# Removal Action Work Plan

Alexander Hamilton High School 2955 South Robertson Boulevard, Los Angeles, California 90034

#### Prepared for

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# **Acronyms and Abbreviations**

μg/m³ micrograms per cubic meter

1,2-DCA 1,2-dichloroethane

ADA Americans with Disabilities Act

bgs below ground surface
COCs chemicals of concern

cy cubic yard(s)

DTSC Department of Toxic Substances Control

DTSC-SL DTSC-modified screening level

HASP health and safety plan

ID identification

LAUSD Los Angeles Unified School District

MDL method detection limit mg/kg milligrams per kilogram mg/L milligrams per liter

OCP organochlorine pesticide

OEHS Office of Environmental Health & Safety

PCBs polychlorinated biphenyls

PCE tetrachloroethene

PEA-E Preliminary Environmental Assessment – Equivalent

PEA-E Document Preliminary Environmental Assessment – Equivalent Document

Phase I ESA Phase I Environmental Site Assessment

PID photoionization detector

PM10 10 microns or less ppm parts per million

RACR Removal Action Completion Report

RAW Remedial Action Work Plan

RCRA Resource Conservation and Recovery Act

Roux Environmental Engineering and Geology, D.P.C.

RSL Regional Screening Level

SCAQMD South Coast Air Quality Management District

Site Alexander Hamilton High School at 2955 South Robertson Boulevard, Los Angeles, California

SSAL site-specific action levels

STLC Soluble Threshold Limit Concentration
SWPPP Storm Water Pollution Prevention Plan

TCLP Toxicity characteristic leaching procedure

Terraphase Engineering Inc.
USA Underground Service Alert

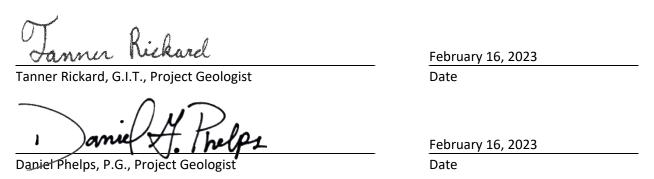
USEPA United State Environmental Protection Agency

VOC volatile organic compound

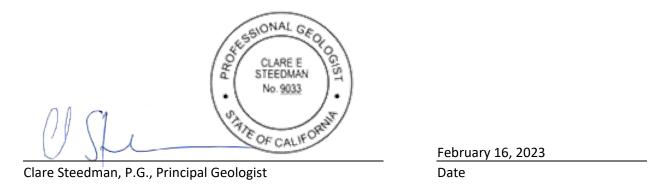


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# **Signatures**



All geologic information, conclusions, and recommendations in this document have been prepared under the responsible charge of a California Professional Geologist.



All engineering information, conclusions, and recommendations in this document have been prepared under the responsible charge of a California Professional Engineer.





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# 1 Introduction

Los Angeles Unified School District (LAUSD) intends to modernize the Alexander Hamilton High School at 2955 South Robertson Boulevard, Los Angeles, California (Site; Figure 1), which entails the removal of four buildings (the Laboratory and Humanities classrooms, photography studio, and music buildings) and several ancillary structures from the Site (Figure 2)—constructing new classroom buildings, a central plant, and new landscaped areas in their place—and renovation of the athletic fields. Terraphase Engineering Inc. (Terraphase) was contracted in 2018 to complete a Preliminary Environmental Assessment Equivalent (PEA-E) study to assess potential impacts of chemicals of concern (COCs) in soil, which include Title 22 metals (primarily arsenic and lead); volatile organic compounds (VOCs); total petroleum hydrocarbons quantified as gasoline, diesel, and oil; semivolatile organic compounds; polycyclic aromatic hydrocarbons; polychlorinated biphenyls (PCBs); and organochlorine pesticides (OCPs) to determine whether environmental impacts were present in soil and soil vapor and required mitigation prior to or during upcoming construction at the Site. Arsenic and lead were detected in soil exceeding site-specific action levels (SSALs) and select VOCs including benzene and ethylbenzene were detected in soil vapor exceeding generic site screening levels; therefore, Terraphase recommended this *Removal Action Work Plan* (RAW) be developed for the Site (Terraphase 2021).

Terraphase prepared this RAW based on the conclusions and recommendations provided in the *Preliminary Environmental Assessment Equivalent Document* (PEA-E Document) prepared for the Site (Terraphase 2021). This RAW summarizes previous environmental investigations conducted at the Site, current extent of impacted soil, and a work plan for soil removal and remediation actions based on the recommendation of the PEA-E Document. The RAW has been prepared in general accordance with the California Environmental Protection Agency Department of Toxic Substances Control (DTSC) guidelines and includes the following:

- Site Preparation
- Permitting (health and safety, public notification, delineation of excavation areas, and utility clearance)
- Excavation Plan
- Air and Meteorological Monitoring
- Dust Control Plan
- Soil Sampling and Analysis Plan
- Backfill and Site Restoration

## 1.1 Removal Action Objectives

The PEA-E study determined that on-site soil contains arsenic and/or lead above risk-based screening levels, and soil vapor contains benzene and ethylbenzene above risk-based screening levels in the vicinity of the photography studio. The following removal action objectives have been established for the Site:

Minimize exposure via ingestion, inhalation, and dermal absorptions to the COCs in shallow soil.



- Remove accessible soils impacted with arsenic and lead that exceed SSALs; and
- Reduce the cancer risk for benzene and ethylbenzene in soil vapor to below 1x10<sup>-6</sup>.

#### 1.2 SSALs

The following SSALs for soil were established in the PEA-E Document (Terraphase 2021). Sources and derivation of the SSALs are discussed further in Section 4.

• Arsenic: 28 milligrams per kilogram (mg/kg)

Lead: 80 mg/kg

Benzene: 48.5 micrograms per cubic meter (µg/m³)

Ethylbenzene: 550 μg/m³

PCE: 230 μg/m<sup>3</sup>

# 2 Summary of Site Background

This section summarizes a description of the Site and adjoining property, Site background, regional and Site geology, and the prior *Phase I Environmental Site Assessment* (Phase I ESA; Roux Environmental Engineering and Geology, D.P.C. [Roux] 2017) results and associated PEA-E sampling plan, study, and field investigation activities and soil removal recommendations.

# 2.1 Site Description

The Site is located at 2955 South Robertson Boulevard, Los Angeles, California, at the cross streets of South Robertson Boulevard and Cattaraugus, Kincardine, and South Canfield avenues (Figures 1 and 2).

The Site has been used as the Alexander Hamilton High School campus since approximately 1931. Buildings at the Site include four classroom buildings, portable classrooms, photography studio, arts building, storage structures, two gymnasiums, cafeteria, and assembly hall. Other on-site developments include an outdoor track and football field, parking structure with elevated tennis courts, a baseball field, and paved parking areas. The northwest portion of the Site is developed with the Cheviot Hills Continuing School. The Site is bounded by residential areas to the north, west, and south, and mixed use residential/commercial to the east.

The proposed comprehensive modernization consists of the construction of new school buildings, the modernization of existing school facilities, and the demolition of certain aging and deteriorated buildings. The project also includes interim facilities, as necessary, to accommodate the displacement of any facilities and associated function during construction. Specifically, the comprehensive modernization project includes:

- New construction of science, art, and classroom buildings, a library and classroom building, a
  performing arts building, a central plant, and a lunch shelter.
- A new track and football field and new softball/baseball fields, including associated field lighting and appurtenant facilities.
- Seismic upgrades and the comprehensive modernization of the auditorium and the administration and classroom building.
- Seismic; heating, ventilation, and air conditioning; and the Americans with Disabilities Act (ADA) accessibility upgrades and minor improvements to the girls' and boys' gym and locker buildings.
- Seismic and ADA accessibility upgrades and minor improvements to the cafeteria building.
- Minor improvements and programmatic access to the Technology classroom building and the Arts and Shops building.
- ADA improvements throughout the Site (i.e., inside and outside of buildings).
- Upgrades to aging and outdated Site utilities.
- Improvements to landscape and hardscape area, including the removal and replacement of trees and asphalt demolition/replacement, as required.



• Demolition and removal of the Laboratory, Humanities, and Music buildings; photography studio building; seven portable/relocatable buildings; and several ancillary structures.

## 2.1.1 Mailing Address and Telephone Number

The designated manager for this project is Steven Morrill, LAUSD Site Assessment Project Manager. Contact information for general inquiries regarding the project should be directed to Patrick Schanen, LAUSD Office of Environmental Health & Safety (OEHS) Environmental Health Manager, as follows:

Patrick Schanen
Los Angeles Unified School District
Office of Environmental Health & Safety
333 South Beaudry Avenue, 21st Floor
Los Angeles, California 90017
Phone Number: 213-241-3356

# 2.1.2 United States Environmental Protection Agency Identification Number

The United States Environmental Protection Agency (USEPA) identification (ID) number for the Site is CAD982039331. This ID number will be used for generation, transportation, and off-site disposal of impacted soil excavated from the Site, as applicable.

## 2.2 Site Background

Owned and operated by LAUSD, the approximately 20.75-acre Site is identified as Los Angeles County Assessor's Parcel Number 4311-031-901. Based on review of the Phase I ESA (Roux 2017), the Site was developed with Alexander Hamilton High School in 1931, and renovated to its current configuration by the late 1960s. Prior to the school being completely developed in the late 1960s, the southern and central portions of the Site contained public streets and roadways.

# 2.3 Adjacent Property History

The northwest portion of the Site is developed with the Cheviot Hills Continuing School. The Site is bounded by residential areas to the north, west, and south, and mixed use residential/commercial to the east.

# 2.4 Regional Geology and Hydrogeology

The Site lies within the Peninsular Ranges Province. Review of the geologic map indicates that the Site is underlain by Quaternary aged alluvial gravel, sand, and silt-clay derived mostly from the Santa Monica Mountains (United States Geological Survey 2005). The Site is located within the Santa Monica Subbasin, located within the Coastal Plain of the Los Angeles Groundwater Basin. This basin has beneficial uses for municipal and irrigation supply (Los Angeles Regional Water Quality Control Board 2014). Roux's 2017 Phase I ESA indicates the depth to groundwater below the Site is unknown, but groundwater was

measured at a depth of 35 feet below ground surface (bgs) at a facility located immediately adjacent to the Site.

# 2.5 Phase I ESA and Subsequent Activities

The Phase I ESA (Roux 2017) identified the following recognized environmental conditions in connection with the Site:

- Based on Site observations and historical records, there are two on-site boilers—one in the
  basement of the main building constructed in 1931, and one on the ground floor of the girls'
  gymnasium building constructed in 1936. Floor drains were observed in both boiler rooms. Based on
  potential historical use of fuel to operate the boilers, it is possible that the subsurface is impacted in
  these areas.
- A photography studio building has been at the south-central portion of the Site since approximately 1964. During the Site reconnaissance, the studio was observed to contain dark rooms with photoprocessing chemicals. Plugged floor drains were also observed within the studio. Based on the nature of the operations in the studio, it is possible that photo-processing chemicals may potentially impact the subsurface in this area.
- Based on Site observations and historical Site plans from 1966, a clarifier is located in the parking area north of the arts building. The clarifier was associated with the former auto shop area. Based on the age of the clarifier and nature of its operation, it is likely it may have leaked over time.
- Elevators were observed in the Humanities and Laboratory classrooms, constructed approximately in the 1960s. Personnel at the school were not aware of the maintenance schedule or if the hydraulic fluids contained PCBs. Based on the age of the elevators, it is possible fluids may have leaked and impacted the surrounding subsurface.
- The current maintenance materials shed was historically used as a hazardous materials storage shed until the early 2000s, containing small quantities of vehicle maintenance fluids. It is possible that maintenance fluids or chemicals stored in the shed may have been released, potentially impact the surrounding subsurface.
- Structures planned for demolition have been located at the Site since the 1960s. Due to their age, lead-based paint may have been used in construction and maintenance activities and therefore may impact shallow soils in the immediate vicinity of the buildings planned for demolition. Also, OCPs may have been historically applied to soil around the vicinity of the buildings.
- Based on historical records, a former rifle range was located at the northwest corner of the Site, in
  the areas of the current Cheviot Hills Continuing School. Due to its historical usage, shallow soils
  may contain lead and/or other metals. This area was not included in the Site redevelopment plans
  and therefore was not investigated during the PEA-E study.
- Historical Site plans from 1944 indicated a former cesspool was located at the southeast corner of
  the Site, south of the Humanities classrooms. Due to historical activities in the Laboratory
  classrooms, it is possible chemicals may have been released into the cesspool impacting the
  subsurface in the area.



- Based on historical records, a spray booth and incinerator were located in the southern side of the
  former shop building. Due to the nature of the operations paints, automotive chemicals, and/or
  fuels may have impacted the surrounding subsurface.
- Below-grade hydraulic lifts, parts washer, oil drain, and moist pits were formerly located in the auto area, and finish rooms were located in the metal and wood shop areas of the industrial arts building based on historical Site plans from 1966. According to facility personnel, these features were removed from the Site in April 2017; however, no documentation was available regarding their removal. It is possible that PCB-containing hydraulic fluid from the lifts and chemicals associated with automotive repair may have affected the subsurface in these areas.
- Based on historical records, numerous historical Site structures were located throughout the Site
  prior to the 1960s, including 3 larger buildings and 36 smaller structures formerly on site. Based on
  the age of the former buildings, lead-based paint may have been used and may be present in
  surrounding shallow soils. Also, based on historical practices, OCPs may have been applied to soils
  at or in the vicinity of the former structures.
- Former street extensions were historically located on the southern to central portions of the Site, including the Durango, Livonia, and Kincardine avenues, and Ivy Street. Historical Site plans dated 1944 noted "rock and oil paving" on Kincardine Avenue. It is possible that soil in the vicinity of the former streets may be impacted by historical releases of automotive-related chemicals and/or metal compounds due to the use of leaded gasoline and wear of tires.
- Distribution Station 20, operated by the Los Angeles Department of Water and Power, is located immediately adjacent to the western portion of the Site and has operated since at least 1933. Due to the nature of historical operation, it is likely that electrical equipment containing PCBs may have impacted the subsurface.
- A dry cleaner facility, Fancy Cleaners, is located immediately adjacent to the northeast of the Site and has operated from at least 1951 to present. During previous investigations of the former Pierce Auto Station, tetrachloroethene (PCE) and trichloroethene were detected in groundwater monitoring wells. According to hazardous waste disposal operations, Fancy Cleaners has documented current and historical operations using chlorinated solvents through 2001. Due to the length and nature of its operation and likely impact to the subsurface, chlorinated solvents may have migrated to impact the Site and/or create a vapor intrusion concern.
- Multiple current and former service stations were located immediately adjacent to the east and
  northeast of the Site. No additional information, such as subsurface investigations or closure data,
  was available for review. A limited soil vapor investigation was conducted in 2001 over a small
  portion of the Site, following guidance and reporting limits applicable at the time of the
  investigation. Due to the nature and length of the historical operations, benzene and total
  petroleum hydrocarbons as gasoline may have impacted the subsurface and migrated to potentially
  impact the Site.

PCBs were used widely in caulking and elastic sealant materials, particularly from 1950 through the 1970s until PCBs were banned in 1979 (USEPA 2015). PCBs may exist in soil near exterior caulking present in buildings meeting the age criteria and adjacent to unpaved areas (DTSC 2006b). PCBs in shallow soil are commonly evaluated at the PEA-E stage of assessment at school sites that meet the age

criteria. Although not identified as a recognized environmental condition by Roux, screening for PCBs was conservatively included in the PEA-E for select samples, as specified in the *Updated Preliminary Environmental Assessment Equivalent PEA-E Proposed Sampling Summary* (Roux 2018).

#### 2.5.1 Sampling Plan

A PEA-E sampling plan was developed based on the recognized environmental conditions identified in the Phase I ESA (Roux 2018), which formed the basis for the PEA-E study. The PEA-E study included sampling of shallow and deep soil samples for COCs throughout the property in support of the Alexander Hamilton High School Modernization Project. Additionally, soil-vapor probes were installed to access volatile constituents in soil vapor that may be present due to historical uses and off-site sources. Figure 2 presents a Site layout showing soil sample and soil-vapor probe locations. Seven sampling efforts were completed between August 2018 and November 2019. Results from the sampling events were summarized and recommendations based on the results were presented in the PEA-E by Terraphase (2021).

#### 2.5.2 PEA-E Sampling Summary

Field activities were performed between August 2018 and November 2019. A total of 116 primary and 64 step-out borings were advanced using hand auger and direct-push drilling methods, and soil-vapor samples were collected for analysis.

On February 28, 2019, nine soil borings were advanced to collect soil samples throughout the Site to calculate a site-specific background arsenic concentration. Soil samples were typically collected every 5 feet until approximately 30 feet bgs.

Additional soil borings were advanced in June, August, and November 2019 to further assess the extent of soil or soil vapor above screening levels. Additional borings were advanced around the original sample location in three or four directions, as access and utility corridors allowed, and samples were labeled using the primary boring number plus a letter designation ("A" to the north and continuing in a clockwise direction). Locations requiring additional step outs beyond the first step-out location were labeled by adding a second "A" (or appropriate letter) to the sample name. Step-out sampling was completed if a result was below the chemical-specific screening level or if a utility corridor or other access restriction (such as a building) was encountered.

# 2.5.3 PEA-E Results Summary

Arsenic was reported above the method detection limit (MDL) in 421 of the 430 samples analyzed at concentrations ranging between 1.297 and 155 mg/kg. Three hundred and three sample concentrations exceeded the DTSC-adopted background arsenic concentration of 12 mg/kg (Chernoff, Bosan, and Oudiz 2008). Due to elevated site-wide arsenic concentrations above the DTSC background concentration, a site-specific background study was conducted. A background arsenic concentration of 28 mg/kg was calculated (Terraphase 2021). Twenty-two sample concentrations exceeded the site-specific background value of 28 mg/kg. Two samples (B11-DDD-1.5 and B18-2.5) were extracted using the soluble threshold limit concentrations (STLC) Waste Extraction Test procedure and the leachate was analyzed for arsenic



using USEPA Method 6010B. One of these samples (B11-DDD-1.5) was also extracted using the Toxicity Characteristic Leaching Procedure (TCLP) and the leachate was also analyzed for arsenic. All results were less than 5 milligrams per liter (mg/L), both the TCLP and STLC regulatory limits for arsenic.

Lead was reported above the MDL in 327 of the 353 samples analyzed at concentrations ranging between 3.3 and 1,030 mg/kg. The DTSC-modified screening level (DTSC-SL) for lead in human health risk assessments is 80 mg/kg (DTSC Human and Ecological Risk Office 2022). Twenty of the samples analyzed exceeded the DTSC-SL of 80 mg/kg. Six samples were extracted using the STLC Waste Extraction Test procedure and the leachate was analyzed for lead using USEPA Method 6010B. The STLC-lead results were between less than the reporting limit of 0.1 to 83 mg/L (B91 at 1.5 feet bgs and B12-BBB at 0.5 feet bgs, respectively). Only samples B12-0.5 and B-12-BBB-0.5 exceeded the 5 mg/L threshold. As a result, B12-BBB at 0.5 feet bgs was extracted using the TCLP, and the leachate was analyzed for lead using USEPA Method 6010B. The concentration for TCLP-lead in sample B12-BBB-0.5 was 5.09 mg/L, above the TCLP regulatory limit of 5 mg/L for lead, which is representative of hazardous material under federal waste disposal regulations.

Cobalt was reported above the MDL in all 99 samples analyzed at concentrations ranging between 2.92 and 31 mg/kg. The USEPA Regional Screening Level (RSL) for cobalt is 23 mg/kg (USEPA 2022). Seven of the sample concentrations were equal to or exceeded the USEPA RSL. The four samples with concentrations that exceeded the RSL also contained arsenic concentrations over the site-specific background concentration. Therefore, cobalt-impacted soil is included in the removal action recommendations for arsenic-impacted soil and is not discussed separately.

A total of 91 soil-vapor samples were analyzed for VOCs at the Site. Soil vapor results were compared to the DTSC-SL or USEPA RSL for residential air, modified by an attenuation factor of 0.002. Six of the VOCs exceeded their respective DTSC-SL or USEPA RSL (1,2-dichloroethane [1,2-DCA], 1,3-butadiene, benzene, ethylbenzene, naphthalene, and tetrachloroethene).

#### 2.5.4 PEA-E Recommendations

Based on the soil sampling and soil vapor results, Terraphase recommended removal of soil, or segregation of soil during redevelopment activities, and an evaluation of potential removal or mitigation measures to address vapor intrusion risks. The approximate soil removal and management areas are shown on Figures 3 through 12.

The recommendations for soil removal areas due to arsenic and lead concentrations in soil are described further below.

- Arsenic. Terraphase recommended removal of soil exceeding the calculated SSAL of 28 mg/kg around boring locations B11, B18, B20, B53, B57, B61, and B70 shown on Figures 8 and 10 through 12. Soil sampling should be performed during soil removal to define the actual extent of the arsenic-impacted soil.
- Lead. Terraphase recommended removal of soil exceeding the DTSC-SL of 80 mg/kg around boring locations B03, B10, B12, B25, B83, and B91 shown on Figures 4 through 7 and 9. Soil sampling should be performed during soil removal to define the actual extent of the lead-impacted soil.

Due to concentrations of VOCs including benzene and ethylbenzene in soil vapor, Terraphase recommended the evaluation of potential removal or mitigation measures to address cancer risks related to vapor intrusion in Site buildings be presented in the RAW. This evaluation is presented in Section 4.



# 3 Nature, Source, and Extent of Chemicals of Concern

Based on the findings presented in the PEA-E Document (Terraphase 2021), lead and arsenic were found to be COCs in soil, and benzene, ethylbenzene, and PCE were found to be COCs in soil vapor. Summaries of the nature, source, and extent of COCs; exposure pathways; and potential receptors are presented in this section.

# 3.1 Location and Extent of Impacts

The location and extent of impacts in soil and soil vapor are presented below.

#### 3.1.1 Lead and Arsenic in Soil

Soil impacted by lead or arsenic was identified in multiple areas of the Site as follows:

- Lead-impacted soil was identified at primary boring locations B03, B10, B12, B25, B83, and B91.
  Each area of lead-impacted soil was delineated by advancing step-out borings until non-impacted soil was identified or a utility line or structure was encountered. The locations of the impacted soils could not be linked to current activities or structures at the school, may be related to historical Site features (e.g., a former shop building and other former small structures), and are regarded as non-point source contaminants.
- Arsenic-impacted soil was identified at primary boring locations B11, B18, B20, B53, B57, B61, and B70. Cobalt-impacted soil was co-located with arsenic-impacted soil at three locations—B53, B57, and B61. Each area of arsenic-impacted soil was delineated by advancing step-out borings until non-impacted soil was identified or a utility line or structure was encountered. The locations of the impacted soils could not be linked to current activities or structures at the school, may be related to historical Site features (e.g., former small structures and the former cesspool), and are regarded as non-point source contaminants.

The tables and figures from Terraphase's PEA-E Document are provided in Appendix A.

# 3.1.2 VOCs in Soil Vapor

Six VOCs in soil vapor exceeded their respective DTSC-SL or USEPA RSL (1,2-DCA, 1,3-butadiene, benzene, ethylbenzene, naphthalene, and tetrachloroethene). These detections were reported in nine sample locations as follows:

- Benzene- and/or ethylbenzene-impacted soil vapor was identified at primary soil-vapor locations SV55, SV110, SV112, SV117, SV121. The locations are adjacent to the photography studio and an associated sewer line.
- PCE-impacted soil vapor was identified at soil-vapor location SV04 near a former incinerator near the former shop building.

- Naphthalene-impacted soil vapor was identified at soil-vapor location SV56. This location is also adjacent to the photography studio.
- 1,2-DCA-impacted soil vapor was identified at soil-vapor location SV62. The location of the impacted soil vapor could not be linked to current on-site activities or structures.
- 1,3-butadiene-impacted soil vapor was identified at soil-vapor location SV60. The location of the impacted soil vapor could not be linked to current on-site activities or structures.

These sample locations are shown on Figures 2 and 3. The soil vapor table from Terraphase's PEA-E Document are provided in Appendix A.

# 3.2 Exposure Pathways

Potential receptors can be exposed to arsenic and lead in soil through a direct contact exposure pathway. Direct contact with soil is assumed to involve incidental ingestion of and dermal contact with soil, and inhalation of soil-derived particulates and vapors. If impacted soil is located at depths such as 10 feet bgs, currently capped by non-impacted soil at 5 feet bgs, and grading activities will not occur within 5 horizontal feet of the detection or extend to 5 feet bgs, the direct contact exposure pathway will not be complete.

Potential receptors can be exposed to VOCs in soil vapor through a vapor intrusion exposure pathway. Vapor intrusion involves the potential migration of volatile chemicals in soil and/or groundwater through building foundations into indoor air.

## 3.3 Potential Receptors

Under current and reasonably expected future land use, potentially exposed populations at and around the Site include high school students, adult educators and school staff, maintenance workers, construction workers, trespassers, and off-site residents.

## 3.4 Health Effects of COCs

The following table presents the potential health effects of arsenic, lead, benzene, ethylbenzene, and PCE.

Chemical	Route of Exposure	Symptoms	Target Organs
Arsenic	Inhalation, skin absorption, skin and/or eye contact, ingestion	Ulceration of nasal septum, dermatitis, gastrointestinal disturbances, peripheral neuropathy, respiratory irritation, hyperpigmentation of skin	Liver, kidneys, skin, lungs, lymphatic system



Chemical	Route of Exposure	Symptoms	Target Organs
Lead	Inhalation, ingestion, skin and/or eye contact	Lassitude (weakness, exhaustion), insomnia; facial pallor; anorexia, weight loss, malnutrition; constipation, abdominal pain, colic; anemia; gingival lead line; tremor; paralysis wrist, ankles; encephalopathy; kidney disease; eye irritation; hypertension	Eyes, gastrointestinal tract, central nervous system, kidneys, blood, gingival tissue
Benzene	Inhalation, skin absorption, ingestion, skin and/or eye contact	Irritation eyes, skin, nose, respiratory system; dizziness; headache, nausea, staggered gait; anorexia, lassitude (weakness, exhaustion); dermatitis; bone marrow depression; [potential occupational carcinogen]	Eyes, skin, respiratory system, blood, central nervous system, bone marrow
Ethylbenzene	Inhalation, ingestion, skin and/or eye contact	Irritation eyes, skin, mucous membrane; headache; dermatitis; narcosis, coma	Eyes, skin, respiratory system, central nervous system
PCE	Inhalation, skin absorption, ingestion, skin and/or eye contact	Irritation eyes, skin, nose, throat, respiratory system; nausea; flush face, neck; dizziness, incoordination; headache, drowsiness; skin erythema (skin redness); liver damage; [potential occupational carcinogen]	Eyes, skin, respiratory system, liver, kidneys, central nervous system

Source: NIOSH Pocket Guide to Chemical Hazards (<a href="https://www.cdc.gov/niosh/npg/default.html">https://www.cdc.gov/niosh/npg/default.html</a>)

# 4 Risk Evaluation and SSALs

This section presents a summary of the risk evaluation for COCs identified in soil and soil vapor, as well as SSALs for chemicals retained as COCs for the Site.

#### 4.1 Soil Risk Evaluation

As presented in Section 4 (Human Health Screening Evaluation) of the PEA-E Document (Terraphase 2021), following the removal of shallow soils above the screening criteria for arsenic and lead of 28 and 80 mg/kg, respectively, no other shallow soil locations would exhibit concentrations that would result in cumulative risk or hazard index estimates that would be greater than the risk management goals.

Grading activities are not expected to occur within 5 feet of soil impacted with arsenic and cobalt at 10 feet bgs; therefore, the direct contact exposure pathway is not complete. Thus, arsenic- and cobalt-impacted soil at depths of 10 feet bgs are not proposed for excavation. However, should Site development plans change, and deep grading be required adjacent to these locations, excavations centered around boring locations B53, B57, and B61 are included in this RAW for informational and planning purposes.

# 4.2 Soil Vapor Risk Evaluation

Eight soil-vapor locations exhibited cumulative cancer risk estimates above the risk management goal of 1x10<sup>-6</sup> when examined as part of the human health screening evaluation performed in the PEA-E study. At the request of the LAUSD, site-specific Johnson-Ettinger modeling was performed for soil-vapor concentrations of benzene, ethylbenzene, tetrachloroethene, naphthalene, 1,2-DCA, and 1,3-butadiene—chemicals that exceeded DTSC-SLs with an attenuation factor of 0.002 per the DTSC's 2011 *Guidance for the Evaluation and Mitigation of Subsurface Vapor Intrusion to Indoor Air (Vapor Intrusion Guidance)*.

Using the Johnson-Ettinger model, the following three exposure scenarios were assessed with the following assumptions listed below. A building air exchange rate of 1 air exchange per hour was assumed.

- 1. Teacher
  - a. Exposure Duration: 25 years
  - b. Exposure Frequency: 182 days per year
- 2. Staff/Non-certified
  - a. Exposure Duration: 25 years
  - b. Exposure Frequency: 250 days per year
- 3. Student
  - a. Exposure Duration: 4 years
  - b. Exposure Frequency: 180 days per year



In addition to the exposure scenarios referenced above, the following summarized soil lithologies were assessed based upon Site lithological data collocated with impacts observed during prior investigations:

- 1. Benzene
  - a. Silt at 5 feet bgs
  - b. Sand at 15 feet bgs
  - c. Silty Clay Loam at 15 feet bgs
- 2. Ethylbenzene
  - a. Sand at 15 feet bgs
  - b. Silty Clay Loam at 15 feet bgs
- 3. Tetrachloroethene: Clay at 5 feet bgs
- 4. Naphthalene, 1,2-DCA, and 1,3-butadiene: Loamy Sand at 15 feet bgs

Results of the Johnson-Ettinger modeling indicated that no single risk due to benzene, ethylbenzene, tetrachloroethene, naphthalene, 1,2-DCA, and 1,3-butadiene, when examined under all scenarios (teacher, student, and staff) and associated lithologies listed above, did not pose a cancer risk greater than 1x10<sup>-6</sup>. Tetrachloroethene, naphthalene, 1,2-DCA, and 1,3-butadiene were not co-located in any samples, but benzene and ethylbenzene were collocated in multiple samples. The cumulative cancer risk of most scenarios for benzene and ethylbenzene did not exceed 1x10<sup>-6</sup>. However, the cumulative cancer risk for benzene and ethylbenzene using Johnson-Ettinger modeling for the staff scenario, with the sand lithology at 15 feet bgs, indicated a cumulative cancer risk of 1.1x10<sup>-6</sup>, slightly greater than the risk management goal. A summary of Johnson-Ettinger modeling is included as Table 2 and calculations are included as Appendix B.

Because the cancer risks associated with tetrachloroethene, naphthalene, 1,2-DCA, and 1,3-butadiene are below the risk management level of 1x10<sup>-6</sup>, the four chemicals in soil vapor are not retained as COCs.

Considering the cumulative cancer risk for benzene and ethylbenzene exceeding 1x10<sup>-6</sup>, and the lack of a clearly identified source of the soil vapor, Terraphase recommends mitigation of benzene and ethylbenzene vapor-impacted soil. LAUSD intends to excavate and remove soil in the vicinity of the vapor impacts, as detailed in Section 5.

# 4.3 Site-Specific Cleanup Goals

Concentrations of arsenic and lead above SSALs were reported in Site soils and concentrations of benzene and ethylbenzene were reported in Site soil vapor. The human health risk assessment performed during Terraphase's 2021 PEA-E study, summarized above, determined the SSALs summarized below.

Arsenic in Soil. The SSAL for arsenic is 28 mg/kg. Due to site-wide arsenic concentrations reported
in the 2021 PEA-E Document, Terraphase calculated an arsenic concentration of 28 mg/kg using the
DTSC's 2009 Arsenic Strategies Determination of Arsenic Remediation, Development of Arsenic
Cleanup Goals.

• Lead in Soil. The SSAL for lead is 80 mg/kg, consistent with the DTSC-SL for lead (DTSC Human and Ecological Risk Office 2022).

Because a soil source that could contribute to the soil-vapor concentrations of benzene and ethylbenzene has not been identified, and soil samples collected in the vicinity of the highest soil-vapor concentrations did not contain benzene above laboratory reporting limits set at or below 1 microgram per kilogram, soil SSALs for benzene and ethylbenzene are not proposed. Photoionization detector (PID) readings of soil will be collected during excavation; post-excavation soil-vapor probes will be installed to evaluate post-remediation benzene and ethylbenzene concentrations in soil vapor.



# 5 Description of Selected Remedy

LAUSD has selected excavation and removal of impacted soil as the removal action for COCs present in soil above the SSALs, and for soil in areas of elevated soil-vapor concentrations. The total estimated volume of soil to be removed from the Site is described below. The excavation areas are based on Site investigations performed as part of the PEA-E study (Terraphase 2021).

Excavation of metals- and vapor-impacted soil is the selected remedy due to its ease of implementation, and effectiveness in eliminating soil with the elevated levels of arsenic and lead, and possibly benzene and ethylbenzene, in Site soils. The impacted soil will be excavated using heavy equipment and removed from the Site by the removal contractor, overseen by an environmental consultant selected by LAUSD OEHS.

Potential risks during the excavation of impacted soils include exposure of on-site construction personnel to impacted soils, the risk of inhalation of benzene and ethylbenzene soil vapors released as the soil by the photography studio building is disturbed, as well as typical safety hazards associated with soil excavation activities and equipment. These risks can be mitigated by the use of personal protective equipment, adherence to a comprehensive health and safety plan (HASP), and engineered controls for dust mitigation during the handling of impacted soils.

Impacted soils will be excavated and transported to a LAUSD-approved and licensed facility for disposal. Upon completion of planned excavations, soil sampling of metals-impacted soil will be conducted to confirm SSALs are met as proposed in Section 7.7.1. Field screening of VOC-impacted soil will be performed, and post-excavation soil-vapor sampling will be conducted as proposed in Section 7.7.2.

Following confirmation that SSALs are met, soil meeting LAUSD Specification Section 01 4524 requirements may be imported to the Site to backfill the excavation.<sup>1</sup>

#### 5.1 Extent and Volume of Soil Removal

The total in-place volume of metals-impacted soil is shown in Table 1. A total of 88.55 cubic yards (cy) of shallow (less than 5 feet bgs) metals-impacted soil (54.76 and 30.79 cy of lead and arsenic-impacted soil, respectively) is proposed for removal. A total of 698 cy of deep (up to 15 feet bgs) soil is proposed for removal and disposal to address impacts of benzene and ethylbenzene concentrations in soil vapor. An additional 1,657 cy of soil required for setback around the deep benzene/ethylbenzene excavation area will be removed and stockpiled separately for potential reuse or disposal. The source of the soil-vapor impacts is not known, and potential sources may be identified after the photography studio building is demolished. The areal extent of vapor-impacted soil may be modified if additional potential source information becomes available.

<sup>&</sup>lt;sup>1</sup> Los Angeles Unified School District, "Environmental Import/Export Materials Testing" (Section 01 4524, August 29, 2018).

An additional 95.31 cy of deep (up to 15 feet bgs) arsenic-impacted soil is proposed for removal only if Site redevelopment plans change such that grading activities extend within 5 feet laterally or vertically of the impacted soil located at 10 feet bgs. This applies to excavations B53, B57, and B61, which are discussed below for informational purposes only.

The recommended shallow excavation areas shown on Figures 3 through 12 include:

- Boring B03: A 33-square-foot excavation around primary boring B3 to a depth of 2.5 feet bgs (3.08 cy) for the removal of lead-impacted soil (Figure 5).
- Boring B10: A 15.3-square-foot excavation around primary boring B10 to a depth of 1.5 feet bgs (0.85 cy) for the removal of lead-impacted soil (Figure 7).
- Boring B11: A 156-square-foot excavation around primary boring B11 to a depth of 3.0 feet bgs (17.36 cy) for the removal of arsenic-impacted soil. Arsenic is not delineated at depth in this location (Figure 12).
- Boring B12: A 360-square-foot excavation around primary boring B12 to a depth of 1.5 feet bgs (19.98 cy) for the removal of lead-impacted soil (Figure 5).
- Boring B18: A 14-square-foot excavation around primary boring B18 to a depth of 3.0 feet bgs (1.53 cy) for the removal of arsenic-impacted soil. Arsenic is not delineated at depth at this location (Figure 11).
- Boring B20: A 179-square-foot excavation around primary boring B20 to a depth of 1.5 feet bgs (9.95 cy) for the removal of arsenic-impacted soil (Figure 12).
- Boring B25: A 123-square-foot excavation around primary boring B25 to a depth of 1.5 feet bgs (6.81 cy) for the removal of lead-impacted soil (Figure 6).
- Boring B70: A 26-square-foot excavation around primary boring B70 to a depth of 2.0 feet bgs
  (1.95 cy) for the removal of arsenic-impacted soil. Arsenic is not delineated at depth at this location
  (Figure 10).
- Boring B83: A 63-square-foot excavation around primary boring B83 to a depth of 1.5 feet bgs (3.48 cy) for the removal of lead-impacted soil (Figure 4).
- Boring B91: A 222-square-foot excavation around primary boring B91 to a depth of 2.5 feet bgs (20.56 cy) for the removal of lead-impacted soil (Figure 9).

The recommended deeper excavation areas shown on Figure 10 include the following excavation volumes, which do not include any setback required for benching or sloping of the excavation sidewalls (except B55/SV55):

Boring B55/SV55: A 1,200-square-foot excavation around primary boring B55/SV55 to a depth of
15 feet bgs (667 cy) for the removal of soil impacted by benzene and ethylbenzene concentrations
in soil vapor (Figure 10). The north, south, and east sides of this excavation will require a 22.5-footwide setback sloped at a horizontal to vertical rise of 1.5:1. The footprint and soil volume of the
setback excavation is 5,362.5 square feet (1,157 cy). The total excavation volume including the deep
excavation and the setback is 1,824 cy.



 Boring SV121: A 150-square-foot excavation around primary boring SV121 and a nearby sanitary sewer line to a depth of 5.5 feet bgs (31 cy) for the removal of soil impacted by benzene and ethylbenzene concentrations in soil vapor (Figure 10).

Three deeper excavation areas (shown on Figures 8, 10, and 12) are proposed for excavation only if Site grading activities are proposed within 5 lateral or vertical feet of impacted soil located at 10 feet bgs. These areas include the following excavation volumes, which do not include any setback required for benching or sloping of the excavation sidewalls:

- Boring B53: A 66-square-foot excavation around primary boring B53 to a depth of 15 feet bgs (36.55 cy) for the removal of arsenic-impacted soil (Figure 10).
- Boring B57: A 66-square-foot excavation around primary boring B57 to a depth of 15.5 feet bgs
  (37.5 cy) for the removal of arsenic-impacted soil. Arsenic is not delineated at depth at this location
  (Figure 12).
- Boring B61: A 38-square-foot excavation around primary boring B61 to a depth of 15 feet bgs (21.26 cy) for the removal of arsenic-impacted soil (Figure 8).

# 6 Applicable or Relevant and Appropriate Requirements

The proposed removal action must comply with the applicable or relevant and appropriate requirements discussed in this section.

## 6.1 Public Participation

Prior to beginning fieldwork for the proposed removal action, LAUSD will distribute a RAW Work Notice, prepared in English and Spanish, to the high school's students and staff and nearby residents and businesses (i.e., within line-of-sight). The notice will provide a general description of the fieldwork that will occur and the telephone number of the LAUSD OEHS Project Manager to contact for further information. The notice will also be laminated and posted along the fence line of the project.

# 6.2 California Environmental Quality Act

California Environmental Quality Act (CEQA) compliance for the RAW will be achieved through the documentation prepared for the overall Hamilton High School Comprehensive Modernization Project. LAUSD filed a Notice of Determination that an Initial Study/Negative Declaration was prepared for the project and the project will not have a significant impact on the environment. A public notice was prepared disclosing the Negative Declaration, which was published for a 30-day public review from October 15 to November 16, 2020. A virtual public meeting was held on October 28, 2020. A response to written comments received on the Negative Declaration was published in February 2021.

# 6.3 Waste Management

Soil excavation, transportation, and disposal will be performed in accordance with applicable federal, state, and local laws, regulations, ordinances, and requirements. Field operations will follow the suggested operation guidelines to prevent cross-media transfer of contaminants, as specified in *Best Management Practices (BMP) for Soils Treatment Technologies* (USEPA 1997).

The total and soluble threshold limit concentrations for classification of hazardous or extremely hazardous wastes, including ignitability, pH, reactivity, and toxicity, are listed in 22 CCR 66261,<sup>2</sup> applicable for determining whether excavated soil must be managed as non-Recourse Conservation and Recovery Act (RCRA) hazardous or nonhazardous waste.<sup>3</sup> Criteria for determining whether a solid or liquid waste is a RCRA hazardous waste, applicable for determining whether excavated soil must be managed as federal hazardous waste, is provided in 42 USC 82.<sup>4</sup> Furthermore, generators of hazardous

<sup>&</sup>lt;sup>4</sup> Solid Waste Disposal, <a href="https://uscode.house.gov/view/prelim@title42/chapter82">https://uscode.house.gov/view/prelim@title42/chapter82</a>



<sup>&</sup>lt;sup>2</sup> Identification and Listing of Hazardous Waste, 22 CCR 66261, https://govt.westlaw.com/calregs/Title22/Div4.5/Ch11.

<sup>&</sup>lt;sup>3</sup> Resource Conservation and Recovery Act (RCRA) Laws and Regulations, <a href="https://www.epa.gov/rcra">https://www.epa.gov/rcra</a>.

waste must observe certain requirements in accumulating, storing, marking, and treating the waste while on site, and preparing and labeling the waste for transport and disposal in accordance with the California HSC § 25100–25166.5, 25179.1–12, and 25244–25244.24; 22 CCR 66262, and 49 CFR. Persons responsible for handling and transporting waste must receive appropriate training, and required contingency/emergency planning, procedures, and records must be retained. These requirements may be relevant and appropriate to any future generation of hazardous wastes through remediation activities (e.g., drilling and excavating), including manifesting and transporting those wastes off site.

Based on results of soil sampling conducted during the PEA-E study, anticipated waste types may include non-hazardous, non-RCRA hazardous, and RCRA hazardous wastes. Soil sample results associated with the PEA-E study will not be recent enough to be used for waste profiling purposes; therefore, additional sampling and analysis will be conducted, as necessary, to ensure that soils generated by the removal action have been properly profiled for waste classification before they are transported off site for disposal. Based on findings of the PEA-E study, excavated soil near primary boring B12 to a depth of 0.5 feet bgs is expected to be non-RCRA hazardous waste for lead; excavated soil near adjacent step-out boring B12-BBB to a depth of 0.5 feet may be RCRA hazardous waste for lead. These soils should be segregated, stockpiled, or stored in a bin, and disposed separately from other non-hazardous excavated wastes. All waste will be properly characterized and profiled under a required USEPA ID number prior to off-site disposal at an appropriate Class I landfill licensed facility by either the removal contractor or environmental consultant.

Compliance with federal and state requirements for waste generation, temporary on-site storage, transportation, and disposal will be required for the contractor(s) performing the excavation and removal activities. The excavation activities will be monitored by the environmental consultant overseeing the field work.

Any container used for on-site storage of hazardous waste will be properly identified with a hazardous waste label. Within 90 days after its generation, the hazardous waste will be transported off site for disposal. Any shipment of hazardous wastes in California will be transported by a registered hazardous waste hauler under a uniform hazardous waste manifest.

# 6.4 Health and Safety

Contractors performing work at the Site will be responsible for operating in accordance with the most current requirements of 8 CCR 5192 and 29 CFR 1910.120.<sup>6</sup> On-site personnel are responsible for

<sup>&</sup>lt;sup>5</sup> Miscellaneous Health and Safety Provisions, https://leginfo.legislature.ca.gov/HSC/Division20title=&part=&chapter=&article; Standards Applicable to Generators of Hazardous Waste, https://govt.westlaw.com/calregs/Title22/Div4.5/Ch12; and Transportation, https://www.ecfr.gov/current/title-49, respectively.

<sup>&</sup>lt;sup>6</sup> Hazardous Waste Operations and Emergency Response, <a href="https://www.dir.ca.gov/title8/5192.html">https://www.dir.ca.gov/title8/5192.html</a> and <a href="https://www.ecfr.gov/current/title-29/subtitle-B/chapter-XVII/part-1910/subpart-H/section-1910.120">https://www.ecfr.gov/current/title-29/subtitle-B/chapter-XVII/part-1910/subpart-H/section-1910.120</a>, respectively.

complying with all applicable federal, state, and local laws and regulations, which include standards outlined in 8 CCR 3200–6184, 29 CFR 1910, and 29 CFR 1926. $^7$ 

# 6.5 Stormwater Discharge Management Plan

State Water Resources Control Board Order No. 99-08-DWQ, National Pollutants Discharge Elimination System General Permit No. CAS000002, Waste Discharge Requirements for Discharges of Storm Water Runoff Associated with Construction Activity (General Permit)" describes the implementation of a Storm Water Pollution Prevention Plan (SWPPP) for construction projects. Since the work area is less than an acre in size, a SWPPP will not be required for this project. However, best management practices will be implemented for runoff control in accordance with regulatory requirements and activities that might be included in a site-specific SWPPP. If excavation is conducted during the rainy season, provisions will be made to prevent off-site migration of impacted soil in runoff. Measures may include placement of sandbags, straw rolls, and/or hay bales to control runoff and act as filters.

# 6.6 South Coast Air Quality Management District

South Coast Air Quality Management District (SCAQMD) has three rules that address soil excavation (Rules 1150, 1166, and 1466) and one that addresses fugitive dust (Rule 403). Rule 1150 applies to the excavation of sanitary landfills and does not apply to this project.

Rule 1166 is expected to apply to this project when VOC-impacted soil in the vicinity of the photography studio is disturbed, because it governs the excavation of soils containing concentrations of VOCs.

Rule 1466 does not apply to this project because there is no regulatory oversight and the removal action will be conducted during school shutdowns (holidays, summer vacations, weekends, etc.). If for any reason that the school is occupied during any portion of the removal action, LAUSD will add an addendum to this RAW that includes a risk assessment for the school occupants. Note, however, LAUSD will comply with the Rule 1466 provisions including protocols for dust monitoring and control, and excavating and loading impacted soils. These protocols will be implemented during field activities.

Several elements of Rule 403, such as protocols for mitigation of potential fugitive dust emissions, have been incorporated into this RAW. Excavation, loading, and transport of impacted soils will comply with Rule 403 prevention, reduction, and mitigation measures for fugitive dust emissions. However, SCAQMD notification is required only for large operations (disturbing more than 100 acres or moving more than 10,000 cy per day). Therefore, no notification or filing of a Fugitive Dust Emission Control Plan is required due to project size.

<sup>&</sup>lt;sup>7</sup> General Industry Safety Orders, <a href="https://www.dir.ca.gov/Title8/sub7.html">https://www.dir.ca.gov/Title8/sub7.html</a>; Occupational Safety and Health Standards, <a href="https://www.osha.gov/laws-regs/regulations/standardnumber/1910">https://www.osha.gov/laws-regs/regulations/standardnumber/1910</a>; and Safety and Health Regulations for Construction, <a href="https://www.osha.gov/laws-regs/regulations/standardnumber/1926">https://www.osha.gov/laws-regs/regulations/standardnumber/1926</a>, respectively.



# 7 Removal Action Implementation

LAUSD has selected soil excavation and removal as the most appropriate removal action for soil impacted with metals and VOC concentrations in soil vapor. The proposed excavation areas are illustrated on Figures 4 through 12. The estimated excavation volumes are provided in Table 1. LAUSD OEHS will contract an environmental consultant to provide project oversight, air monitoring, health and safety compliance, confirmation sampling, and closure reporting. A removal contractor will be separately contracted by LAUSD to provide qualified labor, appropriate equipment, materials, and transportation and disposal services to complete the removal action. Details of the proposed removal action activities are presented below.

# 7.1 Site Preparation

Prior to mobilization, site preparation activities will include obtaining permits, preparation of a HASP, public notification, delineation of excavation areas, and utility clearances.

#### 7.1.1 Permits, Plans, and Pre-field Activities

All appropriate permits and plans must be drafted and obtained from the relevant agencies before the start of field activities. Shoring will be required along the western side of the photography studio excavation area to protect existing utilities lines. A shoring plan design document signed by a structural engineer must be prepared, and an excavation permit from the City of Los Angeles', Department of Public Works, Bureau of Engineering must be obtained prior to beginning the removal action activities.

Other required federal or state permits or agency approvals are not expected to implement the RAW. However, Underground Service Alert (USA) will be notified a minimum of 72 hours prior to any earthwork activities and documentation of this notification will be provided in the completion report.

# 7.1.2 Health and Safety

The removal contractor and an environmental consultant shall each prepare their own comprehensive HASPs prior to the implementation of the proposed RAW activities at the Site. The intent of a HASP, which includes protocols to be followed during removal activities, is to ensure the health and safety of on-Site project employees, subcontractors, visitors, and the public. A HASP identifies policy, procedures, and systems to be followed by project personnel, and is required to be followed and signed by all field personnel, subcontractors, vendors, visitors, and agency representatives at the Site. Copies of the HASPs will be readily available during field activities.

All Site workers involved with the removal action activities will be required to review and sign the HASPs before conducting work at the Site. On the morning of each day of field activities, a health and safety meeting will be conducted to discuss the health and safety issues and concerns related to the specific work, including safety concerns regarding coordination of investigation activities. In addition, Site workers shall meet the training requirements specified in 29 CFR 1910.120(e).

#### 7.1.3 Public Notification

Prior to initiating field activities, a field work notice will be prepared by the environmental consultant in English and Spanish and distributed as follows:

- Delivered to the line-of-sight neighbors;
- · Placed in the school faculty and staff in-boxes; and
- Laminated and posted on the fence-line of the school.

#### 7.1.4 Delineation of Excavation Areas

Prior to initiating the soil excavation activities, the excavation areas will be marked with stakes, flags, or paint by the environmental consultant. In addition, prior to beginning field work, fencing (6-foot-tall chain-link with wind screen) may be installed around individual excavation areas to prevent unauthorized entry and minimize fugitive dust emissions during work activities by the removal contractor. The proposed excavation areas are shown on Figures 4 through 12 and presented in Table 1.

#### 7.1.5 Utility Clearance

Clearance of utilities and other underground obstacles will be conducted by the removal contractor prior to initiating any subsurface investigation activities. USA will be notified at least two business days prior to commencing work at the Site, and after excavation locations are marked with white paint according to USA requirements. The USA ticket will be maintained as long as work continues at the Site and will be updated as necessary for excavation location adjustments.

A geophysical survey will also be completed in the excavation area to identify and mark out underground utilities potentially including, but not limited to, water, natural gas, electrical, telecommunication, and sewer lines, and storm drainpipes within the excavation areas. The geophysical survey will utilize electromagnetic and ground penetrating radar to locate the underground utility lines and subsurface features and structures prior to the initiation of intrusive investigation activities.

#### 7.2 Excavation Plan

This excavation plan describes the scope of the proposed removal actions for soil impacted with arsenic and lead and VOC concentrations in soil vapor, which include excavation, handling, and disposal activities.

# 7.2.1 Metals-Impacted Soil

The scope of the first proposed removal action is to excavate approximately 123 cy of arsenic- and lead-impacted soil from 13 areas which concentrations above the SSALs of 28 and 80 mg/kg for arsenic and lead, respectively. Based on available analytical data, arsenic-impacted soil has been characterized as non-hazardous, while certain lead-impacted soil has been characterized as RCRA-hazardous waste (around boring B-12 to a depth of 1.5 feet bgs).



RCRA hazardous waste should be segregated and stockpiled separately from non-hazardous waste, and the stockpiles or storage bins should be clearly labeled.

The approximate soil removal areas are shown on Figures 4 through 12. Excavations B11, B18, B20, and B70 will warrant additional soil sampling during Site redevelopment activities to further define the volume of soil removed. Soil volumes presented in this RAW assume that where vertical impacts are not defined (excavations B11, B18, and B70), the excavation will extend 0.5 feet past the known impacted depth.

Confirmation soil sampling will be required after the completion of excavation activities. Soil will be prescreened using an X-ray fluorescence unit to evaluate whether excavation activities should be extended prior to collecting analytical samples. Confirmation sampling procedures are discussed in Section 7.7. If a confirmation sample concentration exceeds a SSAL, the excavation will be extended laterally by 1-foot increments until either an additional confirmation sample concentration is below the SSAL or the boundary of the excavation reaches a subsurface utility, property boundary, or other Site feature.

All field work will be completed by properly trained and equipped hazardous waste workers. Excavations shall have a minimum of 1 foot of separation from known utilities and excavation methods within 3 feet of active utilities shall be limited to hand tools and shovels. Excavation areas that are not constrained by utilities may be performed with rubber-tire backhoe or similar equipment. Other equipment that may be used includes a loader for stockpiling and loading, a water truck or trailer tank for dust control, dump trucks for moving or transporting waste soil, and support vehicles.

The excavated material will include impacted soil and any associated debris (asphalt, concrete, etc.). At least 30 days prior to starting any excavation activities, the removal contractor must identify if the soil is to be direct loaded, stockpiled, or placed in bins. The following must be pre-approved by OEHS before any arsenic- or lead-impacted soil can leave the Site:

- Profile document(s) from the disposal facility;
- Draft Bill of Lading/Non-Hazardous Manifest (one per truck); and
- A "Clean Truck" letter from the transporter.

Upon approval of the above, the removal contractor may direct load the soil onto trucks for off-site transport and disposal.

If the removal contractor elects to stockpile or place the soil in bins, the location(s) of the stockpiles/bins must be pre-approved by LAUSD OEHS.

Soil sampling and analysis shall be performed as described in Section 7.7.

Upon completion, backfill and compaction of the excavation areas will be conducted to assure that the excavated areas are suitable for future construction activities (refer to section 7.9).

#### 7.2.2 VOC-impacted Soil Vapor

The scope of the second proposed removal action is removal of soil impacted by benzene and ethylbenzene in soil vapor in the vicinity of borings B55/SV55 and SV121. Following demolition of the photography studio building, the surficial soil should be screened for potential sources of the soil vapor using a PID. If a potential source is identified, the scope of the excavation presented below may be modified. In the absence of a known source, the scope of the proposed removal action is to excavate 1,855 cy of impacted soil from two areas (B55/SV55 and SV121) which contain benzene and/or ethylbenzene concentrations in soil vapor above their respective DTSC-SLs or USEPA RSLs of 48.5 and  $550 \,\mu\text{g/m}^3$  for benzene and ethylbenzene, respectively. Based on available analytical data, this soil is expected to be characterized as non-hazardous. The two soil removal areas are shown on Figure 10. All field work must be completed by properly trained and equipped hazardous waste workers as described in Section 7.2.1.

The proposed excavation at B55/SV55 will remove approximately 1,824 cy of soil impacted by benzene and ethylbenzene in soil vapor. Excavation B55/SV55 will be centered vertically on boring location B55/SV55 and will be excavated to a depth of 15 feet (Figure 10). The west side of the excavation will be shored to protect an existing utility corridor. Assuming a type C soil, the other three sides of the excavation (north, east, and south) must be set back at a maximum allowable slope ratio of 1.5 horizontal to 1 vertical, with a horizontal setback distance of 22.5 feet, as measured from the toe of the slope. Soil excavated from the 15-foot-deep main excavation will be stockpiled for profiling and disposal. The surrounding soil excavated to maintain the setback will be stockpiled separately and profiled for reuse per LAUSD Specification Section 4524.

The proposed excavation around SV121 will remove approximately 31 cy of soil impacted with VOC concentrations in soil vapor (Figure 10). Excavation SV121 will be excavated to a depth of 5.5 feet bgs along a nearby sanitary sewer line. Soil from this excavation will be stockpiled for profiling and disposal. The locations of the soil stockpiles must be pre-approved by LAUSD OEHS.

Upon completing excavation of soil impacted with VOC concentrations in soil vapor (B55/SV55 and SV121), Terraphase recommends that soil from the bottom of both excavations and the sidewalls of excavation SV121 be screened in the field with a PID to assess VOC concentrations of remaining soil and evaluate the need for additional excavation. Soil will be collected from the approximate mid-points of the sidewalls and the centers of the excavation bottoms and screened with a PID. If PID readings exceed 20 parts per million (ppm), additional soil will be removed (as feasible) until the PID readings fall below 20 ppm.

Upon completion, backfill and compaction of the excavation areas will be conducted to ensure the excavated areas are suitable for future construction activities (refer to Section 7.10).

Following placement and compaction of backfill, Terraphase recommends that temporary soil-vapor probes be installed in excavation areas with VOC concentrations in soil vapor (B55/SV55 and SV121) and sampled for VOCs as described in Section 7.7. The post-excavation VOC results should be used to calculate the cancer risk after the completion of remedial activities.



# 7.3 Soil Management

Impacted soils will be stockpiled, placed in bins, or directly loaded onto dump trucks for immediate offsite disposal. The following sections discuss soil and material segregation, stockpile handling, truck loading, and storm water management. Whenever possible, excavated, impacted soils will be loaded directly onto transportation trucks.

If it is necessary to temporarily store the excavated soil on site until off-site transportation and disposal are available, the following may apply:

- The staging process will be conducted in a manner to minimize the generation of dust. At the
  staging areas, excavated soil will be placed on an impermeable barrier base (e.g., plastic sheeting)
  and covered with tarps or other proper materials (e.g., plastic sheeting) to prevent any run-on
  and/or dust generation. If significant rainfall is anticipated, the staging areas will be bermed to
  contain any runoff.
- The temporary on-site storage of excavated soil wastes will be secured until they are ready for loading. Storage of waste for longer than 90 days after it is generated is not anticipated.
- Direct loading may take place concurrently with excavation operations, with access of loaders to the stockpile from outside the excavation areas, while excavation operations deposit impacted soil from the excavation areas to the staging areas.

During non-excavation hours, excavated soil stockpiles will be covered with plastic sheeting or other proper materials. Additional field applications may involve installation of a temporary canopy, liner, or other physical barrier that minimizes movement of materials from the Site by wind, water, or any other mechanism.

## 7.4 Decontamination Methods and Procedures

Entry to the contaminated areas should be limited to avoid unnecessary exposure and related transfer of contaminants. In unavoidable circumstances, any equipment or truck(s) should be decontaminated in a designated decontamination area before leaving the Site as described below.

Equipment that comes into direct contact with potentially contaminated soil or water will be decontaminated to assure the quality of samples collected and/or to avoid cross contamination. Disposable equipment intended for one-time use will not be decontaminated but will be packaged for appropriate disposal. Decontamination will occur prior to and after each designated use of a piece of equipment.

Trucks that come into direct contact with potentially contaminated soil or water will be decontaminated before they leave the Site to prevent the off-site tracking of contaminated soil. Trucks will be visually inspected before leaving the Site, and any dirt adhering to the exterior surfaces will be brushed off and collected on plastic sheeting. The storage bins or beds of the trucks will be inspected to ensure the loads are properly covered and secured. Excavation equipment surfaces will also be brushed off prior to removal from the exclusion zone.

Equipment will be decontaminated in a pre-designated area on pallets or plastic sheeting. Cleaned bulky equipment will be stored on plastic sheeting in uncontaminated areas. Cleaned small equipment will be stored in plastic bags. Materials to be stored more than a few hours will also be covered. Waste material accumulated during decontamination procedures will be collected and properly stored on site for disposal.

# 7.5 Air and Meteorological Monitoring

This section details the air and meteorological monitoring methodologies that will be used during the soil removal action to achieve several goals:

- Identify and measure the air contaminants generated during the soil removal and decontamination
  activities to assign the appropriate personal protective equipment and safety systems specified for
  those activities.
- Provide feedback to Site operations personnel regarding potential hazards from exposure to hazardous air contaminants generated through Site activities.
- Identify and measure air contaminants at points outside the soil removal and decontamination exclusion zones. Air monitoring will be conducted during work activities to measure potential exposure of sensitive receptors to Site chemical constituents as a result of removal activities.

#### 7.5.1 Air Monitoring

#### SCAQMD Rule 1466

Dust and particulate monitoring will be conducted by the environmental consultant using a combination of two to three continuous, direct-reading particulate monitors (e.g., E-BAM Particulate Monitor, MIE Personal DataRam Model PDR 1000 aerosol monitor, or equivalent). The monitors will be operated and calibrated in accordance with SCAQMD Rule 1466 (Control of Particulate Emissions from Soils with Toxic Air Contaminants). The monitors will be placed around the excavation area(s) as work progresses (meters will be moved as work moves from location to location) as follows:

- One meter in the upwind direction; and
- One meter in the downwind location.

One meter may be placed within and around work area to assess whether dust suppression is needed or if worker protection action levels have been exceeded.

The location of the downwind monitor will be adjusted daily based upon prevailing wind direction as indicated by a hand-held wind speed meter. All monitors will provide concentrations of particulate matter in the size of 10 microns or less (PM10). An exceedance will be defined as a PM10 level greater than 25  $\mu$ g/m³ determined by simultaneous sampling, measured as the difference between the upwind and downwind samples collected by the continuous, direct-reading particulate monitors. Each unit will be set to record PM10 readings at 1-minute intervals over the course of the working day or as required by Rule 1466. If the PM10 concentration difference averaged over 2 hours exceeds 25  $\mu$ g/m³, soil excavation and handling operations will be discontinued and appropriate dust control measures



described in Section 7.6 will be implemented. When the PM10 concentration is equal to or less than 25  $\mu g/m^3$  averaged over 30 minutes, work activities can resume. If practicable, the data stored by each unit will be downloaded to a computer at the end of the day and may be stored electronically or printed out as a daily record (or at the end of each work week). The environmental consultant's personnel will also record the upwind and downwind PM10 concentration values every hour on a standard Field Parameter Data Sheet. All dust monitoring records will be retained on site until the removal action has been completed.

#### SCAQMD Rule 1166

Two excavations will be conducted to remove vapor-impacted soils at the Site where benzene and/or ethylbenzene were detected in soil vapor above DTSC SLs or USEPA RSLs. As a result, air monitoring per SCAQMD Rule 1166 (Excavation of Soil Contaminated with Volatile Organic Compounds) procedures will be applied to excavation areas B55/SV55 and SV121.

VOC concentrations will be monitored every 15 minutes during excavation of soil containing VOC materials using an organic vapor analyzer or PID calibrated with hexane. The excavated soils will be monitored for VOCs by placing the probe inlet at a distance of no more than 3 inches from the surface of the excavated soil and slowly moving the probe across the soil surface while observing the instrument readout. If a PID reading greater than 50 ppm is detected during excavation, then the procedures of Rule 1166 will be implemented, including:

- SCAQMD notification;
- Preparation of a Various Locations Plan for the excavation;
- Preparation of VOC concentration monitoring records;
- Preparation of calibration records of monitoring instruments to be kept on site;
- Segregation of VOC-contaminated stockpiles from non-VOC-contaminated stockpiles;
  - Soil stockpiles with VOC impacts will be labeled with "SCAQMD Rule 1166 VOC Impacted Soil"
  - Soils with PID readings less than 50 ppm will be labeled "<50ppm" and soils with readings greater than 50 ppm will be labeled ">50ppm"
- Application of water and plastic covering to VOC-contaminated to stockpiles;
- Daily inspections of all VOC-contaminated stockpiles;
- Maintain records of generator, transporter, and storage/treatment facilities;
- Removal of VOC-contaminated soil within 30 days of excavation;
- Refrain from any activity or movement of soil which results in uncontrolled evaporation of VOC to the atmosphere; and
- Proper truck loading and covering.

If VOC concentrations above 1,000 ppm are detected, the following Rule 1166 procedures will be implemented:

Soil will be sprayed with water or vapor suppressant; and

• Soil will be placed in sealed containers (i.e., covered bins) within 15 minutes or loaded into trucks for off-site transport.

VOC-impacted soils are not expected to be treated on site. Therefore, Rule 1166 procedures for on-site treatment of VOC-impacted materials are not discussed in this RAW.

#### 7.5.2 Meteorological Monitoring

Ambient weather conditions (wind speed and direction, temperature, relative humidity, etc.) will be monitored by the environmental consultant using a portable weather station during performance of all removal activities and recorded on the field log. Information regarding prevailing wind patterns and daily wind direction observations will be used to assist with placement of monitoring stations, and information regarding wind speed will be used to facilitate decision-making regarding Site controls. If sustained winds are in excess of 15 miles per hour averaged over a 15-minute period, or if instantaneous wind speeds exceed 25 miles per hour, work activities will be stopped until the winds subside.

#### 7.6 Dust Control Plan

Dust control measures will be implemented by the removal contractor to stabilize exposed surfaces and minimize activities that suspend or track dust particles. Soil excavation and handling shall be accomplished in a manner that includes adequate measures to minimize and control dust and spillage of soil within the Site. All work shall follow applicable SCAQMD requirements. Specifically, the removal contractor is responsible for meeting requirements and implementing best available control measures specified in SCAQMD Rules 401 (Visible Emissions), 403 (Fugitive Dust), and 1466 (Control of Particulate Emissions from Soils with Toxic Air Contaminants).

Dust control measures will be specified based on the results of air and meteorological monitoring described in Section 7.5, on-site activities, type and location of operations, and the prevailing wind direction. Dust control measures shall include, but not be limited to, the following:

- Wet suppression of exposed soil during excavation, loading, and unloading of contaminated soil;
- Adequately tarping haul trucks transporting contaminated soil before leaving the Site;
- Appropriate measures implemented by the removal contractor to control track out of soil from the Site onto adjacent paved roads;
- Limited on-site traffic speed, reducing speed on unpaved areas; and
- Covering and securing stockpiles and exposed areas at the end of each workday.

### 7.7 Soil Sampling and Analysis Plan

The field sampling program will include confirmation soil sampling within the excavation areas upon completion of impacted soil removal to evaluate whether all impacted soil has been removed or determine if impacted soil remains in place after removal action activities, and stockpile sampling of impacted soil and potential fill soil.



#### 7.7.1 Metals-Impacted Soil

Metals confirmation soil samples will be collected from the base and/or sidewalls of the excavation from freshly uncovered soil. Lead and arsenic contamination in soil will be screened in the field using an X-ray fluorescence unit and analyzed to determine if the respective detections meet the proposed cleanup goal. If the X-ray fluorescence instrument indicates a concentration reading greater than 28 or 80 mg/kg for arsenic or lead, respectively, additional soil excavation will be conducted, and additional samples will be collected to verify removal of the impacted soil. When X-ray fluorescence indicates that the cleanup goals have been met, confirmation samples will be collected for laboratory analysis. Sidewall samples will be collected at approximately one sample for each 10 linear feet of sidewall, with a minimum of one sidewall sample collected from each excavation sidewall, which is less than 10 linear feet wide. Each sidewall location will consist of one sample collected at the midpoint in depth (approximately halfway between the excavation floor and the ground surface surrounding the excavation perimeter). Bottom samples will be collected at the rate of one sample for each 400 square feet of excavation area at the midpoint of each interval.

Soil samples will be placed in appropriate containers provided by the analytical laboratory. Each sample jar will be labeled with the sample ID number, sample depth, and date of collection. After the samples have been labeled and documented in the chain-of-custody record, they will be placed in a cooler with ice at approximately 4 degrees Celsius for transport to a state-certified laboratory. Chain-of-custody protocol will be followed for all soil samples selected for laboratory analysis. The chain-of-custody form(s) will accompany the samples from the sampling locality to the laboratory, providing a continuous record of possession prior to analysis. Duplicate soil samples will be collected at a rate of 10 percent of the total samples.

Confirmation soil samples collected during removal action activities will be analyzed for arsenic or lead using USEPA Method 6020B. If the results of laboratory analysis of confirmation samples indicate soil concentrations exceeding removal action goals remain in the subsurface, additional soil excavation will be conducted and additional confirmation samples will be collected to verify removal of the impacted soil.

In the event that one or more confirmation sample concentrations from an excavation exceed the cleanup goals, the excavation will be expanded and extended laterally by 1-linear-foot increments or vertically by 0.5-feet increments where the confirmation sample concentrations exceed the cleanup goal, and additional confirmation samples will be collected and analyzed. If necessary, the process of additional excavation and confirmation sample collection and analysis will be repeated until all confirmation sample concentrations from the completed excavation are less than the cleanup goal or the boundary of the excavation reaches a subsurface utility, property boundary, or site/building feature (e.g., building wall, planter wall, fence line, building staircase or ramp) or otherwise becomes impracticable.

#### 7.7.2 VOC-Impacted Soil Evaluation

Upon completing soil excavation of VOC concentrations in soil vapor (B55/SV55 and SV121), Terraphase recommends that soil from the bottoms of both excavations and the sidewalls of excavation SV121 be screened in the field with a PID to assess VOC concentrations of remaining soil and evaluate the need for additional excavation. Soil will be collected from the approximate mid-points of the sidewalls or setback slopes, and the centers of the excavation bottoms, and screened with a PID. If PID readings exceed 20 ppm, additional soil will be removed as much (as feasible) until the PID readings are measured below 20 ppm.

Following placement and compaction of backfill, Terraphase recommends that temporary soil-vapor probes be installed in excavation areas impacted by VOC concentrations in soil vapor (B55/SV55 and SV121) and sampled for VOCs. Temporary probes should be installed at depths of 5 and 15 feet bgs in the center of excavation B55/SV55, and at a depth of 5 feet bgs in excavation SV121, and sampled for VOCs. The analytical results should be used to update the risk evaluation associated with these locations to confirm that remedial objectives have been met.

### 7.8 Quality Assurance/Quality Control

Quality assurance/quality control measures that will be used during project execution are documented below and in the site-specific *Quality Assurance Project Plan* included as Appendix C. Following these procedures will ensure that Site field and analytical data collected meet project data quality and removal action objectives to support decisions for the redevelopment of the Site.

### 7.9 Transportation Plan

As soil is excavated, it will be directly loaded into trucks for transportation off site or temporarily stockpiled or placed in bins on site until off-site transportation and disposal is arranged, as described in Section 7.2. As discussed in Section 7.2, soil excavated from B55/SV55 for setback purposes will be stockpiled and profiled separately for potential reuse or disposal. Detailed information on waste transportation and disposal are described in the *Transportation Plan* (Appendix D).

#### 7.10 Backfill and Site Restoration

OEHS will provide approval for the completion of the removal action for each of the impacted soil areas. The approval will be based on the confirmation soil sampling meeting all objectives of this RAW and disposal of the impacted soil at an approved disposal facility. Upon completion, backfill and compaction of the excavation areas will be conducted to ensure that the excavated areas are suitable for future construction activities. The general contractor will be responsible for backfilling the excavated areas, if needed, and removing any site safety security barriers. Any import soil to fill excavation areas must comply with LAUSD Specification Section 01 4524 and have approval of the OEHS Project Manager prior to backfill.



### 8 Project Schedule and Completion Report

The start date for proposed removal action activities is contingent upon the selection of an environmental consultant and removal contractor by LAUSD. It is anticipated that work activities can be completed in less than 1 month of continuous work; the actual duration of work activities is contingent upon how the removal contractor stages construction activities at the Site. A Removal Action Completion Report (RACR) will be prepared by the environmental consultant, under the oversight of a licensed professional geologist or civil engineer, once all removal activities have been completed. The RACR will include, but is not necessarily limited to:

- Summary of the removal activities;
- Summary of public notification activities with a copy of the actual notice as an appendix;
- Analytical test results of excavation confirmation soil samples, stockpile soil samples, and imported fill material samples, including quality assurance/quality control sample results;
- Location(s) and rationale for selection of sampling locations and depths;
- Observations and findings of the environmental controls and measurements;
- Photographic log of removal action activities;
- Final limits of soil excavation with the volumes of soil removed; and
- Documentation showing final disposal of all waste materials generated at the Site.

The draft RACR should be available for OEHS review within 30 days following completion of field activities, and the final RACR should be provided to OEHS within 7 days of receiving comments on the draft document.

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## **Tables**

- 1 Impacted Soil Volume Removal Estimates
- 2 Summary of Johnson-Ettinger Modeling Results



**Table 1 Impacted Soil Volume Removal Estimates**Alexander Hamilton Senior High School
2955 S. Robertson Boulevard, Los Angeles, CA

Excavation ID	Contaminant of Concern	Estimated Soil Removal Volume (cubic yards)	Notes:					
Shallow								
В03	Lead	3.08	Impacted at 1.5 ft bgs. Delineated at 2.5 ft bgs. Delineated to east and south. Excavation ends at utility lines in north and west directions.					
B10	Lead	0.85	Impacted at 0.5 ft bgs. Delineated at 1.5 ft bgs. Delineated to north, south and west. Excavation ends at building to the east.					
B11	Arsenic	17.36*	Impacted at 1.5 and 2.5 ft bgs. Not Delineated at 2.5 ft bgs. Delineated to north. Not delineated to west, east and south.					
B12	Lead	19.98	Impacted at 0.5 ft bgs. Delineated at 1.5 ft bgs. Delineated to north and south. Excavation ends at utility lines in east and west directions.					
B18	Arsenic	1.53*	Impacted at 2.5 ft bgs. Not delineated at 2.5 ft bgs. Delineated to north, south, east and west.					
B20	Arsenic	9.95	Impacted at 0.5 ft bgs. Delineated at 1.5 ft bgs. Delineated to north, south and west. Not delineated to east.					
B25	Lead	6.81	Impacted at 0.5 ft bgs. Delineated at 1.5 ft bgs. Delineated to north, east and west. Excavation ends at building to the south.					
B70	B70 Arsenic 1.95*		Impacted at 1.5 ft bgs. Not delineated at 1.5 ft bgs. Delineated to north and south. Excavation e at wall to west and end of planer to east.					
B83	Lead	3.48	Impacted at 0.5 ft bgs. Delineated at 1.5 ft bgs. Delineated to north, south, east and west.					
B91	B91 Lead 20.56		Impacted at 1.5 ft bgs. Delineated at 2.5 ft bgs. Delineated to north, south and west. Excavation ends at building to east.					
Proposed shallow excavation volume:		85.55						

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## Table 1 Impacted Soil Volume Removal Estimates

Alexander Hamilton Senior High School 2955 S. Robertson Boulevard, Los Angeles, CA

Excavation ID	Contaminant of Concern	Estimated Soil Removal Volume (cubic yards)	Notes:
Deep			
B55/SV55	Benzene/ Ethylbenzene	1,824**	Impacted soil vapor at 15 ft bgs. 60 ft long X 20 ft wide deep excavation centered over B55/SV55. 22.5 ft wide setback sloped at 1.5H:1V to north, south, and east. Excavation ends at utility lines to the west. Not delineated in any direction.
SV121	Benzene/ Ethylbenzene	31	Impacted soil vapor at 5 feet bgs. 10 ft wide X 20 ft long excavation around SV121 and adjacent sanitary sewer line north of SV121. Not delineated in any direction.
Proposed deep excavation volume:		1,855.00	
Contingent Dee	p Excavations - Only if	Required***	
B53***	Arsenic and Cobalt	36.55	Impacted at 10 ft bgs. Delineated at 15 ft bgs. Delineated to north, south, east and west.
B57***	Arsenic and Cobalt	37.5*	Impacted at 10 and 15 ft bgs. Not delineated at 15 ft bgs. Delineated in all directions.
B61***	Arsenic and Cobalt	21.26	Impacted at 10 ft bgs. Delineated at 15 ft bgs. Delineated to north and south. Excavation ends at utility line to west and building to east.
Contingent deep excavation volume		95.31***	
Total Proposed Excavation Volume, excluding Contingent		1,940.55	

#### Note:

cy = cubic yards

ft = feet

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<sup>\*:</sup> where excavation is not defined at depth, calculated volume extends 0.5 ft past last known impacted depth

<sup>\*\*</sup>deep excavation = 667 cy; setback excavation = 1,157 cy

<sup>\*\*\*:</sup> These areas shall only be excavated if grading plans change such that soil is removed within 5 feet laterally or vertically from soil impacted at 10 feet bgs. bgs = below ground surface

Table 2 Summary of Johnson and Ettinger Modeling Results Alexdander Hamilton Senior High School

2955 S. Robertson Boulevard, Los Angeles, CA

Input Parameters						Results Summary			Cumulative Results Summary			
Receptor	Maximum SV Concentration (μg/m³)	Depth (ft. bgs)	Lithology (USDA)	ED (years)	EF (days/year)	Air Exchange Rate	IA Concentration (μg/m³)	Cancer Risk	Noncancer Hazard	Co-located Chemicals	Cumulative Cancer Risk	Cumulative Noncancer Hazard
Benzene												
Teacher	380	5	Silt	25	182	1	0.22	3.8E-07	1.2E-02			
	1,080	15	Sand	25	182	1	0.42	7.2E-07	2.2E-02	Ethylbenzene	7.8E-07	2.2E-02
	1,080	15	Sandy Clay Loam	25	182	1	0.18	3.2E-07	9.8E-03	Ethylbenzene	3.4E-07	9.8E-03
Staff/non- certificated	380	5	Silt	25	250	1	0.22	5.2E-07	1.6E-02		5.2E-07	1.6E-02
	1,080	15	Sand	25	250	1	0.42	9.8E-07	3.0E-02	Ethylbenzene	1.1E-06	3.1E-02
	1,080	15	Sandy Clay Loam	25	250	1	0.18	4.3E-07	1.3E-02	Ethylbenzene	4.7E-07	1.3E-02
	380	5	Silt	4	180	1	0.22	6.0E-08	1.8E-03		6.0E-08	1.8E-03
Student	1,080	15	Sand	4	180	1	0.42	1.1E-07	3.5E-03	Ethylbenzene	1.2E-07	3.5E-03
	1,080	15	Sandy Clay Loam	4	180	1	0.18	5.0E-08	1.5E-03	Ethylbenzene	5.4E-08	1.6E-03
Ethylbenzene												
	1,300	15	Sand	25	182	1	0.41	6.1E-08	6.6E-05	Benzene	7.8E-07	2.2E-02
Teacher	1,300	15	Sandy Clay Loam	25	182	1	0.17	2.6E-08	2.8E-05	Benzene	3.4E-07	9.8E-03
Staff/non-	1,300	15	Sand	25	250	1	0.41	8.4E-08	9.1E-05	Benzene	1.1E-06	3.1E-02
certificated	1,300	15	Sandy Clay Loam	25	250	1	0.17	3.6E-08	3.8E-05	Benzene	4.7E-07	1.3E-02
Charlent	1,300	15	Sand	4	180	1	0.41	9.7E-09	1.0E-05	Benzene	1.2E-07	3.5E-03
Student	1,300	15	Sandy Clay Loam	4	180	1	0.17	4.1E-09	4.4E-06	Benzene	5.4E-08	1.6E-03
Tetrachloroethe	ne				•		•	•				•
Teacher	343	5	Clay	25	182	1	0.08	2.7E-08	3.5E-04		2.7E-08	3.5E-04
Staff/non- certificated	343	5	Clay	25	250	1	0.08	3.7E-08	4.8E-04		3.7E-08	4.8E-04
Student	343	5	Clay	4	180	1	0.08	4.3E-09	5.6E-05		4.3E-09	5.6E-05
Naphthalene		1	•	ı		l .	l .		li .		I.	I.
Teacher	68	15	Loamy Sand	25	182	1	0.02	3.5E-08	9.3E-04		3.5E-08	9.3E-04
Staff/non-	60	45		25	250		0.00	4.05.00	4 25 02			
certificated	68	15	Loamy Sand	25	250	1	0.02	4.9E-08	1.3E-03		4.9E-08	1.3E-03
Student	68	15	Loamy Sand	4	180	1	0.02	5.6E-09	1.5E-04		5.6E-09	1.5E-04
1,2-Dichloroetha	ine	*					•	•		*	•	•
Teacher	76	15	Loamy Sand	25	182	1	0.03	3.9E-08	5.8E-04		3.9E-08	5.8E-04
Staff/non- certificated	76	15	Loamy Sand	25	250	1	0.03	5.4E-08	8.0E-04		5.4E-08	8.0E-04
Student	76	15	Loamy Sand	4	180	1	0.03	6.2E-09	9.2E-05		6.2E-09	9.2E-05
1,3-Butadiene	70	13	Loamy Sand	4	100	1	0.05	0.26-09	9.26-03		0.26-09	9.26-05
	16.0	15	Loamy Cand	25	102	1	0.006	6.45.00	E 1E 04	1	6 45 00	E 1E 04
Teacher	16.9	15	Loamy Sand	25	182	1	0.006	6.4E-08	5.1E-04		6.4E-08	5.1E-04
Staff/non- certificated	16.9	15	Loamy Sand	25	250	1	0.006	8.8E-08	6.9E-04		8.8E-08	
Student	16.9	15	Loamy Sand	4	180	1	0.006	1.0E-08	8.0E-05		1.0E-08	8.0E-05

Note:

 $\mu g/m^3$  = micrograms per cubic meter ft. bgs = feet below ground surface SV = soil vapor

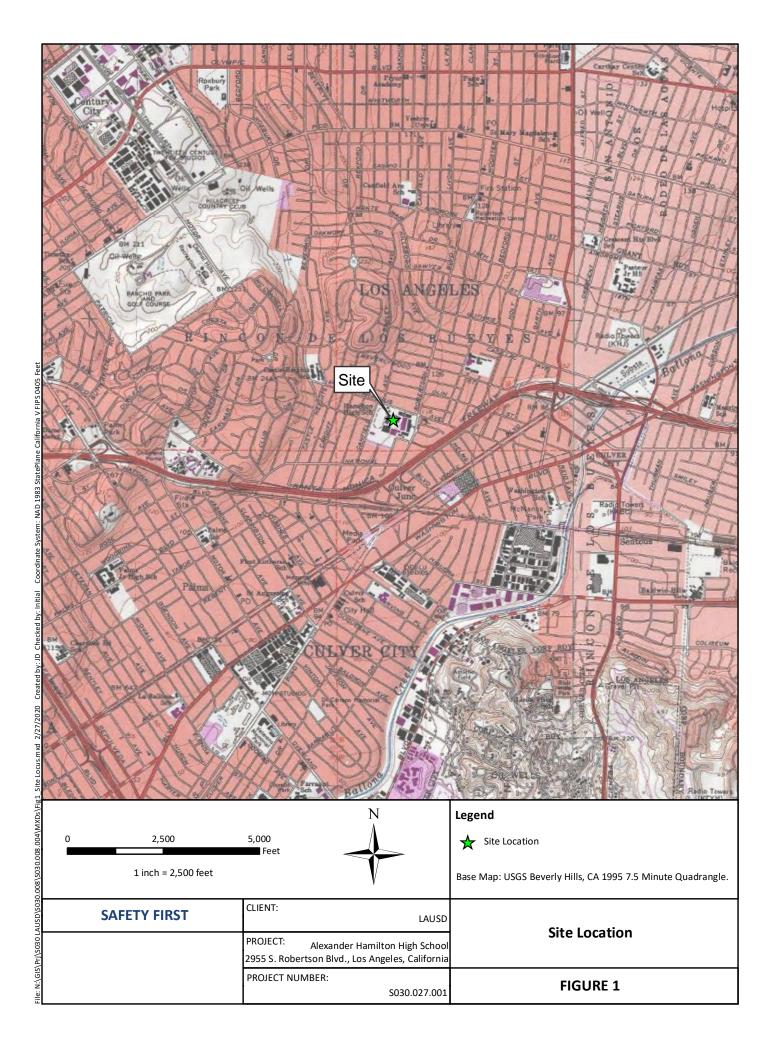
Terraphase Engineering Inc.
Page 1 of 1

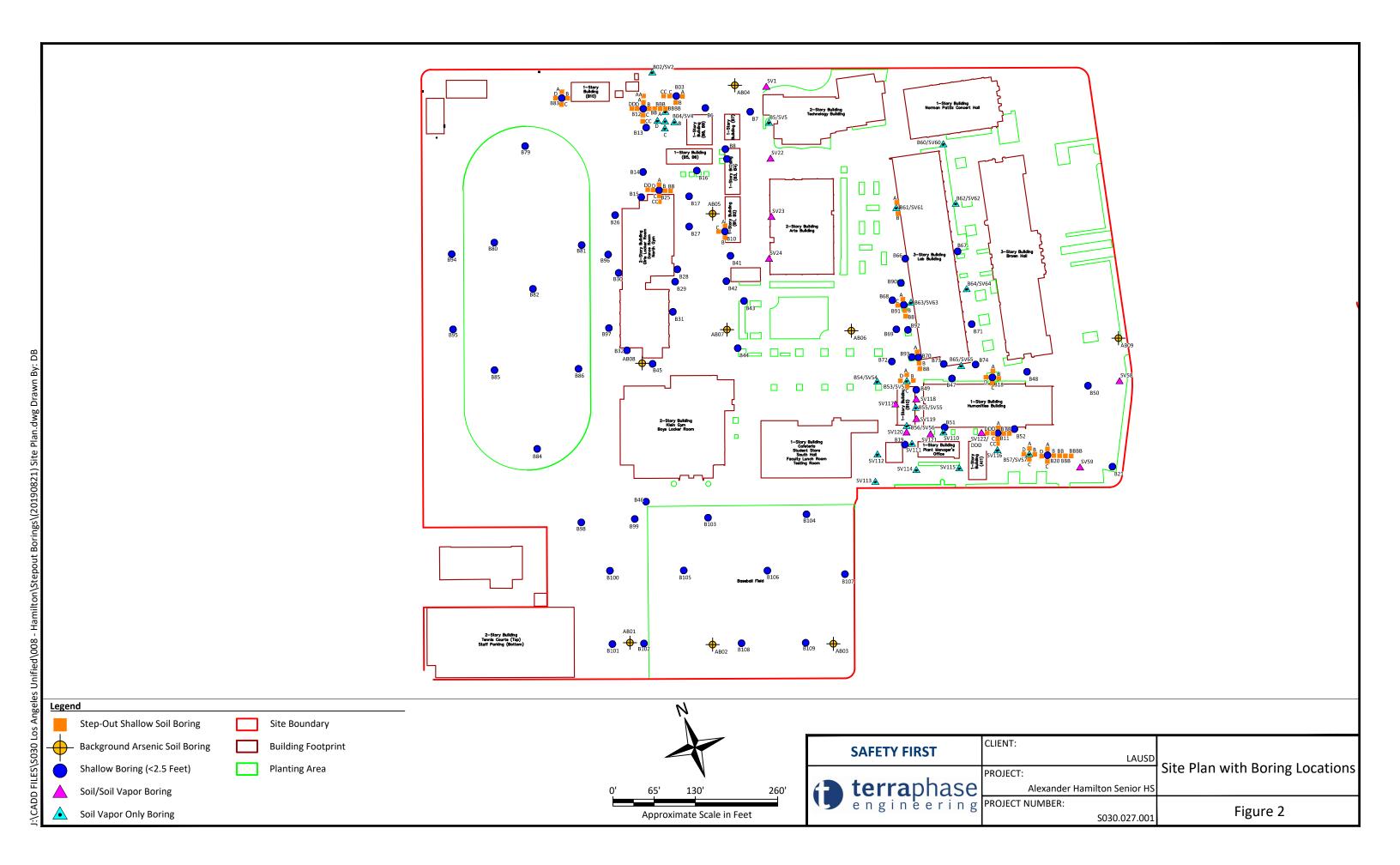
<sup>\*</sup>AF = attenuation factor < 6e-05; unreasonably low

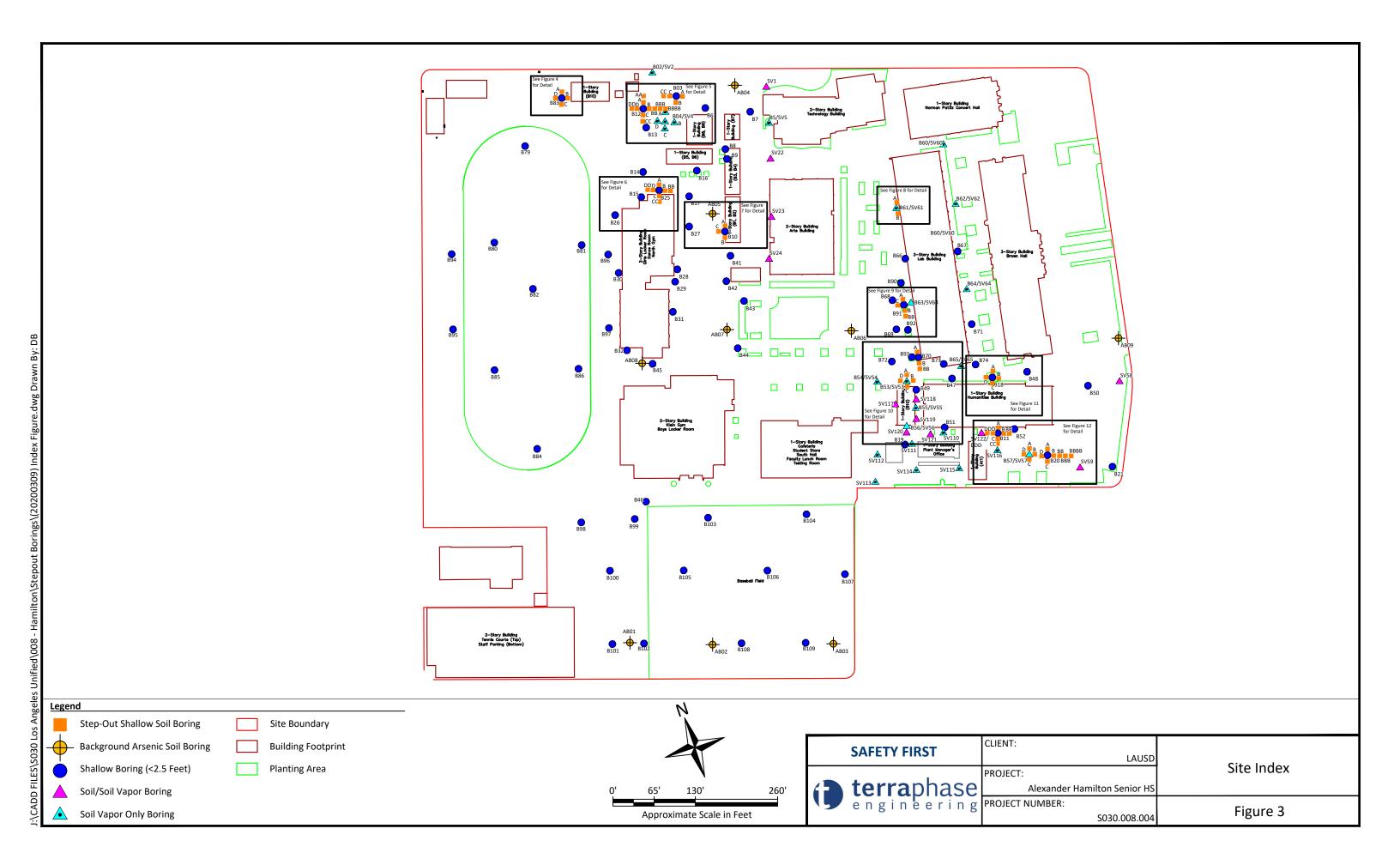
# **Figures**

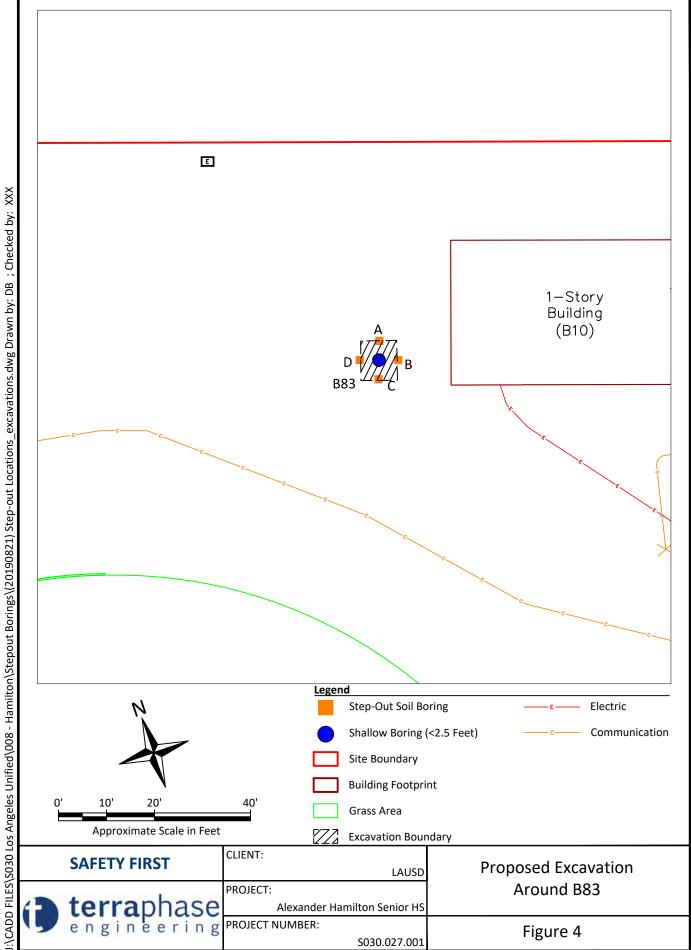
- 1 Site Location
- 2 Site Plan with Boring Locations
- 3 Site Index
- 4 Proposed Excavation Around B83
- 5 Proposed Excavation Around B03 and B12
- 6 Proposed Excavation Around B25
- 7 Proposed Excavation Around B10
- 8 Possible Excavation Around B61
- 9 Proposed Excavation Around B91
- 10 Proposed B55, B70, and SV121 Excavations and Possible B53 Excavation
- 11 Proposed Excavation Around B18
- 12 Proposed Excavations B11 and B20 and Possible Excavation B57

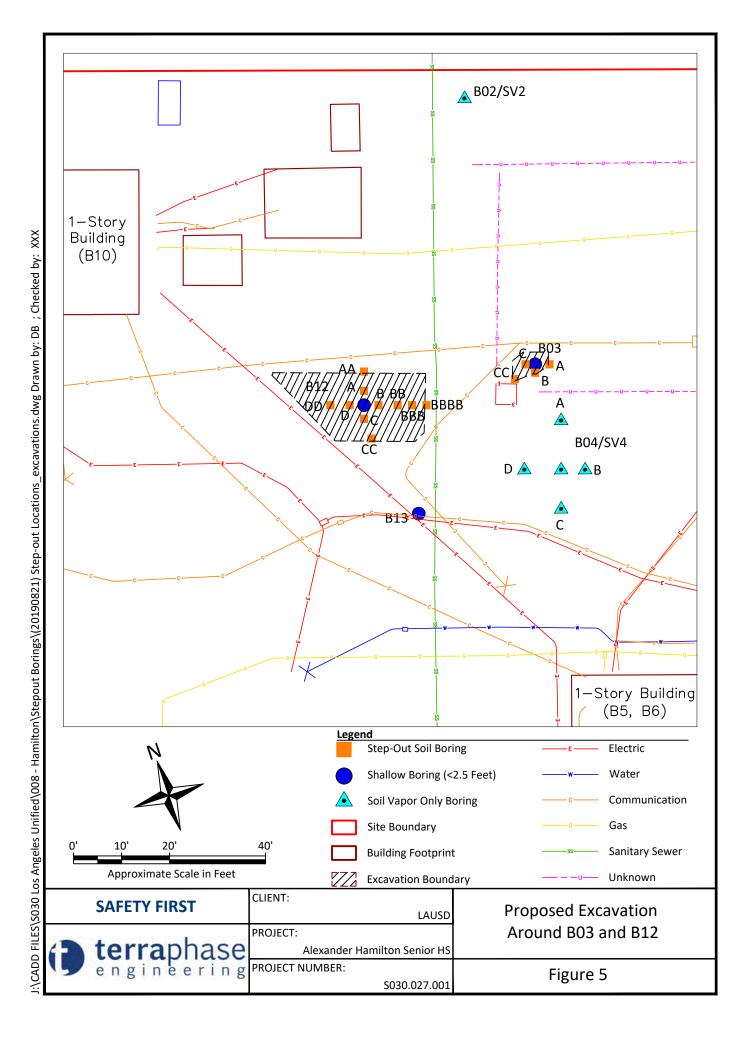


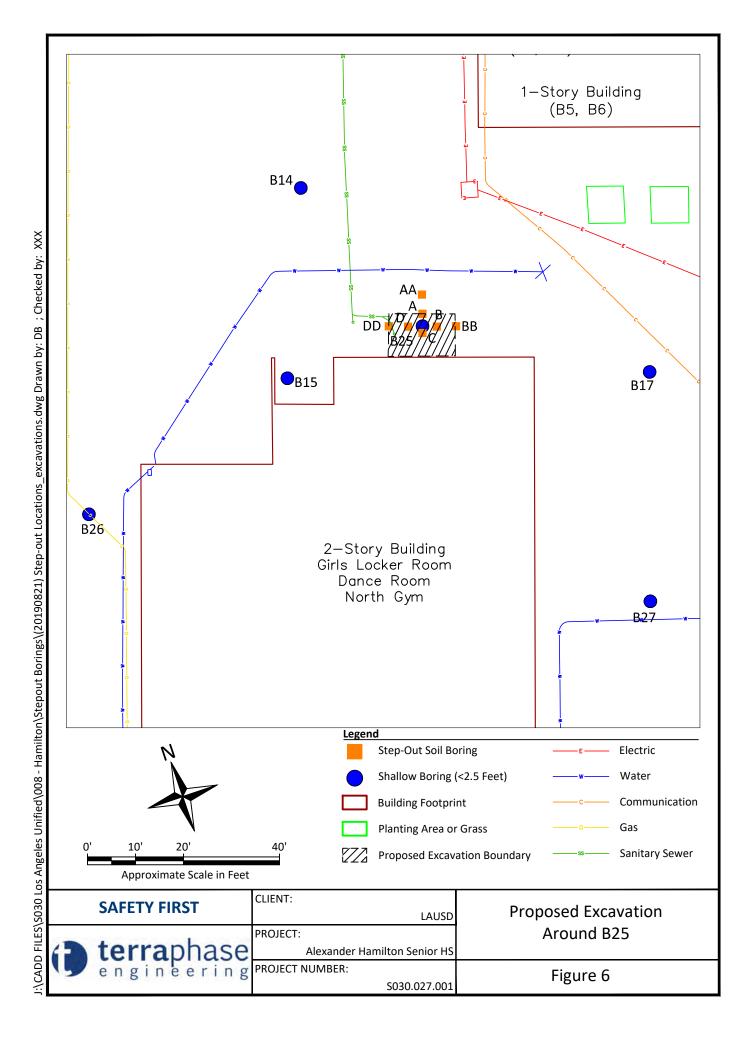


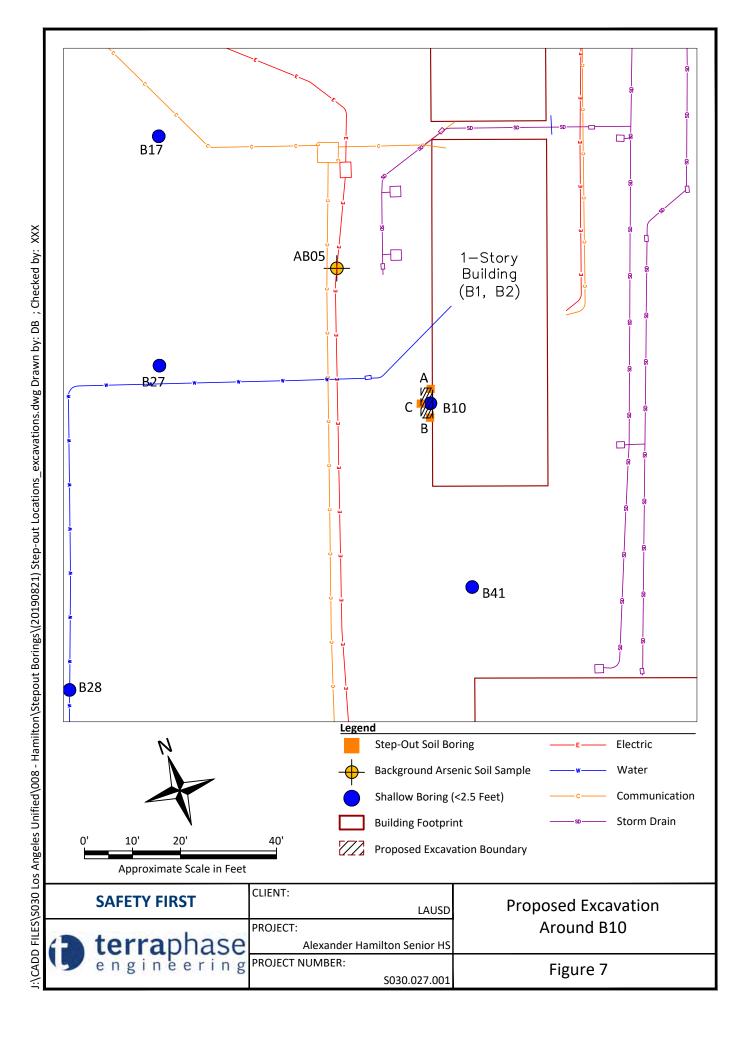


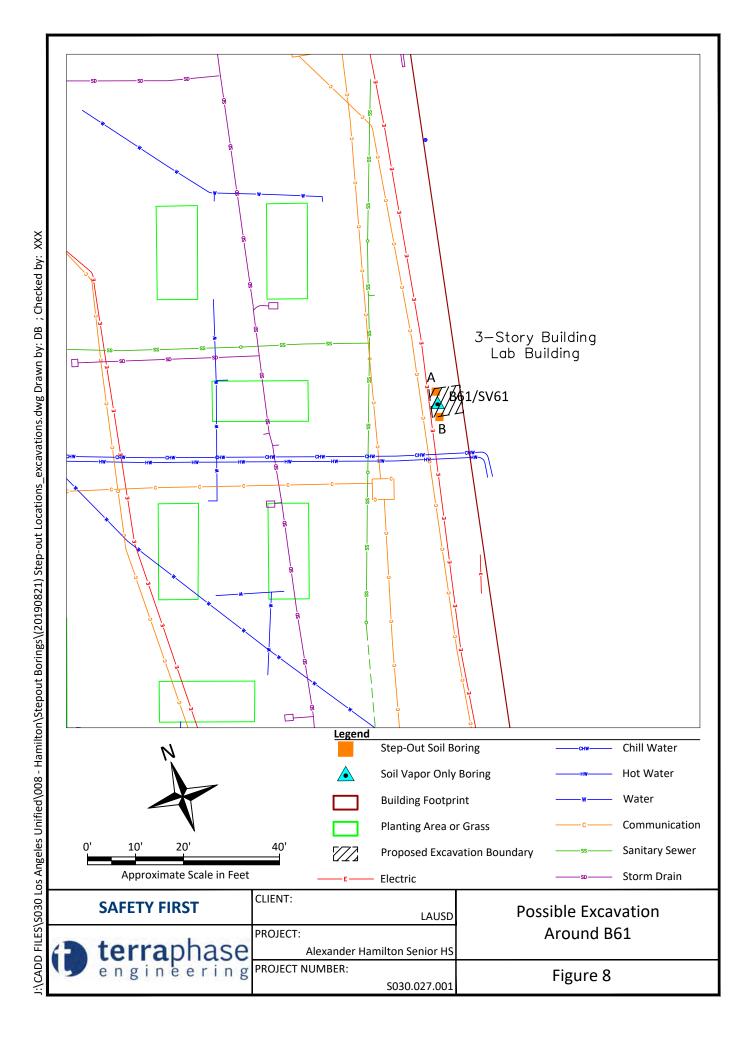


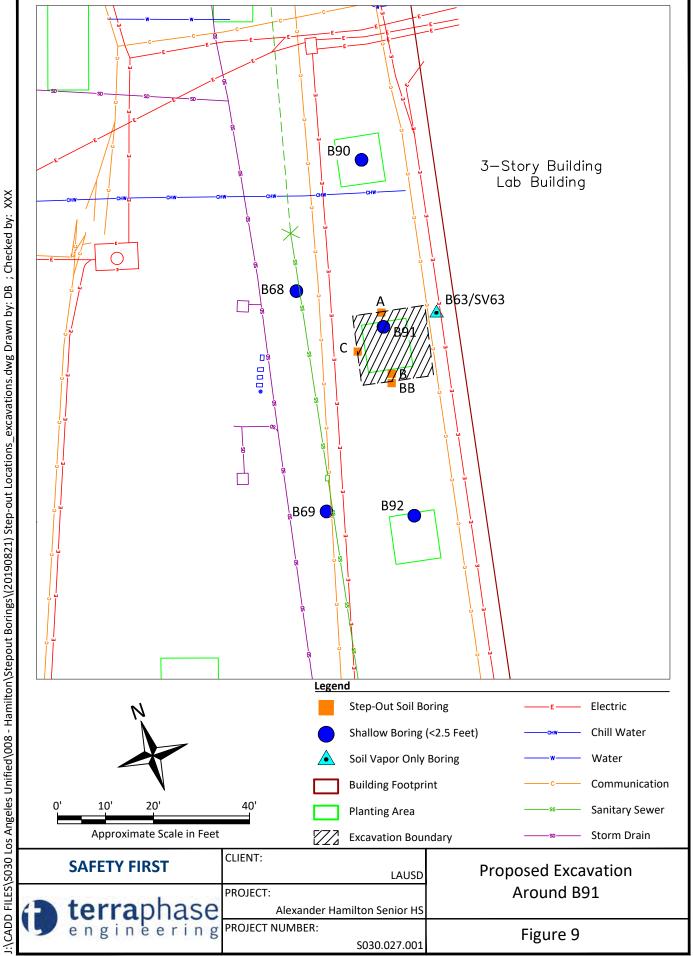


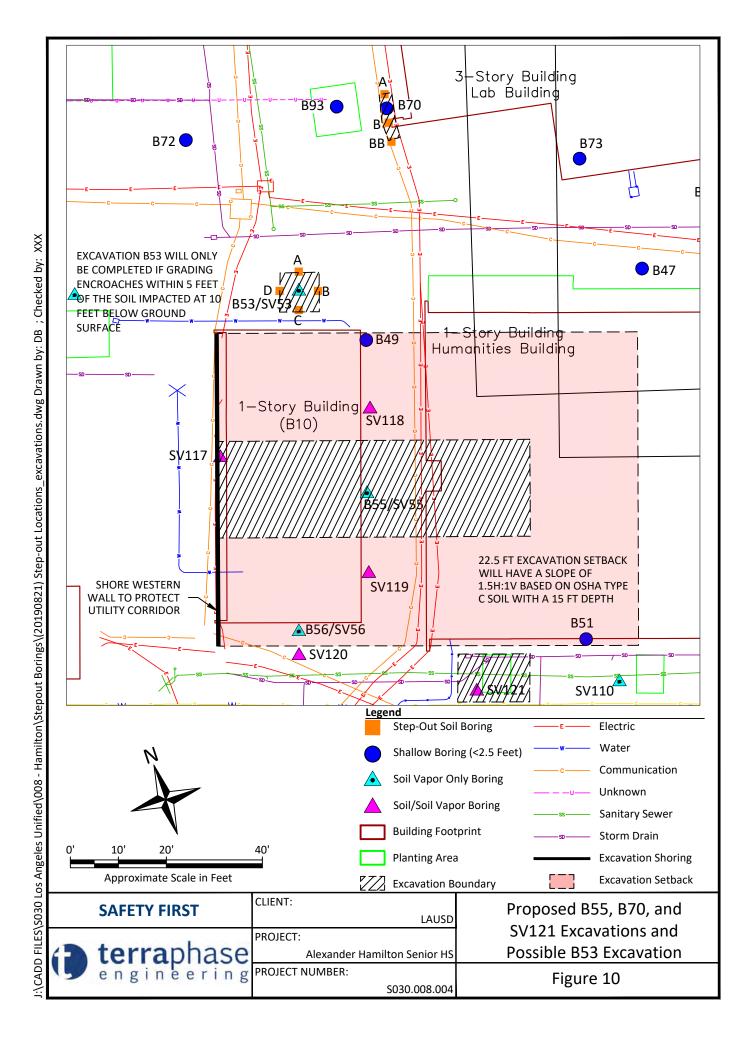


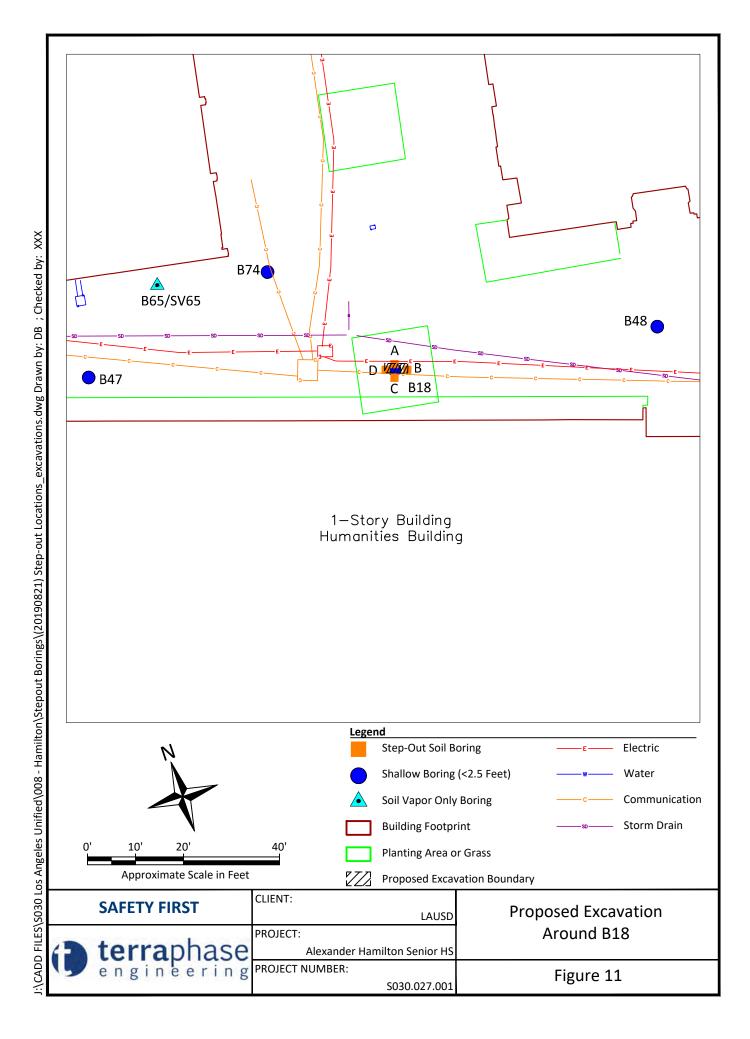


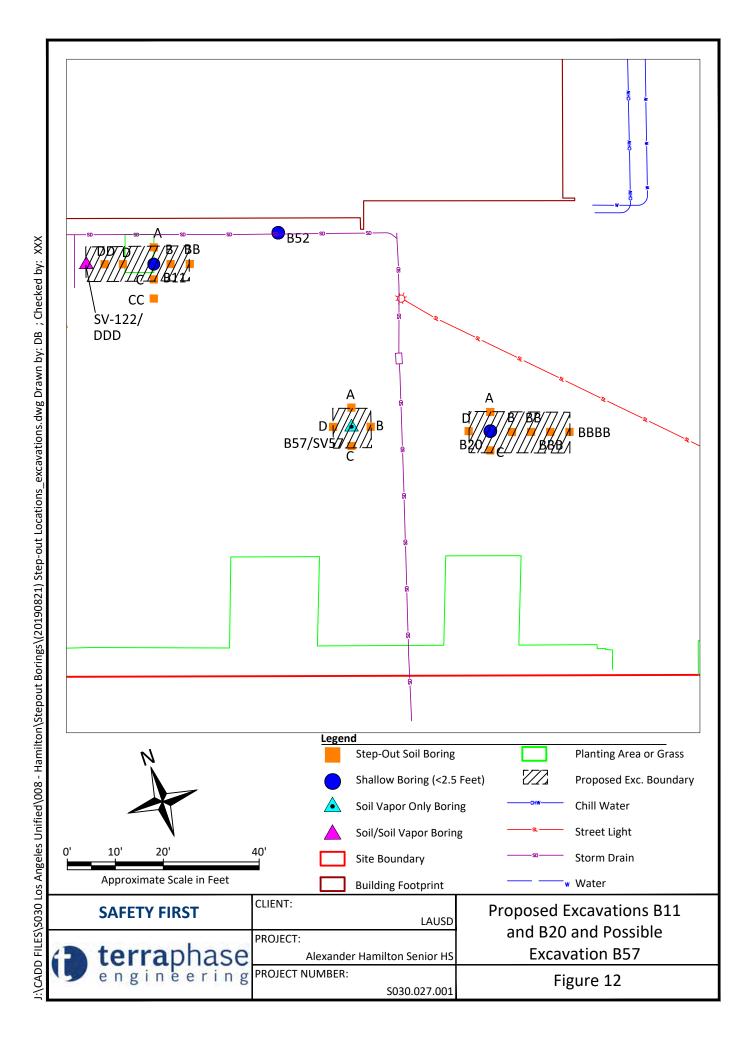








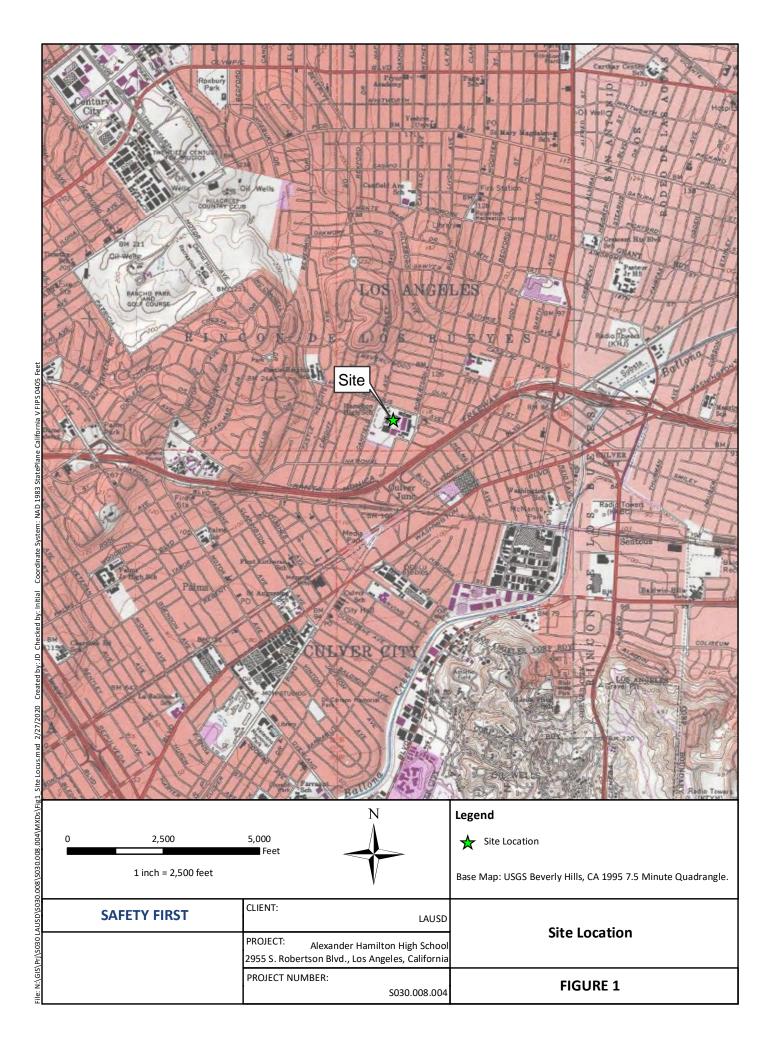


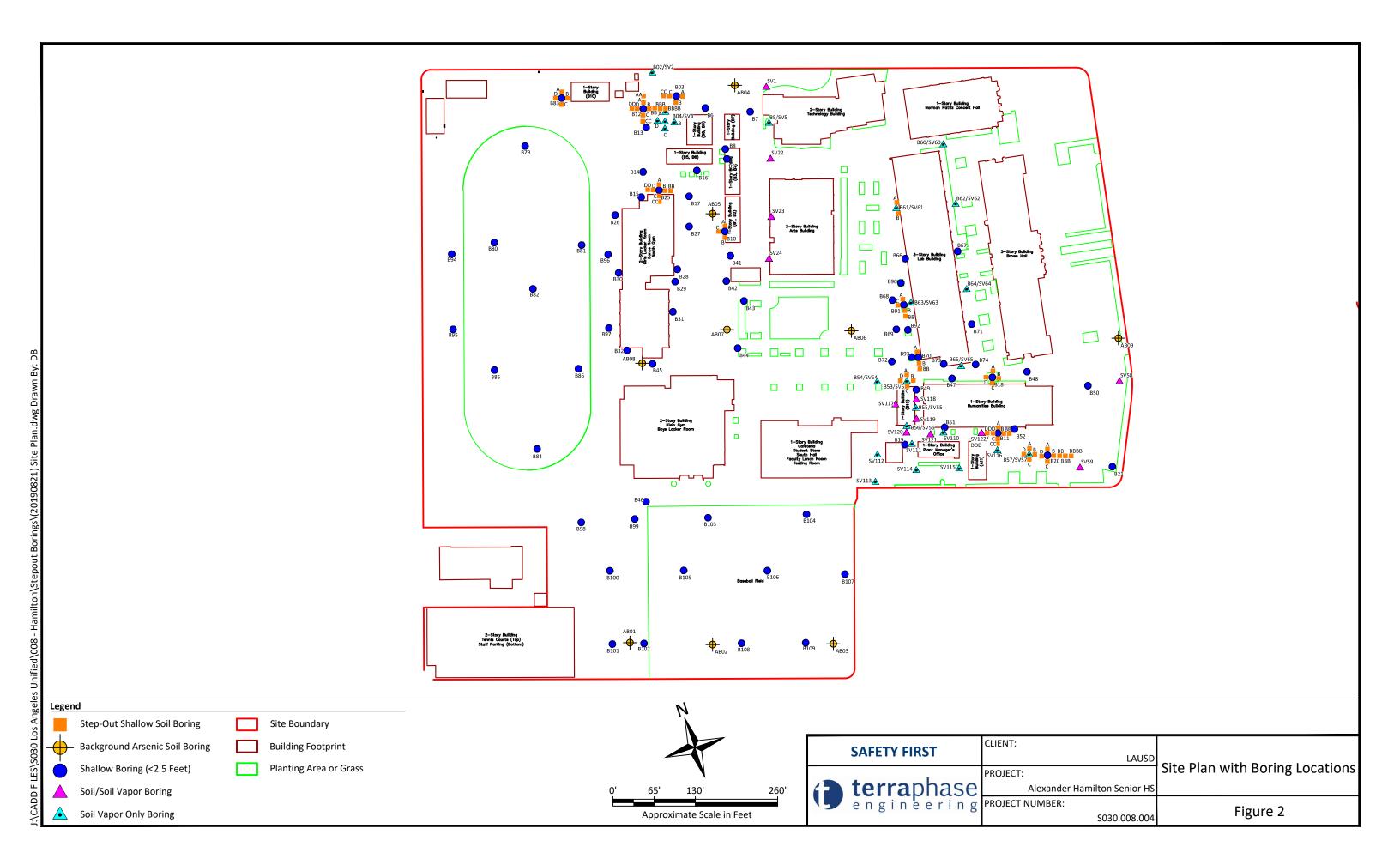


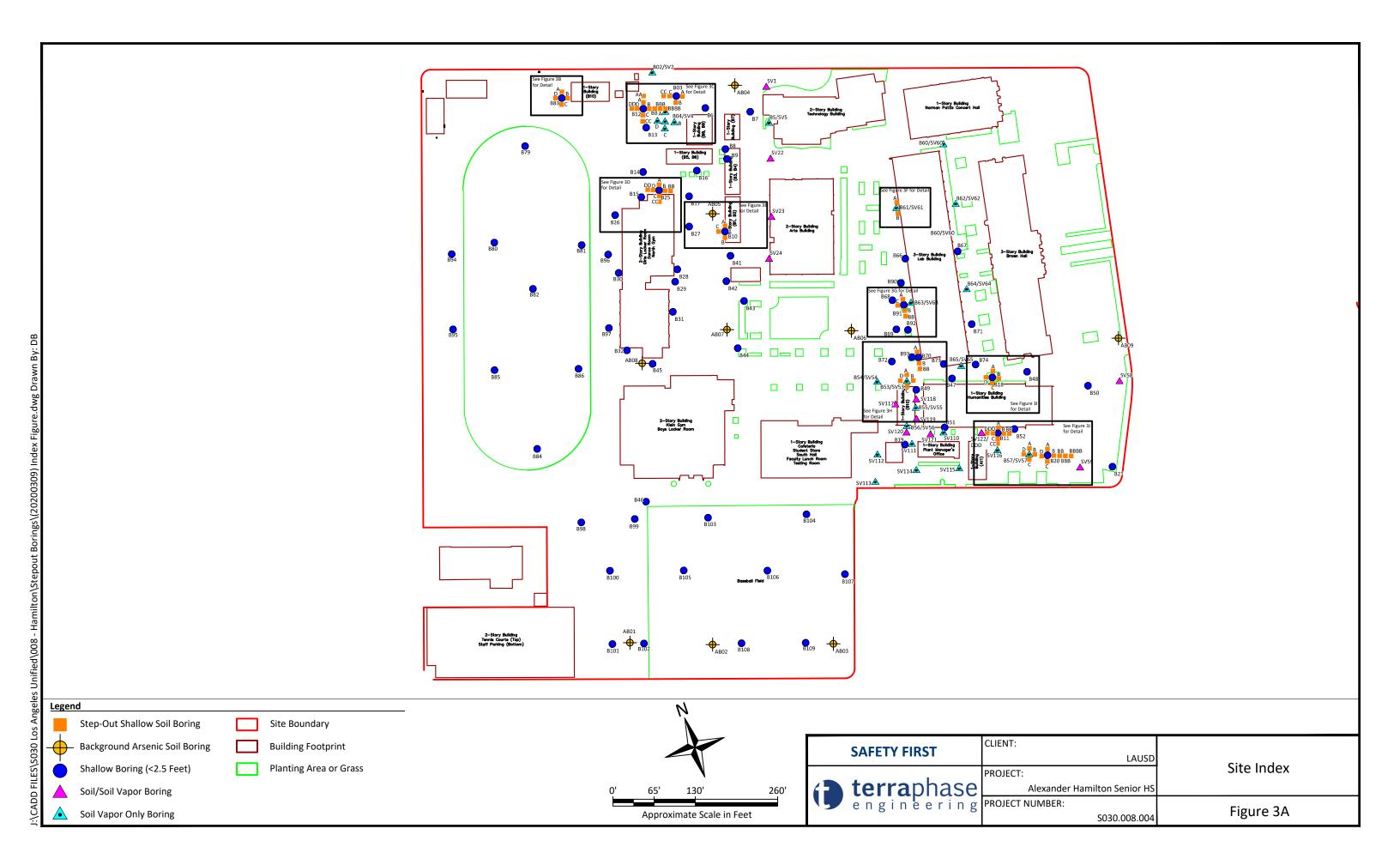
# Appendix A

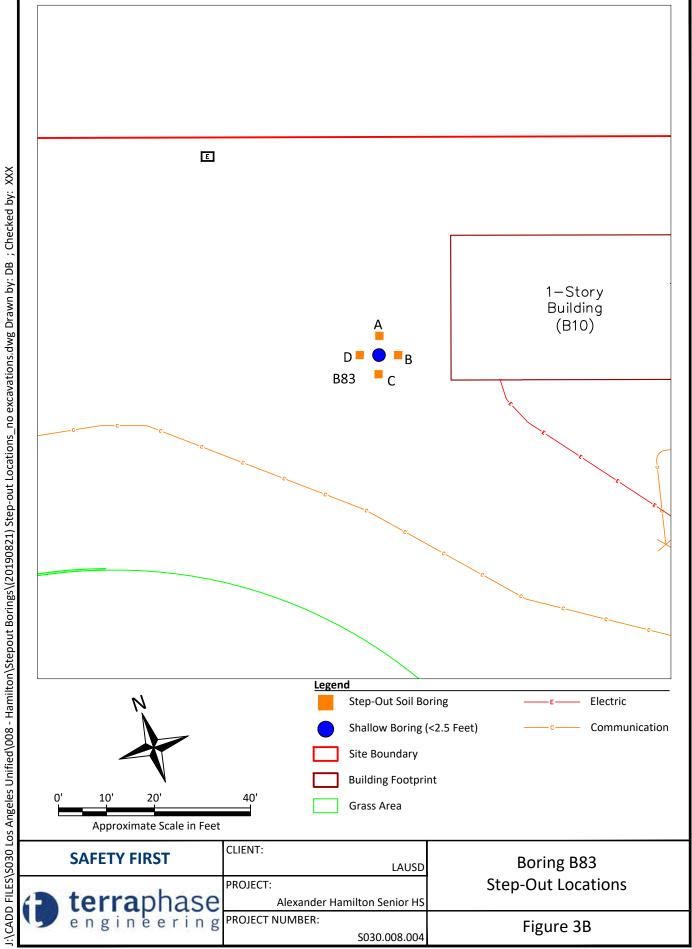
Figures and Tables from Terraphase's 2021 PEA-E

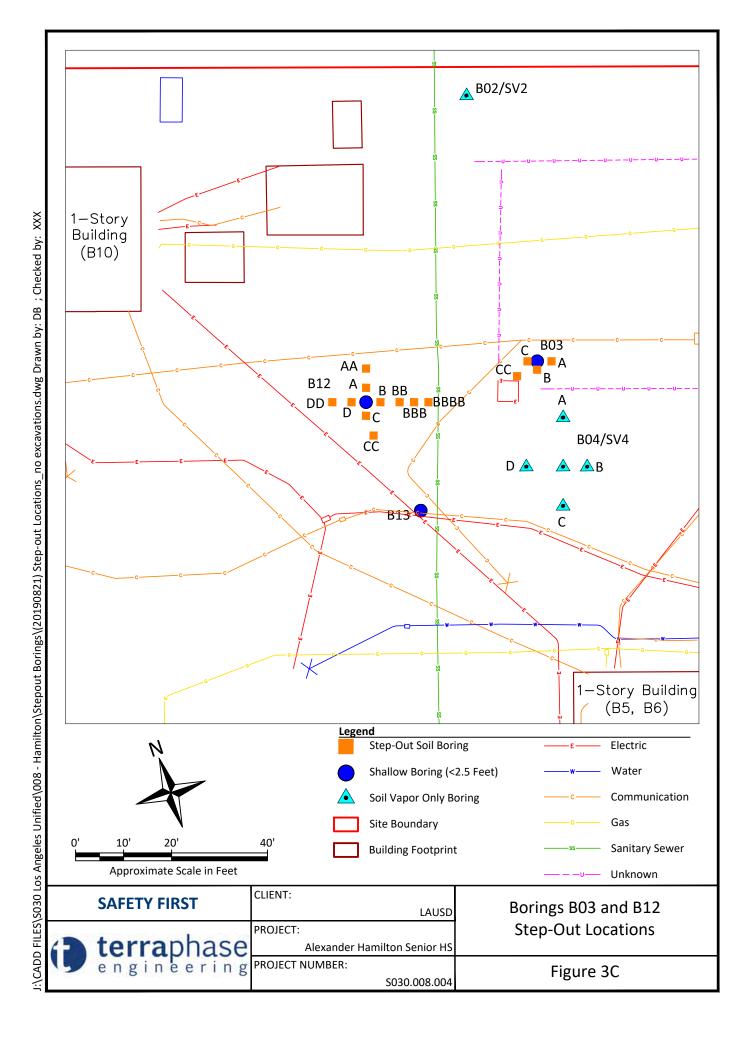


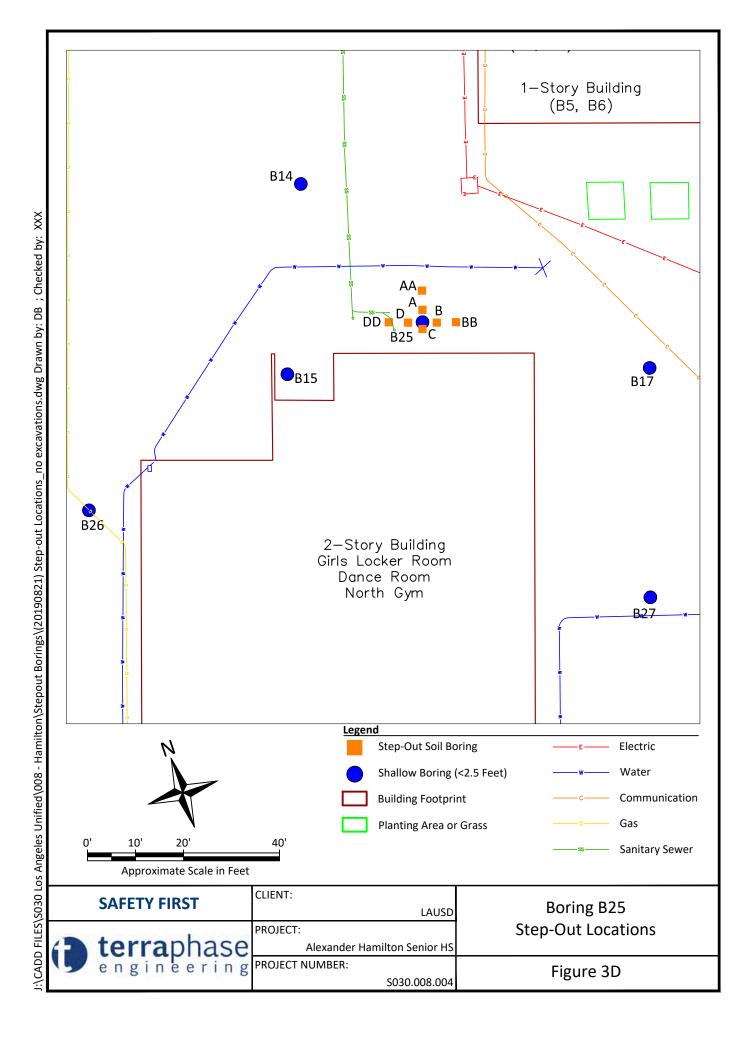


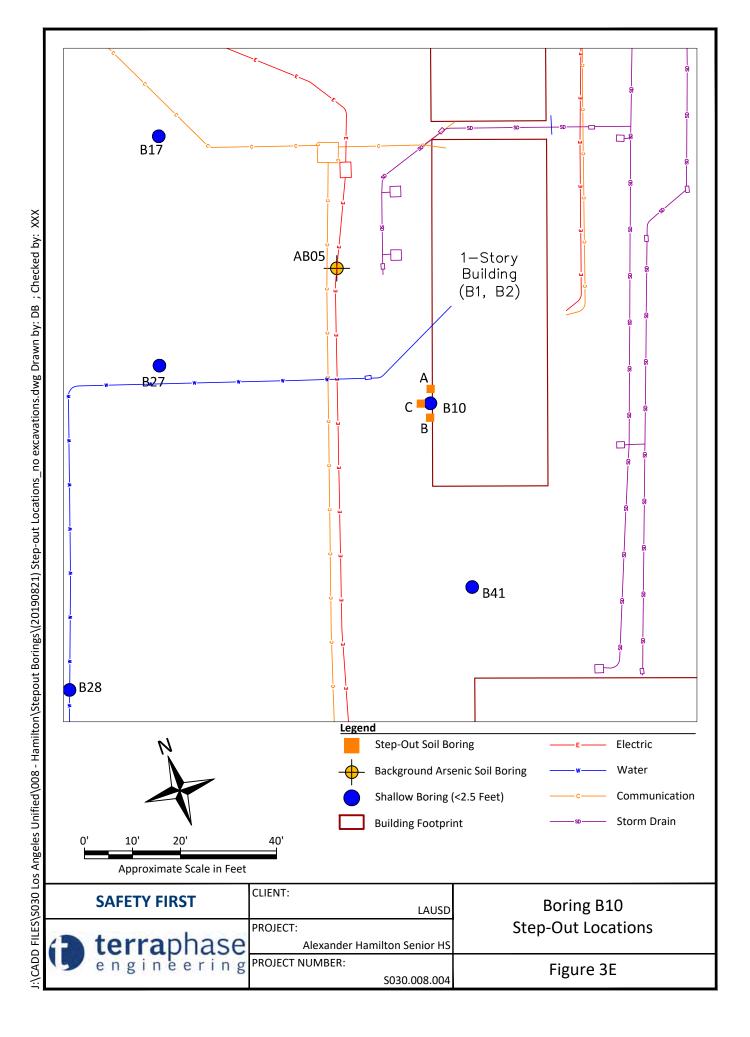


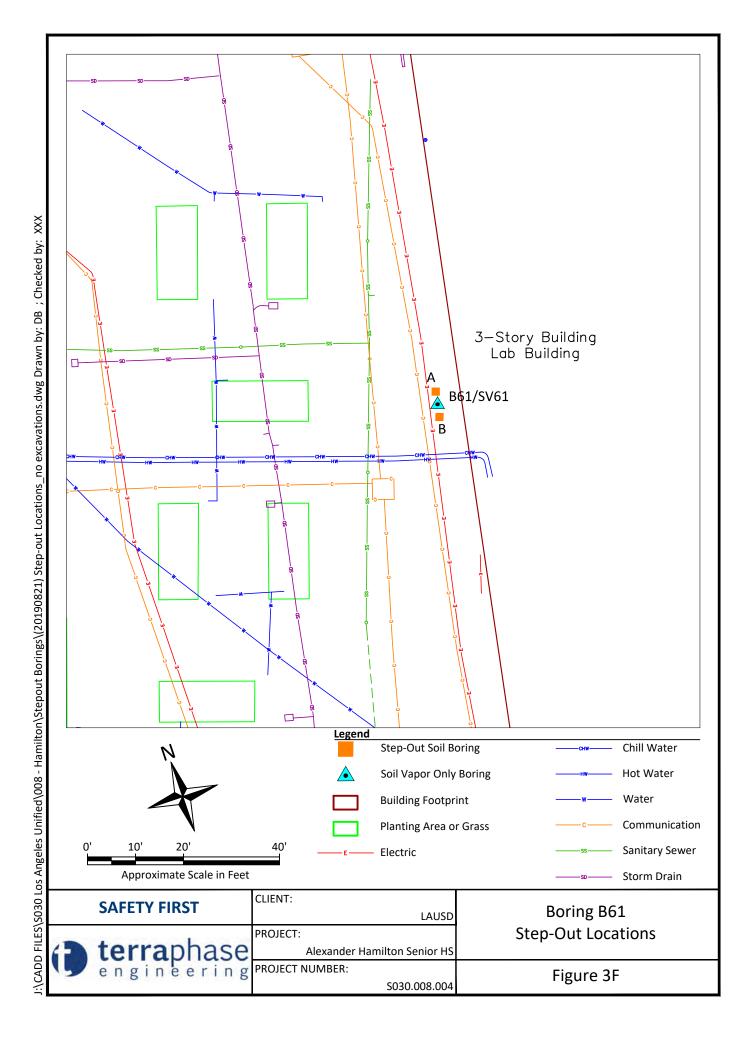


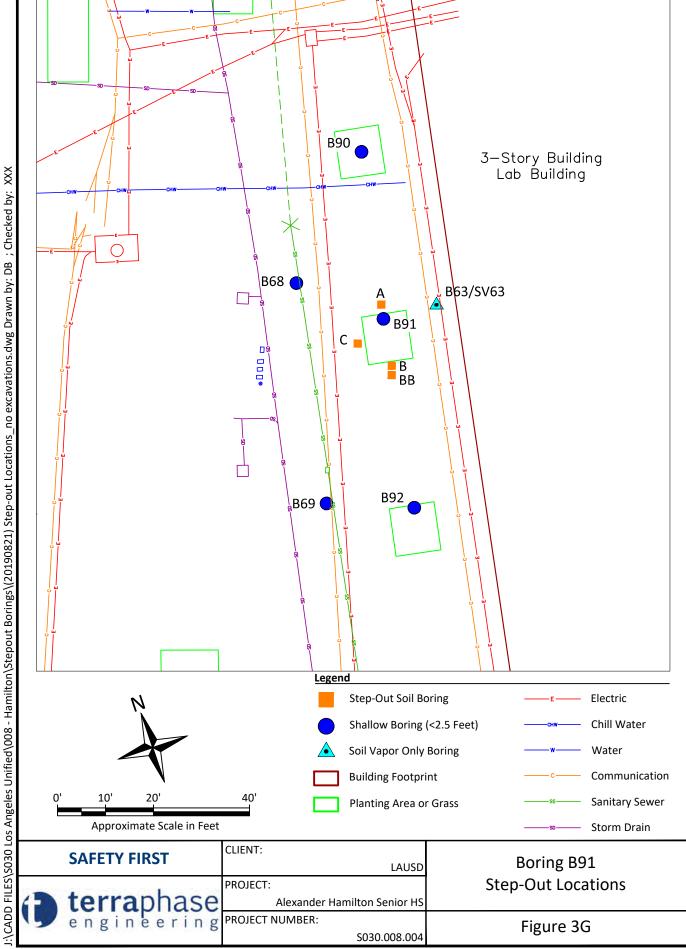


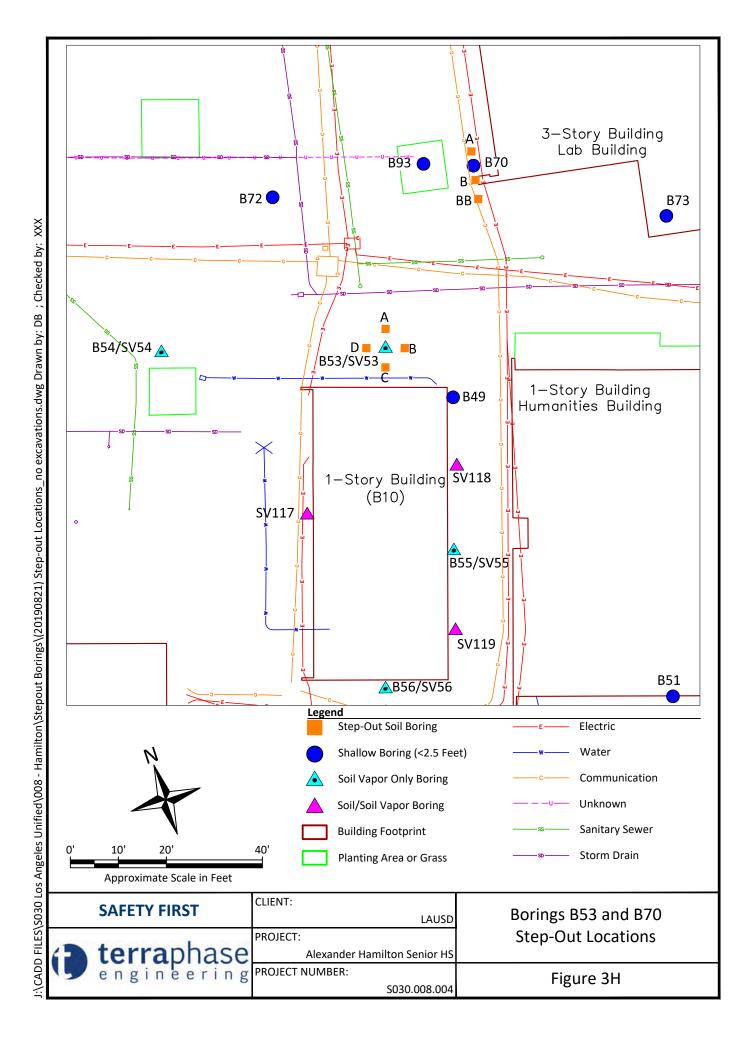


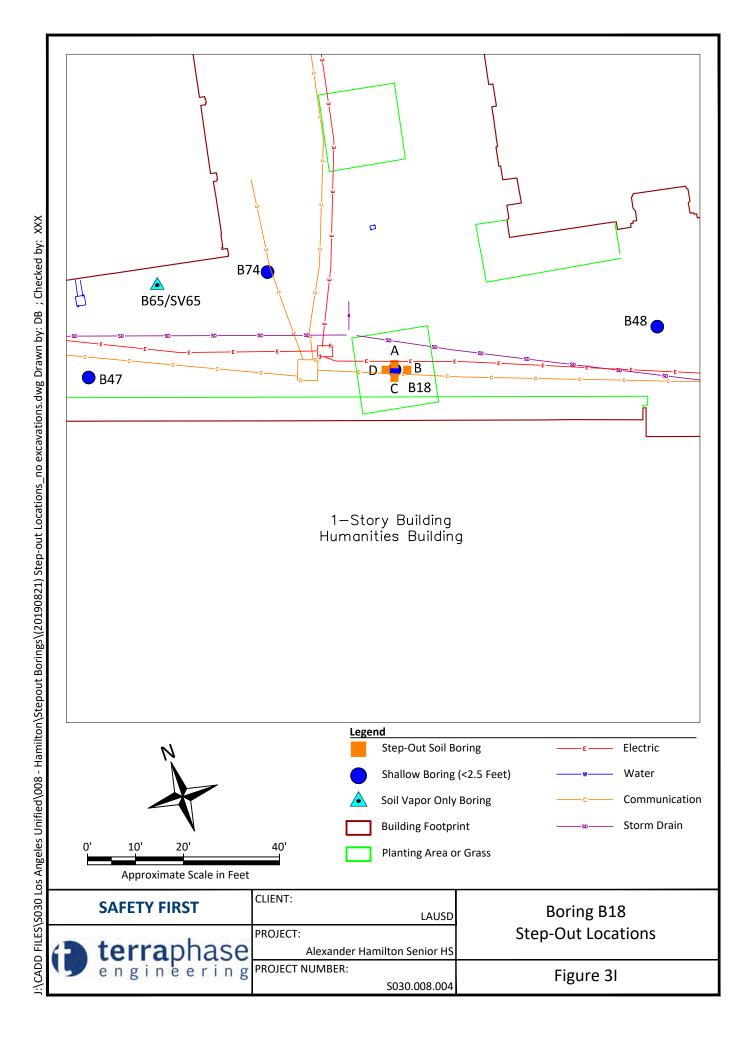


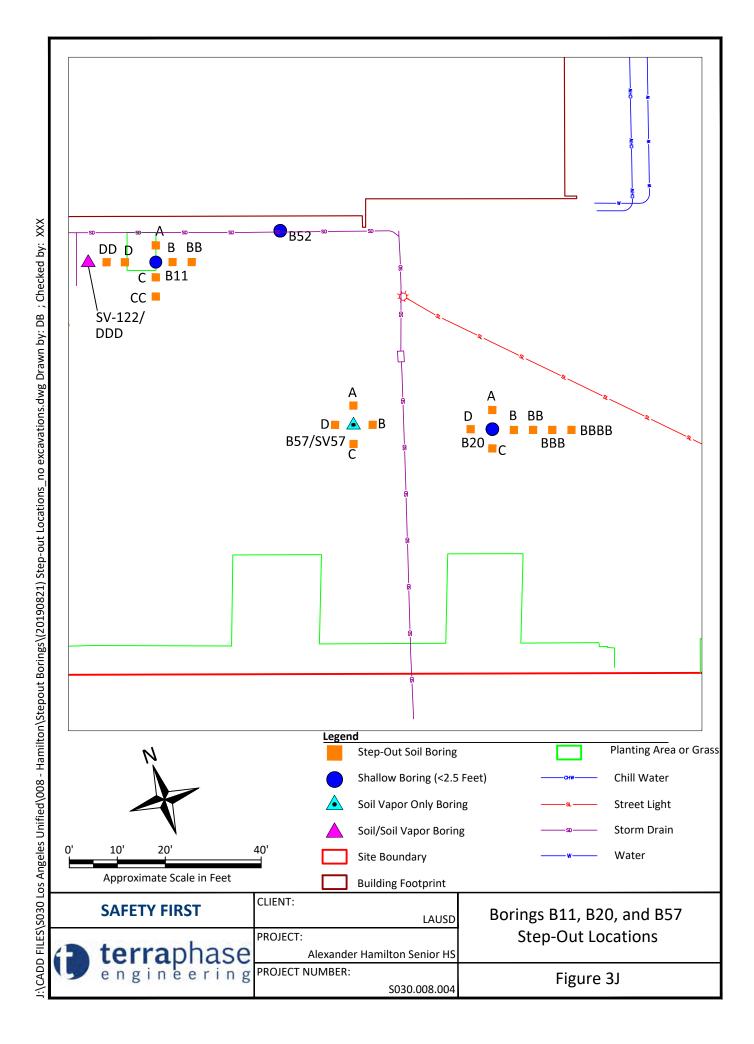


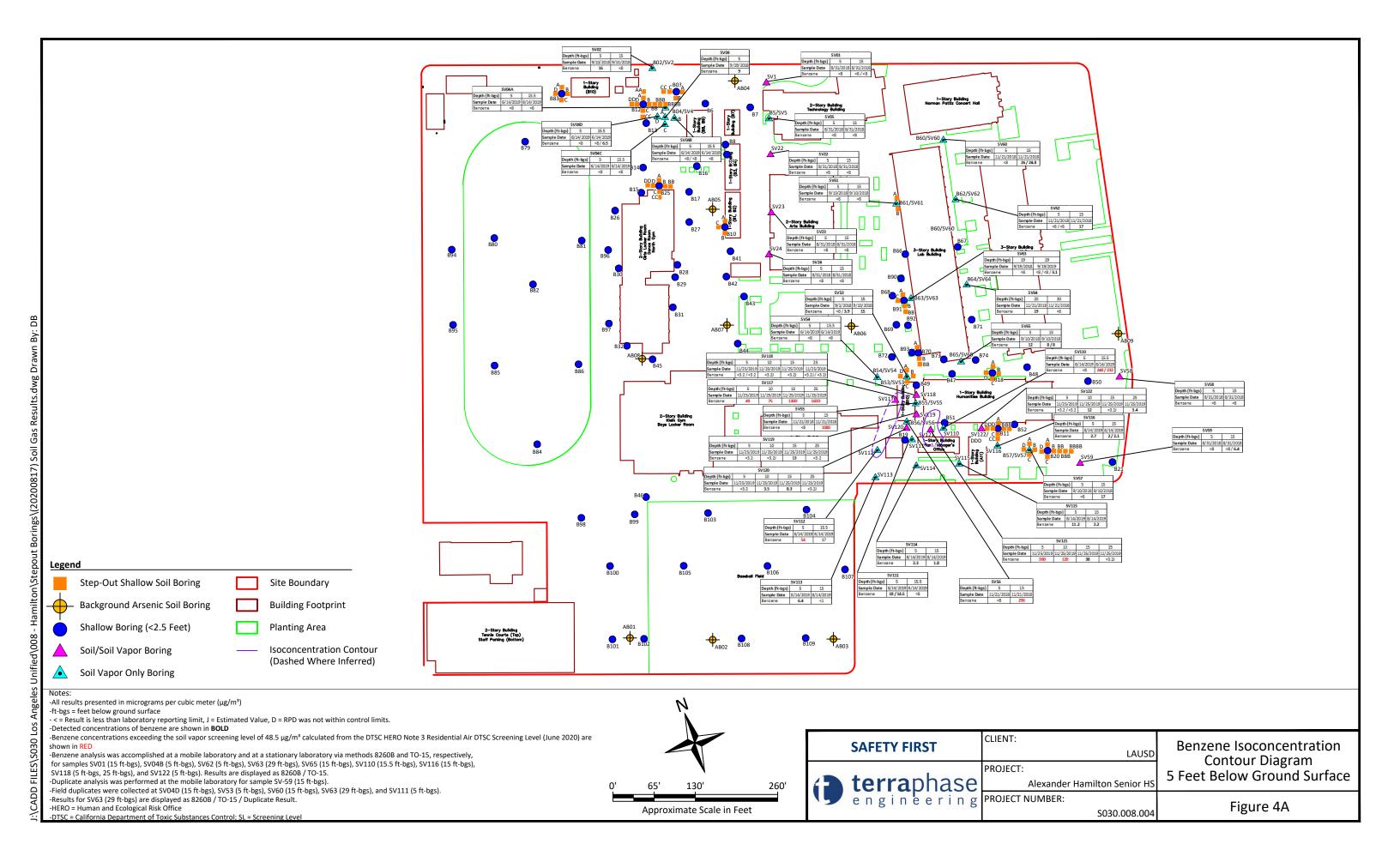


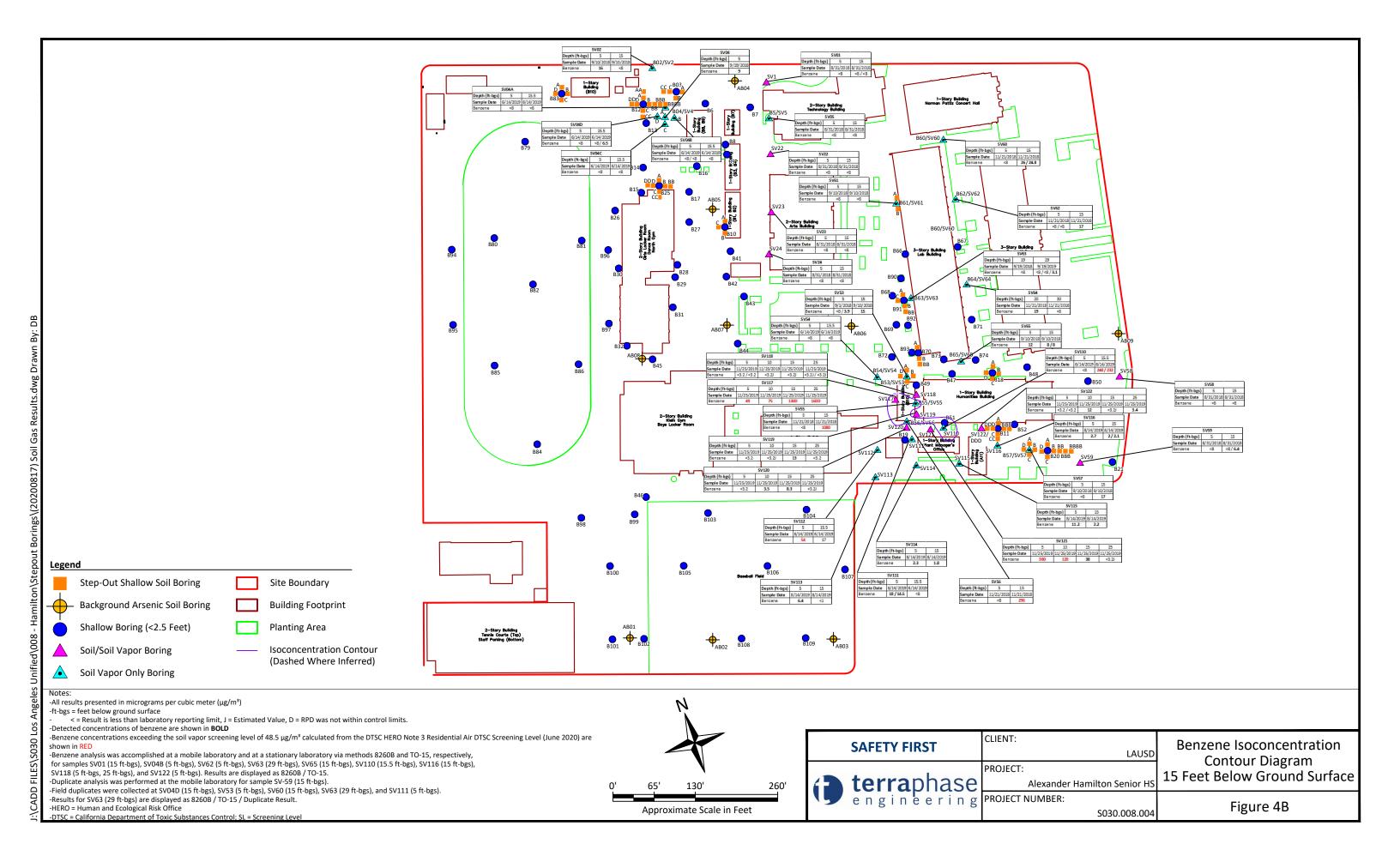


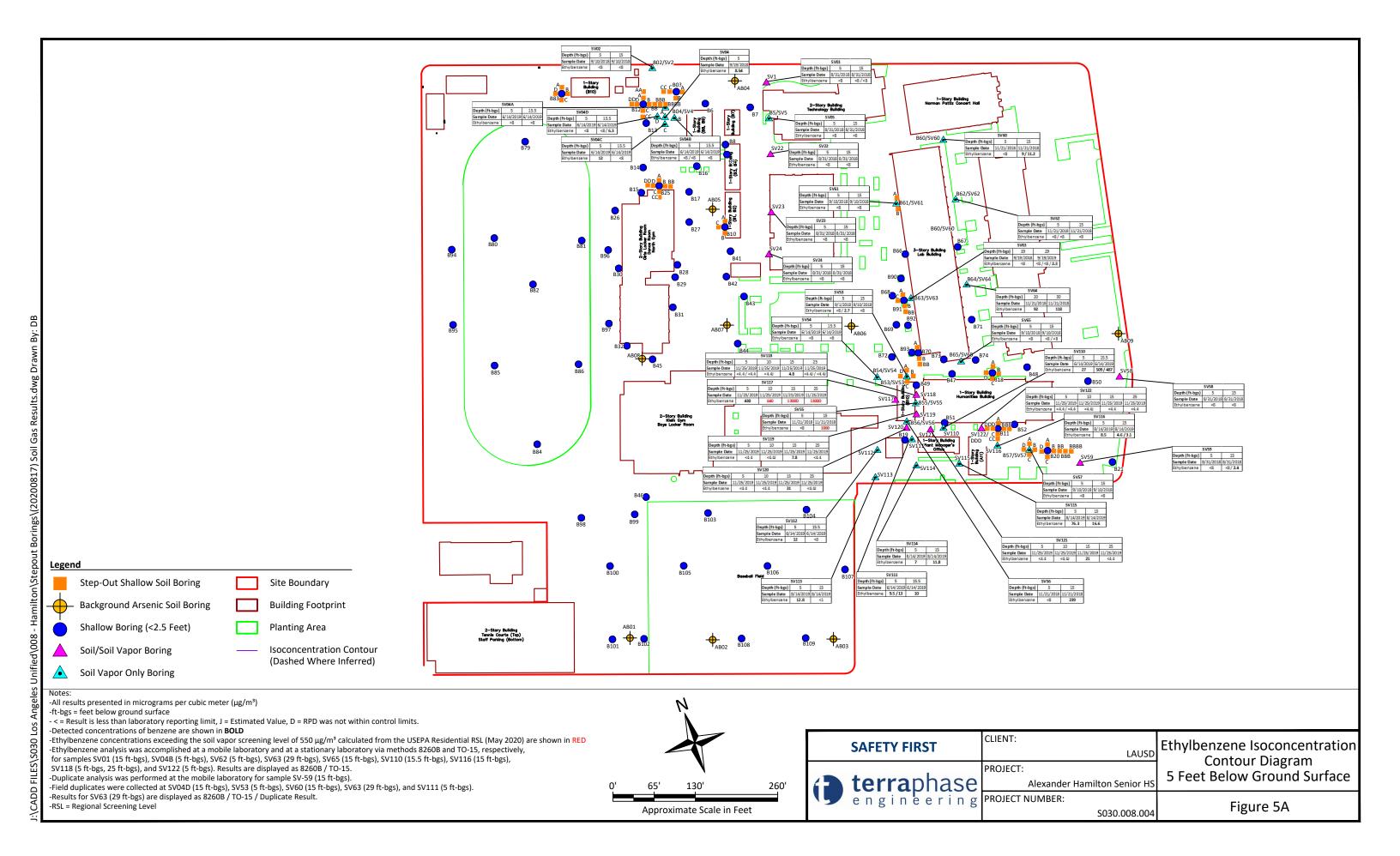


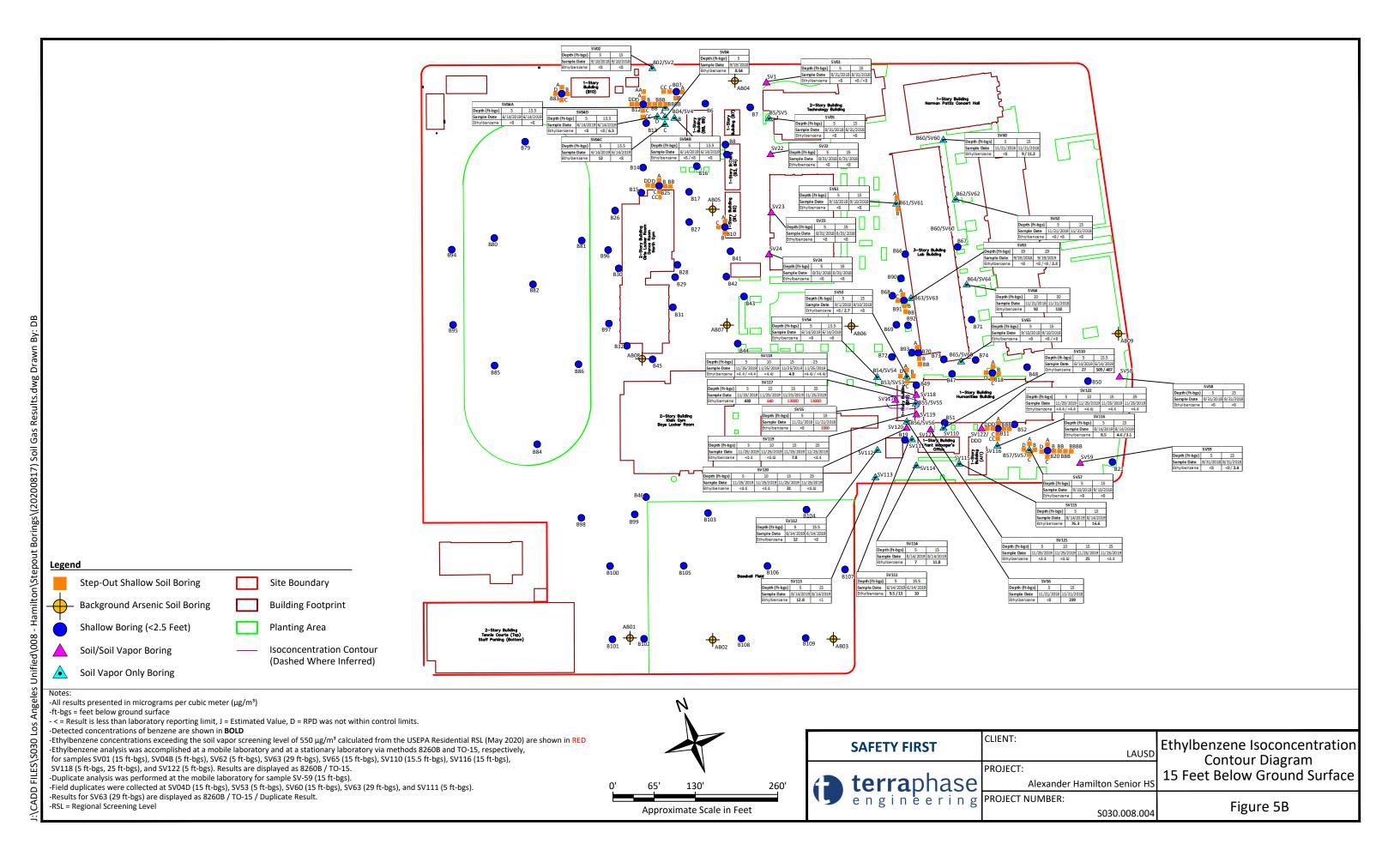


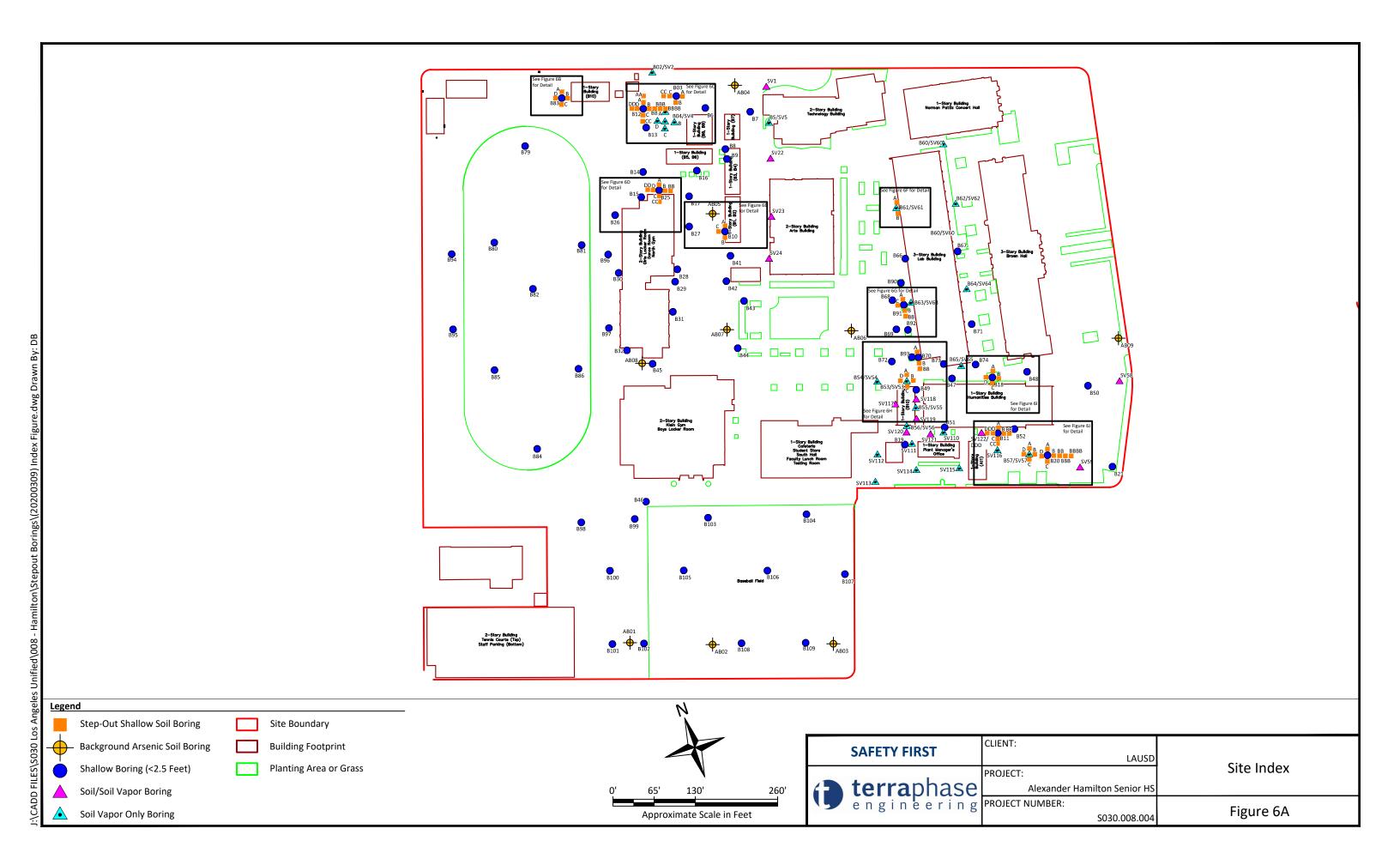


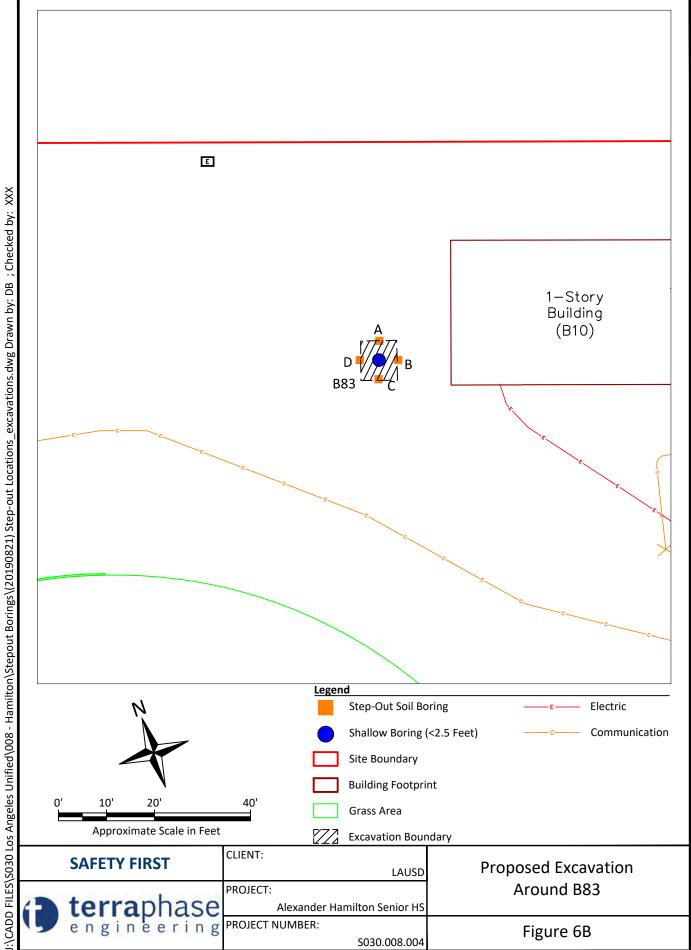


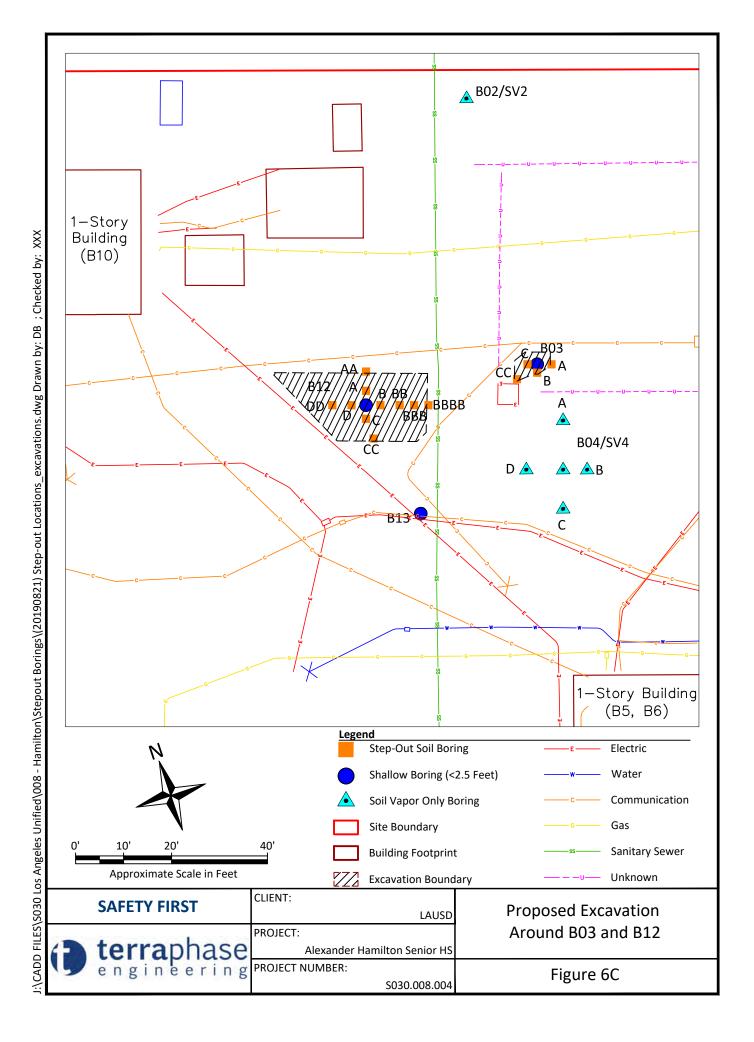


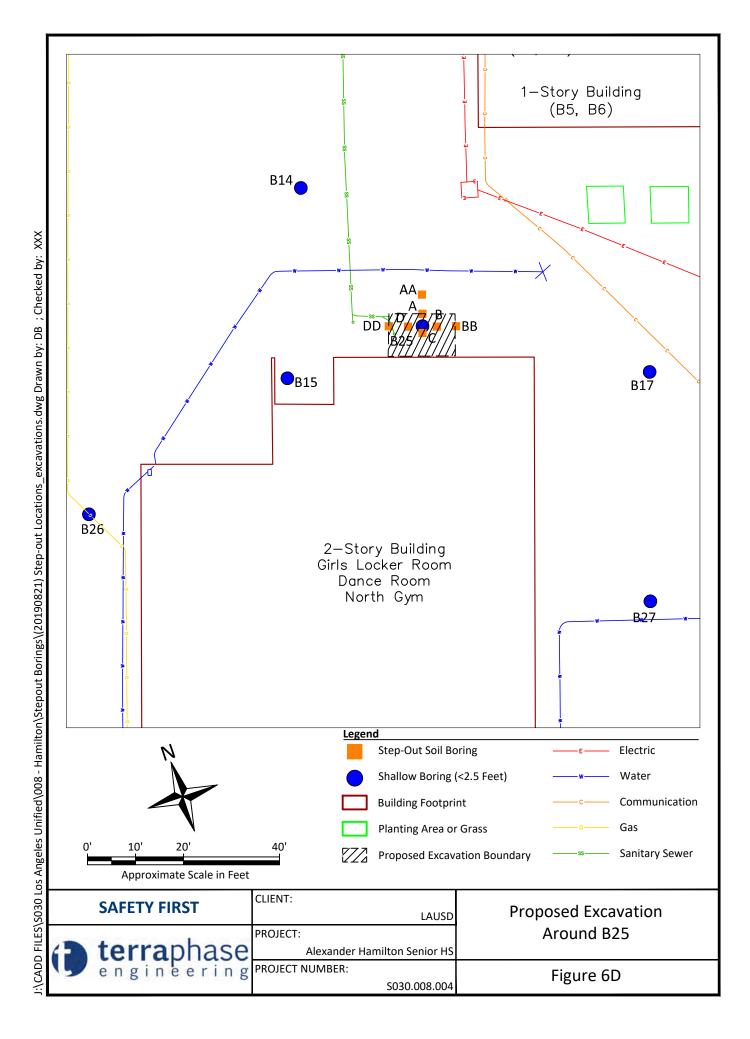


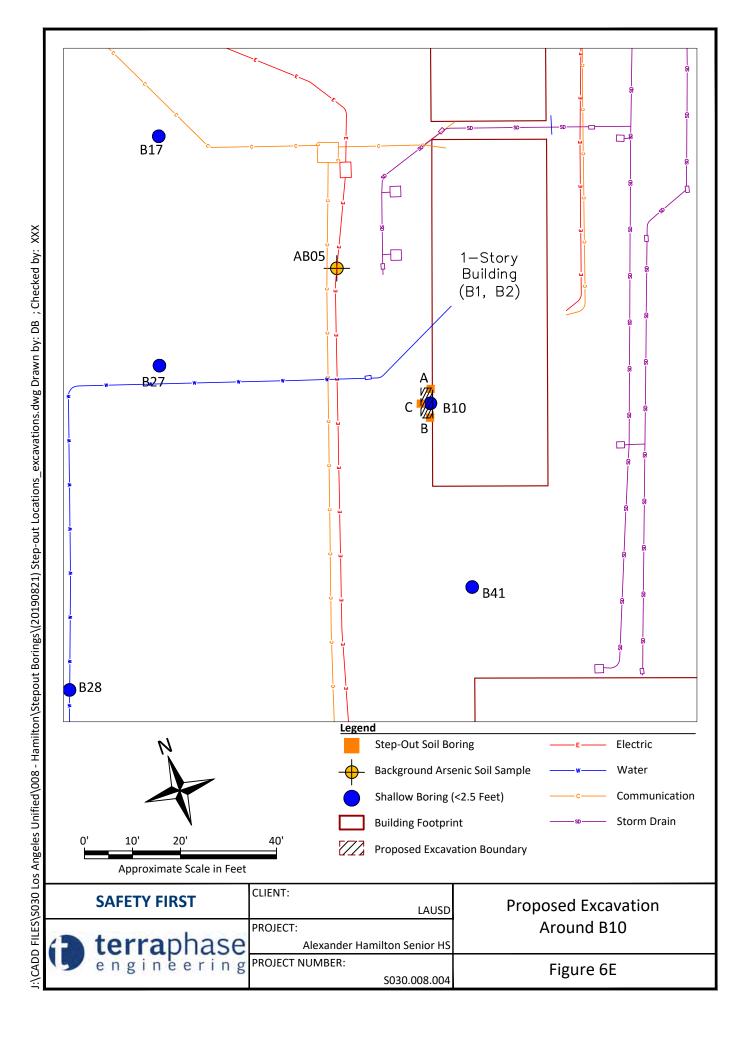


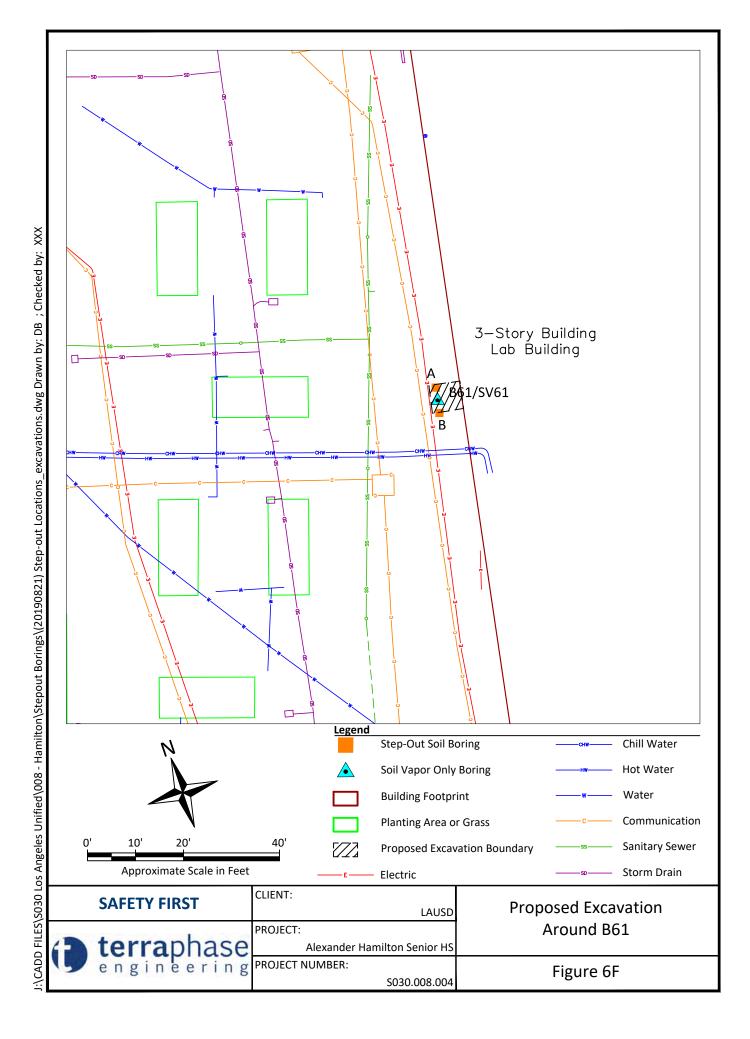


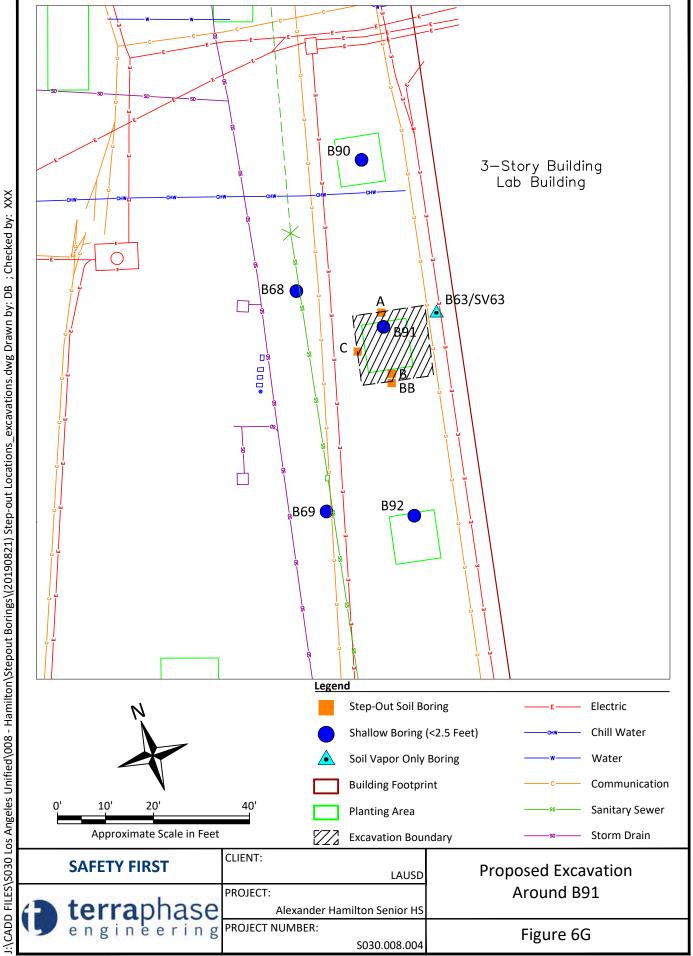


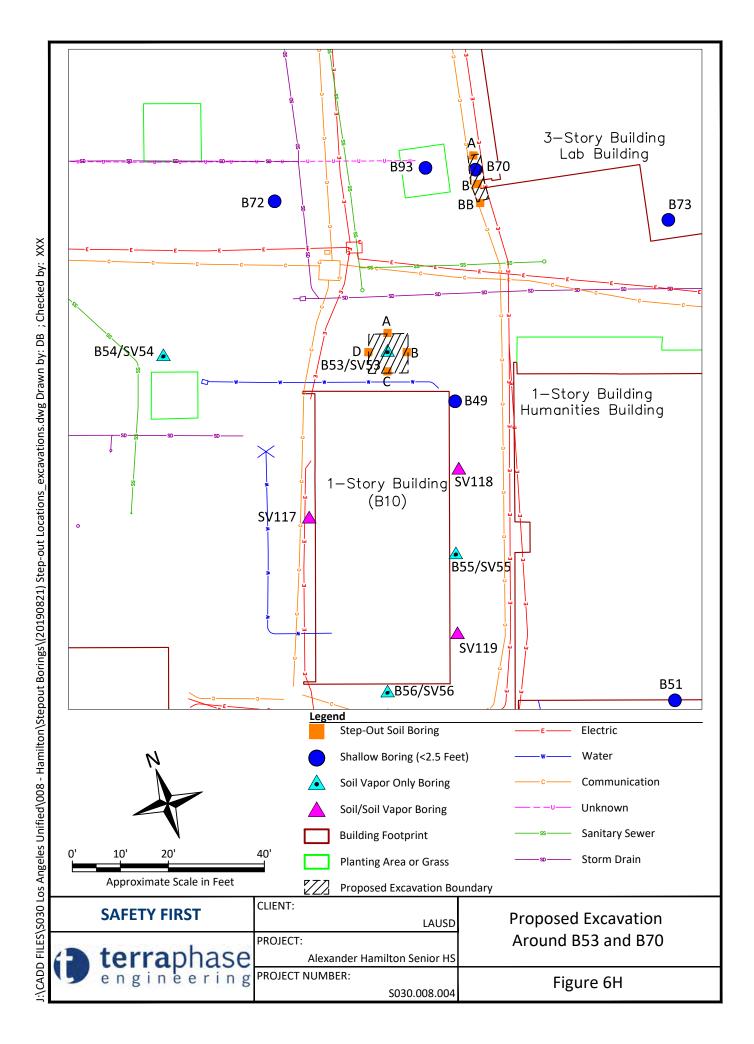


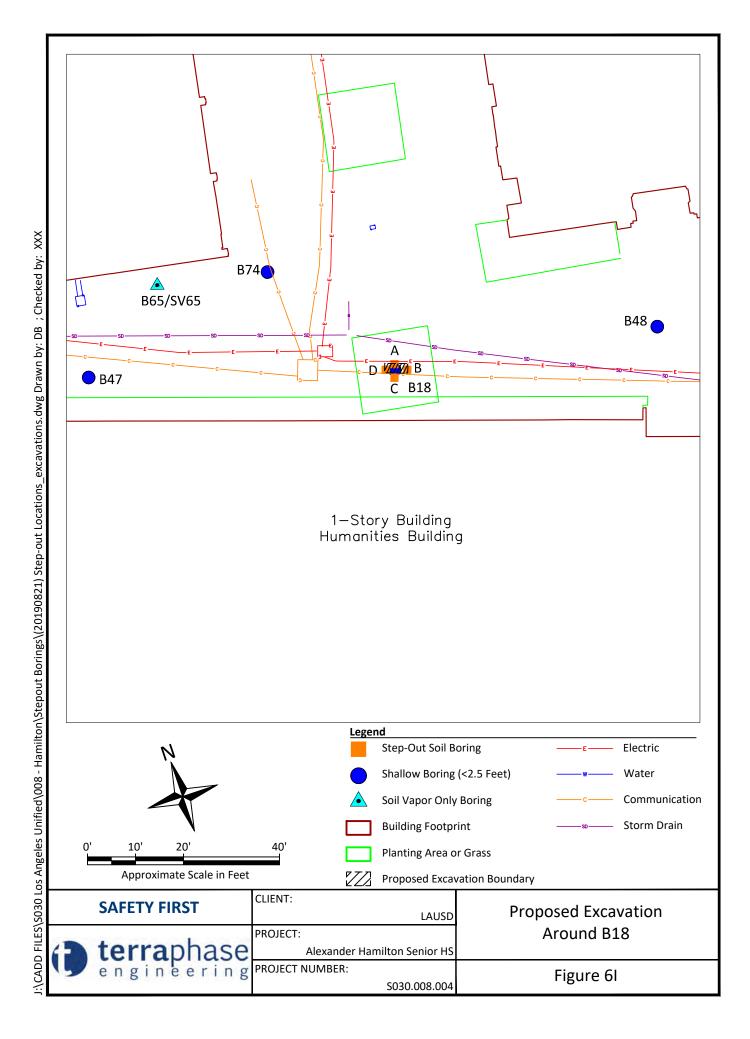


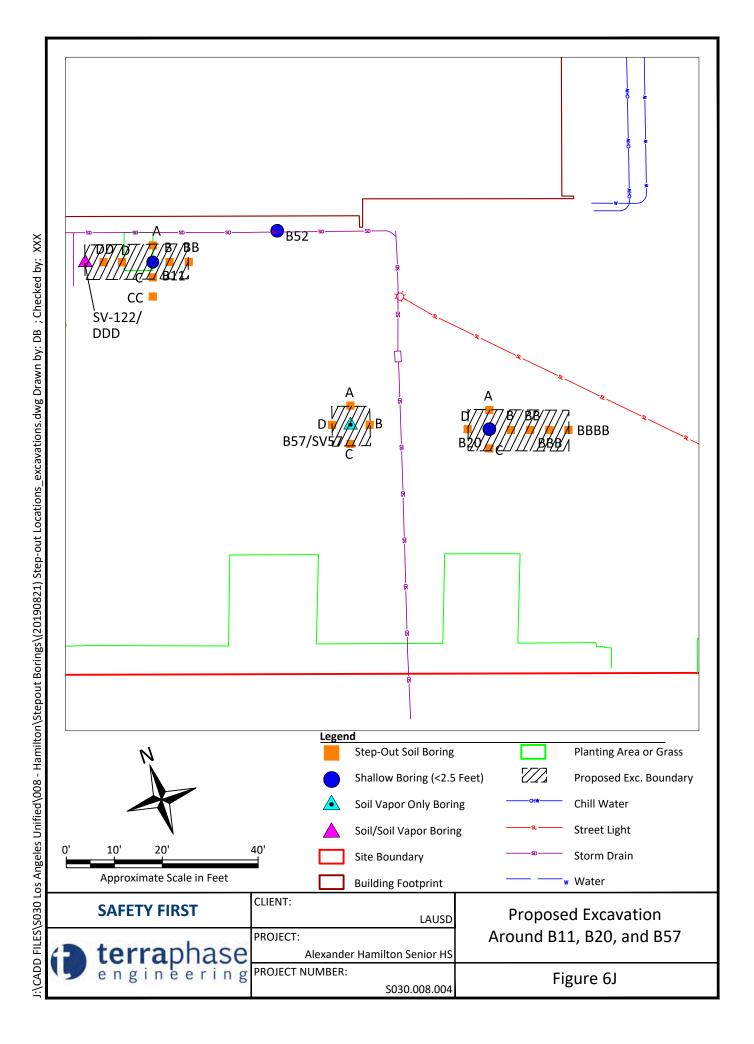












## Table 1 Sample Matrix

Preliminary Endangerment Assessment - Equivalent Report LAUSD Alexander Hamilton High School, Los Angeles, California

											Soil Sa	mples					Soil Vapor S	Samples	Leaching	Analyses
Location	Sample ID	Analytical Report Number	Sampled Date and Time	Sample Depth	Matrix Type	Sample Type	Title 22 Metals EPA 6010B / 7471A *	As and/or Pb EPA 6020	OCPs EPA 8081	PCBs EPA 8082	PAHS EPA 8270C SIM)	SVOCs EPA 8270C	TPHg EPA 8015M / 5035	TPH d/mo EPA 8015B	VOCs EPA 8260B Soil	Dioxins/Furans EPA 8290	VOCs EPA8260B SV	VOCs EPA TO-15	EPA 6020_TCLP(EPA 6020_TCLP)	EPA 6020_WET(EPA 6020_WET)
	SV01-5.0'	F-0170	8/31/2018 10:30	5	Soil Gas	Primary											Х			
SV01	SV01-15.0'	F-0170	8/31/2018 10:45	15	Soil Gas	Primary											X			
	SV01-15.0' REP	F-0170	8/31/2018 10:59	15	Soil Gas	Duplicate	V						V	V	V		Х			
	B02-5.0 B02-10.0	T182803 T182803	9/10/2018 12:10 9/10/2018 12:15	5 10	Soil Soil	Primary Primary	X						X	X	X					
B02/SV0	B02-10.0	T182803	9/10/2018 12:13	15	Soil	Primary	X						X	X	X					
2	SV02-5.0'	F-0173	9/10/2018 14:38	5	Soil Gas	Primary	^						^	^	^		Х			
	SV02-15.0'	F-0173	9/10/2018 14:39	15	Soil Gas	Primary											X			
	B03-0.5	T182803	9/10/2018 13:00	0.5	Soil	Primary		Х	X											
В03	B03-1.5	T182803	9/10/2018 13:02	1.5	Soil	Primary		X	X											Х
	B03-2.5	T182803	9/10/2018 13:05	2.5	Soil	Primary		X	X											
B03A	B03A-1.5	416293	6/13/2019 12:57	1.5	Soil	Primary		X												
B03B	B03B-1.5	416293	6/13/2019 13:00	1.5	Soil	Primary		X												-
B03C	B03C-1.5	416293	6/13/2019 12:52	1.5	Soil	Primary		Χ												-
B03CC	B03-CC-1.5	418425	8/16/2019 0:00	1.5	Soil	Primary		Χ												
	B04-2.5	T182898	9/19/2018 7:45	2.5	Soil	Primary	Х				Х	Х	Х	Х	Х	Х				
B04/SV0	B04-2.5 DUP	T182898	9/19/2018 7:45	2.5	Soil	Duplicate	Х				Х	Х	Х	Х	Х	Х				
4	B04-5.0	T182898	9/19/2018 7:47	5	Soil	Primary	Х				Х	Х	Х	Х	Х	Х				
	B4-5'	F-0180	9/19/2018 10:45	5	Soil Gas	Primary											Х			
CVOAA	SV04A-5.0	D-1648	6/14/2019 8:18	5	Soil Gas	Primary											Х			
SV04A	SV04A-15.5	D-1648	6/14/2019 8:34	15.5	Soil Gas	Primary											Х			
	SV04B-5.0	D-1648	6/14/2019 8:52	5	Soil Gas	Primary											Х			
SV04B	SV04B-5.0 REP	D-1648	6/14/2019 9:00	5	Soil Gas	Duplicate											Х			
	SV04B-15.5	D-1648	6/14/2019 9:25	15.5	Soil Gas	Primary											Х			
SV04C	SV04C-5.0	D-1648	6/14/2019 9:43	5	Soil Gas	Primary											Х			
3V04C	SV04C-15.5	D-1648	6/14/2019 9:58	15.5	Soil Gas	Primary											Х			
	SV04D-5.0	D-1648	6/14/2019 10:11	5	Soil Gas	Primary											Х			
SV04D	SV04D-15.5	D-1648	6/14/2019 10:23	15.5	Soil Gas	Primary											Х			
	SV04D-15.5-Dup	ST-13880		15.5	Soil Gas	Duplicate												Χ		
	B05-0.5	T182726	8/31/2018 11:10	0.5	Soil	Primary		Χ	Χ											
	B05-1.5	T182726	8/31/2018 11:15		Soil	Primary		Χ	Χ											
	B05-2.5	T182726	8/31/2018 11:20		Soil	Primary		Χ	Χ											
B05/SV0		T182726		5	Soil	Primary	Х						Х	X	X					
5	B05-10.0	T182726		10	Soil	Primary	Х						Х	X	X					
	B05-15.0	T182726	8/31/2018 11:05		Soil	Primary	Х						Χ	X	X					
	SV05-5.0'	F-0170	8/31/2018 11:08	5	Soil Gas	Primary											Х			
	SV05-15.0'	F-0170		15	Soil Gas	Primary											Х			-
	B06-0.5	T182803	9/10/2018 12:50	0.5	Soil	Primary		Χ	X											
B06	B06-1.5	T182803		1.5	Soil	Primary		X	X											
	B06-2.5	T182803	9/10/2018 12:55	2.5	Soil	Primary		Χ	Χ											

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	B07-0.5	T182803	9/10/2018 13:20	0.5	Soil	Primary		Χ	Χ											
B07	B07-1.5	T182803	9/10/2018 13:21	1.5	Soil	Primary		Χ	Χ											
	B07-2.5	T182803	9/10/2018 13:25	2.5	Soil	Primary		Х	X											
	B08-0.5	T182803	9/10/2018 13:35	0.5	Soil	Primary		Х	Х											
B08	B08-1.5	T182803	9/10/2018 13:36	1.5	Soil	Primary		Х	Х											
	B08-2.5	T182803	9/10/2018 13:38	2.5	Soil	Primary		Х	Х											
	B09-0.5	T182803	9/10/2018 13:45	0.5	Soil	Primary		Х	Х											
B09	B09-1.5	T182803	9/10/2018 13:46	1.5	Soil	Primary		Х	Х											
	B09-2.5	T182803	9/10/2018 13:48	2.5	Soil	Primary		Х	Х											
	B10-0.5	T182803	9/10/2018 14:35	0.5	Soil	Primary		Χ	Х											Х
B10	B10-1.5	T182803	9/10/2018 14:37	1.5	Soil	Primary		Χ	Х											
	B10-2.5	T182803	9/10/2018 14:40	2.5	Soil	Primary		Χ	Х											
B10A	B10A-0.5	416293	6/13/2019 11:18	0.5	Soil	Primary		Χ												
	B10A-0.5-DUP	416293	6/13/2019 11:18	0.5	Soil	Duplicate		Χ												
B10B	B10B-0.5	416293	6/13/2019 11:20	0.5	Soil	Primary		Х												
B10C	B10C-0.5	416293	6/13/2019 11:21	0.5	Soil	Primary		Х												
	B11-0.5	T183212	10/20/2018 9:20	0.5	Soil	Primary		Х	Х											
	B11-1.5	T183212		1.5	Soil	Primary		Χ	Χ											
	B11-2.5	T183212	10/20/2018 9:22	2.5	Soil	Primary		Х	Χ											
	B11A-1.5	416293	6/13/2019 8:34	1.5	Soil	Primary		Χ												
B11A	B11A-1.5-DUP	416293	6/13/2019 8:34	1.5	Soil	Duplicate		Χ												
	B11A-2.5	416293	6/13/2019 8:36	2.5	Soil	Primary		Χ												
B11B	B11B-1.5	416293	6/13/2019 8:47	1.5	Soil	Primary		Χ												
5115	B11B-2.5	416293	6/13/2019 8:51	2.5	Soil	Primary		Χ												
B11BB	B11BB-2.5	418214	8/12/2019 0:00	2.5	Soil	Primary		Χ												
B11C	B11C-1.5	416293	6/13/2019 8:31	1.5	Soil	Primary		Χ												
DITC	B11C-2.5	416293	6/13/2019 8:36	2.5	Soil	Primary		Χ												
B11D	B11D-1.5	416293	6/13/2019 8:50	1.5	Soil	Primary		Χ												
	B11D-2.5	416293		2.5	Soil	Primary		Χ												
B11DD	B11DD-1.5	418214		1.5	Soil	Primary		Χ												
	B11-DDD-1.5	421801	11/23/2019 11:05		Soil	Primary		Χ												
	B11-DDD-1.5	421801	11/23/2019 11:05		TCLP Leach	Primary													Χ	
	B11-DDD-1.5	421801	11/23/2019 11:05	1.5	WET Leach	Primary														Χ
	B12-0.5	T183212	10/20/2018 10:20		Soil	Primary		Χ	Χ											Χ
	B12-1.5	T183212	10/20/2018 10:21		Soil	Primary		Χ	Χ											
	B12-2.5	T183212	10/20/2018 10:22		Soil	Primary		Χ	Χ											
B12A	B12A-0.5	416293	6/13/2019 12:41		Soil	Primary		Χ												
	B12A-0.5-DUP	416293		0.5	Soil	Duplicate		Χ												
	B12AA-0.5	418214	8/12/2019 0:00	0.5	Soil	Primary		Χ												
	B12B-0.5	416293	6/13/2019 12:47	0.5	Soil	Primary		Χ												
B12BB	B12BB-0.5	418214	8/12/2019 0:00	0.5	Soil	Primary		Χ												

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	B12-BBB-0.5	421801	11/23/2019 11:58	0.5	Soil	Primary		Χ												
B12BBB	B12-BBB-0.5-DUP	421801	11/23/2019 12:00	0.5	Soil	Duplicate		Χ												
DIZDDD	B12-BBB-0.5	421801	11/23/2019 11:58	0.5	TCLP Leach	Primary													Χ	
	B12-BBB-0.5	421801	11/23/2019 11:58	0.5	WET Leach	Primary														Χ
	B12C-0.5	416293	6/13/2019 12:37	0.5	Soil	Primary		Χ												
	B12CC-0.5	418214	8/12/2019 0:00	0.5	Soil	Primary		Χ												
	B12D-0.5	416293	6/13/2019 12:36	0.5	Soil	Primary		Χ												
B12DD	B12DD-0.5	418214	8/12/2019 0:00	0.5	Soil	Primary		Χ												
	B13-0.5	T183211		0.5	Soil	Primary		Χ	Χ											
B13	B13-0.5-DUP	T183211	10/20/2018 10:25		Soil	Duplicate		Χ	Χ											
	B13-1.5	T183211	10/20/2018 10:30		Soil	Primary		Χ	Χ											
	B13-2.5	T183211	10/20/2018 10:32		Soil	Primary		Χ	Χ											
	B14-0.5	T183212	10/20/2018 10:35		Soil	Primary		Χ	Χ											
B14	B14-1.5	T183212	10/20/2018 10:36		Soil	Primary		Χ	Χ											
	B14-2.5	T183212	10/20/2018 10:37		Soil	Primary		Χ	Χ											
	B15-0.5	T183211	10/20/2018 10:50		Soil	Primary		Χ	Χ	Χ										
	B15-1.5	T183211	10/20/2018 10:55		Soil	Primary		Χ	Χ	Χ										
	B15-2.5	T183211	10/20/2018 11:00		Soil	Primary		Χ	Χ	Χ										
	B16-0.5	T182803	9/10/2018 14:50	0.5	Soil	Primary		Χ	Χ											
B16	B16-1.5	T182803		1.5	Soil	Primary		Χ	Χ											
	B16-2.5	T182803	9/10/2018 14:55	2.5	Soil	Primary		Χ	Χ											
	B17-0.5	T182803	9/10/2018 14:09	0.5	Soil	Primary		Χ	Χ											
B17	B17-1.5	T182803	9/10/2018 14:10	1.5	Soil	Primary		Χ	Χ											
	B17-2.5	T182803	9/10/2018 14:12	2.5	Soil	Primary		Χ	Χ											
	B18-0.5	T182898	9/19/2018 14:55	0.5	Soil	Primary		Χ	Χ											
B18	B18-1.5	T182898	9/19/2018 14:57	1.5	Soil	Primary		Χ	Χ											
	B18-2.5	T182898	9/19/2018 15:00	2.5	Soil	Primary		Χ	Χ											Χ
B18A	B18A-2.5	416293	6/13/2019 9:50	2.5	Soil	Primary		Χ												
B18B	B18B-2.5	416293	6/13/2019 9:30	2.5	Soil	Primary		Χ												
	B18B-2.5-DUP	416293	6/13/2019 9:30	2.5	Soil	Duplicate		Χ												
	B18C-2.5	416293	6/13/2019 9:43	2.5	Soil	Primary		Χ												
	B18D-2.5	416293	6/13/2019 9:35	2.5	Soil	Primary		Χ												
	B19-0.5	T183212	10/20/2018 9:40	0.5	Soil	Primary		Χ	Χ											
	B19-0.5-dup	T183212		0.5	Soil	Duplicate		Χ	Χ											
B19	B19-1.5	T183212	10/20/2018 9:41		Soil	Primary		Х	X											
	B19-1.5-dup	T183212	10/20/2018 9:41		Soil	Duplicate		Χ	Χ											
	B19-2.5	T183212	10/20/2018 9:42		Soil	Primary		Χ	X											
	•	T183212	10/20/2018 9:42		Soil	Duplicate		Χ	Χ											
	B20-0.5	T183454	11/19/2018 11:30		Soil	Primary		Х	X											
	B20-1.5	T183454	11/19/2018 11:32		Soil	Primary		Х	X											
	B20-2.5	T183454	11/19/2018 11:34	2.5	Soil	Primary		Х	Χ											

Table 1
Sample Matrix
Preliminary Endangerment Assessment - Equivalent Report
LAUSD Alexander Hamilton High School, Los Angeles, California

	<u> </u>										Soil Sa	mples					Soil Vapor	Samples	Leaching	Analyses
																			Leacining	
Location	Sample ID	Analytical Report Number	Sampled Date and Time	Sample Depth	Matrix Type	Sample Type	Title 22 Metals EPA 6010B / 7471A *	As and/or Pb EPA 6020	OCPs EPA 8081	PCBs EPA 8082	PAHS EPA 8270C SIM)	SVOCs EPA 8270C	TPHg EPA 8015M / 5035	TPH d/mo EPA 8015B	VOCs EPA 8260B Soil	Dioxins/Furans EPA 8290	VOCs EPA8260B SV	VOCs EPA TO-15	EPA 6020_TCLP(EPA 6020_TCLP)	EPA 6020_WET(EPA 6020_WET)
B20A	B20A-0.5	416293	6/13/2019 8:12	0.5	Soil	Primary		Χ												
	B20A-0.5-DUP	416293	6/13/2019 8:12	0.5	Soil	Duplicate		Χ												
B20B	B20B-0.5	416293	6/13/2019 8:11	0.5	Soil	Primary		Χ												
B20BB	B20BB-0.5	418214	8/12/2019 0:00	0.5	Soil	Primary		Χ												
B20BBB	B20-BBB-0.5	421801	11/23/2019 11:37	0.5	Soil	Primary		Χ												
	B20-BBB-0.5-DUP	421801	11/23/2019 13:39		Soil	Duplicate		Χ												
	B20C-0.5	416293	6/13/2019 8:14	0.5	Soil	Primary		Χ												
B20D	B20D-0.5	416293	6/13/2019 8:16	0.5	Soil	Primary		Χ												
	B21-0.5	T183454			Soil	Primary		Χ	Χ											
B21	B21-1.5	T183454	11/19/2018 11:47		Soil	Primary		Χ	Χ											
	B21-2.5	T183454	11/19/2018 11:49	2.5	Soil	Primary		Χ	Χ											
SV22	SV22-5.0'	F-0170	8/31/2018 11:16	5	Soil Gas	Primary											Х			
3422	SV22-15.0'	F-0170		15	Soil Gas	Primary											X			
SV23	SV23-5.0'	F-0170	8/31/2018 11:59	5	Soil Gas	Primary											Х			
3723	SV23-15.0'	F-0170		15	Soil Gas	Primary											X			
SV24	SV24-5.0'	F-0170	8/31/2018 12:33	5	Soil Gas	Primary											X			
3724	SV24-15.0'	F-0170	8/31/2018 12:48	15	Soil Gas	Primary											X			
	B25-0.5	T183212	10/20/2018 11:10		Soil	Primary		Χ	Χ											Х
B25	B25-1.5	T183212	10/20/2018 11:11		Soil	Primary		Χ	Χ											
	B25-2.5	T183212	10/20/2018 11:12		Soil	Primary		Χ	Χ											
B25A	B25A-0.5	416293	6/13/2019 12:16	0.5	Soil	Primary		Χ												
	B25A-0.5-DUP	416293	6/13/2019 12:16	0.5	Soil	Duplicate		Χ												
	B25B-0.5	416293	6/13/2019 12:25	0.5	Soil	Primary		Χ												
B25BB	B25-BB-0.5	418425	8/16/2019 0:00	0.5	Soil	Primary		Χ												
B25C	B25C-0.5	416293	6/13/2019 12:22	0.5	Soil	Primary		Χ												
	B25D-0.5	416293	6/13/2019 12:20	0.5	Soil	Primary		Χ												
B25DD	B25-DD-0.5	418425	8/16/2019 0:00	0.5	Soil	Primary		Χ												
	B26-0.5	T183211			Soil	Primary		Χ	Χ											
	B26-0.5-DUP	T183211	10/20/2018 11:05		Soil	Duplicate		Χ	Χ											
B26	B26-1.5	T183211	10/20/2018 11:10	1.5	Soil	Primary		Χ	Χ											
520	B26-1.5-DUP	T183211	10/20/2018 11:10		Soil	Duplicate		Χ	Χ											
	B26-2.5	T183211	10/20/2018 11:15		Soil	Primary		Χ	Χ											
	B26-2.5-DUP	T183211	10/20/2018 11:15		Soil	Duplicate		Χ	Χ											
	B27-0.5	T182803	9/10/2018 14:42		Soil	Primary		Χ	Χ											
B27	B27-1.5	T182803	9/10/2018 14:23	1.5	Soil	Primary		Χ	Χ											
	B27-2.5	T182803	9/10/2018 14:25	2.5	Soil	Primary		Χ	Χ											
	B28-0.5	T183211	10/20/2018 13:42		Soil	Primary		Χ	Χ											
	B28-1.5	T183211	10/20/2018 13:44		Soil	Primary		Χ	Χ											
	B28-2.5	T183212	10/20/2018 13:45		Soil	Primary		Χ	Χ											
	B29-0.5	T183212	10/20/2018 13:33		Soil	Primary		Χ	Χ											
	B29-1.5	T183212			Soil	Primary		Χ	Χ											
	B29-2.5	T183212	10/20/2018 13:35	2.5	Soil	Primary		Χ	Χ											

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LAUSD Alexander Hamilton High School, Los Angeles, California

											Soil Sar	mples					Soil Vapor S	Samples	Leaching	Analyses
Location	Sample ID	Analytical Report Number	Sampled Date and Time	Sample Depth	Matrix Type	Sample Type	Title 22 Metals EPA 6010B / 7471A *	As and/or Pb EPA 6020	OCPs EPA 8081	PCBs EPA 8082	PAHs EPA 8270C SIM)	SVOCs EPA 8270C	TPHg EPA 8015M / 5035	TPH d/mo EPA 8015B	VOCs EPA 8260B Soil	Dioxins/Furans EPA 8290	VOCs EPA8260B SV	VOCs EPA TO-15	EPA 6020_TCLP(EPA 6020_TCLP)	EPA 6020_WET(EPA 6020_WET)
	B30-0.5	T183212		0.5	Soil	Primary		Χ	Χ											
B30	B30-1.5	T183212	10/20/2018 10:51		Soil	Primary		X	X											
	B30-2.5 B31-0.5	T183212 T183212	10/20/2018 10:52 10/20/2018 13:21		Soil Soil	Primary Primary		X	X											
	B31-0.5-dup	T183212	10/20/2018 13:21		Soil	Duplicate		X	X											
	B31-1.5	T183212	10/20/2018 13:22		Soil	Primary		X	X											
B31	B31-1.5-dup	T183212	10/20/2018 13:22		Soil	Duplicate		X	X											
	B31-2.5	T183212	10/20/2018 13:24	2.5	Soil	Primary		Χ	Х											
	B31-2.5-dup	T183212	10/20/2018 13:24		Soil	Duplicate		Χ	Χ											
	B32-0.5	T183211	10/20/2018 11:45		Soil	Primary		Х	Х	Х										
B32	B32-1.5	T183211	10/20/2018 11:50		Soil	Primary		X	X	X										
	B32-2.5 B41-0.5	T183211 T183211	10/20/2018 11:55 10/20/2018 13:57		Soil Soil	Primary Primary		X	X	Х										
B41	B41-0.5	T183211	10/20/2018 13:59		Soil	Primary		X	X											
	B41-2.5	T183211	10/20/2018 14:01		Soil	Primary		X	X											
B42	B42-0.5	T183211	10/20/2018 14:00		Soil	Primary		Х	Х											
	B43-0.5	T183211	10/20/2018 13:40	0.5	Soil	Primary		Х	Х	Х										
B43	B43-1.5	T183211	10/20/2018 13:45		Soil	Primary		Χ	Χ	Χ										
	B43-2.5	T183211	10/20/2018 13:50		Soil	Primary		Х	Х	Х										
544	B44-0.5	T183211	10/20/2018 13:20		Soil	Primary		X	X											
B44	B44-1.5	T183211	10/20/2018 13:30		Soil	Primary		X	X											
	B44-2.5 B45-0.5	T183211 T183211	10/20/2018 13:33 10/20/2018 12:00		Soil Soil	Primary Primary	Х	X	Х				X	X	X					
B45	B45-1.5	T183211	10/20/2018 12:10		Soil	Primary	X						X	X	X					
	B45-2.5	T183211	10/20/2018 12:15		Soil	Primary	X						X	X	X					
	B46-0.5	T183212	10/20/2018 12:30		Soil	Primary	Х			Х			Х	Х	Х					-
	B46-0.5dup	T183212	10/20/2018 12:30	0.5	Soil	Duplicate	Х			Х			Χ	Χ	Χ					
B46	B46-1.5	T183212	10/20/2018 12:32		Soil	Primary	Х			Х			X	X	X					
	B46-1.5dup	T183212	10/20/2018 12:32		Soil	Duplicate	Х			Х			Х	X	X					
	B46-2.5	T183212	10/20/2018 12:36		Soil	Primary	X			X			X	X	X					
	B46-2.5dup B47-0.5	T183212 T183211	10/20/2018 12:36 10/20/2018 14:15		Soil Soil	Duplicate Primary	Х	V	V	Х			Х	Х	Х					
B47	B47-0.5 B47-1.5	T183211	10/20/2018 14:17		Soil	Primary		X	X											
547	B47-2.5	T183211	10/20/2018 14:17		Soil	Primary		X	X											
	B48-0.5	T182898		0.5	Soil	Primary		X	X											
B48	B48-1.5	T182898		1.5	Soil	Primary		X	X											
	B48-2.5	T182898		2.5	Soil	Primary		Χ	Х											
	B49-0.5	T183211	10/20/2018 14:30		Soil	Primary		Χ	Χ											
B49	B49-1.5	T183211	10/20/2018 14:30		Soil	Primary		X	Х											
	B49-2.5	T183211	10/20/2018 14:30	2.5	Soil	Primary		Х	Х											

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Sample Matrix
Preliminary Endangerment Assessment - Equivalent Report
LAUSD Alexander Hamilton High School, Los Angeles, California

											Soil Sa	mples					Soil Vapor	Samples	Leaching	Analyses
Location	Sample ID	Analytical Report Number	Sampled Date and Time	Sample Depth	Matrix Type	Sample Type	Title 22 Metals EPA 6010B / 7471A *	As and/or Pb EPA 6020	OCPs EPA 8081	PCBs EPA 8082	PAHS EPA 8270C SIM)	SVOCs EPA 8270C	TPHg EPA 8015M / 5035	TPH d/mo EPA 8015B	VOCs EPA 8260B Soil	Dioxins/Furans EPA 8290	VOCs EPA8260B SV	VOCs EPA TO-15	EPA 6020_TCLP(EPA 6020_TCLP)	đ
	B50-0.5	T183454	11/19/2018 12:00	0.5	Soil	Primary		X	Х											
B50	B50-1.5	T183454	11/19/2018 12:02		Soil	Primary		Х	Х											
	B50-2.5	T183454	11/19/2018 12:04		Soil	Primary		Х	Х											
	B51-0.5	T183211	10/20/2018 9:30	0.5	Soil	Primary		Χ	Χ	Х										
B51	B51-0.5-DUP	T183211	10/20/2018 9:30	0.5	Soil	Duplicate		Χ	Χ	Χ										
B21	B51-1.5	T183211	10/20/2018 9:40	1.5	Soil	Primary		Χ	Х	Χ										
	B51-1.5-DUP	T183211	10/20/2018 9:40	1.5	Soil	Duplicate		Х	Х	Х										
	B52-0.5	T183212	10/20/2018 9:05	0.5	Soil	Primary		Χ	Х											
B52	B52-1.5	T183212	10/20/2018 9:06	1.5	Soil	Primary		Χ	Χ											
	B52-2.5	T183212	10/20/2018 9:07	2.5	Soil	Primary		Χ	Χ											
	B53-0.5	T182803	9/10/2018 8:46	0.5	Soil	Primary		Χ	Χ											
	B53-1.5	T182803	9/10/2018 8:47	1.5	Soil	Primary		Χ	Χ											
B53	B53-2.5	T182803	9/10/2018 8:48	2.5	Soil	Primary		Χ	Χ											
	B53-5.0	T182803	9/10/2018 8:40	5	Soil	Primary	Χ						Χ	Χ	Χ					
	B53-10.0	T182803	9/10/2018 8:45	10	Soil	Primary	Х						Χ	Χ	Χ					
	B53-15.0	T182803	9/10/2018 8:50	15	Soil	Primary	Χ						Х	Χ	Χ					
	B53A - 5.0	416244	6/12/2019 9:55	5	Soil	Primary	Х													
B53A	B53A - 10.0	416244	6/12/2019 11:45	10	Soil	Primary	Χ	Χ												
	B53A - 15.0	416244	6/12/2019 11:47	15	Soil	Primary	Χ													
	B53B - 5.0	416244	6/12/2019 9:43	5	Soil	Primary	Х													
B53B	B53B - 10.0	416244	6/12/2019 11:29	10	Soil	Primary	Χ	Χ												
	B53B - 15.0	416244		15	Soil	Primary	Х													
	B53C - 5.0	416244	6/12/2019 9:30	5	Soil	Primary	Х													
B53C	B53C - 10.0	416244	6/12/2019 11:00	10	Soil	Primary	Х	Χ												
	B53C - 15.0	416244	6/12/2019 11:06	15	Soil	Primary	Х													
	B53D - 5.0	416244	6/12/2019 10:16	5	Soil	Primary	Х													
B53D	B53D - 10.0	416244		10	Soil	Primary	Х	Χ												
	B53D - 15.0	416244	6/12/2019 10:39		Soil	Primary	Х													
	SV53-5.0'	F-0173	9/10/2018 11:38		Soil Gas	Primary											Х			
	SV53-5.0'-Dup	ST-12616			Soil Gas	Duplicate												Χ		
	SV53-15.0'	F-0173	9/10/2018 11:18		Soil Gas	Primary											Х			
57/54	SV54-5.0	D-1648	6/14/2019 10:52		Soil Gas	Primary											Х			
	SV54-15.5	D-1648	6/14/2019 11:07		Soil Gas	Primary											Х			
	B55-0.5	T183454		0.5	Soil	Primary		X	X											
	B55-0.5-DUP	T183454	11/19/2018 9:56		Soil	Duplicate		X	X											
	B55-1.5	T183454			Soil	Primary		X	X											
B55/SV5	B55-1.5-DUP	T183454	11/19/2018 9:58		Soil	Duplicate		X	X											
5	B55-2.5	T183454	11/19/2018 9:59		Soil	Primary		X	X											
	B55-2.5-DUP	T183454	11/19/2018 10:00		Soil	Duplicate		Х	X				v							
	B55-5.0	T183454	11/19/2018 10:05		Soil	Primary	X						X	X	X					
	B55-5.0-DUP	T183454	11/19/2018 10:06		Soil	Duplicate	X						X	X	X					
	SV55-10.0	T183494	11/21/2018 0:00	10	Soil	Primary	Х						Χ	Χ	Χ					

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LAUSD Alexander Hamilton High School, Los Angeles, California

											Soil Sar	mples					Soil Vapor S	amples	Leaching	Analyses
Location	Sample ID	Analytical Report Number	Sampled Date and Time	Sample Depth	Matrix Type	Sample Type	Title 22 Metals EPA 6010B / 7471A *	As and/or Pb EPA 6020	OCPs EPA 8081	PCBs EPA 8082	PAHS EPA 8270C SIM)	SVOCs EPA 8270C	TPHg EPA 8015M / 5035	TPH d/mo EPA 8015B	VOCs EPA 8260B Soil	Dioxins/Furans EPA 8290	VOCs EPA8260B SV	VOCs EPA TO-15	EPA 6020_TCLP(EPA 6020_TCLP)	EPA 6020_WET(EPA 6020_WET)
B55/SV5	SV55-15.0-SO	T183494	11/21/2018 0:00	15	Soil	Primary	Х						Χ	Χ	Χ					
1 5	SV55-5.0 SV55-15.0-GS	D-1552 D-1552	11/21/2018 7:58 11/21/2018 0:26	5 15	Soil Gas Soil Gas	Primary Primary											X			
	B56-0.5	T183454	11/19/2018 0:20		Soil	Primary		X	X								Х			
25.5	B56-1.5	T183454	11/19/2018 10:32		Soil	Primary		X	X											
B56	B56-2.5	T183454	11/19/2018 10:34		Soil	Primary		Х	Х											
	B56-5.0	T183454	11/19/2018 10:40	5	Soil	Primary	Х						Х	Χ	Χ					
	SV56-10.0	T183494	11/21/2018 0:00	10	Soil	Primary	Х						Х	X	X					
SV56	SV56-15.0-SO	T183494	11/21/2018 0:00	15	Soil	Primary	Х						X	X	X					
	SV56-5.0	D-1552	11/21/2018 9:16	5	Soil Gas	Primary											X			
	SV56-15.0-GS B57-5.0	D-1552 T182803	11/21/2018 11:37 9/10/2018 7:50	5	Soil Gas Soil	Primary Primary	Х			Х		X	X	X	X		Х			
	B57-10.0	T182803	9/10/2018 7:55	10	Soil	Primary	X			X		X	X	X	X					
B57/SV5	B57-15.0	T182803	9/10/2018 8:00	15	Soil	Primary	X			X		X	X	X	X					
7	SV57-5.0'	F-0173	9/10/2018 10:12	5	Soil Gas	Primary											Х			
	SV57-15.0'	F-0173	9/10/2018 10:15	15	Soil Gas	Primary											Х			
	B57A - 5.0	416244	6/12/2019 13:37	5	Soil	Primary	Х													
B57A	B57A - 5.0 - DUP	416244	6/12/2019 13:37	5	Soil	Duplicate	Х													
	B57A - 10.0	416244	6/12/2019 14:47	10	Soil	Primary	Х	X												
	B57A - 15.0	416244	6/12/2019 14:53	15	Soil	Primary	X	X												
	B57B - 5.0 B57B - 10.0	416244	6/12/2019 13:47	5 10	Soil Soil	Primary	X	V												
6376	B57B - 15.0	416244 416244	6/12/2019 15:01 6/12/2019 15:06	15	Soil	Primary Primary	X	X												
	B57C - 5.0	416244	6/12/2019 13:29	5	Soil	Primary	X	Λ												
B57C	B57C - 10.0	416244	6/12/2019 14:22	10	Soil	Primary	X	Х												
	B57C - 15.0	416244	6/12/2019 14:25	15	Soil	Primary	Х	Х												-
	B57D - 5.0	416244	6/12/2019 13:18	5	Soil	Primary	Х													
	B57D - 5.0 - DUP	416244	6/12/2019 13:18		Soil	Duplicate	Х													
	B57D - 10.0	416244	6/12/2019 14:11		Soil	Primary	Х	Х												
				10	Soil	Duplicate		X												
	B57D - 15.0	416244	6/12/2019 14:14		Soil Con	Primary	Х	X									V			
1 <b>5</b> 0/58	SV58-5.0' SV58-15.0'	F-0170	8/31/2018 14:19 8/31/2018 14:28	5	Soil Gas Soil Gas	Primary											X			
	SV59-5.0'	F-0170 F-0170		5	Soil Gas	Primary Primary											X			
	SV59-15.0'	F-0170	8/31/2018 14:01		Soil Gas	Primary											X			
	SV59-15.0'-Dup	ST-12571		15	Soil Gas	Duplicate											**	Х		
	B60-0.5	T183454	11/19/2018 8:00	0.5	Soil	Primary		Х	Х											
B60	B60-1.5	T183454	11/19/2018 8:02		Soil	Primary		Χ	Χ											
600	B60-2.5	T183454		2.5	Soil	Primary		Χ	Χ											
	B60-5.0	T183454	11/19/2018 8:30	5	Soil	Primary	Х						Х	X	X		<u> </u>			

Table 1
Sample Matrix
Preliminary Endangerment Assessment - Equivalent Report
LAUSD Alexander Hamilton High School, Los Angeles, California

											Soil Sa	mples					Soil Vapor S	Samples	Leaching	Analyses
Location	Sample ID	Analytical Report Number	Sampled Date and Time	Sample Depth	Matrix Type	Sample Type	Title 22 Metals EPA 6010B / 7471A *	As and/or Pb EPA 6020	OCPs EPA 8081	PCBs EPA 8082	PAHs EPA 8270C SIM)	SVOCs EPA 8270C	TPHg EPA 8015M / 5035	TPH d/mo EPA 8015B	VOCs EPA 8260B Soil	Dioxins/Furans EPA 8290	VOCs EPA8260B SV	VOCs EPA TO-15	EPA 6020_TCLP(EPA 6020_TCLP)	EPA 6020_WET(EPA 6020_WET)
	SV60-10.0	T183494	11/21/2018 0:00	10	Soil	Primary	Х						Χ	Χ	Χ					
	SV60-15.0-SO	T183494	11/21/2018 0:00	15	Soil	Primary	Х						Χ	Χ	Χ					
	SV60-5.0	D-1552	11/21/2018 8:48	5	Soil Gas	Primary											Х			
	SV60-15.0-Dup	ST-13007	11/21/2018 13:17		Soil Gas	Duplicate												Χ		
	SV60-15.0-GS	D-1552	11/21/2018 13:13		Soil Gas	Primary											Х			
	B61-0.5	T182803	9/10/2018 9:55	0.5	Soil	Primary		Χ	Х											
	B61-1.5	T182803	9/10/2018 9:56	1.5	Soil	Primary		X	Х											
	B61-2.5	T182803	9/10/2018 9:57	2.5	Soil	Primary		X	Х											
B61/SV6		T182803	9/10/2018 10:05	5	Soil	Primary	Х						Х	Х	Х					
1	B61-10.0	T182803	9/10/2018 10:10	10	Soil	Primary	Х						Х	Х	Х					
	B61-15.0	T182803	9/10/2018 10:15	15	Soil	Primary	Х						Х	Х	Х					
	SV61-5.0'	F-0173	9/10/2018 12:42	5	Soil Gas	Primary											Х			
	SV61-15.0'	F-0173	9/10/2018 14:29	15	Soil Gas	Primary											X			
B61A	B61A-10.0	416293	6/13/2019 7:47	10	Soil	Primary	Х	X												
B61B	B61B-10.0	416293	6/13/2019 7:31	10	Soil	Primary	Х	X												
	B61B-10.0-DUP	416293	6/13/2019 7:31	10	Soil	Duplicate	Х	X												
	B62-0.5	T183454	11/19/2018 8:45	0.5	Soil	Primary		X	Х											
B62	B62-1.5	T183454	11/19/2018 8:47	1.5	Soil	Primary		X	Х											
	B62-2.5	T183454	11/19/2018 8:49	2.5	Soil	Primary		X	X											
	B62-5.0	T183454	11/19/2018 8:55	5	Soil	Primary	Х						X	Х	X					
	SV62-10.0	T183494	11/21/2018 0:00	10	Soil	Primary	Х						X	Х	X					
	SV62-15.0-SO	T183494		15	Soil	Primary	Х						X	Х	X					
	SV62-5.0	D-1552	11/21/2018 9:00	5	Soil Gas	Primary											Х			
	SV62-5.0 REP	D-1552	11/21/2018 9:50	5	Soil Gas	Duplicate											Х			
	SV62-15.0-GS	D-1552	11/21/2018 13:34		Soil Gas	Primary											Х			
	B63-0.5	T182898	9/19/2018 12:25	0.5	Soil	Primary		Х	Х											
B63	B63-1.5	T182898		1.5	Soil	Primary		X	Х											
	B63-2.5	T182898	9/19/2018 12:30		Soil	Primary		X	Х											
	B63-5.0(19)	T182898	9/19/2018 8:45	5	Soil	Primary	Х						Х	Х	Х					
	B63-10.0(24)	T182898	9/19/2018 8:48	10	Soil	Primary	Х						Х	Х	Х					
	B63-15.0(29)	T182898	9/19/2018 8:50	15	Soil	Primary	Х						Х	Х	Х					
B63	B64-19'	F-0180	9/19/2018 11:16	19	Soil Gas	Primary											Х			
	B64-29'	F-0180	9/19/2018 11:35	29	Soil Gas	Primary											Х			
	B64-29' REP	F-0180	9/19/2018 11:49	29	Soil Gas	Duplicate											Х			
	B64-29'-Dup	ST-12676	9/19/2018 12:05	29	Soil Gas	Duplicate												Х		

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LAUSD Alexander Hamilton High School, Los Angeles, California

											Soil Sar	nples					Soil Vapor Sa	mples	Leaching	Analyses
Location	Sample ID	Analytical Report Number	Sampled Date and Time	Sample Depth	Matrix Type	Sample Type	Title 22 Metals EPA 6010B / 7471A *	As and/or Pb EPA 6020	OCPs EPA 8081	PCBs EPA 8082	PAHs EPA 8270C SIM)	SVOCs EPA 8270C	TPHg EPA 8015M / 5035	TPH d/mo EPA 8015B	VOCs EPA 8260B Soil	Dioxins/Furans EPA 8290	VOCs EPA8260B SV	VOCs EPA TO-15	EPA 6020_TCLP(EPA 6020_TCLP)	EPA 6020_WET(EPA 6020_WET)
	B64-0.5	T182898	9/19/2018 13:30	0.5	Soil	Primary		Χ	Χ											
	B64-1.5	T182898	9/19/2018 13:33	1.5	Soil	Primary		X	X											
B64/SV6	B64-2.5 SV64-5.0 (17)	T182898 T183494	9/19/2018 13:35 11/21/2018 0:00	2.5 5	Soil Soil	Primary Primary	Х	X	X				X	X	X					
4	SV64-10.0 (22)	T183494	11/21/2018 0:00	10	Soil	Primary	X						X	X	X					
	SV64-15.0 (27)	T183494	11/21/2018 0:00	15	Soil	Primary	X						X	X	X					
	SV64-20.0	D-1552	11/21/2018 10:30		Soil Gas	Primary											Х			-
	SV64-30.0	D-1552	11/21/2018 10:44	30	Soil Gas	Primary											Х			
	B65-0.5	T182803	9/10/2018 9:10	0.5	Soil	Primary		Χ	X											
	B65-1.5	T182803	9/10/2018 9:11	1.5	Soil	Primary		X	X											
	B65-2.5	T182803	9/10/2018 9:12	2.5	Soil Soil	Primary	V	Х	X				V	V	V					
B65	B65-5.0 B65-10.0	T182803 T182803	9/10/2018 9:15 9/10/2018 9:20	5 10	Soil	Primary Primary	X						X	X	X					
003	B65-15.0	T182803	9/10/2018 9:25	15	Soil	Primary	X						X	X	X					-
	SV65-5.0'	F-0173	9/10/2018 11:52	5	Soil Gas	Primary											Х			
	SV65-15.0'	F-0173	9/10/2018 12:07	15	Soil Gas	Primary											Х			
	SV65-15.0' REP	F-0173	9/10/2018 12:28	15	Soil Gas	Duplicate											Х			
	B66-0.5	T182898	9/19/2018 12:45	0.5	Soil	Primary		Χ	Χ											
B66	B66-1.5	T182898	9/19/2018 12:48	1.5	Soil	Primary		X	X											
	B66-2.5	T182898	9/19/2018 12:50	2.5	Soil	Primary		X	X											
B67	B67-0.5 B67-1.5	T183211 T183211	10/20/2018 14:43 10/20/2018 14:45		Soil Soil	Primary Primary		X	X											
507	B67-2.5	T183211	10/20/2018 14:47		Soil	Primary		X	X											
	B68-0.5	T183211	10/20/2018 8:10	0.5	Soil	Primary		X	X											
B68	B68-1.5	T183211	10/20/2018 8:12	1.5	Soil	Primary		Х	Х											-
	B68-2.5	T183211	10/20/2018 8:15	2.5	Soil	Primary		Χ	Χ											
	B69-0.5	T183212	10/20/2018 8:10	0.5	Soil	Primary		Χ	Χ											
B69	B69-1.5	T183212		1.5	Soil	Primary		X	Х											
	B69-2.5	T183212	10/20/2018 8:12	2.5	Soil	Primary		X	X											
B70	B70-0.5 B70-1.5	T183494 T183494	11/21/2018 0:00 11/21/2018 0:00	0.5 1.5	Soil Soil	Primary Primary		X	X											
	B70A-0.5	416293	6/13/2019 10:38	0.5	Soil	Primary	Х	^	X	X										
B70A	B70A-1.5	416293		1.5	Soil	Primary	X		X	Λ										-
D70D	B70B-0.5	416293	6/13/2019 10:36	0.5	Soil	Primary	Х		X											
B70B	B70B-1.5	416293		1.5	Soil	Primary	Х		Х											
	B70BB-1.5	418214	8/12/2019 0:00	1.5	Soil	Primary		Χ												
	B71-0.5	T182898	9/19/2018 13:20	0.5	Soil	Primary		Χ	Χ											
	B72-0.5	T183211	10/20/2018 14:45		Soil	Primary		X	X	X										
B72	B72-1.5	T183211	10/20/2018 14:50		Soil	Primary		X	X	X										
	B72-2.5	T183211	10/20/2018 14:55	2.5	Soil	Primary		X	Х	Х										

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	T										Soil Sa	mnles					Soil Vapor	Samnles	Leaching	Analyses
								⋖							<u> </u>		_		Leaching	
Location	Sample ID	Analytical Report Number	Sampled Date and Time	Sample Depth	Matrix Type	Sample Type	Title 22 Metals EPA 6010B / 7471A *	As and/or Pb EPA 6020	OCPs EPA 8081	PCBs EPA 8082	PAHS EPA 8270C SIM)	SVOCs EPA 8270C	TPHg EPA 8015M / 5035	TPH d/mo EPA 8015B	VOCs EPA 8260B Soil	Dioxins/Furans EPA 8290	VOCs EPA8260B SV	VOCs EPA TO-15	EPA 6020_TCLP(EPA 6020_TCLP)	EPA 6020_WET(EPA 6020_WET)
	B73-0.5	T182898	9/19/2018 14:10	0.5	Soil	Primary		Х	Х											
B73	B73-1.5	T182898	9/19/2018 14:13	1.5	Soil	Primary		Х	X											
	B73-2.5	T182898	9/19/2018 14:15	2.5	Soil	Primary		X	X											
D7.4	B74-0.5	T182898	9/19/2018 14:25	0.5	Soil	Primary		X	X											
B74	B74-1.5	T182898	9/19/2018 14:27	1.5	Soil	Primary		X	X											
	B74-2.5	T182898	9/19/2018 14:30	2.5	Soil	Primary		X	X											
	B79-0.5	416329	6/14/2019 7:54	0.5	Soil	Primary		X	X	Х										
B79	B79-0.5-DUP	416329	6/14/2019 7:54	0.5	Soil	Duplicate		X	X											
	B79-1.5 B79-2.5	416329 416329	6/14/2019 7:56 6/14/2019 8:01	1.5 2.5	Soil Soil	Primary		X	X											
	B80-0.5	416329	6/14/2019 8:18	0.5	Soil	Primary Primary		X	X											
B80	B80-1.5	416329	6/14/2019 8:21	1.5	Soil	Primary		X	X											
1 500	B80-2.5	416329	6/14/2019 8:25	2.5	Soil	Primary		X	X											
	B81-0.5	416329	6/14/2019 8:20	0.5	Soil	Primary		X	X	X										
	B81-0.5-DUP	416329	6/14/2019 8:10	0.5	Soil	Duplicate		X	X	Λ										-
B81	B81-1.5	416329	6/14/2019 8:11	1.5	Soil	Primary		X	X											-
	B81-2.5	416329	6/14/2019 8:13	2.5	Soil	Primary		X	X											
	B82-0.5	416329	6/14/2019 8:32	0.5	Soil	Primary		X	X											
B82	B82-1.5	416329	6/14/2019 8:34	1.5	Soil	Primary		Х	Х											
	B82-2.5	416329	6/14/2019 8:36	2.5	Soil	Primary		Χ	Х											
	B83-0.5	416329	6/14/2019 7:39	0.5	Soil	Primary		Х	Х	Х										
D02	B83-0.5-DUP	416329	6/14/2019 7:39	0.5	Soil	Duplicate		Χ	Χ											
B83	B83-1.5	416329	6/14/2019 7:43	1.5	Soil	Primary		Χ	Χ											
	B83-2.5	416329	6/14/2019 7:45	2.5	Soil	Primary		Χ	Х											
B83A	B83AA-0.5	418214	8/12/2019 0:00	0.5	Soil	Primary		Χ												
B83B	B83BB-0.5	418214	8/12/2019 0:00	0.5	Soil	Primary		Χ												
B83C	B83CC-0.5	418214	8/12/2019 0:00	0.5	Soil	Primary		Χ												
B83D	B83DD-0.5	418214	8/12/2019 0:00	0.5	Soil	Primary		Χ												
	B84-0.5	416329	6/14/2019 9:36	0.5	Soil	Primary		Х	Х											
B84	B84-1.5	416329	6/14/2019 9:40	1.5	Soil	Primary		Х	Х											
	B84-2.5	416329	6/14/2019 9:42	2.5	Soil	Primary		Х	Х											
	B85-0.5	416329	6/14/2019 9:01	0.5	Soil	Primary		X	X	X			Х	X	X					
B85	B85-0.5-DUP	416329	6/14/2019 9:04	0.5	Soil	Duplicate		X	X				Х	X	X					
	B85-1.5	416329	6/14/2019 9:06	1.5	Soil	Primary		X	X				Х	X	X					
	B85-2.5	416329	6/14/2019 9:09	2.5	Soil	Primary		X	X				X	X	X					
DOC	B86-0.5	416329	6/14/2019 9:17	0.5	Soil	Primary		X	X				X	X	X					
B86	B86-1.5	416329	6/14/2019 9:20	1.5	Soil	Primary		X	X				X	X	X					
	B86-2.5	416329	6/14/2019 9:24	2.5	Soil	Primary	-	X	X				Х	X	Х					
BOO	B90-0.5	T183212	10/20/2018 8:17	0.5	Soil	Primary	-	X	X											
B90	B90-1.5	T183212		1.5	Soil	Primary	-	X	X											
	B90-2.5	T183212	10/20/2018 8:19	2.5	Soil	Primary		Χ	Χ											

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	I										Soil Sa	mples					Soil Vapor S	amples	Leaching	Analyses
Location	Sample ID	Analytical Report Number	Sampled Date and Time	Sample Depth	Matrix Type	Sample Type	Title 22 Metals EPA 6010B / 7471A *	As and/or Pb EPA 6020	OCPs EPA 8081	PCBs EPA 8082	PAHS EPA 8270C SIM)	SVOCs EPA 8270C	TPHg EPA 8015M / 5035	TPH d/mo EPA 8015B	VOCs EPA 8260B Soil	Dioxins/Furans EPA 8290	VOCs EPA8260B SV	VOCs EPA TO-15	EPA 6020_TCLP(EPA 6020_TCLP)	EPA 6020_WET(EPA 6020_WET)
D04	B91-0.5	T183211	10/20/2018 8:30	0.5	Soil	Primary		X	X											
B91	B91-1.5	T183211	10/20/2018 8:35	1.5	Soil	Primary		X	X											
	B91-2.5	T183211 416293	10/20/2018 8:40 6/13/2019 10:08	2.5	Soil Soil	Primary		X	Х											
B91A	B91A-1.5 B91A-1.5-DUP	416293	6/13/2019 10:08	1.5 1.5	Soil	Primary Duplicate		X												X
B91B	B91B-1.5	416293	6/13/2019 10:08	1.5	Soil	Primary		X												
	B91BB-1.5	418214	8/12/2019 0:00	1.5	Soil	Primary		X												
B91C	B91C-1.5	416293	6/13/2019 10:07	1.5	Soil	Primary		X												
BJIC	B92-0.5	T183211	10/20/2018 8:42	0.5	Soil	Primary		X	X											
	B92-0.5-DUP	T183211	10/20/2018 8:42	0.5	Soil	Duplicate		X	X											
	B92-1.5	T183211	10/20/2018 8:45	1.5	Soil	Primary		X	X											
B92	B92-1.5-DUP	T183211	10/20/2018 8:45	1.5	Soil	Duplicate		X	X											-
	B92-2.5	T183211	10/20/2018 8:50	2.5	Soil	Primary		X	X											
	B92-2.5-DUP	T183211	10/20/2018 8:50	2.5	Soil	Duplicate		X	X											
	B93-0.5	T183212	10/20/2018 8:40	0.5	Soil	Primary		X	Х											
B93	B93-1.5	T183212	10/20/2018 8:41	1.5	Soil	Primary		Х	Х											
	B93-2.5	T183212	10/20/2018 8:42	2.5	Soil	Primary		Х	Х											
	B94-0.5	416293	6/13/2019 13:17	0.5	Soil	Primary		Χ	Х											
B94	B94-1.5	416293	6/13/2019 13:21	1.5	Soil	Primary		Х	Х											
	B94-2.5	416293	6/13/2019 13:24	2.5	Soil	Primary		Χ	Х											
	B95-0.5	416293	6/13/2019 13:33	0.5	Soil	Primary		Χ	Χ											
B95	B95-1.5	416293	6/13/2019 13:37	1.5	Soil	Primary		Χ	Χ											
	B95-2.5	416293	6/13/2019 13:40	2.5	Soil	Primary		Χ	Χ											
	B96-0.5	416293	6/13/2019 13:51	0.5	Soil	Primary		Χ	Χ											
B96	B96-1.5	416293	6/13/2019 13:54	1.5	Soil	Primary		Χ	Χ											
	B96-2.5	416293	6/13/2019 13:56	2.5	Soil	Primary		Χ	Χ											
	B97-0.5	416293	6/13/2019 14:03	0.5	Soil	Primary		Χ	Χ											
	B97-1.5	416293	6/13/2019 14:05		Soil	Primary		Χ	Χ											
	B97-2.5	416293	6/13/2019 14:11		Soil	Primary		Χ	Χ											
	B98-0.5	416329	6/14/2019 11:20		Soil	Primary	Х	Х	Х				X	Х						
B98	B98-1.5	416329	6/14/2019 11:22		Soil	Primary	Х	Х	X				Х	Х						
	B98-2.5	416329	6/14/2019 11:27		Soil	Primary	Х	Х	Х				Х	Х						
	B99-0.5	416329	6/14/2019 10:55		Soil	Primary	X	X	X				X	X						
Ruu	B99-0.5-DUP	416329	6/14/2019 10:55		Soil	Duplicate	X	X	X				X	X						
	B99-1.5	416329	6/14/2019 10:57		Soil	Primary	X	X	X				X	X						
	B99-2.5	416329	6/14/2019 11:00		Soil	Primary	X	X	X				X	X						
	B100-0.5	416329	6/14/2019 10:40		Soil	Primary	X	X	X				X	X						
B100	B100-1.5	416329	6/14/2019 10:43		Soil	Primary	X	X	X				X	X						
	B100-2.5	416329	6/14/2019 10:45	2.5	Soil	Primary	Х	Х	Х				Х	Х						

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Location	Sample ID	Analytical Report Number	Sampled Date and Time	Sample Depth	Matrix Type	Sample Type	Title 22 Metals EPA 6010B / 7471A *	As and/or Pb EPA 6020	OCPs EPA 8081	PCBs EPA 8082	PAHs EPA 8270C SIM)	SVOCs EPA 8270C	TPHg EPA 8015M / 5035	TPH d/mo EPA 8015B	VOCs EPA 8260B Soil	Dioxins/Furans EPA 8290	VOCs EPA8260B SV	VOCs EPA TO-15	EPA 6020_TCLP(EPA 6020_TCLP)	EPA 6020_WET(EPA 6020_WET)
	B101-0.5	416329	6/14/2019 10:04	0.5	Soil	Primary	Х	Χ	Χ	Х			Х	Х						
B101	B101-0.5-DUP	416329	6/14/2019 10:05	0.5	Soil	Duplicate	Х	Χ	Χ				Χ	Χ						
B101	B101-1.5	416329	6/14/2019 10:10	1.5	Soil	Primary	Χ	Χ	Χ				Χ	Χ						
	B101-2.5	416329	6/14/2019 10:12	2.5	Soil	Primary	Χ	Χ	Χ				Χ	Χ						
	B102-0.5	416329	6/14/2019 10:15	0.5	Soil	Primary	Χ	Χ	Χ				Χ	Χ						
B102	B102-1.5	416329	6/14/2019 10:19	1.5	Soil	Primary	Х	Χ	Χ				Χ	Χ						
	B102-2.5	416329	6/14/2019 10:21	2.5	Soil	Primary	Х	Χ	Χ				Χ	Χ						
	B103-0.5	416329	6/14/2019 12:35	0.5	Soil	Primary		Χ	Χ	Χ										
B103	B103-0.5-DUP	416329	6/14/2019 12:35	0.5	Soil	Duplicate		Χ	Χ											
1 5103	B103-1.5	416329	6/14/2019 12:37	1.5	Soil	Primary		Χ	Χ											
	B103-2.5	416329	6/14/2019 12:39	2.5	Soil	Primary		Χ	Χ											
	B104-0.5	416329	6/14/2019 12:28	0.5	Soil	Primary		Χ	Χ											
B104	B104-1.5	416329	6/14/2019 12:30	1.5	Soil	Primary		Χ	Χ											
	B104-2.5	416329	6/14/2019 12:32	2.5	Soil	Primary		Χ	Χ											
	B105-0.5	416329	6/14/2019 12:20	0.5	Soil	Primary		Χ	Χ	Χ										
B105	B105-0.5-DUP	416329	6/14/2019 12:24	0.5	Soil	Duplicate		Χ	Χ											
D103	B105-1.5	416329	6/14/2019 12:20	1.5	Soil	Primary		Χ	Χ											
	B105-2.5	416329	6/14/2019 12:23	2.5	Soil	Primary		Χ	Χ											
	B106-0.5	416329	6/14/2019 12:10	0.5	Soil	Primary		Χ	Χ											
B106	B106-1.5	416329	6/14/2019 12:12	1.5	Soil	Primary		Χ	Χ											
	B106-2.5	416329	6/14/2019 12:14	2.5	Soil	Primary		Χ	Χ											
	B107-0.5	416329	6/14/2019 11:59	0.5	Soil	Primary		Χ	Χ	Χ										
B107	B107-0.5-DUP	416329	6/14/2019 11:59	0.5	Soil	Duplicate				Χ										
D107	B107-1.5	416329	6/14/2019 12:01	1.5	Soil	Primary		Χ	Χ											
	B107-2.5	416329	6/14/2019 12:06	2.5	Soil	Primary		Χ	Χ											
	B108-0.5	416329	6/14/2019 11:49	0.5	Soil	Primary		Χ	Χ											
B108	B108-1.5	416329	6/14/2019 11:51	1.5	Soil	Primary		Χ	Χ											
	B108-2.5	416329		2.5	Soil	Primary		Χ	Χ											
	B109-0.5	416329	6/14/2019 11:39	0.5	Soil	Primary		X	Х											
B109	B109-1.5	416329		1.5	Soil	Primary		X	Χ											
	B109-2.5	416329	6/14/2019 11:42	2.5	Soil	Primary		X	X											
	SV110-5.0	D-1648	6/14/2019 11:28	5	Soil Gas	Primary											Х			
SV110	SV110-15.5	D-1648	6/14/2019 11:45	15.5	Soil Gas	Primary											Х			
	SV110-15.5 REP	D-1648	6/14/2019 11:50	15.5	Soil Gas	Duplicate											Х			
	SV111-5.0	D-1648	6/14/2019 12:21	5	Soil Gas	Primary											Х			
SV111	SV111-5.0-Dup	ST-13880	6/14/2019 13:23	5	Soil Gas	Duplicate												X		
	SV111-15.5	D-1648	6/14/2019 12:39	15.5	Soil Gas	Primary											Х			
SV112	SV112-5.0	D-1648	6/14/2019 13:00	5	Soil Gas	Primary											Х			
	SV112-15.5	D-1648	6/14/2019 13:13	15.5	Soil Gas	Primary											Х			
SV113	SV113-5.0	ST-14158	8/14/2019 11:34	5	Soil Gas	Primary												X		
	SV113-15.0	ST-14158	8/14/2019 11:30	15	Soil Gas	Primary												X		

## Table 1 Sample Matrix

Preliminary Endangerment Assessment - Equivalent Report LAUSD Alexander Hamilton High School, Los Angeles, California

											Soil Sa	mples					Soil Vapor	Samples	Leaching	Analyses
Location	Sample ID	Analytical Report Number	Sampled Date and Time	Sample Depth	Matrix Type	Sample Type	Title 22 Metals EPA 6010B / 7471A *	As and/or Pb EPA 6020	OCPs EPA 8081	PCBs EPA 8082	PAHs EPA 8270C SIM)	SVOCs EPA 8270C	TPHg EPA 8015M / 5035	TPH d/mo EPA 8015B	VOCs EPA 8260B Soil	Dioxins/Furans EPA 8290	VOCs EPA8260B SV	VOCs EPA TO-15	EPA 6020_TCLP(EPA 6020_TCLP)	EPA 6020_WET(EPA 6020_WET)
1 <b>SVII</b> 4 <b>E</b>	SV114-5.0	ST-14158	8/14/2019 12:07	5	Soil Gas	Primary												Х		
S	SV114-15.0	ST-14158	8/14/2019 11:56	15	Soil Gas	Primary												Χ		
1 SV115 -	SV115-5.0	ST-14158	8/14/2019 12:19	5	Soil Gas	Primary												Χ		
S	SV115-15.0	ST-14158		15	Soil Gas	Primary												Χ		
	SV116-5.0	ST-14158		5	Soil Gas	Primary												Χ		
SV116 S	SV116-15.0	ST-14158		15	Soil Gas	Primary												Χ		
S	SV116-15.0 REP	ST-14158	8/14/2019 12:57	15	Soil Gas	Duplicate												Χ		
S	SV117-5.0	421801	11/23/2019 8:35	5	Soil	Primary									Χ					
S	SV117-10.0	421801	11/23/2019 8:45	10	Soil	Primary									Χ					
S	SV117-15.0	421801	11/23/2019 9:00	15	Soil	Primary									Χ					
S	SV117-15.0-DUP	421801	11/23/2019 9:02	15	Soil	Duplicate									Χ					
SV117 S	SV117-25.0	421801	11/23/2019 9:05	25	Soil	Primary									Χ					
S	SV117-5	E911113	11/25/2019 0:00	5	Soil Gas	Primary												Χ		
S	SV117-10	E911113	11/25/2019 0:00	10	Soil Gas	Primary												Χ		
S	SV117-15	E911113	11/25/2019 0:00	15	Soil Gas	Primary												Χ		
S	SV117-25	E911113	11/25/2019 0:00	25	Soil Gas	Primary												Χ		
S	SV118-5.0	421801	11/23/2019 9:40	5	Soil	Primary									Χ					
S	SV118-10.0	421801	11/23/2019 10:00	10	Soil	Primary									Χ					
S	SV118-15.0	421801	11/23/2019 10:04	15	Soil	Primary									Х					
S	SV118-25.0	421801	11/23/2019 10:12	25	Soil	Primary									Х					
SV110 S	SV118-5	E911115	11/25/2019 0:00	5	Soil Gas	Primary												Х		
SV118 S	SV118-5-Rep	E911115	11/25/2019 0:00	5	Soil Gas	Duplicate												Х		
S	SV118-10	E911113	11/25/2019 0:00	10	Soil Gas	Primary												Х		
S	SV118-15	E911113	11/25/2019 0:00	15	Soil Gas	Primary												Х		
S	SV118-25	E911113	11/25/2019 0:00	25	Soil Gas	Primary												Х		
S	SV118-25-Rep	E911113	11/25/2019 0:00	25	Soil Gas	Duplicate												Х		
S	SV119-5.0	421801	11/23/2019 9:30	5	Soil	Primary									Х					
S	SV119-10.0	421801	11/23/2019 13:24	10	Soil	Primary									Χ					
S	SV119-15.0	421801	11/23/2019 13:30		Soil	Primary									Χ					
SV110 S	SV119-25.0	421801	11/23/2019 14:00		Soil	Primary									Χ					
SV119 S	SV119-5	E911115	11/25/2019 0:00	5	Soil Gas	Primary												Х		
l —	SV119-10	E911113	11/25/2019 0:00		Soil Gas	Primary												Х		
S	SV119-15	E911113		15	Soil Gas	Primary												Х		
ı 🗁	SV119-25	E911113		25	Soil Gas	Primary												Х		

Table 1
Sample Matrix
Preliminary Endangerment Assessment - Equivalent Report
LAUSD Alexander Hamilton High School, Los Angeles, California

											Soil Sar	mples					Soil Vapor	Samples	Leaching	Analyses
Location	Sample ID	Analytical Report Number	Sampled Date and Time	Sample Depth	Matrix Type	Sample Type	Title 22 Metals EPA 6010B / 7471A *	As and/or Pb EPA 6020	OCPs EPA 8081	PCBs EPA 8082	PAHS EPA 8270C SIM)	SVOCs EPA 8270C	TPHg EPA 8015M / 5035	TPH d/mo EPA 8015B	VOCs EPA 8260B Soil	Dioxins/Furans EPA 8290	VOCs EPA8260B SV	VOCs EPA TO-15	EPA 6020_TCLP(EPA 6020_TCLP)	EPA 6020_WET(EPA 6020_WET)
	SV120-5.0	421801	11/23/2019 11:10		Soil	Primary									Χ					
	SV120-5.0-DUP	421801	11/23/2019 11:12		Soil	Duplicate									Χ					
	SV120-10.0	421801	11/23/2019 11:25		Soil	Primary									X					
	SV120-15.0	421801	11/23/2019 11:30		Soil	Primary									X					
	SV120-25.0	421801	11/23/2019 11:40		Soil	Primary									Χ					
	SV120-5	E911115	11/25/2019 0:00	5	Soil Gas	Primary												X		
	SV120-10	E911113		10	Soil Gas	Primary												X		
	SV120-15	E911113		15	Soil Gas	Primary												X		
	SV120-25	E911113		25	Soil Gas	Primary												Х		
	SV121-5.0	421801	11/23/2019 10:55		Soil	Primary									X					
	SV121-10.0 SV121-15.0	421801	11/23/2019 12:57 11/23/2019 13:02		Soil	Primary									X					
		421801 421801	11/23/2019 13:02		Soil Soil	Primary									X					
SV121	SV121-25.0 SV121-5	E911115	11/25/2019 13:07	5	Soil Gas	Primary Primary									Α			Х		
	SV121-10	E911113	11/25/2019 0:00	10	Soil Gas	Primary												X		
	SV121-10	E911113		15	Soil Gas	Primary												X		
	SV121-15	E911113	11/25/2019 0:00	25	Soil Gas	Primary												X		
	SV121-23	421801	11/23/2019 13:42		Soil	Primary									Х					
	SV122-10.0	421801	11/23/2019 13:45		Soil	Primary									X					
	SV122-15.0	421801	11/23/2019 13:50		Soil	Primary									X					-
	SV122-25.0	421801	11/23/2019 13:55		Soil	Primary									X					-
	SV122-25.0-DUP	421801	11/23/2019 13:57		Soil	Duplicate									X					
	SV122-5	E911115	11/25/2019 0:00	5	Soil Gas	Primary												Х		
	SV122-5-Rep	E911115	11/25/2019 0:00	5	Soil Gas	Duplicate												Х		
	SV122-10	E911113		10	Soil Gas	Primary												Х		
	SV122-15	E911113		15	Soil Gas	Primary												Х		
	SV122-25	E911113	11/25/2019 0:00	25	Soil Gas	Primary												Χ		
	AB01-1.0	412613		1	Soil	Primary		Х												
	AB01-5.0	412613	2/18/2019 8:01	5	Soil	Primary		Χ												
	AB01-10.0	412613	2/18/2019 8:15	10	Soil	Primary		Χ												
	AB01-15.0	412613	2/18/2019 8:21	15	Soil	Primary		Χ												
	AB01-20.0	412613	2/18/2019 8:28	20	Soil	Primary		Χ												
	AB01-25.0	412613	2/18/2019 8:35	25	Soil	Primary		X												
	AB01-30.0	412613	2/18/2019 8:46	30	Soil	Primary		Х												
	AB02-1.0	412613	2/18/2019 8:48	1	Soil	Primary		Х												
	AB02-5.0	412613	2/18/2019 8:52	5	Soil	Primary		X												
	AB02-10.0	412613	2/18/2019 9:00	10	Soil	Primary		X												
AB02	AB02-15.0	412613	2/18/2019 9:05	15	Soil	Primary		X												
	AB02-15.0-DUP	412613	2/18/2019 9:05	15	Soil	Duplicate		X												
	AB02-20.0	412613	2/18/2019 9:10	20	Soil	Primary		X												
	AB02-25.0	412613	2/18/2019 9:15	25	Soil	Primary		X												
	AB02-29.0	412613	2/18/2019 9:30	29	Soil	Primary		Х												

Table 1
Sample Matrix
Preliminary Endangerment Assessment - Equivalent Report
LAUSD Alexander Hamilton High School, Los Angeles, California

											Soil Sar	mples					Soil Vapor S	Samples	Leaching	Analyses
Location	Sample ID	Analytical Report Number	Sampled Date and Time	Sample Depth	Matrix Type	Sample Type	Title 22 Metals EPA 6010B / 7471A *	As and/or Pb EPA 6020	OCPs EPA 8081	PCBs EPA 8082	PAHS EPA 8270C SIM)	SVOCs EPA 8270C	TPHg EPA 8015M / 5035	TPH d/mo EPA 8015B	VOCs EPA 8260B Soil	Dioxins/Furans EPA 8290	VOCs EPA8260B SV	VOCs EPA TO-15	EPA 6020_TCLP(EPA 6020_TCLP)	EPA 6020_WET(EPA 6020_WET)
	AB03-1.0	412613	2/18/2019 9:35	1	Soil	Primary		Χ												
	AB03-5.0	412613	2/18/2019 9:40	5	Soil	Primary		Х												
	AB03-10.0	412613	2/18/2019 9:50	10	Soil	Primary		X												
4000	AB03-10.0-DUP	412613	2/18/2019 9:50	10	Soil	Duplicate		X												
AB03	AB03-15.0 AB03-20.0	412613	2/18/2019 9:53	15	Soil	Primary		X												
	AB03-25.0	412613 412613	2/18/2019 9:58 2/18/2019 10:05	20 25	Soil Soil	Primary Primary		X												
	AB03-25.0-DUP	412613	2/18/2019 10:05	25	Soil	Duplicate		X												
	AB03-30.0	412613	2/18/2019 10:10	30	Soil	Primary		X												-
	AB04-1.0	412613	2/18/2019 11:36	1	Soil	Primary		X												
	AB04-5.0	412613	2/18/2019 11:49	5	Soil	Primary		Х												
	AB04-5.0-DUP	412613	2/18/2019 11:49	5	Soil	Duplicate		Х												
AB04	AB04-10.0	412613	2/18/2019 12:03	10	Soil	Primary		Х												
7504	AB04-15.0	412613	2/18/2019 12:11	15	Soil	Primary		Χ												
	AB04-20.0	412613	2/18/2019 12:26	20	Soil	Primary		Χ												
	AB04-25.0	412613	2/18/2019 12:46	25	Soil	Primary		Х												
	AB04-30.0	412613	2/18/2019 12:54	30	Soil	Primary		X												
	AB05-1.0	412613	2/18/2019 13:30	1	Soil	Primary		X												
	AB05-1.0-DUP AB05-5.0	412613 412613	2/18/2019 13:30 2/18/2019 13:38	5	Soil Soil	Duplicate Primary		X												
	AB05-10.0	412613	2/18/2019 13:55	10	Soil	Primary		X												
AB05	AB05-15.0	412613	2/18/2019 13:53	15	Soil	Primary		X												
	AB05-20.0	412613	2/18/2019 14:04	20	Soil	Primary		X												
	AB05-25.0	412613	2/18/2019 14:10	25	Soil	Primary		Х												
	AB05-29.5	412613	2/18/2019 14:20	29.5	Soil	Primary		Х												
	AB06-1.0	412613	2/18/2019 15:55	1	Soil	Primary		Χ												
	AB06-5.0	412613	2/18/2019 16:00	5	Soil	Primary		Χ												
	AB06-10.0	412613	2/18/2019 16:10		Soil	Primary		Χ												
AB06	AB06-15.0	412613		15	Soil	Primary		Х												
	AB06-20.0	412613	2/18/2019 16:20		Soil	Primary		X												
	AB06-25.0	412613	2/18/2019 16:25		Soil	Primary		X												
	AB06-30.0 AB07-1.0	412613	2/18/2019 16:30		Soil	Primary		X												
1	AB07-1.0 AB07-5.0	412613 412613	2/18/2019 11:35 2/18/2019 11:50		Soil Soil	Primary Primary		X												
	AB07-3.0 AB07-10.0	412613		10	Soil	Primary		X												
	AB07-15.0	412613		15	Soil	Primary		X												
AB07	AB07-20.0	412613		20	Soil	Primary		X												
	AB07-20.0-DUP	412613		20	Soil	Duplicate		X												
	AB07-25.0	412613	2/18/2019 12:30		Soil	Primary		Х												
	AB07-30.0	412613	2/18/2019 12:45	30	Soil	Primary	-	Х	-	-	-	-	-	-	-	-		-	-	

Table 1 Sample Matrix

Preliminary Endangerment Assessment - Equivalent Report LAUSD Alexander Hamilton High School, Los Angeles, California

											Soil Sa	mples					Soil Vapor	r Samples	Leaching A	Analyses
Location	Sample ID	Analytical Report Number	Sampled Date and Time	Sample Depth	Matrix Type	Sample Type	Title 22 Metals EPA 6010B / 7471A *	As and/or Pb EPA 6020	OCPs EPA 8081	PCBs EPA 8082	PAHS EPA 8270C SIM)	SVOCs EPA 8270C	TPHg EPA 8015M / 5035	TPH d/mo EPA 8015B	VOCs EPA 8260B Soil	Dioxins/Furans EPA 8290	VOCs EPA8260B SV	VOCs EPA TO-15	EPA 6020_TCLP(EPA 6020_TCLP)	EPA 6020_WET(EPA 6020_WET)
	AB08-1.0	412613	2/18/2019 14:52	1	Soil	Primary		Χ												
	AB08-5.0	412613	2/18/2019 15:05	5	Soil	Primary		Χ												
	AB08-10.0	412613	2/18/2019 15:25	10	Soil	Primary		Χ												
AB08	AB08-15.0	412613	2/18/2019 15:30	15	Soil	Primary		Χ												
	AB08.20.0	412613	2/18/2019 15:35	20	Soil	Primary		Χ												
	AB08-25.0	412613	2/18/2019 15:40	25	Soil	Primary		Χ												
	AB08-29.5	412613	2/18/2019 15:41	29.5	Soil	Primary		Χ												
	AB09-1.0	412613	2/18/2019 13:31	1	Soil	Primary		Χ												
	AB09-5.0	412613	2/18/2019 13:43	5	Soil	Primary		Χ												
	AB09-10.0	412613	2/18/2019 13:58	10	Soil	Primary		Χ												
AB09	AB09-10.0-DUP	412613	2/18/2019 13:58	10	Soil	Duplicate		Χ												
	AB09-15.0	412613	2/18/2019 14:06	15	Soil	Primary		Χ												
	AB09-20.0	412613	2/18/2019 14:33	20	Soil	Primary		Χ												
	AB09-25.0	412613	2/18/2019 14:59	25	Soil	Primary		Χ												

## Notes

\* Primary samples analyzed for all Title 22 Metals. Step-out samples only analyzed for chemicals above screening levels.

OCPs = organochlorine pesticides

PCBs = polychlorinated biphenyls

PAHs = polyaromatic hydrocarbons

SIM = selective ion monitoring

TPH = total petroluem hydrocarbons

SVOCs = semivolatile organic compounds

VOCs = volatile organic compounds

EPA = United States Environmental Protection Agency

Table 2											Metal	S									
Summary of So	oil Analytical Results for Meta	ıls								(-											
Preliminary End	dangerment Assessment – Equ	uivalent Report								(111+71)					_						ı
Alexander Ham	nilton High School, Los Angeles	s, California								=					בַ					_	1
					Antimony	ا ا	_	E	<u>ڇ</u>	Chromium				2	Molybdenum		띹		Ε	Vanadium	1
					Ĕ	eni.	iun	γ	Ē	m o	alt	be	ъ	2	<u>\$</u>	kel	enic	er	≅	ıadi	
					Ant	Arsenic	Barium	Beryllium	Cadmium	Chr	Cobalt	Copper	Lead	Mercury	Š	Nickel	Selenium	Silver	Thallium	Var	Zinc
					mg/kg				mg/kg				mg/kg		mg/kg		mg/kg		mg/kg	mg/kg	mg/kg
HHRA Note 3 F	Residential Soil DTSC - Most	Stringent April 201	19		0, 0	0, 0	<i>U, U</i>	16	<i>J. J</i>	0, 0	0. 0	<i>J, J</i>	80	1	<i>0,</i> 0	820	<u> </u>	<i>0,</i> 0	<u> </u>	0, 0	<u> </u>
Site Specific Ba	ackground					28															
<b>USEPA</b> Resider	ntial Soil - Most Stringent (TF	R=1E-06, HQ=1.0) N	May 2019		31		15000	160	0 71	0	23	3100	400	11	390	1500	390	390	0.78	390	23000
Location	Sample Depth (ft)	Field ID	Sample Date	SDG																	1
	5	B02-5.0	9/10/2018	T182803	<3	21	120	<1	<2	34	19	29	13	<0.1	<5	29	<5	<2	<2	62	68
B02	10	B02-10.0	9/10/2018	T182803	<3	19	100	<1	<2	38	19	28	9.6	<0.1	<5	30	<5	<2	<2	64	61
	15	B02-15.0	9/10/2018	T182803	<3	21	53	<1	<2	24	15	22	<3	<0.1	<5	22	<5	<2	<2	40	39
1	0.5	B03-0.5	9/10/2018	T182803	-	23	-	-	- ]	-	-	-	18	- ]	-	-	-	-	-	-	
B03	1.5	B03-1.5	9/10/2018	T182803	-	17	-	-	-	-	-		300	-	-	-	-	-	-	-	
	2.5	B03-2.5	9/10/2018	T182803	-	19	-	-	-	-	-	-	7.5	-	-	-	-	-	-	-	
B03A	1.5	B03A-1.5	6/13/2019	416293	-	-	-	-	-	-	-	-	7.38	-	-	-	-	-	-	-	-
B03B	1.5	B03B-1.5	6/13/2019	416293	-	-	-	-	-	-	-	-	23.7	-	-	-	-	-	-	-	-
B03C	1.5	B03C-1.5	6/13/2019	416293	-	-	-	-	-	-	-	-	105	-	-	-	-	-	-	-	-
B03CC	1.5	B03-CC-1.5	8/16/2019	418425	-	-	-	-	-	-	-	-	8.82	-	-	-	-	-	-	-	-
	2.5	B04-2.5	9/19/2018	T182898	16	23	200	<1	<2	42	18	38	13	<0.1	<5	40	<5	<2	<2	83	84
B04		B04-2.5 DUP	9/19/2018	T182898	9.8	20	160	<1	<2	42	17	38	8	<0.1	<5	43	<5	<2	<2	84	84
	5	B04-5.0	9/19/2018	T182898	7.4	16	150	<1	<2	39	17	34	6.3	<0.1	<5	36	<5	<2	<2	74	82
	0.5	B05-0.5	8/31/2018	T182726	-	17	-	-	-	-	-	-	11	-	-	-	-	-	-	-	-
	1.5	B05-1.5	8/31/2018	T182726	-	18	-	-	-	-	-	-	12	-	-	-	-	-	-	-	-
B05	2.5	B05-2.5	8/31/2018	T182726	-	20	-	-	-	-	-	-	18	-	-	-	-	-	-	-	-
	5	B05-5.0	8/31/2018	T182726	<3	8.1	130	<1	<2	29	11	27	<3	<0.1	<5	25	<5	<2	<2	62	68
	10	B05-10.0	8/31/2018	T182726	<3	6.9	110	<1	<2	30	9.7	24	<3	<0.1	<5	24	<5	<2	<2	60	59
	15	B05-15.0	8/31/2018	T182726	<3	26	150	<1	<2	46	14	40	8.1	<0.1	<5	33	<5	<2	<2	90	86
	0.5	B06-0.5	9/10/2018	T182803	-	8.4	-	-	-	-	-	-	21	-	-	-	-	-	-	-	-
В06	1.5	B06-1.5	9/10/2018	T182803	-	20	-	-	-	-	-	-	11	-	-	-	-	-	-	-	-
	2.5	B06-2.5	9/10/2018	T182803	-	21	-	-	-	-	-	-	12	-	-	-	-	-	-	-	-
D07	0.5	B07-0.5	9/10/2018	T182803	-	17	-	-	-	-	-	-	15	-	-	-	-	-	-	-	
B07	1.5	B07-1.5	9/10/2018	T182803	-	14	-	-	-	-	-	-	9.9	-	-	-	-	-	-	-	-
	2.5	B07-2.5	9/10/2018	T182803	-	14	-	-	-	-	-	-	7.1	-	-	-	-	-	-	-	
DOO	0.5	B08-0.5	9/10/2018	T182803	-	12	-	-	-	-	-	-	11	-	-	-	-	-	-	-	-
B08	1.5	B08-1.5	9/10/2018	T182803	-	17	-	-	-	-	-	-	8.1	-	-	-	-	-	-	-	-
	2.5	B08-2.5	9/10/2018	T182803	-	22	-	-	-	-	-	-	8.1	-	-	-	-	-	-	-	
B09	0.5	B09-0.5	9/10/2018	T182803	-	15	-	-	-	-	-	-	14	-	-	-	-	-	-	-	-
BUS	1.5	B09-1.5	9/10/2018	T182803	-	19	-	-	-	-	-	-	9.9	-	-	-	-	-	-	-	
	2.5	B09-2.5	9/10/2018	T182803	-	21 18	-	-		-	-		8.5		-	<del>  -</del>	-	-	-	-	
B10	0.5	B10-0.5	9/10/2018 9/10/2018	T182803 T182803	-	_	-	-		-	-	-	90	-	-	-	-	-	-	-	
l pin	1.5 2.5	B10-1.5 B10-2.5	9/10/2018	T182803	-	20	-	-	-	-	<del>-</del> -		11		-	<del>  -</del>	-	-	-	-	
	۷.۵	B10-2.5 B10A-0.5	6/13/2019	416293	-	22	-	-	-	-	-		9.9	-	-	-	-	-	-	-	
B10A	0.5		6/13/2019		-	+ -	-	-	-	-	<del>-</del> -		17.9		-	<del>  -</del>	-	-	-	-	
B10B	0.5	B10A-0.5-DUP		416293	-	+ -	-	-	-	-	-		15.7	-	-	<del>  -</del>	-	-	-	-	
H		B10B-0.5	6/13/2019	416293	-	+ -	-	-		-	-		7.56		-	-	-	-	-	-	
B10C	0.5	B10C-0.5	6/13/2019	416293	-	-	-	-	-	-	-	-	21.7	-	-	-	-	-	-	-	

Table 2												Metal	<u> </u>								
	oil Analytical Results for Meta	ıls							<u>-</u>			.v.ctai	_							$\Box$	
· ·	dangerment Assessment – Equ nilton High School, Los Angeles	•			Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium (III+VI)	Cobalt	Copper	ead	Mercury	Molybdenum	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc
					mg/kg	•	mg/kg				-		mg/kg		mg/kg	mg/kg			<u>⊢</u> mg/kg		mg/kg
HHRA Note 3 F	Residential Soil DTSC - Most	Stringent April 201	9		1116/116	1116/116	1116/116	16	1116/116	1116/116	1116/116	1116/116	80	1	1116/116	820	1116/116	1116/116	1116/116	1116/116	1116/116
Site Specific Ba		80 0 p				28								_		010					
	ntial Soil - Most Stringent (Ti	R=1E-06, HQ=1.0) N	Лау 2019		31		15000	160	0 71	0	23	3100	400	11	390	1500	390	390	0.78	390	23000
Location	Sample Depth (ft)	Field ID	Sample Date	SDG																	
	0.5	B11-0.5	10/20/2018	T183212	-	21	-	-	-	-	-	-	9.9	-	-	-	-	-	-	-	-
B11	1.5	B11-1.5	10/20/2018	T183212	-	37	-	-	-	-	-	-	34	-	-	-	-	-	-	-	-
	2.5	B11-2.5	10/20/2018	T183212	-	44	-	-		-	-		40	-	-		-	-	-	-	
	1.5	B11A-1.5	6/13/2019	416293	-	3.93	-	-	-	-	-	-	ı	-	-	-	-	-	-	-	-
B11A	1.5	B11A-1.5-DUP	6/13/2019	416293	-	9.12	-	-	-	-	-	-	ı	-	-	-	-	-	-	-	-
	2.5	B11A-2.5	6/13/2019	416293	-	15.9	-	-	-	-	-	-	ı	-	•	-	•	-	-	-	-
B11B	1.5	B11B-1.5	6/13/2019	416293	-	26.6	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-
DIID	2.5	B11B-2.5	6/13/2019	416293	-	40.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
B11BB	2.5	B11BB-2.5	8/12/2019	418214	-	16.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
B11C	1.5	B11C-1.5	6/13/2019	416293	-	87.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BIIC	2.5	B11C-2.5	6/13/2019	416293	-	29.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
B11D	1.5	B11D-1.5	6/13/2019	416293	-	36.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5115	2.5	B11D-2.5	6/13/2019	416293	-	16.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
B11DD	1.5	B11DD-1.5	8/12/2019	418214	-	42.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
B11DDD	1.5	B11-DDD-1.5	11/23/2019	421801	-	54.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	0.5	B12-0.5	10/20/2018	T183212	-	5.3	-	-	-	-	-	-	270	-	-	-	-	-	-	-	-
B12	1.5	B12-1.5	10/20/2018	T183212	-	14	-	-	-	-	-	-	8.1	-	-	-	-	-	-	-	-
	2.5	B12-2.5	10/20/2018	T183212	-	17	-	-	-	-	-	-	6.5	-	-	-	-	-	-	-	-
B12A	0.5	B12A-0.5	6/13/2019	416293	-	-	-	-	-	-	-	-	136	-	-	-	-	-	-	-	-
		B12A-0.5-DUP	6/13/2019	416293	-	<u> </u>	-	-	-	-	-	-	131	-	-	-	-	-	-	-	
B12AA	0.5	B12AA-0.5	8/12/2019	418214	-	-	-	-	-	-	-	-	9.71	-	-	-	-	-	-	-	
B12B	0.5	B12B-0.5	6/13/2019	416293	-	<u> </u>	-	-	-	-	-	-	132	-	-	-	-	-	-	-	<u> </u>
B12BB	0.5	B12BB-0.5	8/12/2019	418214	-	-	-	-	-	-	-	-	190	-	-	-	-	-	-	-	<u> </u>
B12BBB	0.5	B12-BBB-0.5	11/23/2019	421801	-	<del>  -</del>	-	-	-	-	-	-	1030	-	-	-	-	-	-	-	<del>-</del>
		B12-BBB-0.5-DUP	11/23/2019	421801	-	-	-	-	-	-	-	-	32	-	-	-	-	-	-	-	<u> </u>
B12C	0.5	B12C-0.5	6/13/2019	416293	-	-	-	-	-	-	-	-	336	-	-	-	-	-	-	-	<u> </u>
B12CC	0.5	B12CC-0.5	8/12/2019	418214	-	<del>  -</del>	-	-	-	-	-	-	6.09	-	-	-	-	-	-	-	$\vdash$
B12D	0.5	B12D-0.5	6/13/2019	416293	-	<del>  -</del>	-	-	-	-	-	-	412	-	-	-	-	-	-	-	<del>-</del>
B12DD	0.5	B12DD-0.5	8/12/2019	418214	-	-	-	-	-	-	-	-	92.5	-	-	-	-	-	-	-	$\vdash$
	0.5	B13-0.5	10/20/2018	T183211	-	14	-	-	-	-	-	-	36	-	-	-	-	-	-	-	<del>-</del>
B13		B13-0.5-DUP	10/20/2018	T183211	-	14	-	-	-	-	-	<del>-</del> -	7.9	-	-	-	-	-	-	-	<del>-</del>
	1.5	B13-1.5 B13-2.5	10/20/2018 10/20/2018	T183211	-	21	-	-	-	-	-	-	15	-	-	-	-	-	-	-	<del></del>
	2.5	T183211	-	16	-	-	-	-	-	-	16	-	-	-	-	-	-	-			

Table 2												Metal	s								
I =	oil Analytical Results for Meta									Ē											
-	dangerment Assessment – Equ	•								(III+VI)					_						ı l
Alexander Ham	nilton High School, Los Angeles	s, California			Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper	Lead	Mercury	Molybdenum	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc
					mg/kg	mg/kg	mg/kg		mg/kg	mg/kg	mg/kg	mg/kg		mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
	Residential Soil DTSC - Most	Stringent April 201	.9					16					80	1		820					
Site Specific Ba	аск <b>ground</b> ntial Soil - Most Stringent (ТГ	P-15 06 HO-1 0\ N	May 2010		21	28	15000	160	0171	0	22	2100	400	11	200	1500	200	200	0.70	200	22000
T		Field ID	,	SDG	31		15000	160	0 71	0	23	3100	400	11	390	1500	390	390	0.78	390	23000
Location	Sample Depth (ft) 0.5	B14-0.5	Sample Date 10/20/2018	T183212	-	12							9.6								-
B14	1.5	B14-0.5 B14-1.5	10/20/2018	T183212	-	13	-	-	-		-	-		-		-		-		-	
- B14	2.5	B14-1.5 B14-2.5	10/20/2018	T183212	-	16 16	-	-	-	-	-	-	7.3 6.3		-	-	-	-	-	-	
	0.5	B14-2.5 B15-0.5	10/20/2018	T183212	-	13		-		-	-	-	7.5	-	-	<del>                                     </del>	-	-	<u> </u>	-	
B15	1.5	B15-0.5 B15-1.5	10/20/2018	T183211		-	-		-	-		-						-	-	+ +	
	2.5	B15-1.5 B15-2.5	10/20/2018	T183211	-	14 22		-		-	-	-	8 56	-	<u>-</u>	<del>                                     </del>	-	-	-	-	
	0.5	B15-2.5 B16-0.5	9/10/2018	T182803	-	13	-	-	-	-	-	-	5.7		<u> </u>	-	-	-	-	-	
B16	1.5	B16-0.5 B16-1.5	9/10/2018	T182803		21	-		-	-	-	-	8.9			-	-	-	-		
P10	2.5	B16-1.5	9/10/2018	T182803	-	22	-	-	-	-	-	-	7.6		-	-	-	-	-	-	
	0.5	B10-2.5 B17-0.5	9/10/2018	T182803	-	15	-	-	-		-	-	29	-	-	-	-	-	-	-	
B17	1.5	B17-0.5 B17-1.5	9/10/2018	T182803	-	18	-	-	-	-	-	-	8.3	-	-	-	-	-	-	-	
""  -	2.5	B17-1.5 B17-2.5	9/10/2018	T182803	-	23	-	-	-	-	-	-	9	-	<u> </u>	-	-	-		-	
	0.5	B17-2.5 B18-0.5	9/19/2018	T182898	-	24	-	-	-	-	-	-	26	-	-	-	-	-		-	
B18	1.5	B18-0.5	9/19/2018	T182898		14		-	-	-	-	_	6.1	-		<del>                                     </del>		_		-	
-	2.5	B18-1.5	9/19/2018	T182898	-	63		-	-	-	-	_	14	-	<u> </u>	-	-	-		-	
B18A	2.5	B18A-2.5	6/13/2019	416293	<u> </u>	13.4	-	-	-	-	-	-	14	-	-	-		-	-	-	_
DIOA		B18B-2.5	6/13/2019	416293		13.1		-			<u> </u>			-		-				-	
B18B	2.5	B18B-2.5-DUP	6/13/2019	416293	_	13.1	_	-			-	_				- 1		-		<del>-</del> -	
B18C	2.5	B18C-2.5	6/13/2019	416293	_	13.1	_	<del>-</del>	-		<del>-</del>	-				-		-	<u>-</u>	<del>-</del> -	
B18D	2.5	B18D-2.5	6/13/2019	416293	_	14.7	_	<del>-</del> -			-	_				-		_		_	
DIOD		B19-0.5	10/20/2018	T183212		22	-	-	-	-	-	_	18	-		-	-	-		-	
	0.5	B19-0.5-dup	10/20/2018	T183212	-	15		-	<del>-                                    </del>		-	-	16	-	<del>-</del>	-		-	<u>-</u>	<del>-</del> -	-
		B19-1.5	10/20/2018	T183212	_	18	_	-			-	_	8.1	<del>  </del>		-		-	_	_	
B19	1.5	B19-1.5-dup	10/20/2018	T183212	_	18	_	-	_	_	-	_	9.3		<u>-</u>	<del>  _  </del>	_	-	_	_	
	-	B19-2.5	10/20/2018	T183212	-	14	_	_	_		_	-	7.4	_	_	- 1	-	_	_	_	_
	2.5	B19-2.5dup	10/20/2018	T183212	_	21	-	<del> </del>	_	-	-	_	7.7	_	_	<del>  _  </del>	-	-	_	_	
<del> </del>	0.5	B20-0.5	11/19/2018	T183454	_	62	-	-	_	_	_	_	12		_	<del>  _  </del>	-	-	_	_	
B20	1.5	B20-1.5	11/19/2018	T183454	_	20	_	-	_	_	-	_	7.5		_	<del>  _  </del>	_	_	_	_	
	2.5	B20-2.5	11/19/2018	T183454	_	20	_	-	_	_	-	_	7.7	_	<u>-</u>	-	_	-	<u>-</u>	_	
		B20A-0.5	6/13/2019	416293	-	4.84	-	-	_	-	-	-		-	-	-	-	-	-	-	<del>-  </del>
B20A	0.5	B20A-0.5-DUP	6/13/2019	416293	-	17.5	-	-	_	_	-	-	-	-	-	-	-	-	-	-	
B20B	0.5	B20B-0.5	6/13/2019	416293	-	88.9	-	-	_		_	_	_	_	-	- 1	_	-	-	-	-
B20BB	0.5	B20BB-0.5	8/12/2019	418214	_	97.5	-	-	_	-	-	_	-	-	_	-	-	-	_	_	
		B20-BBB-0.5	11/23/2019	421801	-	43.9	_	-	_	_	-	_		_	-	- 1	-	-	-	-	<del>-</del>
B20BBB	0.5	B20-BBB-0.5-DUP		421801	-	56.9	-	-	_	-	-	-	-	_	-	- 1	-	-	-	-	<del>-</del>
			11,20,2010	.22001	<u> </u>	56.5		<u> </u>			<u> </u>					1					

Table 2					I								Metal	ς							
	oil Analytical Results for Meta	ls				I			ı			1	ivietal	э   П							$\overline{}$
_	dangerment Assessment – Equ									(III+VI)											1
-	nilton High School, Los Angeles	•													Ē						1
								Ε	Ε	Chromium				_	Molybdenum		Ε		E	돌	1
					e E	je Si	Ę	₽	niu	Ē	뚩	oer	_	, cr	ybd/	l la	niu	<u>_</u>	<u>:</u>	adit	1
					Antimony	Arsenic	Barium	Beryllium	Cadmium	Pr Se	Cobalt	Copper	ead	Mercury	10	Nickel	Selenium	Silver	Thallium	Vanadium	inc
					mg/kg	-	mg/kg		mg/kg			mg/kg	mg/kg		<u>∠</u> mg/kg	mg/kg	•		<u>⊢</u> mg/kg	_	mg/kg
HHRA Note 3 I	Residential Soil DTSC - Most	Stringent April 201	9		IIIg/ kg	IIIg/ Ng	IIIg/ Ng	16	IIIg/ Ng	ilig/ kg	IIIg/ Ng	IIIg/ kg	80	111g/ Ng	IIIg/ Ng	820	IIIg/ kg	IIIg/ Ng	IIIg/ kg	IIIg/ Ng	IIIg/ Ng
Site Specific Ba		ottingent/tpm/201				28		10					80	1		020					
	ntial Soil - Most Stringent (TF	R=1E-06. HO=1.0) N	May 2019		31	20	15000	160	0 71	0	23	3100	400	11	390	1500	390	390	0.78	390	23000
Location	Sample Depth (ft)	Field ID	Sample Date	SDG	51		13000	100	0   7			3100	100		- 550	1300	330	330	0.70	330	23000
B20C	0.5	B20C-0.5	6/13/2019	416293	-	22.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
B20D	0.5	B20D-0.5	6/13/2019	416293	-	5.44	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	0.5	B21-0.5	11/19/2018	T183454	-	15	-	-	-	-	-	-	32	-	-	-	-	-	-	-	-
B21	1.5	B21-1.5	11/19/2018	T183454	-	19	-	-	-	-	-	- 1	11	-	-	-	-	-	-	-	-
	2.5	B21-2.5	11/19/2018	T183454	-	18	-	-	-	-	-	-	7.9	-	-	-	-	-	-	-	-
	0.5	B25-0.5	10/20/2018	T183212	-	8	-	-	-	-	-	-	130	-	-	-	-	-	-	-	-
B25	1.5	B25-1.5	10/20/2018	T183212	-	17	-	-	-	-	-	-	6.8	-	-	-	-	-	-	-	-
	2.5	B25-2.5	10/20/2018	T183212	-	17	ı	-	-	-	-	-	6.2	-	-	-	-	-	-	-	-
B25A	0.5	B25A-0.5	6/13/2019	416293	-	-	-	-	-	-	-	-	24.7	-	-	-	-	-	-	-	-
BZJA	0.5	B25A-0.5-DUP	6/13/2019	416293	-	-	-	-	-	-	-	-	17.9	-	-	-	-	-	-	-	-
B25B	0.5	B25B-0.5	6/13/2019	416293	-	-	-	-	-	-	-	-	80.2	-	-	-	-	-	-	-	-
B25BB	0.5	B25-BB-0.5	8/16/2019	418425	-	-	-	-	-	-	-	-	54.4	-	-	-	-	-	-	-	_
B25C	0.5	B25C-0.5	6/13/2019	416293	-	-	-	-	-	-	-	-	194	-	-	-	-	-	-	-	-
B25D	0.5	B25D-0.5	6/13/2019	416293	-	-	-	-	-	-	-	-	186	-	-	-	-	-	-	-	
B25DD	0.5	B25-DD-0.5	8/16/2019	418425	-	-	-	-	-	-	-	-	37.6	-	-	-	-	-	-	-	
	0.5	B26-0.5	10/20/2018	T183211	-	21	-	-	-	-	-	-	9.6	-	-	-	-	-	-	-	-
		B26-0.5-DUP	10/20/2018	T183211	-	19	-	-	-	-	-	-	8.4	-	-	-	-	-	-	-	-
B26	1.5	B26-1.5	10/20/2018	T183211	-	8.6	-	-	-	-	-	-	7.7	-	-	-	-	-	-	-	
		B26-1.5-DUP	10/20/2018	T183211	-	6.1	-	-	-	-	-	-	7.7	-	-	-	-	-	-	-	
	2.5	B26-2.5	10/20/2018	T183211	-	20	-	-	-	-	-	-	9.9	-	-	-	-	-	-	-	-
		B26-2.5-DUP	10/20/2018	T183211	-	16	-	-	-	-	-	-	7.8	-	-	-	-	-	-	-	-
	0.5	B27-0.5	9/10/2018	T182803	-	15	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-
B27	1.5	B27-1.5	9/10/2018	T182803	-	18	-	-	-	-	-	-	9	-	-	-	-	-	-	-	
	2.5	B27-2.5	9/10/2018	T182803	-	20	-	-	-	-	-	-	7.9	-	-	-	-	-	-	-	
D20	0.5	B28-0.5	10/20/2018	T183211	-	15	-	-	-	-	-	-	9.9	-	-	-	-	-	-	-	
B28	1.5	B28-1.5	10/20/2018	T183211	-	14	-	-	-	-	-		6.6	-	-	-	-	-	-	-	
	2.5	B28-2.5	10/20/2018	T183212	-	17	-	-	-	-	-		7.1	-	-	-	-	-	-	-	
D20	0.5	B29-0.5	10/20/2018	T183212	-	11	-	-	-	-	-	-	12	-	-	-	-	-	-	-	
B29	1.5	B29-1.5	10/20/2018	T183212	-	12	-	-	-	-	-	-	5.7	-	-	-	-	-	-	-	<del>-</del>
	2.5	B29-2.5	10/20/2018	T183212	-	19	-	-	-	-	-	-	7.5		-	-	-	-	-	-	

Table 2											Metal	S									
_	oil Analytical Results for Meta									Ŝ											
	dangerment Assessment – Equ									(III+VI)					۶						
Alexander Ham	nilton High School, Los Angeles	s, California			<b> </b>			_ ا	ا ہا						Molybdenum		_			۽	
					Antimony	ي.	=	Beryllium	Cadmium	Chromium	ـ ا	-		ır	ode	_	Selenium		Ę	Vanadium	
					ţi.	Arsenic	Barium	₹	ᇣ	ron	Cobalt	Copper	ead	Mercury	ol X	Nickel	len	Silver	Thallium	nac	ည
																					Zinc
					mg/kg	mg/kg	mg/kg		mg/kg	mg/kg	mg/kg	mg/kg		mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
	Residential Soil DTSC - Most	Stringent April 201	19					16					80	1		820					
Site Specific Ba		D 45 06 110 4 0\ A	M 2010		24	28	45000	4.60	0174		0.0	2400	400		200	4500	200	200	0.70	200	22222
Т	ntial Soil - Most Stringent (TI	1	1	CDC	31		15000	160	0 71	0	23	3100	400	11	390	1500	390	390	0.78	390	23000
Location	Sample Depth (ft) 0.5	Field ID B30-0.5	Sample Date 10/20/2018	<b>SDG</b> T183212		16							12								+
B30	1.5	B30-0.5	10/20/2018	T183212	-	13	-	-	-	-	-	-	13 6.9	-	-	-	-	-	-	-	<del>-</del> -
630	2.5	B30-1.5 B30-2.5	10/20/2018	T183212	-	17		-	<del>                                     </del>	-	-	-	6.9	-	-	-	-	-	<u>-</u> -	-	$\vdash$
<del>                                     </del>		B31-0.5	10/20/2018	T183212	-	15	<u> </u>	-		<u> </u>	<del>-</del>	<del>-</del>	31	<del>-</del>		<del>-</del> -	<u> </u>			<del>  -</del>	$\vdash$
	0.5	B31-0.5-dup	10/20/2018	T183212	_	13	<del></del>	-	-		-	-	41	-		<del>-</del> -		_	<u>-</u>	-	-
		B31-1.5	10/20/2018	T183212	_	14	<del>-</del>	<del>-</del>	_		<del>-</del>	<del>-</del>	7.4	_		_	_	_		<del>                                     </del>	
B31	1.5	B31-1.5-dup	10/20/2018	T183212	_	14	_	_	_	_	_	-	8.5	_		_	_	_	_	_	_
		B31-2.5	10/20/2018	T183212	_	18	<b>-</b>	-	_	_	<b>-</b>	-	7.3	_		_	_	_	_	_	_
	2.5	B31-2.5-dup	10/20/2018	T183212	_	13	-	-	_	_	-	-	5.7	_	-	-	-	-	_	-	_
	0.5	B32-0.5	10/20/2018	T183211	_	20	-	l -	-	-	-	-	9.7	-	-	-	_	-	_	-	-
B32	1.5	B32-1.5	10/20/2018	T183211	-	18	-	-	-	-	-	-	8.9	-	-	-	-	-	-	-	-
	2.5	B32-2.5	10/20/2018	T183211	-	17	-	-	-	-	-	-	17	-	-	-	-	-	-	-	-
	0.5	B41-0.5	10/20/2018	T183211	-	7	-	-	-	-	-	-	8.8	-	-	-	-	-	-	-	-
B41	1.5	B41-1.5	10/20/2018	T183211	-	18	-	-	-	-	-	-	7.7	-	-	-	-	-	-	-	-
[	2.5	B41-2.5	10/20/2018	T183211	-	17	-	-	-	-	-	-	7.3	-	-	-	-	-	-	-	-
B42	0.5	B42-0.5	10/20/2018	T183211	-	13	-	-	-	-	-	-	14	-	-	-	-	-	-	-	-
	0.5	B43-0.5	10/20/2018	T183211	-	10	-	-	-	-	-	-	21	-	-	-	-	-	-	-	-
B43	1.5	B43-1.5	10/20/2018	T183211	-	15	-	-	-	-	-	-	7.1	-	-	-	-	-	-	-	-
	2.5	B43-2.5	10/20/2018	T183211	-	18	-	-	-	•	-	-	7.3	-	-	-	-	-	-	-	-
	0.5	B44-0.5	10/20/2018	T183211	-	17	-	-	-	-	-	-	22	-	-	-	-	-	-	-	-
B44	1.5	B44-1.5	10/20/2018	T183211	-	17	-	-	-	-	-	-	8.1	-	-	-	-	-	-	-	
	2.5	B44-2.5	10/20/2018	T183211	-	21	-	-	-	-	-	-	8.6	-	-	-	-	-	-	-	
	0.5	B45-0.5	10/20/2018	T183211	<3	<5	60	<1	<2	8.1	6.1	14	17	<0.1	<5	5.6	<5	<2	<2	29	45
B45	1.5	B45-1.5	10/20/2018	T183211	<3	<5	130	<1	<2	25	9.7	26	<3	<0.1	<5	17	<5	<2	<2	65	59
	2.5	B45-2.5	10/20/2018	T183211	<2.7	<4.5	110	<0.91	<1.8	23	8.8	24	<2.7	<0.1	<4.5	19	<4.5	<1.8	<1.8	61	53
	0.5	B46-0.5	10/20/2018	T183212	<3	<5	91	<1	<2	18	7.9	21	21	<0.1	<5	14	<5	<2	<2	43	210
		B46-0.5dup	10/20/2018	T183212	<2.7	10	150	<0.91	<1.8	25	12	31	<2.7	<0.1	<4.5	19	<4.5	<1.8	<1.8	63	180
B46	1.5	B46-1.5	10/20/2018	T183212	<3	<5	190	<1	<2	40	16	67	<3	<0.1	<5	19	<5	<2	<2	98	95
	-	B46-1.5dup	10/20/2018	T183212	<3	<5	130	<1	<2	28	13	29	<3	<0.1	<5	18	<5	<2	<2	70	62
	2.5	B46-2.5	10/20/2018	T183212	<3	<5	160	<1	<2	35	16	37	30	<0.1	<5	21	<5	<2	<2	93	79
		B46-2.5dup	10/20/2018	T183212	<3	<5	180	<1	<2	35	14	37	<3	<0.1	<5	27	<5	<2	<2	90	80
547	0.5	B47-0.5	10/20/2018	T183211	-	17	-	-	-	-	-	-	17	-	-	-	-	-	-	-	<del>  -</del>
B47	1.5	B47-1.5 B47-2.5	10/20/2018 10/20/2018	T183211	-	13	-	-	-	-	-	-	9.1	-	-	-	-	-	-	-	<del></del>
	2.5	T183211	-	17	-	-	-	-	-	-	8.3	-	-	-	-	-	-	-			

Table 2													Matel								
	oil Analytical Results for Meta	ıls				Т	1	1					Metal	S I		I	1			$\overline{}$	$\vdash$
-	dangerment Assessment – Equ									<b>₹</b>											
1	nilton High School, Los Angeles	-								(III+VI)					重						
	0 , 0	•			2			٤	ε					_	Molybdenum		ε		_	툍	
					Antimony	Arsenic	Ę	Beryllium	Cadmium	Chromium	≝	er		lercury	pq/	<u>-</u>	Selenium	<u>.</u>	Thallium	/anadium	
					l ii	rse	Barium	ery	adn	ᇣ	Cobalt	Copper	ead	Jerc	þ	Nickel	ele l	Silver	hall	ana	u L
						_				_				Σ					•		<b>i</b>
HUDA Noto 2 I	Residential Soil DTSC - Most	Stringont April 201	10		mg/kg	mg/kg	mg/kg	mg/кg 16	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg 80	mg/kg	mg/kg	820	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Site Specific B		Strillgent April 201	19			28		10					80	1		820					
	ntial Soil - Most Stringent (TF	R=1F-06, HO=1.0) N	May 2019		31	20	15000	160	0 71	0	23	3100	400	11	390	1500	390	390	0.78	390	23000
Location	Sample Depth (ft)	Field ID	Sample Date	SDG	31		13000	100	0 /1	Ŭ	23	3100	400		330	1300	330	330	0.70	330	23000
200011011	0.5	B48-0.5	9/19/2018	T182898	_	16	-	_	_	_	_	_	20	_	_	-	_	_	_	_	_
B48	1.5	B48-1.5	9/19/2018	T182898	_	20	-	-	-	-	-	-	20	-	-	-	_	-	-	_	_
	2.5	B48-2.5	9/19/2018	T182898	-	17	-	-	_	-	-	-	6.7	-	-	-	-	-	-	-	-
	0.5	B49-0.5	10/20/2018	T183211	-	16	-	-	-	-	-	-	7.1	-	-	-	-	-	-	-	-
B49	1.5	B49-1.5	10/20/2018	T183211	-	14	-	-	-	-	-	-	6.4	-	-	-	-	-	-	-	-
	2.5	B49-2.5	10/20/2018	T183211	-	20	-	-	-	-	-	-	8.4	-	-	-	-	-	-	-	-
	0.5	B50-0.5	11/19/2018	T183454	-	14	-	-	-	-	-	-	52	-	-	-	-	-	-	-	-
B50	1.5	B50-1.5	11/19/2018	T183454	-	17	-	-	-	-	-	-	11	-	-	-	-	-	-	-	-
	2.5	B50-2.5	11/19/2018	T183454	-	19	-	-	-	-	-	-	7.7	-	-	-	-	-	-	-	-
	0.5	B51-0.5	10/20/2018	T183211	-	18	-	-	-	-	-	-	7.3	-	-	-	-	-	-	-	-
B51	0.5	B51-0.5-DUP	10/20/2018	T183211	-	22	-	-	-	-	-	-	15	-	-	-	-	-	-	-	-
651	1.5	B51-1.5	10/20/2018	T183211	-	18	-	-	-	-	-	-	15	-	-	-	-	-	-	-	-
	1.5	B51-1.5-DUP	10/20/2018	T183211	-	14	-	-	-	-	-	-	9.7	-	-	-	-	-	-	-	-
	0.5	B52-0.5	10/20/2018	T183212	-	20	-	-	-	-	-	-	13	-	-	-	-	-	-	-	-
B52	1.5	B52-1.5	10/20/2018	T183212	-	12	-	-	-	-	-	-	17	-	-	-	-	-	-	-	-
	2.5	B52-2.5	10/20/2018	T183212	-	12	-	-	-	-	-	-	5.8	-	-	-	-	-	-	-	-
	0.5	B53-0.5	9/10/2018	T182803	-	18	-	-	-	-	-	-	27	-	-	-	-	-	-	-	
	1.5	B53-1.5	9/10/2018	T182803	-	17	-	-	-	-	-	-	7.8	-	-	-	-	-	-	-	
B53	2.5	B53-2.5	9/10/2018	T182803	-	21	-	-	-	-	-	-	11	-	-	-	-	-	-	-	-
	5	B53-5.0	9/10/2018	T182803	<3	24	160	<1	<2	42	23	40	13	<0.1	<5	38	<5	<2	<2	79	89
	10	B53-10.0	9/10/2018	T182803	<3	36	210	<1	<2	67	31	53	16	<0.1	<5	51	<b>&lt;</b> 5	<2	<2	120	130
	15	B53-15.0	9/10/2018	T182803	<3	23	170	<1	<2	45	23	35	12	<0.1	<5	34	<5	<2	<2	82	89
DE3.4	5	B53A - 5.0	6/12/2019	416244	-	-	-	-		-	13	-	-		-	-	-	-	-	-	<del></del>
B53A	10	B53A - 10.0	6/12/2019	416244	-	17.3	-	-	-	-	16	-	-	-	-	-	-	-	-	-	$\vdash$
	15	B53A - 15.0	6/12/2019	416244	-	-	-	-	-	-	12.8	-	-	-	-	-	-	-	-	-	$\vdash$
B53B	5 10	B53B - 5.0	6/12/2019	416244	-	15.4	-	-	-	-	11.7	-	-	-	-	-	-	-	-	-	$\vdash$
0038	15	B53B - 10.0	6/12/2019	416244	-	15.4	-	-	-	-	20.6	-	-	-	-	-	-	-	-	-	$\vdash$
	5	B53B - 15.0 B53C - 5.0	6/12/2019 6/12/2019	416244 416244	-	+ -	-	-	-	-	12.8 12.2	-	-	-	-	<del>  -</del>	-	-	-	-	<del>-</del> -
B53C	10	B53C - 3.0	6/12/2019	416244	-	17.9	-	-	-	-	17.6	-	-	-	<u>-</u>	-	- -	-	-	-	$\vdash$
	15	B53C - 10.0	6/12/2019	416244	+		<del>  -</del>	-	-		12	-			<u> </u>		-	-	-		
	12	D33C - 13.U	0/12/2019	410244	-				-		14	_	-	-	-	-		-	-	-	

Table 2													Metal	lc							
	oil Analytical Results for Meta	ıls				T		l					ivietal	is 							$\overline{}$
-	idangerment Assessment – Equ									(111+71)											
	nilton High School, Los Angeles	-								Ξ					Ę						
								Ε	Ε	E				>	Molybdenum		Ε		=	Ę	
					e E	n;	돌	≝	niu	Ē	불	oer	_	מ	ρq	<sub> </sub>	nje.	<u>_</u>	<u>:</u>	di j	
					Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper	ead	Mercury	Į	Nickel	Selenium	Silver	Thallium	Vanadium	inc
						_	mg/kg		_					_			• • •				Na /ka
HHRA Note 3	Residential Soil DTSC - Most	Stringent April 201	10		mg/kg	mg/kg	mg/kg	16	mg/kg	mg/kg	mg/kg	mg/kg	80	mg/kg	mg/kg	mg/kg 820	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Site Specific B		Stringent April 201				28		10					80	1		820					
•	ential Soil - Most Stringent (Ti	R=1F-06 HO=1 0\ N	May 2019		31	20	15000	160	0 71	0	23	3100	400	11	390	1500	390	390	0.78	390	23000
Location	Sample Depth (ft)	Field ID	Sample Date	SDG	31		13000	100	0 /1	0	23	3100	400	11	390	1300	390	390	0.76	330	23000
Location	5	B53D - 5.0	6/12/2019	416244	_	+ -	<del> </del>	_	_		12.9	_	_	<u> </u>		_	_	_		<del>  _</del>	<del></del>
B53D	10	B53D - 10.0	6/12/2019	416244	-	15.4	<del>                                     </del>	-			17.3		-	<del>                                     </del>	<u>-</u>	<del>                                     </del>		-	<del>-</del>	<del>-</del>	
	15	B53D - 15.0	6/12/2019	416244	_	-	_	-	_	_	13.8	_	_	<del>  _  </del>		_	_	_		-	
		B55-0.5	11/19/2018	T183454	-	8.1	-	-	_	-	-	-	15	-	-	-	-	-	-	-	_
	0.5	B55-0.5-DUP	11/19/2018	T183454	-	9.3	-	-	-	-	-	-	22	-	-	-	-	-	-	-	-
	4.5	B55-1.5	11/19/2018	T183454	-	15	-	-	-	-	-	-	6.8	-	-	-	-	-	-	-	-
	1.5	B55-1.5-DUP	11/19/2018	T183454	-	13	-	-	-	-	-	-	6.2	-	-	-	-	-	-	-	-
555	2.5	B55-2.5	11/19/2018	T183454	-	17	-	-	-	-	-	-	6.8	-	-	-	-	-	-	-	-
B55	2.5	B55-2.5-DUP	11/19/2018	T183454	-	16	-	-	-	-	-	-	7.3	-	-	-	-	-	-	-	-
	Г	B55-5.0	11/19/2018	T183454	<3	20	150	<1	<2	32	14	38	<3	<0.1	<5	30	<5	<2	<2	75	160
	5	B55-5.0-DUP	11/19/2018	T183454	<3	<5	110	<1	<2	32	16	30	<3	<0.1	<5	26	<5	<2	<2	72	62
	10	SV55-10.0	11/21/2018	T183494	<3	19	150	<1	<2	45	17	30	<3	<0.1	<5	34	<5	<2	<2	79	91
	15	SV55-15.0-SO	11/21/2018	T183494	<3	22	120	<1	<2	33	11	22	<3	<0.1	<5	24	<5	<2	<2	59	62
	0.5	B56-0.5	11/19/2018	T183454	-	16	-	-	-	-	-	-	8.3	-	-	-	-	-	-	-	-
	1.5	B56-1.5	11/19/2018	T183454	-	20	-	-	-	-	-	-	7.8	-	-	-	-	-	-	-	-
B56	2.5	B56-2.5	11/19/2018	T183454	-	16	-	-	-	-	-	-	6.9	-	-	-	-	-	-	-	-
650	5	B56-5.0	11/19/2018	T183454	<3	20	120	<1	<2	36	16	35	<3	<0.1	<5	36	<5	<2	<2	81	78
	10	SV56-10.0	11/21/2018	T183494	<3	16	130	<1	<2	39	14	26	<3	<0.1	<5	30	<5	<2	<2	69	72
	15	SV56-15.0-SO	11/21/2018	T183494	<3	10	120	<1	<2	31	13	28	<3	<0.1	<5	28	<5	<2	<2	55	63
	5	B57-5.0	9/10/2018	T182803	<3	25	150	<1	<2	45	23	38	15	<0.1	<5	35	<5	<2	<2	77	90
B57	10	B57-10.0	9/10/2018	T182803	<3	37	210	<1	<2	69	30	60	21	<0.1	<5	55	<5	<2	<2	130	130
	15	B57-15.0	9/10/2018	T182803	<3	29	150	<1	<2	48	24	38	15	<0.1	<5	36	<5	<2	<2	88	83
	5	B57A - 5.0	6/12/2019	416244	-	<del>  -</del>	-	-	-	-	14.2	-	-	-	-	-	-	-	-	-	
B57A		B57A - 5.0 - DUP		416244	-	-	-	-	-	-	15.2	-	-	-	-	-	-	-	-	-	
	10	B57A - 10.0	6/12/2019	416244	-	19.1	-	-	-	-	18.9	-	-	-	-	-	-	-	-	-	-
	15	B57A - 15.0	6/12/2019	416244	-	11.8	-	-	-	-	12.9	-	-	-	-	-	-	-	-	-	<u> </u>
0570	5	B57B - 5.0	6/12/2019	416244	-	-	-	-	-	-	15.5	-	-	-	-	-	-	-	-	-	<u> </u>
B57B	10	B57B - 10.0	6/12/2019	416244	-	18.4	-	-	-	-	18.3	-	-	-	-	-	-	-	-	-	<del>-</del> -
	15	B57B - 15.0	6/12/2019	416244	-	12.7	-	-	-	-	14	-	-	-	-	-	-	-	-	-	<del></del>
DE 7.0	5	B57C - 5.0	6/12/2019	416244	-	10.7	-	-	-	-	12.2	-	-	-	-	-	-	-	-	-	<del></del>
B57C	10	B57C - 10.0	6/12/2019	416244	-	16.7	-	-	-	-	15.6	-	-	-	-	-	-	-	-	-	$\vdash$
	15	B57C - 15.0	6/12/2019	416244	-	11.1	-	-	-	-	14.6	-	-	-	-	-	-	-	-	-	-

Table 2					1								Metal	c							
	oil Analytical Results for Meta	ıls				1							ivietal	s 							$\overline{}$
•	dangerment Assessment – Equ									₹											
_ ·	nilton High School, Los Angeles									(III+VI)					돌						
	<b>o</b> , <b>o</b>	•						٤	Ε	Ę				_	Molybdenum		Ε		_	툍	
					e e	nic	툍	≝	niu	Ē	불	er	_	lercury	pq/	<del> </del>	nic.	<u>_</u>	<u>:</u>	anadium	
					Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper	ead	Jer	Jol	Nickel	Selenium	Silver	Thallium	au	inc
						_			_	_				Σ		1				> mg/kg	Na /ka
HHRA Note 3 I	Residential Soil DTSC - Most	Stringent April 201	0		mg/kg	IIIg/kg	mg/kg	mg/kg 16	IIIg/kg	ilig/kg	mg/kg	ilig/kg	80	mg/kg	mg/kg	820	ilig/kg	mg/kg	mg/kg	mg/kg	mg/kg
Site Specific Ba		Stringent April 201	.5			28		10					80	1		820					
•	ntial Soil - Most Stringent (TI	R=1F-06 HO=1 0) N	/Jav 2019		31	20	15000	160	0 71	0	23	3100	400	11	390	1500	390	390	0.78	390	23000
Location	Sample Depth (ft)	Field ID	Sample Date	SDG	31		13000	100	0 /1	0	23	3100	400	11	390	1300	390	390	0.76	390	23000
Location	Sample Depth (1t)	B57D - 5.0	6/12/2019	416244	_	+	_	_	_		15.5	_	_	_	_	_	_	_		<del>  _</del>	
	5	B57D - 5.0 - DUP	6/12/2019	416244	_	<del>                                     </del>	<del>-</del>	_	_		12.6		-	<del>-</del>		-		_		_	
B57D	_	B57D - 10.0	6/12/2019	416244	_	17.5	_	-	_	-	17.7	-	-	_	-	_	_	_		-	<del></del>
	10	B57D - 10.0 - DUP	6/12/2019	416244	-	20	-	-	_	-		_	-	_	-	-	-	-	-	-	
	15	B57D - 15.0	6/12/2019	416244	-	155	-	-	-	-	13.2	-	-	-	-	-	-	-	-	-	-
	0.5	B60-0.5	11/19/2018	T183454	-	16	-	-	-	-	-	-	14	-	-	-	-	-	-	-	-
	1.5	B60-1.5	11/19/2018	T183454	-	16	-	-	-	-	-	-	5.1	-	-	-	-	-	-	-	-
D.CO.	2.5	B60-2.5	11/19/2018	T183454	-	20	-	-	-	-	-	-	5.2	-	-	-	-	-	-	-	-
B60	5	B60-5.0	11/19/2018	T183454	<3	25	100	<1	<2	33	13	29	<3	<0.1	<5	19	<5	<2	<2	69	61
	10	SV60-10.0	11/21/2018	T183494	<3	16	120	<1	<2	42	13	28	<3	<0.1	<5	30	<5	<2	<2	67	67
	15	SV60-15.0-SO	11/21/2018	T183494	<3	12	120	<1	<2	34	13	23	<3	<0.1	<5	26	<5	<2	<2	62	61
	0.5	B61-0.5	9/10/2018	T182803	-	18	-	-	-	-	-	-	8	-	-	-	-	-	-	-	-
	1.5	B61-1.5	9/10/2018	T182803	-	21	-	-	-	-	-	-	8	-	•	-	•	-	-	-	-
B61	2.5	B61-2.5	9/10/2018	T182803	-	17	-	-	-	-	-	-	7.7	-	-	-	-	-	-	-	-
B01	5	B61-5.0	9/10/2018	T182803	<3	21	140	<1	<2	41	22	35	14	<0.1	<5	37	<5	<2	<2	74	80
	10	B61-10.0	9/10/2018	T182803	<3	34	180	<1	<2	58	26	54	16	<0.1	<5	47	<5	<2	<2	100	110
	15	B61-15.0	9/10/2018	T182803	<3	20	110	<1	<2	36	20	29	11	<0.1	<5	28	<5	<2	<2	66	64
B61A	10	B61A-10.0	6/13/2019	416293	-	16.8	-	-	-	-	16.9	-	-	-	-	-	-	-	-	-	-
B61B	10	B61B-10.0	6/13/2019	416293	-	17.9	-	-	-	-	13.8	-	-	-	-	-	-	-	-	-	-
		B61B-10.0-DUP	6/13/2019	416293	-	15.4	-	-	-	-	11.4	-	-	-	-	-	-	-	-	-	-
	0.5	B62-0.5	11/19/2018	T183454	-	12	-	-	-	-	-	-	5.4	-	-	-	-	-	-	-	
	1.5	B62-1.5	11/19/2018	T183454	-	16	-	-	-	-	-	-	7	-	-	-	-	-	-	-	<del></del>
B62	2.5	B62-2.5	11/19/2018	T183454	-	6.9	-	-	-	-	-	-	3.7	-	-	-	-	-	-	-	<u> </u>
	5	B62-5.0	11/19/2018	T183454	<3	20	110	<1	<2	32	13	28	<3	<0.1	<5	23	<5	<2	<2	68	63
	10	SV62-10.0	11/21/2018	T183494	<3	20	140	<1	<2	43	16	33	<3	<0.1	<5	35	<5	<2	<2	77	77
	15	SV62-15.0-SO	11/21/2018	T183494	<3	15	120	<1	<2	34	14	24	<3	<0.1	<5	27	<5	<2	<2	66	63
	0.5	B63-0.5	9/19/2018	T182898	-	10	-	-	-	-	-	-	3.7	-	-	-	-	-	-	-	<del>  -</del>
	1.5	B63-1.5	9/19/2018	T182898	-	23	-	-	-	-	-	-	6.5	-	-	-	-	-	-	-	<del>  -  </del>
B63	2.5	B63-2.5	9/19/2018	T182898	-	14		-	-	-	- 12	-	5	0.1	-	-	-	-	-	-	<del>-</del>
	5	B63-5.0(19)	9/19/2018	T182898	<3	18	73	<1	<2	38	12	30	<3	<0.1	<5 -F	24	<5 .r	<2	<2	58	54
	10	B63-10.0(24)	9/19/2018	T182898	11	12	56	<1	<2	35	10	22	6.3	<0.1	<5 45	22	<5 4F	<2	<2	49	46
	15	B63-15.0(29)	9/19/2018	T182898	<3	8.3	41	<1	<2	23	11	15	<3	<0.1	<5	18	<5	<2	<2	33	27

Table 2													Metal	s							
=	oil Analytical Results for Meta									<b>(</b>											
Preliminary End	dangerment Assessment – Equ	uivalent Report								(III+VI)					_						ı
Alexander Ham	nilton High School, Los Angeles	s, California			, Antimony	Arsenic	Barium	, Beryllium	Cadmium	Chromium	Cobalt	Copper	Lead	Mercury	Molybdenum	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc
LILIDA NISES 2.5	Desidential Call DTCC - March	Chairman Annail 204	0		mg/kg	mg/kg	mg/kg		mg/kg	mg/kg	mg/kg	mg/kg		mg/kg	mg/kg		mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
	Residential Soil DTSC - Most	Stringent April 201	9			20		16					80	1		820					
Site Specific Ba	ntial Soil - Most Stringent (TF	P-1E-06 HO-1 0\ N	/lay 2010		21	28	15000	160	0 71	0	22	3100	400	11	390	1500	390	390	0.78	390	23000
Location	Sample Depth (ft)	Field ID	Sample Date	SDG	31		15000	100	0 /1	U	23	3100	400	11	390	1300	390	390	0.76	390	23000
Location	0.5	B64-0.5	9/19/2018	T182898		17							21							_	$\overline{}$
	1.5	B64-0.5	9/19/2018	T182898	-	19	-		-	-	-	-	6.2	-	-	-	-	-	-		
	2.5	B64-2.5	9/19/2018	T182898	-	3.3	-	-	-	-	-	-	12	-	-	-	-	-	-	-	
B64	5	SV64-5.0 (17)	11/21/2018	T183494	<3	14	84	<1	<2	39	8.6	25	<3	<0.1	- <5	23	- <5	<2	<2	- 55	49
	10	SV64-10.0 (22)	11/21/2018	T183494	<3	15	76	<1	<2	32	7.5	22	<3	<0.1	<5	23	<5 <5	<2	<2	51	50
	15	SV64-15.0 (27)	11/21/2018	T183494	<3	<b>&lt;</b> 5	50	<1	<2	19	7.2	10	<3	<0.1	<5	15	<5	<2	<2	26	25
<del>                                     </del>	0.5	B65-0.5	9/10/2018	T182803	-	2.6	- 50	- \1		- 19			4.4		-	- 15	- '		- \-	-	-23
-	1.5	B65-1.5	9/10/2018	T182803	_	22			_		-	_	9.2		_		_	_		_	
-	2.5	B65-2.5	9/10/2018	T182803	_	20					<del>-</del> -		8.1					-		_	
B65 -	5	B65-5.0	9/10/2018	T182803	<3	19	130	<1	<2	55	19	36	12	<0.1	<5	37	<5	<2	<2	82	87
-	10	B65-10.0	9/10/2018	T182803	<3	25	130	<1	<2	44	22	35	12	<0.1	<5	33	<5	<2	<2	79	72
-	15	B65-15.0	9/10/2018	T182803	<3	19	110	<1	<2	37	19	29	16	<0.1	<5	27	<5	<2	<2	61	62
-	0.5	B66-0.5	9/19/2018	T182898	-	25	-		-	-	-		5.5	-	-		,	-		-	
B66	1.5	B66-1.5	9/19/2018	T182898	_	16	_	_	<del></del>		-	_	5.6	_	_		_	_	_	_	
500	2.5	B66-2.5	9/19/2018	T182898	_	15	_	_	<del></del>			-	5.7	_	_		_	_		_	
	0.5	B67-0.5	10/20/2018	T183211	_	14	_		<del></del>	_	-	_	20	_	_	_	_	_		_	
B67	1.5	B67-1.5	10/20/2018	T183211	<u> </u>	15	_	<u> </u>	_	_	-	_	7.6	_	_	_	_	_		_	_
	2.5	B67-2.5	10/20/2018	T183211	_	2.5	_	-	_	_	_	_	3.3	_	_	_	_	_		_	_
	0.5	B68-0.5	10/20/2018	T183211	_	19	_	<b>-</b>	_	_	_	_	7.7	_	_	_	_	_		_	_
B68	1.5	B68-1.5	10/20/2018	T183211	_	23	_	<b>-</b>	_	_	-	_	18	_	-	_	_	_	_	_	_
	2.5	B68-2.5	10/20/2018	T183211	-	17	-	-	-	-	-	_	7.7	-	-	-	-	-	-	-	-
	0.5	B69-0.5	10/20/2018	T183212	_	16	-	-	-	_	-	_	13	-	-	_	-	-	_	-	_
B69	1.5	B69-1.5	10/20/2018	T183212	_	17	-	-	-	_	-	-	9	-	-	-	-	-	-	-	-
<u> </u>	2.5	B69-2.5	10/20/2018	T183212	_	15	-	-	-	-	-	-	8.6	-	-	-	-	-	-	-	-
	0.5	B70-0.5	11/21/2018	T183494	_	3.2	-	-	-	-	-	-	7.7	-	-	-	-	-	-	-	-
B70	1.5	B70-1.5	11/21/2018	T183494	-	30	-	-	- 1	-	-	-	7.8	-	-	- 1	-	-	-	-	
D701	0.5	B70A-0.5	6/13/2019	416293	0.4JB1	3.81	31.7	<0.5	0.38J	8.1	2.92	7.82	14.6	<0.14	0.73JB1	4.87	1.45J	<0.5	<3	12.5	67.6
B70A	1.5	B70A-1.5	6/13/2019	416293	3.2	16.3	94.5	<0.5	1.05	29.6	9.06	19	13.2	<0.14	0.16JB1	19.2	<3	<0.5	<3	51.2	54.4
D700	0.5	B70B-0.5	6/13/2019	416293	0.72JB1	4.31	33.6	<0.5	0.32J	7.37		8.95	8.52	<0.14	0.62JB1	4.32	3.23	<0.5	<3	12.9	55.2
В70В	1.5	B70B-1.5	6/13/2019	416293	1.51JB1	34.9	134	<0.5	2.15	38.7	13.2	27.5	14.2	<0.14	2.1	31.7	<3	<0.5	1.15JB1	69.1	81.3
B70BB	1.5	B70BB-1.5	8/12/2019	418214	-	22.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
B71	0.5	B71-0.5	9/19/2018	T182898	-	17	-	-	-	-	-	-	6.9	-	-	- 1	-	-	-	-	
	0.5	B72-0.5	10/20/2018	T183211	-	14	-	-	-	-	-	-	8	-	-	-	-	-	-	-	
B72	1.5	B72-1.5	10/20/2018	T183211	-	19	-	-	-	-	-	- 1	7.7	-	-	- 1	-	-	-	-	
	2.5	B72-2.5	10/20/2018	T183211	-	17	-	-	-	-	-	-	6.9	-	-	-	-	-	-	-	_ <u> </u>

Table 3					1								•••								
Table 2	ail Amalusiaal Daards fau 84-4-	le.				1	1	I		I			Metal	S		1 1		1		1	
1	oil Analytical Results for Meta dangerment Assessment – Equ									(III+VI)											1 1
-	nilton High School, Los Angeles	•								I ≛					Ε						
Alexander Hair	illitori riigii scriooi, Los Arigeres	s, camornia			≥			۽	۶						Molybdenum		_		_	Ε	
					Antimony	<u>:</u>	Ε	Beryllium	Cadmium	Chromium	שַּׁ	e e		Mercury	pq	_	Selenium		Thallium	Vanadium	
						Arsenic	Barium	<u> </u>	μqu	<u>[</u>	Cobalt	Copper	ead	erc	o <del>/</del>	Nickel	len	Silver	iii	ana .	ou l
									_	_			_								Zi
					mg/kg	mg/kg	mg/kg		mg/kg	mg/kg	mg/kg	mg/kg		mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
	Residential Soil DTSC - Most	Stringent April 201	19					16					80	1		820					
Site Specific Ba						28															
T	ntial Soil - Most Stringent (TI		I		31		15000	160	0 71	0	23	3100	400	11	390	1500	390	390	0.78	390	23000
Location	Sample Depth (ft)	Field ID	Sample Date	SDG									_								igwdot
	0.5	B73-0.5	9/19/2018	T182898	-	6.5	-	-	-	-	-	-	5.8	-	-	-	-	-	-	-	-
B73	1.5	B73-1.5	9/19/2018	T182898	-	17	-	-	-	-	-	-	6.8	-	-	-	-	-	-	-	<u> </u>
	2.5	B73-2.5	9/19/2018	T182898	-	16	-	-	-	-	-	-	6.6	-	-	-	-	-	-	-	<u> </u>
	0.5	B74-0.5	9/19/2018	T182898	-	11	-	-	-	-	-	-	9.2	-	-	-	-	-	-	-	<u> </u>
B74	1.5	B74-1.5	9/19/2018	T182898	-	22	-	-	-	-	-	-	5.8	-	-	-	-	-	-	-	-
	2.5	B74-2.5	9/19/2018	T182898	-	13	-	-	-	-	-	-	5.8	-	-	-	-	-	-	-	
	0.5	B79-0.5	6/14/2019	416329	-	14.2	-	-	-	-	-	-	9.35	-	-	-	-	-	-	-	
B79		B79-0.5-DUP	6/14/2019	416329	-	16.3	-	-	-	-	-	-	8.19	-	-	-	-	-	-	-	-
	1.5	B79-1.5	6/14/2019	416329	-	20.6	-	-	-	-	-	-	24.1	-	-	-	-	-	-	-	-
	2.5	B79-2.5	6/14/2019	416329	-	14.2	-	-	-	-	-	-	6.81	-	-	-	-	-	-	-	-
500	0.5	B80-0.5	6/14/2019	416329	-	4.2	-	-	-	-	-	-	29.9	-	-	-	-	-	-	-	
B80	1.5	B80-1.5	6/14/2019	416329	-	15.2	-	-	-	-	-	-	12.9	-	-	-	-	-	-	-	<del>-</del> -
	2.5	B80-2.5	6/14/2019	416329	-	13.1	-	-	-	-	-	-	7.46	-	-	-	-	-	-	-	
	0.5	B81-0.5	6/14/2019	416329	-	6.05	-	-	-	-	-	-	14	-	-	-	-	-	-	-	<del>-</del> -
B81		B81-0.5-DUP	6/14/2019	416329	-	4.62	-	-	-	-	-	-	15.4	-	-	-	-	-	-	-	<del>-</del> -
	1.5	B81-1.5	6/14/2019	416329	-	11.3	-	-	-	-	-	-	12	-	-	-	-	-	-	-	<del>-</del> -
	2.5	B81-2.5	6/14/2019	416329	-	12.7	-	-	-	-	-	-	7.6	-	-	-	-	-	-	-	<del>-</del> -
D02	0.5	B82-0.5	6/14/2019	416329	-	2.7	-	-	-	-	-	-	9.01	-	-	-	-	-	-	-	<del>-</del> -
B82	1.5	B82-1.5	6/14/2019	416329	-	11.3	-	-	-	-	-	-	17	-	-	-	-	-	-	-	$\vdash$
	2.5	B82-2.5	6/14/2019	416329	-	11.9	-	-	-	-	-	-	8.11	-	-	-	-	-	-	-	<del>-</del> -
	0.5	B83-0.5	6/14/2019	416329	-	6.88	-	-	-	-	-	-	88.6	-	-	-	-	-	-	-	<del>-</del>
B83	1.5	B83-0.5-DUP B83-1.5	6/14/2019	416329 416329	-	11.1	-	-	-	-	-	-	18.5	-	-	-	-	-	-	-	$\vdash$
	2.5		6/14/2019		-	14.8 23.8	-	-	-	-	-	<del>-</del>	7.29	-	-	<del>  -</del>	-	-	-	-	<del></del>
B83A	2.5 0.5	B83-2.5 B83AA-0.5	6/14/2019 8/12/2019	416329 418214	-		-	-	-	-	-	<del>-</del>	5.23 12.6	-	-	<del>  -</del>	-	-	-	-	<del></del>
B83A B83B	0.5	B83BB-0.5	8/12/2019	418214	-	+ -	-	-	-	-	-	-	9.2	-	-	-	-	-	-	-	$\vdash$
B83C	0.5	B83CC-0.5	8/12/2019	418214		+ -	-	-	-	<del>-</del> -		<del>-</del> -	28		-	-	-		-	-	$\vdash$
B83D	0.5	B83DD-0.5	8/12/2019	418214	-	+ -	-	-	-	<u> </u>	-	-	39.2	-	-	-	-	-	-	-	<del></del>
DOSD	0.5	B84-0.5	6/14/2019	416329	-	27.1	-			-	-	<del>-</del> -	47.9	-	-	<del>  -</del>	-	-	-	-	$\vdash$
B84	1.5	B84-1.5	6/14/2019	416329	-	15.6	-	-	-	-	-	-	8.48	-	<u>-</u>	-	-	-	<u>-</u>	-	$\vdash$
504						15.9	<del>-</del>		-	_		-	8.67	-							$\vdash$
	2.5	B84-2.5	6/14/2019	416329	-	12.9	-	-	-	-	-	_	0.07	-	-	-	-	-	-	-	

Table 2													Metals	5							
Summary of So	oil Analytical Results for Meta	ıls								Ē											1
-	dangerment Assessment – Equaliton High School, Los Angeles	-			Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium (III+VI)	Cobalt	Copper	Lead	Mercury	Molybdenum	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc
					mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
	Residential Soil DTSC - Most	Stringent April 201	19					16					80	1		820					
Site Specific Ba						28															
	ntial Soil - Most Stringent (TI				31		15000	160	0 71	0	23	3100	400	11	390	1500	390	390	0.78	390	23000
Location	Sample Depth (ft)	Field ID	Sample Date	SDG	<u> </u>																
	0.5	B85-0.5	6/14/2019	416329	-	5.42	-	-	-	-	-	-	28.8	-	-	-	-	-	-	-	-
B85		B85-0.5-DUP	6/14/2019	416329	-	6.12	-	-	-	-	-	-	29.9	-	-	-	-	-	-	-	-
-	1.5	B85-1.5	6/14/2019	416329	-	12.3	-	-	-	-	-	-	9.4	-	-	-	-	-	-	-	
	2.5	B85-2.5	6/14/2019	416329	-	14.4	-	-	-	-	-	-	7.6	-	-	-	-	-	-	-	-
DOC	0.5	B86-0.5	6/14/2019	416329	-	2.75	-	-	-	-	-	-	11.4	-	-	-	-	-	-	-	
B86	1.5	B86-1.5	6/14/2019	416329	-	15.1	-	-	-	-	-	-	17.8	-	-	-	-	-	-	-	
	2.5	B86-2.5	6/14/2019	416329	-	9.88	-	-	-	-	-	-	7.7		-	-	-	-	-	-	-
500	0.5	B90-0.5	10/20/2018	T183212	-	15	-	-	-	-	-	-	53	-	-	-	-	-	-	-	
B90	1.5	B90-1.5	10/20/2018	T183212	-	14	-	-	-	-	-	-	28	-	-	-	-	-	-	-	
	2.5	B90-2.5	10/20/2018	T183212	-	15	-	-	-	-	-	-	38	-	-	-	-	-	-	-	
504	0.5	B91-0.5	10/20/2018	T183211	-	15	-	-	-	-	-	-	8.2	-	-	-	-	-	-	-	
B91	1.5	B91-1.5	10/20/2018	T183211	-	14	-	-	-	-	-	-	90	-	-	-	-	-	-	-	
	2.5	B91-2.5	10/20/2018	T183211	-	9.7	-	-	-	-	-	-	8.7	-	-	-	-	-	-	-	
B91A	1.5	B91A-1.5	6/13/2019	416293	-	-	-	-	-	-	-	-	19.1	-	-	-	-	-	-	-	-
		B91A-1.5-DUP	6/13/2019	416293	-	-	-	-	-	-	-	-	13.7	-	-	-	-	-	-	-	
B91B	1.5	B91B-1.5	6/13/2019	416293	-	-	-	-	-	-	-	-	162	-	-	-	-	-	-	-	-
B91BB	1.5	B91BB-1.5	8/12/2019	418214	-	-	-	-	-	-	-	-	5.98	-	-	-	-	-	-	-	
B91C	1.5	B91C-1.5	6/13/2019	416293	-	-	-	-	-	-	-	-	6.84	-	-	-	-	-	-	-	-
	0.5	B92-0.5	10/20/2018	T183211	-	11	-	-	-	-	-	-	6.2	-	-	-	-	-	-	-	
<u>-</u>		B92-0.5-DUP	10/20/2018	T183211	-	4.5	-	-	-	-	-	-	8.1	-	-	-	-	-	-	-	
B92	1.5	B92-1.5	10/20/2018	T183211	-	19	-	-	-	-	-	-	8	-	-	-	-	-	-	-	-
_		B92-1.5-DUP	10/20/2018	T183211	-	18	-	-	-	-	-	-	7.1	-	-	-	-	-	-	-	
	2.5	B92-2.5	10/20/2018	T183211	-	14	-	-	-	-	-	-	16	-	-	-	-	-	-	-	
		B92-2.5-DUP	10/20/2018	T183211	-	17	-	-	-	-	-	-	10	-	-	-	-	-	-	-	
500	0.5	B93-0.5	10/20/2018	T183212	-	16	-	-	-	-	-	-	37	-	-	-	-	-	-	-	-
B93	1.5	B93-1.5	10/20/2018	T183212	-	7.8	-	-	-	-	-	-	9.6	-	-	-	-	-	-	-	
	2.5	B93-2.5	10/20/2018	T183212	-	11	-	-	-	-	-	-	14	-	-	-	-	-	-	-	-
	0.5	B94-0.5	6/13/2019	416293	-	11.9	-	-	-	-	-	-	7.19	-	-	-	-	-	-	-	<del>-</del>
B94	1.5	B94-1.5	6/13/2019	416293	-	12.1	-	-	-	-	-	-	6.82	-	-	-	-	-	-	-	
	2.5	B94-2.5	6/13/2019	416293	-	12.9	-	-	-	-	-	-	6.42	-	-	-	-	-	-	-	
	0.5	B95-0.5	6/13/2019	416293	-	12.4	-	-	-	-	-	-	10.3	-	-	-	-	-	-	-	-
B95	1.5	B95-1.5	6/13/2019	416293	-	11.6	-	-	-	-	-	-	7.09	-	-	-	-	-	-	-	
	2.5	B95-2.5	6/13/2019	416293	-	11	-	-	-	-	-	-	6.43	-	-	-	-	-	-	-	
	0.5	B96-0.5	6/13/2019	416293	-	2.48	-	-	-	-	-	-	29.6	-	-	-	-	-	-	-	
B96	1.5	B96-1.5	6/13/2019	416293	-	10.2	-	-	-	-	-	-	14.4	-	-	-	-	-	-	-	
	2.5	B96-2.5	6/13/2019	416293	-	12.1	-	-	-	-	-	-	11.5	-	-	-	-	-	-	-	_

Table 2													Metal	s							
	oil Analytical Results for Meta	ls				T				<u>-</u>				Ī							
-	dangerment Assessment – Equ nilton High School, Los Angeles				yny			E,	ш,	ium (III+VI)		ر		۲.	Molybdenum		Ę		ε	un.	
					Mg/kg	Arsenic	mg/kg	Beryllium	Cadminm (kg	Chromium	S Cobalt	Copper	mg/kg	Mercury	<b>q∕.</b> <b>o∑</b> mg/kg	Mg/kg	Selenium	Silver	Thallium mg/kg	Vanadium	<b>Ziuc</b> mg/kg
HHRA Note 3 R	Residential Soil DTSC - Most	Stringent April 201	9		IIIg/Ng	IIIg/ Ng	IIIg/ Ng	16	IIIg/ Ng	IIIg/ Ng	IIIg/ Ng	IIIg/ Ng	80	111g/ Ng	IIIg/ Ng	820	IIIg/ Ng	IIIg/ Ng	IIIg/ Ng	IIIg/ Ng	IIIg/ Ng
Site Specific Ba		ott8oeb = 0 =				28		10					00			020					
•	ntial Soil - Most Stringent (TF	R=1E-06, HQ=1.0) N	May 2019		31		15000	160	0 71	0	23	3100	400	11	390	1500	390	390	0.78	390	23000
Location	Sample Depth (ft)	Field ID	Sample Date	SDG					- 1												
	0.5	B97-0.5	6/13/2019	416293	-	1.297	-	-	-	-	-	-	5.49	-	-	-	-	-	-	-	-
B97	1.5	B97-1.5	6/13/2019	416293	-	6.95	-	-	-	-	-	-	5.62	-	-	-	-	-	-	-	-
	2.5	B97-2.5	6/13/2019	416293	-	12.1	-	-	-	-	-	-	6.99	-	-	-	-	-	-	-	-
	0.5	B98-0.5	6/14/2019	416329	1.1	12.8	120	<0.5	2.23	30.4	10.6	25.1	31.3	0.04	1.78	25.3	<3	<0.5	0.47J	55	89.7
B98	1.5	B98-1.5	6/14/2019	416329	1.53	12.4	117	<0.5	2.54	41.8	13.1	29.6	7.61	<0.14	1.92	33.2	<3	<0.5	1.29J	70	68.8
	2.5	B98-2.5	6/14/2019	416329	1.77	13.7	138	<0.5	2.55	38.9	11.5	28.8	9.58	<0.14	2.15	31.1	<3	<0.5	0.83J	77.8	74.2
	0.5	B99-0.5	6/14/2019	416329	2.34	12.2	120	<0.5	2.31	32.5	11.1	27.2	19.9	<0.14	2.25	26.5	<3	<0.5	1.52J	60	83.4
B99 -	0.5	B99-0.5-DUP	6/14/2019	416329	0.7	12	119	<0.5	2.11	31.4	10.6	23.9	28.2	<0.14	2.07	24.8	<3	<0.5	1J	56.6	82.2
	1.5	B99-1.5	6/14/2019	416329	2.24	11.8	212	<0.5	2.72	42.5	13.6	29.6	10.5	<0.14	2.13	34.8	<3	<0.5	2.27J	80.7	71.8
	2.5	B99-2.5	6/14/2019	416329	2.92	11.5	134	<0.5	2.73	46.6	12.5	31	6.7	<0.14	2.24	35.1	<3	<0.5	1.7J	92.1	71.5
_	0.5	B100-0.5	6/14/2019	416329	2.09	11.7	98.6	<0.5	2.83	32.6	10.9	23.5	3.69	<0.14	2.24	31.6	<3	<0.5	2.03J	61.7	60
B100	1.5	B100-1.5	6/14/2019	416329	1.13	11.6	202	<0.5	2.7	41.9	13.4	29.1	4.76	<0.14	2.09	33.2	<3	<0.5	2.22J	83.4	67.1
	2.5	B100-2.5	6/14/2019	416329	0.54	14.1	136	<0.5	2.67	41.6	12.9	27.9	4.37	<0.14	1.96	32.9	<3	<0.5	1.09J	80.1	67.1
	0.5	B101-0.5	6/14/2019	416329	1.87	10.7	112	<0.5	2.36	31.3	10.7	22.4	5.17	<0.14	2.93	25.6	<3	<0.5	0.85J	57.7	64.2
B101		B101-0.5-DUP	6/14/2019	416329	0.55	9.96	134	<0.5	2.45	31	10.9	24	9.14	<0.14	2.22	26	<3	<0.5	2.13J	56.4	87.7
_	1.5	B101-1.5	6/14/2019	416329	1.49	10.1	110	<0.5	2.24	31.3	10.5	21.7	3.42	<0.14	2.57	24.7	<3	<0.5	2.59J	57.5	60.3
	2.5	B101-2.5	6/14/2019	416329	3.53	13.5	127	<0.5	2.62	40.9	11.7	26.4	4.34	<0.14	2.28	31.4	<3	<0.5	1.36J	76.6	68.5
_	0.5	B102-0.5	6/14/2019	416329	3.22	10.7	118	<0.5	2.95	37.1	12.3	27.8	13.7	<0.14	2.59	30.8	<3	<0.5	<3	67.1	84.2
B102	1.5	B102-1.5	6/14/2019	416329	0.56	11.2	173	<0.5	2.31	35	10.6	26.2	47.3	<0.14	1.6	26.6	<3	<0.5	2.02J	61.3	106
	2.5	B102-2.5	6/14/2019	416329	2.54	13.8	118	<0.5	2.52	37.9	12.1	25.8	4.75	<0.14	1.98	31.1	<3	<0.5	1.51J	65	66.4
	0.5	B103-0.5	6/14/2019	416329	-	12.8	-	-	-	-	-	-	24.5	-	-	-	-	-	-	-	-
B103		B103-0.5-DUP	6/14/2019	416329	-	5.36	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
_	1.5	B103-1.5	6/14/2019	416329	-	10	-	-	-	-	-	-	19.9	-	-	-	-	-	-	-	
	2.5	B103-2.5	6/14/2019	416329	-	8.82	-	-	-	-	-	-	21.9	-	-	-	-	-	-	-	
P404	0.5	B104-0.5	6/14/2019	416329	-	7.4	-	-	-	-	-	-	26	-	-	-	-	-	-	-	
B104	1.5	B104-1.5	6/14/2019	416329	-	11	-	-	-	-	-	-	38.2	-	-	-	-	-	-	-	-
	2.5	B104-2.5	6/14/2019	416329	-	2.56	-	-	-	-	-	-	12	-	-	-	-	-	-	-	
	0.5	B105-0.5	6/14/2019	416329	-	4.24	-	-	-	-	-	-	7.53	-	-	-	-	-	-	-	<del>  -</del>
B105	1.5	B105-0.5-DUP	6/14/2019	416329	-	6.32	-	-		-	-	-	13.7		-		-	-	-	-	<del>-</del> -
	1.5	B105-1.5	6/14/2019	416329	-	12.7	<del>-</del> -	-	<del>  -</del>	-	-	-	18.5	<del>  -</del>	-	<del>  -</del>	-	-	-	-	+-
	2.5	B105-2.5	6/14/2019	416329	-	10.3	<u> </u>	<u> </u>	<del>-</del>	-		-	7.55	<del>  -</del>	-	<del>  -</del>	-	-	-	<u> </u>	+
B106	0.5 1.5	B106-0.5 B106-1.5	6/14/2019 6/14/2019	416329 416329	-	5.45 11.6	<del>  -</del>	-	<del>  -  </del>		-	-	18.2 12.6	<del>  -  </del>	-	<del>                                     </del>	-	-	-	-	$\vdash$
P100	2.5	B106-1.5 B106-2.5	6/14/2019	416329	<u>-</u>	10.8	<del>-</del>	-	<del>                                     </del>	-	-	-		<del>                                     </del>	-	<del>                                     </del>	-	-	-	-	$\vdash$
	2.5	D100-2.3	0/14/2019	410329	-	10.8	-	-	-	-	-	-	20.2		-	-	-	-	-	-	

Table 2													Metal	s							
	oil Analytical Results for Meta	ıls								<u>-</u>				<u>-</u>							
Preliminary En	dangerment Assessment – Equ nilton High School, Los Angeles	uivalent Report			Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium (III+VI)	Cobalt	Copper	Lead	Mercury	Molybdenum	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc
					mg/kg	_					-		mg/kg	mg/kg	mg/kg			mg/kg	mg/kg		mg/kg
HHRA Note 3 I	Residential Soil DTSC - Most	Stringent April 201	.9		0, 0	0, 0	<i>O, O</i>	16	<i>J. J</i>	<i>O, O</i>	0, 0	0, 0	80	1	O, O	820	0, 0	<i>J. J</i>	<u> </u>	<u> </u>	<u> </u>
Site Specific Ba	ackground					28															
USEPA Reside	ntial Soil - Most Stringent (T	R=1E-06, HQ=1.0) N	May 2019		31		15000	160	0 71	0	23	3100	400	11	390	1500	390	390	0.78	390	23000
Location	Sample Depth (ft)	Field ID	Sample Date	SDG																	
	0.5	B107-0.5	6/14/2019	416329	-	8.86	-	-	-	-	-	-	37.2	-	-	-	-	-	-	-	-
B107	1.5	B107-1.5	6/14/2019	416329	-	12.6	-	-	-	-	-	-	8.66	-	-	-	-	-	-	-	-
	2.5	B107-2.5	6/14/2019	416329	-	10.8	-	-	-	-	-	-	6.42	-	-	-	-	-	-	-	-
	0.5	B108-0.5	6/14/2019	416329	-	4.75	-	-	-	1	-	-	17.5	-	•	-	-	-	-	-	-
B108	1.5	B108-1.5	6/14/2019	416329	-	14.2	•	-	-	-	-	-	26.9	-	•	-	-	-	-	-	-
	2.5	B108-2.5	6/14/2019	416329	-	10.5	·	-	-	ı	-	-	6.23	-	•	-	-	-	-	-	-
	0.5	B109-0.5	6/14/2019	416329	-	5.22	-	-	-	-	-	-	25.8	-		-	ı	-	-	-	-
B109	1.5	B109-1.5	6/14/2019	416329	-	3.99	•	-	-	-	-	-	24.2	-	•	-	-	-	-	-	-
	2.5	B109-2.5	6/14/2019	416329	-	11.6	•	-	-	-	-	-	6.59	-	-	-	-	-	-	-	-
	1	AB01-1.0	2/18/2019	412613	-	9.98	•	-	-	-	-	-	-	-	•	-	-	-	-	-	-
	5	AB01-5.0	2/18/2019	412613	-	12.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	10	AB01-10.0	2/18/2019	412613	-	11.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AB01	15	AB01-15.0	2/18/2019	412613	-	14.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	20	AB01-20.0	2/18/2019	412613	-	10.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	25	AB01-25.0	2/18/2019	412613	-	14.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	30	AB01-30.0	2/18/2019	412613	-	11.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	1	AB02-1.0	2/18/2019	412613	-	13.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	5	AB02-5.0	2/18/2019	412613	-	10.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	10	AB02-10.0	2/18/2019	412613	-	14.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AB02	15	AB02-15.0	2/18/2019	412613	-	14.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
ABOZ		AB02-15.0-DUP	2/18/2019	412613	-	20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	20	AB02-20.0	2/18/2019	412613	-	13.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	25	AB02-25.0	2/18/2019	412613	-	9.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	29	AB02-29.0	2/18/2019	412613	-	12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	1	AB03-1.0	2/18/2019	412613	-	9.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	5	AB03-5.0	2/18/2019	412613	-	10.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	10	AB03-10.0	2/18/2019	412613	-	13.2	-	-		-	-			-	-	-	-	-	-	-	<u> </u>
		AB03-10.0-DUP	2/18/2019	412613	-	13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<u> </u>
AB03	15	AB03-15.0	2/18/2019	412613	-	12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<u> </u>
	20	AB03-20.0	2/18/2019	412613	-	11.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<u> </u>
	25	AB03-25.0	2/18/2019	412613	-	15.5	-	-	-	-	-			-	-	-	-	-	-	-	<u> </u>
		AB03-25.0-DUP	2/18/2019	412613	-	10.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	30	AB03-30.0	2/18/2019	412613	-	6.12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

Summary of self Analytical Results for Metals   Federal Confidence   F	Table 2													Metal	s							
Part	Summary of So	oil Analytical Results for Meta	ıls								=											
HIRA Notes Residential Soil DISC - Notes Stringent April 2019   Feet 10   Sample Date   Sample Dat	Preliminary End	dangerment Assessment – Equ	uivalent Report								}					_						1 1
### Notes Residential Soil DISC- Notes Stringent April 2019  ### Notes Residential Soil DISC- Notes Stringent April 2019  ### Notes Residential Soil DISC- Notes Stringent April 2019  ### Notes Residential Soil DISC- Notes Stringent April 2019  ### Notes Residential Soil Most Stringent (TREET 66, RICE-10) May 2019  ### To April 2019  ### Notes Residential Soil Most Stringent (TREET 66, RICE-10) May 2019  ### To April 2019  ### Notes Residential Soil Most Stringent (TREET 66, RICE-10) May 2019  ### To April 2019  ### Notes Residential Soil Most Stringent (TREET 66, RICE-10) May 2019  ### To April 2019  ### April 2019	Alexander Ham	nilton High School, Los Angeles	s, California								=					μn					_	1 1
### Notes Residential Soil DISC- Notes Stringent April 2019  ### Notes Residential Soil DISC- Notes Stringent April 2019  ### Notes Residential Soil DISC- Notes Stringent April 2019  ### Notes Residential Soil DISC- Notes Stringent April 2019  ### Notes Residential Soil Most Stringent (TREET 66, RICE-10) May 2019  ### To April 2019  ### Notes Residential Soil Most Stringent (TREET 66, RICE-10) May 2019  ### To April 2019  ### Notes Residential Soil Most Stringent (TREET 66, RICE-10) May 2019  ### To April 2019  ### Notes Residential Soil Most Stringent (TREET 66, RICE-10) May 2019  ### To April 2019  ### April 2019	ĺ					) L		_	툍	툍	<u> </u>				ح ا	den		툍		Ε	E	
### A Note 3 Residential Soil DISC- Most Stringent April 2039  ### A Note 3 Residential Soil DISC- Most Stringent (TR-STE-OK, INCS-10) May 2019  ### A Note 3 Residential Soil DISC- Most Stringent (TR-STE-OK, INCS-10) May 2019  ### A Note 3 Residential Soil DISC- Most Stringent (TR-STE-OK, INCS-10) May 2019  ### A Note 3 Residential Soil Most Stringent (TR-STE-OK, INCS-10) May 2019  ### A Note 3 Residential Soil Most Stringent (TR-STE-OK, INCS-10) May 2019  ### A Note 3 Residential Soil Most Stringent (TR-STE-OK, INCS-10) May 2019  ### A Note 3 Residential Soil Most Stringent (TR-STE-OK, INCS-10) May 2019  ### A Note 3 Residential Soil Most Stringent (TR-STE-OK, INCS-10) May 2019  ### A Note 3 Residential Soil Most Stringent (TR-STE-OK, INCS-10) May 2019  ### A Note 3 Residential Soil Most Stringent (TR-STE-OK, INCS-10) May 2019  ### A Note 3 Residential Soil Most Stringent (TR-STE-OK, INCS-10) May 2019  ### A Note 3 Residential Soil Most Stringent (TR-STE-OK, INCS-10) May 2019  ### A Note 3 Residential Soil Most Stringent (TR-STE-OK, INCS-10) May 2019  ### A Note 3 Residential Soil Most Stringent (TR-STE-OK, INCS-10) May 2019  ### A Note 3 Residential Soil Most Stringent (TR-STE-OK, INCS-10) May 2019  ### A Note 3 Residential Soil Most Stringent (TR-STE-OK, INCS-10) May 2019  ### A Note 3 Residential Soil Most Stringent (TR-STE-OK, INCS-10) May 2019  ### A Note 3 Residential Soil Most Stringent (TR-STE-OK, INCS-10) May 2019  ### A Note 3 Residential Soil Most Stringent (TR-STE-OK, INCS-10) May 2019  ### A Note 3 Residential Soil Most Stringent (TR-STE-OK, INCS-10) May 2019  ### A Note 3 Residential Soil Most Stringent (TR-STE-OK, INCS-10) May 2019  ### A Note 3 Residential Soil Most Stringent (TR-STE-OK, INCS-10) May 2019  ### A Note 3 Residential Soil Most Stringent (TR-STE-OK, INCS-10) May 2019  ### A Note 3 Residential Soil Most Stringent (TR-STE-OK, INCS-10) May 2019  ### A Note 3 Residential Soil Most Stringent (TR-STE-OK, INCS-10) May 2019  ### A Note 3 Residential Soil Most Stringent (TR-STE-OK, INCS-10)						<u> </u>	enic	iun	∰	aj.	E o	at	bei	75	ı	λp	l e	ji.	e l	i⊒	adi	
### A Note 3 Residential Soil DISC- Most Stringent April 2039  ### A Note 3 Residential Soil DISC- Most Stringent (TR-STE-OK, INCS-10) May 2019  ### A Note 3 Residential Soil DISC- Most Stringent (TR-STE-OK, INCS-10) May 2019  ### A Note 3 Residential Soil DISC- Most Stringent (TR-STE-OK, INCS-10) May 2019  ### A Note 3 Residential Soil Most Stringent (TR-STE-OK, INCS-10) May 2019  ### A Note 3 Residential Soil Most Stringent (TR-STE-OK, INCS-10) May 2019  ### A Note 3 Residential Soil Most Stringent (TR-STE-OK, INCS-10) May 2019  ### A Note 3 Residential Soil Most Stringent (TR-STE-OK, INCS-10) May 2019  ### A Note 3 Residential Soil Most Stringent (TR-STE-OK, INCS-10) May 2019  ### A Note 3 Residential Soil Most Stringent (TR-STE-OK, INCS-10) May 2019  ### A Note 3 Residential Soil Most Stringent (TR-STE-OK, INCS-10) May 2019  ### A Note 3 Residential Soil Most Stringent (TR-STE-OK, INCS-10) May 2019  ### A Note 3 Residential Soil Most Stringent (TR-STE-OK, INCS-10) May 2019  ### A Note 3 Residential Soil Most Stringent (TR-STE-OK, INCS-10) May 2019  ### A Note 3 Residential Soil Most Stringent (TR-STE-OK, INCS-10) May 2019  ### A Note 3 Residential Soil Most Stringent (TR-STE-OK, INCS-10) May 2019  ### A Note 3 Residential Soil Most Stringent (TR-STE-OK, INCS-10) May 2019  ### A Note 3 Residential Soil Most Stringent (TR-STE-OK, INCS-10) May 2019  ### A Note 3 Residential Soil Most Stringent (TR-STE-OK, INCS-10) May 2019  ### A Note 3 Residential Soil Most Stringent (TR-STE-OK, INCS-10) May 2019  ### A Note 3 Residential Soil Most Stringent (TR-STE-OK, INCS-10) May 2019  ### A Note 3 Residential Soil Most Stringent (TR-STE-OK, INCS-10) May 2019  ### A Note 3 Residential Soil Most Stringent (TR-STE-OK, INCS-10) May 2019  ### A Note 3 Residential Soil Most Stringent (TR-STE-OK, INCS-10) May 2019  ### A Note 3 Residential Soil Most Stringent (TR-STE-OK, INCS-10) May 2019  ### A Note 3 Residential Soil Most Stringent (TR-STE-OK, INCS-10) May 2019  ### A Note 3 Residential Soil Most Stringent (TR-STE-OK, INCS-10)	ĺ					Ant	Arso	3ari	3er	Cad	į	ලි	ල	-ea	Mei	Ν	Sic	) je	اغزا	Ъа	/an	Zinc
INDEX   100   100   100   100   100   101   100   100   101   100   100   101   100   100   101   100   100   101   100   100   100   101   100   10									_		_			mg/kg								
September   Sept	HHRA Note 3 F	Residential Soil DTSC - Most	Stringent April 201	19			11.6/1.6						6,8		1					6,6		
Sample Depth (ft)			9 1				28															
1	<b>USEPA</b> Resider	ntial Soil - Most Stringent (Tf	R=1E-06, HQ=1.0) N	May 2019		31		15000	160	0 71	0	23	3100	400	11	390	1500	390	390	0.78	390	23000
ABO-50	Location	Sample Depth (ft)	Field ID	Sample Date	SDG																	
AB04 AB04 AB04 AB04 AB04 AB04 AB04 AB04		1	AB04-1.0	2/18/2019	412613	-	12.6	•	-	-	-	-	-	-	-	-	-	-	-	-	-	-
A804	i [	5	AB04-5.0	2/18/2019	412613	-	11.5	•	-	-	-	-	-	-	-	•	-	-	-	-	-	-
15	i L	<u> </u>	AB04-5.0-DUP	2/18/2019	412613	-	11.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15	AR04					-	-	-	-	-	-	-	-	-	-	-	-	-	- ]	-	-	
25	, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,					-	_	-	-	-	-		-	-	-	-	-	-	-	-		
AB05   AB04-30.0   2/18/2019   412613   1.2.9	ı L					-	_	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
AB05 1.0	i L					-	_	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AB05 1-0 Dup		30				-	_	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
ABOS 5	i	1				-	_	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
AB05 10	i -	<del>-</del>				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
AB05	i -					-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
15	AB05					-	_	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
25	i -					-	_	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
AB06-1.0   2/18/2019   412613   - 1.12	i -					-	_	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
AB06 1	i -					-	_	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
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AB07-20.0	l					-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<del></del>
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ABO7  ABO7-1.0	i -					-		-	-	-	-	-	-	-	-	-	-	-	-	-	<u> </u>	-
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AB08 15 AB08-25.0 2/18/2019 412613 - 9.54	1	20					-	-		<del>-</del>	-			-	-		<del>  -</del>		1	-		$\vdash$
ABO8 ABO7-30.0 2/18/2019 412613 - 2.74	, F	25					-	-		<del>  -</del>	-			-		-	<del>  -</del>		-	-	1	$\vdash$
AB08 15 AB08-1.0 2/18/2019 412613 - 4	, F						-	-		<del>-</del>	-		<del>                                     </del>	-	-	-	<del>  -</del>			-		$\vdash$
AB08								-		<del>                                     </del>			<del>-</del> -			_	<del>                                     </del>		<del>                                     </del>	<u>-</u>		$\vdash$
AB08 15 AB08-15.0 2/18/2019 412613 - 10.9	, F									<del>-</del>			<del>-</del>			_	<del>-</del>			<u>-</u>		$\vdash$
AB08 15 AB08-15.0 2/18/2019 412613 - 12.8	,						_			<del>-</del>	_ <u>-</u>		<del>-</del>	<u> </u>	_		<del>                                     </del>		1	<u> </u>		$\vdash$
20     AB08.20.0     2/18/2019     412613     -     12     -	AROS -						-			<del>                                     </del>	<u> </u>		<del>-</del> -	<u> </u>			<del>                                     </del>			<u> </u>		
25 AB08-25.0 2/18/2019 412613 - <b>11.3</b>	, F						-	_		-							<del>                                     </del>		-	<u> </u>		
	,						_	-		-	-			_	_	-	-	-	1	_	1	<del></del>
29.5 AB08-29.5 2/18/2019 412613 - <b>18.6</b>	,						_	_		_	_		_	-	_	_	<del>  _  </del>	_	<del>                                     </del>	_	1	

Table 2													Metal	s							
Summary of So	oil Analytical Results for Meta	ls								(IV											
Preliminary En	dangerment Assessment – Equ	uivalent Report								ı +					_						
Alexander Han	nilton High School, Los Angeles	s, California			Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium (III	Cobalt	Copper	Lead	Mercury	Molybdenum	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc
					mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
HHRA Note 3	Residential Soil DTSC - Most	Stringent April 201	9					16					80	1		820					
Site Specific B	ackground					28															
<b>USEPA</b> Reside	ntial Soil - Most Stringent (Ti	R=1E-06, HQ=1.0) N	Лау 2019		31		15000	160	0 71	0	23	3100	400	11	390	1500	390	390	0.78	390	23000
Location	Sample Depth (ft)	Field ID	Sample Date	SDG																	
	1	AB09-1.0	2/18/2019	412613	-	10.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	5	AB09-5.0	2/18/2019	412613	-	13.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	10	AB09-10.0	2/18/2019	412613	-	17.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AB09	10	AB09-10.0-DUP	2/18/2019	412613	-	15.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	15	AB09-15.0	2/18/2019	412613	-	12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	20	AB09-20.0	2/18/2019	412613	-	11.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	25	AB09-25.0	2/18/2019	412613	-	11.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

## Notes

mg/kg = milligrams per kilogram

- = not analyzed

< = not reported above analytical reporting limit shown

J - estimated value

B1 = Analyte was present in a sample and the associated method blank greater than MDL but less than the RDL

ft bgs = feet below ground surface

HHRA- Human Health Risk Assessment

DTSC - Department of Toxic Substance Control

USEPA- Usited State Environmental Protection Agency

Table 3					1				PCBs					808	1 Pestic	idos							
	of Soil Analytical Resu	Its for PCRs and C	)CPs			1		<u> </u>	PCBS	I	I	l	<u> </u>	808.		iues				Ī			
Prelimina	ry Endangerment Asses Hamilton High School,	sment – Equivaler	nt Report		Aroclor 1016	Aroclor 1221	Aroclor 1232	Aroclor 1242	Aroclor 1248	Aroclor 1254	Aroclor 1260	Aroclor 1268	Aroclor 1262	Chlordane (cis) (alpha)	Chlordane (trans) (gamma)	gamma-Chlordane	а-ВНС	Aldrin	р-внс	chlordane	<b>д-внс</b>	4,4'-DDD	4,4'-DDE
HHRA No	te 3 Residential Soil [	OTSC - Most Stri	ngent April 2019		4	0.2	0.17	0.23	0.23	0.24	0.24						0.086	0.039	0.3			1.9	2
USEPA Re	esidential Soil - Most	Stringent (TR=1	E-06, HQ=1.0) Ma	y 2019	4.1	0.2	0.17	0.23	0.23	0.24	0.24						0.086	0.039	0.3	1.7		1.9	2
Location	Sample Depth (ft)	Field ID	Sample Date	SDG	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	ug/kg	ug/kg	ug/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
	0.5	B03-0.5	9/10/2018	T182803	-	-	-	-	-	-	-	-	-	-	-	-	<0.00033	< 0.00047	<0.00071	-	<0.00067	<0.00035	<0.0015
B03	1.5	B03-1.5	9/10/2018	T182803	-	-	-	-	-	-	-	-	-	-	-	-	<0.00033	< 0.00047	<0.00071	-	<0.00067	<0.00035	<0.0015
	2.5	B03-2.5	9/10/2018	T182803	-	-	-	-	-	-	-	-	-	-	-	-	<0.00033	<0.00047	<0.00071	-	<0.00067	<0.00035	<0.0015
	0.5	B05-0.5	8/31/2018	T182726	-	-	-	-	-	-	-	-	-	-	-	-	<0.00033	<0.00047	<0.00071	-	<0.00067	<0.00035	<0.0015
B05	1.5	B05-1.5	8/31/2018	T182726	-	-	-	-	-	-	-	-	-	-	-	-			<0.00071	-		<0.00035	<0.0015
	2.5	B05-2.5	8/31/2018	T182726	-	-	-	-	-	-	-	-	-	-	-	-			<0.00071	-	<0.00067		<0.0015
	0.5	B06-0.5	9/10/2018	T182803	-	-	-	-	-	-	-	-	-	-	-	-	<0.00033	<0.00047	<0.00071	-	<0.00067	1	<0.0015
B06	1.5	B06-1.5	9/10/2018	T182803	-	-	-	-	-	-	-	-	-	-	-	-		<0.00047	<0.00071	-		<0.00035	<0.0015
	2.5	B06-2.5	9/10/2018	T182803	-	-	-	-	-	-	-	-	-	-	-	-	<0.00033	<0.00047	<0.00071	-	<0.00067		<0.0015
	0.5	B07-0.5	9/10/2018	T182803	-	-	-	-	-	-	-	-	-	-	-	-	<0.00033	<0.00047	<0.00071	<u> </u>	<0.00067	<b>!</b>	<0.0015
B07	1.5	B07-1.5	9/10/2018	T182803	<u> </u>	-	-	-	-	-	-	-	-	-	-	-		<0.00047	<0.00071	<u> </u>		<0.00035	<0.0015
	2.5	B07-2.5	9/10/2018	T182803	-	-	-	-	-	-	-	-	-	-	-	-	<0.00033		<0.00071	<u> </u>	<0.00067		<0.0015
	0.5	B08-0.5	9/10/2018	T182803	-	-	-	-	-	-	-	-	-	-	-	-	<0.00033	<0.00047	<0.00071	-	<0.00067		<0.0015
B08	1.5	B08-1.5	9/10/2018	T182803	-	-	-	-	-	-	-	-	-	-	-	-		<0.00047	<0.00071	-	<0.00067		<0.0015
	2.5	B08-2.5	9/10/2018	T182803	-	-	-	-	-	-	-	-		-	-	-	<0.00033	<0.00047	<0.00071	-	<0.00067	1	<0.0015
200	0.5	B09-0.5	9/10/2018	T182803	+ -	-	-	-	-	-	-	-	-	-	-	-	<0.00033	<0.00047	<0.00071	-	<0.00067		<0.0015
B09	1.5	B09-1.5	9/10/2018	T182803	+ -	-	-	-	-	-	-	-	-	-	-	-	<0.00033	<0.00047	<0.00071	<del>  -</del>	<0.00067		<0.0015
	2.5	B09-2.5	9/10/2018	T182803	+ -	-	-	-	-	-	-	-	-	-	-	-			1	<b>├</b> -	<0.00067	1	<0.0015
D10	0.5	B10-0.5	9/10/2018	T182803	+ -	-	-	-	-	-	-	-	-	-	-	-	<0.00033			+		<0.00035	
B10	1.5	B10-1.5	9/10/2018	T182803	-	-	-	-	-	-	-	-	-	-	-	-	<0.00033			+		<0.00035	<0.0015
	2.5	B10-2.5	9/10/2018	T182803	-	-	-	-	-	-	-	-	-	-	-	-	<0.00033		1	+	1	<0.00035	<0.0015
D11	0.5	B11-0.5	10/20/2018	T183212	+ -	-	-		-	-	-	-		<5	<5 -25	-	<0.00033			<u> </u>		<0.00035	0.04
B11	1.5	B11-1.5	10/20/2018	T183212	+-	<u> </u>	-	<del>-</del> -	<del>-</del> -	-	-		<u> </u>	<25	<25	-	<0.0016	<0.0024	<0.0035	<del>  -</del>	<0.0033		0.14
-	2.5 0.5	B11-2.5 B12-0.5	10/20/2018	T183212 T183212	+ -	-	-	<del>-</del> -	<del></del>	-	-	-	<u> </u>	<25	<25	-	<0.0016	<0.0024	<0.0035	+	<0.0033		0.16
B12	1.5	B12-0.5 B12-1.5	10/20/2018 10/20/2018	T183212	+ -	-	-	<del>  -</del>	<del></del>	-	-	-	<u> </u>	<50	<50	-	<0.0033	<0.0047 <0.00047	<0.0071 <0.00071	<del>  -</del>	<0.0067	<0.0035 <0.00035	<0.015 <0.0015
D12	2.5	B12-1.5 B12-2.5	10/20/2018	T183212	+ -	<u> </u>	-	<del></del>	<del></del>	-	-		<del>                                     </del>	<5 <5	<5 <5	-	<0.00033		<b>†</b>	_		<0.00035	<0.0015
	2.3	B12-2.5 B13-0.5	10/20/2018	T183212	+-	<del>-</del> -		<del>-</del> -	<del></del>		<del>-</del> -	<del>-</del> -	<del>-</del> -		<50	-	<0.0033	<0.0047	<0.00071	<del>                                     </del>	<0.0067	1	<0.0015
	0.5	B13-0.5-DUP	10/20/2018	T183211	+ -	<del></del>	-	<del>                                     </del>	<del></del>	-	-		<del></del>	<50 <5	<50 <5	-			<0.0071	+ -		<0.0035	<0.015
B13	1.5	B13-0.5-D0P	10/20/2018	T183211	+ -	_	-	<del>-</del>	<del>-</del>	-		<del>-</del>	-	<5	<5 <5	_	<0.00033		1	+	1	<0.00035	
	2.5	B13-1.5	10/20/2018	T183211	+ -	-	-	<del>-</del>	-	-	-	-	<del>-</del>	<5	<5 <5	<u> </u>	<0.00033			1		<0.00035	
<u> </u>	۷.5	DT3-5'3	10/20/2010	1102511								_		\)	\J	•	\0.00033	\U.UUU4/	\0.000/1		\0.00007	\U.UUU33	ZT00.0/

Table 3					1		Pes	ticides									
	of Soil Analytical Resu	Its for PCBs and O	CPs			l	. 55										
1	y Endangerment Asses																1
	Hamilton High School,		-						, a								1
									sulphate						epoxide		1
									<del> </del>		ğ		e)		Ŏ	_	1
							_	=			aldehyde	o u	dar	_	1	o L	0
						_	<u> </u>	<u>L</u> a	<u>L</u> a		<u>a</u>	ket	<u> </u> =_	皇	9	S S	en
					Ö	l i <u>i</u>	nso	nso	nso	.E	<u>.</u> E	Ë	) 2	tac	tac	ξ	de l
					4,4'-DDT	Dieldrin	Endosulfan	Endosulfan II	Endosulfan	Endrin	Endrin	Endrin ketone	g-BHC (Lindane)	Heptachlor	Heptachlor	Methoxychlor	Toxaphene
HHRA Not	te 3 Residential Soil [	DTSC - Most Strir	ngent April 2019		1.9	0.034	ш	<del>"</del>		19	ш —		0.57	0.13	0.07	320	0.45
	sidential Soil - Most		<u> </u>	v 2019	1.9	0.034			380	19			0.57	0.13	0.07	320	0.49
	Sample Depth (ft)	Field ID	Sample Date	SDG	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
	0.5	B03-0.5	9/10/2018	T182803	<0.0025	<0.00047	<0.0005		<0.00047					< 0.00051		<0.00045	
B03	1.5	B03-1.5	9/10/2018	T182803	<0.0025	<0.00047	<0.0005	1	<0.00047	1		<0.00045		<0.00051	<0.00046		
	2.5	B03-2.5	9/10/2018	T182803	<0.0025	<0.00047	<0.0005	<0.00056	1		<0.0007	<0.00045	<0.00042	<0.00051	<0.00046		
	0.5	B05-0.5	8/31/2018	T182726	<0.0025	<0.00047	<0.0005	1		<0.00043		•		<0.00051		<0.00045	
B05	1.5	B05-1.5	8/31/2018	T182726	<0.0025	<0.00047	<0.0005	1	<0.00047	1		<0.00045		<0.00051	<0.00046		
	2.5	B05-2.5	8/31/2018	T182726	<0.0025	<0.00047	<0.0005	<0.00056	<0.00047	<0.00043	<0.0007	<0.00045	<0.00042	<0.00051	<0.00046	<0.00045	<0.0058
	0.5	B06-0.5	9/10/2018	T182803	<0.0025	<0.00047	<0.0005	<0.00056	<0.00047	<0.00043	<0.0007	<0.00045	<0.00042	<0.00051	<0.00046	<0.00045	<0.0058
B06	1.5	B06-1.5	9/10/2018	T182803	<0.0025	<0.00047	<0.0005	<0.00056	<0.00047	<0.00043	<0.0007	<0.00045	<0.00042	<0.00051	<0.00046	<0.00045	<0.0058
	2.5	B06-2.5	9/10/2018	T182803	<0.0025	<0.00047	<0.0005	<0.00056	<0.00047	<0.00043	<0.0007	<0.00045	<0.00042	<0.00051	<0.00046	<0.00045	<0.0058
	0.5	B07-0.5	9/10/2018	T182803	<0.0025	<0.00047	<0.0005	<0.00056	<0.00047	<0.00043	<0.0007	<0.00045	<0.00042	<0.00051	<0.00046	<0.00045	<0.0058
B07	1.5	B07-1.5	9/10/2018	T182803	<0.0025	<0.00047	<0.0005	<0.00056	<0.00047	<0.00043	<0.0007	<0.00045	<0.00042	<0.00051	<0.00046	<0.00045	<0.0058
	2.5	B07-2.5	9/10/2018	T182803	<0.0025	<0.00047	<0.0005	<0.00056	<0.00047	<0.00043	<0.0007	<0.00045	<0.00042	<0.00051	<0.00046	<0.00045	<0.0058
	0.5	B08-0.5	9/10/2018	T182803	<0.0025	<0.00047	<0.0005	<0.00056	<0.00047	<0.00043	<0.0007	<0.00045	<0.00042	<0.00051	<0.00046	<0.00045	<0.0058
B08	1.5	B08-1.5	9/10/2018	T182803	<0.0025	<0.00047	<0.0005	<0.00056	<0.00047	<0.00043	<0.0007	<0.00045	<0.00042	<0.00051	<0.00046	<0.00045	<0.0058
	2.5	B08-2.5	9/10/2018	T182803	<0.0025	<0.00047	<0.0005		<0.00047			<0.00045		<0.00051	-	<0.00045	
	0.5	B09-0.5	9/10/2018	T182803	<0.0025	<0.00047	<0.0005		<0.00047	<0.00043	<0.0007	<0.00045		<0.00051		<0.00045	
B09	1.5	B09-1.5	9/10/2018	T182803	<0.0025	<0.00047	<0.0005	<del> </del>	<b>!</b>	<0.00043		<b>!</b>		<0.00051		<0.00045	
	2.5	B09-2.5	9/10/2018	T182803		<0.00047	<0.0005	<b>i</b>	<0.00047	1							
	0.5	B10-0.5	9/10/2018	T182803				1	1	<0.00043		1					
B10	1.5	B10-1.5	9/10/2018	T182803	-			1		<0.00043		•			-		
	2.5	B10-2.5	9/10/2018	T182803	-	<0.00047		1	1	<0.00043					<0.00046		
	0.5	B11-0.5	10/20/2018	T183212	<0.0025	<0.00047	<0.0005	1	<0.00047	+		-		<0.00051			_
B11	1.5	B11-1.5	10/20/2018	T183212	<0.012	<0.0024	<0.0025	<0.0028		1			<0.0021	<0.0025		<0.0023	
	2.5	B11-2.5	10/20/2018	T183212	<0.012	<0.0024	<0.0025	<0.0028	<0.0023	1	<0.0035	1	<0.0021	<0.0025	1	<0.0023	
D4.3	0.5	B12-0.5	10/20/2018	T183212	<0.025	<0.0047	<0.005	<0.0056	1	1	<0.007	<0.0045	<0.0042	<0.0051	<0.0046	<0.0045	
B12	1.5	B12-1.5	10/20/2018	T183212	-	<0.00047		<b>i</b>		<0.00043		1			<0.00046		
	2.5	B12-2.5	10/20/2018	T183212	_	<0.00047	i e	1		<0.00043		1	<0.00042		<0.00046		
	0.5	B13-0.5	10/20/2018	T183211	<0.025	<0.0047	<0.005	<0.0056		1	<0.007	<0.0045	<0.0042	<0.0051	<0.0046		
B13	4.5	B13-0.5-DUP	10/20/2018	T183211		<0.00047		1	1	<0.00043		1			<0.00046		
	1.5	B13-1.5	10/20/2018	T183211	-	<0.00047		1	1	<0.00043		1	<0.00042		<0.00046		
	2.5	B13-2.5	10/20/2018	T183211	<0.0025	<0.00047	<0.0005	<b>  &lt;</b> 0.00056	J <0.00047	<0.00043	<0.0007	J < U.UUU45	<0.00042	<0.00051	<0.00046	<0.00045	<0.0058

Table 2					I				DCDa					000	1 Doctio	idaa							
Table 3	of Cail Analytical Bosyl	to for DCDs and O	ACD-			I	1	Ī	PCBs			I 1	Ī	808	1 Pestic	iaes				Ī	1	1	
Prelimina	of Soil Analytical Resul ry Endangerment Assess r Hamilton High School,	sment – Equivalen	nt Report		roclor 1016	Aroclor 1221	Aroclor 1232	vroclor 1242	Aroclor 1248	Aroclor 1254	Aroclor 1260	roclor 1268	Aroclor 1262	Chlordane (cis) (alpha)	Chlordane (trans) (gamma)	gamma-Chlordane	а-ВНС	Aldrin	-внс	chlordane	-BHC	,4'-DDD	4,4'-DDE
HHRA No	te 3 Residential Soil D	TSC - Most Strir	ngent Anril 2019		4	0.2	0.17	0.23	0.23	0.24	0.24	_ ~	_		-	0.0	0.086	0.039	0.3		7	1.9	2
	esidential Soil - Most S		<u> </u>	v 2019	4.1	0.2	0.17	0.23	0.23	0.24	0.24						0.086	0.039	0.3	1.7		1.9	2
	Sample Depth (ft)	Field ID	Sample Date	SDG	mg/kg			mg/kg				mg/kg	mg/kg	ug/kg	ug/kg	ug/kg		mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
	0.5	B14-0.5	10/20/2018	T183212	-	-	-	-	-	-	-	-	-	<5	<5	-			<0.00071	-		<0.00035	<0.0015
B14	1.5	B14-1.5	10/20/2018	T183212	-	-	-	-	-	-	-	-	-	<5	<5	-			<0.00071	-	<0.00067		<0.0015
	2.5	B14-2.5	10/20/2018	T183212	-	-	-	-	-	-	-	-	-	<5	<5	-	<0.00033	<0.00047	<0.00071	-	<0.00067	<0.00035	<0.0015
	0.5	B15-0.5	10/20/2018	T183211	-	-	-	-	-	-	-	-	-	<50	<50	-	<0.0033	<0.0047	<0.0071	-	<0.0067	<0.0035	<0.015
B15	1.5	B15-1.5	10/20/2018	T183211	-	-	-	-	-	-	-	-	-	<5	<5	-	<0.00033		<0.00071	-	<0.00067		<0.0015
	2.5	B15-2.5	10/20/2018	T183211	-	-	-	-	-	-	-	-	-	<5	<5	-	<0.00033	<0.00047	<0.00071	-	<0.00067		<0.0015
	0.5	B16-0.5	9/10/2018	T182803	-	-	-	-	-	-	-	-	-	-	-	-		<0.00047	<0.00071	-	<0.00067		<0.0015
B16	1.5	B16-1.5	9/10/2018	T182803	-	-	-	-	-	-	-	-	-	-	-	-	<0.00033		<0.00071	-	<0.00067		<0.0015
	2.5	B16-2.5	9/10/2018	T182803	-	-	-	-	-	-	-	-	-	-	-	-			<0.00071	-	<0.00067		<0.0015
	0.5	B17-0.5	9/10/2018	T182803	-	-	-	-	-	-	-	-	-	-	-	-			<0.00071	-	<0.00067		<0.0015
B17	1.5	B17-1.5	9/10/2018	T182803	-	-	-	-	-	-	-	-	-	-	-	-	<0.00033		<0.00071	-	<0.00067		<0.0015
	2.5	B17-2.5	9/10/2018	T182803	-	-	-	-	-	-	-	-	-	-	-	-	<0.00033	<0.00047	<0.00071	-	<0.00067		<0.0015
	0.5	B18-0.5	9/19/2018	T182898	-	-	-	-	-	-	-	-	-	<5	<5	-	<0.00033		<0.00071	-	<0.00067		<0.0015
B18	1.5	B18-1.5	9/19/2018	T182898	-	-	-	-	-	-	-	-	-	<5	<5	-	<0.00033	<0.00047	<0.00071	-	<0.00067	<0.00035	<0.0015
	2.5	B18-2.5	9/19/2018	T182898	-	-	-	-	-	-	-	-	-	<5	<5	-	<0.00033	<0.00047	<0.00071	-	<0.00067	<0.00035	<0.0015
	0.5	B19-0.5	10/20/2018	T183212	-	-	-	-	-	-	-	-	-	6.9	6.1	-	<0.00033	<0.00047	<0.00071	-	<0.00067	<0.00035	<0.0015
	0.5	B19-0.5-dup	10/20/2018	T183212	-	-	-	-	-	-	-	-	-	8.7	8.9	-	<0.00033	<0.00047	<0.00071	-	<0.00067	<0.00035	<0.0015
D10	1.5	B19-1.5	10/20/2018	T183212	-	-	-	-	-	-	-	-	-	<5	<5	-	<0.00033	<0.00047	<0.00071	-	<0.00067	<0.00035	<0.0015
B19	1.5	B19-1.5-dup	10/20/2018	T183212	-	-	-	-	-	-	-	-	-	<5	<5	-	<0.00033	<0.00047	<0.00071	-	<0.00067	<0.00035	<0.0015
	2.5	B19-2.5	10/20/2018	T183212	-	-	-	-	-	-	-	-	-	<5	<5	-	<0.00033	<0.00047	<0.00071	-	<0.00067	<0.00035	<0.0015
	2.5	B19-2.5dup	10/20/2018	T183212	-	-	-	-	-	-	-	-	-	<5	<5	-	<0.00033	< 0.00047	<0.00071	-	<0.00067	<0.00035	<0.0015
	0.5	B20-0.5	11/19/2018	T183454	-	-	-	-	-	-	-	-	-	<25	-	<25	<0.0028	<0.0033	<0.0069	-	<0.0032	<0.006	<0.0039
B20	1.5	B20-1.5	11/19/2018	T183454	-	-	-	-	-	-	-	-	-	<5	-	<5	<0.00056	<0.00066	<0.0014	-	<0.00064	<0.0012	<0.00078
	2.5	B20-2.5	11/19/2018	T183454	-	-	-	-	-	-	-	-	-	<5	-	<5	<0.00056			-	<0.00064		<0.00078
	0.5	B21-0.5	11/19/2018	T183454	-	-	-	-	-	-	-	-	-	<50	-	<50	<0.0056	<0.0066	<0.014	-	<0.0064	<0.012	<0.0078
B21	1.5	B21-1.5	11/19/2018	T183454	-	-	-	-	-	-	-	-	-	<25	-	<25	<0.0028	<0.0033	<0.0069	-	<0.0032	<0.006	<0.0039
	2.5	B21-2.5	11/19/2018	T183454	-	-	-	-	-	-	-	-	-	<5	-	<5	<0.00056		<0.0014	-	<0.00064	<0.0012	<0.00078
	0.5	B25-0.5	10/20/2018	T183212	-	-	-	-	-	-	-	-	-	<25	<25	-	<0.0016	<0.0024	<0.0035	-	<0.0033		<0.0075
B25	1.5	B25-1.5	10/20/2018	T183212			-		-	•		-		<5	<5	-	<0.00033	<0.00047	<0.00071		<0.00067	<0.00035	<0.0015
	2.5	B25-2.5	10/20/2018	T183212	-	-	-		-	-	-	-		<5	<5	-	<0.00033	< 0.00047	< 0.00071	-	<0.00067	<0.00035	<0.0015

Table 3			1		Doct	ticides											
	of Soil Analytical Resul	ts for PCBs and O	CPs				F C31	liciacs									
1	y Endangerment Assess																1
	Hamilton High School,	-	-														1
7 67.44.14.61									sulphate						de		ı
									<u>ਰ</u>		de		(e)		epoxide		1
							_	=			aldehyde	ne	l gan		ер	lor	ı
					_		fan	lan	fan		lde	etc	i-i-	l o	lor	ethoxychlor	l sue
					<u> </u>	rin	sul	sul	sul			r A	5	ach	achlo	χο	g
					4,4'-DDT	Dieldrin	Endosulfan	Endosulfan	Endosulfan	Endrin	Endrin	Endrin ketone	g-BHC (Lindane)	Heptachlor	Нерt	eth	Toxaphene
LILIDA Not	o 2 Desidential Cail D	TCC Most Chris			1		ъ	<u> </u>	<u> </u>		Ē	Ēr				Σ	
	te 3 Residential Soil D		<u> </u>	. 2010	1.9	0.034			200	19			0.57	0.13	0.07	320	0.45
	sidential Soil - Most S				1.9	0.034	/1	/1	380	19	/1	/1	0.57	0.13	0.07	320	0.49
Location	Sample Depth (ft)	Field ID	Sample Date	SDG	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
D1.4	0.5	B14-0.5	10/20/2018	T183212	<0.0025		<0.0005		<0.00047		<0.0007	<0.00045	<0.00042		<0.00046		<0.0058
B14	1.5	B14-1.5	10/20/2018	T183212	+	<0.00047	<0.0005				<0.0007	<0.00045	<0.00042		<0.00046		<0.0058
	2.5	B14-2.5	10/20/2018	T183212	<0.0025	<0.00047	<0.0005	<0.00056	<0.00047	<0.00043	<0.0007	<0.00045	<0.00042		<0.00046		<0.0058
545	0.5	B15-0.5	10/20/2018	T183211	<0.025	<0.0047	<0.005	<0.0056	<0.0047	<0.0043	<0.007	<0.0045	<0.0042	<0.0051	<0.0046	<0.0045	<0.058
B15	1.5	B15-1.5	10/20/2018	T183211	<0.0025		<0.0005	<0.00056			<0.0007	<0.00045	<0.00042		<0.00046		<0.0058
	2.5	B15-2.5	10/20/2018	T183211	1	<0.00047	<0.0005	<0.00056			<0.0007	<0.00045	<0.00042		<0.00046		<0.0058
	0.5	B16-0.5	9/10/2018	T182803	1	<0.00047	<0.0005				<0.0007	<0.00045	<0.00042				<0.0058
B16	1.5	B16-1.5	9/10/2018	T182803	1	<0.00047	<0.0005	<0.00056			<0.0007	<0.00045					<0.0058
	2.5	B16-2.5	9/10/2018	T182803		<0.00047	<0.0005				<0.0007	<0.00045		<0.00051	<0.00046		<0.0058
	0.5	B17-0.5	9/10/2018	T182803	1	<0.00047	<0.0005				<0.0007	<0.00045	<0.00042			<0.00045	
B17	1.5	B17-1.5	9/10/2018	T182803	1	<0.00047	<0.0005				<0.0007	<0.00045					<0.0058
	2.5	B17-2.5	9/10/2018	T182803		<0.00047	<0.0005				<0.0007	<0.00045	<0.00042		<0.00046		
	0.5	B18-0.5	9/19/2018	T182898	1	<0.00047	<0.0005				<0.0007	<0.00045	<0.00042				<0.0058
B18	1.5	B18-1.5	9/19/2018	T182898	1	<0.00047	<0.0005				<0.0007	<0.00045				<0.00045	<0.0058
	2.5	B18-2.5	9/19/2018	T182898	<0.0025		<0.0005	<0.00056			<0.0007	<0.00045	<0.00042		<0.00046		<0.0058
	0.5	B19-0.5	10/20/2018	T183212	<0.0025		<0.0005				<0.0007	<0.00045	<0.00042		<0.00046		<0.0058
	0.5	B19-0.5-dup	10/20/2018	T183212	<0.0025	<0.00047	<0.0005	<0.00056	<0.00047	<0.00043	< 0.0007	<0.00045	<0.00042	<0.00051		<0.00045	
B19	1.5	B19-1.5	10/20/2018	T183212	<0.0025	<0.00047	<0.0005	<0.00056	<0.00047	<0.00043	< 0.0007	<0.00045	<0.00042	<0.00051	<0.00046	<0.00045	<0.0058
	1.5	B19-1.5-dup	10/20/2018	T183212	<0.0025	<0.00047	<0.0005	<0.00056	<0.00047	<0.00043	< 0.0007	<0.00045	<0.00042	<0.00051	<0.00046	<0.00045	<0.0058
	2.5	B19-2.5	10/20/2018	T183212	<0.0025	<0.00047	<0.0005	<0.00056	<0.00047	<0.00043	<0.0007	<0.00045	<0.00042	<0.00051	<0.00046	<0.00045	<0.0058
	2.5	B19-2.5dup	10/20/2018	T183212	<0.0025	<0.00047	<0.0005	<0.00056		<0.00043	<0.0007	<0.00045	<0.00042	<0.00051	<0.00046	<0.00045	<0.0058
	0.5	B20-0.5	11/19/2018	T183454	<0.004	<0.0054	<0.004	<0.0053	<0.0031	<0.0055	<0.0086	<0.0063	<0.0048	<0.003	<0.0049	<0.002	<0.029
B20	1.5	B20-1.5	11/19/2018	T183454	<0.0008	<0.0011	<0.00081	<0.0011	<0.00061	<0.0011	<0.0017	<0.0013	<0.00096	<0.00059	<0.00098	<0.0004	<0.0058
	2.5	B20-2.5	11/19/2018	T183454	<0.0008	<0.0011	<0.00081	<0.0011	<0.00061	<0.0011	< 0.0017	<0.0013	<0.00096	<0.00059	<0.00098	<0.0004	<0.0058
	0.5	B21-0.5	11/19/2018	T183454	<0.008	<0.011	<0.0081	<0.011	<0.0061	<0.011	<0.017	<0.013	<0.0096	<0.0059	<0.0098	<0.004	<0.058
B21	1.5	B21-1.5	11/19/2018	T183454	<0.004	<0.0054	<0.004	<0.0053	<0.0031	<0.0055	<0.0086	<0.0063	<0.0048	<0.003	<0.0049	<0.002	<0.029
	2.5	B21-2.5	11/19/2018	T183454	<0.0008	<0.0011	<0.00081	<0.0011	<0.00061	<0.0011	<0.0017	<0.0013	<0.00096	<0.00059	<0.00098	<0.0004	<0.0058
	0.5	B25-0.5	10/20/2018	T183212	<0.012	<0.0024	<0.0025	<0.0028	<0.0023	<0.0021	<0.0035	<0.0022	<0.0021		<0.0023		<0.029
B25	1.5	B25-1.5	10/20/2018	T183212	<0.0025	<0.00047	<0.0005	<0.00056	<0.00047	<0.00043	<0.0007	<0.00045	<0.00042	<0.00051	<0.00046	<0.00045	<0.0058
	2.5	B25-2.5	10/20/2018	T183212	<0.0025	<0.00047	<0.0005	<0.00056	<0.00047	<0.00043	<0.0007	<0.00045	<0.00042	<0.00051	<0.00046	< 0.00045	<0.0058

Table 3									PCBs					9091	l Pestic	ridos	1						
	of Soil Analytical Resul	lts for PCRs and O	CPs .			1			PCBS	Ι	I			808.		lues		1		l			
Preliminar	y Endangerment Assess Hamilton High School,	sment – Equivalen	nt Report		Aroclor 1016	Aroclor 1221	Aroclor 1232	Aroclor 1242	Aroclor 1248	Aroclor 1254	Aroclor 1260	Aroclor 1268	Aroclor 1262	Chlordane (cis) (alpha)	Chlordane (trans) (gamma)	gamma-Chlordane	а-ВНС	Aldrin	Энв-q	chlordane	д-внс	4,4'-DDD	4,4'-DDE
	te 3 Residential Soil D		<u> </u>		4	0.2	0.17	0.23	0.23	0.24	0.24						0.086	0.039	0.3			1.9	2
	sidential Soil - Most S				4.1	0.2	0.17	0.23	0.23	0.24	0.24		,,		-		0.086	0.039	0.3	1.7	4:	1.9	2
Location	Sample Depth (ft)	Field ID	Sample Date	SDG	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg			ug/kg		mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
	0.5	B26-0.5	10/20/2018	T183211	-	-	-	-	-	-	-	-	-	<50	<50	-	<0.0033	<0.0047	<0.0071	-	<0.0067	<0.0035	<0.015
		B26-0.5-DUP B26-1.5	10/20/2018 10/20/2018	T183211 T183211	-	-		-	-	-	-	-	-	<5 <5	<5 <5	<u> </u>	<0.00033 <0.00033	<0.00047 <0.00047	<0.00071	-	<0.00067 <0.00067	<0.00035	<0.0015 <0.0015
B26	1.5	B26-1.5-DUP	10/20/2018	T183211	-	-		-	-		-		-	<5 <5	<5 <5	-	<0.00033	<0.00047		-	<0.00067	<0.00035	<0.0015
		В26-2.5	10/20/2018	T183211	-	-	-	-		-	-	-	-	<5	<5	-	<0.00033	<0.00047		-	<0.00067	<0.00035	<0.0015
	2.5	B26-2.5-DUP	10/20/2018	T183211	<del>                                     </del>					<del></del>				<5	<5	<del>-</del>	<0.00033				<0.00067	<0.00035	<0.0015
	0.5	B27-0.5	9/10/2018	T182803	<del>                                     </del>	-	-			<del></del>		-		-	-	-	<0.00033	<0.00047		_	<0.00067	<0.00035	<0.0015
B27	1.5	B27-1.5	9/10/2018	T182803	-	_	_	_	_	-	_	_	_	-	-	-	<0.00033			_	< 0.00067	<0.00035	<0.0015
	2.5	B27-2.5	9/10/2018	T182803	-	-	-	-	_	-	-	-	_	-	-	-	<0.00033	<0.00047		-	< 0.00067	<0.00035	<0.0015
	0.5	B28-0.5	10/20/2018	T183211	-	-	-	-	-	-	-	-	-	<5	<5	-	<0.00033	<0.00047		-	< 0.00067	<0.00035	<0.0015
B28	1.5	B28-1.5	10/20/2018	T183211	-	-	-	-	-	-	-	-	-	<5	<5	-	<0.00033	<0.00047		-	<0.00067	<0.00035	<0.0015
	2.5	B28-2.5	10/20/2018	T183212	-	-	-	-	-	-	-	-	-	<5	<5	-	<0.00033	<0.00047		-	<0.00067	<0.00035	<0.0015
	0.5	B29-0.5	10/20/2018	T183212	-	-	-	-	-	-	-	-	-	<5	<5	-	<0.00033	<0.00047	<0.00071	-	<0.00067	<0.00035	<0.0015
B29	1.5	B29-1.5	10/20/2018	T183212	-	-	-	-	-	-	-	-	-	<5	<5	-	<0.00033	<0.00047	<0.00071	-	<0.00067	<0.00035	<0.0015
	2.5	B29-2.5	10/20/2018	T183212	-	-	-	-	-	-	-	-	-	<5	<5	-	<0.00033	<0.00047	<0.00071	-	<0.00067	<0.00035	<0.0015
	0.5	B30-0.5	10/20/2018	T183212	-	-	-	-	-	-	-	-	-	<5	<5	-	<0.00033	<0.00047		-	<0.00067	<0.00035	<0.0015
B30	1.5	B30-1.5	10/20/2018	T183212	-	-	-	-	-	-	-	-	-	<5	<5	-	<0.00033	<0.00047		-	<0.00067	<0.00035	<0.0015
	2.5	B30-2.5	10/20/2018	T183212	-	-	-	-	-	-	-	-	-	<5	<5	-	<0.00033	<0.00047		-		<0.00035	<0.0015
	0.5	B31-0.5	10/20/2018	T183212	-	-	-	-	-	-	-	-	-		<25	-		<0.0024		-		<0.0018	
		B31-0.5-dup	10/20/2018	T183212	-	-	-	-	-		-	-	-	<25	<25	-	<0.0016	<0.0024	<0.0035	-	<0.0033	<0.0018	<0.0075
B31	1.5	B31-1.5	10/20/2018	T183212		-	-	-	-	-	-	-	-	<5	<5	-		<0.00047		-		<0.00035	<0.0015
		B31-1.5-dup	10/20/2018	T183212	-	-	-	-	-	-	-	-	-	<5 -r	<5 .r	-	<0.00033	<0.00047		-		<0.00035	<0.0015
	2.5	B31-2.5 B31-2.5-dup	10/20/2018	T183212	-	-	-	-	-	-	-	-	-	<5 <5	<5	-	•	<0.00047		-	<0.00067		
	0.5	B32-0.5	10/20/2018 10/20/2018	T183212 T183211	<del>-</del> -	-	-	-	-	<del>-</del>	-	-	-	<5 <5	<5 <5	-	<0.00033	<0.00047 <0.00047		-	<0.00067 <0.00067	<0.00035	<0.0015 <0.0015
B32	1.5	B32-0.5 B32-1.5	10/20/2018	T183211	<del>-</del>	-	<del>-</del> -			-	_			<5 <5	<5 <5	-		<0.00047			<0.00067		
	2.5	B32-1.5 B32-2.5	10/20/2018	T183211	+	-	$\vdash$			$\vdash$	<del>-</del>			<5	<5 <5			<0.00047				<0.00035	<0.0015
	0.5	B32-2.3 B41-0.5	10/20/2018	T183211	<del>-</del>	<del>-</del>	$\vdash$	<u>-</u>	$\vdash \overline{}$	<del>-</del>	<u>-</u>	$\vdash$		<5	<5	<del>-</del>	<0.00033	<0.00047		<u> </u>		<0.00035	<0.0015
B41	1.5	B41-1.5	10/20/2018	T183211	-	-	-	_	_	-	_	-	_	<5	<5	-		<0.00047		_		<0.00035	<0.0015
: <b>-</b>	2.5	B41-2.5	10/20/2018	T183211	-	_		_	_	-	_		_	<5	<5	-		<0.00047		_	<0.00067	0.008	0.014
B42	0.5	B42-0.5	10/20/2018	T183211	-	-	_	-	-	-	-	_	-	<50	<50	-	<0.0033	<0.0047	<0.0071	-	<0.0067	<0.0035	<0.015
	0.5	B43-0.5	10/20/2018	T183211	-	-	-	-	-	-	-	-	-	<25	<25	-	<0.0016	<0.0024	<0.0035	-	<0.0033	<0.0018	<0.0075
B43	1.5	B43-1.5	10/20/2018	T183211	-	-	-	-	-	-	-	-	-	<5	<5	-				-		<0.00035	
	2.5	B43-2.5	10/20/2018	T183211	-	-	-	-	-	-	-	-	-	<5	<5	-		<0.00047		-	<0.00067		

Table 3							Pest	ticides									
Preliminar	of Soil Analytical Resulty y Endangerment Assess Hamilton High School,	sment – Equivaler	nt Report						e e						a		
					4,4'-DDT	Dieldrin	Endosulfan I	Endosulfan II	Endosulfan sulphate	Endrin	Endrin aldehyde	Endrin ketone	g-BHC (Lindane)	Heptachlor	Heptachlor epoxide	Methoxychlor	Toxaphene
	te 3 Residential Soil D		<u> </u>	2010	1.9	0.034			200	19			0.57	0.13	0.07	320	0.45
	sidential Soil - Most : Sample Depth (ft)	Field ID	Sample Date	SDG	1.9	0.034	ma/ka	ma/ka	380	19	ma/ka	ma/ka	0.57	0.13	0.07	320	0.49
Location	Sample Depth (11)	B26-0.5	10/20/2018	T183211	mg/kg <0.025	mg/kg <0.0047	mg/kg <0.005	mg/kg <0.0056	mg/kg <0.0047	mg/kg <0.0043	mg/kg <0.007	mg/kg <0.0045	mg/kg <0.0042	mg/kg <0.0051	mg/kg <0.0046	mg/kg <0.0045	mg/kg <0.058
1	0.5	B26-0.5-DUP	10/20/2018	T183211	<0.025	<0.0047	<0.005	<0.0056		<0.0043		<0.0045	<0.0042	<0.0051	<0.0046		
1		B26-1.5	10/20/2018	T183211	<0.0025	<0.00047	<0.0005	<0.00056			<0.0007	<0.00045	<0.00042	<0.00051	<0.00046		
B26	1.5	B26-1.5-DUP	10/20/2018	T183211	<0.0025	<0.00047	<0.0005		<0.00047		< 0.0007	<0.00045	<0.00042	<0.00051		<0.00045	
		B26-2.5	10/20/2018	T183211	<0.0025	< 0.00047	<0.0005			<0.00043		< 0.00045		< 0.00051		<0.00045	
	2.5	B26-2.5-DUP	10/20/2018	T183211	<0.0025	< 0.00047	<0.0005		<0.00047		< 0.0007	< 0.00045	< 0.00042	< 0.00051		<0.00045	
	0.5	B27-0.5	9/10/2018	T182803	<0.0025	<0.00047	<0.0005	<0.00056			<0.0007	<0.00045	<0.00042	<0.00051	<0.00046	<0.00045	
B27	1.5	B27-1.5	9/10/2018	T182803	<0.0025	<0.00047	<0.0005			<0.00043		<0.00045		<0.00051		<0.00045	
	2.5	B27-2.5	9/10/2018	T182803	<0.0025	<0.00047	<0.0005		<0.00047		<0.0007	<0.00045	<0.00042	<0.00051	<0.00046		
	0.5	B28-0.5	10/20/2018	T183211	<0.0025	<0.00047	<0.0005	<0.00056			<0.0007	<0.00045	<0.00042	<0.00051	<0.00046		<0.0058
B28	1.5	B28-1.5	10/20/2018	T183211	<0.0025	<0.00047	<0.0005	<0.00056	<0.00047	<0.00043	<0.0007	<0.00045	<0.00042	<0.00051	<0.00046	<0.00045	<0.0058
	2.5	B28-2.5	10/20/2018	T183212	<0.0025	<0.00047	<0.0005	<0.00056	<0.00047	<0.00043	<0.0007	<0.00045	<0.00042	<0.00051	<0.00046	<0.00045	<0.0058
	0.5	B29-0.5	10/20/2018	T183212	<0.0025	<0.00047	<0.0005	<0.00056	<0.00047	<0.00043	<0.0007	<0.00045	<0.00042	<0.00051	<0.00046	<0.00045	<0.0058
B29	1.5	B29-1.5	10/20/2018	T183212	<0.0025	<0.00047	<0.0005	<0.00056	<0.00047	<0.00043	<0.0007	<0.00045	<0.00042	<0.00051	<0.00046	<0.00045	<0.0058
	2.5	B29-2.5	10/20/2018	T183212	<0.0025	<0.00047	<0.0005	<0.00056	<0.00047	<0.00043	<0.0007	<0.00045	<0.00042	<0.00051	<0.00046	<0.00045	<0.0058
	0.5	B30-0.5	10/20/2018	T183212	<0.0025	<0.00047	<0.0005	<0.00056	<0.00047	<0.00043	<0.0007	<0.00045	<0.00042	<0.00051	<0.00046	<0.00045	<0.0058
B30	1.5	B30-1.5	10/20/2018	T183212	<0.0025	<0.00047	<0.0005	<0.00056	<0.00047	<0.00043	<0.0007	<0.00045	<0.00042	<0.00051	<0.00046	<0.00045	<0.0058
	2.5	B30-2.5	10/20/2018	T183212	<0.0025	<0.00047	<0.0005	<0.00056	<0.00047	<0.00043	<0.0007	<0.00045	<0.00042	<0.00051	<0.00046	<0.00045	<0.0058
	0.5	B31-0.5	10/20/2018	T183212	<0.012			<0.0028		<0.0021			<0.0021		<0.0023		
	0.5	B31-0.5-dup	10/20/2018	T183212	<0.012	<0.0024	<0.0025	<0.0028					<0.0021	<0.0025	<0.0023	<0.0023	
B31	1.5	B31-1.5	10/20/2018	T183212		<0.00047	<0.0005	i e	i	<0.00043		i e			<0.00046		
		B31-1.5-dup	10/20/2018	T183212		<0.00047	<0.0005			<0.00043		<0.00045			<0.00046		
	2.5	B31-2.5	10/20/2018	T183212		<0.00047	<0.0005			<0.00043		<0.00045			<0.00046		
		B31-2.5-dup	10/20/2018	T183212	1	<0.00047	<0.0005			<0.00043					<0.00046		
	0.5	B32-0.5	10/20/2018	T183211	1	<0.00047	<0.0005			<0.00043		<0.00045					
B32	1.5	B32-1.5	10/20/2018	T183211	<0.0025	<0.00047	<0.0005			<0.00043							
	2.5	B32-2.5	10/20/2018	T183211	<0.0025	<0.00047	<0.0005			<0.00043					<0.00046		
D44	0.5	B41-0.5	10/20/2018	T183211	<0.0025	<0.00047	<0.0005		<0.00047			<0.00045					
B41	1.5	B41-1.5	10/20/2018	T183211	<0.0025	<0.00047	<0.0005	i e	<0.00047	<0.00043		<0.00045		<0.00051		<0.00045	
D43	2.5	B41-2.5	10/20/2018	T183211	0.024	<0.00047	<0.0005		1	<0.00043		<0.00045			<0.00046		
B42	0.5	B42-0.5	10/20/2018	T183211	<0.025	<0.0047	<0.005	<0.0056	<0.0047	<0.0043	<0.007	<0.0045	<0.0042	<0.0051	<0.0046	<0.0045	<0.058
D42	0.5	B43-0.5	10/20/2018	T183211	<0.012	<0.0024	<0.0025	<0.0028	<0.0023		<0.0035	<0.0022	<0.0021	<0.0025	<0.0023	<0.0023	<0.029
B43	1.5	B43-1.5	10/20/2018	T183211		<0.00047				<0.00043					<0.00046		
<u></u>	2.5	B43-2.5	10/20/2018	T183211	<0.0025	<0.00047	<0.0005	<0.00056	<0.00047	<0.00043	<0.0007	<0.00045	<0.00042	<0.00051	<0.00046	<0.00045	<0.0058

Table 3					T				PCBs					8081	L Pestic	ides	l						
Summary of Preliminary	of Soil Analytical Resul / Endangerment Asses: Hamilton High School,	sment – Equivalen	t Report		Aroclor 1016	Aroclor 1221	Aroclor 1232	oclor 1242	oclor 1248	roclor 1254	Aroclor 1260	Aroclor 1268	Aroclor 1262	Chlordane (cis) (alpha)	Chlordane (trans) (gamma)	gamma-Chlordane	НС	rin	р-внс	chlordane	HC	-DDD	4,4'-DDE
					Arc	Arc	Arc	Arc	Arc	Arc	Arc	Arc	Arc	Chl	Chl	gan	а-ВНС	Aldrin	p-B	chi	д-внс	4,4	4,4
	e 3 Residential Soil [		<u> </u>		4	0.2	0.17	0.23	0.23	0.24	0.24						0.086	0.039	0.3			1.9	2
	sidential Soil - Most				4.1	0.2	0.17	0.23	0.23	0.24	0.24						0.086	0.039	0.3	1.7		1.9	2
Location	Sample Depth (ft)	Field ID	Sample Date	SDG	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	ug/kg	ug/kg	ug/kg	mg/kg	mg/kg		mg/kg		mg/kg	mg/kg
	0.5	B44-0.5	10/20/2018	T183211	-	-	-	-	-	-	-	-	-	<5	<5	-	<0.00033			-	<0.00067	<0.00035	<0.0015
B44	1.5	B44-1.5	10/20/2018	T183211	-	-	-	-	-	-	-	-	-	<5	<5	-			<0.00071	-	<0.00067	<0.00035	<0.0015
	2.5	B44-2.5	10/20/2018	T183211	-	-	-	-	-	-	-	-	-	<5	<5	-	<0.00033	<0.00047	<0.00071	-	<0.00067	<0.00035	<0.0015
	0.5	B47-0.5	10/20/2018	T183211	-	-	-	-	-	-	-	-	-	<5	<5	-	<0.00033	<0.00047	<0.00071	-	<0.00067	<0.00035	<0.0015
B47	1.5	B47-1.5	10/20/2018	T183211	-	-	-	-	-	-	-	-	-	<5	<5	-		<0.00047		-	<0.00067	<0.00035	<0.0015
	2.5	B47-2.5	10/20/2018	T183211	-	-	-	-	-	-	-	-	-	<5	<5	-	<0.00033	<0.00047	<0.00071	-	<0.00067	<0.00035	<0.0015
	0.5	B48-0.5	9/19/2018	T182898	-	-	-	-	-	-	-	-	-	<5	<5	-	<0.00033	<0.00047		-	<0.00067	<0.00035	<0.0015
B48	1.5	B48-1.5	9/19/2018	T182898	-	-	-	-	-	-	-	-	-	<5	<5	-		<0.00047		-	<0.00067	<0.00035	<0.0015
	2.5	B48-2.5	9/19/2018	T182898	-	-	-	-	-	-	-	-	-	<5	<5	-	<0.00033	<0.00047	<0.00071	-	<0.00067	<0.00035	<0.0015
	0.5	B49-0.5	10/20/2018	T183211	-	-	-	-	-	-	-	-	-	<5	<5	-	<0.00033	<0.00047	<0.00071	-	<0.00067	<0.00035	<0.0015
B49	1.5	B49-1.5	10/20/2018	T183211	-	-	-	-	-	-	-	-	-	<5	<5	-	<0.00033	<0.00047	<0.00071	-	<0.00067	<0.00035	<0.0015
	2.5	B49-2.5	10/20/2018	T183211	-	-	-	-	-	-	-	-	-	<5	<5	-	<0.00033	<0.00047	<0.00071	-	<0.00067	<0.00035	<0.0015
	0.5	B50-0.5	11/19/2018	T183454	-	-	-	-	-	-	-	-	-	<25	-	<25	<0.0028	<0.0033	<0.0069	-	<0.0032	<0.006	<0.0039
B50	1.5	B50-1.5	11/19/2018	T183454	-	-	-	-	-	-	-	-	-	<5	-	<5	<0.00056	<0.00066	<0.0014	-	<0.00064	<0.0012	<0.00078
	2.5	B50-2.5	11/19/2018	T183454	-	-	-	-	-	-	-	-	-	<5	-	<5	<0.00056	<0.00066	<0.0014	-	<0.00064	<0.0012	<0.00078
	0.5	B51-0.5	10/20/2018	T183211	-	-	-	-	-	-	-	-	-	<5	<5	-	<0.00033	<0.00047	<0.00071	-	<0.00067	<0.00035	<0.0015
B51	0.5	B51-0.5-DUP	10/20/2018	T183211	-	-	-	-	-	-	-	-	-	<5	<5	-	<0.00033	<0.00047	<0.00071	-	<0.00067	<0.00035	<0.0015
	1.5	B51-1.5	10/20/2018	T183211	-	-	-	-	-	-	-	-	-	<5	<5	-	<0.00033	<0.00047	<0.00071	-	<0.00067	<0.00035	<0.0015
	1.5	B51-1.5-DUP	10/20/2018	T183211	-	-	-	-	-	-	-	-	-	<5	<5	-	<0.00033	<0.00047	<0.00071	-	<0.00067	<0.00035	<0.0015
	0.5	B52-0.5	10/20/2018	T183212	-	-	-	-	-	-	-	-	-	<5	<5	-	<0.0003	<0.00047	<0.00071	-	<0.00067	<0.00035	<0.0015
B52	1.5	B52-1.5	10/20/2018	T183212	-	-	-	-	-	-	-	-	-	<5	<5	-	<0.0003	<0.00047	<0.00071	-	<0.00067	<0.00035	<0.0015
	2.5	B52-2.5	10/20/2018	T183212	-	-	-	-	-	-	-	-	-	<5	<5	-		<0.00047		-	<0.00067	<0.00035	<0.0015
	0.5	B53-0.5	9/10/2018	T182803	-	-	-	-	-	-	-	-	-	-	-	-	<0.00033	<0.00047	<0.00071	-	<0.00067	<0.00035	<0.0015
B53	1.5	B53-1.5	9/10/2018	T182803	-	-	-	-	-	-	-	-	-	-	-	-	<0.00033	<0.00047	<0.00071	-	<0.00067	<0.00035	<0.0015
	2.5	B53-2.5	9/10/2018	T182803	-	-	-	-	-	-	-	-	-	-	•	-	<0.00033	<0.00047	<0.00071	-	<0.00067	<0.00035	<0.0015

Table 3					T		Pest	ticides									1
	of Soil Analytical Resu	lts for PCBs and O	CPs														
1	y Endangerment Asses																
	Hamilton High School,	-	-						d)								
	_	•			4,4'-DDT	Dieldrin	Endosulfan I	Endosulfan II	Endosulfan sulphate	Endrin	Endrin aldehyde	Endrin ketone	g-BHC (Lindane)	Heptachlor	Heptachlor epoxide	Methoxychlor	Toxaphene
	e 3 Residential Soil [		<u> </u>		1.9	0.034				19			0.57	0.13	0.07	320	0.45
	sidential Soil - Most		•	i	1.9	0.034	,,		380	19			0.57	0.13	0.07	320	0.49
Location	Sample Depth (ft)	Field ID	Sample Date	SDG	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
544	0.5	B44-0.5	10/20/2018	T183211	<0.0025	<0.00047	<0.0005		<0.00047		<0.0007	<0.00045	<0.00042		<0.00046		<0.0058
B44	1.5	B44-1.5	10/20/2018	T183211	<0.0025	<0.00047	<0.0005	<0.00056	t	<del>1</del>	<0.0007	<0.00045		1	<0.00046		<0.0058
	2.5	B44-2.5	10/20/2018	T183211	<0.0025	<0.00047	<0.0005	<0.00056			<0.0007	<0.00045	<0.00042		<0.00046		<0.0058
	0.5	B47-0.5	10/20/2018	T183211	<0.0025	<0.00047	<0.0005		<0.00047	1	<0.0007	<0.00045			<0.00046		<0.0058
B47	1.5	B47-1.5	10/20/2018	T183211	<0.0025	<0.00047	<0.0005		<0.00047	1	<0.0007	<0.00045			<0.00046		<0.0058
	2.5	B47-2.5	10/20/2018	T183211	<0.0025	<0.00047	<0.0005		<0.00047		<0.0007				<0.00046		<0.0058
	0.5	B48-0.5	9/19/2018	T182898	<0.0025	<0.00047	<0.0005	<0.00056	•	1	<0.0007	<0.00045			<0.00046		<0.0058
B48	1.5	B48-1.5	9/19/2018	T182898	<0.0025	<0.00047	<0.0005		<0.00047	1	<0.0007				<0.00046		<0.0058
	2.5	B48-2.5	9/19/2018	T182898	<0.0025	<0.00047	<0.0005				<0.0007	<0.00045			<0.00046		<0.0058
2.40	0.5	B49-0.5	10/20/2018	T183211	<0.0025	<0.00047	<0.0005	<0.00056	<0.00047	<del> </del>	<0.0007	<0.00045	<0.00042		<0.00046		<0.0058
B49	1.5	B49-1.5	10/20/2018	T183211	<0.0025	<0.00047	<0.0005		<0.00047	1	<0.0007	<0.00045			<0.00046		<0.0058
	2.5	B49-2.5	10/20/2018	T183211	<0.0025	<0.00047	<0.0005	<0.00056		•	<0.0007	<0.00045	<0.00042		<0.00046		<0.0058
	0.5	B50-0.5	11/19/2018	T183454	<0.004	<0.0054	<0.004	<0.0053	<0.0031	<0.0055	<0.0086	<0.0063	<0.0048		<0.0049	<0.002	<0.029
B50	1.5	B50-1.5	11/19/2018	T183454	<0.0008		<0.00081		<0.00061	1	<0.0017	<0.0013	<0.00096		<0.00098		<0.0058
	2.5	B50-2.5	11/19/2018	T183454	<0.0008	<0.0011	<0.00081	<0.0011	<0.00061	•	<0.0017	<0.0013	<0.00096		<0.00098		<0.0058
	0.5	B51-0.5	10/20/2018	T183211	<0.0025	<0.00047	<0.0005	<0.00056	<0.00047	1	<0.0007	<0.00045	<0.00042		<0.00046		<0.0058
B51		B51-0.5-DUP	10/20/2018	T183211	<0.0025	<0.00047	<0.0005		<b>i</b>	1	<0.0007		<0.00042		<0.00046		<0.0058
	1.5	B51-1.5	10/20/2018	T183211	<0.0025		<0.0005		<0.00047		<0.0007					<0.00045	<0.0058
		B51-1.5-DUP	10/20/2018	T183211					1	1				<0.00051			
	0.5	B52-0.5	10/20/2018	T183212					1	1				<0.00051			
B52	1.5	B52-1.5	10/20/2018	T183212										<0.00051			
	2.5	B52-2.5	10/20/2018	T183212		<0.00047			1	1				<0.00051			
	0.5	B53-0.5	9/10/2018	T182803	-1	<0.00047								<0.00051			
B53	1.5	B53-1.5	9/10/2018	T182803	-1	<0.00047	<0.0005		1	<0.00043				<0.00051			
	2.5	B53-2.5	9/10/2018	T182803	<0.0025	<0.00047	<0.0005	<0.00056	<0.00047	<0.00043	<0.0007	<0.00045	<0.00042	<0.00051	<0.00046	<0.00045	<0.0058

					1											• •	1						
Table 3	66 114 111 15	l. ( pep l.e							PCBs					808	1 Pestic	ides	-			<del></del>		1	
Preliminar	of Soil Analytical Resu y Endangerment Asses Hamilton High School,	sment – Equivaler	nt Report		Aroclor 1016	Aroclor 1221	Aroclor 1232	Aroclor 1242	Aroclor 1248	Aroclor 1254	Aroclor 1260	Aroclor 1268	Aroclor 1262	Chlordane (cis) (alpha)	Chlordane (trans) (gamma)	gamma-Chlordane	а-ВНС	Aldrin	р-внс	chlordane	д-внс	4,4'-DDD	4,4'-DDE
HHRA Not	te 3 Residential Soil I	DTSC - Most Strii	ngent April 2019		4	0.2	0.17	0.23	0.23	0.24	0.24						0.086	0.039	0.3			1.9	2
	sidential Soil - Most		E-06, HQ=1.0) Ma	y 2019	4.1	0.2	0.17	0.23	0.23	0.24	0.24						0.086	0.039	0.3	1.7		1.9	2
Location	Sample Depth (ft)	Field ID	Sample Date	SDG	mg/kg	ug/kg	ug/kg	ug/kg		mg/kg	mg/kg	mg/kg	+	mg/kg	mg/kg								
	0.5	B55-0.5	11/19/2018	T183454	-	-	-	-	-	-	-	-	-	<5	-	<5			<0.0014	-	<0.00064	1	<0.00078
		B55-0.5-DUP	11/19/2018	T183454	<u> </u>	-	-	-	-	-	-	-	-	<5	-	<5		<0.00066	<0.0014	<u> </u>	<0.00064		<0.00078
B55	1.5	B55-1.5	11/19/2018	T183454	-	-	-	-	-	-	-	-	-	<5	-	<5	<0.00056	<0.00066	<0.0014	<u> </u>	<0.00064	1	<0.00078
		B55-1.5-DUP	11/19/2018	T183454	-	-	-	-	-	-	-	-	-	<5	-	<5	1	<0.00066	<0.0014	-	<0.00064	1	<0.00078
	2.5	B55-2.5	11/19/2018	T183454	-	-	-	-	-	-	-	-	-	<5	-	<5	1	<0.00066		-	<0.00064		<0.00078
		B55-2.5-DUP	11/19/2018	T183454	-	-	-	-	-	-	-	-	-	<5	-	<5	<0.00056	<0.00066	<0.0014	-	<0.00064	1	<0.00078
	0.5	B56-0.5	11/19/2018	T183454	-	-	-	-	-	-	-	-	-	<5	-	<5	1		<0.0014	-	<0.00064		<0.00078
B56	1.5	B56-1.5	11/19/2018	T183454	-	-	-	-	-	-	-	-	-	<5	-	<5	<0.00056	<0.00066	<0.0014	-	<0.00064		<0.00078
	2.5	B56-2.5	11/19/2018	T183454	<u> </u>	-	-	-	-	-	-	-	-	<5	-	<5	<0.00056	<0.00066	<0.0014	<u> </u>	<0.00064		<0.00078
	0.5	B60-0.5	11/19/2018	T183454	<u> </u>	-	-	-	-	-	-	-	-	<50	-	<50	<0.0056	<0.0066	<0.014	<u> </u>	<0.0064	<0.012	<0.0078
B60	1.5	B60-1.5	11/19/2018	T183454	-	-	-	-	-	-	-	-	-	<5	-	<5	<0.00056	<0.00066	<0.0014	-	<0.00064		<0.00078
	2.5	B60-2.5	11/19/2018	T183454	-	-	-	-	-	-	-	-	-	<5	-	<5	<0.00056		<0.0014	-	<0.00064		<0.00078
	0.5	B61-0.5	9/10/2018	T182803	-	-	-	-	-	-	-	-	-	-	-	-	<0.00033		<0.00071	-	<0.00067		
B61	1.5	B61-1.5	9/10/2018	T182803	-	-	-	-	-	-	-	-	-	-	-	-	<0.00033		<0.00071	-	<0.00067	1	
	2.5	B61-2.5	9/10/2018	T182803	-	-	-	-	-	-	-	-	-	-	-	-	<0.00033	<0.00047	<0.00071	<u> </u>	<0.00067		<0.0015
	0.5	B62-0.5	11/19/2018	T183454	-	-	-	-	-	-	-	-	-	<50	-	<50	<0.0056	<0.0066	<0.014	<u> </u>	<0.0064	<0.012	<0.0078
B62	1.5	B62-1.5	11/19/2018	T183454	<u> </u>	-	-	-	-	-	-	-	-	<5	-	<5	<0.00056	<0.00066	<0.0014	<u> </u>	<0.00064		<0.00078
	2.5	B62-2.5	11/19/2018	T183454	<u> </u>	-	-	-	-	-	-	-	-	<5	-	<5		<0.00066	<0.0014	<u> </u>	<0.00064		
	0.5	B63-0.5	9/19/2018	T182898	-	-	-	-	-	-	-	-	-	<5	<5	-	<0.00033			+		<0.00035	
B63	1.5	B63-1.5	9/19/2018	T182898	-	-	-	-	-	-	-	-	-	<5	<5	-	1	<0.00047		+		<0.00035	
	2.5	B63-2.5	9/19/2018	T182898	-	-	-	-	-	-	-	-	-	<5	<5	-		<0.00047		_		<0.00035	
	0.5	B64-0.5	9/19/2018	T182898	-	-	-	-	-	-	-	-	-	<5	<5	-	1	<0.00047		1	1	<0.00035	
B64	1.5	B64-1.5	9/19/2018	T182898	-	-	-	-	-	-	-	-	-	<5	<5	-	+	<0.00047				<0.00035	
	2.5	B64-2.5	9/19/2018	T182898	-	-	-	-	-	-	-	-	-	<5	<5	-		<0.00047				<0.00035	
	0.5	B65-0.5	9/10/2018	T182803	-	-	-	-	-	-	-	-	-	-	-	-	1	<0.00047		1	1	<0.00035	
B65	1.5	B65-1.5	9/10/2018	T182803	-	-	-	-	-	-	-	-	-	-	-	-	1	<0.00047		_	1	<0.00035	
	2.5	B65-2.5	9/10/2018	T182803	-	_	-	-	-	-	-	-		-	-			<0.00047				<0.00035	
	0.5	B66-0.5	9/19/2018	T182898	-	_		-	-	-	-	-		<5	<5					_	1	<0.00035	
B66	1.5	B66-1.5	9/19/2018	T182898	<u> </u>		-	-		-	-	-		<5	<5	-	1	<0.00047		1		<0.00035	
	2.5	B66-2.5	9/19/2018	T182898	-	-	-	-	-	-	-	-	-	<5	<5	<u> </u>		<0.00047		-		<0.00035	+
	0.5	B67-0.5	10/20/2018	T183211	-	-	-	-	-	-	-	-	-	<5	<5	-	<0.00033	<0.00047	<0.00071	-	<0.00067	<0.00035	<0.0015
B67	1.5	B67-1.5	10/20/2018	T183211	-	-	-	-	-	-	-	-	<u> </u>	<5	<5			<0.00047		+		<0.00035	
	2.5	B67-2.5	10/20/2018	T183211	-	-	-	-	-	-	-	-	-	<5	<5	-	<0.00033	<0.00047	<0.00071	-	<0.00067	<0.00035	<0.0015

Table 3							Pest	ticides									
	of Soil Analytical Resu	Its for PCBs and O	CPs				1 031							I			$\Box$
1	ry Endangerment Asses																
	· · Hamilton High School,																
									sulphate						epoxide		
									<u>ē</u>		de	<b>a</b> )	e)		X	_	
							_	=	1		aldehyde	one	dar		r eg	ا و	
					⊢	_	Ifar	sulfan	<u> </u>		ge	ket	Ë	eptachlor	Ι <mark>ο</mark> Ι	yc	l en
					00	ri.	nso	nsc	nsc	<u>۽</u> .	i,	<u>.</u>	<u></u>	tacl	tacl	) ĝ	d d
					4,4'-DDT	Dieldrin	Endosulfan	Endo	Endosulfan	Endrin	Endrin	Endrin ketone	g-BHC (Lindane)	le pi	Heptachlo	Methoxychlor	Toxaphene
HHRA No	te 3 Residential Soil I	OTSC - Most Strir	ngent April 2019		1.9	0.034	ш	ш	ш —	<u>ш</u> 19	ш	ш	0.57	0.13	0.07	320	0.45
	esidential Soil - Most		<u> </u>	y 2019	1.9	0.034			380	19			0.57	0.13	0.07	320	0.49
Location	Sample Depth (ft)	Field ID	Sample Date	SDG	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
	0.5	B55-0.5	11/19/2018	T183454	<0.0008	<0.0011	<0.00081	<0.0011	<0.00061	<0.0011	<0.0017	<0.0013	<0.00096	<0.00059	<0.00098	<0.0004	<0.0058
	0.5	B55-0.5-DUP	11/19/2018	T183454	<0.0008	<0.0011	<0.00081	<0.0011	<0.00061	<0.0011	<0.0017	<0.0013	<0.00096	<0.00059	<0.00098	<0.0004	<0.0058
B55	1.5	B55-1.5	11/19/2018	T183454	<0.0008	<0.0011	<0.00081	<0.0011	<0.00061	<0.0011	<0.0017	<0.0013	<0.00096	<0.00059	<0.00098	<0.0004	<0.0058
633	1.5	B55-1.5-DUP	11/19/2018	T183454	<0.0008	<0.0011	<0.00081	<0.0011	<0.00061	<0.0011	<0.0017	<0.0013	<0.00096	<0.00059	<0.00098	<0.0004	<0.0058
	2.5	B55-2.5	11/19/2018	T183454	<0.0008	<0.0011	<0.00081	<0.0011	<0.00061	<0.0011	<0.0017	<0.0013	<0.00096	<0.00059	<0.00098	<0.0004	<0.0058
	2.5	B55-2.5-DUP	11/19/2018	T183454	<0.0008	<0.0011	<0.00081	<0.0011	<0.00061	<0.0011	<0.0017	<0.0013	<0.00096	<0.00059	<0.00098	<0.0004	<0.0058
	0.5	B56-0.5	11/19/2018	T183454	<0.0008	<0.0011	<0.00081	<0.0011	<0.00061	<0.0011	<0.0017	<0.0013	<0.00096	<0.00059	<0.00098	<0.0004	<0.0058
B56	1.5	B56-1.5	11/19/2018	T183454	<0.0008	<0.0011	<0.00081	<0.0011	<0.00061	<0.0011	<0.0017	<0.0013		<0.00059	<0.00098		<0.0058
	2.5	B56-2.5	11/19/2018	T183454	<0.0008	<0.0011	<0.00081	<0.0011	<0.00061	<0.0011	<0.0017	<0.0013	<0.00096	<0.00059	<0.00098	<0.0004	<0.0058
	0.5	B60-0.5	11/19/2018	T183454	<0.008	<0.011	<0.0081	<0.011	<0.0061	<0.011	<0.017	<0.013	<0.0096	<0.0059	<0.0098	<0.004	<0.058
B60	1.5	B60-1.5	11/19/2018	T183454	<0.0008		<0.00081	<0.0011	<0.00061	<0.0011	<0.0017	<0.0013		<0.00059	<0.00098		<0.0058
	2.5	B60-2.5	11/19/2018	T183454	<0.0008	<0.0011	<0.00081	<0.0011	<0.00061	<0.0011	<0.0017	<0.0013		<0.00059	<0.00098		<0.0058
	0.5	B61-0.5	9/10/2018	T182803	<0.0025	<0.00047	<0.0005	<0.00056	<del> </del>	1	<0.0007	<0.00045	<0.00042		<0.00046		<0.0058
B61	1.5	B61-1.5	9/10/2018	T182803	<0.0025	<0.00047	<0.0005	<0.00056	1	1	<0.0007		<0.00042		<0.00046		_
	2.5	B61-2.5	9/10/2018	T182803	<0.0025	<0.00047	<0.0005	<0.00056	1	<0.00043	<0.0007	<0.00045	<0.00042		<0.00046		<0.0058
	0.5	B62-0.5	11/19/2018	T183454	<0.008	<0.011	<0.0081	<0.011	<0.0061	<0.011	<0.017	<0.013	<0.0096		<0.0098	<0.004	<0.058
B62	1.5	B62-1.5	11/19/2018	T183454	<0.0008		<0.00081		<0.00061	<0.0011	<0.0017	<0.0013		<0.00059	<0.00098		<0.0058
	2.5	B62-2.5	11/19/2018	T183454	<0.0008		<0.00081	<0.0011	<0.00061	<0.0011	<0.0017	<0.0013	<b>!</b>	<0.00059	<0.00098		<0.0058
	0.5	B63-0.5	9/19/2018	T182898	1				1	1				<0.00051			
B63	1.5	B63-1.5	9/19/2018	T182898										<0.00051			
	2.5	B63-2.5	9/19/2018	T182898	1				<del> </del>	t				<0.00051			
B.C.4	0.5	B64-0.5	9/19/2018	T182898	1				1	1				<0.00051			
B64	1.5	B64-1.5	9/19/2018	T182898	1				1	1				<0.00051			
	2.5	B64-2.5	9/19/2018	T182898	1	•		i e	1	t				<0.00051			_
D.C.E	0.5	B65-0.5	9/10/2018	T182803		<0.00047								<0.00051			
B65	1.5	B65-1.5	9/10/2018	T182803										<0.00051			
	2.5	B65-2.5	9/10/2018	T182803	1	i			t	t				<0.00051			_
D.C.C	0.5	B66-0.5	9/19/2018	T182898	<0.0025				<0.00047	1				<0.00051			
B66	1.5	B66-1.5	9/19/2018	T182898		<0.00047			<0.00047					<0.00051			
	2.5	B66-2.5	9/19/2018	T182898	1	i		i e	1	1	1			<0.00051			_
DC7	0.5	B67-0.5	10/20/2018	T183211	1	<0.00047			<0.00047	1				<0.00051			_
B67	1.5	B67-1.5	10/20/2018	T183211	1	<0.00047	<0.0005		<0.00047	1				<0.00051			_
	2.5	B67-2.5	10/20/2018	T183211	J<0.0025	<0.0004/	<0.0005	<0.00056	<0.0004/	<b>  &lt;</b> 0.00043	<0.0007	<0.00045	<0.00042	<0.00051	<0.00046	<0.00045	<0.0058

Table 3					T				PCBs					ono	1 Pestic	ridos	<u> </u>						
	of Soil Analytical Resu	ilts for PCRs and O	)CPs			I	I		PCBS	I	I	<u> </u>		808		lues				I			
Preliminar	ry Endangerment Asses Hamilton High School,	ssment – Equivaler	nt Report		Aroclor 1016	Aroclor 1221	Aroclor 1232	Aroclor 1242	Aroclor 1248	Aroclor 1254	Aroclor 1260	Aroclor 1268	Aroclor 1262	Chlordane (cis) (alpha)	Chlordane (trans) (gamma)	gamma-Chlordane	а-ВНС	Aldrin	р-внс	chlordane	д-внс	4,4'-DDD	4,4'-DDE
HHRA No	te 3 Residential Soil	DTSC - Most Strir	ngent April 2019		4	0.2	0.17	0.23	0.23	0.24	0.24						0.086	0.039	0.3			1.9	2
	sidential Soil - Most		E-06, HQ=1.0) Ma	y 2019	4.1	0.2	0.17	0.23	0.23	0.24	0.24						0.086	0.039	0.3	1.7		1.9	2
Location	Sample Depth (ft)		Sample Date	SDG	mg/kg			ug/kg	mg/kg	mg/kg	mg/kg	mg/kg		mg/kg	mg/kg								
	0.5	B68-0.5	10/20/2018	T183211	-	-	-	-	-	-	-	-	-	<5	<5	-	<0.00033	<0.00047	<0.00071	-	<0.00067		<0.0015
B68	1.5	B68-1.5	10/20/2018	T183211	-	-	-	-	-	-	-	-	-	<5	<5	-	<0.00033	<0.00047	<0.00071	-	<0.00067		<0.0015
	2.5	B68-2.5	10/20/2018	T183211	-	-	-	-	-	-	-	-	-	<5	<5	-	<0.00033	<0.00047	<0.00071	-	<0.00067		<0.0015
200	0.5	B69-0.5	10/20/2018	T183212	-	-	-	-	-	-	-	-	-	<5	<5	-	<0.00033	<0.00047	<0.00071	-	<0.00067		0.013
B69	1.5	B69-1.5	10/20/2018	T183212	-	-	-	-	-	-	-	-	-	<5	<5	-		<0.00047	<0.00071	-		<0.00035	<0.0015
	2.5	B69-2.5	10/20/2018	T183212	-	-	-	-	-	-	-	-	-	<5	<5	-		<0.00047	<0.00071	-	<0.00067		<0.0015
B70	0.5	B70-0.5	11/21/2018	T183494	-	-	-	-	-	-	-	-	-	<5	-	<5	<0.00056	<0.00066	<0.0014	-	<0.00064	1	0.014
	1.5	B70-1.5	11/21/2018	T183494	-	-	-	-	-	-	-	-	-	<5	-	<5	<0.00056	<0.00066	<0.0014	-	<0.00064		<0.00078
B70A	0.5	B70A-0.5	6/13/2019	416293	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	-	<0.005	<0.005	<0.005	<0.05	<0.005	<0.005	0.019
	1.5	B70A-1.5	6/13/2019	416293	-	-	-	-	-	-	-	-	-	-	-	-	<0.005	<0.005	<0.005	<0.05	<0.005	<0.005	<0.005
B70B	0.5	B70B-0.5	6/13/2019	416293	-	-	-	-	-	-	-	-	-	-	-	-	<0.005	<0.005	<0.005	<0.05	<0.005	0.0036J	0.019
	1.5	B70B-1.5	6/13/2019	416293	-	-	-	-	-	-	-	-	-	-	-	-	<0.01	<0.01	<0.01	<0.1	<0.01	<0.01	<0.01
B71	0.5	B71-0.5	9/19/2018	T182898	-	-	-	-	-	-	-	-	-	<5	<5	-	<0.00033	<0.00047	<0.00071	-	<0.00067	<0.00035	<0.0015
D.7.2	0.5	B72-0.5	10/20/2018	T183211	-	-	-	-	-	-	-	-	-	<5	<5	-	<0.00033	<0.00047	<0.00071	-	<0.00067		<0.0015
B72	1.5	B72-1.5	10/20/2018	T183211	-	-	-	-	-	-	-	-	-	<5	<5	-	<0.00033	<0.00047	<0.00071	-	<0.00067		<0.0015
	2.5	B72-2.5	10/20/2018	T183211	-	-	-	-	-	-	-	-	-	<5	<5	-	<0.00033	<0.00047	<0.00071	-	<0.00067		<0.0015
D72	0.5	B73-0.5	9/19/2018	T182898	-	-	-	-	-	-	-		-	<5	<5	-		<0.00047	<0.00071	-	<0.00067		<0.0015
B73	1.5	B73-1.5	9/19/2018	T182898	-	-	-	-	-	-	-	-	-	<5	<5	-	<0.00033	<0.00047	<0.00071	-	<0.00067		<0.0015
	2.5	B73-2.5	9/19/2018	T182898	-	-	-	-	-	-	-	-	-	<5	<5	-	<0.00033					<0.00035	
574	0.5	B74-0.5	9/19/2018	T182898	-	-	-	-	-	-	-	-	-	<5	<5	-	<0.00033			_		<0.00035	
B74	1.5	B74-1.5	9/19/2018	T182898	-	-	-	-	-	-	-	-	-	<5	<5	-	<0.00033			1		<0.00035	<0.0015
	2.5	B74-2.5	9/19/2018	T182898	-	-	-	-	-	-	-	-	-	<5	<5	-		<0.00047				<0.00035	<0.0015
	0.5	B79-0.5	6/14/2019	416329	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	-	<0.005	<0.005	<0.005	<0.05	<0.005	<0.005	<0.005
B79	4.5	B79-0.5-DUP	6/14/2019	416329	-	-	-	-	-	-	-	-	-	-	-	-	<0.005	<0.005	<0.005	<0.05	<0.005	<0.005	<0.005
	1.5	B79-1.5	6/14/2019	416329	-	-	-	-	-	-	-	-	-	-	<u> </u>	-	<0.005	<0.005	<0.005	<0.05	<0.005	<0.005	<0.005
	2.5	B79-2.5	6/14/2019	416329	-	-	-	-	-	-	-	-	-	-	-	-	<0.005	<0.005	<0.005	<0.05	<0.005	<0.005	<0.005
D00	0.5	B80-0.5	6/14/2019	416329	-	-	-	-	-	-	-	-	-	-	-	-	<0.005	<0.005	<0.005	<0.05	<0.005	<0.005	<0.005
B80	1.5	B80-1.5	6/14/2019	416329	-	-	-	-	<u> </u>	-	-	<u> </u>	-	-	-	-	<0.005	<0.005	<0.005	<0.05	<0.005	<0.005	<0.005
	2.5	B80-2.5	6/14/2019	416329	-	•	-	-	-	-	•	-	-	<u> </u>	-	<u> </u>	<0.005	<0.005	<0.005	<0.05	<0.005	<0.005	<0.005
	0.5	B81-0.5	6/14/2019	416329	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<u> </u>	-	-	<0.005	<0.005	<0.005	<0.05	<0.005	<0.005	<0.005
B81	4.5	B81-0.5-DUP	6/14/2019	416329	-	-	-	-	-	-	-	-	-	-	-	-	<0.005	<0.005	<0.005	<0.05	<0.005	<0.005	<0.005
1	1.5	B81-1.5	6/14/2019	416329	-	-	-	-	-	-	-	<u> </u>	-	<u> </u>	-	-	<0.005	<0.005	<0.005	<0.05	<0.005	<0.005	<0.005
	2.5	B81-2.5	6/14/2019	416329	-	-	-	-	-	-	-	-	-	-	-	-	<0.005	<0.005	<0.005	<0.05	<0.005	<0.005	<0.005

Table 3					Π		Pest	ticides									
	of Soil Analytical Resu	Its for PCBs and O	CPs														
	y Endangerment Asses																
	Hamilton High School,																
									late						ide		
									sulphate		de	<b>a</b> ,	e)		epoxide	_	
							_	=			ehy	oue l	dar	_		او	
					⊢		<u> </u>	<u> </u>	<u> </u>		) pie	(et	Ë	ا و	<u> </u>	:yc	ene
						<u>;</u>	nso	nso	nso	<u>ء</u> ِ.	<u>.</u>	<u>.</u> <u>.</u>	<u></u>	acl	acl	ρ̈́ς	hd
					4,4'-DDT	Dieldrin	Endosulfan	Endosulfan II	Endosulfan	Endrin	Endrin aldehyde	Endrin ketone	g-BHC (Lindane)	Heptachlor	Heptachlor	Methoxychlor	Toxaphene
HHRA Not	te 3 Residential Soil I	DTSC - Most Strir	ngent April 2019		1.9	0.034	ш	ш	ш	ш 19	ш	ш	0.57	0.13	0.07	320	0.45
	sidential Soil - Most		<u> </u>	y 2019	1.9	0.034			380	19			0.57	0.13	0.07	320	0.49
Location	Sample Depth (ft)	Field ID	Sample Date	SDG	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
	0.5	B68-0.5	10/20/2018	T183211	<0.0025	<0.00047	<0.0005	<0.00056	<0.00047	<0.00043	<0.0007	<0.00045	<0.00042	<0.00051	<0.00046	<0.00045	<0.0058
B68	1.5	B68-1.5	10/20/2018	T183211	<0.0025	<0.00047	<0.0005	<0.00056	<0.00047	<0.00043	< 0.0007	<0.00045	<0.00042	<0.00051	<0.00046	<0.00045	<0.0058
	2.5	B68-2.5	10/20/2018	T183211	<0.0025	<0.00047	<0.0005	<0.00056	<0.00047	<0.00043	<0.0007	<0.00045	<0.00042	<0.00051	<0.00046	<0.00045	<0.0058
	0.5	B69-0.5	10/20/2018	T183212	<0.0025	<0.00047	<0.0005	<0.00056	<0.00047	<0.00043	<0.0007	<0.00045	<0.00042	<0.00051	<0.00046	<0.00045	<0.0058
B69	1.5	B69-1.5	10/20/2018	T183212	<0.0025	<0.00047	<0.0005	<0.00056	<0.00047	<0.00043	<0.0007	<0.00045	<0.00042	<0.00051	<0.00046	<0.00045	<0.0058
	2.5	B69-2.5	10/20/2018	T183212	<0.0025	<0.00047	<0.0005	<0.00056	<0.00047	<0.00043	<0.0007	<0.00045	<0.00042	<0.00051	<0.00046	<0.00045	<0.0058
B70	0.5	B70-0.5	11/21/2018	T183494	<0.0008	<0.0011	<0.00081	<0.0011	<0.00061	<0.0011	<0.0017	<0.0013	<0.00096	<0.00059	<0.00098	<0.0004	<0.0058
570	1.5	B70-1.5	11/21/2018	T183494	<0.0008	<0.0011	<0.00081	<0.0011	<0.00061	<0.0011	<0.0017	<0.0013	<0.00096	<0.00059	<0.00098	<0.0004	<0.0058
B70A	0.5	B70A-0.5	6/13/2019	416293	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.1
DIOA	1.5	B70A-1.5	6/13/2019	416293	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.1
B70B	0.5	B70B-0.5	6/13/2019	416293	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.1
5705	1.5	B70B-1.5	6/13/2019	416293	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.2
B71	0.5	B71-0.5	9/19/2018	T182898	<0.0025	<0.00047	<0.0005	<0.00056	<0.00047	<0.00043	<0.0007	<0.00045	<0.00042	<0.00051	<0.00046	<0.00045	<0.0058
	0.5	B72-0.5	10/20/2018	T183211	<0.0025	<0.00047	<0.0005	<0.00056	<0.00047	<0.00043	<0.0007	<0.00045	<0.00042	<0.00051	<0.00046	<0.00045	<0.0058
B72	1.5	B72-1.5	10/20/2018	T183211	<0.0025	<0.00047	<0.0005		<0.00047	<0.00043	<0.0007	<0.00045	<0.00042	<0.00051	<0.00046	<0.00045	<0.0058
	2.5	B72-2.5	10/20/2018	T183211	<0.0025	<0.00047	<0.0005		<0.00047	1	<0.0007	<0.00045	<0.00042	<0.00051	<0.00046		
	0.5	B73-0.5	9/19/2018	T182898	<0.0025	<0.00047	<0.0005		<0.00047	<0.00043	<0.0007	<0.00045	<0.00042	<0.00051		<0.00045	
B73	1.5	B73-1.5	9/19/2018	T182898	<0.0025	<0.00047	<0.0005		<0.00047	1	<0.0007	<0.00045		<0.00051		<0.00045	
	2.5	B73-2.5	9/19/2018	T182898	1	1			1	<0.00043							
	0.5	B74-0.5	9/19/2018	T182898	1	<0.00047			1	<0.00043							
B74	1.5	B74-1.5	9/19/2018	T182898	1	<0.00047			1	<0.00043					<0.00046		
	2.5	B74-2.5	9/19/2018	T182898	1	<0.00047			1	<0.00043		<0.00045			<0.00046		
	0.5	B79-0.5	6/14/2019	416329	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.1
B79		B79-0.5-DUP	6/14/2019	416329	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.1
	1.5	B79-1.5	6/14/2019	416329	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.1
	2.5	B79-2.5	6/14/2019	416329	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.1
	0.5	B80-0.5	6/14/2019	416329	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.1
B80	1.5	B80-1.5	6/14/2019	416329	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.1
	2.5	B80-2.5	6/14/2019	416329	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.1
	0.5	B81-0.5	6/14/2019	416329	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.1
B81		B81-0.5-DUP	6/14/2019	416329	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.1
	1.5	B81-1.5	6/14/2019	416329	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.1
	2.5	B81-2.5	6/14/2019	416329	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.1

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Table 3						ī	1		PCBs					8083	1 Pestic	ides						ı	<del> </del>
Preliminary	of Soil Analytical Resul y Endangerment Assess Hamilton High School,	sment – Equivalen	it Report		Aroclor 1016	Aroclor 1221	Aroclor 1232	Aroclor 1242	Aroclor 1248	Aroclor 1254	Aroclor 1260	Aroclor 1268	Aroclor 1262	Chlordane (cis) (alpha)	Chlordane (trans) (gamma)	gamma-Chlordane	а-ВНС	Aldrin	р-внс	chlordane	р-внс	4,4'-DDD	4,4'-DDE
	e 3 Residential Soil D		<u> </u>		4	0.2	0.17	0.23	0.23	0.24	0.24						0.086	0.039	0.3			1.9	2
	sidential Soil - Most !		•	<del>i</del>	4.1	0.2	0.17	0.23	0.23	0.24	0.24						0.086	0.039	0.3	1.7		1.9	2
Location	Sample Depth (ft)	Field ID	Sample Date	SDG	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	ug/kg	ug/kg	ug/kg	mg/kg	mg/kg	mg/kg	mg/kg		mg/kg	mg/kg
	0.5	B82-0.5	6/14/2019	416329	-	-	-	-	-	-	-	-	-	-	-	-	<0.005	<0.005	<0.005	<0.05	<0.005	<0.005	<0.005
B82	1.5	B82-1.5	6/14/2019	416329	-	-	-	-	-	-	-	-	-	-	-	-	<0.005	<0.005	<0.005	<0.05	<0.005	<0.005	<0.005
	2.5	B82-2.5	6/14/2019	416329	-	-	-	-	-	-	-	-	-	-	-	-	<0.005	<0.005	<0.005	<0.05	<0.005	<0.005	<0.005
	0.5	B83-0.5	6/14/2019	416329	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	-	<0.005	<0.005	<0.005	<0.05	<0.005	<0.005	0.0043
B83	4.5	B83-0.5-DUP	6/14/2019	416329	-	-	-	-	-	-	-	-	-	-	-	-	<0.005	<0.005	<0.005	<0.05	<0.005	<0.005	<0.005
	1.5	B83-1.5	6/14/2019	416329	-	-	-	-	-	-	-	-	-	-	-	-	<0.005	<0.005	<0.005	<0.05	<0.005	<0.005	<0.005
	2.5	B83-2.5	6/14/2019	416329	-	-	-	-	-	-	-	-	-	-	-	-	<0.005	<0.005	<0.005	<0.05	<0.005	<0.005	<0.005
D04	0.5	B84-0.5	6/14/2019	416329	-	-	-	-	-	-	-	-	-	-	-	-	<0.005	<0.005	<0.005	<0.05	<0.005	<0.005	<0.005
B84	1.5	B84-1.5	6/14/2019	416329	-	-	-	-	-	-	-	-	-	-	-	-	<0.005	<0.005	<0.005	<0.05	<0.005	<0.005	<0.005
	2.5	B84-2.5	6/14/2019	416329	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	-	-	-	<0.005	<0.005	<0.005	<0.05	<0.005	<0.005	<0.005
	0.5	B85-0.5	6/14/2019	416329	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	-	<0.005	<0.005	<0.005	<0.05	<0.005	<0.005	<0.005
B85	1 -	B85-0.5-DUP	6/14/2019	416329	-	-	-	-	-	-	-	-	-	-	-	-	<0.005	<0.005	<0.005	<0.05	<0.005	<0.005	<0.005
-	1.5 2.5	B85-1.5 B85-2.5	6/14/2019 6/14/2019	416329 416329	-	-	<del>-</del> -	-	-	-	-	-	-	-	-	-	<0.005	<0.005	<0.005	<0.05	<0.005	<0.005	<0.005
	0.5	B86-0.5	6/14/2019	416329	-	-	<del>  -</del>	-	-	-	-	-		-	-	-	<0.005 <0.005	<0.005 <0.005	<0.005 <0.005	<0.05	<0.005 <0.005	<0.005 <0.005	<0.005
B86	1.5	B86-1.5	6/14/2019	416329	-	-	<del>-</del> -	-	-	-	-	-	-	-	-	-	<0.005	<0.005	<0.005	<0.05	<0.005	<0.005	<0.005 <0.005
D80	2.5	B86-2.5	6/14/2019	416329	-	-	-	-	-	-	-	-	-	-	-	-	<0.005	<0.005	<0.005	<0.05	<0.005	<0.005	<0.005
	0.5	B90-0.5	10/20/2018	T183212	<del>  -</del>		<del>-</del>			_			-	<50	<50		<0.003	<0.003	<0.003	-0.03	<0.003	<0.0035	0.29
B90	1.5	B90-1.5	10/20/2018	T183212	<del>                                     </del>		<del>-</del>			_			-	<5	<5			<0.0047				<0.0035	<del>                                     </del>
	2.5	B90-2.5	10/20/2018	T183212	<del>                                     </del>		<del>-</del> -			_				<5	<5			<0.00047			<0.00067	0.007	0.032
	0.5	B91-0.5	10/20/2018	T183211	-	-	<del></del>	<del>-</del>		_			-	<5	<5			<0.00047				<0.00035	<del>                                     </del>
B91	1.5	B91-1.5	10/20/2018	T183211	<del>-</del>	_	<del>-</del> -	<del>-</del>		_	_	_		<5	<5			<0.00047		_		<0.00035	
551	2.5	B91-2.5	10/20/2018	T183211	<u> </u>		<del> </del>		_	_	_	_	_	<5	<5	_		<0.00047		_		<0.00035	
		B92-0.5	10/20/2018	T183211	<u> </u>	_	<u> </u>	_	_	_	_	_	_	<5	<5	_		<0.00047		_		<0.00035	1
	0.5	B92-0.5-DUP	10/20/2018	T183211	<u> </u>	-	-	_	_	_	_	-	_	<5	<5	_		<0.00047		-	< 0.00067	<0.00035	
		B92-1.5	10/20/2018	T183211	-	_	-	_	-	_	_	-	_	<25	<25	_	<0.0016	<0.0024		-	<0.0033	<0.0018	
B92	1.5	B92-1.5-DUP	10/20/2018	T183211	١.	_	-	_	-	_	-	-	_	<5	<5	_		<0.00047		-		<0.00035	
-		B92-2.5	10/20/2018	T183211	١.	_	-	_	-	_	-	-	_	<5	<5	_		< 0.00047		-	< 0.00067	<0.00035	
	2.5	B92-2.5-DUP	10/20/2018	T183211	-	-	-	-	_	_	-	_	_	<5	<5	-		< 0.00047		-		<0.00035	1
	0.5	B93-0.5	10/20/2018	T183212	-	-	-	-	-	-	-	-	_	<25	<25	-	<0.0016	<0.0024	<0.0035	-	<0.0033	<0.0018	0.12
B93	1.5	B93-1.5	10/20/2018	T183212	-	_	-	-	-	-	-	-	_	<5	<5	-				-	< 0.00067	<0.00035	
	2.5	B93-2.5	10/20/2018	T183212	-	-	-	-	-	-	-	-	_	<5	<5	-		<0.00047		-	< 0.00067	<0.00035	
	0.5	B94-0.5	6/13/2019	416293	-	-	-	-	-	-	-	-	-	-	-	-	<0.005	<0.005	<0.005	<0.05	<0.005	<0.005	<0.005
B94	1.5	B94-1.5	6/13/2019	416293	-	-	-	-	-	-	-	-	-	-	-	-	<0.005	<0.005	<0.005	<0.05	<0.005	<0.005	<0.005
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Table 3							Pes	ticides									
	of Soil Analytical Resul	ts for PCBs and O	CPs				1 03	liciacs									
	y Endangerment Assess																
	Hamilton High School,		=		4,4'-DDT	Dieldrin	Endosulfan I	Endosulfan II	Endosulfan sulphate	Endrin	Endrin aldehyde	Endrin ketone	g-BHC (Lindane)	Heptachlor	Heptachlor epoxide	Methoxychlor	Toxaphene
HHRA Not	e 3 Residential Soil D	OTSC - Most Strir	ngent April 2019		1.9	0.034				19			0.57	0.13	0.07	320	0.45
USEPA Res	sidential Soil - Most S	Stringent (TR=1E	E-06, HQ=1.0) May	y 2019	1.9	0.034			380	19			0.57	0.13	0.07	320	0.49
Location	Sample Depth (ft)	Field ID	Sample Date	SDG	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
	0.5	B82-0.5	6/14/2019	416329	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.1
B82	1.5	B82-1.5	6/14/2019	416329	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.1
	2.5	B82-2.5	6/14/2019	416329	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.1
	0.5	B83-0.5	6/14/2019	416329	0.0086	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.0064	<0.005	<0.005	<0.01	<0.1
B83	0.5	B83-0.5-DUP	6/14/2019	416329	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.1
863	1.5	B83-1.5	6/14/2019	416329	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.1
	2.5	B83-2.5	6/14/2019	416329	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.1
	0.5	B84-0.5	6/14/2019	416329	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.1
B84	1.5	B84-1.5	6/14/2019	416329	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.1
	2.5	B84-2.5	6/14/2019	416329	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.1
	0.5	B85-0.5	6/14/2019	416329	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.1
B85	0.5	B85-0.5-DUP	6/14/2019	416329	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.1
003	1.5	B85-1.5	6/14/2019	416329	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.1
	2.5	B85-2.5	6/14/2019	416329	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.1
	0.5	B86-0.5	6/14/2019	416329	0.0023	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.1
B86	1.5	B86-1.5	6/14/2019	416329	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.1
	2.5	B86-2.5	6/14/2019	416329	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.1
	0.5	B90-0.5	10/20/2018	T183212	<0.025	<0.0047	<0.005	<0.0056	<0.0047	<0.0043	<0.007	<0.0045	<0.0042	<0.0051	<0.0046	<0.0045	<0.058
B90	1.5	B90-1.5	10/20/2018	T183212	<0.0025	<0.00047	<0.0005	<0.00056	<0.00047	<0.00043	<0.0007	<0.00045	<0.00042	<0.00051	<0.00046	<0.00045	<0.0058
	2.5	B90-2.5	10/20/2018	T183212												<0.00045	
	0.5	B91-0.5	10/20/2018	T183211	<0.0025	<0.00047	<0.0005	<0.00056	<0.00047	<0.00043	<0.0007	<0.00045	<0.00042	<0.00051	<0.00046	<0.00045	<0.0058
B91	1.5	B91-1.5	10/20/2018	T183211	-1	<0.00047										<0.00045	
	2.5	B91-2.5	10/20/2018	T183211	<0.0025	<0.00047	<0.0005	<0.00056	<0.00047	<0.00043	<0.0007	<0.00045	<0.00042	<0.00051	<0.00046	<0.00045	<0.0058
	0.5	B92-0.5	10/20/2018	T183211	1	<0.00047	<0.0005			1				t e		<0.00045	
	0.0	B92-0.5-DUP	10/20/2018	T183211	-1	<0.00047	<0.0005			<0.00043						<0.00045	
B92	1.5	B92-1.5	10/20/2018	T183211		<0.0024	<0.0025		<0.0023		<0.0035		<0.0021		<0.0023		<0.029
	_,0	B92-1.5-DUP	10/20/2018	T183211	1	<0.00047	<0.0005			1				•		<0.00045	
	2.5	B92-2.5	10/20/2018	T183211	-1	<0.00047				<0.00043						<0.00045	
		B92-2.5-DUP	10/20/2018	T183211	-1	<0.00047	<0.0005			1				<0.00051		<0.00045	
	0.5	B93-0.5	10/20/2018	T183212	-1	<0.0024	<0.0025	•	<0.0023			<0.0022	<0.0021	•		<0.0023	<0.029
B93	1.5	B93-1.5	10/20/2018	T183212		<0.00047	<0.0005		<0.00047			<0.00045		<0.00051		<0.00045	
	2.5	B93-2.5	10/20/2018	T183212		<0.00047	<0.0005		<0.00047		<0.0007	<0.00045	<0.00042			<0.00045	<0.0058
	0.5	B94-0.5	6/13/2019	416293	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.1
B94	1.5	B94-1.5	6/13/2019	416293	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.1
	2.5	B94-2.5	6/13/2019	416293	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.1

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Table 3	66 114 111 15	l: f							PCBs					808	1 Pestic	ides			1				
Preliminar	of Soil Analytical Resu y Endangerment Asses Hamilton High School,	ssment – Equivalen	nt Report		Aroclor 1016	Aroclor 1221	Aroclor 1232	Aroclor 1242	Aroclor 1248	Aroclor 1254	Aroclor 1260	Aroclor 1268	Aroclor 1262	Chlordane (cis) (alpha)	Chlordane (trans) (gamma)	gamma-Chlordane	а-ВНС	Aldrin	р-внс	chlordane	<b>d-ВНС</b>	4,4'-DDD	4,4'-DDE
HHRA Not	e 3 Residential Soil	DTSC - Most Strir	ngent April 2019		4	0.2	0.17	0.23	0.23	0.24	0.24						0.086	0.039	0.3			1.9	2
<b>USEPA</b> Re	sidential Soil - Most	Stringent (TR=1E	E-06, HQ=1.0) Ma	y 2019	4.1	0.2	0.17	0.23	0.23	0.24	0.24						0.086	0.039	0.3	1.7		1.9	2
Location	Sample Depth (ft)	Field ID	Sample Date	SDG	mg/kg	ug/kg	ug/kg	ug/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg								
	0.5	B95-0.5	6/13/2019	416293	-	-	-	-	-	-	-	-	-	-	-	-	<0.005	<0.005	<0.005	<0.05	<0.005	<0.005	<0.005
B95	1.5	B95-1.5	6/13/2019	416293	-	-	-	-	-	-	-	-	-	-	-	-	<0.005	<0.005	<0.005	<0.05	<0.005	<0.005	<0.005
	2.5	B95-2.5	6/13/2019	416293	-	-	-	-	-	-	-	-	-	-	-	-	<0.005	<0.005	<0.005	<0.05	<0.005	<0.005	<0.005
	0.5	B96-0.5	6/13/2019	416293	-	-	-	-	-	-	-	-	-	-	-	-	<0.005	<0.005	<0.005	<0.05	<0.005	<0.005	<0.005
B96	1.5	B96-1.5	6/13/2019	416293	-	-	-	-	-	-	-	-	-	-	-	-	<0.005	<0.005	<0.005	<0.05	<0.005	<0.005	<0.005
	2.5	B96-2.5	6/13/2019	416293	-	-	-	-	-	-	-	-	-	-	-	-	<0.005	<0.005	<0.005	<0.05	<0.005	<0.005	<0.005
	0.5	B97-0.5	6/13/2019	416293	-	-	-	-	-	-	-	-	-	-	-	-	<0.005	<0.005	<0.005	<0.05	<0.005	<0.005	<0.005
B97	1.5	B97-1.5	6/13/2019	416293	-	-	-	-	-	-	-	-	-	-	-	-	<0.005	<0.005	<0.005	<0.05	<0.005	<0.005	<0.005
	2.5	B97-2.5	6/13/2019	416293	-	-	-	-	-	-	-	-	-	-	-	-	<0.005	<0.005	<0.005	<0.05	<0.005	<0.005	<0.005
	0.5	B98-0.5	6/14/2019	416329	-	-	-	-	-	-	-	-	-	-	-	-	<0.005	<0.005	<0.005	<0.05	<0.005	<0.005	<0.005
B98	1.5	B98-1.5	6/14/2019	416329	-	-	-	-	-	-	-	-	-	-	-	-	<0.005	<0.005	<0.005	<0.05	<0.005	<0.005	<0.005
	2.5	B98-2.5	6/14/2019	416329	-	-	-	-	-	-	-	-	-	-	-	-	<0.005	<0.005	<0.005	<0.05	<0.005	<0.005	<0.005
	0.5	B99-0.5	6/14/2019	416329	-	-	-	-	-	-	-	-	-	-	-	-	<0.005	<0.005	<0.005	<0.05	<0.005	<0.005	0.0022
B99		B99-0.5-DUP	6/14/2019	416329	-	-	-	-	-	-	-	-	-	-	-	-	<0.005	<0.005	<0.005	0.094	<0.005	0.0041	0.027
	1.5	B99-1.5	6/14/2019	416329	-	-	-	-	-	-	-	-	-	-	-	-	<0.005	<0.005	<0.005	0.064	<0.005	<0.005	<0.005
	2.5	B99-2.5	6/14/2019	416329	-	-	-	-	-	-	-	-	-	-	-	-	<0.005	<0.005	<0.005	<0.05	<0.005	<0.005	<0.005
	0.5	B100-0.5	6/14/2019	416329	-	-	-	-	-	-	-	-	-	-	-	-	<0.005	<0.005	<0.005	<0.05	<0.005	<0.005	<0.005
B100	1.5	B100-1.5	6/14/2019	416329	-	-	-	-	-	-	-	-	-	-	-	-	<0.005	<0.005	<0.005	<0.05	<0.005	<0.005	<0.005
	2.5	B100-2.5	6/14/2019	416329	-	-	-	-	-	-	-	-	-	-	-	-	<0.005	<0.005	<0.005	1	<0.005	<0.005	<0.005
	0.5	B101-0.5	6/14/2019	416329	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	-	<0.005	<0.005	<0.005	<0.05	<0.005	<0.005	<0.005
B101		B101-0.5-DUP	6/14/2019	416329	-	-	-	-	-	-	-	-	-	-	-	-	<0.005	<0.005	<0.005	<0.05	<0.005	<0.005	<0.005
	1.5	B101-1.5	6/14/2019	416329	-	-	-	-	-	-	-	-	-	-	-	-	<0.005	<0.005	<0.005	<0.05	<0.005	<0.005	<0.005
	2.5	B101-2.5	6/14/2019	416329	-	-	-	-	-	-	-	-	-	-	-	-	<0.005	<0.005	<0.005	<0.05	<0.005	<0.005	<0.005
	0.5	B102-0.5	6/14/2019	416329	-	-	-	-	-	-	-	-	-	-	-	-	<0.005	<0.005	<0.005	0.14	<0.005	0.011	0.017
B102	1.5	B102-1.5	6/14/2019	416329	-	-	-	-	-	-	-	-	-	-	-	-	<0.005	<0.005	<0.005	0.053	<0.005	<0.005	0.017
	2.5	B102-2.5	6/14/2019	416329	-	-	-	-	-	-	-	-	-	-	-	-	<0.005	<0.005	<0.005	<0.05	<0.005	<0.005	<0.005
	0.5	B103-0.5	6/14/2019	416329	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	-	<0.005	<0.005	<0.005	<0.05	<0.005	<0.005	0.003
B103		B103-0.5-DUP	6/14/2019	416329	-	-	-	-	-	-	-	-	-	-	-	-	<0.005	<0.005	<0.005	<0.05	<0.005	<0.005	<0.005
5105	1.5	B103-1.5	6/14/2019	416329	-		-		-	-	-	-		-	-	-	<0.005	<0.005	<0.005	<0.05	<0.005	<0.005	0.0032
	2.5	B103-2.5	6/14/2019	416329	-	-	-	-	-	-	-	-	-	-	-	-	<0.005	<0.005	<0.005	<0.05	<0.005	<0.005	0.0024
	0.5	B104-0.5	6/14/2019	416329	-	-	-	-	-	-	-	-	-	-	-	-	<0.005	<0.005	<0.005	<0.05	<0.005	<0.005	<0.005
B104	1.5	B104-1.5	6/14/2019	416329	-		-		-	-	-	-		-	-	-	<0.005	<0.005	<0.005	<0.05	<0.005	<0.005	<0.005
	2.5	B104-2.5	6/14/2019	416329	-	-	-	-	-	-	-	-	-	-	-	-	<0.005	<0.005	<0.005	<0.05	<0.005	<0.005	<0.005

Table 3					Τ		Pest	ticides									
	of Soil Analytical Resu	Its for PCBs and O	CPs					liciacs		1			1				
1	y Endangerment Asses																
	Hamilton High School,								۵.								
	,	<b>0</b> ,							sulphate		au l				epoxide		
								_	<u>ឆ</u> ្ន		Endrin aldehyde	e e	g-BHC (Lindane)		oda	or	
							<u> </u>	Endosulfan II			de	Endrin ketone	l g	o.		Methoxychlor	<b>9</b>
					5	.⊑	H	#	H	_	a	ke	(Li	c <del>y</del>	G.	λχ	her
					4,4'-DDT	Dieldrin	Endosulfan	los	Endosulfan	ļ ģ	ri d	ri.	HC	Heptachlor	Heptachlor	thc	Toxaphene
					4,4	Die	E E	E E	E E	Endrin	Εuc	Ευc	8-B	He	He	Μ̈́	T <sub>0</sub> ,
HHRA Not	te 3 Residential Soil I	DTSC - Most Strir	ngent April 2019		1.9	0.034				19			0.57	0.13	0.07	320	0.45
	sidential Soil - Most			i	1.9	0.034			380	19			0.57	0.13	0.07	320	0.49
Location	Sample Depth (ft)		Sample Date	SDG	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
	0.5	B95-0.5	6/13/2019	416293	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.1
B95	1.5	B95-1.5	6/13/2019	416293	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.1
	2.5	B95-2.5	6/13/2019	416293	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.1
	0.5	B96-0.5	6/13/2019	416293	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.1
B96	1.5	B96-1.5	6/13/2019	416293	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.1
	2.5	B96-2.5	6/13/2019	416293	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.1
D07	0.5	B97-0.5	6/13/2019	416293	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.1
B97	1.5	B97-1.5	6/13/2019	416293	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.1
	2.5	B97-2.5	6/13/2019	416293	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.1
	0.5	B98-0.5	6/14/2019	416329	0.0074	0.0079	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.1
B98	1.5	B98-1.5	6/14/2019	416329	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.1
	2.5	B98-2.5	6/14/2019	416329	0.0048	0.0062	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.1
	0.5	B99-0.5	6/14/2019	416329	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.1
B99		B99-0.5-DUP	6/14/2019	416329	0.051	0.0099	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.1
	1.5	B99-1.5	6/14/2019	416329	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.1
	2.5	B99-2.5	6/14/2019	416329	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.1
	0.5	B100-0.5	6/14/2019	416329	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.1
B100	1.5	B100-1.5	6/14/2019	416329	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.1
	2.5	B100-2.5	6/14/2019	416329	<0.005		<0.005	<0.005	<0.005				<0.005	<0.005	<0.005	<0.01	<0.1
	0.5	B101-0.5	6/14/2019	416329	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.1
B101		B101-0.5-DUP	6/14/2019	416329	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.1
	1.5	B101-1.5	6/14/2019	416329	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.1
	2.5	B101-2.5	6/14/2019	416329	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.1
	0.5	B102-0.5	6/14/2019	416329	0.25	0.028	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.0039	<0.01	<0.1
B102	1.5	B102-1.5	6/14/2019	416329	0.0082	0.011	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.1
	2.5	B102-2.5	6/14/2019	416329	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.1
	0.5	B103-0.5	6/14/2019	416329	0.0036	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.1
B103		B103-0.5-DUP	6/14/2019	416329	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.1
	1.5	B103-1.5	6/14/2019	416329	0.0023	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.1
	2.5	B103-2.5	6/14/2019	416329	0.0021	0.0028	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.1
	0.5	B104-0.5	6/14/2019	416329	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.1
B104	1.5	B104-1.5	6/14/2019	416329	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.1
	2.5	B104-2.5	6/14/2019	416329	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.1

Table 3									PCBs					808	1 Pesti	cides							
Preliminar	of Soil Analytical Resury Endangerment Asses Hamilton High School,	sment – Equivaler	nt Report		Aroclor 1016	Aroclor 1221	Aroclor 1232	Aroclor 1242	Aroclor 1248	Aroclor 1254	Aroclor 1260	Aroclor 1268	Aroclor 1262	Chlordane (cis) (alpha)	Chlordane (trans) (gamma)	gamma-Chlordane	а-ВНС	Aldrin	р-внс	chlordane	<b>d-ВНС</b>	4,4'-DDD	4,4'-DDE
HHRA Not	te 3 Residential Soil I	DTSC - Most Strir	ngent April 2019		4	0.2	0.17	0.23	0.23	0.24	0.24						0.086	0.039	0.3			1.9	2
<b>USEPA</b> Re	sidential Soil - Most	Stringent (TR=1E	E-06, HQ=1.0) Ma	y 2019	4.1	0.2	0.17	0.23	0.23	0.24	0.24						0.086	0.039	0.3	1.7		1.9	2
Location	Sample Depth (ft)	Field ID	Sample Date	SDG	mg/kg	ug/kg	ug/kg	ug/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg								
	0.5	B105-0.5	6/14/2019	416329	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	-	<0.005	<0.005	<0.005	<0.05	<0.005	<0.005	<0.005
B105	0.5	B105-0.5-DUP	6/14/2019	416329	-	-	-	-	-	-	-	-	-	-	-	-	<0.005	<0.005	<0.005	<0.05	<0.005	<0.005	<0.005
D103	1.5	B105-1.5	6/14/2019	416329	-	-	-	-	-	-	-	-	-	-	-	-	<0.005	<0.005	<0.005	<0.05	<0.005	<0.005	<0.005
	2.5	B105-2.5	6/14/2019	416329	-	-	-	-	-	-	-	-	-	-	-	-	<0.005	<0.005	<0.005	<0.05	<0.005	<0.005	<0.005
	0.5	B106-0.5	6/14/2019	416329	-	-	-	-	-	-	-	-	-	-	-	-	<0.005	<0.005	<0.005	<0.05	<0.005	<0.005	<0.005
B106	1.5	B106-1.5	6/14/2019	416329	-	-	-	-	-	-	-	-	-	-	-	-	<0.005	<0.005	<0.005	<0.05	<0.005	<0.005	<0.005
	2.5	B106-2.5	6/14/2019	416329	-	-	-	-	-	-	-	-	-	-	-	-	<0.005	<0.005	<0.005	<0.05	<0.005	<0.005	0.0053
	0.5	B107-0.5	6/14/2019	416329	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	-	<0.005	<0.005	<0.005	<0.05	<0.005	<0.005	<0.005
B107	0.5	B107-0.5-DUP	6/14/2019	416329	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	-	-	-	-	-	-	-	-
D107	1.5	B107-1.5	6/14/2019	416329	-	-	-	-	-	-	-	-	-	-	-	-	<0.005	<0.005	<0.005	<0.05	<0.005	<0.005	<0.005
	2.5	B107-2.5	6/14/2019	416329	-	-	-	-	-	-	-	-	-	-	-	-	<0.005	<0.005	<0.005	<0.05	<0.005	<0.005	<0.005
	0.5	B108-0.5	6/14/2019	416329	-	-	-	-	-	-	-	-	-	-	-	-	<0.005	<0.005	<0.005	<0.05	<0.005	<0.005	<0.005
B108	1.5	B108-1.5	6/14/2019	416329	-	-	-	-	-	ı	-	•	-	ı	-	-	<0.005	<0.005	<0.005	0.19	<0.005	<0.005	0.0025
	2.5	B108-2.5	6/14/2019	416329	-	-	-	-	-	ı	-	•	-	ı	-	-	<0.005	<0.005	<0.005	<0.05	<0.005	<0.005	<0.005
	0.5	B109-0.5	6/14/2019	416329	-	-	-	-	-	-	-	-	-	-	-	-	<0.005	<0.005	<0.005	<0.05	<0.005	<0.005	<0.005
B109	1.5	B109-1.5	6/14/2019	416329	-	-	-	-	-	-	-	-	-	-		-	<0.005	<0.005	<0.005	<0.05	<0.005	<0.005	<0.005
1	2.5	B109-2.5	6/14/2019	416329	-	-	-	-	-	-	-	-	-	-	-	-	<0.005	<0.005	<0.005	<0.05	<0.005	<0.005	<0.005

## Notes

mg/kg = milligrams per kilogram

- = not analyzed

< = not reported above analytical reporting limit shown

J - estimated value

ft bgs = feet below ground surface

HHRA- Human Health Risk Assessment

DTSC - Department of Toxic Substance Control

USEPA- Usited State Environmental Protection Agency

Table 3	Sidential Soil - Most Stringent (TR=1E-06, HQ=1.0) May 2019           Sample Depth (ft)         Field ID         Sample Date         Sidential Soil Sample Date         Sidential Sample Date         Sidenti						Pest	ticides									
Summary	of Soil Analytical Resu	lts for PCBs and O	CPs														
Preliminar	y Endangerment Asses	sment – Equivalen	it Report														
Alexander	Hamilton High School,	Los Angeles, Califo	ornia		4,4'-DDT	Dieldrin	Endosulfan I	Endosulfan II	Endosulfan sulphate	Endrin	Endrin aldehyde	Endrin ketone	g-BHC (Lindane)	Heptachlor	Heptachlor epoxide	Methoxychlor	Toxaphene
HHRA Not	ote 3 Residential Soil DTSC - Most Stringent April 2019 Residential Soil - Most Stringent (TR=1E-06, HQ=1.0) May 2019  n Sample Depth (ft) Field ID Sample Date SDG			1.9	0.034	ш	ш	ш	<u>ш</u> 19	ш	ш	0.57	0.13	0.07	320	0.45	
			<u> </u>	y 2019	1.9	0.034			380	19			0.57	0.13	0.07	320	0.49
	Sample Depth (ft)			SDG	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
	0.5	B105-0.5	6/14/2019	416329	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.1
B105	0.5	B105-0.5-DUP	6/14/2019	416329	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.1
B103	1.5	B105-1.5	6/14/2019	416329	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.1
	2.5	B105-2.5	6/14/2019	416329	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.1
	0.5	B106-0.5	6/14/2019	416329	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.1
B106	1.5	B106-1.5	6/14/2019	416329	0.0045	0.0027	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.1
	2.5	B106-2.5	6/14/2019	416329	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.1
	0.5	B107-0.5	6/14/2019	416329	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.1
B107	0.5	B107-0.5-DUP		416329	-	-	-	-	-	-	-	-	-	-	-	-	-
D107	1.5	B107-1.5	6/14/2019	416329	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.1
	2.5	B107-2.5	6/14/2019	416329	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.1
	0.5	B108-0.5	6/14/2019	416329	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.1
B108	1.5	B108-1.5	6/14/2019	416329	0.0043	0.016	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.0024	<0.01	<0.1
	2.5			416329	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.1
	0.5	B109-0.5	6/14/2019	416329	0.0046	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.1
B109		B109-1.5	6/14/2019	416329	0.0083	0.0053	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.1
	2.5	B109-2.5	6/14/2019	416329	<0.005	<0.005	<0.005	<0.005	<0.005	< 0.005	<0.005	< 0.005	<0.005	<0.005	<0.005	<0.01	<0.1

## Notes

mg/kg = milligrams per kilogram

- = not analyzed

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ft bgs = feet below ground surface

HHRA- Human Health Risk Assessment

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Table 4						TPH													
Summary of S	oil Analytical Results for TI	PH and VOCs				Ι	<u> </u>												O
	ndangerment Assessment – milton High School, Los Ang				) Diesel	. Gasoline	as Motor Oil	2-tetrachloroethane	1,1,1-trichloroethane	2-tetrachloroethane	,1,2-trichloroethane	1,1-dichloroethane	1,1-dichloroethene	1,1-dichloropropene	3-trichlorobenzene	3-trichloropropane	1,2,4-trichlorobenzene	4-trimethylbenzene	2-dibromo-3-chloropropane
					H as	H as		1,1,2	l,1-t	1,2,2	l,2-t	l-dic	l-dic	l-dic	,2,3-t	,2,3-t	2,4-t		2-dik
LILIDA Noto 2	Residential Soil DTSC - N	Acet Stringont April 3	2010		TPH	T H	H H	1,		ं सं	1,1			ूर् <sub>न</sub>		1	1	1,2	Ť,
	ential Soil - Most Stringer							2	1700 8100	0.6	1.1	3.6 3.6	83 230		63	0.0015 0.0051	7.8 24	300	0.0043
Location	Sample Depth (ft)	Field ID	Sample Date	SDG	ma/ka	ma/ka	ma/ka	_						ma/ka					0.0053
LUCALIUII	Sample Depth (It)	B02-5.0	9/10/2018	T182803	mg/kg <10	mg/kg <0.026		<0.00057	mg/kg <0.0005	mg/kg <0.00066	mg/kg <0.00064	mg/kg <0.0005	mg/kg <0.00051	mg/kg <0.00036	mg/kg <0.00037	mg/kg <0.00066	mg/kg <0.00039	mg/kg <0.00052	mg/kg <0.0018
B02	10	B02-3.0	9/10/2018	T182803	<10	<0.025		<0.00057	<0.00052	<0.00069		<0.00052	<0.00051	<0.00036		<0.00069	<0.00039	<0.00054	<0.0018
502	15	B02-10.0	9/10/2018	T182803	<10	< 0.025		<0.00039	<0.00052	<0.00082		<0.00052	<0.00032	<0.00037	-	<0.00082	<0.0004	<0.00054	1
		T182898	<10	<0.034		<0.00071	<0.00037	<0.00082		<0.00037	<0.0003	<0.00043		<0.00082		<0.00038			
B04	2.5	B04-2.5 B04-2.5 DUP	9/19/2018 9/19/2018	T182898	<10	<0.013		<0.00042	<0.00037	<0.00043		<0.00037	<0.00037	<0.00027	<b>†</b>	<0.00043		<0.00038	<0.0013
	5	B04-5.0	9/19/2018	T182898	<10	<0.022		<0.00049	<0.0004	<0.0003	<0.0003	<0.0004	<0.0004	<0.00023		<0.0003	<0.00031	<0.00041	1
	5	B05-5.0	8/31/2018	T182726	<10	<0.021	<10	<0.00058	<0.00051	<0.0008		<0.00051	<0.00052	<0.00043		<0.0008	1	<0.00053	
B05	10	B05-10.0	8/31/2018	T182726	<10	<0.02	<10	<0.00052	< 0.00031	< 0.00061	<0.00058	< 0.00031	<0.00032	<0.00033		< 0.00061	<0.00035	<0.00048	1
	15	B05-15.0	8/31/2018	T182726	<10	<0.024		<0.00053	< 0.00047	<0.00062			<0.00047	< 0.00033		< 0.00062	<0.00036	< 0.00049	
	0.5	B45-0.5	10/20/2018	T183211	<10	<0.038		<0.001	<0.00089	<0.0012		<0.00089	<0.00017		< 0.00067	<0.0012	<0.00069	<0.00093	
B45	1.5	B45-1.5	10/20/2018	T183211	<10	<0.024		<0.0001	< 0.00053	<0.0007	<0.00067	< 0.00053	< 0.00054	<0.00038		<0.0012	<0.00041	<0.00055	1
2.5	2.5	B45-2.5	10/20/2018	T183211	<10	<0.039	•	<0.00091	<0.0008	<0.0011	<0.001	<0.0008	<0.00081	<0.00058		<0.0011	<0.00061	<0.00083	
		B46-0.5	10/20/2018	T183212	<10	<0.034		<0.00093	<0.00081	<0.0011	<0.001	<0.00081	<0.00082	<0.00059		<0.0011	<0.00062	<0.00084	<0.0029
	0.5	B46-0.5dup	10/20/2018	T183212	<10	<0.025		<0.00038	<0.00068	<0.00011	<0.0002	<0.00068	<0.00069	<0.00049		< 0.00091	<0.00053	<0.00071	<0.0024
		B46-1.5	10/20/2018	T183212	<10	<0.029		<0.0011	<0.00098	<0.0013	<0.0013	<0.00098	<0.001	< 0.00071		<0.0013	<0.00035	<0.001	<0.0035
B46	1.5	B46-1.5dup	10/20/2018	T183212	<10	<0.039		<0.0011	< 0.00094	<0.0013	<0.0012	< 0.00095	<0.00096	<0.00068		<0.0013	<0.00073	<0.00098	< 0.0034
		B46-2.5	10/20/2018	T183212	<10	<0.029		<0.00068	<0.0006	< 0.00079			<0.00061	< 0.00043	<b>†</b>	< 0.00079	1	<0.00062	1
	2.5	B46-2.5dup	10/20/2018	T183212	<10	<0.03					<0.00091						1		1
	5	B53-5.0	9/10/2018	T182803	<10	<0.024		<0.00052	<0.00045		<0.00057						t	<0.00047	
B53	10	B53-10.0	9/10/2018	T182803		<0.025		<0.00057			<0.00064						1		
	15	B53-15.0	9/10/2018	T182803	<10	<0.025		<0.00057			<0.00064		<0.00051		1		1	<0.00052	1
		B55-5.0	11/19/2018	T183454	<10	<0.038		<0.00082			<0.00092		< 0.00073		< 0.00054			< 0.00075	1
	5	B55-5.0-DUP	11/19/2018	T183454	<10	<0.031	•				<0.00082						1	< 0.00067	
B55	10	SV55-10.0	11/21/2018	T183494	<10	<0.031	•				<0.00072		i e		<0.00042		1	<0.00059	
	15	SV55-15.0-SO	11/21/2018	T183494	<10	<0.022					<0.00063				<0.00037		1	<0.00051	1
	5	B56-5.0	11/19/2018	T183454	<10	<0.029					<0.00087			<0.00049	<0.00051	<0.00091	1	<0.00071	
B56	10	SV56-10.0	11/21/2018	T183494	<10	<0.028					<0.00069		<0.00055				<0.00041	<0.00056	1
	15	SV56-15.0-SO	11/21/2018	T183494	<10	<0.028	•	<0.00059	<0.00051		<0.00065		<0.00052		1		1	<0.00053	1
	5	B57-5.0	9/10/2018	T182803	<10	<0.027			<0.00052		<0.00067						1	<0.00055	
B57	10	B57-10.0	9/10/2018	T182803	<10	<0.024	<10	<0.00051	<0.00044	<0.00059	<0.00057	<0.00045	<0.00045	<0.00032	<0.00033	<0.00059	<0.00034	<0.00046	< 0.0016
	15	B57-15.0	9/10/2018	T182803	<10	<0.028	•				<0.00054				<0.00032		1	<0.00044	<0.0015
	5	B60-5.0	11/19/2018	T183454	<10	<0.022					<0.00059				<0.00034		1		1
B60	10	SV60-10.0	11/21/2018	T183494	<10	<0.022					<0.00061						1	<0.0005	
	15	SV60-15.0-SO	11/21/2018	T183494	<10	<0.022	•	<0.00047	<0.00041		<0.00052		<0.00042	<0.0003		<0.00055	1	<0.00043	<0.0015
	5	B61-5.0	9/10/2018	T182803	<10	<0.029	•	<0.00063	<0.00055	<0.00073		<0.00055	i e		<0.00041	<0.00073	1	<0.00057	
B61	10	B61-10.0	9/10/2018	T182803	<10	<0.03	•	<0.00089							<0.00058	<0.001	<0.0006	<0.00081	<0.0028
	15	B61-15.0	9/10/2018	T182803	<10	<0.026	<10	<0.00051	<0.00044	<0.00059	<0.00056	<0.00044	<0.00045	<0.00032	<0.00033	<0.00059	<0.00034	<0.00046	<0.0016

Table 4																			
Summary of S	oil Analytical Results for TI	PH and VOCs								Ι									
=	dangerment Assessment –																		
_ ·	nilton High School, Los Ang																		
	, ,	,							5-trimethylbenzene	<u>a</u>								ne	
						ne l	ā	ıne	nze	Dichloro-2-buten	l e l	ıne	ene	ne				pentanone	
					ethan	nzene	Jan	dichloropropan	pe	ģ	dichlorobenzen	рра	nze	edc		o l	a	nta	
					l E		ett	pro	hyl	-5-	pei	pro		pro		len	ien	per	
						S S	oro	oro	net	orc	S	or	oro	oro		olc	otolu	-2-	
					) ro	dichlorobe	¥	chlc	ri.	<del> </del>	ਵੱ	, i	, Pi	, i	Je	l of		hyl	e e
					,2-dibr		β			ڄَ	<del> </del>	ρ	,4-dichlorobe	2,2-dichloropropane	ij	2-chlorotoluene	-chlo	4-Methyl-2-	Acetone
					1,2	1,2	1,2-dichloroethane	1,2	1,3,	1,4	1,3	1,3-dichloropropane	1,4	2,2	Pyridine	2-c	4-с	4-₽	Ace
HHRA Note 3	Residential Soil DTSC - N	Most Stringent April	2019		0.036							410			58	470	440	-	
<b>USEPA</b> Reside	ential Soil - Most Stringer	nt (TR=1E-06, HQ=1.	.0) May 2019		0.036	1800	0.46	2.5	270	0.0021		1600	2.6		78	1600	1600	33000	61000
Location	Sample Depth (ft)	Field ID	Sample Date	SDG	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg		mg/kg
	5	B02-5.0	9/10/2018	T182803	<0.00052	<0.00047	<0.0007	<0.00058	< 0.00051	-	<0.00055	<0.0005	<0.0005	<0.0005	-	<0.00046	<0.00055	-	-
B02	10	B02-10.0	9/10/2018	T182803	<0.00054	<0.00048	<0.00073	<0.0006	<0.00053	-	<0.00057	<0.00051	<0.00051	<0.00052	-	<0.00048	<0.00057	-	-
	15	B02-15.0	9/10/2018	T182803	<0.00064	<0.00058	<0.00087	<0.00072	< 0.00063	-	<0.00068			<0.00062	-	<0.00057	<0.00069	-	_
		B04-2.5	9/19/2018	T182898	<0.00038	< 0.00034		< 0.00043	< 0.00037	-	<0.0004	<0.00037	<0.00036	< 0.00037	<0.03	<0.00034	<0.00041	-	-
B04	2.5	B04-2.5 DUP	9/19/2018	T182898	<0.00041	<0.00037	<0.00056	<0.00046	<0.0004	-	<0.00044	<0.00039	<0.00039	<0.0004	<0.03	<0.00036	< 0.00044	_	_
	5	B04-5.0	9/19/2018	T182898	-		<0.00084	<0.0007	<0.00061	<u> </u>	<0.00066		<0.00059	<0.0006	<0.03	<0.00055	<0.00066	_	_
	5	B05-5.0	8/31/2018	T182726	<0.00053	<0.00048		<0.00059	<0.00052			<0.00051	<0.00051	<0.00051	-	< 0.00047	<0.00057	-	_
B05	10	B05-10.0	8/31/2018	T182726	<0.00047	< 0.00043	< 0.00064	<0.00053	< 0.00047		<0.0005	<0.00045	<0.00045	< 0.00046	-	<0.00042	<0.00051	-	_
	15	B05-15.0	8/31/2018	T182726	<0.00048			< 0.00054	<0.00048	_		<0.00046	<0.00046		_	<0.00043	<0.00052	_	_
	0.5	B45-0.5	10/20/2018	T183211	<0.00093	<0.00084	<0.0013	<0.001	<0.00091	_	<0.00098	<0.00089		<0.00089	_	<0.00082	<0.00099	_	
B45	1.5	B45-1.5	10/20/2018	T183211	<0.00055	<0.0005	<0.0013	<0.001	<0.00054			<0.00053	<0.00053	<0.00053		<0.00049	<0.00059		
D-13	2.5	B45-2.5	10/20/2018	T183211	<0.00083	<0.0003		<0.00093	<0.00034	<del>-</del>	<0.00038		<0.00033	<0.00033		<0.00043	<0.00033		
	2.3	B46-0.5	10/20/2018	T183211	<0.00083	<0.00075		<0.00094	<0.00081		<0.00089	<0.00073	<0.00073	<0.00081	-	<0.00073	<0.00088		$\vdash$
	0.5	B46-0.5dup	10/20/2018	T183212	<0.00084	<0.00076	<0.0011	<0.00034	<0.00083	-	<0.00089	<0.00061		<0.00081	-	<0.00074	<0.0003	-	<del>-</del> -
		B46-1.5	10/20/2018	T183212	<0.001	<0.00092	<0.0014	<0.00073	<0.0007	-		<0.00098	<0.00008	<0.00098	-	<0.0009	<0.00070	-	$\vdash$
B46	1.5	B46-1.5dup	10/20/2018	T183212	<0.001	<0.00032	<0.0014	<0.0011	<0.001	-	<0.0011	<0.00094	<0.00097	<0.00098	-	<0.0003	<0.0011	-	$\vdash$
		B46-2.5	10/20/2018	T183212	<0.00098			<0.0011		-					-	1		-	$\vdash$
	2.5			T183212		<0.00056 <0.00067		<0.00083	<0.00061	<del>-</del> -		<0.00039	<0.00059	<0.0006	-	<0.00055	<0.00066 <0.00079	-	$\vdash$
	5	B46-2.5dup	10/20/2018							1					-			-	$\vdash$
DEO		B53-5.0	9/10/2018	T182803	_	<0.00042		<0.00052		<del>-</del> -	1 1	<0.00045			-	<0.00042		-	<del>-</del> -
B53	10	B53-10.0	9/10/2018	T182803	-	<0.00047		<0.00058		<u> </u>	<0.00055		<0.0005	<0.0005	-	<0.00046		-	
	15	B53-15.0	9/10/2018	T182803	1	<0.00047		<0.00058		-	<0.00055		<0.0005	<0.0005	-	<0.00046		-	-
	5	B55-5.0	11/19/2018	T183454		<0.00067		<0.00084		-	<0.00079			<0.00072	-	<0.00066		-	-
B55	10	B55-5.0-DUP	11/19/2018	T183454		<0.00061		<0.00075		-	1	<0.00064			-	1	<0.00072	-	-
	10	SV55-10.0	11/21/2018	T183494	1	<0.00053	<0.00079			-	1				-	<0.00052		-	-
	15	SV55-15.0-SO	11/21/2018	T183494	1		<0.00069			-	1	<0.00049			-	<0.00045		-	-
DE C	5	B56-5.0	11/19/2018	T183454			<0.00096			-	-	<0.00068		<0.00068	-	<0.00063		-	
B56	10	SV56-10.0	11/21/2018	T183494	1	<0.00051			<0.00055	-		<0.00054		<0.00054	-	<0.0005	<0.0006	-	-
	15	SV56-15.0-SO	11/21/2018	T183494	-		<0.00072			-	<0.00056			<0.00051	-	<0.00047		-	
	5	B57-5.0	9/10/2018	T182803	-		<0.00074		<0.00054	-		<0.00052		<0.00052	<0.03	<0.00048		-	
B57	10	B57-10.0	9/10/2018	T182803	1	<0.00042		<0.00052	<0.00045	-	<0.00049			<0.00044		1	<0.00049	-	
	15	B57-15.0	9/10/2018	T182803		<0.0004	<0.0006	<0.0005		-	1	<0.00042			<0.03	<0.00039		-	
	5	B60-5.0	11/19/2018	T183454					<0.00047	-	1				-	<0.00043		-	
B60	10	SV60-10.0	11/21/2018	T183494	1		<0.00067				<0.00052			<0.00048	-	<0.00044		-	
	15	SV60-15.0-SO	11/21/2018	T183494	1		<0.00058			-	1	<0.00041		<0.00041	-	<0.00038		-	_
1	5	B61-5.0	9/10/2018	T182803		<0.00051			<0.00056		1	<0.00054		<0.00055	-	1	<0.00061	-	
B61	10	B61-10.0	9/10/2018	T182803		<0.00073	<0.0011		<0.00079		<0.00086			<0.00078	-	<0.00071		-	
	15	B61-15.0	9/10/2018	T182803	<0.00046	<0.00041	<0.00062	<0.00051	<0.00045	-	<0.00049	<0.00044	<0.00044	<0.00044	-	<0.00041	<0.00049	-	1 - 1

Table 4														VOCs				
Summary of S	oil Analytical Results for TI	PH and VOCs																
I	idangerment Assessment – nilton High School, Los Ang				<u>a</u>		ene	omethane	oromethane		ethane	tetrachloride	ene	Chlorodibromomethane	et.		ane	loroethene
					Allyl chloride	Benzene	Bromobenzene	Bromochlor	Bromodichloro	Bromoform	Bromometh	Carbon tetr	Chlorobenzene	Chlorodibro	Chloroethane	Chloroform	Chloromethan	cis-1,2-dichloroethene
	Residential Soil DTSC - N					0.33			0.29	19		0.65		0.94				18
USEPA Reside	ential Soil - Most Stringer	nt (TR=1E-06, HQ=1.0	0) May 2019		0.72	1.2	290	150	0.29	19	6.8	0.65	280	8.3	14000	0.32	110	160
Location	Sample Depth (ft)	Field ID	Sample Date	SDG	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
	5	B02-5.0	9/10/2018	T182803	-				<0.00046				<0.00054			<0.0006		<0.00024
B02	10	B02-10.0	9/10/2018	T182803	-		<0.00049		<0.00048	<0.0008	<0.00051	<0.00036		1		<0.00062	<0.00059	
	15	B02-15.0	9/10/2018	T182803	-		<0.00059			<0.00096		<0.00043				<0.00074	<0.00071	<0.0003
	2.5	B04-2.5	9/19/2018	T182898	-			<0.00033		<0.00057			<0.00039			<0.00044		<0.00018
B04		B04-2.5 DUP	9/19/2018	T182898	-		<0.00038			<0.00062			<0.00043	1		<0.00048		<0.00019
	5	B04-5.0	9/19/2018	T182898	-		<0.00057		<0.00056						<0.0006	<0.00072		<0.00029
	5	B05-5.0	8/31/2018	T182726	-		<0.00049			<0.00079			<0.00055	1	<0.00051	<0.00061		<0.00025
B05	10	B05-10.0	8/31/2018	T182726	-		<0.00044	<0.00041			<0.00045	<0.00032	<0.00049					<0.00022
	15	B05-15.0	8/31/2018	T182726	-		<0.00045	<0.00042		<0.00072			<0.0005	<0.0016	<0.00047	<0.00056		<0.00023
	0.5	B45-0.5	10/20/2018	T183211	-	<0.00079		<0.0008	<0.00083	<0.0014	<0.00088	<0.00062	<0.00096		<0.00089		<0.001	<0.00043
B45	1.5	B45-1.5	10/20/2018	T183211	-	<0.00047	<0.00051		<0.00049	<0.00082	<0.00052			1	<0.00053		<0.00061	<0.00026
	2.5	B45-2.5	10/20/2018	T183211	-					<0.0012	<0.00079		<0.00085	-		<0.00096		<0.00039
	0.5	B46-0.5	10/20/2018	T183212	-	<0.00072		<0.00073	<0.00075	<0.0013	<0.0008		<0.00087		<0.00081	<0.00097		<0.00039
		B46-0.5dup	10/20/2018	T183212	-	<b> </b>	<0.00065			<0.0011	<0.00067	<0.00047		1				<0.00033
B46	1.5	B46-1.5	10/20/2018	T183212	-	<0.00087		<0.00088		<0.0015	<0.00097	<0.00068		<0.0033	<0.00098		<0.0011	<0.00048
		B46-1.5dup	10/20/2018	T183212	-	<0.00084		<0.00085	<0.00087	<0.0015	<0.00093	<0.00066		<0.0032		<0.0011	<0.0011	<0.00046
	2.5	B46-2.5	10/20/2018	T183212	-				<0.00055						<0.0006	<0.00072		<0.00029
		B46-2.5dup	10/20/2018	T183212	-				<0.00066									
	5	B53-5.0	9/10/2018	T182803	-				<0.00042				1	+				<0.00022
B53	10	B53-10.0	9/10/2018	T182803	-	<b> </b>		<b>.</b>	<0.00046									<0.00024
	15	B53-15.0	9/10/2018	T182803	-			<0.00045		<0.00078		<0.00035		+				<0.00024
	5	B55-5.0	11/19/2018	T183454	-	<0.00064	<0.00069	<0.00065	<0.00067	<0.0011	<0.00071	<0.0005	<0.00077	<0.0024	<0.00072	<0.00086	<0.00082	<0.00035
B55		B55-5.0-DUP	11/19/2018	T183454	-			<0.00058						1		<0.00078		
	10	SV55-10.0	11/21/2018	T183494	-			<0.00051		<0.00088				1		<0.00068		
	15	SV55-15.0-SO	11/21/2018	T183494	-			<0.00044					1			<0.00059		
	5	B56-5.0	11/19/2018	T183454	-			<0.00061					•			<0.00082		
B56	10	SV56-10.0	11/21/2018	T183494	-			<0.00048					1			<0.00065		
	15	SV56-15.0-SO	11/21/2018	T183494	-			<0.00046							<0.00051			<0.00025
	5	B57-5.0	9/10/2018	T182803	-		<0.0005		<0.00049					1				<0.00025
B57	10	B57-10.0	9/10/2018	T182803	-		<0.00042			<0.00069			1		<0.00045			<0.00022
	15	B57-15.0	9/10/2018	T182803	-			<0.00038		<0.00066				1	<0.00043		<0.00049	
	5	B60-5.0	11/19/2018	T183454	-				<0.00043				•					
B60	10	SV60-10.0	11/21/2018	T183494	-			<0.00043								<0.00057		
	15	SV60-15.0-SO	11/21/2018	T183494	-				<0.00038								<0.00047	
	5	B61-5.0	9/10/2018	T182803	-			<0.00049					•			<0.00066		
B61	10	B61-10.0	9/10/2018	T182803	-		<0.00074		<0.00072				1					<0.00038
	15	B61-15.0	9/10/2018	T182803	-	<0.00039	<0.00042	<0.0004	<0.00041	<0.00069	<0.00044	<0.00031	<0.00047	<0.0015	<0.00044	<0.00053	<0.00051	<0.00021

Table 4					T														
Summary of S	oil Analytical Results for T	PH and VOCs						1			1 1		1		1		1		
_	ndangerment Assessment –																_		1
	milton High School, Los Ang					<b>Je</b>		_ e									Ether		1
	0 11 11, 11	, ,			l au	ter		har						a)			<u> </u>		1
					l å	2-butene		et				_		enc		ne	Butyl		1
					pro	)-2·	ne	on T	ne	er		Ether		ıtadieı	ne	Ketone			1
					oro	orc	t a	5	;ha	ether	υ			ŭ	nze	Ž	ar)	0	l ene
					dichloropropene	Dichloro-	٦e	≝	net		l ien	ıt.		chlorobu	þei	Ethyl	Tertiary	en (	, uz
					ļij		0	5	ō	õ	enz	Ą	113	ود	ρ	<u> </u>	Ë	hal	ag
					1,3	1,4-	Dibromomethane	Dichlorodifluoromethane	Dichloromethane	Diisopropyl	Ethylbenzene	Ethyl-t-Butyl	L C	act	Isopropylbenzene	Methyl	Methyl	Naphthalene	utylbenzene
					i.	cis	je	) jo	)ic	Siis	£	£	i.e	ě	Sop	Met	Met	l ap	8
HHRA Note 3	Residential Soil DTSC - I	Most Stringent April	2019		<del>                                     </del>				2.2					1.2				2	2400
	ential Soil - Most Stringe					0.0074	24	87	57	2200	5.8		6700	1.2	1900	27000	47	3.8	3900
Location	Sample Depth (ft)	Field ID	Sample Date	SDG	mg/kg	mg/kg		mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Location	5	B02-5.0	9/10/2018	T182803	<0.00036	- 1116/116	<0.00048		<0.00042	-	<0.00045	-	- 1116/118	<0.00059		- -		<0.00021	<0.00039
B02	10	B02-10.0	9/10/2018	T182803	<0.00038		<0.00049		<0.00044		<0.00045			<0.00061	<0.00045			<0.00021	<0.0003
B02	15	B02-15.0	9/10/2018	T182803	<0.00038		<0.00059	t	<0.00052		<0.00040		-		<0.00040		_	1	<0.0004
	13	B04-2.5	9/19/2018	T182898	<0.00043	-	<0.00035		<0.00032	-	<0.00033	-	-	<0.00073	1	-	-		<0.00048
B04	2.5		9/19/2018	T182898		-					<0.00035	-	-			-	-	<0.00013	
604		B04-2.5 DUP	<u> </u>		<0.00029	-	<0.00038	1	<0.00034	-	+ +	-	-	<0.00047	1	-	-	1	<0.00031
	5	B04-5.0	9/19/2018	T182898	<0.00044	-	<0.00057	1	<0.00051	-	<0.00054	-	-	<0.00071	<0.00054	-	-		
DOE	5	B05-5.0	8/31/2018	T182726	<0.00037	-	<0.00049		<0.00043	-	<0.00046	-	-	<0.0006	<0.00046	-	-	<0.00021	<0.0004
B05	10	B05-10.0	8/31/2018	T182726	<0.00033	-	<0.00044	<0.00036	<0.00039		<0.00041	-	-	<0.00054	<0.00041	-	-		
	15	B05-15.0	8/31/2018	T182726	<0.00034	-	<0.00045	1	<0.0004	-	<0.00042	•	-	<0.00055	1	-	-		<0.00036
	0.5	B45-0.5	10/20/2018	T183211	<0.00065	-	<0.00085	<0.0007	<0.00076	-	<0.0008	-	-	<0.0011	<0.0008	-	-	<0.00037	<0.00069
B45	1.5	B45-1.5	10/20/2018	T183211	<0.00039	-	<0.00051	<0.00042	<0.00045	-	<0.00047	-	-	<0.00063	1	-	-		<0.00041
	2.5	B45-2.5	10/20/2018	T183211	<0.00058	-	<0.00076		<0.00068	-	<0.00071	-	-		<0.00071	-	-		<0.00062
	0.5	B46-0.5	10/20/2018	T183212	<0.00059	-	<0.00077	<0.00064	<0.00069	-	<0.00072	-	-	<0.00096		-	-		<0.00063
		B46-0.5dup	10/20/2018	T183212	<0.0005	-	<0.00065		<0.00058	-	<0.00061	-	-	<0.00081	1	-	-		<0.00053
B46	1.5	B46-1.5	10/20/2018	T183212	<0.00071	-	<0.00094	1	<0.00083	-	<0.00088	-	-	<0.0012	<0.00088	-	-		<0.00076
	1.5	B46-1.5dup	10/20/2018	T183212	<0.00069	-	<0.0009	<0.00074	<0.0008	-	<0.00084	-	-	<0.0011	<0.00084	-	-	<0.00039	<0.00073
	2.5	B46-2.5	10/20/2018	T183212	<0.00043	-	<0.00057	<0.00047	<0.00051	-	<0.00053	-	-	<0.00071	<0.00053	-	-		<0.00046
	2.3	B46-2.5dup	10/20/2018	T183212	<0.00052	-	<0.00068	<0.00056	<0.00061	-	<0.00064	-	-	<0.00085	<0.00064	-	-	<0.0003	<0.00055
	5	B53-5.0	9/10/2018	T182803	<0.00033	•	<0.00043	<0.00036	<0.00038	-	<0.0004	-	-	<0.00053	<0.0004	•	-	<0.00019	<0.00035
B53	10	B53-10.0	9/10/2018	T182803	<0.00036	-	<0.00048	<0.00039	<0.00042	-	<0.00045	-	-	<0.00059	<0.00045		-	<0.00021	<0.00039
	15	B53-15.0	9/10/2018	T182803	<0.00036	-	<0.00048	<0.0004	<0.00043	-	<0.00045	-	-	<0.00059	<0.00045	-	-	<0.00021	<0.00039
	-	B55-5.0	11/19/2018	T183454	<0.00052	-	<0.00069	<0.00057	<0.00061	-	<0.00064	-	-	<0.00085	<0.00064	-	-	<0.0003	<0.00056
DEE	5	B55-5.0-DUP	11/19/2018	T183454	<0.00047	-	<0.00062	<0.00051	<0.00055	-	<0.00058	-	-	<0.00076	<0.00058	-	-	<0.00027	<0.0005
B55	10	SV55-10.0	11/21/2018	T183494	<0.00041	-	<0.00054	<0.00044	<0.00048	-	<0.0005	-	-	<0.00066	<0.0005	-	-	<0.00023	<0.00044
	15	SV55-15.0-SO	11/21/2018	T183494	<0.00036	-	<0.00047	<0.00039	<0.00042	-	<0.00044	-	-	<0.00058	<0.00044	-	-	<0.00021	<0.00038
	5	B56-5.0	11/19/2018	T183454	<0.0005	-	1	<0.00054	<0.00058	-	<0.00061	-	-		<0.00061	-	-		<0.00053
B56	10	SV56-10.0	11/21/2018	T183494	<0.00039	-	1	1	<0.00046	-	<0.00048	-	-	<0.00064	1	-	-		
	15	SV56-15.0-SO	11/21/2018	T183494	<0.00037	_	<0.00049	1	<0.00044	_	<0.00046	-	_		<0.00046	_	_	1	<0.0004
	5	B57-5.0	9/10/2018	T182803	<0.00038	-	<del>1</del>	<0.00041	<0.00045	-	<0.00047	-			<0.00047	-	-		<0.00041
B57	10	B57-10.0	9/10/2018	T182803	<0.00032	_	1	1	<0.00038		<0.0004		_	<0.00052		_	_		< 0.00034
	15	B57-15.0	9/10/2018	T182803	<0.00032	_	1	<0.00033		_	<0.00038	_	<del> </del>		<0.00038	-	_		<0.00034
	5	B60-5.0	11/19/2018	T183454	<0.00031		1	<0.00034			<0.00038		<del>-</del>		<0.00038		<u> </u>		<0.00033
B60	10	SV60-10.0	11/21/2018	T183494	<0.00034		1	<0.00038	<0.00039		<0.00041		<del>-</del>		<0.00041				<0.00037
	15	SV60-15.0-SO	11/21/2018	T183494	<0.00033	_	1	<0.00038		<u>-</u>	<0.00043	<u> </u>	<u> </u>		<0.00043		_		<0.00037
	5	B61-5.0	9/10/2018	T182803	<0.0003	-	1	1			<0.00037	-	<del></del>		<0.00037	-	_		<0.00032
B61	10					-	1	<0.00043			1		<del></del>		1	-	<del>-</del> -		
BOI		B61-10.0	9/10/2018	T182803	<0.00057	-	1	1	<0.00066	-	<0.0007	-	<del>-</del> -		<0.0007	-	-		<0.0006
	15	B61-15.0	9/10/2018	T182803	<0.00032	-	<0.00042	<0.00035	<0.00038	-	<0.0004	•		<0.00052	<0.0004	-	•	<0.00018	<0.00034

Table 4																		
Preliminary Er	oil Analytical Results for TF Idangerment Assessment – Milton High School, Los Ang	Equivalent Report												e e	opene		a	
					n-propylbenzene	p-isopropyltoluene	sec-butylbenzene	Styrene	tert-Amyl-Methyl Ether	tert-Butyl alcohol	tert-Butylbenzene	Tetrachloroethene	Toluene	trans-1,2-dichloroethene	trans-1,3-dichloroprope	Trichloroethene	Trichlorofluoromethane	Vinyl chloride
HHRA Note 3	Residential Soil DTSC - N	Most Stringent April 2	2019				2200	5600			2200	0.59	1100	130			1200	0.0082
<b>USEPA</b> Reside	ential Soil - Most Stringer	nt (TR=1E-06, HQ=1.	0) May 2019		3800		7800	6000			7800	24	4900	1600		0.94	23000	0.059
Location	Sample Depth (ft)	Field ID	Sample Date	SDG	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
	5	B02-5.0	9/10/2018	T182803	<0.00047	<0.00043	<0.00048	<0.00041	-	-	<0.00045	<0.00059	<0.00046	<0.00051	<0.00035	<0.00055	<0.00038	<0.00055
B02	10	B02-10.0	9/10/2018	T182803	<0.00048	<0.00044	<0.0005	<0.00042	-	-	<0.00047	<0.00061	<0.00048	<0.00052	<0.00036	<0.00057	<0.00039	<0.00057
	15	B02-15.0	9/10/2018	T182803	<0.00058	<0.00053	<0.00059	<0.0005	-	-	<0.00056	<0.00073	<0.00057	<0.00063	<0.00043	<0.00068	<0.00047	<0.00068
	2.5	B04-2.5	9/19/2018	T182898	<0.00034	<0.00032	<0.00035	<0.0003	-	-	<0.00033	<0.00044	<0.00034	<0.00037	<0.00026	<0.0004	<0.00028	<0.0004
B04	2.5	B04-2.5 DUP	9/19/2018	T182898	<0.00037	<0.00034	<0.00038	<0.00032	-	-	<0.00036	<0.00047	<0.00037	<0.0004	<0.00028	<0.00044	<0.0003	<0.00044
	5	B04-5.0	9/19/2018	T182898	<0.00056	<0.00051	<0.00057	<0.00049	-	-	<0.00054	<0.00071	<0.00056	<0.00061	<0.00042	<0.00066	<0.00046	<0.00066
	5	B05-5.0	8/31/2018	T182726	<0.00048	<0.00044	<0.00049	<0.00042	-	-	<0.00046	<0.0006	<0.00047	<0.00052	<0.00036	<0.00056	<0.00039	<0.00056
B05	10	B05-10.0	8/31/2018	T182726	<0.00043	<0.00039	<0.00044	<0.00037	-	-	<0.00041	<0.00054	<0.00042	<0.00046	<0.00032	<0.0005	<0.00035	<0.0005
	15	B05-15.0	8/31/2018	T182726	<0.00044	<0.0004	<0.00045	<0.00038	-	-	<0.00042	<0.00055	<0.00043	<0.00047	<0.00033	<0.00051	<0.00036	<0.00051
	0.5	B45-0.5	10/20/2018	T183211	<0.00083		<0.00086		-	-	<0.00081	<0.0011	<0.00083			<0.00098	<0.00068	1
B45	1.5	B45-1.5	10/20/2018	T183211	1	<0.00046		< 0.00043	-	-	<0.00048	<0.00063			<0.00037		<0.0004	<0.00058
	2.5	B45-2.5	10/20/2018	T183211	1	<0.00068			-	-	<0.00072		<0.00074		<0.00056		<0.00061	
		B46-0.5	10/20/2018	T183212	<0.00076			<0.00066	_	_	<0.00073	<0.00096		<0.00082	<0.00057		<0.00062	
	0.5	B46-0.5dup	10/20/2018	T183212	<0.00064			<0.00056	_	_	<0.00062	<0.00081	<0.00063		<0.00048		<0.00052	1
		B46-1.5	10/20/2018	T183212		<0.00084	<0.00094	<0.0008	_	_	<0.00089	<0.0012	<0.00091	<0.001	< 0.00069		<0.00075	<0.0011
B46	1.5	B46-1.5dup	10/20/2018	T183212	<0.00088		<0.0009	<0.00077	_	_	<0.00085	<0.0011	<0.00087	<0.00096	<0.00066		<0.00072	<0.001
		B46-2.5	10/20/2018	T183212		< 0.00051		<0.00049	_	_	< 0.00054	<0.00071	<0.00055		<0.00042		1	<del>                                     </del>
	2.5	B46-2.5dup	10/20/2018	T183212			<0.00069		_	_								< 0.00079
	5	B53-5.0	9/10/2018	T182803			<0.00043		_		<0.00041				<0.00032		<0.00034	
B53	10	B53-10.0	9/10/2018	T182803			<0.00048		_	_	<0.00045	i e	<0.00046	i	<0.00035			<0.00055
	15	B53-15.0	9/10/2018	T182803			<0.00048		_		<0.00045		<0.00047					<0.00055
	15	B55-5.0	11/19/2018	T183454			<0.00048				<0.00045		<0.00047		1		i e	<0.00079
	5	B55-5.0-DUP	11/19/2018	T183454			<0.00062		_		<0.00059				<0.00045			<0.00073
B55	10	SV55-10.0	11/21/2018	T183494			<0.00054				<0.00051		<0.00052				1	<0.00071
	15	SV55-15.0-SO	11/21/2018	T183494	1		<0.00034	<0.0004			<0.00031		<0.00032		1		1	<0.00054
	5	B56-5.0	11/19/2018	T183454			<0.00047		_		<0.00043			<0.00069			1	<0.00075
B56	10	SV56-10.0	11/21/2018	T183494	1		<0.00052				<0.00049	<0.00064		<0.00055			<0.00032	
	15	SV56-15.0-SO	11/21/2018	T183494			<0.00032				t				<0.00036		1	1
	5	B57-5.0	9/10/2018	T182803		<0.00044		<0.00042		<del>-</del>	<b>i</b>				<0.00037			<0.00058
B57	10	B57-10.0	9/10/2018	T182803	1		<0.0003			<del>-</del>	<0.00048	<0.00053		<0.00035	<0.00037		1	<del>                                     </del>
	15	B57-15.0	9/10/2018	T182803			<0.00043		<del>-</del>	<del>-</del>	<0.00039				<0.00031		1	1
	5	B60-5.0	11/19/2018	T183454	<0.0004				<del>-</del>	<del>-</del>	<0.00039		<0.0004				1	<0.00047
B60	10	SV60-10.0	11/21/2018	T183494		<0.0004	<0.00044		<u> </u>	<del>-</del>	<0.00042		<0.00043				1	1
	15	SV60-15.0-SO	11/21/2018	T183494	1	<0.00041		<0.00039			<0.00043				<0.00033			
	5	B61-5.0	9/10/2018	T182803					-	<del>-</del>								
B61					1	<0.00047	•			<del>-</del> -	<0.0005	i	1	i	<0.00038		1	1
BOI	10	B61-10.0	9/10/2018	T182803			<0.00075		<del>-</del> -	<del>-</del> -	<0.0007				<0.00055		1	
	15	B61-15.0	9/10/2018	T182803	<0.00041	<0.00038	<0.00042	<0.00036	-		<0.0004	<0.00052	<0.00041	<0.00045	<0.00031	<0.00049	<0.00034	<0.00049

Table 4							
Summary of So	oil Analytical Results for T	PH and VOCs					
-	dangerment Assessment -						
Alexander Han	nilton High School, Los Ang	geles, California					
					a		
					8		<u>ra</u>
					<u>E</u>	<u> </u>	ΙÓ
					ne	ne	ne
					Xylene (m & p)	Xylene (o)	Xylene Total
HHRA Note 3	Residential Soil DTSC - I	Most Stringent April	2019			_	
	ential Soil - Most Stringe					650	
Location	Sample Depth (ft)	Field ID	Sample Date	SDG	mg/kg	mg/kg	mg/kg
	5	B02-5.0	9/10/2018	T182803	<0.00085		-
B02	10	B02-10.0	9/10/2018	T182803	<0.00087	<0.00041	-
	15	B02-15.0	9/10/2018	T182803	<0.001	<0.00048	-
	2.5	B04-2.5	9/19/2018	T182898	<0.00062	<0.00029	-
B04	2.5	B04-2.5 DUP	9/19/2018	T182898	<0.00067	<0.00031	-
	5	B04-5.0	9/19/2018	T182898	<0.001	<0.00047	-
	5	B05-5.0	8/31/2018	T182726	<0.00087	<0.0004	-
B05	10	B05-10.0	8/31/2018	T182726	<0.00077	<0.00036	-
	15	B05-15.0	8/31/2018	T182726	<0.00079	<0.00037	-
	0.5	B45-0.5	10/20/2018	T183211	<0.0015	<0.0007	-
B45	1.5	B45-1.5	10/20/2018	T183211	<0.0009	<0.00042	-
	2.5	B45-2.5	10/20/2018	T183211	<0.0013	<0.00062	-
	0.5	B46-0.5	10/20/2018	T183212	<0.0014	<0.00063	-
	0.3	B46-0.5dup	10/20/2018	T183212	<0.0012	<0.00054	-
B46	1.5	B46-1.5	10/20/2018	T183212	<0.0017	<0.00077	-
540	1.5	B46-1.5dup	10/20/2018	T183212	<0.0016	<0.00074	-
	2.5	B46-2.5	10/20/2018	T183212	<0.001	<0.00047	-
	2.5	B46-2.5dup	10/20/2018	T183212	<0.0012	<0.00056	-
	5	B53-5.0	9/10/2018	T182803	<0.00076	<0.00035	-
B53	10	B53-10.0	9/10/2018	T182803	<0.00085	<0.00039	-
	15	B53-15.0	9/10/2018	T182803	<0.00085	<0.00039	-
	5	B55-5.0	11/19/2018	T183454	<0.0012	<0.00056	-
B55		B55-5.0-DUP	11/19/2018	T183454	<0.0011	<0.00051	-
	10	SV55-10.0	11/21/2018	T183494	<0.00095	<0.00044	-
	15	SV55-15.0-SO	11/21/2018	T183494	<0.00083		-
	5	B56-5.0	11/19/2018	T183454	<0.0012		-
B56	10	SV56-10.0	11/21/2018	T183494	<0.00091		-
	15	SV56-15.0-SO	11/21/2018	T183494	<0.00087		-
	5	B57-5.0	9/10/2018	T182803	<0.00089		-
B57	10	B57-10.0	9/10/2018	T182803	<0.00075		-
	15	B57-15.0	9/10/2018	T182803	<0.00072		-
5.50	5	B60-5.0	11/19/2018	T183454		<0.00036	-
B60	10	SV60-10.0	11/21/2018	T183494	<0.00081		-
	15	SV60-15.0-SO	11/21/2018	T183494	<0.0007	<0.00032	-
DC4	5	B61-5.0	9/10/2018	T182803	<0.00093		-
B61	10	B61-10.0	9/10/2018	T182803	<0.0013	<0.00061	-
	15	B61-15.0	9/10/2018	T182803	<0.00075	<0.00035	-

Table 4					1	TPH													
Summary of S	oil Analytical Results for T	PH and VOCs				<u> </u>													ā
Preliminary Er	ndangerment Assessment -	- Equivalent Report																	opropane
Alexander Har	milton High School, Los Aกยู	geles, California						ane		ane						_		a)	Š
								<u>ڇ</u>	e e	eth	e e			a)	ene	ane	,2,4-trichlorobenzene	en	g
							l _	-tetrachloroeth	har	2	har	ne	ne	en	uze	opa	uze	enz	chlor
						_ e	ō	을	oet	C <del>p</del>	oet	etha	ethen	o g	3-trichlorobenz	opr	əqc	ethylb	3-6
					sel	Gasoline	Motor	ra C	orc	rac	orc		oet	dichloropr	orc		orc	j.	1
					Diesel	gas	≗	tet	ich	tet	ich		<u> </u>	힐	ich	trichlor	ichl	<u>ä</u>	Jo.
					as	as (	as	<b>4</b>	<u> </u>	2,	<u>.</u>	dichlore	dichloro	<u>i</u>	<u>‡</u>	-tr	-tr	<u>-</u>	dibromo
					I de	TPH T	T H	1,1	1,1,1-trichloroethane	1,2	1,1,2-trichloroethane	1-0	1-d	1- 0-	2,3	2,3	2,4	2,4	2-6
IIIIDA Noto 2	Desidential Cail DTCC	Most Ctringont April	2010		F	F	F	ਜੇ		ਜੇ	ť.	ਜੇ	H.	ਜੰ	1,	ਜੇ	1	ਜੰ	H.
	Residential Soil DTSC - I ential Soil - Most Stringe							2	1700 8100	0.6	1.1	3.6 3.6	83 230		40 63	0.0015	7.8 24	300	0.0043
Location	Sample Depth (ft)	Field ID	Sample Date	SDG	mg/kg	mg/kg	ma/ka		mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	0.0053 mg/kg
Location	5	B62-5.0	11/19/2018	T183454	<10	<0.027		<0.00073	<0.00064	<0.00085	<0.00082		<0.00065	<0.00046		<0.00085	<0.00049	<0.00067	
B62	10	SV62-10.0	11/19/2018	T183454	<10	<0.027	<10	<0.00073	1		i	<0.00064	<0.00085		<0.00048			<0.00067	
B02	15	SV62-10.0 SV62-15.0-SO	11/21/2018	T183494	<10	<0.021	<10	<0.00054	1	<0.00063 <0.00074	<0.0006	<0.00047	<0.00048	<0.00034 <0.0004	<0.00035	< 0.00063	<0.00036	<0.00049	+
1	5	B63-5.0(19)	9/19/2018	T183494	<10	<0.031	<10	<0.00063	<0.00055	<0.00074			<0.00056	<0.0004	<0.00041	<0.00074	<0.00043	<0.00058	
B63		` '	+ +	T182898							<b>!</b>			<b>-</b>					+
603	10	B63-10.0(24)	9/19/2018		<10	<0.024		<0.00064				1		<0.00041			<0.00043	<0.00059	
	15	B63-15.0(29)	9/19/2018	T182898	<10	<0.032		<0.00069		<0.0008	<0.00076	<b>i</b>	<0.00061	<0.00043			<0.00046	<0.00063	
DC4	5	SV64-5.0 (17)	11/21/2018	T183494	<10	<0.025		<0.00053			<0.00059	1	<0.00047	<0.00034	<0.00035	<0.00062	<0.00036	<0.00049	
B64	10	SV64-10.0 (22)	11/21/2018	T183494	<10	<0.029		<0.00066		<0.00077		<b>i</b>	<0.00059	<0.00042			<0.00045	<0.0006	<0.0021
	15	SV64-15.0 (27)	11/21/2018	T183494	<10	<0.03	<10	<0.00067		<0.00078			<0.0006	<0.00043		<0.00078	<0.00045	<0.00061	
DCE	5	B65-5.0	9/10/2018	T182803	<10	<0.02	<10	<0.00074	1	<0.00086		1	<0.00066	<0.00047			<0.0005	<0.00067	
B65	10	B65-10.0	9/10/2018	T182803	<10	<0.028		<0.00056		<0.00066		<b>i</b>	<0.0005	<0.00036			<0.00038	<0.00051	<0.0018
	15	B65-15.0	9/10/2018	T182803	<10	<0.022		<0.00046	1		<0.00051	<0.0004	<0.00041	<0.00029		<0.00053		<0.00042	
	0.5	B85-0.5	6/14/2019	416329	<10	<4.77	<20	<0.0055	<0.0055	<0.0055	<0.0055	<0.0055	<0.0055	<0.0055	<0.0055	<0.0055	<0.0055	0.00047	<0.0055
B85	4.5	B85-0.5-DUP	6/14/2019	416329	<10	<2.94	<20	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006
	1.5	B85-1.5	6/14/2019	416329	<10	<3.33	<20	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	0.00025	<0.004
	2.5	B85-2.5	6/14/2019	416329	<10	<3.06	<20	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035
DOC	0.5	B86-0.5	6/14/2019	416329	<10	<3.66	<20	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007	0.00054	<0.007
B86	1.5	B86-1.5	6/14/2019	416329	<10	1		<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006
	2.5	B86-2.5	6/14/2019	416329	<10	<2.46		<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004
DOS	0.5	B98-0.5	6/14/2019	416329	<10	<3	<20	-	-	-	-	-	-	-	-	-	-	-	-
B98	1.5	B98-1.5	6/14/2019	416329	<10	<3	<20	-	-	-	-	-	-	-	-	-	-	-	-
	2.5	B98-2.5	6/14/2019	416329	<10	<2.82	<20	-	-	-	-	-	-	-	-	-	-	-	-
	0.5	B99-0.5	6/14/2019	416329	<10	<2.88	<20	-	-	-	-	-	-	-	-	-	-	-	-
B99	1.5	B99-0.5-DUP	6/14/2019	416329	11	<3	<20	-	-	-	-	-	-	-	-	-	-	-	-
	1.5	B99-1.5	6/14/2019	416329 416329	<10	<3	<20 <20	-	<del>                                     </del>	-	-	-	-	-	-	-	-	-	-
	2.5	B99-2.5	6/14/2019		<10	<2.46		-	-	-	-	-	-	-	-	-	-	-	-
B100	0.5	B100-0.5	6/14/2019	416329	<10	<2.58		-	-	-	-	<del></del>	-	-	-	-	-	-	-
BIOO	1.5	B100-1.5	6/14/2019	416329	<10	<3.06	<20	-	<del>-</del> -	-	-	<del>  -</del>	-	-	-	-	-	-	-
	2.5	B100-2.5	6/14/2019	416329	<10	<2.88	<20	-	-	-	-	<u> </u>	-	-	-	-	-	-	-
B101	0.5	B101-0.5	6/14/2019	416329	<10	<2.82		-	-	-	-	-	-	-	-	-	-	-	-
	1.5	B101-0.5-DUP	6/14/2019	416329	<20	<2.58		-	<del>-</del> -	-	-	<del>                                     </del>	-	-	-	-	-	-	<del>  -</del>
B101	1.5	B101-1.5	6/14/2019	416329	<10	<2.79	<20	-	-	-	-	<del>-</del> -	-	-	-	-	-	-	-
	2.5	B101-2.5	6/14/2019	416329	<10	<2.64		-	-	-	-	<del>-</del> -	-	-	-	-	-	-	-
D103	0.5	B102-0.5	6/14/2019	416329	<20	<2.67	<40	-	-	-	-	<del>-</del> -	-	-	-	-	-	-	-
B102	1.5	B102-1.5	6/14/2019	416329	<10	<2.34		-	-	-	-	-	-	-	-	-	-	-	-
	2.5	B102-2.5	6/14/2019	416329	<10	<2.58	<20	-	-		-		-	-		-	-	-	-

Table 4																			
Summary of S	oil Analytical Results for T	PH and VOCs					1												
	ndangerment Assessment –																		1
•	milton High School, Los Ang	•																	1
									5-trimethylbenzene	_ e								ne	1
					e e	nzene	<u>a</u>	ıne	nze	te	ene	ıne	ine	ıne				lou	1
					har		Jan	-dichloropropane	lþe	ġ	nze	edc	nze	edc		ā	ō	nta	i
					Jet	pe	ett	pre	h.	5-	ppe	bre	ppe	pro		ner	ner	ρe	1
					Ĕ	dichlorobe	or o	orc	net	ö	dichlorobe	orc	oro	orc		tolt	io lt	-5	i
					prc	chl	Ch	chl	ţ	E	chl	chl	dichlor	chl	ne	ro	ro	.hy	e e
					,2-dibromoethane		1,2-dichloroethane	ib-		,4-Dichloro-2-butene	ī	1,3-dichloropropane	i <u>b</u>	2,2-dichloropropane	Pyridine	2-chlorotoluene	) ly	-Methyl-2-pentanone	Acetone
					1,2	1,2	1,2	1,2	1,3,	1,4	1,3	1,3	1,4	2,2	Ру	2-0	4-6	4-ľ	Ac
HHRA Note 3	Residential Soil DTSC - I	Most Stringent April 2	2019		0.036							410			58	470	440		
USEPA Reside	ential Soil - Most Stringe		0) May 2019		0.036	1800	0.46	2.5	270	0.0021		1600	2.6		78	1600	1600	33000	61000
Location	Sample Depth (ft)	Field ID	Sample Date	SDG	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
	5	B62-5.0	11/19/2018	T183454	<0.00067	<0.0006	<0.0009	<0.00075	<0.00065	-	<0.00071	<0.00064	<0.00064		-		<0.00071	-	
B62	10	SV62-10.0	11/21/2018	T183494	<0.00049	<0.00044	<0.00067	<0.00055	<0.00048	-	<0.00052	<0.00047	<0.00047	<0.00047	-	<0.00044	<0.00053	-	
	15	SV62-15.0-SO	11/21/2018	T183494	<0.00057	<0.00052	<0.00078	<0.00064	<0.00056			<0.00055	<0.00055		-		<0.00061	-	
	5	B63-5.0(19)	9/19/2018	T182898	<0.00067	<0.00061	<0.00091	<0.00075	<0.00066	-	<0.00071	<0.00064		<0.00065	-			-	
B63	10	B63-10.0(24)	9/19/2018	T182898	<0.00058	<0.00053	<0.00079	<0.00065	<0.00057		<0.00062	<0.00056		<0.00056	-	<0.00052	<0.00062	-	
	15	B63-15.0(29)	9/19/2018	T182898		<0.00056		<0.0007	<0.00061	-	<0.00066		<0.0006	<0.0006	-		<0.00067	-	
	5	SV64-5.0 (17)	11/21/2018	T183494	<0.00048	<0.00044	<0.00066	<0.00054	<0.00048	-	<0.00051	<0.00046	<0.00046		-		<0.00052	-	
B64	10	SV64-10.0 (22)	11/21/2018	T183494	<0.0006	<0.00054	<0.00082	<0.00068	< 0.00059	-	< 0.00064	<0.00058	<0.00058	<0.00058	-	<0.00053	<0.00064	-	-
	15	SV64-15.0 (27)	11/21/2018	T183494	<0.00061	<0.00055	<0.00083	<0.00068	<0.0006	-	< 0.00065	<0.00058	<0.00058	<0.00059	-	<0.00054	<0.00065	-	-
	5	B65-5.0	9/10/2018	T182803	<0.00067	<0.0006	<0.00091	<0.00075	<0.00066	-	<0.00071	<0.00064	<0.00064	<0.00064	-	<0.00059	<0.00071	-	_
B65	10	B65-10.0	9/10/2018	T182803	<0.00051	<0.00046	<0.00069	<0.00057	<0.0005	-	< 0.00054	<0.00049	<0.00049	< 0.00049	-	<0.00045	<0.00055	-	-
	15	B65-15.0	9/10/2018	T182803	<0.00042	<0.00038	<0.00057	<0.00047	<0.00041	-	<0.00044	<0.0004	<0.0004	<0.0004	-	<0.00037	<0.00044	-	-
	0.5	B85-0.5	6/14/2019	416329	<0.0055	<0.0055	<0.0055	<0.0055	<0.0055	<0.0055	<0.0055	<0.0055	<0.0055	<0.0055	-	<0.0055	<0.0055	<0.0055	0.28
B85	0.5	B85-0.5-DUP	6/14/2019	416329	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	-	<0.006	<0.006	<0.006	0.16
503	1.5	B85-1.5	6/14/2019	416329	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	-	<0.004	<0.004	<0.004	0.092
	2.5	B85-2.5	6/14/2019	416329	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	-	<0.0035	<0.0035	<0.0035	0.051
	0.5	B86-0.5	6/14/2019	416329	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007	-	<0.007	<0.007	<0.007	0.26
B86	1.5	B86-1.5	6/14/2019	416329	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	-	<0.006	<0.006	<0.006	0.17
	2.5	B86-2.5	6/14/2019	416329	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	-	<0.004	<0.004	<0.004	0.055
	0.5	B98-0.5	6/14/2019	416329	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
B98	1.5	B98-1.5	6/14/2019	416329	-	-	-	-	-	-	•	-	-	-	-	-	-	-	-
	2.5	B98-2.5	6/14/2019	416329	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	0.5	B99-0.5	6/14/2019	416329	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
B99	0.5	B99-0.5-DUP	6/14/2019	416329	-	-	-	-	-	-	•	-	-	-	-	-	-	-	-
099	1.5	B99-1.5	6/14/2019	416329	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	2.5	B99-2.5	6/14/2019	416329	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	0.5	B100-0.5	6/14/2019	416329	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
B100	1.5	B100-1.5	6/14/2019	416329	-	-	-	-	-	_	-	-	-	-	-	-	-	-	
	2.5	B100-2.5	6/14/2019	416329	-	-	-	-	-	-	-		-	-	-	-	-	-	-
B101	0.5	B101-0.5	6/14/2019	416329	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
D101	0.5	B101-0.5-DUP	6/14/2019	416329	-	-	-	-	-	-	-	-	-	-	-	-	-	-	_
B101	1.5	B101-1.5	6/14/2019	416329	-	-	-	-	-	-		-	-	-	-	-	-	-	-
P101	2.5	B101-2.5	6/14/2019	416329	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	0.5	B102-0.5	6/14/2019	416329	-	-	-	-	-	-			-	-	-	-		-	-
B102	1.5	B102-1.5	6/14/2019	416329	-	-	-	-	-	-			-	-	-	-	-	-	-
	2.5	B102-2.5	6/14/2019	416329	-	-	-	-		-			-	-	-	-	-	-	-

Table 4												VOCs						
Summary of S	oil Analytical Results for T																	
-	ndangerment Assessment – milton High School, Los Ang							hane	ethane			ride		ethane				:hene
HHRA Note 3	Residential Soil DTSC - N	Most Stringent April 1	2019		Allyl chloride	Benzene	Bromobenzene	Bromochloromethane	Bromodichlorom	Bromoform	Bromomethane	69.0 Carbon tetrachlorid	Chlorobenzene	Chlorodibromon	Chloroethane	Chloroform	Chloromethane	cis-1,2-dichloroethene
	ential Soil - Most Stringer				0.72	1.2	290	150	0.29	19	6.8	0.65	280	8.3	14000	0.32	110	160
Location	Sample Depth (ft)	Field ID	Sample Date	SDG	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Location	5 5	B62-5.0	11/19/2018	T183454	- 1118/118		<0.00061		<0.0006					<0.0022			<0.00073	<0.00031
B62	10	SV62-10.0	11/21/2018	T183494	-				<0.00044		<0.00047	<0.00033		<0.0022	<0.00047	<0.00077	<0.00073	<0.00031
	15	SV62-15.0-SO	11/21/2018	T183494	<del>                                     </del>		<0.00053		<0.00044	-					<0.00047		<0.00034	<0.00027
	5	B63-5.0(19)	9/19/2018	T182898	<del>                                     </del>		<0.00053		<0.00031					<0.0013	<0.00055			<0.00027
B63	10	B63-10.0(24)	9/19/2018	T182898			<0.00054		<0.00052	-				< 0.0019	<0.00056		<0.00074	<0.00031
503	15	B63-15.0(29)	9/19/2018	T182898	_		<0.00057		<0.00056			<0.00033		<0.0013	<0.0006	<0.00072	<0.00069	
	5	SV64-5.0 (17)	11/21/2018	T183494	<del>  </del>		<0.00037				<0.00035		<0.0005			<0.00072		<0.00023
B64	10	SV64-10.0 (22)	11/21/2018	T183494	<del>                                     </del>		<0.00056		<0.00043		<0.00040	<0.00032	<0.0003	<0.0010	<0.00047		<0.00066	
504	15	SV64-15.0 (27)	11/21/2018	T183494	-		<0.00056		<0.00054		<0.00057	<0.0004	<0.00063	<0.002	<0.00059		<0.00067	<0.00028
	5	B65-5.0	9/10/2018	T182803	<del>-</del>		<0.00030		<0.00034			<0.00041		<0.002	<0.00039		<0.00074	<0.00031
B65	10	B65-10.0	9/10/2018	T182803	<del>-</del>			<0.00038						<0.0022	<0.00049			
603	15	B65-15.0	9/10/2018	T182803	<u> </u>		<0.00047		<0.00046	<0.00077	<0.00049	<0.00034		<0.0017	<0.00049		<0.00036	
	13	B85-0.5	6/14/2019	416329	<0.0055	0.0012	<0.0055	<0.0055	<0.0055	<0.0055	<0.0055	<0.0055	<0.0055	<0.0014	<0.0055	<0.0055	<0.0055	<0.0055
	0.5	B85-0.5-DUP	6/14/2019	416329	<0.005	0.0012	<0.0033	<0.0033	<0.0033	<0.0055	<0.0055	<0.0055	<0.0033	<0.0055	<0.0055	<0.0055	<0.0033	<0.0055
B85	1.5	B85-0.5-D0F	6/14/2019	416329	<0.004	0.0018	<0.004	<0.008	<0.004	<0.004	<0.004	<0.004	<0.008	<0.004	<0.004	<0.004	<0.008	<0.004
	2.5	B85-2.5	6/14/2019	416329	<0.004	<0.0035	<0.004	<0.004	<0.004	<0.0035	<0.0035	<0.004	<0.004	<0.0035	<0.0035	<0.0035	<0.0035	<0.004
	0.5	B86-0.5	6/14/2019	416329	1	0.00083					<0.0033	<0.0033						
B86		B86-1.5	6/14/2019	416329	<0.007	0.00083	<0.007 <0.006	<0.007 <0.006	<0.007 <0.006	<0.007 <0.006	<0.007	<0.007	<0.007 <0.006	<0.007	<0.007 <0.006	<0.007	<0.007 <0.006	<0.007
Воо	1.5		· · · · · · · · · · · · · · · · · · ·		1													<0.006
	2.5	B86-2.5	6/14/2019	416329	<0.004	0.0002	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004
BOO	0.5	B98-0.5	6/14/2019	416329	-	-	-	-	-	-	-	-	-	-	-	-	-	-
B98	1.5	B98-1.5	6/14/2019	416329	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	2.5	B98-2.5	6/14/2019	416329	-	-	-	-	-	-	-	-	-	-	-	-	-	-
B00	0.5	B99-0.5 B99-0.5-DUP	6/14/2019 6/14/2019	416329 416329	-	-	-	-	-	-	-	-	-	-	-	-	-	-
B99	1.5	B99-1.5	6/14/2019	416329	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	2.5	B99-2.5	6/14/2019	416329	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	0.5	B100-0.5	6/14/2019	416329	-	-	-	-	-	_	-	-	_	-	-	-	-	-
B100	1.5	B100-1.5	6/14/2019	416329	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	2.5	B100-2.5	6/14/2019	416329	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5101		B101-0.5	6/14/2019	416329	-	_	-	-	-	_	-	-	_	-	_	-	-	-
B101	0.5	B101-0.5-DUP	6/14/2019	416329	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	1.5	B101-1.5	6/14/2019	416329	-	-	-	-	-	-	-	-	-	-	-	-	_	-
B101	2.5	B101-2.5	6/14/2019	416329	-	_	-	-	-	_	-	-	-	-	_	-	_	-
	0.5	B102-0.5	6/14/2019	416329	<u> </u>	-	_	-	_	_	_	-	_	-	-	-	_	-
B102	1.5	B102-1.5	6/14/2019	416329	-	_	-	-	-	-	-	-	-	-	-	-	_	-
	2.5 B102-1.5 6/14/2019 416329						-	-	-	-	-	-	-	-	-	-	_	-
	=	_ = = = = = = = = = = = = = = = = = = =	-,,	<b></b>				<u>.                                    </u>										

Table 4					1														
Summary of S	oil Analytical Results for T	PH and VOCs																	
	dangerment Assessment -																er		
Alexander Har	milton High School, Los Ang	geles, California			_ e	2-butene		Dichlorodifluoromethane									Ether		
					dichloropropene	) at		igh.						ne		ē	Butyl		
					l or	-2-	<u>၂</u>	Ĕ	<u>ə</u>	-		Ether		ıtadieı	_e	Ketone			
					Š	ļ ģ	la l	l ö	har	ether	au				ızeı	Хe	ary		ene
					ਵੱ	Dichloro-	l net	≝	net		en	ıtyl		chlorob	ber	Ethyl	Tertiary	ene	Juze
					iş		ē	5 S	ron	rop	enz		113	Ι <mark>ο</mark> Ι	þy	<u> </u>	ļ	hal	ag
					1,3	1,4-	Dibromomethan	皇	Dichloromethane	Diisopropyl	Ethylbenzene	Ethyl-t-Butyl	eon	cacl	sopropylbenzene	Methyl	Methyl	Naphthalene	butylbenz
					cis-	cis	<u>  5</u>	Dic	Dic	Δiis	Eth	Eth	Fre	He.	So	Σe	Ğ	Sal	ᅌ
HHRA Note 3	Residential Soil DTSC - I	Most Stringent April	2019						2.2					1.2				2	2400
<b>USEPA</b> Reside	ential Soil - Most Stringe	ent (TR=1E-06, HQ=1.	0) May 2019			0.0074	24	87	57	2200	5.8		6700	1.2	1900	27000	47	3.8	3900
Location	Sample Depth (ft)	Field ID	Sample Date	SDG	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
	5	B62-5.0	11/19/2018	T183454	<0.00047	-	<0.00061	<0.00051	<0.00054	-	<0.00057	-	-	<0.00076		-	-	<0.00027	<0.0005
B62	10	SV62-10.0	11/21/2018	T183494	<0.00034	-	<0.00045	<0.00037	<0.0004	-	<0.00042	-	-	<0.00056	<0.00042	-	-	<0.0002	<0.00037
	15	SV62-15.0-SO	11/21/2018	T183494	<0.0004	-	<0.00053		<0.00047	-	<0.0005	-	-	<0.00065		-	-		<0.00043
	5	B63-5.0(19)	9/19/2018	T182898	<0.00047	-	<0.00062		<0.00055	-	<0.00058	-	-	<0.00076		-	-	<0.00027	<0.0005
B63	10	B63-10.0(24)	9/19/2018	T182898	<0.00041	-	<0.00054	<0.00044	<0.00048	-	<0.0005	-	-	<0.00066	<0.0005	-	-	<0.00023	<0.00044
	15	B63-15.0(29)	9/19/2018	T182898	<0.00044	-	<0.00057		<0.00051	-	<0.00054	-	-	<0.00071	<0.00054	-	-	<0.00025	<0.00046
	5	SV64-5.0 (17)	11/21/2018	T183494	<0.00034	-	<0.00045		<0.0004	-	<0.00042	-	-	<0.00055		-	-		<0.00036
B64	10	SV64-10.0 (22)	11/21/2018	T183494	<0.00042	-	<0.00056		<0.00049	-	<0.00052	-	-	<0.00069		-	-	<0.00024	
	15	SV64-15.0 (27)	11/21/2018	T183494	<0.00043	-	<0.00056			-	<0.00053	-	-	<0.00069		-	-		<0.00045
	5	B65-5.0	9/10/2018	T182803	<0.00047	-	<0.00062		<0.00055	-	<0.00058	-	-	<0.00076	<0.00058	-	-	<0.00027	<0.0005
B65	10	B65-10.0	9/10/2018	T182803	<0.00036	-	<0.00047	<0.00039	<0.00042	-	<0.00044	-	-		<0.00044	-	-	<0.00021	<0.00038
	15	B65-15.0	9/10/2018	T182803	<0.00029	-	<0.00038		<0.00034	-	<0.00036	-	-	<0.00047		-	-	<0.00017	<0.00031
	0.5	B85-0.5	6/14/2019	416329	<0.0055	<0.0055	<0.0055	<0.0055	<0.0055	<0.0055	0.00047	<0.0055	<0.0055	<0.0055	<0.0055	0.019	<0.0055	<0.0055	<0.0055
B85		B85-0.5-DUP	6/14/2019	416329	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	0.00028	<0.006	<0.006	<0.006	<0.006	0.015	<0.006	<0.006	<0.006
	1.5	B85-1.5	6/14/2019	416329	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	0.008	<0.004	<0.004	<0.004
	2.5	B85-2.5	6/14/2019	416329	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	0.00018	<0.0035	<0.0035	<0.0035	<0.0035	0.0038	<0.0035	<0.0035	<0.0035
DOC.	0.5	B86-0.5	6/14/2019	416329	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007	0.00035	<0.007	<0.007	<0.007	<0.007	0.021	<0.007	<0.007	<0.007
B86	1.5	B86-1.5	6/14/2019	416329	<0.006	<0.006		<0.006	<0.006		0.00031	<0.006	•	<0.006	<0.006	0.014	<0.006		<0.006
	2.5	B86-2.5	6/14/2019	416329	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	0.00021	<0.004	<0.004	<0.004	<0.004	0.0045	<0.004	<0.004	<0.004
DOS	0.5	B98-0.5	6/14/2019	416329	<del>  -</del>	-	-	-	-	-	-	-	-	-	-	-	-	-	<del>-</del>
B98	1.5	B98-1.5	6/14/2019	416329	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	2.5	B98-2.5	6/14/2019	416329 416329	<del>                                     </del>	-	-	-	-	-	-	-	-	-	-	-	<del>-</del>	-	<del>-</del>
	0.5	B99-0.5 B99-0.5-DUP	6/14/2019 6/14/2019	416329	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
B99	1.5	B99-0.5-D0P B99-1.5	6/14/2019	416329	<del>                                     </del>	<del>-</del>		-	-	-	-	-	-	-	-	-	<del>-</del>	-	-
	2.5	B99-1.5 B99-2.5	6/14/2019	416329	-	-	-	-	-	-	-	-	-	-	-	<u>-</u>	-	-	
	0.5	B100-0.5	6/14/2019	416329	<del>                                     </del>	_		<u> </u>	_	-			<u> </u>	-	_	<del>-</del>	_	_	
B100	1.5	B100-0.5 B100-1.5	6/14/2019	416329	<del>  -</del>		<del>-</del>		_	-					_		<del>-</del>	_	
]	2.5	B100-1.5 B100-2.5	6/14/2019	416329	<del>                                     </del>	-	-		-	-	-		<del>-</del>			<u> </u>	<del>-</del>		<del>-</del> -
		B100-2.5 B101-0.5	6/14/2019	416329	<del>                                     </del>	<del>-</del>	-		_	_			<del>-</del>		_		<del>-</del>	_	<del>-</del>
B101	0.5	B101-0.5-DUP	6/14/2019	416329	<del>  -</del>	-	_			-	_			_	_		_	_	
	1.5	B101-1.5	6/14/2019	416329	-	_	_	_	-	-	_	_	_		_		_	_	
B101	2.5	B101-2.5	6/14/2019	416329	-	_	_	_	_	-	_	_	_	_	_	<u>-</u>	_	_	
	0.5	B102-0.5	6/14/2019	416329	-	-	-	-	-	-	-	-	-	-	-	-	-	-	_
B102	1.5	B102-1.5	6/14/2019	416329	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3-	2.5	B102-2.5	6/14/2019	416329	<u> </u>	_	_	_	-	-	-	_	_	_	-	_	_	_	_
	=:=	<b></b>		<u> </u>	<u> </u>														

Table 4																		
Summary of S	nmary of Soil Analytical Results for TPH and VOCs iminary Endangerment Assessment – Equivalent Report kander Hamilton High School, Los Angeles, California																	
Preliminary Er	ndangerment Assessment –	- Equivalent Report																1 1
Alexander Har	milton High School, Los Ang	geles, California							l .					ē	opene		ø)	1 1
		-							Ether					dichloroethene	obe		oromethane	1 1
						l ø			==		٠,	ου		et	opre		ţ	1 1
					ne	l en	ne		-Methyl	<u> </u>	i sue	ethene		oro	oro	Ð	m.	1 1
					O O	<del> </del>	Jze		et	9	uze	l th		Ĕ	dichlor	en	oro	<u>o</u>
					l e	🕇	þei		≥	<u>a</u>	Pe	Ō		ρ	ļ ģ	eth	ofluc	chloride
					🐇	§	₹	o o	Amyl	<u> </u>	Į.	achlor	ē	1,2	1,3	ro	ro	병
					propylbenz	p-isopropyltoluene	sec-butylbenzene	rene		tert-Butyl alcohol	tert-Butylbenzene	rac	Toluene	าs-1	าs-1	Trichloroethene	Trichlor	
					<u> </u>	-is	Ģ Ģ	Styre	le r	l e	l ë	letr	lo le	trar	rans	lric	l_ric	Vinyl
HHRA Note 3	Residential Soil DTSC - I	Most Stringent April	2019				2200	5600	-	<del></del>	2200	0.59	1100	130			1200	0.0082
	ential Soil - Most Stringe				3800		7800	6000			7800	24	4900	1600		0.94	23000	0.059
Location	Sample Depth (ft)	Field ID	Sample Date	SDG	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
11171	5	B62-5.0	11/19/2018	T183454	<0.0006	<0.00055		<0.00052	-	-	<0.00058	<0.00076	<0.0006		<0.00045		<0.00049	
B62	10	SV62-10.0	11/21/2018	T183494	0.0054	0.0045	< 0.00045	<0.00039	_	<u> </u>	<0.00043	<0.00056	0.009	<0.00048	<0.00033	<0.00052	< 0.00036	<0.00052
	15	SV62-15.0-SO	11/21/2018	T183494	1	<0.00048		<0.00035	<u> </u>	<del> </del>	<0.00043	<0.00066			<0.00033			<0.00032
	5	B63-5.0(19)	T182898	<0.00032	<0.00048		<0.00053	_	<del>-</del>	<0.00059	<0.00076		<0.00036			<0.00042		
B63	10	B63-10.0(24)	9/19/2018 9/19/2018	T182898	<0.00053		<0.00054	<0.00046	<u> </u>	<u> </u>	<0.00051	<0.00070	<0.00052	<0.00057	<0.00043	<0.00071	<0.00043	<0.00071
003	15	B63-15.0(24)	9/19/2018	T182898	1	<0.00052		<0.00049		<del>  -</del>	<0.00051	<0.00071	<0.00056		<0.0004			<0.00062
	5	SV64-5.0 (17)	11/21/2018	T183494	1			<0.00049		<del>  -</del>	<0.00034		0.00036					1
DC4		, ,	+ +		<0.00044					<del>  -</del>		<0.00055		<0.00047				<0.00051
B64	10	SV64-10.0 (22)	11/21/2018	T183494	<0.00054		<0.00056	<0.00047	-	-	<0.00053	<0.00069	<0.00054	<0.00059	<0.00041	<0.00064	<0.00044	<0.00064
	15	SV64-15.0 (27)	11/21/2018	T183494	<0.00055			<0.00048	-	-	<0.00053	<0.0007	<0.00054	<0.0006	<0.00041	<0.00065	<0.00045	
D.C.F.	5	B65-5.0	9/10/2018	T182803	<0.0006	<0.00055	<0.00062		-	-	<0.00058	<0.00076	<0.0006	<0.00066	<0.00045	<0.00071	<0.00049	<0.00071
B65	10	B65-10.0	9/10/2018	T182803	<0.00046		<0.00047	<0.0004	-	-	<0.00045		<0.00046	<0.0005	<0.00035		<0.00038	
	15	B65-15.0	9/10/2018	T182803	<0.00037	<0.00034	<0.00038	<0.00033	-	-	<0.00036	<0.00047	<0.00037	<0.00041	<0.00028		<0.00031	
	0.5	B85-0.5	6/14/2019	416329	<0.0055	<0.0055	<0.0055	<0.0055	<0.0055	1	<0.0055	<0.0055	0.0014	<0.0055	<0.0055	<0.0055	<0.0055	<0.0055
B85		B85-0.5-DUP	6/14/2019	416329	<0.006	<0.006	<0.006	<0.006	<0.006	<0.012	<0.006	<0.006	0.0011	<0.006	<0.006	<0.006	<0.006	<0.006
	1.5	B85-1.5	6/14/2019	416329	<0.004	<0.004	<0.004	<0.004		0.0083		<0.004	0.00053	<0.004	<0.004	<0.004	<0.004	<0.004
	2.5	B85-2.5	6/14/2019	416329	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	1	<0.0035	<0.0035	0.00047	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035
	0.5	B86-0.5	6/14/2019	416329	<0.007	<0.007	<0.007	<0.007	<0.007	<0.014		<0.007	0.0015	<0.007	<0.007	<0.007	<0.007	<0.007
B86	1.5	B86-1.5	6/14/2019	416329	<0.006	<0.006	<0.006	<0.006	<0.006	<0.012	<0.006	<0.006	0.00069	<0.006	<0.006	<0.006	<0.006	<0.006
	2.5	B86-2.5	6/14/2019	416329	<0.004	<0.004	<0.004	<0.004	<0.004	<0.008	<0.004	<0.004	0.00052	<0.004	<0.004	<0.004	<0.004	<0.004
	0.5	B98-0.5	6/14/2019	416329	-	-	-	-	-	-	-	-	-	-	-	-	-	-
B98	1.5	B98-1.5	6/14/2019	416329	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	2.5	B98-2.5	6/14/2019	416329		-	-	-	-	-	-	-	1	•	-	•	•	-
	0.5	B99-0.5	6/14/2019	416329	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DO0	0.5	B99-0.5-DUP	6/14/2019	416329	-	-	-	-	-	-	-	-	-	-	-	-	-	-
B99	1.5	B99-1.5	6/14/2019	416329	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	2.5	B99-2.5	6/14/2019	416329	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	0.5	B100-0.5	6/14/2019	416329	-	-	-	-	-	-	-	-	-	-	-	-	-	-
B100	1.5	B100-1.5	6/14/2019	416329	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	2.5	B100-2.5	6/14/2019	416329	-	-	-	-	-	-	-	-	-	-	-	-	-	-
B101		416329	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
B101	0.5	416329	<u> </u>	_	_	_	-	-	_	_	_	_	_	_	_	-		
_	1.5	416329	<b>†</b> -	_	_	_	_	-	_	_	-	_	_	_	_			
B101	2.5	416329	<b>+</b> -	_	_	_	_	<u> </u>	_	_	_		_	_	_	-		
	0.5	B101-2.5 B102-0.5	6/14/2019 6/14/2019	416329	-	_	_	_	_	_	_	_	_	_	_	_	_	-
R102	B102 1.5 B102-0.5 6/14/2019 416329 416329						-	_	-	<del>                                     </del>	_	_	_		_			
5102	B102 1.5 B102-1.5 6/14/2019 416329 2.5 B102-2.5 6/14/2019 416329						<b>†</b>			<del>  -</del>		_		-				
	2.3	D105-5'2	410323	-	-	-	-	-		-	-	-	-	-	-	-		

Table 4							
Summary of So	oil Analytical Results for T	PH and VOCs					
Preliminary En	dangerment Assessment –	- Equivalent Report					
Alexander Ham	nilton High School, Los Ang	geles, California					
					8		<del>-</del>
					Ε	<u> </u>	j
					) e (	) e	၂ ခု
					Xylene (m & p)	Xylene (o)	Xylene Total
LILIDA Nete 2	Desidential Call DTCC	Mark Christman Amel C	2010		×	×	×
	Residential Soil DTSC - I ential Soil - Most Stringe					650	
Location	Sample Depth (ft)	Field ID	Sample Date	SDG	ma/ka		ma/ka
Location	5	B62-5.0	11/19/2018	T183454	mg/kg <0.0011	mg/kg <0.0005	mg/kg
B62	10	SV62-10.0	11/21/2018	T183494	<0.0011	<0.00037	-
502	15	SV62-15.0-SO	11/21/2018	T183494	<0.0008	<0.00037	-
	5		9/19/2018	T182898	<0.00094	<0.00043	
B63	10	B63-5.0(19) B63-10.0(24)	9/19/2018	T182898	<0.0011		-
B03	15	B63-15.0(29)	9/19/2018	T182898	<0.00093	<0.00044	-
	5	SV64-5.0 (17)	11/21/2018	T183494	<0.001	<0.00047	-
B64	10	SV64-10.0 (22)	11/21/2018	T183494	<0.00079	<0.00037	-
504	15	SV64-15.0 (27)	11/21/2018	T183494	<0.00038	<0.00046	-
	5	B65-5.0	9/10/2018	T182803	<0.001	<0.00046	-
B65	10	B65-10.0	9/10/2018	T182803	<0.0011	<0.00031	
B03	15	B65-15.0	9/10/2018	T182803	<0.00068	<0.00033	
	13	B85-0.5	6/14/2019	416329	0.0016		0.00226
	0.5	B85-0.5-DUP	6/14/2019	416329	0.0010	0.00048	0.00228
B85	1.5	B85-1.5	6/14/2019	416329	0.00011	0.00048	0.00138
	2.5	B85-2.5	6/14/2019	416329	0.00063	0.00023	0.000111
	0.5	B86-0.5	6/14/2019	416329	0.00063	0.00021	0.00084
B86	1.5	B86-1.5	6/14/2019	416329	0.0014	0.00043	0.00183
500	2.5	B86-2.5	6/14/2019	416329	0.00075	0.0003	0.0014
	0.5	B98-0.5	6/14/2019	416329		-	0.00037
B98	1.5	B98-0.5	6/14/2019	416329	-	-	-
	2.5	B98-2.5	6/14/2019	416329	-	-	-
	2.5	B99-0.5	6/14/2019	416329	-	-	-
	0.5	B99-0.5-DUP	6/14/2019	416329	-	-	
B99	1.5	B99-1.5	6/14/2019	416329	-	-	-
	2.5	B99-2.5	6/14/2019	416329			
	0.5	B100-0.5	6/14/2019	416329	-	-	
B100	1.5	B100-0.5	6/14/2019	416329	-	-	-
B100	2.5	B100-1.5	6/14/2019	416329	-		-
		B100-2.5 B101-0.5	6/14/2019	416329	-	-	-
B101	0.5	B101-0.5-DUP	6/14/2019	416329	-	-	-
	1.5	B101-0.5-D0P	6/14/2019	416329	<u>-</u>	-	
B101	2.5	B101-1.5 B101-2.5	6/14/2019	416329	-	-	-
	0.5	B101-2.5 B102-0.5	6/14/2019	416329	-	-	-
B102	1.5	B102-0.5 B102-1.5	6/14/2019	416329	-	_	-
2102	2.5	B102-1.5 B102-2.5	6/14/2019	416329	-	_	-
	۷.J	סדמב-2.2	0/14/2019	410323	-	-	-

Table 4					l	TPH													
Preliminary En	oil Analytical Results for T dangerment Assessment - nilton High School, Los Ang	- Equivalent Report			TPH as Diesel	<b>IPH as Gasoline</b>	TPH as Motor Oil	1,1,1,2-tetrachloroethane	1,1,1-trichloroethane	I,1,2,2-tetrachloroethane	I,1,2-trichloroethane	1,1-dichloroethane	I,1-dichloroethene	1,1-dichloropropene	1,2,3-trichlorobenzene	1,2,3-trichloropropane	1,2,4-trichlorobenzene	1,2,4-trimethylbenzene	1,2-dibromo-3-chloropropane
HHRA Note 3	Residential Soil DTSC -	Most Stringent April	2019		<u> </u>	'	· '	2	1700	0.6		3.6	83		40	0.0015	7.8	``	0.0043
USEPA Reside	ential Soil - Most Stringe	nt (TR=1E-06, HQ=1.	0) May 2019					2	8100	0.6	1.1	3.6	230		63	0.0051	24	300	0.0053
Location	Sample Depth (ft)	Field ID	Sample Date	SDG	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
	5	SV117-5.0	421801	-	-	-	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	0.00032J	<0.0035	
	10	SV117-10.0	421801	-	-	-	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	
B117	45	421801	-	-	-	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035		
	15	421801	-	-	-	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035		
	25	421801	-	-	-	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035		
	5	SV118-5.0	11/23/2019	421801	-	-	-	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045
D110	10	SV118-10.0	11/23/2019	421801	-	-	-	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004
B118	15	SV118-15.0	11/23/2019	421801	-	-	-	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035
	25	SV118-25.0	11/23/2019	421801	-	-	-	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045
	5	SV119-5.0	11/23/2019	421801	-	-	-	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
B119	10	SV119-10.0	11/23/2019	421801	-	-	-	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004
D119	15	SV119-15.0	11/23/2019	421801	-	-	-	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004
	25	SV119-25.0	11/23/2019	421801	-	-	-	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004
	5	SV122-5.0	11/23/2019	421801	-	-	-	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004
	10	SV122-10.0	11/23/2019	421801	-	-	-	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004
B11DDD	15	SV122-15.0	11/23/2019	421801	-	-	-	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
	25	SV122-25.0	11/23/2019	421801	-	-	-	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004
	23	SV122-25.0-DUP	11/23/2019	421801	-	-	-	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
	5	SV120-5.0	11/23/2019	421801	-	-	-	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045
	J	SV120-5.0-DUP	11/23/2019	421801	-	•	-	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045
B120	10	SV120-10.0	11/23/2019	421801	-	-	-	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035
	15	SV120-15.0	11/23/2019	421801	-	-	-	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
	25	SV120-25.0	11/23/2019	421801	-	-	-	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004
	5	SV121-5.0	11/23/2019	421801	-	-	-	<0.0055	<0.0055	<0.0055	<0.0055	<0.0055	<0.0055	<0.0055	<0.0055	<0.0055	<0.0055	<0.0055	<0.0055
B121	10	SV121-10.0	11/23/2019	421801	-	-	-	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	< 0.0035
DIZI	15 SV121-15.0 11/23/2019 421801				-	_	-	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035
	25	421801	-	-	-	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	< 0.0045	<0.0045		

mg/kg = milligrams per kilogram

- = not analyzed

< = not reported above analytical reporting limit shown

J - estimated value

ft bgs = feet below ground surface

HHRA- Human Health Risk Assessment

DTSC - Department of Toxic Substance Control

USEPA- Usited State Environmental Protection Agency

Table 4					Ι														
Summary of S	oil Analytical Results for T	PH and VOCs													I				
Preliminary Er	ndangerment Assessment -	- Equivalent Report																	
Alexander Har	milton High School, Los An	geles, California							a)										
								<b>a</b> ,	5-trimethylbenzene	ne	<b>a</b> )	a)						ne	
					ne	ene	Je Je	ane	zue	.2-butene	ene	pane	en e	pane				anc	
					tha	benze	i.	ő	ď	-pr	zue	0	zue	0		l e	l e	jr.	
					dibromoethane	l go	oet	dichloropropane	Ţ,	Ö	dichlorobenzen	dichloropr	g	2-dichloropr		<u> </u>	<u> </u>	ď	
					, j	dichlorol	힐	힐	<u> </u>	,4-Dichlor	lor	lor	<u> </u>	<u> </u>		) to	je	<del>  -</del>	
					ļ ģ	5	<u> </u>	<u> </u>	<u> </u>	) jc	i i	dict.	dichlo	5	<u>i</u>	<u> </u>	<u> </u>	eth.	o u
					)-2 <sub>(</sub>	)-2 <sub>(</sub>	1,2-dichloroethane	-7,	1,3,5	4 <sub>(</sub>	ų́	1,3-0	4		Pyridine	2-chlorotoluene	4-chlorotoluene	4-Methyl-2-pentanone	Acetone
HHRA Note 3	Residential Soil DTSC -	Most Stringent April 2	2019		0.036	Н Н	- +	H.	- 7	н	T,	410		2,	58	470	440	4	_ ⋖
	ential Soil - Most Stringe				0.036	1800	0.46	2.5	270	0.0021		1600	2.6		78	1600	1600	33000	61000
Location	Sample Depth (ft)	Field ID	Sample Date	SDG	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
	5	SV117-5.0	11/23/2019	421801	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	-	<0.0035	<0.0035	<0.0035	
	10	SV117-10.0	11/23/2019	421801	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	-	<0.0035	<0.0035	<0.0035	<0.07
B117	15	SV117-15.0	11/23/2019	421801	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	-	<0.0035	<0.0035	<0.0035	<0.07
	15	SV117-15.0-DUP	11/23/2019	421801	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	-	<0.0035	<0.0035	<0.0035	<0.07
	25	SV117-25.0	11/23/2019	421801	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	-	<0.0035	<0.0035	<0.0035	<0.07
	5	SV118-5.0	11/23/2019	421801	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	-	<0.0045	<0.0045	<0.0045	<0.09
B118	10	SV118-10.0	11/23/2019	421801	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	-	<0.004	<0.004	<0.004	<0.08
B110	15	SV118-15.0	11/23/2019	421801	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	-	<0.0035	<0.0035	<0.0035	<0.07
	25	SV118-25.0	11/23/2019	421801	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	-	<0.0045	<0.0045	<0.0045	<0.09
	5	SV119-5.0	11/23/2019	421801	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	-	<0.005	<0.005	<0.005	0.087J
B119	10	SV119-10.0	11/23/2019	421801	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	-	<0.004	<0.004	<0.004	<0.08
5115	15	SV119-15.0	11/23/2019	421801	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	-	<0.004	<0.004	<0.004	<0.08
	25	SV119-25.0	11/23/2019	421801	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	-	<0.004	<0.004	<0.004	<0.08
	5	SV122-5.0	11/23/2019	421801	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	-	<0.004	<0.004	<0.004	<0.08
	10	SV122-10.0	11/23/2019	421801	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	-	<0.004	<0.004	<0.004	<0.08
B11DDD	15	SV122-15.0	11/23/2019	421801	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	-	<0.005	<0.005	<0.005	<0.1
	25	SV122-25.0	11/23/2019	421801	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	-	<0.004	<0.004	<0.004	<0.08
	23	SV122-25.0-DUP	11/23/2019	421801	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	-	<0.005	<0.005	<0.005	<0.1
	5	SV120-5.0	11/23/2019	421801	<0.0045	<0.0045	<0.0045	<0.0045		<0.0045		<0.0045	<0.0045	<0.0045	-	<0.0045	<0.0045	<0.0045	0.053J
		SV120-5.0-DUP	11/23/2019	421801	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	-	<0.0045	<0.0045	<0.0045	0.056J
B120	10	SV120-10.0	11/23/2019	421801	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	-	<0.0035	<0.0035	<0.0035	<0.07
	15	SV120-15.0	11/23/2019	421801	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	-	<0.003	<0.003	<0.003	<0.06
	25	SV120-25.0	11/23/2019	421801	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	-	<0.004	<0.004	<0.004	<0.08
	5	SV121-5.0	11/23/2019	421801	<0.0055	<0.0055	<0.0055	<0.0055		1	<0.0055	<0.0055	<0.0055	•	-	<0.0055	<0.0055	<0.0055	<0.11
B121	10	SV121-10.0	11/23/2019	421801	<0.0035	<0.0035	<0.0035	<0.0035		<0.0035		<0.0035	<0.0035		-	<0.0035	<0.0035	<0.0035	
	15	SV121-15.0	11/23/2019	421801	<0.0035	<0.0035	<0.0035	<0.0035			<0.0035	<0.0035	<0.0035			<0.0035		<0.0035	
	25	SV121-25.0	11/23/2019	421801	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	-	<0.0045	<0.0045	<0.0045	<0.09

mg/kg = milligrams per kilogram

- = not analyzed

< = not reported above analytical reporting limit shown

J - estimated value

ft bgs = feet below ground surface

HHRA- Human Health Risk Assessment

DTSC - Department of Toxic Substance Control

USEPA- Usited State Environmental Protection Agency

Table 4														VOCs				
Summary of So Preliminary En	oil Analytical Results for T dangerment Assessment – nilton High School, Los Ang	- Equivalent Report			Allyl chloride	Benzene	Bromobenzene	omochloromethane	omodichloromethane	Bromoform	omomethane	Carbon tetrachloride	Chlorobenzene	Chlorodibromomethane	Chloroethane	Chloroform	oromethane	cis-1,2-dichloroethene
					A		Bro	Bro	Br		Bro		ਤ		<u>ਤ</u>	Chl	Chlor	
	Residential Soil DTSC - I					0.33			0.29	19		0.65		0.94				18
Т	ential Soil - Most Stringe		Sample Date		0.72	1.2	290	150	0.29	19	6.8	0.65	280	8.3	14000	0.32	110	160
Location	Sample Depth (ft)	Field ID	SDG	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	
-	5	SV117-5.0	11/23/2019	421801	<0.0035	0.0003J	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035		<0.0035	<0.0035	<0.0035
l	10	SV117-10.0	11/23/2019	421801	<0.0035	0.0011J	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035		<0.0035	<0.0035	<0.0035
B117	15	SV117-15.0	11/23/2019	421801	<0.0035	0.00047J	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035		<0.0035	<0.0035	<0.0035
		SV117-15.0-DUP	11/23/2019	421801	<0.0035	0.0004J	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035		<0.0035	<0.0035	<0.0035
	25	SV117-25.0	11/23/2019	421801	<0.0035	0.00015J	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035		<0.0035	<0.0035	<0.0035
	5	SV118-5.0	11/23/2019	421801	<0.0045	0.00033J	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045		<0.0045	<0.0045	<0.0045
B118	10	SV118-10.0	11/23/2019	421801	<0.004	0.00023J	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004
	15	SV118-15.0	11/23/2019	421801	<0.0035	0.00053J	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035
	25	SV118-25.0	11/23/2019	421801	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045		<0.0045	<0.0045	<0.0045
	5	SV119-5.0	11/23/2019	421801	<0.005	0.00044J	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
B119	10	SV119-10.0	11/23/2019	421801	<0.004	0.00092J	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004
	15	SV119-15.0	11/23/2019	421801	<0.004	0.00097J	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004
	25	SV119-25.0	11/23/2019	421801	<0.004	0.00063J	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004
	5	SV122-5.0	11/23/2019	421801	<0.004	0.00049J	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004
	10	SV122-10.0	11/23/2019	421801	<0.004	0.00045J	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004
B11DDD	15	SV122-15.0	11/23/2019	421801	<0.005	0.00097J	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
	25	SV122-25.0	11/23/2019	421801	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004
		SV122-25.0-DUP	11/23/2019	421801	<0.005	0.00036J	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
	5	SV120-5.0	11/23/2019	421801	<0.0045	0.0004J	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045
	3	SV120-5.0-DUP	11/23/2019	421801	<0.0045	0.00041J	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045
B120	10	SV120-10.0	11/23/2019	421801	<0.0035	0.00035J	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035
	15	SV120-15.0	11/23/2019	421801	<0.003	0.00062J	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
	25	SV120-25.0	11/23/2019	421801	<0.004	0.00027J	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004
	5	SV121-5.0	11/23/2019	421801	<0.0055	0.00031J	<0.0055	<0.0055	<0.0055	<0.0055	<0.0055	<0.0055	<0.0055	<0.0055	<0.0055	<0.0055	<0.0055	<0.0055
B121	10	SV121-10.0	11/23/2019	421801	<0.0035	0.00049J	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035
D121	B121 15 SV121-15.0 11/23/2019 421801				<0.0035	0.00064J	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035
	25	421801	<0.0045	0.00019J	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045		

mg/kg = milligrams per kilogram

- = not analyzed

< = not reported above analytical reporting limit shown

J - estimated value

ft bgs = feet below ground surface

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Table 4					l l														
Summary of S	oil Analytical Results for T	PH and VOCs																	
Preliminary En	ndangerment Assessment -	- Equivalent Report															-		
Alexander Har	milton High School, Los An	geles, California			l o	ne e		l e									Ether		
					l e	2-butene		Dichlorodifluoromethane						e		a)			
					o g	2-b	س ا	e l				ē		chlorobutadiene	o o	Ketone	Butyl		
					§		an	ē	aue	ether		Ether		ıtac	len :	Ket			<b>J</b> e
					0		eth	] [	eth	<u>e</u>	ne			ngc	enz	=	tia	ne	zer
					gich	1,4-Dichloro-		ğ	Ē	dc	nze	But	113	<u>o</u>	옥	Ethyl	Tertiary	ale	ben
					μ	4	<u>د</u> و	<u>o</u>	<u>  o</u>	) pr	lbe	<u>+</u>	n 1	ch		<u> </u>	<u> </u>	)th	₹
					is-1	cis-1	Dibromomethane	ļ ģ	Dichloromethane	Diisopropyl	Ethylbenzene	Ethyl-t-Butyl	Freon	Неха	sopropylbenzen	Methyl	Methyl	laphthalene	n-butylbenzene
HHRA Note 3	Residential Soil DTSC -	Most Stringent April	2019		<u> </u>	-0			2.2		ш	ш	ш.	1.2	<u> </u>			2	2400
	ential Soil - Most Stringe					0.0074	24	87	57	2200	5.8		6700	1.2	1900	27000	47	3.8	3900
Location	Sample Depth (ft)	Field ID	Sample Date	SDG	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
	5	SV117-5.0	11/23/2019	421801	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	0.0022J	<0.0035	<0.0035	<0.0035
	10	SV117-10.0	11/23/2019	421801	<0.0035	<0.0035	<0.0035	<0.0035	0.0023J	<0.0035	<0.0035	<0.0035		<0.0035	<0.0035	0.00086J		<0.0035	<0.0035
B117	45	SV117-15.0	11/23/2019	421801	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035			<0.0035	<0.0035	<0.07	<0.0035	<0.0035	<0.0035
	15	SV117-15.0-DUP	11/23/2019	421801	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.07	<0.0035	<0.0035	<0.0035
	25	SV117-25.0	11/23/2019	421801	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.07	<0.0035	<0.0035	<0.0035
	5	SV118-5.0	11/23/2019	421801	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045			<0.0045	<0.0045	0.0017J	<0.0045	<0.0045	<0.0045
D110	10	SV118-10.0	11/23/2019	421801	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.08	<0.004	<0.004	<0.004
B118	15	SV118-15.0	11/23/2019	421801	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	0.00088J	<0.0035	<0.0035	<0.0035
	25	SV118-25.0	11/23/2019	421801	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	<0.09	<0.0045	<0.0045	<0.0045
	5	SV119-5.0	11/23/2019	421801	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.0045J	<0.005	<0.005	<0.005
B119	10	SV119-10.0	11/23/2019	421801	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.08	<0.004	<0.004	<0.004
B119	15	SV119-15.0	11/23/2019	421801	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.08	<0.004	<0.004	<0.004
	25	SV119-25.0	11/23/2019	421801	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	0.0021J	<0.004	<0.004	<0.004
	5	SV122-5.0	11/23/2019	421801	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.08	<0.004	<0.004	<0.004
	10	SV122-10.0	11/23/2019	421801	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.08	<0.004	<0.004	<0.004
B11DDD	15	SV122-15.0	11/23/2019	421801	<0.005	<0.005	<0.005	<0.005	0.0004J	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.0016J	<0.005	<0.005	<0.005
	25	SV122-25.0	11/23/2019	421801	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.08	<0.004	<0.004	<0.004
	25	SV122-25.0-DUP	11/23/2019	421801	<0.005	<0.005	<0.005	<0.005	0.0021J	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.1	<0.005	<0.005	<0.005
	5	SV120-5.0	11/23/2019	421801	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	0.0051J	<0.0045	<0.0045	<0.0045
	5	SV120-5.0-DUP	11/23/2019	421801	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	0.0046J	<0.0045	<0.0045	<0.0045
B120	10	SV120-10.0	11/23/2019	421801	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.07	<0.0035	<0.0035	<0.0035
	15	SV120-15.0	11/23/2019	421801	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.06	<0.003	<0.003	<0.003
	25	SV120-25.0	11/23/2019	421801	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.08	<0.004	<0.004	<0.004
	5	SV121-5.0	11/23/2019	421801	<0.0055	<0.0055	<0.0055	<0.0055	0.0011J	<0.0055	<0.0055	<0.0055	<0.0055	<0.0055	<0.0055	0.0042J	<0.0055	<0.0055	<0.0055
B121	10	SV121-10.0	11/23/2019	421801	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.07	<0.0035	<0.0035	<0.0035
5121	15	SV121-15.0	11/23/2019	421801	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.07	<0.0035	<0.0035	<0.0035
	25	SV121-25.0	11/23/2019	421801	<0.0045	< 0.0045	<0.0045	<0.0045	0.0042J	<0.0045	<0.0045	< 0.0045	<0.0045	< 0.0045	<0.0045	<0.09	< 0.0045	<0.0045	<0.0045

mg/kg = milligrams per kilogram

- = not analyzed

< = not reported above analytical reporting limit shown

J - estimated value

ft bgs = feet below ground surface

HHRA- Human Health Risk Assessment

DTSC - Department of Toxic Substance Control

USEPA- Usited State Environmental Protection Agency

Table 4					Γ													
Summary of S	oil Analytical Results for T	PH and VOCs			<u> </u>	<u> </u>						1						
Preliminary En	ndangerment Assessment -	- Equivalent Report													<b>a</b> ,			
Alexander Har	milton High School, Los Ang	geles, California							_					ne	opene		Ð	
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						l e	, a		_ <u>_</u>	_	ā	<b>–</b>		oet	opre		eth	
					ene	-isopropyltoluene	e i		Amyl-Methyl	alcohol	zen	her		lor	ō	ne	шo.	_
					)zu:	亨	euz		Βe	alcc	ens	oet		dichl	3-dichlor	; He	uor	chloride
					ap	ď	Š		<u> </u>	<u> </u>	Butylb	ō		2-c	ကို	oe	ljo.	lor
					Go	ğ	j j	ene	An	Bui	Bu	ach	ene	s-1,	s-1,	<u> </u>	اواد	C
					n-propylbenzene	isc	sec-butylbenzene	Styrene	ë	tert-Butyl	tert-	Tetrachloroethene	Toluene	ran	trans-1, 🤅	Trichloroethene	Trichlorofluoromethane	Vinyl
HHRA Note 3	Residential Soil DTSC - I	Most Stringent April 2	2019		-		2200	5600	-	-	2200	0.59	1100	130	<b>4</b>	<u> </u>	1200	0.0082
USEPA Reside	ential Soil - Most Stringe	ent (TR=1E-06, HQ=1.	0) May 2019		3800		7800	6000			7800	24	4900	1600		0.94	23000	0.059
Location	Sample Depth (ft)	Field ID	Sample Date	SDG	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
	5	SV117-5.0	11/23/2019	421801	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035		<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035
	10	SV117-10.0	11/23/2019	421801	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.007	<0.0035	<0.0035	0.0004J	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035
B117	15	SV117-15.0	11/23/2019	421801	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.007	<0.0035	<0.0035	0.00014J	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035
	13	SV117-15.0-DUP	11/23/2019	421801	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.007	<0.0035	<0.0035	0.00013J	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035
	25	SV117-25.0	11/23/2019	421801	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.007	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035
	5	SV118-5.0	11/23/2019	421801	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	<0.009	<0.0045	<0.0045	0.00018J	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045
B118	10	SV118-10.0	11/23/2019	421801	<0.004	<0.004	<0.004	<0.004	<0.004	<0.008	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004
D110	15	SV118-15.0	11/23/2019	421801	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.007	<0.0035	<0.0035	0.00019J	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035
	25	SV118-25.0	11/23/2019	421801	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045		<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045
	5	SV119-5.0	11/23/2019	421801	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	0.00021J	<0.005	<0.005	<0.005	<0.005	<0.005
B119	10	SV119-10.0	11/23/2019	421801	<0.004	<0.004	<0.004	<0.004	<0.004	<0.008	<0.004	<0.004	0.00033J	<0.004	<0.004	<0.004	<0.004	<0.004
5115	15	SV119-15.0	11/23/2019	421801	<0.004	<0.004	<0.004	<0.004	<0.004	<0.008	<0.004	<0.004	0.00033J	<0.004	<0.004	<0.004	<0.004	<0.004
	25	SV119-25.0	11/23/2019	421801	<0.004	<0.004	<0.004	<0.004	<0.004	<0.008	<0.004	<0.004	0.00038J	<0.004	<0.004	<0.004	<0.004	<0.004
	5	SV122-5.0	11/23/2019	421801	<0.004	<0.004	<0.004	<0.004	<0.004	<0.008	<0.004	<0.004	0.00028J	<0.004	<0.004	<0.004	<0.004	<0.004
	10	SV122-10.0	11/23/2019	421801	<0.004	<0.004	<0.004	<0.004	<0.004	<0.008	<0.004	<0.004	0.0002J	<0.004	<0.004	<0.004	<0.004	<0.004
B11DDD	15	SV122-15.0	11/23/2019	421801	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	0.00026J	<0.005	<0.005	<0.005	<0.005	<0.005
	25	SV122-25.0	11/23/2019	421801	<0.004	<0.004	<0.004	<0.004	<0.004	<0.008	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004
		SV122-25.0-DUP	11/23/2019	421801	<0.005	<0.005	<0.005	<0.005		<0.01			0.00038J		<0.005	<0.005	<0.005	<0.005
	5	SV120-5.0	11/23/2019	421801	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045		<0.0045	<0.0045	0.0002J	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045
		SV120-5.0-DUP	11/23/2019	421801	<0.0045	<0.0045	<0.0045	<0.0045		_	<0.0045		0.00018J		<0.0045	<0.0045	<0.0045	<0.0045
B120	10	SV120-10.0	11/23/2019	421801	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035		<0.0035	<0.0035	0.00015J	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035
	15	SV120-15.0	11/23/2019	421801	<0.003	<0.003	<0.003	<0.003	<0.003		<0.003	<0.003	0.00016J	<0.003	<0.003	<0.003	<0.003	<0.003
	25	SV120-25.0	11/23/2019	421801	<0.004	<0.004	<0.004	<0.004	<0.004		<0.004	<0.004	0.00029J	<0.004	<0.004	<0.004	<0.004	<0.004
	5	SV121-5.0	11/23/2019	421801	<0.0055	<0.0055	<0.0055	<0.0055	<0.0055	1	<0.0055	<0.0055	0.00021J	<0.0055	<0.0055	<0.0055	<0.0055	<0.0055
B121	10	SV121-10.0	11/23/2019	421801	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	1	<0.0035	<0.0035	0.00018J	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035
	15 SV121-15.0 11/23/2019 421801				<0.0035	<0.0035	<0.0035		<0.0035	1	<0.0035	<0.0035		<0.0035	<0.0035	<0.0035	<0.0035	<0.0035
	25	SV121-25.0	11/23/2019	421801	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	<0.009	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045

mg/kg = milligrams per kilogram

- = not analyzed

< = not reported above analytical reporting limit shown

J - estimated value

ft bgs = feet below ground surface

HHRA- Human Health Risk Assessment

DTSC - Department of Toxic Substance Control

USEPA- Usited State Environmental Protection Agency

Table 4							
Summary of So	oil Analytical Results for T	PH and VOCs					1
=	dangerment Assessment -						
Alexander Han	nilton High School, Los Ang	geles, California					
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					٤	<u> </u>	
					ne L	e e	ne .
					Xylene (m &	Xylene (o)	Xylene Total
HHRA Note 3	Residential Soil DTSC - I	Most Stringent Anril 1	2019		×	×	×
	ential Soil - Most Stringe					650	
Location	Sample Depth (ft)	Field ID	Sample Date	SDG	mg/kg	mg/kg	mg/kg
20041011	5	SV117-5.0	11/23/2019	421801	<0.0035	<0.0035	<0.0035
	10	SV117-10.0	11/23/2019	421801	<0.0035	<0.0035	< 0.0035
B117		SV117-15.0	11/23/2019	421801	<0.0035	<0.0035	<0.0035
	15	SV117-15.0-DUP	11/23/2019	421801	<0.0035	<0.0035	<0.0035
	25	SV117-25.0	11/23/2019	421801	<0.0035	<0.0035	<0.0035
	5	SV118-5.0	11/23/2019	421801	<0.0045	<0.0045	<0.0045
D440	10	SV118-10.0	11/23/2019	421801	<0.004	<0.004	<0.004
B118	15	SV118-15.0	11/23/2019	421801	<0.0035	<0.0035	<0.0035
	25	SV118-25.0	11/23/2019	421801	<0.0045	<0.0045	<0.0045
	5	SV119-5.0	11/23/2019	421801	<0.005	<0.005	<0.005
B119	10	SV119-10.0	11/23/2019	421801	<0.004	<0.004	<0.004
P113	15	SV119-15.0	11/23/2019	421801	<0.004	<0.004	<0.004
	25	SV119-25.0	11/23/2019	421801	<0.004	<0.004	<0.004
	5	SV122-5.0	11/23/2019	421801	<0.004	<0.004	<0.004
	10	SV122-10.0	11/23/2019	421801	<0.004	<0.004	<0.004
B11DDD	15	SV122-15.0	11/23/2019	421801	<0.005	<0.005	<0.005
	25	SV122-25.0	11/23/2019	421801	<0.004	<0.004	<0.004
	23	SV122-25.0-DUP	11/23/2019	421801	<0.005	<0.005	<0.005
	5	SV120-5.0	11/23/2019	421801	<0.0045	<0.0045	<0.0045
	3	SV120-5.0-DUP	11/23/2019	421801	<0.0045	<0.0045	<0.0045
B120	10	SV120-10.0	11/23/2019	421801	<0.0035	<0.0035	<0.0035
	15	SV120-15.0	11/23/2019	421801	<0.003	<0.003	<0.003
	25	SV120-25.0	11/23/2019	421801	<0.004	<0.004	<0.004
	5	SV121-5.0	11/23/2019	421801	<0.0055	<0.0055	<0.0055
B121	10	SV121-10.0	11/23/2019	421801	<0.0035	<0.0035	<0.0035
D121	15	SV121-15.0	11/23/2019	421801	<0.0035	<0.0035	<0.0035
	25	SV121-25.0	11/23/2019	421801	<0.0045	<0.0045	<0.0045

mg/kg = milligrams per kilogram

- = not analyzed

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J - estimated value

ft bgs = feet below ground surface

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USEPA- Usited State Environmental Protection Agency

Table 5													PAI	1						
Summary of S Preliminary En	Soil Analytical Results fon dangerment Assessmen milton High School, Los A	nt – Equivalent Re	eport		1-Methylnaphthalene	2-methylnaphthalene	Acenaphthene	Acenaphthylene	Anthracene	Benz(a)anthracene	Benzo(a) pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-c,d)pyrene	Phenanthrene
HHRA Note 3	Residential Soil DTSC	- Most Stringer	nt April 2019		9.9	190	3300		17000	1.1	0.11	1.1		11	110	0.028	2400	2300	1.1	
<b>USEPA</b> Resid	ential Soil - Most Strin	gent (TR=1E-06	i, HQ=1.0) May 201	19	18	240	3600		18000	1.1	0.11	1.1		11	110	0.11	2400	2400	1.1	
Location	Sample Depth (ft)	Field ID	Sample Date	SDG	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
	2.5	B04-2.5	9/19/2018	T182898	<0.024	<0.027	<0.0016	<0.0017	<0.0015	<0.0011	<0.0011	<0.00092	<0.0033	<0.0014	<0.001	<0.002	<0.0013	<0.0014	<0.0016	<0.0015
B04	2.5	B04-2.5 DUP	9/19/2018	T182898	<0.024	<0.027	<0.0016	<0.0017	<0.0015	<0.0011	<0.0011	<0.00092	<0.0033	<0.0014	<0.001	<0.002	<0.0013	<0.0014	<0.0016	<0.0015
	5	B04-5.0	9/19/2018	T182898	<0.024	<0.027	<0.0016	<0.0017	<0.0015	<0.0011	<0.0011	<0.00092	<0.0033	< 0.0014	<0.001	<0.002	<0.0013	< 0.0014	<0.0016	<0.0015
				T182803	<0.024	<0.027	<0.017	<0.025	<0.02	<0.023	<0.035	<0.045	<0.038	<0.03	< 0.032	< 0.025	<0.026	<0.024	<0.045	<0.02
B57				T182803	<0.024	<0.027	<0.017	<0.025	<0.02	<0.023	<0.035	<0.045	<0.038	<0.03	<0.032	<0.025	<0.026	<0.024	<0.045	<0.02
	15 B57-15.0 9/10/2018 T182803				<0.024	<0.027	<0.017	<0.025	<0.02	<0.023	<0.035	<0.045	<0.038	< 0.03	<0.032	<0.025	<0.026	< 0.024	<0.045	< 0.02

mg/kg = milligrams per kilogram

- = not analyzed

< = not reported above analytical reporting limit shown

ft bgs = feet below ground surface

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Preliminary E	Soil Analytical Results for ndangerment Assessmer milton High School, Los	nt – Equivalent Re	eport		Pyrene	2,4,5-trichlorophenol	2,4,6-trichlorophenol	2,4-dichlorophenol	2,4-dimethylphenol	2,4-dinitrophenol	2,4-Dinitrotoluene	2,6-dinitrotoluene	2-chloronaphthalene	2-chlorophenol	2-methylphenol	2-nitroaniline	2-nitrophenol	3-nitroaniline	4,6-Dinitro-2-methylphenol	4-bromophenyl phenyl ether	4-chloro-3-methylphenol	4-chloroaniline	4-chlorophenyl phenyl ether
HHRA Note	RA Note 3 Residential Soil DTSC - Most Stringent April 2019				1800	6300	7.8	190	1300	130	1.7	0.36	4100	340	3200	630			5.1		6300	2.7	
<b>USEPA</b> Resid	lential Soil - Most Strin	igent (TR=1E-06	6, HQ=1.0) May 201	9	1800	6300	49	190	1300	130	1.7	0.36	4800	390	3200	630			5.1		6300	2.7	
Location	Sample Depth (ft)	Field ID	Sample Date	SDG	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
	2.5	B04-2.5	9/19/2018	T182898	<0.0012	<0.02	<0.024	<0.095	<0.027	<0.019	<0.02	<0.026	<0.025	<0.018	<0.044	<0.015	<0.033	<0.027	<0.039	<0.021	<0.029	<0.051	<0.018
B04	7.5			T182898	<0.0012	<0.02	<0.024	<0.095	<0.027	<0.019	<0.02	<0.026	<0.025	<0.018	<0.044	<0.015	<0.033	<0.027	<0.039	<0.021	<0.029	<0.051	<0.018
	5 B04-5.0 9/19/2018 T18289			T182898	<0.0012	<0.02	<0.024	< 0.095	< 0.027	<0.019	<0.02	<0.026	<0.025	<0.018	< 0.044	<0.015	<0.033	< 0.027	<0.039	<0.021	<0.029	< 0.051	<0.018
				T182803	<0.023	<0.02	<0.024	<0.095	< 0.027	<0.019	<0.02	<0.026	< 0.025	<0.018	<0.044	<0.015	<0.033	<0.027	<0.039	<0.021	<0.029	<0.051	<0.018
B57					<0.023	<0.02	<0.024	< 0.095	< 0.027	< 0.019	<0.02	< 0.026	< 0.025	< 0.018	< 0.044	< 0.015	< 0.033	< 0.027	< 0.039	< 0.021	< 0.029	< 0.051	< 0.018
	15 B57-15.0 9/10/2018 T182803					<0.02	<0.024	<0.095	< 0.027	<0.019	<0.02	<0.026	<0.025	<0.018	<0.044	<0.015	< 0.033	< 0.027	<0.039	< 0.021	< 0.029	< 0.051	<0.018

mg/kg = milligrams per kilogram

- = not analyzed

< = not reported above analytical reporting limit shown

ft bgs = feet below ground surface

HHRA- Human Health Risk Assessment

DTSC - Department of Toxic Substance Control

USEPA- Usited State Environmental Protection Agency

Table 5								SV	OCs														
Summary of S Preliminary E	<b>Soil Analytical Results fo</b> ndangerment Assessmen milton High School, Los <i>A</i>	nt – Equivalent Re	eport		1-methylphenol	1-nitroaniline	1-nitrophenol	Azobenzene	3enzyl alcohol	3is(2-chloroethoxy) methane	3is(2-chloroethyl)ether	3is(2-chloroisopropyl) ether	3is(2-ethylhexyl) phthalate	3utyl benzyl phthalate	Carbazole	Dibenzofuran	Jiethylphthalate	Jimethyl phthalate	Di-n-butyl phthalate	Oi-n-octyl phthalate	- - - - - - - - - - - - - - - - - - -	- Hexachlorocyclopentadiene	- - - - - - - - - - - - - - - - - - -
HHRA Note 3	Residential Soil DTSC	- Most Stringer	nt April 2019		6300	27			6300	190	0.1	2000	39	290		66	51000		6300	630	0.19		
<b>USEPA</b> Resid	ential Soil - Most Strin	gent (TR=1E-06	i, HQ=1.0) May 201	9	6300	27		5.6	6300	190	0.23	3100	39	290		73	51000		6300	630	0.21	1.8	1.8
Location	Sample Depth (ft)	Field ID	Sample Date	SDG	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
	2.5	B04-2.5	9/19/2018	T182898	<0.018	<0.022	<0.047	<0.025	<0.025	<0.026	<0.023	<0.013	<0.021	<0.027	<0.017	<0.023	<0.019	<0.02	<0.02	<0.033	<0.024	<0.048	<0.012
B04	2.5	B04-2.5 DUP	9/19/2018	T182898	<0.018	<0.022	<0.047	<0.025	<0.025	<0.026	<0.023	<0.013	<0.021	<0.027	<0.017	<0.023	<0.019	<0.02	<0.02	<0.033	<0.024	<0.048	<0.012
	5	B04-5.0	9/19/2018	T182898	<0.018	< 0.022	< 0.047	< 0.025	< 0.025	< 0.026	< 0.023	< 0.013	< 0.021	< 0.027	< 0.017	< 0.023	< 0.019	< 0.02	< 0.02	< 0.033	<0.024	< 0.048	< 0.012
	5	B57-5.0	9/10/2018	T182803	<0.018	<0.022	< 0.047	< 0.025	< 0.025	< 0.026	< 0.023	< 0.013	< 0.021	< 0.027	< 0.017	< 0.023	< 0.019	< 0.02	< 0.02	< 0.033	<0.024	< 0.048	< 0.012
B57	10	B57-10.0	9/10/2018	T182803	<0.018	<0.022	<0.047	<0.025	<0.025	< 0.026	< 0.023	<0.013	<0.021	<0.027	<0.017	< 0.023	<0.019	<0.02	< 0.02	< 0.033	<0.024	<0.048	<0.012
	15	B57-15.0	9/10/2018	T182803	<0.018	<0.022	<0.047	<0.025	<0.025	<0.026	< 0.023	<0.013	<0.021	<0.027	<0.017	< 0.023	<0.019	<0.02	< 0.02	<0.033	<0.024	<0.048	<0.012

mg/kg = milligrams per kilogram

- = not analyzed

< = not reported above analytical reporting limit shown

ft bgs = feet below ground surface

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Table 5											
	oil Analytical Results fo	r SVOCs and PAI	ls .								
=	ndangerment Assessmer						<b>a</b> .	ne L			
Alexander Hai	milton High School, Los A	Angeles, Californ	ia		Isophorone	Nitrobenzene	N-Nitrosodimethylamine	N-nitrosodi-n-propylamine	n-Nitrosodiphenylamine	Pentachlorophenol	Phenol
HHRA Note 3	Residential Soil DTSC	- Most Stringe	nt April 2019		570			0.078	110	1	19000
	ential Soil - Most Strin			19	570	5.1	0.002	0.078	110	1	19000
Location	Sample Depth (ft)	Field ID	Sample Date	SDG	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
	2.5	B04-2.5	9/19/2018	T182898	<0.017	<0.027					
B04	2.5	B04-2.5 DUP	9/19/2018	T182898	<0.017	<0.027	<0.022	<0.023	<0.022	<0.028	<0.024
	5	B04-5.0	9/19/2018	T182898	<0.017	<0.027	<0.022	<0.023	<0.022	<0.028	<0.024
	5	B57-5.0	9/10/2018	T182803	<0.017	<0.027	<0.022	<0.023	<0.022	<0.028	<0.024
B57	10	B57-10.0	9/10/2018	T182803	<0.017	<0.027	<0.022	<0.023	<0.022	<0.028	<0.024
	15	B57-15.0	9/10/2018	T182803	< 0.017	< 0.027	< 0.022	< 0.023	< 0.022	< 0.028	<0.024

mg/kg = milligrams per kilogram

- = not analyzed

< = not reported above analytical reporting limit shown

ft bgs = feet below ground surface

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Table 6 Leaching Analyses Results

Preliminary Endangerment Assessment - Equivalent Report Alexander Hamilton Senior High School, Los Angeles, California

				Me	tals		Lead	hing	
				Mg/kg	pead mg/kg	/sm P/ Arsenic (WET)	ತ್ತ ೧ ೧	/sm P/ Lead (WET)	J Lead (TCLP)
Location	Field_ID	Sample Depth (ft bgs)	Sampled Date	500	1000	5	5	5	5
B03	B03-1.5	1.5	9/10/2018	17	300	-	-	3.6	-
B10	B10-0.5	0.5	9/10/2018	18	90	-	-	3.3	-
B11DDD	B11-DDD-1.5	1.5	11/23/2019	54.6	-	1.74	0.19	-	•
B12	B12-0.5	0.5	10/20/2018	5.3	270	-	-	27	-
B12BBB	B12-BBB-0.5	0.5-0.5	11/23/2019	-	1030	-	-	83	5.09
	B12-BBB-0.5-DUP	0.5-0.5	11/23/2019	-	32	-	-	-	-
B18	B18-2.5	2.5	9/19/2018	63	14	0.38	-	-	-
B25	B25-0.5	0.5	10/20/2018	8	130	-	-	4.6	-
B91	B91-1.5	1.5	10/20/2018	14	90	-	-	<0.1	-

Notes

mg/kg = milligrams per kilogram

mg/L = milligrams per liter

- = not analyzed

< = not reported above analytical reporting limit shown

ft bgs = feet below ground surface

### Table 7 **Soil Vapor Detections**

Preliminary Endangerment Assessment - Equivalent Report LAUSD Alexander Hamilton High School, Los Angeles, California

					MAH		Other		ТРН	I						voc	is.						
HHRA Not	e 3 Res Air DTSC-SLs	April 2019			1-methyl-4 ethyl benzene	1,1-Difluoroethane	1,1-Dibromoethane	Propene	TPH as Gasoline	1,2-Dichlorotetrafluoroet	06 1,1,1,2-tetrachloroethane	000002 1,1,1-trichloroethane	2,1,2,2-tetrachloroethane	1,1,2-trichloroethane	00 1,1-dichloroethane	36500 1,1-dichloroethene	1,1-dichloropropene	1,2,3-trichlorobenzene	1,2,3-trichloropropane	1,2,4-trichlorobenzene	1,2,4-trimethylbenzene	1,2-dibromo-3-chloroprop	1,2-dibromoethane
		HQ=1.0) April 2019, Atte	enuation Factor =	0.002	μg/m3	21000000 μg/m3	ug/m3	1550000 μg/m3	μg/m3	μg/m3	190 μg/m3	2600000 μg/m3	24 μg/m3	90 μg/m3	900 μg/m3	105000 μg/m3	μg/m3		155	1050	31500 μg/m3	0.085 μg/m3	2.35 µg/m3
Location	(ft bgs)	Field ID  SV01-5.0'	8/31/2018	<b>SDG</b> F-0170							<8	<8			<8		<8		<8			<8	<8
SV01	15 15	SV01-5.0' SV01-15.0' REP	8/31/2018 8/31/2018 8/31/2018	F-0170 F-0170	-	-	-	-	-	-	<8 <8	<8 <8	<8 <8 <8	<8 <8 <8	<8 <8	<8 <8 <8	<8 <8	<16 <16 <16	<8 <8	<16 <16 <16	15 12 12	<8 <8	<8 <8
SV02	5 15	SV02-5.0' SV02-15.0'	9/10/2018 9/10/2018	F-0173 F-0173	-	-	-	-	-	-	<8 <8	<8 <8	<8 <8	<8 <8	<8 <8	<8 <8	<8 <8	<16 <16	<8 <8	<16 <16	14	<8 <8	<8 <8
SV04	5	B4-5' SV04A-5.0	9/19/2018 6/14/2019	F-0180 D-1648	-	-	-	-	-	-	<8 <8	<8 <8	<8 <16	<8 <8	<8 <8	<8 <8	<8 <10	<16 <16	<8 <8	<16 <16	17	<8 <8	<8 <8
SV04A	15.5 5	SV04A-15.5 SV04B-5.0	6/14/2019 6/14/2019	D-1648 D-1648	-	-	-	-	-	-	<8 <8	<8 <8	<16 <16	<8 <8	<8 <8	<8 <8	<10 <10	<16 <16	<8 <8	<16 <16	<8 <8	<8 <8	<8 <8
SV04B	5 15.5	SV04B-5.0 REP SV04B-15.5	6/14/2019 6/14/2019	D-1648 D-1648	-	-	-	-	-	-	<8 <8	<8 <8	<16 <16 <16	<8 <8	<8 <8	<8 <8	<10 <10	<16 <16 <16	<8 <8	<16 <16 <16	<8 <8	<8 <8	<8 <8
SV04C	5 15.5	SV04C-5.0 SV04C-15.5	6/14/2019	D-1648 D-1648	-	-	-	-	-	-	<8	<8	<16	<8	<8 <8	<8 <8	<10	<16	<8 <8	<16	11 26	<8	<8
CVOAD	5	SV04D-5.0	6/14/2019 6/14/2019	D-1648	-	-	-	-	-	-	<8 <8	<8 <8	<16 <16	<8 <8	<8	<8	<10 <10	<16 <16	<8	<16 <16	<8	<8 <8	<8 <8
SV04D	15.5 15.5	SV04D-15.5 SV04D-15.5	6/14/2019 6/14/2019	D-1648 ST-13880	16.1	-	-	3.3	-	<1	<8 <1	<8 <1	<16 <1	<8 <1	<8 <1	<8 <1	<10	<16 -	<8 -	<16 -	9 16.9	<8 <1	<8 <1
SV05	5 15	SV05-5.0' SV05-15.0'	8/31/2018 8/31/2018	F-0170 F-0170	-	-	-	-	-	-	<8 <8	<8 <8	<8 <8	<8 <8	<8 <8	<8 <8	<8 <8	<16 <16	<8 <8	<16 <16	<8 <8	<8 <8	<8 <8
SV22	5 15	SV22-5.0' SV22-15.0'	8/31/2018 8/31/2018	F-0170 F-0170	-	-	-	-	-	-	<8 <8	<8 <8	<8 <8	<8 <8	<8 <8	<8 <8	<8 <8	<16 <16	<8 <8	<16 <16	- 8 - < 8	<8 <8	<8 <8
SV23	5 15	SV23-5.0' SV23-15.0'	8/31/2018 8/31/2018	F-0170 F-0170	-	-	-	-	-	-	<8 <8	<8 <8	<8 <8	<8 <8	<8 <8	<8 <8	<8 <8	<16 <16	<8 <8	<16 <16	<8 <8	<8 <8	<8 <8
SV24	5 15	SV24-5.0' SV24-15.0'	8/31/2018 8/31/2018	F-0170 F-0170	-	-	-	-	-	-	<8 <8	<8 <8	<8 <8	<8 <8	<8 <8	<8 <8	<8 <8	<16 <16	<8 <8	<16 <16	<8 <8	<8 <8	<8 <8
SV53	5 5	SV53-5.0' SV53-5.0'	9/1/2018 9/10/2018	ST-12616 F-0173	3.4	-	-	<1 -	-	<1	<1 <8	<1 <8	- <8	<1 <8	<1 <8	<1 <8	- <8	- <16	- <8	<1 <16	5.1 10	- <8	<1 <8
61/=	15 5	SV53-15.0' SV54-5.0	9/10/2018 6/14/2019	F-0173 D-1648	-	-	-	-	-	-	<8 <8	<8 <8	<8 <16	<8 <8	<8 <8	<8 <8	<8 <10	<16 <16	<8 <8	<16 <16	10 16	<8 <8	<8 <8
SV54	15.5 5	SV54-15.5 SV55-5.0	6/14/2019 11/21/2018	D-1648 D-1552	-	-	-	-	- <80	-	<8 <8	<8 <8	<16 <8	<8 <8	<8	<8 <8	<10 <10	<16 <16	<8 <8	<16 <16	<8 <8	<8 -	<8 -
SV55	15 5	SV55-15.0 SV56-5.0	11/21/2018 11/21/2018 11/21/2018	D-1552 D-1552	-	-	-	-	<80 <80	-	<8 <8	<8 <8	<8 <8	<8 <8	<8 <8	<8 <8	<10 <10	<16 <16	<8 <8	<16 <16	755 <8	<8 <8	<8 <8
SV56	15	SV56-15.0	11/21/2018	D-1552	-	-	-	-	<80	-	<8	<8	<8	<8	<8	<8	<10	<16	<8	<16	418	<8	<8
SV57	5 15	SV57-5.0' SV57-15.0'	9/10/2018 9/10/2018	F-0173 F-0173	-	-	-	-	-	-	<8 <8	<8 <8	<8 <8	<8 <8	<8 <8	<8 <8	<8 <8	<16 <16	<8 <8	<16 <16	12	<8 <8	<8 <8
SV58	5 15	SV58-5.0' SV58-15.0'	8/31/2018 8/31/2018	F-0170 F-0170	-	-	-	-	-	-	<8 <8	<8 <8	<8 <8	<8 <8	<8 <8	<8 <8	<8 <8	<16 <16	<8 <8	<16 <16	<8 <8	<8 <8	<8 <8
SV59	5 15	SV59-5.0' SV59-15.0'	8/31/2018 8/31/2018	F-0170 F-0170	-	-	-	-	-	-	<8 <8	<8 <8	<8 <8	<8 <8	<8 <8	<8 <8	<8 <8	<16 <16	<8 <8	<16 <16	<8 <8	<8 <8	<8 <8
	15 5	SV59-15.0' SV60-5.0	8/31/2018 11/21/2018	ST-12571 D-1552	<2 -	-	-	33.8	- <80	<2 -	<2 <8	<2 <8	<2 <8	<2 <8	<2 <8	<2 <8	<10	- <16	- <8	- <16	2.7	<2 <8	<2 <8
SV60	15 15	SV60-15.0'	11/21/2018 11/21/2018	D-1552 ST-13007	4.49	-	-	700	<80 -	- <4	<8 -	<8 <3	<8 <4	<8 9.81	<8 <2	<8 <2	<10	<16	<8 -	<16 <3	15 19	<8 -	<8 <5
SV61	5 15	SV61-5.0' SV61-15.0'	9/10/2018 9/10/2018	F-0173 F-0173	-	-	-	-	-	-	<8 <8	<8 <8	<8 <8	<8 <8	<8 <8	<8 <8	<8 <8	<16 <16	<8 <8	<16 <16	10 8	<8 <8	<8 <8
SV62	5	SV62-5.0 SV62-5.0 REP	11/21/2018 11/21/2018	D-1552 D-1552	-	-	-	-	<80 <80	-	<8 <8	<8 <8	<8 <8	<8 <8	<8 <8	<8 <8	<10 <10	<16 <16	<8 <8	<16 <16	<8 <8	<8 <8	<8 <8
3102	15 19	SV62-15.0 B64-19'	11/21/2018 9/19/2018	D-1552 F-0180	-	-	-	-	<80	-	<8 <8	<8 <8	<8 <8	<8 <8	<8 <8	<8 <8	<10 <10 <8	<16 9	<8 <8	<16 8	<8 8	<8 <8	<8 <8
	20 29	SV64-20.0 B64-29'	11/21/2018 9/19/2018	D-1552 F-0180	-	-	-	-	<80	-	<8 <8	<8 <8	<8 <8	<8 <8	<8 <8	<8 <8	<10 <8	<16 <16	<8 <8	<16 <16	144	<8 <8	<8 <8
SV64	29	B64-29'	9/19/2018	ST-12676	6	-	-	<2	-	<2	<2	<2	<2	<2	<2	<2	-	-	-	-	8.3	<2	<2
	29 30	B64-29' REP SV64-30.0	9/19/2018 11/21/2018	F-0180 D-1552	-	-	-	-	- <80	-	<8 <8	<8 <8	<8 <8	<8 <8	<8 <8	<8 <8	<8 <10	<16 <16	<8 <8	<16 <16	<8 228	<8 <8	<8 <8
SV65	5 15	SV65-5.0' SV65-15.0'	9/10/2018 9/10/2018	F-0173 F-0173	-	-	-	-	-	-	<8 <8	<8 <8	<8 <8	<8 <8	<8 <8	<8 <8	<8 <8	<16 <16	<8 <8	<16 <16	14 <8	<8 <8	<8 <8
	15 5	SV65-15.0' REP SV110-5.0	9/10/2018 6/14/2019	F-0173 D-1648	-	-	-	-	-	-	<8 <8	<8 <8	<8 <16	<8 <8	<8 <8	<8 <8	<8 <10	<16 <16	<8 <8	<16 <16	<8 29	<8 <8	<8 <8
SV110	15.5 15.5	SV110-15.5 SV110-15.5 REP	6/14/2019 6/14/2019	D-1648 D-1648	-	-	-	-	-	-	<8 <8	<8 <8	<16 <16	<8 <8	<8 <8	<8 <8	<10 <10	<16 <16	<8 <8	<16 <16	174 171	<8 <8	<8 <8
SV111	5 5	SV111-5.0 SV111-5.0	6/14/2019 6/14/2019	D-1648 ST-13880	12.4	-	-	142	-	- <1	<8 <1	<8 <1	<16 <1	<8 <1	<8 <1	<8 <1	<10	<16 -	<8 -	<16 -	23	<8 <1	<8 <1
6) (4.4.2	15.5 5	SV111-15.5 SV112-5.0	6/14/2019 6/14/2019	D-1648 D-1648	-	-	-	-	-	-	<8 <8	<8 <8	<16 <16	<8 <8	<8 <8	<8 <8	<10 <10	<16 <16	<8 <8	<16 <16	18 14	<8 <8	<8 <8
SV112	15.5 5	SV112-15.5 SV113-5.0	6/14/2019 8/14/2019	D-1648 ST-14158	- 17.8	-	-	3.7	-	- <1	<8 <1	<8 <1	<16 <1	<8 <1	<8 <1	<8 <1	<10	<16	<8 -	<16 -	<8 55	<8 <1	<8 <1
SV113	15 5	SV113-15.0 SV114-5.0	8/14/2019 8/14/2019	ST-14158 ST-14158	<1 4.3	-	-	2.5 3.6	-	<1 <1	<1 <1	<1 <1	<1 <1	<1 <1	<1 <1	<1 <1	-	-	-	-	2.9 27.3	<1 <1	<1 <1
SV114	15 5	SV114-15.0 SV115-5.0	8/14/2019 8/14/2019	ST-14158 ST-14158	3.3	-	-	6.4 7.6	-	<1 <1	<1 <1	<1 <1	<1	<1 <1	<1 <1	<1 <1	-	-	-	-	12.5 77.3	<1	<1 <1
SV115	15 5	SV115-5.0 SV115-15.0 SV116-5.0	8/14/2019 8/14/2019 8/14/2019	ST-14158 ST-14158	2.6	-	-	9.8 2.4	-	<1 <1	<1 <1 <1	<1 <1 <1	<1 <1	<1 <1	<1 <1	<1 <1	-	-	-	-	11.4 19.1	<1 <1	<1
SV116	15	SV116-15.0	8/14/2019	ST-14158	2.7	-	-	5.9	-	<1	<1	<1	<1	<1	<1	<1	-	-	-	-	13.2	<1	<1
	15 5	SV116-15.0 REP SV117-5	8/14/2019 11/25/2019	ST-14158 E911113	1.9	- <5.5	<7.8	9.3	-	<1 <7.1	<1 <7	<1 <5.5	<1 <7	<1 <5.5	<4.1	<1 <4	-	-	-	<38	6.8 570	<1 -	<1 -
SV117	10 15	SV117-10 SV117-15	11/25/2019	E911113 E911113	340 500	<5.5 <11	<7.8 <16	-	-	<7.1	<7 <14	<5.5 <11	<7 <14	<5.5 <11	<4.1 <8.2	<4 <8	-	-	-	<38 <75	1300	-	-
	25 5	SV117-25 SV118-5	11/25/2019 11/25/2019	E911113 E911115	510 <5	<11 <5.5	<16 <7.8	-	-	<14 <7.1	<14 <7	<11 <5.5	<14 <7	<11 <5.5	<8.2 <4.1	<8 <4	-	-	-	<75 <38	1800 <5	-	-
SV118	5 10	SV118-5-Rep SV118-10	11/25/2019 11/25/2019	E911115 E911113	<5 <5	<5.5 <5.5	<7.8 <7.8	-	-	<7.1 <7.1	<7 <7	<5.5 <5.5	<7 <7	<5.5 <5.5	<4.1 <4.1	<4 <4	-	-	-	<38 <38	5.3 8.5	-	-
2.110	15 25	SV118-15 SV118-25	11/25/2019 11/25/2019	E911113 E911113	<5 <5	<5.5 <5.5	<7.8 <7.8	-	-	<7.1 <7.1	<7 <7	<5.5 <5.5	<7 <7	<5.5 <5.5	<4.1 <4.1	<4 <4	-	-	-	<38 <38	9 <5J	-	-
	25 5	SV118-25-Rep SV119-5	11/25/2019 11/25/2019	E911113 E911115	<5 <5	<5.5 <5.5	<7.8 <7.8	1	-	<7.1 <7.1	<7 <7	<5.5 <5.5	<7 <7	<5.5 <5.5	<4.1 <4.1	<4 <4	-	-	-	<38 <38	7 <5	-	-
SV119	10 15	SV119-10 SV119-15	11/25/2019 11/25/2019	E911113 E911113	<5 <5J	<5.5 <5.5	<7.8 <7.8	-	-	<7.1 <7.1	<7 <7	<5.5 <5.5	<7 <7	<5.5 <5.5	<4.1 <4.1	<4 <4	-	-	-	<38 <38	5.4 11	-	-
	25 5	SV119-25 SV120-5	11/25/2019 11/25/2019	E911113	<5 <5	<5.5 <5.5	<7.8 <7.8	-	-	<7.1 <7.1	<7 <7	<5.5 <5.5	<7	<5.5 <5.5	<4.1 <4.1	<4 <4	-	-	-	<38 <38	<5J	-	-
SV120	10 15	SV120-10 SV120-15	11/25/2019 11/25/2019 11/25/2019	E911113	<5 12	<5.5 <5.5	<7.8 <7.8	-	-	<7.1 <7.1	<7 <7	<5.5 <5.5	<7 <7	<5.5 <5.5	<4.1 <4.1 <4.1	<4 <4	-	-	-	<38 <38	7.8 49	-	-
	25 5	SV120-25	11/25/2019	E911113	<5	<5.5	<7.8	-	-	<7.1	<7	<5.5	<7	<5.5	<4.1	<4	-	-	-	<38	8.8	-	-
SV121	10	SV121-5 SV121-10	11/25/2019 11/25/2019	E911113	<5 <5	<5.5 <5.5	<7.8 <7.8	-	-	<7.1 <7.1	<7 <7	<5.5 <5.5	<7 <7	<5.5 <5.5	<4.1 <4.1	<4	-	-	-	<38 <38	<5 5.3	-	-
	15 25	SV121-15 SV121-25	11/25/2019 11/25/2019	E911113 E911113	<5J <5	<5.5 <5.5	<7.8 <7.8	-	-	<7.1 <7.1	<7 <7	<5.5 <5.5	<7 <7	<5.5 <5.5	<4.1 <4.1	<4 <4	-	-	-	<38 <38	18 <5J	-	-
	5 5	SV122-5 SV122-5-Rep	11/25/2019	E911115 E911115	<5 <5	<5.5 <5.5	<7.8 <7.8	-	-	<7.1 <7.1	<7 <7	<5.5 <5.5	<7 <7	<5.5 <5.5	<4.1 <4.1	<4 <4	-	-	-	<38 <38	6.1	-	-
SV122	10 15	SV122-10 SV122-15	11/25/2019 11/25/2019	E911113 E911113	<5 <5	<5.5 <5.5	<7.8 <7.8		-	<7.1 <7.1	<7 <7	<5.5 <5.5	<7 <7	<5.5 <5.5	<4.1 <4.1	<4 <4	-	-	-	<38 <38J	7.6 <5J	-	-
	25	SV122-25	11/25/2019		<5	<5.5	<7.8	-	-	<7.1	<7	<5.5	<7	<5.5	<4.1	<4	-	-	-	<38	<5J	-	-

µg/m3 = micrograms per meter cubed < = less than analytical reporting limit shown J = estimated value

Table 7 **Soil Vapor Detections** Preliminary Endangerment Assessment - Equivalent Report LAUSD Alexander Hamilton High School, Los Angeles, California

							1	1				1			1	1		1		1	1		
HHRA Not	te 3 Res Air DTSC-SLs	e April 2019			1,2-dichlorobenzene	1,2-dichloroethane	۲۰۰۵ 1,3-Butadiene	1,2-dichloropropane	1,3,5-trimethylbenzene	1,3-dichlorobenzene	Acrolein	1,3-dichloropropane	1,4-dichlorobenzene	180 1,4-Dioxane	2,2-dichloropropane	2-chlorotoluene	2-hexanone	2-Propanol	4-chlorotoluene	4-Methyl-2-pentanone	Acetone	Benzene	Benzyl chloride
		, HQ=1.0) April 2019, Atte	enuation Factor	= 0.002	105000	55	47	380	31500		10.5		130	280			15500	105000		1550000	16000000	180	28.5
Location	Sample Depth (ft bgs)	Field ID	Sample Date	SDG	μg/m3	μg/m3	μg/m3	μg/m3	μg/m3	μg/m3	μg/m3	μg/m3	μg/m3	μg/m3	μg/m3	μg/m3	μg/m3	μg/m3	μg/m3	μg/m3	ug/m3	μg/m3	ug/m3
CV01	5	SV01-5.0'	8/31/2018	F-0170	<12	<8	-	<8	<8	<12	-	<8	<12	-	<8	<8	-	-	<8	-	-	<8	-
SV01	15 15	SV01-15.0' SV01-15.0' REP	8/31/2018 8/31/2018	F-0170 F-0170	<12 <12	<8 <8	-	<8 <8	9 <8	<12 <12	-	<8 <8	<12 <12	-	<8 <8	<8 <8	-	-	<8 <8	-	-	<8 <8	-
SV02	5 15	SV02-5.0' SV02-15.0'	9/10/2018 9/10/2018	F-0173 F-0173	<8 <8	<8 <8	-	<8 <8	<8 <8	<8 <8	-	<8 <8	9 <8	-	<8 <8	<8 <8	-	-	<8 <8	-	-	16 <8	-
SV04	5 5	B4-5' SV04A-5.0	9/19/2018 6/14/2019	F-0180 D-1648	<8 <16	<8 <8	-	<8 <8	<8 <8	<8 <16	-	<8 <8	<8 <16	-	<8 <16	<8 <12	-	-	<8 <12	-	-	9 <8	-
SV04A	15.5	SV04A-15.5	6/14/2019	D-1648	<16	<8	-	<8	<8	<16	-	<8	<16	-	<16	<12	-	-	<12	-	=	<8	-
SV04B	5 5	SV04B-5.0 SV04B-5.0 REP	6/14/2019 6/14/2019	D-1648 D-1648	<16 <16	<8 <8	-	<8 <8	<8 <8	<16 <16	-	<8 <8	<16 <16	-	<16 <16	<12 <12	-	-	<12 <12	-	-	<8 <8	-
614046	15.5 5	SV04B-15.5 SV04C-5.0	6/14/2019 6/14/2019	D-1648 D-1648	<16 <16	<8 <8	-	<8 <8	<8 <8	<16 <16	-	<8 <8	<16 <16	-	<16 <16	<12 <12	-	-	<12 <12	-	-	<8 <8	-
SV04C	15.5 5	SV04C-15.5 SV04D-5.0	6/14/2019 6/14/2019	D-1648 D-1648	<16 <16	<8 <8	-	<8 <8	16 <8	<16 <16	-	<8 <8	<16 <16	-	<16 <16	<12 <12	-	-	<12 <12	-	-	<8 <8	-
SV04D	15.5	SV04D-15.5	6/14/2019	D-1648	<16	<8	-	<8	<8	<16	-	<8	<16	-	<16	<12	-	-	<12	-	-	<8	-
SV05	15.5 5	SV04D-15.5 SV05-5.0'	6/14/2019 8/31/2018	ST-13880 F-0170	<1 <12	<1 <8	<1 -	- <8	18.4	<1 <12	1.4	- <8	<1 <12	<1 -	- <8	- <8	<1 -	<10 -	- <8	4.5 -	19.4 -	6.5 <8	<1 -
	15 5	SV05-15.0' SV22-5.0'	8/31/2018 8/31/2018	F-0170 F-0170	<12 <12	<8 <8	-	<8 <8	<8 8	<12 <12	-	<8 <8	<12 <12	-	<8 <8	<8 <8	-	-	<8 <8	-	-	<8 <8	-
SV22	15 5	SV22-15.0' SV23-5.0'	8/31/2018 8/31/2018	F-0170 F-0170	<12 <12	<8 <8	-	<8 <8	<8 <8	<12 <12	-	<8 <8	<12 <12	-	<8 <8	<8 <8	-	-	<8 <8	-	-	<8 <8	-
SV23	15	SV23-15.0'	8/31/2018	F-0170	<12	<8	-	<8	<8	<12	-	<8	<12	-	<8	<8	-	-	<8	-	-	<8	-
SV24	5 15	SV24-5.0' SV24-15.0'	8/31/2018 8/31/2018	F-0170 F-0170	<12 <12	<8 <8	-	<8 <8	<8 <8	<12 <12	-	<8 <8	<12 <12	-	<8 <8	<8 <8	-	-	<8 <8	-	-	<8 <8	-
SV53	5	SV53-5.0' SV53-5.0'	9/1/2018 9/10/2018	ST-12616 F-0173	<1 <8	<1 <8	<1	<1 <8	<1 <8	<1 <8	<1	- <8	<1 <8	<1	- <8	- <8	<1	2.9	- <8	4.7	48.5	3.9	<1
3033	15	SV53-15.0'	9/10/2018	F-0173	<8	<8	-	<8	<8	<8	-	<8	<8	-	<8	<8	-	-	<8	-	-	15	-
SV54	5 15.5	SV54-5.0 SV54-15.5	6/14/2019 6/14/2019	D-1648 D-1648	<16 <16	<8 <8	-	<8 <8	<8 <8	<16 <16	-	<8 <8	<16 <16	-	<16 <16	<12 <12	-	-	<12 <12	-	-	<8 <8	-
SV55	5 15	SV55-5.0 SV55-15.0	11/21/2018 11/21/2018	D-1552 D-1552	- <10	- <8	-	<8 <8	<8 299	- <10	-	<8 <8	- <10	-	<8 <8	- <10	-	-	- <10	-	-	1080	-
SV56	5	SV56-5.0	11/21/2018	D-1552	<10	<8	-	<8	<8	<10	-	<8	<10	-	<8	<10	-	-	<10	-	-	<8	-
CVE7	15 5	SV56-15.0 SV57-5.0'	11/21/2018 9/10/2018	D-1552 F-0173	<10 <8	<8 <8	-	<8 <8	139 9	<10 <8	-	<8 <8	<10 <8	-	<8 <8	<10 <8	-	-	<10 <8	-	-	296 <8	-
SV57	15 5	SV57-15.0' SV58-5.0'	9/10/2018 8/31/2018	F-0173 F-0170	<8 <12	<8 <8	-	<8 <8	<8 <8	<8 <12	-	<8 <8	<8 <12	-	<8 <8	<8 <8	-	-	<8 <8	-	-	17 <8	-
SV58	15	SV58-15.0'	8/31/2018	F-0170	<12	<8	-	<8	<8	<12	-	<8	<12	-	<8	<8	-	-	<8	-	-	<8	-
SV59	5 15	SV59-5.0' SV59-15.0'	8/31/2018 8/31/2018	F-0170 F-0170	<12 <12	<8 <8	-	<8 <8	<8 <8	<12 <12	-	<8 <8	<12 <12	-	<8 <8	<8 <8	-	-	<8 <8	-	-	<8 <8	-
	15 5	SV59-15.0' SV60-5.0	8/31/2018 11/21/2018	ST-12571 D-1552	<2 <10	<2 <8	<2	- <8	<2 <8	<2 <10	<2	- <8	<2 <10	<2 -	- <8	- <10	<2 -	<2 -	- <10	4.7	28.1	6.4 <8	<2
SV60	15	SV60-15.0	11/21/2018	D-1552	<10	<8	-	<8	12	<10	-	<8	<10	-	<8	<10	-	-	<10	-	-	26	-
SV61	15 5	SV60-15.0' SV61-5.0'	11/21/2018 9/10/2018	ST-13007 F-0173	<4 <8	<2 <8	16.9	<3 <8	54.2 <8	<4 <8	8.24	- <8	<4 <8	<2 -	- <8	- <8	4.84	10.5	- <8	24 -	93.6	24.8 <8	<3 -
3001	15 5	SV61-15.0' SV62-5.0	9/10/2018 11/21/2018	F-0173 D-1552	<8 <10	<8 <8	-	<8 <8	<8 <8	<8 <10	-	<8 <8	<8 <10	-	<8 <8	<8 <10	-	-	<8 <10	-	-	<8 <8	-
SV62	5 15	SV62-5.0 REP SV62-15.0	11/21/2018 11/21/2018	D-1552	<10 <10	<8 76	-	<8 <8	<8 <8	<10 <10	-	<8 <8	<10 <10	-	<8 <8	<10 <10	-	-	<10 <10	-	-	<8 17	-
	19	B64-19'	9/19/2018	D-1552 F-0180	<8	<8	-	<8	<8	<8	-	<8	<8	-	<8	<8	-	-	<8	-	-	<8	-
C) /C 4	20 29	SV64-20.0 B64-29'	11/21/2018 9/19/2018	D-1552 F-0180	<10 <8	<8 <8	-	<8 <8	139 <8	<10 <8	-	<8 <8	<10 <8	-	<8 <8	<10 <8	-	-	<10 <8	-	-	19 <8	-
SV64	29 29	B64-29' B64-29' REP	9/19/2018 9/19/2018	ST-12676 F-0180	<2 <8	<2 <8	<2	- <8	3.3	<2 <8	<2	- <8	<2 <8	<2 -	- <8	- <8	3.7	3.9	- <8	4.7	47	3.1 <8	<2
	30	SV64-30.0	11/21/2018	D-1552	<10	<8	-	<8	112	<10	-	<8	<10	-	<8	<10	-	-	<10	-	-	<8	-
SV65	5 15	SV65-5.0' SV65-15.0'	9/10/2018 9/10/2018	F-0173 F-0173	<8 <8	<8 <8	-	<8 <8	<8 <8	<8 <8	-	<8 <8	<8 <8	-	<8 <8	<8 <8	-	-	<8 <8	-	-	12 8	-
	15 5	SV65-15.0' REP SV110-5.0	9/10/2018 6/14/2019	F-0173 D-1648	<8 <16	<8 <8	-	<8 <8	<8 12	<8 <16	-	<8 <8	<8 <16	-	<8 <16	<8 <12	-	-	<8 <12	-	-	-8 -<8	-
SV110	15.5 15.5	SV110-15.5 SV110-15.5 REP	6/14/2019 6/14/2019	D-1648 D-1648	<16 <16	<8 <8	-	<8 <8	67 65	<16 <16	-	<8 <8	<16 <16	-	<16 <16	<12 <12	-	-	<12 <12	-	-	240 232	-
	5	SV111-5.0	6/14/2019	D-1648	<16	<8	-	<8 <8	<8	<16	-	<8 <8	<16	-	<16	<12	-	-	<12	-	-	18	_
SV111	5 15.5	SV111-5.0 SV111-15.5	6/14/2019 6/14/2019	ST-13880 D-1648	<1 <16	<1 <8	<1 -	- <8	<1 9	<1 <16	<1 -	- <8	<1 <16	<1 -	- <16	<12	<1 -	<10	<12	<1 -	23.8	14.5 <8	<1 -
SV112	5 15.5	SV112-5.0 SV112-15.5	6/14/2019 6/14/2019	D-1648 D-1648	<16 <16	<8 <8	-	<8 <8	13 <8	<16 <16	-	<8 <8	<16 <16	-	<16 <16	<12 <12	-	-	<12 <12	-	-	54 17	-
SV113	5	SV113-5.0	8/14/2019	ST-14158	<1	<1	<1	-	18.1	<1	2.8	-	<1	<1	-	-	3.9	<1	-	<1	108	6.4	<1
SV114	15 5	SV113-15.0 SV114-5.0	8/14/2019 8/14/2019	ST-14158 ST-14158	<1 <1	<1 <1	<1 <1	-	<1 11	<1 <1	2.6 4.8	-	<1 <1	<1 <1	-	-	1.2 2.5	<1 <1	-	1.1 5	73.3 66.9	<1 2.3	<1 <1
	15 5	SV114-15.0 SV115-5.0	8/14/2019 8/14/2019	ST-14158 ST-14158	<1 <1	<1 <1	<1 <1	-	4.6 34.6	<1 <1	2.8 3.8	-	<1 <1	<1 <1	-	-	2.9 6.8	1.4	-	1.8 3.9	20.9 36.9	1.8 11.2	<1 <1
SV115	15 5	SV115-15.0	8/14/2019	ST-14158	<1	<1	<1	-	3.8	<1	2.2	-	<1	<1	-	-	3.2	<1	-	2.1	29.4	2.2	<1
SV116	15	SV116-5.0 SV116-15.0	8/14/2019 8/14/2019	ST-14158 ST-14158	<1 <1	<1 <1	<1 <1	-	7.8 <1	<1 <1	<1 2	-	<1 <1	<1 <1	-	-	2 1.3	2.8	-	3.9 1.6	65.2 137	2.7	<1 <1
	15 5	SV116-15.0 REP SV117-5	8/14/2019 11/25/2019	ST-14158 E911113	<1 <12	<1 <4.1	<1 -	<9.4	2.3	<1 <12	2.4	-	<1 <12	<1 -	-	-	<1 <8.3	<1 -	-	1.8 <8.3J	34.5	2.1 49	<1 -
SV117	10 15	SV117-10 SV117-15	11/25/2019 11/25/2019	E911113 E911113	<12 <24	<4.1 <8.2	-	<9.4 <19	370 580	<12 <24	-	-	<12 <24	-	-	-	<8.3 <17	-	-	16 <17J	-	75 130	-
	25	SV117-25	11/25/2019	E911113	<24	<8.2	-	<19	630	<24	-	-	<24	-	-	-	<17	-	-	<17J	-	160	_
	5 5	SV118-5 SV118-5-Rep	11/25/2019 11/25/2019	E911115 E911115	<12 <12	<4.1 <4.1	-	<9.4 <9.4	<5 <5	<12 <12	-	-	<12 <12	-	-	-	<8.3 <8.3	-	-	<8.3 <8.3	-	<3.2 <3.2	
SV118	10 15	SV118-10 SV118-15	11/25/2019 11/25/2019	E911113 E911113	<12 <12	<4.1 <4.1	-	<9.4 <9.4	<5J <5J	<12 <12	-	-	<12 <12	-	-	-	<8.3 <8.3	-	-	<8.3 <8.3J	-	<3.2J <3.2J	-
	25	SV118-25	11/25/2019	E911113	<12	<4.1	-	<9.4	<5	<12	-	-	<12	-	-	-	<8.3	-	-	<8.3J	-	<3.2J	
	25 5	SV118-25-Rep SV119-5	11/25/2019 11/25/2019	E911113 E911115	<12 <12	<4.1 <4.1	-	<9.4 <9.4	<5 <5	<12 <12	-	-	<12 <12	-	-	-	<8.3 <8.3	-	-	<8.3J <8.3	-	<3.2J <3.2	-
SV119	10 15	SV119-10 SV119-15	11/25/2019 11/25/2019	E911113 E911113	<12 <12	<4.1 <4.1	-	<9.4 <9.4	<5 <5J	<12 <12	-	-	<12 <12	-	-	-	<8.3 <8.3	-	-	<8.3J <8.3J	-	<3.2J	<del></del>
	25 5	SV119-25 SV120-5	11/25/2019 11/25/2019	E911113	<12 <12	<4.1 <4.1	-	<9.4 <9.4	<5 <5	<12 <12	-	-	<12 <12	-	-	-	<8.3 <8.3	-	-	<8.3 <8.3	-	<3.2	-
SV120	10	SV120-10	11/25/2019	E911113	<12	<4.1	-	<9.4	<5	<12	-	-	<12	-	-	-	<8.3	-	-	<8.3J	-	3.5	
24120	15 25	SV120-15 SV120-25	11/25/2019 11/25/2019		<12 <12	<4.1 <4.1	-	<9.4 <9.4	14 <5J	<12 <12	-	-	<12 <12	-	-	-	<8.3 <8.3	-	-	<8.3 <8.3	-	8.3 <3.2J	<del></del>
	5	SV121-5 SV121-10	11/25/2019 11/25/2019	E911115	<12 <12	<4.1 <4.1	-	<9.4	<5 <5	<12 <12	-	-	<12 <12	-	-	-	<8.3 <8.3	-	-	<8.3 <8.3J	-	380 120	-
SV121	15	SV121-15	11/25/2019	E911113	<12	<4.1	-	<9.4 <9.4	5.9	<12	-	-	<12	-	-	-	<8.3	-	-	<8.3	-	38	-
	25 5	SV121-25 SV122-5	11/25/2019 11/25/2019		<12 <12	<4.1 <4.1	-	<9.4 <9.4	<5 <5	<12 <12	-	-	<12 <12	-	-	-	<8.3 <8.3	-	-	<8.3 <8.3	-	<3.2J <3.2	-
SV122	5 10	SV122-5-Rep SV122-10	11/25/2019 11/25/2019	E911115	<12	<4.1	-	<9.4 <9.4	<5 <5J	<12	-	-	<12	-	-	-	<8.3 <8.3	-	-	<8.3 <8.3	-	<3.2	-
24177	15	SV122-15	11/25/2019	E911113	<12	<4.1	-	<9.4	<5	<12	-	-	<12	-	-	-	<8.3	-	-	<8.3	-	<3.2J	
	25	SV122-25	11/25/2019		<12	<4.1	-	<9.4	<5	<12	-	-	<12	-	-	-	<8.3	-	-	<8.3	-	3.4	-

µg/m3 = micrograms per meter cubed < = less than analytical reporting limit shown J = estimated value

Table 7 **Soil Vapor Detections** Preliminary Endangerment Assessment - Equivalent Report LAUSD Alexander Hamilton High School, Los Angeles, California

Sample Date   Sample Date   Soc					ſ																			
Second Column   Proceeding   Proceeding   Proceeding   Proceeding   Procedure   Procedur						Bromobenzene		В	Bromomethane	Carbon disulfide		Chlorobenzene		Chloroethane	Chloroform	loromethan	cis	dichloropro	Cyclohexane	Dibromomethane	Dichlorodifluoromethane		Diisopropyl ether	Ethanol
			•	enuation Factor :	= 0.002	31500			2600	365000		26000	65	5000000	60	47000	4150		3150000	2100	50000		365000	
Total	Location		Field ID	Sample Date	SDG	μg/m3	μg/m3	μg/m3	μg/m3	μg/m3	μg/m3	μg/m3	μg/m3	μg/m3	μg/m3	μg/m3	μg/m3	μg/m3	ug/m3	μg/m3	μg/m3	μg/m3	ug/m3	μg/m3
T.			SV01-5.0'	8/31/2018	F-0170	<8	9	<8	-	-	<8	<8	12	-	<8	-	<8	<8	-	<8	<8	<8	<40	-
15	SV01						1		1	-						-								-
The column   Column	SV02						1		-	-														-
Mail	SV04	5	B4-5'	9/19/2018	F-0180	<8	<8	<8		-	<8	<8	<8		<8		<8	<8		<8	<8	<8	<40	-
State	SV04A																							-
15	SV04B								+											_				-
1.5.	5,015	15.5	SV04B-15.5	6/14/2019	D-1648	<8	<8	<8	-	-	<8	<8	<8	-	<8	-	<8	<8	-	<8	<8	<8	<40	-
Page	SV04C																				_			-
No.	SV04D								-												_			-
1906   1907	3,012	15.5	SV04D-15.5	6/14/2019	ST-13880	-	<1	<1	-	41.9	<1	<1	<1	-	<1		<1	-		-	<2.4	<1	<1	-
14	SV05								1	-											_			-
100   100	SV22								1											_	_			-
S	SV23	5	SV23-5.0'	8/31/2018	F-0170	<8	<8	<8	-	-	<8	<8	12	-	<8		<8	<8	-	<8	<8	<8	<40	-
15	SV24	5	SV24-5.0'	8/31/2018	F-0170	<8	<8	<8	-	-	<8	<8	10	-	<8	-	<8	<8	-	<8	<8	<8	<40	-
500   500	5.24					<8			+											<8	_		<40	16.7
100   2	SV53	5	SV53-5.0'	9/10/2018	F-0173		<8	<8	-	-	<8	<8	<8	-	<8	-	<8	<8	-		<8	<8		-
15.5   200-15.5   01	SV54	5	SV54-5.0	6/14/2019	D-1648	<8	<8	<8	-	-	<8	<8	<8	-	<8	-	<8	<8	-	<8	<8	<8	<40	-
18																								-
15	SV55								_												_			-
10	SV56	15	SV56-15.0	11/21/2018	D-1552	<8	<8	<8	-	-	<8	<8	<8	-	<8	-	<8	<8	-	<8	<8	<8	<40	-
15	SV57								-	-						-			-					-
No.   1	SV58									-											_			-
Second Column		5	SV59-5.0'	8/31/2018	F-0170	<8	19	14	-	-	<8	<8	27	-	9	-	<8	<8	-	<8	<8	<8	<40	
Section   Property	SV59									3								<8 -						- <2
15   15   15   15   15   15   15   15	SV60								-	-						-			-					-
No.   1.50   No.		15	SV60-15.0'	11/21/2018	ST-13007	-	<4	<6	<2	7.54	<3	<3	<5	-	<2	-	<2	<3	21.5	-	3.28	2.91	-	176
Section   Sect	SV61								-	-						-								-
15   15   15   15   15   15   15   15	SV62								1	-														-
20			SV62-15.0	11/21/2018	D-1552	<8	<8	<8	-	-	<8	<8	<8		<8	-			-		<8	<8		-
1906   29		20	SV64-20.0	11/21/2018	D-1552	<8	<8	<8	-	-	<8	<8	<8	-	<8	-	<8	<8	-	<8	<8	<8	<40	
No.   Special Column	SV64					<8 -			_	- <3						<2				<8 -				150
Section   Sect									1	-														-
15   SVES-ISO REP   910/2018   F-0171   68   68   61   62   63   64   64   65   65		5	SV65-5.0'	9/10/2018	F-0173	<8	<8	<8	-	-	<8	<8	11	-	10		<8	<8		<8	<8	<8	<40	-
Sylin   15.5   Sylin   Sylin	SV65								1	-						-			-					-
15.5	SV110									-						-				_				-
Sylin   5	57110	15.5	SV110-15.5 REP	6/14/2019	D-1648	<8	<8	<8	-	-	<8	<8	<8	-	<8	-	<8	<8	-	<8	<8	<8	<40	-
Strice   S	SV111								1	13.9														-
Syling   S									_	-						-			-					-
SVII   15	SV112	15.5	SV112-15.5	6/14/2019	D-1648		<8	<8	_	-	<8	<8	<8		<8	-	<8		-	_	<8	<8		-
Sylide   15	SV113	15	SV113-15.0	8/14/2019	ST-14158	-	<1	<1	-	2.3	<1	<1	<1	-	<1	-	<1	-	<1	-	2.5	3	<1	
SVIIS   SVIIS-IS	SV114					-			_							-								-
Sylife   S	SV115																							-
15	CV/4.4.C	5	SV116-5.0	8/14/2019	ST-14158	-	4.4	4.6	-	2.3	<1	<1	7.1	-	2.1	-	<1	-	<1	-	2.4	2.6	<1	-
SV117-10   11/25/2019   191113	5V116	15	SV116-15.0 REP	8/14/2019	ST-14158	-	<1	<1	-	6.8	<1	<1	<1	-	<1	-	<1	-	<1	-	2.6	1	<1	-
STITE   SY117-15   11/25/2019   E911113	0.44=					-			_															-
SV118	5V117	15	SV117-15	11/25/2019	E911113		<14	<21	<32	<13J	<13	<9.4	<17	<16	<9.9	<4.1	<8	<9.2	-	-	<10	19B B	-	
SV118   10		5	SV118-5	11/25/2019	E911115		<6.8	<10	<16	<6.3	<6.4	<4.7	<8.6	<8	<4.9	<2.1	<4	<4.6			<5	<3.5		
SV118   15   SV118-15   11/25/2019   E911113   -	C\/110								_														-	
SV119-    SV119-  SV	24119					-				<6.3J											_			-
SV119		25	SV118-25-Rep	11/25/2019	E911113	-	<6.8	<10	<16	<6.3J	<6.4	<4.7	<8.6	<8	9.5	<2.1	<4	<4.6	-	-	<5J	11B B	-	-
15   SV119-15   11/25/2019   E911113   -	SV110	10	SV119-10	11/25/2019	E911113	-	<6.8	<10	<16	<6.3J	<6.4	<4.7	<8.6	<8	<4.9	<2.1	<4	<4.6	-	-	<5J	9.2B B	-	
SV120-5	34113					-													-	-	_			<del></del>
SV120		5	SV120-5	11/25/2019	E911115	-	<6.8	<10	<16	<6.3	<6.4	<4.7	<8.6	<8	<4.9	<2.1	<4	<4.6	=	-	<5	<3.5	-	-
SV121-5         11/25/2019         E911115         -         -         6.8         <10         <16         13         <6.4         <4.7         <8.6         <8         <4.9         <2.1         <4         <4.6         -         -         <5         <3.5         -           5V121-10         11/25/2019         E911113         -         <6.8	SV120	15	SV120-15	11/25/2019	E911113	-	<6.8	<10	<16	<6.3J	<6.4	<4.7	<8.6	<8	<4.9J	<2.1	<4	<4.6	-	-	<5J	10B B	-	-
SV121 10 SV121-10 11/25/2019 E911113 - <6.8 <10 <16 <6.3						-													-	-			-	-
25 SV121-25 11/25/2019 E91113 - <6.8 <10 <16 <6.3 <6.4 <4.7 <8.6 <8 <4.9 <2.1 <4 <4.6 <5 108 B -	SV121	10	SV121-10	11/25/2019	E911113	-	<6.8	<10	<16	<6.3J	<6.4	<4.7	<8.6	<8	<4.9	<2.1	<4	<4.6	-	-	<5	9.4B B	-	
SV122-5-Rep         11/25/2019         E911115         -         <6.8         <10         <16         <6.3         <6.4         <4.7         <8.6         <8         <4.9         <2.1         <4         <4.6         -         <5         <3.5         -           SV122-10         11/25/2019         E911113         -         <6.8		25	SV121-25	11/25/2019	E911113	-	<6.8	<10	<16	<6.3J	<6.4	<4.7	<8.6	<8	<4.9	<2.1	<4	<4.6	-	-	<5	10B B	-	-
15 SV122-15 11/25/2019 E911113 - <6.8 <10 <16 7.6 <6.4 <4.7 <8.6 <8 <4.9 <2.1 <4 <4.6 <5J 118 B -		5	SV122-5-Rep	11/25/2019	E911115				<16	<6.3	<6.4		<8.6								<5			-
	SV122			11/25/2019		-														-				-
Notes	L.					-														-	_			-

μg/m3 = micrograms per meter cubed < = less than analytical reporting limit shown J = estimated value

Table 7 **Soil Vapor Detections** Preliminary Endangerment Assessment - Equivalent Report LAUSD Alexander Hamilton High School, Los Angeles, California

HHRA Not	te 3 Res Air DTSC-SLs	April 2019			Ethyl acetate	Ethylbenzene	Ethyl-t-Butyl Ether	Freon 113	Heptane	9 Hexachlorobutadiene	Hexane	Isopropylbenzene	Methyl Ethyl Ketone	Methyl Tertiary Butyl Eth	Naphthalene	n-butylbenzene	n-propylbenzene	Methyl Methacrylate	Pentane	p-isopropyltoluene	sec-butylbenzene	\$470000
		HQ=1.0) April 2019, Atte	enuation Factor	= 0.002	36500	550		2600000	210000	65	365000	210000	2600000	5500	41.5		500000	365000	500000			500000
Location	Sample Depth	Field ID	Sample Date	SDG	μg/m3	μg/m3	ug/m3	μg/m3	μg/m3	μg/m3	μg/m3	μg/m3	μg/m3	ug/m3	μg/m3	μg/m3	μg/m3	μg/m3	ug/m3	μg/m3	μg/m3	μg/m3
	(ft bgs)	SV01 E 0'	0/21/2010			-0	-40	-16	<400	-16	<400	16		-10	-40	-12	-0		<b>~400</b>	65	-12	-0
SV01	5 15	SV01-5.0' SV01-15.0'	8/31/2018 8/31/2018	F-0170 F-0170	-	<8 <8	<40 <40	<16 <16	<400 <400	<16 <16	<400 <400	<b>16</b> <8	-	<40 <40	<40 <40	<12 <12	<8 <8	-	<400 <400	65 28	<12 <12	<8 <8
	15	SV01-15.0' REP	8/31/2018	F-0170	-	<8	<40	<16	<400	<16	<400	<8	-	<40	<40	<12	<8	-	<400	28	<12	<8
SV02	5 15	SV02-5.0' SV02-15.0'	9/10/2018 9/10/2018	F-0173 F-0173	-	<8 <8	<40 <40	<40 <40	<400 <400	<8 <8	<400 <400	<b>13</b>	-	<40 <40	<40 <40	9	<8 <8	-	<400 <400	16 9	<b>10</b> <8	<b>9</b> <8
SV04	5	B4-5'	9/19/2018	F-0180	-	8.54	<40	<40	<400	<8	<400	<8	-	<40	<40	<8	<8	-	<400	<8	<8	<8
SV04A	5	SV04A-5.0	6/14/2019	D-1648	-	<8	<40	<16	<80	<24	<80	<8	-	<40	<40	<12	<8	-	<80	<8	<12	<8
	15.5 5	SV04A-15.5 SV04B-5.0	6/14/2019 6/14/2019	D-1648 D-1648	-	<8 <8	<40 <40	<16 <16	<80 <80	<24 <24	<80 <80	<8 <8	-	<40 <40	<40 <40	<12 <12	<8 <8	-	<80 <80	<8 <8	<12 <12	<8 <8
SV04B	5	SV04B-5.0 REP	6/14/2019	D-1648	-	<8	<40	<16	<80	<24	<80	<8	-	<40	<40	<12	<8	-	<80	<8	<12	<8
	15.5 5	SV04B-15.5 SV04C-5.0	6/14/2019 6/14/2019	D-1648 D-1648	-	<8	<40	<16	<80 <80	<24	<80 <80	<8 <8	-	<40	<40 <40	<12 <12	<8	-	<80 <80	<8	<12	<8
SV04C	15.5	SV04C-15.5	6/14/2019	D-1648	-	<b>12</b> <8	<40 <40	<16 <16	<80	<24 <24	<80	<8	-	<40 <40	<40	<12	<8 <8	-	<80	<8 <b>27</b>	<12 <12	<8 <8
	5	SV04D-5.0	6/14/2019	D-1648	-	<8	<40	<16	<80	<24	<80	<8	-	<40	<40	<12	<8	-	<80	<8	<12	<8
SV04D	15.5 15.5	SV04D-15.5 SV04D-15.5	6/14/2019 6/14/2019	D-1648 ST-13880	5.6	<8 <b>6.3</b>	<40 <1	<16 <1	<80 <10	<24 <1	<80 <10	<8 <b>2.5</b>	16.5	<40 <1	<40 <5	<12 <b>2.1</b>	<8 <b>2.2</b>	- <1	<80 <10	<8 <b>2.3</b>	<12 <1	<8 1.2
CVOE	5	SV05-5.0'	8/31/2018	F-0170	-	<8	<40	<16	<400	<16	<400	2.5	-	<40	<40	<12	<8	-	<400	15	<12	
SV05	15	SV05-15.0'	8/31/2018	F-0170	-	<8	<40	<16	<400	<16	<400	<8	-	<40	<40	<12	<8	-	<400	<8	<12	<8
SV22	5 15	SV22-5.0' SV22-15.0'	8/31/2018 8/31/2018	F-0170 F-0170	-	<8 <8	<40 <40	<16 <16	<400 <400	<16 <16	<400 <400	<b>21</b> <8	-	<40 <40	<40 <40	<12 <12	<8 <8	-	<400 <400	14 8	<12 <12	<8 <8
SV23	5	SV23-5.0'	8/31/2018	F-0170	-	<8	<40	<16	<400	<16	<400	<8	-	<40	<40	<12	<8	-	<400	10	<12	<8
3423	15	SV23-15.0'	8/31/2018	F-0170	-	<8	<40	<16	<400	<16	<400	<8	-	<40	<40	<12	<8	-	<400	<8	<12	<8
SV24	5 15	SV24-5.0' SV24-15.0'	8/31/2018 8/31/2018	F-0170 F-0170	-	<8 <8	<40 <40	<16 <16	<400 <400	<16 <16	<400 <400	<8 <8	-	<40 <40	<40 <40	<12 <12	<8 <8	-	<400 <400	<8 <8	<12 <12	<8 <8
	5	SV53-5.0'	9/1/2018	ST-12616	3.4	2.7	-	<1	<50	<1	<50	<1	<1	<1	<1	-	<1	<1	<50	<1	-	<1
SV53	5 15	SV53-5.0' SV53-15.0'	9/10/2018 9/10/2018	F-0173 F-0173	-	<8 <8	<40 <40	<40 <40	<400 <400	<8 <8	<400 <400	<8 <8	-	<40 <40	<40 <40	<8 <8	<8 <8	-	<400 <400	<8 <8	<8 <8	<8 <8
CVE c	15 5	SV54-5.0	6/14/2019	F-01/3 D-1648	-	<8 <8	<40 <40	<40 <16	<400 <80	<8 <24	<400 <80	<8 <8	-	<40 <40	<40 <40	<8 <12	<8 <8	-	<400 <80	<8 <b>21</b>	<8 <12	<8 <8
SV54	15.5	SV54-15.5	6/14/2019	D-1648	-	<8	<40	<16	<80	<24	<80	<8	-	<40	<40	<12	<8	-	<80	<8	<12	<8
SV55	5 15	SV55-5.0 SV55-15.0	11/21/2018 11/21/2018	D-1552 D-1552	-	<8 <b>1000</b>	<40 <40	<16 <16	<80 <80	<16 <16	<80 <80	<8 <b>38</b>	-	<40 <40	<40 <40	- 50	<8 <b>174</b>	-	<80 <80	<10 12	- <8	<8 <8
SV56	5	SV56-5.0	11/21/2018	D-1552	-	<8	<40	<16	<80	<16	<80	<8	-	<40	<40	<8	<8	-	<80	<10	<8	<8
3030	15	SV56-15.0	11/21/2018	D-1552	-	239	<40	<16	<80	<16	<80	12	-	<40	68	73	59	-	<80	<10	<8	<8
SV57	5 15	SV57-5.0' SV57-15.0'	9/10/2018 9/10/2018	F-0173 F-0173	-	<8 <8	<40 <40	<40 <40	<400 <400	<8 <8	<400 <400	<8 <b>10</b>	-	<40 <40	<40 <40	<b>9</b> <8	<8 <8	-	<400 <400	11 10	<8 <8	<8 <8
SV58	5	SV58-5.0'	8/31/2018	F-0170	-	<8	<40	<16	<400	<16	<400	<8	-	<40	<40	<12	<8	-	<400	9	<12	<8
3130	15 5	SV58-15.0' SV59-5.0'	8/31/2018 8/31/2018	F-0170 F-0170	-	<8 <8	<40 <40	<16 <16	<400 <400	<16 <16	<400 <400	<8 <8	-	<40 <40	<40 <40	<12 <12	<8 <8	-	<400 <400	<8 <b>9</b>	<12 <12	<8 <8
SV59	15	SV59-15.0'	8/31/2018	F-0170	-	<8	<40	<16	<400	<16	<400	<8	-	<40	<40	<12	<8	-	<400	<8	<12	<8
	15	SV59-15.0'	8/31/2018	ST-12571	2.1	2.4	<2	<2	<20	<2	<20	<2	<2	<2	<2	<2	<2	<2	<20	<2	<2	<2
SV60	5 15	SV60-5.0 SV60-15.0	11/21/2018 11/21/2018	D-1552 D-1552	-	<8 <b>9</b>	<40 <40	<16 <16	<80 <80	<16 <16	<80 <80	<8 <8	-	<40 <40	<40 <40	<8 <8	<8 <8	-	<80 <80	<b>12</b> <10	<8 <8	<8 <8
3100	15	SV60-15.0'	11/21/2018	ST-13007	6.36	11.2	-	<5	32.1	<6	39.1	-	46.4	<2	7.77	-	-	<2	-	-	-	<3
SV61	5	SV61-5.0'	9/10/2018	F-0173	-	<8	<40	<40	<400	<8	<400	<8	-	<40	<40	<8	<8	-	<400	36	<8	<8
	15 5	SV61-15.0' SV62-5.0	9/10/2018 11/21/2018	F-0173 D-1552	-	<8 <8	<40 <40	<40 <16	<400 <80	<8 <16	<400 <80	<8 <8	-	<40 <40	<40 <40	<8 <8	<8 <8	-	<400 <80	8 11	<8 <8	<8 <8
SV62	5	SV62-5.0 REP	11/21/2018	D-1552	-	<8	<40	<16	<80	<16	<80	<8	-	<40	<40	<8	<8	-	<80	10	<8	<8
	15 19	SV62-15.0 B64-19'	11/21/2018 9/19/2018	D-1552	-	<8 <8	<40 <40	<16 <40	<80 <400	<16 <8	<80 <400	<8 <8	-	<40 <40	<40 <40	29	<8 <8	-	<80 <400	<b>18</b> <8	<b>9</b> <8	<8 <8
	20	SV64-20.0	11/21/2018	F-0180 D-1552	-	92	<40	<16	<80	<16	<80	<8	-	<40	<40	<8 <8	38	-	<80	17	<8 <8	<8
SV64	29	B64-29'	9/19/2018	F-0180	-	<8	<40	<40	<400	<8	<400	<8	-	<40	<40	<8	<8	-	<400	<8	<8	<8
	29 29	B64-29' B64-29' REP	9/19/2018 9/19/2018	ST-12676 F-0180	12.4	<b>2.3</b> <8	- <40	<2 <40	<20 <400	<2 <8	<20 <400	<b>5.9</b> <8	11.9	- <40	<b>4.1</b> <40	<2 <8	<b>35.5</b> <8	<2	<20 <400	<2 <8	<2 <8	<2 <8
	30	SV64-30.0	11/21/2018	D-1552	-	118	<40	<16	<80	<16	<80	<8	-	<40	<40	44	44	-	<80	11	<8	<8
SV65	5	SV65-5.0'	9/10/2018	F-0173	-	<8	<40	<40	<400 <400	<8	<400	<8	-	<40 <40	<40	<8	<8	-	<400	356 570	<8	<8
3005	15 15	SV65-15.0' SV65-15.0' REP	9/10/2018 9/10/2018	F-0173 F-0173	-	<8 <8	<40 <40	<40 <40	<400	<8 <8	<400 <400	<8 <8	-	<40	<40 <40	<8 <8	<8 <8	-	<400 <400	496	38 33	<8 <8
	5	SV110-5.0	6/14/2019	D-1648	-	27	<40	<16	<80	<24	<80	<8	-	<40	<40	<12	<8	-	<80	<8	<12	<8
SV110	15.5 15.5	SV110-15.5 SV110-15.5 REP	6/14/2019 6/14/2019	D-1648 D-1648	-	509 487	<40 <40	<16 <16	<80 <80	<24 <24	<80 <80	<8 <8	-	<40 <40	<40 <40	<12 <12	45 45	-	<80 <80	19 19	<12 <12	<8 <8
	5	SV110-13.5 KEF	6/14/2019	D-1648	-	13	<40	<16	<80	<24	<80	<8	-	<40	<40	<12	<8	-	<80	<8	<12	<8
SV111	5	SV111-5.0	6/14/2019	ST-13880	<1	9.5	<1	<1	<10	<1	<10	3.4	4.2	<1	<5	<1	2.4	<1	<10	4	<1	1.7
	15.5 5	SV111-15.5 SV112-5.0	6/14/2019 6/14/2019	D-1648 D-1648	-	10 12	<40 <40	<16 <16	<80 <80	<24 <24	<80 <80	<8 <8	-	<40 <40	<40 <40	<12 <12	<8 <8	-	<80 <80	<8 <8	<12 <12	<8 <8
SV112	15.5	SV112-15.5	6/14/2019	D-1648	-	<8	<40	<16	<80	<24	<80	<8	-	<40	<40	<12	<8	-	<80	<8	<12	<8
SV113	5 15	SV113-5.0 SV113-15.0	8/14/2019 8/14/2019	ST-14158 ST-14158	13.4 27.4	<b>12.8</b> <1	<1 <1	<1 <1	<10 <10	<1 <1	<10 <10	<b>4.6</b> <1	14.7 5.7	<1 <1	<b>5.6</b> <5	<b>4.6</b> <1	<b>9.2</b> <1	<1 <1	<10 <10	237 8.4	<b>1.5</b> <1	<b>3.7</b> <1
SV114	5	SV114-5.0	8/14/2019	ST-14158	13.4	7	<1	<1	<10	<1	<10	2.3	8.3	<1	<5	2.2	3.9	<1	<10	37.1	<1	1.5
	15 5	SV114-15.0 SV115-5.0	8/14/2019 8/14/2019	ST-14158 ST-14158	22.8 12.7	11.8	<1 <1	<1 <1	<10 <10	<1 <1	<10 <10	1.5 6.1	6.1	<1 <1	<5	<1 8	2.2 11.1	<1 <1	<10 <10	29.3	<1 1.7	1.6 6.9
SV115	15	SV115-5.0 SV115-15.0	8/14/2019 8/14/2019	ST-14158 ST-14158	<1	76.3 16.6	<1	<1	<10 <10	<1	<10 <10	1.3	6.2 5.7	<1	<b>30.3</b> <5	1.4	11.1	<1	<10 <10	161 13.8	<1.7	1.9
614	5	SV116-5.0	8/14/2019	ST-14158	6.7	8.5	<1	<1	<10	<1	<10	2.1	6.8	<1	<5	2	3	<1	<10	69.1	<1	1.7
SV116	15 15	SV116-15.0 SV116-15.0 REP	8/14/2019 8/14/2019	ST-14158 ST-14158	12.7 17.6	4.6 3.1	<1 <1	<1 <1	<10 <10	<1 <1	<10 <10	<1 1	4.9 7.6	<1 <1	<b>9.5</b> <5	<1 1.4	2.2 1.3	<1 <1	<10 <10	14.8 20.5	<1 <1	1.3 1.4
	5	SV117-5	11/25/2019	E911113	-	430	-	<7.7	-	<54	-	-	<30	-	-	-	-	-	-	-	-	<4.3
SV117	10	SV117-10	11/25/2019	E911113	-	640	-	<7.7	-	<54	-	-	<30	-	-	-	-	-	-	-	-	<4.3J
	15 25	SV117-15 SV117-25	11/25/2019 11/25/2019	E911113 E911113	-	1300 1300	-	<15 <15	-	<110 <110	-	-	<60 <60	-	-	-	-	-	-	-	-	<8.6 <8.6J
	5	SV118-5	11/25/2019	E911115	-	<4.4	-	<7.7	-	<54	-	-	<30	-	-	-	-	-	-	-	-	<4.3
	5 10	SV118-5-Rep SV118-10	11/25/2019 11/25/2019	E911115 E911113	-	<4.4 <4.4J	-	<7.7 <7.7	-	<54 <54	-	-	<30 <30	-	-	-	-	-	-	-	-	<4.3
SV118	15	SV118-10 SV118-15	11/25/2019	E911113	-	<4.4J	-	<7.7	-	<54 <54	-	-	<30 <30	-	-	-	-	-	-	-	-	<4.3J
	25	SV118-25	11/25/2019	E911113	-	<4.4J	-	<7.7	-	<54	-	-	<30	-	-	-	-	-	-	-	-	<4.3
	25 5	SV118-25-Rep SV119-5	11/25/2019 11/25/2019	E911113 E911115	-	<4.4J	-	<7.7 <7.7	-	<54 <54	-	-	<30 <30	-	-	-	-	-	-	-	-	<4.3 <4.3
SV119	10	SV119-10	11/25/2019	E911113	-	<4.4J	-	<7.7	-	<54	-	-	40	-	-	-	-	-	-	-	-	<4.3
54113	15 25	SV119-15	11/25/2019	E911113	-	7.8	-	<7.7	-	<54	-	-	<30	-	-	-	-	-	-	-	-	<4.3
	25 5	SV119-25 SV120-5	11/25/2019 11/25/2019	E911113 E911115	-	<4.4 <4.4	-	<7.7 <b>10</b>	-	<54 <54	-	-	<30 <30	-	-	-	-	-	-	-	-	<4.3 <4.3
SV120	10	SV120-10	11/25/2019	E911113	-	<4.4	-	10	-	<54	-	-	<30	-	-	-	-	-	-	-	-	<4.3
	15 25	SV120-15 SV120-25	11/25/2019 11/25/2019		-	<b>31</b> <4.4J	-	<7.7 <7.7	-	<54 <54	-	-	<30 <30	-	-	-	-	-	-	-	-	<4.3 <4.3
	5	SV120-25 SV121-5	11/25/2019		-	<4.4	-	<7.7	-	<54 <54	-	-	<30 <b>46</b>	-	-	-	-	-	-	-		<4.3
		SV121-10	11/25/2019	E911113	-	<4.4J	-	<7.7	-	<54	-	-	<30	-	-	-	-	-	-	-	-	<4.3
SV121	10			E911113	-	21	-	<7.7	-	<54	-	-	<30	-	-	-	-	-	-	-	-	<4.3
SV121	15	SV121-15 SV121-25	11/25/2019 11/25/2019		-	<4 A	-	//</td <td>-</td> <td>&lt;54</td> <td>-</td> <td>-</td> <td>&lt;:30</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>&lt;4 ⊀</td>	-	<54	-	-	<:30	-	-	-	-	-	-	-	-	<4 ⊀
SV121	15 25 5	SV121-25 SV122-5	11/25/2019 11/25/2019	E911113 E911115	-	<4.4 <4.4	-	<7.7 <7.7	-	<54 <54J	-	-	<30 <30	-	-	-	-	-	-	-	-	<4.3 <4.3
	15 25 5 5	SV121-25 SV122-5 SV122-5-Rep	11/25/2019 11/25/2019 11/25/2019	E911113 E911115 E911115	-	<4.4 <4.4	-	<7.7 <7.7	-	<54J <54	-	-	<30 <30	-	-	-	-	-	-	-	-	<4.3 <4.3
SV121	15 25 5	SV121-25 SV122-5	11/25/2019 11/25/2019	E911113 E911115 E911115 E911113	-	<4.4	-	<7.7	-	<54J	-	-	<30	-	-	-	-	-	-	-	-	<4.3

µg/m3 = micrograms per meter cubed < = less than analytical reporting limit shown J = estimated value

Table 7 **Soil Vapor Detections** 

Preliminary Endangerment Assessment - Equivalent Report LAUSD Alexander Hamilton High School, Los Angeles, California

					ert-Amyl-Methyl Ether	tert-Butyl alcohol	ert-Butylbenzene	Tetrachloroethene	Tetrahydrofuran	Toluene	trans-1,2-dichloroethene	rans-1,3-dichloropropen	Trichloroethene	Trichlorofluoromethane	Vinyl acetate	Vinyl chloride	Kylene (m & p)	Xylene (o)
HHRA Not	e 3 Res Air DTSC-SLs	s April 2019			ţ	ţ.	210000	230	⊭	155000	41500	ŧ	Ė	650000	ÿ	¥.75	×	×
	S Air RSLs (TR=1E-06 Sample Depth	, HQ=1.0) April 2019, Atte			ug/m3	μg/m3	μg/m3	5500 μg/m3	1050000 μg/m3	2600000 μg/m3	μg/m3	μg/m3	240 μg/m3	μg/m3	105000 μg/m3	85 μg/m3	μg/m3	50000 μg/m3
Location	(ft bgs)	Field ID	Sample Date	SDG														
SV01	5 15	SV01-5.0' SV01-15.0'	8/31/2018 8/31/2018	F-0170 F-0170	<40 <40	<400 <400	14 17	<8 <8	-	33 29	<8 <8	<8 <8	<8 <8	<8 <8	-	<8 <8	<16 <16	<8 <8
	15 5	SV01-15.0' REP SV02-5.0'	8/31/2018 9/10/2018	F-0170 F-0173	<40 <40	<400 <400	17 10	<8 12	-	26 29	<8 <8	<8 <8	<8 <8	<8 <8	-	<8 <8	<16 <b>23</b>	<8 11
SV02	15	SV02-15.0'	9/10/2018	F-0173	<40	<400	<8	10	-	10	<8	<8	<8	<8	-	<8	<8	<8
SV04 SV04A	5 5	B4-5' SV04A-5.0	9/19/2018 6/14/2019	F-0180 D-1648	<40 <40	<400 <400	<8 <12	343 19	-	24 53	<8 <8	<8 <8	<8 <8	<8 <16	-	<8 <8	32 26	12 10
3704A	15.5 5	SV04A-15.5 SV04B-5.0	6/14/2019 6/14/2019	D-1648 D-1648	<40 <40	<400 <400	<12 <12	<8 <8	-	<8 <8	<8 <8	<8 <8	<8 <8	<16 <16	-	<8 <8	<16 <16	<8 <8
SV04B	5 15.5	SV04B-5.0 REP SV04B-15.5	6/14/2019	D-1648 D-1648	<40	<400 <400	<12 <12	<8 <8	-	<8 <8	<8	<8	<8 <8	<16 <16	-	<8 <8	<16	<8 <8
SV04C	5	SV04C-5.0	6/14/2019 6/14/2019	D-1648	<40 <40	<400	<12	11	-	61	<8 <8	<8 <8	<8	<16	-	<8	<16 <b>37</b>	14
370.0	15.5 5	SV04C-15.5 SV04D-5.0	6/14/2019 6/14/2019	D-1648 D-1648	<40 <40	<400 <400	<12 <12	<8 <8	-	11 10	<8 <8	<8 <8	<8 <8	<16 <16	-	<8 <8	<16 <16	<8 <8
SV04D	15.5 15.5	SV04D-15.5 SV04D-15.5	6/14/2019 6/14/2019	D-1648 ST-13880	<40 <1	<400 <10	<12 <b>2.5</b>	<8 <b>13.2</b>	- <1	18 23.6	<8 <1	<8 -	<8 <1	<16 <b>1.4</b>	- <1	<8 <1	<16 <b>21.5</b>	<8 <b>8.4</b>
SV05	5	SV05-5.0'	8/31/2018	F-0170	<40	<400	<12	<8	-	20	<8	<8	<8	<8	÷	<8	<16	<8
	15 5	SV05-15.0' SV22-5.0'	8/31/2018 8/31/2018	F-0170 F-0170	<40 <40	<400 <400	<12 <12	12 25	-	11 22	<8 <8	<8 <8	<8 <8	<8 <8	-	<8 <8	<16 <16	<8 <8
SV22	15 5	SV22-15.0' SV23-5.0'	8/31/2018 8/31/2018	F-0170 F-0170	<40 <40	<400 <400	<12 <12	29 41	-	14 9	<8 <8	<8 <8	<8 <8	<8 <8	-	<8 <8	<16 <16	<8 <b>8</b>
SV23	15	SV23-15.0'	8/31/2018	F-0170	<40	<400	<12	26	-	<8	<8	<8	<8	<8	-	<8	<16	<8
SV24	5 15	SV24-5.0' SV24-15.0'	8/31/2018 8/31/2018	F-0170 F-0170	<40 <40	<400 <400	<12 <12	<8 <8	-	9	<8 <8	<8 <8	<8 <8	<8 <8	-	<8 <8	<16 <16	<8 <8
SV53	5	SV53-5.0' SV53-5.0'	9/1/2018 9/10/2018	ST-12616 F-0173	- <40	- <400	- <8	<1 <8	<1	6.4	<1 <8	<1 <8	<1 <8	<1 <8	<1	<1 <8	5.5	<b>3.1</b> <8
3V53	15	SV53-5.0' SV53-15.0'	9/10/2018	F-0173 F-0173	<40	<400	<8 <8	<8 <8	-	26	<8 <8	<8 <8	<8 <8	<8 <8	-	<8 <8	<8 <8	<8 <8
SV54	5 15.5	SV54-5.0 SV54-15.5	6/14/2019 6/14/2019	D-1648 D-1648	<40 <40	<400 <400	<12 <12	<8 <8	-	<b>14</b> <8	<8 <8	<8 <8	<8 <8	<16 <16	-	<8 <8	<16 <16	<8 <8
SV55	5	SV55-5.0	11/21/2018	D-1552	<40	<400	-	<8	-	10	<8	<8	<8	<10	-	<8	<16	<8
CVEC	15 5	SV55-15.0 SV56-5.0	11/21/2018 11/21/2018	D-1552 D-1552	<40 <40	<400 <400	<8 <8	<8 <8	-	<b>4590</b> <8	<8 <8	<8 <8	<8 <8	<10 <10	-	<8 <8	<b>3840</b> <16	<b>1260</b> <8
SV56	15 5	SV56-15.0 SV57-5.0'	11/21/2018 9/10/2018	D-1552 F-0173	<40 <40	<400 <400	<8 <8	<8 10	-	1090 17	<8 <8	<8 <8	<8 <8	<10 <8	-	<8 <8	1040 20	338 10
SV57	15	SV57-15.0'	9/10/2018	F-0173	<40	<400	<8	10	-	24	<8	<8	<8	<8	-	<8	17	9
SV58	5 15	SV58-5.0' SV58-15.0'	8/31/2018 8/31/2018	F-0170 F-0170	<40 <40	<400 <400	<12 <12	<b>13</b>	-	9 16	<8 <8	<8 <8	<8 <8	<8 <8	-	<8 <8	<16 <16	<8 <8
SV59	5	SV59-5.0'	8/31/2018	F-0170	<40	<400	<12	<8	-	11	<8	<8	<8	<8	-	<8	<16	<8
3739	15 15	SV59-15.0' SV59-15.0'	8/31/2018 8/31/2018	F-0170 ST-12571	<40 <2	<400 <2	<12 <2	<8 <b>2.9</b>	<2	5.9	<8 <20	<8 -	<8 <2	<8 <2	- <2	<8 <2	<16 <b>6.2</b>	<8 <b>2.8</b>
SV60	5 15	SV60-5.0 SV60-15.0	11/21/2018 11/21/2018	D-1552 D-1552	<40 <40	<400 <400	<8 <8	<8 <8	-	12 70	<8 <8	<8 <8	<8 <8	<10 <10	-	<8 <8	<16 <b>38</b>	<8 <b>13</b>
	15	SV60-15.0'	11/21/2018	ST-13007	-	-	-	2.06	<2	75	<2	<3	<3	3.1	<4	<2	41.9	14.4
SV61	5 15	SV61-5.0' SV61-15.0'	9/10/2018 9/10/2018	F-0173 F-0173	<40 <40	<400 <400	<8 <8	<8 <b>13</b>	-	19 11	<8 <8	<8 <8	<8 <8	<8 <8	-	<8 <8	<8 <8	<8 <8
SV62	5 5	SV62-5.0 SV62-5.0 REP	11/21/2018 11/21/2018	D-1552 D-1552	<40 <40	<400 <400	<8 <8	<8 <8	-	<8 <8	<8 <8	<8 <8	<8 <8	<10 <10	-	<8 <8	<16 <16	<8 <8
3002	15	SV62-15.0	11/21/2018	D-1552	<40	<400	<8	<8	-	48	<8	<8	<8	<10	-	<8	21	<8
	19 20	B64-19' SV64-20.0	9/19/2018 11/21/2018	F-0180 D-1552	<40 <40	<400 <400	<8 <8	<b>16</b>	-	13 191	<8 <8	<8 <8	<8 <8	<8 <10	-	<8 <8	<8 <b>396</b>	<8 <b>128</b>
SV64	29	B64-29'	9/19/2018	F-0180	<40	<400	<8	<8 <b>5.3</b>	-	<8 <b>4.9</b>	<8 <20	<8	<8 <2	<8 <2	-	<8 <2	<8	<8 <b>4</b>
	29 29	B64-29' B64-29' REP	9/19/2018 9/19/2018	ST-12676 F-0180	<40	<400	<2 <8	<b>&lt;8</b>	2.6	<b>4.9</b> <8	<20 <8	- <8	<8	<8	<2 -	<8	<b>7.8</b> <8	<8
	30 5	SV64-30.0 SV65-5.0'	11/21/2018 9/10/2018	D-1552 F-0173	<40 <40	<400 <400	<8 <b>32</b>	<8 <8	-	311 37	<8 <8	<8 <8	<8 <8	<10 <8	-	<8 <8	494 17	145 9
SV65	15	SV65-15.0'	9/10/2018	F-0173	<40	<400	55	<8	-	14	<8	<8	<8	<8	-	<8	<8	<8
	15 5	SV65-15.0' REP SV110-5.0	9/10/2018 6/14/2019	F-0173 D-1648	<40 <40	<400 <400	<b>46</b> <12	<8 <8	-	13 55	<8 <8	<8 <8	<8 <8	<8 <16	-	<8 <8	<8 <b>173</b>	<8 <b>70</b>
SV110	15.5 15.5	SV110-15.5 SV110-15.5 REP	6/14/2019 6/14/2019	D-1648 D-1648	<40 <40	<400 <400	<12 <12	<8 <8	-	2690 2540	<8 <8	<8 <8	<8 <8	<16 <16	-	<8 <8	2060 1980	561 544
67.444	5	SV111-5.0	6/14/2019	D-1648	<40	<400	<12	<8	-	36	<8	<8	<8	<16	-	<8	61	24
SV111	5 15.5	SV111-5.0 SV111-15.5	6/14/2019 6/14/2019	ST-13880 D-1648	<1 <40	<10 <400	<b>2.9</b> <12	<b>10.4</b> <8	<1 -	21.9 9	<1 <8	- <8	<1 <8	<b>1</b> <16	<1 -	<1 <8	40.1 66	16.3 25
SV112	5 15.5	SV112-5.0 SV112-15.5	6/14/2019 6/14/2019	D-1648 D-1648	<40 <40	<400 <400	<12 <12	<8 <8	-	<b>78</b> <8	<8 <8	<8 <8	<8 <8	<16 <16	-	<8 <8	<b>51</b> <16	<b>16</b> <8
SV113	5	SV113-5.0	8/14/2019	ST-14158	<1	<10	<1	7.4	1.3	56.3	<1	-	<1	1.6	<1	<1	50.9	16.8
C\/114	15 5	SV113-15.0 SV114-5.0	8/14/2019 8/14/2019	ST-14158 ST-14158	<1 <1	<10 <10	<1 <1	3.4 12.6	<1 <1	1.4 11.4	<1 <1	-	<1 <1	1.4 2.4	<1 <1	<1 <1	1.2 54.6	<1 18.7
SV114	15 5	SV114-15.0 SV115-5.0	8/14/2019 8/14/2019	ST-14158 ST-14158	<1 <1	<10 <10	<1 <1	6.3 8.7	<1 <1	9 100	<1 <1	-	<1 <1	2.2	<1 <1	<1 <1	60.4 354	18.5 132
SV115	15	SV115-15.0	8/14/2019	ST-14158	<1	<10	<1	5.3	<1	14	<1	-	<1	2.4	<1	<1	86.8	26.5
SV116	5 15	SV116-5.0 SV116-15.0	8/14/2019 8/14/2019	ST-14158 ST-14158	<1 <1	<10 <10	<1 2.2	4.4 2.4	<1 <1	24.2 15.7	<1 <1	-	<1 <1	1.6 1.5	<1 <1	<1 <1	36.7 19.6	12.5 9.2
	15	SV116-15.0 REP	8/14/2019	ST-14158	<1	<10	<1	4	<1	11.2	<1	-	<1	1.8	<1	<1	12.5	3.8
SV117	5 10	SV117-5 SV117-10	11/25/2019 11/25/2019	E911113 E911113	-	-	-	36 27	-	1100 1700	<8 <8	<4.6 <4.6	<5.5 <5.5	<5.6 <5.6	-	<2.6 <2.6	1700 2500	510 870
34117	15 25	SV117-15 SV117-25	11/25/2019 11/25/2019	E911113 E911113	-	-	-	73 33	-	3400 4600	<16 <16	<9.2 <9.2	<11 <11	<11 <11	-	<5.2 <5.2	5000 5400	1600 1500
	5	SV118-5	11/25/2019	E911115	-	-	-	<6.9	-	<3.8	<8	<4.6	<5.5	<5.6	-	<2.6	<8.8	<4.4
SV118	5 10	SV118-5-Rep SV118-10	11/25/2019 11/25/2019	E911115 E911113	-	-	-	<6.9J	-	8 14	<8 <8	<4.6 <4.6	<5.5 <5.5	<5.6 <5.6	-	<2.6 <2.6	<8.8J	<4.4 <b>5.4</b>
<b>ΝΑΤΙ</b> Ω	15 25	SV118-15 SV118-25	11/25/2019 11/25/2019	E911113 E911113	-	-	-	<6.9J	-	17 7.1	<8 <8	<4.6 <4.6	<5.5 <5.5	<5.6J <5.6J	-	<2.6 <2.6	17 9.3	<b>6.3</b> <4.4J
	25	SV118-25-Rep	11/25/2019	E911113	-	-	-	13	-	10	<8	<4.6	<5.5	<5.6J	-	<2.6	15	4.7
CUAAC	5 10	SV119-5 SV119-10	11/25/2019 11/25/2019	E911115 E911113	-	-	-	<b>18</b> <6.9J	-	13 12	<8 <8	<4.6 <4.6	<5.5 <5.5	<5.6 <5.6	-	<2.6 <2.6	9.1 9.5	<4.4 <4.4J
SV119	15 25	SV119-15 SV119-25	11/25/2019 11/25/2019	E911113 E911113	-	-	-	8.2 13	-	43 5.2	<8 <8	<4.6 <4.6	<5.5 <5.5	<5.6J <5.6J	-	<2.6 <2.6	<b>25</b> <8.8J	<b>8.7</b> <4.4
	5	SV120-5	11/25/2019	E911115	-	-	-	<6.9	-	<3.8	<8	<4.6	<5.5	<5.6	-	<2.6	<8.8	<4.4
SV120	10 15	SV120-10 SV120-15	11/25/2019 11/25/2019		-	-	-	<6.9 <6.9J	-	6.4 87	<8 <8	<4.6 <4.6	<5.5 <5.5	<5.6 <5.6	-	<2.6 <2.6	<8.8J	<4.4J
	25	SV120-25	11/25/2019	E911113	-	-	-	<6.9J	-	9	<8	<4.6	<5.5	<5.6	-	<2.6	<8.8J	<4.4J
SV121	5 10	SV121-5 SV121-10	11/25/2019 11/25/2019	E911113	-	-	-	<6.9 <6.9	-	5.2 6.6	<8 <8	<4.6 <4.6	<5.5 <5.5	<5.6 <5.6	-	<2.6 <2.6	<8.8J	<4.4 <4.4J
J v 1∠1	15 25	SV121-15 SV121-25	11/25/2019 11/25/2019		-	-	-	<b>7.4</b> <6.9J	-	140 3.9	<8 <8	<4.6 <4.6	<5.5 <5.5	<5.6 <5.6	-	<2.6 <2.6	<b>73</b> <8.8J	<b>22</b> <4.4
՝ լ					-		-	<6.9	-	4.5	<8	<4.6	<5.5	<5.6	-	<2.6	<8.8J	<4.4
	5	SV122-5	11/25/2019		-	-												
SV122	5 5 10	SV122-5 SV122-5-Rep SV122-10	11/25/2019	E911115 E911115 E911113	-	-	-	<6.9 <6.9J	-	4.4	<8 <8	<4.6 <4.6	<5.5 <5.5	<5.6 <5.6	-	<2.6 <2.6	<8.8J	<4.4 <4.4J

μg/m3 = micrograms per meter cubed <= less than analytical reporting limit shown J = estimated value

# Appendix B

Johnson-Ettinger Modeling Spreadsheets



December 2014

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

DATA ENTRY SHEET

Scenario: Teacher Chemical: Benzene

			DATAENTRY	DUEEI							
		Soil	Gas Concentratio	n Data				Resul	ts Summary		
Depot to	ENTER	ENTER		ENTER	]			Attenuation Factor	Indoor Air Conc.	Cancer	Noncancer
Reset to Defaults		Soil		Soil			(µg/m³)	(unitless)	(µg/m³)	Risk	Hazard
Deraults	Chemical	gas	OR	gas			3.80E+02	5.8E-04	2.2E-01	3.8E-07	1.2E-02
	CAS No.	conc.,		conc.,							
	(numbers only,	C <sub>g</sub>		$C_g$							
	no dashes)	(μg/m³)	:	(ppmv)	Chemical			<b>=</b> :			
			•					<u> </u>			
	71432	3.80E+02			Benzene			_			
					MESSAGE: See VLOor and/or toxicity criteria	OKUP table comments on ch for this chemical.	nemical properties				
	ENTER Depth	ENTER	ENTER	ENTER		ENTER					
MORE	below grade	Soil gas		Vadose zone		User-defined					
Ψ.	to bottom	sampling	Average	SCS		vadose zone					
	of enclosed	depth	soil	soil type		soil vapor					
	space floor,	below grade,	temperature,	(used to estimate	OR	permeability,					
	$L_{F}$	L <sub>s</sub>	Ts	soil vapor		k <sub>v</sub>					
	(15 or 200 cm)	(cm)	(°C)	permeability)	•	(cm <sup>2</sup> )	ļ				
	15	132	24	SI	1	_					
	15	132	24	51			]				
MORE Ψ	ENTER Vandose zone SCS soil type Lookup Soil Parameters	ENTER  Vadose zone soil dry bulk density,  Pb^ (g/cm³)	ENTER Vadose zone soil total porosity, n <sup>V</sup> (unitless)	ENTER Vadose zone soil water-filled porosity, $\theta_w^{\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ $		ENTER Average vapor flow rate into bldg. (Leave blank to calcula Q <sub>soil</sub> (L/m)					
	SI	1.35	0.489	0.167	<b>:</b> ]	5	<b>:</b> 1				
	01	1.00	0.400	0.107	I	Ū	ı				
MORE <b>↓</b>	<b>ENTER</b> Averaging	<b>ENTER</b> Averaging	ENTER	ENTER	ENTER	ENTER					
	time for	time for	Exposure	Exposure	Exposure	Air Exchange					
	carcinogens,	noncarcinogens,	duration,	frequency,	Time	Rate					
Lookup Receptor		AT <sub>NC</sub>	ED	EF	ET	ACH					
Parameters	(yrs)	(yrs)	(yrs)	(days/yr)	(hrs/day)	(hour) <sup>-1</sup>					
*		/		, , , , ,	, 11		=				
W=> Residential	70	26	25	182	8	1					
		<del></del>			(NEW)	(NEW)					
END											

December 2014

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

DATA ENTRY SHEET

Scenario: Teacher Chemical: Benzene

							İ					
				Gas Concentration		Ī				s Summary		
Reset	to	ENTER	ENTER		ENTER				Attenuation Factor	Indoor Air Conc.	Cancer	Noncancer
Defaul		Chaminal	Soil	OR	Soil			(µg/m³)	(unitless)	(µg/m³)	Risk	Hazard
		Chemical CAS No.	gas	UR	gas			1.08E+03	3.9E-04	4.2E-01	7.2E-07	2.2E-02
		(numbers only,	conc., C <sub>q</sub>		conc., $C_{\rm g}$							
		,				01						
		no dashes)	(μg/m³)		(ppmv)	Chemical						
		71432	1.08E+03			Benzene						
		7 1432	1.00⊑+03				OKUP table comments on ch	nomical proportion				
						and/or toxicity criteria		iernicai properties				
		ENTER Depth	ENTER	ENTER	ENTER		ENTER					
	DRE	below grade	Soil gas		Vadose zone		User-defined					
<b>`</b>	<b>↓</b>	to bottom	sampling	Average 	SCS		vadose zone					
		of enclosed space floor,	depth below grade,	soil temperature,	soil type (used to estimate	OR	soil vapor permeability,					
		Space 11001,	L <sub>s</sub>	T <sub>S</sub>	soil vapor	OK	permeability, k <sub>v</sub>					
		(15 or 200 cm)	(cm)	(°C)	permeability)		(cm <sup>2</sup> )					
		(13 01 200 011)	(CIII)	( 0)	permeability)		(OIII )					
		15	396	24	S							
	DRE ↓	ENTER Vandose zone SCS soil type Lookup Soil Parameters	ENTER Vadose zone soil dry bulk density,  ph (g/cm³)	ENTER Vadose zone soil total porosity, n <sup>V</sup> (unitless)	ENTER Vadose zone soil water-filled porosity, $\theta_w^{\vee}$ $(cm^3/cm^3)$	]	ENTER Average vapor flow rate into bldg. (Leave blank to calcula Q <sub>soil</sub> (L/m)	ate)				
	DRE ↓	ENTER Averaging time for	ENTER Averaging time for	<b>ENTER</b> Exposure	ENTER Exposure	<b>ENTER</b> Exposure	ENTER Air Exchange					
		carcinogens,	noncarcinogens,	duration,	frequency,	Time	Rate					
	Receptor ameters	$AT_C$	$AT_{NC}$	ED	EF	ET	ACH					
Para	anieleis	(yrs)	(yrs)	(yrs)	(days/yr)	(hrs/day)	(hour) <sup>-1</sup>	:				
NEW=> Resid	dential	70	26	25	182	8	1					
					1	(NEW)	(NEW)					
El	ND											

December 2014

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

Scenario: Teacher Chemical: Benzene

**Results Summary** 

Indoor Air Conc.

 $(\mu g/m^3)$ 

1.8E-01

Cancer

Risk

3.2E-07

Noncancer

Hazard

9.8E-03

#### DATA ENTRY SHEET

			Soil	Gas Concentration	n Data				Result
	<b>D</b>	ENTER	ENTER		ENTER			Soil Gas Conc. A	ttenuation Factor
	Reset to		Soil		Soil			(µg/m³)	(unitless)
Į.	Defaults	Chemical	gas	OR	gas			1.08E+03	1.7E-04
`		CAS No.	conc.,		conc.,				
		(numbers only,	$C_g$		$C_g$				
		no dashes)	(μg/m <sup>3</sup> )		(ppmv)	Chemical			
				•					
		71432	1.08E+03			Benzene			
						MESSAGE: See VLOOk and/or toxicity criteria for	(UP table comments on cl	nemical properties	
		ENTER	ENTER	ENTER	ENTER	andror toxiony ornoria ro.	ENTER		
	MORE	Depth	Coil goo		Vadose zone		User-defined		
	WICKE	below grade to bottom	Soil gas sampling	Average	SCS		vadose zone		
		of enclosed	depth	soil	soil type		soil vapor		
		space floor,	below grade,	temperature,	(used to estimate	OR	permeability,		
		L <sub>F</sub>	L <sub>s</sub>	Ts	soil vapor		k <sub>v</sub>		
		(15 or 200 cm)	(cm)	(°C)	permeability)		(cm <sup>2</sup> )		
		(10 11 200 111)	(=/	( - /	, , , , , ,	ı			
		15	396	24	SCL				
	MORE ↓	ENTER Vandose zone SCS soil type Lookup Soil Parameters	ENTER  Vadose zone soil dry bulk density,  p <sub>b</sub> <sup>A</sup> (g/cm³)	ENTER Vadose zone soil total porosity, n  (unitless)	ENTER Vadose zone soil water-filled porosity, $\theta_w^V$ $(cm^3/cm^3)$	(1	ENTER Average vapor flow rate into bldg. Leave blank to calcul Q <sub>soil</sub> (L/m)	ate)	
		SCL	1.63	0.384	0.146		5		
	MORE								
	₩OKE	ENTER	ENTER	ENTER	ENTER	ENTER	ENTER		
		Averaging	Averaging						
		time for	time for	Exposure	Exposure	Exposure	Air Exchange		
(		carcinogens,	noncarcinogens,	duration,	frequency,	Time	Rate		
	Lookup Receptor Parameters	$AT_C$	AT <sub>NC</sub>	ED	EF	ET	ACH		
Į	Parameters	(yrs)	(yrs)	(yrs)	(days/yr)	(hrs/day)	(hour) <sup>-1</sup>	<b>=</b>	
								-	
NEW=>	Residential	70	26	25	182	8	1	]	

END

(NEW)

December 2014

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

DATA ENTRY SHEET

Scenario: Staff
Chemical: Benzene

						i					
·			Gas Concentratio						ts Summary		
Reset to	ENTER	ENTER		ENTER				Attenuation Factor	Indoor Air Conc.	Cancer	Noncancer
Defaults	Chemical	Soil gas	OR	Soil gas			(µg/m³) 3.80E+02	(unitless) 5.8E-04	(µg/m³) <b>2.2E-01</b>	Risk 5.2E-07	Hazard 1.6E-02
	CAS No.	conc.,	J.(	conc.,			5.552.02	J.JL 04		J	2.02.02
	(numbers only,	C <sub>g</sub>		C <sub>g</sub>							
	no dashes)	(μg/m³)		(ppmv)	Chemical						
	,	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		<u> </u>				=			
	71432	3.80E+02			Benzene			_			
					MESSAGE: See VLOG and/or toxicity criteria	OKUP table comments on ch for this chemical.	nemical properties				
	ENTER Depth	ENTER	ENTER	ENTER		ENTER					
MORE	below grade	Soil gas		Vadose zone		User-defined					
•	to bottom	sampling	Average	SCS		vadose zone					
	of enclosed space floor,	depth	soil	soil type (used to estimate	OR	soil vapor permeability,					
	space iloor, L <sub>F</sub>	below grade, L <sub>s</sub>	temperature, T <sub>S</sub>	soil vapor	UK	permeability, k <sub>v</sub>					
	(15 or 200 cm)		(°C)	permeability)		(cm <sup>2</sup> )					
	(15 01 200 011)	(cm)	( 0)	permeability)		(CIII )					
	15	132	24	SI							
MORE ↓	ENTER Vandose zone SCS soil type Lookup Soil Parameters	ENTER Vadose zone soil dry bulk density,	ENTER Vadose zone soil total porosity, n <sup>V</sup>	ENTER Vadose zone soil water-filled porosity, $\theta_w^V$		ENTER Average vapor flow rate into bldg. (Leave blank to calcula	ate)				
		(g/cm <sup>3</sup> )	(unitless)	θ <sub>w</sub> (cm³/cm³)		Q <sub>soil</sub> (L/m)					
	SI	(g/cm <sup>3</sup> )	(unitless) 0.489				:				
MORE ¥	ENTER	1.35		(cm <sup>3</sup> /cm <sup>3</sup> )	ENTER	(L/m)					
		1.35	0.489	(cm <sup>3</sup> /cm <sup>3</sup> ) 0.167	<b>ENTER</b> Exposure	(L/m) 5					
•	ENTER Averaging time for carcinogens,	1.35  ENTER Averaging time for noncarcinogens,	0.489  ENTER  Exposure duration,	(cm³/cm³)  0.167  ENTER  Exposure frequency,	Exposure Time	(L/m) 5  ENTER Air Exchange Rate					
Lookup Receptor	ENTER Averaging time for carcinogens,	1.35  ENTER Averaging time for	0.489  ENTER  Exposure	(cm³/cm³)  0.167  ENTER  Exposure	Exposure	(L/m) 5  ENTER Air Exchange Rate ACH					
<b>.</b>	ENTER Averaging time for carcinogens,	1.35  ENTER Averaging time for noncarcinogens,	0.489  ENTER  Exposure duration,	(cm³/cm³)  0.167  ENTER  Exposure frequency,	Exposure Time	(L/m) 5  ENTER Air Exchange Rate					
Lookup Receptor Parameters	ENTER Averaging time for carcinogens, ATC (yrs)	ENTER Averaging time for noncarcinogens, AT <sub>NC</sub> (yrs)	0.489  ENTER  Exposure duration, ED (yrs)	(cm³/cm³)  0.167  ENTER  Exposure frequency, EF (days/yr)	Exposure Time ET (hrs/day)	(L/m)  5  ENTER  Air Exchange Rate ACH (hour) <sup>-1</sup>					
Lookup Receptor	ENTER Averaging time for carcinogens, AT <sub>C</sub>	ENTER Averaging time for noncarcinogens, AT <sub>NC</sub>	0.489  ENTER  Exposure duration, ED	(cm³/cm³)  0.167  ENTER  Exposure frequency, EF	Exposure Time ET	(L/m) 5  ENTER Air Exchange Rate ACH					

December 2014

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

DATA ENTRY SHEET

Scenario: Staff Chemical: Benzene

				DATAENTRYS								
			Soil (	Gas Concentration	n Data				Result	ts Summary		
D.	eset to	ENTER	ENTER		ENTER				Attenuation Factor	Indoor Air Conc.	Cancer	Noncancer
	eset to efaults		Soil		Soil			(µg/m³)	(unitless)	(µg/m³)	Risk	Hazard
	Crauits	Chemical	gas	OR	gas			1.08E+03	3.9E-04	4.2E-01	9.8E-07	3.0E-02
		CAS No.	conc.,		conc.,							
		(numbers only,	C <sub>g</sub>		$C_{g}$							
		no dashes)	(µg/m³)		(ppmv)	Chemical			=			
									_			
		71432	1.08E+03			Benzene			_			
						MESSAGE: See VLOC and/or toxicity criteria	OKUP table comments on ch for this chemical.	nemical properties				
		ENTER Depth	ENTER	ENTER	ENTER	•	ENTER					
	MORE	below grade	Soil gas		Vadose zone		User-defined					
	<b>4</b>	to bottom	sampling	Average	SCS		vadose zone					
		of enclosed	depth	soil	soil type		soil vapor					
		space floor,	below grade,	temperature,	(used to estimate	OR	permeability,					
		L <sub>F</sub>	L <sub>s</sub>	T <sub>S</sub>	soil vapor		k <sub>v</sub>					
		(15 or 200 cm)	(cm)	(°C)	permeability)	i	(cm <sup>2</sup> )					
		15	396	24	S	Í		-				
		10	390	24	J							
		ENTER	ENTER	ENTER	ENTER		ENTER					
	MORE	Vandose zone	Vadose zone	Vadose zone	Vadose zone		Average vapor					
	Ψ	SCS	soil dry	soil total	soil water-filled		flow rate into bldg.					
		soil type	bulk density,	porosity,	porosity,		(Leave blank to calcula	ate)				
		Lookup Soil	$\rho_b^{A}$	$n^V$	$\theta_{w}^{V}$		$Q_{soil}$					
		Parameters	(g/cm <sup>3</sup> )	(unitless)	(cm <sup>3</sup> /cm <sup>3</sup> )	:	(L/m)	=				
			1 400 1	2.275	0.054	1		1				
		S	1.66	0.375	0.054		5	J				
	MORE											
	•	ENTER	ENTER	ENTER	ENTER	ENTER	ENTER					
		Averaging	Averaging									
		time for	time for	Exposure	Exposure	Exposure	Air Exchange					
<u> </u>	less Desentin	carcinogens,	noncarcinogens,	duration,	frequency,	Time	Rate					
[	ookup Receptor. Parameters	AT <sub>C</sub>	AT <sub>NC</sub>	ED	EF	ET	ACH					
Ĺ	· · · · · · · · · · · · · · · · · · ·	(yrs)	(yrs)	(yrs)	(days/yr)	(hrs/day)	(hour) <sup>-1</sup>	=				
NEW=>	Residential	70	26	25	250	8	1	1				
IAE AA->	Nesideriliai	70	20	20	200	(NEW)	(NEW)	J				
Г	END					(14244)	(14211)					

December 2014

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

DATA ENTRY SHEET

Scenario: Staff
Chemical: Benzene

Reset to   Defaults   Soil Gase Concentration Data   Soil Gase Concentration Data   Soil Gase Conc. Alternation Factor   Index of Par Conc. Conc.   Conc.										Possili	te Summanı		
Reset to Defaults			ENTER		Gas Concentration		1		0-:100			0	N
Chemical   Gas	R	teset to	ENTER										
CAS No. (cumbers only. Cg Cg Cpmw) Chemical    Note	D	efaults	Chemical		OR				(μg/III ) 1.08E+03				
(numbers only, no dashes) (µg/m²) (pgmw) Chemical    T1432	Ĺ			_		-		!					
NORE   Sci   Soil day   Soil d			(numbers only,										
MORE			no dashes)				Chemical						
MORE  NORE				,,,,,		<u> </u>				=			
MORE			71432	1.08E+03			Benzene			_			
MORE									nemical properties				
To bottom   Sampling   Average   SCS   Soil type   Soil vapor   Soi	_				ENTER	ENTER		ENTER					
of enclosed depth soil space floor, below grade, temperature, used to estimate space floor, below grade, temperature, used to estimate or permeability, soil vapor k, large floor, large f													
space floor, below grade, temperature, Lr, Lz, Ts, soil vapor R, soil va	L	Ψ											
L <sub>F</sub> L <sub>s</sub> T <sub>S</sub> Soll vapor							OP						
Comparison   Co				•		`	OK						
MORE						· ·							
MORE  Vandose zone Vadose zone Vadose zone Vadose zone Vadose zone SCS soil dry soil total soil water-filled flow rate into bldg.  Lookup Soil Pparameters  (g/cm²) (unitless) (cm²/cm²)  SCL 1.63 0.384 0.146 5   MORE  ENTER Vargaging Averaging Averaging Lookup Soil time for carcinogens, Averaging Lookup Soil Parameters  Lookup Receptor Parameters  Lookup Receptor Parameters  (g/sc) (yrs) (yrs) (yrs) (days/yr) (hrs/day) (houry¹  NEW→ Residential 70 26 25 250 8 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			(15 OF 200 CIII)	(CIII)	( 0)	permeability)	•	(CIII )					
MORE  SCS Soil type bulk density, porosity, Cunitless)  SCL  I.63  Noreage vapor Soil type bulk density, porosity, Cunitless)  SCL  I.63  I.63  SCL  I.63  SCL  I.63  SCL  I.63  SCL  I.63  I.63  SCL  I.63  I.64  SCL  I.63  SCL  I.63  I.63  SCL  I.63  SCL  I.63  I.63  SCL  I.63  I.63  SCL  I.63  I.63  SCL  I.63  I.64  SCL  I.63  SCL  I.63  I.63  SCL  I.63  I.64  I.65			15	396	24	SCL			1				
MORE  ↓  ENTER  Averaging  time for Exposure Exposure Exposure Air Exchange carcinogens, noncarcinogens, duration, frequency, Time Rate  AT <sub>C</sub> AT <sub>NC</sub> ED  EF  ET  ACH  (yrs)  (yrs)  (yrs)  (yrs)  (yrs)  (yrs)  (yrs)  (yrs)  (NEW)  (NEW)			Vandose zone SCS soil type Lookup Soil	Vadose zone soil dry bulk density, ρ <sub>b</sub> <sup>A</sup>	Vadose zone soil total porosity, n <sup>V</sup>	Vadose zone soil water-filled porosity, $\theta_{w}^{\ \ V}$		Average vapor flow rate into bldg. (Leave blank to calcula Q <sub>soil</sub>					
ENTER Averaging Averaging time for time for Exposure Exposure Exposure Air Exchange carcinogens, noncarcinogens, duration, frequency, Time Rate  AT <sub>C</sub> AT <sub>NC</sub> ED EF ET ACH  (yrs) (yrs) (yrs) (days/yr) (hrs/day) (hour)-1  REW=> Residential 70 26 25 250 8 1  (NEW) (NEW)	_		SCL	1.63	0.384	0.146		5					
Lookup Receptor Parameters  Carcinogens, noncarcinogens, duration, frequency, Time Rate  AT <sub>C</sub> AT <sub>NC</sub> ED EF ET ACH  (yrs) (yrs) (yrs) (yrs) (days/yr) (hrs/day) (hour) <sup>-1</sup> Residential  70 26 25 250 8 1  (NEW) (NEW)					ENTER	ENTER	ENTER	ENTER					
Lookup Receptor Parameters													
Parameters         (yrs)         (yrs)         (yrs)         (days/yr)         (hrs/day)         (hour) <sup>-1</sup> NEW=>         Residential         70         26         25         250         8         1           (NEW)         (NEW)         (NEW)	<u> </u>	David											
(yrs)         (yrs)         (yrs)         (days/yr)         (hrs/day)         (hour)**           NEW=>         Residential         70         26         25         250         8         1           (NEW)         (NEW)         (NEW)													
(NEW) (NEW)	L		(yrs)	(yrs)	(yrs)	(days/yr)	(hrs/day)	(hour) <sup>-</sup>	=				
(NEW) (NEW)	NEW=>	Residential	70	26	25	250	8	1	]				
				1					1				
		END					, ,	, ,					

December 2014

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

DATA ENTRY SHEET

Scenario: Student Chemical: Benzene

Reset to   Defaults   Sulf Cancer Concentration Data   Sulf Cancer   S					DATALINTIC								
Soil Defaults	,				Gas Concentratio		1						
Defaults	Re	eset to	ENTER										
CAS No. (cumbers only, Cq			Chemical		OR								
(numbers only, no dashes) (ug/m²) (ppmy) Chemical    1452   3.80E+02				-	OIX	-			3.80L+02	3.0L-04	2.21-01	0.0L-08	1.01-03
NORE													
MORE			-				Chemical						
MORE  NORE			no addition)	(F9)		(pp/)	Giloinida			=			
MORE  NORE			71432	3.80E+02			Benzene			_			
MORE									nemical properties	_			
To bottom   Sampling   Average   SCS   Soil type				ENTER	ENTER	ENTER							
of enclosed depth soil space floor, below grade, temperature, (used to estimate space floor, below grade, temperature, (used to estimate soil vapor permeability). L₁ T₃ soil vapor k,			below grade	Soil gas				User-defined					
Space floor,   below grade,   temperature,   Ls		Ψ		sampling									
L <sub>F</sub> L <sub>s</sub> T <sub>S</sub> Soll vapor													
MORE				•		,	OR						
The second of t			•										
MORE  Vandose zone Vadose zone Vadose zone Vadose zone SCS soil dry soil total soil water-filled flow rate into bldg. (Leave blank to calculate)  Lookup Soil Type bulk density, porosity, porosity, porosity, porosity, (Leave blank to calculate)  Lookup Soil Pps (g/cm²) (unitless) (cm³/cm²) (U/m)  SI 1.35 0.489 0.167 5   MORE  ENTER ENTER ENTER ENTER ENTER ENTER  Averaging Averaging time for time for carcinogens, a duration, frequency, Time Rate  Lookup Receptor Parameters  ATC ATNC ED EF ET ACH Parameters  (yrs) (yrs) (yrs) (days/yr) (hrs/day) (hour)¹  IEW→ Residential 70 26 4 180 8 1 1			(15 or 200 cm)	(cm)	(°C)	permeability)	•	(cm²)	ļ				
MORE  Vandose zone Vadose zone Vadose zone Vadose zone SCS soil dry soil total soil water-filled flow rate into bldg. (Leave blank to calculate)  Lookup Soil Type bulk density, porosity, porosity, porosity, porosity, (Leave blank to calculate)  Lookup Soil Pps (g/cm²) (unitless) (cm³/cm²) (U/m)  SI 1.35 0.489 0.167 5   MORE  ENTER ENTER ENTER ENTER ENTER ENTER  Averaging Averaging time for time for carcinogens, a duration, frequency, Time Rate  Lookup Receptor Parameters  ATC ATNC ED EF ET ACH Parameters  (yrs) (yrs) (yrs) (days/yr) (hrs/day) (hour)¹  IEW→ Residential 70 26 4 180 8 1 1			15	122	24	CI.	1						
MORE  SCS Soli dry Soli type bulk density, porosity, porosity, porosity, porosity, (Leave blank to calculate)  Lookup Soil Parameters  (g/cm³)  Interest (g/cm³)  Lookup Receptor Parameters  Lookup Receptor Parameters  Vadose zone Soil dry Soil type bulk density, porosity, porosity, porosity, (Leave blank to calculate)  (g/cm³)  (unitless)  (cm³/cm³)  (unitless)  (cm³/cm³)  (L/m)  SI  1.35  0.489  0.167  ENTER ENTER ENTER ENTER ENTER Averaging time for carcinogens, noncarcinogens, duration, frequency, Time Parameters  Lookup Receptor Parameters  (yrs)  (yrs)  (yrs)  (yrs)  (yrs)  (days/yr)  (hes/w)  (NEW)  (NEW)  (NEW)  Newy Caging flow rate into bidg. (Leave blank to calculate)  (Low blank to calculate)  (Low blank to calculate)  (Low)  (L/m)   SI  Lookup Soil Parameters  ATE Averaging time for carcinogens, noncarcinogens, duration, frequency, Time Rate ET ACH (heave) (hour)¹¹			15	132	24	51			]				
MORE  WORE  WORE  Averaging Averaging time for time for Exposure Exposure Exposure Rate  Lookup Receptor Parameters  ATC ATNC ED EF ET ACH  (yrs) (yrs) (yrs) (yrs) (days/yr) (hrs/day) (hour)¹¹  EW─── Residential  TO 26 4 180 8 1  (NEW) (NEW)			Vandose zone SCS soil type Lookup Soil	Vadose zone soil dry bulk density, ρ <sub>b</sub> <sup>A</sup>	Vadose zone soil total porosity, n <sup>V</sup>	$\begin{array}{c} \text{Vadose zone} \\ \text{soil water-filled} \\ \text{porosity,} \\ \theta_{\text{w}}^{\ \ \text{V}} \end{array}$		Average vapor flow rate into bldg. (Leave blank to calcula ${\sf Q}_{\sf soil}$					
MORE  ↓  ENTER  Averaging  Averaging  time for Exposure Exposure Exposure Air Exchange carcinogens, noncarcinogens, duration, frequency, Time Rate  AT <sub>C</sub> AT <sub>NC</sub> ED  EF  ET  ACH  (yrs)  (yrs)  (yrs)  (yrs)  (yrs)  (yrs)  (yrs)  (yrs)  (NEW)  (NEW)			SI	,			: 		<b>=</b> ]				
ENTER ENTER ENTER ENTER ENTER ENTER  Averaging Averaging time for time for Exposure Exposure Exposure Air Exchange carcinogens, noncarcinogens, duration, frequency, Time Rate  AT <sub>C</sub> AT <sub>NC</sub> ED EF ET ACH  (yrs) (yrs) (yrs) (days/yr) (hrs/day) (hour) <sup>-1</sup>   EW=> Residential							•		-				
Lookup Receptor Parameters  Carcinogens, noncarcinogens, duration, frequency, Time Rate  AT <sub>C</sub> AT <sub>NC</sub> ED EF ET ACH  (yrs) (yrs) (yrs) (yrs) (days/yr) (hrs/day) (hour) <sup>-1</sup> Residential  70 26 4 180 8 1  (NEW) (NEW)					ENTER	ENTER	ENTER	ENTER					
Lookup Receptor Parameters         ATC         AT <sub>NC</sub> ED         EF         ET         ACH           (yrs)         (yrs)         (yrs)         (yrs)         (hrs/day)         (hour) <sup>-1</sup> IEW=>         Residential         70         26         4         180         8         1           (NEW)         (NEW)         (NEW)				time for									
Parameters   (yrs) (yrs) (yrs) (days/yr) (hrs/day) (hour)-1													
(yrs)         (yrs)         (yrs)         (days/yr)         (hrs/day)         (hour)           IEW=>         Residential         70         26         4         180         8         1           (NEW)         (NEW)         (NEW)	L	ookup Receptor	$AT_C$	AT <sub>NC</sub>	ED	EF	ET						
(NEW) (NEW)	L_	. urumotera	(yrs)	(yrs)	(yrs)	(days/yr)	(hrs/day)	(hour) <sup>-1</sup>	<u> </u>				
(NEW) (NEW)	IFW=>	Residential	70	26	4	180	8	1 1	1				
		. Coldonida		20	т	100			J				
	Г	END					(11213)	(::=::/					

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Reset to

Defaults

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

Scenario: Student Chemical: Benzene

#### DATA ENTRY SHEET

	Soil	I Gas Concentration	on Data			Result
ENTER	ENTER		ENTER		Soil Gas Conc.	Attenuation Factor
	Soil		Soil		(µg/m³)	(unitless)
Chemical	gas	OR	gas		1.08E+03	3.9E-04
CAS No.	conc.,		conc.,			
(numbers only,	$C_g$		$C_g$			
no dashes)	(μg/m³)	=	(ppmv)	Chemical		=
71432	1.08E+03			Benzene		= =

MESSAGE: See VLOOKUP table comments on chemical properties

**Results Summary** 

Indoor Air Conc.

 $(\mu g/m^3)$ 

4.2E-01

Cancer

Risk

1.1E-07

Noncancer

Hazard

3.5E-03

MORE	
•	

				and/or toxicity criteria for this chemical.			
ENTER	ENTER	ENTER	ENTER		ENTER		
Depth							
below grade	Soil gas		Vadose zone		User-defined		
to bottom	sampling	Average	SCS		vadose zone		
of enclosed	depth	soil	soil type		soil vapor		
space floor,	below grade,	temperature,	(used to estimate	OR	permeability,		
$L_F$	L <sub>s</sub>	Ts	soil vapor		$k_v$		
(15 or 200 cm)	(cm)	(°C)	permeability)	•	(cm <sup>2</sup> )		
	•	•		•			
15	396	24	S				

MORE ¥	ENTER Vandose zone SCS soil type Lookup Soil Parameters	ENTER Vadose zone soil dry bulk density,  pb  (g/cm³)	ENTER Vadose zone soil total porosity, n  (unitless)	ENTER Vadose zone soil water-filled porosity, $\theta_w^V$ $(cm^3/cm^3)$		ENTER Average vapor flow rate into bldg. (Leave blank to calculate) Q <sub>soil</sub> (L/m)
	S	1.66	0.375	0.054		5
MORE ↓	ENTER Averaging time for	<b>ENTER</b> Averaging time for	ENTER  Exposure	ENTER  Exposure	ENTER Exposure	<b>ENTER</b> Air Exchange
Lookup Receptor Parameters	carcinogens, AT <sub>C</sub> (yrs)	noncarcinogens,  AT <sub>NC</sub> (yrs)	duration, ED (yrs)	frequency,  EF  (days/yr)	Time ET (hrs/day)	Rate ACH (hour) <sup>-1</sup>
NEW=> Residential	70	26	4	180	8 (NEW)	1 (NEW)

December 2014

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

DATA ENTRY SHEET

Scenario: Student Chemical: Benzene

Reset to   Defaults   Solid Gas Concentration Data   Solid Gas Conc. Alternation Factor   Indexing F										Possili	te Summanı		
Rest to   Defaults   Chemical   gas   CR   gas   CAS No.   CONC., CONC., CONC., CONC., (numbers only, C. G.			ENTER		Gas Concentration		1		0-11-0-			0	Mana
Chemical   Gas	R	teset to	ENTER										
CAS No. (numbers only. Cq cpmw)	D	efaults	Chemical		OR				(μg/iii ) 1.08E+03				
(numbers only, no dashes) (ug/m²) (ppmw) Chemical    T1432	Ĺ			-		-							
NORE			(numbers only,										
MORE			no dashes)				Chemical						
MORE  NORE				,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		<u> </u>				=			
MORE			71432	1.08E+03			Benzene			_			
MORE									hemical properties				
MORE			ENTED	ENTED	ENTER	ENTED	and/or toxicity criteria		7				
MORE				ENTER	ENTER	ENTER		ENTER					
of enclosed depth soil space floor, below grade, temperature, used to estimate space floor, below grade, temperature, used to estimate on the permeability, soil vapor k,				Soil gas		Vadose zone		User-defined					
space floor, below grade, temperature, Lr, Lz, Ts, soil vapor roil		•		sampling									
Lr Ls Ts Soll vapor (cm²) (°C) permeability) (cm²)  15 396 24 SCL    MORE													
Comparison   Co				•		`	OR	•					
MORE													
MORE  Vandose zone Vadose zone Vadose zone Vadose zone Soli water-filled flow rate into bldg.  SCS Soli type bulk density, porosity, po			(15 or 200 cm)	(cm)	(°C)	permeability)	•	(cm²)	1				
MORE  Vandose zone Vadose zone Vadose zone Vadose zone Soli water-filled flow rate into bldg.  SCS Soli type bulk density, porosity, po			15	306	24	901	1		-				
MORE  SCS Soil type bulk density, porosity, Cunitless)  SCL  I.63  Noreage vapor Soil type bulk density, porosity, Cunitless)  SCL  I.63  I.63  SCL  I.63  I.63  SCL  I.63  I.64  I.65			15	390	24	SCL			1				
MORE  ↓  ENTER  Averaging  time for time for Exposure Exposure Exposure Air Exchange carcinogens, noncarcinogens, duration, frequency, Time Rate  AT <sub>C</sub> AT <sub>NC</sub> ED  EF  ET  ACH  (yrs)  (yrs)  (yrs)  (yrs)  (yrs)  (yrs)  (yrs)  (yrs)  (NEW)  (NEW)			Vandose zone SCS soil type Lookup Soil	Vadose zone soil dry bulk density, ρ <sub>b</sub> <sup>A</sup>	Vadose zone soil total porosity, n <sup>V</sup>	Vadose zone soil water-filled porosity, $\theta_w^{\ V}$		Average vapor flow rate into bldg. (Leave blank to calculate $Q_{\text{soil}}$					
ENTER Averaging Averaging time for time for Exposure Exposure Exposure Air Exchange carcinogens, noncarcinogens, duration, frequency, Time Rate  AT <sub>C</sub> AT <sub>NC</sub> ED EF ET ACH  (yrs) (yrs) (yrs) (days/yr) (hrs/day) (hour)-1  REW=> Residential 70 26 4 180 8 1  (NEW) (NEW)			SCL	1.63	0.384	0.146	]	5	]				
Lookup Receptor Parameters  Carcinogens, noncarcinogens, duration, frequency, Time Rate  AT <sub>C</sub> AT <sub>NC</sub> ED EF ET ACH  (yrs) (yrs) (yrs) (yrs) (days/yr) (hrs/day) (hour)-1  REW=> Residential  70 26 4 180 8 1  (NEW) (NEW)					ENTER	ENTER	ENTER	ENTER					
Lookup Receptor Parameters													
Parameters         (yrs)         (yrs)         (yrs)         (days/yr)         (hrs/day)         (hour) <sup>-1</sup> NEW=>         Residential         70         26         4         180         8         1           (NEW)         (NEW)         (NEW)	Γ.												
(yrs)         (yrs)         (yrs)         (days/yr)         (hrs/day)         (hour)**           NEW=>         Residential         70         26         4         180         8         1           (NEW)         (NEW)         (NEW)													
(NEW) (NEW)	L		(yrs)	(yrs)	(yrs)	(days/yr)	(hrs/day)	(hour) <sup>-1</sup>	=				
(NEW) (NEW)	NEW=>	Residential	70	26	4	180	8	1	1				
						1 .00			•				
		END											

December 2014

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

DATA ENTRY SHEET

Scenario: Teacher Chemical: Ethylbenzene

**Results Summary** 

Indoor Air Conc.

 $(\mu g/m^3)$ 

4.1E-01

Cancer

Risk

6.1E-08

Noncancer

Hazard

6.6E-05

									_
		Soil	Gas Concentration	n Data				Result	t
<u> </u>	ENTER	ENTER	Cas Concentration	ENTER			Soil Gas Conc.	Attenuation Factor	_
Reset to		Soil		Soil			(µg/m <sup>3</sup> )	(unitless)	
Defaults	Chemical	gas	OR	gas			1.30E+03	3.2E-04	
	CAS No.	conc.,		conc.,					_
	(numbers only,	C <sub>g</sub>		$C_g$					
	no dashes)	(μg/m³)		(ppmv)	Chemical				
		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	!	<u> </u>				=	
	100414	1.30E+03			Ethylbenzene			<del>-</del>	
	ENTER	ENTER	ENTER	ENTER		ENTER			
	Depth								
MORE	below grade	Soil gas		Vadose zone		User-defined			
Ψ.	to bottom	sampling	Average	SCS		vadose zone			
	of enclosed	depth	soil	soil type		soil vapor			
	space floor,	below grade,	temperature,	(used to estimate	OR	permeability,			
	$L_{F}$	$L_s$	Ts	soil vapor		k <sub>v</sub>			
	(15 or 200 cm)	(cm)	(°C)	permeability)		(cm <sup>2</sup> )			
	15	396	24	S					
MORE ↓	ENTER Vandose zone SCS soil type Lookup Soil Parameters	ENTER Vadose zone soil dry bulk density,	ENTER Vadose zone soil total porosity, n <sup>V</sup>	ENTER  Vadose zone soil water-filled porosity, $\theta_w^V$		ENTER Average vapor flow rate into bldg. (Leave blank to calculate)	ate)		
	1 diameters	(g/cm <sup>3</sup> )	(unitless)	(cm <sup>3</sup> /cm <sup>3</sup> )		(L/m)	<b>=</b> :		
	S	1.66	0.375	0.054		5	1		
	5	1.00	0.375	0.054		5			
MORE									
WIORE <b>↓</b>	ENTER	ENTER	ENTER	ENTER	ENTER	ENTER			
	Averaging	Averaging							
	time for	time for	Exposure	Exposure	Exposure	Air Exchange			
	carcinogens,	noncarcinogens,	duration,	frequency,	Time	Rate			
Lookup Receptor	AT <sub>C</sub>	AT <sub>NC</sub>	ED	EF	ET	ACH			
Parameters	(yrs)	(yrs)	(yrs)	(days/yr)	(hrs/day)	(hour) <sup>-1</sup>	<u>.</u>		
				,			- 1		
Residential	70	26	25	182	8	1			
END					(NEW)	(NEW)			

December 2014

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

DATA ENTRY SHEET

Scenario: Teacher Chemical: Ethylbenzene

**Results Summary** 

Indoor Air Conc.

 $(\mu g/m^3)$ 

1.7E-01

Cancer

Risk

2.6E-08

Noncancer

Hazard

2.8E-05

								Result
		Soil (	Gas Concentration	n Data				iveaui
	ENTER	ENTER	Sas Concentration	ENTER			Soil Gas Conc	Attenuation Factor
Reset to		Soil		Soil			(μg/m³)	(unitless)
Defaults	Chemical	gas	OR	gas			1.30E+03	1.3E-04
	CAS No.	conc.,		conc.,				
	(numbers only,	C <sub>q</sub>		C <sub>q</sub>				
	no dashes)	(μg/m <sup>3</sup> )		(ppmv)	Chemical			
	no dasnes)	(μg/111 )		(ррпіч)	Cileilicai			=
	100414	1.30E+03			Ethylbenzene			_ _
	ENTER Depth	ENTER	ENTER	ENTER		ENTER	1	
MORE	below grade	Soil gas		Vadose zone		User-defined		
•	to bottom	sampling	Average	SCS		vadose zone		
	of enclosed	depth	soil	soil type		soil vapor		
	space floor,	below grade,	temperature,	(used to estimate	OR	permeability,		
	$L_F$	$L_s$	Ts	soil vapor		$k_v$		
	(15 or 200 cm)	(cm)	(°C)	permeability)		(cm <sup>2</sup> )		
		` '						
	15	396	24	SCL			J	
MORE ↓	ENTER Vandose zone SCS soil type	ENTER Vadose zone soil dry bulk density,	ENTER Vadose zone soil total porosity,	ENTER Vadose zone soil water-filled porosity,		ENTER Average vapor flow rate into bldg. (Leave blank to calcul		
	ENTER Vandose zone SCS soil type	ENTER Vadose zone soil dry bulk density,	ENTER Vadose zone soil total	ENTER Vadose zone soil water-filled porosity,		Average vapor flow rate into bldg. (Leave blank to calcul		
	ENTER Vandose zone SCS	ENTER Vadose zone soil dry bulk density, $\rho_b^A$	ENTER Vadose zone soil total porosity, n <sup>V</sup>	ENTER Vadose zone soil water-filled porosity, $\theta_w^V$		Average vapor flow rate into bldg. (Leave blank to calcul $\mathbf{Q}_{\text{soil}}$		
	ENTER Vandose zone SCS soil type Lookup Soil	ENTER Vadose zone soil dry bulk density,	ENTER Vadose zone soil total porosity,	ENTER Vadose zone soil water-filled porosity,		Average vapor flow rate into bldg. (Leave blank to calcul		
	ENTER Vandose zone SCS soil type Lookup Soil	ENTER Vadose zone soil dry bulk density, $\rho_b^A$	ENTER Vadose zone soil total porosity, n <sup>V</sup>	ENTER Vadose zone soil water-filled porosity, $\theta_w^V$		Average vapor flow rate into bldg. (Leave blank to calcul $\mathbf{Q}_{\text{soil}}$		
•	ENTER Vandose zone SCS soil type Lookup Soil Parameters	ENTER  Vadose zone soil dry bulk density,  Pb  (g/cm³)	ENTER  Vadose zone soil total porosity, n <sup>V</sup> (unitless)	ENTER  Vadose zone soil water-filled porosity, $\theta_w^V$ $(cm^3/cm^3)$		Average vapor flow rate into bldg. (Leave blank to calcul Q <sub>soil</sub> (L/m)		
	ENTER Vandose zone SCS soil type Lookup Soil Parameters	ENTER  Vadose zone soil dry bulk density,  Pb  (g/cm³)	ENTER  Vadose zone soil total porosity, n <sup>V</sup> (unitless)	ENTER  Vadose zone soil water-filled porosity, $\theta_w^V$ $(cm^3/cm^3)$	ENTER	Average vapor flow rate into bldg. (Leave blank to calcul Q <sub>soil</sub> (L/m)		
₩ORE	ENTER Vandose zone SCS soil type Lookup Soil Parameters  SCL	ENTER Vadose zone soil dry bulk density, Pb (g/cm³)  1.63	ENTER Vadose zone soil total porosity, n v (unitless)	ENTER  Vadose zone soil water-filled porosity, $\theta_w^{\vee}$ $(cm^3/cm^3)$	ENTER	Average vapor flow rate into bldg. (Leave blank to calcul Q <sub>soil</sub> (L/m)		
₩ORE	ENTER Vandose zone SCS Soil type Lookup Soil Parameters  SCL	ENTER Vadose zone soil dry bulk density, \$\rho_b^A\$ (g/cm³)	ENTER Vadose zone soil total porosity, n v (unitless)	ENTER  Vadose zone soil water-filled porosity, $\theta_w^{\vee}$ $(cm^3/cm^3)$	<b>ENTER</b> Exposure	Average vapor flow rate into bldg. (Leave blank to calcul Q <sub>soil</sub> (L/m)		
₩ORE	ENTER Vandose zone SCS soil type Lookup Soil Parameters  SCL  ENTER Averaging	ENTER Vadose zone soil dry bulk density, $\rho_b{}^A$ (g/cm³)  1.63  ENTER Averaging	ENTER Vadose zone soil total porosity, n (unitless)  0.384  ENTER	ENTER Vadose zone soil water-filled porosity, $\theta_w^V$ $(cm^3/cm^3)$ 0.146  ENTER		Average vapor flow rate into bldg. (Leave blank to calcul Q <sub>soil</sub> (L/m)		
MORE U	ENTER Vandose zone SCS soil type Lookup Soil Parameters  SCL  ENTER Averaging time for	ENTER Vadose zone soil dry bulk density, Pb (g/cm³)  1.63  ENTER Averaging time for	ENTER Vadose zone soil total porosity, n (unitless)  0.384  ENTER Exposure	ENTER Vadose zone soil water-filled porosity, $\theta_w^V$ $(cm^3/cm^3)$ 0.146  ENTER  Exposure	Exposure	Average vapor flow rate into bldg. (Leave blank to calcul Q <sub>soil</sub> (L/m)  5  ENTER  Air Exchange		
MORE ¥	ENTER Vandose zone SCS soil type Lookup Soil Parameters  SCL  ENTER Averaging time for carcinogens, AT <sub>C</sub>	ENTER Vadose zone soil dry bulk density, Pb (g/cm³)  1.63  ENTER Averaging time for noncarcinogens, AT <sub>NC</sub>	ENTER Vadose zone soil total porosity, n (unitless)  0.384  ENTER  Exposure duration, ED	ENTER  Vadose zone soil water-filled porosity, $\theta_w^V$ $(cm^3/cm^3)$ 0.146  ENTER  Exposure frequency, EF	Exposure Time	Average vapor flow rate into bldg. (Leave blank to calcul Q <sub>soil</sub> (L/m) 5		
MORE U	ENTER Vandose zone SCS soil type Lookup Soil Parameters  SCL  ENTER Averaging time for carcinogens,	ENTER Vadose zone soil dry bulk density, Pb (g/cm³)  1.63  ENTER Averaging time for noncarcinogens,	ENTER Vadose zone soil total porosity, n (unitless)  0.384  ENTER  Exposure duration,	ENTER  Vadose zone soil water-filled porosity, $\theta_w^V$ $(cm^3/cm^3)$ 0.146  ENTER  Exposure frequency,	Exposure Time ET	Average vapor flow rate into bldg. (Leave blank to calcul Q <sub>soil</sub> (L/m)  5  ENTER  Air Exchange Rate ACH		
MORE U	ENTER Vandose zone SCS soil type Lookup Soil Parameters  SCL  ENTER Averaging time for carcinogens, AT <sub>C</sub>	ENTER Vadose zone soil dry bulk density, Pb (g/cm³)  1.63  ENTER Averaging time for noncarcinogens, AT <sub>NC</sub>	ENTER Vadose zone soil total porosity, n (unitless)  0.384  ENTER  Exposure duration, ED	ENTER  Vadose zone soil water-filled porosity, $\theta_w^V$ $(cm^3/cm^3)$ 0.146  ENTER  Exposure frequency, EF	Exposure Time ET	Average vapor flow rate into bldg. (Leave blank to calcul Q <sub>soil</sub> (L/m)  5  ENTER  Air Exchange Rate ACH		

December 2014

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

DATA ENTRY SHEET

Scenario: Staff

Chemical: Ethylbenzene

**Results Summary** 

Indoor Air Conc.

 $(\mu g/m^3)$ 

4.1E-01

Cancer

Risk

8.4E-08

Noncancer

Hazard

9.1E-05

			Coil	Gas Concentration	n Data				Result
		ENTER	ENTER	Sas Concentration	ENTER			Soil Gas Conc	Attenuation Factor
	Reset to	ENTER	Soil		Soil			(μg/m <sup>3</sup> )	(unitless)
	Defaults	Chemical	gas	OR	gas			1.30E+03	3.2E-04
		CAS No.	conc.,		conc.,				
		(numbers only,	C <sub>q</sub>		C <sub>g</sub>				
		no dashes)	(μg/m³)		(ppmv)	Chemical			
		no ddonoo)	(F.g)		(рршу)	<u> </u>			<b>=</b>
		100414	1.30E+03			Ethylbenzene			=
		100414	1.002.00		I I				=
		ENTER	ENTER	ENTER	ENTER		ENTER		
		Depth							
	MORE	below grade	Soil gas		Vadose zone		User-defined		
	Ψ	to bottom	sampling	Average	SCS		vadose zone		
		of enclosed	depth	soil	soil type	OR	soil vapor		
		space floor,	below grade,	temperature,	(used to estimate	UR	permeability,		
		L <sub>F</sub>	L <sub>s</sub>	Ts	soil vapor		k <sub>v</sub>		
		(15 or 200 cm)	(cm)	(°C)	permeability)		(cm <sup>2</sup> )		
		15	396	24	S				
		15	390	24	5			1	
	MORE 🔟	ENTER Vandose zone	ENTER Vadose zone	ENTER Vadose zone	ENTER Vadose zone		ENTER Average vapor		
		SCS soil type	soil dry bulk density,	soil total porosity,	soil water-filled porosity,		flow rate into bldg. (Leave blank to calcul		
		/ · · · · · · · · · · · · · · · · · · ·	ρ <sub>b</sub> <sup>A</sup>	n <sup>V</sup>	$\theta_{\rm w}^{\rm V}$		Q <sub>soil</sub>	ate)	
		Lookup Soil Parameters	ρ <sub>ь</sub> (g/cm <sup>3</sup> )		(cm <sup>3</sup> /cm <sup>3</sup> )				
			(g/cm )	(unitless)	(CIII /CIII )		(L/m)	=	
		S	1.66	0.375	0.054		5	1	
			1.00	0.070	0.004			1	
	MORE								
	Ψ	ENTER	ENTER	ENTER	ENTER	ENTER	ENTER		
		Averaging	Averaging						
		time for	time for	Exposure	Exposure	Exposure	Air Exchange		
1		carcinogens,	noncarcinogens,	duration,	frequency,	Time	Rate		
	Lookup Receptor Parameters	AT <sub>C</sub>	AT <sub>NC</sub>	ED	EF	ET	ACH		
Į	. alameters	(yrs)	(yrs)	(yrs)	(days/yr)	(hrs/day)	(hour) <sup>-1</sup>	=	
								7	
NEW=>	Residential	70	26	25	250	8	1	1	
	END					(NEW)	(NEW)		

December 2014

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

DATA ENTRY SHEET

Scenario: Staff

Chemical: Ethylbenzene

**Results Summary** 

Indoor Air Conc.

 $(\mu g/m^3)$ 

1.7E-01

Cancer

Risk

3.6E-08

Noncancer

Hazard

3.8E-05

			Soil	Gas Concentration	n Data				Resul	lt
_		ENTER	ENTER		ENTER			Soil Gas Conc.	Attenuation Factor	
	Reset to		Soil		Soil			(µg/m <sup>3</sup> )	(unitless)	
L	Defaults	Chemical	gas	OR	gas			1.30E+03	1.3E-04	
		CAS No.	conc.,		conc.,					
		(numbers only,	$C_g$		$C_g$					
		no dashes)	(μg/m <sup>3</sup> )		(ppmv)	Chemical				
			(13)	•	(FF7				=	
		100414	1.30E+03			Ethylbenzene			<del>-</del>	
		ENTER	ENTER	ENTER	ENTER		ENTER			
ſ	MORE	Depth below grade	Soil gas		Vadose zone		User-defined			
	Ψ.	to bottom	sampling	Average	SCS		vadose zone			
		of enclosed	depth	soil	soil type		soil vapor			
		space floor,	below grade,	temperature,	(used to estimate	OR	permeability,			
		$L_F$	$L_s$	Ts	soil vapor		$k_v$			
		(15 or 200 cm)	(cm)	(°C)	permeability)		(cm <sup>2</sup> )			
		15	396	24	SCL					
	MORE ↓	ENTER Vandose zone SCS soil type Lookup Soil Parameters	ENTER Vadose zone soil dry bulk density, pb <sup>A</sup> (g/cm³)	ENTER Vadose zone soil total porosity, n  (unitless)	ENTER Vadose zone soil water-filled porosity, $\theta_w^V$ $(cm^3/cm^3)$		ENTER Average vapor flow rate into bldg. (Leave blank to calcul Q <sub>soil</sub> (L/m)	ate)		
		SCL	1.63	0.384	0.146		5			
	MORE <b>↓</b>	ENTER	ENTER	ENTER	ENTER	ENTER	ENTER			
		Averaging	Averaging	_	_	_				
		time for	time for	Exposure	Exposure	Exposure	Air Exchange			
	Lastera Bassari	carcinogens,	noncarcinogens,	duration,	frequency,	Time	Rate			
	Lookup Receptor Parameters	AT <sub>C</sub>	AT <sub>NC</sub>	ED	EF	ET	ACH			
Ĺ	. arameters	(yrs)	(yrs)	(yrs)	(days/yr)	(hrs/day)	(hour) <sup>-1</sup>	•		
>	Residential	70	26	25	250	8	1	Ī		

END

(NEW)

(NEW)

December 2014

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

DATA ENTRY SHEET

Scenario: Student Chemical: Ethylbenzene

**Results Summary** 

Indoor Air Conc.

 $(\mu g/m^3)$ 

4.1E-01

Cancer

Risk

9.7E-09

Noncancer

Hazard

1.0E-05

			Cail	Gas Concentration	- D-4-				Results
		ENTER	ENTER	Gas Concentration	ENTER			Soil Gas Conc	Attenuation Factor
	Reset to	LIVILIN	Soil		Soil			(μg/m <sup>3</sup> )	(unitless)
	Defaults	Chemical	gas	OR	gas			1.30E+03	3.2E-04
_		CAS No.	conc.,		conc.,				
		(numbers only,	C <sub>g</sub>		C <sub>g</sub>				
		no dashes)	(μg/m <sup>3</sup> )		(ppmv)	Chemical			
		no dasnes)	(μg/111 )		(ррпіч)	Offernical			=
		100414	1.30E+03			Ethylbenzene			=
			1.002 00		<u> </u>				_
								_	
		ENTER	ENTER	ENTER	ENTER		ENTER		
		Depth							
	MORE <b>↓</b>	below grade	Soil gas		Vadose zone		User-defined		
	Ψ	to bottom of enclosed	sampling	Average soil	SCS		vadose zone		
		space floor,	depth below grade,	temperature,	soil type (used to estimate	OR	soil vapor permeability,		
		L <sub>F</sub>	L <sub>s</sub>	T <sub>S</sub>	soil vapor	OIX	k <sub>v</sub>		
		· ·		(°C)	· ·		(cm <sup>2</sup> )		
		(15 or 200 cm)	(cm)	( C)	permeability)		(GIII )		
		15	396	24	S				
			000		,			1	
	MORE ↓	ENTER Vandose zone SCS soil type	ENTER Vadose zone soil dry bulk density,	ENTER Vadose zone soil total porosity,	ENTER Vadose zone soil water-filled porosity,		ENTER Average vapor flow rate into bldg. (Leave blank to calcul		
		Lookup Soil	$\rho_b^{A}$	n <sup>V</sup>	$\theta_{\mathbf{w}}^{V}$		$Q_{soil}$		
		Parameters	(g/cm <sup>3</sup> )	(unitless)	(cm <sup>3</sup> /cm <sup>3</sup> )		(L/m)		
								-	
		S	1.66	0.375	0.054		5	]	
	MORE <b>↓</b>	ENTER	ENTER	ENTER	ENTER	ENTER	ENTER		
		Averaging	Averaging	ENTER	ENTER	ENTER	ENTER		
		time for	time for	Exposure	Exposure	Exposure	Air Exchange		
		carcinogens,	noncarcinogens,	duration,	frequency,	Time	Rate		
	Lookup Receptor	AT <sub>C</sub>	AT <sub>NC</sub>	ED	EF .	ET	ACH		
	Parameters	(yrs)	(yrs)	(yrs)	(days/yr)	(hrs/day)	(hour) <sup>-1</sup>		
	`	(J:-/	VI1	VI1	\jjjj	···-·	, ,	=	
NEW=	> Residential	70	26	4	180	8	1		
						(NEW)	(NEW)		
	END								

December 2014

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

DATA ENTRY SHEET

Scenario: Student Chemical: Ethylbenzene

**Results Summary** 

Indoor Air Conc.

 $(\mu g/m^3)$ 

1.7E-01

Cancer

Risk

4.1E-09

Noncancer

Hazard

4.4E-06

									D
		Soil Gas Concentration Data							Result
		ENTER	ENTER		ENTER			Soil Gas Conc.	Attenuation Factor
	Reset to		Soil		Soil			(µg/m <sup>3</sup> )	(unitless)
	Defaults	Chemical	gas	OR	gas			1.30E+03	1.3E-04
		CAS No.	conc.,		conc.,				
		(numbers only,	C <sub>q</sub>		C <sub>q</sub>				
		no dashes)	(μg/m³)		(ppmv)	Chemical			
		110 dasiles)	(μg/111 )	Ī	(ррпіч)	Chemical			≣
		400444	4.005.00			Etheribeanne			_
		100414	1.30E+03			Ethylbenzene			=
		ENTER	ENTER	ENTER	ENTER		ENTER		
		Depth	ENTER	ENTER	ENTER		ENTER		
	MORE	below grade	Soil gas		Vadose zone		User-defined		
	₩ V	to bottom	sampling	Average	SCS		vadose zone		
		of enclosed	depth	soil	soil type		soil vapor		
		space floor,	below grade,	temperature,	(used to estimate	OR	permeability,		
		L <sub>F</sub>	L <sub>s</sub>	T <sub>s</sub>	soil vapor	OIX	k <sub>v</sub>		
		•		(°C)	· ·		(cm <sup>2</sup> )		
		(15 or 200 cm)	(cm)	( C)	permeability)		(cm )		
					201				
		15	396	24	SCL				
	MORE ¥	ENTER Vandose zone SCS soil type Lookup Soil	ENTER Vadose zone soil dry bulk density, $\rho_b^A$	ENTER Vadose zone soil total porosity, n <sup>V</sup>	ENTER Vadose zone soil water-filled porosity, $\theta_w^V$		ENTER Average vapor flow rate into bldg. (Leave blank to calcula	ate)	
		Parameters	(g/cm <sup>3</sup> )	(unitless)	(cm <sup>3</sup> /cm <sup>3</sup> )		(L/m)		
		SCL	1.63	0.384	0.146		5		
	MORE								
	Ψ	ENTER	ENTER	ENTER	ENTER	ENTER	ENTER		
	·	Averaging	Averaging						
		time for	time for	Exposure	Exposure	Exposure	Air Exchange		
(		carcinogens,	noncarcinogens,	duration,	frequency,	Time	Rate		
	Lookup Receptor	$AT_C$	AT <sub>NC</sub>	ED	EF	ET	ACH		
Į	Parameters	(yrs)	(yrs)	(yrs)	(days/yr)	(hrs/day)	(hour) <sup>-1</sup>		
`				.,		· · · · · · · · · · · · · · · · · · ·	· · · · · · · · · · · · · · · · · · ·		
NEW=>	Residential	70	26	4	180	8	1		

END

(NEW)

(NEW)

December 2014

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

DATA ENTRY SHEET

Scenario: Teacher Chemical: Naphthalene

**Results Summary** 

Indoor Air Conc.

 $(\mu g/m^3)$ 

1.7E-02

Cancer

Risk

3.5E-08

Noncancer

Hazard

9.3E-04

									D
			Soil	Gas Concentration	n Data				Result
	5	ENTER	ENTER		ENTER			Soil Gas Conc.	Attenuation Factor
	Reset to		Soil		Soil			(µg/m <sup>3</sup> )	(unitless)
	Defaults	Chemical	gas	OR	gas			6.80E+01	2.6E-04
		CAS No.	conc.,		conc.,		•		
		(numbers only,	C <sub>q</sub>		C <sub>q</sub>				
		no dashes)	(μg/m³)		(ppmv)	Chemical			
		no dasnes)	(μg/111 )	1	(ррпіч)	Cileilicai			■
		04000	0.005.04	Ī		Nambabalana			=
		91203	6.80E+01			Naphthalene			_
		ENTER	ENTER	ENTER	ENTER		ENTER		
		Depth	ENTER	ENTER	ENTER		ENTER		
	MORE	below grade	Soil gas		Vadose zone		User-defined		
	₩ V	to bottom	sampling	Average	SCS		vadose zone		
		of enclosed	depth	soil	soil type		soil vapor		
		space floor,	below grade,	temperature,	(used to estimate	OR	permeability,		
		L <sub>F</sub>	L <sub>s</sub>	T <sub>s</sub>	soil vapor	Oit	k <sub>v</sub>		
		•		(°C)	· ·		(cm <sup>2</sup> )		
		(15 or 200 cm)	(cm)	( C)	permeability)		(cm )		
		15	396	24	LS				
		15	390	24	LS				
	MORE 🔱	ENTER Vandose zone SCS soil type Lookup Soil	ENTER Vadose zone soil dry bulk density, $\rho_b^A$	ENTER Vadose zone soil total porosity, n <sup>V</sup>	ENTER  Vadose zone soil water-filled porosity, $\theta_w^{\ \ \ \ \ \ }$		ENTER Average vapor flow rate into bldg. (Leave blank to calcula	ate)	
	ļ	Parameters	(g/cm <sup>3</sup> )	(unitless)	(cm <sup>3</sup> /cm <sup>3</sup> )		(L/m)		
			(0 )	(======)	,		(=,)		
		LS	1.62	0.39	0.076		5		
	MORE								
	Ψ	ENTER	ENTER	ENTER	ENTER	ENTER	ENTER		
		Averaging	Averaging						
		time for	time for	Exposure	Exposure	Exposure	Air Exchange		
(		carcinogens,	noncarcinogens,	duration,	frequency,	Time	Rate		
	Lookup Receptor	AT <sub>C</sub>	AT <sub>NC</sub>	ED	EF	ET	ACH		
	Parameters	(yrs)	(yrs)	(yrs)	(days/yr)	(hrs/day)	(hour) <sup>-1</sup>		
1		(310)	0.0)	(310)	(~~,0/,5//	(o/ddy)	\ ·/		
NEW=>	Residential	70	26	25	182	8	1		

END

(NEW)

(NEW)

December 2014

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

DATA ENTRY SHEET

Scenario: Staff

Chemical: Naphthalene

**Results Summary** 

Indoor Air Conc.

 $(\mu g/m^3)$ 

1.7E-02

Cancer

Risk

4.9E-08

Noncancer

Hazard

1.3E-03

		Soil (	Gas Concentration	n Data				Results
	ENTER	ENTER	Jas Concentiation	ENTER			Soil Gas Conc.	Attenuation Factor
Reset to		Soil		Soil			(µg/m <sup>3</sup> )	(unitless)
Defaults	Chemical	gas	OR	gas			6.80E+01	2.6E-04
	CAS No.	conc.,		conc.,		<u>'</u>		
	(numbers only,	$C_{g}$		$C_g$				
	no dashes)	(μg/m <sup>3</sup> )		(ppmv)	Chemical			
		<u> </u>						=
	91203	6.80E+01			Naphthalene			=
								-
	ENTER	ENTER	ENTER	ENTER		ENTER		
	Depth							
MORE	below grade	Soil gas		Vadose zone		User-defined		
<b>↓</b>	to bottom	sampling	Average	SCS		vadose zone		
	of enclosed	depth	soil	soil type		soil vapor		
	space floor,	below grade,	temperature,	(used to estimate	OR	permeability,		
	$L_F$	$L_s$	T <sub>S</sub>	soil vapor		$k_{v}$		
	(15 or 200 cm)	(cm)	(°C)	permeability)		(cm <sup>2</sup> )		
	15	396	24	LS				
	ENTER	ENTER	ENTER	ENTER		ENTER		
MORE	Vandose zone	Vadose zone	Vadose zone	Vadose zone		Average vapor		
Ψ.	SCS	soil dry	soil total	soil water-filled		flow rate into bldg.		
	coil type							
	soil type	bulk density,	porosity,	porosity,		(Leave blank to calcula	ate)	
	Lookup Soil	$\rho_b^A$	porosity, n <sup>v</sup>	$\theta_{\mathbf{w}}^{V}$			ate)	
	7					(Leave blank to calcula	ate)	
	Lookup Soil Parameters	ρ <sub>b</sub> <sup>A</sup> (g/cm <sup>3</sup> )	n <sup>V</sup> (unitless)	θ <sub>w</sub> <sup>V</sup> (cm <sup>3</sup> /cm <sup>3</sup> )		(Leave blank to calcula Q <sub>soil</sub> (L/m)	ate) - 1	
	Lookup Soil	$\rho_b^A$	n <sup>V</sup>	$\theta_{\mathbf{w}}^{V}$		(Leave blank to calcula Q <sub>soil</sub>	=   	
MORE	Lookup Soil Parameters	ρ <sub>b</sub> <sup>A</sup> (g/cm <sup>3</sup> )	n <sup>V</sup> (unitless)	θ <sub>w</sub> <sup>V</sup> (cm <sup>3</sup> /cm <sup>3</sup> )		(Leave blank to calcula Q <sub>soil</sub> (L/m)	- - ]	
MORE ↓	Lookup Soil Parameters	ρ <sub>b</sub> <sup>A</sup> (g/cm <sup>3</sup> )	n <sup>V</sup> (unitless)	θ <sub>w</sub> <sup>V</sup> (cm <sup>3</sup> /cm <sup>3</sup> )	ENTER	(Leave blank to calcula Q <sub>soil</sub> (L/m)	ate) - ]	
	Lookup Soil Parameters  Is  ENTER Averaging	ρ <sup>A</sup> (g/cm³)  1.62  ENTER Averaging	(unitless)  0.39  ENTER	θ <sub>w</sub> <sup>V</sup> (cm³/cm³)  0.076  ENTER		(Leave blank to calcular Q <sub>soil</sub> (L/m) 5	ate) - ]	
	Lookup Soil Parameters  Is  ENTER Averaging time for	ρ <sub>b</sub> <sup>A</sup> (g/cm³)  1.62  ENTER Averaging time for	(unitless)  0.39  ENTER  Exposure	(cm³/cm³)  0.076  ENTER  Exposure	Exposure	(Leave blank to calcula Q <sub>soil</sub> (L/m) 5	ate)	
<b>—</b>	Lookup Soil Parameters  Is  ENTER Averaging time for carcinogens,	(g/cm³)  1.62  ENTER Averaging time for noncarcinogens,	(unitless)  0.39  ENTER  Exposure duration,	(cm³/cm³)  0.076  ENTER  Exposure frequency,	Exposure Time	(Leave blank to calcula Q <sub>soil</sub> (L/m)  5  ENTER  Air Exchange Rate	ate)	
Lookup Receptor	Lookup Soil Parameters  Is  ENTER Averaging time for	ρ <sub>b</sub> <sup>A</sup> (g/cm³)  1.62  ENTER Averaging time for	(unitless)  0.39  ENTER  Exposure	(cm³/cm³)  0.076  ENTER  Exposure	Exposure	(Leave blank to calcula Q <sub>soil</sub> (L/m)  5  ENTER  Air Exchange Rate ACH	= 	
<b>.</b>	Lookup Soil Parameters  Is  ENTER Averaging time for carcinogens,	(g/cm³)  1.62  ENTER Averaging time for noncarcinogens,	(unitless)  0.39  ENTER  Exposure duration,	(cm³/cm³)  0.076  ENTER  Exposure frequency,	Exposure Time	(Leave blank to calcula Q <sub>soil</sub> (L/m)  5  ENTER  Air Exchange Rate	=   	
Lookup Receptor	Lookup Soil Parameters  Is  ENTER Averaging time for carcinogens, AT <sub>C</sub>	P <sub>b</sub> <sup>A</sup> (g/cm³)  1.62  ENTER Averaging time for noncarcinogens, AT <sub>NC</sub>	(unitless)  0.39  ENTER  Exposure duration, ED	(cm³/cm³)  0.076  ENTER  Exposure frequency, EF	Exposure Time ET	(Leave blank to calcula Q <sub>soil</sub> (L/m)  5  ENTER  Air Exchange Rate ACH	ate)	

END

December 2014

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

DATA ENTRY SHEET

Scenario: Student Chemical: Naphthalene

**Results Summary** 

Indoor Air Conc.

 $(\mu g/m^3)$ 

1.7E-02

Cancer

Risk

5.6E-09

Noncancer

Hazard

1.5E-04

Defaults										_
Soil Conc. Attenuation Factor (gam²) (conc. (mumbers only), Conc. (conc.) (ppm²) (contents) (conc.) (ppm²) (conc.) (conc.) (ppm²) (conc.) (conc.) (ppm²) (conc.) (c			Soil	Cas Concentration	n Data				Resul	ť
Soil   gas   OR   gas   OR   gas   OR   gas   OR   Gaster   OR   October	<u> </u>	FNTFR		Gas Concentration				Soil Gas Conc		_
Chemical   CAS No.   CODE.   CAS No.   CAS	Reset to	LIVILIX								
CAS No. (numbers only, (numbers onl	Defaults	Chemical		OR						_
C			_	0	-			0.002.02	2.02 0	_
MORE										
MORE		•				Chamical				
MORE Depth Depth Delow grade to bottom sampling of enclosed depth space floor, below grade, temperature, Lr Lr Lr Ls Ts soil vapor permeability) (cm²) (cm²)    MORE		110 dasiles)	(μg/111 )	•	(ррпіч)	Cileillicai			=	
MORE Depth Depth Delow grade to bottom sampling of enclosed depth space floor, below grade, temperature, Lr Lr Lr Ls Ts soil vapor permeability) (cm²) (cm²)    MORE		91203	6.80F+01	ſ		Naphthalene			_	
Depth   Delow grade to bottom   Sampling   Average   SCS		01200	0.002.01		l l	p			_	
Depth   Delow grade to bottom   Sampling   Average   SCS								1		
↓         to bottom of enclosed depth space floor, below grade, space floor, L <sub>F</sub> Ls soil vapor (used to estimate soil vapor permeability).         Soil vapor permeability.         OR permeability.         Soil vapor permeability.         k, (cm²)           15         396         24         LS         LS         ENTER Averaging time for carcinogens, Averaging time for parameters         Vadose zone soil total porosity. (unitless)         Vadose zone soil water-filled porosity. (unitless)         Vadose zone soil water-filled porosity. (Leave blank to calculate)         Average vapor flow rate into bidg. (Leave blank to calculate)           MORE ↓         LS         1.62         0.39         0.076         5           MORE ↓         Averaging time for carcinogens, ATC ATC (yrs)         ATRC ATNG         ENTER ENTER ENTER ENTER Exposure Exposure Exposure Exposure Exposure Rate (yrs) (yrs)         Exposure Exposure Exposure Action (hour)¹         ACH ACH (yrs) (yrs)         ET ACH (yrs) (hour)¹           Residential         70         26         4         180         8         1			ENTER	ENTER	ENTER		ENTER			
of enclosed space floor, below grade, temperature, L <sub>F</sub> L <sub>A</sub> T <sub>S</sub> (used to estimate soil vapor permeability, (15 or 200 cm) (cm) (°C) permeability) (cm²)  ■ ENTER Vandose zone Soil dry Soil vapor permeability)  ■ ENTER Vandose zone Soil dry Soil vater-filled soil water-filled soil	MORE	below grade	Soil gas		Vadose zone		User-defined			
space floor, below grade, temperature, L <sub>s</sub> T <sub>S</sub> soil vapor k <sub>k</sub> , (15 or 200 cm) (cm) (°C) permeability) (cm²)  15 396 24 LS  SCS soil dry bulk density, porosity, porosity, porosity, porosity, porosity, parameters (g/cm³) (unitless) (cm²/cm²)  LS 1.62 0.39 0.076  MORE  WORE  LS 1.62 0.39 0.076  ENTER  ENTER  ENTER  ENTER  Vadose zone Vadose zone Vadose zone Soil dry Soil total Soil water-filled soil water-filled flow rate into bldg. (Leave blank to calculate)  Lookup Roil Parameters (g/cm³) (unitless) (cm²/cm²) (L/m)  LS 1.62 0.39 0.076  ENTER  ENTER  ENTER  ENTER  ENTER  ENTER  ENTER  Averaging Averaging time for Exposure Exposure Exposure Air Exchange carcinogens, noncarcinogens, duration, frequency, Time Rate  Lookup Receptor Parameters (yrs) (yrs) (yrs) (days/yr) (hrs/day) (hour)¹  Residential 70 26 4 180 8 1	Ψ	to bottom		Average	SCS		vadose zone			
L <sub>F</sub>   L <sub>1</sub>   T <sub>S</sub>   Soil vapor   K <sub>V</sub>   (cm²)     15   396   24   LS     16   20   391   24   LS     17   24   24   24   24   24   24   24   2		of enclosed	depth	soil	soil type		soil vapor			
MORE		space floor,	below grade,	temperature,	(used to estimate	OR	permeability,			
MORE  Vandose zone SCS soil type bulk density, Parameters  Valose zone Vadose zone SCS soil type bulk density, Parameters  Vadose zone SCS Soil type bulk density, Parameters  Vadose zone Soil water-filled porosity, porosity, porosity, porosity, (Leave blank to calculate) (L/m)  LS 1.62 0.39 0.076  ENTER Vadose zone Soil water-filled porosity, (Leave blank to calculate) (L/m)  LS 1.62 0.39 0.076  5  MORE  Vadose zone Soil water-filled porosity, porosity, porosity, porosity, (Leave blank to calculate) (L/m)  LS 1.62 0.39 0.076  5  MORE  Vadose zone Soil water-filled Soil (Leave blank to calculate) (L/m)  LS 1.62 0.39 0.076  Farameters  Vadose zone Soil water-filled Soil		$L_F$	$L_s$	Ts	soil vapor					
MORE  Vandose zone Vadose zone SCS soil dry soil total soil water-filled flow rate into bldg.  Lookup Soil Parameters (g/cm³) (unitless) (cm³/cm³) (L/m)   MORE  LS 1.62 0.39 0.076   MORE  Lokup Receptor Parameters  Lookup Receptor Parameters  AT <sub>C</sub> AT <sub>NC</sub> ED EF ET ACH Parameters  Residential 70 26 4 180 8 1		(15 or 200 cm)	(cm)	(°C)	permeability)		(cm <sup>2</sup> )			
MORE  Vandose zone Vadose zone Vadose zone Soil dry Soil total Soil water-filled S										
MORE       Vandose zone SCS       Vadose zone soil dry       Vadose zone soil vadose zone soil vadose zone soil water-filled soil water-filled porosity, porosity, (Leave blank to calculate)         Lookup Soil type       bulk density, porosity, porosity, porosity, (Lower blank to calculate)         Lookup Soil Parameters       p <sub>b</sub> <sup>A</sup> n <sup>V</sup> θ <sub>w</sub> <sup>V</sup> Q <sub>soil</sub> (L/m)         LS       1.62       0.39       0.076       5         MORE         LS       1.62       0.39       0.076       5     **PATER**  **Averaging time for time for time for Exposure Exposure Exposure Air Exchange carcinogens, noncarcinogens, duration, frequency, Time Rate AT <sub>C</sub> AT <sub>NC</sub> ED EF ET ACH (yrs) (yrs) (yrs) (days/yr) (hrs/day) (hour) <sup>-1</sup> Residential       70       26       4       180       8       1		15	396	24	LS					
soil type bulk density, porosity, porosity, $\rho$ bulk density, porosity, porosity, $\rho$ bulk density,	MORE									
MORE → Lookup Receptor Parameters         ENTER (g/cm³)         ENTER (uritine for time for carcinogens, noncarcinogens, noncarcinogens, noncarcinogens, (yrs)         ENTER (g/cm²)         ENTER (uritine for time for time for time for time for type of time for time	<b>↓</b>	SCS	soil dry	soil total	soil water-filled		flow rate into bldg.			
MORE		soil type	bulk density,		porosity,		(Leave blank to calculate	ate)		
Parameters   (g/cm³)   (unitless)   (cm³/cm³)   (L/m)		Lookup Soil	ρ <sub>b</sub> <sup>A</sup>	n <sup>V</sup>	$\theta_{\mathbf{w}}^{V}$		$Q_{soil}$			
LS 1.62 0.39 0.076 5  MORE  ↓  ENTER ENTER ENTER ENTER ENTER  Averaging Averaging time for time for Exposure Exposure Exposure Rate  Lookup Receptor Parameters  AT <sub>C</sub> AT <sub>NC</sub> ED EF ET ACH  (yrs) (yrs) (yrs) (days/yr) (hrs/day) (hour) <sup>-1</sup> Residential  70 26 4 180 8 1		Parameters		(unitless)	(cm <sup>3</sup> /cm <sup>3</sup> )					
MORE  V  ENTER ENTER ENTER ENTER ENTER ENTER  Averaging time for time for Exposure Exposure Exposure Rate  Lookup Receptor Parameters  Lookup Receptor (yrs) (yrs) (yrs) (days/yr) (hrs/day) (hour)⁻¹  Residential  70 26 4 180 8 1				, ,				<u>-</u> !		
V         ENTER Averaging Itime for Carcinogens, Parameters         ENTER Averaging Averaging Itime for Exposure E		LS	1.62	0.39	0.076		5			
V         ENTER Averaging time for carcinogens, Parameters         ENTER Averaging Averaging time for time for Exposure Exp										
Averaging time for time for Exposure Exposure Exposure Air Exchange carcinogens, noncarcinogens, duration, frequency, Time Rate  AT <sub>C</sub> AT <sub>NC</sub> ED EF ET ACH  (yrs) (yrs) (yrs) (days/yr) (hrs/day) (hour)-1  Residential 70 26 4 180 8 1										
time for carcinogens, noncarcinogens, duration, frequency, Time Rate  Lookup Receptor Parameters    Lookup Receptor Parameters   Time   Rate	Ψ			ENTER	ENTER	ENTER	ENTER			
Carcinogens, noncarcinogens, duration, frequency, Time Rate  AT <sub>C</sub> AT <sub>NC</sub> ED EF ET ACH  (yrs) (yrs) (yrs) (days/yr) (hrs/day) (hour)-1  Residential 70 26 4 180 8 1				F	F	F	Ain Freshau			
Lookup Receptor Parameters         AT <sub>C</sub> (yrs)         AT <sub>NC</sub> (yrs)         ED         EF         ET         ACH (hour) <sup>-1</sup> Residential         70         26         4         180         8         1										
Parameters	Lookun Recentor	_	-							
Residential 70 26 4 180 8 1										
		(yrs)	(yrs)	(yrs)	(days/yr)	(hrs/day)	(hour)	i.		
	Residential	70	26	4	180	8	1	]		
				•		(NEW)	(NEW)			

END

December 2014

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

DATA ENTRY SHEET

Scenario: Teacher

Chemical: Tetrachloroethylene

**Results Summary** 

Indoor Air Conc.

 $(\mu g/m^3)$ 

7.7E-02

Cancer

Risk

2.7E-08

Noncancer

Hazard

3.5E-04

		Soil	Gas Concentration	n Data				Results
<u> </u>	ENTER	ENTER	odo Concontration	ENTER			Soil Gas Conc.	Attenuation Factor
Reset to		Soil		Soil			(µg/m³)	(unitless)
Defaults	Chemical	gas	OR	gas			3.43E+02	2.3E-04
	CAS No.	conc.,		conc.,				
	(numbers only,	C <sub>q</sub>		C <sub>g</sub>				
	,	(μg/m <sup>3</sup> )			01			
	no dashes)	(μg/m²)		(ppmv)	Chemical			=
	127184	3.43E+02			Tetrachloroethyl	000		-
	127 104	3.43E+02			retracilioroethyl	ene		-
							_	
	ENTER Depth	ENTER	ENTER	ENTER		ENTER		
MORE	below grade	Soil gas		Vadose zone		User-defined		
•	to bottom	sampling	Average	SCS		vadose zone		
	of enclosed	depth	soil	soil type		soil vapor		
	space floor,	below grade,	temperature,	(used to estimate	OR	permeability,		
	$L_F$	$L_s$	Ts	soil vapor		$k_v$		
	(15 or 200 cm)	(cm)	(°C)	permeability)		(cm <sup>2</sup> )		
			,	, , , , ,	1			
	15	132	24	С				
MORE 🗸	ENTER Vandose zone SCS soil type Lookup Soil Parameters	ENTER Vadose zone soil dry bulk density, $\rho_b^A$ (g/cm³)	ENTER Vadose zone soil total porosity, n <sup>V</sup> (unitless)	ENTER Vadose zone soil water-filled porosity, $\theta_w^V$ $(cm^3/cm^3)$		ENTER Average vapor flow rate into bldg. Leave blank to calcul Q <sub>soil</sub> (L/m)	ate)	
	С	1.43	0.459	0.215		5	]	
				3.2.10	!			
MORE <b>↓</b>	ENTER	ENTER	ENTER	ENTER	ENTER	ENTER		
<b>—</b> •	Averaging	Averaging	LIVILIX	LIVILIN	LITTLE	LIVILIX		
	time for	time for	Exposure	Exposure	Exposure	Air Exchange		
	carcinogens,	noncarcinogens,	duration,	frequency,	Time	Rate		
Lookup Receptor	AT <sub>C</sub>	AT <sub>NC</sub>	ED	EF.	ET	ACH		
Parameters		(yrs)		(days/yr)	(hrs/day)	(hour) <sup>-1</sup>		
	(yrs)	(yis)	(yrs)	(uays/yr)	(IIIS/uay)	(Hour)	•	
> Residential	70	26	25	182	8	1		
					(NEW)	(NEW)		
END								

December 2014

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

DATA ENTRY SHEET

Scenario: Staff

Chemical: Tetrachloroethylene

**Results Summary** 

Indoor Air Conc.

 $(\mu g/m^3)$ 

7.7E-02

Cancer

Risk

3.7E-08

Noncancer

Hazard

4.8E-04

			Soil	Gas Concentration	n Data				Result
		ENTER	ENTER		ENTER			Soil Gas Conc.	Attenuation Factor
	Reset to		Soil		Soil			(µg/m <sup>3</sup> )	(unitless)
l l	Defaults	Chemical	gas	OR	gas			3.43E+02	2.3E-04
,		CAS No.	conc.,		conc.,				
		(numbers only,	$C_{g}$		$C_g$				
		no dashes)	(μg/m³)		(ppmv)	Chemical			=
									_
		127184	3.43E+02			Tetrachloroethy	ylene		_
		ENTER Depth	ENTER	ENTER	ENTER		ENTER		
	MORE	below grade	Soil gas		Vadose zone		User-defined		
	<b>4</b>	to bottom	sampling	Average	SCS		vadose zone		
		of enclosed	depth	soil	soil type		soil vapor		
		space floor,	below grade,	temperature,	(used to estimate	OR	permeability,		
		$L_F$	$L_s$	Ts	soil vapor		k <sub>v</sub>		
		(15 or 200 cm)	(cm)	(°C)	permeability)		(cm <sup>2</sup> )		
		15	132	24	С				
		15	132	24	C				
	MORE	ENTER Vandose zone	ENTER Vadose zone	ENTER Vadose zone	ENTER Vadose zone		ENTER Average vapor		
	₩OKE •	SCS	soil dry	soil total	soil water-filled		flow rate into bldg.		
		soil type	bulk density,	porosity,	porosity,		(Leave blank to calcula	ate)	
		Lookup Soil	ρ <sub>b</sub> <sup>A</sup>	n <sup>V</sup>	$\theta_{w}^{V}$		$Q_{soil}$	,	
		Parameters	(g/cm <sup>3</sup> )	(unitless)	(cm <sup>3</sup> /cm <sup>3</sup> )		(L/m)		
			(9: )	(unitioda)	(=,=)		(2/11)		
		С	1.43	0.459	0.215		5		
	MORE 🗸	ENTER	ENTER	ENTER	ENTER	ENTER	ENTER		
		Averaging	Averaging	Z.V. Z.V	Littlett	ENTER	LIVILIV		
		time for	time for	Exposure	Exposure	Exposure	Air Exchange		
ſ		carcinogens,	noncarcinogens,	duration,	frequency,	Time	Rate		
	Lookup Receptor Parameters	$AT_C$	AT <sub>NC</sub>	ED	EF	ET	ACH		
Į	rarameters	(yrs)	(yrs)	(yrs)	(days/yr)	(hrs/day)	(hour) <sup>-1</sup>		
NEW=>	Residential	70	26	25	250	8	1		

END

(NEW)

December 2014

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

DATA ENTRY SHEET

Scenario: Student

Chemical: Tetrachloroethylene

**Results Summary** 

Indoor Air Conc.

 $(\mu g/m^3)$ 

7.7E-02

Cancer

Risk

4.3E-09

Noncancer

Hazard

5.6E-05

		Soil	Gas Concentration	n Data				Resul	t
	ENTER	ENTER	Sas Concentration	ENTER			Soil Gas Conc	Attenuation Factor	-
Reset to	LIVILIV	Soil		Soil			(μg/m³)	(unitless)	
Defaults	Chemical	gas	OR	gas			3.43E+02	2.3E-04	_
	CAS No.	conc.,		conc.,					_
	(numbers only,	C <sub>g</sub>		C <sub>g</sub>					
	no dashes)	(μg/m <sup>3</sup> )		(ppmv)	Chemical				
	no dasnes)	(μg/π)		(ррпіч)	Cileilicai			=	
	127184	3.43E+02			Tetrachloroethyle	ene		<del>-</del> -	
	ENTER Depth	ENTER	ENTER	ENTER		ENTER			
MORE	below grade	Soil gas		Vadose zone		User-defined			
₩.	to bottom	sampling	Average	SCS		vadose zone			
	of enclosed	depth	soil	soil type		soil vapor			
	space floor,	below grade,	temperature,	(used to estimate	OR	permeability,			
	L <sub>F</sub>	Ls	Ts	soil vapor		k <sub>v</sub>			
	(15 or 200 cm)	(cm)	(°C)	permeability)		(cm <sup>2</sup> )			
	(10 01 200 011)	(0111)	( 0)	pormoublity)		(6)			
	15	132	24	С					
MORE ↓	ENTER Vandose zone SCS soil type	ENTER Vadose zone soil dry bulk density,	ENTER Vadose zone soil total porosity,	ENTER Vadose zone soil water-filled porosity,	(1)	ENTER Average vapor flow rate into bldg. Leave blank to calcul			
	Lookup Soil	$\rho_b^{A}$	n <sup>V</sup>	$\theta_{w}^{V}$		$Q_{soil}$			
	Parameters	(g/cm <sup>3</sup> )	(unitless)	(cm <sup>3</sup> /cm <sup>3</sup> )		(L/m)	=		
	С	1.43	0.459	0.215		5	]		
MORE									
¥	ENTER	ENTER	ENTER	ENTER	ENTER	ENTER			
	Averaging	Averaging							
	time for	time for	Exposure	Exposure	Exposure	Air Exchange			
	carcinogens,	noncarcinogens,	duration,	frequency,	Time	Rate			
Lookup Receptor Parameters	AT <sub>C</sub>	AT <sub>NC</sub>	ED	EF	ET	ACH			
raiameters	(yrs)	(yrs)	(yrs)	(days/yr)	(hrs/day)	(hour) <sup>-1</sup>	=		
<u> </u>		,					- 1		
Residential	70	26	4	180	8	1	]		
					(NEW)	(NEW)			

END

December 2014

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

DATA ENTRY SHEET

Scenario: Teacher

Chemical: 1,2-Dichloroethane

Cancer

Risk

3.9E-08

Noncancer

Hazard

5.8E-04

Seed to   Defaults   Sulf Gase Concentration Data   Sulf Gase Concentration Data   Sulf Gase Concentration Data   Sulf Gase Concentration Data   Sulf Gase Conce Atterwater   Moder Air Corce   (ug/m²)   (undess)   (ug/m²)									Posul	te Summary
Soil   Soil   GAS No.   CAS No.   CODO.   C		ENTER		Gas Concentratio				0 10 0		
Defaults	Reset to	ENTER								
CAS No. (numbers only, C <sub>3</sub> c (ppmv) Chemical  107062 7.60E+01 1.2-Dichloroethane    NORE	Defaults	Chemical		OR						
(upmv)   (upmv)   (ppmv)		-		OIX	•			7.002101	3.41-04	2.51-02
NORE										
MORE						Chamiaal				
## ENTER Depth   Delow grade   Soil gas   Vadose zone   Soil yapor		no dasnes)	(μg/π)		(ррпіч)	Chemicai			=	
Depth		107062	7.60E+01			1,2-Dichloroeth	iane		<del>-</del> -	
Depth								-		
to bottom sampling Average SCS soil type of enclosed depth soil space floor, below grade, temperature, Le Ls Ts permeability, Le Ls Ts permeability)  15 396 24 LS    MORE   Vandose zone Soil dry be widensity, be soil vapor between the soil vapor permeability (cm²)			ENTER	ENTER	ENTER		ENTER			
of enclosed depth soil specific temperature, L₂ T₂ Soil type Soil vapor permeability, L₂ T₂ Soil vapor permeability)  L₂ T₂ Soil vapor permeability)  15 396 24 LS   MORE  Vandose zone SCS Soil dry Soil vapor soil vapor permeability)  ENTER Vandose zone SCS Soil dry Soil vapor soil vapor permeability)  Lookup Soil pe bulk density, porosity, porosity, porosity, (Leave blank to calculate)  Lookup Soil Parameters (g/cm²) (unitless) (cm²/cm³) (L/m)  LS 1.62 0.39 0.076 5   MORE  ENTER Lookup Receptor Parameters (yrs) (yrs) (yrs) (days/yr) (hrs/day) (hour)¹¹  Residential 70 26 25 182 8 1  (NEW) (NEW)		below grade	Soil gas				User-defined			
Space floor,   Delow grade,   Le   Ts   Soil vapor   No   No   No   No   No   No   No	•			•	_					
L <sub>F</sub>   L <sub>a</sub>   T <sub>S</sub>   Soil vapor   K <sub>V</sub>   (cm²)     15   396   24   LS     15   396   24   LS     15   396   24   LS     16   Vandose zone   Vadose zone   SCS   Soil dry   Soil total   Soil water-filled   Farameters   Parameters   Parameters   Parameters   Parameters   Parameters   Carcinogens,   Averaging time for carcinogens,   Averaging time for carcinogens,   Ancarcinogens,   Ancarcinogen										
MORE		•	•		,	OR				
MORE					· ·					
MORE  Vandose zone SCS Soil type bulk density, Parameters  MORE  Vandose zone Soil type Soil total Soil water-filled Soil water-f		(15 or 200 cm)	(cm)	(°C)	permeability)		(cm <sup>2</sup> )			
MORE  Vandose zone SCS soil dry soil total soil water-filled flow rate into bldg.  Lookup Soil pharmeters (g/cm³) (unitless) (cm³/cm³) (L/m)  LS 1.62 0.39 0.076   MORE  Vandose zone Soil water-filled flow rate into bldg. (Leave blank to calculate)  Lookup Receptor Parameters (g/cm³) (unitless) (cm³/cm³) (L/m)  ENTER ENTER ENTER ENTER ENTER ENTER  Lookup Receptor Parameters (yrs) (yrs) (yrs) (yrs) (days/yr) (hrs/day) (hour)¹  Residential 70 26 25 182 8 1 1 (NEW) (NEW)		15	396	24	LS					
MORE  Veraging Averaging time for time for Exposure Exposure Exposure Air Exchange carcinogens, noncarcinogens, duration, frequency, Time Rate  AT <sub>C</sub> AT <sub>NC</sub> ED EF ET ACH  (yrs) (yrs) (yrs) (days/yr) (hrs/day) (hour)-1  Residential  70 26 25 182 8 1  (NEW) (NEW)		Vandose zone SCS soil type Lookup Soil	Vadose zone soil dry bulk density, ρ <sub>b</sub> <sup>A</sup>	Vadose zone soil total porosity, n <sup>V</sup>	Vadose zone soil water-filled porosity, $\theta_w^{\ \ V}$		Average vapor flow rate into bldg. (Leave blank to calcul ${\sf Q}_{\sf soil}$	ate)		
ENTER ENTER ENTER ENTER ENTER ENTER  Averaging Averaging time for time for Exposure Exposure Exposure Air Exchange carcinogens, noncarcinogens, duration, frequency, Time Rate  AT <sub>C</sub> AT <sub>NC</sub> ED EF ET ACH  (yrs) (yrs) (yrs) (days/yr) (hrs/day) (hour)-1  Residential  70 26 25 182 8 1  (NEW) (NEW)		LS	1.62	0.39	0.076		5			
Carcinogens, noncarcinogens, duration, frequency, Time Rate  AT <sub>C</sub> AT <sub>NC</sub> ED EF ET ACH  (yrs) (yrs) (yrs) (days/yr) (hrs/day) (hour) <sup>-1</sup> Residential  70 26 25 182 8 1  (NEW) (NEW)		Averaging	Averaging							
Parameters         (yrs)         (yrs)         (yrs)         (yrs)         (days/yr)         (hrs/day)         (hour)⁻¹           ▶         Residential         70         26         25         182         8         1           (NEW)         (NEW)         (NEW)							Rate			
(yrs)         (yrs)         (yrs)         (days/yr)         (hrs/day)         (hour)           Residential         70         26         25         182         8         1           (NEW)         (NEW)         (NEW)		AT <sub>C</sub>	AT <sub>NC</sub>	ED	EF	ET	ACH			
(NEW) (NEW)	Parameters	(yrs)	(yrs)	(yrs)	(days/yr)	(hrs/day)	(hour) <sup>-1</sup>	<b>=</b>		
	> Residential	70	26	25	182					
	END					(NEW)	(NEW)			

December 2014

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

DATA ENTRY SHEET

Scenario: Staff

Chemical: 1,2-Dichloroethane

**Results Summary** 

Indoor Air Conc.

 $(\mu g/m^3)$ 

2.5E-02

Cancer

Risk

5.4E-08

Noncancer

Hazard

8.0E-04

		Soil (	Gas Concentration	n Data				Resul	ts
	ENTER	ENTER	040 001100111141101	ENTER			Soil Gas Conc.	Attenuation Factor	_
Reset to		Soil		Soil			(µg/m³)	(unitless)	
Defaults	Chemical	gas	OR	gas			7.60E+01	3.4E-04	
	CAS No.	conc.,		conc.,					
	(numbers only,	C <sub>g</sub>		$C_{g}$					
	no dashes)	(μg/m <sup>3</sup> )		(ppmv)	Chemical				
	107062	7.60E+01			1,2-Dichloroeth	ane			
	ENTER Depth	ENTER	ENTER	ENTER		ENTER			
MORE	below grade	Soil gas		Vadose zone		User-defined			
₩	to bottom	sampling	Average	SCS		vadose zone			
<u> </u>	of enclosed	depth	soil	soil type		soil vapor			
	space floor,	below grade,	temperature,	(used to estimate	OR	permeability,			
	$L_F$	L <sub>s</sub>	Ts	soil vapor		$k_v$			
	(15 or 200 cm)	(cm)	(°C)	permeability)		(cm <sup>2</sup> )			
	4.5	396	24	LS					
	15	390	2-1			1	1		
MORE Ψ	ENTER Vandose zone SCS soil type Lookup Soil Parameters	ENTER Vadose zone soil dry bulk density,  pb (g/cm³)	ENTER Vadose zone soil total porosity, n <sup>V</sup> (unitless)	ENTER Vadose zone soil water-filled porosity, $\theta_w^V$ $(cm^3/cm^3)$		ENTER Average vapor flow rate into bldg. (Leave blank to calculate) Q <sub>soil</sub> (L/m)			
	ENTER Vandose zone SCS soil type Lookup Soil Parameters	ENTER  Vadose zone soil dry bulk density,  Pb  (g/cm³)	ENTER  Vadose zone soil total porosity, n <sup>V</sup> (unitless)	ENTER  Vadose zone soil water-filled porosity, $\theta_w^V$ $(cm^3/cm^3)$		Average vapor flow rate into bldg. (Leave blank to calcul Q <sub>soil</sub> (L/m)			
	ENTER Vandose zone SCS soil type Lookup Soil	ENTER Vadose zone soil dry bulk density, ρ <sub>b</sub>	ENTER Vadose zone soil total porosity, n <sup>V</sup>	ENTER Vadose zone soil water-filled porosity, $\theta_w^V$		Average vapor flow rate into bldg. (Leave blank to calculate) Q <sub>soil</sub>			
₩ORE	ENTER Vandose zone SCS soil type Lookup Soil Parameters	ENTER Vadose zone soil dry bulk density, $\rho_b^A$ (g/cm³)	ENTER Vadose zone soil total porosity, n v (unitless)	ENTER  Vadose zone soil water-filled porosity, $\theta_w^{\vee}$ (cm <sup>3</sup> /cm <sup>3</sup> )	ENTED	Average vapor flow rate into bldg. (Leave blank to calcul: Q <sub>soil</sub> (L/m)			
<b>.</b>	ENTER Vandose zone SCS soil type Lookup Soil Parameters	ENTER Vadose zone soil dry bulk density, Pb (g/cm³)  1.62  ENTER	ENTER  Vadose zone soil total porosity, n <sup>V</sup> (unitless)	ENTER  Vadose zone soil water-filled porosity, $\theta_w^V$ $(cm^3/cm^3)$	ENTER	Average vapor flow rate into bldg. (Leave blank to calcul Q <sub>soil</sub> (L/m)			
₩ORE	ENTER Vandose zone SCS soil type Lookup Soil Parameters Is ENTER Averaging	ENTER Vadose zone soil dry bulk density, $\rho_b{}^A$ (g/cm³)  1.62  ENTER Averaging	ENTER Vadose zone soil total porosity, n (unitless)  0.39	ENTER Vadose zone soil water-filled porosity, $\theta_w^V$ $(cm^3/cm^3)$ 0.076		Average vapor flow rate into bldg. (Leave blank to calcul:  Q <sub>soil</sub> (L/m)  5			
₩ORE	ENTER Vandose zone SCS soil type Lookup Soil Parameters Is  ENTER Averaging time for	ENTER Vadose zone soil dry bulk density, Pb <sup>A</sup> (g/cm³)  1.62  ENTER Averaging time for	ENTER Vadose zone soil total porosity, n (unitless)  0.39  ENTER Exposure	ENTER Vadose zone soil water-filled porosity, $\theta_w^V$ $(cm^3/cm^3)$ 0.076  ENTER  Exposure	Exposure	Average vapor flow rate into bldg. (Leave blank to calcul:  Q <sub>soil</sub> (L/m)  5  ENTER  Air Exchange			
MORE V	ENTER Vandose zone SCS soil type Lookup Soil Parameters  IS  ENTER Averaging time for carcinogens,	ENTER Vadose zone soil dry bulk density, Pb (g/cm³)  1.62  ENTER Averaging time for noncarcinogens,	ENTER Vadose zone soil total porosity, n (unitless)  0.39	ENTER Vadose zone soil water-filled porosity, $\theta_w^V$ $(cm^3/cm^3)$ 0.076		Average vapor flow rate into bldg. (Leave blank to calcule Q <sub>soil</sub> (L/m) 5			
MORE ¥	ENTER Vandose zone SCS soil type Lookup Soil Parameters  IS  ENTER Averaging time for carcinogens, AT <sub>C</sub>	ENTER Vadose zone soil dry bulk density, Pb (g/cm³)  1.62  ENTER Averaging time for noncarcinogens, AT <sub>NC</sub>	ENTER Vadose zone soil total porosity, n (unitless)  0.39  ENTER  Exposure duration, ED	ENTER  Vadose zone soil water-filled porosity, $\theta_w^V$ $(cm^3/cm^3)$ 0.076  ENTER  Exposure frequency, EF	Exposure Time ET	Average vapor flow rate into bldg. (Leave blank to calcule Q <sub>soil</sub> (L/m)  5  ENTER  Air Exchange Rate ACH			
MORE V	ENTER Vandose zone SCS soil type Lookup Soil Parameters  IS  ENTER Averaging time for carcinogens,	ENTER Vadose zone soil dry bulk density, Pb (g/cm³)  1.62  ENTER Averaging time for noncarcinogens,	ENTER Vadose zone soil total porosity, n (unitless)  0.39  ENTER  Exposure duration,	ENTER  Vadose zone soil water-filled porosity, $\theta_w^V$ $(cm^3/cm^3)$ 0.076  ENTER  Exposure frequency,	Exposure Time	Average vapor flow rate into bldg. (Leave blank to calcule Q <sub>soil</sub> (L/m) 5			
MORE V	ENTER Vandose zone SCS soil type Lookup Soil Parameters  IS  ENTER Averaging time for carcinogens, AT <sub>C</sub>	ENTER Vadose zone soil dry bulk density, Pb (g/cm³)  1.62  ENTER Averaging time for noncarcinogens, AT <sub>NC</sub>	ENTER Vadose zone soil total porosity, n (unitless)  0.39  ENTER  Exposure duration, ED	ENTER  Vadose zone soil water-filled porosity, $\theta_w^V$ $(cm^3/cm^3)$ 0.076  ENTER  Exposure frequency, EF	Exposure Time ET	Average vapor flow rate into bldg. (Leave blank to calcule Q <sub>soil</sub> (L/m)  5  ENTER  Air Exchange Rate ACH			

END

December 2014

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

DATA ENTRY SHEET

Scenario: Student

Chemical: 1,2-Dichloroethane

Cancer

Risk

6.2E-09

Noncancer

Hazard

9.2E-05

							-		
		Soil	Gas Concentration	n Data				Resul	ts Summary
Reset to	ENTER	ENTER		ENTER				Attenuation Factor	Indoor Air Conc.
Defaults	Q1	Soil	0.5	Soil			(µg/m³)	(unitless)	(µg/m³)
Deladito	Chemical	gas	OR	gas			7.60E+01	3.4E-04	2.5E-02
	CAS No.	conc.,		conc.,					
	(numbers only,	C <sub>g</sub>		$C_g$					
	no dashes)	(μg/m³)	•	(ppmv)	Chemical				
			1						
	107062	7.60E+01			1,2-Dichloroethar	<u>1e</u>			
	ENTER	ENTER	ENTER	ENTER		ENTER	]		
	Depth								
MORE	below grade	Soil gas		Vadose zone		User-defined			
₩	to bottom	sampling	Average	SCS		vadose zone			
	of enclosed	depth	soil	soil type (used to estimate	OR	soil vapor			
	space floor, L <sub>F</sub>	below grade,	temperature, T <sub>S</sub>	soil vapor	UR	permeability, k <sub>v</sub>			
	(15 or 200 cm)	L <sub>s</sub>	(°C)			κ <sub>ν</sub> (cm²)			
	(15 or 200 cm)	(cm)	( C)	permeability)		(CIII )	-		
	15	396	24	LS					
MORE ¥	ENTER Vandose zone SCS soil type	ENTER Vadose zone soil dry bulk density,	ENTER Vadose zone soil total porosity,	ENTER Vadose zone soil water-filled porosity,	(1)	ENTER Average vapor flow rate into bldg. Leave blank to calcul	ate)		
	Lookup Soil Parameters	$\rho_b^A$	n <sup>V</sup>	$\theta_{w}^{V}$		$Q_{soil}$			
	1 didiffeters	(g/cm <sup>3</sup> )	(unitless)	(cm <sup>3</sup> /cm <sup>3</sup> )		(L/m)	=		
	LS	1.62	0.39	0.076		5	1		
	Lo	1.02	0.39	0.076		3	J		
MORE <b>↓</b>	ENTER	ENTER	ENTER	ENTER	ENTER	ENTER			
	Averaging time for	Averaging time for	Exposure	Exposure	Exposure	Air Exchange			
	carcinogens,	noncarcinogens,	duration,	frequency,	Time	Rate			
Lookup Rece	eptor AT <sub>C</sub>	AT <sub>NC</sub>	ED	EF	ET	ACH			
Parameter	(yrs)	(yrs)	(yrs)	(days/yr)	(hrs/day)	(hour) <sup>-1</sup>			
		•	13 /		, ,,		-		
IEW=> Residential	70	26	4	180	8	1	J		
					(NEW)	(NEW)			

END

December 2014

MORE

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

Scenario: Teacher Chemical: 1,3-Butadiene DATA ENTRY SHEET

**Results Summary** 

(unitless)

3.7E-04

Indoor Air Conc.

 $(\mu g/m^3)$ 

6.3E-03

Cancer

Risk

6.4E-08

Noncancer

Hazard

5.1E-04

#### Soil Gas Concentration Data **ENTER** Soil Gas Conc. Attenuation Factor **ENTER** Reset to Soil Soil $(\mu g/m^3)$ Defaults Chemical gas OR gas 1.69E+01 CAS No. conc., conc., (numbers only, $C_{q}$ $C_{q}$ $(\mu g/m^3)$ no dashes) Chemical (ppmv) 106990 1.69E+01 1,3-Butadiene

ENTER Depth	ENTER	ENTER	ENTER		ENTER
below grade to bottom of enclosed space floor, L <sub>F</sub> (15 or 200 cm)	Soil gas sampling depth below grade, L <sub>s</sub> (cm)	Average soil temperature, T <sub>S</sub> (°C)	Vadose zone SCS soil type (used to estimate soil vapor permeability)	OR	User-defined vadose zone soil vapor permeability, $k_v$ (cm <sup>2</sup> )
15	396	24	LS		

	MORE ↓	ENTER Vandose zone SCS soil type	ENTER Vadose zone soil dry bulk density,	ENTER Vadose zone soil total porosity, n <sup>V</sup>	ENTER Vadose zone soil water-filled porosity, $\theta_w^V$		ENTER Average vapor flow rate into bldg. (Leave blank to calculat	e)
		Lookup Soil Parameters	ρ <sub>b</sub> (g/cm <sup>3</sup> )	(unitless)	(cm <sup>3</sup> /cm <sup>3</sup> )		Q <sub>soil</sub> (L/m)	
		LS	1.62	0.39	0.076		5	
	MORE ↓	ENTER Averaging time for	ENTER Averaging time for	<b>ENTER</b> Exposure	ENTER Exposure	ENTER Exposure	ENTER Air Exchange	
	Lookup Receptor Parameters	carcinogens, AT <sub>C</sub>	noncarcinogens, AT <sub>NC</sub>	duration, ED	frequency, EF	Time ET (hrs/day)	Rate ACH (hour) <sup>-1</sup>	
(		(yrs)	(yrs)	(yrs)	(days/yr)	(IIIS/day)	(Hour)	
W=>	Residential	70	26	25	182	8	1	
	END					(NEW)	(NEW)	

NEW

December 2014

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

DATA ENTRY SHEET

Scenario: Staff

Chemical:	1,3-Butadiene
-----------	---------------

**Results Summary** 

Indoor Air Conc.

 $(\mu g/m^3)$ 

6.3E-03

Cancer

Risk

8.8E-08

Noncancer

Hazard

6.9E-04

		Soil (	Gas Concentration	n Data				Resul	t
D	ENTER	ENTER		ENTER			Soil Gas Conc.	Attenuation Factor	
Reset to Defaults		Soil		Soil			(µg/m³)	(unitless)	
Delaulis	Chemical	gas	OR	gas			1.69E+01	3.7E-04	_
	CAS No.	conc.,		conc.,					
	(numbers only,	C <sub>g</sub>		$C_g$					
	no dashes)	(μg/m³)		(ppmv)	Chemical			i.	
								•	
	106990	1.69E+01		<u> </u>	1,3-Butadiene				
	ENTER Depth	ENTER	ENTER	ENTER		ENTER	]		
MORE	below grade	Soil gas		Vadose zone		User-defined			
₩ <b>O</b> KL	to bottom	sampling	Average	SCS		vadose zone			
	of enclosed	depth	soil	soil type		soil vapor			
	space floor,	below grade,	temperature,	(used to estimate	OR	permeability,			
	$L_F$	$L_s$	Ts	soil vapor		$k_v$			
	(15 or 200 cm)	(cm)	(°C)	permeability)		(cm <sup>2</sup> )			
		000	24	LS					
	15	396	24	L5 I			J		
MORE ↓	ENTER Vandose zone SCS soil type Lookup Soil Parameters	ENTER Vadose zone soil dry bulk density, Pb (g/cm³)	ENTER  Vadose zone soil total porosity, n <sup>V</sup> (unitless)	ENTER  Vadose zone soil water-filled porosity, $\theta_w^V$ $(cm^3/cm^3)$		ENTER  Average vapor flow rate into bldg. (Leave blank to calculate)  Q <sub>soil</sub> (L/m)			
<b>V</b>	ENTER Vandose zone SCS soil type Lookup Soil	ENTER Vadose zone soil dry bulk density, ρ <sub>b</sub>	ENTER Vadose zone soil total porosity, n V	ENTER Vadose zone soil water-filled porosity, $\theta_w^V$		Average vapor flow rate into bldg. (Leave blank to calcula Q <sub>soil</sub>			
	ENTER Vandose zone SCS soil type Lookup Soil Parameters	ENTER Vadose zone soil dry bulk density, Pb (g/cm³)	ENTER  Vadose zone soil total porosity, n <sup>V</sup> (unitless)	ENTER  Vadose zone soil water-filled porosity, $\theta_w^V$ $(cm^3/cm^3)$	ENTER	Average vapor flow rate into bldg. (Leave blank to calculous Q <sub>soil</sub> (L/m)			
₩	ENTER Vandose zone SCS soil type Lookup Soil Parameters  Is  ENTER Averaging	ENTER Vadose zone soil dry bulk density, $\rho_b^A$ (g/cm³)  1.62  ENTER Averaging	ENTER Vadose zone soil total porosity, n (unitless)  0.39	ENTER  Vadose zone soil water-filled porosity,	ENTER	Average vapor flow rate into bldg. (Leave blank to calcul: Q <sub>soil</sub> (L/m)  5			
₩ORE	ENTER Vandose zone SCS soil type Lookup Soil Parameters  Is  ENTER Averaging time for	ENTER Vadose zone soil dry bulk density, ρ <sub>b</sub> <sup>A</sup> (g/cm³)  1.62  ENTER Averaging time for	ENTER Vadose zone soil total porosity, n (unitless)  0.39  ENTER Exposure	ENTER Vadose zone soil water-filled porosity, $\theta_w^V$ $(cm^3/cm^3)$ 0.076  ENTER  Exposure	<b>ENTER</b> Exposure	Average vapor flow rate into bldg. (Leave blank to calcul:  Q <sub>soil</sub> (L/m)  5  ENTER  Air Exchange			
MORE 🖖	ENTER Vandose zone SCS soil type Lookup Soil Parameters  Is  ENTER Averaging time for carcinogens,	ENTER Vadose zone soil dry bulk density, Pb (g/cm³)  1.62  ENTER Averaging time for noncarcinogens,	ENTER Vadose zone soil total porosity, n (unitless)  0.39  ENTER  Exposure duration,	ENTER  Vadose zone soil water-filled porosity, $\theta_w^V$ $(cm^3/cm^3)$ 0.076  ENTER  Exposure frequency,	<b>ENTER</b> Exposure Time	Average vapor flow rate into bldg. (Leave blank to calculdus) (L/m)  5  ENTER  Air Exchange Rate			
₩	ENTER Vandose zone SCS soil type Lookup Soil Parameters  Is  ENTER Averaging time for carcinogens, AT <sub>C</sub>	ENTER Vadose zone soil dry bulk density, Pb (g/cm³)  1.62  ENTER Averaging time for noncarcinogens, AT <sub>NC</sub>	ENTER Vadose zone soil total porosity, n (unitless)  0.39  ENTER  Exposure duration, ED	ENTER Vadose zone soil water-filled porosity, $\theta_w^V$ $(cm^3/cm^3)$ 0.076  ENTER  Exposure frequency, EF	ENTER Exposure Time ET	Average vapor flow rate into bldg. (Leave blank to calculd Qsoil (L/m)  5  ENTER  Air Exchange Rate ACH			
MORE Under the Lookup Receptor	ENTER Vandose zone SCS soil type Lookup Soil Parameters  Is  ENTER Averaging time for carcinogens,	ENTER Vadose zone soil dry bulk density, Pb (g/cm³)  1.62  ENTER Averaging time for noncarcinogens,	ENTER Vadose zone soil total porosity, n (unitless)  0.39  ENTER  Exposure duration,	ENTER  Vadose zone soil water-filled porosity, $\theta_w^V$ $(cm^3/cm^3)$ 0.076  ENTER  Exposure frequency,	<b>ENTER</b> Exposure Time	Average vapor flow rate into bldg. (Leave blank to calculdus) (L/m)  5  ENTER  Air Exchange Rate			
MORE Under the Lookup Receptor	ENTER Vandose zone SCS soil type Lookup Soil Parameters  Is  ENTER Averaging time for carcinogens, AT <sub>C</sub>	ENTER Vadose zone soil dry bulk density, Pb (g/cm³)  1.62  ENTER Averaging time for noncarcinogens, AT <sub>NC</sub>	ENTER Vadose zone soil total porosity, n (unitless)  0.39  ENTER  Exposure duration, ED	ENTER Vadose zone soil water-filled porosity, $\theta_w^V$ $(cm^3/cm^3)$ 0.076  ENTER  Exposure frequency, EF	ENTER Exposure Time ET	Average vapor flow rate into bldg. (Leave blank to calculd Qsoil (L/m)  5  ENTER  Air Exchange Rate ACH			

END

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

DATA ENTRY SHEET

Student Scenario: Chemical: 1,3-Butadiene

Results Summary

Indoor Air Conc.

(µg/m³) 6.3E-03

Cancer

Risk

1.0E-08

Noncancer

Hazard

8.0E-05

		Soil (	Gas Concentration	on Data				Result
Reset to Defaults	Chemical CAS No. (numbers only, no dashes)	ENTER Soil gas conc., C <sub>α</sub> (μg/m³)	OR	ENTER Soil gas conc., C <sub>q</sub> (ppmv)	Chemical		Soil Gas Conc. A (μg/m³) 1.69E+01	Attenuation Factor (unitless) 3.7E-04
	106990 ENTER	1.69E+01	ENTER	ENTER	1,3-Butadiene	ENTER		

	ENTER Depth	ENTER	ENTER	ENTER		ENTER
MORE <b>→</b>	below grade to bottom of enclosed space floor, L <sub>F</sub> (15 or 200 cm)	Soil gas sampling depth below grade, L <sub>s</sub> (cm)	Average soil temperature, T <sub>S</sub> (°C)	Vadose zone SCS soil type (used to estimate soil vapor permeability)	OR	User-defined vadose zone soil vapor permeability, k <sub>v</sub> (cm²)
	15	396	24	LS		

MORE ¥	ENTER Vandose zone SCS soil type Lookup Soil Parameters	ENTER Vadose zone soil dry bulk density, \$\rho_b^A\$ (g/cm^3)	ENTER Vadose zone soil total porosity, n  (unitless)	ENTER Vadose zone soil water-filled porosity, $\theta_w^{\ \vee}$ $(cm^3/cm^3)$		ENTER Average vapor flow rate into bldg. (Leave blank to calculate) Q <sub>soil</sub> (L/m)
	LS	1.62	0.39	0.076		5
MORE U	ENTER Averaging time for	ENTER Averaging time for	<b>ENTER</b> Exposure	<b>ENTER</b> Exposure	<b>ENTER</b> Exposure	<b>ENTER</b> Air Exchange
Lookup Receptor Parameters	carcinogens, AT <sub>C</sub> (yrs)	noncarcinogens, AT <sub>NC</sub> (yrs)	duration, ED (yrs)	frequency, EF (days/yr)	Time ET (hrs/day)	Rate ACH (hour) <sup>-1</sup>
NEW=> Residential	70	26	4	180	8 (NEW)	1 (NEW)
END						

# Appendix C

Quality Assurance Project Plan



## Quality Assurance Project Plan

Alexander Hamilton High School 2955 South Robertson Blvd, Los Angeles, California 90034

#### Prepared for

Steven Morrill
Los Angeles Unified School District
Office of Environmental Health and Safety
333 South Beaudry Avenue, 21st Floor
Los Angeles, California 90017

#### Prepared by

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February 16, 2023

Project Number S030.027.001

File: RAW-App B-QAPP-Final



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## **Table**

1 Sample Containers, Preservatives and Holding Times, Laboratory Reporting Limits

## **Figures**

- 1 Site Location
- 2 Site Layout

# **Acronyms and Abbreviations**

%R percent recovery

COPCs chemicals of potential concern

DQO data quality objective

EPA Environmental Protection Agency
LAUSD Los Angeles Unified School District

MDL method detection limit mg/kg milligrams per kilogram

PM Project Manager
QA quality assurance

QAPP Quality Assurance Project Plan

QC quality control

RAW Removal Action Work Plan
RPD relative percent difference

Site Alexander Hamilton High School, 2955 South Robertson Boulevard, Los Angeles, California

Terraphase Engineering Inc.



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## 1 Introduction and Background

This Quality Assurance Project Plan (QAPP) has been prepared by Terraphase Engineering Inc. (Terraphase) on behalf of the Los Angeles Unified School District (LAUSD) to address quality assurance (QA) and quality control (QC) policies associated with the collection of environmental data at Alexander Hamilton High School located at 2955 South Robertson Boulevard in Los Angeles, California (Site; Figures 1 and 2), during planned modernization and improvements. The Site modernization project includes the removal of four buildings (the Laboratory Classrooms, Humanities Classrooms, Photo Studio, and Music Building) and several ancillary structures from the Site (Figure 2), construction of new classroom buildings, a central plant, and new landscaped areas in their place, and modernization of the athletic fields. This QAPP focuses on data collected during the removal action associated with the improvement areas.

The purpose of this QAPP is to identify the methods to be employed to establish technical accuracy, precision, and validity of data that are generated during the removal action for the Site. With the confirmation sampling plan provided in the *Removal Action Work Plan* (RAW; Terraphase 2022), this QAPP presents sampling and analysis procedures to be followed during removal action activities.

The sampling program is formally described in Section 7.7 (Soil Sampling and Analysis Plan) of the RAW (Terraphase 2022). This QAPP contains general and specific details regarding field sampling, laboratory and analytical procedures that apply to activities described in the sampling and analysis plan. This document provides field and laboratory personnel with instructions regarding activities to be performed before, during, and after field investigations. These instructions will ensure data collected for use in the project decisions will be of the type and quality needed and expected for their intended purpose.

Guidelines followed in preparation of this QAPP are described in the United States Environmental Protection Agency's (EPA's) *EPA Requirements for Quality Assurance Project Plans, EPA QA/R-5* (EPA 2001) and *Guidance for Quality Assurance Project Plans, EPA QA/G-5* (EPA 2002b). Other documents referenced in this plan include *Guidance on Systemic Planning Using the Data Quality Objectives Process, EPA QA/G-4* (EPA 2006) and *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW-846* (EPA 2015).

## 1.1 Project Information and Objectives

A summary of the project information and objectives is provided below.

**Project Site:** Alexander Hamilton High School

**Project Proponent:** Los Angeles Unified School District

**Property Owner:** Los Angeles Unified School District

**Chemicals of Concern:** Arsenic, cobalt, lead, benzene, ethylbenzene



Cleanup Goals: Arsenic: 28 milligrams per kilogram (mg/kg)

Lead: 80 mg/kg Cobalt: 23 mg/kg

Estimated Volume of Soil Removal: 2,035.86 cubic yards (includes contingent deep

excavations)

## 2 Project Description

This section presents information concerning the proposed sampling activities, selected analytical parameters, data objectives, and the resulting project decisions. The specific sampling and analysis plan for the project including specifications for field activities is provided in the RAW (Terraphase 2022).

## 2.1 Analytical Scope

Following soil excavation, confirmation soil samples will be collected from the locations specified in Section 7.7 (Soil Sampling and Analysis Plan) of the RAW (Terraphase 2022). The soil matrix confirmation samples will be analyzed for the specific chemicals of potential concern (COPCs) associated with the impacted areas, which is defined in Section 7.2 (Excavation Plan) of the RAW. The COPCs associated with the impacted areas are arsenic, cobalt, and lead in soil, and the VOCs benzene and ethylbenzene in soil vapor.

The confirmation soil samples will be collected from the excavation sidewalls and bottoms as recommended in the RAW and sent to an off-site stationary laboratory. Confirmation samples will be collected into containers as described in Table 1. All sample containers will be capped, sealed, labeled, and stored in a cool ice chest prior to sending to the offsite laboratory for analysis. The soil samples will be delivered to a California-certified laboratory for analysis by EPA Method 6020 for arsenic, cobalt, and/or lead.

### 2.2 Data Use

Decisions to be made based on the planned sampling and analysis effort will be determined by the data compiled from the sampling and analysis program. It is intended that data collected through implementation of this QAPP will satisfy federal, state, and local data quality requirements. The data may be used to characterize the nature and extent of any residual contamination, support the completeness of the remedial action, or assist in determination of additional actions.

The presence of environmental contaminants will be determined by the extent of valid detectable concentrations of the constituents discussed above. If the data associated with COPCs are confirmed, the data will be compared to the cleanup goals. If results are below the proposed cleanup levels, then LAUSD will use the data to support a "no further action" determination. If the evaluation indicates

unacceptable risks of exposure, then the data can be used by the LAUSD for further consideration of action.

## 3 Project Organization

This section provides a description of the organizational structure and responsibilities of the individual positions for this project. This description defines the lines of communication and identifies key personnel assigned to various activities for the project.

## 3.1 Los Angeles Unified School District

LAUSD's Project Manager (PM) will be responsible for the directional decisions, as well as budget control, for work conducted at the Site. LAUSD will perform document review of related work plans, reports, and drawings for activities associated with this project.

## 3.2 Removal Action Work Plan Implementation Contractor

The Removal Contractor has responsibility for assigned phases of remedial action and reporting. Together, the Removal Contractor's management team (PM, Field Team Leader, and the Health and Safety Coordinator) will be responsible for the technical planning and implementation of the work prescribed in the RAW (Terraphase 2022). The QA staff has the responsibility for effective planning, verification and management of QA activities associated with the assigned project.

The Removal Contractor PM will have the authority to commit the necessary resources to ensure timely completion of the project tasks and serve as the primary contact for LAUSD.

Responsibilities include strategy development, schedule creation, budget control and document review. The PM will also be responsible for the day-to-day coordination, along with the subcontractors and field crews, to ensure field activities conform to the specifications presented in the RAW (Terraphase 2022) and health and safety plan.

The Removal Contractor's Health and Safety Coordinator will be responsible for ensuring that the health and safety plan is properly implemented during fieldwork.

### 3.3 Removal Action Work Plan Environmental Consultant

The LAUSD-contracted Environmental Consultant's PM will serve as the primary contact for LAUSD Office of Environmental Health Services. The Environmental Consultant's PM will be responsible for coordinating the monitoring and sampling activities outlined in the RAW. The Environmental Consultant's QA Manager will be responsible for the QA/QC aspects of the project. It is the responsibility of the QA Manager to ensure that all required QA/QC protocols are met in the field and laboratory and to provide oversight of related data validation activities.



## 3.4 Laboratory

The off-site laboratory employed for this project will hold current testing laboratory certification by the State of California in each analysis required for the proper execution and completion of the project. A certified laboratory will perform analytical testing for the confirmation soil samples collected as part of this removal action. The laboratory's PM will report to the LAUSD Environmental Consultant's PM on all aspects of the sample analysis. In addition, the Environmental Consultant's QA Manager shall be advised of any matters related to data quality during the course of the excavation activities. The laboratory will conform to the QA/QC procedures outlined in their laboratory QA/QC plan.

## 4 Data Quality Objectives

Data quality objectives (DQOs) have been specified for each data collection activity, and the work will be conducted and documented so that the data collected are of sufficient quality for their intended use. DQOs specify the data type, quality, quantity, and uses needed to make decisions and are the basis for designing data collection activities. The DQOs were used to design the data collection activities presented in Section 7.7 of the RAW (Terraphase 2022). The DQOs for the project are discussed in the following sections.

## 4.1 Data Quality Objective Process

The project DQOs developed specifically for the planned sampling and analysis program have been determined based on the EPA's seven-step DQO process (EPA 2006). The PM will evaluate the project DQOs to determine whether the quantitative and qualitative needs of the sampling and analysis program have been met. The project definition associated with each step of the DQO process is summarized as follows:

- **State the problem.** The purpose of the sampling program is to confirm that the removal action is complete and the proposed Site is acceptable for the redevelopment of the school.
- Identify the decision. The data obtained from the sampling and testing activities will be used to evaluate whether COPCs remain in soil at concentrations above the preliminary cleanup goals. Based on a review of the data, the need for additional sampling will be determined.
- **Identify inputs to the decision.** Inputs to the decision will include the results of the analytical testing of the soil samples. The samples will be tested for the specified analytes discussed in Section 2.
- **Define the study boundaries.** The boundaries of the field sampling and analysis program were defined in the RAW (Terraphase 2022).
- **Develop a decision rule.** Decisions will be based on laboratory results for the target constituents presented in Table 1. If the concentrations of target compounds are below the preliminary cleanup goals, then a decision will be made that no further action is required. If target constituents are detected in the samples tested, then the data will be compiled for use in determining the need for further step-out and step-down sampling.

- Specify limits on decision error. The results of all analytical testing will be subjected to data validation as specified in Section 8.5 of this QAPP. Data are determined to be valid if the specified limits on precision, accuracy, representativeness, comparability, and completeness are achieved. The results of any detected target constituents will be considered in evaluating the need for additional sampling of the Site and assessing the necessity of reducing any risks posed by the potential contamination.
- Optimize the design. The sampling and analysis plan has been designed to provide the type and
  quantity of data needed to satisfy each of the aforementioned objectives. A separate sampling and
  analysis plan provides the specifications for the data collection activities, including the numbers of
  samples, respective locations, and sampling techniques. The quality of the data will be assessed
  through the procedures further described in this QAPP.

# 4.2 Precision, Accuracy, Representativeness, Comparability, and Completeness

The basis for assessing the elements of data quality is discussed in the following subsections. In the absence of laboratory-specific precision and accuracy limits, the QC limits listed in this section must be met.

#### 4.2.1 Precision

Precision measures the reproducibility of repetitive measurements. It is strictly defined as the degree of mutual agreement among independent measurements as the result of repeated application of the sample process under similar conditions.

Analytical precision is a measurement of the variability associated with duplicate or replicate analyses of the same sample in the laboratory, and is determined by analysis of laboratory QC samples, such as laboratory control sample duplicates, matrix spike duplicates, or sample duplicates. If the recoveries of analytes in the specified control samples are comparable within established control limits, then precision is within limits.

Total precision is a measurement of the variability associated with the entire sampling and analytical process. It is determined by analysis of duplicate or replicate field samples, and measures variability introduced by both the laboratory and field operations. Field duplicate samples are analyzed to assess field and analytical precision.

Duplicate results are assessed using the relative percent difference (RPD) between duplicate measurements. If the RPD for laboratory QC samples exceeds the laboratory's statistically determined acceptance ranges, data will be qualified as described in the application validation procedure. If the RPD between primary and duplicate field samples exceeds 100 percent for soil, data will be qualified as described in the applicable validation procedure. The RPD will be calculated as follows:

$$%RPD=200 \times \frac{X_2 - X_1}{X_2 + X_1}$$

(Where %R is the percent recovery and X<sub>1</sub> is the smaller of the two observed values.)



### 4.2.2 Accuracy

Accuracy is a statistical measurement of correctness and includes components of random error (variability due to imprecision) and systematic error. It reflects the total error associated with a measurement. A measurement is accurate when the value reported does not differ from the true value or known concentration of the spike or standard.

Accuracy of laboratory analyses will be assessed by laboratory control samples, surrogate standards, matrix spikes and initial and continuing calibrations of instruments. Laboratory accuracy is expressed as %R. Statistically derived laboratory accuracy limits are included with the laboratory QA/QC plan. If the %R is determined to be outside acceptance criteria, data will be qualified as described in the applicable validation procedure. The calculation of percent recovery is provided below:

$$\%R = 100\% \times \frac{X_S - X}{T}$$

(Where  $X_S$  is the measured value of the spiked sample, X is the measured value of the non-spiked sample, and T is the true value of the spike solution added.)

Field accuracy will be assessed through the analysis of field equipment blanks. Analysis of blanks will monitor errors associated with the sampling process and field contamination. The DQO for field equipment and trip blanks is that all values are less than the reporting limit for each target constituent. If contamination is reported in the field equipment blanks, data will be qualified as described in the applicable validation procedure.

## 4.2.3 Representativeness

Representativeness is the degree to which data accurately and precisely present selected characteristics of the media sampled. The representativeness of data collection is addressed by careful preparation of sampling and analysis programs. This QAPP, together with the RAW, addresses representativeness by specifying sufficient and proper numbers and locations of samples, incorporating appropriate sampling methodologies, specifying proper sample collection techniques and decontamination procedures, selecting appropriate laboratory methods to prepare and analyze samples, and establishing proper field and laboratory QA/QC procedures.

## 4.2.4 Completeness

Completeness is the amount of valid data obtained compared to the amount that was expected under ideal conditions. The number of valid results divided by the number of possible results expressed as a percentage defines the completeness of the data set. The objective for completeness is to recover at least 90 percent of the planned data to support field efforts. The formula for calculation of completeness is presented as follows:

$$\% \textit{Completeness} = 100\% \times \frac{\textit{number of valid results}}{\textit{number of expected results}}$$

### 4.2.5 Comparability

Comparability is an expression of confidence with which one data set can be compared to another. The objective of comparability is to ensure that data developed during the investigation are comparable to Site knowledge and adequately address applicable criteria or standards established by the EPA and the California Department of Health Services. This QAPP addresses comparability by specifying laboratory methods that are consistent with the current standards of practice as approved by the EPA and the California Department of Health Services. Field methods are discussed in the sampling and analysis plan.

## 5 Quality

This section presents QC requirements relevant to analysis of environmental samples that will be followed during all project analytical activities. The purpose of the QC program is to produce data of known quality that satisfy the project objective and meet or exceed the requirements of the standard methods of analysis. This program provides a mechanism for ongoing control and evaluation of data quality measurements through the use of the QC procedures, materials, and samples.

## 5.1 Quality Control Procedures

The chemical data to be collected for this effort will be used to determine that the extent of contamination is properly evaluated. As such, it is critical that the chemical data be of the highest confidence and quality. Consequently, strict QA/QC procedures will be adhered to. These procedures include:

- Adherence to strict protocols for field sampling and decontamination procedures;
- Collection and laboratory analysis of appropriate field equipment and trip blanks to monitor for contamination of samples in the field or the laboratory;
- Collection and laboratory analysis of matrix spike, matrix spike duplicate, and field duplicate samples
  to evaluate precision and accuracy; and
- Attainment of completeness of goals.

### 5.1.1 Equipment Decontamination

Non-dedicated equipment must be decontaminated before and after each sample is collected. The equipment is to be washed in a non-phosphate detergent solution and double-rinsed in distilled water.

#### 5.1.2 Standards

Standards used for calibration or to prepare samples are to be certified by the National Institute of Standards and Technology, the EPA, or other equivalent source. The standards will be current. The expiration date will be established by the manufacturer, or based on chemical stability, the possibility of contamination, and environmental and storage conditions. Standards must be labeled with expiration dates and will reference primary standard sources, if applicable. Expired standards must be discarded.



### 5.1.3 Supplies

All supplies must be inspected prior to their use in the field or laboratory. The descriptions for sample collection and analysis contained in the methods will be used as a guideline for establishing the acceptance criteria for supplies. A current inventory and appropriate storage system for these materials will ensure their integrity prior to use. Efficiency and purity of supplies will be monitored through the use of standards and blank samples.

### 5.1.4 Holding Time Compliance

Sample preparation and analysis must be completed within the required method holding times (Table 1). Holding time begins at the time of sample collection. If holding times are exceeded, and the analyses are performed, the associated results will be qualified as described in the applicable validation procedure.

The following definitions of extraction and analysis compliance are to be used to assess holding times:

- **Preparation or extraction completion.** Completion of the sample preparation process as described in the applicable method, prior to any necessary extract cleanup; and
- Analysis completion. Completion of all analytical runs, including dilutions, second-column confirmations, and any required re-analysis.

#### 5.1.5 Preventative Maintenance

The LAUSD Removal Contractor Field Manager is responsible for documenting the maintenance of all field equipment prescribed in the manufacturer's specifications. Scheduled maintenance is to be performed by trained personnel only. Subcontractors are responsible for maintenance of all equipment needed to carry out subcontracted duties. Backup instrumentation and equipment will be available locally and shipped to the Site as needed. The analytical laboratory is responsible for all analytical equipment calibration and maintenance as described in their laboratory QA/QC plan.

## 5.2 Field Quality Control Samples

The types of field QC samples that will be collected during confirmation sampling for the remedial action and their purpose in relation to the DQOs are discussed in the following subsections.

## 5.2.1 Field Duplicate Samples

Field duplicate samples will be collected and analyzed to evaluate sampling and analytical precision. Field duplicates are collected and analyzed in the same manner as the primary samples. Agreement between duplicate sample results will indicate good sampling and analytical precision. Field duplicates will be collected at a frequency of 10 percent of the primary soil samples collected. The duplicate sample will be subject to the same laboratory analyses performed on the associated primary sample.

### 5.2.2 Field Equipment Blanks

An equipment rinsate blank will be collected from the final water rinsed over non-disposable sampling equipment after decontamination activities have been performed. The equipment rinsate blank will be collected from non-disposable (reusable) sampling equipment such as soil sampling tools and sampling equipment. To collect an equipment rinsate blank sample, distilled water will be poured over or through the recently cleaned equipment and carefully collected directly into an appropriate sample container held over a bucket. Equipment rinsate blank samples will be stored and processed in the same manner as the other samples. An equipment rinsate blank will be collected each day that field sampling activities are conducted using reusable sampling equipment.

#### 5.2.3 Temperature Blanks

One temperature blank will accompany each cooler containing project samples submitted to the subcontract laboratory. Temperature blanks typically consist of deionized water poured into a glass container. Laboratory personnel will obtain temperature measurements from the temperature blank upon receipt of sample shipment containers, and this measurement will be recorded on the chain-of-custody form.

## 5.3 Laboratory Quality Control Samples

Laboratory QC samples are used to ensure that conducted analyses are within QC limits and document the quality of analytical results. The types of QC samples the laboratory will employ depend on the particular analytical methodology used to analyze the samples. Each analytical method has a required QC procedure that must meet laboratory-developed acceptance limits in order for the data to be considered valid. In addition, as part of the laboratory's accreditation program, performance evaluation samples and method detection limit studies are conducted to evaluate the laboratory's capability of performing the method accurately and precisely. The primary types of laboratory QC samples are discussed in the following subsections.

## 5.3.1 Laboratory Method Blanks

A laboratory method blank is prepared and analyzed by the laboratory in exactly the same manner as project samples in the analytical batch. Analysis of the method blank indicates potential sources of contamination from laboratory procedures (e.g., contaminated reagents, improperly cleaned laboratory equipment, or persistent contamination due to presence of certain compounds in the ambient laboratory air). A method blank is included with the analysis of every analytical batch or as stated in the method, whichever is more frequent.

## 5.3.2 Laboratory Control Samples

Laboratory control samples are analyzed by the analytical laboratory to evaluate the efficiency of the extraction and analysis procedures and are necessary to verify the accuracy and precision of the extraction and analysis. The laboratory control sample is prepared by the addition of known quantities of target compounds to a blank matrix. The laboratory control sample is extracted and analyzed in the



same manner as project samples in the analytical batch. The results of the analysis are compared with the known additions, and a laboratory control samples recovery is calculated to provide an evaluation of the accuracy of the extraction and analysis procedures. Laboratory control sample recoveries are required to check that they are within laboratory's determined acceptance ranges. The acceptable ranges vary with both sample matrix and analytical method. Laboratory control sample and laboratory control sample duplicates will be analyzed by the laboratory with each sample batch at a frequency of at least 1 per batch of 20 samples. Analysis of laboratory control samples may be performed in duplicate in order to evaluate the precision of the procedures as well as the accuracy. Precision objectives (represented by agreement between laboratory control sample and laboratory control sample duplicate recoveries) and accuracy objectives (represented by laboratory control sample recovery results) are based on statistically generated limits established annually by the analytical laboratory. If a bias is determined, the associated data will be qualified and the direction of the bias indicated in the data validation report.

#### 5.3.3 Matrix Spike Samples

Matrix spike analyses are performed by the analytical laboratory to evaluate the efficiency of the sample extraction and analysis procedures, and are necessary because matrix interference (i.e., interference from the sample matrix, water, or soil) may have a widely varying impact on the accuracy and precision of the extraction analysis. The matrix spike is prepared by the addition of known quantities of target compounds to a project-specific sample. The matrix spike sample is extracted and analyzed in the same manner as project samples in the analytical batch. The results of the analysis are compared with the known additions and a matrix spike recovery is calculated to provide an evaluation of accuracy of the extraction and analysis procedures. Matrix spike recoveries are reviewed to check that they are within the laboratory's statistically determined acceptance ranges. However, the acceptance ranges vary widely with both sample matrix and analytical method. Matrix spikes and matrix spike duplicates will be analyzed by the laboratory at a frequency of at least 1 per batch of 20 samples or less. Typically, matrix spike analyses are performed in duplicate in order to evaluate the precision of the procedures as well as the accuracy. Precision objectives (represented by agreement between matrix spike and matrix spike duplicate recoveries) and accuracy objectives (represented by matrix spike recovery results) are based on statistically generated limits established annually by the analytical laboratory. These objectives are to be viewed as goals, not criteria. If matrix bias is suspected, the associated data will be qualified and the direction of the bias indicated in the data validation report.

## 6 Sampling Procedures

The defensibility of data depends on the use of well defined, accepted sampling procedures. This section describes the sampling and handling procedures that will be followed for each sampling event.

### 6.1 Field Procedures

Collection of environmental samples of high integrity is important to the quality of chemical data to be generated. To this end, strict field procedures have been developed as general descriptions of field

methods that will be employed at various locations during phases of the field investigation. These procedures are contained in the sampling and analysis plan.

## 6.2 Sample Containers, Preservation and Holding Times

Table 1 lists the required sample containers, preservatives and recommended maximum holding times for samples. Sample containers will be provided by the laboratory.

## 6.3 Sample Handling and Storage

In the field, each sampler container will be marked with the sampling location number, date, and time of sample collection. All sample containers will be wiped with clean paper towels, securely packed in zipper-sealed plastic bags, and placed into coolers that are properly chilled.

Upon receipt of the samples, the laboratory will immediately notify the Environmental Consultant's PM if conditions or problems are identified that require immediate resolution. Such conditions include container breakage, missing or improper chain-of-custody forms, exceeded holding times, missing or illegible sample labeling, or temperature excursions.

## 6.4 Sample Custody

For each sample that is submitted to the laboratory for analysis, an entry will be made on a chain-of-custody form supplied by the laboratory. The information to be recorded includes the sampling date and time, sample identification number, matrix type, requested analyses and methods, preservatives, and the sampler's name. The chain-of-custody form will also specify the laboratory turnaround time that will be appropriate to meet the EPA holding times for the requested methods.

Sampling team members will maintain custody of the samples until they are relinquished to laboratory personnel or a professional courier service. The chain-of-custody form will accompany the samples from the time of collection until received by the laboratory. Each party in possession of the samples (except the professional courier service) will sign the chain-of-custody form signifying receipt. The chain-of-custody form will be placed in a plastic bag and shipped with samples inside the cooler. After the samples, ice and chain-of-custody forms are packed in the cooler, it will be appropriately sealed before being relinquished to the courier. A copy of the original completed form will be provided by the laboratory along with the report of results. Upon receipt, the laboratory will inspect the condition of the sample containers and report the information on the chain-of-custody or similar form.

## 7 Analytical Procedures

The analytical methods used for this project are primarily EPA-approved methods and are listed in Table 1. Specific analytical method procedures are detailed in the laboratory QA/QC plan of the selected laboratory, which may be reviewed by QA staff during laboratory audits to ensure that project specifications are met. Laboratory audits are discussed in Section 8.2.



#### 7.1 Internal Standards

Internal standards are measured amounts of method-specified compounds added after preparation, or extraction, of a sample. Internal standards are added to samples, controls, and blanks in accordance with method requirements to identify column injection losses, purging losses, or viscosity effects.

Acceptance limits for internal standard recoveries are set forth in the applicable method. If the internal standard recovery falls outside acceptance criteria, the instrument will be checked for malfunction, and re-analysis of the sample will be performed after any problems are resolved.

#### 7.2 Retention Windows

Retention time windows will be established as described in SW-846 Method 8000A for applicable analyses of organic compounds, if necessary. Retention time windows are used for qualitative identification of analytes and are calculated based on multiple, replicated analyses of respective standards.

Retention times will be checked daily. Acceptance criteria for retention time windows are established in the referenced method. If the retention time falls outside the respective window, action will be taken to correct the problem. The instrument must be re-calibrated after any retention time window failure, and the affected samples must be re-analyzed.

#### 7.3 Method Detection Limits

The method detection limit (MDL) is the minimum concentration of an analyte, or compound, that can be measured and reported with 99 percent confidence that the concentration is greater than zero. MDLs are established for each method, matrix and analyte, and for each instrument used to analyze project samples. MDLs are derived using the procedures described in Code of Federal Regulations, Title 40, Section 136. The EPA requires that MDLs be established annually. MDLs must be below applicable reporting limits for each target analyte.

#### 7.4 Instrument Calibration

Analytical instruments will be calibrated in accordance with the procedures specified in the applicable methods. All analytes that are reported must be present in the initial and continuing calibrations, and these calibrations must meet the acceptance criteria specified in the reference method. Records of standard preparation and instrument calibration will be maintained. Records must unambiguously trace the preparation of standards and their use in calibration and quantification of sample results. Calibration records will be traceable to standards materials as described in Section 5.1.2.

At the onset of analysis, instrument calibrations will be checked using all of the analytes of interest. At a minimum, calibration criteria will satisfy method requirements. Analyte concentrations can be determined with either calibration curves or response factors, as defined in the method. Guidance provided in Method SW-846 should be considered to determine appropriate evaluation procedures.

## 8 Data Reporting

This section presents reporting requirements relevant to the data produced during all project analytical activities.

#### 8.1 Field Data

Data measured by field instruments will be recorded in field logs, and/or on required field forms. Units of measure for field analyses are identified on the field forms. The field data will be reviewed by the Environmental Consultant PM or Field Manager to evaluate completeness of the field records and appropriateness of the field methods employed. All field records will be retained in the project files.

## 8.2 Laboratory Data

Analytical data will contain the necessary sample results and quality control data to evaluate the DQOs defined for the project. At a minimum the laboratory reports will include the following data and summary forms:

- Narrative, cross-reference, chain-of-custody and method references
- Analytical results
- Calibration summary upon request
- Blank results
- Laboratory control sample recoveries
- Duplicate sample results or duplicate spike recoveries
- Sample spike recoveries
- Instrument tuning summary upon request
- Associated raw data upon request
- · Magnetic tape or equivalent upon request

The laboratory data will be reviewed for compliance with the applicable method and the quality of the data reported. The areas of data validation are summarized as follows.

- Data completeness
- Holding times
- Blanks
- · Laboratory control samples
- Matrix spike/matrix spike duplicates
- Field quality control samples



The application of data validation criteria is a function of project-specific DQOs. The QA Manager will determine whether the data quality objectives for the analytical data have been met. Results of the data validation review will be documented and summarized in a data validation memorandum, which will be included as an appendix to the remedial action completion report.

## 8.3 Project Data Management

Data management is the process of organizing, maintaining, and applying a variety of data to provide a useful and coherent view of the Site conditions. Data collected for the project implementation include sample collection data, field measurement data, and on- and off-site laboratory analytical data.

#### 8.4 Procedures for Data Validation

Guidance for performing data validation for the types of analyses to be utilized for this investigation is provided in the *National Functional Guidelines for Organic Superfund Methods Data Review* (EPA 2020a) and *National Functional Guidelines for Inorganic Superfund Methods Data Review* (EPA 2020b). Data validation will be documented in a manner consistent with these functional guidelines. The results of the data validation will be included in the data validation memorandum, which will be maintained in the project files.

#### 8.5 Data Qualifiers

The data validation procedures were designed to review each data set and identify biases inherent to the data and determine its usefulness. Data validation flags are applied to those sample results that fall outside of specified tolerance limits and therefore did not meet the program's QA objectives as described in Section 4.2. Data validation flags to be used for this project are defined in the *National Functional Guidelines for Organic Superfund Methods Data Review* (EPA 2020a) and *National Functional Guidelines for Inorganic Superfund Methods Data Review* (EPA 2020b). Data validation flags will indicate if results are considered anomalous, estimated, or rejected. Only rejected data are considered unusable for decision-making purposes; however, other qualified data may require further verification.

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# **Table**

1 Sample Containers, Preservatives and Holding Times, Laboratory Reporting Limits



**Table 1 Sample Containers, Preservatives, Holding Times, and Laboratory Reporting Limits**Quality Assurance Project Plan
Alexander Hamilton High School, 2955 S Robertson Blvd, Los Angeles, CA

	Soil Analyses							
Analyte	Method	Container	Perservative	Holding Time	Reporing Limits			
Arsenic	EPA 6020	Glass jar or acetate/brass/stainless steel sleeve	4°C +/- 2° C, ice	180 days	1.0 mg/kg=RL, 0.06 mg/kg=MDL			
Lead	EPA 6020	Glass jar or acetate/brass/stainless steel sleeve	4°C +/- 2° C, ice	180 days	0.50 mg/kg=RL, 0.0027 mg/kg=MDL			
Cobalt	EPA 6020	Glass jar or acetate/brass/stainless steel sleeve	4°C +/- 2° C, ice	180 days	1.0 mg/kg=RL, 0.47 mg/kg=MDL			

#### Note:

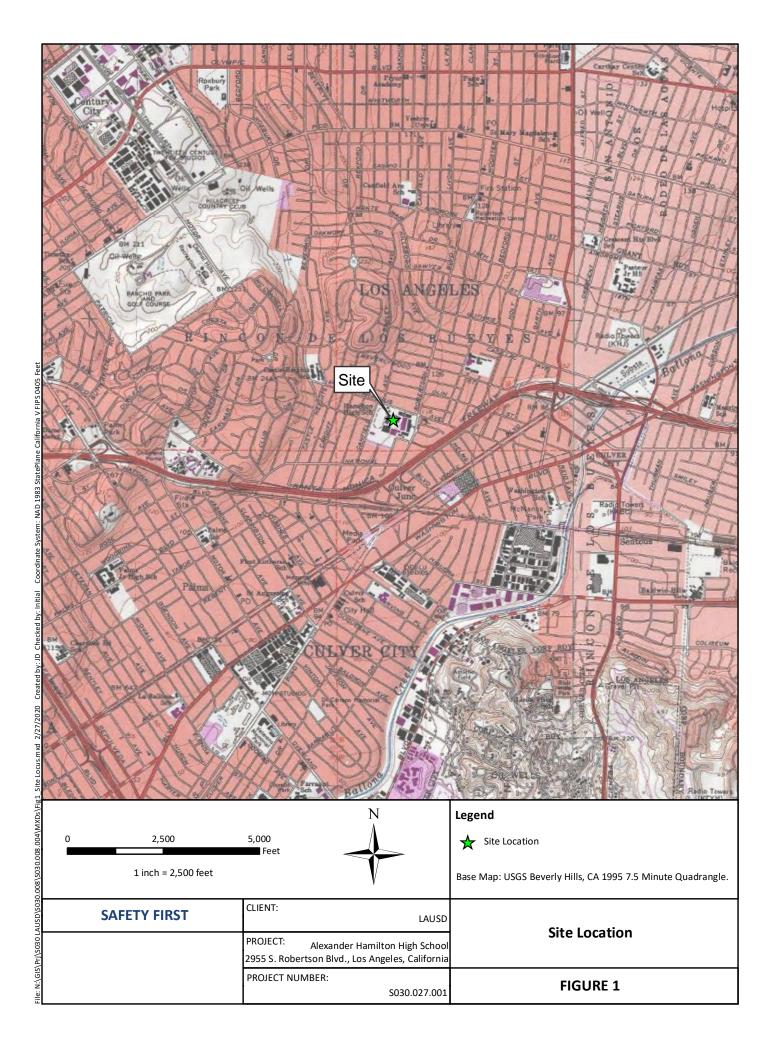
°C = degrees celcius RL = Reporting Limit MDL = Method Detection Limit Hold time "E" = Extraction hold time Hold time "A" = Analysis hold time

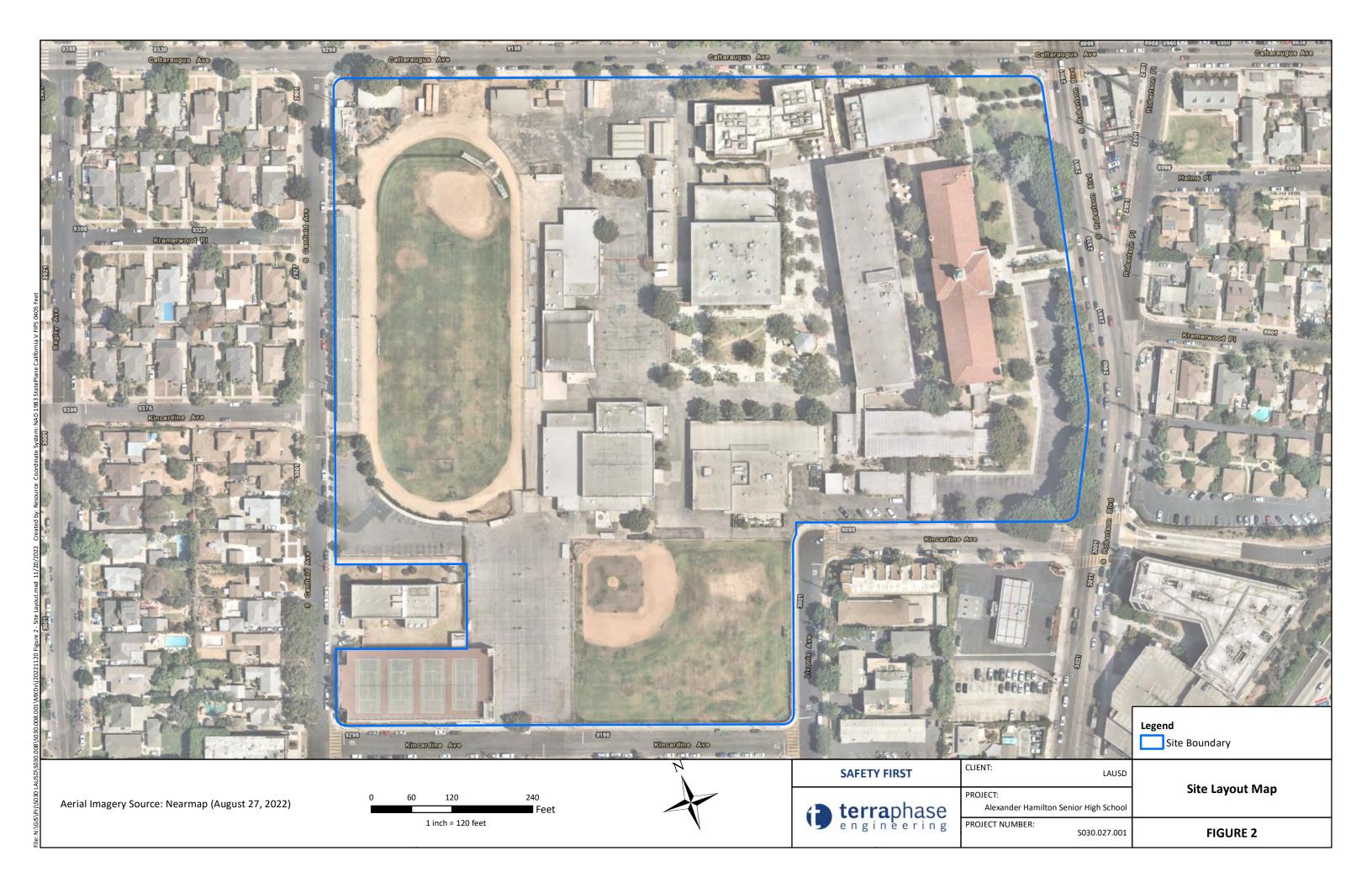
Terraphase Engineering Inc.
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# **Figures**

- 1 Site Location
- 2 Site Layout







# Appendix D

Transportation Plan



## **Transportation Plan**

Alexander Hamilton High School 2955 South Robertson Boulevard, Los Angeles, California 90034

#### Prepared for

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February 16, 2023

Project Number S030.027.001

File: RAW-App C-Transportation Plan-Final



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### **Table**

1 Impacted Soil Volume Removal Estimates

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- 2 Site Layout Map

## **Acronyms and Abbreviations**

bgs below ground surface

cy cubic yard(s)

COCs chemicals of concern
HASP Health and Safety Plan

LAUSD Los Angeles Unified School District

PEA-E Preliminary Environmental Assessment – Equivalent

PEA-E Document Preliminary Environmental Assessment – Equivalent Document

RAW Removal Action Work Plan

RCRA Resource Conservation and Recovery Act

Site Alexander Hamilton High School at 2955 South Robertson Boulevard in Los Angeles,

California

Terraphase Engineering Inc.

VOC volatile organic compound



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### 1 Introduction

Alexander Hamilton High School is located at 2955 South Robertson Boulevard in Los Angeles, California (Site). The Site is developed with the high school campus and comprises approximately 20.75 acres of land identified as Los Angeles County Assessor's Parcel Number 4311-031-901. The Site is owned and operated by Los Angeles Unified School District (LAUSD).

LAUSD intends to modernize the high school (Figure 2), which entails the removal of four buildings (the Laboratory and Humanities classrooms, photography studio, and music buildings) and several ancillary structures from the Site (Figure 2), construction of new classroom buildings, a central plant, and new landscaped areas in their place, and renovation of the athletic fields.

Terraphase Engineering Inc. (Terraphase) was contracted in 2018 to complete a Preliminary Environmental Assessment – Equivalent (PEA-E) study to assess potential impacts of chemicals of concern (COCs) in soil, which include Title 22 metals (primarily arsenic and lead); volatile organic compounds (VOCs); total petroleum hydrocarbons quantified as gasoline, diesel, and oil; semivolatile organic compounds; polycyclic aromatic hydrocarbons; polychlorinated biphenyls; and organochlorine pesticides to evaluate whether environmental impacts were present and required mitigation prior to or during upcoming construction at the Site. Arsenic and lead were detected in soil exceeding site-specific action levels, and benzene and ethylbenzene were detected in soil vapor exceeding generic site screening levels; therefore, Terraphase recommended that the 2022 *Removal Action Work Plan* (RAW) be developed for the Site.

This document outlines the plan for transporting excavated soil to an off-site disposal facility. The purpose of this Transportation Plan is to ensure that soils excavated from the Site are properly disposed at an off-site disposal facility and minimize the risks associated with transporting impacted soils.



### 2 Waste Characterization and Quantity

This section discusses site-specific waste, hazardous and non-hazardous waste management, and total waste volume.

#### 2.1 Waste Profile

Based on the findings of the *Preliminary Environmental Assessment – Equivalent Document* (PEA-E Document) prepared for the Site (Terraphase 2021), lead and arsenic were found to be COCs in soil, and benzene and ethylbenzene were found to be COCs in soil vapor. Samples collected during the PEA-E study will not be recent enough to be used for waste profiling purposes; therefore, additional sampling and analysis will be conducted, as necessary, so that soils generated by the removal action will be properly characterized and profiled before they are transported off-site for disposal.

Based on findings of the PEA-E study, excavated soil near primary boring B12 to a depth of 0.5 feet below ground surface (bgs) is expected to be non-Resource Conservation and Recovery Act (RCRA) hazardous waste for lead; excavated soil near adjacent step-out boring B12-BBB to a depth of 0.5 feet may be RCRA hazardous waste for lead. For disposal purposes, prior to final characterization and profiling, the removal contractor should assume that all soil excavated around boring B12 to a depth of 1.5 feet bgs, an approximate volume of 19.98 cubic yards (cy), will potentially be RCRA hazardous for lead. These soils (RCRA or non-RCRA hazardous waste) should be segregated, stockpiled, or stored in a bin, and disposed separately from other non-hazardous excavated wastes.

All waste will be properly characterized and profiled prior to off-site disposal at an appropriate licensed facility by either the removal contractor or environmental consultant. Waste handled as non-RCRA or RCRA hazardous waste will be profiled under a USEPA Identification Number and disposed off-site at a Class I landfill. Compliance with federal and state requirements for waste generation, temporary on-site storage, transportation, and disposal will be required for the contractor(s) performing the excavation activities and will be monitored by the environmental consultant overseeing the field work.

Any container used for on-site storage of hazardous waste will be properly identified with a hazardous waste label. Within 90 days after its generation, the hazardous waste will be transported off site for disposal. Any shipment of hazardous wastes in California will be transported by a registered hazardous waste hauler under a uniform hazardous waste manifest. Waste is expected to be profiled as either:

- Soil impacted with non-hazardous arsenic or lead, and VOC concentrations in soil vapor.
- Potential non-RCRA hazardous (California hazardous) lead-impacted soil near primary boring B12 to a depth of 0.5 feet bgs.
- Potential RCRA hazardous lead-impacted soil near adjacent step-out boring B12-BBB to a depth of 0.5 feet bgs.

Based on the waste profile of B12-0.5 and B12-BBB-0.5, the removal contractor should assume that all excavated soils around primary boring B12 to a depth of 1.5 feet bgs will be potentially characterized as RCRA hazardous waste for lead. Approval from the disposal facility will be obtained before any

excavation activities commence. Additional documentation will be provided to LAUSD pertaining to waste disposal profiles and acceptance prior to any off-site shipments of waste.

### 2.2 Hazardous Waste Management

RCRA hazardous waste is regulated under both RCRA and the California Health and Safety Code. RCRA regulatory levels for D-listed wastes, using the Toxicity Characteristic Leaching Procedure, are listed in 22 CCR 66261.24(a)(1). Non-RCRA hazardous waste is regulated only under the California Health and Safety Code and 22 CCR 66261. The total and soluble threshold limit concentration values for certain chemicals are listed under 22 CCR 66261.24(a)(2).

- One sample (B12-0.5) was found to contain soluble concentrations of lead that would characterize the impacted soil as a non-RCRA hazardous waste.
- One sample (B12-BBB-0.5) was found to contain soluble concentrations of lead that would characterize the impacted soil as RCRA hazardous waste.

Based on the two borings in excavation area B12 characterizing the impacted soil as non-RCRA **and** RCRA hazardous wastes, the removal contractor should assume that all soil excavated from B12 to a depth of 1.5 feet bgs, an estimated total of 19.98 cy (Table 1), may potentially be characterized as RCRA hazardous waste for lead. These soils (RCRA or non-RCRA hazardous) should be segregated, stockpiled, or stored in a bin, and disposed separately from other non-hazardous excavated wastes.

### 2.3 Non-Hazardous Waste Management

Pending profiling confirmation, the majority of soil impacted by arsenic and lead, and VOC concentrations in soil vapor transported off site shall be managed as non-hazardous waste. Depending on the types and concentrations of COCs and permit limitations of the receiving facility, non-hazardous waste can either be disposed at a Class 3 landfill, used as daily cover at a Class 3 landfill, or recycled at a soil treatment facility.

### 2.4 Waste Quantity

Table 1 provides a detailed summary of the anticipated volumes of soil (1,940 cy) that will be excavated during the removal action. A small portion of the excavated soil (approximately 19.98 cy from proposed excavation around boring B12 to a depth of 1.5 feet bgs) is expected to be RCRA hazardous waste for lead (Table 1). The remaining amount of soil, approximately 1,920 cy, will be disposed as non-hazardous waste pending profile acceptance.

 $\frac{https://govt.westlaw.com/calregs/Document/I8430AAA95B6111EC9451000D3A7C4BC3?viewType=FullText\&originationContext=documenttoc\&transitionType=CategoryPageItem\&contextData=(sc.Default)$ 



<sup>&</sup>lt;sup>1</sup> Characteristic of Toxicity,

### 3 Soil Loading Operations

Impacted soil will be removed with earth moving equipment, as necessary, and will involve the use of a backhoe, loader, excavator, and/or shovels. As the impacted soil is excavated from the Site, it may be immediately loaded onto trucks for immediate off-site removal or stored in on-site stockpiles. The trucks will be staged within the boundaries of the Site. Once loaded, the trucks will transport the impacted soil off site for disposal.

Shallow excavations in the impacted areas will be backfilled with clean fill. Soil excavation, dust control, backfill, and Site restoration are discussed in Section 7 of the RAW (Terraphase 2022).

### 3.1 Truck Loading Operations

Haul vehicles will only be loaded in designated areas. Haul trucks may be loaded utilizing a front-end loader or similar contractor-approved equipment. Water spray or mist, as appropriate, will be applied during soil loading operations for dust control.

All vehicles will be decontaminated prior to leaving the work area. For track-out prevention and control, all trucks will be broom-cleaned after loading and rinsed off with water in a gravel pad area. The dump truck or roll-off bin portion of the truck will then be covered with a tarp to prevent soil and/or dust from spilling or blowing out of the truck during transport to the disposal facility. Any waste accumulated during decontamination procedures will be containerized for appropriate disposal.

Prior to leaving the load-out area, each haul vehicle will be inspected by the excavating contractor to ensure that the payloads are adequately covered, the vehicles are cleaned of spilled soil, and the shipment is properly manifested.

### 3.2 Working Hours and Duration

In most cases, excavation and truck loading/unloading will be conducted between the hours of 7 a.m. to 5 p.m., Monday through Friday. As needed, and with prior LAUSD approval, excavation and truck loading, unloading, and off-site transport to the licensed disposal facility may be conducted on Saturdays from 8 a.m. to 5 p.m. All restoration activities (backfilling, compaction, landscaping, and irrigation repair), if any, will be conducted immediately after cleanup goals have been met, as demonstrated through confirmation sampling and LAUSD concurrence has been obtained.

### 4 Transportation Control

This section presents a summary of the controls associated with transporting soil from the Site.

#### 4.1 Dust Control

Soil for off-site disposal will be transported in tarp end dump trucks, drums, or roll-off bins to an approved land disposal facility. All waste hauler vehicles will be decontaminated prior to leaving the work area. Clean fill materials will be transported in tarped trailers/trucks to the Site.

#### 4.2 Traffic Control

Prior to loading or unloading at the Site, all trucks will be staged on site as much as possible to avoid impacts on the local streets. Careful coordination of trucks will be exercised to help avoid long off-site wait times. If necessary, a flag person will be located at the entry way to assist the truck drivers with safe entry to and departure from the Site.

#### 4.3 Site Access Control

Trucks to be loaded or unloaded at the Site will only access the Site through designated entry/access points. Waste hauling vehicles will not be allowed to cross soil removal or staging areas.

#### 4.4 On-site Traffic Flow

Traffic will be coordinated in such a manner to reduce truck traffic on surrounding surface streets and reduce dust generation during on- and off-site transportation.

### 4.5 Speed Limit

While on the Site, all vehicles are required to maintain slow speeds (e.g., less than 5 miles per hour) for safety purposes and dust control measures. While on streets or freeways, all transporters will be directed to follow the speed limit requirements and use defensive driving techniques for traffic safety.

### 4.6 Transportation Routes

As a removal contractor has not been chosen yet and the disposal Sites have not been designated, this document does not identify any transportation routes for off-site shipment of impacted soils. Identification of transportation routes and preparation of associated maps will be the responsibility of the removal contractor.



### 4.7 Consultation with Local Transportation Department

A "haul route permit" may be required and obtained from the Los Angeles County Department of Public Works with a copy of the transportation route map at least 3 days prior to commencement of the proposed removal action. Mobilization and demobilization of large earthmoving equipment may exceed the applicable weight limit and require additional permits from the state (and local transportation agencies). Heavier loads have higher permit fees and restrictions on time of travel.

#### 4.8 Local Traffic Control

Transportation of impacted soil will be on arterial streets and/or freeways, approved for truck traffic, to minimize any potential impact on the local neighborhood. For entry and exit from the school parking lot, the removal contractor may initiate a flag person to direct traffic flow during heavy traffic hours. Therefore, the number of daily truckloads during implementation of the RAW is not expected to cause a disruption in local traffic.

#### 4.9 Street Maintenance

If required, a "work notice" will be given to the street maintenance authority with a copy of the removal contractor's transportation route map at least 3 days prior to initiation of the proposed removal action. If necessary, streets will be cleaned of spilled soils, and the final cleanup after completion of field activities, such as washing paved areas, will be conducted. The number of daily truckloads during implementation of the RAW is not expected to cause damage to surface streets.

### 5 Off-site Disposal Facilities and Shipping Documentation

Impacted soil targeted for off-site disposal will be properly managed, manifested, and transported by a registered waste hauler to an approved waste management facility located in California or out-of-state facility permitted to accept the waste. Based on the results of the waste profile, soil removed from the excavation area a near primary boring B12, to a depth of 1.5 feet bgs (19.98 cy), is potentially expected to be transported as RCRA hazardous waste under hazardous manifests to a fully permitted and licensed RCRA hazardous waste disposal facility. The remaining soil impacted with arsenic or lead, and VOC concentrations in soil vapor, is expected to be transported under non-hazardous manifests or proper shipping documents to a fully permitted and licensed Class 3 disposal facility in California.

Manifests, bill of lading, and/or invoice from the selected hauler will be used to document and accompany each truck shipment. At a minimum, the shipping document will include the following information:

- Name and address of waste generator
- Name and address of waste transporter
- · Name and address of disposal facility
- Description of the waste
- · Quantity of waste shipped

Copies of the shipping document will be maintained for each truckload of excavated soils or fill materials, and these documents will be submitted to the LAUSD in the final Removal Action Completion Report.



## 6 Record Keeping

Notes will be maintained during the removal action activities to document observations, on-site personnel, truck arrival and departure times, and other vital project information.

## 7 Health and Safety

A site-specific health and safety plan (HASP) will be prepared by the awarded removal contractor. Everyone working at the Site will be required to be familiar with the HASP, and a hard copy of the HASP is to be kept on site at all times during removal action activities.



## 8 Imported Material

If needed, fill materials will be secured by the removal contractor. Selection of fill materials shall follow the latest revision of LAUSD's Specification Section 01 4524 (Environmental Import/Export Materials Testing) and have approval of the LAUSD Office of Environmental Health & Safety Project Manager prior to backfill. All sources shall be approved by LAUSD prior to importing the fill materials to the Site.

## 9 Transportation Requirements

Fully licensed and insured transporters will be selected to haul the excavated soil away or fill materials to the Site. Any hazardous wastes encountered must be shipped by a registered hazardous waste hauler.



## 10 References

Terraphase Engineering Incorporated (Terraphase). 2021. *Preliminary Environmental Assessment – Equivalent Document*, Alexander Hamilton High School, 2955 South Robertson Boulevard, Los Angeles, California 90034. October 27.

Terraphase. 2022. *Removal Action Work Plan*, Alexander Hamilton High School, 2955 South Robertson Boulevard, Los Angeles, Califonria 90034. December 9.

## Table

1 Impacted Soil Volume Removal Estimates



**Table 1 Impacted Soil Volume Removal Estimates**Alexander Hamilton Senior High School
2955 S. Robertson Boulevard, Los Angeles, CA

Excavation ID	Contaminant of Concern	Estimated Soil Removal Volume (cubic yards)	Notes:
Shallow			
B03	Lead	3.08	Impacted at 1.5 ft bgs. Delineated at 2.5 ft bgs. Delineated to east and south. Excavation ends at utility lines in north and west directions.
B10	Lead	0.85	Impacted at 0.5 ft bgs. Delineated at 1.5 ft bgs. Delineated to north, south and west. Excavation ends at building to the east.
B11	Arsenic	17.36*	Impacted at 1.5 and 2.5 ft bgs. Not Delineated at 2.5 ft bgs. Delineated to north. Not delineated to west, east and south.
B12	Lead	19.98	Impacted at 0.5 ft bgs. Delineated at 1.5 ft bgs. Delineated to north and south. Excavation ends at utility lines in east and west directions.
B18	Arsenic	1.53*	Impacted at 2.5 ft bgs. Not delineated at 2.5 ft bgs. Delineated to north, south, east and west.
B20	Arsenic	9.95	Impacted at 0.5 ft bgs. Delineated at 1.5 ft bgs. Delineated to north, south and west. Not delineated to east.
B25	Lead	6.81	Impacted at 0.5 ft bgs. Delineated at 1.5 ft bgs. Delineated to north, east and west. Excavation ends at building to the south.
B70	Arsenic	1.95*	Impacted at 1.5 ft bgs. Not delineated at 1.5 ft bgs. Delineated to north and south. Excavation ends at wall to west and end of planer to east.
B83	Lead	3.48	Impacted at 0.5 ft bgs. Delineated at 1.5 ft bgs. Delineated to north, south, east and west.
B91	Lead	20.56	Impacted at 1.5 ft bgs. Delineated at 2.5 ft bgs. Delineated to north, south and west. Excavation ends at building to east.
Proposed shallov	v excavation volume:	85.55	

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## Table 1 Impacted Soil Volume Removal Estimates

Alexander Hamilton Senior High School 2955 S. Robertson Boulevard, Los Angeles, CA

Excavation ID	Contaminant of Concern	Estimated Soil Removal Volume (cubic yards)	Notes:
Deep			
B55/SV55	Benzene/ Ethylbenzene	1,824**	Impacted soil vapor at 15 ft bgs. 60 ft long X 20 ft wide deep excavation centered over B55/SV55. 22.5 ft wide setback sloped at 1.5H:1V to north, south, and east. Excavation ends at utility lines to the west. Not delineated in any direction.
SV121	Benzene/ Ethylbenzene	31	Impacted soil vapor at 5 feet bgs. 10 ft wide X 20 ft long excavation around SV121 and adjacent sanitary sewer line north of SV121. Not delineated in any direction.
Proposed deep excavation volume:		1,855.00	
Contingent Dee	p Excavations - Only if	Required***	
B53***	Arsenic and Cobalt	36.55	Impacted at 10 ft bgs. Delineated at 15 ft bgs. Delineated to north, south, east and west.
B57***	Arsenic and Cobalt	37.5*	Impacted at 10 and 15 ft bgs. Not delineated at 15 ft bgs. Delineated in all directions.
B61***	Arsenic and Cobalt	21.26	Impacted at 10 ft bgs. Delineated at 15 ft bgs. Delineated to north and south. Excavation ends at utility line to west and building to east.
Contingent deep excavation volume		95.31***	
Total Proposed excluding Contin	Excavation Volume, ngent	1,940.55	

#### Note:

cy = cubic yards

ft = feet

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<sup>\*:</sup> where excavation is not defined at depth, calculated volume extends 0.5 ft past last known impacted depth

<sup>\*\*</sup>deep excavation = 667 cy; setback excavation = 1,157 cy

<sup>\*\*\*:</sup> These areas shall only be excavated if grading plans change such that soil is removed within 5 feet laterally or vertically from soil impacted at 10 feet bgs. bgs = below ground surface

# **Figures**

- 1 Site Location
- 2 Site Layout Map



