 0.23 was estimated for the Site for exposures via the vapor intrusion pathway, which is below the DTSC threshold level of 1.0. Therefore, the human health hazard is less than significant.

A cumulative cancer risk of 2.9 x 10^{-6} was estimated for the Site. This level of risk exceeds the DTSC threshold level of 1.0 x 10^{-6}, but is within the range of 10^{-4} to 10^{-6} used by the USEPA for health risk evaluation. The main contributors to the estimated cancer risk are benzene (45%), PCE (34%), and TCE (17%). Given that the health risk only slightly exceeds the DTSC threshold for a residential land use scenario, it is virtually certain that the risk would be less than significant for the proposed use of the Site for a school. Based on the following considerations, it can be argued that a residential (i.e., unrestricted) land use would also be acceptable for the Site:

- The maximum benzene concentration in soil gas is below the attenuated USEPA RSL for a residential land use. The maximum PCE concentration in soil gas is equal to or below the DTSC CHHSL, attenuated USEPA RSL, and J&E model results for a residential land use.

- The cumulative health risk was calculated using maximum soil gas concentrations and conservative default assumptions without consideration for site-specific conditions and construction plans. Despite the screening level and conservative nature of the model, the calculated health risk only slightly exceeds the DTSC threshold.

- The only soil gas VOC concentration that corresponded to a health risk greater than 1.0 x 10^{-6} was the benzene concentration of 0.093 µg/L in the 5-foot sample from boring B8. If this result were not included in the data set, the health risk associated with the next highest benzene concentration (i.e., 0.081 µg/L in the 5-foot sample from boring B9) would only be 8.1 x 10^{-7} (see Attachment B).

4.3 Groundwater Results

Groundwater is first encountered beneath the Site at depths ranging from 8 to 15 feet bgs and exhibits a west-southwesterly flow direction (Alta Environmental, 2016). One VOC was detected in groundwater – 2-butanone (MEK) at a trace concentration of 4.8J µg/L. The USEPA and State of California have not published a Maximum Contaminant Level (MCL) or Public Health Goal (PHG) for MEK. The San Francisco RWQCB ESL for MEK in groundwater is 4,900 µg/L (Table F-1a of the aforementioned publication). The concentration of MEK is orders of magnitude below this

screening level; therefore, VOCs in groundwater do not pose a significant risk to human health or the environment.

TPH-g was not detected in any of the groundwater samples. TPH-d and TPH-o were detected at maximum concentrations of 1,500 µg/L and 190J µg/L, respectively. The highest TPH-d and TPH-o concentrations were detected in the groundwater sample from boring B5, which was located in the immediate area of the former waste oil UST. Based on this finding, the Phase II ESA report concluded that a historical release may have occurred from the former waste oil UST and recommended that the impacted groundwater be further investigated (see Section 5.0).

5.0 Additional Site Assessment

Alta Environmental conducted an Additional Site Assessment in September 2015 to assess the extent of groundwater impacts in the vicinity of the former 250-gallon waste oil UST, as documented in the Phase II ESA report (Alta Environmental, 2015c). Seven borings (B13 to B19) were completed in the vicinity of the former UST to depths ranging from 15 to 20 feet bgs. Groundwater was encountered at depths between 12 and 13.5 feet bgs. Upon reaching groundwater, temporary well screens were installed and groundwater grab samples were collected. A groundwater sample could not be collected from boring B16 because of insufficient yield. The groundwater samples were analyzed for TPH-g, TPH-d, and TPH-o by USEPA Method 8015M and VOCs by USEPA Method 8260B. Sample location figures and data summary tables for the Additional Site Assessment are provided in Attachment A.

VOCs were not detected in groundwater above laboratory method detection limits, with the exception of carbon disulfide at a trace concentration of 0.44J µg/L. Carbon disulfide was also detected in the laboratory method blank at a similar concentration of 0.46J µg/L. An MCL or agency groundwater screening level has not been established for carbon disulfide. However, given its trace concentration and the quality control anomaly, its detection in groundwater is not considered to be a significant finding.

TPH-g was not detected in any of the groundwater samples. TPH-d and TPH-o were detected at maximum concentrations of 530 µg/L and 3,800 µg/L, respectively. A review of the analytical results indicates that groundwater impacts are limited to the near vicinity of the former waste oil UST and that the petroleum hydrocarbons are not migrating off-site. The Los Angeles RWQCB reviewed the groundwater data (Alta Environmental, 2015d) and concluded that no further action was required at the Site (see Section 8.0).

6.0 Updated Phase I ESA

OCS commissioned Alta Environmental to update its Phase I ESA report so that it would be no more than 180 days old at the time of submittal to the DTSC. The updated report included a new Site inspection, acquisition of an updated EDR Radius Report, and re-interpretation of Site conditions based on the results of the Phase II ESA and Additional Site Assessment, which were appended to the Phase I ESA Report Update (Alta Environmental, 2016). Based on the Phase II investigations, Alta Environmental concluded that the RECs identified in the initial Phase I ESA (Section 3.0) were no longer of environmental concern, as explained below:

- "The previous Phase I ESA dated July 27, 2015 identified three onsite RECs: a former 250-gallon waste oil UST, two former subsurface hydraulic vehicle lifts, and a former wastewater

clarifier. These potential environmental concerns were further assessed during subsurface investigations conducted in September and October of 2015. The concentrations of volatile organic compounds (VOCs), total petroleum hydrocarbons (TPH), and Title 22 metals in all soil and soil vapor analytical results were reported below their respective industrial/commercial screening levels. The concentrations of VOCs in groundwater were reported below drinking water MCLs for all samples. Low levels of TPH as diesel and TPH as oil were detected in the vicinity of the former UST, however the Los Angeles Regional Water Quality Control Board issued a no further action finding dated January 7, 2016. Based on this information, the three previously identified onsite RECs now meet the definition of a Historical REC and are not considered significant environmental concerns for future industrial/commercial site users.

- The previous Phase I ESA dated July 27, 2015 identified one offsite REC: 12922 Panama Street, the southwestern adjoining property. This potential offsite environmental concern was further assessed with two soil and soil vapor boring[s] advanced near the property boundary during the September 2015 subsurface investigation. The concentrations of VOCs, TPH, and Title 22 metals in all soil and soil vapor analytical results were reported below their respective industrial/commercial screening levels. Additionally, Alta has conducted extensive onsite and offsite soil, soil vapor, and groundwater sampling at the 12922 Panama Street site under LARWQCB oversight, has developed an approved draft remedial action plan, and has not identified any significant indications of subsurface impacts along the property boundary with the subject site. Based on this information, the previously identified offsite REC is not considered a significant environmental concern for future industrial/commercial site users."

No RECs that required further investigation were identified in the Phase I ESA Update Report.

7.0 Methane Testing

The Site is located within a Methane Zone, as defined by the City of Los Angeles Department of Building And Safety (LADBS). Accordingly, OCS commissioned PlaceWorks to conduct testing to determine if methane or hydrogen sulfide were present beneath the Site at concentrations that would pose a health or safety risk to future occupants of the Site (PlaceWorks, 2016). Sampling was conducted on April 19-20, 2016 and involved the collection of soil gas samples from nine locations (SG1 to SG9) at depths of 4 and 7 feet bgs. Methane was detected at concentrations ranging from 2.8 to 52.4 parts per million by volume (ppmv) in eight of the nine probe locations; hydrogen sulfide was not detected (<0.003 ppmv). PlaceWorks concluded that hazardous oilfield gases are not present beneath the Site at concentrations that would pose a significant threat to human health or safety.

8.0 UST Closure and Agency No Further Action Determinations

The 250-gallon waste oil UST and two hydraulic lifts identified in the Phase I ESA reports were closed by removal on February 15, 1996, as described in a UST Closure Report prepared by All Environmental Incorporated (AEI, 1996). During the removal, the UST and lifts were described as being in good condition with no signs of corrosion or rupture. One soil sample was collected from beneath the UST and analyzed for TPH (USEPA Method 418.1) and benzene/toluene/-ethylbenzene/xylenes (BTEX; USEPA Method 8020). The TPH concentration was 1,100 mg/kg (duplicate sample concentration of 1,600 mg/kg); BTEX constituents were not detected. Soil beneath the UST was removed to a depth of 10 feet bgs and additional samples were collected from the sidewalls and bottom of the resultant excavation. TPH concentrations in the follow-up samples

were 71 mg/kg or less. The Los Angeles City Fire Department (LAFD) issued a "no further action" (NFA) letter for the UST on April 1, 1996.

After additional information had been gathered regarding subsurface conditions, the case was referred to the Los Angeles RWQCB for further evaluation on December 30, 2015. After reviewing the information from the Phase II ESA (Section 4.0) and the Additional Site Assessment (Section 5.0), the Los Angeles RWQCB issued a second NFA letter, concluding that "residual concentrations of fuel constituents pose a low threat to human health, and soil and groundwater quality beneath the Site." Copies of the LAFD and RWQCB NFA letters are provided in Attachment C.

9.0 Off-Site Property (12922 Panama Street)

One off-site property poses a unique environmental concern due to its proximity to the Site and the documentation of VOC releases that have impacted groundwater. The property adjoins the Site to the southwest, at 12922 Panama Street, and is also owned and historically operated by Teledyne Microelectronics Technologies; it is being actively investigated under RWQCB oversight (GeoTracker File No. T10000004824). Chemicals of concern (COCs) include chlorinated VOCs, particularly PCE, TCE, cis-1,2-dichloroethene (cis-1,2-DCE), 1,1-dichloroethane (1,1-DCA), and vinyl chloride. Several figures that depict environmental conditions at this off-site property are provided in Attachment D and referenced in the following discussion.

Two potential concerns with respect to this off-site property were evaluated by OCS when purchasing the Site:

1. Is impacted groundwater flowing toward and beneath the Site?

2. Are VOCs in groundwater or soil gas migrating beneath the Site at concentrations that would pose vapor intrusion concerns?

With respect to the first issue, several previous quarters of groundwater monitoring data for the off-site property show a consistent southwest groundwater flow direction, placing the off-site property directly and fully downgradient from the Site (see Figure 13 in Attachment D). Groundwater plume boundaries and elongation patterns prepared for PCE, TCE, and 1,2-DCE show groundwater contaminants clearly downgradient and migrating away from the Site (see Figures 14-16 in Attachment D). Groundwater results for monitoring wells and hydropunch locations nearest the Site have shown negligible or non-detect VOC concentrations. The graphical representations confirm that impacted groundwater beneath the off-site property is not affecting the Site. This conclusion is further supported by the fact that chlorinated VOCs were not detected at on-site groundwater sample location B8 during the Phase II ESA, which was located near the shared property boundary (see Section 4.3).

With respect to the second issue, soil gas data for the off-site property show maximum PCE and TCE concentrations of 0.22 µg/L and 0.21 µg/L, respectively, along the shared property boundary (see Figure 12 in Attachment D). These soil gas concentrations are below levels of health risk concern. The absence of detectable concentrations of chlorinated hydrocarbons at on-site soil gas sample locations B8 and B9 during the Phase II ESA (see Section 4.3) further confirms that VOCs from the off-site property are not migrating beneath the Site. In summary, the VOCs in groundwater and soil gas beneath the off-site property are clearly migrating away from, and pose no threat to, the Site.

10.0 Conclusions and Recommendations

Based on the available information, it is PlaceWorks' opinion that all potential on-site and off-site RECs associated with the Site have been identified and adequately investigated. The investigation results demonstrate that the potential threats to human health and the environment are less than significant for an unrestricted land use and support a "no further action" determination for the Site. On behalf of OCS, we look forward to the DTSC's concurrence and response. Please note that a check in the amount of $1,500 has been submitted to the DTSC Accounting/Cashier in Sacramento, California as payment for the DTSC's review of this Phase I ESA.

If you have any questions regarding the contents of this transmittal, please do not hesitate to contact either of the undersigned.

Respectfully submitted,

PLACEWORKS

Ron Cavagrotti, D. Env.
Senior Project Manager

William C. Hass, P.E.
Principal, Senior Engineer

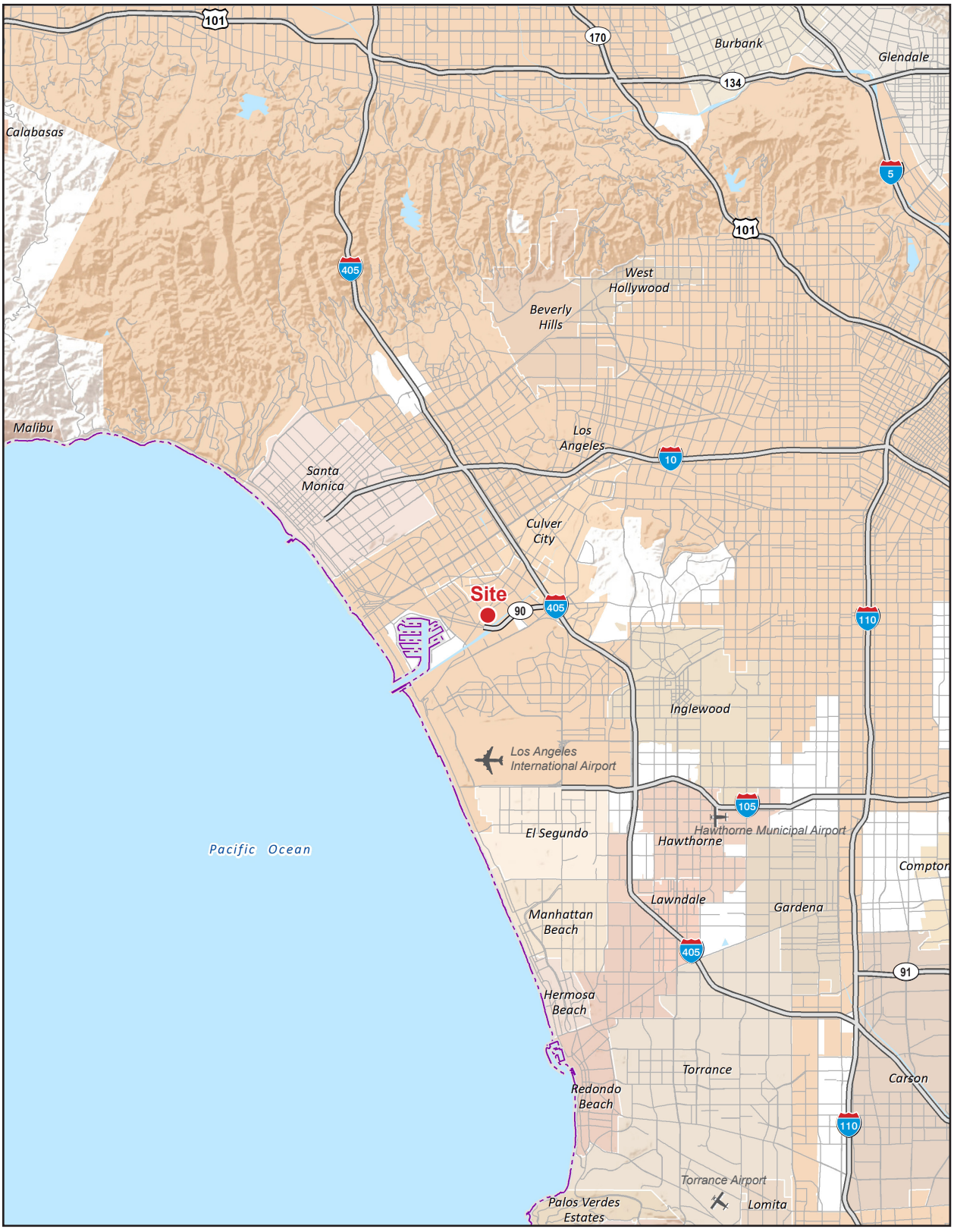
Figures:
- Figure 1 – Regional Location
- Figure 2 -- Local Vicinity
- Figure 3 – Aerial Photograph

Attachments:
- Attachment A – Previous Site Investigation Sample Locations and Analytical Results
- Attachment B – Health Risk Analysis Model Spreadsheets
- Attachment C – Agency NFA Letters
- Attachment D – Off-Site Soil Gas Sample Locations and Results (12922 Panama Street)

cc: Kristy Mack Fett, OCS
Jim Bush
Andrew Fowler, LAUSD-OEHS
Dwayne Mears, PlaceWorks
OCCD-04.0 Project File

Figures

Figure 1 - Regional Location



Note: Unincorporated areas are shown in white.

0 3
Scale (Miles)

Source: ESRI, 2016

Figure 2 - Local Vicinity

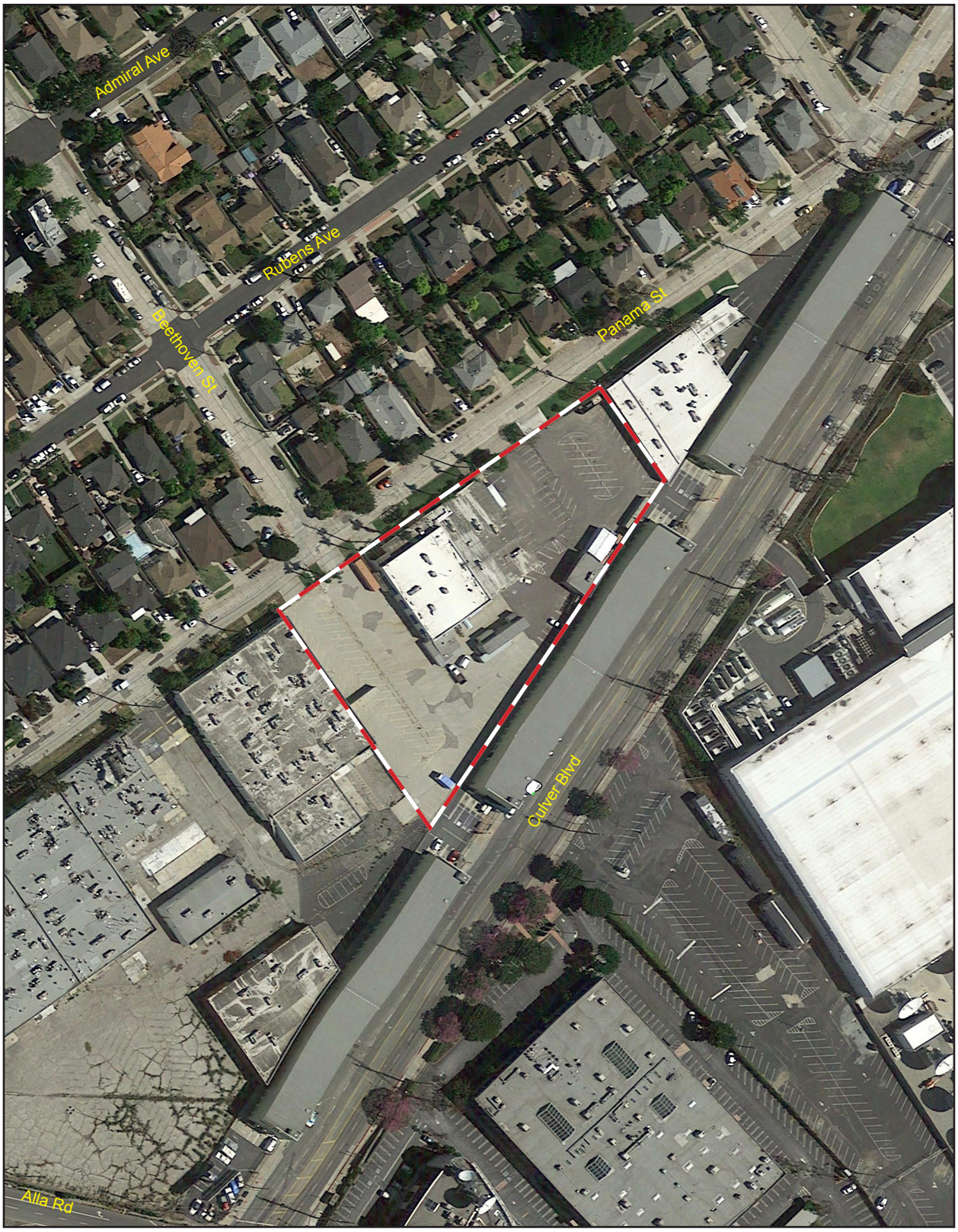
1 Teledyne Reynolds
2 Vacant
3 Vacant
4 AMV Digital Media
5 Office
6 DirecTV
7 Retail
8 E-Z Storage

Site Boundary

0 500
Scale (Feet)

Source: ESRI, 2016

Figure 3 - Aerial Photograph



Site Boundary

0 180
Scale (Feet)

Source: Google Earth Pro, 2016

Attachment A -- Previous Site Investigation Sample Locations and Analytical Results

July 11, 2016

TABLE 1
Soil Matrix Sample Results for VOCs
Phase II Panama Street
12870 Panama Street
Los Angeles, California

VOCs in Soil by EPA Method 8260B	MDL (µg/kg):	RL (µg/kg):	RSL (µg/kg):	Sample ID: B1-10	B2-10	B3-5	B3-10	B4-5	B5-10
				Date: 8/6/2015	8/6/2015	8/6/2015	8/6/2015	8/6/2015	8/6/2015
				VOC Concentration (µg/kg)					
Acetone	0.15-6.7	33-60	6.70E+08	**11J**	**9.9J**	**5.1J**	**13J**	**26J**	**11J**
Benzene	0.087-0.25	0.67-1.2	5.10E+03	ND	ND	ND	**0.13J**	ND	**0.18J**
Bromobenzene	0.14-0.82	0.67-1.2		ND	ND	ND	ND	ND	ND
Bromochloromethane	0.28-0.75	1.3-2.4		ND	ND	ND	ND	ND	ND
Bromodichloromethane	0.16-0.95	0.67-1.2		ND	ND	ND	ND	ND	ND
Bromoform	0.53-11	3.3-6		ND	ND	ND	ND	ND	ND
Bromomethane	4.5-10	13-24		ND	ND	ND	ND	ND	ND
2-Butanone (MEK)	0.19-4.1	13-24	1.90E+08	ND	ND	ND	ND	ND	ND
n-Butylbenzene	0.1-0.69	0.67-1.2		ND	ND	ND	ND	ND	ND
sec-Butylbenzene	0.18-0.62	0.67-1.2		ND	ND	ND	ND	ND	ND
tert-Butylbenzene	0.1-0.36	0.67-1.2		ND	ND	ND	ND	ND	ND
Carbon Disulfide	0.2-0.34	6.7-12	3.50E+06	ND	ND	ND	ND	ND	ND
Carbon Tetrachloride	0.19-0.31	0.67-1.2		ND	ND	ND	ND	ND	ND
Chlorobenzene	0.15-1.8	0.67-1.2		ND	ND	ND	ND	ND	ND
Chloroethane	0.28-1.6	1.3-2.4		ND	ND	ND	ND	ND	ND
Chloroform	0.16-0.36	0.67-1.2		ND	ND	ND	ND	ND	ND
Chloromethane	0.2-0.33	13-24	4.60E+05	ND	**0.22J**	ND	ND	ND	ND
2-Chlorotoluene	0.15-0.25	0.67-1.2		ND	ND	ND	ND	ND	ND
4-Chlorotoluene	0.14-0.68	0.67-1.2		ND	ND	ND	ND	ND	ND
Dibromochloromethane	0.38-2.1	1.3-2.4		ND	ND	ND	ND	ND	ND
1,2-Dibromo-3-Chloropropane	0.3-1.9	3.3-6		ND	ND	ND	ND	ND	ND
1,2-Dibromoethane	0.17-0.92	0.67-1.2		ND	ND	ND	ND	ND	ND
Dibromomethane	0.27-0.84	0.67-1.2		ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	0.15-0.25	0.67-1.2		ND	ND	ND	ND	ND	ND
1,3-Dichlorobenzene	0.12-0.26	0.67-1.2		ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	0.15-0.53	0.67-1.2		ND	ND	ND	ND	ND	ND
Dichlorodifluoromethane	0.25-0.48	1.3-2.4		ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	0.14-0.37	0.67-1.2		ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	0.21-0.41	0.67-1.2		ND	ND	ND	ND	ND	ND
1,1-Dichloroethene	0.23-0.37	0.67-1.2		ND	ND	ND	ND	ND	ND
c-1,2-Dichloroethene	0.19-0.6	0.67-1.2		ND	ND	ND	ND	ND	ND
t-1,2-Dichloroethene	0.34-0.55	0.67-1.2		ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	0.29-0.47	0.67-1.2		ND	ND	ND	ND	ND	ND
1,3-Dichloropropane	0.17-0.39	0.67-1.2		ND	ND	ND	ND	ND	ND
2,2-Dichloropropane	0.22-0.39	3.3-6		ND	ND	ND	ND	ND	ND
1,1-Dichloropropene	0.22-0.35	1.3-2.4		ND	ND	ND	ND	ND	ND
c-1,3-Dichloropropene	0.17-0.72	0.67-1.2		ND	ND	ND	ND	ND	ND
t-1,3-Dichloropropene	0.18-0.65	1.3-2.4		ND	ND	ND	ND	ND	ND
Ethylbenzene	0.1-2.1	0.67-1.2		ND	ND	ND	ND	ND	ND
2-Hexanone	0.65-1.9	13-24		ND	ND	ND	ND	ND	ND
Isopropylbenzene	0.37-0.75	0.67-1.2		ND	ND	ND	ND	ND	ND
p-Isopropyltoluene	0.42-1.6	0.67-1.2		ND	ND	ND	ND	ND	ND
Methylene Chloride	0.9-5.1	6.7-12		ND	ND	ND	ND	ND	ND
4-Methyl-2-Pentanone	0.97-4.7	13-24		ND	ND	ND	ND	ND	ND
Naphthalene	0.54-0.88	0.67-1.2		ND	ND	ND	ND	ND	ND
n-Propylbenzene	0.34-0.72	1.3-2.4		ND	ND	ND	ND	ND	ND
Styrene	0.29-0.65	0.67-1.2		ND	ND	ND	ND	ND	ND
1,1,1,2-Tetrachloroethane	0.16-0.41	0.67-1.2		ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	0.23-0.37	1.3-2.4		ND	ND	ND	ND	ND	ND
Tetrachloroethene	0.14-0.61	0.67-1.2	1.00E+05	ND	ND	ND	ND	ND	ND
Toluene	0.34-1.1	0.67-1.2		ND	ND	ND	ND	ND	ND
1,2,3-Trichlorobenzene	0.37-0.99	1.3-2.4		ND	ND	ND	ND	ND	ND
1,2,4-Trichlorobenzene	0.21-0.34	1.3-2.4		ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	0.15-0.42	0.67-1.2		ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	0.24-0.42	0.67-1.2		ND	ND	ND	ND	ND	ND
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.24-0.38	6.7-12		ND	ND	ND	ND	ND	ND
Trichloroethene	0.2-0.45	1.3-2.4	6.00E+03	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane	0.25-0.99	6.7-12		ND	ND	ND	ND	ND	ND
1,2,3-Trichloropropane	0.56-0.9	1.3-2.4		ND	ND	ND	ND	ND	ND
1,2,4-Trimethylbenzene	0.39-0.65	1.3-2.4		ND	ND	ND	ND	ND	ND
1,3,5-Trimethylbenzene	0.37-5.7	1.3-2.4		ND	ND	ND	ND	ND	ND
Vinyl Acetate	0.6-5.1	6.7-12		ND	ND	ND	ND	ND	ND
Vinyl Chloride	0.32-0.54	0.67-1.2		ND	ND	ND	ND	ND	ND
p/m-Xylene	0.18-0.66	1.3-2.4		ND	ND	ND	ND	ND	ND
o-Xylene	0.35-0.6	0.67-1.2		ND	ND	ND	ND	ND	ND
Methyl-t-Butyl Ether (MTBE)	0.2-6.2	1.3-2.4		ND	ND	ND	ND	ND	ND
Tert-Butyl Alcohol (TBA)	0.57-5.6	13-21		ND	ND	ND	**5.4J**	**4.7J**	ND
Diisopropyl Ether (DIPE)	0.32-0.6	0.67-1.2		ND	ND	ND	ND	ND	ND
Ethyl-t-Butyl Ether (ETBE)	0.34-0.55	0.67-1.2		ND	ND	ND	ND	ND	ND
Tert-Amyl-Methyl Ether (TAME)	0.24-100	0.67-1.2		ND	ND	ND	ND	ND	ND
Ethanol	56-90	330-600		ND	ND	ND	ND	ND	ND
			Dilution Factor:	**1**	**1**	**1**	**1**	**1**	**1**

NOTES:
VOC = Volatile Organic Compound
RL = Reporting Limit
MDL = Method Detection Limit
ND = Indicated constituents not detected above the MDL
µg/L = micrograms per liter
J = Analyte detected; However result is an estimated value between the MDL and the RL

ALTA ENVIRONMENTAL

TABLE 1
Soil Matrix Sample Results for VOCs
Phase II Panama Street
12870 Panama Street
Los Angeles, California

VOCs in Soil by EPA Method 8260B			Sample ID:	B6-5	B6-10	B7-5	B7-10	B8-2.5	B8-5
			Date:	8/5/2015	8/5/2015	8/5/2015	8/5/2015	8/5/2015	8/5/2015
	MDL (µg/kg):	RL (µg/kg):	RSL (µg/kg):	VOC Concentration (µg/kg)					
Acetone	0.15-6.7	33-60	6.70E+08	**7.9J**	**6.3J**	**5.5J**	**5.4J**	**19J**	**11.0J**
Benzene	0.087-0.25	0.67-1.2	5.10E+03	ND	**0.17J**	ND	**0.12J**	**0.54J**	ND
Bromobenzene	0.14-0.82	0.67-1.2		ND	ND	ND	ND	ND	ND
Bromochloromethane	0.28-0.75	1.3-2.4		ND	ND	ND	ND	ND	ND
Bromodichloromethane	0.16-0.95	0.67-1.2		ND	ND	ND	ND	ND	ND
Bromoform	0.53-11	3.3-6		ND	ND	ND	ND	ND	ND
Bromomethane	4.5-10	13-24		ND	ND	ND	ND	ND	ND
2-Butanone (MEK)	0.19-4.1	13-24	1.90E+08	ND	ND	ND	ND	ND	ND
n-Butylbenzene	0.1-0.69	0.67-1.2		ND	ND	ND	ND	ND	ND
sec-Butylbenzene	0.18-0.62	0.67-1.2		ND	ND	ND	ND	ND	ND
tert-Butylbenzene	0.1-0.36	0.67-1.2		ND	ND	ND	ND	ND	ND
Carbon Disulfide	0.2-0.34	6.7-12	3.50E+06	ND	ND	ND	ND	ND	ND
Carbon Tetrachloride	0.19-0.31	0.67-1.2		ND	ND	ND	ND	ND	ND
Chlorobenzene	0.15-1.8	0.67-1.2		ND	ND	ND	ND	ND	ND
Chloroethane	0.28-1.6	1.3-2.4		ND	ND	ND	ND	ND	ND
Chloroform	0.16-0.36	0.67-1.2		ND	ND	ND	ND	ND	ND
Chloromethane	0.2-0.33	13-24	4.60E+05	ND	ND	ND	ND	ND	ND
2-Chlorotoluene	0.15-0.25	0.67-1.2		ND	ND	ND	ND	ND	ND
4-Chlorotoluene	0.14-0.68	0.67-1.2		ND	ND	ND	ND	ND	ND
Dibromochloromethane	0.38-2.1	1.3-2.4		ND	ND	ND	ND	ND	ND
1,2-Dibromo-3-Chloropropane	0.3-1.9	3.3-6		ND	ND	ND	ND	ND	ND
1,2-Dibromoethane	0.17-0.92	0.67-1.2		ND	ND	ND	ND	ND	ND
Dibromomethane	0.27-0.84	0.67-1.2		ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	0.15-0.25	0.67-1.2		ND	ND	ND	ND	ND	ND
1,3-Dichlorobenzene	0.12-0.26	0.67-1.2		ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	0.15-0.53	0.67-1.2		ND	ND	ND	ND	ND	ND
Dichlorodifluoromethane	0.25-0.48	1.3-2.4		ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	0.14-0.37	0.67-1.2		ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	0.21-0.41	0.67-1.2		ND	ND	ND	ND	ND	ND
1,1-Dichloroethene	0.23-0.37	0.67-1.2		ND	ND	ND	ND	ND	ND
c-1,2-Dichloroethene	0.19-0.6	0.67-1.2		ND	ND	ND	ND	ND	ND
t-1,2-Dichloroethene	0.34-0.55	0.67-1.2		ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	0.29-0.47	0.67-1.2		ND	ND	ND	ND	ND	ND
1,3-Dichloropropane	0.17-0.39	0.67-1.2		ND	ND	ND	ND	ND	ND
2,2-Dichloropropane	0.22-0.39	3.3-6		ND	ND	ND	ND	ND	ND
1,1-Dichloropropene	0.22-0.35	1.3-2.4		ND	ND	ND	ND	ND	ND
c-1,3-Dichloropropene	0.17-0.72	0.67-1.2		ND	ND	ND	ND	ND	ND
t-1,3-Dichloropropene	0.18-0.65	1.3-2.4		ND	ND	ND	ND	ND	ND
Ethylbenzene	0.1-2.1	0.67-1.2		ND	ND	ND	ND	ND	ND
2-Hexanone	0.65-1.9	13-24		ND	ND	ND	ND	ND	ND
Isopropylbenzene	0.37-0.75	0.67-1.2		ND	ND	ND	ND	ND	ND
p-Isopropyltoluene	0.42-1.6	0.67-1.2		ND	ND	ND	ND	ND	ND
Methylene Chloride	0.9-5.1	6.7-12		ND	ND	ND	ND	ND	ND
4-Methyl-2-Pentanone	0.97-4.7	13-24		ND	ND	ND	ND	ND	ND
Naphthalene	0.54-0.88	0.67-1.2		ND	ND	ND	ND	ND	ND
n-Propylbenzene	0.34-0.72	1.3-2.4		ND	ND	ND	ND	ND	ND
Styrene	0.29-0.65	0.67-1.2		ND	ND	ND	ND	ND	ND
1,1,1,2-Tetrachloroethane	0.16-0.41	0.67-1.2		ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	0.23-0.37	1.3-2.4		ND	ND	ND	ND	ND	ND
Tetrachloroethene	0.14-0.61	0.67-1.2	1.00E+05	ND	ND	ND	ND	ND	ND
Toluene	0.34-1.1	0.67-1.2		ND	ND	ND	ND	ND	ND
1,2,3-Trichlorobenzene	0.37-0.99	1.3-2.4		ND	ND	ND	ND	ND	ND
1,2,4-Trichlorobenzene	0.21-0.34	1.3-2.4		ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	0.15-0.42	0.67-1.2		ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	0.24-0.42	0.67-1.2		ND	ND	ND	ND	ND	ND
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.24-0.38	6.7-12		ND	ND	ND	ND	ND	ND
Trichloroethene	0.2-0.45	1.3-2.4	6.00E+03	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane	0.25-0.99	6.7-12		ND	ND	ND	ND	ND	ND
1,2,3-Trichloropropane	0.56-0.9	1.3-2.4		ND	ND	ND	ND	ND	ND
1,2,4-Trimethylbenzene	0.39-0.65	1.3-2.4		ND	ND	ND	ND	ND	ND
1,3,5-Trimethylbenzene	0.37-5.7	1.3-2.4		ND	ND	ND	ND	ND	ND
Vinyl Acetate	0.6-5.1	6.7-12		ND	ND	ND	ND	ND	ND
Vinyl Chloride	0.32-0.54	0.67-1.2		ND	ND	ND	ND	ND	ND
p/m-Xylene	0.18-0.66	1.3-2.4		ND	ND	ND	ND	ND	ND
o-Xylene	0.35-0.6	0.67-1.2		ND	ND	ND	ND	ND	ND
Methyl-t-Butyl Ether (MTBE)	0.2-6.2	1.3-2.4		ND	ND	ND	ND	ND	ND
Tert-Butyl Alcohol (TBA)	0.57-5.6	13-21		ND	**4.5J**	ND	ND	ND	ND
Diisopropyl Ether (DIPE)	0.32-0.6	0.67-1.2		ND	ND	ND	ND	ND	ND
Ethyl-t-Butyl Ether (ETBE)	0.34-0.55	0.67-1.2		ND	ND	ND	ND	ND	ND
Tert-Amyl-Methyl Ether (TAME)	0.24-100	0.67-1.2		ND	ND	ND	ND	ND	ND
Ethanol	56-90	330-600		ND	ND	ND	ND	ND	ND
			Dilution Factor:	**1**	**1**	**1**	**1**	**1**	**1**

NOTES:
VOC = Volatile Organic Compound
RL = Reporting Limit
MDL = Method Detection Limit
ND = Indicated constituents not detected above the MDL
µg/L = micrograms per liter
J = Analyte detected; However result is an estimated value between the MDL and the RL

ALTA ENVIRONMENTAL

TABLE 1
Soil Matrix Sample Results for VOCs
Phase II Panama Street
12870 Panama Street
Los Angeles, California

VOCs in Soil by EPA Method 8260B	MDL (µg/kg):	RL (µg/kg):	RSL (µg/kg):	Sample ID: B8-10	B9-2.5	B9-5	B9-10	B10-2.5	B10-5
				Date: 8/5/2015	8/5/2015	8/5/2015	8/5/2015	8/6/2015	8/6/2015
				VOC Concentration (µg/kg)					
Acetone	0.15-6.7	33-60	6.70E+08	ND	**20J**	**6.8J**	**5.8J**	**64**	**15J**
Benzene	0.087-0.25	0.67-1.2	5.10E+03	**0.15J**	**0.65J**	ND	**0.15J**	**0.40J**	ND
Bromobenzene	0.14-0.82	0.67-1.2		ND	ND	ND	ND	ND	ND
Bromochloromethane	0.28-0.75	1.3-2.4		ND	ND	ND	ND	ND	ND
Bromodichloromethane	0.16-0.95	0.67-1.2		ND	ND	ND	ND	ND	ND
Bromoform	0.53-11	3.3-6		ND	ND	ND	ND	ND	ND
Bromomethane	4.5-10	13-24		ND	ND	ND	ND	ND	ND
2-Butanone (MEK)	0.19-4.1	13-24	1.90E+08	ND	ND	ND	ND	**3.3J**	ND
n-Butylbenzene	0.1-0.69	0.67-1.2		ND	ND	ND	ND	ND	ND
sec-Butylbenzene	0.18-0.62	0.67-1.2		ND	ND	ND	ND	ND	ND
tert-Butylbenzene	0.1-0.36	0.67-1.2		ND	ND	ND	ND	ND	ND
Carbon Disulfide	0.2-0.34	6.7-12	3.50E+06	ND	ND	ND	ND	**0.26J**	ND
Carbon Tetrachloride	0.19-0.31	0.67-1.2		ND	ND	ND	ND	ND	ND
Chlorobenzene	0.15-1.8	0.67-1.2		ND	ND	ND	ND	ND	ND
Chloroethane	0.28-1.6	1.3-2.4		ND	ND	ND	ND	ND	ND
Chloroform	0.16-0.36	0.67-1.2		ND	ND	ND	ND	ND	ND
Chloromethane	0.2-0.33	13-24	4.60E+05	ND	ND	ND	ND	ND	ND
2-Chlorotoluene	0.15-0.25	0.67-1.2		ND	ND	ND	ND	ND	ND
4-Chlorotoluene	0.14-0.68	0.67-1.2		ND	ND	ND	ND	ND	ND
Dibromochloromethane	0.38-2.1	1.3-2.4		ND	ND	ND	ND	ND	ND
1,2-Dibromo-3-Chloropropane	0.3-1.9	3.3-6		ND	ND	ND	ND	ND	ND
1,2-Dibromoethane	0.17-0.92	0.67-1.2		ND	ND	ND	ND	ND	ND
Dibromomethane	0.27-0.84	0.67-1.2		ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	0.15-0.25	0.67-1.2		ND	ND	ND	ND	ND	ND
1,3-Dichlorobenzene	0.12-0.26	0.67-1.2		ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	0.15-0.53	0.67-1.2		ND	ND	ND	ND	ND	ND
Dichlorodifluoromethane	0.25-0.48	1.3-2.4		ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	0.14-0.37	0.67-1.2		ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	0.21-0.41	0.67-1.2		ND	ND	ND	ND	ND	ND
1,1-Dichloroethene	0.23-0.37	0.67-1.2		ND	ND	ND	ND	ND	ND
c-1,2-Dichloroethene	0.19-0.6	0.67-1.2		ND	ND	ND	ND	ND	ND
t-1,2-Dichloroethene	0.34-0.55	0.67-1.2		ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	0.29-0.47	0.67-1.2		ND	ND	ND	ND	ND	ND
1,3-Dichloropropane	0.17-0.39	0.67-1.2		ND	ND	ND	ND	ND	ND
2,2-Dichloropropane	0.22-0.39	3.3-6		ND	ND	ND	ND	ND	ND
1,1-Dichloropropene	0.22-0.35	1.3-2.4		ND	ND	ND	ND	ND	ND
c-1,3-Dichloropropene	0.17-0.72	0.67-1.2		ND	ND	ND	ND	ND	ND
t-1,3-Dichloropropene	0.18-0.65	1.3-2.4		ND	ND	ND	ND	ND	ND
Ethylbenzene	0.1-2.1	0.67-1.2		ND	ND	ND	ND	ND	ND
2-Hexanone	0.65-1.9	13-24		ND	ND	ND	ND	ND	ND
Isopropylbenzene	0.37-0.75	0.67-1.2		ND	ND	ND	ND	ND	ND
p-Isopropyltoluene	0.42-1.6	0.67-1.2		ND	ND	ND	ND	ND	ND
Methylene Chloride	0.9-5.1	6.7-12		ND	ND	ND	ND	ND	ND
4-Methyl-2-Pentanone	0.97-4.7	13-24		ND	ND	ND	ND	ND	ND
Naphthalene	0.54-0.88	0.67-1.2		ND	ND	ND	ND	ND	ND
n-Propylbenzene	0.34-0.72	1.3-2.4		ND	ND	ND	ND	ND	ND
Styrene	0.29-0.65	0.67-1.2		ND	ND	ND	ND	ND	ND
1,1,1,2-Tetrachloroethane	0.16-0.41	0.67-1.2		ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	0.23-0.37	1.3-2.4		ND	ND	ND	ND	ND	ND
Tetrachloroethene	0.14-0.61	0.67-1.2	1.00E+05	ND	ND	ND	ND	ND	ND
Toluene	0.34-1.1	0.67-1.2		ND	ND	ND	ND	ND	ND
1,2,3-Trichlorobenzene	0.37-0.99	1.3-2.4		ND	ND	ND	ND	ND	ND
1,2,4-Trichlorobenzene	0.21-0.34	1.3-2.4		ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	0.15-0.42	0.67-1.2		ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	0.24-0.42	0.67-1.2		ND	ND	ND	ND	ND	ND
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.24-0.38	6.7-12		ND	ND	ND	ND	ND	ND
Trichloroethene	0.2-0.45	1.3-2.4	6.00E+03	ND	ND	ND	ND	**2.4**	ND
Trichlorofluoromethane	0.25-0.99	6.7-12		ND	ND	ND	ND	ND	ND
1,2,3-Trichloropropane	0.56-0.9	1.3-2.4		ND	ND	ND	ND	ND	ND
1,2,4-Trimethylbenzene	0.39-0.65	1.3-2.4		ND	ND	ND	ND	ND	ND
1,3,5-Trimethylbenzene	0.37-5.7	1.3-2.4		ND	ND	ND	ND	ND	ND
Vinyl Acetate	0.6-5.1	6.7-12		ND	ND	ND	ND	ND	ND
Vinyl Chloride	0.32-0.54	0.67-1.2		ND	ND	ND	ND	ND	ND
p/m-Xylene	0.18-0.66	1.3-2.4		ND	ND	ND	ND	ND	ND
o-Xylene	0.35-0.6	0.67-1.2		ND	ND	ND	ND	ND	ND
Methyl-t-Butyl Ether (MTBE)	0.2-6.2	1.3-2.4		ND	ND	ND	ND	ND	ND
Tert-Butyl Alcohol (TBA)	0.57-5.6	13-21		ND	ND	ND	ND	ND	ND
Diisopropyl Ether (DIPE)	0.32-0.6	0.67-1.2		ND	ND	ND	ND	ND	ND
Ethyl-t-Butyl Ether (ETBE)	0.34-0.55	0.67-1.2		ND	ND	ND	ND	ND	ND
Tert-Amyl-Methyl Ether (TAME)	0.24-100	0.67-1.2		ND	ND	ND	ND	ND	ND
Ethanol	56-90	330-600		ND	ND	ND	ND	ND	ND
			Dilution Factor:	**1**	**1**	**1**	**1**	**1**	**1**

NOTES:
VOC = Volatile Organic Compound
RL = Reporting Limit
MDL = Method Detection Limit
ND = Indicated constituents not detected above the MDL
µg/L = micrograms per liter
J = Analyte detected; However result is an estimated value between the MDL and the RL

ALTA ENVIRONMENTAL

TABLE 1
Soil Matrix Sample Results for VOCs
Phase II Panama Street
12870 Panama Street
Los Angeles, California

VOCs in Soil by EPA Method 8260B	MDL (µg/kg):	RL (µg/kg):	RSL (µg/kg):	Sample ID: B10-10	B11-2.5	B11-5	B11-10	B12-2.5	B12-5	B12-10
				Date: 8/6/2015	8/5/2015	8/5/2015	8/5/2015	8/5/2015	8/5/2015	8/5/2015
				VOC Concentration (µg/kg)						
Acetone	0.15-6.7	33-60	6.70E+08	**24J**	**24J**	**35J**	**11J**	**55**	**7.5J**	**6.1J**
Benzene	0.087-0.25	0.67-1.2	5.10E+03	**0.14J**	ND	**0.19J**	ND	**0.29J**	ND	**0.14J**
Bromobenzene	0.14-0.82	0.67-1.2		ND	ND	ND	ND	ND	ND	ND
Bromochloromethane	0.28-0.75	1.3-2.4		ND	ND	ND	ND	ND	ND	ND
Bromodichloromethane	0.16-0.95	0.67-1.2		ND	ND	ND	ND	ND	ND	ND
Bromoform	0.53-11	3.3-6		ND	ND	ND	ND	ND	ND	ND
Bromomethane	4.5-10	13-24		ND	ND	ND	ND	ND	ND	ND
2-Butanone (MEK)	0.19-4.1	13-24	1.90E+08	ND	ND	**5.7J**	ND	ND	ND	ND
n-Butylbenzene	0.1-0.69	0.67-1.2		ND	ND	ND	ND	ND	ND	ND
sec-Butylbenzene	0.18-0.62	0.67-1.2		ND	ND	ND	ND	ND	ND	ND
tert-Butylbenzene	0.1-0.36	0.67-1.2		ND	ND	ND	ND	ND	ND	ND
Carbon Disulfide	0.2-0.34	6.7-12	3.50E+06	ND	ND	ND	ND	ND	ND	ND
Carbon Tetrachloride	0.19-0.31	0.67-1.2		ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	0.15-1.8	0.67-1.2		ND	ND	ND	ND	ND	ND	ND
Chloroethane	0.28-1.6	1.3-2.4		ND	ND	ND	ND	ND	ND	ND
Chloroform	0.16-0.36	0.67-1.2		ND	ND	ND	ND	ND	ND	ND
Chloromethane	0.2-0.33	13-24	4.60E+05	ND	ND	ND	ND	ND	**0.24J**	ND
2-Chlorotoluene	0.15-0.25	0.67-1.2		ND	ND	ND	ND	ND	ND	ND
4-Chlorotoluene	0.14-0.68	0.67-1.2		ND	ND	ND	ND	ND	ND	ND
Dibromochloromethane	0.38-2.1	1.3-2.4		ND	ND	ND	ND	ND	ND	ND
1,2-Dibromo-3-Chloropropane	0.3-1.9	3.3-6		ND	ND	ND	ND	ND	ND	ND
1,2-Dibromoethane	0.17-0.92	0.67-1.2		ND	ND	ND	ND	ND	ND	ND
Dibromomethane	0.27-0.84	0.67-1.2		ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	0.15-0.25	0.67-1.2		ND	ND	ND	ND	ND	ND	ND
1,3-Dichlorobenzene	0.12-0.26	0.67-1.2		ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	0.15-0.53	0.67-1.2		ND	ND	ND	ND	ND	ND	ND
Dichlorodifluoromethane	0.25-0.48	1.3-2.4		ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	0.14-0.37	0.67-1.2		ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	0.21-0.41	0.67-1.2		ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene	0.23-0.37	0.67-1.2		ND	ND	ND	ND	ND	ND	ND
c-1,2-Dichloroethene	0.19-0.6	0.67-1.2		ND	ND	ND	ND	ND	ND	ND
t-1,2-Dichloroethene	0.34-0.55	0.67-1.2		ND	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	0.29-0.47	0.67-1.2		ND	ND	ND	ND	ND	ND	ND
1,3-Dichloropropane	0.17-0.39	0.67-1.2		ND	ND	ND	ND	ND	ND	ND
2,2-Dichloropropane	0.22-0.39	3.3-6		ND	ND	ND	ND	ND	ND	ND
1,1-Dichloropropene	0.22-0.35	1.3-2.4		ND	ND	ND	ND	ND	ND	ND
c-1,3-Dichloropropene	0.17-0.72	0.67-1.2		ND	ND	ND	ND	ND	ND	ND
t-1,3-Dichloropropene	0.18-0.65	1.3-2.4		ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	0.1-2.1	0.67-1.2		ND	ND	ND	ND	ND	ND	ND
2-Hexanone	0.65-1.9	13-24		ND	ND	ND	ND	ND	ND	ND
Isopropylbenzene	0.37-0.75	0.67-1.2		ND	ND	ND	ND	ND	ND	ND
p-Isopropyltoluene	0.42-1.6	0.67-1.2		ND	ND	ND	ND	ND	ND	ND
Methylene Chloride	0.9-5.1	6.7-12		ND	ND	ND	ND	ND	ND	ND
4-Methyl-2-Pentanone	0.97-4.7	13-24		ND	ND	ND	ND	ND	ND	ND
Naphthalene	0.54-0.88	0.67-1.2		ND	ND	ND	ND	ND	ND	ND
n-Propylbenzene	0.34-0.72	1.3-2.4		ND	ND	ND	ND	ND	ND	ND
Styrene	0.29-0.65	0.67-1.2		ND	ND	ND	ND	ND	ND	ND
1,1,1,2-Tetrachloroethane	0.16-0.41	0.67-1.2		ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	0.23-0.37	1.3-2.4		ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene	0.14-0.61	0.67-1.2	1.00E+05	ND	ND	ND	ND	**1.2**	ND	ND
Toluene	0.34-1.1	0.67-1.2		ND	ND	ND	ND	ND	ND	ND
1,2,3-Trichlorobenzene	0.37-0.99	1.3-2.4		ND	ND	ND	ND	ND	ND	ND
1,2,4-Trichlorobenzene	0.21-0.34	1.3-2.4		ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	0.15-0.42	0.67-1.2		ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	0.24-0.42	0.67-1.2		ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.24-0.38	6.7-12		ND	ND	ND	ND	ND	ND	ND
Trichloroethene	0.2-0.45	1.3-2.4	6.00E+03	**0.57J**	ND	ND	ND	**0.56J**	ND	ND
Trichlorofluoromethane	0.25-0.99	6.7-12		ND	ND	ND	ND	ND	ND	ND
1,2,3-Trichloropropane	0.56-0.9	1.3-2.4		ND	ND	ND	ND	ND	ND	ND
1,2,4-Trimethylbenzene	0.39-0.65	1.3-2.4		ND	ND	ND	ND	ND	ND	ND
1,3,5-Trimethylbenzene	0.37-5.7	1.3-2.4		ND	ND	ND	ND	ND	ND	ND
Vinyl Acetate	0.6-5.1	6.7-12		ND	ND	ND	ND	ND	ND	ND
Vinyl Chloride	0.32-0.54	0.67-1.2		ND	ND	ND	ND	ND	ND	ND
p/m-Xylene	0.18-0.66	1.3-2.4		ND	ND	ND	ND	ND	ND	ND
o-Xylene	0.35-0.6	0.67-1.2		ND	ND	ND	ND	ND	ND	ND
Methyl-t-Butyl Ether (MTBE)	0.2-6.2	1.3-2.4		ND	ND	ND	ND	ND	ND	ND
Tert-Butyl Alcohol (TBA)	0.57-5.6	13-21		ND	**4.8J**	ND	ND	**5.8J**	ND	ND
Diisopropyl Ether (DIPE)	0.32-0.6	0.67-1.2		ND	ND	ND	ND	ND	ND	ND
Ethyl-t-Butyl Ether (ETBE)	0.34-0.55	0.67-1.2		ND	ND	ND	ND	ND	ND	ND
Tert-Amyl-Methyl Ether (TAME)	0.24-100	0.67-1.2		ND	ND	ND	ND	ND	ND	ND
Ethanol	56-90	330-600		ND	ND	ND	ND	ND	ND	ND
			Dilution Factor:	1	1	1	1	1	1	1

NOTES:
VOC = Volatile Organic Compound
RL = Reporting Limit
MDL = Method Detection Limit
ND = Indicated constituents not detected above the MDL
µg/L = micrograms per liter
J = Analyte detected; However result is an estimated value between the MDL and the RL

ALTA ENVIRONMENTAL

TABLE 2
Soil Matrix Sample Results for Title 22 Metals
Phase II Panama Street
12870 Panama Street
Los Angeles, California

Sample ID	Title 22 Metals by EPA Method 6010B/7471A (mg/kg) and Mecury by EPA Method 7471 (mg/kg) in Soil																	
	Sample Date	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper	Lead	Molybdenum	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc	Mercury (By EPA 7471)
MDL (mg/kg):		**0.143-0.154**	**0.249-0.269**	**0.148-0.16**	**0.132-0.142**	**0.13-0.14**	**0.137-0.147**	**0.142-0.153**	**0.13-0.14**	**0.127-0.136**	**0.127-0.137**	**0.139-0.15**	**0.288-0.31**	**0.0824-0.0888**	**0.146-0.157**	**0.136-0.146**	**0.171-0.184**	**0.00559-0.00618**
RL (mg/kg):		**0.721-0.777**	**0.721-0.777**	**0.481-0.518**	**0.24-0.259**	**0.481-0.518**	**0.24-0.259**	**0.24-0.259**	**0.481-0.518**	**0.481-0.518**	**0.24-0.259**	**0.24-0.259**	**0.721-0.777**	**0.24-0.259**	**0.721-0.777**	**0.24-0.259**	**0.962-1.04**	**0.0794-0.0877**
CHHSLs Ind (mg/kg):		**380**	**0.24**	**63,000**	**190.0**	**7.5**	**100,000**	**3,200**	**38,000**	**320**	**4,800**	**16,000**	**4,800**	**4,800**	**63**	**6,700**	**100,000**	**180**
B4-5	8/6/2015	ND	**10.2**	**172**	**0.803**	**1.35**	**51.6**	**16.2**	**47.2**	**10.7**	ND	**42.3**	ND	ND	**0.391J**	**62.1**	**96.6**	**0.0235J**
B5-10	8/6/2015	ND	**5.48**	**93.4**	**0.385**	**0.963**	**28.3**	**7.66**	**28.8**	**8.28**	**0.707**	**22.4**	ND	ND	**0.281J**	**40.5**	**62.1**	**0.0168J**
B6-5	8/5/2015	ND	**8.31**	**168**	**0.771**	**1.56**	**42.6**	**10.8**	**34.2**	**19.8**	ND	**32**	ND	ND	ND	**51.2**	**76.7**	**0.0313J**
B6-10	8/5/2015	ND	**4.07**	**51.4**	**0.326**	**1.03**	**20.3**	**5.38**	**13**	**10.4**	ND	**17.3**	ND	ND	**0.295J**	**33.4**	**34.5**	**0.00749J**
B7-5	8/5/2015	ND	**17.1**	**167**	**0.73**	**1.85**	**38**	**11.4**	**28.1**	**20.1**	ND	**31**	ND	ND	ND	**58.1**	**69**	**0.0277J**
B7-10	8/5/2015	ND	ND	**66.5**	**0.374**	**1.01**	**23.1**	**6.72**	**14.6**	**11.2**	ND	**20.3**	ND	ND	ND	**34.5**	**39.9**	**0.0171J**
B8-2.5	8/5/2015	ND	**2.95**	**92.8**	**0.356**	**1.2**	**26.4**	**8.68**	**21.8**	**3.75**	ND	**18.1**	ND	ND	**0.638J**	**36.6**	**46.1**	ND
B9-2.5	8/5/2015	ND	**7.39**	**96.1**	**0.463**	**1.41**	**31.8**	**7.29**	**125**	**17.4**	ND	**16.1**	ND	ND	**0.486J**	**39.2**	**65.9**	**0.0511J**
B10-2.5	8/6/2015	ND	**4.04**	**111**	**0.444**	**1.62**	**38.6**	**9.38**	**172**	**24.4**	ND	**22.4**	ND	ND	**0.722J**	**44.3**	**91.9**	**0.0375J**
B11-2.5	8/5/2015	ND	**4.76**	**114**	**0.694**	**1.52**	**39.3**	**13**	**23.8**	**18.2**	ND	**32.7**	ND	ND	ND	**62.3**	**58.9**	**0.00825J**
B11-10	8/5/2015	ND	**3.12**	**71.7**	**0.392**	**1.35**	**29.9**	**7.1**	**15.2**	**12.7**	ND	**26.2**	ND	ND	ND	**43.7**	**44**	**0.0235J**
B12-2.5	8/5/2015	ND	**5.86**	**95.9**	**0.526**	**1.43**	**33.3**	**9.32**	**61.4**	**16.4**	ND	**18.7**	ND	ND	ND	**43.6**	**61.7**	**0.0227J**

NOTES:
mg/kg = milligrams per kilogram
ND = Indicates constituent not detected at or above the MDL
MDL = Method Detection Limit
RL = Reporting Limit
J = Analyte detected; however result is an estimated value between the MDL and the RL
CHHSLs = California Health Hazard Screening Level, industrial/commercial land use scenario

TABLE 3
Soil Matrix Sample Results for TPH
Phase II Panama Street
12870 Panama Street
Los Angeles, California

Sample ID	Sample Date	TPHcc by EPA Method 8015M in Soil		
		TPH-GRO (C4-C12) (mg/kg)	TPH-DRO (C10-C28) (mg/kg)	TPH-ORO (C28-C36+) (mg/kg)
	MDL (mg/kg):	**0.4-0.44**	**1.2-1.3**	**5.9-6**
	RL (mg/kg):	**0.48-0.53**	**4.9-5.0**	**25.0**
B1-10	8/6/2015	ND	ND	ND
B2-10	8/6/2015	ND	ND	ND
B3-5	8/6/2015	ND	**3.3J**	ND
B3-10	8/6/2015	ND	ND	ND
B4-5	8/6/2015	ND	**19**	**120**
B5-10	8/6/2015	ND	**17**	ND
B6-5	8/5/2015	ND	**1.3J**	ND
B6-10	8/5/2015	ND	**1.7J**	ND
B7-5	8/5/2015	ND	**2.6J**	ND
B7-10	8/5/2015	ND	ND	ND
B8-2.5	8/5/2015	ND	**2.0J**	ND
B8-5	8/5/2015	ND	**5.7**	ND
B8-10	8/5/2015	ND	**4.9J**	ND
B9-2.5	8/5/2015	ND	**2.7J**	ND
B9-5	8/5/2015	ND	**4.0J**	ND
B9-10	8/5/2015	ND	**2.7J**	ND
B10-2.5	8/6/2015	ND	ND	ND
B10-5	8/6/2015	ND	ND	ND
B10-10	8/6/2015	ND	ND	ND
B11-2.5	8/5/2015	ND	**1.9J**	ND
B11-5	8/5/2015	ND	**6.9**	ND
B11-10	8/5/2015	ND	ND	ND
B12-2.5	8/5/2015	ND	**2.3J**	ND
B12-5	8/5/2015	ND	ND	ND
B12-10	8/5/2015	ND	ND	ND

NOTES:

ND = Indicates constituents not detected above the PQL

PQL = Practical Quantitation Limit

TPH-GRO = total petroleum hydrocarbons as gasoline range organics

TPH-DRO = total petroleum hydrocarbons as diesel range organics

TPH-ORO = total petroleum hydrocarbons as oil range organics

mg/kg = milligrams per kilogram

bgs = Below ground surface

TABLE 4
Soil Matrix Sample Results for PCBs and PAHs
Phase II Panama Street
12870 Panama Street
Los Angeles, California

Sample ID	Sample Date	EPA 8082	EPA8310		B(a)P Equivalent
		PCBs	Benzo(k)Fluoranthene	All Other PAHs	
MDL (µg/kg):		**21-43**	**1.7**	**NA**	**NA**
RL (µg/kg):		**50.0**	**10**	**NA**	**NA**
Screening Level (µg/kg):		**NA**	**NA**	**NA**	**900.0**
B4-5	8/6/2015	ND	**38**	ND	**0.38**
B5-10	8/6/2015	ND	ND	ND	NA

NOTES:
ND = Indicates constituent not detected at or above the MDL
MDL = Method Detection Limit
RL = Practical Quantitation Limit
µg/kg = micrograms per kilogram
NA = Not Applicable

TABLE 5
Soil Vapor Sample Results for VOCs
Phase II Panama Street
12870 Panama Street
Los Angeles, California

VOCs in Soil Vapor by EPA Method 8260B	MDL (µg/L):	RL (µg/L):	CHHSLs Ind (µg/L):	Sample ID: B4-5	B4-10	B5-5-1PV	B5-5-3PV	B5-5-10PV	B5-10	B6-5	B6-10
				Date: 8/10/2015	8/10/2015	8/10/2015	8/10/2015	8/10/2015	8/10/2015	8/10/2015	8/10/2015
				VOC Concentration (µg/L)							
Acetone	5	10	--	ND	ND	ND	ND	ND	ND	ND	ND
t-Amyl Methyl Ether (TAME)	0.05	0.1	--	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	0.04	0.05	**0.122**	ND	ND	ND	ND	ND	ND	ND	ND
Bromobenzene	0.05	0.1	--	ND	ND	ND	ND	ND	ND	ND	ND
Bromochloromethane	0.05	0.1	--	ND	ND	ND	ND	ND	ND	ND	ND
Bromodichloromethane	0.05	0.1	--	ND	ND	ND	ND	ND	ND	ND	ND
Bromoform	0.05	0.1	--	ND	ND	ND	ND	ND	ND	ND	ND
Bromomethane	0.1	0.2	--	ND	ND	ND	ND	ND	ND	ND	ND
t-Butanol (TBA)	0.5	1	--	ND	ND	ND	ND	ND	ND	ND	ND
2-Butanone (MEK)	0.5	1	--	ND	ND	ND	ND	ND	ND	ND	ND
n-Butylbenzene	0.05	0.1	--	ND	ND	ND	ND	ND	ND	ND	ND
sec-Butylbenzene	0.05	0.1	--	ND	ND	ND	ND	ND	ND	ND	ND
tert-Butylbenzene	0.05	0.1	--	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Disulfide	0.5	1	--	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Tetrachloride	0.03	0.05	**0.085**	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	0.05	0.1	--	ND	ND	ND	ND	ND	ND	ND	ND
Chloroethane	0.05	0.1	--	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	0.05	0.1	--	ND	ND	ND	ND	ND	ND	ND	ND
Chloromethane	0.1	0.2	--	ND	ND	ND	ND	ND	ND	ND	ND
2-Chlorotoluene	0.05	0.1	--	ND	ND	ND	ND	ND	ND	ND	ND
4-Chlorotoluene	0.05	0.1	--	ND	ND	ND	ND	ND	ND	ND	ND
Dibromochloromethane	0.05	0.1	--	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromoethane (EDB)	0.02	0.1	--	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromo-3-Chloropropane	0.02	0.1	--	ND	ND	ND	ND	ND	ND	ND	ND
Dibromomethane	0.05	0.1	--	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	0.05	0.1	--	ND	ND	ND	ND	ND	ND	ND	ND
1,3-Dichlorobenzene	0.05	0.1	--	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	0.05	0.1	--	ND	ND	ND	ND	ND	ND	ND	ND
Dichlorodifluoromethane	0.05	0.1	--	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	0.05	0.1	--	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	0.05	0.1	**0.167**	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene	0.05	0.1	--	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene	0.05	0.1	**44.4**	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene	0.05	0.1	**88.7**	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	0.05	0.1	--	ND	ND	ND	ND	ND	ND	ND	ND
1,3-Dichloropropane	0.05	0.1	--	ND	ND	ND	ND	ND	ND	ND	ND
2,2-Dichloropropane	0.05	0.1	--	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloropropene	0.05	0.1	--	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene	0.05	0.1	--	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene	0.05	0.1	--	ND	ND	ND	ND	ND	ND	ND	ND
Diisopropyl Ether (DiPE)	0.05	0.1	--	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	0.05	0.1	**1.4**	ND	ND	ND	ND	ND	ND	ND	ND
Ethyl-t-Butyl Ether (EtBE)	0.05	0.1	--	ND	ND	ND	ND	ND	ND	ND	ND
Hexachlorobutadiene	0.05	0.1	--	ND	ND	ND	ND	ND	ND	ND	ND
2-Hexanone	0.5	1	--	ND	ND	ND	ND	ND	ND	ND	ND
Isopropylbenzene	0.05	0.1	--	ND	ND	ND	ND	ND	ND	ND	ND
4-Isopropyltoluene	0.05	0.1	--	ND	ND	ND	ND	ND	ND	ND	ND
Methylene Chloride	0.05	0.1	--	ND	ND	ND	ND	ND	ND	ND	ND
4-Methyl-2-Pentanone (MIBK)	0.5	1	--	ND	ND	ND	ND	ND	ND	ND	ND
Methyl-t-butyl Ether (MtBE)	0.05	0.1	**13**	ND	ND	ND	ND	ND	ND	ND	ND
Naphthalene	0.03	0.05	**0.11**	ND	ND	ND	ND	ND	ND	ND	ND
n-Propylbenzene	0.05	0.1	--	ND	ND	ND	ND	ND	ND	ND	ND
Styrene	0.05	0.1	--	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1,2-Tetrachloroethane	0.05	0.1	--	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	0.05	0.1	--	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene	0.05	0.1	**0.6**	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	0.05	0.1	**380**	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3-Trichlorobenzene	0.05	0.1	--	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trichlorobenzene	0.05	0.1	--	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	0.05	0.1	**2,800**	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	0.05	0.1	--	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	0.05	0.1	**1.8**	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3-Trichloropropane	0.02	0.1	--	ND	ND	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane	0.05	0.1	--	ND	ND	ND	ND	ND	ND	ND	ND
Trichlorotrifluoroethane	0.1	0.2	--	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trimethylbenzene	0.05	0.1	--	ND	ND	ND	ND	ND	ND	ND	ND
1,3,5-Trimethylbenzene	0.05	0.1	--	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl Chloride	0.01	0.05	**0.045**	ND	ND	ND	ND	ND	ND	ND	ND
m,p-Xylenes	0.1	0.2	**890**	ND	ND	ND	ND	ND	ND	ND	ND
o-Xylene	0.05	0.1	**880**	ND	ND	ND	ND	ND	ND	ND	ND
			Dilution Factor:	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**

NOTES:
VOC = Volatile Organic Compound
RL = Reporting Limit
MDL = Method Detection Limit
ND = Indicated constituents not detected above the MDL
µg/L = micrograms per liter
J = Analyte detected; However result is an estimated value between the MDL and the RL
CHHSLs = California Human Health Screening Levels, Industrial

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TABLE 5
Soil Vapor Sample Results for VOCs
Phase II Panama Street
12870 Panama Street
Los Angeles, California

VOCs in Soil Vapor by EPA Method 8260B	MDL (µg/L):	RL (µg/L):	CHHSLs Ind (µg/L):	Sample ID:	B7-5	B7-10	B7-10-DUP	B8-5	B8-10	B9-5	B9-10	B10-5
				Date:	8/10/2015	8/10/2015	8/10/2015	8/10/2015	8/10/2015	8/10/2015	8/10/2015	8/10/2015
					VOC Concentration (µg/L)							
Acetone	5	10	--		ND	ND	ND	ND	ND	ND	ND	ND
t-Amyl Methyl Ether (TAME)	0.05	0.1	--		ND	ND	ND	ND	ND	ND	ND	ND
Benzene	0.04	0.05	**0.122**		**0.055**	ND	ND	**0.093**	ND	**0.061**	ND	ND
Bromobenzene	0.05	0.1	--		ND	ND	ND	ND	ND	ND	ND	ND
Bromochloromethane	0.05	0.1	--		ND	ND	ND	ND	ND	ND	ND	ND
Bromodichloromethane	0.05	0.1	--		ND	ND	ND	ND	ND	ND	ND	ND
Bromoform	0.05	0.1	--		ND	ND	ND	ND	ND	ND	ND	ND
Bromomethane	0.1	0.2	--		ND	ND	ND	ND	ND	ND	ND	ND
t-Butanol (TBA)	0.5	1	--		ND	ND	ND	ND	ND	ND	ND	ND
2-Butanone (MEK)	0.5	1	--		ND	ND	ND	ND	ND	ND	ND	ND
n-Butylbenzene	0.05	0.1	--		ND	ND	ND	ND	ND	ND	ND	ND
sec-Butylbenzene	0.05	0.1	--		ND	ND	ND	ND	ND	ND	ND	ND
tert-Butylbenzene	0.05	0.1	--		ND	ND	ND	ND	ND	ND	ND	ND
Carbon Disulfide	0.5	1	--		ND	ND	ND	ND	ND	ND	ND	ND
Carbon Tetrachloride	0.03	0.05	**0.085**		ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	0.05	0.1	--		ND	ND	ND	ND	ND	ND	ND	ND
Chloroethane	0.05	0.1	--		ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	0.05	0.1	--		ND	ND	ND	ND	ND	ND	ND	ND
Chloromethane	0.1	0.2	--		ND	ND	ND	ND	ND	ND	ND	ND
2-Chlorotoluene	0.05	0.1	--		ND	ND	ND	ND	ND	ND	ND	ND
4-Chlorotoluene	0.05	0.1	--		ND	ND	ND	ND	ND	ND	ND	ND
Dibromochloromethane	0.05	0.1	--		ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromoethane (EDB)	0.02	0.1	--		ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromo-3-Chloropropane	0.02	0.1	--		ND	ND	ND	ND	ND	ND	ND	ND
Dibromomethane	0.05	0.1	--		ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	0.05	0.1	--		ND	ND	ND	ND	ND	ND	ND	ND
1,3-Dichlorobenzene	0.05	0.1	--		ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	0.05	0.1	--		ND	ND	ND	ND	ND	ND	ND	ND
Dichlorodifluoromethane	0.05	0.1	--		ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	0.05	0.1	--		ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	0.05	0.1	**0.167**		ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene	0.05	0.1	--		ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene	0.05	0.1	**44.4**		ND	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene	0.05	0.1	**88.7**		ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	0.05	0.1	--		ND	ND	ND	ND	ND	ND	ND	ND
1,3-Dichloropropane	0.05	0.1	--		ND	ND	ND	ND	ND	ND	ND	ND
2,2-Dichloropropane	0.05	0.1	--		ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloropropene	0.05	0.1	--		ND	ND	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene	0.05	0.1	--		ND	ND	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene	0.05	0.1	--		ND	ND	ND	ND	ND	ND	ND	ND
Diisopropyl Ether (DiPE)	0.05	0.1	--		ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	0.05	0.1	**1.4**		ND	ND	ND	**0.094J**	ND	ND	ND	ND
Ethyl-t-Butyl Ether (EtBE)	0.05	0.1	--		ND	ND	ND	ND	ND	ND	ND	ND
Hexachlorobutadiene	0.05	0.1	--		ND	ND	ND	ND	ND	ND	ND	ND
2-Hexanone	0.5	1	--		ND	ND	ND	ND	ND	ND	ND	ND
Isopropylbenzene	0.05	0.1	--		ND	ND	ND	ND	ND	ND	ND	ND
4-Isopropyltoluene	0.05	0.1	--		ND	ND	ND	ND	ND	ND	ND	ND
Methylene Chloride	0.05	0.1	--		ND	ND	ND	ND	ND	ND	ND	ND
4-Methyl-2-Pentanone (MIBK)	0.5	1	--		ND	ND	ND	ND	ND	ND	ND	ND
Methyl-t-butyl Ether (MtBE)	0.05	0.1	**13**		ND	ND	ND	ND	ND	ND	ND	ND
Naphthalene	0.03	0.05	**0.11**		ND	ND	ND	ND	ND	ND	ND	ND
n-Propylbenzene	0.05	0.1	--		ND	ND	ND	ND	ND	ND	ND	ND
Styrene	0.05	0.1	--		ND	ND	ND	ND	ND	ND	ND	ND
1,1,1,2-Tetrachloroethane	0.05	0.1	--		ND	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	0.05	0.1	--		ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene	0.05	0.1	**0.6**		ND	ND	ND	ND	ND	ND	ND	ND
Toluene	0.05	0.1	**380**		**0.14**	**0.060J**	**0.063J**	**0.37**	ND	**0.15**	ND	**0.11**
1,2,3-Trichlorobenzene	0.05	0.1	--		ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trichlorobenzene	0.05	0.1	--		ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	0.05	0.1	**2,800**		ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	0.05	0.1	--		ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	0.05	0.1	**1.8**		ND	ND	ND	ND	ND	ND	ND	**0.29**
1,2,3-Trichloropropane	0.02	0.1	--		ND	ND	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane	0.05	0.1	--		ND	ND	ND	ND	ND	ND	ND	ND
Trichlorotrifluoroethane	0.1	0.2	--		ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trimethylbenzene	0.05	0.1	--		ND	ND	ND	ND	ND	ND	ND	ND
1,3,5-Trimethylbenzene	0.05	0.1	--		ND	ND	ND	ND	ND	ND	ND	ND
Vinyl Chloride	0.01	0.05	**0.045**		ND	ND	ND	ND	ND	ND	ND	ND
m,p-Xylenes	0.1	0.2	**890**		**0.11J**	ND	ND	**0.27**	ND	**0.13J**	ND	**0.12J**
o-Xylene	0.05	0.1	**880**		ND	ND	ND	**0.080J**	ND	ND	ND	ND
				Dilution Factor:	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**

NOTES:
VOC = Volatile Organic Compound
RL = Reporting Limit
MDL = Method Detection Limit
ND = Indicated constituents not detected above the MDL
µg/L = micrograms per liter
J = Analyte detected; However result is an estimated value between the MDL and the RL
CHHSLs = California Human Health Screening Levels, Industrial

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TABLE 5
Soil Vapor Sample Results for VOCs
Phase II Panama Street
12870 Panama Street
Los Angeles, California

VOCs in Soil Vapor by EPA Method 8260B	MDL (µg/L):	RL (µg/L):	CHHSLs Ind (µg/L):	Sample ID: B10-10	B11-6	B11-9.5	B12-5	B12-10	B12-10-DUP
				Date: 8/10/2015	8/10/2015	8/10/2015	8/10/2015	8/10/2015	8/10/2015
				VOC Concentration (µg/L)					
Acetone	5	10	--	ND	ND	ND	ND	ND	ND
t-Amyl Methyl Ether (TAME)	0.05	0.1	--	ND	ND	ND	ND	ND	ND
Benzene	0.04	0.05	**0.122**	ND	**0.060**	**0.081**	**0.044J**	**0.041J**	**0.045J**
Bromobenzene	0.05	0.1	--	ND	ND	ND	ND	ND	ND
Bromochloromethane	0.05	0.1	--	ND	ND	ND	ND	ND	ND
Bromodichloromethane	0.05	0.1	--	ND	ND	ND	ND	ND	ND
Bromoform	0.05	0.1	--	ND	ND	ND	ND	ND	ND
Bromomethane	0.1	0.2	--	ND	ND	ND	ND	ND	ND
t-Butanol (TBA)	0.5	1	--	ND	ND	ND	ND	ND	ND
2-Butanone (MEK)	0.5	1	--	ND	ND	ND	ND	ND	ND
n-Butylbenzene	0.05	0.1	--	ND	ND	ND	ND	ND	ND
sec-Butylbenzene	0.05	0.1	--	ND	ND	ND	ND	ND	ND
tert-Butylbenzene	0.05	0.1	--	ND	ND	ND	ND	ND	ND
Carbon Disulfide	0.5	1	--	ND	ND	ND	ND	ND	ND
Carbon Tetrachloride	0.03	0.05	**0.085**	ND	ND	ND	ND	ND	ND
Chlorobenzene	0.05	0.1	--	ND	ND	ND	ND	ND	ND
Chloroethane	0.05	0.1	--	ND	ND	ND	ND	ND	ND
Chloroform	0.05	0.1	--	ND	ND	ND	ND	ND	ND
Chloromethane	0.1	0.2	--	ND	ND	ND	ND	ND	ND
2-Chlorotoluene	0.05	0.1	--	ND	ND	ND	ND	ND	ND
4-Chlorotoluene	0.05	0.1	--	ND	ND	ND	ND	ND	ND
Dibromochloromethane	0.05	0.1	--	ND	ND	ND	ND	ND	ND
1,2-Dibromoethane (EDB)	0.02	0.1	--	ND	ND	ND	ND	ND	ND
1,2-Dibromo-3-Chloropropane	0.02	0.1	--	ND	ND	ND	ND	ND	ND
Dibromomethane	0.05	0.1	--	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	0.05	0.1	--	ND	ND	ND	ND	ND	ND
1,3-Dichlorobenzene	0.05	0.1	--	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	0.05	0.1	--	ND	ND	ND	ND	ND	ND
Dichlorodifluoromethane	0.05	0.1	--	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	0.05	0.1	--	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	0.05	0.1	**0.167**	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene	0.05	0.1	--	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene	0.05	0.1	**44.4**	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene	0.05	0.1	**88.7**	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	0.05	0.1	--	ND	ND	ND	ND	ND	ND
1,3-Dichloropropane	0.05	0.1	--	ND	ND	ND	ND	ND	ND
2,2-Dichloropropane	0.05	0.1	--	ND	ND	ND	ND	ND	ND
1,1-Dichloropropene	0.05	0.1	--	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene	0.05	0.1	--	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene	0.05	0.1	--	ND	ND	ND	ND	ND	ND
Diisopropyl Ether (DiPE)	0.05	0.1	--	ND	ND	ND	ND	ND	ND
Ethylbenzene	0.05	0.1	**1.4**	ND	ND	ND	ND	ND	ND
Ethyl-t-Butyl Ether (EtBE)	0.05	0.1	--	ND	ND	ND	ND	ND	ND
Hexachlorobutadiene	0.05	0.1	--	ND	ND	ND	ND	ND	ND
2-Hexanone	0.5	1	--	ND	ND	ND	ND	ND	ND
Isopropylbenzene	0.05	0.1	--	ND	ND	ND	ND	ND	ND
4-Isopropyltoluene	0.05	0.1	--	ND	ND	ND	ND	ND	ND
Methylene Chloride	0.05	0.1	--	ND	ND	ND	ND	ND	ND
4-Methyl-2-Pentanone (MIBK)	0.5	1	--	ND	ND	ND	ND	ND	ND
Methyl-t-butyl Ether (MtBE)	0.05	0.1	**13**	ND	ND	ND	ND	ND	ND
Naphthalene	0.03	0.05	**0.11**	ND	ND	ND	ND	ND	ND
n-Propylbenzene	0.05	0.1	--	ND	ND	ND	ND	ND	ND
Styrene	0.05	0.1	--	ND	ND	ND	ND	ND	ND
1,1,1,2-Tetrachloroethane	0.05	0.1	--	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	0.05	0.1	--	ND	ND	ND	ND	ND	ND
Tetrachloroethene	0.05	0.1	**0.6**	ND	ND	ND	**0.47**	**0.40**	**0.40**
Toluene	0.05	0.1	**380**	**ND**	**0.22**	**0.10**	**0.13**	ND	ND
1,2,3-Trichlorobenzene	0.05	0.1	--	ND	ND	ND	ND	ND	ND
1,2,4-Trichlorobenzene	0.05	0.1	--	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	0.05	0.1	**2,800**	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	0.05	0.1	--	ND	ND	ND	ND	ND	ND
Trichloroethene	0.05	0.1	**1.8**	**0.16**	ND	ND	**0.076J**	**0.099J**	**0.096J**
1,2,3-Trichloropropane	0.02	0.1	--	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane	0.05	0.1	--	ND	ND	ND	ND	ND	ND
Trichlorotrifluoroethane	0.1	0.2	--	ND	ND	ND	ND	ND	ND
1,2,4-Trimethylbenzene	0.05	0.1	--	ND	ND	ND	ND	ND	ND
1,3,5-Trimethylbenzene	0.05	0.1	--	ND	ND	ND	ND	ND	ND
Vinyl Chloride	0.01	0.05	**0.045**	ND	ND	ND	ND	ND	ND
m,p-Xylenes	0.1	0.2	**890**	ND	**0.16J**	ND	**0.17J**	ND	ND
o-Xylene	0.05	0.1	**880**	ND	**0.10**	ND	**0.058J**	ND	ND
			Dilution Factor:	**1**	**1**	**1**	**1**	**1**	**1**

NOTES:
VOC = Volatile Organic Compound
RL = Reporting Limit
MDL = Method Detection Limit
ND = Indicated constituents not detected above the MDL
µg/L = micrograms per liter
J = Analyte detected; However result is an estimated value between the MDL and the RL
CHHSLs = California Human Health Screening Levels, Industrial

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TABLE 6
Water Sample Results for VOCs
Phase II Panama Street
12870 Panama Street
Los Angeles, California

VOCs by EPA Method 8260B in Water			Sample ID:	B8	B11	B5
			Date:	8/5/2015	8/5/2015	8/6/2015
	MDL (µg/L):	RL (µg/L):	MCLs (ug/L)	VOC Concentration (ug/L)		
Acetone	10	20		ND	ND	ND
Benzene	0.14	0.50	**1**	ND	ND	ND
Bromobenzene	0.30	1.0		ND	ND	ND
Bromochloromethane	0.48	1.0		ND	ND	ND
Bromodichloromethane	0.21	1.0		ND	ND	ND
Bromoform	0.50	1.0		ND	ND	ND
Bromomethane	3.9	10		ND	ND	ND
2-Butanone	2.2	10		ND	ND	**4.8J**
n-Butylbenzene	0.23	1.0		ND	ND	ND
sec-Butylbenzene	0.25	1.0		ND	ND	ND
tert-Butylbenzene	0.28	1.0		ND	ND	ND
Carbon Disulfide	0.41	10		ND	ND	ND
Carbon Tetrachloride	0.23	0.50	**0.5**	ND	ND	ND
Chlorobenzene	0.17	1.0		ND	ND	ND
Chloroethane	2.3	5.0		ND	ND	ND
Chloroform	0.46	1.0		ND	ND	ND
Chloromethane	1.8	10		ND	ND	ND
2-Chlorotoluene	0.24	1.0		ND	ND	ND
4-Chlorotoluene	0.13	1.0		ND	ND	ND
Dibromochloromethane	0.25	1.0		ND	ND	ND
1,2-Dibromo-3-Chloropropane	1.2	5.0		ND	ND	ND
1,2-Dibromoethane	0.36	1.0		ND	ND	ND
Dibromomethane	0.46	1.0		ND	ND	ND
1,2-Dichlorobenzene	0.46	1.0	**600**	ND	ND	ND
1,3-Dichlorobenzene	0.40	1.0		ND	ND	ND
1,4-Dichlorobenzene	0.43	1.0	**5.0**	ND	ND	ND
Dichlorodifluoromethane	0.46	1.0		ND	ND	ND
1,1-Dichloroethane	0.28	1.0	**5.0**	ND	ND	ND
1,2-Dichloroethane	0.24	0.50	**0.5**	ND	ND	ND
1,1-Dichloroethene	0.43	1.0	**6.0**	ND	ND	ND
c-1,2-Dichloroethene	0.48	1.0	**6.0**	ND	ND	ND
t-1,2-Dichloroethene	0.37	1.0	**10**	ND	ND	ND
1,2-Dichloropropane	0.42	1.0	**5.0**	ND	ND	ND
1,3-Dichloropropane	0.30	1.0		ND	ND	ND
2,2-Dichloropropane	0.36	1.0		ND	ND	ND
1,1-Dichloropropene	0.46	1.0		ND	ND	ND
c-1,3-Dichloropropene	0.25	0.50		ND	ND	ND
t-1,3-Dichloropropene	0.25	0.50		ND	ND	ND
Ethylbenzene	0.14	1.0	**300**	ND	ND	ND
2-Hexanone	2.1	10		ND	ND	ND
Isopropylbenzene	0.58	1.0		ND	ND	ND
p-Isopropyltoluene	0.16	1.0		ND	ND	ND
Methylene Chloride	0.64	10		ND	ND	ND
4-Methyl-2-Pentanone	4.4	10		ND	ND	ND
Naphthalene	2.5	10		ND	ND	ND
n-Propylbenzene	0.17	1.0		ND	ND	ND
Styrene	0.17	1.0	**100**	ND	ND	ND
1,1,1,2-Tetrachloroethane	0.40	1.0		ND	ND	ND
1,1,2,2-Tetrachloroethane	0.41	1.0	**1**	ND	ND	ND
Tetrachloroethene	0.39	1.0	**5**	ND	ND	ND
Toluene	0.24	1.0	**150**	ND	ND	ND
1,2,3-Trichlorobenzene	0.51	1.0		ND	ND	ND
1,2,4-Trichlorobenzene	0.50	1.0	**5**	ND	ND	ND
1,1,1-Trichloroethane	0.30	1.0	**200**	ND	ND	ND
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.78	10	**1,200**	ND	ND	ND
1,1,2-Trichloroethane	0.38	1.0	**5**	ND	ND	ND
Trichloroethene	0.37	1.0	**5**	ND	ND	ND
Trichlorofluoromethane	1.7	10	**150**	ND	ND	ND
1,2,3-Trichloropropane	0.64	5.0		ND	ND	ND
1,2,4-Trimethylbenzene	0.36	1.0		ND	ND	ND
1,3,5-Trimethylbenzene	0.28	1.0		ND	ND	ND
Vinyl Acetate	2.8	10		ND	ND	ND
Vinyl Chloride	0.30	0.50	**0.5**	ND	ND	ND
p/m-Xylene	0.30	1.0		ND	ND	ND
o-Xylene	0.23	1.0		ND	ND	ND
Methyl-t-Butyl Ether (MTBE)	0.31	1.0	**13**	ND	ND	ND
Tert-Butyl Alcohol (TBA)	4.6	10		ND	ND	ND
Diisopropyl Ether (DIPE)	0.33	2.0		ND	ND	ND
Ethyl-t-Butyl Ether (ETBE)	0.44	2.0		ND	ND	ND
Tert-Amyl-Methyl Ether (TAME)	0.22	2.0		ND	ND	ND
Ethanol	50	100		ND	ND	ND
			Dilution Factor:	**1**	**1**	**1**

NOTES:

VOC = Volatile Organic Compound

MDL = Method Detection Limit

RL = Reporting Limit

MCLs = California Department of Public Health Maximum Contaminant Levels, Updated July 2014

ND = Indicated constituents not detected at or above the MDL

J = Analyte detected; however, result is an estimated value between the MDL and RL.

µg/L = micrograms per liter

TABLE 7
Water Sample Results for TPH
Phase II Panama Street
12870 Panama Street
Los Angeles, California

TPHcc by EPA Method 8015M in Water				
Sample ID	Sample Date	TPH-GRO (C6-C10) (ug/L)	TPH-DRO (C10-C22) (ug/L)	TPH-ORO (C23+) (ug/L)
MDL (ug/L):		**48**	**8.0**	**53**
RL (µg/L)		**50**	**50.0**	**250**
B8	8/5/2015	ND	**65**	ND
B11	8/5/2015	ND	**37J**	ND
B5	8/6/2015	ND	**1,500**	**190J**

NOTES:

ND = Indicates constituents not detected above the PQL

MDL = Method Detection Limit

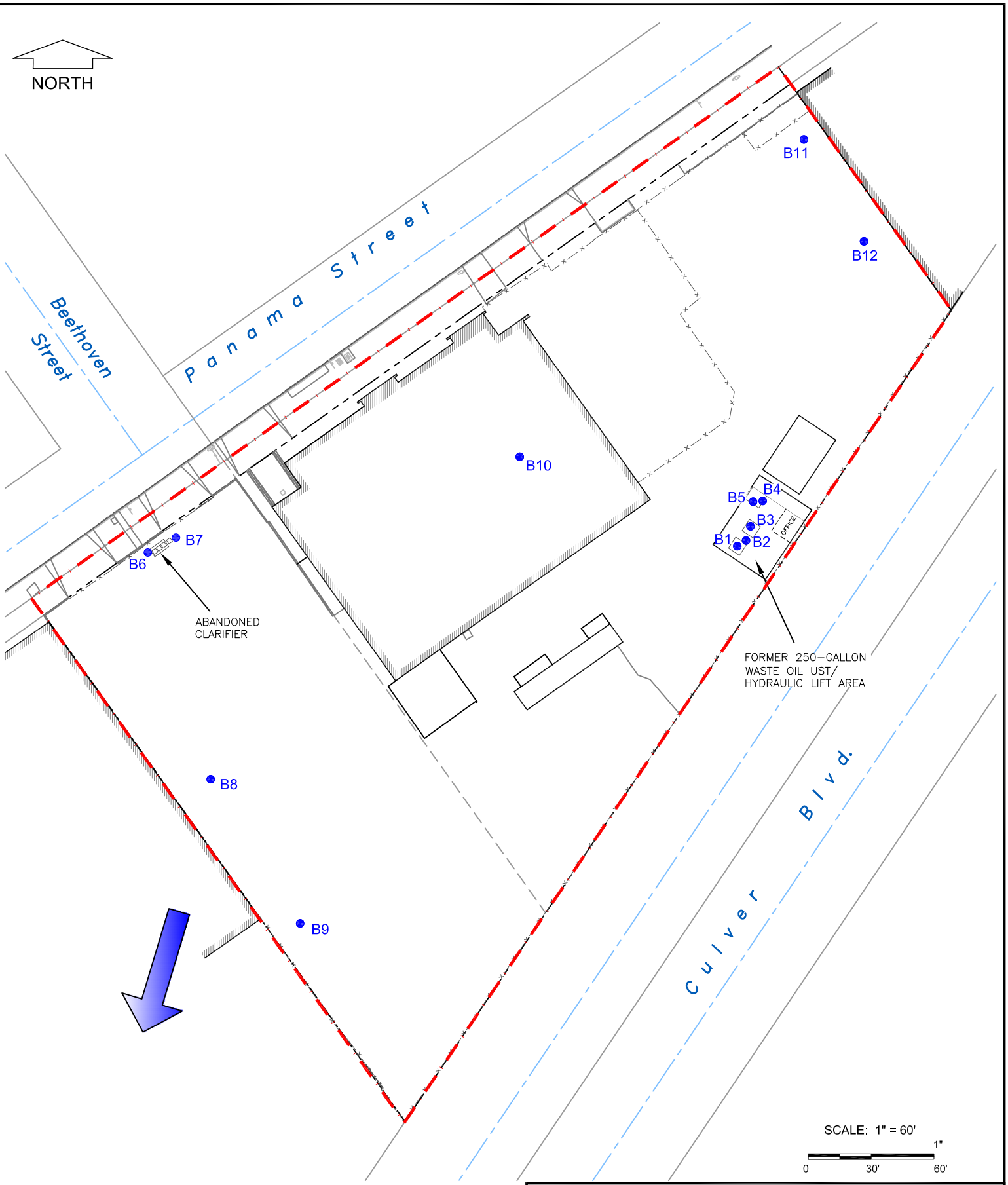
TPH-GRO = total petroleum hydrocarbons as gasoline range organics

TPH-DRO = total petroleum hydrocarbons as diesel range organics

TPH-ORO = total petroleum hydrocarbons as oil range organics

ug/L = micrograms per liter

J = Analyte detected; result is an estimated value between the MDL and the reporting limit.



LEGEND:

- Site Boundary
- Center Line
- Property Line
- Fence Line
- Approximate Building Outline
- Approximate Boring Location
- Estimated Groundwater Flow Direction

NOTE: Base map adapted from Site ALTA Survey conducted July, 2015, by Aalbers and Associates.

FIGURE 2: Site Layout and Boring Location Map

CLIENT: McGuireWoods, LLP	
SITE: 12870 Panama Street Los Angeles, CA 90066	
DRAWN: KD	APPRV.: SR
SCALE: 1" = 60'	DATE: 8/26/2015
PROJ. NO.: MCGU-15-5422	

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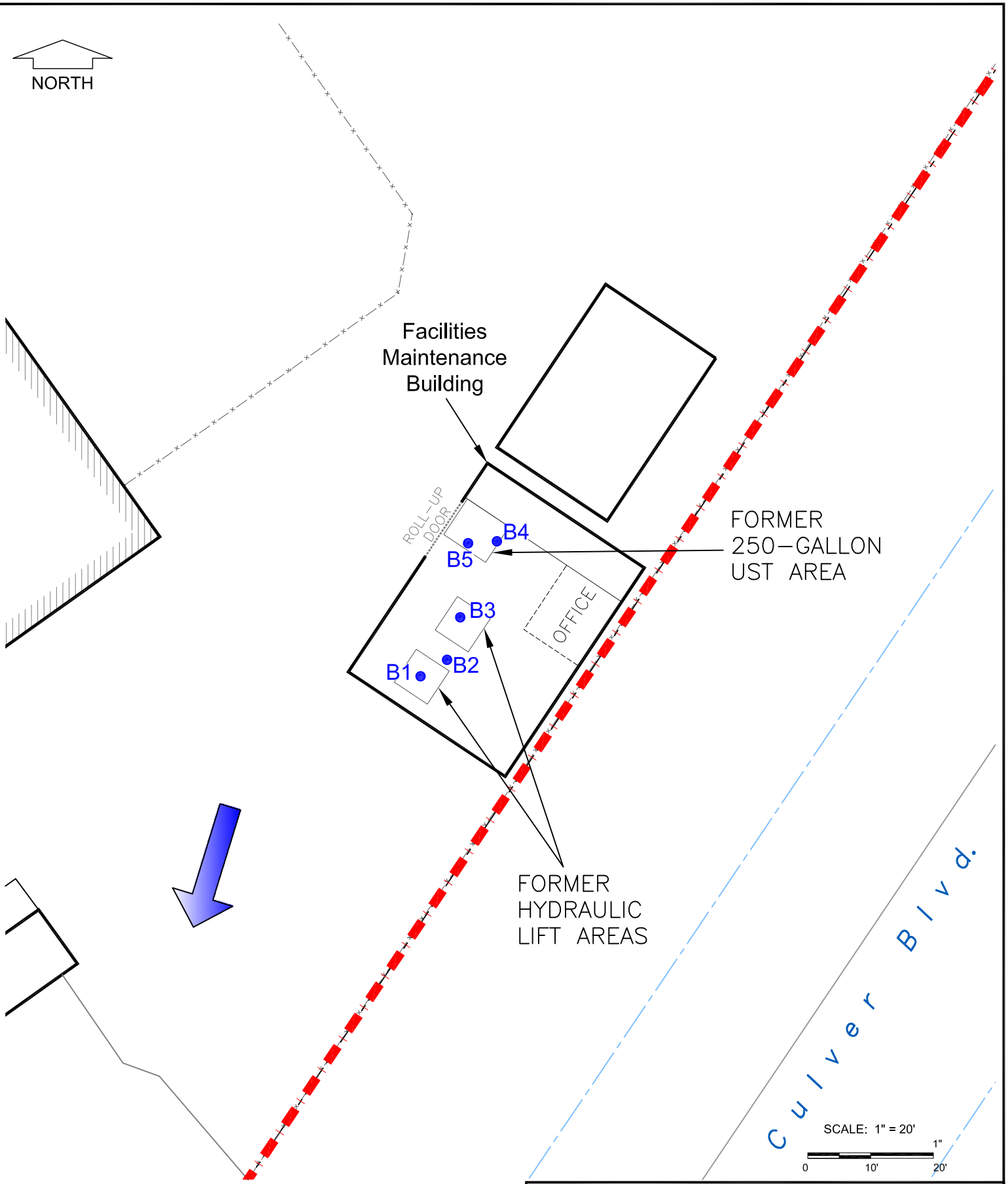

FIGURE 3: Detail View - Facilities Maintenance Building

CLIENT: McGuireWoods, LLP	
SITE: 12870 Panama Street Los Angeles, CA 90066	
DRAWN: KD	APPRV.: SR
SCALE: 1" = 20'	DATE: 9/1/2015
PROJ. NO.: MCGU-15-5422	

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TABLE 1
Water Sample Results for VOCs
Panama Street - Additional Site Assessment
12870 Panama Street
Los Angeles, California

VOCs by EPA Method 8260B in Water			Sample ID:	B13	B14	B15	B17	B18	B19
			Date:	9/24/2015	9/24/2015	9/24/2015	9/24/2015	9/24/2015	9/24/2015
	MDL (µg/L):	RL (µg/L):	MCLs (ug/L)	VOC Concentration (ug/L)			VOC Concentration (ug/L)		
Acetone	10	20	-	ND	ND	ND	ND	ND	ND
Benzene	0.14	0.5	-	ND	ND	ND	ND	ND	ND
Bromobenzene	0.3	1	-	ND	ND	ND	ND	ND	ND
Bromochloromethane	0.48	1	-	ND	ND	ND	ND	ND	ND
Bromodichloromethane	0.21	1	-	ND	ND	ND	ND	ND	ND
Bromoform	0.5	1	-	ND	ND	ND	ND	ND	ND
Bromomethane	3.9	10	-	ND	ND	ND	ND	ND	ND
2-Butanone	2.2	10	-	ND	ND	ND	ND	ND	ND
n-Butylbenzene	0.23	1	-	ND	ND	ND	ND	ND	ND
sec-Butylbenzene	0.25	1	-	ND	ND	ND	ND	ND	ND
tert-Butylbenzene	0.28	1	-	ND	ND	ND	ND	ND	ND
Carbon Disulfide	0.41	10	NE	ND	0.44J,B	ND	ND	ND	ND
Carbon Tetrachloride	0.23	0.5	-	ND	ND	ND	ND	ND	ND
Chlorobenzene	0.17	1	-	ND	ND	ND	ND	ND	ND
Chloroethane	2.3	5	-	ND	ND	ND	ND	ND	ND
Chloroform	0.46	1	-	ND	ND	ND	ND	ND	ND
Chloromethane	1.8	10	-	ND	ND	ND	ND	ND	ND
2-Chlorotoluene	0.24	1	-	ND	ND	ND	ND	ND	ND
4-Chlorotoluene	0.13	1	-	ND	ND	ND	ND	ND	ND
Dibromochloromethane	0.25	1	-	ND	ND	ND	ND	ND	ND
1,2-Dibromo-3-Chloropropane	1.2	5	-	ND	ND	ND	ND	ND	ND
1,2-Dibromoethane	0.36	1	-	ND	ND	ND	ND	ND	ND
Dibromomethane	0.46	1	-	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	0.46	1	-	ND	ND	ND	ND	ND	ND
1,3-Dichlorobenzene	0.4	1	-	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	0.43	1	-	ND	ND	ND	ND	ND	ND
Dichlorodifluoromethane	0.46	1	-	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	0.28	1	-	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	0.24	0.5	-	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene	0.43	1	-	ND	ND	ND	ND	ND	ND
c-1,2-Dichloroethene	0.48	1	-	ND	ND	ND	ND	ND	ND
t-1,2-Dichloroethene	0.37	1	-	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	0.42	1	-	ND	ND	ND	ND	ND	ND
1,3-Dichloropropane	0.3	1	-	ND	ND	ND	ND	ND	ND
2,2-Dichloropropane	0.36	1	-	ND	ND	ND	ND	ND	ND
1,1-Dichloropropene	0.46	1	-	ND	ND	ND	ND	ND	ND
c-1,3-Dichloropropene	0.25	0.5	-	ND	ND	ND	ND	ND	ND
t-1,3-Dichloropropene	0.25	0.5	-	ND	ND	ND	ND	ND	ND
Ethylbenzene	0.14	1	-	ND	ND	ND	ND	ND	ND
2-Hexanone	2.1	10	-	ND	ND	ND	ND	ND	ND
Isopropylbenzene	0.58	1	-	ND	ND	ND	ND	ND	ND
p-Isopropyltoluene	0.16	1	-	ND	ND	ND	ND	ND	ND
Methylene Chloride	0.64	10	-	ND	ND	ND	ND	ND	ND
4-Methyl-2-Pentanone	4.4	10	-	ND	ND	ND	ND	ND	ND
Naphthalene	2.5	10	-	ND	ND	ND	ND	ND	ND
n-Propylbenzene	0.17	1	-	ND	ND	ND	ND	ND	ND
Styrene	0.17	1	-	ND	ND	ND	ND	ND	ND
1,1,1,2-Tetrachloroethane	0.4	1	-	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	0.41	1	-	ND	ND	ND	ND	ND	ND
Tetrachloroethene	0.39	1	-	ND	ND	ND	ND	ND	ND
Toluene	0.24	1	-	ND	ND	ND	ND	ND	ND
1,2,3-Trichlorobenzene	0.51	1	-	ND	ND	ND	ND	ND	ND
1,2,4-Trichlorobenzene	0.5	1	-	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	0.3	1	-	ND	ND	ND	ND	ND	ND
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.78	10	-	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	0.38	1	-	ND	ND	ND	ND	ND	ND
Trichloroethene	0.37	1	-	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane	1.7	10	-	ND	ND	ND	ND	ND	ND
1,2,3-Trichloropropane	0.64	5	-	ND	ND	ND	ND	ND	ND
1,2,4-Trimethylbenzene	0.36	1	-	ND	ND	ND	ND	ND	ND
1,3,5-Trimethylbenzene	0.28	1	-	ND	ND	ND	ND	ND	ND
Vinyl Acetate	2.8	10	-	ND	ND	ND	ND	ND	ND
Vinyl Chloride	0.3	0.5	-	ND	ND	ND	ND	ND	ND
p/m-Xylene	0.3	1	-	ND	ND	ND	ND	ND	ND
o-Xylene	0.23	1	-	ND	ND	ND	ND	ND	ND
Methyl-t-Butyl Ether (MTBE)	0.31	1	-	ND	ND	ND	ND	ND	ND
Tert-Butyl Alcohol (TBA)	4.6	10	-	ND	ND	ND	ND	ND	ND
Diisopropyl Ether (DIPE)	0.33	2	-	ND	ND	ND	ND	ND	ND
Ethyl-t-Butyl Ether (ETBE)	0.44	2	-	ND	ND	ND	ND	ND	ND
Tert-Amyl-Methyl Ether (TAME)	0.22	2	-	ND	ND	ND	ND	ND	ND
Ethanol	50	100	-	ND	ND	ND	ND	ND	ND
			Dilution Factor:	1	1	1	1	1	1

NOTES:

VOC = Volatile Organic Compound

MDL = Method Detection Limit

RL = Reporting Limit

MCLs = California Department of Public Health Maximum Contaminant Levels, Updated July 2014

ND = Indicated constituents not detected at or above the MDL

J = Analyte detected; however, result is an estimated value between the MDL and RL.

µg/L = micrograms per liter

B = Analyte was present in the associated method blank

- = Not Applicable

NE = No MCL Established

TABLE 2
Water Sample Results for TPH
Panama Street - Additional Site Assessment
12870 Panama Street
Los Angeles, California

TPHcc by EPA Method 8015M in Water				
Sample ID	**Sample Date**	**TPH-GRO (C6-C10) (ug/L)**	**TPH-DRO (C10-C22) (ug/L)**	**TPH-ORO (C23+) (ug/L)**
	MDL (ug/L):	**48**	**7.7-15**	**51-100**
	RL (µg/L)	**50**	**48-96**	**240-480**
B13	9/24/2015	ND	ND	ND
B14	9/24/2015	ND	**530**	**3800**
B15	9/24/2015	ND	**15J**	ND
B17	9/24/2015	ND	ND	ND
B18	9/24/2015	ND	ND	ND
B19	9/24/2015	ND	**9.4J**	ND

NOTES:

ND = Indicates constituents not detected above the PQL

MDL = Method Detection Limit

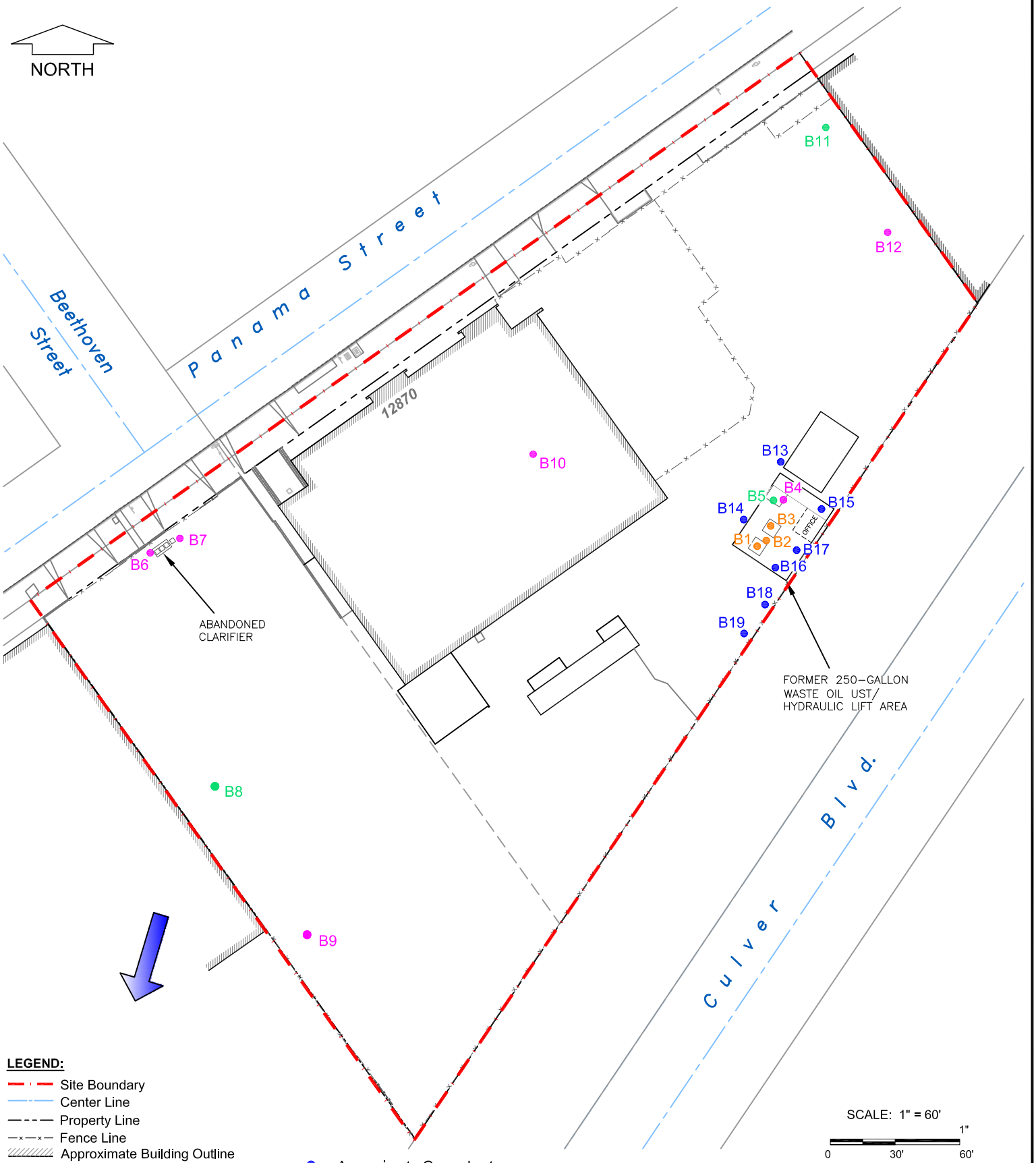
TPH-GRO = total petroleum hydrocarbons as gasoline range organics

TPH-DRO = total petroleum hydrocarbons as diesel range organics

TPH-ORO = total petroleum hydrocarbons as oil range organics

ug/L = micrograms per liter

J = Analyte detected; result is an estimated value between the MDL and the reporting limit.



LEGEND:

- Site Boundary
- Center Line
- Property Line
- Fence Line
- Approximate Building Outline
- Approximate Soil Boring Location (Previous Investigation by Alta, Sept. 2015)
- Approximate Soil/Soil Vapor Boring Location (Previous Investigation by Alta, Sept. 2015)
- Approximate Soil/ Soil Vapor/Groundwater Boring Location (Previous Investigation by Alta, Sept. 2015)
- Approximate Groundwater Boring Location (Additional Site Assessment by Alta, Oct. 2015)
- Estimated Groundwater Flow Direction

NOTE: Base map adapted from Site ALTA Survey conducted July, 2015, by Aalbers and Associates.

FIGURE 2: Site Layout and Boring Location Map

CLIENT: McGuireWoods, LLP	
SITE: 12870 Panama Street Los Angeles, CA 90066	
DRAWN: KD	APPRV.: SR
SCALE: 1" = 60'	DATE: 10/15/2015
PROJ. NO.: MCGU-15-5422	

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NORTH

Panama Street

Beethoven Street

12870

Culver Blvd.

B1 B2 B3 B4 B5 B6 B7 B8 B9 B10 B11 B12

ABANDONED CLARIFIER

FORMER 250-GALLON WASTE OIL UST/ HYDRAULIC LIFT AREA

B11		
TPH-GRO	TPH-DRO	TPH-ORO
(ug/L)		
ND	**37J**	ND

B5		
TPH-GRO	TPH-DRO	TPH-ORO
(ug/L)		
ND	**1,500**	**190J**

B8		
TPH-GRO	TPH-DRO	TPH-ORO
(ug/L)		
ND	**65**	ND

SCALE: 1" = 50'

0 25' 50'

LEGEND:

- Site Boundary
- Center Line
- Property Line
- Fence Line
- Approximate Building Outline
- Approximate Soil Boring Location (Previous Investigation by Alta, Sept. 2015)
- Approximate Soil/Soil Vapor Boring Location (Previous Investigation by Alta, Sept. 2015)
- Approximate Soil/Soil Vapor/Groundwater Boring Location (Previous Investigation by Alta, Sept. 2015)
- Estimated Groundwater Flow Direction

TPH Total Petroleum Hydrocarbons

TPH-GRO Total Petroleum Hydrocarbons as Gasoline

TPH-DRO Total Petroleum Hydrocarbons as Diesel

TPH-ORO Total Petroleum Hydrocarbons as Oil

ND Not detected above laboratory reporting limits

ug/L micrograms per liter

J Analyte was detected; However, concentration is an estimated value between the method detection limit (MDL) and the practical quantitation limit (PQL)

NOTE: Base map adapted from Site ALTA Survey conducted July, 2015, by Aalbers and Associates.

FIGURE 3: Detected TPH Concentrations in Groundwater Samples - Previous Investigation Borings

CLIENT: McGuireWoods, LLP	
SITE: 12870 Panama Street Los Angeles, CA 90066	
DRAWN: KD	APPRV.: SR
SCALE: 1" = 50'	DATE: 10/15/2015
PROJ. NO.: MCGU-15-5422	

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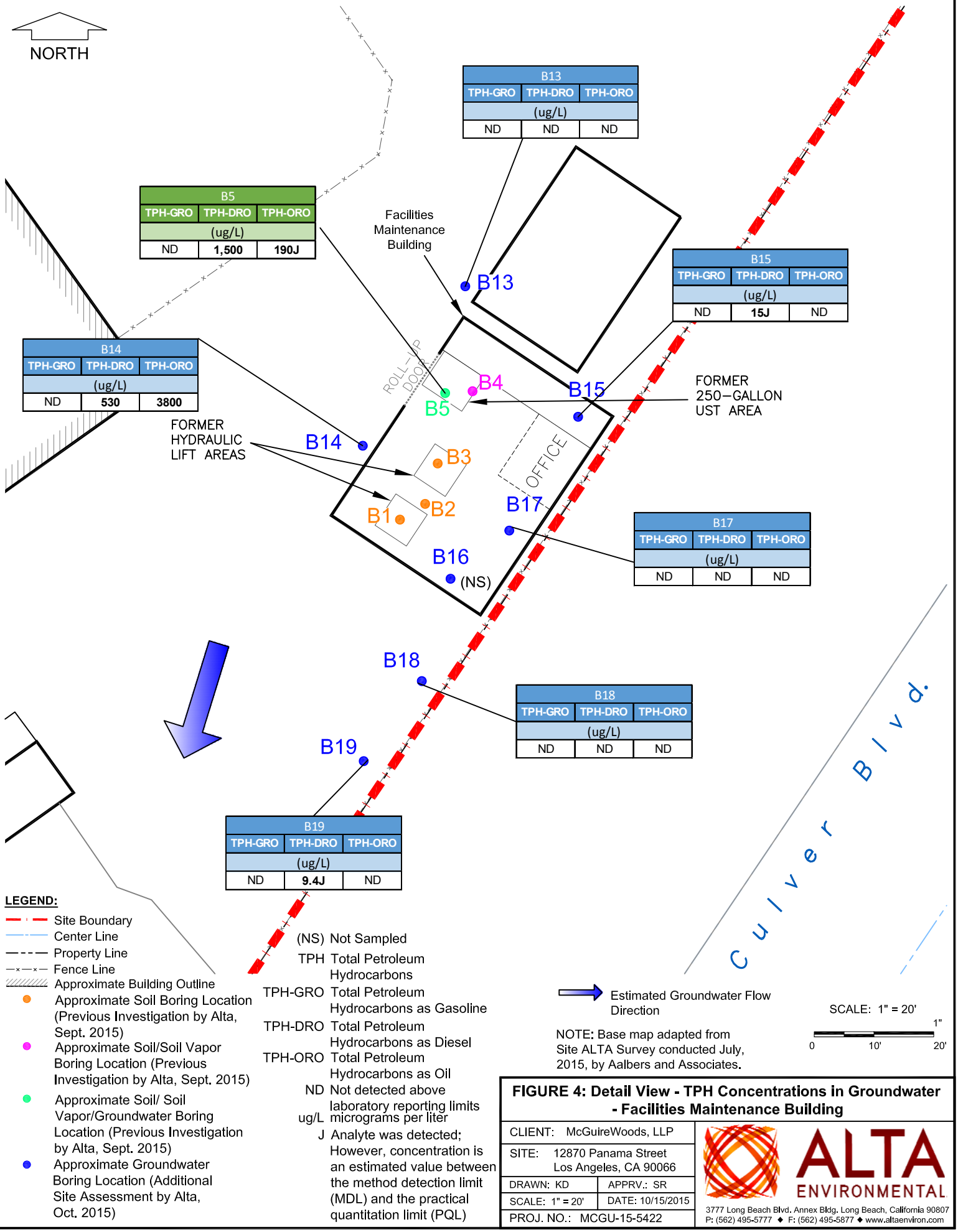
\\tbfile01\Data2\Clients H-M\McGuire Woods (MCGU)\MCGU-15-5506 12870 StepOut\Photos - Drawings\12870_Panama.dwg



\\bfile01\Data2\Clients H-M\McGuire Woods (MCGU)\MCGU-15-5506 12870 StepOut\Photos - Drawings\12870_Panama.dwg

FIGURE 4: Detail View - TPH Concentrations in Groundwater - Facilities Maintenance Building

CLIENT: McGuireWoods, LLP	
SITE: 12870 Panama Street Los Angeles, CA 90066	
DRAWN: KD	APPRV.: SR
SCALE: 1" = 20'	DATE: 10/15/2015
PROJ. NO.: MCGU-15-5422	

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Attachment B -- Health Risk Analysis Model Spreadsheets

July 11, 2016

USEPA SG-SCREEN
Version 2.0, 04/2003

DTSC Modification
December 2014

Department of Toxic Substances Control
Vapor Intrusion Screening Model - Soil Gas

DATA ENTRY SHEET

Scenario: Residential
Chemical: Benzene

Results Summary

Soil Gas Conc. ($\mu g/m^3$)	Attenuation Factor (unitless)	Indoor Air Conc. ($\mu g/m^3$)	Cancer Risk	Noncancer Hazard
7.30E+01	1.4E-03	1.0E-01	1.0E-06	3.2E-02

Reset to Defaults

Soil Gas Concentration Data

ENTER Chemical CAS No. (numbers only, no dashes)	ENTER Soil gas conc., C_g ($\mu g/m^3$)	OR	ENTER Soil gas conc., C_g (ppmv)	Chemical
71432	7.30E+01			Benzene

MESSAGE: See VLOOKUP table comments on chemical properties and/or toxicity criteria for this chemical.

MORE ↓

ENTER Depth below grade to bottom of enclosed space floor, L_F (15 or 200 cm)	ENTER Soil gas sampling depth below grade, L_s (cm)	ENTER Average soil temperature, T_S (°C)	ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability)	OR	ENTER User-defined vadose zone soil vapor permeability, k_v (cm^2)
15	152	24	S		

MORE ↓

Lookup Soil Parameters

ENTER Vandose zone SCS soil type	ENTER Vadose zone soil dry bulk density, ρ_b^A (g/cm^3)	ENTER Vadose zone soil total porosity, n^V (unitless)	ENTER Vadose zone soil water-filled porosity, θ_w^V (cm^3/cm^3)	ENTER Average vapor flow rate into bldg. (Leave blank to calculate) Q_{soil} (L/m)
S	1.66	0.375	0.054	5

MORE ↓

Lookup Receptor Parameters

	ENTER Averaging time for carcinogens, AT_C (yrs)	ENTER Averaging time for noncarcinogens, AT_{NC} (yrs)	ENTER Exposure duration, ED (yrs)	ENTER Exposure frequency, EF (days/yr)	ENTER Exposure Time ET (hrs/day)	ENTER Air Exchange Rate ACH $(hour)^{-1}$
NEW=> Residential	70	26	26	350	24 (NEW)	0.5 (NEW)

END

USEPA SG-SCREEN
Version 2.0, 04/2003

DTSC Modification
December 2014

Department of Toxic Substances Control
Vapor Intrusion Screening Model - Soil Gas

DATA ENTRY SHEET

Scenario: Residential
Chemical: Ethylbenzene

Results Summary

Soil Gas Conc. ($\mu g/m^3$)	Attenuation Factor (unitless)	Indoor Air Conc. ($\mu g/m^3$)	Cancer Risk	Noncancer Hazard
9.74E+02	1.2E-03	1.2E+00	1.0E-06	1.1E-03

Reset to Defaults

Soil Gas Concentration Data

ENTER Chemical CAS No. (numbers only, no dashes)	ENTER Soil gas conc., C_g ($\mu g/m^3$)	OR	ENTER Soil gas conc., C_g (ppmv)	Chemical
100414	9.74E+02			Ethylbenzene

MORE ↓

ENTER Depth below grade to bottom of enclosed space floor, L_F (15 or 200 cm)	ENTER Soil gas sampling depth below grade, L_s (cm)	ENTER Average soil temperature, T_S (°C)	ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability)	OR	ENTER User-defined vadose zone soil vapor permeability, k_v (cm^2)
15	152	24	S		

MORE ↓

Lookup Soil Parameters

ENTER Vandose zone SCS soil type	ENTER Vadose zone soil dry bulk density, ρ_b^A (g/cm^3)	ENTER Vadose zone soil total porosity, n^V (unitless)	ENTER Vadose zone soil water-filled porosity, θ_w^V (cm^3/cm^3)	ENTER Average vapor flow rate into bldg. (Leave blank to calculate) Q_{soil} (L/m)
S	1.66	0.375	0.054	5

MORE ↓

Lookup Receptor Parameters

	ENTER Averaging time for carcinogens, AT_C (yrs)	ENTER Averaging time for noncarcinogens, AT_{NC} (yrs)	ENTER Exposure duration, ED (yrs)	ENTER Exposure frequency, EF (days/yr)	ENTER Exposure Time ET (hrs/day)	ENTER Air Exchange Rate ACH $(hour)^{-1}$
NEW=> Residential	70	26	26	350	24 (NEW)	0.5 (NEW)

END

USEPA SG-SCREEN
Version 2.0, 04/2003

DTSC Modification
December 2014

Department of Toxic Substances Control
Vapor Intrusion Screening Model - Soil Gas

DATA ENTRY SHEET

Scenario: Residential
Chemical: Tetrachloroethylene

Results Summary				
Soil Gas Conc. ($\mu g/m^3$)	Attenuation Factor (unitless)	Indoor Air Conc. ($\mu g/m^3$)	Cancer Risk	Noncancer Hazard
4.87E+02	1.0E-03	5.0E-01	1.0E-06	1.4E-02

Reset to Defaults

Soil Gas Concentration Data

ENTER Chemical CAS No. (numbers only, no dashes)	ENTER Soil gas conc., C_g ($\mu g/m^3$)	OR	ENTER Soil gas conc., C_g (ppmv)	Chemical
127184	4.87E+02			Tetrachloroethylene

MORE ↓

ENTER Depth below grade to bottom of enclosed space floor, L_F (15 or 200 cm)	ENTER Soil gas sampling depth below grade, L_s (cm)	ENTER Average soil temperature, T_S (°C)	ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability)	OR	ENTER User-defined vadose zone soil vapor permeability, k_v (cm^2)
15	152	24	S		

MORE ↓

Lookup Soil Parameters

ENTER Vandose zone SCS soil type	ENTER Vadose zone soil dry bulk density, ρ_b^A (g/cm^3)	ENTER Vadose zone soil total porosity, n^V (unitless)	ENTER Vadose zone soil water-filled porosity, θ_w^V (cm^3/cm^3)	ENTER Average vapor flow rate into bldg. (Leave blank to calculate) Q_{soil} (L/m)
S	1.66	0.375	0.054	5

MORE ↓

Lookup Receptor Parameters

	ENTER Averaging time for carcinogens, AT_C (yrs)	ENTER Averaging time for noncarcinogens, AT_{NC} (yrs)	ENTER Exposure duration, ED (yrs)	ENTER Exposure frequency, EF (days/yr)	ENTER Exposure Time ET (hrs/day)	ENTER Air Exchange Rate ACH $(hour)^{-1}$
NEW=> Residential	70	26	26	350	24 (NEW)	0.5 (NEW)

END

USEPA SG-SCREEN
Version 2.0, 04/2003

DTSC Modification
December 2014

Department of Toxic Substances Control
Vapor Intrusion Screening Model - Soil Gas

Scenario: **Residential**
Chemical: **Toluene**

DATA ENTRY SHEET

Reset to Defaults

Soil Gas Concentration Data

ENTER Chemical CAS No. (numbers only, no dashes)	ENTER Soil gas conc., C_s ($\mu g/m^3$)	OR	ENTER Soil gas conc., C_s (ppmv)	Chemical
108883	2.54E+05			Toluene

MORE ↓

ENTER Depth below grade to bottom of enclosed space floor, L_F (15 or 200 cm)	ENTER Soil gas sampling depth below grade, L_s (cm)	ENTER Average soil temperature, T_S (°C)	ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability)	OR	ENTER User-defined vadose zone soil vapor permeability, k_v (cm^2)
15	152	24	S		

MORE ↓

ENTER Vandose zone SCS soil type (Lookup Soil Parameters)	ENTER Vadose zone soil dry bulk density, ρ_b^A (g/cm^3)	ENTER Vadose zone soil total porosity, n^V (unitless)	ENTER Vadose zone soil water-filled porosity, θ_w^V (cm^3/cm^3)	ENTER Average vapor flow rate into bldg. (Leave blank to calculate) Q_{soil} (L/m)
S	1.66	0.375	0.054	5

MORE ↓

Lookup Receptor Parameters

	ENTER Averaging time for carcinogens, AT_C (yrs)	ENTER Averaging time for noncarcinogens, AT_{NC} (yrs)	ENTER Exposure duration, ED (yrs)	ENTER Exposure frequency, EF (days/yr)	ENTER Exposure Time ET (hrs/day)	ENTER Air Exchange Rate ACH $(hour)^{-1}$
NEW=> Residential	70	26	26	350	24 (NEW)	0.5 (NEW)

END

Results Summary

Soil Gas Conc. ($\mu g/m^3$)	Attenuation Factor (unitless)	Indoor Air Conc. ($\mu g/m^3$)	Cancer Risk	Noncancer Hazard
2.54E+05	1.3E-03	3.3E+02	NA	1.0E+00

USEPA SG-SCREEN
Version 2.0, 04/2003

DTSC Modification
December 2014

Department of Toxic Substances Control
Vapor Intrusion Screening Model - Soil Gas

DATA ENTRY SHEET

Scenario: Residential
Chemical: Trichloroethylene

Results Summary				
Soil Gas Conc. ($\mu g/m^3$)	Attenuation Factor (unitless)	Indoor Air Conc. ($\mu g/m^3$)	Cancer Risk	Noncancer Hazard
5.93E+02	1.2E-03	7.2E-01	1.0E-06	3.4E-01

Reset to Defaults

Soil Gas Concentration Data

ENTER Chemical CAS No. (numbers only, no dashes)	ENTER Soil gas conc., C_g ($\mu g/m^3$)	OR	ENTER Soil gas conc., C_g (ppmv)	Chemical
79016	5.93E+02			Trichloroethylene

MESSAGE: See VLOOKUP table comments on chemical properties and/or toxicity criteria for this chemical.

MORE ↓

ENTER Depth below grade to bottom of enclosed space floor, L_F (15 or 200 cm)	ENTER Soil gas sampling depth below grade, L_s (cm)	ENTER Average soil temperature, T_S (°C)	ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability)	OR	ENTER User-defined vadose zone soil vapor permeability, k_v (cm^2)
15	152	24	S		

MORE ↓

Lookup Soil Parameters

ENTER Vandose zone SCS soil type	ENTER Vadose zone soil dry bulk density, ρ_b^A (g/cm^3)	ENTER Vadose zone soil total porosity, n^V (unitless)	ENTER Vadose zone soil water-filled porosity, θ_w^V (cm^3/cm^3)	ENTER Average vapor flow rate into bldg. (Leave blank to calculate) Q_{soil} (L/m)
S	1.66	0.375	0.054	5

MORE ↓

Lookup Receptor Parameters

	ENTER Averaging time for carcinogens, AT_C (yrs)	ENTER Averaging time for noncarcinogens, AT_{NC} (yrs)	ENTER Exposure duration, ED (yrs)	ENTER Exposure frequency, EF (days/yr)	ENTER Exposure Time ET (hrs/day)	ENTER Air Exchange Rate ACH $(hour)^{-1}$
NEW=> Residential	70	26	26	350	24 (NEW)	0.5 (NEW)

END

USEPA SG-SCREEN
Version 2.0, 04/2003

DTSC Modification
December 2014

Department of Toxic Substances Control
Vapor Intrusion Screening Model - Soil Gas

Scenario: Residential
Chemical: o-Xylene

DATA ENTRY SHEET

Reset to Defaults

Results Summary				
Soil Gas Conc. ($\mu g/m^3$)	Attenuation Factor (unitless)	Indoor Air Conc. ($\mu g/m^3$)	Cancer Risk	Noncancer Hazard
9.00E+04	1.2E-03	1.1E+02	NA	1.0E+00

Soil Gas Concentration Data

ENTER Chemical CAS No. (numbers only, no dashes)	ENTER Soil gas conc., C_g ($\mu g/m^3$)	OR	ENTER Soil gas conc., C_g (ppmv)	Chemical
95476	9.00E+04			o-Xylene

MORE ↓

ENTER Depth below grade to bottom of enclosed space floor, L_F (15 or 200 cm)	ENTER Soil gas sampling depth below grade, L_s (cm)	ENTER Average soil temperature, T_S (°C)	ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability)	OR	ENTER User-defined vadose zone soil vapor permeability, k_v (cm^2)
15	152	24	S		

MORE ↓

Lookup Soil Parameters

ENTER Vandose zone SCS soil type	ENTER Vadose zone soil dry bulk density, ρ_b^A (g/cm^3)	ENTER Vadose zone soil total porosity, n^V (unitless)	ENTER Vadose zone soil water-filled porosity, θ_w^V (cm^3/cm^3)	ENTER Average vapor flow rate into bldg. (Leave blank to calculate) Q_{soil} (L/m)
S	1.66	0.375	0.054	5

MORE ↓

Lookup Receptor Parameters

	ENTER Averaging time for carcinogens, AT_C (yrs)	ENTER Averaging time for noncarcinogens, AT_{NC} (yrs)	ENTER Exposure duration, ED (yrs)	ENTER Exposure frequency, EF (days/yr)	ENTER Exposure Time ET (hrs/day)	ENTER Air Exchange Rate ACH $(hour)^{-1}$
NEW=> Residential	70	26	26	350	24 (NEW)	0.5 (NEW)

END

USEPA SG-SCREEN
Version 2.0, 04/2003

DTSC Modification
December 2014

Department of Toxic Substances Control
Vapor Intrusion Screening Model - Soil Gas

DATA ENTRY SHEET

Scenario: Residential
Chemical: Benzene

Reset to Defaults

Soil Gas Concentration Data

ENTER Chemical CAS No. (numbers only, no dashes)	ENTER Soil gas conc., C_g ($\mu g/m^3$)	OR	ENTER Soil gas conc., C_g (ppmv)	Chemical
71432	9.30E+01			Benzene

MESSAGE: See VLOOKUP table comments on chemical properties and/or toxicity criteria for this chemical.

MORE ↓

ENTER Depth below grade to bottom of enclosed space floor, L_F (15 or 200 cm)	ENTER Soil gas sampling depth below grade, L_s (cm)	ENTER Average soil temperature, T_S (°C)	ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability)	OR	ENTER User-defined vadose zone soil vapor permeability, k_v (cm^2)
15	152	24	S		

MORE ↓

Lookup Soil Parameters

ENTER Vandose zone SCS soil type	ENTER Vadose zone soil dry bulk density, ρ_b^A (g/cm^3)	ENTER Vadose zone soil total porosity, n^V (unitless)	ENTER Vadose zone soil water-filled porosity, θ_w^V (cm^3/cm^3)	ENTER Average vapor flow rate into bldg. (Leave blank to calculate) Q_{soil} (L/m)
S	1.66	0.375	0.054	5

MORE ↓

Lookup Receptor Parameters

	ENTER Averaging time for carcinogens, AT_C (yrs)	ENTER Averaging time for noncarcinogens, AT_{NC} (yrs)	ENTER Exposure duration, ED (yrs)	ENTER Exposure frequency, EF (days/yr)	ENTER Exposure Time ET (hrs/day)	ENTER Air Exchange Rate ACH $(hour)^{-1}$
NEW=> Residential	70	26	26	350	24 (NEW)	0.5 (NEW)

END

Results Summary

Soil Gas Conc. ($\mu g/m^3$)	Attenuation Factor (unitless)	Indoor Air Conc. ($\mu g/m^3$)	Cancer Risk	Noncancer Hazard
9.30E+01	1.4E-03	1.3E-01	1.3E-06	4.1E-02

USEPA SG-SCREEN
Version 2.0, 04/2003

DTSC Modification
December 2014

Department of Toxic Substances Control
Vapor Intrusion Screening Model - Soil Gas

DATA ENTRY SHEET

Scenario: Residential
Chemical: Ethylbenzene

Reset to Defaults

Soil Gas Concentration Data

ENTER Chemical CAS No. (numbers only, no dashes)	ENTER Soil gas conc., C_g ($\mu g/m^3$)	OR	ENTER Soil gas conc., C_g (ppmv)	Chemical
100414	9.40E+01			Ethylbenzene

MORE ↓

ENTER Depth below grade to bottom of enclosed space floor, L_F (15 or 200 cm)	ENTER Soil gas sampling depth below grade, L_s (cm)	ENTER Average soil temperature, T_S (°C)	ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability)	OR	ENTER User-defined vadose zone soil vapor permeability, k_v (cm^2)
15	152	24	S		

MORE ↓

Lookup Soil Parameters

ENTER Vandose zone SCS soil type	ENTER Vadose zone soil dry bulk density, ρ_b^A (g/cm^3)	ENTER Vadose zone soil total porosity, n^V (unitless)	ENTER Vadose zone soil water-filled porosity, θ_w^V (cm^3/cm^3)	ENTER Average vapor flow rate into bldg. (Leave blank to calculate) Q_{soil} (L/m)
S	1.66	0.375	0.054	5

MORE ↓

Lookup Receptor Parameters

	ENTER Averaging time for carcinogens, AT_C (yrs)	ENTER Averaging time for noncarcinogens, AT_{NC} (yrs)	ENTER Exposure duration, ED (yrs)	ENTER Exposure frequency, EF (days/yr)	ENTER Exposure Time ET (hrs/day)	ENTER Air Exchange Rate ACH $(hour)^{-1}$
NEW=> Residential	70	26	26	350	24 (NEW)	0.5 (NEW)

END

Results Summary

Soil Gas Conc. ($\mu g/m^3$)	Attenuation Factor (unitless)	Indoor Air Conc. ($\mu g/m^3$)	Cancer Risk	Noncancer Hazard
9.40E+01	1.2E-03	1.1E-01	1.0E-07	1.1E-04

USEPA SG-SCREEN
Version 2.0, 04/2003

DTSC Modification
December 2014

Department of Toxic Substances Control
Vapor Intrusion Screening Model - Soil Gas

DATA ENTRY SHEET

Scenario: **Residential**
Chemical: **Tetrachloroethylene**

Reset to Defaults

Soil Gas Concentration Data

ENTER Chemical CAS No. (numbers only, no dashes)	ENTER Soil gas conc., C_g ($\mu g/m^3$)	OR	ENTER Soil gas conc., C_g (ppmv)	Chemical
127184	4.70E+02			Tetrachloroethylene

MORE ↓

ENTER Depth below grade to bottom of enclosed space floor, L_F (15 or 200 cm)	ENTER Soil gas sampling depth below grade, L_s (cm)	ENTER Average soil temperature, T_S (°C)	ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability)	OR	ENTER User-defined vadose zone soil vapor permeability, k_v (cm^2)
15	152	24	S		

MORE ↓

Lookup Soil Parameters

ENTER Vandose zone SCS soil type	ENTER Vadose zone soil dry bulk density, ρ_b^A (g/cm^3)	ENTER Vadose zone soil total porosity, n^V (unitless)	ENTER Vadose zone soil water-filled porosity, θ_w^V (cm^3/cm^3)	ENTER Average vapor flow rate into bldg. (Leave blank to calculate) Q_{soil} (L/m)
S	1.66	0.375	0.054	5

MORE ↓

Lookup Receptor Parameters

	ENTER Averaging time for carcinogens, AT_C (yrs)	ENTER Averaging time for noncarcinogens, AT_{NC} (yrs)	ENTER Exposure duration, ED (yrs)	ENTER Exposure frequency, EF (days/yr)	ENTER Exposure Time ET (hrs/day)	ENTER Air Exchange Rate ACH $(hour)^{-1}$
NEW=> Residential	70	26	26	350	24 (NEW)	0.5 (NEW)

END

Results Summary

Soil Gas Conc. ($\mu g/m^3$)	Attenuation Factor (unitless)	Indoor Air Conc. ($\mu g/m^3$)	Cancer Risk	Noncancer Hazard
4.70E+02	1.0E-03	4.8E-01	1.0E-06	1.3E-02

USEPA SG-SCREEN
Version 2.0, 04/2003

DTSC Modification
December 2014

Department of Toxic Substances Control
Vapor Intrusion Screening Model - Soil Gas

DATA ENTRY SHEET

Scenario: Residential
Chemical: Toluene

Results Summary				
Soil Gas Conc. ($\mu g/m^3$)	Attenuation Factor (unitless)	Indoor Air Conc. ($\mu g/m^3$)	Cancer Risk	Noncancer Hazard
3.70E+02	1.3E-03	4.8E-01	NA	1.5E-03

Reset to Defaults

Soil Gas Concentration Data

ENTER Chemical CAS No. (numbers only, no dashes)	ENTER Soil gas conc., C_g ($\mu g/m^3$)	OR	ENTER Soil gas conc., C_g (ppmv)	Chemical
108883	3.70E+02			Toluene

MORE ↓

ENTER Depth below grade to bottom of enclosed space floor, L_F (15 or 200 cm)	ENTER Soil gas sampling depth below grade, L_s (cm)	ENTER Average soil temperature, T_s (°C)	ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability)	OR	ENTER User-defined vadose zone soil vapor permeability, k_v (cm^2)
15	152	24	S		

MORE ↓

Lookup Soil Parameters

ENTER Vandose zone SCS soil type	ENTER Vadose zone soil dry bulk density, ρ_b^A (g/cm^3)	ENTER Vadose zone soil total porosity, n^V (unitless)	ENTER Vadose zone soil water-filled porosity, θ_w^V (cm^3/cm^3)	ENTER Average vapor flow rate into bldg. (Leave blank to calculate) Q_{soil} (L/m)
S	1.66	0.375	0.054	5

MORE ↓

Lookup Receptor Parameters

	ENTER Averaging time for carcinogens, AT_C (yrs)	ENTER Averaging time for noncarcinogens, AT_{NC} (yrs)	ENTER Exposure duration, ED (yrs)	ENTER Exposure frequency, EF (days/yr)	ENTER Exposure Time ET (hrs/day)	ENTER Air Exchange Rate ACH $(hour)^{-1}$
NEW=> Residential	70	26	26	350	24 (NEW)	0.5 (NEW)

END

USEPA SG-SCREEN
Version 2.0, 04/2003

DTSC Modification
December 2014

Department of Toxic Substances Control
Vapor Intrusion Screening Model - Soil Gas

DATA ENTRY SHEET

Scenario: Residential
Chemical: Trichloroethylene

Results Summary				
Soil Gas Conc. ($\mu g/m^3$)	Attenuation Factor (unitless)	Indoor Air Conc. ($\mu g/m^3$)	Cancer Risk	Noncancer Hazard
2.90E+02	1.2E-03	3.5E-01	5.1E-07	1.7E-01

Reset to Defaults

Soil Gas Concentration Data

ENTER Chemical CAS No. (numbers only, no dashes)	ENTER Soil gas conc., C_g ($\mu g/m^3$)	OR	ENTER Soil gas conc., C_g (ppmv)	Chemical
79016	2.90E+02			Trichloroethylene

MESSAGE: See VLOOKUP table comments on chemical properties and/or toxicity criteria for this chemical.

MORE ↓

ENTER Depth below grade to bottom of enclosed space floor, L_F (15 or 200 cm)	ENTER Soil gas sampling depth below grade, L_s (cm)	ENTER Average soil temperature, T_S (°C)	ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability)	OR	ENTER User-defined vadose zone soil vapor permeability, k_v (cm^2)
15	152	24	S		

MORE ↓

Lookup Soil Parameters

ENTER Vandose zone SCS soil type	ENTER Vadose zone soil dry bulk density, ρ_b^A (g/cm^3)	ENTER Vadose zone soil total porosity, n^V (unitless)	ENTER Vadose zone soil water-filled porosity, θ_w^V (cm^3/cm^3)	ENTER Average vapor flow rate into bldg. (Leave blank to calculate) Q_{soil} (L/m)
S	1.66	0.375	0.054	5

MORE ↓

Lookup Receptor Parameters

	ENTER Averaging time for carcinogens, AT_C (yrs)	ENTER Averaging time for noncarcinogens, AT_{NC} (yrs)	ENTER Exposure duration, ED (yrs)	ENTER Exposure frequency, EF (days/yr)	ENTER Exposure Time ET (hrs/day)	ENTER Air Exchange Rate ACH $(hour)^{-1}$
NEW=> Residential	70	26	26	350	24 (NEW)	0.5 (NEW)

END

USEPA SG-SCREEN
Version 2.0, 04/2003

DTSC Modification
December 2014

Department of Toxic Substances Control
Vapor Intrusion Screening Model - Soil Gas

DATA ENTRY SHEET

Scenario: Residential
Chemical: o-Xylene

Results Summary				
Soil Gas Conc. ($\mu g/m^3$)	Attenuation Factor (unitless)	Indoor Air Conc. ($\mu g/m^3$)	Cancer Risk	Noncancer Hazard
2.70E+02	1.2E-03	3.3E-01	NA	3.1E-03

Reset to Defaults

Soil Gas Concentration Data

ENTER Chemical CAS No. (numbers only, no dashes)	ENTER Soil gas conc., C_g ($\mu g/m^3$)	OR	ENTER Soil gas conc., C_g (ppmv)	Chemical
95476	2.70E+02			o-Xylene

MORE ↓

ENTER Depth below grade to bottom of enclosed space floor, L_F (15 or 200 cm)	ENTER Soil gas sampling depth below grade, L_s (cm)	ENTER Average soil temperature, T_s (°C)	ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability)	OR	ENTER User-defined vadose zone soil vapor permeability, k_v (cm^2)
15	152	24	S		

MORE ↓

Lookup Soil Parameters

ENTER Vandose zone SCS soil type	ENTER Vadose zone soil dry bulk density, ρ_b^A (g/cm^3)	ENTER Vadose zone soil total porosity, n^V (unitless)	ENTER Vadose zone soil water-filled porosity, θ_w^V (cm^3/cm^3)	ENTER Average vapor flow rate into bldg. (Leave blank to calculate) Q_{soil} (L/m)
S	1.66	0.375	0.054	5

MORE ↓

Lookup Receptor Parameters

	ENTER Averaging time for carcinogens, AT_C (yrs)	ENTER Averaging time for noncarcinogens, AT_{NC} (yrs)	ENTER Exposure duration, ED (yrs)	ENTER Exposure frequency, EF (days/yr)	ENTER Exposure Time ET (hrs/day)	ENTER Air Exchange Rate ACH $(hour)^{-1}$
NEW=> Residential	70	26	26	350	24 (NEW)	0.5 (NEW)

END

USEPA SG-SCREEN
Version 2.0, 04/2003

DTSC Modification
December 2014

Department of Toxic Substances Control
Vapor Intrusion Screening Model - Soil Gas

DATA ENTRY SHEET

Scenario: **Residential**
Chemical: **Benzene**

Results Summary				
Soil Gas Conc. ($\mu g/m^3$)	Attenuation Factor (unitless)	Indoor Air Conc. ($\mu g/m^3$)	Cancer Risk	Noncancer Hazard
8.10E+01	9.6E-04	7.8E-02	8.1E-07	2.5E-02

Reset to Defaults

Soil Gas Concentration Data

ENTER Chemical CAS No. (numbers only, no dashes)	ENTER Soil gas conc., C_g ($\mu g/m^3$)	OR	ENTER Soil gas conc., C_g (ppmv)	Chemical
71432	8.10E+01			Benzene

MESSAGE: See VLOOKUP table comments on chemical properties and/or toxicity criteria for this chemical.

MORE ↓

ENTER Depth below grade to bottom of enclosed space floor, L_F (15 or 200 cm)	ENTER Soil gas sampling depth below grade, L_s (cm)	ENTER Average soil temperature, T_S (°C)	ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability)	OR	ENTER User-defined vadose zone soil vapor permeability, k_v (cm^2)
15	285	24	S		

MORE ↓

Lookup Soil Parameters

ENTER Vandose zone SCS soil type	ENTER Vadose zone soil dry bulk density, ρ_b^A (g/cm^3)	ENTER Vadose zone soil total porosity, n^V (unitless)	ENTER Vadose zone soil water-filled porosity, θ_w^V (cm^3/cm^3)	ENTER Average vapor flow rate into bldg. (Leave blank to calculate) Q_{soil} (L/m)
S	1.66	0.375	0.054	5

MORE ↓

Lookup Receptor Parameters

	ENTER Averaging time for carcinogens, AT_C (yrs)	ENTER Averaging time for noncarcinogens, AT_{NC} (yrs)	ENTER Exposure duration, ED (yrs)	ENTER Exposure frequency, EF (days/yr)	ENTER Exposure Time ET (hrs/day)	ENTER Air Exchange Rate ACH $(hour)^{-1}$
NEW=> Residential	70	26	26	350	24 (NEW)	0.5 (NEW)

END

Attachment C -- Agency NFA Letters

July 11, 2016

CITY OF LOS ANGELES
CALIFORNIA

RICHARD J. RIORDAN
MAYOR

DEPARTMENT OF FIRE
200 NORTH MAIN STREET
LOS ANGELES, CA 90012

WILLIAM R. BAMATTRE
CHIEF ENGINEER
AND
GENERAL MANAGER

April 1, 1996

Mr. Craig Fry
Teledyne Industries
12870 Panama Street
Los Angeles, CA 90067

Dear Mr. Fry:

Teledyne Electronics
12870 Panama Street
Los Angeles, California

The Fire Department has reviewed the Closure Report dated March 27, 1996, as submitted by All Environmental, Incorporated.

Based on the information provided to date, no further action is required at this time.

Please note that this correspondence does not exempt you of any liability under the California Health and Safety Code or Water Code for past, present, or future operations at this site. Nor does it exempt you of the responsibility to correct additional or previously unidentified conditions at the site which cause, or thereafter to cause, pollution or nuisance, or otherwise pose a threat to water quality or public health.

If you require additional information from the Los Angeles City Fire Department, please contact Inspector Robert B. Reimers of the Underground Tank Plan Check Unit, at (213) 485-7543.

Very truly yours,

WILLIAM R. BAMATTRE
Chief Engineer and General Manager

Jeffrey J. Mills

Jeffrey J. Mills, Captain I
Commander, Underground Tank Plan Check Unit

JJM:RBR:kz:ugt1282

cc: Mr. Joseph P. Derhake, All Environmental, Incorporated

CALIFORNIA
Water Boards

REC'D JAN 0 8 2016

EDMUND G. BROWN JR.
GOVERNOR

MATTHEW RODRIQUEZ
SECRETARY FOR
ENVIRONMENTAL PROTECTION

Los Angeles Regional Water Quality Control Board

January 7, 2016

Ms. Melanie S. Cibik
Teledyne Technologies Incorporated
1049 Camino Dos Rios
Thousand Oaks, CA 91360

UNDERGROUND STORAGE TANK PROGRAM – CASE REFERRAL RESPONSE
TELEDYNE TECHNOLOGIES INCORPORATED
12870 PANAMA STREET, LOS ANGELES, CALIFORNIA
(GLOBAL ID NO.: T10000008217)

Dear Ms. Cibik:

On December 30, 2015, the City of Los Angeles Fire Department transmitted this case to our agency due to concerns regarding soil and groundwater impacts from the subject site (Site). The California Regional Water Quality Control Board, Los Angeles Region (Regional Board), is the public agency with primary responsibility for the protection of ground and surface water quality for all beneficial uses within the Los Angeles and Ventura counties. As such, we are the lead regulatory agency for overseeing corrective actions (assessment and/or monitoring activities) and cleanup of releases from leaking underground storage tank (UST) systems at the Site.

We have received the following document for the Site:

- "Groundwater Assessment Results, Former Underground Storage Tank Site" dated December 10, 2015, prepared by Alta Environmental (Alta).

Based on our review of the submitted document, we have the following comments:

- The City of Los Angeles Fire Department issued a no further action letter for the Site on April 1, 1996, following removal of two hydraulic lifts and one 250-gallon waste oil UST from the Site.

- In August and September 2015, Alta oversaw the advancement of soil borings B5, and B13 through B19 into groundwater and the collection of grab groundwater samples from borings B5, B13, B14, B15, B17, B18, and B19. Groundwater samples were submitted to an analytical testing laboratory for chemical analysis. Soil samples were not submitted for analytical testing during the investigation.

- Groundwater samples were analyzed for total petroleum hydrocarbons as gasoline (TPHg), total petroleum hydrocarbons as diesel (TPHd), and total petroleum hydrocarbons as oil (TPHo) by modified EPA Method 8015B, and for full scan volatile organic compounds (VOCs) and ethanol by EPA Method 8260B.

January 7, 2016

- Laboratory results for the groundwater samples indicated the maximum concentration of TPHd, TPHo, 2-butanone, and carbon disulfide were 1,500 micrograms per liter (µg/L), 3,800 µg/L, 4.8J µg/L, and 0.44J µg/L, respectively. TPHg, ethanol, and other VOCs tested for were not detected above their respective reporting limits.

- Groundwater was encountered at the Site during site investigation activities in August and September 2015 at depths ranging between 12 and 13.5 feet below ground surface.

Based on the information available to us, Regional Board staff determined that residual concentrations of fuel constituents pose a low threat to human health, and soil and groundwater quality beneath the Site. Therefore, no further action is required to pursue any further soil and/or groundwater investigation at the Site. At this time, the Regional Board is not opening a case for the Site.

If you have any questions, please contact Dr. Weixing Tong at (213) 576-6715 or email him at Weixing.Tong@waterboards.ca.gov.

Sincerely,

Yue Rong, Ph. D.
Program Manager
Underground Storage Tank Program

cc: Eloy Luna, City of Los Angeles Fire Department
Steven Ridenour, Alta Environmental

Attachment D -- Off-Site Soil Gas Sample Locations and Results (12922 Panama Street)

July 11, 2016

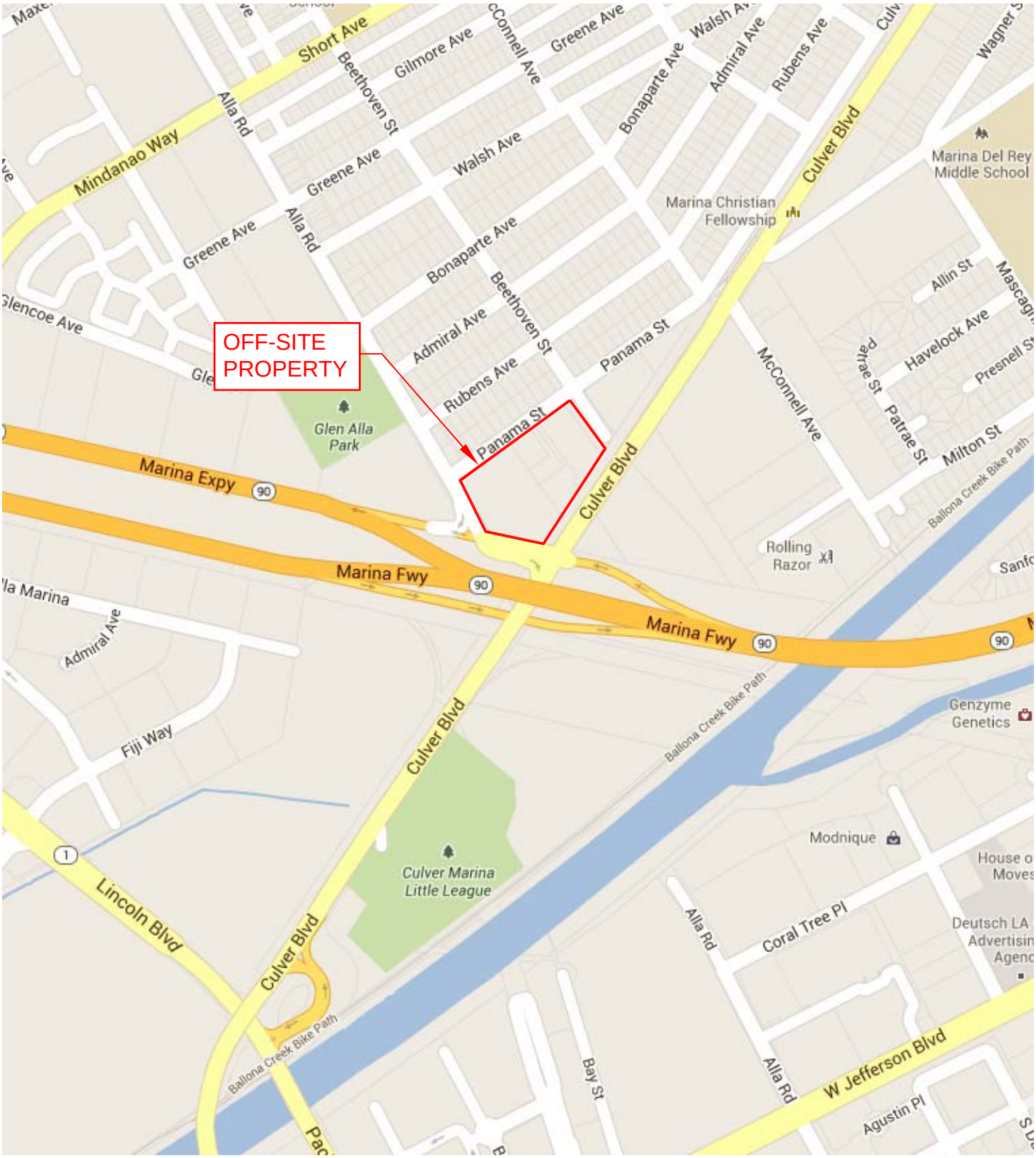


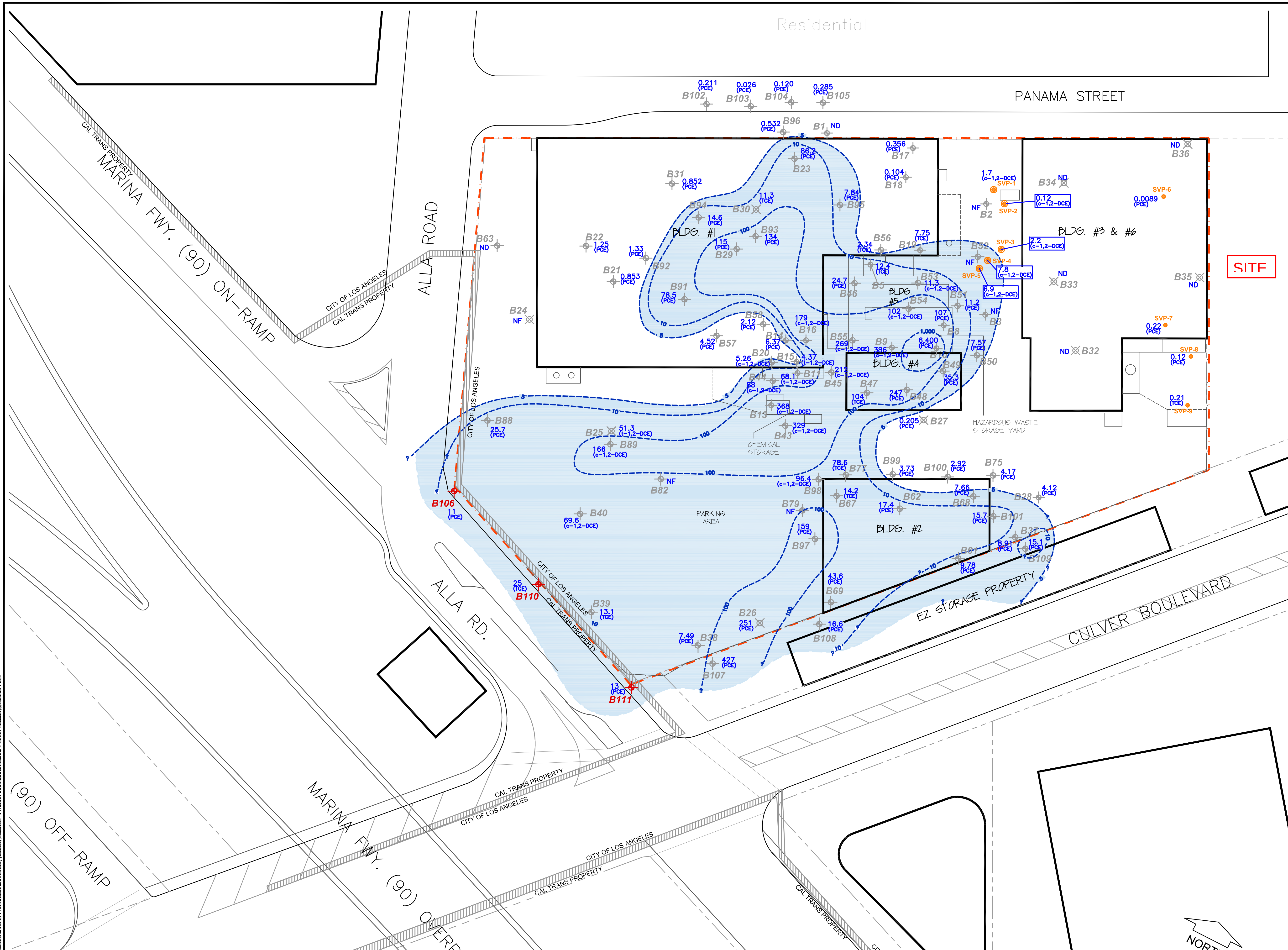
FIGURE 1: Site Vicinity Map

CLIENT: McGuire Woods, LLP	SITE LOCATION: Panama Street Site 12922 Panama Street Los Angeles, California 90066
PROJECT #: MCGU-14-4695:6	

ALTA ENVIRONMENTAL
3777 Long Beach Blvd., Annex Bldg.
Long Beach, CA 90807
(562) 495-5777 www.altaenviron.com

DRAWN: KD	APPROVED: SR	NORTH
SCALE: None	DATE: 8/17/15	

\\brfile01\Data2\Clients H-M\McGuire Woods (MCGU)\MCGU-14-4695 Post Board Order\Photos - Drawings\CAD Files\PanamaSURVEY.dwg



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LEGEND:

- Building Outline
- Approximate Outline of Site
- Center Line
- 12964 Address Number on Panama Street
- Soil Vapor Boring Location
- Soil/Soil Vapor Boring Location
- Approximate Soil Vapor Boring Location - Installed by Geosyntec Consultants (May, 2014); Eastern Boundary
- Approximate Soil/Soil Vapor Boring Location - Installed by Geosyntec Consultants (May, 2014); Spill Area
- New Groundwater Monitoring Well Location (Alta, 2015)
- Existing Groundwater Monitoring Well Location (Alta, 2013 and 2015)
- 6,400 (PCE) Maximum concentrations of VOC Chemicals of Concern detected in soil vapor samples collected between 4 and 10 feet bgs and presented in ug/L. Maximum detected VOC is identified in parentheses.
- Estimated isoconcentration contour for VOCs detected in Soil Vapor between 4 and 10 feet bgs.

bgs	below ground surface
ug/L	micrograms per liter
CVOC	Chlorinated Volatile Organic Compound
PCE	Tetrachloroethylene
TCE	Trichloroethylene
c-1,2-DCE	cis-1,2-Dichloroethene
t-1,2-DCE	trans-1,2-Dichloroethene
ND	VOCs not detected above the laboratory reporting limits
NF	No sample collected due to no flow sample conditions and have not been used for interpretation purposes.

NOTES:
All VOC results by EPA Method 8260B; except Geosyntec soil vapor VOC results by EPA Method TO-15.

SCALE: 1" = 80'   0   40'   80'   1"

FIGURE 12: Maximum CVOC Detected in Soil Vapor - Areas of Potential Concern

CLIENT: McGuireWoods, LLP

SITE: Panama Street Site, 12922 Panama Street, Los Angeles, CA 90066

PROJ. NO.: MCGU-14-4695:7

DRAWN: KAD   APPRV.: SR

SCALE: 1" = 80'   DRAWN DATE: February 2015   REVISION DATE: Oct. 9, 2015

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PANAMA STREET

MARINA FWY. (90) ON-RAMP

CAL TRANS PROPERTY

CITY OF LOS ANGELES

CAL TRANS PROPERTY

ALLA ROAD

CITY OF LOS ANGELES

BLDG. #1

BLDG. #3 & #6

BLDG. #5

BLDG. #4

BLDG. #2

SITE

HAZARDOUS WASTE STORAGE YARD

CHEMICAL STORAGE

PARKING AREA

EZ STORAGE PROPERTY

CULVER BOULEVARD

ALLA RD.

MARINA FWY. (90) OVERPASS

(90) OFF-RAMP

CAL TRANS PROPERTY

CITY OF LOS ANGELES

CAL TRANS PROPERTY

CITY OF LOS ANGELES

CAL TRANS PROPERTY

CITY OF LOS ANGELES

B1A
B60A
B36A
B59A
B65A
B24A
B57A
B3A
B7A
B55A
B48A
B41A
B25A
B43A
B44A
B28A
B40A
B37A
B70
B39A
B26A
B38A

GW2 (1.77)
GW1 (0.04)
GW3 (0.72)
MW4 (-0.51)
MW9 (0.06)
MW10 (-0.14)
MW11 (-0.20)
MW5 (-0.47)
MW6 (0.07)
MW7 (0.46)
MW8 (0.96)

1.75
1.50
1.25
1.00
0.75
0.50
0.25
0.00
-0.25
-0.50
0.0030

LEGEND:

- Building Outline
- Approximate Outline of Site
- Center Line
- New Groundwater Monitoring Well Location (Alta, 2015)
- Existing Groundwater Monitoring Well Location (Alta, 2013 and 2015)
- Hydropunch Groundwater Boring Location
- Soil/Hydropunch Groundwater Boring Location
- (1.77) Groundwater Elevation measured in feet above mean sea level (AMSL); measured 7-23-15
- 1.75 Groundwater Equipotential Surface Line (AMSL)
- 0.0030 Groundwater Flow Direction and Gradient

NORTH

SCALE: 1" = 80'

0 40' 80'

1"

FIGURE 13: Groundwater Gradient Map - Third Quarter 2015

CLIENT: McGuireWoods, LLP

SITE: Panama Street Site
12922 Panama Street
Los Angeles, CA 90066

PROJ. NO.: MCGU-14-4695:7

DRAWN: KAD | APPRV.: SR

SCALE: 1" = 80' | DRAWN DATE: February 2015 REVISION DATE: Oct, 9, 2015

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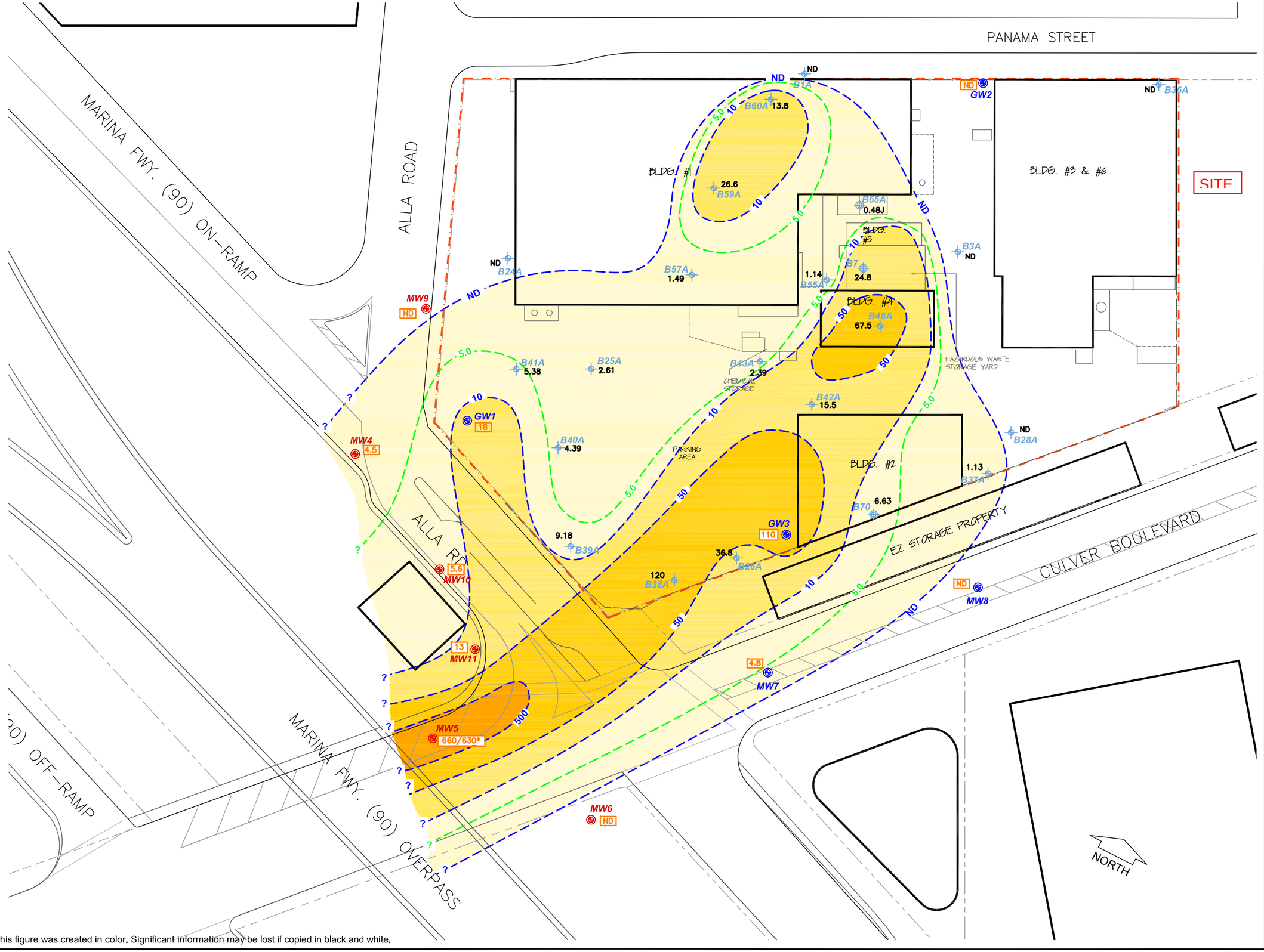

LEGEND:

- Building Outline
- Approximate Outline of Site
- Center Line
- New Groundwater Monitoring Well Location (Alta, 2015)
- Existing Groundwater Monitoring Well Location (Alta, 2013 and 2015)
- Hydropunch Groundwater Boring Location
- Soil/Hydropunch Groundwater Boring Location
- 660 — PCE concentration detected in groundwater monitoring well sample results presented in ug/L, and sampled September 21, 2015.
- 120 — PCE concentration detected in groundwater hydropunch sample results presented in ug/L, and sampled April and June, 2013.
- * — Primary and duplicate sample results
- Estimated isoconcentration contour for PCE detected in Groundwater
- 5.0 — PCE Isoconcentration Contour at MCL of 5.0 ug/L
- ug/L — micrograms per liter
- PCE — Tetrachloroethylene
- ND — PCE not detected above the laboratory reporting limits
- MCL — Maximum Contaminant Level (California drinking water standards)

KEY:

- PCE Concentration: ND to 10 ug/L
- PCE Concentration: 10 to 50 ug/L
- PCE Concentration: 50 to 500 ug/L
- PCE Concentration: >500 ug/L

NOTES:
All VOC results by EPA Method 8260B.

SCALE:
1" = 80'
0 — 40' — 80'
1"

FIGURE 14: PCE Concentrations in Groundwater - Third Quarter 2015

CLIENT:
McGuireWoods, LLP

SITE:
Panama Street Site
12922 Panama Street
Los Angeles, CA 90066

PROJ. NO.: MCGU-14-4695:7

DRAWN: KAD	APPRV.: SR
SCALE: 1" = 80'	DRAWN DATE: February 2015 REVISION DATE: Oct. 9, 2015

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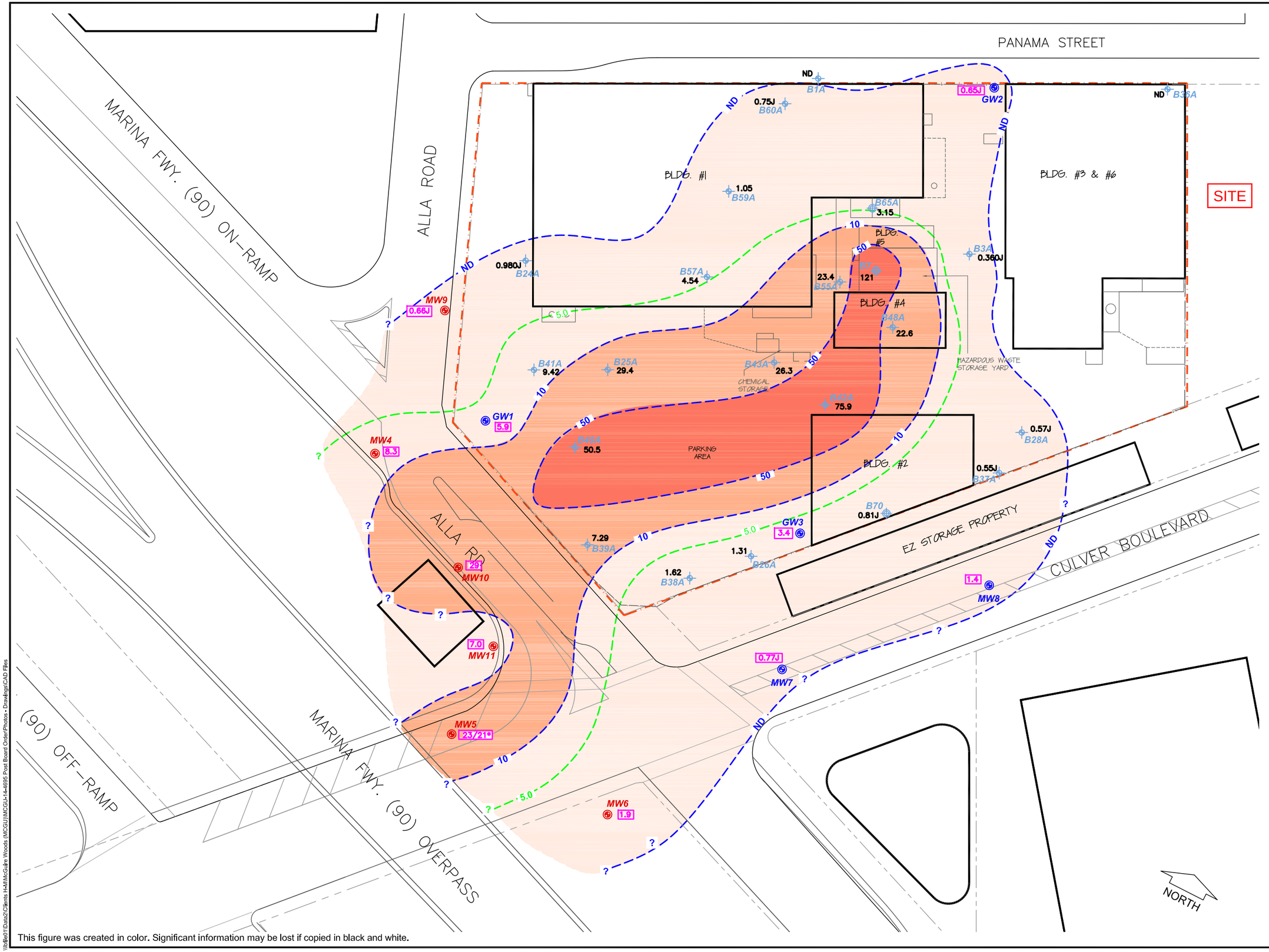

LEGEND:

- Building Outline
- Approximate Outline of Site
- Center Line
- New Groundwater Monitoring Well Location (Alta, 2015)
- Existing Groundwater Monitoring Well Location (Alta, 2013 and 2015)
- Hydropunch Groundwater Boring Location
- Soil/Hydropunch Groundwater Boring Location
- 29 — TCE concentration detected in groundwater monitoring well sample results presented in ug/L, and sampled September 21, 2015.
- 121 — TCE concentration detected in groundwater hydropunch sample results presented in ug/L, and sampled April and June, 2013.
- * Primary and duplicate sample results
- Estimated isoconcentration contour for TCE detected in Groundwater
- 5.0 — TCE Isoconcentration Contour at MCL of 5.0 ug/L
- ug/L micrograms per liter
- TCE Trichloroethylene
- ND TCE not detected above the laboratory reporting limits
- J Analyte detected; however concentration is an estimated value between the method detection limit (MDL) and practical quantitation limit (PQL)
- MCL Maximum Contaminant Level (California drinking water standards)

KEY:

- TCE Concentration: ND to 10 ug/L
- TCE Concentration: 10 to 50 ug/L
- TCE Concentration: >50 ug/L

NOTES:
All VOC results by EPA Method 8260B.

SCALE:
1" = 80'

0 1" 40' 80'

FIGURE 15: TCE Concentrations in Groundwater - Third Quarter 2015

CLIENT:
McGuireWoods, LLP

SITE:
Panama Street Site
12922 Panama Street
Los Angeles, CA 90066

PROJ. NO.: MCGU-14-4695:7

DRAWN: KAD	APPRV.: SR
SCALE: 1" = 80'	DRAWN DATE: February 2015 REVISION DATE: Oct. 9, 2015

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LEGEND:

- Building Outline
- Approximate Outline of Site
- Center Line
- 12964 — Address Number on Panama Street
- New Groundwater Monitoring Well Location (Alta, 2015)
- Existing Groundwater Monitoring Well Location (Alta, 2013 and 2015)
- Hydropunch Groundwater Boring Location
- Soil/Hydropunch Groundwater Boring Location
- 23 — cis-1,2-DCE concentration detected in groundwater monitoring well sample results presented in ug/L, and sampled September 21, 2015.
- 140 — cis-1,2-DCE concentration detected in groundwater hydropunch sample results presented in ug/L, and sampled April and June, 2013.
- * — Primary and duplicate sample results
- Estimated isoconcentration contour for cis-1,2-DCE detected in Groundwater
- 6.0 — cis-1,2-DCE Isoconcentration Contour at MCL of 6.0 ug/L
- ug/L — micrograms per liter
- cis-1,2-DCE — cis-1,2-Dichloroethene
- ND — cis-1,2-DCE not detected above the laboratory reporting limits
- MCL — Maximum Contaminant Level (California drinking water standards)

KEY:

- cis-1,2-DCE Concentration: ND to 10 ug/L
- cis-1,2-DCE Concentration: 10 to 50 ug/L
- cis-1,2-DCE Concentration: >50 ug/L

NOTES:
All VOC results by EPA Method 8260B.

SCALE:
1" = 80'

0 — 40' — 80'

1"

FIGURE 16: cis-1,2-DCE Concentrations in Groundwater - Third Quarter 2015

CLIENT:
McGuireWoods, LLP

SITE:
Panama Street Site
12922 Panama Street
Los Angeles, CA 90066

PROJ. NO.: MCGU-14-4695:7

DRAWN: KAD	APPRV.: SR
SCALE: 1" = 80'	DRAWN DATE: February 2015 REVISION DATE: Oct. 9, 2015

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