Prepared by
Ramboll US Corporation
Irvine, California

Submitted to:
California Regional Water Quality Control Board – Los Angeles Region
Los Angeles, California

Project Number
1690006783

Date
February 2018

REMEDIAL ACTION PLAN FOR IMPACTED SOIL REMOVAL

NORTHEAST CORNER OF SOUTH CENTRAL AND VICTORIA STREET CARSON, CALIFORNIA

RAMBOLL

PREPARED BY

Farid Anchor, PG
Senior Managing Consultant

Jeff Raumin, PE
Senior Managing Consultant

Farshad Razmdjoo
Managing Principal

P:\I\Integral Partners Funding\1690006783 Carson RAP\Final\Carson Remedial Action Plan.docx

Ramboll
18100 Von Karman Avenue
Suite 600
Irvine, CA 92612
USA
T +1 949 261 5151
F +1 949 261 6202
www.ramboll.com

CONTENTS

TABLES

FIGURES

APPENDICES

ACRONYMS AND ABBREVIATIONS

APN	Assessor Parcel Number
bgs	below ground surface
Cal/EPA	California Environmental Protection Agency
CHHSLs	California Human Health Screening Levels
DTSC	Department of Toxic Substances Control
HHRA	Human Health Risk Assessment
HQ	Hazard Quotient
LARWQCB	Los Angeles Regional Water Quality Control Board
BTEX	benzene, toluene, ethylbenzene, xylenes,
NCP	National Contingency Plan
RAP	Remedial Action Plan
RBTCs	Risk Based Target Concentrations
SCM	Site Conceptual Model
TPH	Total Petroleum Hydrocarbon
USEPA	United States Environmental Protection Agency
VOC	Volatile Organic Compound
µg/kg	micrograms per kilogram
µg/l	micrograms per liter
$\mu g/m^3$	micrograms per cubic meter

1. INTRODUCTION

Ramboll US Corporation (Ramboll) has prepared this Remedial Action Plan (RAP) for The Carson Project Owner LLC (the "Owner") to address residual petroleum hydrocarbons, arsenic, and lead related impacts in shallow soil for the 8.07-acre property located on the northeastern corner of the intersection of South Central Avenue and Victoria Street in Carson, California and consisting of assessor parcel numbers (APNs) 7319-003-104, -105 and -106 (Site, see Figures 1 and 2). The Owner is proposing to redevelop the Site with multi-family residential homes as shown in Figure 3. The Site was part of a larger parcel of land that was historically used for oil exploration activities from the 1920s through the late 1990s as part of the "Hellman Lease". There are eight abandoned oil exploration wells onsite that are marked with metal stove pipes at ground surface. As part of decommissioning the oil exploration activities at the Site, numerous phases of subsurface investigations have been conducted at the Site that identified areas of shallow soils that were impacted by total petroleum hydrocarbons (TPH) and metals. The Site underwent remediation activities in the late 1990s and received conditional site closure from the Los Angeles Regional Water Quality Control Board (LARWQCB) in a letter dated letter dated August 13, 2008 (Appendix A). As part of the closure process, it was determined that a Covenant and Environmental Restriction on Property (Covenant) was necessary as part of the site closure for the protection of public health or safety due to the residual concentrations of aromatic hydrocarbons in soil and soil gas remaining on-site. The Covenant was filed and recorded in Official Records, Recorder's Office, Los Angeles County on July 11, 2008. In order to develop the Site with the proposed residential development this RAP has been prepared to remove shallow soils impacted with residual arsenic, lead and TPH impacts greater than the calculated respective risk based target concentrations (RBTCs).

This report includes the following:

- Summary of the historical Site investigation and remediation activities, and post remediation sampling events (soil gas study in 2006 and soil and soil gas study in 2017),
- A conceptual site model (CSM) for the Site,
- A site-specific human health risk assessment (HHRA) to establish Risk-Based Target Concentrations (RBTCs) that are protective of human health based on the presented exposure scenarios,
- Remedial action objectives (RAOs), and
- A remedial approach to meet those RAOs.

2. OBJECTIVE

The objective of this RAP is to develop a remedial approach to remove impacted soil that is above site-specific clean up goals that are protective of human health under a construction worker and residential use exposure scenario. Groundwater at the Site is approximately 200 feet below ground surface (bgs) and past Site investigations concluded that soil impacts did not extend beyond approximately 30 feet bgs and therefore potential impacts to groundwater were not a concern at the Site.

This RAP presents a summary of environmental conditions at the Site, CSM, identifies the chemicals of concern (COCs) and presents a remedial strategy to mitigate the risks associated with the identified Site impacts to acceptable levels to attain regulatory site closure from the LARWQCB based on the proposed redevelopment of the Site as multi-family structures. The proposed development proposes to construct approximately 176 multi-level residential units with surface parking and a community pool. The proposed development layout is presented in Figure 3.

3. SITE BACKGROUND

3.1 Site Setting

The approximately 8.07 acre, Site is located in a mixed use residential and commercial area in the City of Carson, within Los Angeles County, California (Figure 2). The adjoining properties to the west, opposite South Central Avenue, are residential dwellings. The adjoining property to the south, opposite Victoria Street, has been graded for future development. The adjoining properties north and east of the Site appear to be developed with commercial structures.

3.2 Historical Site Uses

Historically the 3 parcels (2.51-acre, 4.62-acre, and 0.94-acre) that make up the Site, were part of a larger 26-acre Hellman Lease that was used for oil exploration activities. The largest 19-acre parcel was remediated and granted closure by LARWQCB. That parcel has been redeveloped with commercial structures. The remaining 3 parcels have undergone environmental investigations and remediation and attained conditional site closure for commercial/industrial use from the LARWQCB in 2008 (Appendix A). The Site remediation efforts involved excavation and treatment of soils (on neighboring properties) to address petroleum hydrocarbon impacts.

The Site has been separated into 3 parcels (based on the assessor's parcel number for each). The 3 parcels were all part of the larger Hellman Lease, but each had a different level of oil exploration activity. The 2.51-acre parcel is located on the northern portion of the Site (Figure 2). This parcel had the most site improvements related to the oil exploration work. The 2.51-acre portion of the Site was improved with four oil exploration wells (Hellman Wells 24, 27, 31, and 45), a former office area (with septic system), a former warehouse (with a septic system and wash rack), and former underground and above ground storage tanks (USTs and ASTs) (Figure 4). The 4.62-acre parcel is located in the central and eastern portion of the Site and was improved with four oil exploration wells (Hellman Wells 2, 16, 42, and 47). Additionally, some of the improvements on the 2.51-acre parcel extended near or onto the northern portion of the 4.62-acre parcel (septic tanks, wash rack, and AST). The final parcel, 0.94-acre parcel, is located on the southwest portion of the Site. Historical records and site investigations indicate that this area of the Site was not used significantly during the oil exploration activities and no former improvements were noted in this area of the Site.

3.3 Previous Investigation Work

The following sections present a summary of previous investigations and remediation conducted at the Site. A more detailed accounting of these activities can be reviewed in the following documents:

- *Environmental Site Remediation, Summary and Closure Report, Hellman Property –* 4 Acre and 1 Acre Parcels*; Northeast Corner of Victoria Street and Central Avenue, Carson, California*, The Reynolds Group, October 2003.
- *Summary and Closure Report, Hellman Property – Parcel 2; Little Blackfoot, LLC, Formerly Estate of Albert Levinson dba Brea Canyon Oil Company/Hellman 2.5 Acre Parcel (Parcel 2), Northeast Corner of Victoria Street and Central Avenue, Carson, California,* Mactec Inc. 12 December 2003.

- *Results of Deep Borings and Protection of Groundwater Discussion, Little Blackfoot, LLC, Formerly Estate of Albert Levinson, dba Brea Canyon Oil Hellman Lease – 1, 2.5 and 4-Acre Parcels, Carson, California*, Brown and Caldwell, 11 December 2003.
- *Results of Soil Gas Survey and Request for Case Closure, Former Brea Canyon Company Hellman Lease (2.5, 1 and 4 Acre Parcels), 17810 S. Central Avenue, Carson, California,* The Reynolds Group, 5 May 2006.
- *California Regional Water Quality Control Board, No Further Action – The Estate of Albert Levinson, DBA Brea Canyon Oil Company, Hellman Property, 1, 2.5, & 4 Acre Parcels, Northeast Corner of Victoria Street & Central Avenue, 17810 Central Avenue, Carson (SCP No. 468) (Site ID No. C244101), 13 August* 2008.
- *ASTM Phase I Environmental Site Assessment and Phase II Assessment*, Haley & Aldrich, Inc. (Haley & Aldrich), October 2017.

3.3.1 1- and 4-Acre Parcel Closure Report

Environmental Site Remediation, Summary and Closure Report, Hellman Property – 4 Acre and 1 Acre Parcels; Northeast Corner of Victoria Street and Central Avenue, Carson, California, October 2003.

This Summary and Closure Report was prepared for a portion of the Hellman Lease (0.94- and 4.62-acre parcels) and documents remediation activities performed between February 2000 and May 2002. The Hellman 4.62-acre parcel has four oil wells identified as Hellman 2, 16, 42 and 47 that are located adjacent to the east of the MCI communications property and were plµgged and abandoned under DOGGR oversight in 2000.

The 0.94-acre parcel (located in the southwest corner of the Site) was investigated by advancing 32 trenches (Figure 5) and sampling and analyzing soil for TPH; benzene, toluene, ethylbenzene and xylenes (BTEX); volatile organic compounds (VOCs) and semi-volatile organic compounds (SVOCs). No detectable concentrations were found and therefore, no remedial activities were recommended in this area. Groundwater was encountered on Site at approximately 205 and 210 feet below ground surface (bgs) and the deepest soil impacts (TPH and/or BTEX) were encountered on the 4.62-acre parcel at approximately 30 feet bgs.

Soil investigations conducted on the 4.62-acre parcel identified soil impacts that required remediation. Approximately 8,900 cubic yards of impacted soil were excavated form the 4.62-acre parcel and placed within Treatment Areas on the Callender Lease, which was on the adjoining property to the west of the Site, opposite South Central Avenue. No soil treatment was reported on the 4.62-acre or 0.94-acre parcels on the Site. Treated soil that met the Waste Discharge Requirements (WDR) issued by LARWQCB file No. 92-32, Order No. 98-064 originally dated 24 September 1994 and revised in 1998 or overburden soil, was used as backfill within the 4.62-acre parcel. All remediated soil brought from the treatment areas was tested and approved by LARWQCB for its reuse. Accounting for compaction, the total estimated quantity of soil imported to the 4.62-acre parcel was approximately 9,000 cubic yards. Figure 5 shows the outline of the excavation areas and closure related soil sample locations.

Approximately 94 confirmation soil samples were collected during excavation activities and no soil remaining in place exceeded the LARWQCB Site-specific cleanup levels established for TPH or BTEX. Eight of those samples were also analyzed for total metals and were found to be below their respective action levels and/or Residential Preliminary Remediation Goals

(PRGs). Based on the results of the confirmation sampling, The Reynolds Group recommended that a no further action determination be issued by the LARWQCB for both the Hellman 4.62-acre and 0.94-acre parcels.

3.3.2 2.5 Acre Parcel Closure Report

Summary and Closure Report, Hellman Property – Parcel 2; Little Blackfoot, LLC, Formerly Estate of Albert Levinson dba Brea Canyon Oil Company/Hellman 2.5 Acre Parcel (Parcel 2), Northeast Corner of Victoria Street and Central Avenue, Carson, California, 12 December 2003.

This Summary and Closure Report was prepared for the 2.51-acre northern parcel of the Site. The report documents the past investigations and subsequent remedial activities at the 2.51- acre parcel. Remediation activities were performed between December 1998 and May 2002. Prior to this remediation, a 2,000 gallon UST and fuel dispenser was removed and closed as documented in a UST Case Closure/No Further Action letter, dated November 23, 1994, and issued by Los Angeles County Department of Public Works. Mactec's subsurface assessment included soil sampling in the vicinity of the former UST, the abandoned oil wells, a former warehouse and wash rack, cesspools and septic tanks, and the office driveway. All impacted soils on the 2.51-acre parcel were found to be greater than 150 feet above groundwater. An estimated 2,870 cubic yards of impacted soil were excavated and placed within Treatment Areas on the Callender Lease,. No soil treatment was reported on the 2.51-acre parcel. Treated soil that met the WDR or overburden soil, was used as backfill within the 2.51-acre parcel. Some excavations were also filled with gravel or slurry for geotechnical reasons. Mactec reported that no post remediation soil samples had concentrations of benzene, toluene, ethylbenzene, total xylenes (BTEX), TPH, and metals above the LARWQCB approved site clean-up goals and therefore Mactec recommended that a No Further Action Letter be issued by the LARWQCB for the 2.51-acre parcel.

3.3.3 Deep Borings and Groundwater Evaluation Report

Results of Deep Borings and Protection of Groundwater Discussion, Little Blackfoot, LLC, Formerly Estate of Albert Levinson, dba Brea Canyon Oil Hellman Lease – 1, 2.5 and 4-Acre Parcels, Carson, California, Brown and Caldwell, 11 December 2003.

This letter summarized the regional groundwater conditions and presented the conclusion that the former areas of concern within the Hellman 0.94-, 2.51- and 4.62-acre parcels were not a threat to groundwater. To address any potential threat to groundwater, deep soil borings were drilled through, or adjacent to, the excavation areas where residual impacted soil remained on the Site. Soil samples collected from these borings reported the deepest detected TPH or BTEX concentrations remaining on the 2.51-acre or 4.62-acre parcels was approximately 30 feet bgs and that historically the first encountered groundwater on the Hellman lease (Site) was at approximately 205 feet bgs. No further assessment or remediation was recommended.

3.3.4 Soil Gas Survey Report

Results of Soil Gas Survey and Request for Case Closure, Former Brea Canyon Company Hellman Lease (2.5, 1 and 4 Acre Parcels), 17810 S. Central Avenue, Carson, California, The Reynolds Group, 5 May 2006.

This report documents the results of a soil gas survey completed in 2005 and 2006 at the three parcels (0.94-acre, 2.51-acre, and 4.62-acre) and consisted of the analyses of 61 soil gas samples collected from 44 locations (Figure 6). The purpose of the investigation was to

assess the Site for closure following the remedial excavation activities conducted by Mactec and The Reynolds Group as described above.

On the 0.94-acre Parcel, five soil gas samples were collected from four locations and analyzed for VOCs using Environmental Protection Agency (EPA) Method 8260 with two further analyzed by EPA Method TO-15. The only volatile organic compound (VOC) detected on the 0.94-acre Parcel was benzene which was detected in three samples (0.1 micrograms per liter [µg/L], 0.009 µg/L and 0.012 µg/L). No other VOCs were detected on this parcel.

On the 4.62-acre Parcel, 42 soil gas samples were collected from 29 locations, with 40 samples analyzed for VOCs using EPA Method 8260 and 24 of the samples analyzed using EPA Method TO-15. Benzene was reported in soil gas at concentrations from below detection limits to 0.3 µg/L. Based on these initial results soil was excavated to a depth of approximately 10 feet bgs from the soil vapor point (SG-18) with the benzene concentrations of 0.3 µg/L. Confirmation soil samples from the excavation reported BTEX below reporting limits. Following completion of the excavation backfill, two additional soil gas samples were collected at locations surrounding SG-18, and were found to have detectable concentrations of benzene at 0.14 µg/L and 0.023 µg/L, which were below the Commercial/Industrial CHHSL of 0.28 µg/L.

On the 2.51-acre Parcel, 14 soil gas samples were collected from 12 locations, all of which were analyzed for VOCs using EPA Method 8260, with five of the samples also analyzed using EPA Method TO-15. The only VOC detected on the 2.51-acre Parcel was benzene with a maximum concentration of 0.041 µg/L using TO-15. This concertation was below the residential CHHSL of 0.085 µg/L. No samples analyzed using EPA Method 8260 detected benzene. No other VOCs were detected on this parcel.

Based on these findings, the report requested that no further action be required by the LARWQCB for the three Hellman parcels and that case closure be issued for the Site.

3.3.5 LARWQCB Closure Letter

California Regional Water Quality Control Board, No Further Action – The Estate of Albert Levinson, DBA Brea Canyon Oil Company, Hellman Property, 1, 2.5, & 4 Acre Parcels, Northeast Corner of Victoria Street & Central Avenue, 17810 Central Avenue, Carson (SCP No. 468) (Site ID No. C244101), 13 August 2008.

This No Further Action Letter states that the LARWQCB has received and reviewed the four documents that have been summarized above. The letter further indicates that by June 1999, all of the oil wells on the 8.07-acre Hellman Property had been abandoned according to the requirements established by the DOGGR and that based on the subsurface investigations to date, it was confirmed that the primary COCs were TPH (gasoline range, diesel range and crude oil), aromatic hydrocarbons (e.g. BTEX), and metals (e.g. arsenic). As a remedial measure, a total of six known and encountered areas and eight oil/gas wells were remediated by excavating approximately 12,800 cubic yards of hydrocarbon-impacted soils and that, along with past remediation soil sampling programs and verification sampling, the remaining soils meet the LARWQCB's criteria (1996 LARWQCB Guidance) for protection of groundwater resources. The LARWQCB concluded that since the Site is not suitable for unrestricted use a "No Further Action" letter could not be issued unless a land use restriction is recorded. It was also concluded that a Covenant and Environmental Restriction on Property (Covenant) was necessary for the Site for the protection of public health or safety due to the residual concentrations of aromatic hydrocarbons in soil and soil gas remaining onsite.

3.3.6 Phase I and Phase II Report

ASTM Phase I Environmental Site Assessment and Phase II Assessment, Haley & Aldrich, Inc. (Haley & Aldrich), October 2017

Haley & Aldrich conducted a Phase I Environmental Site Assessment (ESA) for the Site (all three parcels, 2.51-acre, 4.64-acre, and 0.94-acre) to assess the current environmental site conditions of the Site. The Phase I ESA identified 2 Recognized Environmental Conditions (RECs) for the Site. The first REC was the "previous use of the Site for oil exploration activities." The second REC noted that there are 8 oil wells on the Site that were plµgged and abandoned in 1999 and 2000. Additionally, the report noted that the Site had undergone numerous site investigations and subsequent remediation to address petroleum hydrocarbons and metal impacted soils. Following remedial activities at the Site, the LARWQCB concluded that the post remedial soil concentrations met the criteria for the LARWQCB protection of groundwater but did not fully met the LARWQCB's criteria for unrestricted use due to residual concentrations of aromatic hydrocarbons in soil and soil gas. As such, the LARWQCB issued a conditional closure letter which included a covenant agreement that restricted the land use to commercial/industrial. Because the Site is now being considered for redevelopment for residential use, Haley & Aldrich recommended conducting a site investigation to assess the contemporary Site conditions and associated risks under a residential use scenario.

The Phase II investigation was conducted by Haley & Aldrich in August and September 2017. Soil at the Site was investigated for the presence of TPH, VOCs, and metals by advancing and collecting soil samples at 53 locations (Figure 7). Haley & Aldrich advanced 6 step-out borings, HA-21A, HA-21B, HA-21C, HA-21D, HA-21D1, and HA-21E (Figure 8) to further assess the area around HA-21 based on field observations indicating potential hydrocarbon impacts (e.g. odor). Haley & Aldrich generally found heavier end hydrocarbons (greater than C10) were detected sporadically across the Site with more frequent detections on the eastern portion of the Site (in the vicinity of the four abandoned oil wells). Metals were generally detected at concentrations consistent with background. The exception was arsenic and lead that were detected at various locations at concentrations above the residential screening levels for each (12 mg/kg Arsenic and 80 mg/kg Lead). The metal impacted soils were also also located sporadically across the Site and not concentrated in one potential source area. The soil sample results are presented in Table 1.

62 soil gas samples (50 collected at a depth of approximately 5 and and 12 collected at a depth of 15 feet bgs) were collected and analyzed for VOCs, hydrogen sulfide, and methane (Figure 7). Results from soil gas analyses are presented in Table 2. VOCs were detected in 6 of the soil gas samples. Detected compounds included 1,2,4-trimethylbenzene, benzene, cymene, ethylbenzene, isopropylbenzene, m,p-xylenes, naphthalene, o-xylene, tetrachloroethene, toluene, and trichloroethylene. All other VOCs were non-detect in the soil gas samples. The majority of VOC detections were less than 100 µg/L. Methane and hydrogen sulfide were not detected in any soil gas samples.

The data collected by Haley & Aldrich is the basis for this RAP. The Haley & Aldrich investigation included soil borings randomly spread across the Site that included both areas that had undergone remediation and areas that had not required remediation. As such, the sample set provided a good representation of the current site conditions and no further investigation is required at this time.

4. SITE EVALUATION AND SOIL AND SOIL VAPOR SCREENING LEVELS

This section presents a CSM to assess site-specific conditions and history of the releases, the COCs and exposure pathways, and presents clean-up goals for each COC using screening tools and health based clean-up goals derived from a human health risk assessment (HHRA).

The CSM presented below is based on the previous investigations and evaluation of historical site activities.

4.1 Conceptual Site Model

The CSM is developed to evaluate potential impacts of the contaminants present at the Site to human health and the environment through applicable exposure scenarios. The CSM identifies the potential source(s) of the chemical release, transport media and routes of chemical migration through the environment, exposure media, and potential exposure populations.

4.1.1 Potential Chemicals of Concern

Petroleum-related exploration operations including installation and operation of eight oil wells have historically occurred at the Site. To support the oil exploration activity two main structures were identified at the Site, an office and a warehouse area. Septic tanks were identified associated with each structure. In addition, a UST was located on the north end of the Site and a AST was located on the eastern portion of the Site (Figure 5). A wash rack was identified south of the warehouse. The eight oil wells were plµgged and abandoned in accordance with DOGGR requirements at the time of the abandonments; however, it is Ramboll's understanding that DOGGR has requested that a leak test be conducted at each well and certain "set backs" to future structures be implemented prior to Site development. Adherence to DOGGR requirements is ongoing and will be completed concurrently with proposed Site remediation activities. All other Site improvements were removed prior to remediation and Site closure in 2008.

Previous subsurface investigations have identified several constituents that are potential COCs in soil and soil gas.

COCs in soil include:

- TPH (Carbon Chain C8-C14, C9-C-16, C10-C23, and C15-C32); and
- Metals (Arsenic, Lead).

COCs in soil gas include:

- 1,2,4-trimethylbenzene,
- benzene,
- isopropyltoluene,
- ethylbenzene,
- isopropylbenzene,
- m,p-xylenes,
- naphthalene,

- o-xylene,
- tetrachloroethene,
- toluene, and
- trichloroethylene.

TPH, Arsenic, and Lead impacts to soil at the Site are located primarily in shallow soils at various locations across the Site.

4.1.2 Evaluation of Potential Exposure Pathways

Potential receptors are considered during two scenarios: during the proposed development process and once the development is completed. Construction workers are potential receptors during the onsite redevelopment. Once the development is completed potential receptors include future residents.

Based on the CSM, potential exposure pathways and routes for construction workers and residents are as follows:

- Direct contact with surface and subsurface soils (0–10 feet bgs, when soils from depths of up to 10 feet bgs could be brought to the surface during excavation or other activities) via ingestion, dermal contact, inhalation of vapors migrating from soil to outdoor or trench air, and inhalation of windblown particulates.
- Inhalation of vapors (either through migration of soil gas from the subsurface into indoor air [home] or trench air [construction trench]).

For soil gas, only inhalation of VOCs in indoor air was modeled for the future resident populations, since outdoor concentrations of VOCs will be lower than indoor air concentrations due to higher mixing in the ambient environment. For construction workers, inhalation of VOCs migrating from soil gas or soil in a construction trench while conducting excavation activities was modeled for conservativeness as the mixing with ambient air is limited in that scenario.

Neither direct contact with groundwater nor vapor migration from groundwater were considered as possible exposure pathways. According to the Phase I Environmental Site Assessment (ESA) (Haley Aldrich 2017), groundwater in the uppermost aquifer at the Site is located at approximately 205 feet bgs. No groundwater was encountered on-Site at a boring advanced to 28 feet bgs. Also, municipally-supplied water is available for potable uses in this area. Given these reasons, groundwater is unlikely to represent a major source of vapor intrusion, and direct contact with groundwater during domestic use is unlikely.

4.2 Development of Risk-Based Target Concentrations

RBTCs were developed for detected chemicals following the recommended methodologies from Department of Toxic Substance Control (DTSC) (Cal/EPA 2016) and USEPA (1989, 1991, 2002, 2004, 2009, and 2016) with consideration of site-specific information. The detailed methodology of RBTC development are described in detail in the Appendix B of this report.

A CSM was developed for the Site to describe the relationships between a chemical source, exposure pathway, and potentially exposed populations and is presented in Figure B1. As described above, based on the planned future use of the Site and to evaluate an unrestricted redevelopment scenario, RBTCs were developed for future on-Site construction workers

conducting Site redevelopment activities and future on-Site residents occupying the Site after redevelopment.

As discussed above, residential redevelopment of the Site is planned for the near future. Redevelopment will consist of apartments, open space, and paved parking on the ground floor. Contact with soil at the Site will be limited due to the presence of building footprints, hardscape, and landscape.

Chemicals were detected in soil and soil gas. Two potential exposure media, soil and soil gas, were included in this analysis based on potential exposure during construction and after development.

4.2.1 Exposure Assessment

In order to quantify exposures, an upper-bound estimate of the theoretical intake was developed for each of the potentially exposed human populations via each of the exposure pathways identified in the CSM. The exposure pathways include soil ingestion, soil dermal contact, soil particulate inhalation, and soil vapor inhalation.

The detailed assumptions and calculations associated with the exposure assessment and fate and transport mechanisms is presented in Appendix B.

4.2.2 RBTC Calculation

Using the exposure scenarios and the pathway-specific parameters discussed in Appendix B, Ramboll developed RBTCs for all the COCs. As a conservative measure, the RBTCs were calculated to correspond to a target cancer risk of $1x10^{-6}$ and a target noncancer HQ of one. Since the RBTCs correspond to the low end of the target risk range considered by USEPA and Cal/EPA to be protective of human health, the presence of a chemical at a concentration in excess of the RBTC does not indicate that adverse impacts to human health are occurring or will occur but suggests that further evaluation may be warranted.

For chemicals that have both carcinogenic and noncarcinogenic effects, the RBTCs were calculated separately for both health effect endpoints. The more stringent (i.e., lowest and most conservative) value was selected as RBTC and used for comparison with Site data.

The equations and assumptions used to calculate the RBTCs for each medium for the potential future on-site worker were presented in Appendix B.

Soil gas and soil RBTCs were developed for the future residents and construction workers, and are presented in Tables 3 and 4.

4.3 Alternative Soil Screening Levels

For Lead, DTSC applies the risk-based soil lead concentrations in a residential use (i.e., unrestricted use) scenario as an Exposure Point Concentration. A 95% UCL on the arithmetic mean calculated to be 80 mg/Kg or less for residential soil lead, or a 95% UCL of 320 mg/kg or less for industrial soil lead, would be protective of children and women of child-bearing ages, respectively (Cal/EPA 2016). For lead, the DTSC screening level for residential soil of 80 mg/kg was selected as the RBTC.

4.4 Site Clean Up Goals for Soil and Soil Gas

Site clean-up goals have been developed for soil and soil vapor based on a HHRA evaluation and are presented in Tables 3 and 4. None of the soil gas sample results from the Haley & Aldrich 2017 sampling event exceeded the calculated respective RBTCs for either the

construction worker or residential scenario. Therefore, additional action related to soil gas impacts at the Site is not required.

The following chemicals were identified in at least one soil sample at a concentration exceeding either the construction worker or residential RBTC for soil:

- TPH (C8-C16)
- TPH (C8-C19)
- Lead
- Arsenic

Arsenic concentrations were evaluated against both the Department of Toxic Substances Control (DTSC) default background soil concentration of 12 mg/kg and the site-specific calculated background concentration of 19 mg/kg (Appendix B). To calculate the site-specific Arsenic background concentration, Ramboll used the methodology developed by the DTSC. The methodology consisted in using graphical and statistical approaches to assess the distribution of the arsenic data, identify the outliers and determine the cleanup goal. Both approaches indicate that the cleanup level for arsenic at the site is 19 mg/kg. Details about the approach is included in Attachment A of Appendix B.

5. REMEDIAL ACTION OBJECTIVES

5.1 Remedial Action Objectives

Remedial Action Objectives have been developed for the Site based on investigations that have been completed to date. The RAOs were developed to minimize the risks associated with the identified site impacts. Various levels of acceptable risk have been established by regulatory agencies and are summarized below.

As noted above, the National Oil and Hazardous Substances Pollution Contingency Plan (NCP) (40 CFR 300) indicates that lifetime incremental cancer risks posed by a site should not exceed a range of one in one million (1×10^{-6}) to one hundred in one million (1×10^{-4}) and that noncarcinogenic chemicals should not be present at levels expected to cause adverse health effects (i.e., a Hazard Quotient [HQ] greater than 1). In addition, guidelines provided by USEPA indicate that sites posing a cumulative cancer risk of less than 1×10^{-4} and hazard indices less than unity (1) for noncancer endpoints are generally not considered to pose a significant risk and remediation is not warranted (The Role of the Baseline Risk Assessment in Superfund Remedy Selection Decisions, USEPA, 1991c).

Various levels of acceptable risk have also been established in the State of California. For example, the California Hazardous Substances Account Act (HSAA) incorporates the NCP by reference, and thus accepts the same acceptable risk range. The Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65) in California regulates chemical exposures to the general population and is based on an acceptable risk level of 1×10^{-5}. In addition, the California Department of Toxic Substances Control (DTSC) considers the 1×10^{-6} risk level as the generally accepted point of departure for risk management decisions to achieve unrestricted land use. For purposes of this site remediation approach we have established clean-up goals using the most conservative risk management criteria, 1×10^{-6}.

Therefore, cumulative cancer risks in the range of 1×10^{-6} to 1×10^{-4} may be considered to be acceptable, with cancer risks less than 1×10^{-6} considered de minimis. The risk range and target hazard index has been considered in developing RAOs based on human health exposures to soil and soil vapor. The following RAOs are proposed for the Site based on the above and site-specific considerations:

- Prevent human exposures to concentrations of COCs in soil such that total (i.e., cumulative) lifetime incremental carcinogenic risks are less than the most conservative end of the NCP risk range (i.e., 1×10-6) and a noncancer HI less than 1.

6. EXCAVATION SCOPE OF WORK

Ramboll conducted geostatistical analyses on Arsenic, Lead, and TPH soil concentrations from the Haley & Aldrich site investigation conducted in 2017. A summary of the soil sample results is presented in Table 1 and the sample locations are shown on Figures 9 and 10. The geostatistical analyses methodology was used to map the spatial distribution of each of the COC so that an estimate corresponding excavation volumetric area could be estimated of soil exceeding the established corresponding RBTC for each COC. These RBTC thresholds were established as described above and are established to achieve the site specific RAOs by the physical removal of soil with concentrations of TPH, Arsenic, and Lead that exceed the respective RBTCs.

Geostatistics is used and accepted by the DTSC and EPA which developed its own proprietary software (https://www.epa.gov/water-research/geostatistical-environmental-assessment-software-geoeas). It is a class of statistics used to analyze and predict the values associated with spatial or spatiotemporal phenomena. It incorporates the spatial coordinates of the data within the analyses. Many geostatistical tools were originally developed as a practical means to describe spatial patterns and interpolate values for locations where samples were not collected. Ramboll employed these approved statistical methodologies to estimate the horizontal and vertical limits of soil around the samples that had reported TPH, Arsenic, or Lead concentrations exceeding the respective RBTC. The following describes the methodology used for each COC:

Because Arsenic data follow a log normal distribution, Ramboll first built a spatial variogram using the logarithm of the data. A map for each sampling depth was created using kriging interpolation (Appendix C).

Second, Ramboll transformed the produced maps (one per sampling depth) to natural values by taking the exponential of the produced map. Ramboll identified the isocontour corresponding to 19 mg/kg on each map for one excavation scenario and estimated the areas that correspond to 12 mg/kg for a second scenario.

A similar statistical evaluation was then conducted for TPH and Lead values exceeding the respective RBTCs.

The three COC maps were then merged into one final map to show the estimated areas of excavation to remove the COCs exceeding the RBTCs. Two maps were prepared, one assuming a RBTC of 12 mg/kg for Arsenic with TPH and Lead above their respective RBTCs (Figure 9) and one assuming a RBTC of 19 mg/kg for Arsenic with TPH and Lead above their respective RBTCs (Figure 10). The estimated volume associated with excavating soil exceeding Arsenic of 12 mg/kg and TPH and Lead above their respective RBTCs is approximately 6,100 cubic yards and the estimated volume associated with excavating soil exceeding Arsenic of 19 mg/kg and TPH and Lead above their respective RBTCs is approximately 2,800 cubic yards.

Because it has been shown through multiple soil samples collected at the Site that arsenic is naturally present in shallow soils, it is recommended that the Site-specific calculated background arsenic concentration of 19 mg/kg be selected as the Site clean-up goal for Arsenic (Appendix B). Additionally, the proposed site development will largely mitigate direct exposure to underlying soils for the future residences as nearly all of the Site will be paved with foundations, streets and sidewalks further supporting the selection of the Site-specific background concentration for Arsenic. Therefore, the proposed areas of soil excavation are

presented in Figure 10. Each area of excavation will be advanced to approximately 6-inches below the deepest impacted soil sample in that area.

Prior to excavation, each area will be marked in the field to establish the limits of the excavations. The excavation methodology and confirmation sampling is described below.

6.1 Pre-Field Activities

Ramboll will prepare a site-specific Health and Safety Plan (HASP) to protect its employees that may directly contact contaminated soil during planned field activities. Ramboll subcontractors will each be responsible for preparing their own site-specific HASP to protect the health and safety of their employees.

Prior to commencing excavation activities, an excavation plan will be prepared by the excavation contractor and submitted to the Building Department in order to obtain an excavation permit. The excavation plan will present the excavation details generally presented herein. Ramboll will obtain site access/consent from the property owner; and notify Underground Services Alert (USA) of its intent to conduct the proposed soil excavation. The proposed excavation footprint of the subsurface investigation will be clearly marked with white paint, as required by USA. Ramboll will also contract with a private utility locator to clear subsurface obstructions. The proposed soil excavation footprint will be modified in the field, as necessary, to avoid utilities or other obstructions, per the recommendations of USA and/or the private utility locator.

Once the Work Plan is formally approved by LARWQCB and arrangements for access have been obtained, Ramboll will conduct the pre-field activities described above. Notification of field dates will be provided to LARWQCB at least 48 hours prior to field mobilization. Field work will be conducted under the supervision of a qualified geologist and/or a California-licensed Professional Engineer from the Remediation Contractor.

6.2 Excavation Equipment and Methods

Excavation in each of the proposed areas will be conducted using conventional excavation equipment (i.e., backhoes, excavators, bobcats, etc.). The area of active remedial excavation will be considered an exclusion zone for health and safety purposes and to reduce the potential for migration of contamination. Berms or sandbags will be placed around the open excavation prior to any rain event to minimize runoff from entering the excavation and/or spreading contamination out of the exclusion zone.

6.3 Excavation Screening

Continuous oversight of excavation activities will be conducted to assess the potential for chemical impacts based on evidence of staining, discoloration, chemical odors, etc. A photo ionization detector (PID) and Gem 2000 methane meter (GEM) will be used in the field to screen for VOCs and methane in accordance with local air permitting requirements. The South Coast Air Quality Management District (SCAQMD's) Rule 1166 (the Rule) sets requirements to control emission of VOCs from excavation activities. According to the Rule, VOC-contaminated soil is defined as soil that registers above 50 parts per million (ppm) as measured in the field using a vapor analyzer photo-ionization detector (PID) calibrated to hexane. Pursuant to the Rule's guidelines, Ramboll personnel will monitor for VOC contamination in excavated soil at least once every 15 minutes during active excavation. When PID readings exceeded 50 ppm at three inches above the working face of the odor source, work will be stopped until conditions could be brought into compliance. During excavation activities, the potential for exposure to airborne COCs will be controlled using

suppressants. Suppressants may include water, plastic sheeting, or other chemical suppressants. It is believed that water, plastic covering, or other chemical suppressants will be sufficient to control dust and other COCs. In the event that fugitive vapor concentrations from excavated materials are sustained above 50 ppmV, applicable notification protocol will be completed pursuant to SCAQMD Rule 1166. Field observations along with PID and GEM measurements will be documented in field notes and keep onsite during the excavation.

6.4 Excavation Confirmation Sampling

Each excavation will proceed to the proposed dimensions presented in Section 5.1. Upon completion, soil samples will be collected from the sidewalls and bottom of the excavation. The samples will be selectively analyzed for TPH by USEPA Method 8015M (carbon chain), VOCs by USEPA Method 8260B, and for metals by USEPA Method 6010B. The purpose of this sampling will be to confirm that the cleanup levels have been achieved and that no additional excavation is needed.

Confirmation soil samples will be collected in clean jars and will be collected directly from the excavator bucket. Each soil sample that will be analyzed for TPH or VOCs will be collected by extracting three 5-gram aliquots from the designated sampling jar using an Encore® T-handle or similar device and loaded with the Teflon® sampler. Samples will be labeled with a unique identification number, type of sample, the sample location, and the sample depth, if applicable. The sample number will be legibly entered on the chain-of-custody form and the sample label. Soil samples will be delivered to a state-certified laboratory within 24 hours of collection. Chain of custody procedures will be followed during sample storage, transportation, and delivery.

The number of samples required to confirm that cleanup standards have been achieved will be based on the surface area of the excavation (wall or floor), or as directed by the appropriate regulatory authority. Unless directed otherwise by the appropriate regulatory authority, a minimum of one sample per 25 lineal feet of sidewall or one sample per 200 square feet of exposed sidewall face (whichever is greater) will be collected for laboratory analysis. Samples will be collected randomly within the sidewall area to be sampled. At a minimum, four samples will be collected from the sidewalls and one from the excavation bottom. Confirmation samples that exceed the clean-up goal will be over excavated (approximately 5 additional feet horizontally for side wall confirmation samples and approximately 1 foot vertically for bottom samples).

Duplicate quality assurance and quality control (QA/QC) samples will be included for analysis of soil samples. QA/QC samples will be labeled and sent to the laboratory along with the actual samples for analysis. The collection and handling of all QA/QC samples will be documented in the field notebook. Approximately one field duplicate will be submitted per 20 soil samples (5 percent, or a minimum of one sample) for the same analyses as the confirmation samples.

Remediation will be deemed complete once the confirmation sample results are reported below the proposed Site screening levels or the LARWQCB confirms that the extent of confirmation sampling is sufficient. Backfilling of these areas will be performed once the remediation is deemed complete. Clean soil from other portions of the site, or from offsite, will be used as backfill.

Excavated soil will be placed in temporary stockpiles for disposal at an appropriate landfill qualified to accept the soil. Waste manifests for the removed soil will be included in the report that will be prepared after completing the excavation. Groundwater and liquid waste is not anticipated to be generated during excavation activities. All waste manifests will be signed by the Responsible Party.

7. REPORTING AND SCHEDULE

7.1 Reporting

Following completion of the remedial activities, Ramboll will prepare a report documenting the remedial activities, observations, other findings, conclusions, and recommendations, if any. The purpose of the remedial actions presented herein and the Final Site Closure Report is to attain Site closure from the LARWQCB for unrestricted use so that the proposed multi-family development can move forward. As such, the report will include an analysis of final Site-specific risks so that it is documented that the Site will not pose an unacceptable risk to the future residents.

7.2 Schedule

Ramboll will schedule the field tasks outlined in this RAP upon receipt of LARWQCB's authorization and availability of subcontractors. Ramboll estimates that the tasks outlined above can be completed in accordance with the following tentative schedule.

Task	Description	Estimated Schedule
1	Pre-Field Activities, Permitting, and Mobilization (Concurrent Tasks)	8 weeks total
	Update HASP, notify DigAlert, mark subsurface utility lines	1 week
	Current Site Conditions Inspection	1 week
	Prepare excavation permit	2 weeks
	Obtain excavation permit from City of Los Angeles	6 weeks
2	Mobilize and Conduct Excavation and Site Restoration Activities	6 weeks total
3	Report Preparation	6 weeks total

8. REFERENCES

Brown and Caldwell, Results of Deep Borings and Protection of Groundwater Discussion, Little Blackfoot, LLC, Formerly Estate of Albert Levinson, dba Brea Canyon Oil Hellman Lease – 1, 2.5 and 4-Acre Parcels, Carson, California, 11 December 2003.

California Environmental Protection Agency (Cal/EPA). 2011. Final Guidance for the Evaluation and Mitigation of Subsurface Vapor Intrusion to Indoor Air.

Cal/EPA. 2014. Human Health Risk Assessment (HHRA) Note Number 1, Issue: Recommended DTSC Default Exposure Factors for Use in Risk Assessment at California Hazardous Waste Sites and Permitted Facilities. September.

Cal/EPA. 2015. Human Health Risk Assessment (HHRA) Note Number 3, Issue: DTSC-modified Screening Levels (DTSC-SLs). October.

Cal/EPA. 2016. DTSC. Human and Ecological Risk Office (HERO) Human Health Risk Assessment (HHRA) Note Number 3, Issue: DTSC-Modified Screening Levels (DTSC-SLs). June.

California Mechanical Code (CMC). 2013. California Code of Regulations, Title 24, Part 4.

Chernoff G, Bosan W, Oudiz D. 2008. Determination of a Southern California Regional Background Arsenic Concentration in Soil.

California Department of Toxic Substances Control, records request and on-line database review (www.envirostor.dtsc.ca.gov), accessed 20 April 2017.

California Regional Water Quality Control Board – Los Angeles Region, No Further Action – The Estate of Albert Levinson DBA Brea Canyon Oil Company, Hellman Property, 1, 2.5, & 4 Acre Parcels, Northeast Corner of Victoria Street & Central Avenue, 17810 Central Avenue, Carson (SCP No. 468) (Site ID No. C244010), 13 August 2008.

California Regional Water Quality Control Board – Los Angeles Region, records request and on-line database review (www.geotracker.waterboards.ca.gov), accessed 20 April 2017.

Division of Oil, Gas & Geothermal Resources, Wildcat Map W1-5 and records request, 20 April 2017.

Earth Management Company., Third Quarter 2014 Groundwater Monitoring Report and Request for Closure, Best California Gas Ltd. Station #267, 18523 S. Avalon Blvd., Carson, CA, 17 September 2014.

Environmental Data Resources, Inc., The EDR® Radius Map Report, 20 April 2017.

Haley & Aldrich, Inc., site visit conducted by Kelly Hoggan on 28 July 2017.

Mactec Engineering and Consulting, Inc., Summary and Closure Report, Hellman Property – Parcel 2; Little Blackfoot, LLC, Formerly Estate of Albert Levinson dba Brea Canyon Oil Company/Hellman 2.5 Acre Parcel (Parcel 2), Northeast Corner of Victoria Street and Central Avenue, Carson, California, 12 December 2003.

National Pipeline Mapping System, Public Map Viewer (www.npms.phmsa.dot.gov), accessed 28 July 2017.

The Reynolds Group, Environmental Site Remediation, Summary and Closure Report, Hellman Property – 4 Acre and 1 Acre Parcels; Northeast Corner of Victoria Street and Central Avenue, Carson, California, October 2003.

The Reynolds Group, Results of Soil Gas Survey and Request for Case Closure, Former Brea Canyon Company Hellman Lease (2.5, 1 and 4 Acre Parcels), 17810 S. Central Avenue, Carson, California, 5 May 2006.

RMT, Inc., Phase II Preacquisition Site Assessment, Hellman Property, Compton, California, May 1992.

South Coast Air Quality Management District, records request and on-line database review (Facility Information Detail [FIND]), accessed 20 April 2017.

Topographic Map, Long Beach, California, United States Geological Survey 7.5-minute series, 2012.

Johnson PC, Ettinger RA. 1991. Heuristic Model for Predicting the Intrusion Rate of Contaminant Vapors into Buildings. Environmental Science and Technology, 25, 1445-1452.

United States Environmental Protection Agency (USEPA). 1989. Risk Assessment Guidance for Superfund, Volume I: Human Health Evaluation Manual (Part A). Interim Final. EPA/540/1-89/002. Office of Emergency and Remedial Response. Washington, D.C. December.

USEPA. 1991. Risk Assessment Guidance for Superfund, Volume 1 – Human Health Valuation Manual, Supplemental Guidance, Office of Emergency and Remedial Response.

USEPA. 2002. Supplemental Guidance for Developing Soil Screening Levels for Superfund Sites. OSWER 9355.4-24. December.

USEPA. 2004. Risk Assessment Guidance (RAGs) (Part E Supplemental Guidance for Dermal Risk Assessment). Final. EPA/540/R/99/005: Office of Emergency and Remedial Response. Washington, D.C.

USEPA. 2009. Risk Assessment Guidance (RAGs) (Part F, Supplemental Guidance for Inhalation Risk Assessment). Final. January.

USEPA. 2016. User's Guide for Regional Screening Levels for Chemical Contaminants at Superfund Sites. November.

TABLES

Table 1. Summary of Soil Analytical Results
Northeast Corner of South Central Avenue and Victoria Street
Carson, California

Location	DTSC	Regional	HA-01	HA-01	HA-02	HA-02	HA-03	HA-03	HA-04	HA-04	HA-05	HA-05	HA-06	HA-06	HA-07	HA-07	HA-08	HA-08
Sample Date	HHRA	Screening	8/30/17	8/30/17	8/30/17	8/30/17	8/30/17	8/30/17	8/31/17	8/31/17	8/30/17	8/30/17	8/30/17	8/30/17	8/30/17	8/30/17	8/31/17	8/31/17
Sample Depth (bgs)	Note 3	Levels	0.5 (ft)	2 (ft)	0.5 (ft)	2 (ft)	0.5 (ft)	2 (ft)	0 (ft)	0.5 (ft)	0.5 (ft)	2 (ft)	0.5 (ft)	2 (ft)	0.5 (ft)	2 (ft)	0.5 (ft)	2 (ft)
Sample Name	Residential	Residential	HA-01-.5	HA-01-2	HA-02-.5	HA-02-2	HA-03-.5	HA-03-2	HA-04-2	HA-04-.5	HA-05-.5	HA-05-2	HA-06-.5	HA-06-2	HA-07-.5	HA-07-2	HA-08-.5	HA-08-2
Inorganic Compounds (mg/kg)																		
Antimony	-	31	ND (2)	ND (2)	ND (2)	ND (2)	ND (2)	ND (2)	ND (2)	ND (2)	ND (2)	ND (2)	ND (2)	ND (2)	ND (2)	ND (2)	ND (2)	ND (2)
Arsenic	12	-	**9.2**	**6.5**	**120**	**5**	**3**	**4.8**	**4.4**	**4.7**	**5.2**	**6.5**	**4.5**	**4.5**	**9.1**	**9.3**	**5.7**	**5.1**
Barium	-	15000	**130**	**140**	**110**	**140**	**110**	**170**	**150**	**120**	**150**	**110**	**170**	**200**	**160**	**150**	**150**	**150**
Beryllium	15	-	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)
Cadmium	5.2	-	ND (1)	ND (1)	ND (1)	ND (1)	**3.1**	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)
Chromium	-	-	**20**	**20**	**14**	**23**	**16**	**24**	**21**	**23**	**22**	**25**	**26**	**25**	**26**	**26**	**26**	**26**
Cobalt	-	23	**9.8**	**11**	**7.8**	**11**	**6.1**	**8.7**	**11**	**11**	**11**	**9.8**	**12**	**13**	**12**	**12**	**13**	**13**
Copper	-	3100	**19**	**20**	**16**	**20**	**18**	**18**	**26**	**24**	**22**	**18**	**24**	**25**	**22**	**25**	**23**	**23**
Lead	80	-	**12**	**4.6**	**19**	**4.8**	**110**	**9.3**	**21**	**21**	**14**	**4.6**	**4.8**	**4.7**	**5.8**	**4.7**	**5.9**	**4.7**
Mercury	1	-	**0.51**	ND (0.1)	**0.18**	ND (0.1)	ND (0.1)	ND (0.1)	**0.16**	ND (0.1)	**1.8**	ND (0.1)	**0.13**	ND (0.1)	ND (0.1)	ND (0.1)	ND (0.1)	ND (0.1)
Molybdenum	-	390	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)
Nickel	490	-	**17**	**17**	**13**	**19**	**14**	**17**	**19**	**20**	**17**	**19**	**23**	**25**	**25**	**27**	**22**	**23**
Selenium	-	390	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	**1.1**	ND (1)	ND (1)	**1**	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)
Silver	390	-	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)
Thallium	-	0.78	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)
Vanadium	390	-	**35**	**36**	**29**	**40**	**28**	**43**	**39**	**41**	**40**	**43**	**45**	**44**	**44**	**43**	**44**	**44**
Zinc	-	23000	**60**	**38**	**85**	**42**	**1000**	**61**	**180**	**90**	**73**	**42**	**46**	**48**	**45**	**48**	**47**	**45**
Total Petroleum Hydrocarbons (mg/kg)																		
Total Petroleum Hydrocarbons (C4-C10)	-	-	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)
Total Petroleum Hydrocarbons (C5-C8)	-	-	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)
Total Petroleum Hydrocarbons (C6-C8)	-	-	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)
Total Petroleum Hydrocarbons (C9-C16)	-	-	ND (10)	ND (10)	ND (20)	ND (10)	**140**	**40**	ND (10)	ND (10)	**16**	ND (10)	ND (10)	ND (10)	**43**	**11**	ND (20)	ND (10)
Total Petroleum Hydrocarbons (C9-C18)	-	-	ND (10)	ND (10)	**21**	ND (10)	**260**	**46**	ND (10)	ND (10)	**17**	ND (10)	ND (10)	ND (10)	**49**	**11**	ND (20)	ND (10)
Total Petroleum Hydrocarbons (C10-C40)	-	-	**520**	ND (10)	**3500**	ND (10)	**2600**	**200**	**42**	ND (10)	**280**	ND (10)	ND (10)	ND (10)	**260**	**26**	**790**	ND (10)
Total Petroleum Hydrocarbons (C17-C32)	-	-	**260**	ND (10)	**1900**	ND (10)	**1600**	**110**	**31**	ND (10)	**140**	ND (10)	ND (10)	ND (10)	**130**	**14**	ND (20)	ND (10)
Total Petroleum Hydrocarbons (C19-C32)	-	-	**260**	ND (10)	**1900**	ND (10)	**1500**	**100**	**31**	ND (10)	**140**	ND (10)	ND (10)	ND (10)	**120**	**14**	**350**	ND (10)
Volatile Organic Compounds (mg/kg)																		
1,1,1,2-Tetrachloroethane	2	-	ND (0.004)	ND (0.0038)	ND (0.0038)	ND (0.0037)	ND (0.0036)	ND (0.0036)	ND (0.0039)	ND (0.004)	ND (0.0041)	ND (0.0037)	ND (0.0057)	ND (0.0042)	ND (0.004)	ND (0.0038)	ND (0.0042)	ND (0.0036)
1,1,1-Trichloroethane	1700	-	ND (0.004)	ND (0.0038)	ND (0.0038)	ND (0.0037)	ND (0.0036)	ND (0.0036)	ND (0.0039)	ND (0.004)	ND (0.0041)	ND (0.0037)	ND (0.0057)	ND (0.0042)	ND (0.004)	ND (0.0038)	ND (0.0042)	ND (0.0036)
1,1,2,2-Tetrachloroethane	0.61	-	ND (0.004)	ND (0.0038)	ND (0.0038)	ND (0.0037)	ND (0.0036)	ND (0.0036)	ND (0.0039)	ND (0.004)	ND (0.0041)	ND (0.0037)	ND (0.0057)	ND (0.0042)	ND (0.004)	ND (0.0038)	ND (0.0042)	ND (0.0036)
1,1,2-Trichloroethane	-	1.1	ND (0.004)	ND (0.0038)	ND (0.0038)	ND (0.0037)	ND (0.0036)	ND (0.0036)	ND (0.0039)	ND (0.004)	ND (0.0041)	ND (0.0037)	ND (0.0057)	ND (0.0042)	ND (0.004)	ND (0.0038)	ND (0.0042)	ND (0.0036)
1,1-Dichloroethane	3.6	-	ND (0.004)	ND (0.0038)	ND (0.0038)	ND (0.0037)	ND (0.0036)	ND (0.0036)	ND (0.0039)	ND (0.004)	ND (0.0041)	ND (0.0037)	ND (0.0057)	ND (0.0042)	ND (0.004)	ND (0.0038)	ND (0.0042)	ND (0.0036)
1,1-Dichloroethene	-	230	ND (0.004)	ND (0.0038)	ND (0.0038)	ND (0.0037)	ND (0.0036)	ND (0.0036)	ND (0.0039)	ND (0.004)	ND (0.0041)	ND (0.0037)	ND (0.0057)	ND (0.0042)	ND (0.004)	ND (0.0038)	ND (0.0042)	ND (0.0036)
1,1-Dichloropropene	-	-	ND (0.004)	ND (0.0038)	ND (0.0038)	ND (0.0037)	ND (0.0036)	ND (0.0036)	ND (0.0039)	ND (0.004)	ND (0.0041)	ND (0.0037)	ND (0.0057)	ND (0.0042)	ND (0.004)	ND (0.0038)	ND (0.0042)	ND (0.0036)
1,2,3-Trichlorobenzene	63	-	ND (0.004)	ND (0.0038)	ND (0.0038)	ND (0.0037)	ND (0.0036)	ND (0.0036)	ND (0.0039)	ND (0.004)	ND (0.0041)	ND (0.0037)	ND (0.0057)	ND (0.0042)	ND (0.004)	ND (0.0038)	ND (0.0042)	ND (0.0036)
1,2,3-Trichloropropane	0.0015	-	ND (0.004)	ND (0.0038)	ND (0.0038)	ND (0.0037)	ND (0.0036)	ND (0.0036)	ND (0.0039)	ND (0.004)	ND (0.0041)	ND (0.0037)	ND (0.0057)	ND (0.0042)	ND (0.004)	ND (0.0038)	ND (0.0042)	ND (0.0036)
1,2,4-Trichlorobenzene	-	24	ND (0.004)	ND (0.0038)	ND (0.0038)	ND (0.0037)	ND (0.0036)	ND (0.0036)	ND (0.0039)	ND (0.004)	ND (0.0041)	ND (0.0037)	ND (0.0057)	ND (0.0042)	ND (0.004)	ND (0.0038)	ND (0.0042)	ND (0.0036)
1,2,4-Trimethylbenzene	-	300	ND (0.004)	ND (0.0038)	ND (0.0038)	ND (0.0037)	ND (0.0036)	ND (0.0036)	ND (0.0039)	ND (0.004)	ND (0.0041)	ND (0.0037)	ND (0.0057)	ND (0.0042)	ND (0.004)	ND (0.0038)	ND (0.0042)	ND (0.0036)

Table 1. Summary of Soil Analytical Results
Northeast Corner of South Central Avenue and Victoria Street
Carson, California

Location	DTSC	Regional	HA-01	HA-01	HA-02	HA-02	HA-03	HA-03	HA-04	HA-04	HA-05	HA-05	HA-06	HA-06	HA-07	HA-07	HA-08	HA-08
Sample Date	HHRA	Screening	8/30/17	8/30/17	8/30/17	8/30/17	8/30/17	8/30/17	8/31/17	8/31/17	8/30/17	8/30/17	8/30/17	8/30/17	8/30/17	8/30/17	8/31/17	8/31/17
Sample Depth (bgs)	Note 3	Levels	0.5 (ft)	2 (ft)	0.5 (ft)	2 (ft)	0.5 (ft)	2 (ft)	0 (ft)	0.5 (ft)	0.5 (ft)	2 (ft)	0.5 (ft)	2 (ft)	0.5 (ft)	2 (ft)	0.5 (ft)	2 (ft)
Sample Name	Residential	Residential	HA-01-.5	HA-01-2	HA-02-.5	HA-02-2	HA-03-.5	HA-03-2	HA-04-2	HA-04-.5	HA-05-.5	HA-05-2	HA-06-.5	HA-06-2	HA-07-.5	HA-07-2	HA-08-.5	HA-08-2
Volatile Organic Compounds (mg/kg)																		
1,2-Dibromo-3-chloropropane (DBCP)	-	0.0053	ND (0.008)	ND (0.0075)	ND (0.0076)	ND (0.0073)	ND (0.0073)	ND (0.0073)	ND (0.0078)	ND (0.0079)	ND (0.0083)	ND (0.0073)	ND (0.011)	ND (0.0083)	ND (0.008)	ND (0.0075)	ND (0.0084)	ND (0.0073)
1,2-Dibromoethane (Ethylene Dibromide)	0.037	-	ND (0.004)	ND (0.0038)	ND (0.0038)	ND (0.0037)	ND (0.0036)	ND (0.0036)	ND (0.0039)	ND (0.004)	ND (0.0041)	ND (0.0037)	ND (0.0057)	ND (0.0042)	ND (0.004)	ND (0.0038)	ND (0.0042)	ND (0.0036)
1,2-Dichlorobenzene	-	1800	ND (0.004)	ND (0.0038)	ND (0.0038)	ND (0.0037)	ND (0.0036)	ND (0.0036)	ND (0.0039)	ND (0.004)	ND (0.0041)	ND (0.0037)	ND (0.0057)	ND (0.0042)	ND (0.004)	ND (0.0038)	ND (0.0042)	ND (0.0036)
1,2-Dichloroethane	-	0.46	ND (0.004)	ND (0.0038)	ND (0.0038)	ND (0.0037)	ND (0.0036)	ND (0.0036)	ND (0.0039)	ND (0.004)	ND (0.0041)	ND (0.0037)	ND (0.0057)	ND (0.0042)	ND (0.004)	ND (0.0038)	ND (0.0042)	ND (0.0036)
1,2-Dichloropropane	-	0.28	ND (0.004)	ND (0.0038)	ND (0.0038)	ND (0.0037)	ND (0.0036)	ND (0.0036)	ND (0.0039)	ND (0.004)	ND (0.0041)	ND (0.0037)	ND (0.0057)	ND (0.0042)	ND (0.004)	ND (0.0038)	ND (0.0042)	ND (0.0036)
1,3,5-Trimethylbenzene	210	-	ND (0.004)	ND (0.0038)	ND (0.0038)	ND (0.0037)	ND (0.0036)	ND (0.0036)	ND (0.0039)	ND (0.004)	ND (0.0041)	ND (0.0037)	ND (0.0057)	ND (0.0042)	ND (0.004)	ND (0.0038)	ND (0.0042)	ND (0.0036)
1,3-Dichlorobenzene	240	-	ND (0.004)	ND (0.0038)	ND (0.0038)	ND (0.0037)	ND (0.0036)	ND (0.0036)	ND (0.0039)	ND (0.004)	ND (0.0041)	ND (0.0037)	ND (0.0057)	ND (0.0042)	ND (0.004)	ND (0.0038)	ND (0.0042)	ND (0.0036)
1,3-Dichloropropane	420	-	ND (0.004)	ND (0.0038)	ND (0.0038)	ND (0.0037)	ND (0.0036)	ND (0.0036)	ND (0.0039)	ND (0.004)	ND (0.0041)	ND (0.0037)	ND (0.0057)	ND (0.0042)	ND (0.004)	ND (0.0038)	ND (0.0042)	ND (0.0036)
1,4-Dichlorobenzene	-	2.6	ND (0.004)	ND (0.0038)	ND (0.0038)	ND (0.0037)	ND (0.0036)	ND (0.0036)	ND (0.0039)	ND (0.004)	ND (0.0041)	ND (0.0037)	ND (0.0057)	ND (0.0042)	ND (0.004)	ND (0.0038)	ND (0.0042)	ND (0.0036)
2,2-Dichloropropane	-	-	ND (0.004)	ND (0.0038)	ND (0.0038)	ND (0.0037)	ND (0.0036)	ND (0.0036)	ND (0.0039)	ND (0.004)	ND (0.0041)	ND (0.0037)	ND (0.0057)	ND (0.0042)	ND (0.004)	ND (0.0038)	ND (0.0042)	ND (0.0036)
2-Chlorotoluene	480	-	ND (0.004)	ND (0.0038)	ND (0.0038)	ND (0.0037)	ND (0.0036)	ND (0.0036)	ND (0.0039)	ND (0.004)	ND (0.0041)	ND (0.0037)	ND (0.0057)	ND (0.0042)	ND (0.004)	ND (0.0038)	ND (0.0042)	ND (0.0036)
2-Phenylbutane (sec-Butylbenzene)	2200	-	ND (0.004)	ND (0.0038)	ND (0.0038)	ND (0.0037)	ND (0.0036)	ND (0.0036)	ND (0.0039)	ND (0.004)	ND (0.0041)	ND (0.0037)	ND (0.0057)	ND (0.0042)	ND (0.004)	ND (0.0038)	ND (0.0042)	ND (0.0036)
4-Chlorotoluene	440	-	ND (0.004)	ND (0.0038)	ND (0.0038)	ND (0.0037)	ND (0.0036)	ND (0.0036)	ND (0.0039)	ND (0.004)	ND (0.0041)	ND (0.0037)	ND (0.0057)	ND (0.0042)	ND (0.004)	ND (0.0038)	ND (0.0042)	ND (0.0036)
Benzene	0.33	-	ND (0.004)	ND (0.0038)	ND (0.0038)	ND (0.0037)	ND (0.0036)	ND (0.0036)	ND (0.0039)	ND (0.004)	ND (0.0041)	ND (0.0037)	ND (0.0057)	ND (0.0042)	ND (0.004)	ND (0.0038)	ND (0.0042)	ND (0.0036)
Bromobenzene	-	290	ND (0.004)	ND (0.0038)	ND (0.0038)	ND (0.0037)	ND (0.0036)	ND (0.0036)	ND (0.0039)	ND (0.004)	ND (0.0041)	ND (0.0037)	ND (0.0057)	ND (0.0042)	ND (0.004)	ND (0.0038)	ND (0.0042)	ND (0.0036)
Bromodichloromethane	0.3	-	ND (0.004)	ND (0.0038)	ND (0.0038)	ND (0.0037)	ND (0.0036)	ND (0.0036)	ND (0.0039)	ND (0.004)	ND (0.0041)	ND (0.0037)	ND (0.0057)	ND (0.0042)	ND (0.004)	ND (0.0038)	ND (0.0042)	ND (0.0036)
Bromoform	20	-	ND (0.004)	ND (0.0038)	ND (0.0038)	ND (0.0037)	ND (0.0036)	ND (0.0036)	ND (0.0039)	ND (0.004)	ND (0.0041)	ND (0.0037)	ND (0.0057)	ND (0.0042)	ND (0.004)	ND (0.0038)	ND (0.0042)	ND (0.0036)
Bromomethane (Methyl Bromide)	-	6.8	ND (0.004)	ND (0.0038)	ND (0.0038)	ND (0.0037)	ND (0.0036)	ND (0.0036)	ND (0.0039)	ND (0.004)	ND (0.0041)	ND (0.0037)	ND (0.0057)	ND (0.0042)	ND (0.004)	ND (0.0038)	ND (0.0042)	ND (0.0036)
Carbon disulfide	-	770	ND (0.004)	ND (0.0038)	ND (0.0038)	ND (0.0037)	ND (0.0036)	ND (0.0036)	ND (0.0039)	ND (0.004)	ND (0.0041)	ND (0.0037)	ND (0.0057)	ND (0.0042)	ND (0.004)	ND (0.0038)	ND (0.0042)	ND (0.0036)
Carbon tetrachloride	0.099	-	ND (0.004)	ND (0.0038)	ND (0.0038)	ND (0.0037)	ND (0.0036)	ND (0.0036)	ND (0.0039)	ND (0.004)	ND (0.0041)	ND (0.0037)	ND (0.0057)	ND (0.0042)	ND (0.004)	ND (0.0038)	ND (0.0042)	ND (0.0036)
Chlorobenzene	-	280	ND (0.004)	ND (0.0038)	ND (0.0038)	ND (0.0037)	ND (0.0036)	ND (0.0036)	ND (0.0039)	ND (0.004)	ND (0.0041)	ND (0.0037)	ND (0.0057)	ND (0.0042)	ND (0.004)	ND (0.0038)	ND (0.0042)	ND (0.0036)
Chlorobromomethane	-	150	ND (0.004)	ND (0.0038)	ND (0.0038)	ND (0.0037)	ND (0.0036)	ND (0.0036)	ND (0.0039)	ND (0.004)	ND (0.0041)	ND (0.0037)	ND (0.0057)	ND (0.0042)	ND (0.004)	ND (0.0038)	ND (0.0042)	ND (0.0036)
Chloroethane	3.1	-	ND (0.004)	ND (0.0038)	ND (0.0038)	ND (0.0037)	ND (0.0036)	ND (0.0036)	ND (0.0039)	ND (0.004)	ND (0.0041)	ND (0.0037)	ND (0.0057)	ND (0.0042)	ND (0.004)	ND (0.0038)	ND (0.0042)	ND (0.0036)
Chloroform (Trichloromethane)	-	0.32	ND (0.004)	ND (0.0038)	ND (0.0038)	ND (0.0037)	ND (0.0036)	ND (0.0036)	ND (0.0039)	ND (0.004)	ND (0.0041)	ND (0.0037)	ND (0.0057)	ND (0.0042)	ND (0.004)	ND (0.0038)	ND (0.0042)	ND (0.0036)
Chloromethane (Methyl Chloride)	-	110	ND (0.004)	ND (0.0038)	ND (0.0038)	ND (0.0037)	ND (0.0036)	ND (0.0036)	ND (0.0039)	ND (0.004)	ND (0.0041)	ND (0.0037)	ND (0.0057)	ND (0.0042)	ND (0.004)	ND (0.0038)	ND (0.0042)	ND (0.0036)
cis-1,2-Dichloroethene	19	-	ND (0.004)	ND (0.0038)	ND (0.0038)	ND (0.0037)	ND (0.0036)	ND (0.0036)	ND (0.0039)	ND (0.004)	ND (0.0041)	ND (0.0037)	ND (0.0057)	ND (0.0042)	ND (0.004)	ND (0.0038)	ND (0.0042)	ND (0.0036)
cis-1,3-Dichloropropene	-	-	ND (0.004)	ND (0.0038)	ND (0.0038)	ND (0.0037)	ND (0.0036)	ND (0.0036)	ND (0.0039)	ND (0.004)	ND (0.0041)	ND (0.0037)	ND (0.0057)	ND (0.0042)	ND (0.004)	ND (0.0038)	ND (0.0042)	ND (0.0036)
Cymene (p-Isopropyltoluene)	-	-	ND (0.004)	ND (0.0038)	ND (0.0038)	ND (0.0037)	ND (0.0036)	ND (0.0036)	ND (0.0039)	ND (0.004)	ND (0.0041)	ND (0.0037)	ND (0.0057)	ND (0.0042)	ND (0.004)	ND (0.0038)	ND (0.0042)	ND (0.0036)
Dibromochloromethane	0.95	-	ND (0.004)	ND (0.0038)	ND (0.0038)	ND (0.0037)	ND (0.0036)	ND (0.0036)	ND (0.0039)	ND (0.004)	ND (0.0041)	ND (0.0037)	ND (0.0057)	ND (0.0042)	ND (0.004)	ND (0.0038)	ND (0.0042)	ND (0.0036)
Dibromomethane	-	24	ND (0.004)	ND (0.0038)	ND (0.0038)	ND (0.0037)	ND (0.0036)	ND (0.0036)	ND (0.0039)	ND (0.004)	ND (0.0041)	ND (0.0037)	ND (0.0057)	ND (0.0042)	ND (0.004)	ND (0.0038)	ND (0.0042)	ND (0.0036)
Dichlorodifluoromethane (CFC-12)	-	87	ND (0.004)	ND (0.0038)	ND (0.0038)	ND (0.0037)	ND (0.0036)	ND (0.0036)	ND (0.0039)	ND (0.004)	ND (0.0041)	ND (0.0037)	ND (0.0057)	ND (0.0042)	ND (0.004)	ND (0.0038)	ND (0.0042)	ND (0.0036)
Diisopropyl ether (DIPE)	-	2200	ND (0.004)	ND (0.0038)	ND (0.0038)	ND (0.0037)	ND (0.0036)	ND (0.0036)	ND (0.0039)	ND (0.004)	ND (0.0041)	ND (0.0037)	ND (0.0057)	ND (0.0042)	ND (0.004)	ND (0.0038)	ND (0.0042)	ND (0.0036)
Ethyl acetate	-	620	ND (0.04)	ND (0.038)	ND (0.038)	ND (0.037)	ND (0.036)	ND (0.036)	ND (0.039)	ND (0.04)	ND (0.041)	ND (0.037)	ND (0.057)	ND (0.042)	ND (0.04)	ND (0.038)	ND (0.042)	ND (0.036)
Ethyl Ether	2300	-	ND (0.04)	ND (0.038)	ND (0.038)	ND (0.037)	ND (0.036)	ND (0.036)	ND (0.039)	ND (0.04)	ND (0.041)	ND (0.037)	ND (0.057)	ND (0.042)	ND (0.04)	ND (0.038)	ND (0.042)	ND (0.036)
Ethylbenzene	-	5.8	ND (0.004)	ND (0.0038)	ND (0.0038)	ND (0.0037)	ND (0.0036)	ND (0.0036)	ND (0.0039)	ND (0.004)	ND (0.0041)	ND (0.0037)	ND (0.0057)	ND (0.0042)	ND (0.004)	ND (0.0038)	ND (0.0042)	ND (0.0036)
Hexachlorobutadiene	1.2	-	ND (0.004)	ND (0.0038)	ND (0.0038)	ND (0.0037)	ND (0.0036)	ND (0.0036)	ND (0.0039)	ND (0.004)	ND (0.0041)	ND (0.0037)	ND (0.0057)	ND (0.0042)	ND (0.004)	ND (0.0038)	ND (0.0042)	ND (0.0036)
Isopropylbenzene (Cumene)	-	1900	ND (0.004)	ND (0.0038)	ND (0.0038)	ND (0.0037)	ND (0.0036)	ND (0.0036)	ND (0.0039)	ND (0.004)	ND (0.0041)	ND (0.0037)	ND (0.0057)	ND (0.0042)	ND (0.004)	ND (0.0038)	ND (0.0042)	ND (0.0036)
m,p-Xylenes	-	-	ND (0.008)	ND (0.0075)	ND (0.0076)	ND (0.0073)	ND (0.0073)	ND (0.0073)	ND (0.0078)	ND (0.0079)	ND (0.0083)	ND (0.0073)	ND (0.011)	ND (0.0083)	ND (0.008)	ND (0.0075)	ND (0.0084)	ND (0.0073)

Table 1. Summary of Soil Analytical Results
Northeast Corner of South Central Avenue and Victoria Street
Carson, California

Location	DTSC	Regional	HA-01	HA-01	HA-02	HA-02	HA-03	HA-03	HA-04	HA-04	HA-05	HA-05	HA-06	HA-06	HA-07	HA-07	HA-08	HA-08
Sample Date	HHRA	Screening	8/30/17	8/30/17	8/30/17	8/30/17	8/30/17	8/30/17	8/31/17	8/31/17	8/30/17	8/30/17	8/30/17	8/30/17	8/30/17	8/30/17	8/31/17	8/31/17
Sample Depth (bgs)	Note 3	Levels	0.5 (ft)	2 (ft)	0.5 (ft)	2 (ft)	0.5 (ft)	2 (ft)	0 (ft)	0.5 (ft)	0.5 (ft)	2 (ft)	0.5 (ft)	2 (ft)	0.5 (ft)	2 (ft)	0.5 (ft)	2 (ft)
Sample Name	Residential	Residential	HA-01-.5	HA-01-2	HA-02-.5	HA-02-2	HA-03-.5	HA-03-2	HA-04-2	HA-04-.5	HA-05-.5	HA-05-2	HA-06-.5	HA-06-2	HA-07-.5	HA-07-2	HA-08-.5	HA-08-2
Volatile Organic Compounds (mg/kg)																		
Methyl Tert Butyl Ether	-	47	ND (0.004)	ND (0.0038)	ND (0.0038)	ND (0.0037)	ND (0.0036)	ND (0.0036)	ND (0.0039)	ND (0.004)	ND (0.0041)	ND (0.0037)	ND (0.0057)	ND (0.0042)	ND (0.004)	ND (0.0038)	ND (0.0042)	ND (0.0036)
Methylene chloride	1.9	-	ND (0.004)	ND (0.0038)	ND (0.0038)	ND (0.0037)	ND (0.0036)	ND (0.0036)	ND (0.0039)	ND (0.004)	ND (0.0041)	ND (0.0037)	ND (0.0057)	ND (0.0042)	ND (0.004)	ND (0.0038)	ND (0.0042)	ND (0.0036)
Naphthalene	-	3.8	ND (0.004)	ND (0.0038)	ND (0.0038)	ND (0.0037)	ND (0.0036)	ND (0.0036)	ND (0.0039)	ND (0.004)	ND (0.0041)	ND (0.0037)	ND (0.0057)	ND (0.0042)	ND (0.004)	ND (0.0038)	ND (0.0042)	ND (0.0036)
n-Butylbenzene	1200	-	ND (0.004)	ND (0.0038)	ND (0.0038)	ND (0.0037)	ND (0.0036)	ND (0.0036)	ND (0.0039)	ND (0.004)	ND (0.0041)	ND (0.0037)	ND (0.0057)	ND (0.0042)	ND (0.004)	ND (0.0038)	ND (0.0042)	ND (0.0036)
n-Propylbenzene	-	3800	ND (0.004)	ND (0.0038)	ND (0.0038)	ND (0.0037)	ND (0.0036)	ND (0.0036)	ND (0.0039)	ND (0.004)	ND (0.0041)	ND (0.0037)	ND (0.0057)	ND (0.0042)	ND (0.004)	ND (0.0038)	ND (0.0042)	ND (0.0036)
o-Xylene	-	650	ND (0.004)	ND (0.0038)	ND (0.0038)	ND (0.0037)	ND (0.0036)	ND (0.0036)	ND (0.0039)	ND (0.004)	ND (0.0041)	ND (0.0037)	ND (0.0057)	ND (0.0042)	ND (0.004)	ND (0.0038)	ND (0.0042)	ND (0.0036)
Styrene	-	6000	ND (0.004)	ND (0.0038)	ND (0.0038)	ND (0.0037)	ND (0.0036)	ND (0.0036)	ND (0.0039)	ND (0.004)	ND (0.0041)	ND (0.0037)	ND (0.0057)	ND (0.0042)	ND (0.004)	ND (0.0038)	ND (0.0042)	ND (0.0036)
Tert-Amyl Methyl Ether (TAME)	-	-	ND (0.004)	ND (0.0038)	ND (0.0038)	ND (0.0037)	ND (0.0036)	ND (0.0036)	ND (0.0039)	ND (0.004)	ND (0.0041)	ND (0.0037)	ND (0.0057)	ND (0.0042)	ND (0.004)	ND (0.0038)	ND (0.0042)	ND (0.0036)
Tert-Butyl Alcohol (tert-Butanol)	-	-	ND (0.08)	ND (0.075)	ND (0.076)	ND (0.073)	ND (0.073)	ND (0.073)	ND (0.078)	ND (0.079)	ND (0.083)	ND (0.073)	ND (0.11)	ND (0.083)	ND (0.08)	ND (0.075)	ND (0.084)	ND (0.073)
Tert-Butyl Ethyl Ether (ETBE)	-	-	ND (0.004)	ND (0.0038)	ND (0.0038)	ND (0.0037)	ND (0.0036)	ND (0.0036)	ND (0.0039)	ND (0.004)	ND (0.0041)	ND (0.0037)	ND (0.0057)	ND (0.0042)	ND (0.004)	ND (0.0038)	ND (0.0042)	ND (0.0036)
tert-Butylbenzene	2200	-	ND (0.004)	ND (0.0038)	ND (0.0038)	ND (0.0037)	ND (0.0036)	ND (0.0036)	ND (0.0039)	ND (0.004)	ND (0.0041)	ND (0.0037)	ND (0.0057)	ND (0.0042)	ND (0.004)	ND (0.0038)	ND (0.0042)	ND (0.0036)
Tetrachloroethene	0.6	-	ND (0.004)	ND (0.0038)	ND (0.0038)	ND (0.0037)	ND (0.0036)	ND (0.0036)	ND (0.0039)	ND (0.004)	ND (0.0041)	ND (0.0037)	ND (0.0057)	ND (0.0042)	ND (0.004)	ND (0.0038)	ND (0.0042)	ND (0.0036)
Toluene	1100	-	ND (0.004)	ND (0.0038)	ND (0.0038)	ND (0.0037)	ND (0.0036)	ND (0.0036)	ND (0.0039)	ND (0.004)	ND (0.0041)	ND (0.0037)	ND (0.0057)	ND (0.0042)	ND (0.004)	ND (0.0038)	ND (0.0042)	ND (0.0036)
trans-1,2-Dichloroethene	130	-	ND (0.004)	ND (0.0038)	ND (0.0038)	ND (0.0037)	ND (0.0036)	ND (0.0036)	ND (0.0039)	ND (0.004)	ND (0.0041)	ND (0.0037)	ND (0.0057)	ND (0.0042)	ND (0.004)	ND (0.0038)	ND (0.0042)	ND (0.0036)
trans-1,3-Dichloropropene	-	-	ND (0.004)	ND (0.0038)	ND (0.0038)	ND (0.0037)	ND (0.0036)	ND (0.0036)	ND (0.0039)	ND (0.004)	ND (0.0041)	ND (0.0037)	ND (0.0057)	ND (0.0042)	ND (0.004)	ND (0.0038)	ND (0.0042)	ND (0.0036)
Trichloroethene	-	0.94	ND (0.004)	ND (0.0038)	ND (0.0038)	ND (0.0037)	ND (0.0036)	ND (0.0036)	ND (0.0039)	ND (0.004)	ND (0.0041)	ND (0.0037)	ND (0.0057)	ND (0.0042)	ND (0.004)	ND (0.0038)	ND (0.0042)	ND (0.0036)
Trichlorofluoromethane (CFC-11)	1200	-	ND (0.004)	ND (0.0038)	ND (0.0038)	ND (0.0037)	ND (0.0036)	ND (0.0036)	ND (0.0039)	ND (0.004)	ND (0.0041)	ND (0.0037)	ND (0.0057)	ND (0.0042)	ND (0.004)	ND (0.0038)	ND (0.0042)	ND (0.0036)
Trifluorotrichloroethane (Freon 113)	-	6700	ND (0.004)	ND (0.0038)	ND (0.0038)	ND (0.0037)	ND (0.0036)	ND (0.0036)	ND (0.0039)	ND (0.004)	ND (0.0041)	ND (0.0037)	ND (0.0057)	ND (0.0042)	ND (0.004)	ND (0.0038)	ND (0.0042)	ND (0.0036)
Vinyl acetate	-	910	ND (0.04)	ND (0.038)	ND (0.038)	ND (0.037)	ND (0.036)	ND (0.036)	ND (0.039)	ND (0.04)	ND (0.041)	ND (0.037)	ND (0.057)	ND (0.042)	ND (0.04)	ND (0.038)	ND (0.042)	ND (0.036)
Vinyl chloride	0.0088	-	ND (0.004)	ND (0.0038)	ND (0.0038)	ND (0.0037)	ND (0.0036)	ND (0.0036)	ND (0.0039)	ND (0.004)	ND (0.0041)	ND (0.0037)	ND (0.0057)	ND (0.0042)	ND (0.004)	ND (0.0038)	ND (0.0042)	ND (0.0036)

Table 1. Summary of Soil Analytical Results
Northeast Corner of South Central Avenue and Victoria Street
Carson, California

Location	DTSC	Regional	HA-09	HA-09	HA-09	HA-09	HA-10	HA-10	HA-11	HA-11	HA-12	HA-12	HA-13	HA-13	HA-14	HA-14	HA-15	HA-15
Sample Date	HHRA	Screening	8/30/17	8/30/17	8/30/17	8/30/17	8/31/17	8/31/17	8/31/17	8/31/17	8/31/17	8/31/17	8/31/17	8/31/17	8/31/17	8/31/17	8/31/17	8/31/17
Sample Depth (bgs)	Note 3	Levels	0.5 (ft)	2 (ft)	4 (ft)	6 (ft)	0.5 (ft)	2 (ft)	0.5 (ft)	2 (ft)	0.5 (ft)	2 (ft)	0.5 (ft)	2 (ft)	0.5 (ft)	2 (ft)	0.5 (ft)	2 (ft)
Sample Name	Residential	Residential	HA-09-.5	HA-09-2	HA-09-4	HA-09-6	HA-10-.5	HA-10-2	HA-11-.5	HA-11-2	HA-12-.5	HA-12-2	HA-13-.5	HA-13-2	HA-14-.5	HA-14-2	HA-15-.5	HA-15-2
Inorganic Compounds (mg/kg)																		
Antimony	-	31	ND (2)	ND (2)	-	-	ND (2)	ND (2)	ND (2)	ND (2)	ND (2)	ND (2)	ND (2)	ND (2)	ND (2)	ND (2)	ND (2)	ND (2)
Arsenic	12	-	**10**	**17**	**17**	**8**	**7.8**	**6.6**	**5**	**4.4**	**6**	**4.6**	**4**	**3.8**	**5**	**3.4**	**14**	**4.1**
Barium	-	15000	**150**	**150**	-	-	**210**	**170**	**200**	**190**	**200**	**240**	**220**	**180**	**160**	**160**	**210**	**150**
Beryllium	15	-	ND (1)	ND (1)	-	-	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)
Cadmium	5.2	-	ND (1)	ND (1)	-	-	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)
Chromium	-	-	**26**	**25**	-	-	**27**	**27**	**27**	**27**	**27**	**28**	**27**	**26**	**27**	**24**	**23**	**26**
Cobalt	-	23	**10**	**9.9**	-	-	**11**	**12**	**12**	**11**	**12**	**12**	**13**	**11**	**10**	**11**	**10**	**12**
Copper	-	3100	**20**	**19**	-	-	**22**	**22**	**19**	**20**	**22**	**21**	**19**	**19**	**18**	**19**	**23**	**21**
Lead	80	-	**8.6**	**6.6**	-	-	**11**	**5.8**	**5.1**	**4.3**	**7.1**	**4.3**	**4.6**	**4.9**	**9.8**	**4.4**	**20**	**4.1**
Mercury	1	-	**0.31**	**0.19**	-	-	**0.25**	ND (0.1)	ND (0.1)	**0.1**	**0.13**	ND (0.1)	ND (0.1)	ND (0.1)	ND (0.1)	ND (0.1)	**0.3**	ND (0.1)
Molybdenum	-	390	ND (1)	ND (1)	-	-	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)
Nickel	490	-	**18**	**17**	-	-	**21**	**20**	**22**	**21**	**20**	**20**	**21**	**20**	**16**	**19**	**18**	**20**
Selenium	-	390	ND (1)	ND (1)	-	-	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)
Silver	390	-	ND (1)	ND (1)	-	-	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)
Thallium	-	0.78	ND (1)	ND (1)	-	-	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)
Vanadium	390	-	**37**	**39**	-	-	**42**	**45**	**44**	**45**	**45**	**45**	**44**	**46**	**36**	**40**	**40**	**44**
Zinc	-	23000	**56**	**52**	-	-	**86**	**50**	**43**	**43**	**52**	**44**	**41**	**41**	**52**	**41**	**80**	**45**
Total Petroleum Hydrocarbons (mg/kg)																		
Total Petroleum Hydrocarbons (C4-C10)	-	-	ND (1)	ND (1)	-	-	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)
Total Petroleum Hydrocarbons (C5-C8)	-	-	ND (1)	ND (1)	-	-	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)
Total Petroleum Hydrocarbons (C6-C8)	-	-	ND (1)	ND (1)	-	-	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)
Total Petroleum Hydrocarbons (C9-C16)	-	-	**22**	ND (10)	-	-	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	**28**	ND (10)
Total Petroleum Hydrocarbons (C9-C18)	-	-	**22**	ND (10)	-	-	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	**44**	ND (10)
Total Petroleum Hydrocarbons (C10-C40)	-	-	**470**	**330**	-	-	**28**	ND (10)	**180**	ND (10)	**160**	ND (10)	**21**	ND (10)	**210**	ND (10)	**1900**	ND (10)
Total Petroleum Hydrocarbons (C17-C32)	-	-	**190**	**150**	-	-	**49**	ND (10)	**120**	ND (10)	**110**	ND (10)	**15**	ND (10)	**140**	ND (10)	**750**	ND (10)
Total Petroleum Hydrocarbons (C19-C32)	-	-	**190**	**150**	-	-	**49**	ND (10)	**120**	ND (10)	**110**	ND (10)	**15**	ND (10)	**140**	ND (10)	**730**	ND (10)
Volatile Organic Compounds (mg/kg)																		
1,1,1,2-Tetrachloroethane	2	-	ND (0.0055)	ND (0.0036)	-	-	ND (0.0055)	ND (0.004)	ND (0.0046)	ND (0.0062)	ND (0.0045)	ND (0.0037)	ND (0.0036)	ND (0.0035)	ND (0.0057)	ND (0.0041)	ND (0.0046)	ND (0.0056)
1,1,1-Trichloroethane	1700	-	ND (0.0055)	ND (0.0036)	-	-	ND (0.0055)	ND (0.004)	ND (0.0046)	ND (0.0062)	ND (0.0045)	ND (0.0037)	ND (0.0036)	ND (0.0035)	ND (0.0057)	ND (0.0041)	ND (0.0046)	ND (0.0056)
1,1,2,2-Tetrachloroethane	0.61	-	ND (0.0055)	ND (0.0036)	-	-	ND (0.0055)	ND (0.004)	ND (0.0046)	ND (0.0062)	ND (0.0045)	ND (0.0037)	ND (0.0036)	ND (0.0035)	ND (0.0057)	ND (0.0041)	ND (0.0046)	ND (0.0056)
1,1,2-Trichloroethane	-	1.1	ND (0.0055)	ND (0.0036)	-	-	ND (0.0055)	ND (0.004)	ND (0.0046)	ND (0.0062)	ND (0.0045)	ND (0.0037)	ND (0.0036)	ND (0.0035)	ND (0.0057)	ND (0.0041)	ND (0.0046)	ND (0.0056)
1,1-Dichloroethane	3.6	-	ND (0.0055)	ND (0.0036)	-	-	ND (0.0055)	ND (0.004)	ND (0.0046)	ND (0.0062)	ND (0.0045)	ND (0.0037)	ND (0.0036)	ND (0.0035)	ND (0.0057)	ND (0.0041)	ND (0.0046)	ND (0.0056)
1,1-Dichloroethene	-	230	ND (0.0055)	ND (0.0036)	-	-	ND (0.0055)	ND (0.004)	ND (0.0046)	ND (0.0062)	ND (0.0045)	ND (0.0037)	ND (0.0036)	ND (0.0035)	ND (0.0057)	ND (0.0041)	ND (0.0046)	ND (0.0056)
1,1-Dichloropropene	-	-	ND (0.0055)	ND (0.0036)	-	-	ND (0.0055)	ND (0.004)	ND (0.0046)	ND (0.0062)	ND (0.0045)	ND (0.0037)	ND (0.0036)	ND (0.0035)	ND (0.0057)	ND (0.0041)	ND (0.0046)	ND (0.0056)
1,2,3-Trichlorobenzene	63	-	ND (0.0055)	ND (0.0036)	-	-	ND (0.0055)	ND (0.004)	ND (0.0046)	ND (0.0062)	ND (0.0045)	ND (0.0037)	ND (0.0036)	ND (0.0035)	ND (0.0057)	ND (0.0041)	ND (0.0046)	ND (0.0056)
1,2,3-Trichloropropane	0.0015	-	ND (0.0055)	ND (0.0036)	-	-	ND (0.0055)	ND (0.004)	ND (0.0046)	ND (0.0062)	ND (0.0045)	ND (0.0037)	ND (0.0036)	ND (0.0035)	ND (0.0057)	ND (0.0041)	ND (0.0046)	ND (0.0056)
1,2,4-Trichlorobenzene	-	24	ND (0.0055)	ND (0.0036)	-	-	ND (0.0055)	ND (0.004)	ND (0.0046)	ND (0.0062)	ND (0.0045)	ND (0.0037)	ND (0.0036)	ND (0.0035)	ND (0.0057)	ND (0.0041)	ND (0.0046)	ND (0.0056)
1,2,4-Trimethylbenzene	-	300	ND (0.0055)	ND (0.0036)	-	-	ND (0.0055)	ND (0.004)	ND (0.0046)	ND (0.0062)	ND (0.0045)	ND (0.0037)	ND (0.0036)	ND (0.0035)	ND (0.0057)	ND (0.0041)	ND (0.0046)	ND (0.0056)

Table 1. Summary of Soil Analytical Results
Northeast Corner of South Central Avenue and Victoria Street
Carson, California

Location	DTSC	Regional	HA-09	HA-09	HA-09	HA-09	HA-10	HA-10	HA-11	HA-11	HA-12	HA-12	HA-13	HA-13	HA-14	HA-14	HA-15	HA-15
Sample Date	HHRA	Screening	8/30/17	8/30/17	8/30/17	8/30/17	8/31/17	8/31/17	8/31/17	8/31/17	8/31/17	8/31/17	8/31/17	8/31/17	8/31/17	8/31/17	8/31/17	8/31/17
Sample Depth (bgs)	Note 3	Levels	0.5 (ft)	2 (ft)	4 (ft)	6 (ft)	0.5 (ft)	2 (ft)	0.5 (ft)	2 (ft)	0.5 (ft)	2 (ft)	0.5 (ft)	2 (ft)	0.5 (ft)	2 (ft)	0.5 (ft)	2 (ft)
Sample Name	Residential	Residential	HA-09-.5	HA-09-2	HA-09-4	HA-09-6	HA-10-.5	HA-10-2	HA-11-.5	HA-11-2	HA-12-.5	HA-12-2	HA-13-.5	HA-13-2	HA-14-.5	HA-14-2	HA-15-.5	HA-15-2
Volatile Organic Compounds (mg/kg)																		
1,2-Dibromo-3-chloropropane (DBCP)	-	0.0053	ND (0.011)	ND (0.0072)	-	-	ND (0.011)	ND (0.0079)	ND (0.0092)	ND (0.012)	ND (0.009)	ND (0.0075)	ND (0.0073)	ND (0.0069)	ND (0.011)	ND (0.0083)	ND (0.0091)	ND (0.011)
1,2-Dibromoethane (Ethylene Dibromide)	0.037	-	ND (0.0055)	ND (0.0036)	-	-	ND (0.0055)	ND (0.004)	ND (0.0046)	ND (0.0062)	ND (0.0045)	ND (0.0037)	ND (0.0036)	ND (0.0035)	ND (0.0057)	ND (0.0041)	ND (0.0046)	ND (0.0056)
1,2-Dichlorobenzene	-	1800	ND (0.0055)	ND (0.0036)	-	-	ND (0.0055)	ND (0.004)	ND (0.0046)	ND (0.0062)	ND (0.0045)	ND (0.0037)	ND (0.0036)	ND (0.0035)	ND (0.0057)	ND (0.0041)	ND (0.0046)	ND (0.0056)
1,2-Dichloroethane	-	0.46	ND (0.0055)	ND (0.0036)	-	-	ND (0.0055)	ND (0.004)	ND (0.0046)	ND (0.0062)	ND (0.0045)	ND (0.0037)	ND (0.0036)	ND (0.0035)	ND (0.0057)	ND (0.0041)	ND (0.0046)	ND (0.0056)
1,2-Dichloropropane	-	0.28	ND (0.0055)	ND (0.0036)	-	-	ND (0.0055)	ND (0.004)	ND (0.0046)	ND (0.0062)	ND (0.0045)	ND (0.0037)	ND (0.0036)	ND (0.0035)	ND (0.0057)	ND (0.0041)	ND (0.0046)	ND (0.0056)
1,3,5-Trimethylbenzene	210	-	ND (0.0055)	ND (0.0036)	-	-	ND (0.0055)	ND (0.004)	ND (0.0046)	ND (0.0062)	ND (0.0045)	ND (0.0037)	ND (0.0036)	ND (0.0035)	ND (0.0057)	ND (0.0041)	ND (0.0046)	ND (0.0056)
1,3-Dichlorobenzene	240	-	ND (0.0055)	ND (0.0036)	-	-	ND (0.0055)	ND (0.004)	ND (0.0046)	ND (0.0062)	ND (0.0045)	ND (0.0037)	ND (0.0036)	ND (0.0035)	ND (0.0057)	ND (0.0041)	ND (0.0046)	ND (0.0056)
1,3-Dichloropropane	420	-	ND (0.0055)	ND (0.0036)	-	-	ND (0.0055)	ND (0.004)	ND (0.0046)	ND (0.0062)	ND (0.0045)	ND (0.0037)	ND (0.0036)	ND (0.0035)	ND (0.0057)	ND (0.0041)	ND (0.0046)	ND (0.0056)
1,4-Dichlorobenzene	-	2.6	ND (0.0055)	ND (0.0036)	-	-	ND (0.0055)	ND (0.004)	ND (0.0046)	ND (0.0062)	ND (0.0045)	ND (0.0037)	ND (0.0036)	ND (0.0035)	ND (0.0057)	ND (0.0041)	ND (0.0046)	ND (0.0056)
2,2-Dichloropropane	-	-	ND (0.0055)	ND (0.0036)	-	-	ND (0.0055)	ND (0.004)	ND (0.0046)	ND (0.0062)	ND (0.0045)	ND (0.0037)	ND (0.0036)	ND (0.0035)	ND (0.0057)	ND (0.0041)	ND (0.0046)	ND (0.0056)
2-Chlorotoluene	480	-	ND (0.0055)	ND (0.0036)	-	-	ND (0.0055)	ND (0.004)	ND (0.0046)	ND (0.0062)	ND (0.0045)	ND (0.0037)	ND (0.0036)	ND (0.0035)	ND (0.0057)	ND (0.0041)	ND (0.0046)	ND (0.0056)
2-Phenylbutane (sec-Butylbenzene)	2200	-	ND (0.0055)	ND (0.0036)	-	-	ND (0.0055)	ND (0.004)	ND (0.0046)	ND (0.0062)	ND (0.0045)	ND (0.0037)	ND (0.0036)	ND (0.0035)	ND (0.0057)	ND (0.0041)	ND (0.0046)	ND (0.0056)
4-Chlorotoluene	440	-	ND (0.0055)	ND (0.0036)	-	-	ND (0.0055)	ND (0.004)	ND (0.0046)	ND (0.0062)	ND (0.0045)	ND (0.0037)	ND (0.0036)	ND (0.0035)	ND (0.0057)	ND (0.0041)	ND (0.0046)	ND (0.0056)
Benzene	0.33	-	ND (0.0055)	ND (0.0036)	-	-	ND (0.0055)	ND (0.004)	ND (0.0046)	ND (0.0062)	ND (0.0045)	ND (0.0037)	ND (0.0036)	ND (0.0035)	ND (0.0057)	ND (0.0041)	ND (0.0046)	ND (0.0056)
Bromobenzene	-	290	ND (0.0055)	ND (0.0036)	-	-	ND (0.0055)	ND (0.004)	ND (0.0046)	ND (0.0062)	ND (0.0045)	ND (0.0037)	ND (0.0036)	ND (0.0035)	ND (0.0057)	ND (0.0041)	ND (0.0046)	ND (0.0056)
Bromodichloromethane	0.3	-	ND (0.0055)	ND (0.0036)	-	-	ND (0.0055)	ND (0.004)	ND (0.0046)	ND (0.0062)	ND (0.0045)	ND (0.0037)	ND (0.0036)	ND (0.0035)	ND (0.0057)	ND (0.0041)	ND (0.0046)	ND (0.0056)
Bromoform	20	-	ND (0.0055)	ND (0.0036)	-	-	ND (0.0055)	ND (0.004)	ND (0.0046)	ND (0.0062)	ND (0.0045)	ND (0.0037)	ND (0.0036)	ND (0.0035)	ND (0.0057)	ND (0.0041)	ND (0.0046)	ND (0.0056)
Bromomethane (Methyl Bromide)	-	6.8	ND (0.0055)	ND (0.0036)	-	-	ND (0.0055)	ND (0.004)	ND (0.0046)	ND (0.0062)	ND (0.0045)	ND (0.0037)	ND (0.0036)	ND (0.0035)	ND (0.0057)	ND (0.0041)	ND (0.0046)	ND (0.0056)
Carbon disulfide	-	770	ND (0.0055)	ND (0.0036)	-	-	ND (0.0055)	ND (0.004)	ND (0.0046)	ND (0.0062)	ND (0.0045)	ND (0.0037)	ND (0.0036)	ND (0.0035)	ND (0.0057)	ND (0.0041)	ND (0.0046)	ND (0.0056)
Carbon tetrachloride	0.099	-	ND (0.0055)	ND (0.0036)	-	-	ND (0.0055)	ND (0.004)	ND (0.0046)	ND (0.0062)	ND (0.0045)	ND (0.0037)	ND (0.0036)	ND (0.0035)	ND (0.0057)	ND (0.0041)	ND (0.0046)	ND (0.0056)
Chlorobenzene	-	280	ND (0.0055)	ND (0.0036)	-	-	ND (0.0055)	ND (0.004)	ND (0.0046)	ND (0.0062)	ND (0.0045)	ND (0.0037)	ND (0.0036)	ND (0.0035)	ND (0.0057)	ND (0.0041)	ND (0.0046)	ND (0.0056)
Chlorobromomethane	-	150	ND (0.0055)	ND (0.0036)	-	-	ND (0.0055)	ND (0.004)	ND (0.0046)	ND (0.0062)	ND (0.0045)	ND (0.0037)	ND (0.0036)	ND (0.0035)	ND (0.0057)	ND (0.0041)	ND (0.0046)	ND (0.0056)
Chloroethane	3.1	-	ND (0.0055)	ND (0.0036)	-	-	ND (0.0055)	ND (0.004)	ND (0.0046)	ND (0.0062)	ND (0.0045)	ND (0.0037)	ND (0.0036)	ND (0.0035)	ND (0.0057)	ND (0.0041)	ND (0.0046)	ND (0.0056)
Chloroform (Trichloromethane)	-	0.32	ND (0.0055)	ND (0.0036)	-	-	ND (0.0055)	ND (0.004)	ND (0.0046)	ND (0.0062)	ND (0.0045)	ND (0.0037)	ND (0.0036)	ND (0.0035)	ND (0.0057)	ND (0.0041)	ND (0.0046)	ND (0.0056)
Chloromethane (Methyl Chloride)	-	110	ND (0.0055)	ND (0.0036)	-	-	ND (0.0055)	ND (0.004)	ND (0.0046)	ND (0.0062)	ND (0.0045)	ND (0.0037)	ND (0.0036)	ND (0.0035)	ND (0.0057)	ND (0.0041)	ND (0.0046)	ND (0.0056)
cis-1,2-Dichloroethene	19	-	ND (0.0055)	ND (0.0036)	-	-	ND (0.0055)	ND (0.004)	ND (0.0046)	ND (0.0062)	ND (0.0045)	ND (0.0037)	ND (0.0036)	ND (0.0035)	ND (0.0057)	ND (0.0041)	ND (0.0046)	ND (0.0056)
cis-1,3-Dichloropropene	-	-	ND (0.0055)	ND (0.0036)	-	-	ND (0.0055)	ND (0.004)	ND (0.0046)	ND (0.0062)	ND (0.0045)	ND (0.0037)	ND (0.0036)	ND (0.0035)	ND (0.0057)	ND (0.0041)	ND (0.0046)	ND (0.0056)
Cymene (p-Isopropyltoluene)	-	-	ND (0.0055)	ND (0.0036)	-	-	ND (0.0055)	ND (0.004)	ND (0.0046)	ND (0.0062)	ND (0.0045)	ND (0.0037)	ND (0.0036)	ND (0.0035)	ND (0.0057)	ND (0.0041)	ND (0.0046)	ND (0.0056)
Dibromochloromethane	0.95	-	ND (0.0055)	ND (0.0036)	-	-	ND (0.0055)	ND (0.004)	ND (0.0046)	ND (0.0062)	ND (0.0045)	ND (0.0037)	ND (0.0036)	ND (0.0035)	ND (0.0057)	ND (0.0041)	ND (0.0046)	ND (0.0056)
Dibromomethane	-	24	ND (0.0055)	ND (0.0036)	-	-	ND (0.0055)	ND (0.004)	ND (0.0046)	ND (0.0062)	ND (0.0045)	ND (0.0037)	ND (0.0036)	ND (0.0035)	ND (0.0057)	ND (0.0041)	ND (0.0046)	ND (0.0056)
Dichlorodifluoromethane (CFC-12)	-	87	ND (0.0055)	ND (0.0036)	-	-	ND (0.0055)	ND (0.004)	ND (0.0046)	ND (0.0062)	ND (0.0045)	ND (0.0037)	ND (0.0036)	ND (0.0035)	ND (0.0057)	ND (0.0041)	ND (0.0046)	ND (0.0056)
Diisopropyl ether (DIPE)	-	2200	ND (0.0055)	ND (0.0036)	-	-	ND (0.0055)	ND (0.004)	ND (0.0046)	ND (0.0062)	ND (0.0045)	ND (0.0037)	ND (0.0036)	ND (0.0035)	ND (0.0057)	ND (0.0041)	ND (0.0046)	ND (0.0056)
Ethyl acetate	-	620	ND (0.055)	ND (0.036)	-	-	ND (0.055)	ND (0.04)	ND (0.046)	ND (0.062)	ND (0.045)	ND (0.037)	ND (0.036)	ND (0.035)	ND (0.057)	ND (0.041)	ND (0.046)	ND (0.056)
Ethyl Ether	2300	-	ND (0.055)	ND (0.036)	-	-	ND (0.055)	ND (0.04)	ND (0.046)	ND (0.062)	ND (0.045)	ND (0.037)	ND (0.036)	ND (0.035)	ND (0.057)	ND (0.041)	ND (0.046)	ND (0.056)
Ethylbenzene	-	5.8	ND (0.0055)	ND (0.0036)	-	-	ND (0.0055)	ND (0.004)	ND (0.0046)	ND (0.0062)	ND (0.0045)	ND (0.0037)	ND (0.0036)	ND (0.0035)	ND (0.0057)	ND (0.0041)	ND (0.0046)	ND (0.0056)
Hexachlorobutadiene	1.2	-	ND (0.0055)	ND (0.0036)	-	-	ND (0.0055)	ND (0.004)	ND (0.0046)	ND (0.0062)	ND (0.0045)	ND (0.0037)	ND (0.0036)	ND (0.0035)	ND (0.0057)	ND (0.0041)	ND (0.0046)	ND (0.0056)
Isopropylbenzene (Cumene)	-	1900	ND (0.0055)	ND (0.0036)	-	-	ND (0.0055)	ND (0.004)	ND (0.0046)	ND (0.0062)	ND (0.0045)	ND (0.0037)	ND (0.0036)	ND (0.0035)	ND (0.0057)	ND (0.0041)	ND (0.0046)	ND (0.0056)
m,p-Xylenes	-	-	ND (0.011)	ND (0.0072)	-	-	ND (0.011)	ND (0.0079)	ND (0.0092)	ND (0.012)	ND (0.009)	ND (0.0075)	ND (0.0073)	ND (0.0069)	ND (0.011)	ND (0.0083)	ND (0.0091)	ND (0.011)

Table 1. Summary of Soil Analytical Results
Northeast Corner of South Central Avenue and Victoria Street
Carson, California

Location	DTSC	Regional	HA-09	HA-09	HA-09	HA-09	HA-10	HA-10	HA-11	HA-11	HA-12	HA-12	HA-13	HA-13	HA-14	HA-14	HA-15	HA-15
Sample Date	HHRA	Screening	8/30/17	8/30/17	8/30/17	8/30/17	8/31/17	8/31/17	8/31/17	8/31/17	8/31/17	8/31/17	8/31/17	8/31/17	8/31/17	8/31/17	8/31/17	8/31/17
Sample Depth (bgs)	Note 3	Levels	0.5 (ft)	2 (ft)	4 (ft)	6 (ft)	0.5 (ft)	2 (ft)	0.5 (ft)	2 (ft)	0.5 (ft)	2 (ft)	0.5 (ft)	2 (ft)	0.5 (ft)	2 (ft)	0.5 (ft)	2 (ft)
Sample Name	Residential	Residential	HA-09-.5	HA-09-2	HA-09-4	HA-09-6	HA-10-.5	HA-10-2	HA-11-.5	HA-11-2	HA-12-.5	HA-12-2	HA-13-.5	HA-13-2	HA-14-.5	HA-14-2	HA-15-.5	HA-15-2
Volatile Organic Compounds (mg/kg)																		
Methyl Tert Butyl Ether	-	47	ND (0.0055)	ND (0.0036)	-	-	ND (0.0055)	ND (0.004)	ND (0.0046)	ND (0.0062)	ND (0.0045)	ND (0.0037)	ND (0.0036)	ND (0.0035)	ND (0.0057)	ND (0.0041)	ND (0.0046)	ND (0.0056)
Methylene chloride	1.9	-	ND (0.0055)	ND (0.0036)	-	-	ND (0.0055)	ND (0.004)	ND (0.0046)	ND (0.0062)	ND (0.0045)	ND (0.0037)	ND (0.0036)	ND (0.0035)	ND (0.0057)	ND (0.0041)	ND (0.0046)	ND (0.0056)
Naphthalene	-	3.8	ND (0.0055)	ND (0.0036)	-	-	ND (0.0055)	ND (0.004)	ND (0.0046)	ND (0.0062)	ND (0.0045)	ND (0.0037)	ND (0.0036)	ND (0.0035)	ND (0.0057)	ND (0.0041)	ND (0.0046)	ND (0.0056)
n-Butylbenzene	1200	-	ND (0.0055)	ND (0.0036)	-	-	ND (0.0055)	ND (0.004)	ND (0.0046)	ND (0.0062)	ND (0.0045)	ND (0.0037)	ND (0.0036)	ND (0.0035)	ND (0.0057)	ND (0.0041)	ND (0.0046)	ND (0.0056)
n-Propylbenzene	-	3800	ND (0.0055)	ND (0.0036)	-	-	ND (0.0055)	ND (0.004)	ND (0.0046)	ND (0.0062)	ND (0.0045)	ND (0.0037)	ND (0.0036)	ND (0.0035)	ND (0.0057)	ND (0.0041)	ND (0.0046)	ND (0.0056)
o-Xylene	-	650	ND (0.0055)	ND (0.0036)	-	-	ND (0.0055)	ND (0.004)	ND (0.0046)	ND (0.0062)	ND (0.0045)	ND (0.0037)	ND (0.0036)	ND (0.0035)	ND (0.0057)	ND (0.0041)	ND (0.0046)	ND (0.0056)
Styrene	-	6000	ND (0.0055)	ND (0.0036)	-	-	ND (0.0055)	ND (0.004)	ND (0.0046)	ND (0.0062)	ND (0.0045)	ND (0.0037)	ND (0.0036)	ND (0.0035)	ND (0.0057)	ND (0.0041)	ND (0.0046)	ND (0.0056)
Tert-Amyl Methyl Ether (TAME)	-	-	ND (0.0055)	ND (0.0036)	-	-	ND (0.0055)	ND (0.004)	ND (0.0046)	ND (0.0062)	ND (0.0045)	ND (0.0037)	ND (0.0036)	ND (0.0035)	ND (0.0057)	ND (0.0041)	ND (0.0046)	ND (0.0056)
Tert-Butyl Alcohol (tert-Butanol)	-	-	ND (0.11)	ND (0.072)	-	-	ND (0.11)	ND (0.079)	ND (0.092)	ND (0.12)	ND (0.09)	ND (0.075)	ND (0.073)	ND (0.069)	ND (0.11)	ND (0.083)	ND (0.091)	ND (0.11)
Tert-Butyl Ethyl Ether (ETBE)	-	-	ND (0.0055)	ND (0.0036)	-	-	ND (0.0055)	ND (0.004)	ND (0.0046)	ND (0.0062)	ND (0.0045)	ND (0.0037)	ND (0.0036)	ND (0.0035)	ND (0.0057)	ND (0.0041)	ND (0.0046)	ND (0.0056)
tert-Butylbenzene	2200	-	ND (0.0055)	ND (0.0036)	-	-	ND (0.0055)	ND (0.004)	ND (0.0046)	ND (0.0062)	ND (0.0045)	ND (0.0037)	ND (0.0036)	ND (0.0035)	ND (0.0057)	ND (0.0041)	ND (0.0046)	ND (0.0056)
Tetrachloroethene	0.6	-	ND (0.0055)	ND (0.0036)	-	-	ND (0.0055)	ND (0.004)	ND (0.0046)	ND (0.0062)	ND (0.0045)	ND (0.0037)	ND (0.0036)	ND (0.0035)	ND (0.0057)	ND (0.0041)	ND (0.0046)	ND (0.0056)
Toluene	1100	-	ND (0.0055)	ND (0.0036)	-	-	ND (0.0055)	ND (0.004)	ND (0.0046)	ND (0.0062)	ND (0.0045)	ND (0.0037)	ND (0.0036)	ND (0.0035)	ND (0.0057)	ND (0.0041)	ND (0.0046)	ND (0.0056)
trans-1,2-Dichloroethene	130	-	ND (0.0055)	ND (0.0036)	-	-	ND (0.0055)	ND (0.004)	ND (0.0046)	ND (0.0062)	ND (0.0045)	ND (0.0037)	ND (0.0036)	ND (0.0035)	ND (0.0057)	ND (0.0041)	ND (0.0046)	ND (0.0056)
trans-1,3-Dichloropropene	-	-	ND (0.0055)	ND (0.0036)	-	-	ND (0.0055)	ND (0.004)	ND (0.0046)	ND (0.0062)	ND (0.0045)	ND (0.0037)	ND (0.0036)	ND (0.0035)	ND (0.0057)	ND (0.0041)	ND (0.0046)	ND (0.0056)
Trichloroethene	-	0.94	ND (0.0055)	ND (0.0036)	-	-	ND (0.0055)	ND (0.004)	ND (0.0046)	ND (0.0062)	ND (0.0045)	ND (0.0037)	ND (0.0036)	ND (0.0035)	ND (0.0057)	ND (0.0041)	ND (0.0046)	ND (0.0056)
Trichlorofluoromethane (CFC-11)	1200	-	ND (0.0055)	ND (0.0036)	-	-	ND (0.0055)	ND (0.004)	ND (0.0046)	ND (0.0062)	ND (0.0045)	ND (0.0037)	ND (0.0036)	ND (0.0035)	ND (0.0057)	ND (0.0041)	ND (0.0046)	ND (0.0056)
Trifluorotrichloroethane (Freon 113)	-	6700	ND (0.0055)	ND (0.0036)	-	-	ND (0.0055)	ND (0.004)	ND (0.0046)	ND (0.0062)	ND (0.0045)	ND (0.0037)	ND (0.0036)	ND (0.0035)	ND (0.0057)	ND (0.0041)	ND (0.0046)	ND (0.0056)
Vinyl acetate	-	910	ND (0.055)	ND (0.036)	-	-	ND (0.055)	ND (0.04)	ND (0.046)	ND (0.062)	ND (0.045)	ND (0.037)	ND (0.036)	ND (0.035)	ND (0.057)	ND (0.041)	ND (0.046)	ND (0.056)
Vinyl chloride	0.0088	-	ND (0.0055)	ND (0.0036)	-	-	ND (0.0055)	ND (0.004)	ND (0.0046)	ND (0.0062)	ND (0.0045)	ND (0.0037)	ND (0.0036)	ND (0.0035)	ND (0.0057)	ND (0.0041)	ND (0.0046)	ND (0.0056)

Table 1. Summary of Soil Analytical Results
Northeast Corner of South Central Avenue and Victoria Street
Carson, California

Location	DTSC	Regional	HA-16	HA-16	HA-16	HA-16	HA-17	HA-17	HA-17	HA-17	HA-18	HA-18	HA-18	HA-18	HA-19	HA-19	HA-19	HA-19	HA-20
Sample Date	HHRA	Screening	8/31/17	8/31/17	8/31/17	8/31/17	8/31/17	8/31/17	8/31/17	8/31/17	9/1/17	9/1/17	9/1/17	9/1/17	9/1/17	9/1/17	9/1/17	9/1/17	9/1/17
Sample Depth (bgs)	Note 3	Levels	0.5 (ft)	2 (ft)	4 (ft)	6 (ft)	0.5 (ft)	2 (ft)	4 (ft)	6 (ft)	0.5 (ft)	2 (ft)	4 (ft)	6 (ft)	0.5 (ft)	2 (ft)	4 (ft)	6 (ft)	0.5 (ft)
Sample Name	Residential	Residential	HA-16-.5	HA-16-2	HA-16-4	HA-16-6	HA-17-.5	HA-17-2	HA-17-4	HA-17-6	HA-18-.5	HA-18-2	HA-18-4	HA-18-6	HA-19-.5	HA-19-2	HA-19-4	HA-19-6	HA-20-.5
Inorganic Compounds (mg/kg)																			
Antimony	-	31	ND (2)	ND (2)	-	-	ND (2)	ND (2)	-	-	ND (2)	**4.8**	-	-	ND (2)	ND (2)	-	-	ND (2)
Arsenic	12	-	**11**	**29**	**6.2**	**3.5**	**28**	**83**	**26**	**3.3**	**10**	**19**	**4.3**	**8.8**	**14**	**16**	**16**	**12**	**6.7**
Barium	-	15000	**270**	**290**	-	-	**200**	**180**	-	-	**260**	**320**	-	-	**260**	**180**	-	-	**280**
Beryllium	15	-	ND (1)	ND (1)	-	-	ND (1)	ND (1)	-	-	ND (1)	ND (1)	-	-	ND (1)	ND (1)	-	-	ND (1)
Cadmium	5.2	-	ND (1)	ND (1)	-	-	ND (1)	ND (1)	-	-	ND (1)	ND (1)	-	-	ND (1)	ND (1)	-	-	ND (1)
Chromium	-	-	**23**	**21**	-	-	**18**	**19**	-	-	**16**	**22**	-	-	**20**	**21**	-	-	**20**
Cobalt	-	23	**11**	**8.6**	-	-	**11**	**8.7**	-	-	**7**	**8.1**	-	-	**10**	**10**	-	-	**9.6**
Copper	-	3100	**22**	**21**	-	-	**20**	**19**	-	-	**17**	**24**	-	-	**21**	**21**	-	-	**21**
Lead	80	-	**13**	**18**	-	-	**25**	**31**	-	-	**13**	**86**	-	-	**20**	**28**	-	-	**15**
Mercury	1	-	**0.23**	**0.54**	-	-	**0.31**	**0.25**	-	-	**0.31**	**0.6**	-	-	**0.85**	**0.12**	-	-	**0.33**
Molybdenum	-	390	ND (1)	ND (1)	-	-	ND (1)	ND (1)	-	-	ND (1)	ND (1)	-	-	ND (1)	ND (1)	-	-	ND (1)
Nickel	490	-	**18**	**15**	-	-	**16**	**16**	-	-	**12**	**14**	-	-	**17**	**18**	-	-	**17**
Selenium	-	390	ND (1)	ND (1)	-	-	ND (1)	ND (1)	-	-	**1**	ND (1)	-	-	ND (1)	**1.2**	-	-	**1**
Silver	390	-	ND (1)	ND (1)	-	-	ND (1)	ND (1)	-	-	ND (1)	ND (1)	-	-	ND (1)	ND (1)	-	-	ND (1)
Thallium	-	0.78	ND (1)	ND (1)	-	-	ND (1)	ND (1)	-	-	ND (1)	ND (1)	-	-	ND (1)	ND (1)	-	-	ND (1)
Vanadium	390	-	**40**	**33**	-	-	**31**	**31**	-	-	**26**	**35**	-	-	**35**	**37**	-	-	**34**
Zinc	-	23000	**73**	**95**	-	-	**99**	**98**	-	-	**70**	**120**	-	-	**71**	**78**	-	-	**61**
Total Petroleum Hydrocarbons (mg/kg)																			
Total Petroleum Hydrocarbons (C4-C10)	-	-	ND (1)	ND (1)	ND (1) H4	ND (1) H4	ND (1)	ND (1)	-	-	ND (1)	ND (1)	ND (1) H4	ND (1) H4	ND (1)	ND (1)	-	-	ND (1)
Total Petroleum Hydrocarbons (C5-C8)	-	-	ND (1)	ND (1)	ND (1) H4	ND (1) H4	ND (1)	ND (1)	-	-	ND (1)	ND (1)	ND (1) H4	ND (1) H4	ND (1)	ND (1)	-	-	ND (1)
Total Petroleum Hydrocarbons (C6-C8)	-	-	ND (1)	ND (1)	ND (1) H4	ND (1) H4	ND (1)	ND (1)	-	-	ND (1)	ND (1)	ND (1) H4	ND (1) H4	ND (1)	ND (1)	-	-	ND (1)
Total Petroleum Hydrocarbons (C9-C16)	-	-	ND (10)	ND (20)	ND (10) H1	ND (10) H1	ND (20)	ND (10)	-	-	ND (10)	ND (20)	ND (10) H1	ND (10) H1	ND (10)	ND (20)	-	-	ND (10)
Total Petroleum Hydrocarbons (C9-C18)	-	-	ND (10)	ND (20)	ND (10) H1	ND (10) H1	ND (20)	ND (10)	-	-	**12**	**29**	ND (10) H1	ND (10) H1	ND (10)	ND (20)	-	-	**12**
Total Petroleum Hydrocarbons (C10-C40)	-	-	**830**	**1400**	ND (10) H1	**72 H1**	**2500**	**740**	-	-	**810**	**2000**	**160 H4**	ND (10) H4	**970**	**800**	-	-	**860**
Total Petroleum Hydrocarbons (C17-C32)	-	-	**490**	**710**	ND (10) H1	ND (10) H1	**1100**	**290**	-	-	**310**	**820**	**88 H1**	ND (10) H1	**400**	**320**	-	-	**360**
Total Petroleum Hydrocarbons (C19-C32)	-	-	**490**	**700**	ND (10) H1	**47 H1**	**1100**	**290**	-	-	**310**	**800**	**88 H1**	ND (10) H1	**400**	**320**	-	-	**350**
Volatile Organic Compounds (mg/kg)																			
1,1,1,2-Tetrachloroethane	2	-	ND (0.0066)	ND (0.004)	-	-	ND (0.004)	ND (0.0036)	-	-	ND (0.0049)	ND (0.0064)	-	-	ND (0.0046)	ND (0.0055)	-	-	ND (0.0034)
1,1,1-Trichloroethane	1700	-	ND (0.0066)	ND (0.004)	-	-	ND (0.004)	ND (0.0036)	-	-	ND (0.0049)	ND (0.0064)	-	-	ND (0.0046)	ND (0.0055)	-	-	ND (0.0034)
1,1,2,2-Tetrachloroethane	0.61	-	ND (0.0066)	ND (0.004)	-	-	ND (0.004)	ND (0.0036)	-	-	ND (0.0049)	ND (0.0064)	-	-	ND (0.0046)	ND (0.0055)	-	-	ND (0.0034)
1,1,2-Trichloroethane	-	1.1	ND (0.0066)	ND (0.004)	-	-	ND (0.004)	ND (0.0036)	-	-	ND (0.0049)	ND (0.0064)	-	-	ND (0.0046)	ND (0.0055)	-	-	ND (0.0034)
1,1-Dichloroethane	3.6	-	ND (0.0066)	ND (0.004)	-	-	ND (0.004)	ND (0.0036)	-	-	ND (0.0049)	ND (0.0064)	-	-	ND (0.0046)	ND (0.0055)	-	-	ND (0.0034)
1,1-Dichloroethene	-	230	ND (0.0066)	ND (0.004)	-	-	ND (0.004)	ND (0.0036)	-	-	ND (0.0049)	ND (0.0064)	-	-	ND (0.0046)	ND (0.0055)	-	-	ND (0.0034)
1,1-Dichloropropene	-	-	ND (0.0066)	ND (0.004)	-	-	ND (0.004)	ND (0.0036)	-	-	ND (0.0049)	ND (0.0064)	-	-	ND (0.0046)	ND (0.0055)	-	-	ND (0.0034)
1,2,3-Trichlorobenzene	63	-	ND (0.0066)	ND (0.004)	-	-	ND (0.004)	ND (0.0036)	-	-	ND (0.0049)	ND (0.0064)	-	-	ND (0.0046)	ND (0.0055)	-	-	ND (0.0034)
1,2,3-Trichloropropane	0.0015	-	ND (0.0066)	ND (0.004)	-	-	ND (0.004)	ND (0.0036)	-	-	ND (0.0049)	ND (0.0064)	-	-	ND (0.0046)	ND (0.0055)	-	-	ND (0.0034)
1,2,4-Trichlorobenzene	-	24	ND (0.0066)	ND (0.004)	-	-	ND (0.004)	ND (0.0036)	-	-	ND (0.0049)	ND (0.0064)	-	-	ND (0.0046)	ND (0.0055)	-	-	ND (0.0034)
1,2,4-Trimethylbenzene	-	300	ND (0.0066)	ND (0.004)	-	-	ND (0.004)	ND (0.0036)	-	-	ND (0.0049)	ND (0.0064)	-	-	ND (0.0046)	ND (0.0055)	-	-	ND (0.0034)

Table 1. Summary of Soil Analytical Results
Northeast Corner of South Central Avenue and Victoria Street
Carson, California

Location	DTSC	Regional	HA-16	HA-16	HA-16	HA-16	HA-17	HA-17	HA-17	HA-17	HA-18	HA-18	HA-18	HA-18	HA-19	HA-19	HA-19	HA-19	HA-20
Sample Date	HHRA	Screening	8/31/17	8/31/17	8/31/17	8/31/17	8/31/17	8/31/17	8/31/17	8/31/17	9/1/17	9/1/17	9/1/17	9/1/17	9/1/17	9/1/17	9/1/17	9/1/17	9/1/17
Sample Depth (bgs)	Note 3	Levels	0.5 (ft)	2 (ft)	4 (ft)	6 (ft)	0.5 (ft)	2 (ft)	4 (ft)	6 (ft)	0.5 (ft)	2 (ft)	4 (ft)	6 (ft)	0.5 (ft)	2 (ft)	4 (ft)	6 (ft)	0.5 (ft)
Sample Name	Residential	Residential	HA-16-.5	HA-16-2	HA-16-4	HA-16-6	HA-17-.5	HA-17-2	HA-17-4	HA-17-6	HA-18-.5	HA-18-2	HA-18-4	HA-18-6	HA-19-.5	HA-19-2	HA-19-4	HA-19-6	HA-20-.5
Volatile Organic Compounds (mg/kg)																			
1,2-Dibromo-3-chloropropane (DBCP)	-	0.0053	ND (0.013)	ND (0.0081)	-	-	ND (0.008)	ND (0.0072)	-	-	ND (0.0098)	ND (0.013)	-	-	ND (0.0092)	ND (0.011)	-	-	ND (0.0069)
1,2-Dibromoethane (Ethylene Dibromide)	0.037	-	ND (0.0066)	ND (0.004)	-	-	ND (0.004)	ND (0.0036)	-	-	ND (0.0049)	ND (0.0064)	-	-	ND (0.0046)	ND (0.0055)	-	-	ND (0.0034)
1,2-Dichlorobenzene	-	1800	ND (0.0066)	ND (0.004)	-	-	ND (0.004)	ND (0.0036)	-	-	ND (0.0049)	ND (0.0064)	-	-	ND (0.0046)	ND (0.0055)	-	-	ND (0.0034)
1,2-Dichloroethane	-	0.46	ND (0.0066)	ND (0.004)	-	-	ND (0.004)	ND (0.0036)	-	-	ND (0.0049)	ND (0.0064)	-	-	ND (0.0046)	ND (0.0055)	-	-	ND (0.0034)
1,2-Dichloropropane	-	0.28	ND (0.0066)	ND (0.004)	-	-	ND (0.004)	ND (0.0036)	-	-	ND (0.0049)	ND (0.0064)	-	-	ND (0.0046)	ND (0.0055)	-	-	ND (0.0034)
1,3,5-Trimethylbenzene	210	-	ND (0.0066)	ND (0.004)	-	-	ND (0.004)	ND (0.0036)	-	-	ND (0.0049)	ND (0.0064)	-	-	ND (0.0046)	ND (0.0055)	-	-	ND (0.0034)
1,3-Dichlorobenzene	240	-	ND (0.0066)	ND (0.004)	-	-	ND (0.004)	ND (0.0036)	-	-	ND (0.0049)	ND (0.0064)	-	-	ND (0.0046)	ND (0.0055)	-	-	ND (0.0034)
1,3-Dichloropropane	420	-	ND (0.0066)	ND (0.004)	-	-	ND (0.004)	ND (0.0036)	-	-	ND (0.0049)	ND (0.0064)	-	-	ND (0.0046)	ND (0.0055)	-	-	ND (0.0034)
1,4-Dichlorobenzene	-	2.6	ND (0.0066)	ND (0.004)	-	-	ND (0.004)	ND (0.0036)	-	-	ND (0.0049)	ND (0.0064)	-	-	ND (0.0046)	ND (0.0055)	-	-	ND (0.0034)
2,2-Dichloropropane	-	-	ND (0.0066)	ND (0.004)	-	-	ND (0.004)	ND (0.0036)	-	-	ND (0.0049)	ND (0.0064)	-	-	ND (0.0046)	ND (0.0055)	-	-	ND (0.0034)
2-Chlorotoluene	480	-	ND (0.0066)	ND (0.004)	-	-	ND (0.004)	ND (0.0036)	-	-	ND (0.0049)	ND (0.0064)	-	-	ND (0.0046)	ND (0.0055)	-	-	ND (0.0034)
2-Phenylbutane (sec-Butylbenzene)	2200	-	ND (0.0066)	ND (0.004)	-	-	ND (0.004)	ND (0.0036)	-	-	ND (0.0049)	ND (0.0064)	-	-	ND (0.0046)	ND (0.0055)	-	-	ND (0.0034)
4-Chlorotoluene	440	-	ND (0.0066)	ND (0.004)	-	-	ND (0.004)	ND (0.0036)	-	-	ND (0.0049)	ND (0.0064)	-	-	ND (0.0046)	ND (0.0055)	-	-	ND (0.0034)
Benzene	0.33	-	ND (0.0066)	ND (0.004)	-	-	ND (0.004)	ND (0.0036)	-	-	ND (0.0049)	ND (0.0064)	-	-	ND (0.0046)	ND (0.0055)	-	-	ND (0.0034)
Bromobenzene	-	290	ND (0.0066)	ND (0.004)	-	-	ND (0.004)	ND (0.0036)	-	-	ND (0.0049)	ND (0.0064)	-	-	ND (0.0046)	ND (0.0055)	-	-	ND (0.0034)
Bromodichloromethane	0.3	-	ND (0.0066)	ND (0.004)	-	-	ND (0.004)	ND (0.0036)	-	-	ND (0.0049)	ND (0.0064)	-	-	ND (0.0046)	ND (0.0055)	-	-	ND (0.0034)
Bromoform	20	-	ND (0.0066)	ND (0.004)	-	-	ND (0.004)	ND (0.0036)	-	-	ND (0.0049)	ND (0.0064)	-	-	ND (0.0046)	ND (0.0055)	-	-	ND (0.0034)
Bromomethane (Methyl Bromide)	-	6.8	ND (0.0066)	ND (0.004)	-	-	ND (0.004)	ND (0.0036)	-	-	ND (0.0049)	ND (0.0064)	-	-	ND (0.0046)	ND (0.0055)	-	-	ND (0.0034)
Carbon disulfide	-	770	ND (0.0066)	ND (0.004)	-	-	ND (0.004)	ND (0.0036)	-	-	ND (0.0049)	ND (0.0064)	-	-	ND (0.0046)	ND (0.0055)	-	-	ND (0.0034)
Carbon tetrachloride	0.099	-	ND (0.0066)	ND (0.004)	-	-	ND (0.004)	ND (0.0036)	-	-	ND (0.0049)	ND (0.0064)	-	-	ND (0.0046)	ND (0.0055)	-	-	ND (0.0034)
Chlorobenzene	-	280	ND (0.0066)	ND (0.004)	-	-	ND (0.004)	ND (0.0036)	-	-	ND (0.0049)	ND (0.0064)	-	-	ND (0.0046)	ND (0.0055)	-	-	ND (0.0034)
Chlorobromomethane	-	150	ND (0.0066)	ND (0.004)	-	-	ND (0.004)	ND (0.0036)	-	-	ND (0.0049)	ND (0.0064)	-	-	ND (0.0046)	ND (0.0055)	-	-	ND (0.0034)
Chloroethane	3.1	-	ND (0.0066)	ND (0.004)	-	-	ND (0.004)	ND (0.0036)	-	-	ND (0.0049)	ND (0.0064)	-	-	ND (0.0046)	ND (0.0055)	-	-	ND (0.0034)
Chloroform (Trichloromethane)	-	0.32	ND (0.0066)	ND (0.004)	-	-	ND (0.004)	ND (0.0036)	-	-	ND (0.0049)	ND (0.0064)	-	-	ND (0.0046)	ND (0.0055)	-	-	ND (0.0034)
Chloromethane (Methyl Chloride)	-	110	ND (0.0066)	ND (0.004)	-	-	ND (0.004)	ND (0.0036)	-	-	ND (0.0049)	ND (0.0064)	-	-	ND (0.0046)	ND (0.0055)	-	-	ND (0.0034)
cis-1,2-Dichloroethene	19	-	ND (0.0066)	ND (0.004)	-	-	ND (0.004)	ND (0.0036)	-	-	ND (0.0049)	ND (0.0064)	-	-	ND (0.0046)	ND (0.0055)	-	-	ND (0.0034)
cis-1,3-Dichloropropene	-	-	ND (0.0066)	ND (0.004)	-	-	ND (0.004)	ND (0.0036)	-	-	ND (0.0049)	ND (0.0064)	-	-	ND (0.0046)	ND (0.0055)	-	-	ND (0.0034)
Cymene (p-Isopropyltoluene)	-	-	ND (0.0066)	ND (0.004)	-	-	ND (0.004)	ND (0.0036)	-	-	ND (0.0049)	ND (0.0064)	-	-	ND (0.0046)	ND (0.0055)	-	-	ND (0.0034)
Dibromochloromethane	0.95	-	ND (0.0066)	ND (0.004)	-	-	ND (0.004)	ND (0.0036)	-	-	ND (0.0049)	ND (0.0064)	-	-	ND (0.0046)	ND (0.0055)	-	-	ND (0.0034)
Dibromomethane	-	24	ND (0.0066)	ND (0.004)	-	-	ND (0.004)	ND (0.0036)	-	-	ND (0.0049)	ND (0.0064)	-	-	ND (0.0046)	ND (0.0055)	-	-	ND (0.0034)
Dichlorodifluoromethane (CFC-12)	-	87	ND (0.0066)	ND (0.004)	-	-	ND (0.004)	ND (0.0036)	-	-	ND (0.0049)	ND (0.0064)	-	-	ND (0.0046)	ND (0.0055)	-	-	ND (0.0034)
Diisopropyl ether (DIPE)	-	2200	ND (0.0066)	ND (0.004)	-	-	ND (0.004)	ND (0.0036)	-	-	ND (0.0049)	ND (0.0064)	-	-	ND (0.0046)	ND (0.0055)	-	-	ND (0.0034)
Ethyl acetate	-	620	ND (0.066)	ND (0.04)	-	-	ND (0.04)	ND (0.036)	-	-	ND (0.049)	ND (0.064)	-	-	ND (0.046)	ND (0.055)	-	-	ND (0.034)
Ethyl Ether	2300	-	ND (0.066)	ND (0.04)	-	-	ND (0.04)	ND (0.036)	-	-	ND (0.049)	ND (0.064)	-	-	ND (0.046)	ND (0.055)	-	-	ND (0.034)
Ethylbenzene	-	5.8	ND (0.0066)	ND (0.004)	-	-	ND (0.004)	ND (0.0036)	-	-	ND (0.0049)	ND (0.0064)	-	-	ND (0.0046)	ND (0.0055)	-	-	ND (0.0034)
Hexachlorobutadiene	1.2	-	ND (0.0066)	ND (0.004)	-	-	ND (0.004)	ND (0.0036)	-	-	ND (0.0049)	ND (0.0064)	-	-	ND (0.0046)	ND (0.0055)	-	-	ND (0.0034)
Isopropylbenzene (Cumene)	-	1900	ND (0.0066)	ND (0.004)	-	-	ND (0.004)	ND (0.0036)	-	-	ND (0.0049)	ND (0.0064)	-	-	ND (0.0046)	ND (0.0055)	-	-	ND (0.0034)
m,p-Xylenes	-	-	ND (0.013)	ND (0.0081)	-	-	ND (0.008)	ND (0.0072)	-	-	ND (0.0098)	ND (0.013)	-	-	ND (0.0092)	ND (0.011)	-	-	ND (0.0069)

Table 1. Summary of Soil Analytical Results
Northeast Corner of South Central Avenue and Victoria Street
Carson, California

Location	DTSC	Regional	HA-16	HA-16	HA-16	HA-16	HA-17	HA-17	HA-17	HA-17	HA-18	HA-18	HA-18	HA-18	HA-19	HA-19	HA-19	HA-19	HA-20
Sample Date	HHRA	Screening	8/31/17	8/31/17	8/31/17	8/31/17	8/31/17	8/31/17	8/31/17	8/31/17	9/1/17	9/1/17	9/1/17	9/1/17	9/1/17	9/1/17	9/1/17	9/1/17	9/1/17
Sample Depth (bgs)	Note 3	Levels	0.5 (ft)	2 (ft)	4 (ft)	6 (ft)	0.5 (ft)	2 (ft)	4 (ft)	6 (ft)	0.5 (ft)	2 (ft)	4 (ft)	6 (ft)	0.5 (ft)	2 (ft)	4 (ft)	6 (ft)	0.5 (ft)
Sample Name	Residential	Residential	HA-16-.5	HA-16-2	HA-16-4	HA-16-6	HA-17-.5	HA-17-2	HA-17-4	HA-17-6	HA-18-.5	HA-18-2	HA-18-4	HA-18-6	HA-19-.5	HA-19-2	HA-19-4	HA-19-6	HA-20-.5
Volatile Organic Compounds (mg/kg)																			
Methyl Tert Butyl Ether	-	47	ND (0.0066)	ND (0.004)	-	-	ND (0.004)	ND (0.0036)	-	-	ND (0.0049)	ND (0.0064)	-	-	ND (0.0046)	ND (0.0055)	-	-	ND (0.0034)
Methylene chloride	1.9	-	ND (0.0066)	ND (0.004)	-	-	ND (0.004)	ND (0.0036)	-	-	ND (0.0049)	ND (0.0064)	-	-	ND (0.0046)	ND (0.0055)	-	-	ND (0.0034)
Naphthalene	-	3.8	ND (0.0066)	ND (0.004)	-	-	ND (0.004)	ND (0.0036)	-	-	ND (0.0049)	ND (0.0064)	-	-	ND (0.0046)	ND (0.0055)	-	-	ND (0.0034)
n-Butylbenzene	1200	-	ND (0.0066)	ND (0.004)	-	-	ND (0.004)	ND (0.0036)	-	-	ND (0.0049)	ND (0.0064)	-	-	ND (0.0046)	ND (0.0055)	-	-	ND (0.0034)
n-Propylbenzene	-	3800	ND (0.0066)	ND (0.004)	-	-	ND (0.004)	ND (0.0036)	-	-	ND (0.0049)	ND (0.0064)	-	-	ND (0.0046)	ND (0.0055)	-	-	ND (0.0034)
o-Xylene	-	650	ND (0.0066)	ND (0.004)	-	-	ND (0.004)	ND (0.0036)	-	-	ND (0.0049)	ND (0.0064)	-	-	ND (0.0046)	ND (0.0055)	-	-	ND (0.0034)
Styrene	-	6000	ND (0.0066)	ND (0.004)	-	-	ND (0.004)	ND (0.0036)	-	-	ND (0.0049)	ND (0.0064)	-	-	ND (0.0046)	ND (0.0055)	-	-	ND (0.0034)
Tert-Amyl Methyl Ether (TAME)	-	-	ND (0.0066)	ND (0.004)	-	-	ND (0.004)	ND (0.0036)	-	-	ND (0.0049)	ND (0.0064)	-	-	ND (0.0046)	ND (0.0055)	-	-	ND (0.0034)
Tert-Butyl Alcohol (tert-Butanol)	-	-	ND (0.13)	ND (0.081)	-	-	ND (0.08)	ND (0.072)	-	-	ND (0.098)	ND (0.13)	-	-	ND (0.092)	ND (0.11)	-	-	ND (0.069)
Tert-Butyl Ethyl Ether (ETBE)	-	-	ND (0.0066)	ND (0.004)	-	-	ND (0.004)	ND (0.0036)	-	-	ND (0.0049)	ND (0.0064)	-	-	ND (0.0046)	ND (0.0055)	-	-	ND (0.0034)
tert-Butylbenzene	2200	-	ND (0.0066)	ND (0.004)	-	-	ND (0.004)	ND (0.0036)	-	-	ND (0.0049)	ND (0.0064)	-	-	ND (0.0046)	ND (0.0055)	-	-	ND (0.0034)
Tetrachloroethene	0.6	-	ND (0.0066)	ND (0.004)	-	-	ND (0.004)	ND (0.0036)	-	-	ND (0.0049)	ND (0.0064)	-	-	ND (0.0046)	ND (0.0055)	-	-	ND (0.0034)
Toluene	1100	-	ND (0.0066)	ND (0.004)	-	-	ND (0.004)	ND (0.0036)	-	-	ND (0.0049)	ND (0.0064)	-	-	ND (0.0046)	ND (0.0055)	-	-	ND (0.0034)
trans-1,2-Dichloroethene	130	-	ND (0.0066)	ND (0.004)	-	-	ND (0.004)	ND (0.0036)	-	-	ND (0.0049)	ND (0.0064)	-	-	ND (0.0046)	ND (0.0055)	-	-	ND (0.0034)
trans-1,3-Dichloropropene	-	-	ND (0.0066)	ND (0.004)	-	-	ND (0.004)	ND (0.0036)	-	-	ND (0.0049)	ND (0.0064)	-	-	ND (0.0046)	ND (0.0055)	-	-	ND (0.0034)
Trichloroethene	-	0.94	ND (0.0066)	ND (0.004)	-	-	ND (0.004)	ND (0.0036)	-	-	ND (0.0049)	ND (0.0064)	-	-	ND (0.0046)	ND (0.0055)	-	-	ND (0.0034)
Trichlorofluoromethane (CFC-11)	1200	-	ND (0.0066)	ND (0.004)	-	-	ND (0.004)	ND (0.0036)	-	-	ND (0.0049)	ND (0.0064)	-	-	ND (0.0046)	ND (0.0055)	-	-	ND (0.0034)
Trifluorotrichloroethane (Freon 113)	-	6700	ND (0.0066)	ND (0.004)	-	-	ND (0.004)	ND (0.0036)	-	-	ND (0.0049)	ND (0.0064)	-	-	ND (0.0046)	ND (0.0055)	-	-	ND (0.0034)
Vinyl acetate	-	910	ND (0.066)	ND (0.04)	-	-	ND (0.04)	ND (0.036)	-	-	ND (0.049)	ND (0.064)	-	-	ND (0.046)	ND (0.055)	-	-	ND (0.034)
Vinyl chloride	0.0088	-	ND (0.0066)	ND (0.004)	-	-	ND (0.004)	ND (0.0036)	-	-	ND (0.0049)	ND (0.0064)	-	-	ND (0.0046)	ND (0.0055)	-	-	ND (0.0034)

Table 1. Summary of Soil Analytical Results
Northeast Corner of South Central Avenue and Victoria Street
Carson, California

Location	DTSC	Regional	HA-20	HA-20	HA-20	HA-21	HA-21	HA-21	HA-21A	HA-21A	HA-21B	HA-21B	HA-21C	HA-21D	HA-21D	HA-21D1	HA-21E	HA-21E
Sample Date	HHRA	Screening	9/1/17	9/1/17	9/1/17	8/31/17	8/31/17	8/31/17	9/7/17	9/7/17	9/7/17	9/7/17	9/7/17	9/7/17	9/7/17	9/8/17	9/7/17	9/7/17
Sample Depth (bgs)	Note 3	Levels	2 (ft)	4 (ft)	6 (ft)	0.5 (ft)	2 (ft)	6 (ft)	7.5 (ft)	12 (ft)	5.5 (ft)	7 (ft)	6 (ft)	6.5 (ft)	12 (ft)	28 (ft)	6 (ft)	15 (ft)
Sample Name	Residential	Residential	HA-20-2	HA-20-4	HA-20-6	HA-21-.5	HA-21-2	HA-21-6	HA-21A-7.5	HA-21A-12	HA-21B1-5.5	HA-21B-7	HA-21C-6	HA-21D-6.5	HA-21D-12	HA-21D1-28	HA-21E-6	HA-21E-15
Inorganic Compounds (mg/kg)																		
Antimony	-	31	ND (2)	-	-	ND (2)	ND (2)	ND (2)	-	-	-	-	-	-	-	-	-	-
Arsenic	12	-	**11**	-	-	**16**	**10**	**7.7**	-	-	-	-	-	-	-	-	-	-
Barium	-	15000	**300**	-	-	**410**	**250**	**360**	-	-	-	-	-	-	-	-	-	-
Beryllium	15	-	ND (1)	-	-	ND (1)	ND (1)	ND (1)	-	-	-	-	-	-	-	-	-	-
Cadmium	5.2	-	ND (1)	-	-	ND (1)	ND (1)	ND (1)	-	-	-	-	-	-	-	-	-	-
Chromium	-	-	**17**	-	-	**21**	**19**	**18**	-	-	-	-	-	-	-	-	-	-
Cobalt	-	23	**7.6**	-	-	**9.2**	**8.9**	**9.2**	-	-	-	-	-	-	-	-	-	-
Copper	-	3100	**20**	-	-	**22**	**22**	**18**	-	-	-	-	-	-	-	-	-	-
Lead	80	-	**19**	-	-	**20**	**15**	**17**	-	-	-	-	-	-	-	-	-	-
Mercury	1	-	**0.49**	-	-	**0.89**	**0.5**	**0.24**	-	-	-	-	-	-	-	-	-	-
Molybdenum	-	390	ND (1)	-	-	ND (1)	ND (1)	ND (1)	-	-	-	-	-	-	-	-	-	-
Nickel	490	-	**14**	-	-	**16**	**15**	**16**	-	-	-	-	-	-	-	-	-	-
Selenium	-	390	ND (1)	-	-	ND (1)	ND (1)	ND (1)	-	-	-	-	-	-	-	-	-	-
Silver	390	-	ND (1)	-	-	ND (1)	ND (1)	ND (1)	-	-	-	-	-	-	-	-	-	-
Thallium	-	0.78	ND (1)	-	-	ND (1)	ND (1)	ND (1)	-	-	-	-	-	-	-	-	-	-
Vanadium	390	-	**27**	-	-	**35**	**33**	**33**	-	-	-	-	-	-	-	-	-	-
Zinc	-	23000	**110**	-	-	**100**	**84**	**59**	-	-	-	-	-	-	-	-	-	-
Total Petroleum Hydrocarbons (mg/kg)																		
Total Petroleum Hydrocarbons (C4-C10)	-	-	ND (1)	ND (1) H4	ND (1) H4	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	**1.7**	ND (1)	ND (1)
Total Petroleum Hydrocarbons (C5-C8)	-	-	ND (1)	ND (1) H4	ND (1) H4	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	**1.3**	ND (1)	ND (1)
Total Petroleum Hydrocarbons (C6-C8)	-	-	ND (1)	ND (1) H4	ND (1) H4	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	**1.1**	ND (1)	ND (1)
Total Petroleum Hydrocarbons (C9-C16)	-	-	**24**	ND (10) H1	**110 H1**	ND (20)	ND (20)	ND (10)	**52**	**43**	**65**	ND (10)	**19**	**99**	**20**	**16**	**19**	**22**
Total Petroleum Hydrocarbons (C9-C18)	-	-	**44**	**11 H1**	**150 H1**	ND (20)	ND (20)	**31**	**81**	**90**	**89**	**12**	**38**	**140**	**30**	**16**	**44**	**39**
Total Petroleum Hydrocarbons (C10-C40)	-	-	**2200**	**130 H4**	**1400 H4**	**1400**	**1500**	**260**	**2000**	**1300**	**940**	**1500**	**670**	**1700**	**580**	**250**	**1600**	**1800**
Total Petroleum Hydrocarbons (C17-C32)	-	-	**900**	**94 H1**	**740 H1**	**660**	**550**	ND (10)	**940**	**790**	**590**	**700**	**420**	**920**	**370**	**230**	**780**	**1100**
Total Petroleum Hydrocarbons (C19-C32)	-	-	**880**	**90 H1**	**700 H1**	**660**	**540**	**150**	**910**	**740**	**570**	**690**	**400**	**880**	**360**	**230**	**750**	**1000**
Volatile Organic Compounds (mg/kg)																		
1,1,1,2-Tetrachloroethane	2	-	ND (0.0039)	-	-	ND (0.0035)	ND (0.0035)	ND (0.0036)	-	-	-	-	-	-	-	-	-	-
1,1,1-Trichloroethane	1700	-	ND (0.0039)	-	-	ND (0.0035)	ND (0.0035)	ND (0.0036)	-	-	-	-	-	-	-	-	-	-
1,1,2,2-Tetrachloroethane	0.61	-	ND (0.0039)	-	-	ND (0.0035)	ND (0.0035)	ND (0.0036)	-	-	-	-	-	-	-	-	-	-
1,1,2-Trichloroethane	-	1.1	ND (0.0039)	-	-	ND (0.0035)	ND (0.0035)	ND (0.0036)	-	-	-	-	-	-	-	-	-	-
1,1-Dichloroethane	3.6	-	ND (0.0039)	-	-	ND (0.0035)	ND (0.0035)	ND (0.0036)	-	-	-	-	-	-	-	-	-	-
1,1-Dichloroethene	-	230	ND (0.0039)	-	-	ND (0.0035)	ND (0.0035)	ND (0.0036)	-	-	-	-	-	-	-	-	-	-
1,1-Dichloropropene	-	-	ND (0.0039)	-	-	ND (0.0035)	ND (0.0035)	ND (0.0036)	-	-	-	-	-	-	-	-	-	-
1,2,3-Trichlorobenzene	63	-	ND (0.0039)	-	-	ND (0.0035)	ND (0.0035)	ND (0.0036)	-	-	-	-	-	-	-	-	-	-
1,2,3-Trichloropropane	0.0015	-	ND (0.0039)	-	-	ND (0.0035)	ND (0.0035)	ND (0.0036)	-	-	-	-	-	-	-	-	-	-
1,2,4-Trichlorobenzene	-	24	ND (0.0039)	-	-	ND (0.0035)	ND (0.0035)	ND (0.0036)	-	-	-	-	-	-	-	-	-	-
1,2,4-Trimethylbenzene	-	300	ND (0.0039)	-	-	ND (0.0035)	ND (0.0035)	ND (0.0036)	-	-	-	-	-	-	-	-	-	-

Table 1. Summary of Soil Analytical Results
Northeast Corner of South Central Avenue and Victoria Street
Carson, California

Location	DTSC	Regional	HA-20	HA-20	HA-20	HA-21	HA-21	HA-21	HA-21A	HA-21A	HA-21B	HA-21B	HA-21C	HA-21D	HA-21D	HA-21D1	HA-21E	HA-21E
Sample Date	HHRA	Screening	9/1/17	9/1/17	9/1/17	8/31/17	8/31/17	8/31/17	9/7/17	9/7/17	9/7/17	9/7/17	9/7/17	9/7/17	9/7/17	9/8/17	9/7/17	9/7/17
Sample Depth (bgs)	Note 3	Levels	2 (ft)	4 (ft)	6 (ft)	0.5 (ft)	2 (ft)	6 (ft)	7.5 (ft)	12 (ft)	5.5 (ft)	7 (ft)	6 (ft)	6.5 (ft)	12 (ft)	28 (ft)	6 (ft)	15 (ft)
Sample Name	Residential	Residential	HA-20-2	HA-20-4	HA-20-6	HA-21-.5	HA-21-2	HA-21-6	HA-21A-7.5	HA-21A-12	HA-21B1-5.5	HA-21B-7	HA-21C-6	HA-21D-6.5	HA-21D-12	HA-21D1-28	HA-21E-6	HA-21E-15
Volatile Organic Compounds (mg/kg)																		
1,2-Dibromo-3-chloropropane (DBCP)	-	0.0053	ND (0.0077)	-	-	ND (0.007)	ND (0.0069)	ND (0.0071)	-	-	-	-	-	-	-	-	-	-
1,2-Dibromoethane (Ethylene Dibromide)	0.037	-	ND (0.0039)	-	-	ND (0.0035)	ND (0.0035)	ND (0.0036)	-	-	-	-	-	-	-	-	-	-
1,2-Dichlorobenzene	-	1800	ND (0.0039)	-	-	ND (0.0035)	ND (0.0035)	ND (0.0036)	-	-	-	-	-	-	-	-	-	-
1,2-Dichloroethane	-	0.46	ND (0.0039)	-	-	ND (0.0035)	ND (0.0035)	ND (0.0036)	-	-	-	-	-	-	-	-	-	-
1,2-Dichloropropane	-	0.28	ND (0.0039)	-	-	ND (0.0035)	ND (0.0035)	ND (0.0036)	-	-	-	-	-	-	-	-	-	-
1,3,5-Trimethylbenzene	210	-	ND (0.0039)	-	-	ND (0.0035)	ND (0.0035)	ND (0.0036)	-	-	-	-	-	-	-	-	-	-
1,3-Dichlorobenzene	240	-	ND (0.0039)	-	-	ND (0.0035)	ND (0.0035)	ND (0.0036)	-	-	-	-	-	-	-	-	-	-
1,3-Dichloropropane	420	-	ND (0.0039)	-	-	ND (0.0035)	ND (0.0035)	ND (0.0036)	-	-	-	-	-	-	-	-	-	-
1,4-Dichlorobenzene	-	2.6	ND (0.0039)	-	-	ND (0.0035)	ND (0.0035)	ND (0.0036)	-	-	-	-	-	-	-	-	-	-
2,2-Dichloropropane	-	-	ND (0.0039)	-	-	ND (0.0035)	ND (0.0035)	ND (0.0036)	-	-	-	-	-	-	-	-	-	-
2-Chlorotoluene	480	-	ND (0.0039)	-	-	ND (0.0035)	ND (0.0035)	ND (0.0036)	-	-	-	-	-	-	-	-	-	-
2-Phenylbutane (sec-Butylbenzene)	2200	-	ND (0.0039)	-	-	ND (0.0035)	ND (0.0035)	ND (0.0036)	-	-	-	-	-	-	-	-	-	-
4-Chlorotoluene	440	-	ND (0.0039)	-	-	ND (0.0035)	ND (0.0035)	ND (0.0036)	-	-	-	-	-	-	-	-	-	-
Benzene	0.33	-	ND (0.0039)	-	-	ND (0.0035)	ND (0.0035)	ND (0.0036)	-	-	-	-	-	-	-	-	-	-
Bromobenzene	-	290	ND (0.0039)	-	-	ND (0.0035)	ND (0.0035)	ND (0.0036)	-	-	-	-	-	-	-	-	-	-
Bromodichloromethane	0.3	-	ND (0.0039)	-	-	ND (0.0035)	ND (0.0035)	ND (0.0036)	-	-	-	-	-	-	-	-	-	-
Bromoform	20	-	ND (0.0039)	-	-	ND (0.0035)	ND (0.0035)	ND (0.0036)	-	-	-	-	-	-	-	-	-	-
Bromomethane (Methyl Bromide)	-	6.8	ND (0.0039)	-	-	ND (0.0035)	ND (0.0035)	ND (0.0036)	-	-	-	-	-	-	-	-	-	-
Carbon disulfide	-	770	ND (0.0039)	-	-	ND (0.0035)	ND (0.0035)	ND (0.0036)	-	-	-	-	-	-	-	-	-	-
Carbon tetrachloride	0.099	-	ND (0.0039)	-	-	ND (0.0035)	ND (0.0035)	ND (0.0036)	-	-	-	-	-	-	-	-	-	-
Chlorobenzene	-	280	ND (0.0039)	-	-	ND (0.0035)	ND (0.0035)	ND (0.0036)	-	-	-	-	-	-	-	-	-	-
Chlorobromomethane	-	150	ND (0.0039)	-	-	ND (0.0035)	ND (0.0035)	ND (0.0036)	-	-	-	-	-	-	-	-	-	-
Chloroethane	3.1	-	ND (0.0039)	-	-	ND (0.0035)	ND (0.0035)	ND (0.0036)	-	-	-	-	-	-	-	-	-	-
Chloroform (Trichloromethane)	-	0.32	ND (0.0039)	-	-	ND (0.0035)	ND (0.0035)	ND (0.0036)	-	-	-	-	-	-	-	-	-	-
Chloromethane (Methyl Chloride)	-	110	ND (0.0039)	-	-	ND (0.0035)	ND (0.0035)	ND (0.0036)	-	-	-	-	-	-	-	-	-	-
cis-1,2-Dichloroethene	19	-	ND (0.0039)	-	-	ND (0.0035)	ND (0.0035)	ND (0.0036)	-	-	-	-	-	-	-	-	-	-
cis-1,3-Dichloropropene	-	-	ND (0.0039)	-	-	ND (0.0035)	ND (0.0035)	ND (0.0036)	-	-	-	-	-	-	-	-	-	-
Cymene (p-Isopropyltoluene)	-	-	ND (0.0039)	-	-	ND (0.0035)	ND (0.0035)	ND (0.0036)	-	-	-	-	-	-	-	-	-	-
Dibromochloromethane	0.95	-	ND (0.0039)	-	-	ND (0.0035)	ND (0.0035)	ND (0.0036)	-	-	-	-	-	-	-	-	-	-
Dibromomethane	-	24	ND (0.0039)	-	-	ND (0.0035)	ND (0.0035)	ND (0.0036)	-	-	-	-	-	-	-	-	-	-
Dichlorodifluoromethane (CFC-12)	-	87	ND (0.0039)	-	-	ND (0.0035)	ND (0.0035)	ND (0.0036)	-	-	-	-	-	-	-	-	-	-
Diisopropyl ether (DIPE)	-	2200	ND (0.0039)	-	-	ND (0.0035)	ND (0.0035)	ND (0.0036)	-	-	-	-	-	-	-	-	-	-
Ethyl acetate	-	620	ND (0.039)	-	-	ND (0.035)	ND (0.035)	ND (0.036)	-	-	-	-	-	-	-	-	-	-
Ethyl Ether	2300	-	ND (0.039)	-	-	ND (0.035)	ND (0.035)	ND (0.036)	-	-	-	-	-	-	-	-	-	-
Ethylbenzene	-	5.8	ND (0.0039)	-	-	ND (0.0035)	ND (0.0035)	ND (0.0036)	-	-	-	-	-	-	-	-	-	-
Hexachlorobutadiene	1.2	-	ND (0.0039)	-	-	ND (0.0035)	ND (0.0035)	ND (0.0036)	-	-	-	-	-	-	-	-	-	-
Isopropylbenzene (Cumene)	-	1900	ND (0.0039)	-	-	ND (0.0035)	ND (0.0035)	ND (0.0036)	-	-	-	-	-	-	-	-	-	-
m,p-Xylenes	-	-	ND (0.0077)	-	-	ND (0.007)	ND (0.0069)	ND (0.0071)	-	-	-	-	-	-	-	-	-	-

Table 1. Summary of Soil Analytical Results
Northeast Corner of South Central Avenue and Victoria Street
Carson, California

Location	DTSC	Regional	HA-20	HA-20	HA-20	HA-21	HA-21	HA-21	HA-21A	HA-21A	HA-21B	HA-21B	HA-21C	HA-21D	HA-21D	HA-21D1	HA-21E	HA-21E
Sample Date	HHRA	Screening	9/1/17	9/1/17	9/1/17	8/31/17	8/31/17	8/31/17	9/7/17	9/7/17	9/7/17	9/7/17	9/7/17	9/7/17	9/7/17	9/8/17	9/7/17	9/7/17
Sample Depth (bgs)	Note 3	Levels	2 (ft)	4 (ft)	6 (ft)	0.5 (ft)	2 (ft)	6 (ft)	7.5 (ft)	12 (ft)	5.5 (ft)	7 (ft)	6 (ft)	6.5 (ft)	12 (ft)	28 (ft)	6 (ft)	15 (ft)
Sample Name	Residential	Residential	HA-20-2	HA-20-4	HA-20-6	HA-21-.5	HA-21-2	HA-21-6	HA-21A-7.5	HA-21A-12	HA-21B1-5.5	HA-21B-7	HA-21C-6	HA-21D-6.5	HA-21D-12	HA-21D1-28	HA-21E-6	HA-21E-15
Volatile Organic Compounds (mg/kg)																		
Methyl Tert Butyl Ether	-	47	ND (0.0039)	-	-	ND (0.0035)	ND (0.0035)	ND (0.0036)	-	-	-	-	-	-	-	-	-	-
Methylene chloride	1.9	-	ND (0.0039)	-	-	ND (0.0035)	ND (0.0035)	ND (0.0036)	-	-	-	-	-	-	-	-	-	-
Naphthalene	-	3.8	ND (0.0039)	-	-	ND (0.0035)	ND (0.0035)	ND (0.0036)	-	-	-	-	-	-	-	-	-	-
n-Butylbenzene	1200	-	ND (0.0039)	-	-	ND (0.0035)	ND (0.0035)	ND (0.0036)	-	-	-	-	-	-	-	-	-	-
n-Propylbenzene	-	3800	ND (0.0039)	-	-	ND (0.0035)	ND (0.0035)	ND (0.0036)	-	-	-	-	-	-	-	-	-	-
o-Xylene	-	650	ND (0.0039)	-	-	ND (0.0035)	ND (0.0035)	ND (0.0036)	-	-	-	-	-	-	-	-	-	-
Styrene	-	6000	ND (0.0039)	-	-	ND (0.0035)	ND (0.0035)	ND (0.0036)	-	-	-	-	-	-	-	-	-	-
Tert-Amyl Methyl Ether (TAME)	-	-	ND (0.0039)	-	-	ND (0.0035)	ND (0.0035)	ND (0.0036)	-	-	-	-	-	-	-	-	-	-
Tert-Butyl Alcohol (tert-Butanol)	-	-	ND (0.077)	-	-	ND (0.07)	ND (0.069)	ND (0.071)	-	-	-	-	-	-	-	-	-	-
Tert-Butyl Ethyl Ether (ETBE)	-	-	ND (0.0039)	-	-	ND (0.0035)	ND (0.0035)	ND (0.0036)	-	-	-	-	-	-	-	-	-	-
tert-Butylbenzene	2200	-	ND (0.0039)	-	-	ND (0.0035)	ND (0.0035)	ND (0.0036)	-	-	-	-	-	-	-	-	-	-
Tetrachloroethene	0.6	-	ND (0.0039)	-	-	ND (0.0035)	ND (0.0035)	ND (0.0036)	-	-	-	-	-	-	-	-	-	-
Toluene	1100	-	ND (0.0039)	-	-	ND (0.0035)	ND (0.0035)	ND (0.0036)	-	-	-	-	-	-	-	-	-	-
trans-1,2-Dichloroethene	130	-	ND (0.0039)	-	-	ND (0.0035)	ND (0.0035)	ND (0.0036)	-	-	-	-	-	-	-	-	-	-
trans-1,3-Dichloropropene	-	-	ND (0.0039)	-	-	ND (0.0035)	ND (0.0035)	ND (0.0036)	-	-	-	-	-	-	-	-	-	-
Trichloroethene	-	0.94	ND (0.0039)	-	-	ND (0.0035)	ND (0.0035)	ND (0.0036)	-	-	-	-	-	-	-	-	-	-
Trichlorofluoromethane (CFC-11)	1200	-	ND (0.0039)	-	-	ND (0.0035)	ND (0.0035)	ND (0.0036)	-	-	-	-	-	-	-	-	-	-
Trifluorotrichloroethane (Freon 113)	-	6700	ND (0.0039)	-	-	ND (0.0035)	ND (0.0035)	ND (0.0036)	-	-	-	-	-	-	-	-	-	-
Vinyl acetate	-	910	ND (0.039)	-	-	ND (0.035)	ND (0.035)	ND (0.036)	-	-	-	-	-	-	-	-	-	-
Vinyl chloride	0.0088	-	ND (0.0039)	-	-	ND (0.0035)	ND (0.0035)	ND (0.0036)	-	-	-	-	-	-	-	-	-	-

Table 1. Summary of Soil Analytical Results
Northeast Corner of South Central Avenue and Victoria Street
Carson, California

Location	DTSC	Regional	HA-22	HA-22	HA-22	HA-22	HA-23	HA-23	HA-24	HA-24	HA-25	HA-25	HA-26	HA-26	HA-27	HA-27	HA-28
Sample Date	HHRA	Screening	9/1/17	9/1/17	9/1/17	9/1/17	9/1/17	9/1/17	9/1/17	9/1/17	8/31/17	8/31/17	9/5/17	9/5/17	9/5/17	9/5/17	9/5/17
Sample Depth (bgs)	Note 3	Levels	0.5 (ft)	2 (ft)	4 (ft)	6 (ft)	0.5 (ft)	2 (ft)	0.5 (ft)	2 (ft)	0.5 (ft)	2 (ft)	0.5 (ft)	2 (ft)	0.5 (ft)	2 (ft)	0.5 (ft)
Sample Name	Residential	Residential	HA-22-.5	HA-22-2	HA-22-4	HA-22-6	HA-23-.5	HA-23-2	HA-24-.05	HA-24-2	HA-25-.5	HA-25-2	HA-26-.5	HA-26-2	HA-27-.5	HA-27-2	HA-28-.5
Inorganic Compounds (mg/kg)																	
Antimony	-	31	ND (2)	ND (2)	-	-	ND (2)	ND (2)	ND (2)	ND (2)	ND (2)	ND (2)	ND (2)	ND (2)	ND (2)	ND (2)	ND (2)
Arsenic	12	-	**15**	**15**	**7.5**	**71**	**5.2**	**4.8**	**2.3**	**3.6**	**11**	**5.7**	**8.2**	**5**	**8.1**	**7.6**	**15**
Barium	-	15000	**350**	**310**	-	-	**180**	**120**	**190**	**220**	**190**	**170**	**180**	**230**	**200**	**110**	**320**
Beryllium	15	-	ND (1)	ND (1)	-	-	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)
Cadmium	5.2	-	ND (1)	ND (1)	-	-	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)
Chromium	-	-	**20**	**18**	-	-	**25**	**25**	**20**	**23**	**24**	**26**	**20**	**25**	**20**	**27**	**19**
Cobalt	-	23	**9**	**8.1**	-	-	**11**	**11**	**11**	**11**	**12**	**10**	**10**	**12**	**9.2**	**13**	**8.9**
Copper	-	3100	**23**	**19**	-	-	**18**	**18**	**19**	**20**	**21**	**21**	**20**	**21**	**22**	**22**	**22**
Lead	80	-	**22**	**19**	-	-	**4.7**	**3.7**	**4.7**	**5.6**	**8.6**	**14**	**7.5**	**6.4**	**10**	**5.4**	**21**
Mercury	1	-	**0.84**	**0.64**	-	-	ND (0.1)	ND (0.1)	ND (0.1)	ND (0.1)	**0.17**	**0.13**	**0.46**	ND (0.1)	**0.12**	ND (0.1)	**0.61**
Molybdenum	-	390	ND (1)	ND (1)	-	-	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)
Nickel	490	-	**16**	**14**	-	-	**18**	**19**	**18**	**18**	**19**	**17**	**17**	**21**	**17**	**20**	**15**
Selenium	-	390	ND (1)	ND (1)	-	-	ND (1)	ND (1)	ND (1)	**1.1**	ND (1)	ND (1)	ND (1)	**1.3**	ND (1)	**1.9**	ND (1)
Silver	390	-	ND (1)	ND (1)	-	-	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)
Thallium	-	0.78	ND (1)	ND (1)	-	-	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)
Vanadium	390	-	**34**	**30**	-	-	**43**	**45**	**35**	**39**	**42**	**39**	**36**	**39**	**34**	**46**	**32**
Zinc	-	23000	**100**	**88**	-	-	**39**	**40**	**57**	**41**	**64**	**60**	**52**	**44**	**70**	**46**	**100**
Total Petroleum Hydrocarbons (mg/kg)																	
Total Petroleum Hydrocarbons (C4-C10)	-	-	ND (1)	ND (1)	ND (1) H4	ND (1) H4	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)
Total Petroleum Hydrocarbons (C5-C8)	-	-	ND (1)	ND (1)	ND (1) H4	ND (1) H4	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)
Total Petroleum Hydrocarbons (C6-C8)	-	-	ND (1)	ND (1)	ND (1) H4	ND (1) H4	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)
Total Petroleum Hydrocarbons (C9-C16)	-	-	ND (20)	ND (20)	ND (10) H1	ND (10) H1	ND (10)	ND (10)	ND (10)	**14**	ND (10)	ND (10)	**19**	ND (10)	ND (10)	ND (10)	ND (10)
Total Petroleum Hydrocarbons (C9-C18)	-	-	ND (20)	**34**	ND (10) H1	ND (10) H1	ND (10)	ND (10)	ND (10)	**21**	ND (10)	ND (10)	**37**	ND (10)	**12**	ND (10)	**21**
Total Petroleum Hydrocarbons (C10-C40)	-	-	**1500**	**1600**	**150 H4**	ND (10) H4	ND (10)	**120**	**13**	**770**	**670**	**730**	**1100**	**360**	**1300**	ND (10)	**1400**
Total Petroleum Hydrocarbons (C17-C32)	-	-	**700**	**760**	**99 H1**	ND (10) H1	ND (10)	**77**	**12**	**380**	**360**	**300**	**570**	**200**	**460**	ND (10)	**650**
Total Petroleum Hydrocarbons (C19-C32)	-	-	**690**	**740**	**98 H1**	ND (10) H1	ND (10)	**77**	**12**	**370**	**350**	**290**	**550**	**200**	**450**	ND (10)	**630**
Volatile Organic Compounds (mg/kg)																	
1,1,1,2-Tetrachloroethane	2	-	ND (0.005)	ND (0.005)	-	-	ND (0.005)	ND (0.005)	ND (0.005)	ND (0.005)	ND (0.0041)	ND (0.0046)	ND (0.0041)	ND (0.0037)	ND (0.0038)	ND (0.0041)	ND (0.0052)
1,1,1-Trichloroethane	1700	-	ND (0.005)	ND (0.005)	-	-	ND (0.005)	ND (0.005)	ND (0.005)	ND (0.005)	ND (0.0041)	ND (0.0046)	ND (0.0041)	ND (0.0037)	ND (0.0038)	ND (0.0041)	ND (0.0052)
1,1,2,2-Tetrachloroethane	0.61	-	ND (0.005)	ND (0.005)	-	-	ND (0.005)	ND (0.005)	ND (0.005)	ND (0.005)	ND (0.0041)	ND (0.0046)	ND (0.0041)	ND (0.0037)	ND (0.0038)	ND (0.0041)	ND (0.0052)
1,1,2-Trichloroethane	-	1.1	ND (0.005)	ND (0.005)	-	-	ND (0.005)	ND (0.005)	ND (0.005)	ND (0.005)	ND (0.0041)	ND (0.0046)	ND (0.0041)	ND (0.0037)	ND (0.0038)	ND (0.0041)	ND (0.0052)
1,1-Dichloroethane	3.6	-	ND (0.005)	ND (0.005)	-	-	ND (0.005)	ND (0.005)	ND (0.005)	ND (0.005)	ND (0.0041)	ND (0.0046)	ND (0.0041)	ND (0.0037)	ND (0.0038)	ND (0.0041)	ND (0.0052)
1,1-Dichloroethene	-	230	ND (0.005)	ND (0.005)	-	-	ND (0.005)	ND (0.005)	ND (0.005)	ND (0.005)	ND (0.0041)	ND (0.0046)	ND (0.0041)	ND (0.0037)	ND (0.0038)	ND (0.0041)	ND (0.0052)
1,1-Dichloropropene	-	-	ND (0.005)	ND (0.005)	-	-	ND (0.005)	ND (0.005)	ND (0.005)	ND (0.005)	ND (0.0041)	ND (0.0046)	ND (0.0041)	ND (0.0037)	ND (0.0038)	ND (0.0041)	ND (0.0052)
1,2,3-Trichlorobenzene	63	-	ND (0.005)	ND (0.005)	-	-	ND (0.005)	ND (0.005)	ND (0.005)	ND (0.005)	ND (0.0041)	ND (0.0046)	ND (0.0041)	ND (0.0037)	ND (0.0038)	ND (0.0041)	ND (0.0052)
1,2,3-Trichloropropane	0.0015	-	ND (0.005)	ND (0.005)	-	-	ND (0.005)	ND (0.005)	ND (0.005)	ND (0.005)	ND (0.0041)	ND (0.0046)	ND (0.0041)	ND (0.0037)	ND (0.0038)	ND (0.0041)	ND (0.0052)
1,2,4-Trichlorobenzene	-	24	ND (0.005)	ND (0.005)	-	-	ND (0.005)	ND (0.005)	ND (0.005)	ND (0.005)	ND (0.0041)	ND (0.0046)	ND (0.0041)	ND (0.0037)	ND (0.0038)	ND (0.0041)	ND (0.0052)
1,2,4-Trimethylbenzene	-	300	ND (0.005)	ND (0.005)	-	-	ND (0.005)	ND (0.005)	ND (0.005)	ND (0.005)	ND (0.0041)	ND (0.0046)	ND (0.0041)	ND (0.0037)	ND (0.0038)	ND (0.0041)	ND (0.0052)

Table 1. Summary of Soil Analytical Results
Northeast Corner of South Central Avenue and Victoria Street
Carson, California

Location	DTSC	Regional	HA-22	HA-22	HA-22	HA-22	HA-23	HA-23	HA-24	HA-24	HA-25	HA-25	HA-26	HA-26	HA-27	HA-27	HA-28
Sample Date	HHRA	Screening	9/1/17	9/1/17	9/1/17	9/1/17	9/1/17	9/1/17	9/1/17	9/1/17	8/31/17	8/31/17	9/5/17	9/5/17	9/5/17	9/5/17	9/5/17
Sample Depth (bgs)	Note 3	Levels	0.5 (ft)	2 (ft)	4 (ft)	6 (ft)	0.5 (ft)	2 (ft)	0.5 (ft)	2 (ft)	0.5 (ft)	2 (ft)	0.5 (ft)	2 (ft)	0.5 (ft)	2 (ft)	0.5 (ft)
Sample Name	Residential	Residential	HA-22-.5	HA-22-2	HA-22-4	HA-22-6	HA-23-.5	HA-23-2	HA-24-.05	HA-24-2	HA-25-.5	HA-25-2	HA-26-.5	HA-26-2	HA-27-.5	HA-27-2	HA-28-.5
Volatile Organic Compounds (mg/kg)																	
1,2-Dibromo-3-chloropropane (DBCP)	-	0.0053	ND (0.01)	ND (0.01)	-	-	ND (0.01)	ND (0.01)	ND (0.01)	ND (0.01)	ND (0.0083)	ND (0.0092)	ND (0.0082)	ND (0.0075)	ND (0.0075)	ND (0.0082)	ND (0.01)
1,2-Dibromoethane (Ethylene Dibromide)	0.037	-	ND (0.005)	ND (0.005)	-	-	ND (0.005)	ND (0.005)	ND (0.005)	ND (0.005)	ND (0.0041)	ND (0.0046)	ND (0.0041)	ND (0.0037)	ND (0.0038)	ND (0.0041)	ND (0.0052)
1,2-Dichlorobenzene	-	1800	ND (0.005)	ND (0.005)	-	-	ND (0.005)	ND (0.005)	ND (0.005)	ND (0.005)	ND (0.0041)	ND (0.0046)	ND (0.0041)	ND (0.0037)	ND (0.0038)	ND (0.0041)	ND (0.0052)
1,2-Dichloroethane	-	0.46	ND (0.005)	ND (0.005)	-	-	ND (0.005)	ND (0.005)	ND (0.005)	ND (0.005)	ND (0.0041)	ND (0.0046)	ND (0.0041)	ND (0.0037)	ND (0.0038)	ND (0.0041)	ND (0.0052)
1,2-Dichloropropane	-	0.28	ND (0.005)	ND (0.005)	-	-	ND (0.005)	ND (0.005)	ND (0.005)	ND (0.005)	ND (0.0041)	ND (0.0046)	ND (0.0041)	ND (0.0037)	ND (0.0038)	ND (0.0041)	ND (0.0052)
1,3,5-Trimethylbenzene	210	-	ND (0.005)	ND (0.005)	-	-	ND (0.005)	ND (0.005)	ND (0.005)	ND (0.005)	ND (0.0041)	ND (0.0046)	ND (0.0041)	ND (0.0037)	ND (0.0038)	ND (0.0041)	ND (0.0052)
1,3-Dichlorobenzene	240	-	ND (0.005)	ND (0.005)	-	-	ND (0.005)	ND (0.005)	ND (0.005)	ND (0.005)	ND (0.0041)	ND (0.0046)	ND (0.0041)	ND (0.0037)	ND (0.0038)	ND (0.0041)	ND (0.0052)
1,3-Dichloropropane	420	-	ND (0.005)	ND (0.005)	-	-	ND (0.005)	ND (0.005)	ND (0.005)	ND (0.005)	ND (0.0041)	ND (0.0046)	ND (0.0041)	ND (0.0037)	ND (0.0038)	ND (0.0041)	ND (0.0052)
1,4-Dichlorobenzene	-	2.6	ND (0.005)	ND (0.005)	-	-	ND (0.005)	ND (0.005)	ND (0.005)	ND (0.005)	ND (0.0041)	ND (0.0046)	ND (0.0041)	ND (0.0037)	ND (0.0038)	ND (0.0041)	ND (0.0052)
2,2-Dichloropropane	-	-	ND (0.005)	ND (0.005)	-	-	ND (0.005)	ND (0.005)	ND (0.005)	ND (0.005)	ND (0.0041)	ND (0.0046)	ND (0.0041)	ND (0.0037)	ND (0.0038)	ND (0.0041)	ND (0.0052)
2-Chlorotoluene	480	-	ND (0.005)	ND (0.005)	-	-	ND (0.005)	ND (0.005)	ND (0.005)	ND (0.005)	ND (0.0041)	ND (0.0046)	ND (0.0041)	ND (0.0037)	ND (0.0038)	ND (0.0041)	ND (0.0052)
2-Phenylbutane (sec-Butylbenzene)	2200	-	ND (0.005)	ND (0.005)	-	-	ND (0.005)	ND (0.005)	ND (0.005)	ND (0.005)	ND (0.0041)	ND (0.0046)	ND (0.0041)	ND (0.0037)	ND (0.0038)	ND (0.0041)	ND (0.0052)
4-Chlorotoluene	440	-	ND (0.005)	ND (0.005)	-	-	ND (0.005)	ND (0.005)	ND (0.005)	ND (0.005)	ND (0.0041)	ND (0.0046)	ND (0.0041)	ND (0.0037)	ND (0.0038)	ND (0.0041)	ND (0.0052)
Benzene	0.33	-	ND (0.005)	ND (0.005)	-	-	ND (0.005)	ND (0.005)	ND (0.005)	ND (0.005)	ND (0.0041)	ND (0.0046)	ND (0.0041)	ND (0.0037)	ND (0.0038)	ND (0.0041)	ND (0.0052)
Bromobenzene	-	290	ND (0.005)	ND (0.005)	-	-	ND (0.005)	ND (0.005)	ND (0.005)	ND (0.005)	ND (0.0041)	ND (0.0046)	ND (0.0041)	ND (0.0037)	ND (0.0038)	ND (0.0041)	ND (0.0052)
Bromodichloromethane	0.3	-	ND (0.005)	ND (0.005)	-	-	ND (0.005)	ND (0.005)	ND (0.005)	ND (0.005)	ND (0.0041)	ND (0.0046)	ND (0.0041)	ND (0.0037)	ND (0.0038)	ND (0.0041)	ND (0.0052)
Bromoform	20	-	ND (0.005)	ND (0.005)	-	-	ND (0.005)	ND (0.005)	ND (0.005)	ND (0.005)	ND (0.0041)	ND (0.0046)	ND (0.0041)	ND (0.0037)	ND (0.0038)	ND (0.0041)	ND (0.0052)
Bromomethane (Methyl Bromide)	-	6.8	ND (0.005)	ND (0.005)	-	-	ND (0.005)	ND (0.005)	ND (0.005)	ND (0.005)	ND (0.0041)	ND (0.0046)	ND (0.0041)	ND (0.0037)	ND (0.0038)	ND (0.0041)	ND (0.0052)
Carbon disulfide	-	770	ND (0.005)	ND (0.005)	-	-	ND (0.005)	ND (0.005)	ND (0.005)	ND (0.005)	ND (0.0041)	ND (0.0046)	ND (0.0041)	ND (0.0037)	ND (0.0038)	ND (0.0041)	ND (0.0052)
Carbon tetrachloride	0.099	-	ND (0.005)	ND (0.005)	-	-	ND (0.005)	ND (0.005)	ND (0.005)	ND (0.005)	ND (0.0041)	ND (0.0046)	ND (0.0041)	ND (0.0037)	ND (0.0038)	ND (0.0041)	ND (0.0052)
Chlorobenzene	-	280	ND (0.005)	ND (0.005)	-	-	ND (0.005)	ND (0.005)	ND (0.005)	ND (0.005)	ND (0.0041)	ND (0.0046)	ND (0.0041)	ND (0.0037)	ND (0.0038)	ND (0.0041)	ND (0.0052)
Chlorobromomethane	-	150	ND (0.005)	ND (0.005)	-	-	ND (0.005)	ND (0.005)	ND (0.005)	ND (0.005)	ND (0.0041)	ND (0.0046)	ND (0.0041)	ND (0.0037)	ND (0.0038)	ND (0.0041)	ND (0.0052)
Chloroethane	3.1	-	ND (0.005)	ND (0.005)	-	-	ND (0.005)	ND (0.005)	ND (0.005)	ND (0.005)	ND (0.0041)	ND (0.0046)	ND (0.0041)	ND (0.0037)	ND (0.0038)	ND (0.0041)	ND (0.0052)
Chloroform (Trichloromethane)	-	0.32	ND (0.005)	ND (0.005)	-	-	ND (0.005)	ND (0.005)	ND (0.005)	ND (0.005)	ND (0.0041)	ND (0.0046)	ND (0.0041)	ND (0.0037)	ND (0.0038)	ND (0.0041)	ND (0.0052)
Chloromethane (Methyl Chloride)	-	110	ND (0.005)	ND (0.005)	-	-	ND (0.005)	ND (0.005)	ND (0.005)	ND (0.005)	ND (0.0041)	ND (0.0046)	ND (0.0041)	ND (0.0037)	ND (0.0038)	ND (0.0041)	ND (0.0052)
cis-1,2-Dichloroethene	19	-	ND (0.005)	ND (0.005)	-	-	ND (0.005)	ND (0.005)	ND (0.005)	ND (0.005)	ND (0.0041)	ND (0.0046)	ND (0.0041)	ND (0.0037)	ND (0.0038)	ND (0.0041)	ND (0.0052)
cis-1,3-Dichloropropene	-	-	ND (0.005)	ND (0.005)	-	-	ND (0.005)	ND (0.005)	ND (0.005)	ND (0.005)	ND (0.0041)	ND (0.0046)	ND (0.0041)	ND (0.0037)	ND (0.0038)	ND (0.0041)	ND (0.0052)
Cymene (p-Isopropyltoluene)	-	-	ND (0.005)	ND (0.005)	-	-	ND (0.005)	ND (0.005)	ND (0.005)	ND (0.005)	ND (0.0041)	ND (0.0046)	ND (0.0041)	ND (0.0037)	ND (0.0038)	ND (0.0041)	ND (0.0052)
Dibromochloromethane	0.95	-	ND (0.005)	ND (0.005)	-	-	ND (0.005)	ND (0.005)	ND (0.005)	ND (0.005)	ND (0.0041)	ND (0.0046)	ND (0.0041)	ND (0.0037)	ND (0.0038)	ND (0.0041)	ND (0.0052)
Dibromomethane	-	24	ND (0.005)	ND (0.005)	-	-	ND (0.005)	ND (0.005)	ND (0.005)	ND (0.005)	ND (0.0041)	ND (0.0046)	ND (0.0041)	ND (0.0037)	ND (0.0038)	ND (0.0041)	ND (0.0052)
Dichlorodifluoromethane (CFC-12)	-	87	ND (0.005)	ND (0.005)	-	-	ND (0.005)	ND (0.005)	ND (0.005)	ND (0.005)	ND (0.0041)	ND (0.0046)	ND (0.0041)	ND (0.0037)	ND (0.0038)	ND (0.0041)	ND (0.0052)
Diisopropyl ether (DIPE)	-	2200	ND (0.005)	ND (0.005)	-	-	ND (0.005)	ND (0.005)	ND (0.005)	ND (0.005)	ND (0.0041)	ND (0.0046)	ND (0.0041)	ND (0.0037)	ND (0.0038)	ND (0.0041)	ND (0.0052)
Ethyl acetate	-	620	ND (0.05)	ND (0.05)	-	-	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.041)	ND (0.046)	ND (0.041)	ND (0.037)	ND (0.038)	ND (0.041)	ND (0.052)
Ethyl Ether	2300	-	ND (0.05)	ND (0.05)	-	-	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.041)	ND (0.046)	ND (0.041)	ND (0.037)	ND (0.038)	ND (0.041)	ND (0.052)
Ethylbenzene	-	5.8	ND (0.005)	ND (0.005)	-	-	ND (0.005)	ND (0.005)	ND (0.005)	ND (0.005)	ND (0.0041)	ND (0.0046)	ND (0.0041)	ND (0.0037)	ND (0.0038)	ND (0.0041)	ND (0.0052)
Hexachlorobutadiene	1.2	-	ND (0.005)	ND (0.005)	-	-	ND (0.005)	ND (0.005)	ND (0.005)	ND (0.005)	ND (0.0041)	ND (0.0046)	ND (0.0041)	ND (0.0037)	ND (0.0038)	ND (0.0041)	ND (0.0052)
Isopropylbenzene (Cumene)	-	1900	ND (0.005)	ND (0.005)	-	-	ND (0.005)	ND (0.005)	ND (0.005)	ND (0.005)	ND (0.0041)	ND (0.0046)	ND (0.0041)	ND (0.0037)	ND (0.0038)	ND (0.0041)	ND (0.0052)
m,p-Xylenes	-	-	ND (0.01)	ND (0.01)	-	-	ND (0.01)	ND (0.01)	ND (0.01)	ND (0.01)	ND (0.0083)	ND (0.0092)	ND (0.0082)	ND (0.0075)	ND (0.0075)	ND (0.0082)	ND (0.01)

Table 1. Summary of Soil Analytical Results
Northeast Corner of South Central Avenue and Victoria Street
Carson, California

Location	DTSC	Regional	HA-22	HA-22	HA-22	HA-22	HA-23	HA-23	HA-24	HA-24	HA-25	HA-25	HA-26	HA-26	HA-27	HA-27	HA-28
Sample Date	HHRA	Screening	9/1/17	9/1/17	9/1/17	9/1/17	9/1/17	9/1/17	9/1/17	9/1/17	8/31/17	8/31/17	9/5/17	9/5/17	9/5/17	9/5/17	9/5/17
Sample Depth (bgs)	Note 3	Levels	0.5 (ft)	2 (ft)	4 (ft)	6 (ft)	0.5 (ft)	2 (ft)	0.5 (ft)	2 (ft)	0.5 (ft)	2 (ft)	0.5 (ft)	2 (ft)	0.5 (ft)	2 (ft)	0.5 (ft)
Sample Name	Residential	Residential	HA-22-.5	HA-22-2	HA-22-4	HA-22-6	HA-23-.5	HA-23-2	HA-24-.05	HA-24-2	HA-25-.5	HA-25-2	HA-26-.5	HA-26-2	HA-27-.5	HA-27-2	HA-28-.5
Volatile Organic Compounds (mg/kg)																	
Methyl Tert Butyl Ether	-	47	ND (0.005)	ND (0.005)	-	-	ND (0.005)	ND (0.005)	ND (0.005)	ND (0.005)	ND (0.0041)	ND (0.0046)	ND (0.0041)	ND (0.0037)	ND (0.0038)	ND (0.0041)	ND (0.0052)
Methylene chloride	1.9	-	ND (0.005)	ND (0.005)	-	-	ND (0.005)	ND (0.005)	ND (0.005)	ND (0.005)	ND (0.0041)	ND (0.0046)	ND (0.0041)	ND (0.0037)	ND (0.0038)	ND (0.0041)	ND (0.0052)
Naphthalene	-	3.8	ND (0.005)	ND (0.005)	-	-	ND (0.005)	ND (0.005)	ND (0.005)	ND (0.005)	ND (0.0041)	ND (0.0046)	ND (0.0041)	ND (0.0037)	ND (0.0038)	ND (0.0041)	ND (0.0052)
n-Butylbenzene	1200	-	ND (0.005)	ND (0.005)	-	-	ND (0.005)	ND (0.005)	ND (0.005)	ND (0.005)	ND (0.0041)	ND (0.0046)	ND (0.0041)	ND (0.0037)	ND (0.0038)	ND (0.0041)	ND (0.0052)
n-Propylbenzene	-	3800	ND (0.005)	ND (0.005)	-	-	ND (0.005)	ND (0.005)	ND (0.005)	ND (0.005)	ND (0.0041)	ND (0.0046)	ND (0.0041)	ND (0.0037)	ND (0.0038)	ND (0.0041)	ND (0.0052)
o-Xylene	-	650	ND (0.005)	ND (0.005)	-	-	ND (0.005)	ND (0.005)	ND (0.005)	ND (0.005)	ND (0.0041)	ND (0.0046)	ND (0.0041)	ND (0.0037)	ND (0.0038)	ND (0.0041)	ND (0.0052)
Styrene	-	6000	ND (0.005)	ND (0.005)	-	-	ND (0.005)	ND (0.005)	ND (0.005)	ND (0.005)	ND (0.0041)	ND (0.0046)	ND (0.0041)	ND (0.0037)	ND (0.0038)	ND (0.0041)	ND (0.0052)
Tert-Amyl Methyl Ether (TAME)	-	-	ND (0.005)	ND (0.005)	-	-	ND (0.005)	ND (0.005)	ND (0.005)	ND (0.005)	ND (0.0041)	ND (0.0046)	ND (0.0041)	ND (0.0037)	ND (0.0038)	ND (0.0041)	ND (0.0052)
Tert-Butyl Alcohol (tert-Butanol)	-	-	ND (0.1)	ND (0.1)	-	-	ND (0.1)	ND (0.1)	ND (0.1)	ND (0.1)	ND (0.083)	ND (0.092)	ND (0.082)	ND (0.075)	ND (0.075)	ND (0.082)	ND (0.1)
Tert-Butyl Ethyl Ether (ETBE)	-	-	ND (0.005)	ND (0.005)	-	-	ND (0.005)	ND (0.005)	ND (0.005)	ND (0.005)	ND (0.0041)	ND (0.0046)	ND (0.0041)	ND (0.0037)	ND (0.0038)	ND (0.0041)	ND (0.0052)
tert-Butylbenzene	2200	-	ND (0.005)	ND (0.005)	-	-	ND (0.005)	ND (0.005)	ND (0.005)	ND (0.005)	ND (0.0041)	ND (0.0046)	ND (0.0041)	ND (0.0037)	ND (0.0038)	ND (0.0041)	ND (0.0052)
Tetrachloroethene	0.6	-	ND (0.005)	ND (0.005)	-	-	ND (0.005)	ND (0.005)	ND (0.005)	ND (0.005)	ND (0.0041)	ND (0.0046)	ND (0.0041)	ND (0.0037)	ND (0.0038)	ND (0.0041)	ND (0.0052)
Toluene	1100	-	ND (0.005)	ND (0.005)	-	-	ND (0.005)	ND (0.005)	ND (0.005)	ND (0.005)	ND (0.0041)	ND (0.0046)	ND (0.0041)	ND (0.0037)	ND (0.0038)	ND (0.0041)	ND (0.0052)
trans-1,2-Dichloroethene	130	-	ND (0.005)	ND (0.005)	-	-	ND (0.005)	ND (0.005)	ND (0.005)	ND (0.005)	ND (0.0041)	ND (0.0046)	ND (0.0041)	ND (0.0037)	ND (0.0038)	ND (0.0041)	ND (0.0052)
trans-1,3-Dichloropropene	-	-	ND (0.005)	ND (0.005)	-	-	ND (0.005)	ND (0.005)	ND (0.005)	ND (0.005)	ND (0.0041)	ND (0.0046)	ND (0.0041)	ND (0.0037)	ND (0.0038)	ND (0.0041)	ND (0.0052)
Trichloroethene	-	0.94	ND (0.005)	ND (0.005)	-	-	ND (0.005)	ND (0.005)	ND (0.005)	ND (0.005)	ND (0.0041)	ND (0.0046)	ND (0.0041)	ND (0.0037)	ND (0.0038)	ND (0.0041)	ND (0.0052)
Trichlorofluoromethane (CFC-11)	1200	-	ND (0.005)	ND (0.005)	-	-	ND (0.005)	ND (0.005)	ND (0.005)	ND (0.005)	ND (0.0041)	ND (0.0046)	ND (0.0041)	ND (0.0037)	ND (0.0038)	ND (0.0041)	ND (0.0052)
Trifluorotrichloroethane (Freon 113)	-	6700	ND (0.005)	ND (0.005)	-	-	ND (0.005)	ND (0.005)	ND (0.005)	ND (0.005)	ND (0.0041)	ND (0.0046)	ND (0.0041)	ND (0.0037)	ND (0.0038)	ND (0.0041)	ND (0.0052)
Vinyl acetate	-	910	ND (0.05)	ND (0.05)	-	-	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.041)	ND (0.046)	ND (0.041)	ND (0.037)	ND (0.038)	ND (0.041)	ND (0.052)
Vinyl chloride	0.0088	-	ND (0.005)	ND (0.005)	-	-	ND (0.005)	ND (0.005)	ND (0.005)	ND (0.005)	ND (0.0041)	ND (0.0046)	ND (0.0041)	ND (0.0037)	ND (0.0038)	ND (0.0041)	ND (0.0052)

Table 1. Summary of Soil Analytical Results
Northeast Corner of South Central Avenue and Victoria Street
Carson, California

Location	DTSC	Regional	HA-28	HA-29	HA-29	HA-30	HA-30	HA-31	HA-31	HA-32	HA-32	HA-33	HA-33	HA-34	HA-34	HA-35	HA-35	HA-36
Sample Date	HHRA	Screening	9/5/17	9/5/17	9/5/17	8/31/17	8/31/17	9/5/17	9/5/17	9/5/17	9/5/17	9/1/17	9/1/17	9/1/17	9/1/17	9/5/17	9/5/17	9/6/17
Sample Depth (bgs)	Note 3	Levels	2 (ft)	0.5 (ft)	2 (ft)	0.5 (ft)	2 (ft)	0.5 (ft)	2 (ft)	0.5 (ft)	2 (ft)	0.5 (ft)	2 (ft)	0.5 (ft)	2 (ft)	0.5 (ft)	2 (ft)	0.5 (ft)
Sample Name	Residential	Residential	HA-28-2	HA-29-.5	HA-29-2	HA-30-.5	HA-30-2	HA-31-.5	HA-31-2	HA-32-.5	HA-32-2	HA-33-.5	HA-33-2	HA-34-.5	HA-34-2	HA-35-.5	HA-35-2	HA-36-0.5
Inorganic Compounds (mg/kg)																		
Antimony	-	31	ND (2)	ND (2)	ND (2)	ND (2)	ND (2)	ND (2)	ND (2)	ND (2)	ND (2)	ND (2)	ND (2)	ND (2)	ND (2)	ND (2)	ND (2)	ND (2)
Arsenic	12	-	**7**	**7.7**	**7**	**8**	**6.5**	**2.1**	**5.6**	**4.8**	**5.4**	**9.8**	**5.1**	**5.3**	**3.2**	**8**	**8.4**	**5.4**
Barium	-	15000	**210**	**240**	**130**	**230**	**230**	**160**	**140**	**130**	**140**	**310**	**200**	**160**	**170**	**240**	**310**	**190**
Beryllium	15	-	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)
Cadmium	5.2	-	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)
Chromium	-	-	**25**	**23**	**24**	**29**	**27**	**25**	**22**	**24**	**23**	**22**	**23**	**26**	**20**	**33**	**22**	**21**
Cobalt	-	23	**12**	**11**	**11**	**12**	**12**	**10**	**11**	**12**	**11**	**11**	**10**	**19**	**11**	**9.4**	**11**	**9.7**
Copper	-	3100	**20**	**22**	**21**	**22**	**20**	**18**	**20**	**19**	**18**	**22**	**21**	**24**	**19**	**200**	**25**	**37**
Lead	80	-	**6.2**	**11**	**4.3**	**4.8**	**5.4**	**17**	**4.9**	**5**	**4.5**	**10**	**5.7**	**6**	**3.7**	**85**	**28**	**36**
Mercury	1	-	ND (0.1)	**0.16**	ND (0.1)	ND (0.1)	ND (0.1)	ND (0.1)	ND (0.1)	ND (0.1)	ND (0.1)	**0.23**	**0.12**	ND (0.1)	ND (0.1)	**0.17**	**0.17**	**0.37**
Molybdenum	-	390	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)
Nickel	490	-	**20**	**18**	**20**	**23**	**21**	**15**	**19**	**19**	**18**	**18**	**20**	**24**	**17**	**24**	**19**	**17**
Selenium	-	390	**1**	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	**2**	**1**	**1**	ND (1)	**1.6**	**1.2**	ND (1)	ND (1)	ND (1)
Silver	390	-	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)
Thallium	-	0.78	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)
Vanadium	390	-	**39**	**38**	**39**	**46**	**45**	**39**	**38**	**38**	**36**	**37**	**39**	**45**	**35**	**34**	**39**	**35**
Zinc	-	23000	**42**	**51**	**46**	**47**	**46**	**59**	**39**	**40**	**36**	**60**	**43**	**47**	**36**	**360**	**140**	**110**
Total Petroleum Hydrocarbons (mg/kg)																		
Total Petroleum Hydrocarbons (C4-C10)	-	-	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)
Total Petroleum Hydrocarbons (C5-C8)	-	-	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)
Total Petroleum Hydrocarbons (C6-C8)	-	-	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)
Total Petroleum Hydrocarbons (C9-C16)	-	-	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	**12**	ND (10)	**41**
Total Petroleum Hydrocarbons (C9-C18)	-	-	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	**52**	**11**	**69**
Total Petroleum Hydrocarbons (C10-C40)	-	-	ND (10)	**230**	ND (10)	ND (10)	ND (10)	**370**	ND (10)	ND (10)	ND (10)	**560**	**18**	ND (10)	ND (10)	**2000**	**850**	**1600**
Total Petroleum Hydrocarbons (C17-C32)	-	-	ND (10)	**120**	ND (10)	ND (10)	ND (10)	**160**	ND (10)	ND (10)	ND (10)	**300**	**12**	ND (10)	ND (10)	**1200**	**400**	**820**
Total Petroleum Hydrocarbons (C19-C32)	-	-	ND (10)	**120**	ND (10)	ND (10)	ND (10)	**160**	ND (10)	ND (10)	ND (10)	**290**	**12**	ND (10)	ND (10)	**1200**	**390**	**790**
Volatile Organic Compounds (mg/kg)																		
1,1,1,2-Tetrachloroethane	2	-	ND (0.0042)	ND (0.0044)	ND (0.004)	ND (0.0044)	ND (0.0039)	ND (0.004)	ND (0.0039)	ND (0.0039)	ND (0.0041)	ND (0.004)	ND (0.0037)	ND (0.005)	ND (0.005)	ND (0.0044)	ND (0.0033)	ND (0.0044)
1,1,1-Trichloroethane	1700	-	ND (0.0042)	ND (0.0044)	ND (0.004)	ND (0.0044)	ND (0.0039)	ND (0.004)	ND (0.0039)	ND (0.0039)	ND (0.0041)	ND (0.004)	ND (0.0037)	ND (0.005)	ND (0.005)	ND (0.0044)	ND (0.0033)	ND (0.0044)
1,1,2,2-Tetrachloroethane	0.61	-	ND (0.0042)	ND (0.0044)	ND (0.004)	ND (0.0044)	ND (0.0039)	ND (0.004)	ND (0.0039)	ND (0.0039)	ND (0.0041)	ND (0.004)	ND (0.0037)	ND (0.005)	ND (0.005)	ND (0.0044)	ND (0.0033)	ND (0.0044)
1,1,2-Trichloroethane	-	1.1	ND (0.0042)	ND (0.0044)	ND (0.004)	ND (0.0044)	ND (0.0039)	ND (0.004)	ND (0.0039)	ND (0.0039)	ND (0.0041)	ND (0.004)	ND (0.0037)	ND (0.005)	ND (0.005)	ND (0.0044)	ND (0.0033)	ND (0.0044)
1,1-Dichloroethane	3.6	-	ND (0.0042)	ND (0.0044)	ND (0.004)	ND (0.0044)	ND (0.0039)	ND (0.004)	ND (0.0039)	ND (0.0039)	ND (0.0041)	ND (0.004)	ND (0.0037)	ND (0.005)	ND (0.005)	ND (0.0044)	ND (0.0033)	ND (0.0044)
1,1-Dichloroethene	-	230	ND (0.0042)	ND (0.0044)	ND (0.004)	ND (0.0044)	ND (0.0039)	ND (0.004)	ND (0.0039)	ND (0.0039)	ND (0.0041)	ND (0.004)	ND (0.0037)	ND (0.005)	ND (0.005)	ND (0.0044)	ND (0.0033)	ND (0.0044)
1,1-Dichloropropene	-	-	ND (0.0042)	ND (0.0044)	ND (0.004)	ND (0.0044)	ND (0.0039)	ND (0.004)	ND (0.0039)	ND (0.0039)	ND (0.0041)	ND (0.004)	ND (0.0037)	ND (0.005)	ND (0.005)	ND (0.0044)	ND (0.0033)	ND (0.0044)
1,2,3-Trichlorobenzene	63	-	ND (0.0042)	ND (0.0044)	ND (0.004)	ND (0.0044)	ND (0.0039)	ND (0.004)	ND (0.0039)	ND (0.0039)	ND (0.0041)	ND (0.004)	ND (0.0037)	ND (0.005)	ND (0.005)	ND (0.0044)	ND (0.0033)	ND (0.0044)
1,2,3-Trichloropropane	0.0015	-	ND (0.0042)	ND (0.0044)	ND (0.004)	ND (0.0044)	ND (0.0039)	ND (0.004)	ND (0.0039)	ND (0.0039)	ND (0.0041)	ND (0.004)	ND (0.0037)	ND (0.005)	ND (0.005)	ND (0.0044)	ND (0.0033)	ND (0.0044)
1,2,4-Trichlorobenzene	-	24	ND (0.0042)	ND (0.0044)	ND (0.004)	ND (0.0044)	ND (0.0039)	ND (0.004)	ND (0.0039)	ND (0.0039)	ND (0.0041)	ND (0.004)	ND (0.0037)	ND (0.005)	ND (0.005)	ND (0.0044)	ND (0.0033)	ND (0.0044)
1,2,4-Trimethylbenzene	-	300	ND (0.0042)	ND (0.0044)	ND (0.004)	ND (0.0044)	ND (0.0039)	ND (0.004)	ND (0.0039)	ND (0.0039)	ND (0.0041)	ND (0.004)	ND (0.0037)	ND (0.005)	ND (0.005)	ND (0.0044)	ND (0.0033)	ND (0.0044)

Table 1. Summary of Soil Analytical Results
Northeast Corner of South Central Avenue and Victoria Street
Carson, California

Location	DTSC	Regional	HA-28	HA-29	HA-29	HA-30	HA-30	HA-31	HA-31	HA-32	HA-32	HA-33	HA-33	HA-34	HA-34	HA-35	HA-35	HA-36
Sample Date	HHRA	Screening	9/5/17	9/5/17	9/5/17	8/31/17	8/31/17	9/5/17	9/5/17	9/5/17	9/5/17	9/1/17	9/1/17	9/1/17	9/1/17	9/5/17	9/5/17	9/6/17
Sample Depth (bgs)	Note 3	Levels	2 (ft)	0.5 (ft)	2 (ft)	0.5 (ft)	2 (ft)	0.5 (ft)	2 (ft)	0.5 (ft)	2 (ft)	0.5 (ft)	2 (ft)	0.5 (ft)	2 (ft)	0.5 (ft)	2 (ft)	0.5 (ft)
Sample Name	Residential	Residential	HA-28-2	HA-29-.5	HA-29-2	HA-30-.5	HA-30-2	HA-31-.5	HA-31-2	HA-32-.5	HA-32-2	HA-33-.5	HA-33-2	HA-34-.5	HA-34-2	HA-35-.5	HA-35-2	HA-36-0.5
Volatile Organic Compounds (mg/kg)																		
1,2-Dibromo-3-chloropropane (DBCP)	-	0.0053	ND (0.0083)	ND (0.0088)	ND (0.0081)	ND (0.0087)	ND (0.0079)	ND (0.008)	ND (0.0079)	ND (0.0078)	ND (0.0081)	ND (0.0081)	ND (0.0074)	ND (0.01)	ND (0.01)	ND (0.0089)	ND (0.0066)	ND (0.0087)
1,2-Dibromoethane (Ethylene Dibromide)	0.037	-	ND (0.0042)	ND (0.0044)	ND (0.004)	ND (0.0044)	ND (0.0039)	ND (0.004)	ND (0.0039)	ND (0.0039)	ND (0.0041)	ND (0.004)	ND (0.0037)	ND (0.005)	ND (0.005)	ND (0.0044)	ND (0.0033)	ND (0.0044)
1,2-Dichlorobenzene	-	1800	ND (0.0042)	ND (0.0044)	ND (0.004)	ND (0.0044)	ND (0.0039)	ND (0.004)	ND (0.0039)	ND (0.0039)	ND (0.0041)	ND (0.004)	ND (0.0037)	ND (0.005)	ND (0.005)	ND (0.0044)	ND (0.0033)	ND (0.0044)
1,2-Dichloroethane	-	0.46	ND (0.0042)	ND (0.0044)	ND (0.004)	ND (0.0044)	ND (0.0039)	ND (0.004)	ND (0.0039)	ND (0.0039)	ND (0.0041)	ND (0.004)	ND (0.0037)	ND (0.005)	ND (0.005)	ND (0.0044)	ND (0.0033)	ND (0.0044)
1,2-Dichloropropane	-	0.28	ND (0.0042)	ND (0.0044)	ND (0.004)	ND (0.0044)	ND (0.0039)	ND (0.004)	ND (0.0039)	ND (0.0039)	ND (0.0041)	ND (0.004)	ND (0.0037)	ND (0.005)	ND (0.005)	ND (0.0044)	ND (0.0033)	ND (0.0044)
1,3,5-Trimethylbenzene	210	-	ND (0.0042)	ND (0.0044)	ND (0.004)	ND (0.0044)	ND (0.0039)	ND (0.004)	ND (0.0039)	ND (0.0039)	ND (0.0041)	ND (0.004)	ND (0.0037)	ND (0.005)	ND (0.005)	ND (0.0044)	ND (0.0033)	ND (0.0044)
1,3-Dichlorobenzene	240	-	ND (0.0042)	ND (0.0044)	ND (0.004)	ND (0.0044)	ND (0.0039)	ND (0.004)	ND (0.0039)	ND (0.0039)	ND (0.0041)	ND (0.004)	ND (0.0037)	ND (0.005)	ND (0.005)	ND (0.0044)	ND (0.0033)	ND (0.0044)
1,3-Dichloropropane	420	-	ND (0.0042)	ND (0.0044)	ND (0.004)	ND (0.0044)	ND (0.0039)	ND (0.004)	ND (0.0039)	ND (0.0039)	ND (0.0041)	ND (0.004)	ND (0.0037)	ND (0.005)	ND (0.005)	ND (0.0044)	ND (0.0033)	ND (0.0044)
1,4-Dichlorobenzene	-	2.6	ND (0.0042)	ND (0.0044)	ND (0.004)	ND (0.0044)	ND (0.0039)	ND (0.004)	ND (0.0039)	ND (0.0039)	ND (0.0041)	ND (0.004)	ND (0.0037)	ND (0.005)	ND (0.005)	ND (0.0044)	ND (0.0033)	ND (0.0044)
2,2-Dichloropropane	-	-	ND (0.0042)	ND (0.0044)	ND (0.004)	ND (0.0044)	ND (0.0039)	ND (0.004)	ND (0.0039)	ND (0.0039)	ND (0.0041)	ND (0.004)	ND (0.0037)	ND (0.005)	ND (0.005)	ND (0.0044)	ND (0.0033)	ND (0.0044)
2-Chlorotoluene	480	-	ND (0.0042)	ND (0.0044)	ND (0.004)	ND (0.0044)	ND (0.0039)	ND (0.004)	ND (0.0039)	ND (0.0039)	ND (0.0041)	ND (0.004)	ND (0.0037)	ND (0.005)	ND (0.005)	ND (0.0044)	ND (0.0033)	ND (0.0044)
2-Phenylbutane (sec-Butylbenzene)	2200	-	ND (0.0042)	ND (0.0044)	ND (0.004)	ND (0.0044)	ND (0.0039)	ND (0.004)	ND (0.0039)	ND (0.0039)	ND (0.0041)	ND (0.004)	ND (0.0037)	ND (0.005)	ND (0.005)	ND (0.0044)	ND (0.0033)	ND (0.0044)
4-Chlorotoluene	440	-	ND (0.0042)	ND (0.0044)	ND (0.004)	ND (0.0044)	ND (0.0039)	ND (0.004)	ND (0.0039)	ND (0.0039)	ND (0.0041)	ND (0.004)	ND (0.0037)	ND (0.005)	ND (0.005)	ND (0.0044)	ND (0.0033)	ND (0.0044)
Benzene	0.33	-	ND (0.0042)	ND (0.0044)	ND (0.004)	ND (0.0044)	ND (0.0039)	ND (0.004)	ND (0.0039)	ND (0.0039)	ND (0.0041)	ND (0.004)	ND (0.0037)	ND (0.005)	ND (0.005)	ND (0.0044)	ND (0.0033)	ND (0.0044)
Bromobenzene	-	290	ND (0.0042)	ND (0.0044)	ND (0.004)	ND (0.0044)	ND (0.0039)	ND (0.004)	ND (0.0039)	ND (0.0039)	ND (0.0041)	ND (0.004)	ND (0.0037)	ND (0.005)	ND (0.005)	ND (0.0044)	ND (0.0033)	ND (0.0044)
Bromodichloromethane	0.3	-	ND (0.0042)	ND (0.0044)	ND (0.004)	ND (0.0044)	ND (0.0039)	ND (0.004)	ND (0.0039)	ND (0.0039)	ND (0.0041)	ND (0.004)	ND (0.0037)	ND (0.005)	ND (0.005)	ND (0.0044)	ND (0.0033)	ND (0.0044)
Bromoform	20	-	ND (0.0042)	ND (0.0044)	ND (0.004)	ND (0.0044)	ND (0.0039)	ND (0.004)	ND (0.0039)	ND (0.0039)	ND (0.0041)	ND (0.004)	ND (0.0037)	ND (0.005)	ND (0.005)	ND (0.0044)	ND (0.0033)	ND (0.0044)
Bromomethane (Methyl Bromide)	-	6.8	ND (0.0042)	ND (0.0044)	ND (0.004)	ND (0.0044)	ND (0.0039)	ND (0.004)	ND (0.0039)	ND (0.0039)	ND (0.0041)	ND (0.004)	ND (0.0037)	ND (0.005)	ND (0.005)	ND (0.0044)	ND (0.0033)	ND (0.0044)
Carbon disulfide	-	770	ND (0.0042)	ND (0.0044)	ND (0.004)	ND (0.0044)	ND (0.0039)	ND (0.004)	ND (0.0039)	ND (0.0039)	ND (0.0041)	ND (0.004)	ND (0.0037)	ND (0.005)	ND (0.005)	ND (0.0044)	ND (0.0033)	ND (0.0044)
Carbon tetrachloride	0.099	-	ND (0.0042)	ND (0.0044)	ND (0.004)	ND (0.0044)	ND (0.0039)	ND (0.004)	ND (0.0039)	ND (0.0039)	ND (0.0041)	ND (0.004)	ND (0.0037)	ND (0.005)	ND (0.005)	ND (0.0044)	ND (0.0033)	ND (0.0044)
Chlorobenzene	-	280	ND (0.0042)	ND (0.0044)	ND (0.004)	ND (0.0044)	ND (0.0039)	ND (0.004)	ND (0.0039)	ND (0.0039)	ND (0.0041)	ND (0.004)	ND (0.0037)	ND (0.005)	ND (0.005)	ND (0.0044)	ND (0.0033)	ND (0.0044)
Chlorobromomethane	-	150	ND (0.0042)	ND (0.0044)	ND (0.004)	ND (0.0044)	ND (0.0039)	ND (0.004)	ND (0.0039)	ND (0.0039)	ND (0.0041)	ND (0.004)	ND (0.0037)	ND (0.005)	ND (0.005)	ND (0.0044)	ND (0.0033)	ND (0.0044)
Chloroethane	3.1	-	ND (0.0042)	ND (0.0044)	ND (0.004)	ND (0.0044)	ND (0.0039)	ND (0.004)	ND (0.0039)	ND (0.0039)	ND (0.0041)	ND (0.004)	ND (0.0037)	ND (0.005)	ND (0.005)	ND (0.0044)	ND (0.0033)	ND (0.0044)
Chloroform (Trichloromethane)	-	0.32	ND (0.0042)	ND (0.0044)	ND (0.004)	ND (0.0044)	ND (0.0039)	ND (0.004)	ND (0.0039)	ND (0.0039)	ND (0.0041)	ND (0.004)	ND (0.0037)	ND (0.005)	ND (0.005)	ND (0.0044)	ND (0.0033)	ND (0.0044)
Chloromethane (Methyl Chloride)	-	110	ND (0.0042)	ND (0.0044)	ND (0.004)	ND (0.0044)	ND (0.0039)	ND (0.004)	ND (0.0039)	ND (0.0039)	ND (0.0041)	ND (0.004)	ND (0.0037)	ND (0.005)	ND (0.005)	ND (0.0044)	ND (0.0033)	ND (0.0044)
cis-1,2-Dichloroethene	19	-	ND (0.0042)	ND (0.0044)	ND (0.004)	ND (0.0044)	ND (0.0039)	ND (0.004)	ND (0.0039)	ND (0.0039)	ND (0.0041)	ND (0.004)	ND (0.0037)	ND (0.005)	ND (0.005)	ND (0.0044)	ND (0.0033)	ND (0.0044)
cis-1,3-Dichloropropene	-	-	ND (0.0042)	ND (0.0044)	ND (0.004)	ND (0.0044)	ND (0.0039)	ND (0.004)	ND (0.0039)	ND (0.0039)	ND (0.0041)	ND (0.004)	ND (0.0037)	ND (0.005)	ND (0.005)	ND (0.0044)	ND (0.0033)	ND (0.0044)
Cymene (p-Isopropyltoluene)	-	-	ND (0.0042)	ND (0.0044)	ND (0.004)	ND (0.0044)	ND (0.0039)	ND (0.004)	ND (0.0039)	ND (0.0039)	ND (0.0041)	ND (0.004)	ND (0.0037)	ND (0.005)	ND (0.005)	ND (0.0044)	ND (0.0033)	ND (0.0044)
Dibromochloromethane	0.95	-	ND (0.0042)	ND (0.0044)	ND (0.004)	ND (0.0044)	ND (0.0039)	ND (0.004)	ND (0.0039)	ND (0.0039)	ND (0.0041)	ND (0.004)	ND (0.0037)	ND (0.005)	ND (0.005)	ND (0.0044)	ND (0.0033)	ND (0.0044)
Dibromomethane	-	24	ND (0.0042)	ND (0.0044)	ND (0.004)	ND (0.0044)	ND (0.0039)	ND (0.004)	ND (0.0039)	ND (0.0039)	ND (0.0041)	ND (0.004)	ND (0.0037)	ND (0.005)	ND (0.005)	ND (0.0044)	ND (0.0033)	ND (0.0044)
Dichlorodifluoromethane (CFC-12)	-	87	ND (0.0042)	ND (0.0044)	ND (0.004)	ND (0.0044)	ND (0.0039)	ND (0.004)	ND (0.0039)	ND (0.0039)	ND (0.0041)	ND (0.004)	ND (0.0037)	ND (0.005)	ND (0.005)	ND (0.0044)	ND (0.0033)	ND (0.0044)
Diisopropyl ether (DIPE)	-	2200	ND (0.0042)	ND (0.0044)	ND (0.004)	ND (0.0044)	ND (0.0039)	ND (0.004)	ND (0.0039)	ND (0.0039)	ND (0.0041)	ND (0.004)	ND (0.0037)	ND (0.005)	ND (0.005)	ND (0.0044)	ND (0.0033)	ND (0.0044)
Ethyl acetate	-	620	ND (0.042)	ND (0.044)	ND (0.04)	ND (0.044)	ND (0.039)	ND (0.04)	ND (0.039)	ND (0.039)	ND (0.041)	ND (0.04)	ND (0.037)	ND (0.05)	ND (0.05)	ND (0.044)	ND (0.033)	ND (0.044)
Ethyl Ether	2300	-	ND (0.042)	ND (0.044)	ND (0.04)	ND (0.044)	ND (0.039)	ND (0.04)	ND (0.039)	ND (0.039)	ND (0.041)	ND (0.04)	ND (0.037)	ND (0.05)	ND (0.05)	ND (0.044)	ND (0.033)	ND (0.044)
Ethylbenzene	-	5.8	ND (0.0042)	ND (0.0044)	ND (0.004)	ND (0.0044)	ND (0.0039)	ND (0.004)	ND (0.0039)	ND (0.0039)	ND (0.0041)	ND (0.004)	ND (0.0037)	ND (0.005)	ND (0.005)	ND (0.0044)	ND (0.0033)	ND (0.0044)
Hexachlorobutadiene	1.2	-	ND (0.0042)	ND (0.0044)	ND (0.004)	ND (0.0044)	ND (0.0039)	ND (0.004)	ND (0.0039)	ND (0.0039)	ND (0.0041)	ND (0.004)	ND (0.0037)	ND (0.005)	ND (0.005)	ND (0.0044)	ND (0.0033)	ND (0.0044)
Isopropylbenzene (Cumene)	-	1900	ND (0.0042)	ND (0.0044)	ND (0.004)	ND (0.0044)	ND (0.0039)	ND (0.004)	ND (0.0039)	ND (0.0039)	ND (0.0041)	ND (0.004)	ND (0.0037)	ND (0.005)	ND (0.005)	ND (0.0044)	ND (0.0033)	ND (0.0044)
m,p-Xylenes	-	-	ND (0.0083)	ND (0.0088)	ND (0.0081)	ND (0.0087)	ND (0.0079)	ND (0.008)	ND (0.0079)	ND (0.0078)	ND (0.0081)	ND (0.0081)	ND (0.0074)	ND (0.01)	ND (0.01)	ND (0.0089)	ND (0.0066)	ND (0.0087)

Table 1. Summary of Soil Analytical Results
Northeast Corner of South Central Avenue and Victoria Street
Carson, California

Location	DTSC	Regional	HA-28	HA-29	HA-29	HA-30	HA-30	HA-31	HA-31	HA-32	HA-32	HA-33	HA-33	HA-34	HA-34	HA-35	HA-35	HA-36
Sample Date	HHRA	Screening	9/5/17	9/5/17	9/5/17	8/31/17	8/31/17	9/5/17	9/5/17	9/5/17	9/5/17	9/1/17	9/1/17	9/1/17	9/1/17	9/5/17	9/5/17	9/6/17
Sample Depth (bgs)	Note 3	Levels	2 (ft)	0.5 (ft)	2 (ft)	0.5 (ft)	2 (ft)	0.5 (ft)	2 (ft)	0.5 (ft)	2 (ft)	0.5 (ft)	2 (ft)	0.5 (ft)	2 (ft)	0.5 (ft)	2 (ft)	0.5 (ft)
Sample Name	Residential	Residential	HA-28-2	HA-29-.5	HA-29-2	HA-30-.5	HA-30-2	HA-31-.5	HA-31-2	HA-32-.5	HA-32-2	HA-33-.5	HA-33-2	HA-34-.5	HA-34-2	HA-35-.5	HA-35-2	HA-36-0.5
Volatile Organic Compounds (mg/kg)																		
Methyl Tert Butyl Ether	-	47	ND (0.0042)	ND (0.0044)	ND (0.004)	ND (0.0044)	ND (0.0039)	ND (0.004)	ND (0.0039)	ND (0.0039)	ND (0.0041)	ND (0.004)	ND (0.0037)	ND (0.005)	ND (0.005)	ND (0.0044)	ND (0.0033)	ND (0.0044)
Methylene chloride	1.9	-	ND (0.0042)	ND (0.0044)	ND (0.004)	ND (0.0044)	ND (0.0039)	ND (0.004)	ND (0.0039)	ND (0.0039)	ND (0.0041)	ND (0.004)	ND (0.0037)	ND (0.005)	ND (0.005)	ND (0.0044)	ND (0.0033)	ND (0.0044)
Naphthalene	-	3.8	ND (0.0042)	ND (0.0044)	ND (0.004)	ND (0.0044)	ND (0.0039)	ND (0.004)	ND (0.0039)	ND (0.0039)	ND (0.0041)	ND (0.004)	ND (0.0037)	ND (0.005)	ND (0.005)	ND (0.0044)	ND (0.0033)	ND (0.0044)
n-Butylbenzene	1200	-	ND (0.0042)	ND (0.0044)	ND (0.004)	ND (0.0044)	ND (0.0039)	ND (0.004)	ND (0.0039)	ND (0.0039)	ND (0.0041)	ND (0.004)	ND (0.0037)	ND (0.005)	ND (0.005)	ND (0.0044)	ND (0.0033)	ND (0.0044)
n-Propylbenzene	-	3800	ND (0.0042)	ND (0.0044)	ND (0.004)	ND (0.0044)	ND (0.0039)	ND (0.004)	ND (0.0039)	ND (0.0039)	ND (0.0041)	ND (0.004)	ND (0.0037)	ND (0.005)	ND (0.005)	ND (0.0044)	ND (0.0033)	ND (0.0044)
o-Xylene	-	650	ND (0.0042)	ND (0.0044)	ND (0.004)	ND (0.0044)	ND (0.0039)	ND (0.004)	ND (0.0039)	ND (0.0039)	ND (0.0041)	ND (0.004)	ND (0.0037)	ND (0.005)	ND (0.005)	ND (0.0044)	ND (0.0033)	ND (0.0044)
Styrene	-	6000	ND (0.0042)	ND (0.0044)	ND (0.004)	ND (0.0044)	ND (0.0039)	ND (0.004)	ND (0.0039)	ND (0.0039)	ND (0.0041)	ND (0.004)	ND (0.0037)	ND (0.005)	ND (0.005)	ND (0.0044)	ND (0.0033)	ND (0.0044)
Tert-Amyl Methyl Ether (TAME)	-	-	ND (0.0042)	ND (0.0044)	ND (0.004)	ND (0.0044)	ND (0.0039)	ND (0.004)	ND (0.0039)	ND (0.0039)	ND (0.0041)	ND (0.004)	ND (0.0037)	ND (0.005)	ND (0.005)	ND (0.0044)	ND (0.0033)	ND (0.0044)
Tert-Butyl Alcohol (tert-Butanol)	-	-	ND (0.083)	ND (0.088)	ND (0.081)	ND (0.087)	ND (0.079)	ND (0.08)	ND (0.079)	ND (0.078)	ND (0.081)	ND (0.081)	ND (0.074)	ND (0.1)	ND (0.1)	ND (0.089)	ND (0.066)	ND (0.087)
Tert-Butyl Ethyl Ether (ETBE)	-	-	ND (0.0042)	ND (0.0044)	ND (0.004)	ND (0.0044)	ND (0.0039)	ND (0.004)	ND (0.0039)	ND (0.0039)	ND (0.0041)	ND (0.004)	ND (0.0037)	ND (0.005)	ND (0.005)	ND (0.0044)	ND (0.0033)	ND (0.0044)
tert-Butylbenzene	2200	-	ND (0.0042)	ND (0.0044)	ND (0.004)	ND (0.0044)	ND (0.0039)	ND (0.004)	ND (0.0039)	ND (0.0039)	ND (0.0041)	ND (0.004)	ND (0.0037)	ND (0.005)	ND (0.005)	ND (0.0044)	ND (0.0033)	ND (0.0044)
Tetrachloroethene	0.6	-	ND (0.0042)	ND (0.0044)	ND (0.004)	ND (0.0044)	ND (0.0039)	ND (0.004)	ND (0.0039)	ND (0.0039)	ND (0.0041)	ND (0.004)	ND (0.0037)	ND (0.005)	ND (0.005)	ND (0.0044)	ND (0.0033)	ND (0.0044)
Toluene	1100	-	ND (0.0042)	ND (0.0044)	ND (0.004)	ND (0.0044)	ND (0.0039)	ND (0.004)	ND (0.0039)	ND (0.0039)	ND (0.0041)	ND (0.004)	ND (0.0037)	ND (0.005)	ND (0.005)	ND (0.0044)	ND (0.0033)	ND (0.0044)
trans-1,2-Dichloroethene	130	-	ND (0.0042)	ND (0.0044)	ND (0.004)	ND (0.0044)	ND (0.0039)	ND (0.004)	ND (0.0039)	ND (0.0039)	ND (0.0041)	ND (0.004)	ND (0.0037)	ND (0.005)	ND (0.005)	ND (0.0044)	ND (0.0033)	ND (0.0044)
trans-1,3-Dichloropropene	-	-	ND (0.0042)	ND (0.0044)	ND (0.004)	ND (0.0044)	ND (0.0039)	ND (0.004)	ND (0.0039)	ND (0.0039)	ND (0.0041)	ND (0.004)	ND (0.0037)	ND (0.005)	ND (0.005)	ND (0.0044)	ND (0.0033)	ND (0.0044)
Trichloroethene	-	0.94	ND (0.0042)	ND (0.0044)	ND (0.004)	ND (0.0044)	ND (0.0039)	ND (0.004)	ND (0.0039)	ND (0.0039)	ND (0.0041)	ND (0.004)	ND (0.0037)	ND (0.005)	ND (0.005)	ND (0.0044)	ND (0.0033)	ND (0.0044)
Trichlorofluoromethane (CFC-11)	1200	-	ND (0.0042)	ND (0.0044)	ND (0.004)	ND (0.0044)	ND (0.0039)	ND (0.004)	ND (0.0039)	ND (0.0039)	ND (0.0041)	ND (0.004)	ND (0.0037)	ND (0.005)	ND (0.005)	ND (0.0044)	ND (0.0033)	ND (0.0044)
Trifluorotrichloroethane (Freon 113)	-	6700	ND (0.0042)	ND (0.0044)	ND (0.004)	ND (0.0044)	ND (0.0039)	ND (0.004)	ND (0.0039)	ND (0.0039)	ND (0.0041)	ND (0.004)	ND (0.0037)	ND (0.005)	ND (0.005)	ND (0.0044)	ND (0.0033)	ND (0.0044)
Vinyl acetate	-	910	ND (0.042)	ND (0.044)	ND (0.04)	ND (0.044)	ND (0.039)	ND (0.04)	ND (0.039)	ND (0.039)	ND (0.041)	ND (0.04)	ND (0.037)	ND (0.05)	ND (0.05)	ND (0.044)	ND (0.033)	ND (0.044)
Vinyl chloride	0.0088	-	ND (0.0042)	ND (0.0044)	ND (0.004)	ND (0.0044)	ND (0.0039)	ND (0.004)	ND (0.0039)	ND (0.0039)	ND (0.0041)	ND (0.004)	ND (0.0037)	ND (0.005)	ND (0.005)	ND (0.0044)	ND (0.0033)	ND (0.0044)

Table 1. Summary of Soil Analytical Results
Northeast Corner of South Central Avenue and Victoria Street
Carson, California

Location	DTSC	Regional	HA-36	HA-37	HA-37	HA-37	HA-37	HA-38	HA-38	HA-39	HA-39	HA-39	HA-39	HA-40	HA-40	HA-41	HA-41	HA-41	HA-41
Sample Date	HHRA	Screening	9/6/17	9/1/17	9/1/17	9/1/17	9/1/17	9/6/17	9/6/17	9/6/17	9/6/17	9/6/17	9/6/17	9/6/17	9/6/17	8/31/17	8/31/17	8/31/17	8/31/17
Sample Depth (bgs)	Note 3	Levels	2 (ft)	0.5 (ft)	2 (ft)	4 (ft)	6 (ft)	0.5 (ft)	2 (ft)	0.5 (ft)	2 (ft)	4 (ft)	6 (ft)	0.5 (ft)	2 (ft)	0.5 (ft)	2 (ft)	4 (ft)	6 (ft)
Sample Name	Residential	Residential	HA-36-2	HA-37-.5	HA-37-2	HA-37-4	HA-37-6	HA-38-.5	HA-38-2	HA-39-.5	HA-39-2	HA-39-4	HA-39-6	HA-40-.5	HA-40-2	HA-41-.5	HA-41-2	HA-41-4	HA-41-6
Inorganic Compounds (mg/kg)																			
Antimony	-	31	ND (2)	ND (2)	ND (2)	-	-	ND (2)	ND (4) D5	ND (2)	ND (2)	-	-	ND (2)	ND (2)	ND (2)	ND (2)	-	-
Arsenic	12	-	**2.4**	ND (1)	**9.5**	-	-	**8.3**	ND (2) D5	**17**	**3.3**	-	-	**16**	**4.6**	**6.4**	**15**	**6.4**	**3.3**
Barium	-	15000	**200**	**160**	**230**	-	-	**200**	**130 D5**	**220**	**160**	-	-	**230**	**170**	**160**	**420**	-	-
Beryllium	15	-	ND (1)	ND (1)	ND (1)	-	-	ND (1)	ND (2) D5	ND (1)	ND (1)	-	-	ND (1)	ND (1)	ND (1)	ND (1)	-	-
Cadmium	5.2	-	ND (1)	ND (1)	ND (1)	-	-	ND (1)	ND (2) D5	ND (1)	ND (1)	-	-	ND (1)	ND (1)	ND (1)	ND (1)	-	-
Chromium	-	-	**20**	**19**	**20**	-	-	**22**	**20 D5**	**19**	**16**	-	-	**21**	**18**	**25**	**22**	-	-
Cobalt	-	23	**11**	**11**	**9.8**	-	-	**11**	**11 D5**	**9.1**	**8.9**	-	-	**9.8**	**10**	**11**	**9.6**	-	-
Copper	-	3100	**18**	**19**	**19**	-	-	**21**	**17 D5**	**24**	**15**	-	-	**24**	**19**	**21**	**29**	-	-
Lead	80	-	**4.3**	**8.8**	**9.6**	-	-	**8.5**	**6.7 D5**	**13**	**9.3**	-	-	**14**	**11**	**6.7**	**18**	-	-
Mercury	1	-	ND (0.1)	ND (0.1)	**1.4**	ND (0.1)	ND (0.1)	**0.16**	ND (0.1)	**0.26**	**0.13**	-	-	**0.3**	**0.17**	ND (0.1)	**0.37**	-	-
Molybdenum	-	390	ND (1)	ND (1)	ND (1)	-	-	ND (1)	ND (2) D5	ND (1)	ND (1)	-	-	ND (1)	ND (1)	ND (1)	ND (1)	-	-
Nickel	490	-	**18**	**16**	**16**	-	-	**18**	**17 D5**	**17**	**14**	-	-	**18**	**17**	**20**	**18**	-	-
Selenium	-	390	ND (1)	ND (1)	ND (1)	-	-	ND (1)	ND (2) D5	ND (1)	ND (1)	-	-	ND (1)	ND (1)	ND (1)	ND (1)	-	-
Silver	390	-	ND (1)	ND (1)	ND (1)	-	-	ND (1)	ND (2) D5	ND (1)	ND (1)	-	-	ND (1)	ND (1)	ND (1)	ND (1)	-	-
Thallium	-	0.78	ND (1)	ND (1)	ND (1)	-	-	ND (1)	ND (2) D5	ND (1)	ND (1)	-	-	ND (1)	ND (1)	ND (1)	ND (1)	-	-
Vanadium	390	-	**34**	**40**	**36**	-	-	**39**	**42 D5**	**34**	**31**	-	-	**36**	**32**	**41**	**37**	-	-
Zinc	-	23000	**33**	**48**	**61**	-	-	**54**	**44 D5**	**72**	**41**	-	-	**73**	**52**	**51**	**150**	-	-
Total Petroleum Hydrocarbons (mg/kg)																			
Total Petroleum Hydrocarbons (C4-C10)	-	-	ND (1)	ND (1)	ND (1)	-	-	ND (1)	ND (1)	ND (1)	ND (1)	ND (1) H4	ND (1) H4	ND (1)	ND (1)	ND (1)	ND (1)	ND (1) H4	ND (1) H4
Total Petroleum Hydrocarbons (C5-C8)	-	-	ND (1)	ND (1)	ND (1)	-	-	ND (1)	ND (1)	ND (1)	ND (1)	ND (1) H4	ND (1) H4	ND (1)	ND (1)	ND (1)	ND (1)	ND (1) H4	ND (1) H4
Total Petroleum Hydrocarbons (C6-C8)	-	-	ND (1)	ND (1)	ND (1)	-	-	ND (1)	ND (1)	ND (1)	ND (1)	ND (1) H4	ND (1) H4	ND (1)	ND (1)	ND (1)	ND (1)	ND (1) H4	ND (1) H4
Total Petroleum Hydrocarbons (C9-C16)	-	-	**10**	ND (10)	ND (10)	-	-	**27**	ND (10)	ND (10)	**51**	ND (10) H1	ND (10) H1	**28**	**16**	ND (10)	ND (20)	ND (10) H1	ND (10) H1
Total Petroleum Hydrocarbons (C9-C18)	-	-	**12**	ND (10)	ND (10)	-	-	**44**	ND (10)	ND (10)	**75**	ND (10) H1	ND (10) H1	**42**	**29**	ND (10)	ND (20)	ND (10) H1	ND (10) H1
Total Petroleum Hydrocarbons (C10-C40)	-	-	**78**	ND (10)	**350**	-	-	**590**	**58**	**530**	**1500**	ND (10) H1	ND (10) H1	**830**	**800**	**710**	**2000**	ND (10) H1	ND (10) H1
Total Petroleum Hydrocarbons (C17-C32)	-	-	**51**	ND (10)	**160**	-	-	**350**	**36**	**260**	**720**	ND (10) H1	ND (10) H1	**450**	**400**	**260**	**930**	ND (10) H1	ND (10) H1
Total Petroleum Hydrocarbons (C19-C32)	-	-	**49**	ND (10)	**160**	-	-	**340**	**35**	**260**	**700**	ND (10) H1	ND (10) H1	**430**	**380**	**260**	**920**	ND (10) H1	ND (10) H1
Volatile Organic Compounds (mg/kg)																			
1,1,1,2-Tetrachloroethane	2	-	ND (0.0042)	ND (0.005)	ND (0.005)	-	-	ND (0.0041)	ND (0.0046)	ND (0.0039)	ND (0.004)	-	-	ND (0.0041)	ND (0.0046)	ND (0.0039)	ND (0.0043)	-	-
1,1,1-Trichloroethane	1700	-	ND (0.0042)	ND (0.005)	ND (0.005)	-	-	ND (0.0041)	ND (0.0046)	ND (0.0039)	ND (0.004)	-	-	ND (0.0041)	ND (0.0046)	ND (0.0039)	ND (0.0043)	-	-
1,1,2,2-Tetrachloroethane	0.61	-	ND (0.0042)	ND (0.005)	ND (0.005)	-	-	ND (0.0041)	ND (0.0046)	ND (0.0039)	ND (0.004)	-	-	ND (0.0041)	ND (0.0046)	ND (0.0039)	ND (0.0043)	-	-
1,1,2-Trichloroethane	-	1.1	ND (0.0042)	ND (0.005)	ND (0.005)	-	-	ND (0.0041)	ND (0.0046)	ND (0.0039)	ND (0.004)	-	-	ND (0.0041)	ND (0.0046)	ND (0.0039)	ND (0.0043)	-	-
1,1-Dichloroethane	3.6	-	ND (0.0042)	ND (0.005)	ND (0.005)	-	-	ND (0.0041)	ND (0.0046)	ND (0.0039)	ND (0.004)	-	-	ND (0.0041)	ND (0.0046)	ND (0.0039)	ND (0.0043)	-	-
1,1-Dichloroethene	-	230	ND (0.0042)	ND (0.005)	ND (0.005)	-	-	ND (0.0041)	ND (0.0046)	ND (0.0039)	ND (0.004)	-	-	ND (0.0041)	ND (0.0046)	ND (0.0039)	ND (0.0043)	-	-
1,1-Dichloropropene	-	-	ND (0.0042)	ND (0.005)	ND (0.005)	-	-	ND (0.0041)	ND (0.0046)	ND (0.0039)	ND (0.004)	-	-	ND (0.0041)	ND (0.0046)	ND (0.0039)	ND (0.0043)	-	-
1,2,3-Trichlorobenzene	63	-	ND (0.0042)	ND (0.005)	ND (0.005)	-	-	ND (0.0041)	ND (0.0046)	ND (0.0039)	ND (0.004)	-	-	ND (0.0041)	ND (0.0046)	ND (0.0039)	ND (0.0043)	-	-
1,2,3-Trichloropropane	0.0015	-	ND (0.0042)	ND (0.005)	ND (0.005)	-	-	ND (0.0041)	ND (0.0046)	ND (0.0039)	ND (0.004)	-	-	ND (0.0041)	ND (0.0046)	ND (0.0039)	ND (0.0043)	-	-
1,2,4-Trichlorobenzene	-	24	ND (0.0042)	ND (0.005)	ND (0.005)	-	-	ND (0.0041)	ND (0.0046)	ND (0.0039)	ND (0.004)	-	-	ND (0.0041)	ND (0.0046)	ND (0.0039)	ND (0.0043)	-	-
1,2,4-Trimethylbenzene	-	300	ND (0.0042)	ND (0.005)	ND (0.005)	-	-	ND (0.0041)	ND (0.0046)	ND (0.0039)	ND (0.004)	-	-	ND (0.0041)	ND (0.0046)	ND (0.0039)	ND (0.0043)	-	-

Table 1. Summary of Soil Analytical Results
Northeast Corner of South Central Avenue and Victoria Street
Carson, California

Location	DTSC	Regional	HA-36	HA-37	HA-37	HA-37	HA-37	HA-38	HA-38	HA-39	HA-39	HA-39	HA-39	HA-40	HA-40	HA-41	HA-41	HA-41	HA-41
Sample Date	HHRA	Screening	9/6/17	9/1/17	9/1/17	9/1/17	9/1/17	9/6/17	9/6/17	9/6/17	9/6/17	9/6/17	9/6/17	9/6/17	9/6/17	8/31/17	8/31/17	8/31/17	8/31/17
Sample Depth (bgs)	Note 3	Levels	2 (ft)	0.5 (ft)	2 (ft)	4 (ft)	6 (ft)	0.5 (ft)	2 (ft)	0.5 (ft)	2 (ft)	4 (ft)	6 (ft)	0.5 (ft)	2 (ft)	0.5 (ft)	2 (ft)	4 (ft)	6 (ft)
Sample Name	Residential	Residential	HA-36-2	HA-37-.5	HA-37-2	HA-37-4	HA-37-6	HA-38-.5	HA-38-2	HA-39-.5	HA-39-2	HA-39-4	HA-39-6	HA-40-.5	HA-40-2	HA-41-.5	HA-41-2	HA-41-4	HA-41-6
Volatile Organic Compounds (mg/kg)																			
1,2-Dibromo-3-chloropropane (DBCP)	-	0.0053	ND (0.0084)	ND (0.01)	ND (0.01)	-	-	ND (0.0082)	ND (0.0092)	ND (0.0077)	ND (0.0079)	-	-	ND (0.0081)	ND (0.0092)	ND (0.0079)	ND (0.0087)	-	-
1,2-Dibromoethane (Ethylene Dibromide)	0.037	-	ND (0.0042)	ND (0.005)	ND (0.005)	-	-	ND (0.0041)	ND (0.0046)	ND (0.0039)	ND (0.004)	-	-	ND (0.0041)	ND (0.0046)	ND (0.0039)	ND (0.0043)	-	-
1,2-Dichlorobenzene	-	1800	ND (0.0042)	ND (0.005)	ND (0.005)	-	-	ND (0.0041)	ND (0.0046)	ND (0.0039)	ND (0.004)	-	-	ND (0.0041)	ND (0.0046)	ND (0.0039)	ND (0.0043)	-	-
1,2-Dichloroethane	-	0.46	ND (0.0042)	ND (0.005)	ND (0.005)	-	-	ND (0.0041)	ND (0.0046)	ND (0.0039)	ND (0.004)	-	-	ND (0.0041)	ND (0.0046)	ND (0.0039)	ND (0.0043)	-	-
1,2-Dichloropropane	-	0.28	ND (0.0042)	ND (0.005)	ND (0.005)	-	-	ND (0.0041)	ND (0.0046)	ND (0.0039)	ND (0.004)	-	-	ND (0.0041)	ND (0.0046)	ND (0.0039)	ND (0.0043)	-	-
1,3,5-Trimethylbenzene	210	-	ND (0.0042)	ND (0.005)	ND (0.005)	-	-	ND (0.0041)	ND (0.0046)	ND (0.0039)	ND (0.004)	-	-	ND (0.0041)	ND (0.0046)	ND (0.0039)	ND (0.0043)	-	-
1,3-Dichlorobenzene	240	-	ND (0.0042)	ND (0.005)	ND (0.005)	-	-	ND (0.0041)	ND (0.0046)	ND (0.0039)	ND (0.004)	-	-	ND (0.0041)	ND (0.0046)	ND (0.0039)	ND (0.0043)	-	-
1,3-Dichloropropane	420	-	ND (0.0042)	ND (0.005)	ND (0.005)	-	-	ND (0.0041)	ND (0.0046)	ND (0.0039)	ND (0.004)	-	-	ND (0.0041)	ND (0.0046)	ND (0.0039)	ND (0.0043)	-	-
1,4-Dichlorobenzene	-	2.6	ND (0.0042)	ND (0.005)	ND (0.005)	-	-	ND (0.0041)	ND (0.0046)	ND (0.0039)	ND (0.004)	-	-	ND (0.0041)	ND (0.0046)	ND (0.0039)	ND (0.0043)	-	-
2,2-Dichloropropane	-	-	ND (0.0042)	ND (0.005)	ND (0.005)	-	-	ND (0.0041)	ND (0.0046)	ND (0.0039)	ND (0.004)	-	-	ND (0.0041)	ND (0.0046)	ND (0.0039)	ND (0.0043)	-	-
2-Chlorotoluene	480	-	ND (0.0042)	ND (0.005)	ND (0.005)	-	-	ND (0.0041)	ND (0.0046)	ND (0.0039)	ND (0.004)	-	-	ND (0.0041)	ND (0.0046)	ND (0.0039)	ND (0.0043)	-	-
2-Phenylbutane (sec-Butylbenzene)	2200	-	ND (0.0042)	ND (0.005)	ND (0.005)	-	-	ND (0.0041)	ND (0.0046)	ND (0.0039)	ND (0.004)	-	-	ND (0.0041)	ND (0.0046)	ND (0.0039)	ND (0.0043)	-	-
4-Chlorotoluene	440	-	ND (0.0042)	ND (0.005)	ND (0.005)	-	-	ND (0.0041)	ND (0.0046)	ND (0.0039)	ND (0.004)	-	-	ND (0.0041)	ND (0.0046)	ND (0.0039)	ND (0.0043)	-	-
Benzene	0.33	-	ND (0.0042)	ND (0.005)	ND (0.005)	-	-	ND (0.0041)	ND (0.0046)	ND (0.0039)	ND (0.004)	-	-	ND (0.0041)	ND (0.0046)	ND (0.0039)	ND (0.0043)	-	-
Bromobenzene	-	290	ND (0.0042)	ND (0.005)	ND (0.005)	-	-	ND (0.0041)	ND (0.0046)	ND (0.0039)	ND (0.004)	-	-	ND (0.0041)	ND (0.0046)	ND (0.0039)	ND (0.0043)	-	-
Bromodichloromethane	0.3	-	ND (0.0042)	ND (0.005)	ND (0.005)	-	-	ND (0.0041)	ND (0.0046)	ND (0.0039)	ND (0.004)	-	-	ND (0.0041)	ND (0.0046)	ND (0.0039)	ND (0.0043)	-	-
Bromoform	20	-	ND (0.0042)	ND (0.005)	ND (0.005)	-	-	ND (0.0041)	ND (0.0046)	ND (0.0039)	ND (0.004)	-	-	ND (0.0041)	ND (0.0046)	ND (0.0039)	ND (0.0043)	-	-
Bromomethane (Methyl Bromide)	-	6.8	ND (0.0042)	ND (0.005)	ND (0.005)	-	-	ND (0.0041)	ND (0.0046)	ND (0.0039)	ND (0.004)	-	-	ND (0.0041)	ND (0.0046)	ND (0.0039)	ND (0.0043)	-	-
Carbon disulfide	-	770	ND (0.0042)	ND (0.005)	ND (0.005)	-	-	ND (0.0041)	ND (0.0046)	ND (0.0039)	ND (0.004)	-	-	ND (0.0041)	ND (0.0046)	ND (0.0039)	ND (0.0043)	-	-
Carbon tetrachloride	0.099	-	ND (0.0042)	ND (0.005)	ND (0.005)	-	-	ND (0.0041)	ND (0.0046)	ND (0.0039)	ND (0.004)	-	-	ND (0.0041)	ND (0.0046)	ND (0.0039)	ND (0.0043)	-	-
Chlorobenzene	-	280	ND (0.0042)	ND (0.005)	ND (0.005)	-	-	ND (0.0041)	ND (0.0046)	ND (0.0039)	ND (0.004)	-	-	ND (0.0041)	ND (0.0046)	ND (0.0039)	ND (0.0043)	-	-
Chlorobromomethane	-	150	ND (0.0042)	ND (0.005)	ND (0.005)	-	-	ND (0.0041)	ND (0.0046)	ND (0.0039)	ND (0.004)	-	-	ND (0.0041)	ND (0.0046)	ND (0.0039)	ND (0.0043)	-	-
Chloroethane	3.1	-	ND (0.0042)	ND (0.005)	ND (0.005)	-	-	ND (0.0041)	ND (0.0046)	ND (0.0039)	ND (0.004)	-	-	ND (0.0041)	ND (0.0046)	ND (0.0039)	ND (0.0043)	-	-
Chloroform (Trichloromethane)	-	0.32	ND (0.0042)	ND (0.005)	ND (0.005)	-	-	ND (0.0041)	ND (0.0046)	ND (0.0039)	ND (0.004)	-	-	ND (0.0041)	ND (0.0046)	ND (0.0039)	ND (0.0043)	-	-
Chloromethane (Methyl Chloride)	-	110	ND (0.0042)	ND (0.005)	ND (0.005)	-	-	ND (0.0041)	ND (0.0046)	ND (0.0039)	ND (0.004)	-	-	ND (0.0041)	ND (0.0046)	ND (0.0039)	ND (0.0043)	-	-
cis-1,2-Dichloroethene	19	-	ND (0.0042)	ND (0.005)	ND (0.005)	-	-	ND (0.0041)	ND (0.0046)	ND (0.0039)	ND (0.004)	-	-	ND (0.0041)	ND (0.0046)	ND (0.0039)	ND (0.0043)	-	-
cis-1,3-Dichloropropene	-	-	ND (0.0042)	ND (0.005)	ND (0.005)	-	-	ND (0.0041)	ND (0.0046)	ND (0.0039)	ND (0.004)	-	-	ND (0.0041)	ND (0.0046)	ND (0.0039)	ND (0.0043)	-	-
Cymene (p-Isopropyltoluene)	-	-	ND (0.0042)	ND (0.005)	ND (0.005)	-	-	ND (0.0041)	ND (0.0046)	ND (0.0039)	ND (0.004)	-	-	ND (0.0041)	ND (0.0046)	ND (0.0039)	ND (0.0043)	-	-
Dibromochloromethane	0.95	-	ND (0.0042)	ND (0.005)	ND (0.005)	-	-	ND (0.0041)	ND (0.0046)	ND (0.0039)	ND (0.004)	-	-	ND (0.0041)	ND (0.0046)	ND (0.0039)	ND (0.0043)	-	-
Dibromomethane	-	24	ND (0.0042)	ND (0.005)	ND (0.005)	-	-	ND (0.0041)	ND (0.0046)	ND (0.0039)	ND (0.004)	-	-	ND (0.0041)	ND (0.0046)	ND (0.0039)	ND (0.0043)	-	-
Dichlorodifluoromethane (CFC-12)	-	87	ND (0.0042)	ND (0.005)	ND (0.005)	-	-	ND (0.0041)	ND (0.0046)	ND (0.0039)	ND (0.004)	-	-	ND (0.0041)	ND (0.0046)	ND (0.0039)	ND (0.0043)	-	-
Diisopropyl ether (DIPE)	-	2200	ND (0.0042)	ND (0.005)	ND (0.005)	-	-	ND (0.0041)	ND (0.0046)	ND (0.0039)	ND (0.004)	-	-	ND (0.0041)	ND (0.0046)	ND (0.0039)	ND (0.0043)	-	-
Ethyl acetate	-	620	ND (0.042)	ND (0.05)	ND (0.05)	-	-	ND (0.041)	ND (0.046)	ND (0.039)	ND (0.04)	-	-	ND (0.041)	ND (0.046)	ND (0.039)	ND (0.043)	-	-
Ethyl Ether	2300	-	ND (0.042)	ND (0.05)	ND (0.05)	-	-	ND (0.041)	ND (0.046)	ND (0.039)	ND (0.04)	-	-	ND (0.041)	ND (0.046)	ND (0.039)	ND (0.043)	-	-
Ethylbenzene	-	5.8	ND (0.0042)	ND (0.005)	ND (0.005)	-	-	ND (0.0041)	ND (0.0046)	ND (0.0039)	ND (0.004)	-	-	ND (0.0041)	ND (0.0046)	ND (0.0039)	ND (0.0043)	-	-
Hexachlorobutadiene	1.2	-	ND (0.0042)	ND (0.005)	ND (0.005)	-	-	ND (0.0041)	ND (0.0046)	ND (0.0039)	ND (0.004)	-	-	ND (0.0041)	ND (0.0046)	ND (0.0039)	ND (0.0043)	-	-
Isopropylbenzene (Cumene)	-	1900	ND (0.0042)	ND (0.005)	ND (0.005)	-	-	ND (0.0041)	ND (0.0046)	ND (0.0039)	ND (0.004)	-	-	ND (0.0041)	ND (0.0046)	ND (0.0039)	ND (0.0043)	-	-
m,p-Xylenes	-	-	ND (0.0084)	ND (0.01)	ND (0.01)	-	-	ND (0.0082)	ND (0.0092)	ND (0.0077)	ND (0.0079)	-	-	ND (0.0081)	ND (0.0092)	ND (0.0079)	ND (0.0087)	-	-

Table 1. Summary of Soil Analytical Results
Northeast Corner of South Central Avenue and Victoria Street
Carson, California

Location	DTSC	Regional	HA-36	HA-37	HA-37	HA-37	HA-37	HA-38	HA-38	HA-39	HA-39	HA-39	HA-39	HA-40	HA-40	HA-41	HA-41	HA-41	HA-41
Sample Date	HHRA	Screening	9/6/17	9/1/17	9/1/17	9/1/17	9/1/17	9/6/17	9/6/17	9/6/17	9/6/17	9/6/17	9/6/17	9/6/17	9/6/17	8/31/17	8/31/17	8/31/17	8/31/17
Sample Depth (bgs)	Note 3	Levels	2 (ft)	0.5 (ft)	2 (ft)	4 (ft)	6 (ft)	0.5 (ft)	2 (ft)	0.5 (ft)	2 (ft)	4 (ft)	6 (ft)	0.5 (ft)	2 (ft)	0.5 (ft)	2 (ft)	4 (ft)	6 (ft)
Sample Name	Residential	Residential	HA-36-2	HA-37-.5	HA-37-2	HA-37-4	HA-37-6	HA-38-.5	HA-38-2	HA-39-.5	HA-39-2	HA-39-4	HA-39-6	HA-40-.5	HA-40-2	HA-41-.5	HA-41-2	HA-41-4	HA-41-6
Volatile Organic Compounds (mg/kg)																			
Methyl Tert Butyl Ether	-	47	ND (0.0042)	ND (0.005)	ND (0.005)	-	-	ND (0.0041)	ND (0.0046)	ND (0.0039)	ND (0.004)	-	-	ND (0.0041)	ND (0.0046)	ND (0.0039)	ND (0.0043)	-	-
Methylene chloride	1.9	-	ND (0.0042)	ND (0.005)	ND (0.005)	-	-	ND (0.0041)	ND (0.0046)	ND (0.0039)	ND (0.004)	-	-	ND (0.0041)	ND (0.0046)	ND (0.0039)	ND (0.0043)	-	-
Naphthalene	-	3.8	ND (0.0042)	ND (0.005)	ND (0.005)	-	-	ND (0.0041)	ND (0.0046)	ND (0.0039)	ND (0.004)	-	-	ND (0.0041)	ND (0.0046)	ND (0.0039)	ND (0.0043)	-	-
n-Butylbenzene	1200	-	ND (0.0042)	ND (0.005)	ND (0.005)	-	-	ND (0.0041)	ND (0.0046)	ND (0.0039)	ND (0.004)	-	-	ND (0.0041)	ND (0.0046)	ND (0.0039)	ND (0.0043)	-	-
n-Propylbenzene	-	3800	ND (0.0042)	ND (0.005)	ND (0.005)	-	-	ND (0.0041)	ND (0.0046)	ND (0.0039)	ND (0.004)	-	-	ND (0.0041)	ND (0.0046)	ND (0.0039)	ND (0.0043)	-	-
o-Xylene	-	650	ND (0.0042)	ND (0.005)	ND (0.005)	-	-	ND (0.0041)	ND (0.0046)	ND (0.0039)	ND (0.004)	-	-	ND (0.0041)	ND (0.0046)	ND (0.0039)	ND (0.0043)	-	-
Styrene	-	6000	ND (0.0042)	ND (0.005)	ND (0.005)	-	-	ND (0.0041)	ND (0.0046)	ND (0.0039)	ND (0.004)	-	-	ND (0.0041)	ND (0.0046)	ND (0.0039)	ND (0.0043)	-	-
Tert-Amyl Methyl Ether (TAME)	-	-	ND (0.0042)	ND (0.005)	ND (0.005)	-	-	ND (0.0041)	ND (0.0046)	ND (0.0039)	ND (0.004)	-	-	ND (0.0041)	ND (0.0046)	ND (0.0039)	ND (0.0043)	-	-
Tert-Butyl Alcohol (tert-Butanol)	-	-	ND (0.084)	ND (0.1)	ND (0.1)	-	-	ND (0.082)	ND (0.092)	ND (0.077)	ND (0.079)	-	-	ND (0.081)	ND (0.092)	ND (0.079)	ND (0.087)	-	-
Tert-Butyl Ethyl Ether (ETBE)	-	-	ND (0.0042)	ND (0.005)	ND (0.005)	-	-	ND (0.0041)	ND (0.0046)	ND (0.0039)	ND (0.004)	-	-	ND (0.0041)	ND (0.0046)	ND (0.0039)	ND (0.0043)	-	-
tert-Butylbenzene	2200	-	ND (0.0042)	ND (0.005)	ND (0.005)	-	-	ND (0.0041)	ND (0.0046)	ND (0.0039)	ND (0.004)	-	-	ND (0.0041)	ND (0.0046)	ND (0.0039)	ND (0.0043)	-	-
Tetrachloroethene	0.6	-	ND (0.0042)	ND (0.005)	ND (0.005)	-	-	ND (0.0041)	ND (0.0046)	ND (0.0039)	ND (0.004)	-	-	ND (0.0041)	ND (0.0046)	ND (0.0039)	ND (0.0043)	-	-
Toluene	1100	-	ND (0.0042)	ND (0.005)	ND (0.005)	-	-	ND (0.0041)	ND (0.0046)	ND (0.0039)	ND (0.004)	-	-	ND (0.0041)	ND (0.0046)	ND (0.0039)	ND (0.0043)	-	-
trans-1,2-Dichloroethene	130	-	ND (0.0042)	ND (0.005)	ND (0.005)	-	-	ND (0.0041)	ND (0.0046)	ND (0.0039)	ND (0.004)	-	-	ND (0.0041)	ND (0.0046)	ND (0.0039)	ND (0.0043)	-	-
trans-1,3-Dichloropropene	-	-	ND (0.0042)	ND (0.005)	ND (0.005)	-	-	ND (0.0041)	ND (0.0046)	ND (0.0039)	ND (0.004)	-	-	ND (0.0041)	ND (0.0046)	ND (0.0039)	ND (0.0043)	-	-
Trichloroethene	-	0.94	ND (0.0042)	ND (0.005)	ND (0.005)	-	-	ND (0.0041)	ND (0.0046)	ND (0.0039)	ND (0.004)	-	-	ND (0.0041)	ND (0.0046)	ND (0.0039)	ND (0.0043)	-	-
Trichlorofluoromethane (CFC-11)	1200	-	ND (0.0042)	ND (0.005)	ND (0.005)	-	-	ND (0.0041)	ND (0.0046)	ND (0.0039)	ND (0.004)	-	-	ND (0.0041)	ND (0.0046)	ND (0.0039)	ND (0.0043)	-	-
Trifluorotrichloroethane (Freon 113)	-	6700	ND (0.0042)	ND (0.005)	ND (0.005)	-	-	ND (0.0041)	ND (0.0046)	ND (0.0039)	ND (0.004)	-	-	ND (0.0041)	ND (0.0046)	ND (0.0039)	ND (0.0043)	-	-
Vinyl acetate	-	910	ND (0.042)	ND (0.05)	ND (0.05)	-	-	ND (0.041)	ND (0.046)	ND (0.039)	ND (0.04)	-	-	ND (0.041)	ND (0.046)	ND (0.039)	ND (0.043)	-	-
Vinyl chloride	0.0088	-	ND (0.0042)	ND (0.005)	ND (0.005)	-	-	ND (0.0041)	ND (0.0046)	ND (0.0039)	ND (0.004)	-	-	ND (0.0041)	ND (0.0046)	ND (0.0039)	ND (0.0043)	-	-

Table 1. Summary of Soil Analytical Results
Northeast Corner of South Central Avenue and Victoria Street
Carson, California

Location	DTSC	Regional	HA-42	HA-42	HA-43	HA-43	HA-44	HA-44	HA-45	HA-45	HA-46	HA-46	HA-47	HA-47	HA-48	HA-48	HA-49	HA-49
Sample Date	HHRA	Screening	9/6/17	9/6/17	9/6/17	9/6/17	9/7/17	9/7/17	9/1/17	9/1/17	9/7/17	9/7/17	9/1/17	9/1/17	9/7/17	9/7/17	9/7/17	9/7/17
Sample Depth (bgs)	Note 3	Levels	0.5 (ft)	2 (ft)	0.5 (ft)	2 (ft)	0.5 (ft)	2 (ft)	0.5 (ft)	2 (ft)	0.5 (ft)	2 (ft)	0.5 (ft)	2 (ft)	0.5 (ft)	2 (ft)	0.5 (ft)	2 (ft)
Sample Name	Residential	Residential	HA-42-.5	HA-42-2	HA-43-.5	HA-43-2	HA-44-0.5	HA-44-2	HA-45-.5	HA-45-2	HA-46-0.5	HA-46-2	HA-47-.5	HA-47-2	HA-48-0.5	HA-48-2	HA-49-0.5	HA-49-2
Inorganic Compounds (mg/kg)																		
Antimony	-	31	ND (2)	ND (2)	ND (2)	ND (2)	ND (2)	ND (2)	ND (2)	ND (2)	ND (2)	ND (2)	ND (2)	ND (2)	ND (2)	ND (2)	ND (2)	ND (2)
Arsenic	12	-	**9.1**	**5**	**5.5**	**4.9**	**5.5**	**5**	**6**	**5.6**	**5.4**	**5.2**	**4.3**	**3.3**	**18**	**3.8**	**3.3**	**4.6**
Barium	-	15000	**180**	**85**	**160**	**210**	**140**	**120**	**180**	**180**	**170**	**130**	**150**	**180**	**240**	**180**	**140**	**110**
Beryllium	15	-	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)
Cadmium	5.2	-	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)
Chromium	-	-	**21**	**23**	**22**	**23**	**24**	**25**	**23**	**27**	**26**	**21**	**25**	**25**	**18**	**21**	**23**	**24**
Cobalt	-	23	**11**	**11**	**11**	**11**	**11**	**12**	**11**	**12**	**12**	**10**	**11**	**12**	**9**	**7.8**	**11**	**11**
Copper	-	3100	**21**	**17**	**20**	**19**	**20**	**20**	**21**	**21**	**24**	**18**	**19**	**19**	**18**	**22**	**20**	**20**
Lead	80	-	**7.9**	**4.8**	**9.2**	**4.7**	**5.1**	**5.2**	**11**	**6.8**	**9.6**	**4.7**	**5**	**5.2**	**5.4**	**24**	**7.2**	**4.6**
Mercury	1	-	**0.2**	ND (0.1)	**0.11**	ND (0.1)	ND (0.1)	ND (0.1)	ND (0.1)	ND (0.1)	ND (0.1)	ND (0.1)	ND (0.1)	ND (0.1)	**0.12**	ND (0.1)	ND (0.1)	ND (0.1)
Molybdenum	-	390	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)
Nickel	490	-	**18**	**18**	**18**	**18**	**18**	**20**	**20**	**21**	**21**	**17**	**18**	**20**	**15**	**18**	**19**	**19**
Selenium	-	390	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	**1.7**	**1.2**	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	**1.2**
Silver	390	-	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)
Thallium	-	0.78	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)
Vanadium	390	-	**37**	**40**	**38**	**38**	**40**	**43**	**38**	**45**	**43**	**36**	**44**	**44**	**33**	**35**	**39**	**41**
Zinc	-	23000	**56**	**36**	**47**	**39**	**39**	**41**	**48**	**44**	**47**	**35**	**38**	**37**	**92**	**54**	**40**	**39**
Total Petroleum Hydrocarbons (mg/kg)																		
Total Petroleum Hydrocarbons (C4-C10)	-	-	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)
Total Petroleum Hydrocarbons (C5-C8)	-	-	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)
Total Petroleum Hydrocarbons (C6-C8)	-	-	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)
Total Petroleum Hydrocarbons (C9-C16)	-	-	**35**	**14**	ND (10)	ND (10)	ND (10)	ND (10)	**58**	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	**11**	ND (10)	ND (10)	ND (10)
Total Petroleum Hydrocarbons (C9-C18)	-	-	**53**	**20**	ND (10)	ND (10)	ND (10)	ND (10)	**74**	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	**16**	ND (10)	ND (10)	ND (10)
Total Petroleum Hydrocarbons (C10-C40)	-	-	**920**	**180**	**36**	**47**	ND (10)	ND (10)	**3500**	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	**440**	ND (10)	ND (10)	ND (10)
Total Petroleum Hydrocarbons (C17-C32)	-	-	**490**	**120**	**21**	**31**	ND (10)	ND (10)	**1100**	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	**210**	ND (10)	ND (10)	ND (10)
Total Petroleum Hydrocarbons (C19-C32)	-	-	**470**	**110**	**21**	**30**	ND (10)	ND (10)	**1100**	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	**210**	ND (10)	ND (10)	ND (10)
Volatile Organic Compounds (mg/kg)																		
1,1,1,2-Tetrachloroethane	2	-	ND (0.0041)	ND (0.004)	ND (0.0046)	ND (0.004)	ND (0.0043)	ND (0.004)	ND (0.005)	ND (0.005)	ND (0.004)	ND (0.0045)	ND (0.005)	ND (0.005)	ND (0.0043)	ND (0.004)	ND (0.0044)	ND (0.0039)
1,1,1-Trichloroethane	1700	-	ND (0.0041)	ND (0.004)	ND (0.0046)	ND (0.004)	ND (0.0043)	ND (0.004)	ND (0.005)	ND (0.005)	ND (0.004)	ND (0.0045)	ND (0.005)	ND (0.005)	ND (0.0043)	ND (0.004)	ND (0.0044)	ND (0.0039)
1,1,2,2-Tetrachloroethane	0.61	-	ND (0.0041)	ND (0.004)	ND (0.0046)	ND (0.004)	ND (0.0043)	ND (0.004)	ND (0.005)	ND (0.005)	ND (0.004)	ND (0.0045)	ND (0.005)	ND (0.005)	ND (0.0043)	ND (0.004)	ND (0.0044)	ND (0.0039)
1,1,2-Trichloroethane	-	1.1	ND (0.0041)	ND (0.004)	ND (0.0046)	ND (0.004)	ND (0.0043)	ND (0.004)	ND (0.005)	ND (0.005)	ND (0.004)	ND (0.0045)	ND (0.005)	ND (0.005)	ND (0.0043)	ND (0.004)	ND (0.0044)	ND (0.0039)
1,1-Dichloroethane	3.6	-	ND (0.0041)	ND (0.004)	ND (0.0046)	ND (0.004)	ND (0.0043)	ND (0.004)	ND (0.005)	ND (0.005)	ND (0.004)	ND (0.0045)	ND (0.005)	ND (0.005)	ND (0.0043)	ND (0.004)	ND (0.0044)	ND (0.0039)
1,1-Dichloroethene	-	230	ND (0.0041)	ND (0.004)	ND (0.0046)	ND (0.004)	ND (0.0043)	ND (0.004)	ND (0.005)	ND (0.005)	ND (0.004)	ND (0.0045)	ND (0.005)	ND (0.005)	ND (0.0043)	ND (0.004)	ND (0.0044)	ND (0.0039)
1,1-Dichloropropene	-	-	ND (0.0041)	ND (0.004)	ND (0.0046)	ND (0.004)	ND (0.0043)	ND (0.004)	ND (0.005)	ND (0.005)	ND (0.004)	ND (0.0045)	ND (0.005)	ND (0.005)	ND (0.0043)	ND (0.004)	ND (0.0044)	ND (0.0039)
1,2,3-Trichlorobenzene	63	-	ND (0.0041)	ND (0.004)	ND (0.0046)	ND (0.004)	ND (0.0043)	ND (0.004)	ND (0.005)	ND (0.005)	ND (0.004)	ND (0.0045)	ND (0.005)	ND (0.005)	ND (0.0043)	ND (0.004)	ND (0.0044)	ND (0.0039)
1,2,3-Trichloropropane	0.0015	-	ND (0.0041)	ND (0.004)	ND (0.0046)	ND (0.004)	ND (0.0043)	ND (0.004)	ND (0.005)	ND (0.005)	ND (0.004)	ND (0.0045)	ND (0.005)	ND (0.005)	ND (0.0043)	ND (0.004)	ND (0.0044)	ND (0.0039)
1,2,4-Trichlorobenzene	-	24	ND (0.0041)	ND (0.004)	ND (0.0046)	ND (0.004)	ND (0.0043)	ND (0.004)	ND (0.005)	ND (0.005)	ND (0.004)	ND (0.0045)	ND (0.005)	ND (0.005)	ND (0.0043)	ND (0.004)	ND (0.0044)	ND (0.0039)
1,2,4-Trimethylbenzene	-	300	ND (0.0041)	ND (0.004)	ND (0.0046)	ND (0.004)	ND (0.0043)	ND (0.004)	ND (0.005)	ND (0.005)	ND (0.004)	ND (0.0045)	ND (0.005)	ND (0.005)	ND (0.0043)	ND (0.004)	ND (0.0044)	ND (0.0039)

Table 1. Summary of Soil Analytical Results
Northeast Corner of South Central Avenue and Victoria Street
Carson, California

Location	DTSC	Regional	HA-42	HA-42	HA-43	HA-43	HA-44	HA-44	HA-45	HA-45	HA-46	HA-46	HA-47	HA-47	HA-48	HA-48	HA-49	HA-49
Sample Date	HHRA	Screening	9/6/17	9/6/17	9/6/17	9/6/17	9/7/17	9/7/17	9/1/17	9/1/17	9/7/17	9/7/17	9/1/17	9/1/17	9/7/17	9/7/17	9/7/17	9/7/17
Sample Depth (bgs)	Note 3	Levels	0.5 (ft)	2 (ft)	0.5 (ft)	2 (ft)	0.5 (ft)	2 (ft)	0.5 (ft)	2 (ft)	0.5 (ft)	2 (ft)	0.5 (ft)	2 (ft)	0.5 (ft)	2 (ft)	0.5 (ft)	2 (ft)
Sample Name	Residential	Residential	HA-42-.5	HA-42-2	HA-43-.5	HA-43-2	HA-44-0.5	HA-44-2	HA-45-.5	HA-45-2	HA-46-0.5	HA-46-2	HA-47-.5	HA-47-2	HA-48-0.5	HA-48-2	HA-49-0.5	HA-49-2
Volatile Organic Compounds (mg/kg)																		
1,2-Dibromo-3-chloropropane (DBCP)	-	0.0053	ND (0.0082)	ND (0.008)	ND (0.0093)	ND (0.008)	ND (0.0087)	ND (0.0079)	ND (0.01)	ND (0.01)	ND (0.0081)	ND (0.009)	ND (0.01)	ND (0.01)	ND (0.0085)	ND (0.008)	ND (0.0088)	ND (0.0077)
1,2-Dibromoethane (Ethylene Dibromide)	0.037	-	ND (0.0041)	ND (0.004)	ND (0.0046)	ND (0.004)	ND (0.0043)	ND (0.004)	ND (0.005)	ND (0.005)	ND (0.004)	ND (0.0045)	ND (0.005)	ND (0.005)	ND (0.0043)	ND (0.004)	ND (0.0044)	ND (0.0039)
1,2-Dichlorobenzene	-	1800	ND (0.0041)	ND (0.004)	ND (0.0046)	ND (0.004)	ND (0.0043)	ND (0.004)	ND (0.005)	ND (0.005)	ND (0.004)	ND (0.0045)	ND (0.005)	ND (0.005)	ND (0.0043)	ND (0.004)	ND (0.0044)	ND (0.0039)
1,2-Dichloroethane	-	0.46	ND (0.0041)	ND (0.004)	ND (0.0046)	ND (0.004)	ND (0.0043)	ND (0.004)	ND (0.005)	ND (0.005)	ND (0.004)	ND (0.0045)	ND (0.005)	ND (0.005)	ND (0.0043)	ND (0.004)	ND (0.0044)	ND (0.0039)
1,2-Dichloropropane	-	0.28	ND (0.0041)	ND (0.004)	ND (0.0046)	ND (0.004)	ND (0.0043)	ND (0.004)	ND (0.005)	ND (0.005)	ND (0.004)	ND (0.0045)	ND (0.005)	ND (0.005)	ND (0.0043)	ND (0.004)	ND (0.0044)	ND (0.0039)
1,3,5-Trimethylbenzene	210	-	ND (0.0041)	ND (0.004)	ND (0.0046)	ND (0.004)	ND (0.0043)	ND (0.004)	ND (0.005)	ND (0.005)	ND (0.004)	ND (0.0045)	ND (0.005)	ND (0.005)	ND (0.0043)	ND (0.004)	ND (0.0044)	ND (0.0039)
1,3-Dichlorobenzene	240	-	ND (0.0041)	ND (0.004)	ND (0.0046)	ND (0.004)	ND (0.0043)	ND (0.004)	ND (0.005)	ND (0.005)	ND (0.004)	ND (0.0045)	ND (0.005)	ND (0.005)	ND (0.0043)	ND (0.004)	ND (0.0044)	ND (0.0039)
1,3-Dichloropropane	420	-	ND (0.0041)	ND (0.004)	ND (0.0046)	ND (0.004)	ND (0.0043)	ND (0.004)	ND (0.005)	ND (0.005)	ND (0.004)	ND (0.0045)	ND (0.005)	ND (0.005)	ND (0.0043)	ND (0.004)	ND (0.0044)	ND (0.0039)
1,4-Dichlorobenzene	-	2.6	ND (0.0041)	ND (0.004)	ND (0.0046)	ND (0.004)	ND (0.0043)	ND (0.004)	ND (0.005)	ND (0.005)	ND (0.004)	ND (0.0045)	ND (0.005)	ND (0.005)	ND (0.0043)	ND (0.004)	ND (0.0044)	ND (0.0039)
2,2-Dichloropropane	-	-	ND (0.0041)	ND (0.004)	ND (0.0046)	ND (0.004)	ND (0.0043)	ND (0.004)	ND (0.005)	ND (0.005)	ND (0.004)	ND (0.0045)	ND (0.005)	ND (0.005)	ND (0.0043)	ND (0.004)	ND (0.0044)	ND (0.0039)
2-Chlorotoluene	480	-	ND (0.0041)	ND (0.004)	ND (0.0046)	ND (0.004)	ND (0.0043)	ND (0.004)	ND (0.005)	ND (0.005)	ND (0.004)	ND (0.0045)	ND (0.005)	ND (0.005)	ND (0.0043)	ND (0.004)	ND (0.0044)	ND (0.0039)
2-Phenylbutane (sec-Butylbenzene)	2200	-	ND (0.0041)	ND (0.004)	ND (0.0046)	ND (0.004)	ND (0.0043)	ND (0.004)	ND (0.005)	ND (0.005)	ND (0.004)	ND (0.0045)	ND (0.005)	ND (0.005)	ND (0.0043)	ND (0.004)	ND (0.0044)	ND (0.0039)
4-Chlorotoluene	440	-	ND (0.0041)	ND (0.004)	ND (0.0046)	ND (0.004)	ND (0.0043)	ND (0.004)	ND (0.005)	ND (0.005)	ND (0.004)	ND (0.0045)	ND (0.005)	ND (0.005)	ND (0.0043)	ND (0.004)	ND (0.0044)	ND (0.0039)
Benzene	0.33	-	ND (0.0041)	ND (0.004)	ND (0.0046)	ND (0.004)	ND (0.0043)	ND (0.004)	ND (0.005)	ND (0.005)	ND (0.004)	ND (0.0045)	ND (0.005)	ND (0.005)	ND (0.0043)	ND (0.004)	ND (0.0044)	ND (0.0039)
Bromobenzene	-	290	ND (0.0041)	ND (0.004)	ND (0.0046)	ND (0.004)	ND (0.0043)	ND (0.004)	ND (0.005)	ND (0.005)	ND (0.004)	ND (0.0045)	ND (0.005)	ND (0.005)	ND (0.0043)	ND (0.004)	ND (0.0044)	ND (0.0039)
Bromodichloromethane	0.3	-	ND (0.0041)	ND (0.004)	ND (0.0046)	ND (0.004)	ND (0.0043)	ND (0.004)	ND (0.005)	ND (0.005)	ND (0.004)	ND (0.0045)	ND (0.005)	ND (0.005)	ND (0.0043)	ND (0.004)	ND (0.0044)	ND (0.0039)
Bromoform	20	-	ND (0.0041)	ND (0.004)	ND (0.0046)	ND (0.004)	ND (0.0043)	ND (0.004)	ND (0.005)	ND (0.005)	ND (0.004)	ND (0.0045)	ND (0.005)	ND (0.005)	ND (0.0043)	ND (0.004)	ND (0.0044)	ND (0.0039)
Bromomethane (Methyl Bromide)	-	6.8	ND (0.0041)	ND (0.004)	ND (0.0046)	ND (0.004)	ND (0.0043)	ND (0.004)	ND (0.005)	ND (0.005)	ND (0.004)	ND (0.0045)	ND (0.005)	ND (0.005)	ND (0.0043)	ND (0.004)	ND (0.0044)	ND (0.0039)
Carbon disulfide	-	770	ND (0.0041)	ND (0.004)	ND (0.0046)	ND (0.004)	ND (0.0043)	ND (0.004)	ND (0.005)	ND (0.005)	ND (0.004)	ND (0.0045)	ND (0.005)	ND (0.005)	ND (0.0043)	ND (0.004)	ND (0.0044)	ND (0.0039)
Carbon tetrachloride	0.099	-	ND (0.0041)	ND (0.004)	ND (0.0046)	ND (0.004)	ND (0.0043)	ND (0.004)	ND (0.005)	ND (0.005)	ND (0.004)	ND (0.0045)	ND (0.005)	ND (0.005)	ND (0.0043)	ND (0.004)	ND (0.0044)	ND (0.0039)
Chlorobenzene	-	280	ND (0.0041)	ND (0.004)	ND (0.0046)	ND (0.004)	ND (0.0043)	ND (0.004)	ND (0.005)	ND (0.005)	ND (0.004)	ND (0.0045)	ND (0.005)	ND (0.005)	ND (0.0043)	ND (0.004)	ND (0.0044)	ND (0.0039)
Chlorobromomethane	-	150	ND (0.0041)	ND (0.004)	ND (0.0046)	ND (0.004)	ND (0.0043)	ND (0.004)	ND (0.005)	ND (0.005)	ND (0.004)	ND (0.0045)	ND (0.005)	ND (0.005)	ND (0.0043)	ND (0.004)	ND (0.0044)	ND (0.0039)
Chloroethane	3.1	-	ND (0.0041)	ND (0.004)	ND (0.0046)	ND (0.004)	ND (0.0043)	ND (0.004)	ND (0.005)	ND (0.005)	ND (0.004)	ND (0.0045)	ND (0.005)	ND (0.005)	ND (0.0043)	ND (0.004)	ND (0.0044)	ND (0.0039)
Chloroform (Trichloromethane)	-	0.32	ND (0.0041)	ND (0.004)	ND (0.0046)	ND (0.004)	ND (0.0043)	ND (0.004)	ND (0.005)	ND (0.005)	ND (0.004)	ND (0.0045)	ND (0.005)	ND (0.005)	ND (0.0043)	ND (0.004)	ND (0.0044)	ND (0.0039)
Chloromethane (Methyl Chloride)	-	110	ND (0.0041)	ND (0.004)	ND (0.0046)	ND (0.004)	ND (0.0043)	ND (0.004)	ND (0.005)	ND (0.005)	ND (0.004)	ND (0.0045)	ND (0.005)	ND (0.005)	ND (0.0043)	ND (0.004)	ND (0.0044)	ND (0.0039)
cis-1,2-Dichloroethene	19	-	ND (0.0041)	ND (0.004)	ND (0.0046)	ND (0.004)	ND (0.0043)	ND (0.004)	ND (0.005)	ND (0.005)	ND (0.004)	ND (0.0045)	ND (0.005)	ND (0.005)	ND (0.0043)	ND (0.004)	ND (0.0044)	ND (0.0039)
cis-1,3-Dichloropropene	-	-	ND (0.0041)	ND (0.004)	ND (0.0046)	ND (0.004)	ND (0.0043)	ND (0.004)	ND (0.005)	ND (0.005)	ND (0.004)	ND (0.0045)	ND (0.005)	ND (0.005)	ND (0.0043)	ND (0.004)	ND (0.0044)	ND (0.0039)
Cymene (p-Isopropyltoluene)	-	-	ND (0.0041)	ND (0.004)	ND (0.0046)	ND (0.004)	ND (0.0043)	ND (0.004)	ND (0.005)	ND (0.005)	ND (0.004)	ND (0.0045)	ND (0.005)	ND (0.005)	ND (0.0043)	ND (0.004)	ND (0.0044)	ND (0.0039)
Dibromochloromethane	0.95	-	ND (0.0041)	ND (0.004)	ND (0.0046)	ND (0.004)	ND (0.0043)	ND (0.004)	ND (0.005)	ND (0.005)	ND (0.004)	ND (0.0045)	ND (0.005)	ND (0.005)	ND (0.0043)	ND (0.004)	ND (0.0044)	ND (0.0039)
Dibromomethane	-	24	ND (0.0041)	ND (0.004)	ND (0.0046)	ND (0.004)	ND (0.0043)	ND (0.004)	ND (0.005)	ND (0.005)	ND (0.004)	ND (0.0045)	ND (0.005)	ND (0.005)	ND (0.0043)	ND (0.004)	ND (0.0044)	ND (0.0039)
Dichlorodifluoromethane (CFC-12)	-	87	ND (0.0041)	ND (0.004)	ND (0.0046)	ND (0.004)	ND (0.0043)	ND (0.004)	ND (0.005)	ND (0.005)	ND (0.004)	ND (0.0045)	ND (0.005)	ND (0.005)	ND (0.0043)	ND (0.004)	ND (0.0044)	ND (0.0039)
Diisopropyl ether (DIPE)	-	2200	ND (0.0041)	ND (0.004)	ND (0.0046)	ND (0.004)	ND (0.0043)	ND (0.004)	ND (0.005)	ND (0.005)	ND (0.004)	ND (0.0045)	ND (0.005)	ND (0.005)	ND (0.0043)	ND (0.004)	ND (0.0044)	ND (0.0039)
Ethyl acetate	-	620	ND (0.041)	ND (0.04)	ND (0.046)	ND (0.04)	ND (0.043)	ND (0.04)	ND (0.05)	ND (0.05)	ND (0.04)	ND (0.045)	ND (0.05)	ND (0.05)	ND (0.043)	ND (0.04)	ND (0.044)	ND (0.039)
Ethyl Ether	2300	-	ND (0.041)	ND (0.04)	ND (0.046)	ND (0.04)	ND (0.043)	ND (0.04)	ND (0.05)	ND (0.05)	ND (0.04)	ND (0.045)	ND (0.05)	ND (0.05)	ND (0.043)	ND (0.04)	ND (0.044)	ND (0.039)
Ethylbenzene	-	5.8	ND (0.0041)	ND (0.004)	ND (0.0046)	ND (0.004)	ND (0.0043)	ND (0.004)	ND (0.005)	ND (0.005)	ND (0.004)	ND (0.0045)	ND (0.005)	ND (0.005)	ND (0.0043)	ND (0.004)	ND (0.0044)	ND (0.0039)
Hexachlorobutadiene	1.2	-	ND (0.0041)	ND (0.004)	ND (0.0046)	ND (0.004)	ND (0.0043)	ND (0.004)	ND (0.005)	ND (0.005)	ND (0.004)	ND (0.0045)	ND (0.005)	ND (0.005)	ND (0.0043)	ND (0.004)	ND (0.0044)	ND (0.0039)
Isopropylbenzene (Cumene)	-	1900	ND (0.0041)	ND (0.004)	ND (0.0046)	ND (0.004)	ND (0.0043)	ND (0.004)	ND (0.005)	ND (0.005)	ND (0.004)	ND (0.0045)	ND (0.005)	ND (0.005)	ND (0.0043)	ND (0.004)	ND (0.0044)	ND (0.0039)
m,p-Xylenes	-	-	ND (0.0082)	ND (0.008)	ND (0.0093)	ND (0.008)	ND (0.0087)	ND (0.0079)	ND (0.01)	ND (0.01)	ND (0.0081)	ND (0.009)	ND (0.01)	ND (0.01)	ND (0.0085)	ND (0.008)	ND (0.0088)	ND (0.0077)

Table 1. Summary of Soil Analytical Results
Northeast Corner of South Central Avenue and Victoria Street
Carson, California

Location	DTSC	Regional	HA-42	HA-42	HA-43	HA-43	HA-44	HA-44	HA-45	HA-45	HA-46	HA-46	HA-47	HA-47	HA-48	HA-48	HA-49	HA-49
Sample Date	HHRA	Screening	9/6/17	9/6/17	9/6/17	9/6/17	9/7/17	9/7/17	9/1/17	9/1/17	9/7/17	9/7/17	9/1/17	9/1/17	9/7/17	9/7/17	9/7/17	9/7/17
Sample Depth (bgs)	Note 3	Levels	0.5 (ft)	2 (ft)	0.5 (ft)	2 (ft)	0.5 (ft)	2 (ft)	0.5 (ft)	2 (ft)	0.5 (ft)	2 (ft)	0.5 (ft)	2 (ft)	0.5 (ft)	2 (ft)	0.5 (ft)	2 (ft)
Sample Name	Residential	Residential	HA-42-.5	HA-42-2	HA-43-.5	HA-43-2	HA-44-0.5	HA-44-2	HA-45-.5	HA-45-2	HA-46-0.5	HA-46-2	HA-47-.5	HA-47-2	HA-48-0.5	HA-48-2	HA-49-0.5	HA-49-2
Volatile Organic Compounds (mg/kg)																		
Methyl Tert Butyl Ether	-	47	ND (0.0041)	ND (0.004)	ND (0.0046)	ND (0.004)	ND (0.0043)	ND (0.004)	ND (0.005)	ND (0.005)	ND (0.004)	ND (0.0045)	ND (0.005)	ND (0.005)	ND (0.0043)	ND (0.004)	ND (0.0044)	ND (0.0039)
Methylene chloride	1.9	-	ND (0.0041)	ND (0.004)	ND (0.0046)	ND (0.004)	ND (0.0043)	ND (0.004)	ND (0.005)	ND (0.005)	ND (0.004)	ND (0.0045)	ND (0.005)	ND (0.005)	ND (0.0043)	ND (0.004)	ND (0.0044)	ND (0.0039)
Naphthalene	-	3.8	ND (0.0041)	ND (0.004)	ND (0.0046)	ND (0.004)	ND (0.0043)	ND (0.004)	ND (0.005)	ND (0.005)	ND (0.004)	ND (0.0045)	ND (0.005)	ND (0.005)	ND (0.0043)	ND (0.004)	ND (0.0044)	ND (0.0039)
n-Butylbenzene	1200	-	ND (0.0041)	ND (0.004)	ND (0.0046)	ND (0.004)	ND (0.0043)	ND (0.004)	ND (0.005)	ND (0.005)	ND (0.004)	ND (0.0045)	ND (0.005)	ND (0.005)	ND (0.0043)	ND (0.004)	ND (0.0044)	ND (0.0039)
n-Propylbenzene	-	3800	ND (0.0041)	ND (0.004)	ND (0.0046)	ND (0.004)	ND (0.0043)	ND (0.004)	ND (0.005)	ND (0.005)	ND (0.004)	ND (0.0045)	ND (0.005)	ND (0.005)	ND (0.0043)	ND (0.004)	ND (0.0044)	ND (0.0039)
o-Xylene	-	650	ND (0.0041)	ND (0.004)	ND (0.0046)	ND (0.004)	ND (0.0043)	ND (0.004)	ND (0.005)	ND (0.005)	ND (0.004)	ND (0.0045)	ND (0.005)	ND (0.005)	ND (0.0043)	ND (0.004)	ND (0.0044)	ND (0.0039)
Styrene	-	6000	ND (0.0041)	ND (0.004)	ND (0.0046)	ND (0.004)	ND (0.0043)	ND (0.004)	ND (0.005)	ND (0.005)	ND (0.004)	ND (0.0045)	ND (0.005)	ND (0.005)	ND (0.0043)	ND (0.004)	ND (0.0044)	ND (0.0039)
Tert-Amyl Methyl Ether (TAME)	-	-	ND (0.0041)	ND (0.004)	ND (0.0046)	ND (0.004)	ND (0.0043)	ND (0.004)	ND (0.005)	ND (0.005)	ND (0.004)	ND (0.0045)	ND (0.005)	ND (0.005)	ND (0.0043)	ND (0.004)	ND (0.0044)	ND (0.0039)
Tert-Butyl Alcohol (tert-Butanol)	-	-	ND (0.082)	ND (0.08)	ND (0.093)	ND (0.08)	ND (0.087)	ND (0.079)	ND (0.1)	ND (0.1)	ND (0.081)	ND (0.09)	ND (0.1)	ND (0.1)	ND (0.085)	ND (0.08)	ND (0.088)	ND (0.077)
Tert-Butyl Ethyl Ether (ETBE)	-	-	ND (0.0041)	ND (0.004)	ND (0.0046)	ND (0.004)	ND (0.0043)	ND (0.004)	ND (0.005)	ND (0.005)	ND (0.004)	ND (0.0045)	ND (0.005)	ND (0.005)	ND (0.0043)	ND (0.004)	ND (0.0044)	ND (0.0039)
tert-Butylbenzene	2200	-	ND (0.0041)	ND (0.004)	ND (0.0046)	ND (0.004)	ND (0.0043)	ND (0.004)	ND (0.005)	ND (0.005)	ND (0.004)	ND (0.0045)	ND (0.005)	ND (0.005)	ND (0.0043)	ND (0.004)	ND (0.0044)	ND (0.0039)
Tetrachloroethene	0.6	-	ND (0.0041)	ND (0.004)	ND (0.0046)	ND (0.004)	ND (0.0043)	ND (0.004)	ND (0.005)	ND (0.005)	ND (0.004)	ND (0.0045)	ND (0.005)	ND (0.005)	ND (0.0043)	ND (0.004)	ND (0.0044)	ND (0.0039)
Toluene	1100	-	ND (0.0041)	ND (0.004)	ND (0.0046)	ND (0.004)	ND (0.0043)	ND (0.004)	ND (0.005)	ND (0.005)	ND (0.004)	ND (0.0045)	ND (0.005)	ND (0.005)	ND (0.0043)	ND (0.004)	ND (0.0044)	ND (0.0039)
trans-1,2-Dichloroethene	130	-	ND (0.0041)	ND (0.004)	ND (0.0046)	ND (0.004)	ND (0.0043)	ND (0.004)	ND (0.005)	ND (0.005)	ND (0.004)	ND (0.0045)	ND (0.005)	ND (0.005)	ND (0.0043)	ND (0.004)	ND (0.0044)	ND (0.0039)
trans-1,3-Dichloropropene	-	-	ND (0.0041)	ND (0.004)	ND (0.0046)	ND (0.004)	ND (0.0043)	ND (0.004)	ND (0.005)	ND (0.005)	ND (0.004)	ND (0.0045)	ND (0.005)	ND (0.005)	ND (0.0043)	ND (0.004)	ND (0.0044)	ND (0.0039)
Trichloroethene	-	0.94	ND (0.0041)	ND (0.004)	ND (0.0046)	ND (0.004)	ND (0.0043)	ND (0.004)	ND (0.005)	ND (0.005)	ND (0.004)	ND (0.0045)	ND (0.005)	ND (0.005)	ND (0.0043)	ND (0.004)	ND (0.0044)	ND (0.0039)
Trichlorofluoromethane (CFC-11)	1200	-	ND (0.0041)	ND (0.004)	ND (0.0046)	ND (0.004)	ND (0.0043)	ND (0.004)	ND (0.005)	ND (0.005)	ND (0.004)	ND (0.0045)	ND (0.005)	ND (0.005)	ND (0.0043)	ND (0.004)	ND (0.0044)	ND (0.0039)
Trifluorotrichloroethane (Freon 113)	-	6700	ND (0.0041)	ND (0.004)	ND (0.0046)	ND (0.004)	ND (0.0043)	ND (0.004)	ND (0.005)	ND (0.005)	ND (0.004)	ND (0.0045)	ND (0.005)	ND (0.005)	ND (0.0043)	ND (0.004)	ND (0.0044)	ND (0.0039)
Vinyl acetate	-	910	ND (0.041)	ND (0.04)	ND (0.046)	ND (0.04)	ND (0.043)	ND (0.04)	ND (0.05)	ND (0.05)	ND (0.04)	ND (0.045)	ND (0.05)	ND (0.05)	ND (0.043)	ND (0.04)	ND (0.044)	ND (0.039)
Vinyl chloride	0.0088	-	ND (0.0041)	ND (0.004)	ND (0.0046)	ND (0.004)	ND (0.0043)	ND (0.004)	ND (0.005)	ND (0.005)	ND (0.004)	ND (0.0045)	ND (0.005)	ND (0.005)	ND (0.0043)	ND (0.004)	ND (0.0044)	ND (0.0039)

Table 1. Summary of Soil Analytical Results
Northeast Corner of South Central Avenue and Victoria Street
Carson, California

Location	DTSC	Regional	HA-50	HA-50	HA-50	HA-50	HA-51	HA-51	HA-51	HA-51	HA-52	HA-52	HA-52	HA-52	HA-53	HA-53	HA-53	HA-53
Sample Date	HHRA	Screening	10/19/17	10/19/17	10/19/17	10/19/17	10/19/17	10/19/17	10/19/17	10/19/17	10/19/17	10/19/17	10/19/17	10/19/17	10/19/17	10/19/17	10/19/17	10/19/17
Sample Depth (bgs)	Note 3	Levels	0.5 (ft)	2 (ft)	4 (ft)	6 (ft)	0.5 (ft)	2 (ft)	4 (ft)	6 (ft)	0.5 (ft)	2 (ft)	4 (ft)	6 (ft)	0.5 (ft)	2 (ft)	4 (ft)	6 (ft)
Sample Name	Residential	Residential	HA-50-005	HA-50-020	HA-50-040	HA-50-060	HA-51-005	HA-51-020	HA-51-040	HA-51-060	HA-52-005	HA-52-020	HA-52-040	HA-52-060	HA-53-005	HA-53-020	HA-53-040	HA-53-060
Inorganic Compounds (mg/kg)																		
Antimony	-	31	ND (2)	ND (2)	ND (2)	ND (2)	ND (2)	ND (2)	ND (2)	ND (2)	ND (2)	ND (2)	ND (2)	ND (2)	ND (2)	ND (2)	ND (2)	ND (2)
Arsenic	12	-	**8**	**5.1**	**5.6**	**6.2**	**8.3**	**7.8**	**32**	**10**	**11**	**7.9**	**7.6**	**3.4**	**5.9**	**5**	**10**	**5.8**
Barium	-	15000	**160**	**200**	**190**	**100**	**190**	**170**	**220**	**160**	**240**	**180**	**170**	**280**	**300**	**150**	**180**	**240**
Beryllium	15	-	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)
Cadmium	5.2	-	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)
Chromium	-	-	**19**	**20**	**21**	**15**	**19**	**20**	**22**	**17**	**21**	**20**	**19**	**18**	**27**	**17**	**19**	**24**
Cobalt	-	23	**9.9**	**10**	**12**	**7**	**10**	**10**	**11**	**9.2**	**9.9**	**10**	**10**	**8.4**	**9.3**	**11**	**9.8**	**8.8**
Copper	-	3100	**18**	**15**	**22**	**18**	**21**	**19**	**23**	**19**	**21**	**19**	**19**	**21**	**25**	**20**	**18**	**20**
Lead	80	-	**7.4**	**4.4**	**5.5**	**3.6**	**9.7**	**7.4**	**4.5**	**4.4**	**16**	**7.4**	**7.2**	**4.4**	**12**	**38**	**7.4**	**10**
Mercury	1	-	**0.92**	**0.78**	**1.2**	**1.1**	**1.3**	**1.1**	**0.8**	**0.77**	**0.95**	**1.2**	**0.21**	ND (0.1)	**0.17**	**0.17**	**0.16**	**0.11**
Molybdenum	-	390	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)
Nickel	490	-	**16**	**17**	**20**	**13**	**17**	**17**	**20**	**16**	**17**	**18**	**17**	**18**	**15**	**15**	**16**	**15**
Selenium	-	390	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)
Silver	390	-	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)
Thallium	-	0.78	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)
Vanadium	390	-	**31**	**32**	**34**	**32**	**32**	**34**	**38**	**30**	**35**	**34**	**34**	**29**	**40**	**30**	**33**	**33**
Zinc	-	23000	**51**	**32**	**46**	**37**	**55**	**50**	**47**	**38**	**62**	**48**	**46**	**46**	**61**	**47**	**52**	**54**
Total Petroleum Hydrocarbons (mg/kg)																		
Total Petroleum Hydrocarbons (C4-C10)	-	-	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)
Total Petroleum Hydrocarbons (C5-C8)	-	-	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)
Total Petroleum Hydrocarbons (C6-C8)	-	-	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)
Total Petroleum Hydrocarbons (C9-C16)	-	-	**13**	ND (10)	**40**	ND (10)	**14**	**19**	ND (10)	ND (10)	ND (50)	ND (10)	**16**	ND (10)	ND (50)	**10**	**14**	**21**
Total Petroleum Hydrocarbons (C9-C18)	-	-	**24**	ND (10)	**48**	ND (10)	**28**	**34**	ND (10)	ND (10)	ND (50)	**12**	**27**	ND (10)	ND (50)	**12**	**19**	**28**
Total Petroleum Hydrocarbons (C10-C40)	-	-	**520**	**33**	**850**	ND (10)	**590**	**820**	ND (10)	ND (10)	**1200**	**360**	**680**	ND (10)	**1900**	**120**	**510**	**750**
Total Petroleum Hydrocarbons (C17-C32)	-	-	**280**	**27**	**320**	ND (10)	**350**	**430**	ND (10)	ND (10)	**430**	**190**	**310**	ND (10)	**850**	**66**	**220**	**360**
Total Petroleum Hydrocarbons (C19-C32)	-	-	**270**	**27**	**310**	ND (10)	**340**	**410**	ND (10)	ND (10)	**430**	**190**	**300**	ND (10)	**840**	**64**	**220**	**350**
Volatile Organic Compounds (mg/kg)																		
1,1,1,2-Tetrachloroethane	2	-	ND (0.0041)	ND (0.004)	ND (0.0041)	ND (0.0045)	ND (0.0045)	ND (0.0044)	ND (0.0043)	ND (0.0038)	ND (0.0047)	ND (0.0042)	ND (0.004)	ND (0.0047)	ND (0.0046)	ND (0.0045)	ND (0.0045)	ND (0.004)
1,1,1-Trichloroethane	1700	-	ND (0.0041)	ND (0.004)	ND (0.0041)	ND (0.0045)	ND (0.0045)	ND (0.0044)	ND (0.0043)	ND (0.0038)	ND (0.0047)	ND (0.0042)	ND (0.004)	ND (0.0047)	ND (0.0046)	ND (0.0045)	ND (0.0045)	ND (0.004)
1,1,2,2-Tetrachloroethane	0.61	-	ND (0.0041)	ND (0.004)	ND (0.0041)	ND (0.0045)	ND (0.0045)	ND (0.0044)	ND (0.0043)	ND (0.0038)	ND (0.0047)	ND (0.0042)	ND (0.004)	ND (0.0047)	ND (0.0046)	ND (0.0045)	ND (0.0045)	ND (0.004)
1,1,2-Trichloroethane	-	1.1	ND (0.0041)	ND (0.004)	ND (0.0041)	ND (0.0045)	ND (0.0045)	ND (0.0044)	ND (0.0043)	ND (0.0038)	ND (0.0047)	ND (0.0042)	ND (0.004)	ND (0.0047)	ND (0.0046)	ND (0.0045)	ND (0.0045)	ND (0.004)
1,1-Dichloroethane	3.6	-	ND (0.0041)	ND (0.004)	ND (0.0041)	ND (0.0045)	ND (0.0045)	ND (0.0044)	ND (0.0043)	ND (0.0038)	ND (0.0047)	ND (0.0042)	ND (0.004)	ND (0.0047)	ND (0.0046)	ND (0.0045)	ND (0.0045)	ND (0.004)
1,1-Dichloroethene	-	230	ND (0.0041)	ND (0.004)	ND (0.0041)	ND (0.0045)	ND (0.0045)	ND (0.0044)	ND (0.0043)	ND (0.0038)	ND (0.0047)	ND (0.0042)	ND (0.004)	ND (0.0047)	ND (0.0046)	ND (0.0045)	ND (0.0045)	ND (0.004)
1,1-Dichloropropene	-	-	ND (0.0041)	ND (0.004)	ND (0.0041)	ND (0.0045)	ND (0.0045)	ND (0.0044)	ND (0.0043)	ND (0.0038)	ND (0.0047)	ND (0.0042)	ND (0.004)	ND (0.0047)	ND (0.0046)	ND (0.0045)	ND (0.0045)	ND (0.004)
1,2,3-Trichlorobenzene	63	-	ND (0.0041)	ND (0.004)	ND (0.0041)	ND (0.0045)	ND (0.0045)	ND (0.0044)	ND (0.0043)	ND (0.0038)	ND (0.0047)	ND (0.0042)	ND (0.004)	ND (0.0047)	ND (0.0046)	ND (0.0045)	ND (0.0045)	ND (0.004)
1,2,3-Trichloropropane	0.0015	-	ND (0.0041)	ND (0.004)	ND (0.0041)	ND (0.0045)	ND (0.0045)	ND (0.0044)	ND (0.0043)	ND (0.0038)	ND (0.0047)	ND (0.0042)	ND (0.004)	ND (0.0047)	ND (0.0046)	ND (0.0045)	ND (0.0045)	ND (0.004)
1,2,4-Trichlorobenzene	-	24	ND (0.0041)	ND (0.004)	ND (0.0041)	ND (0.0045)	ND (0.0045)	ND (0.0044)	ND (0.0043)	ND (0.0038)	ND (0.0047)	ND (0.0042)	ND (0.004)	ND (0.0047)	ND (0.0046)	ND (0.0045)	ND (0.0045)	ND (0.004)
1,2,4-Trimethylbenzene	-	300	ND (0.0041)	ND (0.004)	ND (0.0041)	ND (0.0045)	ND (0.0045)	ND (0.0044)	ND (0.0043)	ND (0.0038)	ND (0.0047)	ND (0.0042)	ND (0.004)	ND (0.0047)	ND (0.0046)	ND (0.0045)	ND (0.0045)	ND (0.004)

Table 1. Summary of Soil Analytical Results
Northeast Corner of South Central Avenue and Victoria Street
Carson, California

Location	DTSC	Regional	HA-50	HA-50	HA-50	HA-50	HA-51	HA-51	HA-51	HA-51	HA-52	HA-52	HA-52	HA-52	HA-53	HA-53	HA-53	HA-53
Sample Date	HHRA	Screening	10/19/17	10/19/17	10/19/17	10/19/17	10/19/17	10/19/17	10/19/17	10/19/17	10/19/17	10/19/17	10/19/17	10/19/17	10/19/17	10/19/17	10/19/17	10/19/17
Sample Depth (bgs)	Note 3	Levels	0.5 (ft)	2 (ft)	4 (ft)	6 (ft)	0.5 (ft)	2 (ft)	4 (ft)	6 (ft)	0.5 (ft)	2 (ft)	4 (ft)	6 (ft)	0.5 (ft)	2 (ft)	4 (ft)	6 (ft)
Sample Name	Residential	Residential	HA-50-005	HA-50-020	HA-50-040	HA-50-060	HA-51-005	HA-51-020	HA-51-040	HA-51-060	HA-52-005	HA-52-020	HA-52-040	HA-52-060	HA-53-005	HA-53-020	HA-53-040	HA-53-060
Volatile Organic Compounds (mg/kg)																		
1,2-Dibromo-3-chloropropane (DBCP)	-	0.0053	ND (0.0082)	ND (0.008)	ND (0.0082)	ND (0.0089)	ND (0.0089)	ND (0.0088)	ND (0.0085)	ND (0.0076)	ND (0.0095)	ND (0.0083)	ND (0.0079)	ND (0.0093)	ND (0.0091)	ND (0.0091)	ND (0.009)	ND (0.0081)
1,2-Dibromoethane (Ethylene Dibromide)	0.037	-	ND (0.0041)	ND (0.004)	ND (0.0041)	ND (0.0045)	ND (0.0045)	ND (0.0044)	ND (0.0043)	ND (0.0038)	ND (0.0047)	ND (0.0042)	ND (0.004)	ND (0.0047)	ND (0.0046)	ND (0.0045)	ND (0.0045)	ND (0.004)
1,2-Dichlorobenzene	-	1800	ND (0.0041)	ND (0.004)	ND (0.0041)	ND (0.0045)	ND (0.0045)	ND (0.0044)	ND (0.0043)	ND (0.0038)	ND (0.0047)	ND (0.0042)	ND (0.004)	ND (0.0047)	ND (0.0046)	ND (0.0045)	ND (0.0045)	ND (0.004)
1,2-Dichloroethane	-	0.46	ND (0.0041)	ND (0.004)	ND (0.0041)	ND (0.0045)	ND (0.0045)	ND (0.0044)	ND (0.0043)	ND (0.0038)	ND (0.0047)	ND (0.0042)	ND (0.004)	ND (0.0047)	ND (0.0046)	ND (0.0045)	ND (0.0045)	ND (0.004)
1,2-Dichloropropane	-	0.28	ND (0.0041)	ND (0.004)	ND (0.0041)	ND (0.0045)	ND (0.0045)	ND (0.0044)	ND (0.0043)	ND (0.0038)	ND (0.0047)	ND (0.0042)	ND (0.004)	ND (0.0047)	ND (0.0046)	ND (0.0045)	ND (0.0045)	ND (0.004)
1,3,5-Trimethylbenzene	210	-	ND (0.0041)	ND (0.004)	ND (0.0041)	ND (0.0045)	ND (0.0045)	ND (0.0044)	ND (0.0043)	ND (0.0038)	ND (0.0047)	ND (0.0042)	ND (0.004)	ND (0.0047)	ND (0.0046)	ND (0.0045)	ND (0.0045)	ND (0.004)
1,3-Dichlorobenzene	240	-	ND (0.0041)	ND (0.004)	ND (0.0041)	ND (0.0045)	ND (0.0045)	ND (0.0044)	ND (0.0043)	ND (0.0038)	ND (0.0047)	ND (0.0042)	ND (0.004)	ND (0.0047)	ND (0.0046)	ND (0.0045)	ND (0.0045)	ND (0.004)
1,3-Dichloropropane	420	-	ND (0.0041)	ND (0.004)	ND (0.0041)	ND (0.0045)	ND (0.0045)	ND (0.0044)	ND (0.0043)	ND (0.0038)	ND (0.0047)	ND (0.0042)	ND (0.004)	ND (0.0047)	ND (0.0046)	ND (0.0045)	ND (0.0045)	ND (0.004)
1,4-Dichlorobenzene	-	2.6	ND (0.0041)	ND (0.004)	ND (0.0041)	ND (0.0045)	ND (0.0045)	ND (0.0044)	ND (0.0043)	ND (0.0038)	ND (0.0047)	ND (0.0042)	ND (0.004)	ND (0.0047)	ND (0.0046)	ND (0.0045)	ND (0.0045)	ND (0.004)
2,2-Dichloropropane	-	-	ND (0.0041)	ND (0.004)	ND (0.0041)	ND (0.0045)	ND (0.0045)	ND (0.0044)	ND (0.0043)	ND (0.0038)	ND (0.0047)	ND (0.0042)	ND (0.004)	ND (0.0047)	ND (0.0046)	ND (0.0045)	ND (0.0045)	ND (0.004)
2-Chlorotoluene	480	-	ND (0.0041)	ND (0.004)	ND (0.0041)	ND (0.0045)	ND (0.0045)	ND (0.0044)	ND (0.0043)	ND (0.0038)	ND (0.0047)	ND (0.0042)	ND (0.004)	ND (0.0047)	ND (0.0046)	ND (0.0045)	ND (0.0045)	ND (0.004)
2-Phenylbutane (sec-Butylbenzene)	2200	-	ND (0.0041)	ND (0.004)	ND (0.0041)	ND (0.0045)	ND (0.0045)	ND (0.0044)	ND (0.0043)	ND (0.0038)	ND (0.0047)	ND (0.0042)	ND (0.004)	ND (0.0047)	ND (0.0046)	ND (0.0045)	ND (0.0045)	ND (0.004)
4-Chlorotoluene	440	-	ND (0.0041)	ND (0.004)	ND (0.0041)	ND (0.0045)	ND (0.0045)	ND (0.0044)	ND (0.0043)	ND (0.0038)	ND (0.0047)	ND (0.0042)	ND (0.004)	ND (0.0047)	ND (0.0046)	ND (0.0045)	ND (0.0045)	ND (0.004)
Benzene	0.33	-	ND (0.0041)	ND (0.004)	ND (0.0041)	ND (0.0045)	ND (0.0045)	ND (0.0044)	ND (0.0043)	ND (0.0038)	ND (0.0047)	ND (0.0042)	ND (0.004)	ND (0.0047)	ND (0.0046)	ND (0.0045)	ND (0.0045)	ND (0.004)
Bromobenzene	-	290	ND (0.0041)	ND (0.004)	ND (0.0041)	ND (0.0045)	ND (0.0045)	ND (0.0044)	ND (0.0043)	ND (0.0038)	ND (0.0047)	ND (0.0042)	ND (0.004)	ND (0.0047)	ND (0.0046)	ND (0.0045)	ND (0.0045)	ND (0.004)
Bromodichloromethane	0.3	-	ND (0.0041)	ND (0.004)	ND (0.0041)	ND (0.0045)	ND (0.0045)	ND (0.0044)	ND (0.0043)	ND (0.0038)	ND (0.0047)	ND (0.0042)	ND (0.004)	ND (0.0047)	ND (0.0046)	ND (0.0045)	ND (0.0045)	ND (0.004)
Bromoform	20	-	ND (0.0041)	ND (0.004)	ND (0.0041)	ND (0.0045)	ND (0.0045)	ND (0.0044)	ND (0.0043)	ND (0.0038)	ND (0.0047)	ND (0.0042)	ND (0.004)	ND (0.0047)	ND (0.0046)	ND (0.0045)	ND (0.0045)	ND (0.004)
Bromomethane (Methyl Bromide)	-	6.8	ND (0.0041)	ND (0.004)	ND (0.0041)	ND (0.0045)	ND (0.0045)	ND (0.0044)	ND (0.0043)	ND (0.0038)	ND (0.0047)	ND (0.0042)	ND (0.004)	ND (0.0047)	ND (0.0046)	ND (0.0045)	ND (0.0045)	ND (0.004)
Carbon disulfide	-	770	ND (0.0041)	ND (0.004)	ND (0.0041)	ND (0.0045)	ND (0.0045)	ND (0.0044)	ND (0.0043)	ND (0.0038)	ND (0.0047)	ND (0.0042)	ND (0.004)	ND (0.0047)	ND (0.0046)	ND (0.0045)	ND (0.0045)	ND (0.004)
Carbon tetrachloride	0.099	-	ND (0.0041)	ND (0.004)	ND (0.0041)	ND (0.0045)	ND (0.0045)	ND (0.0044)	ND (0.0043)	ND (0.0038)	ND (0.0047)	ND (0.0042)	ND (0.004)	ND (0.0047)	ND (0.0046)	ND (0.0045)	ND (0.0045)	ND (0.004)
Chlorobenzene	-	280	ND (0.0041)	ND (0.004)	ND (0.0041)	ND (0.0045)	ND (0.0045)	ND (0.0044)	ND (0.0043)	ND (0.0038)	ND (0.0047)	ND (0.0042)	ND (0.004)	ND (0.0047)	ND (0.0046)	ND (0.0045)	ND (0.0045)	ND (0.004)
Chlorobromomethane	-	150	ND (0.0041)	ND (0.004)	ND (0.0041)	ND (0.0045)	ND (0.0045)	ND (0.0044)	ND (0.0043)	ND (0.0038)	ND (0.0047)	ND (0.0042)	ND (0.004)	ND (0.0047)	ND (0.0046)	ND (0.0045)	ND (0.0045)	ND (0.004)
Chloroethane	3.1	-	ND (0.0041)	ND (0.004)	ND (0.0041)	ND (0.0045)	ND (0.0045)	ND (0.0044)	ND (0.0043)	ND (0.0038)	ND (0.0047)	ND (0.0042)	ND (0.004)	ND (0.0047)	ND (0.0046)	ND (0.0045)	ND (0.0045)	ND (0.004)
Chloroform (Trichloromethane)	-	0.32	ND (0.0041)	ND (0.004)	ND (0.0041)	ND (0.0045)	ND (0.0045)	ND (0.0044)	ND (0.0043)	ND (0.0038)	ND (0.0047)	ND (0.0042)	ND (0.004)	ND (0.0047)	ND (0.0046)	ND (0.0045)	ND (0.0045)	ND (0.004)
Chloromethane (Methyl Chloride)	-	110	ND (0.0041)	ND (0.004)	ND (0.0041)	ND (0.0045)	ND (0.0045)	ND (0.0044)	ND (0.0043)	ND (0.0038)	ND (0.0047)	ND (0.0042)	ND (0.004)	ND (0.0047)	ND (0.0046)	ND (0.0045)	ND (0.0045)	ND (0.004)
cis-1,2-Dichloroethene	19	-	ND (0.0041)	ND (0.004)	ND (0.0041)	ND (0.0045)	ND (0.0045)	ND (0.0044)	ND (0.0043)	ND (0.0038)	ND (0.0047)	ND (0.0042)	ND (0.004)	ND (0.0047)	ND (0.0046)	ND (0.0045)	ND (0.0045)	ND (0.004)
cis-1,3-Dichloropropene	-	-	ND (0.0041)	ND (0.004)	ND (0.0041)	ND (0.0045)	ND (0.0045)	ND (0.0044)	ND (0.0043)	ND (0.0038)	ND (0.0047)	ND (0.0042)	ND (0.004)	ND (0.0047)	ND (0.0046)	ND (0.0045)	ND (0.0045)	ND (0.004)
Cymene (p-Isopropyltoluene)	-	-	ND (0.0041)	ND (0.004)	ND (0.0041)	ND (0.0045)	ND (0.0045)	ND (0.0044)	ND (0.0043)	ND (0.0038)	ND (0.0047)	ND (0.0042)	ND (0.004)	ND (0.0047)	ND (0.0046)	ND (0.0045)	ND (0.0045)	ND (0.004)
Dibromochloromethane	0.95	-	ND (0.0041)	ND (0.004)	ND (0.0041)	ND (0.0045)	ND (0.0045)	ND (0.0044)	ND (0.0043)	ND (0.0038)	ND (0.0047)	ND (0.0042)	ND (0.004)	ND (0.0047)	ND (0.0046)	ND (0.0045)	ND (0.0045)	ND (0.004)
Dibromomethane	-	24	ND (0.0041)	ND (0.004)	ND (0.0041)	ND (0.0045)	ND (0.0045)	ND (0.0044)	ND (0.0043)	ND (0.0038)	ND (0.0047)	ND (0.0042)	ND (0.004)	ND (0.0047)	ND (0.0046)	ND (0.0045)	ND (0.0045)	ND (0.004)
Dichlorodifluoromethane (CFC-12)	-	87	ND (0.0041)	ND (0.004)	ND (0.0041)	ND (0.0045)	ND (0.0045)	ND (0.0044)	ND (0.0043)	ND (0.0038)	ND (0.0047)	ND (0.0042)	ND (0.004)	ND (0.0047)	ND (0.0046)	ND (0.0045)	ND (0.0045)	ND (0.004)
Diisopropyl ether (DIPE)	-	2200	ND (0.0041)	ND (0.004)	ND (0.0041)	ND (0.0045)	ND (0.0045)	ND (0.0044)	ND (0.0043)	ND (0.0038)	ND (0.0047)	ND (0.0042)	ND (0.004)	ND (0.0047)	ND (0.0046)	ND (0.0045)	ND (0.0045)	ND (0.004)
Ethyl acetate	-	620	ND (0.041)	ND (0.04)	ND (0.041)	ND (0.045)	ND (0.045)	ND (0.044)	ND (0.043)	ND (0.038)	ND (0.047)	ND (0.042)	ND (0.04)	ND (0.047)	ND (0.046)	ND (0.045)	ND (0.045)	ND (0.04)
Ethyl Ether	2300	-	ND (0.041)	ND (0.04)	ND (0.041)	ND (0.045)	ND (0.045)	ND (0.044)	ND (0.043)	ND (0.038)	ND (0.047)	ND (0.042)	ND (0.04)	ND (0.047)	ND (0.046)	ND (0.045)	ND (0.045)	ND (0.04)
Ethylbenzene	-	5.8	ND (0.0041)	ND (0.004)	ND (0.0041)	ND (0.0045)	ND (0.0045)	ND (0.0044)	ND (0.0043)	ND (0.0038)	ND (0.0047)	ND (0.0042)	ND (0.004)	ND (0.0047)	ND (0.0046)	ND (0.0045)	ND (0.0045)	ND (0.004)
Hexachlorobutadiene	1.2	-	ND (0.0041)	ND (0.004)	ND (0.0041)	ND (0.0045)	ND (0.0045)	ND (0.0044)	ND (0.0043)	ND (0.0038)	ND (0.0047)	ND (0.0042)	ND (0.004)	ND (0.0047)	ND (0.0046)	ND (0.0045)	ND (0.0045)	ND (0.004)
Isopropylbenzene (Cumene)	-	1900	ND (0.0041)	ND (0.004)	ND (0.0041)	ND (0.0045)	ND (0.0045)	ND (0.0044)	ND (0.0043)	ND (0.0038)	ND (0.0047)	ND (0.0042)	ND (0.004)	ND (0.0047)	ND (0.0046)	ND (0.0045)	ND (0.0045)	ND (0.004)
m,p-Xylenes	-	-	ND (0.0082)	ND (0.008)	ND (0.0082)	ND (0.0089)	ND (0.0089)	ND (0.0088)	ND (0.0085)	ND (0.0076)	ND (0.0095)	ND (0.0083)	ND (0.0079)	ND (0.0093)	ND (0.0091)	ND (0.0091)	ND (0.009)	ND (0.0081)

Table 1. Summary of Soil Analytical Results
Northeast Corner of South Central Avenue and Victoria Street
Carson, California

Location	DTSC	Regional	HA-50	HA-50	HA-50	HA-50	HA-51	HA-51	HA-51	HA-51	HA-52	HA-52	HA-52	HA-52	HA-53	HA-53	HA-53	HA-53
Sample Date	HHRA	Screening	10/19/17	10/19/17	10/19/17	10/19/17	10/19/17	10/19/17	10/19/17	10/19/17	10/19/17	10/19/17	10/19/17	10/19/17	10/19/17	10/19/17	10/19/17	10/19/17
Sample Depth (bgs)	Note 3	Levels	0.5 (ft)	2 (ft)	4 (ft)	6 (ft)	0.5 (ft)	2 (ft)	4 (ft)	6 (ft)	0.5 (ft)	2 (ft)	4 (ft)	6 (ft)	0.5 (ft)	2 (ft)	4 (ft)	6 (ft)
Sample Name	Residential	Residential	HA-50-005	HA-50-020	HA-50-040	HA-50-060	HA-51-005	HA-51-020	HA-51-040	HA-51-060	HA-52-005	HA-52-020	HA-52-040	HA-52-060	HA-53-005	HA-53-020	HA-53-040	HA-53-060
Volatile Organic Compounds (mg/kg)																		
Methyl Tert Butyl Ether	-	47	ND (0.0041)	ND (0.004)	ND (0.0041)	ND (0.0045)	ND (0.0045)	ND (0.0044)	ND (0.0043)	ND (0.0038)	ND (0.0047)	ND (0.0042)	ND (0.004)	ND (0.0047)	ND (0.0046)	ND (0.0045)	ND (0.0045)	ND (0.004)
Methylene chloride	1.9	-	ND (0.0041)	ND (0.004)	ND (0.0041)	ND (0.0045)	ND (0.0045)	ND (0.0044)	ND (0.0043)	ND (0.0038)	ND (0.0047)	ND (0.0042)	ND (0.004)	ND (0.0047)	ND (0.0046)	ND (0.0045)	ND (0.0045)	ND (0.004)
Naphthalene	-	3.8	ND (0.0041)	ND (0.004)	ND (0.0041)	ND (0.0045)	ND (0.0045)	ND (0.0044)	ND (0.0043)	ND (0.0038)	ND (0.0047)	ND (0.0042)	ND (0.004)	ND (0.0047)	ND (0.0046)	ND (0.0045)	ND (0.0045)	ND (0.004)
n-Butylbenzene	1200	-	ND (0.0041)	ND (0.004)	ND (0.0041)	ND (0.0045)	ND (0.0045)	ND (0.0044)	ND (0.0043)	ND (0.0038)	ND (0.0047)	ND (0.0042)	ND (0.004)	ND (0.0047)	ND (0.0046)	ND (0.0045)	ND (0.0045)	ND (0.004)
n-Propylbenzene	-	3800	ND (0.0041)	ND (0.004)	ND (0.0041)	ND (0.0045)	ND (0.0045)	ND (0.0044)	ND (0.0043)	ND (0.0038)	ND (0.0047)	ND (0.0042)	ND (0.004)	ND (0.0047)	ND (0.0046)	ND (0.0045)	ND (0.0045)	ND (0.004)
o-Xylene	-	650	ND (0.0041)	ND (0.004)	ND (0.0041)	ND (0.0045)	ND (0.0045)	ND (0.0044)	ND (0.0043)	ND (0.0038)	ND (0.0047)	ND (0.0042)	ND (0.004)	ND (0.0047)	ND (0.0046)	ND (0.0045)	ND (0.0045)	ND (0.004)
Styrene	-	6000	ND (0.0041)	ND (0.004)	ND (0.0041)	ND (0.0045)	ND (0.0045)	ND (0.0044)	ND (0.0043)	ND (0.0038)	ND (0.0047)	ND (0.0042)	ND (0.004)	ND (0.0047)	ND (0.0046)	ND (0.0045)	ND (0.0045)	ND (0.004)
Tert-Amyl Methyl Ether (TAME)	-	-	ND (0.0041)	ND (0.004)	ND (0.0041)	ND (0.0045)	ND (0.0045)	ND (0.0044)	ND (0.0043)	ND (0.0038)	ND (0.0047)	ND (0.0042)	ND (0.004)	ND (0.0047)	ND (0.0046)	ND (0.0045)	ND (0.0045)	ND (0.004)
Tert-Butyl Alcohol (tert-Butanol)	-	-	ND (0.082)	ND (0.08)	ND (0.082)	ND (0.089)	ND (0.089)	ND (0.088)	ND (0.085)	ND (0.076)	ND (0.095)	ND (0.083)	ND (0.079)	ND (0.093)	ND (0.091)	ND (0.091)	ND (0.09)	ND (0.081)
Tert-Butyl Ethyl Ether (ETBE)	-	-	ND (0.0041)	ND (0.004)	ND (0.0041)	ND (0.0045)	ND (0.0045)	ND (0.0044)	ND (0.0043)	ND (0.0038)	ND (0.0047)	ND (0.0042)	ND (0.004)	ND (0.0047)	ND (0.0046)	ND (0.0045)	ND (0.0045)	ND (0.004)
tert-Butylbenzene	2200	-	ND (0.0041)	ND (0.004)	ND (0.0041)	ND (0.0045)	ND (0.0045)	ND (0.0044)	ND (0.0043)	ND (0.0038)	ND (0.0047)	ND (0.0042)	ND (0.004)	ND (0.0047)	ND (0.0046)	ND (0.0045)	ND (0.0045)	ND (0.004)
Tetrachloroethene	0.6	-	ND (0.0041)	ND (0.004)	ND (0.0041)	ND (0.0045)	ND (0.0045)	ND (0.0044)	ND (0.0043)	ND (0.0038)	ND (0.0047)	ND (0.0042)	ND (0.004)	ND (0.0047)	ND (0.0046)	ND (0.0045)	ND (0.0045)	ND (0.004)
Toluene	1100	-	ND (0.0041)	ND (0.004)	ND (0.0041)	ND (0.0045)	ND (0.0045)	ND (0.0044)	ND (0.0043)	ND (0.0038)	ND (0.0047)	ND (0.0042)	ND (0.004)	ND (0.0047)	ND (0.0046)	ND (0.0045)	ND (0.0045)	ND (0.004)
trans-1,2-Dichloroethene	130	-	ND (0.0041)	ND (0.004)	ND (0.0041)	ND (0.0045)	ND (0.0045)	ND (0.0044)	ND (0.0043)	ND (0.0038)	ND (0.0047)	ND (0.0042)	ND (0.004)	ND (0.0047)	ND (0.0046)	ND (0.0045)	ND (0.0045)	ND (0.004)
trans-1,3-Dichloropropene	-	-	ND (0.0041)	ND (0.004)	ND (0.0041)	ND (0.0045)	ND (0.0045)	ND (0.0044)	ND (0.0043)	ND (0.0038)	ND (0.0047)	ND (0.0042)	ND (0.004)	ND (0.0047)	ND (0.0046)	ND (0.0045)	ND (0.0045)	ND (0.004)
Trichloroethene	-	0.94	ND (0.0041)	ND (0.004)	ND (0.0041)	ND (0.0045)	ND (0.0045)	ND (0.0044)	ND (0.0043)	ND (0.0038)	ND (0.0047)	ND (0.0042)	ND (0.004)	ND (0.0047)	ND (0.0046)	ND (0.0045)	ND (0.0045)	ND (0.004)
Trichlorofluoromethane (CFC-11)	1200	-	ND (0.0041)	ND (0.004)	ND (0.0041)	ND (0.0045)	ND (0.0045)	ND (0.0044)	ND (0.0043)	ND (0.0038)	ND (0.0047)	ND (0.0042)	ND (0.004)	ND (0.0047)	ND (0.0046)	ND (0.0045)	ND (0.0045)	ND (0.004)
Trifluorotrichloroethane (Freon 113)	-	6700	ND (0.0041)	ND (0.004)	ND (0.0041)	ND (0.0045)	ND (0.0045)	ND (0.0044)	ND (0.0043)	ND (0.0038)	ND (0.0047)	ND (0.0042)	ND (0.004)	ND (0.0047)	ND (0.0046)	ND (0.0045)	ND (0.0045)	ND (0.004)
Vinyl acetate	-	910	ND (0.041)	ND (0.04)	ND (0.041)	ND (0.045)	ND (0.045)	ND (0.044)	ND (0.043)	ND (0.038)	ND (0.047)	ND (0.042)	ND (0.04)	ND (0.047)	ND (0.046)	ND (0.045)	ND (0.045)	ND (0.04)
Vinyl chloride	0.0088	-	ND (0.0041)	ND (0.004)	ND (0.0041)	ND (0.0045)	ND (0.0045)	ND (0.0044)	ND (0.0043)	ND (0.0038)	ND (0.0047)	ND (0.0042)	ND (0.004)	ND (0.0047)	ND (0.0046)	ND (0.0045)	ND (0.0045)	ND (0.004)

Notes:

1. ND (#): Not detected above indicated reporting limit.
2. Results in bold are detected.
3. Lab qualifiers are shown and defined as follows:

   D5: Sample diluted due to failing internal standard in the original run.
4. Results were compared to the following criteria. If action levels were not available under DTSC HHRA Note 3, EPA RSLs were used. Exceedances are in red and flagged [ ]:

   A: Result is greater than DTSC HHRA Note 3 Residential (June 2017)

   B: Result is greater than Regional Screening Levels for Direct Contact Residential (RSLs, June 2017)

Exceeds the calculated site specific Risk Based Target Concentrations, the site-specific calculated Arsenic background concentration of 19 miligrams per kilogram, or the DTSC Hero Note #3 lead concentration for residential use.

Exceeds DTSC Hero Note #3 background concentration for Arsenic of 12 miligrams per kilogram but is less than the site-specfic Arsenic background concentration of 19 miligrams per kilogram

Table 2. Summary of Soild Gas Analytical Results
Southeast Corner of South Central Avenue and Victoria Street
Carson, California

Location	HA-01	HA-01	HA-02	HA-04	HA-05	HA-06	HA-07	HA-08	HA-09	HA-10	HA-11	HA-12	HA-13	HA-14	HA-15	HA-16	HA-17
Sample Date	9/6/17	9/6/17	9/6/17	9/6/17	9/6/17	9/6/17	9/6/17	9/6/17	9/6/17	9/6/17	9/6/17	9/6/17	9/6/17	9/6/17	9/6/17	9/6/17	9/6/17
Sample Type	N	FD	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Sample Depth (bgs)	5 (ft)	5 (ft)	5 (ft)	5 (ft)	5 (ft)	5 (ft)	5 (ft)	5 (ft)	5 (ft)	5 (ft)	5 (ft)	5 (ft)	5 (ft)	5 (ft)	5 (ft)	5 (ft)	5 (ft)
Sample Name	HA-01-5'	HA-01-5' REP	HA-02-5'	HA-04-5'	HA-05-5'	HA-06-5'	HA-07-5'	HA-08-5'	HA-09-5'	HA-10-5'	HA-11-5'	HA-12-5'	HA-13-5'	HA-14-5'	HA-15-5'	HA-16-5'	HA-17-5'
Inorganic Compounds (%)																	
Carbon dioxide	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Carbon monoxide	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methane	ND (0.01)	ND (0.01)	ND (0.01)	ND (0.01)	ND (0.01)	ND (0.01)	ND (0.01)	ND (0.01)	ND (0.01)	ND (0.01)	ND (0.01)	ND (0.01)	ND (0.01)	ND (0.01)	ND (0.01)	ND (0.01)	ND (0.01)
Nitrogen	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Oxygen (O2)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other																	
Hydrogen sulfide (ppmv)	ND (0.005)	ND (0.005)	ND (0.005)	ND (0.005)	ND (0.005)	ND (0.005)	ND (0.005)	ND (0.005)	ND (0.005)	ND (0.005)	ND (0.005)	ND (0.005)	ND (0.005)	ND (0.005)	ND (0.005)	ND (0.005)	ND (0.005)
Volatile Organic Compounds (ug/m3)																	
1,1,1,2-Tetrachloroethane	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)
1,1,1-Trichloroethane	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)
1,1,2,2-Tetrachloroethane	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)
1,1,2-Trichloroethane	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)
1,1-Dichloroethane	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)
1,1-Dichloroethene	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)
1,1-Dichloropropene	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)
1,2,3-Trichlorobenzene	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)
1,2,3-Trichloropropane	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)
1,2,4-Trichlorobenzene	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)
1,2,4-Trimethylbenzene	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)
1,2-Dibromo-3-chloropropane (DBCP)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)
1,2-Dibromoethane (Ethylene Dibromide)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)
1,2-Dichlorobenzene	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)
1,2-Dichloroethane	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)
1,2-Dichloropropane	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)
1,3,5-Trimethylbenzene	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)
1,3-Dichlorobenzene	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)
1,3-Dichloropropane	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)
1,4-Dichlorobenzene	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)
2,2-Dichloropropane	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)
2-Chlorotoluene	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)
2-Phenylbutane (sec-Butylbenzene)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)
4-Chlorotoluene	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)
Benzene	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)
Bromobenzene	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)
Bromodichloromethane	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)
Bromoform	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)
Carbon tetrachloride	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)

Table 2. Summary of Soild Gas Analytical Results
Southeast Corner of South Central Avenue and Victoria Street
Carson, California

Location	HA-01	HA-01	HA-02	HA-04	HA-05	HA-06	HA-07	HA-08	HA-09	HA-10	HA-11	HA-12	HA-13	HA-14	HA-15	HA-16	HA-17
Sample Date	9/6/17	9/6/17	9/6/17	9/6/17	9/6/17	9/6/17	9/6/17	9/6/17	9/6/17	9/6/17	9/6/17	9/6/17	9/6/17	9/6/17	9/6/17	9/6/17	9/6/17
Sample Type	N	FD	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Sample Depth (bgs)	5 (ft)	5 (ft)	5 (ft)	5 (ft)	5 (ft)	5 (ft)	5 (ft)	5 (ft)	5 (ft)	5 (ft)	5 (ft)	5 (ft)	5 (ft)	5 (ft)	5 (ft)	5 (ft)	5 (ft)
Sample Name	HA-01-5'	HA-01-5' REP	HA-02-5'	HA-04-5'	HA-05-5'	HA-06-5'	HA-07-5'	HA-08-5'	HA-09-5'	HA-10-5'	HA-11-5'	HA-12-5'	HA-13-5'	HA-14-5'	HA-15-5'	HA-16-5'	HA-17-5'
Volatile Organic Compounds (ug/m3)																	
Chlorobenzene	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)
Chloroform (Trichloromethane)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)
cis-1,2-Dichloroethene	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)
cis-1,3-Dichloropropene	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)
Cymene (p-Isopropyltoluene)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)
Dibromochloromethane	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)
Dibromomethane	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)
Dichlorodifluoromethane (CFC-12)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)
Diisopropyl ether (DIPE)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)
Ethylbenzene	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)
Gasoline	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hexachlorobutadiene	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)
Isopropylbenzene (Cumene)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)
m,p-Xylenes	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)
Methyl Tert Butyl Ether	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)
Methylene chloride	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)
Naphthalene	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)
n-Butylbenzene	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)
n-Propylbenzene	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)
o-Xylene	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)
Styrene	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)
Tert-Amyl Methyl Ether (TAME)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)
Tert-Butyl Alcohol (tert-Butanol)	ND (400)	ND (400)	ND (400)	ND (400)	ND (400)	ND (400)	ND (400)	ND (400)	ND (400)	ND (400)	ND (400)	ND (400)	ND (400)	ND (400)	ND (400)	ND (400)	ND (400)
Tert-Butyl Ethyl Ether (ETBE)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)
tert-Butylbenzene	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)
Tetrachloroethene	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)
Toluene	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)
trans-1,2-Dichloroethene	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)
trans-1,3-Dichloropropene	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)
Trichloroethene	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)
Trichlorofluoromethane (CFC-11)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)
Trifluorotrichloroethane (Freon 113)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)
Vinyl chloride	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)

Notes:

1. ND (#): Not detected above indicated reporting limit.
2. Results in **bold** are detected.

Table 2. Summary of Soild Gas Analytical Results
Southeast Corner of South Central Avenue and Victoria Street
Carson, California

Location	HA-18	HA-19	HA-20	HA-21	HA-22	HA-23	HA-24	HA-25	HA-26	HA-27	HA-28	HA-29	HA-30	HA-30	HA-31	HA-31	HA-32
Sample Date	9/6/17	9/6/17	9/6/17	9/7/17	9/7/17	9/7/17	9/7/17	9/7/17	9/7/17	9/7/17	9/7/17	9/7/17	9/8/17	9/20/17	9/8/17	9/20/17	9/8/17
Sample Type	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Sample Depth (bgs)	5 (ft)	5 (ft)	5 (ft)	5 (ft)	5 (ft)	5 (ft)	5 (ft)	5 (ft)	5 (ft)	5 (ft)	5 (ft)	5 (ft)	5 (ft)	15 (ft)	5 (ft)	15 (ft)	5 (ft)
Sample Name	HA-18-5'	HA-19-5'	HA-20-5'	HA-21-5'	HA-22-5'	HA-23-5'	HA-24-5'	HA-25-5'	HA-26-5'	HA-27-5'	HA-28-5'	HA-29-5'	HA-30-5'	HA-30-15'	HA-31-5'	HA-31-15'	HA-32-5'
Inorganic Compounds (%)																	
Carbon dioxide	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Carbon monoxide	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methane	ND (0.01)	ND (0.01)	ND (0.01)	ND (0.01)	ND (0.01)	ND (0.01)	ND (0.01)	ND (0.01)	ND (0.01)	ND (0.01)	ND (0.01)	ND (0.01)	ND (0.01)	-	ND (0.01)	-	ND (0.01)
Nitrogen	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Oxygen (O2)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other																	
Hydrogen sulfide (ppmv)	ND (0.005)	ND (0.005)	ND (0.005)	ND (0.005)	ND (0.005)	ND (0.005)	ND (0.005)	ND (0.005)	ND (0.005)	ND (0.005)	ND (0.005)	ND (0.005)	-	-	ND (0.005)	-	ND (0.005)
Volatile Organic Compounds (ug/m3)																	
1,1,1,2-Tetrachloroethane	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)
1,1,1-Trichloroethane	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)
1,1,2,2-Tetrachloroethane	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)
1,1,2-Trichloroethane	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)
1,1-Dichloroethane	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)
1,1-Dichloroethene	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)
1,1-Dichloropropene	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)
1,2,3-Trichlorobenzene	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)
1,2,3-Trichloropropane	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)
1,2,4-Trichlorobenzene	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)
1,2,4-Trimethylbenzene	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)
1,2-Dibromo-3-chloropropane (DBCP)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)
1,2-Dibromoethane (Ethylene Dibromide)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)
1,2-Dichlorobenzene	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)
1,2-Dichloroethane	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)
1,2-Dichloropropane	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)
1,3,5-Trimethylbenzene	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)
1,3-Dichlorobenzene	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)
1,3-Dichloropropane	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)
1,4-Dichlorobenzene	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)
2,2-Dichloropropane	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)
2-Chlorotoluene	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)
2-Phenylbutane (sec-Butylbenzene)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)
4-Chlorotoluene	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)
Benzene	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	**51**	ND (8)	ND (8)
Bromobenzene	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)
Bromodichloromethane	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)
Bromoform	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)
Carbon tetrachloride	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)

Table 2. Summary of Soild Gas Analytical Results
Southeast Corner of South Central Avenue and Victoria Street
Carson, California

Location	HA-18	HA-19	HA-20	HA-21	HA-22	HA-23	HA-24	HA-25	HA-26	HA-27	HA-28	HA-29	HA-30	HA-30	HA-31	HA-31	HA-32
Sample Date	9/6/17	9/6/17	9/6/17	9/7/17	9/7/17	9/7/17	9/7/17	9/7/17	9/7/17	9/7/17	9/7/17	9/7/17	9/8/17	9/20/17	9/8/17	9/20/17	9/8/17
Sample Type	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Sample Depth (bgs)	5 (ft)	5 (ft)	5 (ft)	5 (ft)	5 (ft)	5 (ft)	5 (ft)	5 (ft)	5 (ft)	5 (ft)	5 (ft)	5 (ft)	5 (ft)	15 (ft)	5 (ft)	15 (ft)	5 (ft)
Sample Name	HA-18-5'	HA-19-5'	HA-20-5'	HA-21-5'	HA-22-5'	HA-23-5'	HA-24-5'	HA-25-5'	HA-26-5'	HA-27-5'	HA-28-5'	HA-29-5'	HA-30-5'	HA-30-15'	HA-31-5'	HA-31-15'	HA-32-5'
Volatile Organic Compounds (ug/m3)																	
Chlorobenzene	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)
Chloroform (Trichloromethane)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)
cis-1,2-Dichloroethene	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)
cis-1,3-Dichloropropene	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)
Cymene (p-Isopropyltoluene)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)
Dibromochloromethane	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)
Dibromomethane	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)
Dichlorodifluoromethane (CFC-12)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)
Diisopropyl ether (DIPE)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)
Ethylbenzene	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	**20**	ND (8)	ND (8)	ND (8)	ND (8)
Gasoline	-	-	-	-	-	-	-	-	-	-	-	-	-	ND (200)	-	-	-
Hexachlorobutadiene	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)
Isopropylbenzene (Cumene)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)
m,p-Xylenes	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	**79**	ND (8)	**12**	ND (8)	ND (8)
Methyl Tert Butyl Ether	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)
Methylene chloride	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)
Naphthalene	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)
n-Butylbenzene	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)
n-Propylbenzene	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)
o-Xylene	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	**23**	ND (40)	ND (8)	ND (40)	ND (8)
Styrene	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)
Tert-Amyl Methyl Ether (TAME)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)
Tert-Butyl Alcohol (tert-Butanol)	ND (400)	ND (400)	ND (400)	ND (400)	ND (400)	ND (400)	ND (400)	ND (400)	ND (400)	ND (400)	ND (400)	ND (400)	ND (400)	ND (400)	ND (400)	ND (400)	ND (400)
Tert-Butyl Ethyl Ether (ETBE)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)
tert-Butylbenzene	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)
Tetrachloroethene	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	**18**	**131**	**66**	**224**	**11**
Toluene	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	**95**	ND (8)	**15**	ND (8)	ND (8)
trans-1,2-Dichloroethene	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)
trans-1,3-Dichloropropene	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)
Trichloroethene	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)
Trichlorofluoromethane (CFC-11)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)
Trifluorotrichloroethane (Freon 113)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)
Vinyl chloride	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)

Notes:

1. ND (#): Not detected above indicated reporti
2. Results in **bold** are detected.

Table 2. Summary of Soild Gas Analytical Results
Southeast Corner of South Central Avenue and Victoria Street
Carson, California

Location	HA-32	HA-33	HA-34	HA-34	HA-35	HA-36	HA-37	HA-38	HA-39	HA-40	HA-41	HA-42	HA-43	HA-43	HA-44	HA-44	HA-44
Sample Date	9/20/17	9/7/17	9/7/17	9/7/17	9/7/17	9/7/17	9/7/17	9/7/17	9/7/17	9/7/17	9/7/17	9/7/17	9/8/17	9/8/17	9/8/17	9/8/17	9/8/17
Sample Type	N	N	N	FD	N	N	N	N	N	N	N	N	N	N	N	FD	N
Sample Depth (bgs)	15 (ft)	5 (ft)	5 (ft)	5 (ft)	5 (ft)	5 (ft)	5 (ft)	5 (ft)	5 (ft)	5 (ft)	5 (ft)	5 (ft)	5 (ft)	15 (ft)	5 (ft)	5 (ft)	15 (ft)
Sample Name	HA-32-15'	HA-33-5'	HA-34-5'	HA-34-5' REP	HA-35-5'	HA-36-5'	HA-37-5'	HA-38-5'	HA-39-5'	HA-40-5'	HA-41-5'	HA-42-5'	HA-43-5'	HA-43-15'	HA-44-5'	HA-44-5' REP	HA-44-15'
Inorganic Compounds (%)																	
Carbon dioxide	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Carbon monoxide	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methane	-	ND (0.01)	ND (0.01)	ND (0.01)	ND (0.01)	ND (0.01)	ND (0.01)	ND (0.01)	ND (0.01)	ND (0.01)	ND (0.01)	ND (0.01)	ND (0.01)	ND (0.01)	ND (0.01)	ND (0.01)	ND (0.01)
Nitrogen	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Oxygen (O2)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other																	
Hydrogen sulfide (ppmv)	-	ND (0.005)	ND (0.005)	ND (0.005)	ND (0.005)	ND (0.005)	ND (0.005)	ND (0.005)	ND (0.005)	ND (0.005)	ND (0.005)	ND (0.005)	ND (0.005)	-	ND (0.005)	ND (0.005)	-
Volatile Organic Compounds (ug/m3)																	
1,1,1,2-Tetrachloroethane	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)
1,1,1-Trichloroethane	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)
1,1,2,2-Tetrachloroethane	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)
1,1,2-Trichloroethane	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)
1,1-Dichloroethane	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)
1,1-Dichloroethene	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)
1,1-Dichloropropene	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)
1,2,3-Trichlorobenzene	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)
1,2,3-Trichloropropane	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)
1,2,4-Trichlorobenzene	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)
1,2,4-Trimethylbenzene	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	**45**	ND (8)	ND (8)	ND (8)	ND (8)
1,2-Dibromo-3-chloropropane (DBCP)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)
1,2-Dibromoethane (Ethylene Dibromide)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)
1,2-Dichlorobenzene	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)
1,2-Dichloroethane	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)
1,2-Dichloropropane	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)
1,3,5-Trimethylbenzene	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)
1,3-Dichlorobenzene	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)
1,3-Dichloropropane	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)
1,4-Dichlorobenzene	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)
2,2-Dichloropropane	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)
2-Chlorotoluene	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)
2-Phenylbutane (sec-Butylbenzene)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)
4-Chlorotoluene	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)
Benzene	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	**23**	ND (8)	**31**	**34**	ND (8)
Bromobenzene	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)
Bromodichloromethane	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)
Bromoform	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)
Carbon tetrachloride	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)

Table 2. Summary of Soild Gas Analytical Results
Southeast Corner of South Central Avenue and Victoria Street
Carson, California

Location	HA-32	HA-33	HA-34	HA-34	HA-35	HA-36	HA-37	HA-38	HA-39	HA-40	HA-41	HA-42	HA-43	HA-43	HA-44	HA-44	HA-44
Sample Date	9/20/17	9/7/17	9/7/17	9/7/17	9/7/17	9/7/17	9/7/17	9/7/17	9/7/17	9/7/17	9/7/17	9/7/17	9/8/17	9/8/17	9/8/17	9/8/17	9/8/17
Sample Type	N	N	N	FD	N	N	N	N	N	N	N	N	N	N	N	FD	N
Sample Depth (bgs)	15 (ft)	5 (ft)	5 (ft)	5 (ft)	5 (ft)	5 (ft)	5 (ft)	5 (ft)	5 (ft)	5 (ft)	5 (ft)	5 (ft)	5 (ft)	15 (ft)	5 (ft)	5 (ft)	15 (ft)
Sample Name	HA-32-15'	HA-33-5'	HA-34-5'	HA-34-5' REP	HA-35-5'	HA-36-5'	HA-37-5'	HA-38-5'	HA-39-5'	HA-40-5'	HA-41-5'	HA-42-5'	HA-43-5'	HA-43-15'	HA-44-5'	HA-44-5' REP	HA-44-15'
Volatile Organic Compounds (ug/m3)																	
Chlorobenzene	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)
Chloroform (Trichloromethane)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)
cis-1,2-Dichloroethene	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)
cis-1,3-Dichloropropene	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)
Cymene (p-Isopropyltoluene)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	**94**	**23**	ND (8)	ND (8)	**44**
Dibromochloromethane	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)
Dibromomethane	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)
Dichlorodifluoromethane (CFC-12)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)
Diisopropyl ether (DIPE)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)
Ethylbenzene	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	**54**	ND (8)	**11**	**14**	ND (8)
Gasoline	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hexachlorobutadiene	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)
Isopropylbenzene (Cumene)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	**16**	ND (8)	**21**	**23**	ND (8)
m,p-Xylenes	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	**212**	ND (8)	**62**	**74**	ND (8)
Methyl Tert Butyl Ether	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)
Methylene chloride	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)
Naphthalene	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)
n-Butylbenzene	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)
n-Propylbenzene	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)
o-Xylene	ND (40)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	**48**	ND (8)	ND (8)	ND (8)	ND (8)
Styrene	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)
Tert-Amyl Methyl Ether (TAME)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)
Tert-Butyl Alcohol (tert-Butanol)	ND (400)	ND (400)	ND (400)	ND (400)	ND (400)	ND (400)	ND (400)	ND (400)	ND (400)	ND (400)	ND (400)	ND (400)	ND (400)	ND (400)	ND (400)	ND (400)	ND (400)
Tert-Butyl Ethyl Ether (ETBE)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)
tert-Butylbenzene	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)
Tetrachloroethene	**39**	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	**11**	ND (8)	ND (8)	**15**
Toluene	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	**307**	ND (8)	**163**	**178**	**17**
trans-1,2-Dichloroethene	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)
trans-1,3-Dichloropropene	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)
Trichloroethene	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)
Trichlorofluoromethane (CFC-11)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)
Trifluorotrichloroethane (Freon 113)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)
Vinyl chloride	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)

Notes:

1. ND (#): Not detected above indicated reporti
2. Results in **bold** are detected.

Table 2. Summary of Soild Gas Analytical Results
Southeast Corner of South Central Avenue and Victoria Street
Carson, California

Location	HA-45	HA-45	HA-46	HA-46	HA-46	HA-47	HA-47	HA-48	HA-48	HA-48	HA-49	HA-49	HA-50	HA-50	HA-50	HA-51	HA-51
Sample Date	9/8/17	9/20/17	9/8/17	9/20/17	9/20/17	9/8/17	9/8/17	9/8/17	9/20/17	9/20/17	9/8/17	9/20/17	10/23/17	10/23/17	10/23/17	10/23/17	10/23/17
Sample Type	N	N	N	N	FD	N	N	N	N	FD	N	N	N	FD	N	N	N
Sample Depth (bgs)	5 (ft)	15 (ft)	5 (ft)	15 (ft)	15 (ft)	5 (ft)	15 (ft)	5 (ft)	15 (ft)	15 (ft)	5 (ft)	15 (ft)	5 (ft)	5 (ft)	14 (ft)	5 (ft)	15 (ft)
Sample Name	HA-45-5'	HA-45-15'	HA-46-5'	HA-46-15'	HA-46-15' REP	HA-47-5'	HA-47-15'	HA-48-5'	HA-48-15'	HA-48-15' REP	HA-49-5'	HA-49-15'	HA-50-5	HA-50-5 REP	HA-50-14	HA-51-5	HA-51-15
Inorganic Compounds (%)																	
Carbon dioxide	-	-	-	-	-	-	-	-	-	-	-	-	**6.17**	**6.6**	**7.1**	**2.34**	**7.16**
Carbon monoxide	-	-	-	-	-	-	-	-	-	-	-	-	ND (0.01)	ND (0.01)	ND (0.01)	ND (0.01)	ND (0.01)
Methane	ND (0.01)	-	ND (0.01)	-	-	ND (0.01)	ND (0.01)	ND (0.01)	-	-	ND (0.01)	-	ND (0.01)	ND (0.01)	ND (0.01)	ND (0.01)	ND (0.01)
Nitrogen	-	-	-	-	-	-	-	-	-	-	-	-	**58.9**	**58.9**	**59.4**	**60.4**	**60.7**
Oxygen (O2)	-	-	-	-	-	-	-	-	-	-	-	-	**16.2**	**16.2**	**15.3**	**18.7**	**14.3**
Other																	
Hydrogen sulfide (ppmv)	ND (0.005)	-	ND (0.005)	-	-	ND (0.005)	-	ND (0.005)	-	-	ND (0.005)	-	-	-	-	-	-
Volatile Organic Compounds (ug/m3)																	
1,1,1,2-Tetrachloroethane	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)
1,1,1-Trichloroethane	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)
1,1,2,2-Tetrachloroethane	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)
1,1,2-Trichloroethane	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)
1,1-Dichloroethane	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)
1,1-Dichloroethene	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)
1,1-Dichloropropene	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)
1,2,3-Trichlorobenzene	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)
1,2,3-Trichloropropane	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)
1,2,4-Trichlorobenzene	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)
1,2,4-Trimethylbenzene	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	**39**	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	**21**	**18**	ND (8)	ND (8)	ND (8)
1,2-Dibromo-3-chloropropane (DBCP)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)
1,2-Dibromoethane (Ethylene Dibromide)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)
1,2-Dichlorobenzene	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)
1,2-Dichloroethane	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)
1,2-Dichloropropane	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)
1,3,5-Trimethylbenzene	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)
1,3-Dichlorobenzene	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)
1,3-Dichloropropane	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)
1,4-Dichlorobenzene	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)
2,2-Dichloropropane	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)
2-Chlorotoluene	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)
2-Phenylbutane (sec-Butylbenzene)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)
4-Chlorotoluene	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)
Benzene	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	**88**	ND (8)	**13**	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)
Bromobenzene	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)
Bromodichloromethane	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)
Bromoform	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)
Carbon tetrachloride	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)

Table 2. Summary of Soild Gas Analytical Results
Southeast Corner of South Central Avenue and Victoria Street
Carson, California

Location	HA-45	HA-45	HA-46	HA-46	HA-46	HA-47	HA-47	HA-48	HA-48	HA-48	HA-49	HA-49	HA-50	HA-50	HA-50	HA-51	HA-51
Sample Date	9/8/17	9/20/17	9/8/17	9/20/17	9/20/17	9/8/17	9/8/17	9/8/17	9/20/17	9/20/17	9/8/17	9/20/17	10/23/17	10/23/17	10/23/17	10/23/17	10/23/17
Sample Type	N	N	N	N	FD	N	N	N	N	FD	N	N	N	FD	N	N	N
Sample Depth (bgs)	5 (ft)	15 (ft)	5 (ft)	15 (ft)	15 (ft)	5 (ft)	15 (ft)	5 (ft)	15 (ft)	15 (ft)	5 (ft)	15 (ft)	5 (ft)	5 (ft)	14 (ft)	5 (ft)	15 (ft)
Sample Name	HA-45-5'	HA-45-15'	HA-46-5'	HA-46-15'	HA-46-15' REI	HA-47-5'	HA-47-15'	HA-48-5'	HA-48-15'	HA-48-15' REI	HA-49-5'	HA-49-15'	HA-50-5	HA-50-5 REP	HA-50-14	HA-51-5	HA-51-15
Volatile Organic Compounds (ug/m3)																	
Chlorobenzene	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)
Chloroform (Trichloromethane)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)
cis-1,2-Dichloroethene	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)
cis-1,3-Dichloropropene	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)
Cymene (p-Isopropyltoluene)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	**155**	**28**	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	**13**	ND (8)
Dibromochloromethane	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)
Dibromomethane	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)
Dichlorodifluoromethane (CFC-12)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)
Diisopropyl ether (DIPE)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)
Ethylbenzene	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	**74**	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	**39**	ND (8)
Gasoline	-	-	-	-	-	-	-	-	-	-	-	-	ND (2000)	ND (2000)	ND (2000)	ND (2000)	ND (2000)
Hexachlorobutadiene	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)
Isopropylbenzene (Cumene)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	**100**	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)
m,p-Xylenes	**9**	ND (8)	ND (8)	ND (8)	ND (8)	**280**	**23**	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	**46**	ND (8)
Methyl Tert Butyl Ether	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)
Methylene chloride	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)
Naphthalene	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	**9**	**8**	**8**	**9**	ND (40)
n-Butylbenzene	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)
n-Propylbenzene	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)
o-Xylene	ND (8)	ND (40)	ND (8)	ND (40)	ND (40)	**50**	ND (8)	ND (8)	ND (40)	ND (40)	ND (8)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)
Styrene	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)
Tert-Amyl Methyl Ether (TAME)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)
Tert-Butyl Alcohol (tert-Butanol)	ND (400)	ND (400)	ND (400)	ND (400)	ND (400)	ND (400)	ND (400)	ND (400)	ND (400)	ND (400)	ND (400)	ND (400)	ND (400)	ND (400)	ND (400)	ND (400)	ND (400)
Tert-Butyl Ethyl Ether (ETBE)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)
tert-Butylbenzene	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)
Tetrachloroethene	ND (8)	**31**	**11**	**87**	**75**	**13**	**13**	ND (8)	**49**	**58**	**18**	**58**	**21**	**23**	**34.9**	**25**	**18**
Toluene	**43**	ND (8)	**32**	ND (8)	ND (8)	**495**	**18**	**48**	ND (8)	ND (8)	**14**	ND (8)	ND (8)	ND (8)	ND (8)	**80**	ND (8)
trans-1,2-Dichloroethene	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)
trans-1,3-Dichloropropene	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)
Trichloroethene	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	**38**	**36**	**43**	**53**	**44**
Trichlorofluoromethane (CFC-11)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)
Trifluorotrichloroethane (Freon 113)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)
Vinyl chloride	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)

Notes:

1. ND (#): Not detected above indicated reporti
2. Results in **bold** are detected.

Table 3. Summary of Soil Gas Risk-Based Target Concentrations
Construction Workers and Residents
Northeast Corner of South Central Avenue and Victoria Street
Carson, CA

Chemical Group	Chemical	$RBTC_{SG}$ (ug/L)		
		Construction Worker	Resident	
		Soil Gas Migrating to Trench Air	Soil Gas Migrating to Indoor Air	
		All Depths	5 feet	15 feet
VOC	Benzene	1.3E+01	1.3E-01	2.3E-01
VOC	Ethylbenzene	1.9E+02	1.8E+00	3.4E+00
VOC	Isopropylbenzene	6.9E+02	7.3E+02	1.4E+03
VOC	p-Isopropyltoluene	--	--	--
VOC	Naphthalene	1.6E+01	1.4E-01	2.7E-01
VOC	Tetrachloroethene	1.1E+02	9.2E-01	1.8E+00
VOC	Toluene	3.0E+04	4.5E+02	8.4E+02
VOC	Trichloroethene	1.5E+01	7.6E-01	1.4E+00
VOC	1,2,4-Trimethylbenzene	4.6E+02	1.1E+02	2.1E+02
VOC	m,p-Xylenes	2.7E+03	1.7E+02	3.1E+02
VOC	o-Xylene	2.7E+03	1.6E+02	3.1E+02

Notes:
-- = Not calculated
µg/L = microgram per liter
$RBTC_{SG}$ = Soil Gas Risk-Based Target Concentration
VOC = Volatile Organic Compound

Table 4. Summary of Soil Risk-Based Target Concentrations
Construction Workers and Residents
Northeast Corner of South Central Avenue and Victoria Street
Carson, CA

Chemical Group	Chemical	$RBTC_s$ (mg/kg)	
		Construction Worker	Resident
		Soil Direct Contact	
TPH	Medium Aromatic (C9-C16)	1.4E+03	8.3E+01
TPH	Medium Aliphatic (C9-C18)	5.8E+01	6.8E+01
TPH	High Aromatic (C17-C32)	5.7E+04	2.4E+03
TPH	High Aliphatic (C19-C32)	8.1E+04	9.9E+03
Metal	Antimony	7.1E+01	2.6E+01
Metal	Arsenic[a]	1.9E+01	1.9E+01
Metal	Barium	1.1E+04	1.1E+04
Metal	Cadmium	3.5E+01	5.2E+00
Metal	Chromium (total)	1.5E+04	3.6E+04
Metal	Cobalt	3.4E+01	2.3E+01
Metal	Copper	3.1E+03	3.0E+03
Metal	Lead[b]	3.2E+02	8.0E+01
Metal	Mercury	8.4E+01	8.8E+00
Metal	Nickel	5.6E+02	4.9E+02
Metal	Selenium	1.5E+03	3.8E+02
Metal	Vanadium	3.4E+01	1.8E+02
Metal	Zinc	9.3E+04	2.3E+04

Notes:
mg/kg = milligram per kilogram
Cal/EPA = California Environmental Protection Agency
$RBTC_s$ = Soil Risk-Based Target Concentration
TPH = Total Petroleum Hydrocarbon

a. For arsenic, a site-specific background concentration was calculated using 2017 Haley & Aldrich data (see Appendix C).

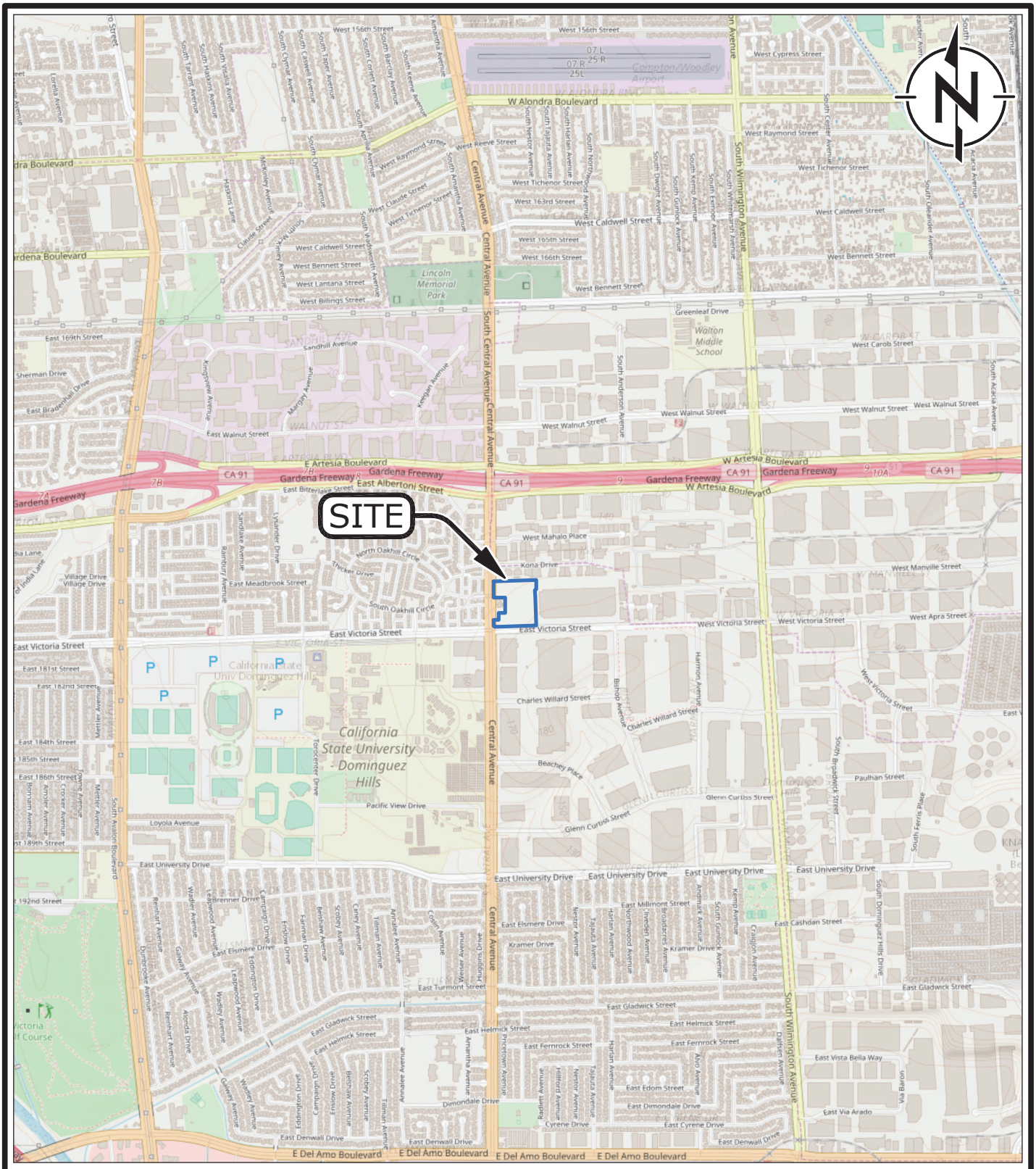
b. For lead, the screening level for residential soil from Cal/EPA (2017) was used for residents, and the screening level for industrial soil from Cal/EPA (2017) was used for construction workers.

Sources:

California Environmental Protection Agency (Cal/EPA). 2017. Human and Ecological Risk Office (HERO) Human Health Risk assessment (HHRA) Note Number 3, Issue: DTSC-Modified Screening Levels (DTSC-SLs). August.

Chernoff G, Bosan W, Oudiz D. 2008. Determination of a Southern California Regional Background Arsenic Concentration in Soil.

FIGURES



Site Location Map

Northeast Corner of South Central Avenue and Victoria Street
Carson, California

FIGURE
1

RAMBOLL

DRAFTED BY: M. KNEALE | DATE: 1/31/2018 | PROJECT: 1690006031

Z:\01_Projects\Integral Partners Funding\MXD\Figure 01 - Site Location Map.mxd

RAMBOLL

Site Layout Map

Northeast Corner of South Central Avenue and Victoria Street
Carson, California

FIGURE
2

DRAFTED BY: C.Enslin | DATE: 2/13/2018 | PROJECT: 1690006031

Z:\01_Projects\Integral Partners Funding\MXD\Figure 02 - Site Plan - 2018-01-23.mxd

Site area:	8.07 acres
Total units:	176
Gross density:	21.81 DU/AC
No. of phases:	13

Dwelling Units:

	No. of units
Multiple family:	
Studio	0
One bedroom	0
Two bedroom	50
Three bedroom	126
Four or more bedrooms	0
TOTAL	**176**

Area Distribution:

	Area (in SF)	% of area
Building coverage	126,890	36%
Vehicular & Parking areas	87,788	25%
Common open space/ landscape	136,952	39%
		100%
Private open space (total)	22,042	
Private open space (per unit)	125	SF (average deck)

Parking:

TOTAL **414** spaces (2.35 spaces per unit)

Plan Type Summary

Plan Type	S.F.	BR	Total	% of total	Total buildable SF
UA ROW					
3.66					
23.49 DU/AC					
Plan 1	1,517	3	24	28%	36,408
Plan 2	1,578	2	24	28%	37,872
Plan 3	1,857	3	18	21%	33,426
Plan 4	1,999	3	20	23%	39,980
			86	**100%**	**147,686**

Plan Type	S.F.	BR	Total	% of total	Total buildable SF
UA LEVEL					
3.84					
23.43 DU/AC					
Plan 1	1,453	2	26	29%	37,778
Plan 2	1,558	3	26	29%	40,508
Plan 3	1,811	3	19	21%	34,409
Plan 4	2,072	3	19	21%	39,368
			90	**100%**	**152,063**

Parking Summary

Parking Required: Per Proposed Amended Dominguez Hills Specific Plan

Required spaces per unit	No of units	Spaces required
2.35	176	414
	Total parking required:	**414** Spaces

Parking Provided:	Spaces provided
Garages:	352
Residential surface parking: (Guest)	29
Driveway (Guest)	18
Compact spaces (Guest)	15
Total parking provided:	**414** Spaces
Spaces/unit:	**2.35**

Recreation Area Summary

Recreation Area Required: Per Municipal Code / Dominguez Hills Specific plan

Plan Type	SF required/unit	No of units	required
2 bed unit	70	50	3500
3+ bed unit	140	126	17640
	Total recreation area required:		**21,140** SF

Recreation Area Provided:	
Dog park and adjacent area	6,870
Rec area	8,970
Linear park	7,479
Total recreation area provided:	**23,319** SF

Note

Buildings are shown up to 11 units in length

RAMBOLL

DRAFTED BY: M. Kneale | DATE: 2/13/2018

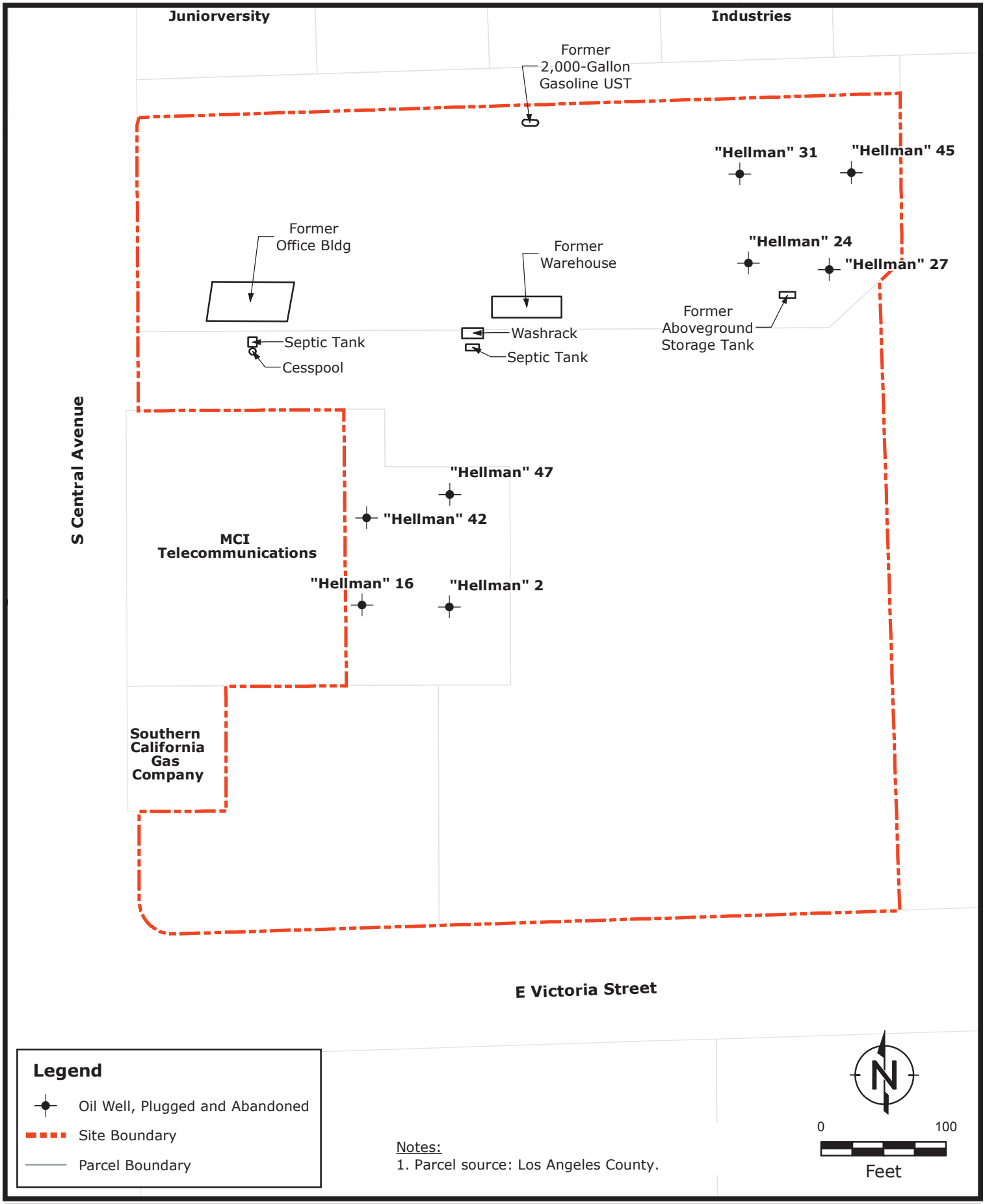
Proposed Site Development Plan

Northeast Corner of South Central Avenue and Victoria Street
Carson, California

FIGURE **3**

PROJECT: 1690006031

Z:\01_Projects\Integral Partners Funding\MXD\Figure 03 - Proposed Site Development Plan - 2018-01-31.pptx



Notes:
1. Parcel source: Los Angeles County.

RAMBOLL

Historical Site Features

Northeast Corner of South Central Avenue and Victoria Street
Carson, California

FIGURE
4

DRAFTED BY: M. Kneale | DATE: 1/31/2018 | PROJECT: 1690006031

Z:\01_Projects\Integral Partners Funding\MXD\Figure 04 - Historical Site Features - 2018-01-23.mxd

Juniorversity

TEKMA Machining

Pervan Industries

ACE C Ente

E Victoria Street

MCI Telecommunications

Southern California Gas Company

Former 2,000-Gallon Gasoline UST

Former Office Bldg

Former Warehouse

Former Aboveground Storage Tank

Septic Tank

Cesspool

Washrack

Septic Tank

T-30 T-29 T-28 T-27 T-26 T-25 T-24 T-23 T-22 T-21 T-20 T-19 T-18 T-17 T-16 T-15 T-14 T-13 T-12 T-11 T-10 T-9 T-8 T-7 T-6 T-5 T-4 T-3 T-2 T-1

SB-1 SB-2 SB-3 SB-4 SB-5

SG-1 SG-2 SG-3 SG-4 SG-5 SG-6 SG-7 SG-8 SG-9 SG-10 SG-11 SG-12 SG-13 SG-14 SG-15 SG-16 SG-17 SG-18 SG-18A SG-18B SG-19 SG-20 SG-21 SG-22 SG-23 SG-24 SG-25 SG-26 SG-27 SG-28 SG-29 SG-30 SG-31 SG-32 SG-33 SG-34 SG-35 SG-36 SG-37 SG-38 SG-39 SG-40 SG-41 SG-42

HB-1 HB-2 HB-3 HB-4 HB-5 HB-6 HB-7 HB-8 HB-9 HB-10 HB-11 HB-12A HB-13 HB-14 HB-15 HB-16 HB-17 HB-18 HB-19 HB-20 HB-21 HB-22 HB-23 HB-24 HB-25 HB4N HB4SW HB4SW1 HB4SW2 HB4SW3

PV1 PV2 PV3 PV4

HELL2.5SENDRCONF-3 HELL2.5DROPCONF-3 HELL2.5EXPLCONF-3 HELL2.5EXOFCONF-1.5 HP4-SE1

HP2-RS1 HP2-RS2 HP2-RS3 HP2-RS4 HP2-NW-2' HP2-BOT-5 HP2-RS1-1' HP2-RS2-3' HP2-SV1-1' HB-RS-5'

HEL 2.5-RSC-20 HEL 2.5RSF-2.5 HEL 2.5RSB-35 HEL 2.5RSE-1.5 HEL 2.5RSA-10 H2.5RS-1

HW1-1 HW1-2.5NW HW1-3.5BOT HW2-1 HW2-4.5BOT HW3-1 HW4-1 HW5-2.5-WW HW6-1.5 HW7-2.5EW HW7BOT-3' HW8-1 HW9-5 HW9SW-3 HW9WW-2.5 HW10-5.5 HW11-1 HW12-1 HW13-6BOT HW14-2.5SW HW14-4.4BOT

CP1 CP2

B1 B2 B3 B5

HBST1 SepticTank-01

VPSMC101-2.5 VPSMC101-10 GP-4 GP-5

H4EXMC1E

BW47-20' BW-2

"Hellman" 16 "Hellman" 2 "Hellman" 24 "Hellman" 27 "Hellman" 31 "Hellman" 42 "Hellman" 45 "Hellman" 47

H24V-1NW H24V-2SW H24V-3WW H24V-4EW H24V-5ABOT H24V-5BOT H24V-6BOT

H27V-1NW H27V-2SW H27V-3WW H27V-4EW H27V-5BOT

H31V-1NW H31V-2SW H31V-3EW H31V-4EW H31V-5NW H31V-6BOT H31V-7BOT

H45V-1NW H45V-2SW H45V-3WW H45V-4EW H45V-BOT

HELL2.5-V1 HELL2.5-V2 HELL2.5-V3 HELL2.5-V4 HELL2.5-V5 HELL2.5-V6 HELL2.5-V9 HELL2.5-V10

HP2 HP3 HP4 HP5 HP6 HP7 HP8

HYR555-4'

H4RSS2@1.5' H4RSS4@1'

HRSS3@0.5'

T21-BOT-6" T15-BOT-2" T17-BOT-32" T16-BOT-3"

PS3 PS4

ET-01@44" ET-02@28" ET-03@48" ET-04@48" ET-05@48" ET-06@45" ET-07@45" ET-08@48" ET-09@50" ET19-BOT-16"

EXSG-18N6 EXSG-18E7 EXSG-18W5 EXSG-18B10 EXSG-18-S4

RTP-200

TP1 5'5" TP2 5'4" TP3 5'7" TP5 5'4" TP6 5'7" TP7 5'7" TP10 6'7" TP11 6'0" TP12 5'6" TP13 5'2" TP14 5'8" TP15 5'0" TP15 5'4" TP16 5'7" TP18 6'0" TP19 5'5" TP20 5'8" TP21 5'4" TP22 5'2" TP23 5'7" TP24 5'2" TP25 5'3" TP26 5'9" TP27 5'6" TP28 5'0" TP29 5'4" TP30 5'4" TP31 5'3" TP32 6'5"

30 0 30 60 90

SCALE IN FEET

Legend

- Oil Well, Abandoned and Plugged
- Excavation
- Site Boundary
- Pipeline Trench
- Surrounding Parcels

Sampling Locations

- Soil Boring
- Soil Gas Sample

Note:
All locations are approximate.

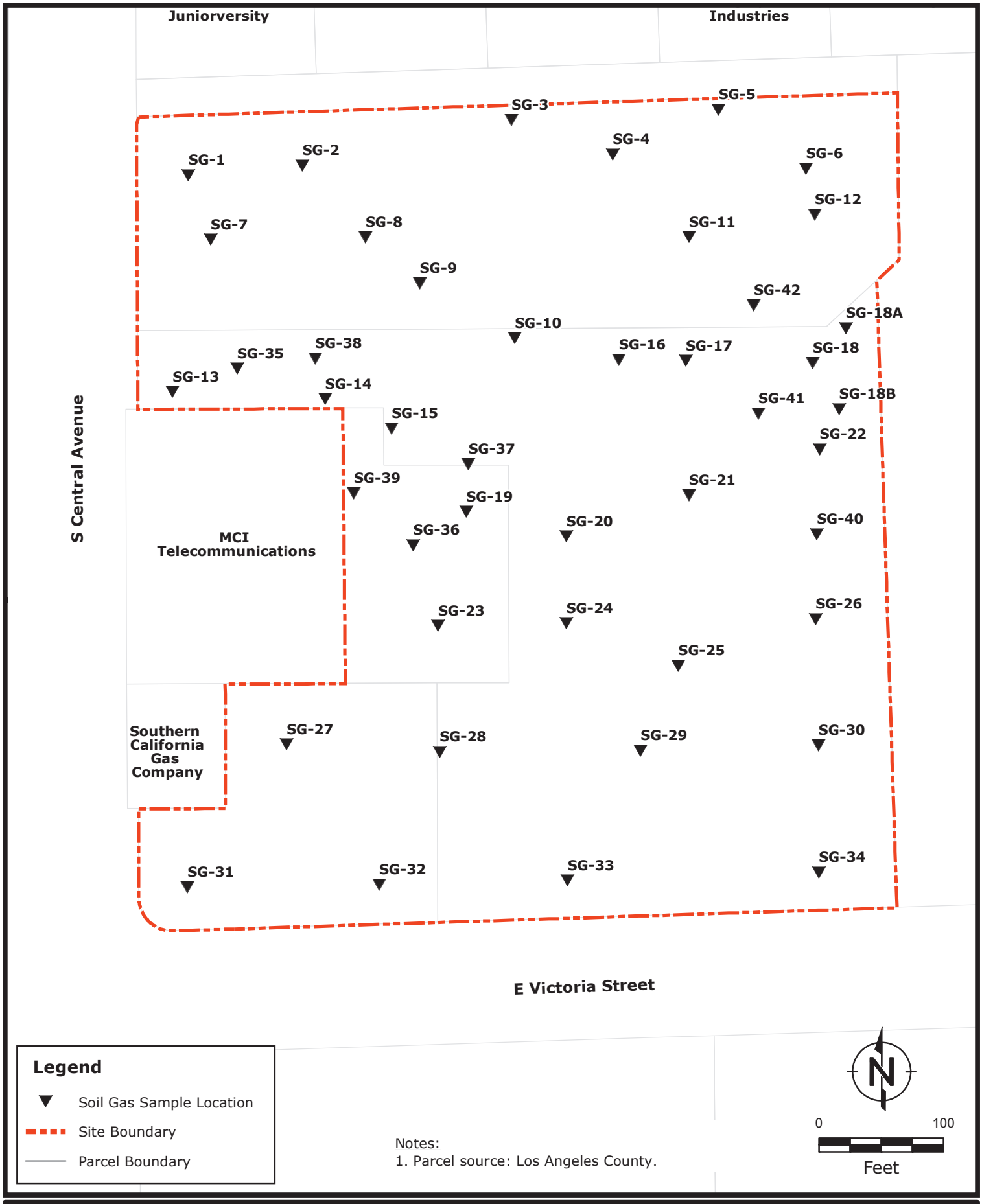
Site Layout and Sampling Locations

Northeast Corner of South Central Avenue and Victoria Street
Carson, California

RAMBOLL

PREPARED BY: MK	DATE: 1/31/2018	DRAWING 5
DRAFTED BY: MK	SCALE: AS SHOWN	
APPROVED BY: MK	PROJECT: 1690006031	

Z:\01_Projects\Integral Partners Funding\MXD\Figure 05 - Historical Sampling Locations - 2018.01.23.mxd



Notes:
1. Parcel source: Los Angeles County.

RAMBOLL

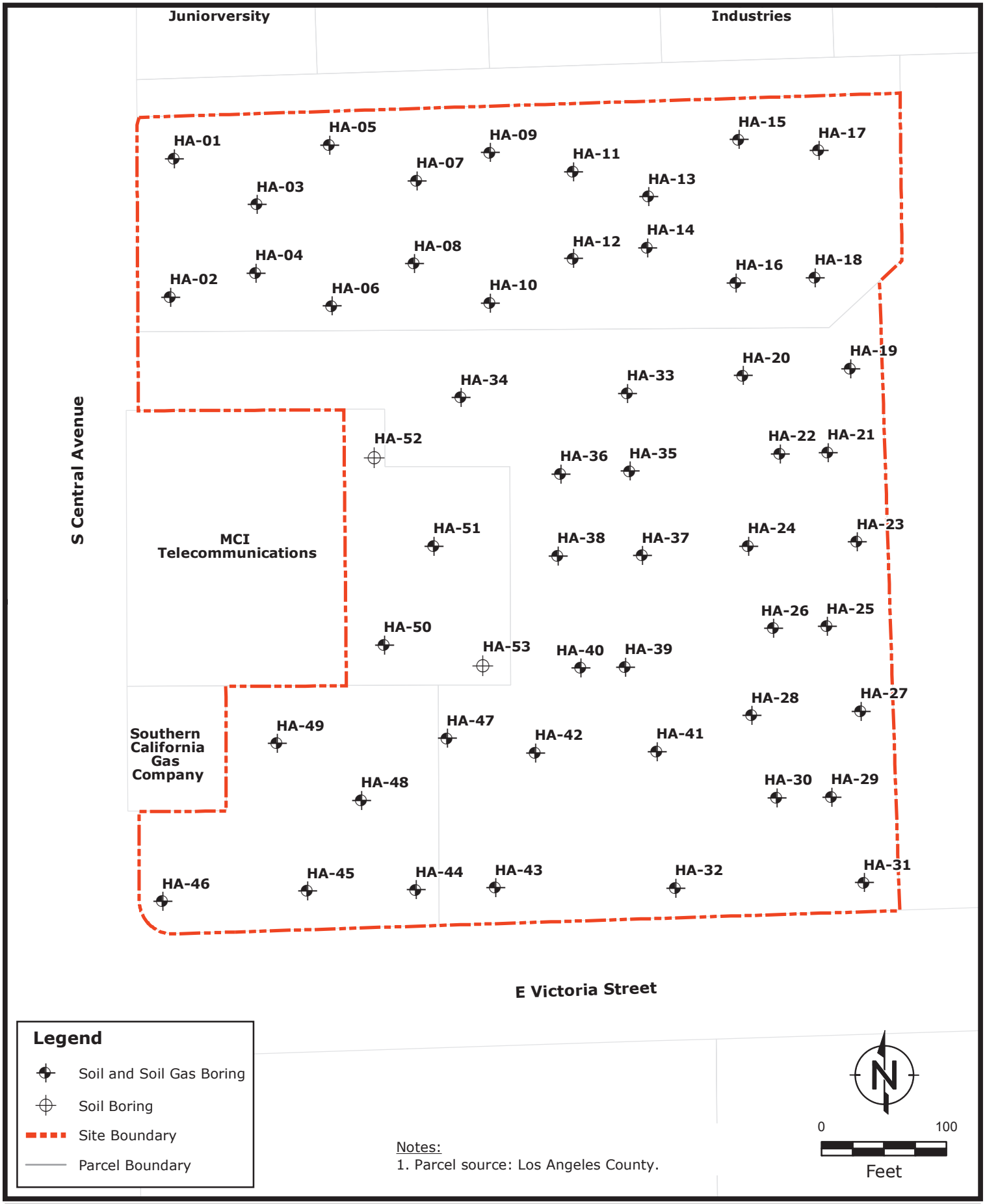
2006 Soil Gas Sampling Locations

Northeast Corner of South Central Avenue and Victoria Street
Carson, California

FIGURE
6

DRAFTED BY: M. Kneale | DATE: 1/31/2018 | PROJECT: 1690006031

Z:\01_Projects\Integral Partners Funding\MXD\Figure 06 - 2006 Soil Gas Samples - 2018-01-23.mxd



Notes:
1. Parcel source: Los Angeles County.

RAMBOLL

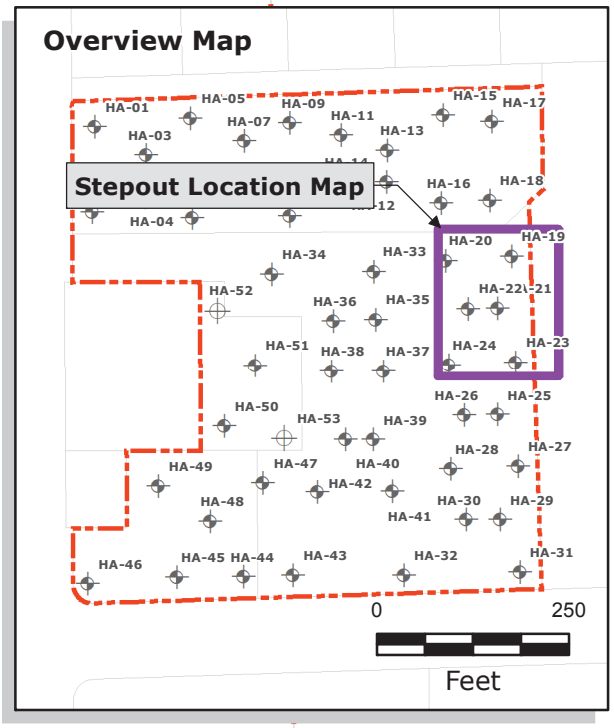
2017 Soil and Soil Gas Sample Locations

Northeast Corner of South Central Avenue and Victoria Street
Carson, California

FIGURE
7

DRAFTED BY: M. Kneale | DATE: 1/31/2018 | PROJECT: 1690006031

Z:\01_Projects\Integral Partners Funding\MXD\Figure 07 - 2017 Samples - 2018-01-23.mxd



HA-20

HA-21D1

HA-21D

HA-21A

HA-22

HA-21E

HA-21

HA-21C

HA-21B

HA-23

Legend

- Soil and Soil Gas Boring
- Soil Boring
- Stepout Soil Boring
- Site Boundary
- Parcel Boundary

Notes:
1. Parcel source: Los Angeles County.

N

0 20

Feet

RAMBOLL

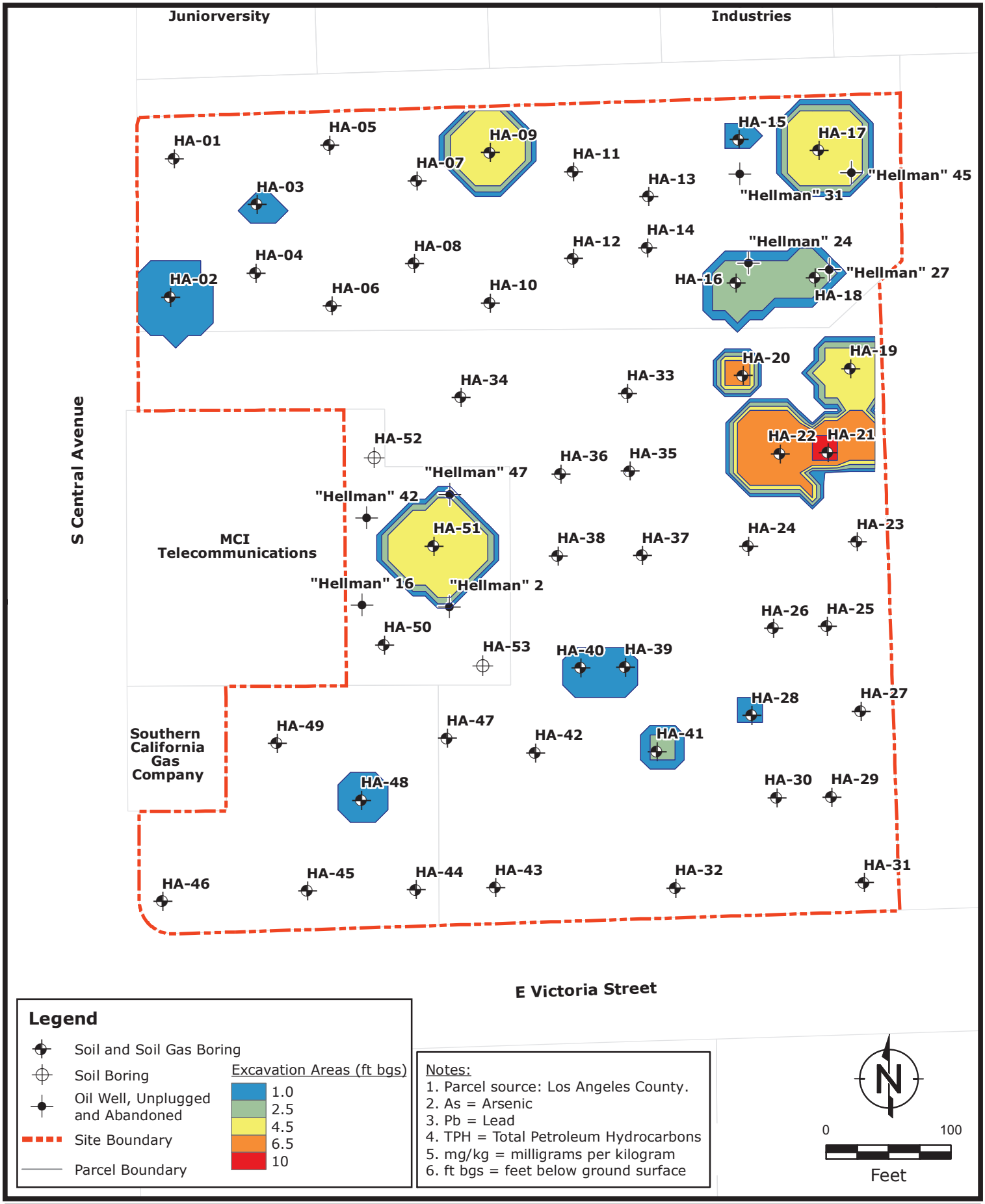
HA-21 Stepout Borings

Northeast Corner of South Central Avenue and Victoria Street
Carson, California

FIGURE
8

DRAFTED BY: M. Kneale | DATE: 1/31/2018 | PROJECT: 1690006031

Z:\01_Projects\Integral Partners Funding\MXD\Figure 08 - HA Step Out Borings - 2018-01-25.mxd



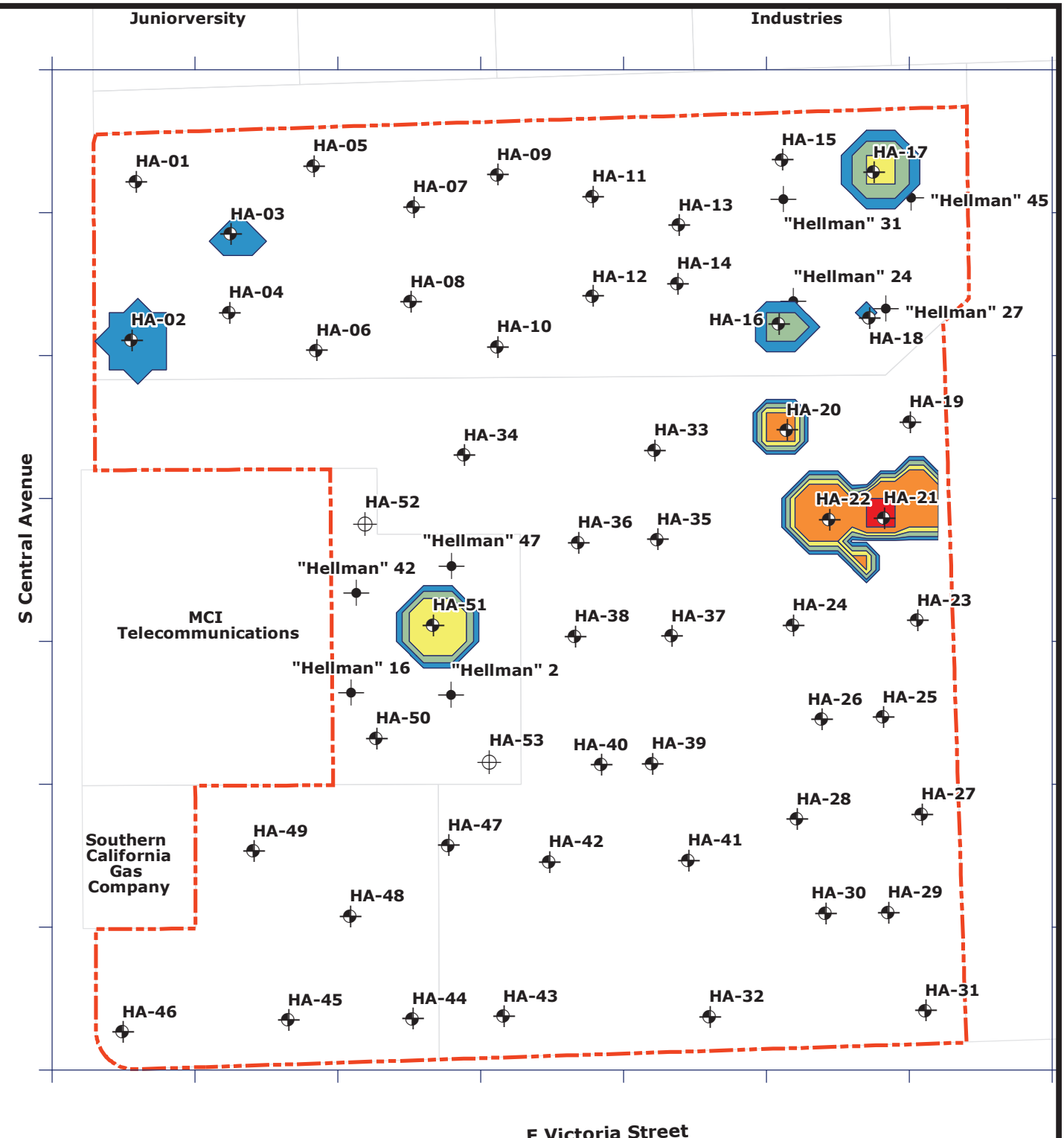
RAMBOLL

Excavation Areas - 12 mg/kg As, 80 mg/kg Pb, and TPH
Northeast Corner of South Central Avenue and Victoria Street
Carson, California

FIGURE
9

DRAFTED BY: M. Kneale | DATE: 1/31/2018 | PROJECT: 1690006031

Z:\01_Projects\Integral Partners Funding\MXD\Figure 09 - 12mgkg Excavations.mxd



Legend

- Soil and Soil Gas Boring
- Soil Boring
- Oil Well, Unplugged and Abandoned
- Site Boundary
- Parcel Boundary

Excavation Areas (ft bgs)

- 1.0
- 2.5
- 4.5
- 6.5
- 10

Notes:
1. Parcel source: Los Angeles County.
2. As = Arsenic
3. Pb = Lead
4. TPH = Total Petroleum Hydrocarbons
5. mg/kg = milligrams per kilogram
6. ft bgs = feet below ground surface

N

0 100

Feet

RAMBOLL

Excavation Areas - 19 mg/kg As, 80 mg/kg Pb, and TPH
Northeast Corner of South Central Avenue and Victoria Street
Carson, California

FIGURE **10**

DRAFTED BY: M. Kneale | DATE: 1/31/2018 | PROJECT: 1690006031

Z:\01_Projects\Integral Partners Funding\MXD\Figure 10 - 19mgkg Excavations.mxd

APPENDIX A
RWQCB CLOSURE LETTER 2008

California Regional Water Quality Control Board
Los Angeles Region

Linda S. Adams
Cal/EPA Secretary

320 W. 4th Street, Suite 200, Los Angeles, California 90013
Phone (213) 576-6600 FAX (213) 576-6640 - Internet Address: http://www.waterboards.ca.gov/losangeles

Arnold Schwarzenegger
Governor

August 13, 2008

Mr. Michael Parker
c/o Loma Verde Properties, LLC
Little Blackfoot, LLC
Loma Verde Properties, LLC
2200 Powell Street, Suite 970
Emeryville, CA 94608

NO FURTHER ACTION – THE ESTATE OF ALBERT LEVINSON DBA BREA CAÑON OIL COMPANY, HELLMAN PROPERTY, 1, 2.5, & 4 ACRE PARCELS, NORTHEAST CORNER OF VICTORIA STREET & CENTRAL AVENUE, 17810 CENTRAL AVENUE, CARSON (SCP NO. 468)(SITE ID NO. C244010)

Dear Mr. Parker:

We have received and reviewed: 1) the October 2003, Environmental Site Remediation Summary and Closure Report, Hellman Property – 4 Acre & 1 Acre Parcels that Reynolds Group; 2) the December 12, 2003, Summary and Closure Report, Hellman Property – Parcel 2 that MACTEC Engineering and Consulting, Inc.; 3) the December 11, 2003, Results of Deep Soil Borings and Protection of Groundwater Discussion, Hellman Lease – 1, 2.5 and 4-Acre Parcels that Brown and Caldwell; and 4) the May 5, 2006, Results of Soil Gas Survey and Request for Case Closure that Reynolds Group. These reports and document contain assessment, monitoring, and remediation activities performed within the subject 1, 2.5 and 4 Acre Parcels on the Hellman Property, which encompasses approximately 7.5 acres. The Hellman Property is a part of the former 100-acre Dominguez Oil Field in Carson and was formerly used for crude oil and natural gas production beginning in the 1920's. Brea Cañon Oil Company purchased the subject property from Unocal in 1991, and subsequently transferred the property to Little Blackfoot, LLC.

Waste Discharge Requirements (WDRs) were issued for land treatment of petroleum hydrocarbon contaminated soils and oil field production solids at the Dominguez Oil Field, including Order No. 94-104, Order No. 97-065 and Order No. 98-064. Order No. 94-104 and Order No. 97-065 were rescinded and replaced with Order No. 98-064. By June 1999, all the oil wells on the 7.5 Acre Hellman Property had been abandoned according to the requirements established by the California Division of Oil and Gas and Geothermal Resources. Site assessment activities were conducted by Unocal and Brea Cañon Oil Company for their purchase and sale agreement and further by The Estate of Albert Levinson environmental staff to support Regional Board's staffs 'No Further Action' determination. Based upon subsurface investigations to date, it was confirmed that the primary chemicals of concern are total petroleum hydrocarbons (gasoline range, diesel range and crude oil),

aromatic hydrocarbons (e.g., benzene, toluene, ethyl benzene and total xylenes) and metals (e.g., Arsenic).

As a remedial measure, a total of six known and encountered areas and eight oil/gas wells were remediated by excavating approximately 12,800 cubic yards of hydrocarbon impacted soils. The hydrocarbon impacted soil excavated from the subject site was placed within treatment cells for biological landfarming treatment in accordance with the WDRs issued by this Regional Board. Past remediation soil sampling programs have verified that remaining soils meet this Regional Board's soil cleanup criteria contained in the May 1996 Interim Site Assessment & Cleanup Guidebook for the protection of groundwater resources. Based upon the verification sampling, no known petroleum hydrocarbon soil contamination has been left in-place that exceeds the Regional Board's soil cleanup criteria for the protection of groundwater resources. The results of the deep soil borings conducted at the subject site confirmed that soil contaminants had not reached groundwater beneath the subject site. The depth to groundwater is approximately 205 feet below grade. On August 8, 2005, Regional Board staff also conducted a pre-closure site inspection and found no noticeable violations.

Within the Hellman 4 Acre Parcel, soil samples collected at 14 to 30 feet below ground surface (bgs) contained benzene concentrations below the United States Environmental Protection Agency, Region IX, Preliminary Remediation Goals (PRGs) for both residential and commercial use, but slightly in excess of the Regional Water Quality Control Board, San Francisco Region, Environmental Screening Levels (ESLs). Also on the 4 Acre Parcel, one soil sample collected at 5 feet bgs contained total xylenes concentrations below both the residential and commercial PRGs but slightly in excess of the ESLs, and several soil gas samples from 5 to 10 feet bgs had concentrations of benzene below the California Human Health Screening Levels (CHHSLs) for commercial use but above the CHHSLs for residential use. Within the Hellman 2.5 Acre Parcel, soil samples collected at 6 to 13 feet bgs contained benzene concentrations below both the residential and commercial PRGs but above the ESLs. All metals in soil at the Burdened Property were detected below residential and commercial soil screening levels, with the exception of arsenic, that was detected within the typical background range up to 10 milligram per kilogram for soils in southern California.

Recent legislation, AB 2436, prohibits the Regional Board from issuing a closure letter or making a determination that 'No Further Action' is required if a property is not suitable for unrestricted use, unless a land use restriction is recorded. We had determined that a Covenant and Environmental Restriction on Property (Covenant) was necessary for the site for the protection of public health or safety due to the residual concentration of aromatic hydrocarbons in soil and soil gas remaining onsite. The Covenant was filed and recorded in Official Records, Recorder's Office, Los Angeles County on July 11, 2008.

Based upon the information provided, and investigation data, and with the provision that information provided to this Regional Board was accurate and representative of site conditions, we have determined that no further soil or groundwater investigation or remediation action is necessary.

If contaminated soils are encountered during future site demolition and construction activities, you are required to provide verbal notification to this Regional Board immediately and submit a follow-up written report to this Regional Board within 72 hours.

Should you have any questions, please contact Dr. Kwang-il Lee at (213) 576-6734 or Mr. Paul Cho at (213) 576-6721.

Sincerely,

Tracy Egoscue
Executive Officer

cc: Sherry Repp, Department of Planning, City of Carson
Maria Hoye, Latham & Watkins, LLP
Gwen Tellegen, The Reynolds Group

LATHAM & WATKINS LLP

355 South Grand Avenue
Los Angeles, California 90071-1560
Tel: +1.213.485.1234 Fax: +1.213.891.8763
www.lw.com

July 18, 2008

VIA FEDEX

Kelly MacArthur
Controller
Loma Verde Properties LLC
2200 Powell Street, Suite 970
Emeryville, California 94608

COPY

Re: Hellman Property- Certified Copy of Covenant

Dear Kelly:

Enclosed please find a certified copy of the recorded Covenant and Environmental Restriction on Property for the Hellman Property. Please let me know if you have any questions.

Best regards,

Katharine Young
of LATHAM & WATKINS LLP

This page is part of your document - DO NOT DISCARD

20081238354 Pages: 012

Recorded/Filed in Official Records
Recorder's Office, Los Angeles County,
California

07/11/08 AT 02:11PM

Fee: 40.00
Tax: 0.00
Other: 144.00
Total: 184.00

2119810 200807110030037 Counter

TITLE(S) :

LEAD SHEET

Assessor's Identification Number (AIN)
To be completed by Examiner OR Title Company in black ink.

Number of AIN's Shown

- -

07/11/08

20081238354

Recording Requested By:
Little Blackfoot, LLC
2200 Powell Street, Suite 970
Emeryville, California 94608

When Recorded, Mail To:
Tracy J. Egoscue, Executive Officer
California Regional Water Quality Control Board
Los Angeles Region
320 W. 4th Street, Suite 200
Los Angeles, California 90013

COVENANT AND ENVIRONMENTAL RESTRICTION ON PROPERTY

Northeast Corner of Central Avenue and Victoria Street, Carson, California 90746
Assessor Parcel Numbers: 7319-003-104, 7319-003-105, and 7319-003-106
LARWQCB SCP No. 468

This Covenant and Environmental Restriction on Property ("Covenant") is made as of the 8th day of JULY, 2008 by Little Blackfoot, LLC ("Covenantor") who is the Owner of record of that certain property situated at the northeast corner of Central Avenue and Victoria Street, with the street address of 17810 South Central Avenue, in the City of Carson, County of Los Angeles, State of California, which is more particularly described in Exhibits A, B, and C attached hereto and incorporated herein by this reference (hereinafter referred to as the "Burdened Property"), for the benefit of the California Regional Water Quality Control Board, Los Angeles Region ("Board"), with reference to the following facts:

A. Nature of Covenant. This Covenant is an environmental covenant provided for by Civil Code section 1471 and required by the Board pursuant to Water Code section 13307.1, because the Burdened Property is contaminated by hazardous materials as defined in section 25260 of the Health and Safety Code.

B. Contamination of the Burdened Property. The soil and soil gas at the Burdened Property was contaminated by crude oil and natural gas production activities conducted by Unocal and Brea Canon Oil Company. The known contamination originally consisted of organic chemicals, including total petroleum hydrocarbons (e.g., gasoline range, diesel range, and crude oil), aromatic hydrocarbons (e.g., benzene, toluene, ethylbenzene, and total xylenes) and metals (e.g., arsenic), which constitute hazardous materials. By means of soil excavation, the known contamination has been reduced to low residual concentrations of total petroleum hydrocarbons, benzene, toluene, ethylbenzene, and total xylenes in the soil and soil gas at the Burdened Property.

C. Exposure Pathways. The contaminants addressed in this Covenant are present in the soil and soil gas at the Burdened Property. Without the mitigation measures which have been performed on the Burdened Property, exposure to these contaminants could take place via in-place contact and wind dispersal, resulting in dermal contact, inhalation, or ingestion by humans. The risk of public exposure to the contaminants has been substantially lessened by the soil remediation completed at the site and through controls described herein.

D. Land Uses and Population Potentially Affected. The Burdened Property is used for industrial land uses and is adjacent to industrial and residential land uses.

E. Disclosure and Sampling. Disclosure of the presence of hazardous materials on the Burdened Property has been made to the Board and extensive sampling of the Burdened Property has been conducted.

F. Use of Burdened Property. Covenantor desires and intends that in order to benefit the Board, and to protect the present and future public health and safety, the Burdened Property shall be used in such a manner as to avoid potential harm to persons or property that might result from any hazardous materials that might remain deposited on portions of the Burdened Property.

ARTICLE I
GENERAL PROVISIONS

1.1 Provisions to Run with the Land. This Covenant sets forth protective provisions, covenants, conditions and restrictions (collectively referred to as "Restrictions") upon and subject to which the Burdened Property and every portion thereof shall be improved, held, used, occupied, leased, sold, hypothecated, encumbered, and/or conveyed. These Restrictions are reasonably necessary to protect present and future human health and safety or the environment as a result of the presence on the land of hazardous materials. Each and all of the Restrictions shall run with the land and pass with each and every portion of the Burdened Property, and shall apply to, inure to the benefit of, and bind the respective successors, assigns, and lessees thereof for the benefit of the Board and all Owners and Occupants. Each and all of the Restrictions: (a) are imposed upon the entire Burdened Property, unless expressly stated as applicable to a specific portion of the Burdened Property; (b) run with the land pursuant to section 1471 of the Civil Code: and (c) are enforceable by the Board.

1.2 Concurrence of Owners and Lessees Presumed. All purchasers, lessees, and possessors of all or any portion of the Burdened Property shall become Owners or Occupants as defined herein and shall be deemed by their purchase, leasing, or possession of the Burdened Property to be bound by the Restrictions and to agree for and among themselves, their heirs, successors, and assignees, and the agents, employees, and lessees of such owners, heirs, successors, and assignees, that the Restrictions herein established must be adhered to for the benefit of the Board and all Owners and Occupants, and that the interest of all Owners and Occupants of the Burdened Property shall be subject to the Restrictions.

1.3 Incorporation into Deeds and Leases. Covenantor desires and covenants that the Restrictions shall be incorporated in and attached to each and all deeds and leases of all or any portion of the Burdened Property. Recordation of this Covenant shall be deemed binding on all successors, assigns, and lessees, regardless of whether a copy of this Covenant has been attached to or incorporated into any given deed or lease.

1.4 Purpose. It is the purpose of this instrument to convey to the Board real property rights, which will run with the land, to facilitate the remediation of past environmental contamination and to protect human health and the environment by reducing the risk of exposure to residual hazardous materials.

ARTICLE II
DEFINITIONS

2.1 Board. "Board" shall mean the California Regional Water Quality Control Board, Los Angeles Region and shall include its successor agencies, if any.

2.2 Improvements. "Improvements" shall mean all buildings, structures, roads, driveways, gradings, re-gradings, and paved areas, constructed or placed upon any portion of the Burdened Property.

2.3 Occupant or Occupants. "Occupant" or "Occupants" shall mean Owners and those persons entitled by ownership, leasehold, or other legal relationship to the right to use and/or occupy all or any portion of the Burdened Property.

2.4 Owner or Owners. "Owner" or "Owners" shall mean the Covenantor and Covenantor's successors in interest who hold title to all or any portion of the Burdened Property.

ARTICLE III
DEVELOPMENT, USE AND CONVEYANCE OF THE BURDENED PROPERTY

3.1 Restrictions on Development and Use. Covenantor promises to restrict the use of the Burdened Property as follows:

a. Development and use of the Burdened Property shall be restricted to industrial, commercial, and/or office space;

b. No residence for human habitation shall be permitted on the Burdened Property;

c. No hospitals for humans shall be permitted on the Burdened Property;

d. No public or private schools for persons under 21 years of age shall be permitted on the Burdened Property;

e. No day care or community centers for children or senior citizens shall be authorized on the Burdened Property;

f. Any excavation conducted on the Burdened Property shall be performed pursuant to an appropriate and fully implemented Health and Safety Plan. Any contaminated soils brought to the surface by grading, excavation, trenching, or backfilling shall be managed by the Owner, Owner's agent, Occupant, or Occupant's agent in accordance with all applicable provisions of local, state and federal law;

g. No Owner or Occupant shall drill, bore, otherwise construct, or use a well for the purpose of extracting water for any use, including but not limited to, domestic, potable, or industrial uses, unless expressly permitted in writing by the Board; nor shall the Owner or Occupant permit or engage any third party to do such acts;

h. The Covenantor agrees that the Board, and any persons acting pursuant to Board orders, shall have reasonable access to the Burdened Property for the purposes of inspection, surveillance, maintenance, or monitoring as provided in Division 7 of the Water Code; and

i. No Owner or Occupant shall act in any manner that threatens or is likely to aggravate or contribute to the existing contaminated conditions of the Burdened Property.

3.2 Enforcement. Failure of an Owner or Occupant to comply with any of the Restrictions set forth in Paragraph 3.1 shall be grounds for the Board, by the authority of this Covenant, to require that the Owner or Occupant modify or remove, or cause to be modified or removed, any Improvements constructed in violation of that Paragraph. Violation of this Covenant shall also be grounds for the Board to file civil actions against the Owner or Occupant as provided by law.

3.3 Notice in Agreements. After the date of recordation hereof, all Owners and Occupants shall execute a written instrument which shall accompany all purchase agreements or leases relating to all or any portion of the Burdened Property. Any such instrument shall contain the following statement:

> The land described herein contains hazardous materials in soils and soil gas that are above recommended levels for residential land uses, and is subject to a Covenant and Environmental Restriction dated as of _____, 2008, and recorded on _____, 2008, in the Official Records of Los Angeles County, California, as Document No. _____, which Covenant and Environmental Restriction imposes certain covenants, conditions, and restrictions on usage of the property described herein. This statement is not a declaration that a hazard exists.

ARTICLE IV
VARIANCE AND TERMINATION

4.1 Variance. Any Owner or, with the Owner's written consent, any Occupant may apply to the Board for a written variance from the provisions of this Covenant.

4.2 Termination. Any Owner or, with the Owner's written consent, any Occupant may apply to the Board for a termination of the Restrictions as they apply to all or any portion of the Burdened Property.

4.3 Term. Unless terminated in accordance with Paragraph 4.2 above, by law or otherwise, this Covenant shall continue in effect in perpetuity.

ARTICLE V
MISCELLANEOUS

5.1 No Dedication Intended. Nothing set forth herein shall be construed to be a gift or dedication, or offer of a gift or dedication, of the Burdened Property or any portion thereof to the general public.

5.2 Notices. Whenever any person gives or serves any notice, demand, or other communication with respect to this Covenant, each such notice, demand, or other communication shall be in writing and shall be deemed effective (a) when delivered, if personally delivered to the person being served or an official of a government agency being served, or (b) three (3) business days after deposit in the mail if mailed by United States mail, postage paid certified, return receipt requested, addressed:

If To: "Covenantor"
Little Blackfoot, LLC
Attention: Mr. Andrew Parker
2200 Powell Street, Suite 970
Emeryville, California 94608

Little Blackfoot, LLC
Attention: Mr. William Houston
2200 Powell Street, Suite 970
Emeryville, California 94608

With a copy to:
James L. Arnone, Esq.
Latham & Watkins, LLP
355 South Grand Avenue, Suite 100
Los Angeles, California 90071-1560

If To: "Board"
Regional Water Quality Control Board
Los Angeles Region
Attention: Executive Officer
320 W. 4th Street, Suite 200
Los Angeles, California 90013

5.3 Partial Invalidity. If any portion of the Restrictions or terms set forth herein is determined by a court having jurisdiction to be invalid for any reason, the remaining portion shall remain in full force and effect as if such portion had not been included herein.

5.4 Recordation. This instrument shall be executed by the Covenantor and by the Executive Officer of the Board. This instrument shall be recorded by the Covenantor in the County of Los Angeles within ten (10) days of the date of execution.

5.5 References. All references to Code sections include successor provisions.

5.6 Construction. Any general rule of construction to the contrary notwithstanding, this instrument shall be liberally construed in favor of the Covenant to preserve and implement the purpose of this instrument and the policies and purposes of the Water Code. If any provision of this instrument is found to be ambiguous, an interpretation consistent with the purpose of this instrument that would render the provision valid shall be favored over any interpretation that would render it invalid.

IN WITNESS WHEREOF, the parties execute this Covenant as of the date set forth above.

[REMAINDER OF PAGE INTENTIONALLY LEFT BLANK;
SIGNATURES ON FOLLOWING PAGES.]

Covenantor: Little Blackfoot, LLC
By: Michael L. Parker, Member/Manager of Loma Verde Properties LLC
Print Name: _____
Signature: _____
Title: Manager
Date: July 8, 2008

CERTIFICATE OF ACKNOWLEDGMENT

State of California

County of Alameda

On July 8, 2008 before me, Kelly A. MacArthur, Notary Public, personally appeared Michael L. Parker, who proved to me on the basis of satisfactory evidence to be the person(~~s~~) whose name(~~s~~) is/~~are~~ subscribed to the within instrument and acknowledged to me that he/~~she/they~~ executed the same in his/~~her/their~~ authorized capacity(~~ies~~), and that by his/~~her/their~~ signature(~~s~~) on the instrument the person(~~s~~), or the entity upon behalf of which the person(~~s~~) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

_____
Signature of Notary Public

(Notary Seal)

KELLY A. MACARTHUR
Commission # 1781989
Notary Public - California
Alameda County
My Comm. Expires Dec 5, 2011

California Regional Water Quality Control Board, Los Angeles Region

Print Name: Tracy J. Egoscue

Signature: _____

Title: Executive Officer

Date: 6/20/08

CERTIFICATE OF ACKNOWLEDGMENT

State of California

County of Los Angeles

On June 20, 2008 before me, Carlos M. Urrunaga, Notary Public, personally appeared Tracy J. Egoscue, who proved to me on the basis of satisfactory evidence to be the person whose name is subscribed to the within instrument and acknowledged to me that she executed the same in her authorized capacity, and that by her signature on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

CARLOS M. URRUNAGA
COMM. #1596343
Notary Public - California
Los Angeles County
My Comm. Expires Jul. 21, 2009

_____ (Notary Seal)
Signature of Notary Public

EXHIBIT A

LEGAL DESCRIPTION OF PROPERTY

The Burdened Property referred to herein is reflected on the attached maps and described as follows:

Parcels 2, 3 and 4 of Parcel Map No. 24971, in the City of Carson, County of Los Angeles, State of California, as per map filed in Book 289 Pages 13 and 14 of Parcel Maps, in the Office of the County Recorder of said County.

EXCEPT therefrom all oil, gas, petroleum, hydrocarbon substances, water and other minerals below a depth of 500 feet measured vertically from the present surface of said land, together with the right of entry below said depth of 500 feet by slant of directional drilling from other lands to develop and produce oil, gas, petroleum, hydrocarbon substances, water and other minerals, and the right to use the structures below said depth of 500 feet for the storage and subsequent removal of gas or other substances, but without any right of surface entry.

Assessor Parcel Numbers: 7319-003-104 and 7319-003-105 and 7319-003-106

EXHIBIT B

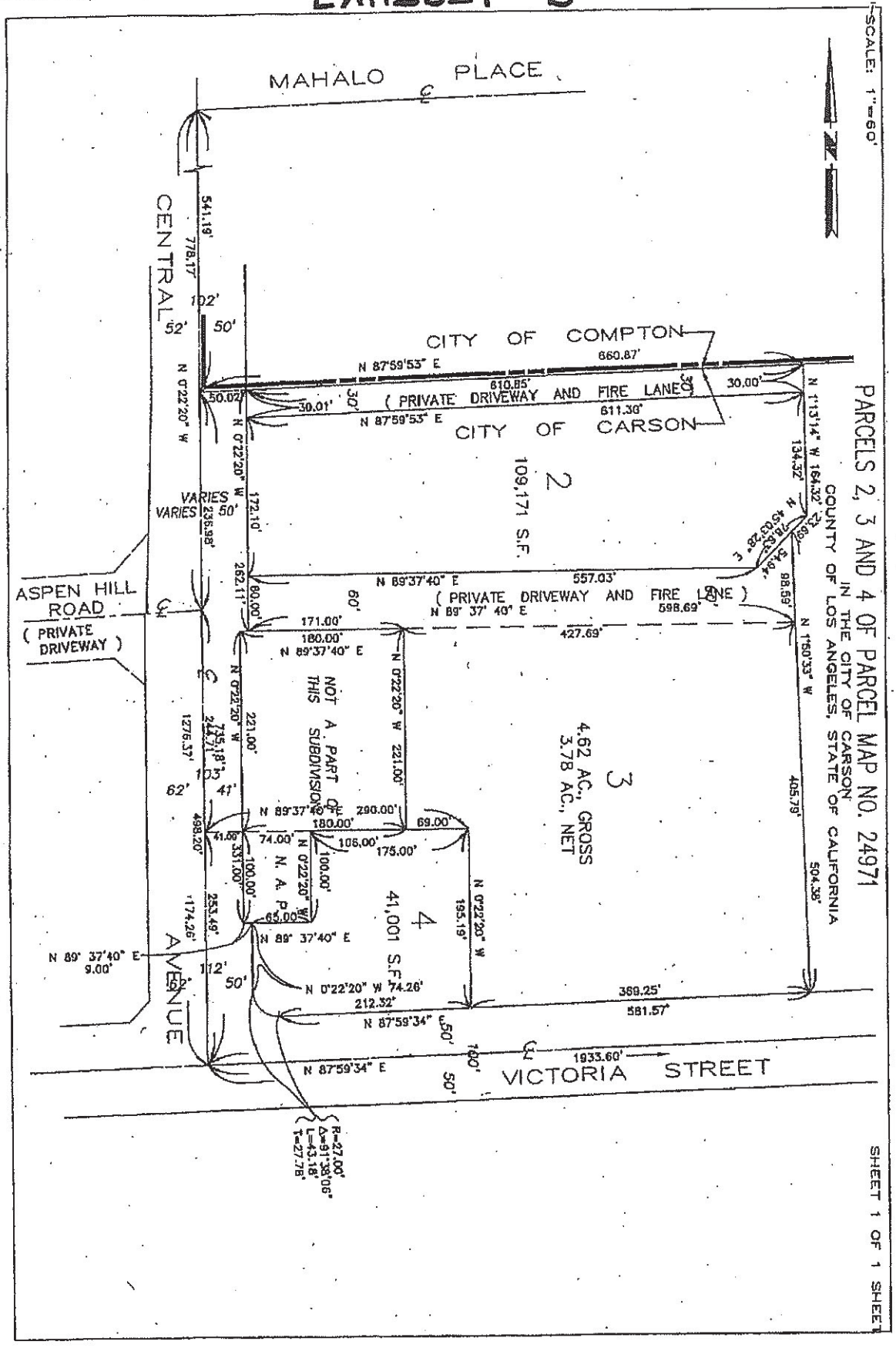
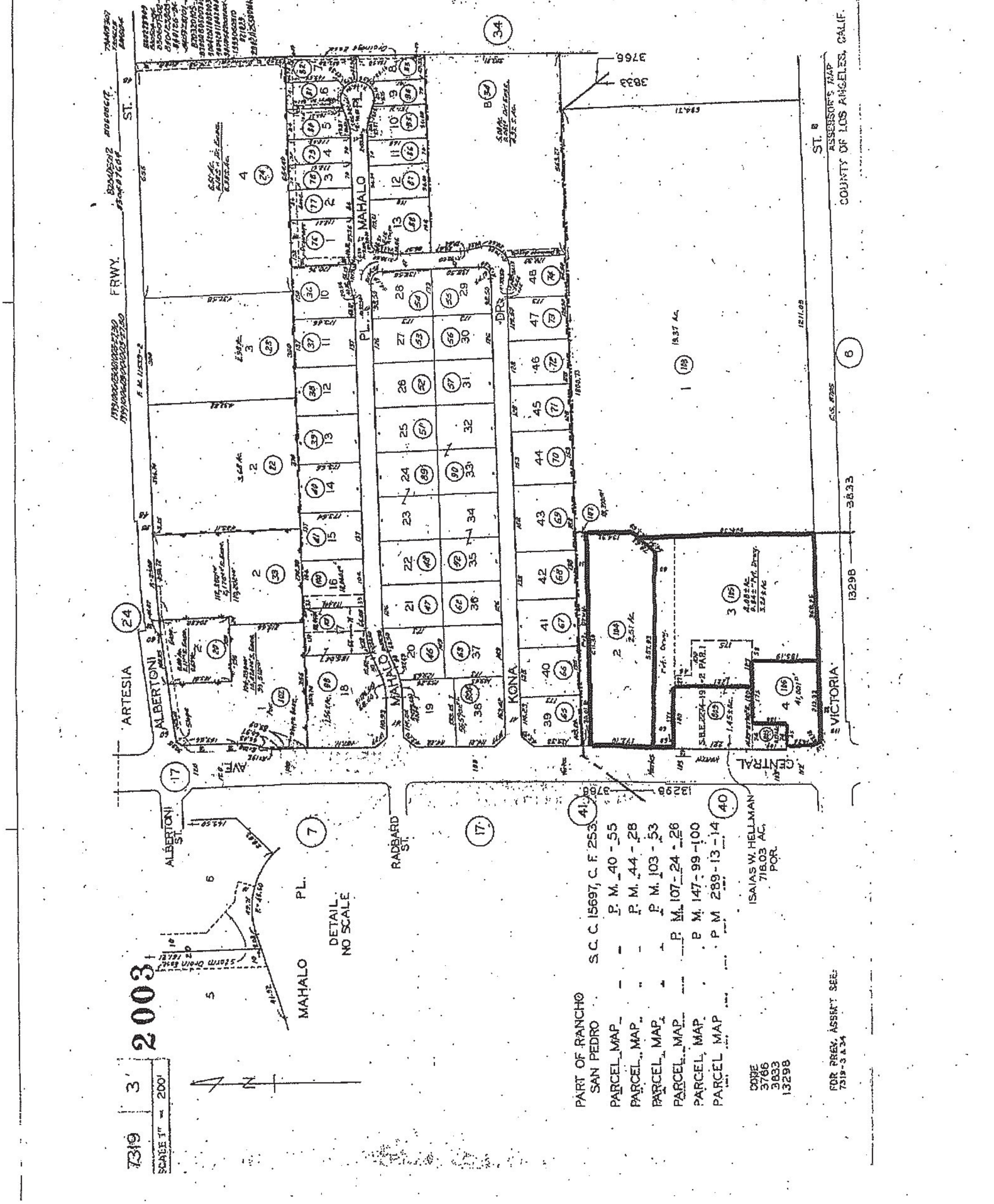

SCALE: 1"=60'
MAHALO PLACE
CENTRAL AVENUE
ASPEN HILL ROAD
(PRIVATE DRIVEWAY)
CITY OF COMPTON
CITY OF CARSON
(PRIVATE DRIVEWAY AND FIRE LANE)
(PRIVATE DRIVEWAY AND FIRE LANE)
VICTORIA STREET
PARCELS 2, 3 AND 4 OF PARCEL MAP NO. 24971
IN THE CITY OF CARSON
COUNTY OF LOS ANGELES, STATE OF CALIFORNIA
2
109,171 S.F.
3
4.62 AC., GROSS
3.78 AC., NET
4
41,001 S.F.
NOT A PART OF THIS SUBDIVISION
N. A. P.
N 87°59'53" E 660.87'
N 87°59'53" E 610.85'
N 87°59'53" E 611.30'
N 89°37'40" E 557.03'
N 89° 37' 40" E 598.69'
N 89°37'40" E 427.69'
N 89°37'40" E 290.00'
N 89° 37' 40" E 9.00'
N 87°59'34" E 1933.60'
N 0°22'20" W 541.19'
N 0°22'20" W 778.17'
N 0°22'20" W 172.10'
N 0°22'20" W 262.11'
N 0°22'20" W 221.00'
N 0°22'20" W 221.00'
N 0°22'20" W 195.19'
N 0°22'20" W 74.26'
N 1°13'14" W 164.32'
N 1°50'33" W 405.79'
N 45°03'28" E 78.85'
N 0°22'20" W 1276.37'
N 0°22'20" W 735.18'
N 0°22'20" W 498.20'
N 0°22'20" W 331.00'
N 0°22'20" W 253.49'
N 0°22'20" W 174.26'
S 89°37'40" W 180.00'
S 89°37'40" W 171.00'
S 89°37'40" W 180.00'
S 89°37'40" W 74.00'
S 89°37'40" W 105.00'
S 89°37'40" W 175.00'
S 89°37'40" W 69.00'
S 89°37'40" W 65.00'
S 89°37'40" W 212.32'
S 87°59'34" W 581.57'
S 87°59'34" W 369.25'
S 87°59'34" W 1933.60'
S 0°22'20" E 60.00'
S 0°22'20" E 30.00'
S 0°22'20" E 30.01'
S 0°22'20" E 50.02'
S 0°22'20" E 100.00'
S 0°22'20" E 100.00'
S 0°22'20" E 65.00'
S 0°22'20" E 504.38'
S 1°13'14" E 134.32'
S 45°03'28" E 54.54'
S 1°50'33" E 88.59'
541.19'
778.17'
102'
52'
50'
30'
30.00'
30.01'
50.02'
VARIES
VARIES
50'
236.98'
172.10'
262.11'
60.00'
60'
171.00'
180.00'
221.00'
1276.37'
735.18'
103'
62'
41'
498.20'
41.00'
331.00'
100.00'
253.49'
174.26'
112'
50'
74.00'
105.00'
175.00'
69.00'
65.00'
195.19'
212.32'
369.25'
581.57'
50'
1933.60'
180'
50'
427.69'
290.00'
180.00'
405.79'
504.38'
134.32'
78.85'
54.54'
88.59'
R=27.00'
Δ=91°38'06"
L=43.18'
T=27.78'
SHEET 1 OF 1 SHEET

EXHIBIT C


ARTESIA FRWY.
ALBERTONI AVE
MAHALO PL.
KONA DR.
CENTRAL
VICTORIA
RADBARD ST.
ALBERTONI ST.
MAHALO PL.
DETAIL NO SCALE
PART OF RANCHO SAN PEDRO S.C.C. 15697, C.F. 253
PARCEL MAP P.M. 40-55
PARCEL MAP P.M. 44-28
PARCEL MAP P.M. 103-53
PARCEL MAP P.M. 107-24-26
PARCEL MAP P.M. 147-99-100
PARCEL MAP P.M. 289-13-14
ISAIAS W. HELLMAN 718.03 AC. POR.
CODE 3766 3833 13298
FOR PREV. ASSM'T SEE: 7319-3 & 34
ASSESSOR'S MAP COUNTY OF LOS ANGELES, CALIF.
7319 3
SCALE 1" = 200'
2003

APPENDIX B
HUMAN HEALTH RISK ASSESSMENT

CONTENTS

TABLES

FIGURES

ACRONYMS AND ABBREVIATIONS

ABS	Soil Absorption Factor
ADAF	Age-Dependent Adjustment Factor
ALM	Adult Lead Model
ATSDR	Agency for Toxic Substances & Disease Registry
bgs	below ground surface
Cal/EPA	California Environmental Protection Agency
CFR	Code of Federal Regulations
COPC	Chemical of Potential Concern
CSF	Cancer Slope Factor
CSM	Conceptual Site Model
DTSC	Department of Toxic Substances Control
ESA	Environmental Site Assessment
GIABS	Fraction of Contaminant Absorbed in Gastrointestinal Tract
HEAST	Health Effects Assessment Summary Tables
HHRA	Human Health Risk Assessment
HQ	Hazard Quotient
IARC	International Agency for Research on Cancer
IQ	Intelligence Quotient
IUR	Inhalation Unit Risk
MRL	Minimal Risk Level
NCP	National Contingency Plan
NHL	Non-Hodgkin Lymphoma
OEHHA	Office of Environmental Health Hazard Assessment
PEF	Particulate Emission Factor
PPRTV	Provisional Peer Reviewed Toxicity Value
RBA_{oral}	Oral relative bioavailability
RBTC	Risk-Based Target Concentration
RfC	Reference Concentration
RfD	Reference Dose
RSL	Regional Screening Level
TCE	Trichloroethene
TPH	Total Petroleum Hydrocarbons
USEPA	United States Environmental Protection Agency
VOC	Volatile Organic Compound

UNITS OF MEASURE

atm	atmosphere
cm	centimeter
cm^2	square centimeter
dL	deciliter
kg	kilogram
L	liter
m^3	cubic meters
mg	milligram
mm	millimeter
mol	mole
µg	microgram

B.1 DEVELOPMENT OF RISK-BASED TARGET CONCENTRATIONS

In order to evaluate the potential human health risk to future on-Site populations, risk-based target concentrations (RBTCs) were developed for selected chemicals detected in soil gas and soil at the Site according to California Environmental Protection Agency (Cal/EPA) and United States Environmental Protection Agency (USEPA) risk assessment guidance as follows:

- Cal/EPA 2011a. Final Guidance for the Evaluation and Mitigation of Subsurface Vapor Intrusion to Indoor Air;
- Cal/EPA 2014. Human Health Risk Assessment (HHRA) Note Number 1, Issue: Recommended Department of Toxic Substances Control (DTSC) Default Exposure Factors for Use in Risk Assessment at California Hazardous Waste Sites and Permitted Facilities;
- Cal/EPA 2015. Preliminary Endangerment Assessment Guidance Manual;
- Cal/EPA 2017. HHRA Note Number 3, Issue: DTSC-Modified Screening Levels;
- USEPA 1989. Risk Assessment Guidance for Superfund, Volume I: Human Health Evaluation Manual (Part A);
- USEPA 2004. Risk Assessment Guidance for Superfund Volume I: Human Health Evaluation Manual (Part E, Supplemental Guidance for Dermal Risk Assessment), Final; and
- USEPA 2009. Risk Assessment Guidance for Superfund. Volume 1: Human Health Evaluation Manual (Part F, Supplemental Guidance for Inhalation Risk Assessment).

The RBTC represents the concentration of a chemical that is protective of human health. As a conservative measure, the RBTCs were calculated to correspond to a target cancer risk of one in a million (1×10^{-6}) and a target non-cancer hazard quotient (HQ) of one. The National Contingency Plan (NCP) (40 Code of Federal Regulations [CFR] § 300) is commonly cited as the basis for target risk and hazard levels. According to the NCP, lifetime incremental cancer risks posed by a site should not exceed 1×10^{-6} to one hundred in a million (1×10^{-4}), and noncarcinogenic chemicals should not be present at levels expected to cause adverse health effects (i.e., HQ greater than one). As a risk management policy, the Cal/EPA generally considers 1×10^{-6} to be a point of departure for purposes of making risk management decisions, with most approved remediation achieving incremental risk levels of ten in a million (1×10^{-5}) or lower.

The following sections discuss the various components required for developing RBTCs. Section B.1.1 identifies the chemicals for which RBTCs were developed. Section B.1.2 discusses the exposure assessment. Section B.1.3 presents the fate and transport modeling used to predict the concentration of volatile chemicals and particulates in air. The toxicity of the chemicals evaluated is discussed in Section B.1.4. Section B.1.5 explains the methodology for calculation of RBTCs and presents the media and chemical-specific RBTCs.

B.1.1 Selection of Chemicals to be Evaluated

Analytes identified as chemicals of potential concern (COPCs) and for which RBTCs were developed are listed in Table B.1. COPCs were selected based on the analytical data collected by Haley Aldrich in relation to a Phase II site investigation in August through October, 2017 (Haley Aldrich 2017).

Among the 141 soil samples collected at 0 to 10 feet below ground surface (feet bgs) across the Site (excluding four samples collected at deeper depths) and analyzed for metals, total petroleum hydrocarbons (TPH), and volatile organic compounds (VOCs), 17 analytes detected in at least one soil sample were identified as soil COPCs, including 13 metals and four TPH fractions. For TPH, the soil samples were analyzed for eight fractions with different carbon ranges, and five fractions were detected. However, based on Cal/EPA (2015) and USEPA (2017a), RBTCs were calculated only for the four TPH fractions that have toxicity values derived in the Regional Screening Level (RSL) table (USEPA 2017b).

Among the 68 soil gas samples collected at five and 15 feet bgs across the Site and analyzed for VOCs and inorganic compounds, 11 VOCs detected in at least one soil gas sample were identified as soil gas COPCs. All 11 COPCs were detected in the five feet bgs samples, six of which were also detected in the 15 feet bgs samples.

B.1.2 Exposure Assessment

To evaluate the human health risks posed by a site, it is necessary to identify the populations that may potentially be exposed to the chemicals present and to determine the pathways by which these exposures may occur. A Conceptual Site Model (CSM) describing the potentially exposed populations and exposure pathways identified for the Site is presented in Figure B.1.

Rationale for the selection of potentially exposed populations is presented in Section B.1.2.1 and for the relevant (i.e., complete) exposure pathways in Section B.1.2.2. Section B.1.2.3 presents the exposure assumptions, and Section B.1.2.4 provides the intake estimation to quantify the exposures.

B.1.2.1 Potentially Exposed Human Populations

The Site is a former oil field and is currently vacant. It is understood that the Site may be redeveloped for residential use. Thus, to evaluate an unrestricted redevelopment scenario, RBTCs were developed for future on-Site construction workers conducting Site redevelopment activities and future on-Site residents occupying the Site after redevelopment.

B.1.2.2 Exposure Pathways

Based on the CSM, potential exposure pathways and routes for construction workers and residents are as follows:

- Direct contact with surface and subsurface soils (0–10 feet bgs, when soils from depths of up to 10 feet bgs could be brought to the surface during excavation or other activities) via ingestion, dermal contact, inhalation of vapors migrating from soil to outdoor or trench air, and inhalation of windblown particulates.
- Inhalation of vapors (either through migration of soil gas from the subsurface into indoor air [home] or trench air [construction trench]).

For soil gas, only inhalation of VOCs in indoor air was modeled for the future resident populations, since outdoor concentrations of VOCs will be lower than indoor air concentrations due to higher mixing in the ambient environment. For construction workers, inhalation of VOCs migrating from soil gas or soil in a construction trench while conducting excavation activities was modeled for conservativeness as the mixing with ambient air is limited in that scenario.

Neither direct contact with groundwater nor vapor migration from groundwater were considered as possible exposure pathways. According to the Phase I Environmental Site Assessment (ESA) (Haley Aldrich 2017), groundwater in the uppermost aquifer at the Site is located at approximately 205 feet bgs. No groundwater was encountered on-Site at a boring advanced to 28 feet bgs. Also, municipally-supplied water is available for potable uses in this area. Given these reasons, groundwater is unlikely to represent a major source of vapor intrusion, and direct contact with groundwater during domestic use is unlikely.

B.1.2.3 Exposure Assumptions

Standard exposure assumptions recommended by Cal/EPA (2014) were used for construction workers and residents. The exposure parameters are presented in Table B.2.

B.1.2.4 Estimate Intake

In order to quantify exposures, an upper-bound estimate of the theoretical intake was developed for each of the potentially exposed human populations via each of the exposure pathways identified in the CSM. This section provides the equations and assumptions used to develop the intake factors used in the calculation of the RBTCs. The exposure assumptions and calculated intake factors are presented in Table B.2.

Ingestion of Soil

The intake factor for soil ingestion was calculated using the following equation (USEPA 1989):

$$IF_{soil.ing} = \frac{IR_S * EF * ED * CF}{BW * AT}$$

Where:

$IF_{soil.ing}$	=	Intake Factor for soil ingestion (kilogram [kg] of soil/kg body weight-day)
IR_s	=	Soil Ingestion Rate (milligram [mg] of soil/day)
EF	=	Exposure Frequency (day/year)
ED	=	Exposure Duration (year)
BW	=	Body Weight (kg)
AT	=	Averaging Time (day)
CF	=	Conversion Factor (kg of soil/mg of soil)

Dermal Contact with Soil

The intake factor for dermal contact with soil was calculated using the following equation (USEPA 2004):

$$IF_{soil.derm} = \frac{AF * SA_s * EF * ED * CF}{BW * AT}$$

Where:

$IF_{soil.derm}$	=	Intake Factor for dermal contact with soil (kg of soil/kg body weight-day)
AF	=	Adherence Factor (mg of soil/square centimeter [cm^2])
SA_s	=	Skin Surface Area for soil contact (cm^2/day)
EF	=	Exposure Frequency (day/year)
ED	=	Exposure Duration (year)

BW	=	Body Weight (kg)
AT	=	Averaging Time (day)
CF	=	Conversion Factor (kg of soil/mg of soil)

Inhalation of Air

The intake factor for inhalation of volatile chemicals or windblown particulates migrating from soil or soil gas to indoor, outdoor, or trench air was calculated using the following equation (USEPA 2009):

$$IF_{inh} = \frac{ET * EF * ED}{AT * CF}$$

Where:

IF_{inh}	=	Intake Factor for air inhalation (unitless)
ET	=	Exposure Time (hour/day)
EF	=	Exposure Frequency (day/year)
ED	=	Exposure Duration (year)
AT	=	Averaging Time (day)
CF	=	Conversion Factor (hour/day)

B.1.3 Fate and Transport Modeling

B.1.3.1 Vapors

Volatile compounds detected in soil gas and soil can potentially migrate through the unsaturated zone to indoor or outdoor air. This migration is quantified for the purposes of this assessment through an intermedia transfer factor. When the transfer factor is multiplied by the source concentration of a chemical in soil or soil gas, the product is the resulting steady-state concentration that is predicted in indoor or outdoor air.

Ramboll developed transfer factors for volatile compounds from soil or soil gas to indoor, outdoor, or trench air (for exposure of future on-Site construction workers and residents) for the following scenarios:

- Transport of soil gas from five feet bgs into a residential slab-on-grade building with engineered fill.
- Transport of soil gas from 15 feet bgs into a residential slab-on-grade building with engineered fill.
- Transport of soil gas from five feet bgs into a five-foot deep construction trench.
- Transport of soil from one centimeter (cm) bgs into outdoor air.
- Transport of soil from one cm bgs into a 10-foot deep construction trench.

Soil gas transfer factors were estimated using the screening-level model described by Johnson and Ettinger (1991). Specifically, the DTSC Screening-Level Model for Soil Gas Contaminants[1] was used. Soil transfer factors were estimated using the Jury model as outline in the Soil Screening Users Guidance (USEPA 2002).

These models are conservative because they assume that the chemical source has infinite mass and it does not include other attenuation processes that typically would reduce the

[1] https://www.dtsc.ca.gov/AssessingRisk/upload/HERO_Soil-Gas_Screening_Model_March2014.xlsm

amount of vapor migration, such as biodegradation, leaching from infiltration, and lateral diffusion.

The calculation of transfer factors was based on parameters describing the properties of the chemicals evaluated, the vadose zone, the surface barrier, and the air dispersion zone. The physical-chemical properties used in these calculations are shown in Table B.3. Based on guidance from USEPA (2017a), only chemicals that easily volatilize were included in the evaluation of vapor migration. These include chemicals with a Henry's Law constant of greater than 1×10^{-5} atmosphere-cubic meter per mole (atm-m^3/mol) or a vapor pressure of greater than 1 millimeter of mercury (mm Hg). Physical and chemical properties in the DTSC Screening-Level Model for Soil Gas Contaminants were updated to newer values from Cal/EPA (2011) or USEPA (2017b) when available and as shown in Table B.3.

Site-specific vadose zone soil parameters and conservative assumptions, which were used to calculate the effective diffusion coefficients, are shown in Table B.4. The soil properties were conservatively selected based on a review of site boring logs (Haley Aldrich 2017), which indicated silty clay to clayey silt soil from the ground surface until 7 to 10 feet deep and sandier soils with some silt or clay until 15 feet bgs. The clayey soils were modeled as clay loam, and the sandier soils were modeled as sandy loam. For simplicity, the soil types were selected as follows:

- Soil gas to indoor air for residents: The upper vadose zone at the Site was assumed to consist of up to three distinct layers. For a future building with engineered fill, the upper two layers consist of a 10 cm layer of sand on top of a 30 cm layer of engineered fill as outlined in Cal/EPA (2005). The remaining layer was conservatively assumed to be sandy loam.
- Soil gas or soil to trench air for construction workers: The soil type was conservatively assumed to be sandy loam.
- Soil to outdoor air for residents: Two soil layers, clay loam (0-7 feet bgs) and sandy loam (7-15 feet bgs), were modeled.

For residential indoor air scenario, the building parameters were based on residential defaults, and are also shown in Table B.4. For the residential outdoor air scenario, dispersion was calculated using the Q/C model (as described in USEPA 2002) with site-specific input values as shown in Table B.4.

For construction workers, two different construction trench scenarios were included to ensure that the most conservative scenario was modeled for transport of vapor compounds from both soil gas and soil, and the trench parameters are also shown in Table B.4. For soil gas modeling, the trench was assumed to be five feet deep to allow for the trench to sit directly on top of the potential soil vapor sources located at the soil gas sample locations at five feet bgs, and the derived RBTCs based on this scenario were also conservatively applied to the soil gas samples at 15 feet bgs. For soil modeling, the trench was conservatively assumed to be 10 feet deep due to less dispersion. For both trench scenarios, dispersion was calculated using a box model and including reduced airflow in the breathing zone of the construction workers inside the trench.

The transfer factors for volatile compounds migrating from soil gas or soil to indoor, outdoor, or trench air are presented in Tables B.5 and Table B.6.

B.1.3.2 Windblown Dust

It is assumed that residents and construction workers may be exposed to airborne particulates on a daily basis under the current Site conditions. Consistent with Cal/EPA recommendations (Cal/EPA 2014), a particulate emission factor (PEF) of 1.4 x 10^9 cubic meter per kilogram (m^3/kg) was used to estimate airborne concentrations of a chemical from corresponding soil concentrations for residents. This PEF reflects an airborne concentration of dust of approximately 0.74 microgram per cubic meter (µg/m^3). For construction workers, a PEF of 1.0 x 10^6 m^3/kg was used to estimate airborne concentrations, resulting an airborne concentration of dust of approximately 1,000 µg/m^3.

B.1.4 Toxicity Assessment

The purpose of a toxicity assessment is to present the weight-of-evidence regarding the potential for a chemical to cause adverse effects in exposed individuals, and to quantitatively characterize, where possible, the relationship between exposure to a chemical and the increased likelihood and/or severity of adverse effects (i.e., the dose-response assessment).

Chemicals are usually evaluated for their potential health effects in two categories, carcinogenic and non-carcinogenic. Different methods are used to estimate the potential for carcinogenic and non-carcinogenic health effects to occur. Several chemicals produce non-carcinogenic effects at sufficiently high doses but only some chemicals are associated with carcinogenic effects. Most regulatory agencies consider carcinogens to pose a risk for cancer at all exposure levels (i.e., a "no-threshold" assumption); that is, any increase in dose is associated with an increase in the probability of developing cancer. In contrast, non-carcinogens generally are thought to produce adverse health effects only when some minimum exposure level is reached (i.e., a threshold dose).

Oral cancer slope factors (CSFs), which are expressed in units of (milligram per kilogram per day)$^{-1}$ (mg/kg-day)$^{-1}$, and inhalation unit risks (IURs), which are expressed in units of (µg/m^3)$^{-1}$, are chemical specific and experimentally derived potency values that are used to calculate the risk of cancer resulting from exposure to potentially carcinogenic chemicals. The CSFs and IURs are defined as upper-bound estimates of the probability of an individual developing cancer per unit intake of a potential carcinogen over a lifetime. With CSFs and IURs, a higher value implies a more potent carcinogenic potential.

Non-cancer oral reference doses (RfDs), which are expressed in units of mg/kg-day, and inhalation reference concentrations (RfCs), which are expressed in units of µg/m^3, are experimentally derived “no-effect” levels that are used to quantify the extent of toxic effects other than cancer due to exposure to chemicals. The RfDs and RfCs are intended to represent the dose or concentration of a chemical that is not expected to cause adverse health effects, assuming daily exposure over the exposure duration, even in sensitive individuals, with a substantial margin of safety. With RfDs and RfCs, a lower value implies a more potent toxicant.

The toxicity values used in this evaluation are summarized in Table B.7. The hierarchy of sources used for the chronic toxicity values is consistent with those recommended by the Cal/EPA (2017) for risk assessments. Based on Cal/EPA (2015), toxicity values for TPHs were selected based on aliphatics and aromatics in the medium and high carbon ranges as presented in the RSL Table (USEPA 2017b).

For construction workers, who were assumed to be present on-Site for one year, subchronic toxicity values were used whenever available for the evaluation of adverse non-cancer

effects in accordance with recommendations by USEPA (2017a). The general hierarchy of sources used for the subchronic toxicity values are as below:

- USEPA Provisional Peer Reviewed Toxicity Values for Superfund (PPRTV) (USEPA 2018);
- Agency for Toxic Substances & Disease Registry (ATSDR). Minimal Risk Levels (MRLs) (ATSDR 2017); and
- USEPA's Health Effects Assessment (HEAST) Summary Tables (USEPA 2011a).

In the absence of subchronic toxicity values, chronic toxicity values were used as a surrogate.

Specific dermal route toxicity values have not yet been developed for any chemicals. Consistent with Cal/EPA and USEPA guidance, potential health effects associated with dermal exposure are calculated using the oral toxicity values.

Trichloroethylene (TCE) is a carcinogen with a mutagenic mode of action for kidney tumors. In order to adjust for the potential increased susceptibility from early-life exposure, when assessing the cancer risk for TCE to residents, the oral CSF and IUR for TCE presented in Table B.7 need to be adjusted for their kidney cancer contribution as recommended by USEPA (2011b) using time-weighted age-dependent adjustment factors (ADAFs). For the oral CSF of 0.046 $(mg/kg\text{-}day)^{-1}$ published by USEPA (2017b), 0.0093 $(mg/kg\text{-}day)^{-1}$ is from the kidney cancer contribution and 0.0367 $(mg/kg\text{-}day)^{-1}$ is from the non-Hodgkin lymphoma (NHL) plus liver cancer contribution. For the IUR of 4.1E-06 $(\mu g/m^3)^{-1}$ published by USEPA (2017b), 1.0E-06 $(\mu g/m^3)^{-1}$ is from the kidney cancer contribution and 3.1E-06 $(\mu g/m^{3)-1}$ is from the NHL plus liver cancer contribution. Based on the exposure durations for child and adult residents as well as ADAFs of 10 for <2 years, 3 for 2–<16 years, and 1 for ≥16 years, time-weighted ADAFs for child and adult residents were calculated to be 5.3 and 2.0, respectively. These ADAFs were applied only to the kidney contribution of the oral CSF and IUR.

Lead exposure/toxicity is evaluated by modeling blood lead levels, and therefore RBTCs were not calculated for lead. For lead, the DTSC screening level for residential soil of 80 mg/kg was derived using LeadSpread 8 and corresponds to a concentration in soil that will result in a 90th percentile estimate of one microgram per deciliter (µg/dL) increase in blood lead in a child (Cal/EPA 2011b). According to Cal/EPA's Office of Environmental Health Hazard Assessment (OEHHA), one µg/dL is the estimated incremental increase in children's blood lead that would reduce an intelligence quotient (IQ) by up to one point (Cal/EPA 2007). For nonresidents, the lead soil screening level was developed to be protective of the fetus of a pregnant adult worker. The DTSC screening level for commercial/industrial soil of 320 mg/kg was derived using a modified version of USEPA's Adult Lead Model (DTSC-modified ALM) and corresponds to a concentration in soil that will result in a 90th percentile estimate of one µg/dL increase in the blood lead of a fetus (Cal/EPA 2011b).

B.1.5 Calculation of Risk-Based Target Concentrations

Using the exposure scenarios and the pathway-specific parameters discussed above, Ramboll developed RBTCs for all the chemicals except lead identified in Section B.1.1. As a conservative measure, the RBTCs were calculated to correspond to a target cancer risk of $1x10^{-6}$ and a target noncancerous HQ of one. Since the RBTCs correspond to the low end of the target risk range considered by USEPA and Cal/EPA to be protective of human health, the presence of a chemical at a concentration in excess of the RBTC does not indicate that

adverse impacts to human health are occurring or will occur but suggests that further evaluation may be warranted.

For chemicals that have both carcinogenic and noncarcinogenic effects, the RBTCs were calculated separately for both health effect endpoints. The more stringent (i.e., lowest and most conservative) value was used for comparison with Site data.

Soil Gas RBTC

The equation used to calculate soil gas RBTCs for vapor migration into indoor air for residents or trench air for construction workers for the carcinogenic endpoint is as follows:

$$\mathrm{RBTC_{SG.c}} = \frac{\mathrm{TR}}{\mathrm{IF_{vapor.inh}} * \alpha * \mathrm{IUR} * \mathrm{CF}}$$

Where:

$RBTC_{SG.c}$	=	Risk-Based Target Concentration, soil gas (microgram per liter [µg/L]), carcinogenic endpoint
TR	=	Target Risk (unitless)
$IF_{vapor.inh}$	=	Intake Factor for vapor inhalation (unitless)
IUR	=	Inhalation Unit Risk $(\mu g/m^3)^{-1}$
α	=	Transfer Factor for soil gas migrating to indoor air or trench air (µg/L per µg/L)
CF	=	Conversion Factor (µg/mg or L/m^3)

The equation used to calculate soil gas RBTCs for vapor migration into indoor air for residents or trench air for construction workers for the noncarcinogenic endpoint is as follows:

$$\mathrm{RBTC_{SG.nc}} = \frac{\mathrm{THQ} * \mathrm{RfC_{inh}}}{\mathrm{IF_{vapor.inh}} * \alpha * \mathrm{CF}}$$

Where:

$RBTC_{SG.nc}$	=	Risk-Based Target Concentration, soil gas (µg/L), noncarcinogenic endpoint
THQ	=	Target Hazard Quotient (unitless)
$IF_{vapor.inh}$	=	Intake Factor for vapor inhalation (unitless)
RfC_{inh}	=	Inhalation Reference Concentration $(\mu g/m^3)$
α	=	Transfer Factor for soil gas migrating to indoor air or trench air (µg/L per µg/L)
CF	=	Conversion Factor (µg/mg or L/m^3)

The RBTCs for VOCs in soil gas migrating to trench air are presented in Table B.8 for construction workers, and the RBTCs for VOCs in soil gas migrating to indoor air are presented in Table B.9 for residents.

Soil RBTC

The equation used to calculate soil direct contact RBTCs for residents or construction workers for the carcinogenic endpoint due to exposure via the ingestion, dermal contact, and inhalation of soil vapor or particulate migrating to outdoor air or trench air is as follows:

$$RBTC_{soil.c} = \frac{TR}{(IF_{soil.ing} * RBA_{oral} + ABS/GIABS * IF_{soil.derm}) * CSF_{oral} + (IF_{vapor.inh} * \alpha + IF_{part.inh}/PEF) * IUR * CF}$$

Where:

$RBTC_{soil.c}$	=	Risk-Based Target Concentration, soil direct contact, carcinogenic endpoint (mg/kg)
TR	=	Target Risk (unitless)
$IF_{soil.ing}$	=	Intake Factor for soil ingestion (kg of soil/kg body weight-day)
$IF_{soil.derm}$	=	Intake Factor for dermal contact with soil (kg of soil/kg body weight-day)
$IF_{vapor.inh}$	=	Intake Factor for vapor inhalation (unitless)
$IF_{part.inh}$	=	Intake Factor for soil particulate inhalation (unitless)
CSF_{oral}	=	Oral Cancer Slope Factor (mg/kg body weight-day)$^{-1}$
IUR	=	Inhalation Unit Risk ($\mu g/m^3$)$^{-1}$
RBA_{oral}	=	Oral Relative Bioavailability
ABS	=	Soil Absorption Factor (unitless)
GIABS	=	Fraction of contaminant absorbed in gastrointestinal tract (unitless)
α	=	Transfer Factor for soil vapor migrating to outdoor air or trench air (mg/m^3 per mg/kg)
PEF	=	Particulate Emission Factor, resident (m^3/kg of soil)
CF	=	Conversion Factor (µg/mg)

The equation used to calculate soil direct contact RBTCs for residents or construction workers for the noncarcinogenic endpoint due to exposure via the ingestion, dermal contact, and inhalation of soil vapor or particulate migrating to outdoor air or trench air is as follows:

$$RBTC_{soil.nc} = \frac{THQ}{(IF_{soil.ing} * RBA_{oral} + ABS/GIABS * IF_{soil.derm})/RfD_{oral} + (IF_{vapor.inh} * \alpha + \frac{IF_{part.inh}}{PEF})/RfC_{inh} * CF}$$

Where:

$RBTC_{soil.nc}$	=	Risk-Based Target Concentration, soil direct contact, noncarcinogenic endpoint (mg/kg)
THQ	=	Target Hazard Quotient (unitless)
$IF_{soil.ing}$	=	Intake Factor for soil ingestion (kg of soil/kg body weight-day)
$IF_{soil.derm}$	=	Intake Factor for dermal contact with soil (kg of soil/kg body weight-day)
$IF_{vapor.inh}$	=	Intake Factor for vapor inhalation (unitless)
$IF_{part.inh}$	=	Intake Factor for soil particulate inhalation (unitless)
RfD_{oral}	=	Oral Reference Dose (mg/kg body weight-day)
RfC_{inh}	=	Inhalation Reference Concentration ($\mu g/m^3$)
RBA_{oral}	=	Oral Relative Bioavailability
ABS	=	Soil Absorption Factor (unitless)
GIABS	=	Fraction of contaminant absorbed in gastrointestinal tract (unitless)
α	=	Transfer Factor for soil vapor migrating to outdoor air or trench air (mg/m^3 per mg/kg)
PEF	=	Particulate Emission Factor, resident (m^3/kg of soil)
CF	=	Conversion Factor (µg/mg)

Oral relative bioavailability (RBA_{oral}), soil absorption factors (ABS), and fraction of contaminant absorbed in gastrointestinal tract (GIABS) are presented in Table B.7.

In a residential scenario, for carcinogenic effects, an age-adjusted approach was adopted to take into the differences in exposure parameters for adult and child residents (USEPA 2017a, Cal/EPA 2015). The 26-year residential exposure duration for carcinogenic effects was a composite of exposure assumptions for six years as a child and 20 years as an adult. The intake factors associated with each exposure duration were combined with toxicity values (adjusted by ADAFs if needed), and then were summed to calculate the carcinogenic RBTCs for an age-adjusted resident. For noncarcinogenic effects, the RBTCs for a child resident with an exposure duration of six years and an adult resident with an exposure duration of 20 years were calculated separately.

The RBTCs for soil direct contact are presented in Table 4.10 for construction workers and Table B.11 for residents. The residential RBTCs are more conservative for most metals with the exception of chromium (total) and vanadium. For these metals, the lowest (or most conservative) RBTCs are those for construction workers. This is due to a very conservative soil ingestion rate (330 mg/day) and high dust concentration (1,000 $\mu g/m^3$) assumed for the calculation of the construction worker RBTCs. The calculation of the RBTC assumes no worker protection (e.g., direct hand to mouth contact, no gloves, no respirator or other protection against dust) and eight hours exposure per day. As this is not representative of typical worker conditions during construction on large redevelopment properties, the residential land use option has been selected as the most conservative land use option for the Site.

Overall, the soil gas RBTCs are summarized in Table B.12 and the soil RBTCs are summarized in Table B.13. For soil RBTCs, there are two exceptions for lead and arsenic. For lead, the screening level of 80 mg/kg for residential soil from Cal/EPA (2017) was used for residents, and the screening level of 320 mg/kg for industrial soil from Cal/EPA (2017) was used for construction workers. For arsenic, the soil RBTCs developed for both construction workers and residents were well below the regional background soil level of 12 mg/kg for southern California, and Arsenic concentrations were evaluated against both the Department of Toxic Substances Control (DTSC) default background soil concentration of 12 mg/kg and the site-specific calculated background concentration of 19 mg/kg (Attachment A). To calculate the site-specific Arsenic background concentration, Ramboll used the methodology developed by the DTSC. The methodology consisted in using graphical and statistical approaches to assess the distribution of the arsenic data, identify the outliers and determine the cleanup goal. Both approaches indicate that the cleanup level for arsenic at the site is 19 mg/kg. Either the default background soil concentration of 12 mg/kg or the site-specific Arsenic background concentration of 19 mg/kg should be used as a clean-up criteria for comparison with Site data. In addition to arsenic, the soil vanadium RBTC for construction workers (34 mg/kg) was below the arithmetic mean of background concentrations in California soils (112 mg/kg, Bradford 1996); therefore, the consistency with background concentrations should be considered when comparing this RBTC with the Site data. Lastly, a ratio of 75% aliphatic and 25% aromatic, which is based on an appropriate composition for crude oil (International Agency for Research on Cancer [IARC] 1989), should be applied to the TPH concentrations in order to compare with the soil RBTCs developed specific to aliphatic or aromatic fraction of certain carbon ranges.

B.2 REFERENCES

Agency for Toxic Substances & Disease Registry (ATSDR). 2017. Minimal Risk Levels (MRLs). June.

Bradford, G.R., A.C. Chang, A.L. Page, D. Bakhtar, J.A. Frampton, and H. Wright. 1996. Background Concentrations of Trace and Major Elements in California Soils. Kearney Foundation Special Report. University of California, Division of Agriculture.

California Environmental Protection Agency (Cal/EPA). 2005. Human-Exposure-Based Screening Numbers Developed to Aid Estimation of Cleanup Costs for Contaminated Soil. January.

Cal/EPA. 2007. Development of Health Criteria for School Site Risk Assessment Pursuant to Health and Safety Code Section 901(g): Child-Specific Benchmark Change in Blood Lead Concentration for School Site Risk Assessment. April.

Cal/EPA. 2011a. Department of Toxic Substances Control. Final Guidance for the Evaluation and Mitigation of Subsurface Vapor Intrusion to Indoor Air (Vapor Intrusion Guidance). October.

Cal/EPA. 2011b. User's Guide to LeadSpread 8 and Recommendations for Evaluation of Lead Exposures in Adults. September.

Cal/EPA. 2014. Human and Ecological Risk Office (HERO) Human Health Risk Assessment (HHRA) Note Number 1, Issue: Recommended DTSC Default Exposure Factors for Use in Risk Assessment at California Hazardous Waste Sites and Permitted Facilities. September.

Cal/EPA. 2015. Preliminary Endangerment Assessment Guidance Manual. October.

Cal/EPA. 2017. Human and Ecological Risk Office (HERO) Human Health Risk assessment (HHRA) Note Number 3, Issue: DTSC-Modified Screening Levels (DTSC-SLs). August.

Code of Federal Regulations (CFR). Title 40, Environmental Protection Agency. Part 300, National Oil and Hazardous Substances Pollution Contingency Plan. (40 CFR § 300).

Haley Aldrich. 2017. ASTM Phase I Environmental Site Assessment and Phase II Assessment. Northeast Corner of South Central Avenue and Victoria Street. APNs: 7319-003-104, -105, and -106. Carson California. October.

International Agency for Research on Cancer (IARC). 1989. IARC Monographs on the Evaluation of Carcinogenic Risk to Humans, Occupational Exposures in Petroleum Refining, Crude Oil and Major Petroleum Fuels, Volume 45. March.

Johnson, P.C. and R.A. Ettinger. 1991. Heuristic Model for Predicting the Intrusion Rate of Contaminant Vapors into Buildings. Environ. Sci. Technol. 25:1445-1452.

United States Environmental Protection Agency (USEPA). 1989. Risk Assessment Guidance for Superfund. Volume 1: Human Health Evaluation Manual (Part A). Interim Final. Office of Emergency and Remedial Response. EPA-540/1-89/002. Washington, D.C. December.

USEPA. 2002. Supplemental Guidance for Developing Soil Screening Levels for Superfund Sites. December.

USEPA. 2004. Risk Assessment Guidance for Superfund Volume I: Human Health Evaluation Manual (Part E, Supplemental Guidance for Dermal Risk Assessment), Final. July.

USEPA. 2009. Risk Assessment Guidance for Superfund Volume I: Human health Evaluation Manual (Part F, Supplemental Guidance for Inhalation Risk Assessment). Final. Office of Superfund Remediation and technology Innovation. EPA-540-R-070-002. OSWER 9285.7-82. January.

USEPA. 2011a. Health Effects Assessment Summary Tables (HEAST). December. Available at: http://epa-heast.ornl.gov/

USEPA. 2011b. Toxicological Review of Trichloroethylene. EPA/635/R-09/011F. September.

USEPA. 2017a. Regional Screening Levels (RSLs) User's Guide. November.

USEPA. 2017b. Regional Screening Levels (RSLs) Tables. November.

USEPA. 2018. Provisional Peer Reviewed Toxicity Values for Superfund (PPRTV). Available at https://hhpprtv.ornl.gov/. Accessed on January 5, 2018.

TABLES

Table B.1. Chemicals for Evaluation
Northeast Corner of South Central Avenue and Victoria Street
Carson, California

Chemical	Soil Gas		Soil
	5 feet	15 feet	
Volatile Organic Compounds (VOCs)			
Benzene	X		
Ethylbenzene	X		
Isopropylbenzene	X		
p-Isopropyltoluene	X	X	
Naphthalene	X	X	
Tetrachloroethene	X	X	
Toluene	X	X	
Trichloroethene	X	X	
1,2,4-Trimethylbenzene	X		
m,p-Xylenes	X	X	
o-Xylene	X		
Total Petroleum Hydrocarbons (TPHs)			
Total Petroleum Hydrocarbons (C9-C16)			X
Total Petroleum Hydrocarbons (C9-C18)			X
Total Petroleum Hydrocarbons (C17-C32)			X
Total Petroleum Hydrocarbons (C19-C32)			X
Metals			
Antimony			X
Arsenic			X
Barium			X
Cadmium			X
Chromium (total)			X
Cobalt			X
Copper			X
Lead			X
Mercury			X
Nickel			X
Selenium			X
Vanadium			X
Zinc			X

Table B.2. Exposure Assumptions
Northeast Corner of South Central Avenue and Victoria Street
Carson, California

Exposure Factors	Units	Symbol	Construction Worker		Child Resident		Adult Resident	
			Value	Source	Value	Source	Value	Source
Receptor-Specific Exposure Factors								
Target Risk	unitless	TR	1E-06	--	1E-06	--	1E-06	--
Target Hazard Quotient	unitless	THQ	1	--	1	--	1	--
Population-Specific Exposure Assumptions								
Exposure Time	hours/day	ET	8	Cal/EPA 2014, a	24	Cal/EPA 2014	24	Cal/EPA 2014
Exposure Time -- Trench	hours/day	ET_T	4	Site-specific, b	--	--	--	--
Exposure Frequency	days/year	EF	250	Cal/EPA 2014	350	Cal/EPA 2014	350	Cal/EPA 2014
Exposure Frequency -- Trench	days/year	ED_T	125	Site-specific, c	--	--	--	--
Exposure Duration	years	ED	1	Cal/EPA 2014	6	Cal/EPA 2014	20	Cal/EPA 2014
Body Weight	kg_{BW}	BW	80	Cal/EPA 2014	15	Cal/EPA 2014	80	Cal/EPA 2014
Averaging Time for Cancinogens	days	AT_c	25,550	Cal/EPA 2014	25,550	Cal/EPA 2014	25,550	Cal/EPA 2014
Averaging Time for Noncarcinogens	days	AT_{nc}	365	Cal/EPA 2014	2,190	Cal/EPA 2014	7,300	Cal/EPA 2014
Soil Ingestion								
Soil Ingestion Rate	mg_{soil}/day	IR_s	330	Cal/EPA 2014	200	Cal/EPA 2014	100	Cal/EPA 2014
Conversion Factor	kg_{soil}/mg_{soil}	CF	1E-06	--	1E-06	--	1E-06	--
Intake Factor for Soil Ingestion, cancer	kg_{soil}/kg_{BW}/day	$IF_{soil.ing\_c}$	4.0E-08	USEPA 1989	1.1E-06	USEPA 1989	3.4E-07	USEPA 1989
Intake Factor for Soil Ingestion, noncancer	kg_{soil}/kg_{BW}/day	$IF_{soil.ing\_nc}$	2.8E-06	USEPA 1989	1.3E-05	USEPA 1989	1.2E-06	USEPA 1989
Soil Dermal Contact								
Skin Surface Area for Soil Contact	cm^2/day	SAs	6,032	Cal/EPA 2014	2,900	Cal/EPA 2014	6,032	Cal/EPA 2014
Adherence Factor	mg_{soil}/cm^2	AF	0.8	Cal/EPA 2014	0.2	Cal/EPA 2014	0.07	Cal/EPA 2014
Conversion Factor	kg_{soil}/mg_{soil}	CF	1E-06	--	1E-06	--	1E-06	--
Intake Factor for Soil Dermal Contact, cancer	kg_{soil}/kg_{BW}/day	$IF_{soil.derm\_c}$	5.9E-07	USEPA 2004	3.2E-06	USEPA 2004	1.4E-06	USEPA 2004
Intake Factor for Soil Dermal Contact, noncancer	kg_{soil}/kg_{BW}/day	$IF_{soil.derm\_nc}$	4.1E-05	USEPA 2004	3.7E-05	USEPA 2004	5.1E-06	USEPA 2004
Inhalation of Soil Particulates								
Particulate Emission Factor	m^3/kg_{soil}	PEF	1.0E+06	Cal/EPA 2014	1.4E+09	Cal/EPA 2014	1.4E+09	Cal/EPA 2014
Conversion Factor	hour/day	CF	24	--	24	--	24	--
Intake Factor for Soil Particulate Inhalation, cancer	unitless	$IF_{part.inh\_c}$	3.3E-03	USEPA 2009	8.2E-02	USEPA 2009	2.7E-01	USEPA 2009
Intake Factor for Soil Particulate Inhalation, noncancer	unitless	$IF_{part.inh\_nc}$	2.3E-01	USEPA 2009	9.6E-01	USEPA 2009	9.6E-01	USEPA 2009

Table B.2. Exposure Assumptions
Northeast Corner of South Central Avenue and Victoria Street
Carson, California

Exposure Factors	Units	Symbol	Construction Worker		Child Resident		Adult Resident	
			Value	Source	Value	Source	Value	Source
Inhalation of Vapors Migrating from Soil Gas or Soil to Indoor Air, Outdoor Air or Trench Air								
Conversion Factor	hour/day	CF	24	--	24	--	24	--
Intake Factor for Vapor Inhalation, cancer	unitless	$IF_{vapor.inh\_c}$	8.2E-04	USEPA 2009	8.2E-02	USEPA 2009	2.7E-01	USEPA 2009
Intake Factor for Vapor Inhalation, noncancer	unitless	$IF_{vapor.inh\_nc}$	5.7E-02	USEPA 2009	9.6E-01	USEPA 2009	9.6E-01	USEPA 2009

Notes:
-- = Not applicable
Cal/EPA = California Environmental Protection Agency
DTSC = Department of Toxic Substances Control
USEPA = United States Environmental Protection Agency
cm^2/day = square centimeter per day
kg_{BW} = kilogram of body weight
kg_{soil}/kg_{BW}/day = kilogram of soil per kilogram of body weight per day
kg_{soil}/mg_{soil} = kilogram of soil per milligram of soil
mg_{soil}/cm^2 = milligram of soil per square centimeter
mg_{soil}/day = milligram of soil per day
m^3/kg_{soil} = cubic meter per kilogram of soil

a. The exposure time for a commercial worker was used.
b. It was assumed that the time a construction worker would be present in a trench would not exceed 50% of the workday.
c. It was assumed that the frequency a construction worker would be present in a trench would not exceed 50% of the days spent on-site.

Sources:

California Environmental Protection Agency (Cal/EPA). 2014. Human and Ecological Risk Office (HERO) Human Health Risk Assessment, Note Number 1, Issue: Recommended DTSC Default Exposure Factors for Use in Risk Assessment at California Hazardous Waste Sites and Permitted Facilities. September.

United States Environmental Protection Agency (USEPA). 1989. Risk Assessment Guidance for Superfund, Volume I: Human Health Evaluation Manual (Part A). Interim Final. EPA/540/1-89/002. Office of Emergency and Remedial Response. Washington, D.C. December.

USEPA. 2004. Risk Assessment Guidance for Superfund Volume I: Human Health Evaluation Manual (Part E, Supplemental Guidance for Dermal Risk Assessment), Final. July.

USEPA. 2009. Risk Assessment Guidance for Superfund. Vol. 1: Part F, Supplemental Guidance for Inhalation Risk Assessment. Final. January.

Table B.3. Physical/Chemical Properties of Volatile Chemicals[a,b]
Northeast Corner of South Central Avenue and Victoria Street
Carson, California

Chemical	Molecular Weight MW (g/mol)	Organic Carbon Partition Coefficient, K_{oc} (cm^3/g)	Diffusivity in Air, D_a (cm^2/s)	Diffusivity in Water, D_w (cm^2/s)	Pure Component Water Solubility, S (mg/L)	Henry's Law Constant at 25° C H (atm-m^3/mol)	Normal Boiling Point, T_B (^oK)	Critical Temperature, T_C (^oK)	Enthalpy of Vaporization at the Normal Boiling Point, ΔHv,b (cal/mol)
Volatile Organic Compounds (VOCs)									
Benzene	78.11	1.46E+02	8.95E-02	1.03E-05	1.79E+03	5.55E-03	353.24	562.16	7342.00
Ethylbenzene	106.17	4.46E+02	6.85E-02	8.46E-06	1.69E+02	7.88E-03	409.34	617.20	8501.00
Isopropylbenzene	120.19	6.98E+02	6.03E-02	7.86E-06	6.13E+01	1.15E-02	425.56	631.10	10335.30
p-Isopropyltoluene [c]	134.22	1.12E+03	5.70E-02	8.12E-06	2.34E+01	1.10E-02	449.65	---	---
Naphthalene	128.18	1.54E+03	6.05E-02	8.38E-06	3.10E+01	4.40E-04	491.14	748.40	10373.00
Tetrachloroethene	165.83	9.49E+01	5.05E-02	9.46E-06	2.06E+02	1.77E-02	394.40	620.20	8288.00
Toluene	92.14	2.34E+02	7.78E-02	9.20E-06	5.26E+02	6.64E-03	383.78	591.79	7930.00
Trichloroethene	131.39	6.07E+01	6.87E-02	1.02E-05	1.28E+03	9.85E-03	360.36	544.20	7505.00
1,2,4-Trimethylbenzene	120.20	6.14E+02	6.07E-02	7.92E-06	5.70E+01	6.16E-03	442.30	649.17	9368.80
m,p-Xylenes [d]	106.17	3.75E+02	6.82E-02	8.42E-06	1.62E+02	6.90E-03	411.52	616.20	8525.00
o-Xylene	106.17	3.83E+02	6.89E-02	8.53E-06	1.78E+02	5.18E-03	417.60	630.30	8661.00
Total Petroleum Hydrocarbons (TPHs)									
Medium Aromatic (C9-C16) [e]	135.19	2.01E+03	5.64E-02	8.07E-06	2.78E+01	4.79E-04	---	---	---
Medium Aliphatic (C9-C18) [e]	128.26	7.96E+02	5.14E-02	6.77E-06	2.20E-01	3.40E+00	---	---	---
High Aliphatic (C19-C32) [e]	170.34	4.82E+03	3.62E-02	6.43E-06	3.70E-03	8.18E+00	---	---	---

Notes:

--- = Not available
atm-m^3/mol = atmosphere-cubic meter per mole
cal/mol = calorie per mole
cm^3/g = cubic centimeter per gram
cm^2/s = square centimeter per second
g/mol = gram per mole
^oK = degrees Kelvin
mg/L = milligram per liter
Cal/EPA = California Environmental Protection Agency
USEPA = United States Environmental Protection Agency

a. Volatile compounds defined by USEPA (2017) as chemicals with vapor pressure greater than 1 millimeter (mm) Hg or Henry's Law constant greater than 0.00001 atm-m^3/mole.
b. Physical/chemical properties were obtained from Cal/EPA (2011) unless noted.
c. Physical/chemical properties were obtained from EPIsuite 4.11 (USEPA 2012), except sec-butylbenzene was used as a surrogate for diffusivities.
d. p-Xylene was used as a surrogate for m,p-xylenes.
e. Physical/chemical properties were obtained from USEPA (2017).

Sources:

California Environmental Protection Agency (Cal/EPA). 2011. Guidance for the Evaluation and Mitigation of Subsurface Vapor Intrusion to Indoor Air (Vapor Intrusion Guidance). Final. Department of Toxic Substances Control. October.

United States Environmental Protection Agency (USEPA). 2012. Estimation Programs Interface Suite™ for Microsoft® Windows, v 4.11. Washington, DC, USA.

USEPA. 2017. Regional Screening Level (RSL) Table, November.

Table B.4. Modeling Parameters
Northeast Corner of South Central Avenue and Victoria Street
Carson, California

Parameter	Value	Units	Notes
Source/Receptor Parameters			
Soil gas sampling depth, shallow	5	feet	Site-specific estimate.
Soil gas sampling depth, deep	15	feet	Site-specific estimate.
Soil gas sampling depth, trench	1	cm	Conservative assumption
Depth to top of soil contamination	1	cm	Conservative assumption
Soil temperature at source	24	Celsius	Default value (Cal/EPA 2011)
Soil Parameters for Indoor Air Scenario			
Soil type in Horizon A (0-10 cm below foundation)	Sand	--	Engineered fill is assumed to underlie building foundation.
Thickness	10	cm	Default value for engineered fill layer (Cal/EPA 2005)
Bulk density	1.66	g/cm^3	Default value for engineered fill layer (Cal/EPA 2005)
Total porosity	0.375	unitless	Default value for engineered fill layer (Cal/EPA 2005)
Water content	0.0535	unitless	Default value for engineered fill layer (Cal/EPA 2005)
Soil type in Horizon B (10-40 cm below foundation)	Fill	--	Engineered fill is assumed to underlie building foundation.
Thickness	30	cm	Default value for engineered fill layer (Cal/EPA 2005)
Bulk density	1.8	g/cm^3	Default value for engineered fill layer (Cal/EPA 2005)
Total porosity	0.3	unitless	Default value for engineered fill layer (Cal/EPA 2005)
Water content	0.15	unitless	Default value for engineered fill layer (Cal/EPA 2005)
Soil type in Horizon C (>40 cm below foundation)	Sandy Loam	--	Conservative estimate based on site boring logs.
Thickness	13.2	feet	Site-specific estimate.
Bulk density	1.62	g/cm^3	Default value for sandy loam (Cal/EPA 2011).
Total porosity	0.387	unitless	Default value for sandy loam (Cal/EPA 2011).
Water content	0.103	unitless	Default value for sandy loam (Cal/EPA 2011).
Soil Parameters for Trench Outdoor Air Scenario			
Soil type in Horizon A	Sandy Loam	--	Conservative estimate based on site boring logs.
Thickness	15	feet	Site-specific estimate.
Bulk density	1.62	g/cm^3	Default value for sandy loam (Cal/EPA 2011).
Total porosity	0.387	unitless	Default value for sandy loam (Cal/EPA 2011).
Water content	0.103	unitless	Default value for sandy loam (Cal/EPA 2011).
foc	0.006	unitless	Default value (USEPA 2002)
Soil Parameters for Residential Outdoor Air Scenario			
Soil type in Horizon A	Clay Loam	--	Conservative estimate based on site boring logs.
Thickness	7	feet	Conservative estimate based on site boring logs.
Bulk density	1.48	g/cm^3	Default value for clay loam (Cal/EPA 2011).
Total porosity	0.442	unitless	Default value for clay loam (Cal/EPA 2011).
Water content	0.168	unitless	Default value for clay loam (Cal/EPA 2011).
foc	0.006	unitless	Default value (USEPA 2002)
Soil type in Horizon B	Sandy Loam	--	Conservative estimate based on site boring logs.
Thickness	8	feet	Conservative estimate based on site boring logs.
Bulk density	1.62	g/cm^3	Default value for sandy loam (Cal/EPA 2011).
Total porosity	0.387	unitless	Default value for sandy loam (Cal/EPA 2011).
Water content	0.103	unitless	Default value for sandy loam (Cal/EPA 2011).
foc	0.006	unitless	Default value (USEPA 2002)
Building Foundation Parameters			
Depth to Bottom of Foundation, Slab-on-grade	15	cm	Default value (USEPA 2004)
Foundation crack ratio	0.005	unitless	Default value (Cal/EPA 2011)
Average vapor flow rate into building	5	$L/min/m^2$	Default value (USEPA 2004)
Foundation thickness	10	cm	Default value (USEPA 2004)

Table B.4. Modeling Parameters
Northeast Corner of South Central Avenue and Victoria Street
Carson, California

Parameter	Value	Units	Notes
Air Dispersion Parameters			
Residential Indoor Air Scenario			
Air exchange rate	0.5	1/hour	Residential default value (Cal/EPA 2011)
Length of building	1000	cm	Default value (USEPA 2004)
Width of building	1000	cm	Default value (USEPA 2004)
Mixing height of building, Slab-on-grade	244	cm	Residential default value (Cal/EPA 2011)
Residential Outdoor Air Scenario			
Site Area	7.5	acre	Site-specific value
Site windspeed	0.94	m/s	Site-specific estimate
Q/C	43.1	g/m^2-s per kg/m^3	Site-specific value calculated from Appendix D of USEPA (2002)
Shallow Trench Outdoor Air Scenario			
Depth of construction trench	5	feet	Conservative assumption
Lengh of construction trench	5	feet	Conservative assumption
Width of construction trench	2.5	feet	Conservative assumption
Windspeed in breathing zone	0.19	m/s	Conservative estimate based on 1/5 of site windspeed
Q/C	26.8	g/m^2-s per kg/m^3	Calculated from box model
Deep Trench Outdoor Air Scenario			
Depth of construction trench	10	feet	Conservative assumption
Lengh of construction trench	10	feet	Conservative assumption
Width of construction trench	5	feet	Conservative assumption
Windspeed in breathing zone	0.094	m/s	Conservative estimate based on 1/10 of site windspeed
Q/C	13.4	g/m^2-s per kg/m^3	Calculated from box model

Notes:

-- =Not applicable

cm = centimeter

g/cm^3 = gram per cubic centimeter

g/m^2 per kg/m^3 = (gram per square meter) per (kilogram percubic meter)

$L/min/m^2$ = liter per minute per 100 square meter

Cal/EPA = California Environmental Protection Agency

USEPA = United States Environmental Protection Agency

Sources:

Cal/EPA. 2005. Human-Exposure-Based Screening Numbers Developed to Aid Estimation of Cleanup Costs for Contaminated Soil. January.

Cal/EPA. 2011. Guidance for the Evaluation and Mitigation of Subsurface Vapor Intrusion to Indoor Air (Vapor Intrusion Guidance). Final. Department of Toxic Substances Control. October.

USEPA. 2002. Supplemental Guidance for Developing Soil Screening Levels for Superfund Sites. December.

USEPA. 2004. User's Guide for Evaluating Subsurface Vapor Intrusion Into Buildings Office of Emergency and Remedial Response. February.

Table B.5. Transfer Factors for Vapors from Soil Gas to Indoor Air and Trench Air
Northeast Corner of South Central Avenue and Victoria Street
Carson, California

Chemical Group	Chemical	TF for Soil Gas Migrating to Indoor Air (µg/L per µg/L)		TF for Soil Gas Migrating to Trench Air (µg/L per µg/L)
		5 feet	15 feet	
VOC	Benzene	7.7E-04	4.2E-04	3.4E-03
VOC	Ethylbenzene	6.3E-04	3.3E-04	2.6E-03
VOC	Isopropylbenzene	5.7E-04	3.0E-04	2.3E-03
VOC	p-Isopropyltoluene	5.5E-04	2.8E-04	2.1E-03
VOC	Naphthalene	5.8E-04	3.0E-04	2.3E-03
VOC	Tetrachloroethene	5.0E-04	2.6E-04	1.9E-03
VOC	Toluene	6.9E-04	3.7E-04	2.9E-03
VOC	Trichloroethene	6.3E-04	3.4E-04	2.6E-03
VOC	1,2,4-Trimethylbenzene	5.8E-04	3.0E-04	2.3E-03
VOC	m,p-Xylenes	6.3E-04	3.3E-04	2.6E-03
VOC	o-Xylene	6.3E-04	3.4E-04	2.6E-03

Notes:
µg/L = microgram per liter
µg/m^3 = microgram per cubic meter
TF = Transfer Factor
VOC = Volatile Organic Compound

Table B.6. Transfer Factors for Vapors from Soil to Outdoor Air and Trench Air
Northeast Corner of South Central Avenue and Victoria Street
Carson, California

Chemical Group	Chemical	TF for Soil Migrating to Outdoor Air (mg/m^3 per mg/kg)	TF for Soil Migrating to Trench Air (mg/m^3 per mg/kg)
		Resident 26 years	Construction Worker 1 Year
TPH	Medium Aromatic (C9-C16)	2.8E-05	5.8E-04
TPH	Medium Aliphatic (C9-C18)	1.4E-03	3.0E-02
TPH	High Aliphatic (C19-C32)	1.1E-03	2.3E-02

Notes:

mg/m^3 per mg/kg = milligram/cubic meter per milligram/kilogram

TF = Transfer Factor

TPH = Total Petroleum Hydrocarbon

a. The transfer factors for child residents are also used for the years 0-6 of age-adjusted resident calculations.

Table B.7. Toxicity Values
Northeast Corner of South Central Avenue and Victoria Street
Carson, California

Chemical Group	Chemical	Oral Cancer Slope Factor $(mg/kg\text{-}day)^{-1}$		Inhalation Unit Risk $(\mu g/m^3)^{-1}$		Chronic Oral RfD (mg/kg-day)		Chronic Inhalation RfC ($\mu g/m^3$)		Subhronic Oral RfD (mg/kg-day)		Subchronic Inhalation RfC ($\mu g/m^3$)		GIABS	Soil Dermal Absorption Factor ABS_{soil}		Oral Relative Bioavailability[a]	Mutagen[b]
VOC	Benzene	0.1	Cal/EPA 2017a	0.000029	Cal/EPA 2017a	0.004	Cal/EPA 2017a	3	Cal/EPA 2017a	0.01	PPRTV	80	PPRTV	1	--	--	1	--
VOC	Ethylbenzene	0.011	USEPA 2017	2.5E-06	USEPA 2017	0.1	USEPA 2017	1000	USEPA 2017	0.05	PPRTV	9000	PPRTV	1	--	--	1	--
VOC	Isopropylbenzene	--	--	--	--	0.1	USEPA 2017	400	USEPA 2017	0.4	HEAST	90	HEAST	1	--	--	1	--
VOC	p-Isopropyltoluene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1	--
VOC	Naphthalene	0.12	USEPA 2017, c	0.000034	USEPA 2017	0.02	USEPA 2017	3	USEPA 2017	0.6	ATSDR 2017	3	USEPA 2017, d	1	0.15	Cal/EPA 2015	1	--
VOC	Tetrachloroethene	0.54	Cal/EPA 2017a	6.1E-06	Cal/EPA 2017a	0.006	Cal/EPA 2017a	40	Cal/EPA 2017a	0.008	ATSDR 2017	41	ATSDR 2017	1	--	--	1	--
VOC	Toluene	--	--	--	--	0.08	Cal/EPA 2017a	300	Cal/EPA 2017a	0.8	PPRTV	5000	PPRTV	1	--	--	1	--
VOC	Trichloroethene	0.046	USEPA 2017	4.1E-06	USEPA 2017	0.0005	USEPA 2017	2	USEPA 2017	0.0005	ATSDR 2017	2.1	ATSDR 2017	1	--	--	1	x
VOC	1,2,4-Trimethylbenzene	--	--	--	--	0.01	USEPA 2017	60	USEPA 2017	0.01	USEPA 2017, d	60	USEPA 2017, d	1	--	--	1	--
VOC	m,p-Xylenes	--	--	--	--	0.2	USEPA 2017, e	100	USEPA 2017, e	0.4	PPRTV, e	400	PPRTV, e	1	--	--	1	--
VOC	o-Xylene	--	--	--	--	0.2	USEPA 2017	100	USEPA 2017	0.4	PPRTV, e	400	PPRTV, e	1	--	--	1	--
TPH	Medium Aromatic (C9-C16)	--	--	--	--	0.004	USEPA 2017	3	USEPA 2017	0.004	PPRTV	1000	PPRTV	1	--	--	1	--
TPH	Medium Aliphatic (C9-C18)	--	--	--	--	0.01	USEPA 2017	100	USEPA 2017	0.1	PPRTV Appendix	100	PPRTV	1	--	--	1	--
TPH	High Aromatic (C17-C32)	--	--	--	--	0.04	USEPA 2017	140	USEPA 2017, c	0.4	PPRTV	1400	PPRTV, c	1	0.1	USEPA 2017	1	--
TPH	High Aliphatic (C19-C32)	--	--	--	--	3	USEPA 2017	10500	USEPA 2017, c	30	PPRTV	105000	PPRTV, c	1	--	--	1	--
Metal	Antimony	--	--	--	--	0.0004	USEPA 2017	--	--	0.0004	PPRTV	1	ATSDR 2017	0.15	0.01	Cal/EPA 2015	1	--
Metal	Arsenic	9.5	Cal/EPA 2017a	0.0033	Cal/EPA 2017a	0.0000035	Cal/EPA 2017a	0.015	Cal/EPA 2017a	3.5E-06	Cal/EPA 2017a, d	0.015	Cal/EPA 2017a, d	1	0.03	Cal/EPA 2015	0.6	--
Metal	Barium	--	--	--	--	0.2	USEPA 2017	0.5	USEPA 2017	0.2	ATSDR 2017	5	HEAST	0.07	0.01	Cal/EPA 2015	1	--
Metal	Cadmium	--	--	0.0018	Cal/EPA 2017a	0.0000063	Cal/EPA 2017a, f	0.01	Cal/EPA 2017a, f	0.0005	ATSDR 2017	0.01	Cal/EPA 2017a, d	1	0.001	Cal/EPA 2015	1	--
Metal	Chromium (total)	--	--	--	--	1.5	Cal/EPA 2017a, g	--	--	1.5	HEAST, g	5	ATSDR 2017, g	0.013	0.01	Cal/EPA 2015	1	--
Metal	Cobalt	--	--	0.009	USEPA 2017	0.0003	USEPA 2017	0.006	USEPA 2017	0.003	PPRTV	0.02	PPRTV	1	0.01	Cal/EPA 2015	1	--
Metal	Copper	--	--	--	--	0.04	USEPA 2017	--	--	0.01	ATSDR 2017	--	--	1	0.01	Cal/EPA 2015	1	--
Metal	Mercury	--	--	--	--	0.00016	Cal/EPA 2017a, h	0.03	Cal/EPA 2017a, h	0.002	ATSDR 2017, h	0.03	Cal/EPA 2017a, d	0.07	0.01	Cal/EPA 2015	1	--
Metal	Nickel	--	--	0.00026	Cal/EPA 2017a	0.011	Cal/EPA 2017a	0.014	Cal/EPA 2017a	0.02	HEAST	0.2	ATSDR 2017	0.04	0.01	Cal/EPA 2015	1	--
Metal	Selenium	--	--	--	--	0.005	USEPA 2017	20	USEPA 2017	0.005	HEAST	20	USEPA 2017, d	1	0.01	Cal/EPA 2015	1	--
Metal	Vanadium	--	--	--	--	0.005	Cal/EPA 2017a	0.1	Cal/EPA 2017a	0.0007	PPRTV	0.1	Cal/EPA 2017a, d	0.026	0.01	Cal/EPA 2015	1	--
Metal	Zinc	--	--	--	--	0.3	USEPA 2017	--	--	0.3	ATSDR 2017	--	--	1	0.01	Cal/EPA 2015	1	--

Notes:
-- = Not available
mg/kg-day = milligram per kilogram per day
$\mu g/m^3$ = microgram per cubic meter
ABS_{soil} = Soil Dermal Absorption Factor
ADAF = Age-Dependent Adjustment Factor
ATSDR = Agency for Toxic Substances and Disease Registry
Cal/EPA = California Environmental Protection Agency
DTSC = Department of Toxic Substances Control
GIABS = Fraction of contaminant absorbed in gastrointestinal tract (USEPA 2017)
HEAST = Health Effects Assessment Summary Tables (USEPA 2011a)
PPRTV = Provisional Peer Reviewed Toxicity Value (cited in USEPA 2018)
RfD = Reference Dose
RfC = Reference Concentration
TPH = Total Petroleum Hydrocarbon
USEPA = United States Environmental Protection Agency
VOC = Volatile Organic Compound

a. An oral relative bioavailability of 0.6 (or 60%) was applied to oral ingestion pathway for arsenic (Cal/EPA 2017b). The oral relative bioavailability was assumed to be one (or 100%) for all the other chemicals.
b. Trichloroethylene (TCE) is a carcinogen with a mutagenic mode of action for kidney tumors. In order to adjust for the potential increased susceptibility from early-life exposure, when assessing the cancer risk for TCE to residents, the oral cancer slope factor and inhalation unit risk for TCE presented in this table need to be adjusted for their kidney cancer contribution as recommended by USEPA (2011b) using time-weighted ADAFs. For the oral cancer slope factor of 0.046 $(mg/kg\text{-}day)^{-1}$ published by USEPA (2017), 0.0093 $(mg/kg\text{-}day)^{-1}$ is from the kidney cancer contribution and 0.0367 $(mg/kg\text{-}day)^{-1}$ is from the non-Hodgkin lymphoma (NHL) plus liver cancer contribution. For the inhalation unit risk of 4.1E-06 $(\mu g/m^3)^{-1}$ published by USEPA (2017), 1.0E-06 $(\mu g/m^3)^{-1}$ is from the kidney cancer contribution and 3.1E-06 $(\mu g/m^3)^{-1}$ is from the NHL plus liver cancer contribution. Based on the exposure durations for child and adult residents as well as ADAFs of 10 for <2 years, 3 for 2–<16 years, and 1 for ≥16 years, time-weighted ADAFs for child and adult residents were calculated to be 5.3 and 2.0, respectively. These ADAFs were applied only to the kidney contribution of the oral cancer slope factor and inhalation unit risk.
c. Route to route extrapolation.
d. The chronic toxicity value was used as a surrogate.
e. Xylenes (total) was used as a surrogate.
f. Based on Cal/EPA (2017a), the noncancer toxicity values for cadmium were only applied to adult resident.
g. Chromium III was used as a surrogate.
h. The value for mercuric chloride was used.

Sources:

Agency for Toxic Substances & Disease Registry (ATSDR). 2017. Minimal Risk Levels (MRLs). June.
Cal/EPA. 2015. Preliminary Endangerment Assessment Guidance Manual. October.
Cal/EPA. 2017a. Human and Ecological Risk Office (HERO) Human Health Risk assessment (HHRA) Note Number 3, Issue: DTSC-Modified Screening Levels (DTSC-SLs). August.
Cal/EPA. 2017b. HERO, HHRA Note Number 6, Issue: Recommended Methodology for Evaluating Site-Specific Arsenic Bioavailability in California Soils. September.
USEPA. 2011a. Health Effects Assessment Summary Tables (HEAST). December. Available at: http://epa-heast.ornl.gov/
USEPA. 2011b. Toxicological Review of Trichloroethylene. EPA/635/R-09/011F. September.
USEPA. 2017. Regional Screening Levels (RSLs) Tables. November.
USEPA. 2018. Provisional Peer Reviewed Toxicity Values for Superfund (PPRTV). Available at https://hhpprtv.ornl.gov/. Accessed on January 5, 2018.

Table B.8. Risk-Based Target Concentrations - Construction Workers Exposed to Soil Gas Migrating to Trench Air
Northeast Corner of South Central Avenue and Victoria Street
Carson, California

Chemical Group	Chemical	All Depths		
		$RBTC_{SG\text{-}TA\text{-}C}$ (µg/L)	$RBTC_{SG\text{-}TA\text{-}NC}$ (µg/L)	Minimum RBTC (µg/L)
VOC	Benzene	1.3E+01	4.2E+02	1.3E+01
VOC	Ethylbenzene	1.9E+02	6.1E+04	1.9E+02
VOC	Isopropylbenzene	--	6.9E+02	6.9E+02
VOC	p-Isopropyltoluene	--	--	--
VOC	Naphthalene	1.6E+01	2.3E+01	1.6E+01
VOC	Tetrachloroethene	1.1E+02	3.8E+02	1.1E+02
VOC	Toluene	--	3.0E+04	3.0E+04
VOC	Trichloroethene	1.2E+02	1.5E+01	1.5E+01
VOC	1,2,4-Trimethylbenzene	--	4.6E+02	4.6E+02
VOC	m,p-Xylenes	--	2.7E+03	2.7E+03
VOC	o-Xylene	--	2.7E+03	2.7E+03

Notes:

-- = Not calculated

µg/L = microgram per liter

$RBTC_{SG\text{-}TA\text{-}C}$ = Risk-Based Target Concentration, cancer, inhalation of soil gas migrating to trench air

$RBTC_{SG\text{-}TA\text{-}NC}$ = Risk-Based Target Concentration, noncancer, inhalation of soil gas migrating to trench air

VOC = Volatile Organic Compound

Table B.9. Risk-Based Target Concentrations - Residents Exposed to Soil Gas Migrating to Indoor Air
Northeast Corner of South Central Avenue and Victoria Street
Carson, California

Chemical Group	Chemical	5 feet				15 feet			
		Age-Adjusted Resident	Child Resident	Adult Resident	Minimum RBTC (µg/L)	Age-Adjusted Resident	Child Resident	Adult Resident	Minimum RBTC (µg/L)
		$RBTC_{SG-IA-C}$ (µg/L)	$RBTC_{SG-IA-NC}$ (µg/L)	$RBTC_{SG-IA-NC}$ (µg/L)		$RBTC_{SG-IA-C}$ (µg/L)	$RBTC_{SG-IA-NC}$ (µg/L)	$RBTC_{SG-IA-NC}$ (µg/L)	
VOC	Benzene	1.3E-01	4.1E+00	4.1E+00	1.3E-01	2.3E-01	7.5E+00	7.5E+00	2.3E-01
VOC	Ethylbenzene	1.8E+00	1.7E+03	1.7E+03	1.8E+00	3.4E+00	3.1E+03	3.1E+03	3.4E+00
VOC	Isopropylbenzene	--	7.3E+02	7.3E+02	7.3E+02	--	1.4E+03	1.4E+03	1.4E+03
VOC	p-Isopropyltoluene	--	--	--	--	--	--	--	--
VOC	Naphthalene	1.4E-01	5.4E+00	5.4E+00	1.4E-01	2.7E-01	1.0E+01	1.0E+01	2.7E-01
VOC	Tetrachloroethene	9.2E-01	8.4E+01	8.4E+01	9.2E-01	1.8E+00	1.6E+02	1.6E+02	1.8E+00
VOC	Toluene	--	4.5E+02	4.5E+02	4.5E+02	--	8.4E+02	8.4E+02	8.4E+02
VOC	Trichloroethene	7.6E-01	3.3E+00	3.3E+00	7.6E-01	1.4E+00	6.2E+00	6.2E+00	1.4E+00
VOC	1,2,4-Trimethylbenzene	--	1.1E+02	1.1E+02	1.1E+02	--	2.1E+02	2.1E+02	2.1E+02
VOC	m,p-Xylenes	--	1.7E+02	1.7E+02	1.7E+02	--	3.1E+02	3.1E+02	3.1E+02
VOC	o-Xylene	--	1.6E+02	1.6E+02	1.6E+02	--	3.1E+02	3.1E+02	3.1E+02

Notes:

-- = Not calculated

µg/L = microgram per liter

$RBTC_{SG-IA-C}$ = Risk-Based Target Concentration, cancer, inhalation of soil gas migrating to indoor air

$RBTC_{SG-IA-NC}$ = Risk-Based Target Concentration, noncancer, inhalation of soil gas migrating to indoor air

VOC = Volatile Organic Compound

Table B.10. Risk-Based Target Concentrations - Construction Workers Exposed to Outdoor Soil through Direct Contact
Northeast Corner of South Central Avenue and Victoria Street
Carson, California

Chemical Group	Chemical	Soil Ingestion		Soil Dermal Contact		Soil Vapor Inhalation		Soil Particulate Inhalation		Combined Cancer RBTC (mg/kg)	Combined Non-Cancer RBTC (mg/kg)	Minimum RBTC (mg/kg)
		$RBTC_{soil\text{-}ing\text{-}C}$ (mg/kg)	$RBTC_{soil\text{-}ing\text{-}NC}$ (mg/kg)	$RBTC_{soil\text{-}derm\text{-}C}$ (mg/kg)	$RBTC_{soil\text{-}derm\text{-}NC}$ (mg/kg)	$RBTC_{soil.vapor\text{-}inh\text{-}C}$ (mg/kg)	$RBTC_{soil.vapor\text{-}inh\text{-}NC}$ (mg/kg)	$RBTC_{soil.part\text{-}inh\text{-}C}$ (mg/kg)	$RBTC_{soil.part\text{-}inh\text{-}NC}$ (mg/kg)			
TPH	Medium Aromatic (C9-C16)	--	1.4E+03	--	--	--	3.0E+04	--	4.4E+06	--	1.4E+03	1.4E+03
TPH	Medium Aliphatic (C9-C18)	--	3.5E+04	--	--	--	5.8E+01	--	4.4E+05	--	5.8E+01	5.8E+01
TPH	High Aromatic (C17-C32)	--	1.4E+05	--	9.7E+04	--	--	--	6.1E+06	--	5.7E+04	5.7E+04
TPH	High Aliphatic (C19-C32)	--	1.1E+07	--	--	--	8.2E+04	--	4.6E+08	--	8.1E+04	8.1E+04
Metal	Antimony	--	1.4E+02	--	1.5E+02	--	--	--	4.4E+03	--	7.1E+01	7.1E+01
Metal	Arsenic	4.3E+00	2.1E+00	5.9E+00	2.8E+00	--	--	9.3E+01	6.6E+01	2.4E+00	1.2E+00	1.2E+00
Metal	Barium	--	7.1E+04	--	3.4E+04	--	--	--	2.2E+04	--	1.1E+04	1.1E+04
Metal	Cadmium	--	1.8E+02	--	1.2E+04	--	--	1.7E+02	4.4E+01	1.7E+02	3.5E+01	3.5E+01
Metal	Chromium (total)	--	5.3E+05	--	4.7E+04	--	--	--	2.2E+04	--	1.5E+04	1.5E+04
Metal	Cobalt	--	1.1E+03	--	7.3E+03	--	--	3.4E+01	8.8E+01	3.4E+01	8.0E+01	3.4E+01
Metal	Copper	--	3.5E+03	--	2.4E+04	--	--	--	--	--	3.1E+03	3.1E+03
Metal	Mercury	--	7.1E+02	--	3.4E+02	--	--	--	1.3E+02	--	8.4E+01	8.4E+01
Metal	Nickel	--	7.1E+03	--	1.9E+03	--	--	1.2E+03	8.8E+02	1.2E+03	5.6E+02	5.6E+02
Metal	Selenium	--	1.8E+03	--	1.2E+04	--	--	--	8.8E+04	--	1.5E+03	1.5E+03
Metal	Vanadium	--	2.5E+02	--	4.4E+01	--	--	--	4.4E+02	--	3.4E+01	3.4E+01
Metal	Zinc	--	1.1E+05	--	7.3E+05	--	--	--	--	--	9.3E+04	9.3E+04

Notes:
-- = Not calculated
mg/kg = milligram per kilogram
TPH = Total Petroleum Hydrocarbon
$RBTC_{soil\text{-}ing\text{-}C}$ = Risk-Based Concentration, cancer, soil ingestion
$RBTC_{soil\text{-}ing\text{-}NC}$ = Risk-Based Concentration, noncancer, soil ingestion
$RBTC_{soil\text{-}derm\text{-}C}$ = Risk-Based Concentration, cancer, soil dermal contact
$RBTC_{soil\text{-}derm\text{-}NC}$ = Risk-Based Concentration, noncancer, soil dermal contact
$RBTC_{soil.vapor\text{-}inh\text{-}C}$ = Risk-Based Concentration, cancer, soil vapor inhalation
$RBTC_{soil.vapor\text{-}inh\text{-}NC}$ = Risk-Based Concentration, noncancer, soil vapor inhalation
$RBTC_{soil.part\text{-}inh\text{-}C}$ = Risk-Based Concentration, cancer, soil particulate inhalation
$RBTC_{soil.part\text{-}inh\text{-}NC}$ = Risk-Based Concentration, noncancer, soil particulate inhalation

Table B.11. Risk-Based Target Concentrations - Residents Exposed to Outdoor Soil through Direct Contact
Northeast Corner of South Central Avenue and Victoria Street
Carson, California

Chemical Group	Chemical	Soil Ingestion			Soil Dermal Contact			Soil Vapor Inhalation			Soil Particulate Inhalation			Age-Adjusted Resident	Child Resident	Adult Resident	Minimum RBTC (mg/kg)
		Age-Adjusted Resident	Child Resident	Adult Resident	Age-Adjusted Resident	Child Resident	Adult Resident	Age-Adjusted Resident	Child Resident	Adult Resident	Age-Adjusted Resident	Child Resident	Adult Resident				
		$RBTC_{soil\text{-}ing\text{-}C}$ (mg/kg)	$RBTC_{soil\text{-}ing\text{-}NC}$ (mg/kg)	$RBTC_{soil\text{-}ing\text{-}NC}$ (mg/kg)	$RBTC_{soil\text{-}derm\text{-}C}$ (mg/kg)	$RBTC_{soil\text{-}derm\text{-}NC}$ (mg/kg)	$RBTC_{soil\text{-}derm\text{-}NC}$ (mg/kg)	$RBTC_{soil.vapor\text{-}inh\text{-}C}$ (mg/kg)	$RBTC_{soil.vapor\text{-}inh\text{-}NC}$ (mg/kg)	$RBTC_{soil.vapor\text{-}inh\text{-}NC}$ (mg/kg)	$RBTC_{soil.part\text{-}inh\text{-}C}$ (mg/kg)	$RBTC_{soil.part\text{-}inh\text{-}NC}$ (mg/kg)	$RBTC_{soil.part\text{-}inh\text{-}NC}$ (mg/kg)	Combined Cancer RBTC (mg/kg)	Combined Non-Cancer RBTC (mg/kg)	Combined Non-Cancer RBTC (mg/kg)	
TPH	Medium Aromatic (C9-C16)	--	3.1E+02	3.3E+03	--	--	--	--	1.1E+02	1.1E+02	--	4.3E+06	4.3E+06	--	8.3E+01	1.1E+02	8.3E+01
TPH	Medium Aliphatic (C9-C18)	--	7.8E+02	8.3E+03	--	--	--	--	7.4E+01	7.4E+01	--	1.4E+08	1.4E+08	--	6.8E+01	7.3E+01	6.8E+01
TPH	High Aromatic (C17-C32)	--	3.1E+03	3.3E+04	--	1.1E+04	7.9E+04	--	--	--	--	2.0E+08	2.0E+08	--	2.4E+03	2.3E+04	2.4E+03
TPH	High Aliphatic (C19-C32)	--	2.3E+05	2.5E+06	--	--	--	--	1.0E+04	1.0E+04	--	1.5E+10	1.5E+10	--	9.9E+03	1.0E+04	9.9E+03
Metal	Antimony	--	3.1E+01	3.3E+02	--	1.6E+02	1.2E+03	--	--	--	--	--	--	--	2.6E+01	2.6E+02	2.6E+01
Metal	Arsenic	1.2E-01	4.6E-01	4.9E+00	7.6E-01	3.1E+00	2.3E+01	--	--	--	1.2E+03	2.1E+04	2.1E+04	1.1E-01	4.0E-01	4.0E+00	1.1E-01
Metal	Barium	--	1.6E+04	1.7E+05	--	3.8E+04	2.8E+05	--	--	--	--	7.1E+05	7.1E+05	--	1.1E+04	9.1E+04	1.1E+04
Metal	Cadmium	--	--	5.3E+00	--	--	1.2E+03	--	--	--	2.1E+03	--	1.4E+04	2.1E+03	--	5.2E+00	5.2E+00
Metal	Chromium (total)	--	1.2E+05	1.3E+06	--	5.3E+04	3.9E+05	--	--	--	--	--	--	--	3.6E+04	2.9E+05	3.6E+04
Metal	Cobalt	--	2.3E+01	2.5E+02	--	8.1E+02	5.9E+03	--	--	--	4.2E+02	8.5E+03	8.5E+03	4.2E+02	2.3E+01	2.3E+02	2.3E+01
Metal	Copper	--	3.1E+03	3.3E+04	--	1.1E+05	7.9E+05	--	--	--	--	--	--	--	3.0E+03	3.2E+04	3.0E+03
Metal	Mercury	--	1.3E+01	1.3E+02	--	3.0E+01	2.2E+02	--	--	--	--	4.3E+04	4.3E+04	--	8.8E+00	8.3E+01	8.8E+00
Metal	Nickel	--	8.6E+02	9.2E+03	--	1.2E+03	8.7E+03	--	--	--	1.5E+04	2.0E+04	2.0E+04	1.5E+04	4.9E+02	3.6E+03	4.9E+02
Metal	Selenium	--	3.9E+02	4.2E+03	--	1.3E+04	9.9E+04	--	--	--	--	2.8E+07	2.8E+07	--	3.8E+02	4.0E+03	3.8E+02
Metal	Vanadium	--	3.9E+02	4.2E+03	--	3.5E+02	2.6E+03	--	--	--	--	1.4E+05	1.4E+05	--	1.8E+02	1.6E+03	1.8E+02
Metal	Zinc	--	2.3E+04	2.5E+05	--	8.1E+05	5.9E+06	--	--	--	--	--	--	--	2.3E+04	2.4E+05	2.3E+04

Notes:

-- = Not calculated

mg/kg = milligram per kilogram

TPH = Total Petroleum Hydrocarbon

$RBTC_{soil\text{-}ing\text{-}C}$ = Risk-Based Concentration, cancer, soil ingestion

$RBTC_{soil\text{-}ing\text{-}NC}$ = Risk-Based Concentration, noncancer, soil ingestion

$RBTC_{soil\text{-}derm\text{-}C}$ = Risk-Based Concentration, cancer, soil dermal contact

$RBTC_{soil\text{-}derm\text{-}NC}$ = Risk-Based Concentration, noncancer, soil dermal contact

$RBTC_{soil.vapor\text{-}inh\text{-}C}$ = Risk-Based Concentration, cancer, soil vapor inhalation

$RBTC_{soil.vapor\text{-}inh\text{-}NC}$ = Risk-Based Concentration, noncancer, soil vapor inhalation

$RBTC_{soil.part\text{-}inh\text{-}C}$ = Risk-Based Concentration, cancer, soil particulate inhalation

$RBTC_{soil.part\text{-}inh\text{-}NC}$ = Risk-Based Concentration, noncancer, soil particulate inhalation

Table B.12. Summary of Soil Gas Risk-Based Target Concentrations - Construction Workers and Residents

Northeast Corner of South Central Avenue and Victoria Street
Carson, California

Chemical Group	Chemical	$RBTC_{SG}$ (ug/L)		
		Construction Worker	Resident	
		Soil Gas Migrating to Trench Air	Soil Gas Migrating to Indoor Air	
		All Depths	5 feet	15 feet
VOC	Benzene	1.3E+01	1.3E-01	2.3E-01
VOC	Ethylbenzene	1.9E+02	1.8E+00	3.4E+00
VOC	Isopropylbenzene	6.9E+02	7.3E+02	1.4E+03
VOC	p-Isopropyltoluene	--	--	--
VOC	Naphthalene	1.6E+01	1.4E-01	2.7E-01
VOC	Tetrachloroethene	1.1E+02	9.2E-01	1.8E+00
VOC	Toluene	3.0E+04	4.5E+02	8.4E+02
VOC	Trichloroethene	1.5E+01	7.6E-01	1.4E+00
VOC	1,2,4-Trimethylbenzene	4.6E+02	1.1E+02	2.1E+02
VOC	m,p-Xylenes	2.7E+03	1.7E+02	3.1E+02
VOC	o-Xylene	2.7E+03	1.6E+02	3.1E+02

Notes:

-- = Not calculated

µg/L = microgram per liter

$RBTC_{SG}$ = Soil Gas Risk-Based Target Concentration

VOC = Volatile Organic Compound

Table B.13. Summary of Soil Risk-Based Target Concentrations - Construction Workers and Residents

Northeast Corner of South Central Avenue and Victoria Street
Carson, California

Chemical Group	Chemical	$RBTC_s$ (mg/kg)	
		Construction Worker	Resident
		Soil Direct Contact	
TPH	Medium Aromatic (C9-C16)	1.4E+03	8.3E+01
TPH	Medium Aliphatic (C9-C18)	5.8E+01	6.8E+01
TPH	High Aromatic (C17-C32)	5.7E+04	2.4E+03
TPH	High Aliphatic (C19-C32)	8.1E+04	9.9E+03
Metal	Antimony	7.1E+01	2.6E+01
Metal	Arsenic[a]	1.2E+01	1.2E+01
Metal	Barium	1.1E+04	1.1E+04
Metal	Cadmium	3.5E+01	5.2E+00
Metal	Chromium (total)	1.5E+04	3.6E+04
Metal	Cobalt	3.4E+01	2.3E+01
Metal	Copper	3.1E+03	3.0E+03
Metal	Lead[b]	3.2E+02	8.0E+01
Metal	Mercury	8.4E+01	8.8E+00
Metal	Nickel	5.6E+02	4.9E+02
Metal	Selenium	1.5E+03	3.8E+02
Metal	Vanadium	3.4E+01	1.8E+02
Metal	Zinc	9.3E+04	2.3E+04

Notes:
Cal/EPA = California Environmental Protection Agency
mg/kg = milligram per kilogram
$RBTC_s$ = Soil Risk-Based Target Concentration
TPH = Total Petroleum Hydrocarbon

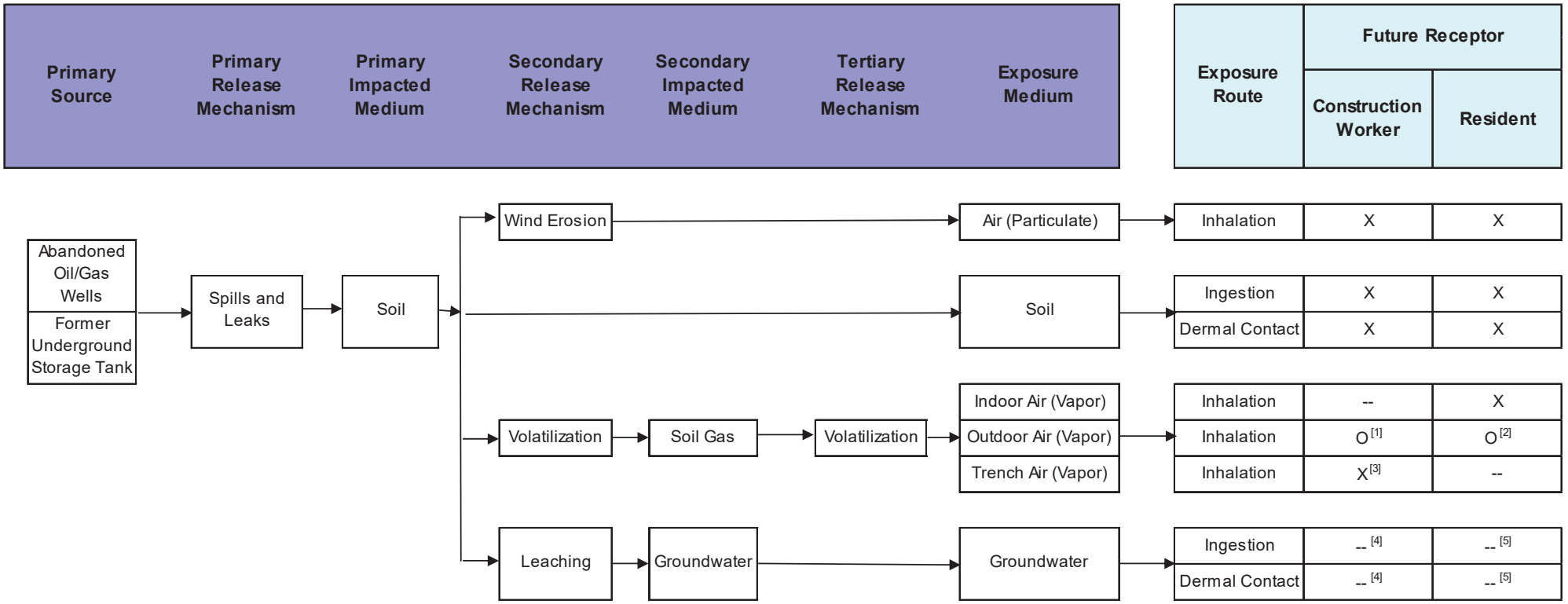
a. For arsenic, the regional background soil level of 12 mg/kg for southern California was used (Chernoff et al. 2008).

b. For lead, the screening level for residential soil from Cal/EPA (2017) was used for residents, and the screening level for industrial soil from Cal/EPA (2017) was used for construction workers.

Sources:
California Environmental Protection Agency (Cal/EPA). 2017. Human and Ecological Risk Office (HERO) Human Health Risk assessment (HHRA) Note Number 3, Issue: DTSC-Modified Screening Levels (DTSC-SLs). August.

Chernoff G, Bosan W, Oudiz D. 2008. Determination of a Southern California Regional Background Arsenic Concentration in Soil.

FIGURE



Notes:

X = Complete or potentially complete exposure pathway O = Complete, but negligible exposure pathway; not evaluated quantitatively -- = Incomplete exposure pathway

VOC = Volatile organic compound

[1] The exposure to VOCs in outdoor air is not quantitatively evaluated for construction workers because it is expected to be much lower than the exposure to VOCs in trench air.
[2] The exposure to VOCs in outdoor air is not quantitatively evaluated for residents because it is expected to be much lower than the exposure to VOCs in indoor air.
[3] To be conservative, construction workers are assumed to be exposed to vapors migrating from soil gas/soil while standing in a trench in the unsaturated zone, placing them closer to the potential sources
[4] Incidental ingestion of and dermal contact with groundwater by construction workers are not considered complete exposure pathways because depth to groundwater is at 205 feet below ground surface.
[5] Exposure via domestic use of groundwater is not evaluated because Site groundwater is not used as a domestic water supply.

RAMBOLL

Conceptual Site Model

Northeast Corner of South Central Avenue and Victoria Street, Carson CA

Figure
B-1

DRAFTED BY:

DATE:1/22/2018

PROJECT:

ATTACHMENT A
BACKGROUND CONCENTRATION

DETERMINATION OF CLEANUP GOAL FOR ARSENIC

Ramboll used a methodology developed by the Department of Toxic Substances Control (DTSC) in order to develop a cleanup goal for Arsenic at the site.

The DTSC oversees the environmental assessments of hazardous waste sites and proposed and existing schools in Southern California. During the Preliminary Environmental Assessment (PEA) or Remedial Investigation (RI) for certain sites, once arsenic has been identified as a chemical of concern, a standard approach was developed to determine if remedial action is warranted and, if so, how to develop appropriate cleanup goals. Ramboll used the approach suggested by the DTSC Human and Ecological Risk Division (HERD) for arsenic remediation on sites.

Graphical Approach

A histogram of the arsenic data demonstrated a classical lognormal distribution with a wide range of arsenic concentrations (Figure A-1). A box plot, also known as the fourth spread was used to identify 8 outliers, the one lowest value and seven largest values (Figure A-2).

In addition, Ramboll prepared a normality plot on the logarithmic values of the arsenic (Figure A-3). The plot demonstrates that the log-transformed arsenic data is normally distributed with an inflexion point at approximately 19 mg/kg. The upper bound of the arsenic data at the site is therefore 19 mg/kg. This means that all values that are greater than 19 mg/kg should be considered as a result of a contamination and need to be remediated/excavated.

Statistical Analysis

Rosner's Outlier Test

Ramboll performed a statistical outlier analysis on the arsenic concentrations collected at the site to detect the presence/absence of anomalies. Anomalous values of arsenic in soil would indicate the presence of a source that is different from background (naturally occurring conditions), thus corresponding to a contamination.

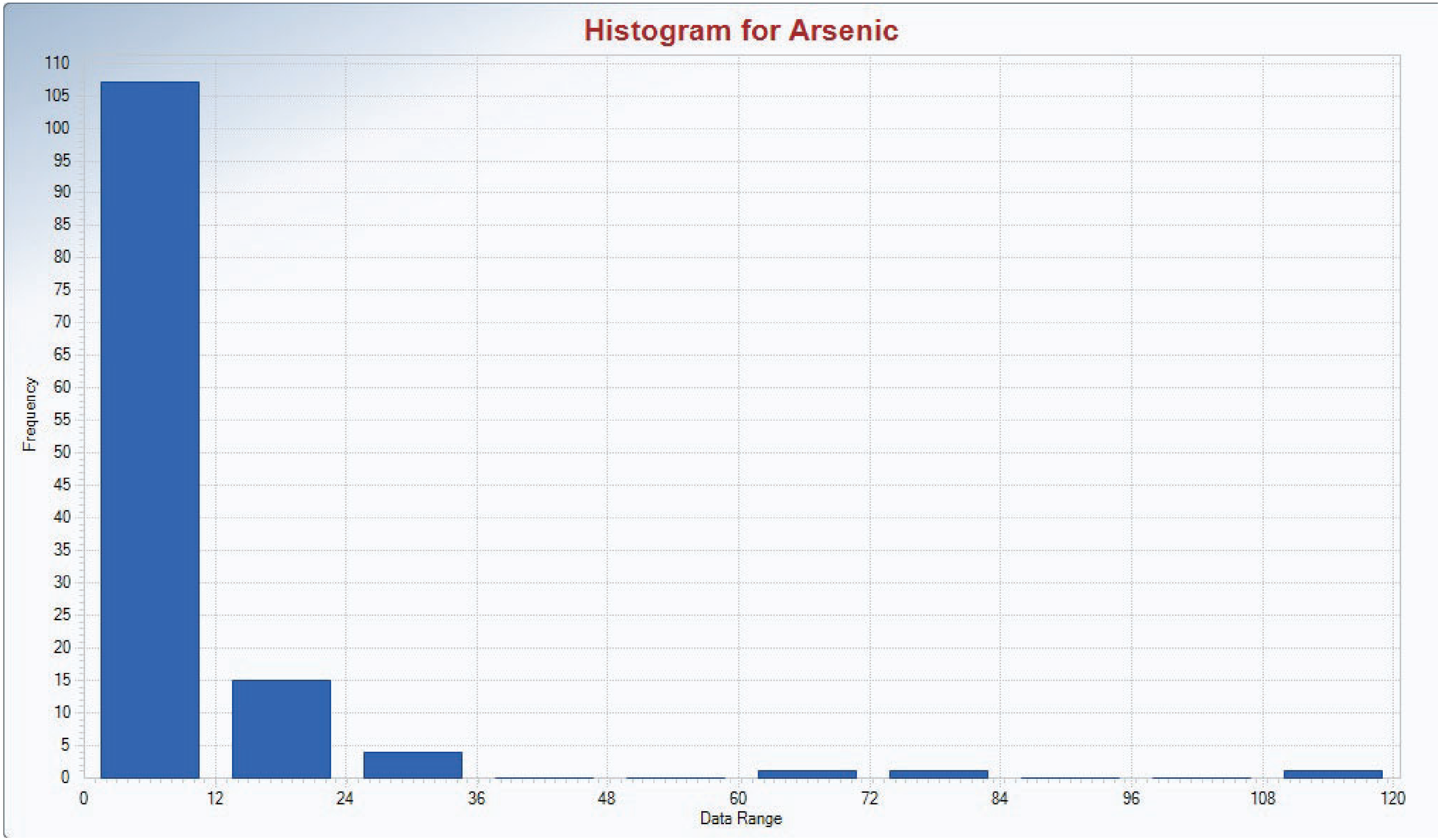
The Rosner's test is generally used if $25 < N < 500$, and identifies up to 10 extreme values (i.e. the most distant from sample's mean).

- Null hypothesis : "H0 = there is no extreme value"
- Alternative hypothesis : "H1 = there is at least one extreme value that does not belong to a same population"

Using a significance level of 5% and 1%, the results indicate that we have 7 outliers in the arsenic dataset. The following values were identified as outliers (26, 28, 29, 32, 71, 83 and 120 mg/kg). Therefore, the upper bound for the native arsenic concentration should be established at 19 mg/kg.

The studies conducted by the DTSC at several school sites in southern California established an average arsenic screening background concentration for southern California soils to be at 12 mg/kg. This information was published in the "Final Report Background Metals at Los Angeles Unified School Sites - ARSENIC" (DTSC 2005). For the purpose of the remediation of arsenic impacted soil at the site, and in order to estimate volumes of soil to be excavated, Ramboll considered two cleanup goals:

- Arsenic concentration of 12 mg/kg corresponding to the value established by the DTSC for southern California soil
- Arsenic concentration of 19 mg/kg corresponding to site specific value obtained by using the methodology developed by the DTSC.



RAMBOLL

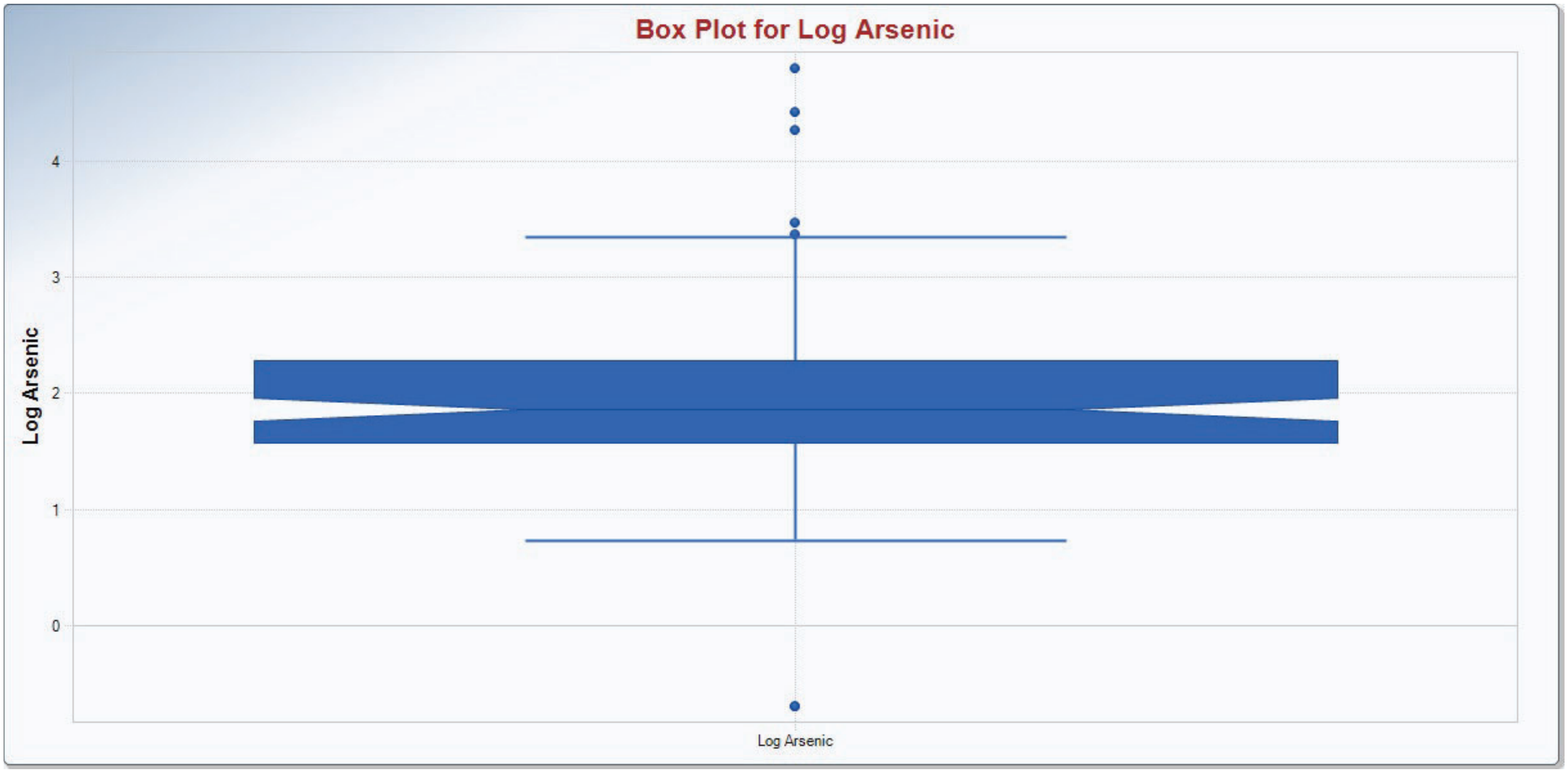
DRAFTED BY: MK | DATE: 2/13/2018

Histogram for Arsenic
Northeast Corner of South Central Avenue and
Victoria Street
Carson, California

FIGURE
A-1

PROJECT: 1690006031

Z:\01_Projects\Integral Partners Funding\MXD\Appendix B\Attachment A1.pptx



RAMBOLL

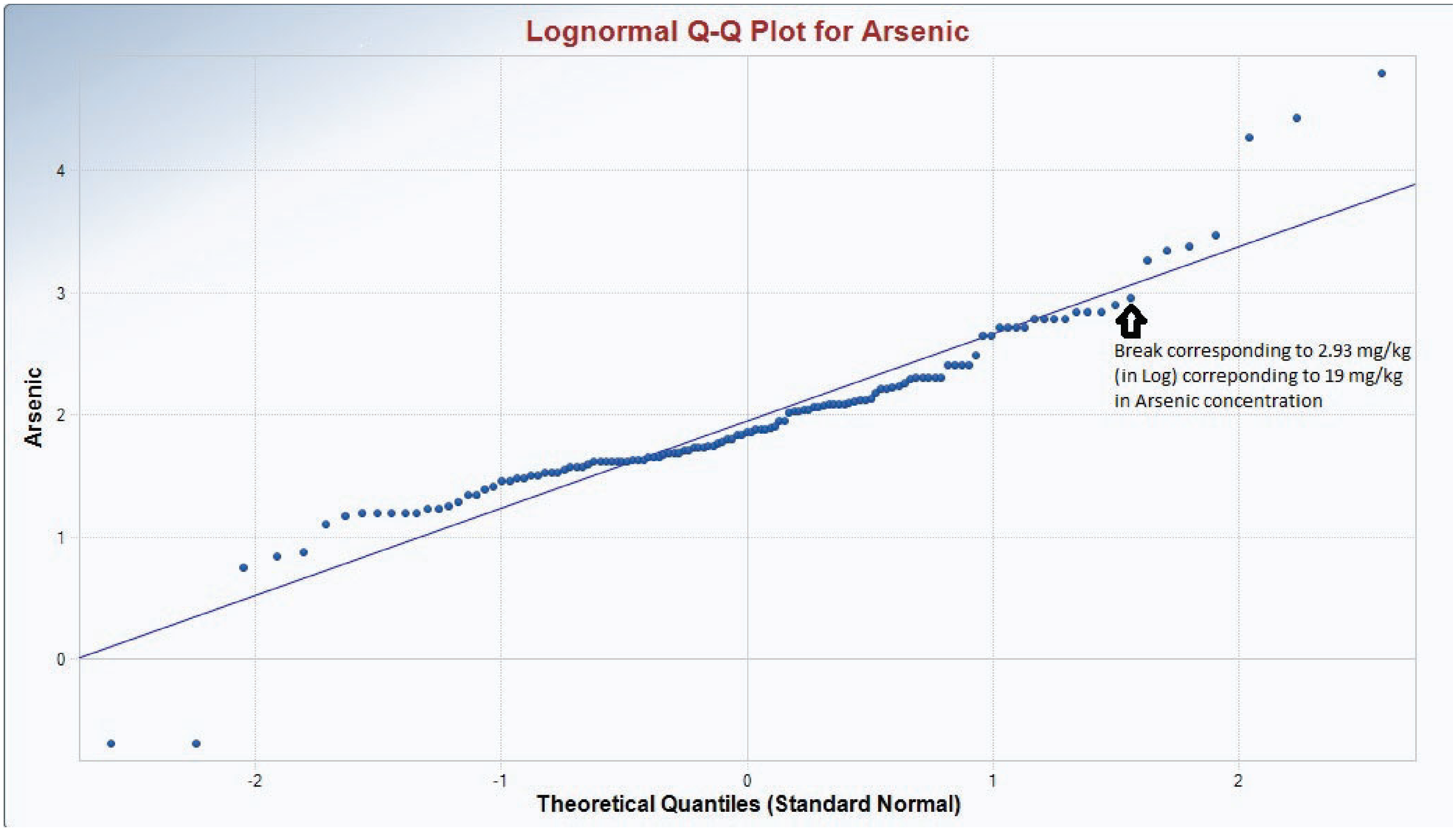
DRAFTED BY: MK | DATE: 2/13/2018

Box Plot for Arsenic
Northeast Corner of South Central Avenue and
Victoria Street
Carson, California

FIGURE
A-2

PROJECT: 1690006031

Z:\01_Projects\Integral Partners Funding\MXD\Appendix B\Attachment A2.pptx



RAMBOLL

DRAFTED BY: MK | DATE: 2/13/2018

Lognormal Q-Q Plot for Arsenic
Northeast Corner of South Central Avenue and
Victoria Street
Carson, California

FIGURE
A-3

PROJECT: 1690006031

Z:\01_Projects\Integral Partners Funding\MXD\Appendix B\Attachment A3.pptx

APPENDIX C
GEOSTATISTICAL MAPS

GEOSTATISTICAL ANALYSIS OF ARSENIC (AS), TOTAL PETROLEUM HYDROCARBONS (TPH) AND LEAD (PB)

Ramboll conducted geostatistical analyses on Arsenic (As), Lead (Pb) and Total Petroleum Hydrocarbons (TPH) in order to map the spatial distribution of each of the chemical of concern and estimate corresponding volumes of soil exceeding the established threshold for each chemical of concern. The thresholds are as follow:

- TPH: 80 mg/kg. This values was derived in the Human Health Risk Assessment (HHRA)
- Lead: 58 mg/kg. This value was derived in the HHRA
- Arsenic: 19 mg/kg (site specific value)
- Arsenic 12 mg/kg (DTSC screening value)

Geostatistics is widely used by the Environmental Protection Agency (EPA) which developed its own proprietary software (https://www.epa.gov/water-research/geostatistical-environmental-assessment-software-geoeas), it also used by the DTSC and the Water Board.

Geostatistics is widely used in many areas of science and engineering. It is a class of statistics used to analyze and predict the values associated with spatial or spatiotemporal phenomena. It incorporates the spatial coordinates of the data within the analyses. Many geostatistical tools were originally developed as a practical means to describe spatial patterns and interpolate values for locations where samples were not taken.

Mapping Procedure

In order to conduct a soil remediation at the site and estimate the volumes of soils that need to be excavated, Ramboll used the following procedure:

Arsenic

Because Arsenic data follow a log normal distribution, Ramboll built the spatial variogram using the logarithm of the data. A concentration map for each sampling depth was prepared using kriging interpolation.

A second step consisted in transforming the produced maps (one per sampling depth) to natural values by taking the exponential of the produced map. Ramboll identified the icocontour corresponding to 19 mg/kg on each map. Ramboll estimated the areas that correspond to 19 mg/kg and higher for each map and multiplied the identified area by the corresponding sampling depth to estimate volumes.

Ramboll followed the same procedure to estimate the volumes to be excavated if the threshold for arsenic was 12 mg/kg.

Figures showing footprint of excavations for arsenic versus depth are provided in Figure C-1.

TPH and Lead

Similar procedure as the one described above for arsenic was used to estimate areas and volumes of TPH and Lead impacted soil.

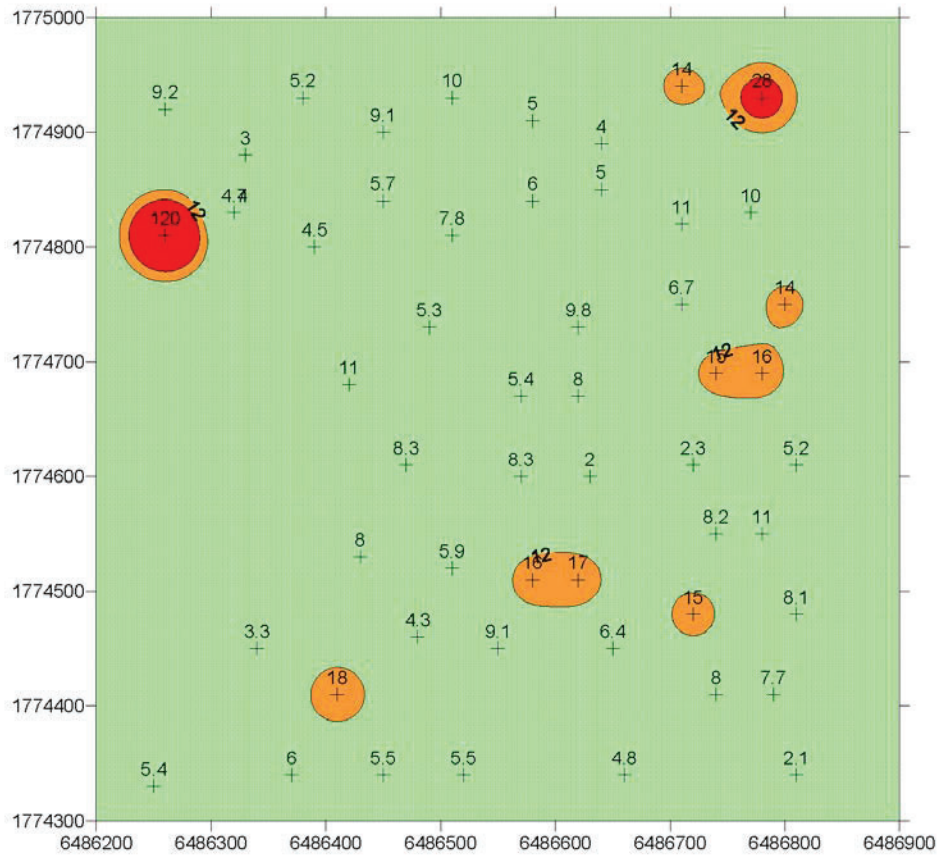
Figures showing footprint of excavations for TPH and Lead are provided in Figures C-2 and C-3.

Resulting Maps

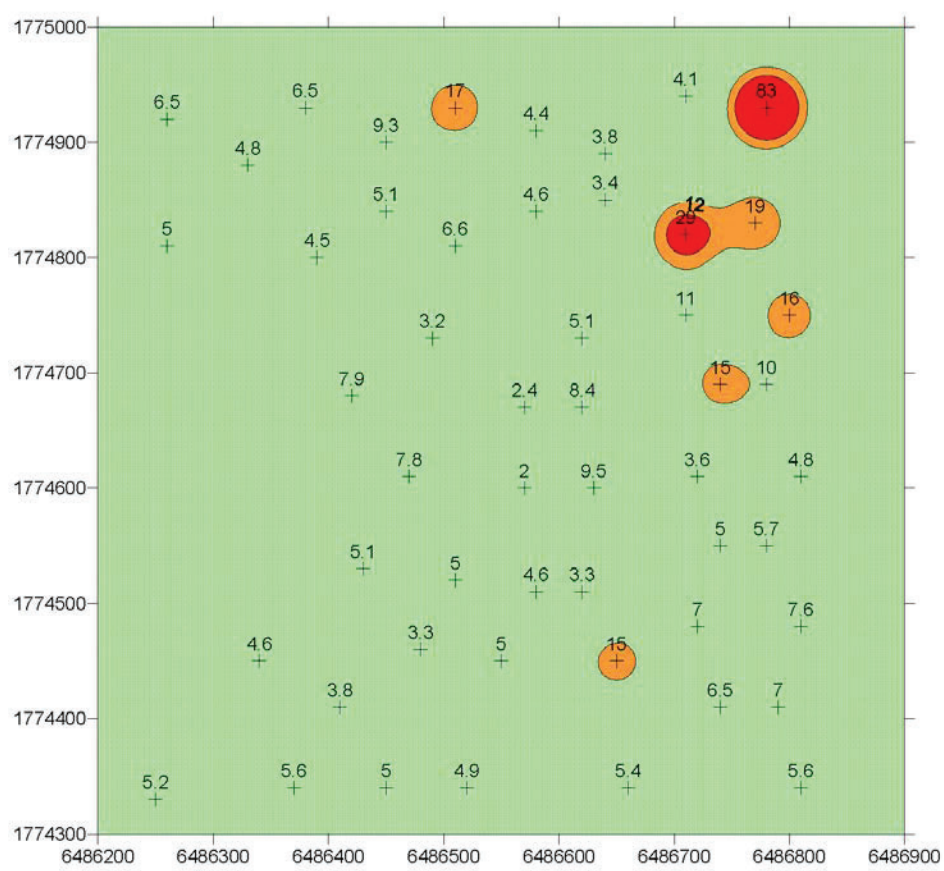
In order to produce maps showing areas that need to be excavated for all chemicals of concern (COCs), Ramboll summed the excavation maps obtained for arsenic, TPH and Lead. The final maps showed areas to

be excavated if one of the three COCs was above the regulatory threshold. The resulting figures are shown in the report as Figures 9 and 10.

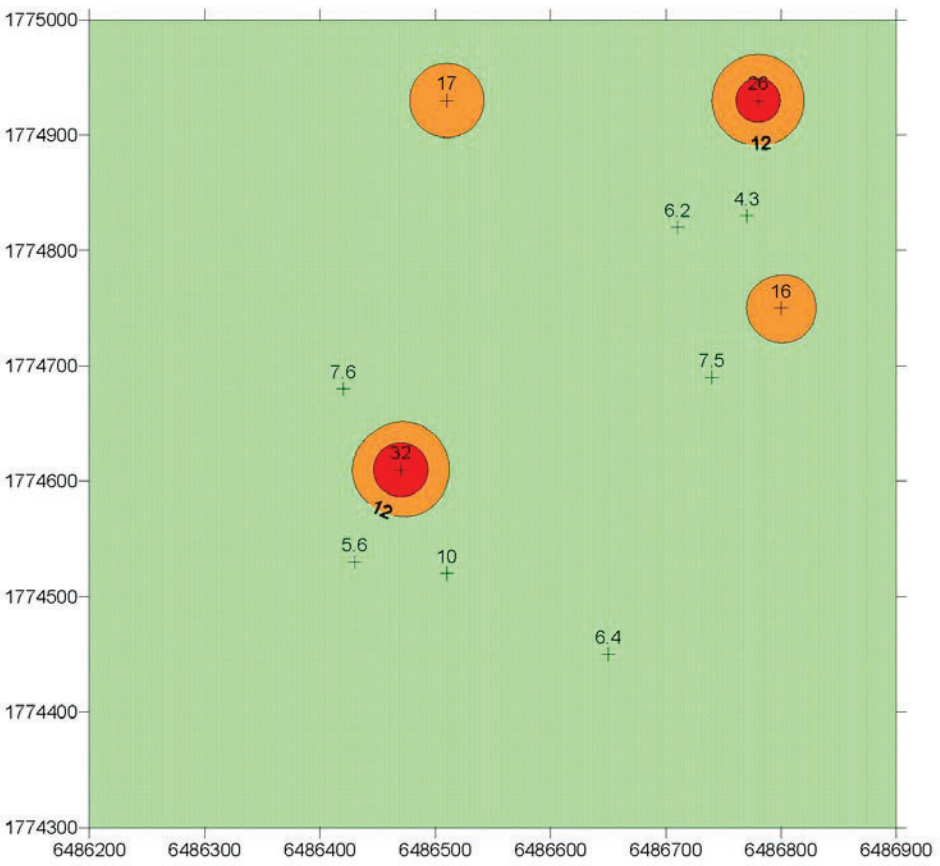
It should be noted that the calculated volumes include a safety margin of 6 inches (i.e. if a contamination was encountered at 6 feet, the excavation will be extended to a depth of 6.5 feet within the impacted area).



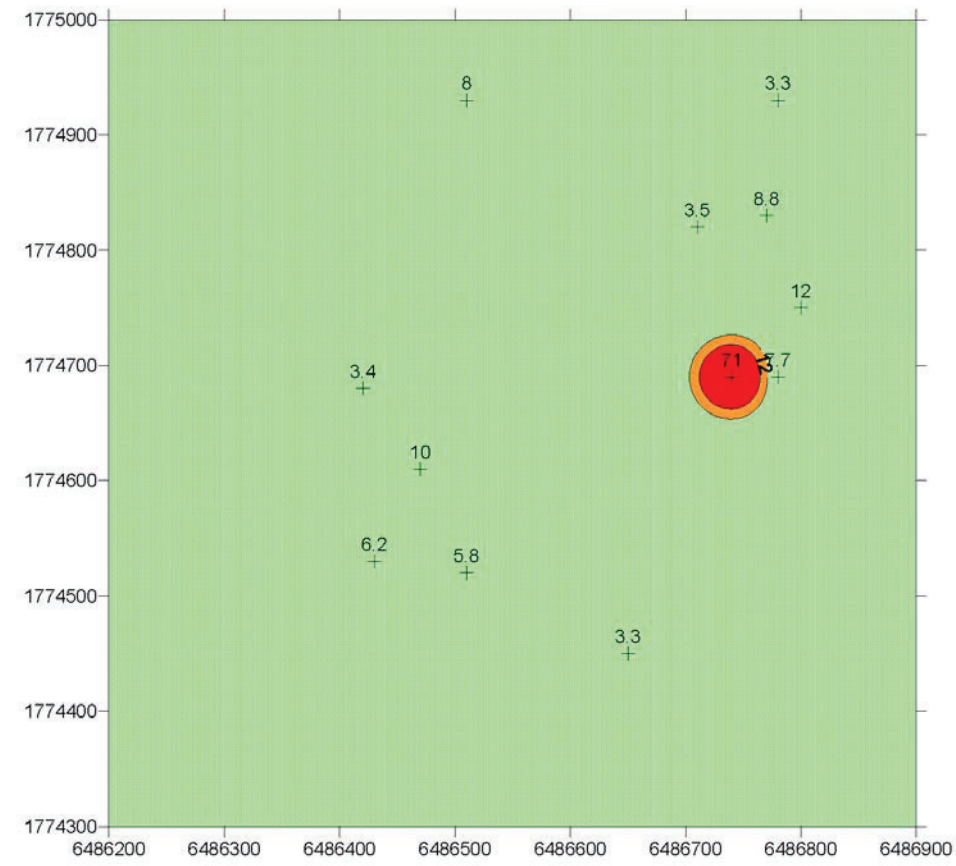
Arsenic 0.5 ft bgs



Arsenic 2.0 ft bgs



Arsenic 4.0 ft bgs



Arsenic 6.0 ft bgs

Notes:
1. Coordinate units are in feet.
2. Arsenic footprint is for feet below ground surface (ft bgs).

Excavation Footprint for Arsenic

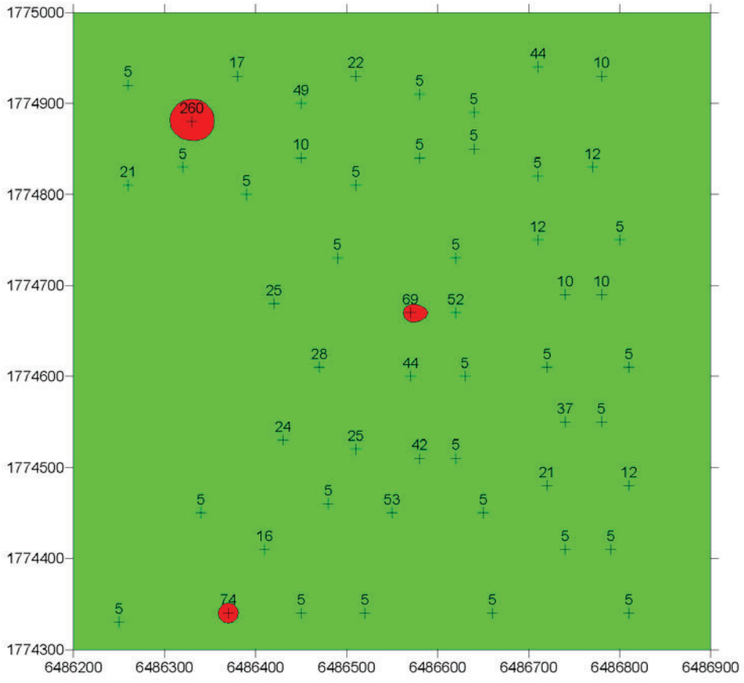
Northeast Corner of South Central Avenue and Victoria Street
Carson, California

RAMBOLL

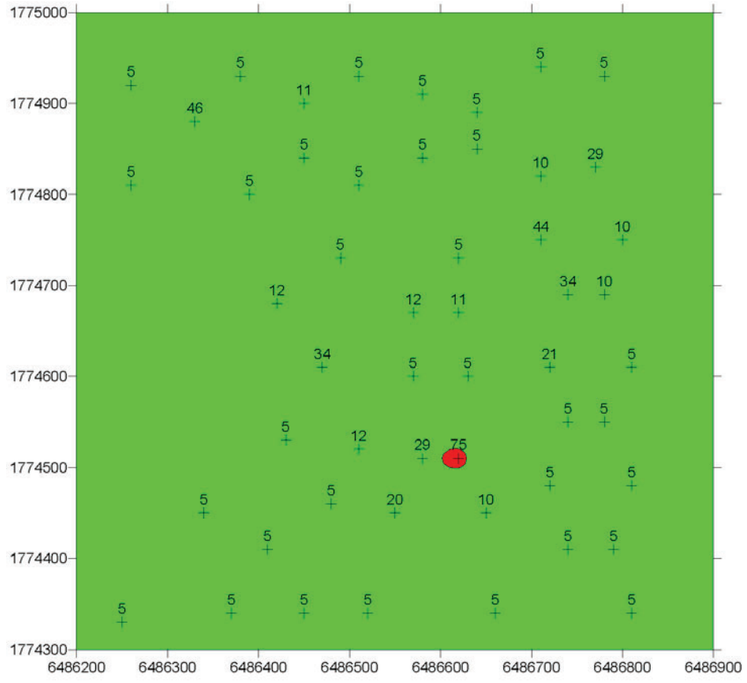
FIGURE
C-1

DRAFTED BY: MK | DATE: 2/14/2018 | PROJECT: 0690006031

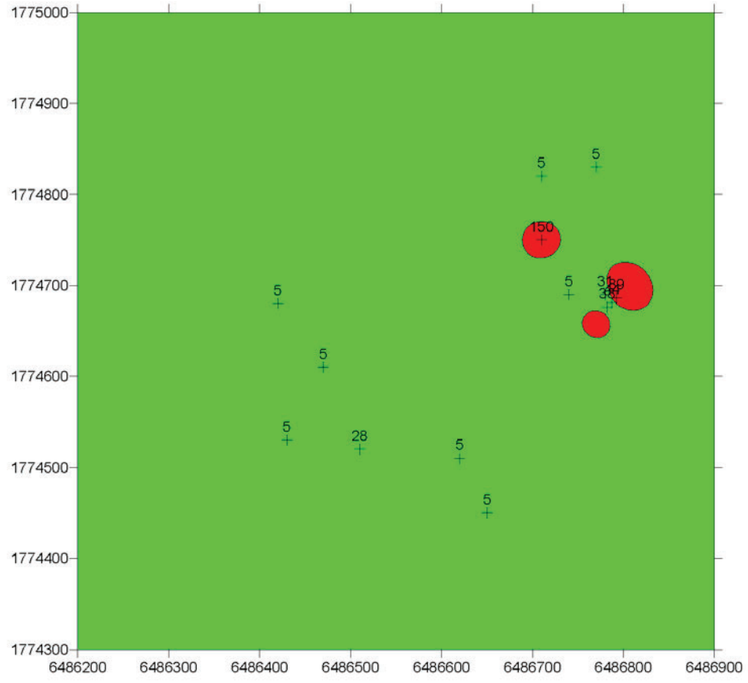
Z:\01_Projects\Integral Partners Funding\MXD\Appendix C\Figure C1\Appendix C1 - all.pptx



TPH at 0.5 ft bgs



TPH at 2.0 ft bgs



TPH at 6.0 ft bgs

Notes:
1. Coordinate units are in feet.
2. Arsenic footprint is for feet below ground surface (ft bgs).

RAMBOLL

DRAFTED BY: MK | DATE: 2/14/2018

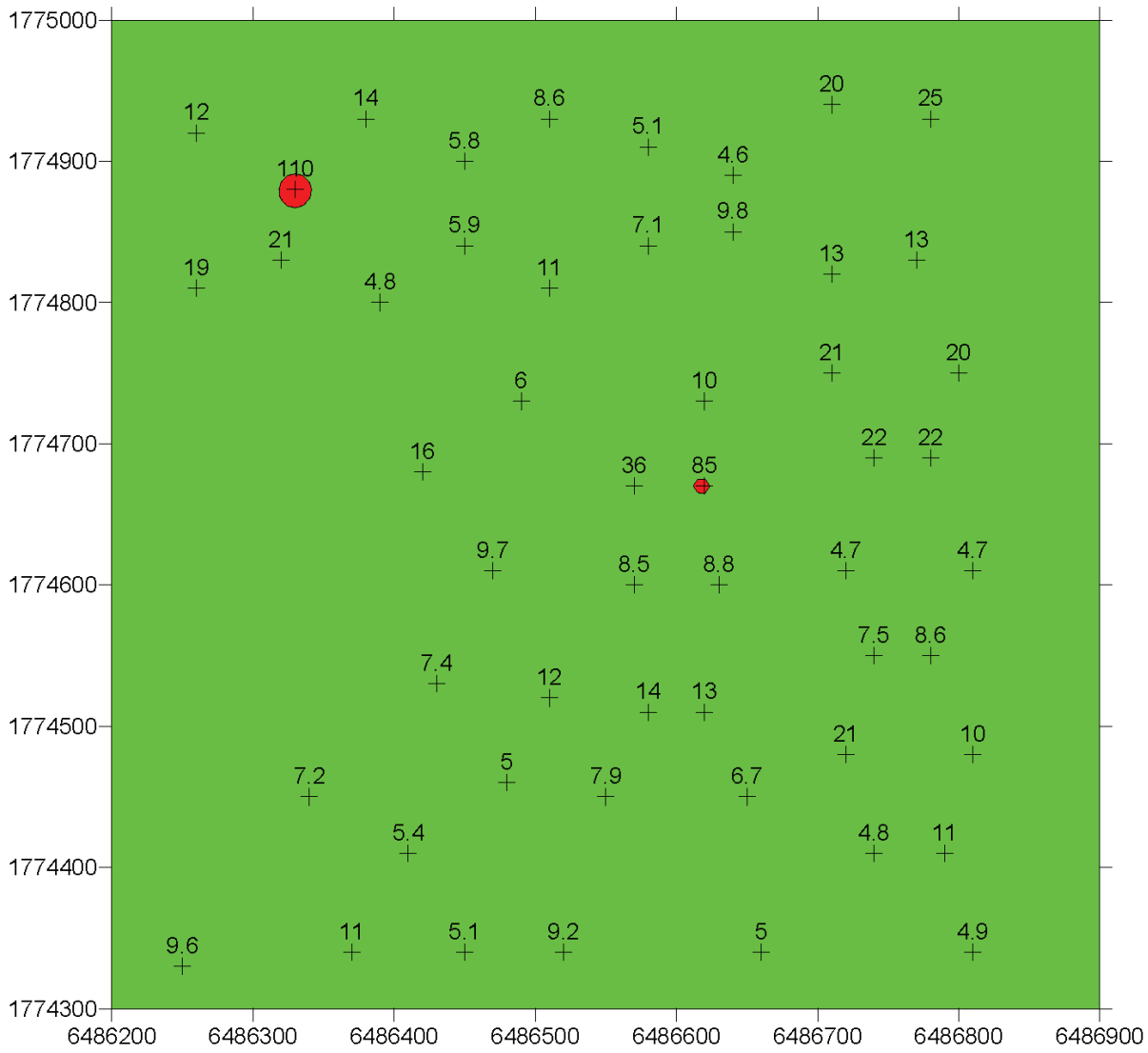
Excavation Footprint for TPH

Northeast Corner of South Central Avenue and Victoria Street
Carson, California

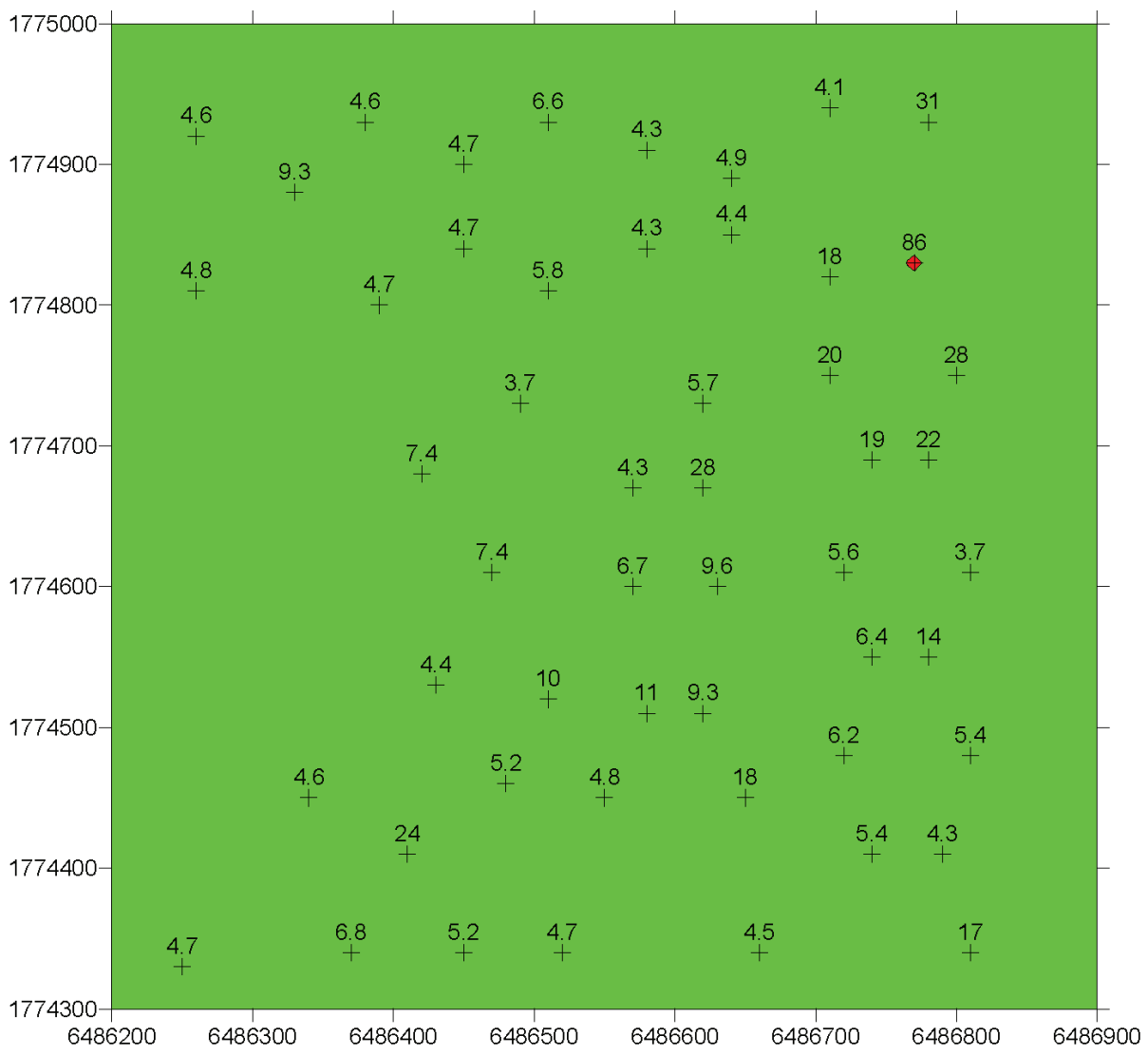
FIGURE
C-2

PROJECT: 1690006031

Z:\01_Projects\Integral Partners Funding\MXD\Appendix C\Figure C2\Appendix C2 - All.pptx



Lead 0.5 ft bgs



Lead 4.0 ft bgs

Notes:
1. Coordinate units are in feet.
2. Arsenic footprint is for feet below ground surface (ft bgs).

Excavation Footprint for Lead

Northeast Corner of South Central Avenue and Victoria Street
Carson, California

RAMBOLL

FIGURE
C-3

DRAFTED BY: MK | DATE: 2/14/2018 | PROJECT: 0690006031

Z:\01_Projects\Integral Partners Funding\MXD\Appendix C\Figure C3\Appendix C3 - all.pptx