Removal Action Workplan

Elizabeth Learning Center
4811 Elizabeth Street
Cudahy, California

Los Angeles Unified School District

August 16, 2022

The Power of Commitment

Removal Action Workplan

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1. Introduction

GHD Inc. (GHD) has prepared this *Removal Action Workplan* (RAW) for the Los Angeles Unified School District (LAUSD or 'The District') to address the removal of soils impacted with the chemicals of concern (COC) as specified in this RAW at the Elizabeth Learning Center located at 4811 Elizabeth Street, Cudahy, California (Figure 1, the Site or School). This RAW includes a detailed engineering plan for conducting the removal action (RA), a description of onsite contamination, and the goals to be achieved by the RA, as required by California Health and Safety Code (H&SC) Section 25323.1. The RAW is also consistent with the criteria specified in the H&SC Section 25356.1(h).

A *Preliminary Environmental Assessment Equivalent* (PEA-E) was conducted at the Site by Geosyntec Consultants (Geosyntec) in 2019, with a technical memorandum to supplement the PEA-E prepared by GHD. The PEA-E indicates that approximately 291 cubic yards of soil at the Site contain arsenic and lead concentrations above screening levels, and recommended preparation of a RAW. Based on these findings and recommendations, LAUSD requires a "Response Action" to address potential threat or hazards posed by the presence of COCs detected in soil beneath the Site at concentrations above screening levels.

This RAW is prepared in conformance with regulatory guidance related to site assessment, characterization, and investigation published by the California Environmental Protection Agency (Cal/EPA) – Department of Toxic Substances Control (DTSC, 2013). This document is also prepared with considerations of the South Coast Air Quality Management (SCAQMD) Rule 1466 (SCAQMD, 2017).

1.1 Removal Action Objectives

The removal action objectives (RAOs) are formulated to protect human health and the environment to minimize exposure of humans to the COCs in shallow soil through inhalation, dermal absorption, or ingestion; and to minimize potential for migration of the COCs from the soil to other media.

Remedial Action Objectives

- Removal and offsite disposal of soils impacted with COCs to reduce the threat to human health, safety and the environment, for Site users; and
- Provide a solution that reduces threat to human health, safety and the environment from impacted soils during redevelopment activities.

These RAOs were used to select screening levels for impacted soils at the Site. The RA will remove impacted soils that exceed the following human health risk criteria to prevent exposure to the COC that may cause adverse effects:

- The DTSC Screening Level (DTSC-SL) of 80 milligrams per kilogram (mg/kg) for total lead in soils at school sites (DTSC, 2019).
- The DTSC-SL of 12 mg/kg for arsenic in soils at school sites (DTSC, 2020).

LAUSD has preliminarily identified the removal of affected soils as the preferred RA in terms of the evaluation of the three broad technology criteria: effectiveness, implementability, and cost.

Necessary RAs will be completed in accordance with the RAW under the supervision of LAUSD's environmental consultant, who will confirm through confirmation soil sampling that post removal Site conditions do not pose a significant risk to human health, safety, and the environment.

2. Site Background

A Phase I Environmental Site Assessment (ESA) was completed for the Site on September 7, 2017, by APTIM Environmental & Infrastructure, Inc. (APTIM, 2017). The purpose of the Phase I ESA was to identify if recognized

environmental conditions (RECs) existed at the Site. Based on the findings of APTIM's Phase I ESA, Geosyntec completed the subsequent PEA-E in 2019 (Geosyntec, 2019).

2.1 Site Location and Description

The Elizabeth Learning Center is located at 4811 Elizabeth Street in the city of Cudahy in Los Angeles County, California. The School property is owned and operated by LAUSD and is primarily located on land identified by the Los Angeles County Assessor's office as Parcel Number 6226-032-903. The School encompasses approximately 16.7 acres and is bound by Clara Street followed by a park and residences to the north, Elizabeth Street and residences to the south, a mix of residential and commercial properties to the west, and a park and residences to the east.

The majority of the Site is paved with asphalt or is currently developed with educational and administration facilities, surface parking lots, a gymnasium, a cafeteria, and temporary portable buildings. The School's buildings are located in the western and southern portions of the campus, and athletic fields are located at the northern portion of the campus. The current school layout and approximate year of construction of the historical and existing buildings are shown on Figure 2. There are 16 permanent buildings and 22 portable buildings, as well as 34 metal storage containers positioned throughout the campus.

2.2 Site History

According to historical aerial photographs, topographic maps, and Sanborn maps reviewed as part of the Phase I ESA, the School property was developed sometime around 1923, when several small- and medium-sized buildings were present on the eastern portion of the Site. In 1929, the San Antonio School occupied the southeastern area of the Site, and the remaining areas contained primarily residential structures. By 1949, the school had been re-named Elizabeth Street School. By 1963, the Administration Building and a north/south aligned classroom building had been constructed and remains today. Athletic fields in the northern portion of the Site appeared around 1994 (APTIM, 2017). Historical building footprints are shown on Figure 2.

2.3 Topography

According to a Historical Topographic Map Report prepared by Environmental Data Resources, Inc (EDR) and included in APTIM's Phase I ESA, the Site is approximately 128 feet above mean sea level (amsl). The surrounding area slopes gently toward the south/southeast.

2.4 Regional Geology and Hydrogeology

The Site is located in the central portion of the Los Angeles Basin, a sedimentary basin that has accumulated thick sequences of sedimentary deposits. The basin is underlain by igneous and metamorphic "basement" rock, which his primarily Jurassic and Cretaceous in age. The basement rock is overlain by a thick accumulation of marine and non-marine rocks. The basin deposits range in age from late Cretaceous to Recent (Department of Water Resources (DWR), 1961).

Approximately 200 feet of Quaternary alluvium underlies the Site. The Lakewood Formation underlies the alluvium from approximately 200 to 500 feet below ground surface (bgs). The San Pedro Formation lies beneath the Lakewood Formation from 500 to greater than 1,000 feet bgs (DWR, 1961).

The predominant geologic feature in the area is the Paramount Syncline, the axis of which runs approximately two miles west of the Site. The Newport-Inglewood Fault zone is located approximately six miles southwest of the Site. The Site lies within the central portion of the Coastal Plain of the Los Angeles Groundwater Basin and is located within the Central sub-basin. This sub-basin is commonly referred to as the "Central Basin" and is bounded on the north by a surface divide called the La Brea high, and on the northeast and east by emergent less permeable Tertiary rocks of the Elysian, Repetto, Merced, and Puente Hills. The southeast boundary between the Central Basin and Orange County Groundwater Basin roughly follows Coyote Creek, which is a regional drainage province boundary. The

southwest boundary is formed by the Newport Inglewood fault system and the associated folded rocks of the Newport Inglewood uplift.

The Central Basin is divided into Forebay and Pressure Areas. The Site is located in the Central Basin Pressure Area, which contains aquifers of permeable sands and gravels separated by semi-permeable to impermeable sandy clay to clay that extend to about 2,200 feet bgs. Aquifers within the Central Basin Pressure Area occur in the Recent Alluvium and in the Lakewood and San Pedro Formations. Groundwater in the Recent Alluvium occurs in the “semi-perched” and Gaspur Aquifers, groundwater in the Lakewood Formation occurs in the Exposition and Gage Aquifers, and groundwater within the San Pedro Formation occurs within the Hollydale, Jefferson, Lynwood, Silverado, and Sunnyside Aquifers (DWR, 1961).

Based on the approximate elevation of the site (128 feet amsl) and depth to groundwater beneath the Site and its vicinity estimated to be approximately 30 feet bgs (APTIM, 2017), groundwater beneath the Site is estimated to occur at an elevation of approximately 100 feet amsl.

2.5 Soil Types and Groundwater Occurrence

Soil sampling conducted at the Site during the PEA-E in June and July 2019 (Geosyntec, 2019) and in January 2021 (GHD, 2021) included the completion of 135 soil borings, advanced to 3 feet bgs. 109 out of the 135 soil borings were completed in paved areas consisting of 3 inches of asphalt at surface. Site lithology generally consisted of silty sands, sandy silts, and silt to the maximum depth explored of 3 feet bgs. Construction debris, including brick, concrete, and plastics, were observed in borings SB-79 to SB-89, located around the structures in the west area of the Site. No discoloration or odors were noted in any soil samples collected. Groundwater was not encountered in any boring completed during the aforementioned investigations.

2.6 Land Uses, Sensitive Receptors, Ecosystems and Cultural Resources

The Site is currently zoned for school use. The surrounding land consists of residential and commercial properties. A map showing the vicinity of the Site is included as Figure 1.

The Site is not located in an area of known significant cultural or biological resources. The Site is currently an existing school campus. Excavation areas proposed near the administrative building along the southern property line, and near the existing and historical buildings in the southeast portion of the Site, lie adjacent to residential properties (Figure 3, including Figures 3A through 3C).

Cudahy Pre-School Academy is the only school located within 1,000 feet of the Site (approximately 400 feet to the east). No hospitals, elderly care, or daycare centers are located within 1,000 feet of the Site.

2.7 Meteorology

Cudahy climate is classified as a Mediterranean climate. A typical dry-summer and wet-winter pattern is representative of Mediterranean climates; however, annual precipitation is lower in Cudahy than in many typical Mediterranean climates, giving it semi-arid characteristics. While precipitation does occur during summer months, it is infrequent. Rainless periods of several months are common (NOAA, 2008).

The hot season in Cudahy spans from July to October, with average daily high temperatures above 80 degrees Fahrenheit (°F). The cool season spans from November to March with an average high temperature below 70°F and an average low of 48°F (Weatherspark, 2022). The rest of the year is considered mild/warm.

Average hourly wind speeds in Cudahy range between 5.2 miles per hour (mph) to 8.3 mph, with calmer summers and windier winters. The wind is most often from the west from February to November and is most often from the north from November to February (Weatherspark, 2022).

2.8 Previous Environmental Assessments

Besides what previously listed in Section 1 and 2 of this document and summarized below, no other previous environmental assessments are known to have been conducted at this Site.

2.9 Phase I Environmental Assessment

APTIM's Phase I ESA (APTIM, 2017) found no evidence of the storage or release of hazardous materials during on-Site inspection at the School property with the exception of two-55 gallon steel drums containing diesel and gasoline located within a metal flammables storage cabinet near the southwest corner of the Site. Based on review of records, Site reconnaissance, and Site personnel interviews, APTIM concluded the following in the Phase I ESA:

- No evidence of recognized environmental conditions (RECs) in connection with the Site;
- No evidence of controlled RECs in connection with the Site;
- No evidence of historical RECs in connection with the Site;
- No evidence of vapor encroachment conditions in connection with the Site, and;
- No evidence of *de minimis* conditions in connection with the Site.
- Lead based paint (LBP) may be present on the Site based on the age of existing and former Site buildings. As such, it is possible that LBP residue may be present in soils around the perimeter of the existing and former buildings. DTSC guidance indicates that LBP residue from paint or surface coatings may be present in soil and around school structures that are adjacent or near unpaved areas where runoff could occur and were constructed prior to January 1993 (DTSC, 2006).
- A hazardous material inventory for the School, provided by the Los Angeles County Fire Department (LACFD), indicated that soil contaminated with arsenic was generated from construction processes and disposed of at a waste disposal site, based on a hazardous material inventory from 2010.
- Based on the age of current and former Site buildings, it is possible that asbestos is present on the Property.

2.10 PEA-Equivalent

Geosyntec completed a PEA-E to address soil concerns identified in the Phase I ESA; specifically, soil sampling activities to assess potential impacts associated with current and historical onsite buildings and infrastructures, as well as past school management practices. Geosyntech's PEA-E evaluated current and historical building areas for lead from LBP and organochlorine pesticides (OCPs) from weed and pest control practices, and areas of asphalt ground cover subject to arsenic-based herbicides were analyzed for arsenic (Geosyntech, 2019). A summary of the major findings of the PEA-E is below:

- Soil concentrations of arsenic above background concentration for Southern California of 12 mg/kg are present at the Site. Areas of arsenic impacted soil are shown in Figures 6, 8 and 11;
- Soil concentrations of lead above its DTSC residential screening level of 80 mg/kg are present at the Site. Areas of lead impacted soil are shown in Figures 4, 5, 7, 9, and 10;
- The majority of the arsenic and lead impacts are located around building footprints;
- Soluble testing was conducted using the waste extraction test (WET) Method to determine hazardous waste designation following California Title 22 when samples exceeded the soluble threshold limit concentration (STLC) by a factor of 10 or more (50 mg/kg for arsenic and lead) but does not exceed the total threshold limit concentration (TTLC) value of 500 mg/kg for arsenic and lead. Toxicity characteristic leaching procedure (TCLP) was used to assess federal hazardous waste classification when the TTLC result exceeds the TCLP threshold by a factor of 20 or more (100 mg/kg for arsenic and lead). Soil in certain impacted areas with higher concentrations of arsenic and/or lead exceeded the STLC and/or TCLP and if excavated needs to be managed as Non-RCRA Hazardous Waste (California-hazardous) or RCRA Hazardous Waste (federal-hazardous) waste; and

- An estimated 291 cubic yards of soil at the School are above screening levels and subject to RA.

Based on then above findings and conclusions, Geosyntec recommended preparation and implementation of a RAW to address soil in areas impacted with lead and arsenic at concentrations above their respective screening levels.

2.11 Limited Soil Sampling Investigation

In January 2021, GHD conducted a limited soil sampling investigation consisting in the advancement of 10 shallow soil borings to 3 feet bgs (B-1 through B-10). The soil samples were analyzed for the following constituents: California Title 22 Metals (antimony, arsenic, barium, beryllium, cadmium, cobalt, chromium, copper, cobalt, mercury, molybdenum, nickel, selenium, silver, thallium, vanadium, zinc), polycyclic aromatic hydrocarbons (PAHs), OCPs, asbestos, total petroleum hydrocarbons (TPHs), and volatile organic compounds (VOCs). In addition, selected soil samples were also analyzed for polychlorinated biphenyls (PCBs) and/or STLC and TCLP for arsenic, lead, and dieldrin (as the OCP reported at the highest concentration).

Based on the findings of the soil sampling activities, GHD concluded and recommended the following (GHD, 2021):

- There are impacts from lead in boring B-8. GHD recommended step-out sampling be performed to establish an area for soil removal. Based on STLC analysis results of lead in this area (B-8 at 0.5 feet bgs), excavated soil (above 1-foot bgs) is anticipated to be classified as non-RCRA Hazardous Waste.
- Arsenic at concentrations above background levels was detected in the southeastern area in the vicinity of borings B-2, B-3 and B-5 and also slightly above the background levels in boring B-9, located to the southwest portion of the sampled area. GHD recommended additional soil sampling be performed vertically and horizontally to better establish an area for soil removal. Based on STLC analysis of arsenic in this area, one soil sample from B-2 at 1.5 feet bgs had an arsenic concentration slightly exceeding the classification as non-RCRA Hazardous Waste.

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

3.1 Chemicals of Concern: Arsenic and Lead

During the PEA-E, arsenic was detected in soil samples collected from the Site ranging from 1.0 to 140 mg/kg. Arsenic was detected above the background concentration for Southern California soils of 12 mg/kg in eight areas of concern (AOCs) at the Site. These AOCs are Areas C, E, F, G, H, I, J, and Q. AOCs are delineated on Figures 4 through 13.

Lead was detected at levels exceeding the DTSC-SL of 80 mg/kg TTLC in 10 AOCs. These AOCs are Areas A, B, D, H, K, L, M, N, O, and P (Figures 4 through 12).

Soil exceeding both the DTSC-SL for lead and the DTSC background concentration for arsenic was found in AOC H.

3.2 Sources and Locations of Chemicals of Concern

3.2.1 Sources of Chemicals of Concern

Arsenic: Unknown, possible arsenical herbicides used prior to school construction or as weed abatement at the Site.

Lead: Unknown, possibly LBP used in current and former buildings.

3.2.2 Locations of Chemicals of Concern

A total of 17 AOCs (AOCs A through Q) are located in the proposed area of renovation at the Site. The majority of lead and arsenic impacts are in distinct AOCs and do not appear to be collocated. AOCs and excavation locations are shown in Figures 4 through 13.

3.3 Extent and Volume of Soil to be Removed

Based on the data presented in the PEA-E, the lateral and vertical extent of arsenic and lead impacts above relevant screening levels have been characterized in most locations. The excavation areas for each AOC to meet the RAOs are as follows:

AOC A: Clara Street Entrance (SB-22), Excavation Area (Table 1, Figure 4), anticipated to be California-restricted non-RCRA Hazardous Waste.

AOC B: Physical Education Building (SB-29), Excavation Area (Table 1, Figure 5), anticipated to be California-restricted non-RCRA Hazardous Waste.

AOCs C, D, E, F, G: Basketball Courts (B-2, B-3, B-5, B-8, B-9), Excavation Area and Proposed Confirmation Samples (Table 1, Figures 6 and 7). Areas C, D, E, and F are anticipated to be non-hazardous waste Area G is anticipated to be California-restricted non-RCRA Hazardous Waste.

AOC H: Portable buildings on west portion of the Site (SB-88), Excavation area and Proposed Confirmation Samples (Table 1, Figure 7), anticipated to be California-restricted non-RCRA Hazardous Waste.

AOC I: Central Playfield (SB-59), Excavation area and Proposed Confirmation Samples (Table 1, Figure 8), anticipated to be California-restricted non-RCRA Hazardous Waste.

AOCs J, K, L, M: East Classroom Building #3 (SB-10, SB-41, SB-44, SB-45), Excavation area (Table 1, Figure 9), Area J is anticipated to be non-hazardous waste and Areas K, L, and M are anticipated to be RCRA-Hazardous Waste.

AOCs N, O, P: Administrative Building (SB50, SB-68, SB-78), Excavation Area and Confirmation Soil Samples (Table 1, Figure 10), anticipated to be non-hazardous waste.

AOC Q: Southeast Permanent Building (SB-06), Excavation Area (Table 1, Figure 11), anticipated non-Hazardous Waste.

The total estimated volume of soil removal is:

- Approximately 270 cubic yards (CY) of lead-impacted soil from Areas A, B, D, K, L, M, N, O, and P.
- Approximately 192 CY of arsenic-impacted soil from Areas C, E, F, G, I, J, and Q.
- Approximately 5 CY of arsenic- and lead-impacted soil in Area H.

3.3.1 Detailed Discussion of Soil Results from the PEA-E

The PEA-E field investigation consisted of investigative sampling to assess potential impacts associated with historical and current onsite operation in the portions of the Site proposed for redevelopment. Between June and July 2019, Geosyntec advanced 90 initial borings to a target maximum total depth of 3 feet bgs, with soil samples typically collected from 0.5, 1.5 and 3.0 feet bgs. Based on the results of these samples, Geosyntec advanced 35 step-out borings in July 2019 to a total depth of 3 feet bgs to delineate the horizontal extent of arsenic and lead contamination in soil within select areas, with soil samples typically collected at 0.5, 1.5 and 3.0 feet bgs. In January 2021, GHD advanced 10 additional borings as part of a limited soil sampling investigation to supplement the PEA-E. Tables 1 and 2 summarize data collected during the PEA-E from these soil borings at various depths. The summary below includes findings from both Geosyntech's PEA-E and the subsequent limited soil sampling conducted by GHD.

The soil matrix analytical results indicate the following when screened for arsenic, lead, OCPs, and/or PCBs at 135 total soil boring locations in the vicinity of existing and former buildings (Figures 3A through 3C, and Table 1):

- An initial round of soil sampling conducted between June 10 and June 13, 2019, identified lead or arsenic impacts in soil in 13 borings (Table 2). Subsequent sampling events conducted on July 8, 2017 and July 9, 2017, further delineated the extent of lead or arsenic contamination in these areas. Borings advanced in July 2018 are referred to as step-out borings throughout this report. Boring locations are shown on Figures 3A through 3C.
- During the initial PEA-E and subsequent limited soil sampling, eighty-five (85) primary samples were analyzed for arsenic in soil with the following results (Table 2):
    - Arsenic was reported above the method detection limit (MDL) in 58 samples at concentrations ranging from 1 mg/kg to 140 mg/kg.
    - Arsenic was detected above the DTSC background concentration for southern California soils of 12 mg/kg in 13 samples.
    - Three initial samples (SB-59-1.3, B-2-1.5 and B-5-1.5) were analyzed for arsenic using the WET Method for STLC and/or TCLP by EPA Method 6010B because the TTLC arsenic result was greater than the STLC threshold limit concentration of 50 mg/kg. The resulting arsenic concentrations in the BS-59 and B-2 samples were above the STLC regulatory limit of 5 milligrams per liter (mg/L). Based on these results, the levels of arsenic around the area of SB-59 (AOC I) and B-2 (AOC G) are representative of Non-RCRA California Hazardous Waste under California waste disposal regulations, per the California Code of Regulations (CCR), Title 22, Chapter 11, Article 5. Arsenic concentrations in B-5 did not exceed TCLP/STLC limits and is representative of non-hazardous waste under CCR, Title 22, Chapter 11, Article 3.
- 275 primary soil samples were analyzed for lead with the following results (Table 2):
    - Of the initial samples, 234 contained lead at concentrations greater than the MDL, ranging from 1 mg/kg to 490 mg/kg.
    - Lead was detected above the DTSC/LBP/OCP Guidance screening level of 80 mg/kg in 21 samples.
    - Twelve initial samples were analyzed for arsenic using the WET Method for STLC and/or TCLP by EPA Method 6010B because the TTLC lead result was greater than 50 mg/kg. Because lead results in select samples in soils around AOC's K, L, M exceeded the TTLC/TCLP levels of lead, these areas are representative of RCRA Hazardous Waste under federal RCRA waste disposal regulations.
    - Because lead results in select samples in soils around AOC's A, B, and H exceeded the STLC levels of lead, these areas are representative of Non-RCRA California Hazardous Waste under California waste disposal regulations, per the CCR, Title 22, Chapter 11, Article 5.
    - Lead concentrations in AOC's D, N, O, P did not exceed TCLP/STLC limits; therefore, the soil in these areas is representative of non-hazardous material under CCR, Title 22, Chapter 11, Article 3.
- The majority of initial OCP soil samples were composite samples consisting of two to four discrete samples. A total of 51 composite soil samples and 21 discrete samples were analyzed for OCPs, with an additional six discrete samples analyzed based on composite results. One discrete sample (B-6-1.5) had a concentration of dieldrin at 36 micrograms per kilogram (ug/kg), which exceeds the DTSC-SL of 34 µg/kg. The sample was subsequently analyzed for STLC using EPA Method 8081A. The STLC analysis did not detect dieldrin in this sample above the laboratory reporting limit. All other OCP results were below their respective residential EPA/DTSC Regional Screening Levels (RSLs).
- PCBs were not detected above the laboratory reporting limits in the 31 primary and three duplicate soil samples analyzed from the former or existing building/transformer areas, except for Aroclor 1260 which was detected below the screening level, at a concentration of 43 ug/kg at SB-06-1.3.
- TPH was analyzed in 29 soil samples collected. TPH results for each sample were reported separately as the gasoline range C4-C12 concentration, diesel range C13-C22 concentration, and motor oil C23-C40 concentration. No gasoline range organics were detected above the laboratory reporting limits in any of the 29 samples analyzed. Diesel and motor oil range organics were detected, but at concentrations below the Regional Water Quality Control Board (RWQCB)/DTSC screening levels.

- VOCs were not detected above their respective EPA/DTSC screening levels in in the 30 primary and one duplicate soil samples analyzed.
- PAHs were not detected above the carcinogenic PAH background concentration in Southern California of 900 µg/kg in the 32 primary and three duplicate samples analyzed.
- Asbestos was not detected in any of the 50 primary and three duplicate samples analyzed.

3.4 Health Effects of Chemicals of Concern

Long term chronic exposure to elevated levels of arsenic is known to cause liver damage, heart disease, peripheral neuropathy, and melanosis. Arsenic is also a known human carcinogen. It should be noted that arsenic is naturally occurring in Southern California soils at levels exceeding the residential and commercial DTSC-SL and RSL. A 2020 study performed by the DTSC recommended using 12 mg/kg as an appropriate background level in Southern California (DTSC, 2020). Average site concentrations above this concentration may pose an increased health risk to site occupants and are considered actionable levels.

Lead is a bio-accumulative substance and can cause gastrointestinal distress, central nervous system damage, encephalopathy, hypertension, and kidney damage. Long term chronic exposure to lead has been found to cause brain damage. Lead is also a known animal carcinogen and a suspected human carcinogen. The DTSC human health screening level for lead in soils is 80 mg/kg (DTSC, 2019). Average site concentrations above this concentration may pose an increased health risk to site occupants and are considered actionable levels.

3.5 Targets Potentially Affected by the Site

A conceptual site model that identifies receptors who may contact the COCs and the exposure pathways through which they may contact the COCs has been developed. The main chemicals of potential concern at the site are arsenic and lead, with the primary source of these COCs being surficial and subsurface soils. Excavation activities included in the removal scope of work give way to two release mechanisms: airborne particles and direct contact with soil. Routes of exposure for airborne particles include inhalation, dermal contact, and ingestion; while direct contact with soil offers routes of exposure via ingestion and dermal contact. The potential exposed populations for all routes of exposure are students, staff, and visitors.

Due to the risk associated with the COCs being long term chronic exposure, the concentrations do not pose a substantial risk to construction workers performing the RA. The onsite removal contractor personnel will be responsible for operating in accordance with all applicable regulations of OSHA outlined in CCR, Title 8, General Industry and Construction Safety Orders and 29 CFR 1910 and 29 CFR 1926, Construction Industry Standards, as well as other applicable federal, state, and local laws and regulations. All personnel shall operate in compliance with all California OSHA requirements. A copy of the Conceptual Site Exposure Model is attached as Appendix A.

4. Risk Evaluation and Cleanup Goals

This section presents detailed information regarding the cleanup goals for the identified arsenic and lead contamination at the Site. The cleanup goals, based on a screening level evaluation, will be used to support decisions with respect to the need for and the extent of the remediation.

4.1 Human Health Risk and Screening Evaluation

A human health screening evaluation, conducted as part of the PEA-E, shows an increased human health risk over background to human receptors at the Site due to elevated levels of arsenic and/or lead detected in soil beneath the Site. Areas surrounding existing and former buildings at the Site are typically paved. Within the paved areas, there is no direct pathway between the current Site occupants and shallow soil.

Elevated levels of arsenic and lead were identified in soil at the Site, based on initial soil sampling activities conducted by Geosyntec between June and July 2019, and supplemental soil sampling performed by GHD on January 6, 2021. Select samples were analyzed for arsenic, lead, OCPs, PCBs, TPH, PAHs, Title 22 metals, asbestos, and/or VOCs, as described in Section 3. Soil sample analytical results indicate that Title 22 Metals (other than arsenic and lead), OCPs, PCBs, TPH, PAHs, and VOCs were below their respective screening levels (Human and Ecological Risk Office (HERO) Note #3, and RSLs), therefore remediation of these constituents is not warranted. Soil sample analytical results and applicable screening levels are presented in Table 2.

Arsenic in Soil: DTSC's established Southern California background level of 12 mg/kg of arsenic in soil represents an upper-bound value and is a 95% upper confidence limit (95UCL) (DTSC, 2020). The 12 mg/kg concentration is used as the screening level for arsenic at the Site.

Arsenic was reported above the MDL in 58 samples at concentrations ranging from 1 mg/kg to 140 mg/kg (Table 2). As part of the PEA-E, a statistical evaluation of arsenic concentrations was conducted using the methodology described in DTSC's document *Arsenic Strategies* (DTSC, 2007). This calculation was performed assuming that all the locations where arsenic concentrations were substantially elevated above 12 mg/kg were removed as noted above. The 95UCL on the mean concentration and the 95 percent upper tolerance limit (95UTL), which represents an upper-bound of a data set consistent with the DTSC background 95UTL of 12 mg/kg, were calculated using the EPA statistical software ProUCL. Based on the results of the statistical evaluation, the calculated 95UCL is 3.4 mg/kg and the 95UTL is 11 mg/kg, both below the background concentration of 12 mg/kg.

Shallow soil where elevated arsenic results were reported will be removed so that arsenic remaining at the Site is below background arsenic levels for southern California of 12 mg/kg, per DTSC guidelines (DTSC, 2020).

Lead in Soil: The 80 mg/kg concentration is the DTSC-modified screening level for lead in soil (HERO Note #3, 2019). The analysis used the 217 detections above the Practical Quantitation Limit (PQL) to evaluate if lead in soil exceeded the screening level and would potentially present a human health risk to current or future occupants of the Site. The 95UCL Analysis report is included as Appendix G of the PEA-E. The result was 46.5 mg/kg for lead. The median lead result is 13 mg/kg. The lead data set indicates that the 95UCL is below the screening level of 80 mg/kg.

Shallow soil where elevated lead results were reported will be removed so that lead remaining at the Site is below the DTSC-modified screening level of 80 mg/kg.

Other COPCs in Soil: With the exception of limited areas with elevated arsenic and lead in soil, the PEA-E sampling results and subsequent limited soil sampling investigation indicate that soil analytical results for OCPs, PCBs, TPH, PAHs, VOCs and Asbestos were below regulatory screening levels.

Arsenic and lead have been identified as the chemicals of concern in soil. Based on the District preference to remove limited areas with elevated arsenic and lead concentrations above the established screening levels, further action is warranted at the site.

4.2 Environmental Screening Risk Evaluation

Arsenic and lead were detected in on-Site soil at concentrations above their SLs of 12 mg/kg and 80 mg/kg, respectively. This has identified a release of hazardous material into the Site soil from previous onsite activities. A cleanup of the identified releases is necessary. Potential threats to the environment include the potential for wind and surface water runoff to facilitate the migration of contaminated soils from the Site to other areas during construction. Exposed impacted soils should be covered while not actively worked on to mitigate wind and surface water transportation potential. Low average annual precipitation and asphalt cover in the area reduces the potential for surface water runoff outside of active construction.

Information on surface water bodies was provided in Section 2.6. There is no documented release or threatened release of hazardous materials to surface water.

Information on groundwater occurrence beneath the Site and its vicinity is provided in Sections 2.4 and 2.5. No evidence has been found to suggest a release or threatened release from the Site has reached groundwater; therefore, aquifers are not known or suspected to have been impacted from Site releases.

Potential sources of release of a hazardous material to the atmosphere are limited to fugitive dust from surface soils. The arsenic and lead concentrations are not expected to exceed short term permissible exposure limits (PELs) in air borne dust; however, the work poses a long-term chronic exposure risk. There is no documentation of a release of hazardous materials from the Site to the atmosphere. Therefore, the potential for releases of hazardous materials from the Site to the atmosphere is considered to be de minimis.

4.3 Endangerment Determination

Arsenic and lead are “hazardous substances” as defined in H&SC section 25320. There are no documented instances of human exposure at the Site. As part of the modernization project, soils containing arsenic and/or lead will be disturbed, which may present an imminent and substantial endangerment to the public health, welfare, or environment. As such, the District has determined that a response action is necessary at the Site.

4.4 Screening Levels (SLs)

As discussed in Section 3.1, the COCs for this Site are arsenic and lead. The SL for arsenic is 12.0 mg/kg, based on background concentrations in Southern California soils (DTSC, 2020). The SL for lead is 80 mg/kg, based on the DTSC human health screening level for lead for residential receptors (DTSC, 2019).

These values are responsive to the RAOs identified in Section 1.1.

5. Engineering Evaluation/Cost Analysis

This Engineering Evaluation/Cost Analysis (EE/CA) was conducted to examine RA alternatives RA at the Site in accordance with the USEPA guidance, titled “Guidance on Conducting Non-Time-Critical Removal Actions under CERCLA” (USEPA, 1993). The EE/CA was used to aid in the evaluation of alternatives for the remediation of impacted soils at the Site. The proposed RA at the Site has been determined to be a non-time-critical removal, based on the risk evaluation and Site considerations. The proposed RA will be conducted in accordance with protocols of CERCLA and the National Contingency Plan (NCP) codified in Part 300 of Code of Federal Regulations (CFR), Title 40 (40 CFR 300). Under 40 CFR 300.415 of the NCP, an EE/CA is required to address the implementability, effectiveness, and cost of a non-time-critical RA.

This EE/CA will be used as the basis for the planned non-time-critical RA. As the project proponent, the District will have final authority of the selected alternative and of overall public participation activities.

5.1 Human Health Risk and Screening Evaluation

This RAW outlines the remedy to address the COCs at the Site. It is prepared to address the arsenic- and lead-impacted soils identified in the AOCs (Figures 4 through 11).

The estimated volume of soil proposed for the RA was calculated to be:

- Approximately 270 cubic yards (CY) of lead-impacted sol in AOCs
- Approximately 192 CY of arsenic-impacted soil in AOCs
- Approximately 5 CY of arsenic and lead-impacted soils in AOCs

5.2 Identification and Evaluation of Removal Action Alternatives

This RAW describes a RA to prevent, minimize, stabilize, mitigate, or eliminate the release or threat of release of a hazardous waste or substance at the Site. Based on historical patterns of remedy selection for sites where arsenic and lead are the only COCs, the "No Action" alternative and three common alternatives were identified for evaluation. A screening process was then used to evaluate the applicability of each option to treat or otherwise remediate the COCs that drive risk at the Site, based on EE/CA evaluation criteria (effectiveness, implementability, and cost) and general scientific and engineering evaluation.

5.2.1 EE/CA Alternative Evaluation Criteria

The criteria outlined below was used during this evaluation process based on EE/CA evaluation criteria:

Effectiveness: In the effectiveness evaluation, the following factors are considered:

- *Overall Protection of Human Health and the Environment* – This criterion evaluates whether the removal alternative provides adequate protection to human health and the environment and is able to meet the Site's RAOs.
- *Compliance with the Applicable or Relevant and Appropriate Requirements (ARARs) and To-Be-Considered Criteria (TBCs):* Compliance with the ARARs is presented in Section 6.0 (threshold factor).
- *Short-Term Effectiveness* – This criterion evaluates the effects of the removal alternative during the RA alternative until the RAOs are met. It accounts for the protection of workers and the community during removal activities and the environmental impacts from implementing the removal action.
- *Long-Term Effectiveness and Permanence* – This criterion addresses issues related to the management of residual risk remaining at the Site after a RA has been performed and met the RAOs. The primary focus is on the controls that may be required to manage risk posed by treatment residuals and/or untreated wastes.
- *Reduction of Toxicity, Mobility, or Volume* – This criterion evaluates whether the remedial technology evaluated results in significant reduction in toxicity, mobility, or volume of the hazardous substances.

Implementability: This criterion evaluates the technical and administrative feasibility of implementing the alternative, as well as the availability of the necessary equipment and services. This includes the ability to design and perform a removal alternative, ability to obtain services and equipment, ability to monitor the performance and effusiveness of technologies, and the ability to obtain necessary permits and approvals from agencies, and acceptance by the State and community. An RA with good implementability will be able to meet applicable regulations and permitting requirements within project schedule and facility operation requirements.

Cost: Cost assessment balances the relative cost of each proposed RA based on estimated capital cost for construction or initial implementation, as well as ongoing operation and maintenance (O&M) costs. The actual costs will depend on true labor and material cost, competitive market conditions, final project scope, and the implementation schedule.

5.2.2 Description and Comparative Analysis of Removal Action Alternatives

Based on the RAOs presented in Section 1.1, the following four alternatives were evaluated for the proposed RA at the Site:

5.2.2.1 No Action

The "No Action" alternative was not considered by the District but was evaluated as a baseline to which the relative benefits of the other alternatives could be compared, as required under the NCP.

Effectiveness: "No Action" would result in the materials being disturbed and potentially distributed during scheduled construction activities of the modernization project. Therefore, the alternative does not meet the effectiveness criterion and acceptance by the State and the community would be unobtainable.

Implementability: The "No Action" alternative is not feasible due to the proposed modernization project.

Cost: "No Action" would not require implementing any measures at the Site, and thus no costs would be incurred.

5.2.2.2 Treatment

Effectiveness: Soil composition and contaminant concentrations are key considerations for selection of a proper treatment. The factors and ratings used to qualitatively rate the technologies are those described in the USEPA document, "Remediation Technologies Screening Matrix and Reference Guide, 2nd ed." EPA/542-B-94-0-13, October 1994" (USEPA, 1994). However, the two COCs, arsenic and lead, generally cannot be destroyed or biodegraded in an efficient or practical manner.

Implementability: Treatment technologies were found to be unacceptable due to project timing, probable permitting, and location constraints. Therefore, this alternative was not considered further for this Site.

Cost: Costs for treatment consist of construction and routine O&M of a treatment system and are high relative to other RA alternatives.

5.2.2.3 Soil Containment/Capping in Place

Effectiveness: The capping alternative was considered and determined to be ineffective since the contaminated soils are shallow and would be disturbed during any form of capping response and are in the area to be disturbed by scheduled site modernization activities.

Implementability: Since the COCs would remain on the Site, permitting, regulatory approval, and community acceptance would be required.

Cost: The total cost of capping capital, land use restriction, and O&M make the cost of capping greater than other considered RA alternatives.

5.2.2.4 Excavation and Offsite Disposal

Effectiveness: Excavation and disposal would remove the COCs from the Site, and therefore eliminate the long-term risk and accomplishes the RAOs. By moving the impacted soil into an engineered landfill suitable for receiving the concentrations of COCs, the mobility of the COCs will be reduced.

Implementability: Excavation and off-Site disposal is a proven and readily implementable technology. Equipment and labor required to implement this alternative are readily available. The shallow depths of the identified contamination make excavation readily implementable. Due to the shallow nature of the soil contamination, an immediate soil removal will be required prior to future school modernization activities.

Cost: The estimated cost for excavation, transportation, and disposal of impacted soils is lower relative to other RA alternatives (aside from No Action).

The alternative of soil excavation and offsite disposal has been indicated by the District as the preferred remedial action. No other alternative will be considered further for this RAW.

The excavation may include the use of loaders, backhoes, and other appropriate equipment to remove soil containing COCs. Excavation operations may generate dust emissions, in which case suppressant, water spray, and other forms of dust control will be used as necessary. Workers may be required to use personal protective equipment to reduce exposure to COCs (see HASP in Appendix C). Excavation and offsite disposal would remove the COCs form the Site, and therefore, eliminate the long-term risk and accomplishes the RAOs.

Sloping excavation sidewalls, if necessary, may result in increased volume of soil requiring excavation. Confirmation soil sampling and analysis would be conducted to verify that the SLs of 12 mg/kg for arsenic and 80 mg/kg for lead

were met at the excavation bottom and perimeter. Areas in which confirmation soil sampling will be conducted are shown in Figures 4 through 11. The sampling and analysis program and confirmation sample list are provided in Table 1. Excavations may require additional area for soil stockpiling, prior to transporting offsite for disposal.

The estimated volume of soil proposed for the RA was calculated to be:

- Approximately 270 cubic yards (CY) of lead-impacted sol in AOCs
- Approximately 192 CY of arsenic-impacted soil in AOCs
- Approximately 5 CY of arsenic and lead-impacted soils in AOCs

Offsite disposal involves removing impacted soil from the Site and transporting it to an appropriate offsite facility for disposal. Approximately 161 cubic yards of soil is considered non-hazardous and is expected to be disposed of at a Class III landfill. Approximately 118 cubic yards of soil are considered California-restricted non-RCRA hazardous waste and will be disposed of at a Class I Landfill or a properly permitted out-of-state disposal facility. Approximately 188 cubic yards of soil are considered RCRA Hazardous waste, which is expected to be disposed of at a Class I landfill under hazardous waste manifest.

5.2.2.5 Response Action Cost and Feasibility

A summary of estimated costs to implement the proposed alternatives is presented in the table below.

Response Option	Action Costs	O&M Costs	Overall Costs	Feasibility
No Action	$ 0	$ 0	$ 0	Not Feasible
Treatment	N/A	N/A	N/A	Not Feasible
Capping and Containment	$ 350,000	$ 350,000*	$ 700,000	Not Feasible
Excavation and Disposal	$ 300,000**	$ 0	$ 300,000**	Feasible

*Estimate for 30 years. In 30 years or less, the cap shall be replaced to ensure there are no cracks.

** Cost estimated with a confidence of -30% to + 50%.

5.3 Description of Recommended Action

The recommended RA remedy combines excavation with offsite disposal of the impacted soil at the appropriate landfill, based on waste profiling and characterization. The activities that would be conducted to implement this RA are described below:

- Where applicable, in order to expedite the confirmation sample results, initial potholing or hand auguring will be performed and laboratory analysis expedited on the same day or 24-hour turn-around time (TAT) prior to start of the bulk of excavation activities. Subsequent confirmation step-out sampling will be performed as needed in areas exceeding SLs.
- Excavate approximately 467 cubic yards of impacted soil from identified locations (Figures 4 through 13).
- Collect confirmation soil samples from excavated areas and rush laboratory analysis to obtain results on a 24 or 48-hour TAT. Subsequent confirmation step-out sampling will be performed as needed in areas exceeding SLs.
- Waste profile samples will also be collected and analyzed as needed during the initial activity to provide the contractor with the necessary information for waste profiling for acceptance at the designated disposal facilities, according to the waste classification.

- If necessary, segregate and stockpile impacted soils that contain COCs at concentrations greater than the SLs presented in Section 4.4 on visqueen sheeting or hard surfaces and cover with visqueen to protect against fugitive dust and precipitation runoff.
- Load and transport approximately 467 cubic yards of impacted soil to an appropriate disposal facility.
- If necessary, grade, backfill and compact previously excavated areas using clean impo
- rted or on-site fill material.
- Obtaining any import fill material for the remainder of the modernization project will be in accordance with the current OEHS and LAUSD Specification 01 4524 on import fill material and retained in the construction documentation files.

5.4 Cost Estimates of Recommended Remedy

Costs for the excavation of contaminated soils and offsite disposal is estimated to be approximately $300,000 including RA contractor and environmental professional fees. Sampling activities include air monitoring, waste profile, and confirmation sampling. A cost estimate for the proposed excavation and offsite disposal is listed below:

- Excavation
- Air Monitoring
- Sampling and Analysis
- Transportation and Disposal
- Preparation of a Removal Action Completion Report
- Other

6. Applicable or Relevant and Appropriate Requirements

As discussed in Section 5.3, the most effective remedial action has been identified to be excavation and offsite disposal of lead and arsenic contaminated soils. This section will discuss the ARARs for excavation and offsite disposal at the Site.

6.1 Public Participation

The LAUSD Office of Environmental Health and Safety (OEHS) has developed for similar sites/projects a public participation strategy to determine the level of public interest in the proposed RA and verify that the local community is informed of the proposed RA at the Site. Through the planned community survey, community interviews, and/or other public participation activities, LAUSD will provide the community with opportunities to be involved in LAUSD's decision-making process for the Site.

Based on expressed community interest or other factors, LAUSD may hold a public comment period to accept comments on the proposed RA and, if appropriate (e.g., when there is high interest in the Site), a public meeting(s) to brief interested parties locally about the proposed RA during the public comment period, before approving the RAW. When a public comment period is planned, LAUSD will determine its appropriate duration (0 to 30+ days). In general, LAUSD will hold a 30-day public comment period. However, the public comment period may be shortened, as appropriate, if expressed community interest in the proposed RA is moderate and compliance with NCP for cost recovery is not an issue.

6.1.1 Community Assessment

Community demographics for Cudahy, CA according to the 2020 US Census is as follows:

- Population: 22,811
- Male: 48.5%
- Female: 51.5%
- Population 18 years and over: 61.3%
- Average household size: 4.14
- Population by race:
  - White: 64.1%
  - Black or African American: 0.7%
  - Native American: 0.3%
  - Asian: 0.2%
  - Native Hawaiian and Pacific Islander: 0.1%
  - Two or more races: 14.0%
  - Hispanic or Latino: 96.5%
  - White, not Hispanic or Latino: 2.1%

Fact notes: Hispanics may be of any race, so are also included in other applicable race categories

Local Participation and Involvement: A work notice announcing the PEA-E investigative activities was distributed to the local community in English and Spanish. The work notice was laminated and placed on gates/fences around the School property on June 5, 2019. Copies of the work notice were also distributed to nearby residents, businesses, School faculty/staff, and parents of students. The School was provided advance notice of the planned activities at least 48 hours prior to initiating field work.

6.1.2 Community Profile Report

If directed by the District, a Community Survey can be mailed to stakeholders and the community with a 30-day response period. Once the community responses are received, the Community Profile Report (CPR) will be updated for the Site, under the direction and guidance of LAUSD, to address the responses. The CPR is based on the information from a variety of sources including file review, site visits, demographic data, similar or relevant community interest/concerns shown during previous public participation activities for other LAUSD projects within the surrounding community, and likely or existing level of community interest/concerns identified for the Site through the community survey or interviews. A copy of the current CPR is included as Appendix B.

6.1.3 Public Participation Activities

The public participation requirements for the RAW process include publishing a notice of the availability of the RAW for public review and comment, making the RAW and other supporting documents available in the local information repository, and responding to public comments received on the RAW and California Environmental Quality Act (CEQA) documents. In accordance with the Community Profile prepared for this site, the following additional activities may be conducted:

- A fact sheet in English and Spanish will be sent out to addresses within a radius of 1/8 mile of the Site describing the site proposed removal action
- A minimum 30-day public comment period
- A public meeting or workshop will be held if there is sufficient community interest

Copies of this RAW and project CEQA documents will be placed in the Information Repositories.

6.2 Underground Services Alert Notification

An Underground Services Alert (USA) notification will be called in by the RA contractor at least two business days before start of excavation to delineate any underground utilities that may be in the area of excavation.

6.3 Hazardous Waste Management

During the PEA-E investigation, elevated levels arsenic were detected up to 140 mg/kg in soils at the Site. Three samples (SB-59-1.3, B-2-1.5 and B-5-1.5) with concentrations over ten times the STLC/TCLP limit (50 mg/kg) were analyzed for arsenic using the WET Method for STLC and/or TCLP by EPA Method 6010B. The resulting arsenic concentrations in the BS-59 and B-2 samples were above the STLC regulatory limit of 5 milligrams per liter (mg/L). Based on these results, the levels of arsenic around the area of SB-59 (AOC I) and B-2 (AOC G) are representative of Non-RCRA California Hazardous Waste and shall be disposed of at a Class I Landfill. Arsenic concentrations around AOCs C, E, F, J and Q did not exceed TCLP/STLC limits and are representative of non-Hazardous Waste, to be disposed of at a pre-approved Class III Landfill.

Lead concentrations in soils at the site were detected up to 490 mg/kg. Twelve samples with concentrations over ten times the STLC/TCLP limit (50 mg/kg) were analyzed for arsenic using the WET Method for STLC and/or TCLP by EPA Method 6010B. Because lead results in select samples in soils around AOC's K, L, and M exceeded the TTLC/TCLP levels of lead, these areas are representative of RCRA Hazardous Waste under federal RCRA waste disposal regulations and shall be disposed of at a Class I Landfill. Because lead results in select samples soils around AOC's A, B, and H exceeded the STLC levels of lead, these areas are representative of Non-RCRA California Hazardous Waste and shall be disposed of at a Class I Landfill or a properly permitted out-of-state disposal facility. Lead concentrations in AOC's D, N, O, and P did not exceed TCLP/STLC limits; therefore, these areas representative of non-hazardous material and can be disposed of at an approved Class III Landfill.

As a portion of the wase is classified as hazardous and disposed of at a Class I Landfill, a USEPA ID number will be required for this RA. The EPA ID number for the Elizabeth Learning Center to be used for management of all hazardous wastes is CAR000193862. Compliance with federal and state requirements of hazardous waste generation, temporary onsite storage, transportation, and disposal will be required for this RA. Hazardous waste containers will be properly labeled. Within 90 days of generation, the hazardous waste will be transported to the selected Class I landfill for disposal. Transportation will be completed by a DOT-registered hazardous waste transporter under a hazardous waste manifest.

6.4 Air Quality Management

South Coast Air Quality Management District (AQMD) has two rules addressing fugitive dust, Rules 403 and 1466. Several elements of Rules 403 and 1466, such as protocols for mitigation of potential fugitive dust emissions and warning signage have been incorporated into this RAW. Excavation, loading, and transport of impacted soils shall be in compliance with South Coast AQMD Rules 403 and 1466 for prevention, reduction, and mitigation measures for fugitive dust emissions. Greater than 50 cubic yards of soil will be disturbed during the RA activities, therefore South Coast AQMD will be notified a minimum of 72 hours, but no more than 30 days prior to the start of the RA at the Site.

6.5 Storm Water Discharge Management

The State Water Resources Control Board (SWRCB) has adopted a statewide National Pollutant Discharge Elimination System (NPDES) General Permit for Stormwater Discharges Associated with Construction Activity (General Permit) to address discharges of storm water runoff from construction projects that encompass one acre or more in total acreage of soil disturbances. Construction activities subject to the General Permit includes clearing, grading and disturbances to the ground such as stockpiling or excavation. Coverage under the Construction General Permit requires the submittal of the Permit Registration Documents (PRDs) which includes a Notice of Intent, Storm Water Pollution Prevention Plan (SWPPP), and SWPPP Compliance Checklist; and mailing the appropriate permit fee

to SWRCB. The SWPPP shall specify Best Management Practices (BMPs) to prevent all construction pollutants from contacting stormwater. The discharger shall obtain coverage under the General Permit prior to commencement of construction activities. When construction is complete or ownership has been transferred, the discharger shall file a Notice of Termination with the appropriate RWQCB certifying that all State and local requirement have been met in accordance with the General Permit. Since the RA will be performed during the demolition and grading of the Site, the RA contractor will perform the RA under the PRDs and SWPPP prepared by the general contractor and submitted to the SWRCB for the Site modernization project.

6.6 California Environmental Quality Act (CEQA)

The CEQA, modeled after the National Environmental Policy Act (NEPA) of 1969, was enacted in 1970 as a system of checks and balances for land-use development and management decisions in California. It is an administrative procedure to ensure comprehensive environmental review of cumulative impacts prior to project approval.

A CEQA project is a project that has a potential for resulting in a direct physical change in the environment or for a reasonably foreseeable indirect physical change in the environment. CEQA applies to all discretionary projects proposed to be carried out or approved by California public agencies. Once an activity is determined as a CEQA project, the lead agency shall conduct a preliminary review to determine whether the project is exempt from CEQA. When the lead agency approves a project that has the potential to significantly impact the environment, the agency is required to submit an Environmental Impact Report (EIR).

This modernization project type is analyzed in the LAUSD SUP Program EIR that was certified by LAUSD BOE on November 10, 2015 (LAUSD, 2015). LAUSD's School Upgrade Program (SUP) Environmental Impact Report (EIR) meets the criteria for a Program EIR under CEQA Guidelines Section 15168 (a)(4) as one "prepared on a series of actions that can be characterized as one large project and are related…[a]s individual activities carried out under the same authorizing statutory or regulatory authority and having generally similar environmental effects which can be mitigated in similar ways."

The Program EIR enables LAUSD to streamline future environmental compliance and reduces the need for repetitive environmental studies. The Program EIR serves as the framework and baseline for CEQA analyses of later projects through a process known as "tiering." Under CEQA Guidelines Sections 15152(a) and 15385, "Tiering" refers to using the analysis of general matters contained in a broader EIR (such as one prepared for a program) with later EIRs and NDs on narrower projects; incorporating by reference the general discussions from the broader EIR; and concentrating the later EIR or ND solely on the issues specific to the later project. The Program EIR is applicable to all projects implemented under the SUP.

The Program EIR provides the framework for evaluating environmental impacts related to ongoing facility upgrade projects planned by the District. Due to the extensive number of individual projects anticipated to occur under the SUP, projects were grouped into four categories based on the amount and type of construction proposed. The proposed Project is categorized as Type 2 – New Construction on Existing Campus, which includes demolition and new building construction on existing Campuses and the replacement of buildings on the same location; and Type 3 – Modernization, Repair, Replacement, Upgrade, Remodel, Renovation, and Installation, which includes modernization and infrastructure upgrades. The evaluation of environmental impacts related to Type 2 and Type 3 projects, and the appropriate project design features and Standard Conditions of Approval to incorporate, are provided in the Program EIR (LAUSD, 2019)

The proposed project is considered a site-specific project under the Program EIR; therefore, a Mitigated Negative Declaration was tiered from the SUP Program EIR and published in May 2019. The Program EIR is available for review online at http://achieve.lausd.net/ceqa .

6.7 Health and Safety Plan

All contractors will be responsible for operating in accordance with the most current requirements of State and Federal Standards for Hazardous Waste Operations and Emergency Response (Cal. Code Regs., tit. 8, section 5192; 29 CFR

1910.120). Onsite personnel are responsible for operating in accordance with all applicable regulations of the Occupational Safety and Health Administration (OSHA) outlined in the State General Industry and Construction Safety Orders (Cal. Code Regs., tit. 8) and Federal Construction Industry Standards (29 CFR 1910 and 29 CFR 1926), as well as other applicable federal, state, and local laws and regulations. All personnel shall operate in compliance with all California OSHA requirements.

In addition, California OSHA's Construction Safety Orders (especially Cal. Code Regs., tit. 8, sections 1539 and 1541) will be followed as appropriate. Specific requirements are identified below:

- The maximum depth of the excavation will be at or less than three feet; therefore, excavation permits and shoring of the excavation area is not required.
- Underground service alert will be notified a minimum of 48 hours and a survey or inspection of subsurface utilities will be conducted by the RA contractor prior to the commencement of excavation activities.
- Excavations will remain two feet from any active utility lines and will be hand dug if additional removals are required.

A site-specific health and safety plan (HASP) has been prepared for the Site in accordance with current health and safety standards as specified by the federal and California OSHAs. A copy of the HASP is available in Appendix C.

The provisions of the HASP are mandatory for all personnel who are at the Site. The District's contractor and its subcontractors doing fieldwork in association with this RAW will either adopt and abide by the HASP or shall develop their own safety plans which, at a minimum, meet the requirements of the HASP. All onsite personnel shall read the HASP and sign the "HASP Acknowledgement Form" (Attachment A of the HASP) before starting Site activities.

6.8 Quality Assurance Project Plan (QAPP)

All sampling will be conducted in general accordance with the applicable field procedures and QA/QC protocols, and quality assurance project plan (QAPP) for the site presented in Appendix D. The proposed RA will require the collection and analysis of samples to confirm the removal of impacted media to determine the proper waste classification of excavated soils for disposal purposes. The QAPP will assure that the Site field and analytical data collected meet Daily Quality Objectives (DQOs) and RAOs to support decisions for proceeding with modernization activities for the Site.

6.9 Others

Necessary permits and approvals identified in this RAW will be obtained prior to removal activities. The RA will be performed by a California licensed contractor with oversight from an environmental professional who is either a California Professional Geologist or Professional Civil Engineer. As directed by Education Code section 17213.2 (e), if a previously unidentified environmental concern is discovered at any time during school construction process, all construction activities at the Site will be halted, LAUSD-OEHS will be notified, and necessary response actions will be taken.

7. Removal Action Implementation

Data from the PEA-E of the Site indicates the COC (arsenic and lead) in soil at concentrations exceeding the SLs. The SLs for this RA are presented in Section 4.4. An EE/CA for the removal is included in Section 5.0. As discussed as part of the EE/CA (Section 5.0), the RA best fit for this Site has been identified to be removal consisting of soil excavation and offsite disposal. The RA will be performed by a California licensed contractor with supervision of a California Professional Geologist or Professional Civil Engineer.

Removal, transportation, and disposal will be performed in accordance with applicable Federal, State, and local laws, regulations, ordinances and requirements. Field operations shall follow the suggested operational guidelines to prevent cross-media transfer of contaminants, as specified in BMPs for Soils Treatment Technologies" (U.S. EPA 530-R-97-007). Figures 4 through 11 illustrate the excavation areas, as well as the sampling points from the previous investigations within the Site.

7.1 Field Documentation

7.1.1 Daily Field Reports (DFRs)

The environmental contractor will be responsible for maintaining daily field notes (DFRs), which will serve to document observations, personnel on site, equipment arrival and departure times, and other important project information. Logbook entries will be complete and accurate enough to permit reconstruction of field activities. DFRs will be assembled with consecutively numbered pages and each page will indicate the date and time of the entry. All entries will be legible, written in black or blue ink, and signed by the author. Language will be factual and objective. If an error is made, corrections will be made by crossing a line through the error and entering the correct information. Corrections will be dated and initialed.

DFRs will include site plans detailing the area in which excavation occurred, photos depicting the bounds of the excavation, and any applicable soil or dust monitoring logs. The DFR will quantify both the amount impacted soils excavated, stored onsite, and hauled offsite for disposal. The document will name the waste transporters as well as the proposed disposal facilities and include a copy of all manifests for waste shipments on the given day. Any deviation from the RAW and Site HASP is to be described.

During the collection of samples, the sample ID, location, date, and time the sample was collected will be noted in the DFR. Field observations and details important to the analysis and integrity of the samples will be recorded, such as odors, colors, and extreme weather.

7.1.2 Chain-of-Custody Records

A chain-of-custody record will be used to document sample collection and shipment to the laboratory for analysis. All samples will be accompanied with a chain of custody, which will serve as a record to maintain the custodial integrity of the samples. The chain-of-custody will document sample ID, person collecting the samples, sample date, sample time, and analysis information. The QAPP (Appendix D) details appropriate sample collection, record keeping, and transportation.

7.1.3 Photographs

Photographs will be taken to record the bounds of the excavation areas, confirmation soil sampling locations, and other areas of interest during the RA. Photographs will supplement information included in the DFR. The date, time, location, and subject of the photo will be included in the Photo Log, to be included with the DFR.

7.2 Site Preparation and Security Measures

Prior to the start of the proposed RA, the following site activities will be performed:

7.2.1 Utility Clearance

Remaining underground utilities and other hazardous obstacles will be delineated by the RA contractor prior to excavation activities in the RA excavation areas. At a minimum, this will consist of a USA notification two business days before start of excavation. A geophysical survey may be conducted as appropriate to further clear excavation locations.

7.2.2 Security Measures

Prior to excavation of the RA excavation areas, appropriate barriers will be installed to prevent trespassers, unauthorized, or untrained personnel near the work areas. Security measures may include installing barrier fencing, providing adequate Site security, and implementation of a visitor's log. The RA contractor will be required to obtain and present proper training certifications (such as 40-hour HAZWOPER) prior to start of work, as outlined in the HASP (Appendix C).

7.2.3 Contaminant Control

In order to prevent potential exposure of hazardous material to the adjacent properties, the following measures will be implemented during soil excavation activities:

- Air monitoring procedures (see Section 7.4) will be implemented by the environmental professional during excavation activities.
- RA activities will not be conducted during inclement weather (e.g., high winds, heavy rains, or electrical storms) or unfavorable hours reasonably raised by the community concerns or City ordinances.
- Community members will be informed prior to initiation of removal activities.

7.2.4 Cultural Resources Consideration

This Site is not in an area of cultural resources consideration. Further assessment is detailed in Section 2.6.

7.2.5 Biological Resources Consideration

This Site is not in an area of biological resources consideration. Further assessment is detailed in Section 2.6.

7.2.6 Noise Control

The Site is located in a residential and commercial area in Cudahy, CA. Established operational noise standards by land use are found in Cudahy Municipal Code Section 20.88.020. For residential areas, the noise limit is 65 dBA during the hours of 7:00 AM to 10:00 PM, and 45 dBA between the hours of 10:00 PM to 7:00 AM. The City has not established noise limits for temporary construction noise. Path controls such as noise barriers, noise curtains, and enclosures can be used as needed to reduce excessive noise.

7.2.7 Permits and Plans

As discussed in Section 6.8, necessary permits, approvals, and South Coast AQMD Rule 1466 notification will be obtained by the RA contractor prior to the commencement of the RA.

7.3 Excavation

7.3.1 Excavation of Designated Areas

The areal limits of the excavations will be delineated by the environmental professional at the start of the modernization work before commencement of removal activities. The areas to be excavated shall be called the "RA excavation areas" and they will be marked in the field by the environmental professional with stakes and/or high visibility paint. At the time of the proposed RA, GPS coordinates will be collected and compared to GPS data collected during the PEA-E investigation.

The RA contractor will initially excavate the RA excavation areas to the specified boundaries and depths. The environmental professional will collect and analyze samples from sidewall and bottom each designated RA area. The

samples will be analyzed on a 24- or 48-hour rushed TAT. If impact above the SL is found on a sidewall or bottom sample, additional excavation of the remaining impacted soil will be performed in that direction by an additional 5 feet by 5 feet in surface area laterally and/or 1-foot in depth vertically, until arsenic or lead impacts above the SLs are no longer detected. Once sidewall and bottom concentrations are below the SLs have been reached, the data set will be evaluated to confirm the SLs of 12.0 mg/kg for arsenic and 80 mg/kg for lead have been achieved.

Fieldwork will be completed by properly trained in Hazardous Waste Operations and Emergency Response (HAZWOPER), as required by 29 CFR 1910.120. Impacted soil will be removed with a backhoe, tracked excavator, shovels or other types of earth moving equipment, as necessary. As soil is excavated, it will be loaded directly onto transportation trucks or temporarily stored on and covered by plastic sheeting in stockpile staging areas onsite. Use of roll-off bins in areas of limited access, with the capability to be covered for transport is also acceptable. In addition, California OSHA's Construction Safety Orders (including, but not limited to 8 CCR 1539 and 1541) will be followed as appropriate. The removal of impacted soil will be to the desired depth and lateral extent at each identified excavation area.

Excavation areas will be controlled to avoid dust generation with physical barriers (such as perimeter fencing with windscreen), soil wetting, and air monitoring (at property perimeter and work area). Each excavation area will be secured, and water will be used to control fugitive dust from blowing onto other properties. No excavation will be conducted in times of high wind conditions (e.g., wind speed more than 25 miles per hour) or inclement weather conditions.

7.3.2 Confined Space Entry Requirements

In the event an excavation is five (5) feet deep or deeper, it must be shored or sloped if entry is necessary. If there is a possibility of soil movement or structural compromise, shallower trenches may have to be shored to protect structures or utilities. If workers are required to enter an excavation that is five feet or deeper, a permit from the Division of Occupational Safety and Health, California Department of Industrial Relations must be obtained before excavating and entry. For the proposed RA, confined-space entry procedures are not anticipated to apply. Whenever compliance is necessary, the site-specific HASP (Appendix C) will be updated to reflect this change.

7.3.3 Soil Staging and Storage Operations

If it is necessary to temporarily store the excavated soil onsite until offsite transportation and disposal are available, excavated soil will be placed on an impermeable barrier base such as plastic sheeting and covered with tarps or other proper materials to prevent run-on and/or dust generation. If significant rainfall is anticipated, the staging areas will be bermed to contain potential run-off. When possible, excavated soils may be placed in covered roll-off bins or drums, or may be loaded directly onto transportation trucks. Soil wastes will be properly labeled and secured until offsite transportation and disposal commences. Hazardous waste will not be stored at the Site longer than 90 days after generation. Direct loading may take place concurrently with excavation operations, with access of loaders to the stockpile from outside of 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 or other physical barriers that minimize the movement of materials form the Site.

7.3.4 Waste Segregation Operations

Prior to stockpiling/staging, the excavated soil will be segregated to the extent possible to avoid mixture of hazardous and non-hazardous soils. This segregation will minimize the amount of hazardous soils generated and its associated disposal cost. The soil segregation will be based upon criteria for federal RCRA hazardous, California non-RCRA hazardous, and non-hazardous soils and the available sampling data. RCRA hazardous soils will be transported to a licensed Class I landfill, and non-RCRA hazardous soils will be transported to a licensed Class I landfill or a properly permitted out-of-state disposal facility, based on the waste profile. Non-hazardous soils will be transported to an approved facility or Class III landfill to be used for alternate daily cover or disposal within the landfill, with pre-approval

from the landfill based on the waste profile. Reuse of the material outside the designated landfill disposal sites will not be permitted.

7.3.5 Decontamination Area

Prior to exiting the site, the vehicle will be swept to remove any extra soil from areas not covered or protected. This cleanup/decontamination area will be set up as close to the loading area as possible to minimize spreading the impacted soil. Prior to the offsite transport, the environmental contractor will be responsible for inspecting each truck to ensure that the payloads are adequately covered, the trucks are cleaned of excess soil and properly placarded, and that the truck's manifest has been completed and signed by the generator (or its agent) and the transporter. As the trucks leave the site, the flag person will assist the truck drivers so that they can safely merge with traffic.

7.3.6 Decontamination Procedures

Sampling equipment that comes into direct contact with potentially impacted soil or water will be decontaminated to assure the quality of samples collected and/or to avoid cross contamination. Decontamination will occur prior to and after each designated use of a piece of sampling equipment, using the following procedures:

- Non-phosphate detergent and tap water wash, using a brush
- If necessary, tap-water rinse
- Initial deionized/distilled water rinse
- Final deionized/distilled water rinse

Trucks that come into direct contact with potentially impacted soil or water will be decontaminated prior to leaving the Site to prevent the offsite tracking of impacted soil, in accordance with the Transportation Plan provided as Appendix E. Trucks will be visually inspected before leaving the Site; rumble plates stationed at departure in positions in accordance with AQMD 1466, and decontamination stations and dirt adhering to the exterior surfaces will be brushed off with brooms and collected on plastic sheeting or hardscape surface. 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 removing it from the exclusion zone. Equipment will be decontaminated in a pre-designated area on pallets or plastic sheeting. Clean bulky equipment will be stored on plastic sheeting in unimpacted areas. Cleaned small equipment will be stored in plastic bags. Materials to be stored more than a few hours will also be covered.

7.3.7 Excavation Plan

The initial excavation includes 17 identified AOCs as discussed in Section 3.2 and shown on Figures 4 through 13. The initial excavation will produce approximately 467 cubic yards of impacted soil. Approximately 35 to 40 truck loads are anticipated. The excavations include approximately 270 cubic yards of lead-impacted sol in Areas A, B, D, K, L, M, N, O, and P, approximately 192 cubic yards of arsenic-impacted soil in Areas C, E, F, G, I, J, and Q, and approximately 5 CY of arsenic and lead-impacted soils in Area H. Additional excavation may be necessary depending on the results of the confirmation soil sampling, as discussed in Sections 7.3.1 and 7.6. Sample results will be provided to LAUSD-OEHS for a decision on final clearance and completion of excavation activities.

7.4 Air and Meteorological Monitoring

Air and meteorological monitoring strategies and methodologies will be implemented during the 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 measures specified for those activities.
- Provide feedback to site personnel regarding potential hazards from exposure to hazardous air contaminants generated through excavation activities.

- Identify and measure air contaminants at points outside of the soil removal and decontamination exclusion zones. Air monitoring will be conducted during work activities to measure potential exposure of sensitive receptors to site COPCs, as a result of removal activities and to monitor the dust control measured implemented.

7.4.1 Dust Monitoring

As required by SCAQMD Rule 1466, air monitoring will be conducted to mitigate against potential off-Site fugitive dust emissions containing COCs generated as a result of excavation, stockpiling, transferring, and handling activities. The environmental professional will monitor dust levels in the exclusion zone, at the upwind property boundary, and up to three downwind property boundary locations of the Site. Real-time, data-logging aerosol monitors will be used to measure dust levels. Air monitoring personnel will advise RA workers on appropriate PPE and safety measures based on observed results.

Action levels for the site will be set using ½ the OSHA dust standard (75 µg/m3 for PM10) as the first action level. If this action level is met or exceeded, appropriate dust mitigation control measures will be implemented such as adequately wetting soils through the use of application of chemical stabilizers and dust suppressants, and/or the implementation of physical barriers. If the Site air contaminants cannot be controlled reliably within 15 minutes, all work will cease and a CIH will be consulted.

7.4.1.1 Arsenic and Lead Monitoring

The OSHA Permissible Exposure Limit (PEL) for each COC is noted in the table below. No real-time methods exist for detection of the individual metals. Measuring the total particulate concentration provides the quickest means of screening potential exposure to workers on Site. The total particulate concentration which may indicate an exceedance of the action level has been estimated using maximum COC concentration in soil samples collected during the PEA-E excavation. This estimate is based on calculating the Equivalent Airborne Dust Concentration ($\mathrm{EADC_{EL}}$). The $\mathrm{EADC_{EL}}$ calculation determines what dust levels would equal exposure limit for a specific metal contaminant, in this instance, arsenic and lead. The following equation shows the relationship of metal contaminant to airborne particulate concentrations:

$$EADC_{EL} = EL\ x\ Conc^{-1}_{contaminated\ soil}\ x\ 10^{6}$$

Where: EL = Exposure Limit, mg/m3

$Conc^{-1}_{contaminated\ soil}$= Inverse of the soil concentration, kilograms per milligram (kg/mg)

As an example, the peak lead soil content is estimated to be 490 mg_{lead} /kg_{soil}. Using the equation above, the $EADC_{EL}$ is calculated as shown below:

$$Lowest\ \text{Total dust leve} = \mathrm{EADC}_{EL} = \left(\frac{0.05\ mg_{lead}}{m^3_{air}}\right)\left(\frac{kg_{soil}}{490\ mg_{lead}}\right)\left(\frac{10^6 mg_{soil}}{kg_{soil}}\right) = 102\ mg/m^3$$

Chemical Name	Cal/OSHA PEL (mg/m^3)	Site Specific Soil Concentration (mg/Kg)	Air Concentration necessary to exceed EL (mg/m^3)
Arsenic	0.01	140	71
Lead	0.05	490	102

Assuming this soil concentration for each COC and the understanding that the source of COC containing dust will be the disturbance (aerosolization) of COC contaminated soil, the total dust concentrations (averaged over an 8-hour period) required to reach the associated Exposure Limits (EL) for dust in air are shown in the last column of the table

above. These total dust concentrations are unlikely (and is far above the dust standard of 150 µg/m3 for PM10), therefore specific exposure sampling is not required during remediation activities of the Site.

7.4.2 Meteorological Monitoring

Onsite ambient weather conditions (wind speed and direction, temperature, and relative humidity) will be monitored by the environmental professional following methods: an onsite meteorological station, real-time internet weather locations, and/or the National Weather Service (if a local station can provide data relevant to the Site). If offsite meteorological stations cannot provide data relevant to the Site, an onsite meteorological station will be set up and monitored during excavation activities. Onsite meteorological monitoring will be performed simultaneously with the excavation activities to verify necessary precautions have been taken. Detailed information is described in the site-specific HASP (see Appendix C).

7.5 Dust Control Plan

In accordance with South Coast AQMD Rule 1466, the RA contractor will implement appropriate procedures to control the generation of airborne dusts from soil removal activities, such as the following:

- The Site air monitoring personnel will monitor dust levels in the locations determined in the field. They will have the authority to stop-work in the event that onsite activities generate dust levels in excess of the onsite (1.0 mg/m3) or community/fence line (0.05 mg/m3) action levels. Generation of dust during the removal operations will be minimized as necessary with the use of water as a dust suppressant. The water will be available via a water truck. The RA contractor will control dust generation by spraying water prior to daily work activities, during excavation/loading activities, and at truck staging locations. Watering equipment will be continuously available to provide proper dust control.
- Warning signage will be placed around the perimeter of the Site at all entrances and at intervals of 1,000 feet or less around the perimeter of the Site, with a minimum of one sign along each side.
- If required, the air monitoring professional will monitor onsite meteorological instrumentation and/or coordinate with offsite meteorological professionals to identify conditions that require work to be stopped. All removal activities will cease in the event wind conditions change in a manner that creates an uncontrollable condition.

Measurement of airborne dust levels at locations outlined in Section 7.4.1 using real-time, data-logging aerosol monitors. The monitors will be set to log dust levels over 5-minute periods and will be visually read and documented by the on-Site air monitoring personnel every 15 minutes. In consultation with LAUSD-OEHS, the frequency may be changed based on-Site conditions and newly available data. At a minimum, PDM-3 Miniram or equivalent will be placed upwind to monitor background and the second set will be placed on the backhoe operator or assistant to provide worst case dust concentrations on the Site.

7.6 Sampling and Analysis Plan

7.6.1 Waste Profiling Sampling

Waste profiles for arsenic- and/or lead-impacted soils will be submitted to the appropriate landfill, according to the waste characterization, by the RA Contractor for acceptance prior to transport, based on submittal of representative site characterization laboratory reports. Existing soil sample data can be used for waste profiling and characterization and/or additional soil samples may be collected for laboratory analysis from the excavated and on-Site stockpiled soil.

An acceptance letter will be issued by the disposal facilities once the waste transporter has been contracted by the District or their contractor, and final profile sample results are submitted.

7.6.2 Confirmation Sampling

To the extent possible, the previous sampling data will be used for soil profiling and characterization purposes. Upon excavation of the 15 documented impacted areas shown on Figures 4 through 11, confirmation soil samples will be collected from the sidewalls and bottom of each excavated area to confirm that the soil left in-place does not exceed the SLs. If confirmation sol sample results indicate that soil remains in-place impacted at levels above the SLs, the excavated areas will be enlarged laterally and/or vertically as described in Section 7.3.1, until soil left in-place does not exceed the SLs. The final confirmation samples will be properly sealed, labeled, and stored onsite in a cooled chest prior to delivery to a California Environmental Laboratory Accreditation Program (ELAP) certified laboratory. Samples will be delivered to the laboratory on the same day collected, if time permits, and no later than the day following collection. In the event the samples are delivered the day after they are collected, the samples will be secured under proper chain of custody documentation at the environmental professional's office until delivery. All confirmation soil samples will be analyzed for TTLC arsenic and TTLC lead, using USEPA SW-846 Method 6010B.

After the removal action is complete, the confirmation data will be compiled and reported in the Removal Action Completion Report (RACR). The entire arsenic and lead data set for the Site will be included in the RACR reflecting the now-current conditions of the Site for arsenic and lead. This data set will not include arsenic or lead values for soil which have been removed. The data will be expressed as both the range of values and the 95UCL when there are sufficient samples to calculate this value. These calculations are required to give an overall representation of arsenic and lead concentrations of the Site following the removal action.

7.7 Transportation Plan for Offsite Disposal

A profile for the waste material will be prepared and submitted to the appropriate disposal facilities before soil is transported offsite. Based on the analytical results gathered during previous soil investigation(s), the impacted soil excavated from the Site will be handled, transported, and disposed of as a combination of RCRA hazardous, non-RCRA hazardous and non-hazardous waste, and will be transported to the proper landfill facility, Class I or Class III, according to its characterization. Final determination of the facility identified for disposal will be based on approval from the facility. Detailed information on waste transportation, transportation routes, and disposal is described in the Transportation Plan included as Appendix E.

7.8 Backfill and Site Restoration

Based on Site conditions and school construction plans, the RA excavations are expected to be backfilled with soil generated from grading operations during the proposed site modernization development. Clean fill material from an off-Site source is not expected to be used during RA work.

8. Report of Completion

A RACR, documenting all activities conducted associated with this RAW, will be prepared upon completion of the RA. At a minimum, the RACR will contain the following:

- A description of the excavation activities
- Soil sampling results
- Soil and disposal methods
- A site plan showing the excavation limits
- Laboratory analytical reports (as appendix)
- A Photolog (as appendix)
- Field notes (as appendix)

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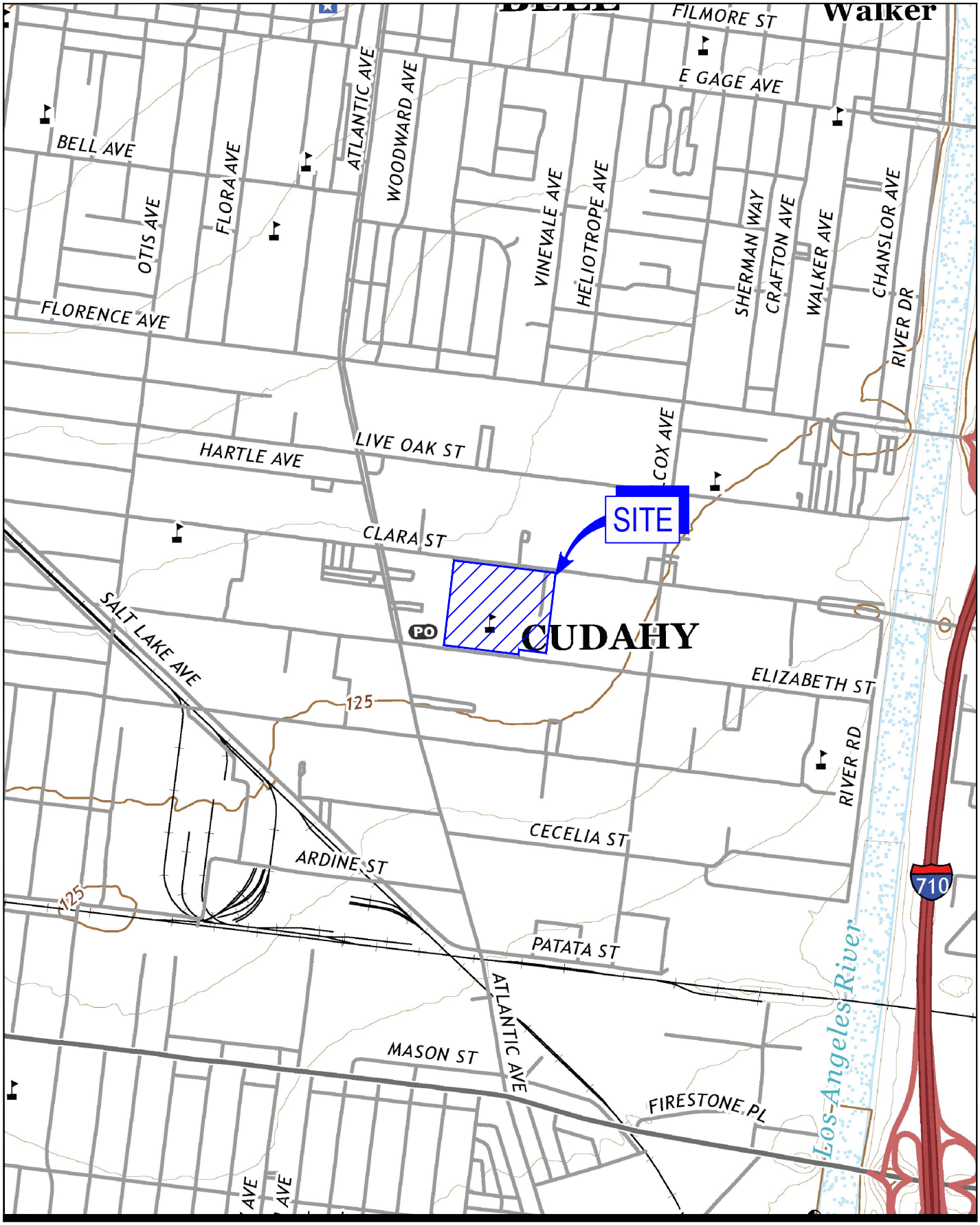
Figures



0 600 1200 ft

Coordinate System:
California State Plane Zone 5
CA83-VF

N

GHD

Elizabeth Learning Center (LAUSD)
4811 ELIZABETH STREET
CUDAHY, CALIFORNIA

Project No. **12580357**
Date **July 2022**

VICINITY MAP

FIGURE 1

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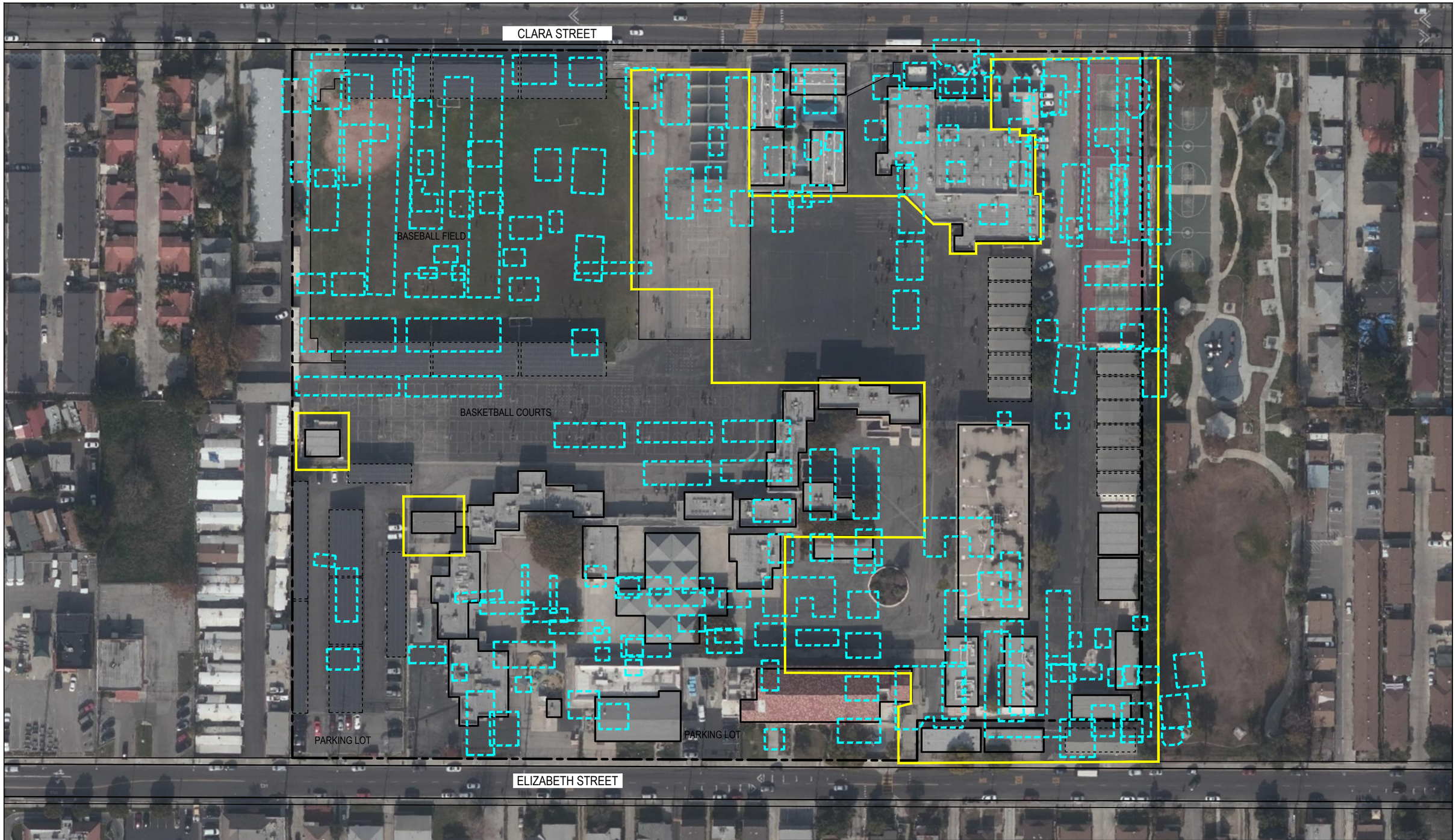

LEGEND

APPROXIMATE PROPERTY BOUNDARY LINE

APPROXIMATE AREA OF RENOVATION

APPROXIMATE LOCATION OF HISTORICAL BUILDING

0 50 100 ft

N

GHD

Elizabeth Learning Center (LAUSD)
4811 ELIZABETH STREET
CUDAHY, CALIFORNIA

CURRENT SITE PLAN WITH HISTORICAL BULIDINGS

Project No. **12580357**
Date **July 2022**

FIGURE 2

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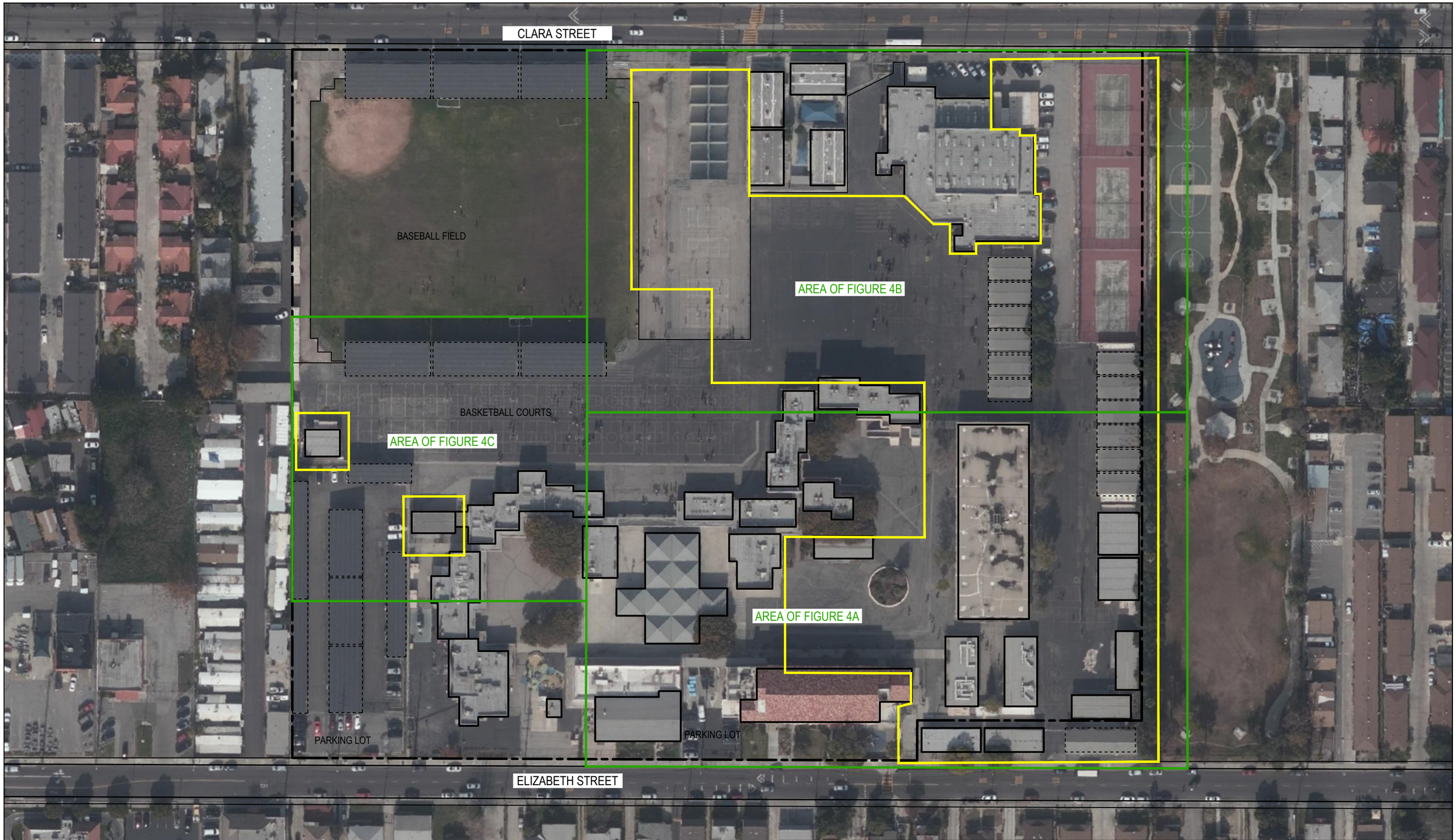

LEGEND

APPROXIMATE PROPERTY BOUNDARY LINE

APPROXIMATE AREA OF RENOVATION

APPROXIMATE FIGURE EXTENT INDICATOR

0 50 100 ft

N

GHD

Elizabeth Learning Center (LAUSD)
4811 ELIZABETH STREET
CUDAHY, CALIFORNIA

PEA-E SAMPLING LOCATIONS INDEX MAP

Project No. **12580357**
Date **August 2022**

FIGURE 3

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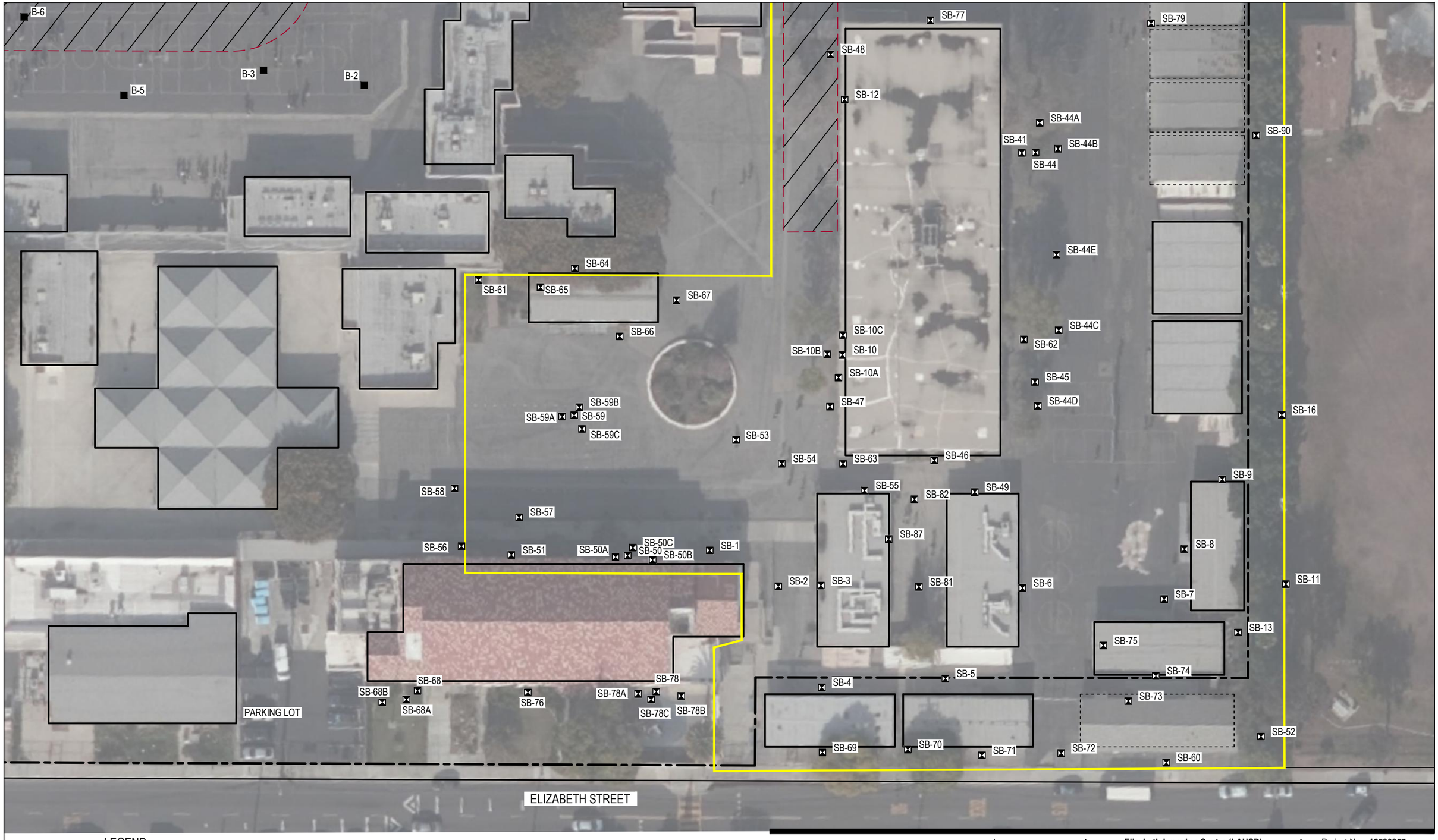

LEGEND

- B-1 ■ BORING LOCATION
- S-B1 ⊠ SOIL BORING LOCATION
- APPROXIMATE PROPERTY BOUNDARY LINE
- APPROXIMATE AREA OF RENOVATION
- PROPOSED FIRE LANE

0 22.5 45 ft

N

GHD

Elizabeth Learning Center (LAUSD)
4811 ELIZABETH STREET
CUDAHY, CALIFORNIA

PEA-E SAMPLING LOCATIONS - SOUTHEAST

Project No. **12580357**
Date **August 2022**

FIGURE 3A

Filename: N:\US\Irvine\Projects\561\12580357\Digital_Design\ACAD\Figures\RPT001\12580357-GHD-00-00-RPT-EN-D103_SO-001.DWG
Plot Date: 08 August 2022 11:12 AM

LEGEND

- B-1 ■ BORING LOCATION
- S-B1 ⊠ SOIL BORING LOCATION
- APPROXIMATE PROPERTY BOUNDARY LINE
- APPROXIMATE AREA OF RENOVATION
- PROPOSED FIRE LANE

0 22.5 45 ft

N

GHD

Elizabeth Learning Center (LAUSD)
4811 ELIZABETH STREET
CUDAHY, CALIFORNIA

PEA-E SAMPLING LOCATIONS - NORTHEAST

Project No. **12580357**
Date **August 2022**

FIGURE 3B

Filename: N:\US\Irvine\Projects\561\12580357\Digital_Design\ACAD\Figures\RPT001\12580357-GHD-00-00-RPT-EN-D104_SO-001.DWG
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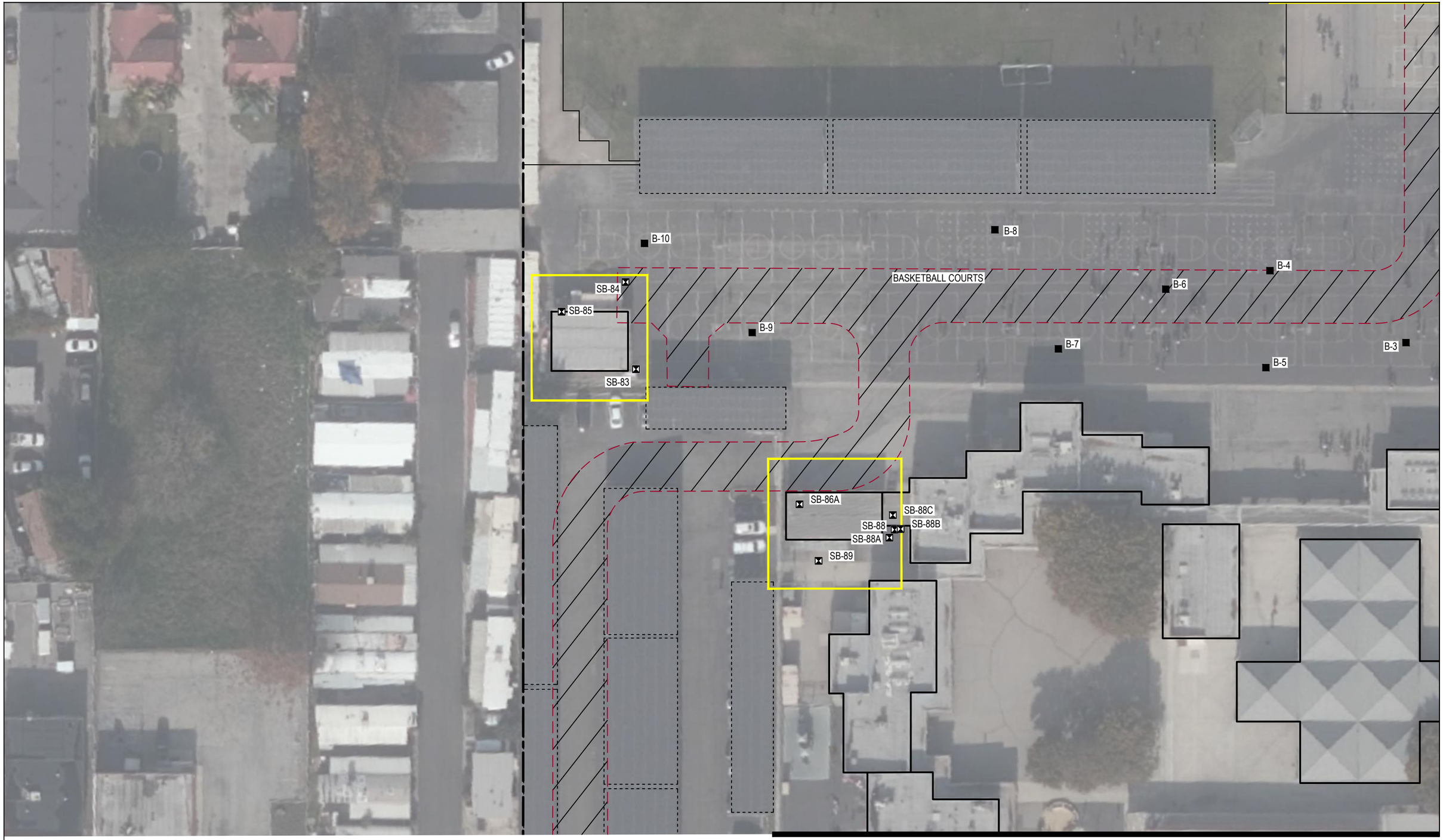

LEGEND

B-1 ■ BORING LOCATION

S-B1 ⊠ SOIL BORING LOCATION

APPROXIMATE PROPERTY BOUNDARY LINE

APPROXIMATE AREA OF RENOVATION

PROPOSED FIRE LANE

0 22.5 45 ft

N

GHD

Elizabeth Learning Center (LAUSD)
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CUDAHY, CALIFORNIA

PEA-E SAMPLING LOCATIONS - CENTRAL WEST

Project No. **12580357**
Date **August 2022**

FIGURE 3C

Filename: N:\US\Irvine\Projects\561\12580357\Digital_Design\ACAD\Figures\RPT001\12580357-GHD-00-00-RPT-EN-D105_SO-001.DWG
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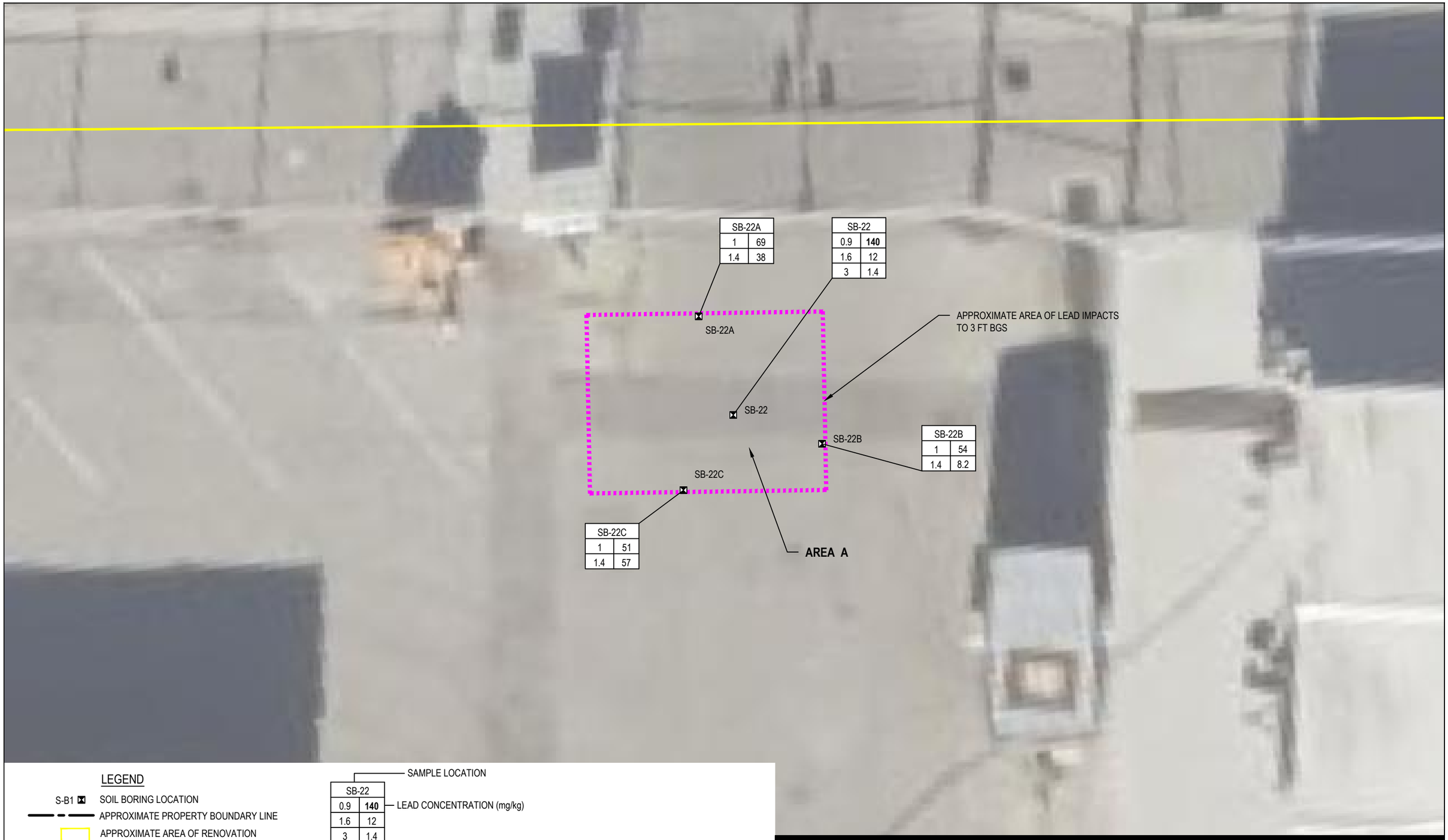

LEGEND

- S-B1 — SOIL BORING LOCATION
- APPROXIMATE PROPERTY BOUNDARY LINE
- APPROXIMATE AREA OF RENOVATION
- APPROXIMATE AREA OF LEAD IMPACT

SB-22	
0.9	**140**
1.6	12
3	1.4

SAMPLE LOCATION; LEAD CONCENTRATION (mg/kg); BOTTOM OF SAMPLE DEPTH (ft bgs)

NOTES:
1. < = REPORTED RESULT WAS LESS THAN THE INDICATED REPORTING LIMIT.
2. mg/kg = MILLIGRAMS PER KILOGRAM.
3. ft bgs = FEET BELOW GROUND SURFACE.
4. LEAD RESULTS ABOVE 80 mg/kg SCREENING LEVEL ARE SHOWN IN BOLD.
5. MAXIMUM DETECTION OR MINIMUM REPORTING LIMIT IS SHOWN FOR DUPLICATE SAMPLES.

0 2.5 5 ft

N

GHD

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CUDAHY, CALIFORNIA

SB-22 STEP-OUT SAMPLING LOCATIONS AND LEAD DETECTIONS

Project No. **12580357**
Date **August 2022**

FIGURE 4

Filename: N:\US\Irvine\Projects\561\12580357\Digital_Design\ACAD\Figures\RPT001\12580357-GHD-00-00-RPT-EN-D106_SO-001.DWG
Plot Date: 08 August 2022 11:16 AM

LEGEND

S-B1 SOIL BORING LOCATION

APPROXIMATE PROPERTY BOUNDARY LINE

APPROXIMATE AREA OF RENOVATION

APPROXIMATE AREA OF LEAD IMPACT

SAMPLE LOCATION

SB-29	
1	**83**
1.4	**490**
3	2.7

LEAD CONCENTRATION (mg/kg)

BOTTOM OF SAMPLE DEPTH (ft bgs)

NOTES:

1. < = REPORTED RESULT WAS LESS THAN THE INDICATED REPORTING LIMIT.
2. mg/kg = MILLIGRAMS PER KILOGRAM.
3. ft bgs = FEET BELOW GROUND SURFACE.
4. LEAD RESULTS ABOVE 80 mg/kg SCREENING LEVEL ARE SHOWN IN BOLD.
5. MAXIMUM DETECTION OR MINIMUM REPORTING LIMIT IS SHOWN FOR DUPLICATE SAMPLES.

0 2.5 5 ft

N

GHD

Elizabeth Learning Center (LAUSD)
4811 ELIZABETH STREET
CUDAHY, CALIFORNIA

SB-29 STEP-OUT SAMPLING LOCATIONS AND LEAD DETECTIONS

Project No. **12580357**
Date **August 2022**

FIGURE 5

Filename: N:\US\Irvine\Projects\561\12580357\Digital_Design\ACAD\Figures\RPT001\12580357-GHD-00-00-RPT-EN-D107_SO-001.DWG
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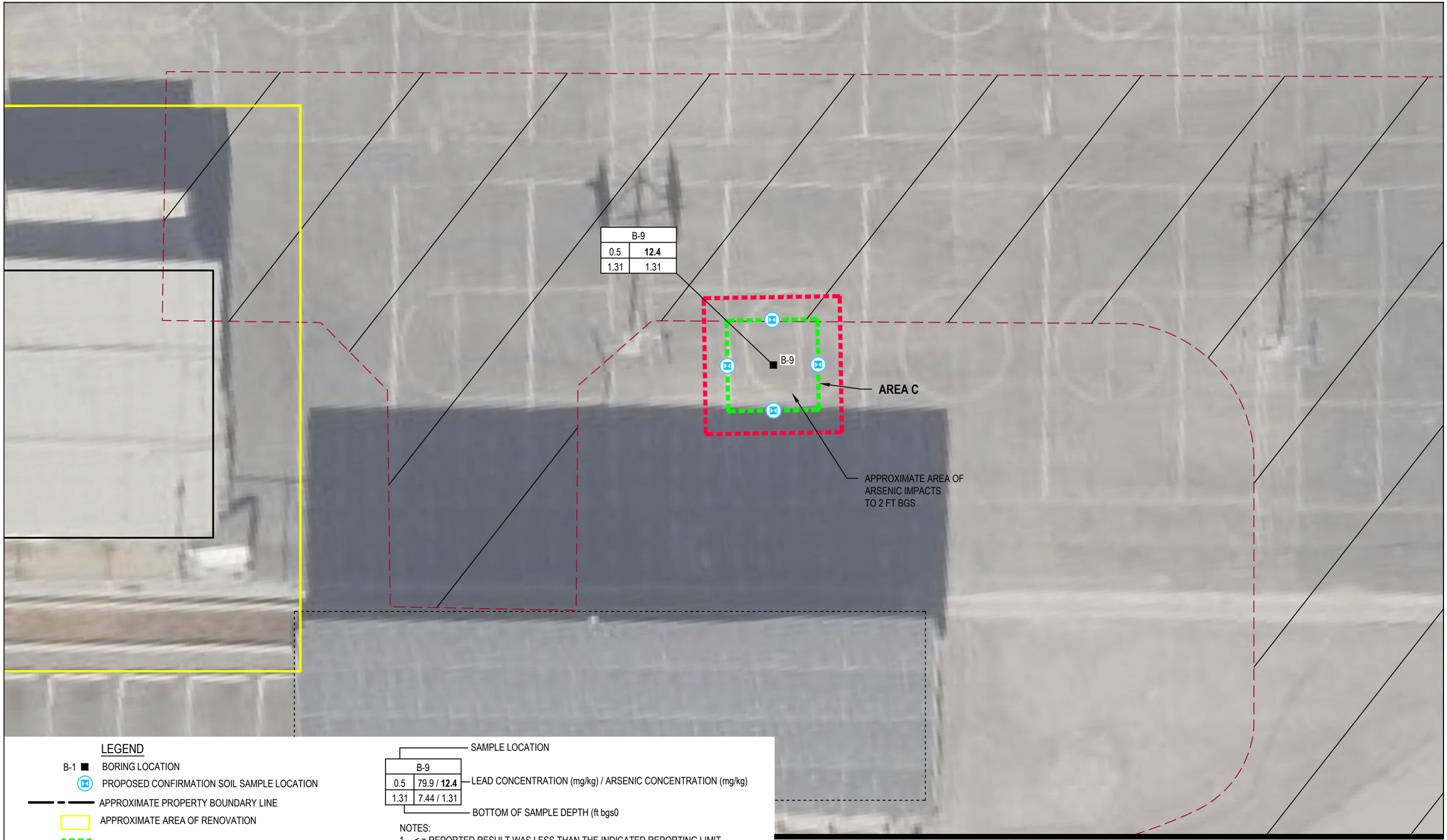

LEGEND

- B-1 ■ BORING LOCATION
- PROPOSED CONFIRMATION SOIL SAMPLE LOCATION
- APPROXIMATE PROPERTY BOUNDARY LINE
- APPROXIMATE AREA OF RENOVATION
- APPROXIMATE AREA OF ARSENIC IMPACT
- EXCAVATION AREA CONTINGENT ON CONFIRMATION SOIL SAMPLING
- PROPOSED FIRE LANE

SAMPLE LOCATION

B-9	
0.5	79.9 / **12.4**
1.31	7.44 / 1.31

LEAD CONCENTRATION (mg/kg) / ARSENIC CONCENTRATION (mg/kg)

BOTTOM OF SAMPLE DEPTH (ft bgs0

NOTES:
1. < = REPORTED RESULT WAS LESS THAN THE INDICATED REPORTING LIMIT.
2. mg/kg = MILLIGRAMS PER KILOGRAM.
3. NA = NOT ANALYZED.
4. ft bgs = FEET BELOW GROUND SURFACE.
5. ARSENIC RESULTS ABOVE 12 mg/kg BACKGROUND LEVEL ARE SHOWN IN BOLD.
6. MAXIMUM DETECTION OR MINIMUM REPORTING LIMIT IS SHOWN FOR DUPLICATE SAMPLES.

0 5 10 ft

N

GHD

Elizabeth Learning Center (LAUSD)
4811 ELIZABETH STREET
CUDAHY, CALIFORNIA

B-9 BORING SAMPLING LOCATION AND ARSENIC DETECTIONS

Project No. **12580357**
Date **August 2022**

FIGURE 6

Filename: N:\US\Irvine\Projects\561\12580357\Digital_Design\ACAD\Figures\RPT001\12580357-GHD-00-00-RPT-EN-D115_SO-001.DWG
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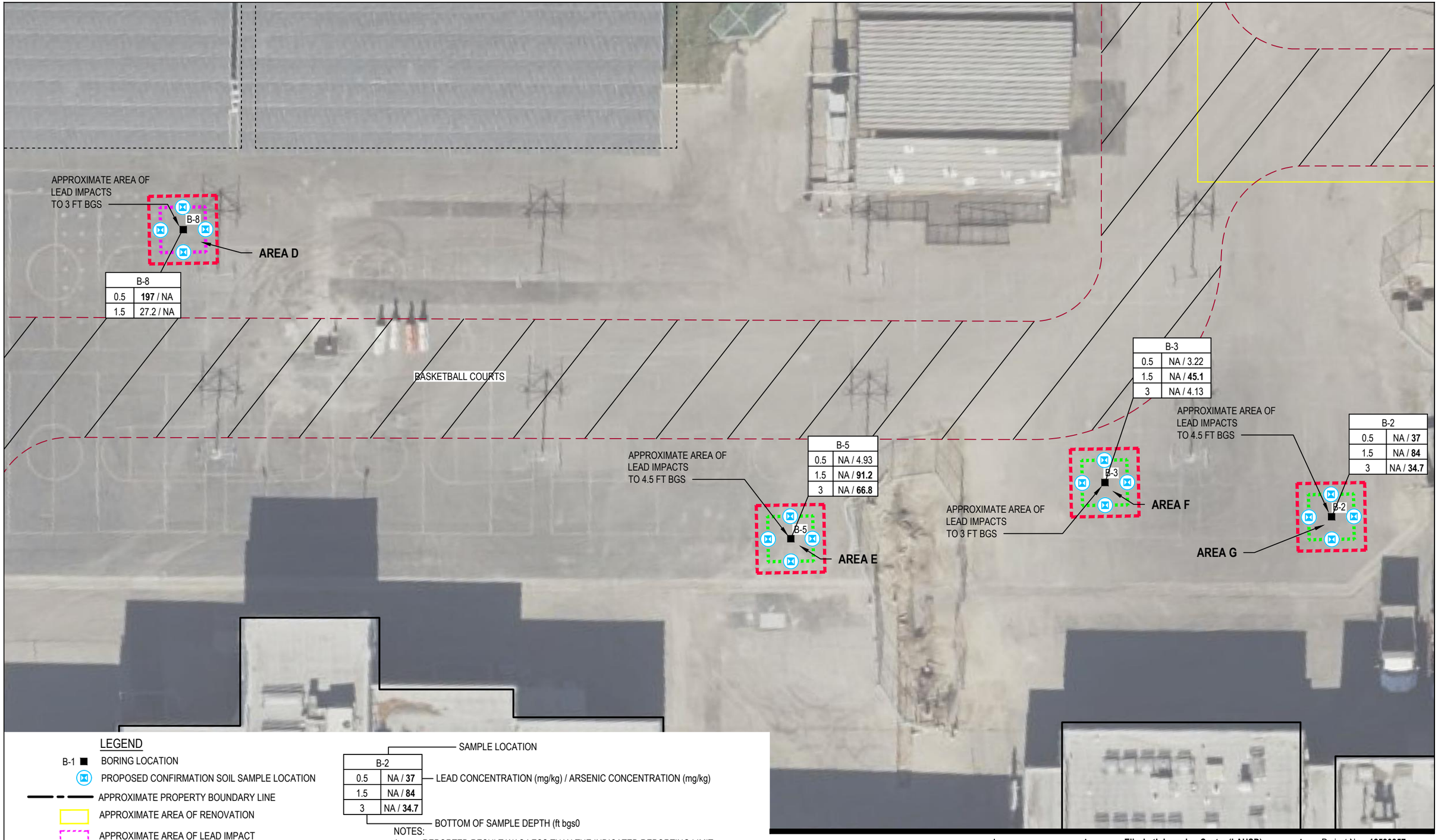

LEGEND

- B-1 ■ BORING LOCATION
- PROPOSED CONFIRMATION SOIL SAMPLE LOCATION
- APPROXIMATE PROPERTY BOUNDARY LINE
- APPROXIMATE AREA OF RENOVATION
- APPROXIMATE AREA OF LEAD IMPACT
- APPROXIMATE AREA OF ARSENIC IMPACT
- EXCAVATION AREA CONTINGENT ON CONFIRMATION SOIL SAMPLING
- PROPOSED FIRE LANE

B-2	
0.5	NA / **37**
1.5	NA / **84**
3	NA / **34.7**

- SAMPLE LOCATION
- LEAD CONCENTRATION (mg/kg) / ARSENIC CONCENTRATION (mg/kg)
- BOTTOM OF SAMPLE DEPTH (ft bgs0

NOTES:

1. < = REPORTED RESULT WAS LESS THAN THE INDICATED REPORTING LIMIT.
2. mg/kg = MILLIGRAMS PER KILOGRAM.
3. NA = NOT ANALYZED.
4. ft bgs = FEET BELOW GROUND SURFACE.
5. LEAD RESULTS ABOVE 80 mg/kg SCREENING LEVEL ARE SHOWN IN BOLD.
6. ARSENIC RESULTS ABOVE 12 mg/kg BACKGROUND LEVEL ARE SHOWN IN BOLD.
7. MAXIMUM DETECTION OR MINIMUM REPORTING LIMIT IS SHOWN FOR DUPLICATE SAMPLES.

0 10 20 ft

N

GHD

Elizabeth Learning Center (LAUSD)
4811 ELIZABETH STREET
CUDAHY, CALIFORNIA

B-2, B-3, B-5 AND B-8 BORING SAMPLING LOCATIONS AND LEAD AND ARSENIC DETECTIONS

Project No. **12580357**
Date **August 2022**

FIGURE 7

Filename: N:\US\Irvine\Projects\561\12580357\Digital_Design\ACAD\Figures\RPT001\12580357-GHD-00-00-RPT-EN-D108_SO-001.DWG
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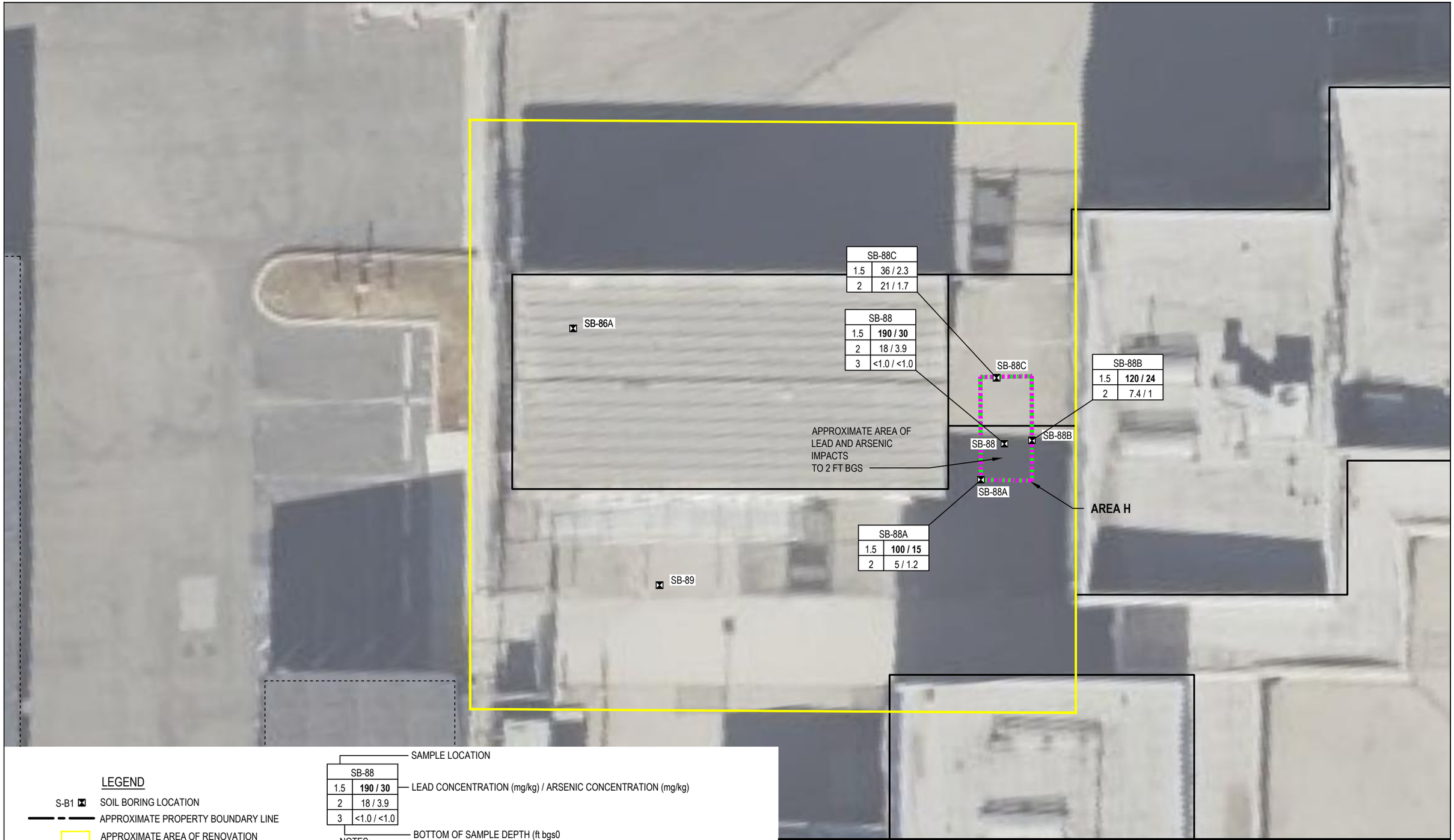

LEGEND

- S-B1 — SOIL BORING LOCATION
- APPROXIMATE PROPERTY BOUNDARY LINE
- APPROXIMATE AREA OF RENOVATION
- APPROXIMATE AREA OF LEAD AND ARSENIC IMPACT

SB-88	
1.5	**190 / 30**
2	18 / 3.9
3	<1.0 / <1.0

SAMPLE LOCATION

LEAD CONCENTRATION (mg/kg) / ARSENIC CONCENTRATION (mg/kg)

BOTTOM OF SAMPLE DEPTH (ft bgs0

NOTES:

1. < = REPORTED RESULT WAS LESS THAN THE INDICATED REPORTING LIMIT.
2. mg/kg = MILLIGRAMS PER KILOGRAM.
3. NA = NOT ANALYZED.
4. ft bgs = FEET BELOW GROUND SURFACE.
5. LEAD RESULTS ABOVE 80 mg/kg SCREENING LEVEL ARE SHOWN IN BOLD.
6. ARSENIC RESULTS ABOVE 12 mg/kg BACKGROUND LEVEL ARE SHOWN IN BOLD.
7. MAXIMUM DETECTION OR MINIMUM REPORTING LIMIT IS SHOWN FOR DUPLICATE SAMPLES.

0 5 10 ft

N

GHD

Elizabeth Learning Center (LAUSD)
4811 ELIZABETH STREET
CUDAHY, CALIFORNIA

SB-86 AND SB-88 STEP-OUT SAMPLING LOCATIONS AND LEAD AND ARSENIC DETECTIONS (PORTABLE BUILDING)

Project No. **12580357**
Date **August 2022**

FIGURE 8

Filename: N:\US\Irvine\Projects\561\12580357\Digital_Design\ACAD\Figures\RPT001\12580357-GHD-00-00-RPT-EN-D109_SO-001.DWG
Plot Date: 08 August 2022 11:30 AM

LEGEND

S-B1 SOIL BORING LOCATION

APPROXIMATE PROPERTY BOUNDARY LINE

APPROXIMATE AREA OF RENOVATION

APPROXIMATE AREA OF ARSENIC IMPACT

SAMPLE LOCATION

SB-59	
1.3	**140**
1.8	**45**
3	<1.0

ARSENIC CONCENTRATION (mg/kg)

BOTTOM OF SAMPLE DEPTH (ft bgs)

NOTES:

1. < = REPORTED RESULT WAS LESS THAN THE INDICATED REPORTING LIMIT.
2. mg/kg = MILLIGRAMS PER KILOGRAM.
3. ft bgs = FEET BELOW GROUND SURFACE.
4. ARSENIC RESULTS ABOVE 12 mg/kg BACKGROUND LEVEL ARE SHOWN IN BOLD.
5. MAXIMUM DETECTION OR MINIMUM REPORTING LIMIT IS SHOWN FOR DUPLICATE SAMPLES.

0 2.5 5 ft

N

GHD

Elizabeth Learning Center (LAUSD)
4811 ELIZABETH STREET
CUDAHY, CALIFORNIA

SB-59 STEP-OUT SAMPLING LOCATIONS AND ARSENIC DETECTIONS (CENTRAL PLAYFIELD)

Project No. **12580357**
Date **August 2022**

FIGURE 9

Filename: N:\US\Irvine\Projects\561\12580357\Digital_Design\ACAD\Figures\RPT001\12580357-GHD-00-00-RPT-EN-D110_SO-001.DWG
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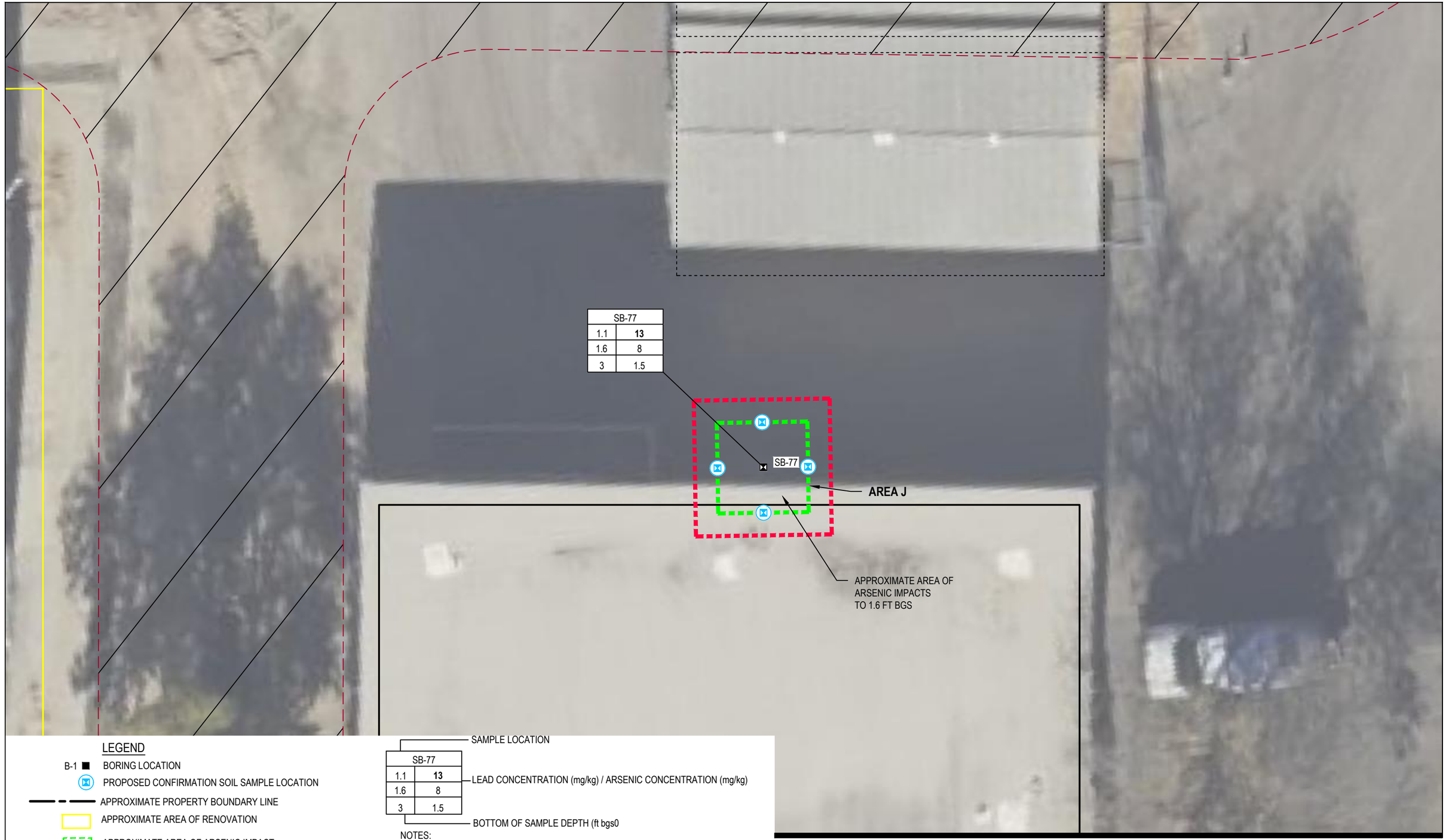

LEGEND

- B-1 ■ BORING LOCATION
- PROPOSED CONFIRMATION SOIL SAMPLE LOCATION
- APPROXIMATE PROPERTY BOUNDARY LINE
- APPROXIMATE AREA OF RENOVATION
- APPROXIMATE AREA OF ARSENIC IMPACT
- EXCAVATION AREA CONTINGENT ON CONFIRMATION SOIL SAMPLING
- PROPOSED FIRE LANE

SAMPLE LOCATION

SB-77	
1.1	**13**
1.6	8
3	1.5

LEAD CONCENTRATION (mg/kg) / ARSENIC CONCENTRATION (mg/kg)

BOTTOM OF SAMPLE DEPTH (ft bgs0

NOTES:
1. < = REPORTED RESULT WAS LESS THAN THE INDICATED REPORTING LIMIT.
2. mg/kg = MILLIGRAMS PER KILOGRAM.
3. NA = NOT ANALYZED.
4. ft bgs = FEET BELOW GROUND SURFACE.
5. ARSENIC RESULTS ABOVE 12 mg/kg BACKGROUND LEVEL ARE SHOWN IN BOLD.
6. MAXIMUM DETECTION OR MINIMUM REPORTING LIMIT IS SHOWN FOR DUPLICATE SAMPLES.

0 5 10 ft

N

GHD

Elizabeth Learning Center (LAUSD)
4811 ELIZABETH STREET
CUDAHY, CALIFORNIA

SB-77 STEP-OUT SAMPLING LOCATION AND LEAD AND ARSENIC DETECTIONS (EAST CLASSROOM BUILDING #3)

Project No. **12580357**
Date **August 2022**

FIGURE 10

Filename: N:\US\Irvine\Projects\561\12580357\Digital_Design\ACAD\Figures\RPT001\12580357-GHD-00-00-RPT-EN-D116_SO-001.DWG
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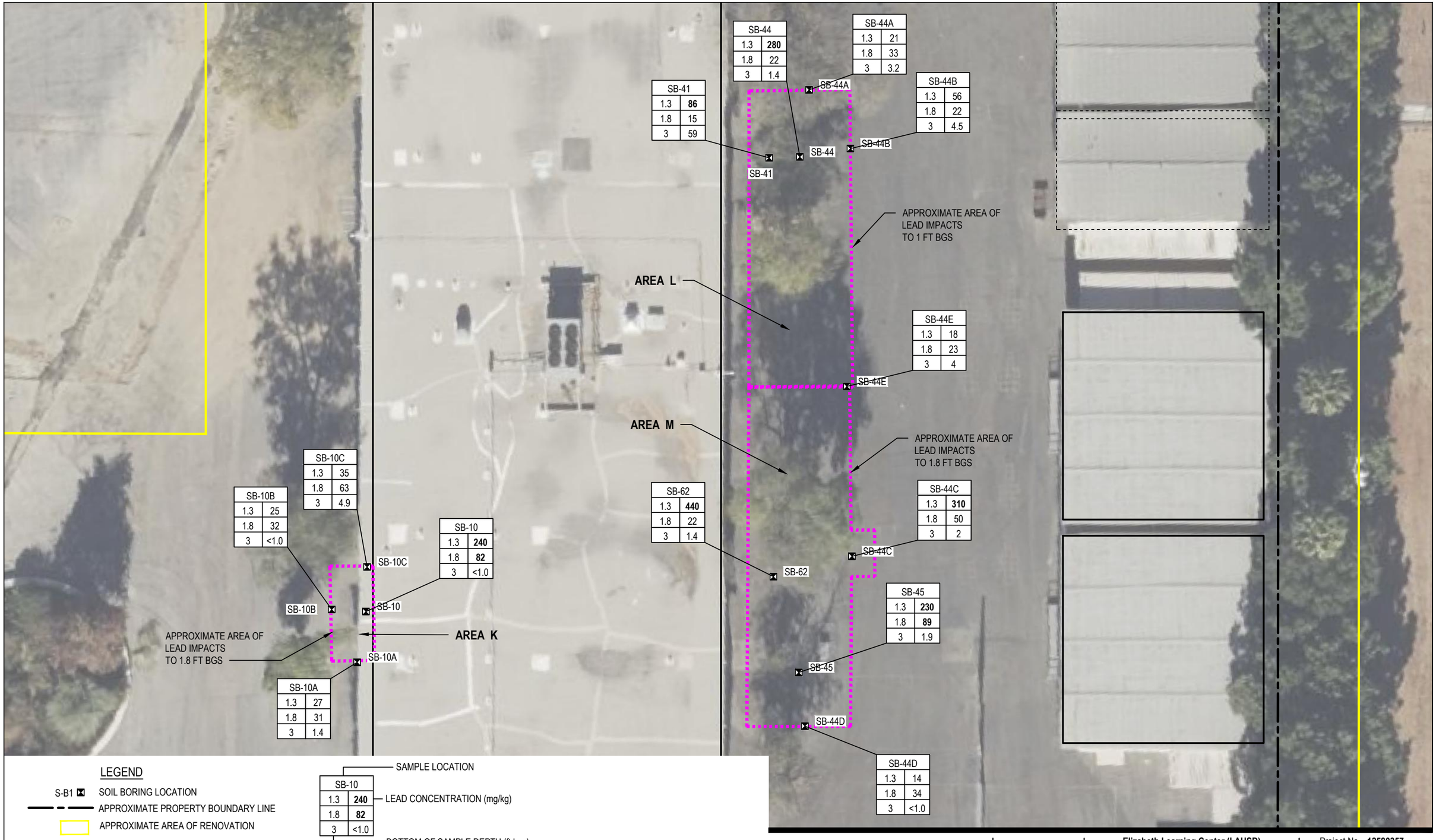

LEGEND

- S-B1 — SOIL BORING LOCATION
- APPROXIMATE PROPERTY BOUNDARY LINE
- APPROXIMATE AREA OF RENOVATION
- APPROXIMATE AREA OF LEAD IMPACT

SB-10 (SAMPLE LOCATION)
1.3 **240** (LEAD CONCENTRATION (mg/kg))
1.8 **82**
3 <1.0 (BOTTOM OF SAMPLE DEPTH (ft bgs))

NOTES:
1. < = REPORTED RESULT WAS LESS THAN THE INDICATED REPORTING LIMIT.
2. mg/kg = MILLIGRAMS PER KILOGRAM.
3. ft bgs = FEET BELOW GROUND SURFACE.
4. LEAD RESULTS ABOVE 80 mg/kg SCREENING LEVEL ARE SHOWN IN BOLD.
5. MAXIMUM DETECTION OR MINIMUM REPORTING LIMIT IS SHOWN FOR DUPLICATE SAMPLES.

0 10 20 ft

N

GHD

Elizabeth Learning Center (LAUSD)
4811 ELIZABETH STREET
CUDAHY, CALIFORNIA

SB-10, SB-41, SB-44, SB-45, AND SB-62 STEP-OUT SAMPLING LOCATIONS AND LEAD DETECTIONS (EAST CLASSROOM BUILDING #3)

Project No. **12580357**
Date **August 2022**

FIGURE 11

Filename: N:\US\Irvine\Projects\561\12580357\Digital_Design\ACAD\Figures\RPT001\12580357-GHD-00-00-RPT-EN-D111_SO-001.DWG
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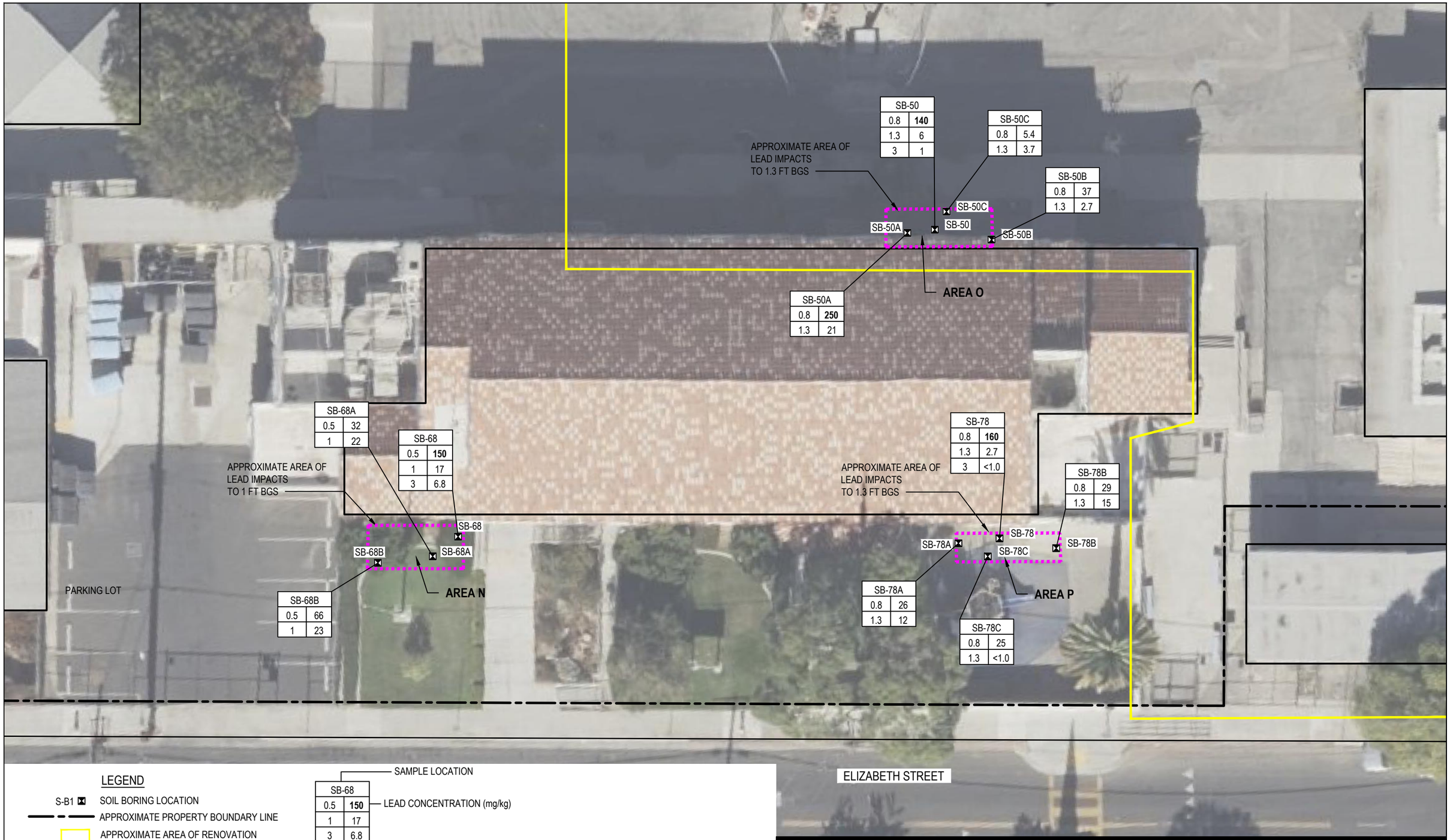

LEGEND

- S-B1 ⊠ SOIL BORING LOCATION
- APPROXIMATE PROPERTY BOUNDARY LINE
- APPROXIMATE AREA OF RENOVATION
- APPROXIMATE AREA OF LEAD IMPACT

SB-68	
0.5	**150**
1	17
3	6.8

SAMPLE LOCATION
LEAD CONCENTRATION (mg/kg)
BOTTOM OF SAMPLE DEPTH (ft bgs)

NOTES:
1. < = REPORTED RESULT WAS LESS THAN THE INDICATED REPORTING LIMIT.
2. mg/kg = MILLIGRAMS PER KILOGRAM.
3. ft bgs = FEET BELOW GROUND SURFACE.
4. LEAD RESULTS ABOVE 80 mg/kg SCREENING LEVEL ARE SHOWN IN BOLD.
5. MAXIMUM DETECTION OR MINIMUM REPORTING LIMIT IS SHOWN FOR DUPLICATE SAMPLES.

0 10 20 ft

N

GHD

Elizabeth Learning Center (LAUSD)
4811 ELIZABETH STREET
CUDAHY, CALIFORNIA

SB-50, SB-68, AND SB-78 STEP-OUT SAMPLING LOCATIONS AND LEAD DETECTIONS (ADMINISTRATIVE BUILDING)

Project No. **12580357**
Date **August 2022**

FIGURE 12

Filename: N:\US\Irvine\Projects\56\12580357\Digital_Design\ACAD\Figures\RPT001\12580357-GHD-00-00-RPT-EN-D112_SO-001.DWG
Plot Date: 08 August 2022 11:43 AM

LEGEND

- S-B1 — SOIL BORING LOCATION
- APPROXIMATE PROPERTY BOUNDARY LINE
- APPROXIMATE AREA OF RENOVATION
- APPROXIMATE AREA OF ARSENIC IMPACT

SAMPLE LOCATION

SB-06	
1.3	**37**
1.8	**24**
3	6.3

SAMPLE LOCATION
ARSENIC CONCENTRATION (mg/kg)
BOTTOM OF SAMPLE DEPTH (ft bgs)

NOTES:
1. < = REPORTED RESULT WAS LESS THAN THE INDICATED REPORTING LIMIT.
2. mg/kg = MILLIGRAMS PER KILOGRAM.
3. ft bgs = FEET BELOW GROUND SURFACE.
4. ARSENIC RESULTS ABOVE 12 mg/kg BACKGROUND LEVEL ARE SHOWN IN BOLD.
5. MAXIMUM DETECTION OR MINIMUM REPORTING LIMIT IS SHOWN FOR DUPLICATE SAMPLES.

0 2.5 5 ft

N

GHD

Elizabeth Learning Center (LAUSD)
4811 ELIZABETH STREET
CUDAHY, CALIFORNIA

SB-6 STEP-OUT SAMPLING LOCATIONS AND ARSENIC DETECTIONS (SOUTHWEST PERMANENT BUILDING)

Project No. **12580357**
Date **August 2022**

FIGURE 13

Filename: N:\US\Irvine\Projects\561\12580357\Digital_Design\ACAD\Figures\RPT001\12580357-GHD-00-00-RPT-EN-D113_SO-001.DWG
Plot Date: 08 August 2022 11:45 AM

Tables

TABLE 1
SOIL SAMPLING AND ANALYSIS PROGRAM
PEA-E SITE INVESTIGATION
Elizabeth Learning Center
Cudahy, California
(Page 1 of 11)

Sampling Location ID	Sampling Rationale / Comments	Sample Depth (ft bgs)	Surface Type	Sampling Method	Analytical Program	Pavement Thickness (inches)	Base thickness (inches)	Soil Type	Observations
SB-01	Assess potential LBP associated with existing and historical structures; assess weed and pest control practices; 1466 profiling	0-0.5	Dirt	Hand auger	Title 22 metals, As, PCBs, asbestos	NA	NA	silty sand	small pieces of rock
		0.5-1.0			Hold				
		2.5-3.0			Title 22 metals, As, PCBs, asbestos				
SB-02	Assess potential LBP associated with existing and historical structures. Assess surface runoff infiltration at Site lowpoint.	0.3-0.8	Asphalt	Hand auger	Title 22 metals, As, OCPs, PCBs, VOCs, PAHs, Asbestos	4	0	sand	
		0.8-1.3			Hold				
		2.5-3.0			Title 22 metals, As, OCPs, PCBs, VOCs, PAHs, Asbestos				
SB-03	Assess potential LBP/OCPs associated with existing and historical structures	0.3-0.8	Asphalt	Hand auger	Pb, OCPs (Composite with SB-55, SB-87)	3	6	sand	pieces of debris in the sand
		0.8-1.3			Hold				
		2.5-3.0			Pb, OCPs (Composite with SB-55, SB-87)				
SB-04	Assess potential LBP/OCPs associated with historical structures	0.3-0.8	Asphalt	Hand auger	Pb, OCPs (Composite with SB-69)	4	5	sand	moist
		0.8-1.3			Hold				
		2.5-3.0			Pb, OCPs (Composite with SB-69)				
SB-05	Assess potential LBP/OCPs associated with historical structures	0.6-1.1	Asphalt	Hand auger	Pb, OCPs (Composite with SB-70, SB-71)	2	5	silty sand	
		1.1-1.6			Hold				
		2.5-3.0			Pb, OCPs (Composite with SB-70, SB-71)				
SB-06	Assess potential LBP/OCPs associated with historical structures; assess weed and pest control practices; 1466 profiling	0.8-1.3	Asphalt	Hand auger	Title 22 metals, As, PCBs, PAHs, asbestos, OCPs (Composite with SB-49, SB-81, SB-82)	2	8	sand	
		1.3-1.8			As				
		2.5-3.0			Title 22 metals, As, PCBs, PAHs, asbestos, OCPs (Composite with SB-49, SB-81, SB-82)				
SB-07	Assess potential LBP/OCPs associated with historical structures	0.7-1.2	Asphalt	Hand auger	Pb, OCPs (Composite with SB-8, SB-9 ,SB-11)	2	6	--	
		1.2-1.7			Hold				
		2.5-3.0			Pb, OCPs (Composite with SB-8, SB-9 ,SB-11)				
SB-08	Assess potential LBP/OCPs associated with historical structures; assess weed and pest control practices; 1466 profiling	0.6-1.1	Asphalt	Hand auger	Title 22 metals, As, asbestos, OCPs (Composite with SB-7, SB-9 ,SB-11)	2	5	sandy silt with rocks	
		1.1-1.6			Hold				
		2.5-3.0			Title 22 metals, As, asbestos, OCPs (Composite with SB-7, SB-9 ,SB-11)				
SB-09	Assess potential LBP/OCPs associated with historical structures	0.7-1.2	Asphalt	Hand auger	Pb, OCPs (Composite with SB-7, SB-8 ,SB-11)	2	6	silt	moist
		1.2-1.7			Hold				
		2.5-3.0			Pb, OCPs (Composite with SB-7, SB-8 ,SB-11)				
SB-10	Assess potential LBP/OCPs associated with existing and historical structures	0.8-1.3	Asphalt	Hand auger	Pb, OCPs (Composite with SB-48, SB-12), Dieldrin	3	7	sand with some gravel	
		1.3-1.8			Pb				
		2.5-3.0			Pb, OCPs (Composite with SB-48, SB-12)				
SB-10A	Assess LBP at SB-10 location	0.8-1.3	Asphalt	Hand auger	Pb	3	5	--	
		1.3-1.8			Pb				
		2.5-3.0			Pb				
SB-10B	Assess LBP at SB-10 location	0.8-1.3	Asphalt	Hand auger	Pb	3	5	--	
		1.3-1.8			Pb				
		2.5-3.0			Pb				
SB-10C	Assess LBP at SB-10 location	0.8-1.3	Asphalt	Hand auger	Pb	3	5	--	
		1.3-1.8			Pb				
		2.5-3.0			Pb				

TABLE 1
SOIL SAMPLING AND ANALYSIS PROGRAM
PEA-E SITE INVESTIGATION
Elizabeth Learning Center
Cudahy, California

Sampling Location ID	Sampling Rationale / Comments	Sample Depth (ft bgs)	Surface Type	Sampling Method	Analytical Program	Pavement Thickness (inches)	Base thickness (inches)	Soil Type	Observations
SB-11	Assess potential LBP/OCPs associated with historical structures; assess utility trench backfill; 1466 profiling	0.7-1.2	Asphalt	Hand auger	Title 22 metals, As, PCBs, PAHs, asbestos, OCPs (Composite with SB-7, SB-8, SB-9)	2	6	sandy silt	augered through layer of concrete slurry material under asphalt
		1.2-1.7			Hold				
		2.5-3.0			Title 22 metals, As, PCBs, PAHs, asbestos, OCPs (Composite with SB-7, SB-8, SB-9)				
SB-12	Assess potential LBP/OCPs associated with existing and historical structures	0.7-1.2	Asphalt	Hand auger	Pb, OCPs (Composite with SB-48, SB-10), Dieldrin	2	6	sandy silt with gravel	
		1.2-1.7			Hold				
		2.5-3.0			Pb, OCPs (Composite with SB-48, SB-10)				
SB-13	Assess potential LBP/OCPs associated with historical structures	0.8-1.3	Asphalt	Hand auger	Pb, OCPs (Composite with SB-74, SB-75)	2	7	sandy silt	augered through layer of concrete slurry material under asphalt
		1.3-1.8			Hold				
		2.5-3.0			Pb, OCPs (Composite with SB-74, SB-75)				
SB-14	Assess potential LBP/OCPs associated with historical structures; assess utility trench backfill; 1466 profiling	0.7-1.2	Asphalt	Hand auger	Title 22 metals, As, PCBs, PAHs, asbestos, OCPs (Composite with SB-79, SB-90)	2	6	sand layer with silt underneath	
		1.2-1.7			Hold				
		2.5-3.0			Title 22 metals, As, PCBs, PAHs, asbestos, OCPs (Composite with SB-79, SB-90)				
SB-15	Assess potential LBP/OCPs associated with historical structures; assess utility trench backfill; assess pad-mounted transformer	0.3-0.8	Asphalt	Hand auger	Title 22 metals, As, PCBs, OCPs (Composite with SB-42, SB-80)	4	0	sand	
		0.8-1.3			Hold				
		2.5-3.0			Title 22 metals, As, PCBs, OCPs (Composite with SB-42, SB-80)				
SB-16	Assess landscape area	0-0.5	Dirt	Hand auger	Title 22 metals, As, OCPs	NA	NA	sandy silt	
		0.5-1.0			Hold				
		2.5-3.0			Title 22 metals, As, OCPs				
SB-17	Assess potential LBP/OCPs associated with historical structures; assess tennis court concrete	0.3-0.8	Concrete	Hand auger	Pb, PCBs, OCPs (Composite with SB-18, SB-19, SB-43)	5	0	sandy silt with pieces of rock	
		0.9-1.4			Hold				
		2.5-3.0			Pb, PCBs, OCPs (Composite with SB-18, SB-19, SB-43)				
SB-18	Assess potential LBP/OCPs associated with historical structures; 1466 profiling; waste profiling	0.3-0.8	Asphalt	Hand auger	Title 22 metals, As, asbestos, OCPs (Composite with SB-17, SB-19, SB-43)	2	4	sandy silt with pieces of rock	
		0.8-1.3			Hold				
		2.5-3.0			Title 22 metals, As, asbestos, OCPs (Composite with SB-17, SB-19, SB-43)				
SB-19	Assess potential LBP/OCPs associated with historical structures; assess pad-mounted transformer	0.5-1.0	Asphalt	Hand auger	Pb, PCBs, OCPs (Composite with SB-17, SB-18, SB-43)	2	8	sandy silt	pieces of broken tile at 1'3" that appear to be non-natvie fill
		0.8-1.3			Hold				
		2.5-3.0			Pb, PCBs, OCPs (Composite with SB-17, SB-18, SB-43)				
SB-20	Assess potential LBP/OCPs associated with historical structures; assess weed and pest control practices; 1466 profiling; waste profiling	0.5-1.0	Asphalt	Hand auger	Title 22 metals, As, VOCs, TPH, asbestos, OCPs (Composite with SB-26, SB-28, SB-39)	2	6	sandy silt	
		0.9-1.4			Hold				
		2.5-3.0			Title 22 metals, As, VOCs, TPH, asbestos, OCPs (Composite with SB-26, SB-28, SB-39)				
SB-21	Assess potential LBP/OCPs associated with historical structures	0.5-1	Asphalt	Hand auger	Pb, OCPs (Composite with SB-22, SB-23, SB-25), Chlordane	3	6	loose silt	
		0.9-1.4			Hold				
		2.5-3.0			Pb, OCPs (Composite with SB-22, SB-23, SB-25)				

TABLE 1
SOIL SAMPLING AND ANALYSIS PROGRAM
PEA-E SITE INVESTIGATION
Elizabeth Learning Center
Cudahy, California

Sampling Location ID	Sampling Rationale / Comments	Sample Depth (ft bgs)	Surface Type	Sampling Method	Analytical Program	Pavement Thickness (inches)	Base thickness (inches)	Soil Type	Observations
SB-22	Assess potential LBP/OCPs associated with historical structures	0.4-0.9	Asphalt	Hand auger	Pb, OCPs (Composite with SB-21, SB-23, SB-25), Chlordane, STLC and TCLP Pb	3	5	loose silt	
		1.1-1.6			Pb, Chlordane				
		2.5-3.0			Pb, OCPs (Composite with SB-21, SB-23, SB-25)				
SB-22A	Assess LBP and chlordane at SB-22 location	0.5-1.0	Asphalt	Hand auger	Pb, Chlordane	3	5	--	
		0.9-1.4			Pb, Chlordane				
		2.5-3.0			Hold				
SB-22B	Assess LBP and chlordane at SB-22 location	0.5-1.0	Asphalt	Hand auger	Pb, Chlordane	3	5	--	
		0.9-1.4			Pb, Chlordane				
		2.5-3.0			Hold				
SB-22C	Assess LBP and chlordane at SB-22 location	0.5-1.0	Asphalt	Hand auger	Pb, Chlordane	3	5	--	
		0.9-1.4			Pb, Chlordane, TCLP Chlordane				
		2.5-3.0			Hold				
SB-23	Assess potential LBP/OCPs associated with historical structures; assess tennis court concrete	0.3-0.8	Concrete	Hand auger	Pb, PCBs, OCPs (Composite with SB-21, SB-22, SB-25)	5	0	loose silt	
		1.1-1.6			Hold				
		2.5-3.0			Pb, PCBs, OCPs (Composite with SB-21, SB-22, SB-25)				
SB-24	Assess potential LBP/OCPs associated with historical structures	0.3-0.8	Asphalt	Hand auger	Pb, OCPs (Composite with SB-27, SB-29)	2	7	loose silt	
		0.8-1.3			Hold				
		2.5-3.0			Pb, OCPs (Composite with SB-27, SB-29)				
SB-25	Assess potential LBP/OCPs associated with historical structures	0.3-0.8	Concrete	Hand auger	Pb, OCPs (Composite with SB-21, SB-22, SB-23), chlordane	4	0	coarse sand	
		0.8-1.3			Hold				
		2.5-3.0			Pb, OCPs (Composite with SB-21, SB-22, SB-23)				
SB-26	Assess potential LBP/OCPs associated with historical structures	0.3-0.8	Concrete	Hand auger	Pb, OCPs (Composite with SB-20, SB-28, SB-39)	5	0	silty sand	
		0.9-1.4			Hold				
		2.5-3.0			Pb, OCPs (Composite with SB-20, SB-28, SB-39)				
SB-27	Assess potential LBP/OCPs associated with historical structures; assess weed and pest control practices; 1466 profiling; waste profiling	0.4-0.9	Asphalt	Hand auger	Title 22 metals, As, VOCs, TPH, asbestos, OCPs (Composite with SB-24, SB-29)	3	6	silt	
		0.8-1.3			Hold				
		2.5-3.0			Title 22 metals, As, VOCs, TPH, asbestos, OCPs (Composite with SB-24, SB-29)				
SB-28	Assess potential LBP/OCPs associated with historical structures; assess tennis court concrete	0.3-0.8	Concrete	Hand auger	Pb, PCBs, OCPs (Composite with SB-20, SB-26, SB-39), Chlordane	5	0	sandy silt	
		0.9-1.4			Hold				
		2.5-3.0			Pb, PCBs, OCPs (Composite with SB-20, SB-26, SB-39)				
SB-29	Assess potential LBP/OCPs associated with historical structures	0.5-1.0	Asphalt	Hand auger	Pb, OCPs (Composite with SB-24, SB-27), STLC Pb	3	5	silt	
		0.9-1.4			Pb				
		2.5-3.0			Pb, OCPs (Composite with SB-24, SB-27)				
SB-29A	Assess LBP at SB-29 location	0.5-1.0	Asphalt	Hand auger	Pb	3	5	--	
		0.9-1.4			Pb				
		2.5-3.0			Pb				
SB-29B	Assess LBP at SB-29 location	0.5-1.0	Asphalt	Hand auger	Pb	3	5	--	
		0.9-1.4			Pb				
		2.5-3.0			Pb				

TABLE 1
SOIL SAMPLING AND ANALYSIS PROGRAM
PEA-E SITE INVESTIGATION
Elizabeth Learning Center
Cudahy, California

Sampling Location ID	Sampling Rationale / Comments	Sample Depth (ft bgs)	Surface Type	Sampling Method	Analytical Program	Pavement Thickness (inches)	Base thickness (inches)	Soil Type	Observations
SB-29C	Assess LBP at SB-29 location	0.5-1.0	Asphalt	Hand auger	Pb	3	5	--	
		0.9-1.4			Pb				
		2.5-3.0			Pb				
SB-30	Assess potential LBP/OCPs associated with historical structures	0.5-1.0	Asphalt	Hand auger	Pb, OCPs (Composite with SB-31, SB-38)	5	5	silt	iron-oxide staininig in deep soil
		0.9-1.4			Hold				
		2.5-3.0			Pb, OCPs (Composite with SB-31, SB-38)				
SB-31	Assess potential LBP/OCPs associated with historical structures	0.4-0.9	Asphalt	Hand auger	Pb, OCPs (Composite with SB-30, SB-38)	2	6	silt	
		0.8-1.3			Hold				
		2.5-3.0			Pb, OCPs (Composite with SB-30, SB-38)				
SB-32	Assess potential LBP/OCPs associated with historical structures; assess weed and pest control practices; 1466 profiling	0.7-1.2	Asphalt	Hand auger	Title 22 metals, As, asbestos, OCPs (Composite with SB-33, SB-34, SB-35), Chlordane	2	6	silt	
		1.2-1.7			Hold				
		2.5-3.0			Title 22 metals, As, asbestos, OCPs (Composite with SB-33, SB-34, SB-35)				
SB-33	Assess potential LBP/OCPs associated with historical structures; assess handball court concrete	0.3-0.8	Concrete	Hand auger	Pb, PCBs, OCPs (Composite with SB-32, SB-34, SB-35), Chlordane	3	0	silt	
		0.8-1.3			Hold				
		2.5-3.0			Pb, PCBs, OCPs (Composite with SB-32, SB-34, SB-35)				
SB-34	Assess potential LBP/OCPs associated with historical structures	0.5-1.0	Asphalt	Hand auger	Pb, OCPs (Composite with SB-32, SB-33, SB-35), Chlordane	2	6	silt	
		1.0-1.5			Hold				
		2.5-3.0			Pb, OCPs (Composite with SB-32, SB-33, SB-35)				
SB-34A	Assess chlordane at SB-34 location	0.5-1.0	Asphalt	Hand auger	Chlordane	2	6	--	
		1.0-1.5			Chlordane				
		2.5-3.0			Hold				
SB-34B	Assess chlordane at SB-34 location	0.5-1.0	Asphalt	Hand auger	Chlordane	2	6	--	
		1.0-1.5			Chlordane				
		2.5-3.0			Hold				
SB-34C	Assess chlordane at SB-34 location	0.5-1.0	Asphalt	Hand auger	Chlordane	2	6	--	
		1.0-1.5			Chlordane				
		2.5-3.0			Hold				
SB-35	Assess potential LBP/OCPs associated with historical structures; assess handball court concrete	0.2-0.7	Concrete	Hand auger	Pb, PCBs, OCPs (Composite with SB-32, SB-33, SB-34), Chlordane	4	0	silt	
		0.7-1.2			Hold				
		2.5-3.0			Pb, PCBs, OCPs (Composite with SB-32, SB-33, SB-34)				
SB-36	Assess potential LBP/OCPs associated with historical structures; assess handball court concrete	0.3-0.8	Concrete	Hand auger	Pb, PCBs, OCPs (Composite with SB-37, SB-40), Chlordane	6	0	silt	
		0.6-1.1			Hold				
		2.5-3.0			Pb, PCBs, OCPs (Composite with SB-37, SB-40)				
SB-37	Assess potential LBP/OCPs associated with historical structures	0.5-1.0	Asphalt	Hand auger	Pb, OCPs (Composite with SB-36, SB-40), Chlordane	2	6	loose silt	
		1.0-1.5			Chlordane				
		2.5-3.0			Pb, OCPs (Composite with SB-36, SB-40)				

TABLE 1
SOIL SAMPLING AND ANALYSIS PROGRAM
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Cudahy, California

Sampling Location ID	Sampling Rationale / Comments	Sample Depth (ft bgs)	Surface Type	Sampling Method	Analytical Program	Pavement Thickness (inches)	Base thickness (inches)	Soil Type	Observations
SB-37A	Assess chlordane at SB-37 location	0.5-1.0	Asphalt	Hand auger	Chlordane, TCLP Chlordane (dup)	2	6	--	
		1.0-1.5			Chlordane				
		2.5-3.0			Hold				
SB-37B	Assess chlordane at SB-37 location	0.5-1.0	Asphalt	Hand auger	Chlordane	2	6	--	
		1.0-1.5			Chlordane				
		2.5-3.0			Hold				
SB-37C	Assess chlordane at SB-37 location	0.5-1.0	Asphalt	Hand auger	Chlordane	2	6	--	
		1.0-1.5			Chlordane				
		2.5-3.0			Hold				
SB-38	Assess potential LBP/OCPs associated with historical structures	0.4-0.9	Asphalt	Hand auger	Pb, OCPs (Composite with SB-30, SB-31)	2	5	sandy silt with gravel	
		0.9-1.4			Hold				
		2.5-3.0			Pb, OCPs (Composite with SB-30, SB-31)				
SB-39	Assess potential LBP/OCPs associated with historical structures	0.3-0.8	Concrete	Hand auger	Pb, OCPs (Composite with SB-20, SB-26, SB-28)	5	0	sandy silt with gravel	
		0.8-1.3			Hold				
		2.5-3.0			Pb, OCPs (Composite with SB-20, SB-26, SB-28)				
SB-40	Assess potential LBP/OCPs associated with historical structures; assess weed and pest control practices; 1466 profiling	0.5-1.0	Asphalt	Hand auger	Title 22 metals, As, asbestos, OCPs (Composite with SB-36, SB-37), Chlordane	2	5	stiff silt	
		0.9-1.4			Hold				
		2.5-3.0			Title 22 metals, As, asbestos, OCPs (Composite with SB-36, SB-37)				
SB-41	Assess potential LBP/OCPs associated with existing and historical structures	0.8-1.3	Asphalt	Hand auger	Pb, OCPs (Composite with SB-44, SB-77), STLC Pb	3	6	sandy silt with pieces of rock	
		1.3-1.8			Pb				
		2.5-3.0			Pb, OCPs (Composite with SB-44, SB-77)				
SB-42	Assess potential LBP/OCPs associated with historical structures; assess utility trench backfill	0.7-1.2	Asphalt	Hand auger	Pb, As, OCPs (Composite with SB-15, SB-80)	2	6	silt	
		1.2-1.7			Hold				
		2.5-3.0			Pb, As, OCPs (Composite with SB-15, SB-80)				
SB-43	Assess potential LBP/OCPs associated with historical structures	0.4-0.9	Asphalt	Hand auger	Pb, OCPs (Composite with SB-17, SB-18, SB-19)	2	6	silt	
		0.8-1.3			Hold				
		2.5-3.0			Pb, OCPs (Composite with SB-17, SB-18, SB-19)				
SB-44	Assess potential LBP/OCPs associated with existing and historical structures	0-0.5	Dirt	Hand auger	Pb, OCPs (Composite with SB-41, SB-77), STLC and TCLP Pb	NA	NA	silt	roots encountered at depth
		0.5-1.0			Pb				
		2.5-3.0			Pb, OCPs (Composite with SB-41, SB-77)				
SB-44A	Assess LBP at SB-41, SB-44, SB-45, and SB-62 locations	0.8-1.3	Asphalt	Hand auger	Pb	3	4	--	
		1.3-1.8			Pb				
		2.5-3.0			Pb				
SB-44B	Assess LBP at SB-41, SB-44, SB-45, and SB-62 locations	0.8-1.3	Asphalt	Hand auger	Pb	3	4	--	
		1.3-1.8			Pb				
		2.5-3.0			Pb				
SB-44C	Assess LBP at SB-41, SB-44, SB-45, and SB-62 locations	0.8-1.3	Asphalt	Hand auger	Pb	2	5	--	
		1.3-1.8			Pb				
		2.5-3.0			Pb				

TABLE 1
SOIL SAMPLING AND ANALYSIS PROGRAM
PEA-E SITE INVESTIGATION
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Cudahy, California

Sampling Location ID	Sampling Rationale / Comments	Sample Depth (ft bgs)	Surface Type	Sampling Method	Analytical Program	Pavement Thickness (inches)	Base thickness (inches)	Soil Type	Observations
SB-44D	Assess LBP at SB-41, SB-44, SB-45, and SB-62 locations	0.8-1.3	Asphalt	Hand auger	Pb	3	6	--	
		1.3-1.8			Pb				
		2.5-3.0			Pb				
SB-44E	Assess LBP at SB-41, SB-44, SB-45, and SB-62 locations	0.8-1.3	Asphalt	Hand auger	Pb	3	6	--	
		1.3-1.8			Pb				
		2.5-3.0			Pb				
SB-45	Assess potential LBP/OCPs associated with existing and historical structures	0-0.5	Asphalt	Hand auger	Pb, OCPs (Composite with SB-62)	2	4	sandy silt	top layer of soil has pieces of broken material
		0.5-1.0			Pb				
		2.5-3.0			Pb, OCPs (Composite with SB-62)				
SB-46	Assess potential LBP associated with existing structure	0-0.5	Dirt	Hand auger	Pb	NA	NA	sandy silt	
		0.5-1.0			Hold				
		2.5-3.0			Pb				
SB-47	Assess potential LBP/OCPs associated with existing and historical structures	1.0-1.5	Asphalt	Hand auger	Pb, OCPs (Composite with SB-53, SB-54)	3	9	sand with gravel in shallow. Sand at depth.	stepped out 1' to collect the 3' sample
		1.5-2.0			Hold				
		2.5-3.0			Pb, OCPs (Composite with SB-53, SB-54)				
SB-48	Assess potential LBP/OCPs associated with existing and historical structures	0-0.5	Dirt	Hand auger	Pb, OCPs (Composite with SB-10, SB-12), Dieldrin	NA	NA	silty sand with gravel	
		0.5-1.0			Hold				
		2.5-3.0			Pb, OCPs (Composite with SB-10, SB-12)				
SB-49	Assess potential LBP/OCPs associated with existing and historical structures	0.4-0.9	Asphalt	Hand auger	Pb, OCPs (Composite with SB-6, SB-81, SB-82)	5	0	sand	
		0.9-1.4			Hold				
		2.5-3.0			Pb, OCPs (Composite with SB-6, SB-81, SB-82)				
SB-50	Assess potential LBP/OCPs associated with existing and historical structures	0.3-0.8	Asphalt	Hand auger	Pb, OCPs (Composite with SB-51, SB-56)	4	0	silty sand	
		0.8-1.3			Pb				
		2.5-3.0			Pb, OCPs (Composite with SB-51, SB-56)				
SB-50A	Assess LBP at SB-50 location	0.3-0.8	Asphalt	Hand auger	Pb	4	0	--	
		0.8-1.3			Pb				
		2.5-3.0			Hold				
SB-50B	Assess LBP at SB-50 location	0.3-0.8	Asphalt	Hand auger	Pb	4	0	--	
		0.8-1.3			Pb				
		2.5-3.0			Hold				
SB-50C	Assess LBP at SB-50 location	0.3-0.8	Asphalt	Hand auger	Pb	4	0	--	
		0.8-1.3			Pb				
		2.5-3.0			Hold				
SB-51	Assess potential LBP/OCPs associated with existing and historical structures	0.3-0.8	Asphalt	Hand auger	Pb, OCPs (Composite with SB-50, SB-56)	4	0	silty sand	
		0.8-1.3			Hold				
		2.5-3.0			Pb, OCPs (Composite with SB-50, SB-56)				
SB-52	Assess potential LBP/OCPs associated with historical structures; assess weed and pest control practices	0.8-1.3	Asphalt	Hand auger	Pb, As, OCPs (Composite with SB-72, SB-73, SB-60)	2	8	silty sand	
		1.3-1.8			Hold				
		2.5-3.0			Pb, As, OCPs (Composite with SB-72, SB-73, SB-60)				
SB-53	Assess potential LBP/OCPs associated with historical structures	0.8-1.3	Asphalt	Hand auger	Pb, OCPs (Composite with SB-47, SB-52, SB-54)	2	8	silty sand	
		1.3-1.8			Hold				
		2.5-3.0			Pb, OCPs (Composite with SB-47, SB-52, SB-54)				

TABLE 1
SOIL SAMPLING AND ANALYSIS PROGRAM
PEA-E SITE INVESTIGATION
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Cudahy, California

Sampling Location ID	Sampling Rationale / Comments	Sample Depth (ft bgs)	Surface Type	Sampling Method	Analytical Program	Pavement Thickness (inches)	Base thickness (inches)	Soil Type	Observations
SB-54	Assess potential LBP/OCPs associated with historical structures; assess weed and pest control practices; 1466 profiling	0.8-1.3	Asphalt	Hand auger	Title 22 metals, As, asbestos, OCPs (Composite with SB-53, SB-47)	4	6	silty sand	
		1.3-1.5			Hold				
		2.5-3.0			Title 22 metals, As, asbestos, OCPs (Composite with SB-53, SB-47)				
SB-55	Assess potential LBP/OCPs associated with existing and historical structures	0.3-0.8	Asphalt	Hand auger	Pb, OCPs (Composite with SB-3, SB-87)	3	0	shallow sand with debris to sandy silt deeper	
		0.8-1.3			Hold				
		2.5-3.0			Pb, OCPs (Composite with SB-3, SB-87)				
SB-56	Assess potential LBP/OCPs associated with existing and historical structures	0-0.5	Dirt	Hand auger	Pb, OCPs (Composite with SB-50, SB-51)	NA	NA	silty sand	
		0.5-1.0			Hold				
		2.5-3.0			Pb, OCPs (Composite with SB-50, SB-51)				
SB-57	Assess potential LBP/OCPs associated with historical structures	0-0.5	Dirt	Hand auger	Pb, OCPs (Composite with SB-58, SB-59)	NA	NA	silty sand	
		0.5-1.0			Hold				
		2.5-3.0			Pb, OCPs (Composite with SB-58, SB-59)				
SB-58	Assess potential LBP/OCPs associated with historical structures	0.8-1.3	Asphalt	Hand auger	Pb, OCPs (Composite with SB-57, SB-59)	2	7	sandy silt	
		1.3-1.8			Hold				
		2.5-3.0			Pb, OCPs (Composite with SB-57, SB-59)				
SB-59	Assess potential LBP/OCPs associated with historical structures; assess weed and pest control practices; 1466 profiling; waste profiling	0.8-1.3	Asphalt	Hand auger	Title 22 metals, As, asbestos, VOCs, TPH, PAHs, OCPs (Composite with SB-57, SB-58), STLC and TCLP As	3	6	silty sand	
		1.3-1.8			As				
		2.5-3.0			Title 22 metals, As, asbestos, VOCs, TPH, PAHs, OCPs (Composite with SB-57, SB-58)				
SB-59A	Assess arsenic at SB-59 location	0.8-1.3	Asphalt	Hand auger	As	3	6	--	
		1.3-1.8			As				
		2.5-3.0			As				
SB-59B	Assess arsenic at SB-59 location	0.8-1.3	Asphalt	Hand auger	As	3	6	--	
		1.3-1.8			As				
		2.5-3.0			As				
SB-59C	Assess arsenic at SB-59 location	0.8-1.3	Asphalt	Hand auger	As	3	6	--	
		1.3-1.8			As				
		2.5-3.0			As				
SB-60	Assess potential LBP/OCPs associated with historical structures	0.8-1.3	Asphalt	Hand auger	Pb, OCPs (Composite with SB-72, SB-73, SB-52)	2	7	silt	
		1.3-1.8			Hold				
		2.5-3.0			Pb, OCPs (Composite with SB-72, SB-73, SB-52)				
SB-61	Assess potential LBP/OCPs associated with historical structures	0-0.5	Dirt	Hand auger	Pb, OCPs (Composite with SB-65)	NA	NA	sandy silt	
		0.5-1.0			Hold				
		2.5-3.0			Pb, OCPs (Composite with SB-65)				
SB-62	Assess potential LBP/OCPs associated with existing and historical structures	0.7-1.2	Asphalt	Hand auger	Pb, OCPs (Composite with SB-45), STLC and TCLP Pb	3	5	silty sand	
		1.2-1.7			Pb				
		2.5-3.0			Pb, OCPs (Composite with SB-45)				
SB-63	Assess potential LBP/OCPs associated with existing and historical structures	0.4-0.9	Concrete	Hand auger	Pb, OCPs	3	2	sand	chunks of broken brick
		0.9-1.4			Hold				
		2.5-3.0			Pb, OCPs				

TABLE 1
SOIL SAMPLING AND ANALYSIS PROGRAM
PEA-E SITE INVESTIGATION
Elizabeth Learning Center
Cudahy, California

Sampling Location ID	Sampling Rationale / Comments	Sample Depth (ft bgs)	Surface Type	Sampling Method	Analytical Program	Pavement Thickness (inches)	Base thickness (inches)	Soil Type	Observations
SB-64	Assess potential LBP/OCPs associated with historical structures	0-0.5	Dirt	Hand auger	Pb, OCPs (Composite with SB-66, SB-67)	NA	NA	sandy silt	
		0.5-1.0			Hold				
		2.5-3.0			Pb, OCPs (Composite with SB-66, SB-67)				
SB-65	Assess potential LBP/OCPs associated with historical structures	0-0.5	Dirt	Hand auger	Pb, OCPs (Composite with SB-61)	NA	NA	sandy silt	Hit refusal at 3' and stepped out 2' from side of the building.
		0.5-1.0			Hold				
		2.5-3.0			Pb, OCPs (Composite with SB-61)				
SB-66	Assess potential LBP/OCPs associated with historical structures	0.8-1.3	Asphalt	Hand auger	Pb, OCPs (Composite with SB-64, SB-67)	2	7	silty sand	
		1.3-1.8			Hold				
		2.5-3.0			Pb, OCPs (Composite with SB-64, SB-67)				
SB-67	Assess potential LBP/OCPs associated with historical structures; assess weed and pest control practices; 1466 profiling	0.8-1.3	Asphalt	Hand auger	Title 22 metals, As, asbestos, OCPs (Composite with SB-64, SB-66)	3	6	sandy silt	
		1.3-1.8			Hold				
		2.5-3.0			Title 22 metals, As, asbestos, OCPs (Composite with SB-64, SB-66)				
SB-68	Assess potential LBP/OCPs associated with existing and historical structures	0-0.5	Dirt	Hand auger	Pb, OCPs (Composite with SB-76, SB-78)	NA	NA	silty sand	
		0.5-1.0			Pb				
		2.5-3.0			Pb, OCPs (Composite with SB-76, SB-78)				
SB-68A	Assess LBP at SB-68 location	0-0.5	Dirt	Hand auger	Pb	NA	NA	--	Above unknown subsurface lines.
		0.5-1.0			Pb				
SB-68B	Assess LBP at SB-68 location	0-0.5	Dirt	Hand auger	Pb	NA	NA	--	Above gas lines.
		0.5-1.0			Pb				
SB-69	Assess potential LBP/OCPs associated with historical structures	0.6-1.1	Asphalt	Hand auger	Pb, OCPs (Composite with SB-4)	3	4	sand	Encountered concrete ~5" bgs. Recored and hit stormdrain pipe.
		1.1-1.6			Hold				
		2.5-3.0			Pb, OCPs (Composite with SB-4)				
SB-70	Assess potential LBP/OCPs associated with historical structures	0.7-1.2	Asphalt	Hand auger	Pb, As, OCPs (Composite with SB-5, SB-71)	3	5	sandy silt	
		1.2-1.7			Hold				
		2.5-3.0			Pb, As, OCPs (Composite with SB-5, SB-71)				
SB-71	Assess potential LBP/OCPs associated with historical structures	0.6-1.1	Asphalt	Hand auger	Pb, OCPs (Composite with SB-5, SB-70)	3	4	sandy silt	
		1.1-1.6			Hold				
		2.5-3.0			Pb, OCPs (Composite with SB-5, SB-70)				
SB-72	Assess potential LBP/OCPs associated with historical structures	0.7-1.2	Asphalt	Hand auger	Pb, OCPs (Composite with SB-73, SB-52, SB-60)	3	5	silty sand	
		1.2-1.7			Hold				
		2.5-3.0			Pb, OCPs (Composite with SB-73, SB-52, SB-60)				
SB-73	Assess potential LBP/OCPs associated with historical structures	0.6-1.1	Asphalt	Hand auger	Pb, OCPs (Composite with SB-72, SB-52, SB-60)	2	5	silt	
		1.1-1.6			Hold				
		2.5-3.0			Pb, OCPs (Composite with SB-72, SB-52, SB-60)				
SB-74	Assess potential LBP/OCPs associated with historical structures	0.7-1.2	Asphalt	Hand auger	Pb, OCPs (Composite with SB-13, SB-75)	2	6	sandy silt	
		1.2-1.7			Hold				
		2.5-3.0			Pb, OCPs (Composite with SB-13, SB-75)				
SB-75	Assess potential LBP/OCPs associated with historical structures	0.8-1.3	Asphalt	Hand auger	Pb, OCPs (Composite with SB-13, SB-74)	2	7	sandy silt	
		1.3-1.8			Hold				
		2.5-3.0			Pb, OCPs (Composite with SB-13, SB-74)				

TABLE 1
SOIL SAMPLING AND ANALYSIS PROGRAM
PEA-E SITE INVESTIGATION
Elizabeth Learning Center
Cudahy, California

Sampling Location ID	Sampling Rationale / Comments	Sample Depth (ft bgs)	Surface Type	Sampling Method	Analytical Program	Pavement Thickness (inches)	Base thickness (inches)	Soil Type	Observations
SB-76	Assess potential LBP/OCPs associated with existing and historical structures	0-0.5	Dirt	Hand auger	Pb, As, OCPs (Composite with SB-68, SB-78)	NA	NA	silty sand	
		0.5-1.0			Hold				
		2.5-3.0			Pb, As, OCPs (Composite with SB-68, SB-78)				
SB-77	Assess potential LBP/OCPs associated with existing and historical structures; 1466 profiling; waste profiling	0.6-1.1	Asphalt	Hand auger	Title 22 metals, As, TPH, VOCs, PCBs, PAHs, OCPs (Composite with SB-41, SB-44)	3	4	sandy silt	
		1.1-1.6			As				
		2.5-3.0			Title 22 metals, As, TPH, VOCs, PCBs, PAHs, OCPs (Composite with SB-41, SB-44)				
SB-78	Assess potential LBP/OCPs associated with existing and historical structures	0.3-0.8	Asphalt	Hand auger	Pb, OCPs (Composite with SB-68, SB-76), STLC and TCLP Pb	3	0	sand	moist
		0.8-1.3			Pb				
		2.5-3.0			Pb, OCPs (Composite with SB-68, SB-76)				
SB-78A	Assess LBP at SB-78 location	0-0.5	Asphalt	Hand auger	Pb	3	0	--	
		0.5-1.0			Pb				
		2.5-3.0			Hold				
SB-78B	Assess LBP at SB-78 location	0-0.5	Asphalt	Hand auger	Pb	3	0	--	
		0.5-1.0			Pb				
		2.5-3.0			Hold				
SB-78C	Assess LBP at SB-78 location	0-0.5	Asphalt	Hand auger	Pb	3	0	--	
		0.5-1.0			Pb				
		2.5-3.0			Hold				
SB-79	Assess potential LBP/OCPs associated with historical structures; assess weed and pest control practices; 1466 profiling	0.0-0.5	Dirt	Hand auger	Title 22 metals, As, asbestos, OCPs (Composite with SB-14, SB-90)	NA	NA	sandy silt	Sample was collected in a dirt planter. Roots and bits of plastic encountered.
		0.5-1			Hold				
		2.5-3.0			Title 22 metals, As, asbestos, OCPs (Composite with SB-14, SB-90)				
SB-80	Assess potential LBP/OCPs associated with historical structures	0.7-1.2	Asphalt	Hand auger	Pb, OCPs (Composite with SB-15, SB-42)	2	6	sandy silt	
		1.2-1.7			Hold				
		2.5-3.0			Pb, OCPs (Composite with SB-15, SB-42)				
SB-81	Assess potential LBP/OCPs associated with existing and historical structures	0.4-0.9	Asphalt	Hand auger	Pb, OCPs (Composite with SB-6, SB-49, SB-82)	3	2	sand	pieces of red brick in shallow depth
		0.9-1.4			Hold				
		2.5-3.0			Pb, OCPs (Composite with SB-6, SB-49, SB-82)				
SB-82	Assess potential LBP/OCPs associated with existing and historical structures	0.3-0.8	Asphalt	Hand auger	Pb, OCPs (Composite with SB-6, SB-49, SB-81)	3	0	clayey silt in shallow sample; sand in deeper	debris (red bricks) in shallow sample zone
		0.8-1.3			Hold				
		2.5-3.0			Pb, OCPs (Composite with SB-6, SB-49, SB-81)				
SB-83	Assess potential LBP and weed control associated with the existing portable structure structure placed between 1989 and 1994.	0.8-1.3	Asphalt	Hand auger	Pb, As	3	6	silty sand	
		1.3-1.8			Hold				
		2.5-3.0			Pb, As				
SB-84	Assess potential LBP and weed control associated with the existing portable structure structure placed between 1989 and 1994.	0.7-1.2	Asphalt	Hand auger	Pb, As	2	6	silty sand	
		1.2-1.7			Hold				
		2.5-3.0			Pb, As				
SB-85	Assess potential LBP and weed control associated with the existing portable structure structure placed between 1989 and 1994.	0.8-1.3	Concrete	Hand auger	Pb, As	2	7	silty sand	
		1.3-1.8			Hold				
		2.5-3.0			Pb, As				

TABLE 1
SOIL SAMPLING AND ANALYSIS PROGRAM
PEA-E SITE INVESTIGATION
Elizabeth Learning Center
Cudahy, California
(Page 10 of 11)

Sampling Location ID	Sampling Rationale / Comments	Sample Depth (ft bgs)	Surface Type	Sampling Method	Analytical Program	Pavement Thickness (inches)	Base thickness (inches)	Soil Type	Observations
SB-86	Assess potential LBP associated with existing portable structure	1.0-1.5	Asphalt	Hand auger	Pb, STLC Pb	4	8	silty sand	pieces of brick
		1.5-2.0			Pb				
		2.5-3.0			Pb				
SB-86A	Assess LBP at SB-86 location	1.0-1.5	Asphalt	Hand auger	Pb	4	8	--	Area surrounded by electrical lines.
		1.5-2.0			Pb				
		2.5-3.0			Hold				
SB-87	Assess potential LBP/OCPs associated with historical and existing structures	0.3-0.8	Asphalt	Hand auger	Pb, OCPs (Composite with SB-3, SB-55)	3	0	clayey silt in shallow sample; sand in deeper	pieces of brick
		0.8-1.3			Hold				
		2.5-3.0			Pb, OCPs (Composite with SB-3, SB-55)				
SB-88	Assess potential LBP associated with existing portable structure	1.0-1.5	Asphalt	Hand auger	Pb, As, TCLP Pb	3	9	silty sand	encountered refuse (potential concrete encased pipe) at 1.5' bgs. Augered to 3' bgs at slight
		1.5-2.0			Pb, As				
		2.5-3.0			Pb, As				
SB-88A	Assess LBP and arsenic at SB-88 location	1.0-1.5	Asphalt	Hand auger	Pb, As	3	9	--	
		1.5-2.0			Pb, As				
		2.5-3.0			Hold				
SB-88B	Assess LBP and arsenic at SB-88 location	1.0-1.5	Asphalt	Hand auger	Pb, As	3	9	--	
		1.5-2.0			Pb, As				
		2.5-3.0			Hold				
SB-88C	Assess LBP and arsenic at SB-88 location	1.0-1.5	Asphalt	Hand auger	Pb, As	3	9	--	
		1.5-2.0			Pb, As				
		2.5-3.0			Hold				
SB-89	Assess potential LBP associated with existing portable structure	1.0-1.5	Asphalt	Hand auger	Pb, As	3	5	silty sand	pieces of brick and debris
		1.2-1.7			Hold				
		2.5-3.0			Pb, As				
SB-90	Assess potential LBP/OCPs associated with historical structures; assess utility trench backfill	0.7-1.2	Asphalt	Hand auger	Pb, As, OCPs (Composite with SB-14, SB-79)	2	6	silt	roots and pieces of rock encountered
		1.2-1.7			Hold				
		2.5-3.0			Pb, As, OCPs (Composite with SB-14, SB-79)				

Notes:

ft bgs	feet below ground surface or base of pavement
--	Not recorded
LBP	Lead-Based Paint
As	Arsenic by USEPA Method 6020
Pb	Lead by USEPA Method 6010B
OCPs	Organochlorine Pesticides by USEPA Method 8081A
PAHs	Polycyclic Aromatic Hydrocarbons by USEPA Method 8270SIM
PCBs	Polychlorinated Biphenyls by USEPA Method 8082
Metals	Title 22 Metals by USEPA Method 6010B/7471A
TPH	Total Petroleum Hydrocarbons by USEPA Method 8015M
VOCs	Volatile Organic Compounds by USEPA Method 8260B/5035
Asbestos	Asbestos by Polarized Light Miscospcopy
STLC	Soluble Threshold Limit Concentration
TCLP	Toxicity Leaching Characteristic Procedure

Table 1

SOIL SAMPLING AND ANALYSIS PROGRAM
PEA-E SITE INVESTIGATION
Elizabeth Learning Center
Cudahy, California
(Page 11 of 11)

Sampling Location ID	Sampling Rationale / Comments	Sample Depth (ft bgs)	Surface Type	Sampling Method	Analytical Program	Pavement Thickness (inches)	Base Thickness (inches)	Soil Type	Observations
B-1	Assess potential LBP/OCPs associated with historical structures; assess weed and pest contorl practices	0-0.5	Asphalt	Hand auger	Metals, As, PAHs, OCPs, Asbestos, TPH, VOCs	**3.0**	**6.0**	sily sand	
		1.0-1.5			Metals, As, PAHs, OCPs, Asbestos, TPH, VOCs				
		2.5-3			Hold				
B-2	Assess potential LBP/OCPs associated with historical structures; assess weed and pest contorl practices	0-0.5	Asphalt	Hand auger	Metals, As, PAHs, OCPs, Asbestos, TPH, VOCs	**3.0**	**6.0**	sily sand	
		1.0-1.5			Metals, As, PAHs, OCPs, Asbestos, TPH, VOCs, PCBs, STLC				
		2.5-3			As				
B-3	Assess potential LBP/OCPs associated with historical structures; assess weed and pest contorl practices	0-0.5	Asphalt	Hand auger	Metals, As, PAHs, OCPs, Asbestos, TPH, VOCs	**3.0**	**6.0**	sily sand	
		1.0-1.5			Metals, As, PAHs, OCPs, Asbestos, TPH, VOCs				
		2.5-3			As				
B-4	Assess potential LBP/OCPs associated with historical structures; assess weed and pest contorl practices	0-0.5	Asphalt	Hand auger	Metals, As, PAHs, OCPs, Asbestos, TPH, VOCs	**3.0**	**6.0**	sily sand	
		1.0-1.5			Metals, As, PAHs, OCPs, Asbestos, TPH, VOCs				
		2.5-3			Hold				
B-5	Assess potential LBP/OCPs associated with historical structures; assess weed and pest contorl practices	0-0.5	Asphalt	Hand auger	Metals, As, PAHs, OCPs, Asbestos, TPH, VOCs	**3.0**	**6.0**	sily sand	
		1.0-1.5			Metals, As, PAHs, OCPs, Asbestos, TPH, VOCs, PCBs, STLC				
		2.5-3			As				
B-6	Assess potential LBP/OCPs associated with historical structures; assess weed and pest contorl practices	0-0.5	Asphalt	Hand auger	Metals, As, PAHs, OCPs, Asbestos, TPH, VOCs, STLC	**3.0**	**6.0**	sily sand	
		1.0-1.5			Metals, As, PAHs, OCPs, Asbestos, TPH, VOCs				
		2.5-3			Hold				
B-7	Assess potential LBP/OCPs associated with historical structures; assess weed and pest contorl practices	0-0.5	Asphalt	Hand auger	Metals, As, PAHs, OCPs, Asbestos, TPH, VOCs	**3.0**	**6.0**	sily sand	
		1.0-1.5			Metals, As, PAHs, OCPs, Asbestos, TPH, VOCs, PCBs				
		2.5-3			Hold				
B-8	Assess potential LBP/OCPs associated with historical structures; assess weed and pest contorl practices	0-0.5	Asphalt	Hand auger	Metals, As, PAHs, OCPs, Asbestos, TPH, VOCs, STLC	**3.0**	**6.0**	sily sand	
		1.0-1.5			Metals, As, PAHs, OCPs, Asbestos, TPH, VOCs				
		2.5-3			Hold				
B-9	Assess potential LBP/OCPs associated with historical structures; assess weed and pest contorl practices	0-0.5	Asphalt	Hand auger	Metals, As, PAHs, OCPs, Asbestos, TPH, VOCs, STLC	**3.0**	**6.0**	sily sand	
		1.0-1.5			Metals, As, PAHs, OCPs, Asbestos, TPH, VOCs				
		2.5-3			Hold				
B-10	Assess potential LBP/OCPs associated with historical structures; assess weed and pest contorl practices	0-0.5	Asphalt	Hand auger	Metals, As, PAHs, OCPs, Asbestos, TPH, VOCs	**3.0**	**6.0**	sily sand	
		1.0-1.5			Metals, As, PAHs, OCPs, Asbestos, TPH, VOCs				
		2.5-3			Hold				

Notes and Abbreviations:

ft bgs:	feet below ground surface
LBP	Lead-Based Paint
As	Arsenic by USEPA Method 6020
OCPs	Organochlorine Pesticides by USEPA Method 8081A
PAHs	Polycyclic Aromatic Hydrocarbons by USEPA Method 8270SIM
PCBs	Polychlorinated Biphenyls by USEPA Method 8082
Metals	Title 22 Metals by USEPA Method 6010B/7471A
TPH	Total Petroleum Hydrocarbons by USEPA Method 8015M
VOCs	Volatile Organic Compounds by USEPA Mehtod 8260B/5035
STLC	Soluble Threshold Limit Concentration

TABLE 2
SOIL ANALYTICAL RESULTS
PEA-E SITE INVESTIGATION
Elizabeth Learning Center
Cudahy, California

Sample Location		Residential Soil Screening Level (April 2019)[a]			SB-01	SB-01	SB-02	SB-02	SB-3	SB-3	SB-04	SB-04	SB-5	SB-5	SB-06	SB-06	SB-06	SB-06	SB-06	SB-7	SB-7	SB-8	SB-8	SB-8	SB-9	SB-9	SB-10	SB-10	SB-10	SB-10A
Sample ID					SB-01-0.5	SB-01-3	SB-02-0.8	SB-02-3	SB-3-0.8	SB-3-3	SB-04-0.8	SB-04-3	SB-5-1.1	SB-5-3	SB-06-1.3	SB-06-1.3-DUP	SB-06-1.8	SB-06-3	SB-06-3-DUP	SB-7-1.2	SB-7-3	SB-8-1.1	SB-8-3	SB-8-3-DUP	SB-9-1.2	SB-9-3	SB-10-1.3	SB-10-1.8	SB-10-3	SB-10A-1.3
Sample Depth (feet bgs):					0-0.5	2.5-3	0.3-0.8	2.5-3	0.3-0.8	2.5-3	0.3-0.8	2.5-3	0.6-1.1	2.5-3	0.8-1.3	0.8-1.3	1.3-1.8	2.5-3	2.5-3	0.7-1.2	2.5-3	0.6-1.1	2.5-3	2.5-3	0.7-1.2	2.5-3	0.8-1.3	1.3-1.8	2.5-3	0.8-1.3
Sample Date:			STLC	TCLP	6/12/2019	6/12/2019	6/12/2019	6/12/2019	6/12/2019	6/12/2019	6/13/2019	6/13/2019	6/11/2019	6/11/2019	6/12/2019	6/12/2019	6/12/2019	6/12/2019	6/12/2019	6/11/2019	6/11/2019	6/11/2019	6/11/2019	6/11/2019	6/11/2019	6/11/2019	6/13/2019	6/13/2019	6/13/2019	7/8/2019
Metals (TTLC, USEPA Method 6010B/7471A)																														
Antimony (6010B)	mg/kg	31	150		< 2.0	< 2.0	< 2.0	< 2.0	--	--	--	--	--	--	< 2.0	< 2.0	--	< 2.0	< 2.0	--	--	< 2.0	< 2.0	--	--	--	--	--	--	--
Arsenic (6010B)	mg/kg	12[1]	50	100	5.8	< 1.0	1.8	< 1.0	--	--	--	--	--	--	30	44	--	5.0	4.2	--	--	4.3	< 1.0	--	--	--	--	--	--	--
Arsenic (6020)	mg/kg	12 - 19.6 [1]	50	100	6.3	< 1.0	2.6	< 1.0	--	--	--	--	--	--	32	37	24	6.3	5.1	--	--	3.2	1.5	--	--	--	--	--	--	--
Barium (6010B)	mg/kg	15,000	1,000	2,000	63	57	58	30	--	--	--	--	--	--	49	59	--	40	50	--	--	110	60	--	--	--	--	--	--	--
Beryllium (6010B)	mg/kg	16	7.5		< 1.0	< 1.0	< 1.0	< 1.0	--	--	--	--	--	--	< 1.0	< 1.0	--	< 1.0	< 1.0	--	--	< 1.0	< 1.0	--	--	--	--	--	--	--
Cadmium (6010B)	mg/kg	71	10	20	< 1.0	< 1.0	< 1.0	< 1.0	--	--	--	--	--	--	< 1.0	< 1.0	--	< 1.0	< 1.0	--	--	< 1.0	< 1.0	--	--	--	--	--	--	--
Chromium (6010B)	mg/kg	120,000	50	100	13	8.2	7.6	4.7	--	--	--	--	--	--	7.1	8.1	--	4.7	5.7	--	--	21	8.3	--	--	--	--	--	--	--
Cobalt (6010B)	mg/kg	23	800	--	5.9	5.8	4.9	3.1	--	--	--	--	--	--	4.7	5.2	--	3.8	4.7	--	--	9.9	5.6	--	--	--	--	--	--	--
Copper (6010B)	mg/kg	3,100	250	--	23	6.2	8.2	3.4	--	--	--	--	--	--	5.7	7.5	--	3.6	4.4	--	--	16	7.0	--	--	--	--	--	--	--
Lead (6010B)	mg/kg	80[2]	50	100	33	< 1.0	12	< 1.0	5.7	3.7	5.1	9.0	21	< 1.0	3.9	9.8	--	< 1.0	< 1.0	9.9	17	9.7	7.3	--	31	2.4	240	82	< 1.0	24
Mercury (7471A)	mg/kg	11	2	4	< 0.10	< 0.10	0.29	< 0.10	--	--	--	--	--	--	1.2	< 0.10	--	0.76	< 0.10	--	--	< 0.10	< 0.10	--	--	--	--	--	--	--
Molybdenum (6010B)	mg/kg	390	3,500	--	< 1.0	< 1.0	< 1.0	< 1.0	--	--	--	--	--	--	< 1.0	< 1.0	--	< 1.0	< 1.0	--	--	< 1.0	< 1.0	--	--	--	--	--	--	--
Nickel (6010B)	mg/kg	820	200	--	10	5.4	4.7	2.5	--	--	--	--	--	--	4.3	5.6	--	3.2	4.0	--	--	16	5.7	--	--	--	--	--	--	--
Selenium (6010B)	mg/kg	390	10	20	< 1.0	< 1.0	< 1.0	< 1.0	--	--	--	--	--	--	< 1.0	< 1.0	--	< 1.0	< 1.0	--	--	< 1.0	< 1.0	--	--	--	--	--	--	--
Silver (6010B)	mg/kg	390	50	100	< 1.0	< 1.0	< 1.0	< 1.0	--	--	--	--	--	--	< 1.0	< 1.0	--	< 1.0	< 1.0	--	--	< 1.0	< 1.0	--	--	--	--	--	--	--
Thallium (6010B)	mg/kg	0.78	70		< 1.0	< 1.0	< 1.0	< 1.0	--	--	--	--	--	--	< 1.0	< 1.0	--	< 1.0	< 1.0	--	--	< 1.0	< 1.0	--	--	--	--	--	--	--
Vanadium (6010B)	mg/kg	390	240	--	24	23	21	17	--	--	--	--	--	--	18	19	--	14	17	--	--	42	23	--	--	--	--	--	--	--
Zinc (6010B)	mg/kg	23,000	2,500	--	52	28	39	14	--	--	--	--	--	--	35	41	--	18	22	--	--	45	43	--	--	--	--	--	--	--
Organchlorine Pesticides [OCPs] (USEPA Method 8081A)																														
		Discrete Sample Screening Level[a]	Composited Sample Screening Level [2][b]																												
alpha-BHC	ug/kg	86	--	--	--	--	< 1.0	< 1.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
gamma-BHC	ug/kg	570	250, 160, 125	--	--	--	< 1.0	< 1.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
beta-BHC	ug/kg	300	--	--	--	--	< 1.0	< 1.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
delta-BHC	ug/kg	--	--	--	--	--	< 1.0	< 1.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Heptachlor	ug/kg	130[2]	60, 40, 20	--	--	--	< 1.0	< 1.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Aldrin	ug/kg	33[2]	16, 10, 5	140	--	--	< 1.0	< 1.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Heptachlor epoxide	ug/kg	70	--	4,700	160	--	< 1.0	< 1.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
gamma-Chlordane[d]	ug/kg	1,700, 430[2]	215, 140, 105	--	--	--	< 1.0	< 1.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
alpha-Chlordane[d]	ug/kg	1,700, 430[2]	215, 140, 105	--	--	--	< 1.0	< 1.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Endosulfan I	ug/kg	450,000	--	--	--	--	< 1.0	< 1.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4,4'-DDE	ug/kg	1,600[2]	800, 530, 400	1,000	--	--	--	< 2.0	< 2.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dieldrin	ug/kg	35[2]	16, 10, 5	8,000	--	--	--	< 2.0	< 2.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Endrin	ug/kg	19,000	--	200	400	--	--	< 2.0	< 2.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 2.0	--	--	--
4,4'-DDD	ug/kg	2,300[2]	1150, 760, 575	1,000	--	--	--	< 2.0	< 2.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Endosulfan II	ug/kg	--	--	--	--	--	--	< 2.0	< 2.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4,4'-DDT	ug/kg	1,600[2]	800, 530, 400	1,000	--	--	--	< 2.0	< 2.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Endrin aldehyde	ug/kg	--	--	--	--	--	--	< 2.0	< 2.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Endosulfan sulfate	ug/kg	380,000	--	--	--	--	--	< 2.0	< 2.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Methoxychlor	ug/kg	320,000	--	100,000	200,000	--	--	< 5.0	< 5.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Endrin ketone	ug/kg	--	--	--	--	--	--	< 2.0	< 2.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Toxaphene	ug/kg	450	--	5,000	10,000	--	--	< 50	< 50	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chlordane (tech)[d]	ug/kg	1,700, 430[2]	215, 140, 105	2500	600	--	--	< 8.5	< 8.5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Extractions																														
arsenic, STLC	mg/l	--	--	5	5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
arsenic, TCLP	mg/l	--	--	5	5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
lead, STLC	mg/l	--	--	5	5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
lead, TCLP	mg/l	--	--	5	5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chlordane, TCLP	mg/l	--	--	0.25	0.03	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

TABLE 2
SOIL ANALYTICAL RESULTS
PEA-E SITE INVESTIGATION
Elizabeth Learning Center
Cudahy, California

Sample Location		Residential Soil Screening Level (April 2019)[a]			SB-01	SB-01	SB-02	SB-02	SB-3	SB-3	SB-04	SB-04	SB-5	SB-5	SB-06	SB-06	SB-06	SB-06	SB-06	SB-7	SB-7	SB-8	SB-8	SB-8	SB-9	SB-9	SB-10	SB-10	SB-10	SB-10A
Sample ID					SB-01-0.5	SB-01-3	SB-02-0.8	SB-02-3	SB-3-0.8	SB-3-3	SB-04-0.8	SB-04-3	SB-5-1.1	SB-5-3	SB-06-1.3	SB-06-1.3-DUP	SB-06-1.8	SB-06-3	SB-06-3-DUP	SB-7-1.2	SB-7-3	SB-8-1.1	SB-8-3	SB-8-3-DUP	SB-9-1.2	SB-9-3	SB-10-1.3	SB-10-1.8	SB-10-3	SB-10A-1.3
Sample Depth (feet bgs):					0-0.5	2.5-3	0.3-0.8	2.5-3	0.3-0.8	2.5-3	0.3-0.8	2.5-3	0.6-1.1	2.5-3	0.8-1.3	0.8-1.3	1.3-1.8	2.5-3	2.5-3	0.7-1.2	2.5-3	0.6-1.1	2.5-3	2.5-3	0.7-1.2	2.5-3	0.8-1.3	1.3-1.8	2.5-3	0.8-1.3
Sample Date:			STLC	TCLP	6/12/2019	6/12/2019	6/12/2019	6/12/2019	6/12/2019	6/12/2019	6/13/2019	6/13/2019	6/11/2019	6/11/2019	6/12/2019	6/12/2019	6/12/2019	6/12/2019	6/12/2019	6/11/2019	6/11/2019	6/11/2019	6/11/2019	6/11/2019	6/11/2019	6/11/2019	6/13/2019	6/13/2019	6/13/2019	7/8/2019
Polychlorinated Biphenyls [PCBs] (USEPA Method 8082)																														
**Aroclor 1260*	ug/kg	240	--	--	< 16	< 16	< 16	< 16	--	--	--	--	--	--	< 16	43	--	< 16	< 16	--	--	--	--	--	--	--	--	--	--	--
All Other Compounds Non-Detect	ug/kg	Varies	--	--	ND	ND	ND	ND	--	--	--	--	--	--	ND	ND	--	ND	ND	--	--	--	--	--	--	--	--	--	--	--
Volatile Organic Compounds [VOCs] (USEPA Method 8260B/5035)																														
All Compounds Non-Detect	ug/kg	Varies	--	--	--	--	ND	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total Petroleum Hydrocarbons [TPH] (8015M)																														
C4-C12	mg/kg	100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C13-C22	mg/kg	100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C23-C40	mg/kg	100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons [PAHs] (USEPA Method 8270SIM)																														
2-Methyl--phthalene	ug/kg	240,000	--	--	--	--	< 5.0	< 5.0	--	--	--	--	--	--	< 5.0	< 50	--	< 5.0	< 5.0	--	--	--	--	--	--	--	--	--	--	--
Ace--phthene	ug/kg	3,600,000	--	--	--	--	< 5.0	< 5.0	--	--	--	--	--	--	< 5.0	< 50	--	< 5.0	< 5.0	--	--	--	--	--	--	--	--	--	--	--
Ace--phthylene	ug/kg	--	--	--	--	--	< 5.0	< 5.0	--	--	--	--	--	--	< 5.0	< 50	--	< 5.0	< 5.0	--	--	--	--	--	--	--	--	--	--	--
Anthracene	ug/kg	17,000,000	--	--	--	--	< 5.0	< 5.0	--	--	--	--	--	--	< 5.0	< 50	--	< 5.0	< 5.0	--	--	--	--	--	--	--	--	--	--	--
Benzo(a)anthracene	ug/kg	1,100	--	--	--	--	< 5.0	< 5.0	--	--	--	--	--	--	5.3	< 50	--	< 5.0	< 5.0	--	--	--	--	--	--	--	--	--	--	--
Benzo(a)pyrene	ug/kg	110	--	--	--	--	< 5.0	< 5.0	--	--	--	--	--	--	7.0	< 50	--	< 5.0	< 5.0	--	--	--	--	--	--	--	--	--	--	--
Benzo(b)fluoranthene	ug/kg	1,100	--	--	--	--	< 5.0	< 5.0	--	--	--	--	--	--	8.8	< 50	--	< 5.0	< 5.0	--	--	--	--	--	--	--	--	--	--	--
Benzo(g,h,i)perylene	ug/kg	--	--	--	--	--	< 5.0	< 5.0	--	--	--	--	--	--	8.9	74	--	< 5.0	< 5.0	--	--	--	--	--	--	--	--	--	--	--
Benzo(k)fluoranthene	ug/kg	11,000	--	--	--	--	< 5.0	< 5.0	--	--	--	--	--	--	< 5.0	< 50	--	< 5.0	< 5.0	--	--	--	--	--	--	--	--	--	--	--
Chrysene	ug/kg	110,000	--	--	--	--	< 5.0	< 5.0	--	--	--	--	--	--	7.3	< 50	--	< 5.0	< 5.0	--	--	--	--	--	--	--	--	--	--	--
Dibenzo(a,h)anthracene	ug/kg	28	--	--	--	--	< 5.0	< 5.0	--	--	--	--	--	--	< 5.0	< 50	--	< 5.0	< 5.0	--	--	--	--	--	--	--	--	--	--	--
Fluoranthene	ug/kg	2,400,000	--	--	--	--	11	< 5.0	--	--	--	--	--	--	11	< 50	--	< 5.0	< 5.0	--	--	--	--	--	--	--	--	--	--	--
Fluorene	ug/kg	2,300,000	--	--	--	--	< 5.0	< 5.0	--	--	--	--	--	--	< 5.0	< 50	--	< 5.0	< 5.0	--	--	--	--	--	--	--	--	--	--	--
Indeno(1,2,3-c,d)pyrene	ug/kg	1,100	--	--	--	--	< 5.0	< 5.0	--	--	--	--	--	--	5.8	< 50	--	< 5.0	< 5.0	--	--	--	--	--	--	--	--	--	--	--
Naphthalene	ug/kg	2,000	--	--	--	--	< 5.0	< 5.0	--	--	--	--	--	--	< 5.0	< 50	--	< 5.0	< 5.0	--	--	--	--	--	--	--	--	--	--	--
Phenanthrene	ug/kg	--	--	--	--	--	< 5.0	< 5.0	--	--	--	--	--	--	6.8	< 50	--	< 5.0	< 5.0	--	--	--	--	--	--	--	--	--	--	--
Pyrene	ug/kg	1,800,000	--	--	--	--	13	< 5.0	--	--	--	--	--	--	14	56	--	< 5.0	< 5.0	--	--	--	--	--	--	--	--	--	--	--
Benzo(a)pyrene Equivalence[c]	ug/kg	900[3]	--	--	--	--	12	NA	--	--	--	--	--	--	15	123	--	NA	NA	--	--	--	--	--	--	--	--	--	--	--
Asbestos (qualitative)																														
Asbestos (qualitative)	--	--	--	--	ND	ND	ND	ND	--	--	--	--	--	--	ND	--	--	ND	--	--	--	ND	ND	ND	--	--	--	--	--	--

Notes:
bgs below ground surface
-- Not available
NA Not applicable
ND Not detected above the reporting limit
mg/kg milligrams per kilogram
ug/kg micrograms per kilogram
mg/l milligrams per liter
TTLC Total Threshold Limit Concentration
STLC Soluble Threshold Limit Concentration
TCLP Toxicity Leaching Characteristic Procedure
BHC benzene hexachloride
DDD dichlorodiphenyldichloroethane
DDE dichlorodiphenyldichloroethylene
DDT dichlorodiphenyltrichloroethane

[1] California background concentration range for arsenic.
[2] Screening value is from DTSC Interim Guidance, Evaulation of School Sites with Potential Soil Contamination as a Result of Lead from Lead-Based Paint, Organochlorine Pesticides from Termiticides, and Polychlorinated Biphenyls from Electrical Transformers, June 9 2006.
[3] Carcinogenic PAH background concentration for Southern California (Environ, 2002).
a Value is the lower of the California Department of Toxic Substance Control Note 3 Screening Levels (CA DTSC-SLs), April 2019, or EPA Regional Screening Levels (RSLs), April 2019, for residential soil.
b Screening value is listed as x,y,z where x=1:2 composite ratio, y=1:3 composite ratio, and z=1:4 composite ratio
c The Benzo(a)pyrene Equivalence (B[a]P-TE) concentration is calculated for each sample by multiplying each PAH chemical concentration by its Toxic Equivalency Factor. The Toxic Equivalency Factors are summed to obtain the Benzo(a)pyrene Equivalence concentration for the sample. (Nisbet and LaGoy, 1992). If the sample concentration was below the laboratory reporting limit, the laboratory reporting limit was used for the calculation.
d CA DTSC-SL for residential soil for chlordane was updated to 1,700 ug/kg in April, 2019. Step-out sampling was performed based on the chlordane screening level from [2]. However, results from sampling were compared against this updated 1,700 ug/kg screening level.

Results highlighted in yellow exceed their respective screening values.
Results highlighted in blue exceed their respective hazardous waste criteria.

TABLE 2
SOIL ANALYTICAL RESULTS
PEA-E SITE INVESTIGATION
Elizabeth Learning Center
Cudahy, California
(Page 3 of 36)

Sample Location		Residential Soil Screening Level (April 2019)[a]	STLC	TCLP	SB-10A	SB-10A	SB-10A	SB-10A	SB-10A	SB-10B	SB-10B	SB-10B	SB-10C	SB-10C	SB-10C	SB-11	SB-11	SB-12	SB-12	SB-12	SB-12	SB-13	SB-13	SB-14	SB-14	SB-15	SB-15	SB-16
Sample ID					SB-10A-1.3-DUP	SB-10A-1.8	SB-10A-1.8-DUP	SB-10A-3	SB-10A-3-DUP	SB-10B-1.3	SB-10B-1.8	SB-10B-3	SB-10C-1.3	SB-10C-1.8	SB-10C-3	SB-11-1.2	SB-11-3	SB-12-1.2	SB-12-1.2-DUP	SB-12-3	SB-12-3-DUP	SB-13-1.3	SB-13-3	SB-14-1.2	SB-14-3	SB-15-0.8	SB-15-3	SB-16-0.5
Sample Depth (feet bgs):					0.8-1.3	1.3-1.8	1.3-1.8	2.5-3	2.5-3	0.8-1.3	1.3-1.8	2.5-3	0.8-1.3	1.3-1.8	2.5-3	0.7-1.2	2.5-3	0.7-1.2	0.7-1.2	2.5-3	2.5-3	0.8-1.3	2.5-3	0.7-1.2	2.5-3	0.3-0.8	2.5-3	0-0.5
Sample Date:					7/8/2019	7/8/2019	7/8/2019	7/8/2019	7/8/2019	7/8/2019	7/8/2019	7/8/2019	7/8/2019	7/8/2019	7/8/2019	6/11/2019	6/11/2019	6/13/2019	6/13/2019	6/13/2019	6/13/2019	6/11/2019	6/11/2019	6/11/2019	6/11/2019	6/11/2019	6/11/2019	6/11/2019
Metals (TTLC, USEPA Method 6010B/7471A)																												
Antimony (6010B)	mg/kg	31	150		--	--	--	--	--	--	--	--	--	--	--	< 2.0	< 2.0	--	--	--	--	--	--	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Arsenic (6010B)	mg/kg	12[1]	50	100	--	--	--	--	--	--	--	--	--	--	--	3.2	1.2	--	--	--	--	--	--	4.4	1.7	1.7	1.3	2.6
Arsenic (6020)	mg/kg	12 - 19.6 [1]	50	100	--	--	--	--	--	--	--	--	--	--	--	4.9	1.2	--	--	--	--	--	--	6.0	3.6	3.0	2.8	4.1
Barium (6010B)	mg/kg	15,000	1,000	2,000	--	--	--	--	--	--	--	--	--	--	--	100	86	--	--	--	--	--	--	150	97	63	79	83
Beryllium (6010B)	mg/kg	16	7.5		--	--	--	--	--	--	--	--	--	--	--	< 1.0	< 1.0	--	--	--	--	--	--	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Cadmium (6010B)	mg/kg	71	10	20	--	--	--	--	--	--	--	--	--	--	--	< 1.0	< 1.0	--	--	--	--	--	--	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chromium (6010B)	mg/kg	120,000	50	100	--	--	--	--	--	--	--	--	--	--	--	16	8.5	--	--	--	--	--	--	40	16	5.4	11	13
Cobalt (6010B)	mg/kg	23	800	--	--	--	--	--	--	--	--	--	--	--	--	8.1	5.3	--	--	--	--	--	--	11	7.8	4.0	6.4	6.3
Copper (6010B)	mg/kg	3,100	250	--	--	--	--	--	--	--	--	--	--	--	--	16	8.3	--	--	--	--	--	--	17	16	9.7	12	17
Lead (6010B)	mg/kg	80[2]	50	100	27	31	31	1.4	< 1.0	25	32	< 1.0	35	63	4.9	16	13	28	13	1.3	7.8	49	< 1.0	6.1	5.9	< 1.0	9.8	21
Mercury (7471A)	mg/kg	11	2	4	--	--	--	--	--	--	--	--	--	--	--	< 0.10	< 0.10	--	--	--	--	--	--	< 0.10	< 0.10	< 0.10	< 0.10	0.10
Molybdenum (6010B)	mg/kg	390	3,500	--	--	--	--	--	--	--	--	--	--	--	--	< 1.0	< 1.0	--	--	--	--	--	--	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Nickel (6010B)	mg/kg	820	200	--	--	--	--	--	--	--	--	--	--	--	--	13	5.9	--	--	--	--	--	--	20	13	4.3	7.1	9.8
Selenium (6010B)	mg/kg	390	10	20	--	--	--	--	--	--	--	--	--	--	--	< 1.0	< 1.0	--	--	--	--	--	--	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Silver (6010B)	mg/kg	390	50	100	--	--	--	--	--	--	--	--	--	--	--	< 1.0	< 1.0	--	--	--	--	--	--	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Thallium (6010B)	mg/kg	0.78	70		--	--	--	--	--	--	--	--	--	--	--	< 1.0	< 1.0	--	--	--	--	--	--	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Vanadium (6010B)	mg/kg	390	240	--	--	--	--	--	--	--	--	--	--	--	--	32	22	--	--	--	--	--	--	49	30	14	25	27
Zinc (6010B)	mg/kg	23,000	2,500	--	--	--	--	--	--	--	--	--	--	--	--	44	62	--	--	--	--	--	--	90	45	20	46	140
Organchlorine Pesticides [OCPs] (USEPA Method 8081A)																												
		Discrete Sample Screening Level[a]	Composited Sample Screening Level [2][b]																									
alpha-BHC	ug/kg	86	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1.0
gamma-BHC	ug/kg	570	250, 160, 125	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1.0
beta-BHC	ug/kg	300	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1.0
delta-BHC	ug/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1.0
Heptachlor	ug/kg	130[2]	60, 40, 20	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1.0
Aldrin	ug/kg	33[2]	16, 10, 5	140	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1.0
Heptachlor epoxide	ug/kg	70	--	4,700	160	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1.0
gamma-Chlordane[d]	ug/kg	1,700, 430[2]	215, 140, 105	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1.5
alpha-Chlordane[d]	ug/kg	1,700, 430[2]	215, 140, 105	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1.4
Endosulfan I	ug/kg	450,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1.0
4,4'-DDE	ug/kg	1,600[2]	800, 530, 400	1,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 2.0
Dieldrin	ug/kg	35[2]	16, 10, 5	8,000	--	--	--	--	--	--	--	--	--	--	--	--	--	19	--	--	--	--	--	--	--	--	--	< 2.0
Endrin	ug/kg	19,000	--	200	400	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 2.0
4,4'-DDD	ug/kg	2,300[2]	1150, 760, 575	1,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 2.0
Endosulfan II	ug/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 2.0
4,4'-DDT	ug/kg	1,600[2]	800, 530, 400	1,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 2.0
Endrin aldehyde	ug/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 2.0
Endosulfan sulfate	ug/kg	380,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 2.0
Methoxychlor	ug/kg	320,000	--	100,000	200,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 5.0
Endrin ketone	ug/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 2.0
Toxaphene	ug/kg	450	--	5,000	10,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 50
Chlordane (tech)[d]	ug/kg	1,700, 430[2]	215, 140, 105	2500	600	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	21
Extractions																												
arsenic, STLC	mg/l	--	--	5	5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
arsenic, TCLP	mg/l	--	--	5	5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
lead, STLC	mg/l	--	--	5	5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
lead, TCLP	mg/l	--	--	5	5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chlordane, TCLP	mg/l	--	--	0.25	0.03	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

TABLE 2
SOIL ANALYTICAL RESULTS
PEA-E SITE INVESTIGATION
Elizabeth Learning Center
Cudahy, California
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Sample Location		Residential Soil Screening Level (April 2019)[a]	STLC	TCLP	SB-10A	SB-10A	SB-10A	SB-10A	SB-10A	SB-10B	SB-10B	SB-10B	SB-10C	SB-10C	SB-10C	SB-11	SB-11	SB-12	SB-12	SB-12	SB-12	SB-13	SB-13	SB-14	SB-14	SB-15	SB-15	SB-16
Sample ID					SB-10A-1.3-DUP	SB-10A-1.8	SB-10A-1.8-DUP	SB-10A-3	SB-10A-3-DUP	SB-10B-1.3	SB-10B-1.8	SB-10B-3	SB-10C-1.3	SB-10C-1.8	SB-10C-3	SB-11-1.2	SB-11-3	SB-12-1.2	SB-12-1.2-DUP	SB-12-3	SB-12-3-DUP	SB-13-1.3	SB-13-3	SB-14-1.2	SB-14-3	SB-15-0.8	SB-15-3	SB-16-0.5
Sample Depth (feet bgs):					0.8-1.3	1.3-1.8	1.3-1.8	2.5-3	2.5-3	0.8-1.3	1.3-1.8	2.5-3	0.8-1.3	1.3-1.8	2.5-3	0.7-1.2	2.5-3	0.7-1.2	0.7-1.2	2.5-3	2.5-3	0.8-1.3	2.5-3	0.7-1.2	2.5-3	0.3-0.8	2.5-3	0-0.5
Sample Date:					7/8/2019	7/8/2019	7/8/2019	7/8/2019	7/8/2019	7/8/2019	7/8/2019	7/8/2019	7/8/2019	7/8/2019	7/8/2019	6/11/2019	6/11/2019	6/13/2019	6/13/2019	6/13/2019	6/13/2019	6/11/2019	6/11/2019	6/11/2019	6/11/2019	6/11/2019	6/11/2019	6/11/2019
Polychlorinated Biphenyls [PCBs] (USEPA Method 8082)																												
*Aroclor 1260	ug/kg	240	--	--	--	--	--	--	--	--	--	--	--	--	--	< 16	< 16	--	--	--	--	--	--	< 16	< 16	< 16	< 16	--
All Other Compounds Non-Detect	ug/kg	Varies	--	--	--	--	--	--	--	--	--	--	--	--	--	ND	ND	--	--	--	--	--	--	ND	ND	ND	ND	--
Volatile Organic Compounds [VOCs] (USEPA Method 8260B/5035)																												
All Compounds Non-Detect	ug/kg	Varies	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total Petroleum Hydrocarbons [TPH] (8015M)																												
C4-C12	mg/kg	100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C13-C22	mg/kg	100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C23-C40	mg/kg	100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons [PAHs] (USEPA Method 8270SIM)																												
2-Methyl--phthalene	ug/kg	240,000	--	--	--	--	--	--	--	--	--	--	--	--	--	< 5.0	< 10	--	--	--	--	--	--	< 25	< 25	--	--	--
Ace--phthene	ug/kg	3,600,000	--	--	--	--	--	--	--	--	--	--	--	--	--	< 5.0	< 10	--	--	--	--	--	--	< 25	55	--	--	--
Ace--phthylene	ug/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 5.0	< 10	--	--	--	--	--	--	< 25	< 25	--	--	--
Anthracene	ug/kg	17,000,000	--	--	--	--	--	--	--	--	--	--	--	--	--	< 5.0	< 10	--	--	--	--	--	--	< 25	160	--	--	--
Benzo(a)anthracene	ug/kg	1,100	--	--	--	--	--	--	--	--	--	--	--	--	--	6.5	< 10	--	--	--	--	--	--	< 25	400	--	--	--
Benzo(a)pyrene	ug/kg	110	--	--	--	--	--	--	--	--	--	--	--	--	--	6.7	< 10	--	--	--	--	--	--	< 25	280	--	--	--
Benzo(b)fluoranthene	ug/kg	1,100	--	--	--	--	--	--	--	--	--	--	--	--	--	9.6	< 10	--	--	--	--	--	--	< 25	380	--	--	--
Benzo(g,h,i)perylene	ug/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--	6.6	10	--	--	--	--	--	--	< 25	190	--	--	--
Benzo(k)fluoranthene	ug/kg	11,000	--	--	--	--	--	--	--	--	--	--	--	--	--	< 5.0	< 10	--	--	--	--	--	--	< 25	160	--	--	--
Chrysene	ug/kg	110,000	--	--	--	--	--	--	--	--	--	--	--	--	--	6.6	< 10	--	--	--	--	--	--	< 25	340	--	--	--
Dibenzo(a,h)anthracene	ug/kg	28	--	--	--	--	--	--	--	--	--	--	--	--	--	< 5.0	< 10	--	--	--	--	--	--	< 25	60	--	--	--
Fluoranthene	ug/kg	2,400,000	--	--	--	--	--	--	--	--	--	--	--	--	--	12	< 10	--	--	--	--	--	--	< 25	740	--	--	--
Fluorene	ug/kg	2,300,000	--	--	--	--	--	--	--	--	--	--	--	--	--	< 5.0	< 10	--	--	--	--	--	--	< 25	45	--	--	--
Indeno(1,2,3-c,d)pyrene	ug/kg	1,100	--	--	--	--	--	--	--	--	--	--	--	--	--	5.2	< 10	--	--	--	--	--	--	< 25	170	--	--	--
Naphthalene	ug/kg	2,000	--	--	--	--	--	--	--	--	--	--	--	--	--	< 5.0	< 10	--	--	--	--	--	--	< 25	< 25	--	--	--
Phenanthrene	ug/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 5.0	< 10	--	--	--	--	--	--	< 25	620	--	--	--
Pyrene	ug/kg	1,800,000	--	--	--	--	--	--	--	--	--	--	--	--	--	11	< 10	--	--	--	--	--	--	< 25	600	--	--	--
Benzo(a)pyrene Equivalence[c]	ug/kg	900[3]	--	--	--	--	--	--	--	--	--	--	--	--	--	15	25	--	--	--	--	--	--	NA	457	--	--	--
Asbestos (qualitative)																												
Asbestos (qualitative)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	ND	ND	--	--	--	--	--	--	ND	ND	--	--	--

Notes:
bgs below ground surface
-- Not available
NA Not applicable
ND Not detected above the reporting limit
mg/kg milligrams per kilogram
ug/kg micrograms per kilogram
mg/l milligrams per liter
TTLC Total Threshold Limit Concentration
STLC Soluble Threshold Limit Concentration
TCLP Toxicity Leaching Characteristic Procedure
BHC benzene hexachloride
DDD dichlorodiphenyldichloroethane
DDE dichlorodiphenyldichloroethylene
DDT dichlorodiphenyltrichloroethane

[1] California background concentration range for arsenic.
[2] Screening value is from DTSC Interim Guidance, Evaulation of School Sites with Potential Soil Contamination as a Result of Lead from Lead-Based Paint, Organochlorine Pesticides from Termiticides, and Polychlorinated Biphenyls from Electrical Transformers, June 9 2006.
[3] Carcinogenic PAH background concentration for Southern California (Environ, 2002).
a Value is the lower of the California Department of Toxic Substance Control Note 3 Screening Levels (CA DTSC-SLs), April 2019, or EPA Regional Screening Levels (RSLs), April 2019, for residential soil.
b Screening value is listed as x,y,z where x=1:2 composite ratio, y=1:3 composite ratio, and z=1:4 composite ratio
c The Benzo(a)pyrene Equivalence (B[a]P-TE) concentration is calculated for each sample by multiplying each PAH chemical concentration by its Toxic Equivalency Factor. The Toxic Equivalency Factors are summed to obtain the Benzo(a)pyrene Equivalence concentration for the sample. (Nisbet and LaGoy, 1992). If the sample concentration was below the laboratory reporting limit, the laboratory reporting limit was used for the calculation.
d CA DTSC-SL for residential soil for chlordane was updated to 1,700 ug/kg in April, 2019. Step-out sampling was performed based on the chlordane screening level from [2]. However, results from sampling were compared against this updated 1,700 ug/kg screening level.

Results highlighted in yellow exceed their respective screening values.
Results highlighted in blue exceed their respective hazardous waste criteria.

TABLE 2
SOIL ANALYTICAL RESULTS
PEA-E SITE INVESTIGATION
Elizabeth Learning Center
Cudahy, California
(Page 5 of 36)

Sample Location		Residential Soil Screening Level (April 2019)[a]			SB-16	SB-16	SB-17	SB-17	SB-18	SB-18	SB-18	SB-19	SB-19	SB-20	SB-20	SB-21	SB-21	SB-22	SB-22	SB-22	SB-22A	SB-22A	SB-22A	SB-22A	SB-22B	SB-22B	SB-22B	SB-22B	SB-22C
Sample ID					SB-16-3	SB-16-3-DUP	SB-17-0.8	SB-17-3	SB-18-0.8	SB-18-3	SB-18-3-DUP	SB-19-1	SB-19-3	SB-20 -1	SB-20-3	SB-21-1	SB-21-3	SB-22-0.9	SB-22-1.6	SB-22-3	SB-22A-1	SB-22A-1-DUP	SB-22A-1.4	SB-22A-1.4-DUP	SB-22B-1	SB-22B-1-DUP	SB-22B-1.4	SB-22B-1.4-DUP	SB-22C-1
Sample Depth (feet bgs):					2.5-3	2.5-3	0.3-0.8	2.5-3	0.3-0.8	2.5-3	2.5-3	0.5-1	2.5-3	0.5-1	2.5-3	0.5-1	2.5-3	0.4-0.9	1.1-1.6	2.5-3	0.5-1	0.5-1	0.9-1.4	0.9-1.4	0.5-1	0.5-1	0.9-1.4	0.9-1.4	0.5-1
Sample Date:			STLC	TCLP	6/11/2019	6/11/2019	6/10/2019	6/10/2019	6/10/2019	6/10/2019	6/10/2019	6/10/2019	6/10/2019	6/10/2019	6/10/2019	6/10/2019	6/10/2019	6/10/2019	6/10/2019	6/10/2019	7/8/2019	7/8/2019	7/8/2019	7/8/2019	7/8/2019	7/8/2019	7/8/2019	7/8/2019	7/8/2019
Metals (TTLC, USEPA Method 6010B/7471A)																													
Antimony (6010B)	mg/kg	31	150		< 2.0	< 2.0	--	--	< 2.0	< 2.0	--	--	--	< 2.0	< 2.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Arsenic (6010B)	mg/kg	12[1]	50	100	< 1.0	< 1.0	--	--	3.3	< 1.0	--	--	--	1.9	11	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Arsenic (6020)	mg/kg	12 - 19.6 [1]	50	100	1.9	1.8	--	--	2.7	< 1.0	--	--	--	2.6	11	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Barium (6010B)	mg/kg	15,000	1,000	2,000	69	70	--	--	83	71	--	--	--	71	62	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Beryllium (6010B)	mg/kg	16	7.5		< 1.0	< 1.0	--	--	< 1.0	< 1.0	--	--	--	< 1.0	< 1.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Cadmium (6010B)	mg/kg	71	10	20	< 1.0	< 1.0	--	--	< 1.0	< 1.0	--	--	--	< 1.0	< 1.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chromium (6010B)	mg/kg	120,000	50	100	10	11	--	--	11	23	--	--	--	15	7.9	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Cobalt (6010B)	mg/kg	23	800	--	6.7	7.0	--	--	6.7	6.2	--	--	--	6.4	5.6	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Copper (6010B)	mg/kg	3,100	250	--	9.3	9.2	--	--	46	9.1	--	--	--	11	8.9	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Lead (6010B)	mg/kg	80[2]	50	100	2.2	< 1.0	27	42	49	11	--	2.7	6.6	11	8.8	9.7	7.1	140	12	1.4	69	54	38	21	25	54	5.7	8.2	1.1
Mercury (7471A)	mg/kg	11	2	4	< 0.10	0.90	--	--	0.12	< 0.10	--	--	--	< 0.10	< 0.10	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Molybdenum (6010B)	mg/kg	390	3,500	--	< 1.0	< 1.0	--	--	< 1.0	< 1.0	--	--	--	< 1.0	< 1.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Nickel (6010B)	mg/kg	820	200	--	7.2	7.3	--	--	9.7	13	--	--	--	8.6	5.8	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Selenium (6010B)	mg/kg	390	10	20	< 1.0	< 1.0	--	--	< 1.0	< 1.0	--	--	--	< 1.0	< 1.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Silver (6010B)	mg/kg	390	50	100	< 1.0	< 1.0	--	--	< 1.0	< 1.0	--	--	--	< 1.0	< 1.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Thallium (6010B)	mg/kg	0.78	70		< 1.0	< 1.0	--	--	< 1.0	< 1.0	--	--	--	< 1.0	< 1.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Vanadium (6010B)	mg/kg	390	240	--	27	29	--	--	24	21	--	--	--	23	19	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Zinc (6010B)	mg/kg	23,000	2,500	--	40	35	--	--	89	78	--	--	--	65	52	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Organochlorine Pesticides [OCPs] (USEPA Method 8081A)																													
		Discrete Sample Screening Level[a]	Composited Sample Screening Level [2][b]																										
alpha-BHC	ug/kg	86	--	--	--	< 1.0	< 1.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
gamma-BHC	ug/kg	570	250, 160, 125	--	--	< 1.0	< 1.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
beta-BHC	ug/kg	300	--	--	--	< 1.0	< 1.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
delta-BHC	ug/kg	--	--	--	--	< 1.0	< 1.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Heptachlor	ug/kg	130[2]	60, 40, 20	--	--	< 1.0	< 1.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Aldrin	ug/kg	33[2]	16, 10, 5	140	--	< 1.0	< 1.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Heptachlor epoxide	ug/kg	70	--	4,700	160	< 1.0	< 1.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
gamma-Chlordane[d]	ug/kg	1,700, 430[2]	215, 140, 105	--	--	< 1.0	< 1.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
alpha-Chlordane[d]	ug/kg	1,700, 430[2]	215, 140, 105	--	--	< 1.0	< 1.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Endosulfan I	ug/kg	450,000	--	--	--	< 1.0	< 1.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4,4'-DDE	ug/kg	1,600[2]	800, 530, 400	1,000	--	< 2.0	< 2.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dieldrin	ug/kg	35[2]	16, 10, 5	8,000	--	< 2.0	< 2.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Endrin	ug/kg	19,000	--	200	400	< 2.0	< 2.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4,4'-DDD	ug/kg	2,300[2]	1150, 760, 575	1,000	--	< 2.0	< 2.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Endosulfan II	ug/kg	--	--	--	--	< 2.0	< 2.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4,4'-DDT	ug/kg	1,600[2]	800, 530, 400	1,000	--	< 2.0	< 2.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Endrin aldehyde	ug/kg	--	--	--	--	< 2.0	< 2.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Endosulfan sulfate	ug/kg	380,000	--	--	--	< 2.0	< 2.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Methoxychlor	ug/kg	320,000	--	100,000	200,000	< 5.0	< 5.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Endrin ketone	ug/kg	--	--	--	--	< 2.0	< 2.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Toxaphene	ug/kg	450	--	5,000	10,000	< 50	< 50	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chlordane (tech)[d]	ug/kg	1,700, 430[2]	215, 140, 105	2500	600	< 8.5	< 8.5	--	--	--	--	--	--	--	--	--	38	--	530	39	--	310	560	13	10	27	330	< 8.5	27	36
Extractions																													
arsenic, STLC	mg/l	--	--	5	5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
arsenic, TCLP	mg/l	--	--	5	5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
lead, STLC	mg/l	--	--	5	5	--	--	--	--	--	--	--	--	--	--	--	--	--	8.1	--	--	--	--	--	--	--	--	--	--
lead, TCLP	mg/l	--	--	5	5	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.25	--	--	--	--	--	--	--	--	--	--
Chlordane, TCLP	mg/l	--	--	0.25	0.03	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

TABLE 2
SOIL ANALYTICAL RESULTS
PEA-E SITE INVESTIGATION
Elizabeth Learning Center
Cudahy, California
(Page 6 of 36)

Sample Location		Residential Soil Screening Level (April 2019)[a]			SB-16	SB-16	SB-17	SB-17	SB-18	SB-18	SB-18	SB-19	SB-19	SB-20	SB-20	SB-21	SB-21	SB-22	SB-22	SB-22	SB-22A	SB-22A	SB-22A	SB-22A	SB-22B	SB-22B	SB-22B	SB-22B	SB-22C
Sample ID					SB-16-3	SB-16-3-DUP	SB-17-0.8	SB-17-3	SB-18-0.8	SB-18-3	SB-18-3-DUP	SB-19-1	SB-19-3	SB-20 -1	SB-20-3	SB-21-1	SB-21-3	SB-22-0.9	SB-22-1.6	SB-22-3	SB-22A-1	SB-22A-1-DUP	SB-22A-1.4	SB-22A-1.4-DUP	SB-22B-1	SB-22B-1-DUP	SB-22B-1.4	SB-22B-1.4-DUP	SB-22C-1
Sample Depth (feet bgs):					2.5-3	2.5-3	0.3-0.8	2.5-3	0.3-0.8	2.5-3	2.5-3	0.5-1	2.5-3	0.5-1	2.5-3	0.5-1	2.5-3	0.4-0.9	1.1-1.6	2.5-3	0.5-1	0.5-1	0.9-1.4	0.9-1.4	0.5-1	0.5-1	0.9-1.4	0.9-1.4	0.5-1
Sample Date:			STLC	TCLP	6/11/2019	6/11/2019	6/10/2019	6/10/2019	6/10/2019	6/10/2019	6/10/2019	6/10/2019	6/10/2019	6/10/2019	6/10/2019	6/10/2019	6/10/2019	6/10/2019	6/10/2019	6/10/2019	6/10/2019	7/8/2019	7/8/2019	7/8/2019	7/8/2019	7/8/2019	7/8/2019	7/8/2019	7/8/2019	7/8/2019
Polychlorinated Biphenyls [PCBs] (USEPA Method 8082)																													
**Aroclor 1260*	ug/kg	240	--	--	--	--	< 16	< 16	--	--	--	< 16	< 16	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
All Other Compounds Non-Detect	ug/kg	Varies	--	--	--	--	ND	ND	--	--	--	ND	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Volatile Organic Compounds [VOCs] (USEPA Method 8260B/5035)																													
All Compounds Non-Detect	ug/kg	Varies	--	--	--	--	--	--	--	--	--	--	--	ND	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total Petroleum Hydrocarbons [TPH] (8015M)																													
C4-C12	mg/kg	100	--	--	--	--	--	--	--	--	--	--	--	< 1.0	< 1.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C13-C22	mg/kg	100	--	--	--	--	--	--	--	--	--	--	--	3.0	1.2	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C23-C40	mg/kg	100	--	--	--	--	--	--	--	--	--	--	--	78	30	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons [PAHs] (USEPA Method 8270SIM)																													
2-Methyl--phthalene	ug/kg	240,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Ace--phthene	ug/kg	3,600,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Ace--phthylene	ug/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Anthracene	ug/kg	17,000,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(a)anthracene	ug/kg	1,100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(a)pyrene	ug/kg	110	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(b)fluoranthene	ug/kg	1,100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(g,h,i)perylene	ug/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(k)fluoranthene	ug/kg	11,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chrysene	ug/kg	110,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dibenzo(a,h)anthracene	ug/kg	28	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Fluoranthene	ug/kg	2,400,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Fluorene	ug/kg	2,300,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Indeno(1,2,3-c,d)pyrene	ug/kg	1,100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Naphthalene	ug/kg	2,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Phenanthrene	ug/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Pyrene	ug/kg	1,800,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(a)pyrene Equivalence[c]	ug/kg	900[3]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Asbestos (qualitative)																													
Asbestos (qualitative)	--	--	--	--	--	--	--	--	ND	ND	ND	--	--	ND	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Notes:
bgs below ground surface
-- Not available
NA Not applicable
ND Not detected above the reporting limit
mg/kg milligrams per kilogram
ug/kg micrograms per kilogram
mg/l milligrams per liter
TTLC Total Threshold Limit Concentration
STLC Soluble Threshold Limit Concentration
TCLP Toxicity Leaching Characteristic Procedure
BHC benzene hexachloride
DDD dichlorodiphenyldichloroethane
DDE dichlorodiphenyldichloroethylene
DDT dichlorodiphenyltrichloroethane

[1] California background concentration range for arsenic.
[2] Screening value is from DTSC Interim Guidance, Evaulation of School Sites with Potential Soil Contamination as a Result of Lead from Lead-Based Paint, Organochlorine Pesticides from Termiticides, and Polychlorinated Biphenyls from Electrical Transformers, June 9 2006.
[3] Carcinogenic PAH background concentration for Southern California (Environ, 2002).
a Value is the lower of the California Department of Toxic Substance Control Note 3 Screening Levels (CA DTSC-SLs), April 2019, or EPA Regional Screening Levels (RSLs), April 2019, for residential soil.
b Screening value is listed as x,y,z where x=1:2 composite ratio, y=1:3 composite ratio, and z=1:4 composite ratio
c The Benzo(a)pyrene Equivalence (B[a]P-TE) concentration is calculated for each sample by multiplying each PAH chemical concentration by its Toxic Equivalency Factor. The Toxic Equivalency Factors are summed to obtain the Benzo(a)pyrene Equivalence concentration for the sample. (Nisbet and LaGoy, 1992). If the sample concentration was below the laboratory reporting limit, the laboratory reporting limit was used for the calculation.
d CA DTSC-SL for residential soil for chlordane was updated to 1,700 ug/kg in April, 2019. Step-out sampling was performed based on the chlordane screening level from [2]. However, results from sampling were compared against this updated 1,700 ug/kg screening level.

Results highlighted in yellow exceed their respective screening values.
Results highlighted in blue exceed their respective hazardous waste criteria.

TABLE 2
SOIL ANALYTICAL RESULTS
PEA-E SITE INVESTIGATION
Elizabeth Learning Center
Cudahy, California
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Sample Location		Residential Soil Screening Level (April 2019)[a]	STLC	TCLP	SB-22C	SB-22C	SB-22C	SB-22C	SB-23	SB-23	SB-24	SB-24	SB-24	SB-25	SB-25	SB-26	SB-26	SB-27	SB-27	SB-27	SB-28	SB-28	SB-29	SB-29	SB-29	SB-29A	SB-29A	SB-29A
Sample ID					SB-22C-1-DUP	SB-22C-1.4	SB-22C-1.4-DUP	SB-22C-3	SB-23-0.8	SB-23-3	SB-24-0.8	SB-24-0.8-DUP	SB-24-3	SB-25-0.8	SB-25-3	SB-26-0.8	SB-26-3	SB-27-0.9	SB-27-3	SB-27-3-DUP	SB-28-0.8	SB-28-3	SB-29-1	SB-29-1.4	SB-29-3	SB-29A-1	SB-29A-1-DUP	SB-29A-1.4
Sample Depth (feet bgs):					0.5-1	0.9-1.4	0.9-1.4	2.5-3	0.3-0.8	2.5-3	0.3-0.8	0.3-0.8	2.5-3	0.3-0.8	2.5-3	0.3-0.8	2.5-3	0.4-0.9	2.5-3	2.5-3	0.3-0.8	2.5-3	0.5-1	0.9-1.4	2.5-3	0.5-1	0.5-1	0.9-1.4
Sample Date:					7/8/2019	7/8/2019	7/8/2019	7/8/2019	6/10/2019	6/10/2019	6/10/2019	6/10/2019	6/10/2019	6/10/2019	6/10/2019	6/10/2019	6/10/2019	6/10/2019	6/10/2019	6/10/2019	6/10/2019	6/10/2019	6/10/2019	6/10/2019	6/10/2019	7/8/2019	7/8/2019	7/8/2019
Metals (TTLC, USEPA Method 6010B/7471A)																												
Antimony (6010B)	mg/kg	31	150		--	--	--	--	--	--	--	--	--	--	--	--	--	< 2.0	< 2.0	--	--	--	--	--	--	--	--	--	--
Arsenic (6010B)	mg/kg	12[1]	50	100	--	--	--	--	--	--	--	--	--	--	--	--	--	3.9	< 1.0	--	--	--	--	--	--	--	--	--	--
Arsenic (6020)	mg/kg	12 - 19.6 [1]	50	100	--	--	--	--	--	--	--	--	--	--	--	--	--	5.3	1.0	--	--	--	--	--	--	--	--	--	--
Barium (6010B)	mg/kg	15,000	1,000	2,000	--	--	--	--	--	--	--	--	--	--	--	--	--	95	57	--	--	--	--	--	--	--	--	--	--
Beryllium (6010B)	mg/kg	16	7.5		--	--	--	--	--	--	--	--	--	--	--	--	--	< 1.0	< 1.0	--	--	--	--	--	--	--	--	--	--
Cadmium (6010B)	mg/kg	71	10	20	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1.0	< 1.0	--	--	--	--	--	--	--	--	--	--
Chromium (6010B)	mg/kg	120,000	50	100	--	--	--	--	--	--	--	--	--	--	--	--	--	17	7.8	--	--	--	--	--	--	--	--	--	--
Cobalt (6010B)	mg/kg	23	800	--	--	--	--	--	--	--	--	--	--	--	--	--	--	7.7	5.6	--	--	--	--	--	--	--	--	--	--
Copper (6010B)	mg/kg	3,100	250	--	--	--	--	--	--	--	--	--	--	--	--	--	--	15	6.3	--	--	--	--	--	--	--	--	--	--
Lead (6010B)	mg/kg	80[2]	50	100	51	45	57	--	24	2.4	15	8.0	14	33	2.2	50	1.4	22	2.2	--	32	37	83	490	2.7	51	56	94
Mercury (7471A)	mg/kg	11	2	4	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.10	< 0.10	--	--	--	--	--	--	--	--	--	--
Molybdenum (6010B)	mg/kg	390	3,500	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1.0	< 1.0	--	--	--	--	--	--	--	--	--	--
Nickel (6010B)	mg/kg	820	200	--	--	--	--	--	--	--	--	--	--	--	--	--	--	12	5.3	--	--	--	--	--	--	--	--	--	--
Selenium (6010B)	mg/kg	390	10	20	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1.0	< 1.0	--	--	--	--	--	--	--	--	--	--
Silver (6010B)	mg/kg	390	50	100	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1.0	< 1.0	--	--	--	--	--	--	--	--	--	--
Thallium (6010B)	mg/kg	0.78	70		--	--	--	--	--	--	--	--	--	--	--	--	--	< 1.0	< 1.0	--	--	--	--	--	--	--	--	--	--
Vanadium (6010B)	mg/kg	390	240	--	--	--	--	--	--	--	--	--	--	--	--	--	--	32	20	--	--	--	--	--	--	--	--	--	--
Zinc (6010B)	mg/kg	23,000	2,500	--	--	--	--	--	--	--	--	--	--	--	--	--	--	46	32	--	--	--	--	--	--	--	--	--	--
Organchlorine Pesticides [OCPs] (USEPA Method 8081A)																												
		Discrete Sample Screening Level[a]	Composited Sample Screening Level [2][b]																										
alpha-BHC	ug/kg	86	--	--	--	--	--	--	--	--	--	< 1.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
gamma-BHC	ug/kg	570	250, 160, 125	--	--	--	--	--	--	--	--	< 1.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
beta-BHC	ug/kg	300	--	--	--	--	--	--	--	--	--	< 1.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
delta-BHC	ug/kg	--	--	--	--	--	--	--	--	--	--	< 1.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Heptachlor	ug/kg	130[2]	60, 40, 20	--	--	--	--	--	--	--	--	< 1.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Aldrin	ug/kg	33[2]	16, 10, 5	140	--	--	--	--	--	--	--	< 1.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Heptachlor epoxide	ug/kg	70	--	4,700	160	--	--	--	--	--	--	< 1.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
gamma-Chlordane[d]	ug/kg	1,700, 430[2]	215, 140, 105	--	--	--	--	--	--	--	--	1.2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
alpha-Chlordane[d]	ug/kg	1,700, 430[2]	215, 140, 105	--	--	--	--	--	--	--	--	1.1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Endosulfan I	ug/kg	450,000	--	--	--	--	--	--	--	--	--	< 1.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4,4'-DDE	ug/kg	1,600[2]	800, 530, 400	1,000	--	--	--	--	--	--	--	2.1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dieldrin	ug/kg	35[2]	16, 10, 5	8,000	--	--	--	--	--	--	--	< 2.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Endrin	ug/kg	19,000	--	200	400	--	--	--	--	--	--	< 2.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4,4'-DDD	ug/kg	2,300[2]	1150, 760, 575	1,000	--	--	--	--	--	--	--	< 2.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Endosulfan II	ug/kg	--	--	--	--	--	--	--	--	--	--	< 2.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4,4'-DDT	ug/kg	1,600[2]	800, 530, 400	1,000	--	--	--	--	--	--	--	< 2.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Endrin aldehyde	ug/kg	--	--	--	--	--	--	--	--	--	--	< 2.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Endosulfan sulfate	ug/kg	380,000	--	--	--	--	--	--	--	--	--	< 2.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Methoxychlor	ug/kg	320,000	--	100,000	200,000	--	--	--	--	--	--	< 5.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Endrin ketone	ug/kg	--	--	--	--	--	--	--	--	--	--	< 2.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Toxaphene	ug/kg	450	--	5,000	10,000	--	--	--	--	--	--	< 50	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chlordane (tech)[d]	ug/kg	1,700, 430[2]	215, 140, 105	2500	600	870	1,700	1,500	<8.5	27	--	12	--	34	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Extractions																													
arsenic, STLC	mg/l	--	--	5	5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
arsenic, TCLP	mg/l	--	--	5	5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
lead, STLC	mg/l	--	--	5	5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	5.0	--	--	--	--	--	--
lead, TCLP	mg/l	--	--	5	5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chlordane, TCLP	mg/l	--	--	0.25	0.03	--	0.0035	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

TABLE 2
SOIL ANALYTICAL RESULTS
PEA-E SITE INVESTIGATION
Elizabeth Learning Center
Cudahy, California
(Page 8 of 36)

Sample Location		Residential Soil Screening Level (April 2019)[a]	STLC	TCLP	SB-22C	SB-22C	SB-22C	SB-22C	SB-23	SB-23	SB-24	SB-24	SB-24	SB-25	SB-25	SB-26	SB-26	SB-27	SB-27	SB-27	SB-28	SB-28	SB-29	SB-29	SB-29	SB-29A	SB-29A	SB-29A
Sample ID					SB-22C-1-DUP	SB-22C-1.4	SB-22C-1.4-DUP	SB-22C-3	SB-23-0.8	SB-23-3	SB-24-0.8	SB-24-0.8-DUP	SB-24-3	SB-25-0.8	SB-25-3	SB-26-0.8	SB-26-3	SB-27-0.9	SB-27-3	SB-27-3-DUP	SB-28-0.8	SB-28-3	SB-29-1	SB-29-1.4	SB-29-3	SB-29A-1	SB-29A-1-DUP	SB-29A-1.4
Sample Depth (feet bgs):					0.5-1	0.9-1.4	0.9-1.4	2.5-3	0.3-0.8	2.5-3	0.3-0.8	0.3-0.8	2.5-3	0.3-0.8	2.5-3	0.3-0.8	2.5-3	0.4-0.9	2.5-3	2.5-3	0.3-0.8	2.5-3	0.5-1	0.9-1.4	2.5-3	0.5-1	0.5-1	0.9-1.4
Sample Date:					7/8/2019	7/8/2019	7/8/2019	7/8/2019	6/10/2019	6/10/2019	6/10/2019	6/10/2019	6/10/2019	6/10/2019	6/10/2019	6/10/2019	6/10/2019	6/10/2019	6/10/2019	6/10/2019	6/10/2019	6/10/2019	6/10/2019	6/10/2019	6/10/2019	7/8/2019	7/8/2019	7/8/2019
Polychlorinated Biphenyls [PCBs] (USEPA Method 8082)																												
*Aroclor 1260	ug/kg	240	--	--	--	--	--	--	< 16	< 16	--	--	--	--	--	--	--	--	--	--	< 16	< 16	--	--	--	--	--	--
All Other Compounds Non-Detect	ug/kg	Varies	--	--	--	--	--	--	ND	ND	--	--	--	--	--	--	--	--	--	--	ND	ND	--	--	--	--	--	--
Volatile Organic Compounds [VOCs] (USEPA Method 8260B/5035)																												
All Compounds Non-Detect	ug/kg	Varies	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	ND	ND	ND	--	--	--	--	--	--	--	--
Total Petroleum Hydrocarbons [TPH] (8015M)																												
C4-C12	mg/kg	100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1.0	< 1.0	--	--	--	--	--	--	--	--	--
C13-C22	mg/kg	100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	6.5	< 1.0	--	--	--	--	--	--	--	--	--
C23-C40	mg/kg	100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	81	2.4	--	--	--	--	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons [PAHs] (USEPA Method 8270SIM)																												
2-Methyl--phthalene	ug/kg	240,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Ace--phthene	ug/kg	3,600,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Ace--phthylene	ug/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Anthracene	ug/kg	17,000,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(a)anthracene	ug/kg	1,100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(a)pyrene	ug/kg	110	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(b)fluoranthene	ug/kg	1,100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(g,h,i)perylene	ug/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(k)fluoranthene	ug/kg	11,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chrysene	ug/kg	110,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dibenzo(a,h)anthracene	ug/kg	28	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Fluoranthene	ug/kg	2,400,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Fluorene	ug/kg	2,300,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Indeno(1,2,3-c,d)pyrene	ug/kg	1,100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Naphthalene	ug/kg	2,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Phenanthrene	ug/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Pyrene	ug/kg	1,800,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(a)pyrene Equivalence[c]	ug/kg	900[3]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Asbestos (qualitative)																												
Asbestos (qualitative)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	ND	ND	ND	--	--	--	--	--	--	--	--

Notes:
bgs below ground surface
-- Not available
NA Not applicable
ND Not detected above the reporting limit
mg/kg milligrams per kilogram
ug/kg micrograms per kilogram
mg/l milligrams per liter
TTLC Total Threshold Limit Concentration
STLC Soluble Threshold Limit Concentration
TCLP Toxicity Leaching Characteristic Procedure
BHC benzene hexachloride
DDD dichlorodiphenyldichloroethane
DDE dichlorodiphenyldichloroethylene
DDT dichlorodiphenyltrichloroethane

[1] California background concentration range for arsenic.
[2] Screening value is from DTSC Interim Guidance, Evaulation of School Sites with Potential Soil Contamination as a Result of Lead from Lead-Based Paint, Organochlorine Pesticides from Termiticides, and Polychlorinated Biphenyls from Electrical Transformers, June 9 2006.
[3] Carcinogenic PAH background concentration for Southern California (Environ, 2002).
a Value is the lower of the California Department of Toxic Substance Control Note 3 Screening Levels (CA DTSC-SLs), April 2019, or EPA Regional Screening Levels (RSLs), April 2019, for residential soil.
b Screening value is listed as x,y,z where x=1:2 composite ratio, y=1:3 composite ratio, and z=1:4 composite ratio
c The Benzo(a)pyrene Equivalence (B[a]P-TE) concentration is calculated for each sample by multiplying each PAH chemical concentration by its Toxic Equivalency Factor. The Toxic Equivalency Factors are summed to obtain the Benzo(a)pyrene Equivalence concentration for the sample. (Nisbet and LaGoy, 1992). If the sample concentration was below the laboratory reporting limit, the laboratory reporting limit was used for the calculation.
d CA DTSC-SL for residential soil for chlordane was updated to 1,700 ug/kg in April, 2019. Step-out sampling was performed based on the chlordane screening level from [2]. However, results from sampling were compared against this updated 1,700 ug/kg screening level.

Results highlighted in yellow exceed their respective screening values.
Results highlighted in blue exceed their respective hazardous waste criteria.

TABLE 2
SOIL ANALYTICAL RESULTS
PEA-E SITE INVESTIGATION
Elizabeth Learning Center
Cudahy, California
(Page 9 of 36)

Sample Location		Residential Soil Screening Level (April 2019)[a]	STLC	TCLP	SB-29A	SB-29A	SB-29B	SB-29B	SB-29B	SB-29B	SB-29B	SB-29C	SB-29C	SB-29C	SB-29C	SB-29C	SB-30	SB-30	SB-31	SB-31	SB-32	SB-32	SB-33	SB-33	SB-34	SB-34	SB-34	SB-34A
Sample ID					SB-29A-1.4-DUP	SB-29A-3	SB-29B-1	SB-29B-1 DUP	SB-29B-1.4	SB-29B-1.4 DUP	SB-29B-3	SB-29C-1	SB-29C-1-DUP	SB-29C-1.4	SB-29C-1.4-DUP	SB-29C-3	SB-30-1	SB-30-3	SB-31-0.9	SB-31-3	SB-32-1.2	SB-32-3	SB-33-0.8	SB-33-3	SB-34-1	SB-34-1.5	SB-34-3	SB-34A-1
Sample Depth (feet bgs):					0.9-1.4	2.5-3	0.5-1	0.5-1	0.9-1.4	0.9-1.4	2.5-3	0.5-1	0.5-1	0.9-1.4	0.9-1.4	2.5-3	0.5-1	2.5-3	0.4-0.9	2.5-3	0.7-1.2	2.5-3	0.3-0.8	2.5-3	0.5-1	1-1.5	2.5-3	0.5-1
Sample Date:					7/8/2019	7/8/2019	7/8/2019	7/8/2019	7/8/2019	7/8/2019	7/8/2019	7/8/2019	7/8/2019	7/8/2019	7/8/2019	7/8/2019	6/10/2019	6/10/2019	6/10/2019	6/10/2019	6/11/2019	6/11/2019	6/11/2019	6/11/2019	6/11/2019	6/11/2019	6/11/2019	7/8/2019
Metals (TTLC, USEPA Method 6010B/7471A)																												
Antimony (6010B)	mg/kg	31	150		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 2.0	< 2.0	--	--	--	--	--	--
Arsenic (6010B)	mg/kg	12[1]	50	100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1.0	< 1.0	--	--	--	--	--	--
Arsenic (6020)	mg/kg	12 - 19.6 [1]	50	100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1.5	1.0	--	--	--	--	--	--
Barium (6010B)	mg/kg	15,000	1,000	2,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	72	75	--	--	--	--	--	--
Beryllium (6010B)	mg/kg	16	7.5		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1.0	< 1.0	--	--	--	--	--	--
Cadmium (6010B)	mg/kg	71	10	20	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1.0	< 1.0	--	--	--	--	--	--
Chromium (6010B)	mg/kg	120,000	50	100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	9.6	10	--	--	--	--	--	--
Cobalt (6010B)	mg/kg	23	800	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	4.8	7.0	--	--	--	--	--	--
Copper (6010B)	mg/kg	3,100	250	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	11	8.5	--	--	--	--	--	--
Lead (6010B)	mg/kg	80[2]	50	100	47	2.2	38	55	15	22	< 1.0	110	91	24	18	< 1.0	22	3.0	54	1.3	28	2.2	24	< 1.0	32	--	< 1.0	--
Mercury (7471A)	mg/kg	11	2	4	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.35	< 0.10	--	--	--	--	--	--
Molybdenum (6010B)	mg/kg	390	3,500	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1.0	< 1.0	--	--	--	--	--	--
Nickel (6010B)	mg/kg	820	200	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	7.0	6.8	--	--	--	--	--	--
Selenium (6010B)	mg/kg	390	10	20	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1.0	< 1.0	--	--	--	--	--	--
Silver (6010B)	mg/kg	390	50	100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1.0	< 1.0	--	--	--	--	--	--
Thallium (6010B)	mg/kg	0.78	70		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1.0	< 1.0	--	--	--	--	--	--
Vanadium (6010B)	mg/kg	390	240	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	20	26	--	--	--	--	--	--
Zinc (6010B)	mg/kg	23,000	2,500	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	74	34	--	--	--	--	--	--
Organchlorine Pesticides [OCPs] (USEPA Method 8081A)																												
		Discrete Sample Screening Level[a]	Composited Sample Screening Level [2][b]																									
alpha-BHC	ug/kg	86	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
gamma-BHC	ug/kg	570	250, 160, 125	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
beta-BHC	ug/kg	300	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
delta-BHC	ug/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Heptachlor	ug/kg	130[2]	60, 40, 20	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Aldrin	ug/kg	33[2]	16, 10, 5	140	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Heptachlor epoxide	ug/kg	70	--	4,700	160	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
gamma-Chlordane[d]	ug/kg	1,700, 430[2]	215, 140, 105	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
alpha-Chlordane[d]	ug/kg	1,700, 430[2]	215, 140, 105	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Endosulfan I	ug/kg	450,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4,4'-DDE	ug/kg	1,600[2]	800, 530, 400	1,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dieldrin	ug/kg	35[2]	16, 10, 5	8,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Endrin	ug/kg	19,000	--	200	400	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4,4'-DDD	ug/kg	2,300[2]	1150, 760, 575	1,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Endosulfan II	ug/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4,4'-DDT	ug/kg	1,600[2]	800, 530, 400	1,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Endrin aldehyde	ug/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Endosulfan sulfate	ug/kg	380,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Methoxychlor	ug/kg	320,000	--	100,000	200,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Endrin ketone	ug/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Toxaphene	ug/kg	450	--	5,000	10,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chlordane (tech)[d]	ug/kg	1,700, 430[2]	215, 140, 105	2500	600	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	59	--	14	--	500	76	--	280
Extractions																												
arsenic, STLC	mg/l	--	--	5	5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
arsenic, TCLP	mg/l	--	--	5	5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
lead, STLC	mg/l	--	--	5	5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
lead, TCLP	mg/l	--	--	5	5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chlordane, TCLP	mg/l	--	--	0.25	0.03	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

TABLE 2
SOIL ANALYTICAL RESULTS
PEA-E SITE INVESTIGATION
Elizabeth Learning Center
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Sample Location		Residential Soil Screening Level (April 2019)[a]	STLC	TCLP	SB-29A	SB-29A	SB-29B	SB-29B	SB-29B	SB-29B	SB-29B	SB-29C	SB-29C	SB-29C	SB-29C	SB-29C	SB-30	SB-30	SB-31	SB-31	SB-32	SB-32	SB-33	SB-33	SB-34	SB-34	SB-34	SB-34A
Sample ID					SB-29A-1.4-DUP	SB-29A-3	SB-29B-1	SB-29B-1 DUP	SB-29B-1.4	SB-29B-1.4 DUP	SB-29B-3	SB-29C-1	SB-29C-1-DUP	SB-29C-1.4	SB-29C-1.4-DUP	SB-29C-3	SB-30-1	SB-30-3	SB-31-0.9	SB-31-3	SB-32-1.2	SB-32-3	SB-33-0.8	SB-33-3	SB-34-1	SB-34-1.5	SB-34-3	SB-34A-1
Sample Depth (feet bgs):					0.9-1.4	2.5-3	0.5-1	0.5-1	0.9-1.4	0.9-1.4	2.5-3	0.5-1	0.5-1	0.9-1.4	0.9-1.4	2.5-3	0.5-1	2.5-3	0.4-0.9	2.5-3	0.7-1.2	2.5-3	0.3-0.8	2.5-3	0.5-1	1-1.5	2.5-3	0.5-1
Sample Date:					7/8/2019	7/8/2019	7/8/2019	7/8/2019	7/8/2019	7/8/2019	7/8/2019	7/8/2019	7/8/2019	7/8/2019	7/8/2019	7/8/2019	6/10/2019	6/10/2019	6/10/2019	6/10/2019	6/11/2019	6/11/2019	6/11/2019	6/11/2019	6/11/2019	6/11/2019	6/11/2019	7/8/2019
Polychlorinated Biphenyls [PCBs] (USEPA Method 8082)																												
*Aroclor 1260	ug/kg	240	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 16	< 16	--	--	--	--
*All Other Compounds Non-Detect	ug/kg	Varies	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	ND	ND	--	--	--	--
Volatile Organic Compounds [VOCs] (USEPA Method 8260B/5035)																												
All Compounds Non-Detect	ug/kg	Varies	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total Petroleum Hydrocarbons [TPH] (8015M)																												
C4-C12	mg/kg	100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C13-C22	mg/kg	100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C23-C40	mg/kg	100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons [PAHs] (USEPA Method 8270SIM)																												
2-Methyl--phthalene	ug/kg	240,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Ace--phthene	ug/kg	3,600,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Ace--phthylene	ug/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Anthracene	ug/kg	17,000,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(a)anthracene	ug/kg	1,100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(a)pyrene	ug/kg	110	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(b)fluoranthene	ug/kg	1,100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(g,h,i)perylene	ug/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(k)fluoranthene	ug/kg	11,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chrysene	ug/kg	110,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dibenzo(a,h)anthracene	ug/kg	28	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Fluoranthene	ug/kg	2,400,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Fluorene	ug/kg	2,300,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Indeno(1,2,3-c,d)pyrene	ug/kg	1,100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Naphthalene	ug/kg	2,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Phenanthrene	ug/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Pyrene	ug/kg	1,800,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(a)pyrene Equivalence[c]	ug/kg	900[3]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Asbestos (qualitative)																												
Asbestos (qualitative)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	ND	ND	--	--	--	--	--	--

Notes:

bgs	below ground surface
--	Not available
NA	Not applicable
ND	Not detected above the reporting limit
mg/kg	milligrams per kilogram
ug/kg	micrograms per kilogram
mg/l	milligrams per liter
TTLC	Total Threshold Limit Concentration
STLC	Soluble Threshold Limit Concentration
TCLP	Toxicity Leaching Characteristic Procedure
BHC	benzene hexachloride
DDD	dichlorodiphenyldichloroethane
DDE	dichlorodiphenyldichloroethylene
DDT	dichlorodiphenyltrichloroethane

[1] California background concentration range for arsenic.

[2] Screening value is from DTSC Interim Guidance, Evaulation of School Sites with Potential Soil Contamination as a Result of Lead from Lead-Based Paint, Organochlorine Pesticides from Termiticides, and Polychlorinated Biphenyls from Electrical Transformers, June 9 2006.

[3] Carcinogenic PAH background concentration for Southern California (Environ, 2002).

a Value is the lower of the California Department of Toxic Substance Control Note 3 Screening Levels (CA DTSC-SLs), April 2019, or EPA Regional Screening Levels (RSLs), April 2019, for residential soil.

b Screening value is listed as x,y,z where x=1:2 composite ratio, y=1:3 composite ratio, and z=1:4 composite ratio

c The Benzo(a)pyrene Equivalence (B[a]P-TE) concentration is calculated for each sample by multiplying each PAH chemical concentration by its Toxic Equivalency Factor. The Toxic Equivalency Factors are summed to obtain the Benzo(a)pyrene Equivalence concentration for the sample. (Nisbet and LaGoy, 1992). If the sample concentration was below the laboratory reporting limit, the laboratory reporting limit was used for the calculation.

d CA DTSC-SL for residential soil for chlordane was updated to 1,700 ug/kg in April, 2019. Step-out sampling was performed based on the chlordane screening level from [2]. However, results from sampling were compared against this updated 1,700 ug/kg screening level.

Results highlighted in yellow exceed their respective screening values.

Results highlighted in blue exceed their respective hazardous waste criteria.

TABLE 2
SOIL ANALYTICAL RESULTS
PEA-E SITE INVESTIGATION
Elizabeth Learning Center
Cudahy, California
(Page 11 of 36)

Sample Location		Residential Soil Screening Level (April 2019)[a]			SB-34A	SB-34B	SB-34B	SB-34C	SB-34C	SB-35	SB-35	SB-36	SB-36	SB-36	SB-37	SB-37	SB-37	SB-37	SB-37A	SB-37A	SB-37A	SB-37A	SB-37B	SB-37B	SB-37B	SB-37B	SB-37C
Sample ID					SB-34A-1.5	SB-34B-1	SB-34B-1.5	SB-34C-1	SB-34C-1.5	SB-35-0.7	SB-35-3	SB-36-0.8	SB-36-0.8-DUP	SB-36-3	SB-37-1	SB-37-1-DUP	SB-37-1.5	SB-37-3	SB-37A-1	SB-37A-1-DUP	SB-37A-1.5	SB-37A-1.5-DUP	SB-37B-1	SB-37B-1 DUP	SB-37B-1.5	SB-37B-1.5 DUP	SB-37C-1
Sample Depth (feet bgs):					1-1.5	0.5-1	1-1.5	0.5-1	1-1.5	0.2-0.7	2.5-3	0.3-0.8	0.3-0.8	2.5-3	0.5-1	0.5-1	1-1.5	2.5-3	0.5-1	0.5-1	1-1.5	1-1.5	0.5-1	0.5-1	1-1.5	1-1.5	0.5-1
Sample Date:			STLC	TCLP	7/8/2019	7/8/2019	7/8/2019	7/8/2019	7/8/2019	6/11/2019	6/11/2019	6/10/2019	6/10/2019	6/10/2019	6/10/2019	6/10/2019	6/10/2019	6/10/2019	7/8/2019	7/8/2019	7/8/2019	7/8/2019	7/8/2019	7/8/2019	7/8/2019	7/8/2019	7/8/2019
Metals (TTLC, USEPA Method 6010B/7471A)																											
Antimony (6010B)	mg/kg	31	150		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Arsenic (6010B)	mg/kg	12[1]	50	100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Arsenic (6020)	mg/kg	12 - 19.6 [1]	50	100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Barium (6010B)	mg/kg	15,000	1,000	2,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Beryllium (6010B)	mg/kg	16	7.5		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Cadmium (6010B)	mg/kg	71	10	20	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chromium (6010B)	mg/kg	120,000	50	100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Cobalt (6010B)	mg/kg	23	800	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Copper (6010B)	mg/kg	3,100	250	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Lead (6010B)	mg/kg	80[2]	50	100	--	--	--	--	--	22	< 1.0	14	15	< 1.0	37	44	--	8.8	--	--	--	--	--	--	--	--	--
Mercury (7471A)	mg/kg	11	2	4	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Molybdenum (6010B)	mg/kg	390	3,500	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Nickel (6010B)	mg/kg	820	200	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Selenium (6010B)	mg/kg	390	10	20	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Silver (6010B)	mg/kg	390	50	100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Thallium (6010B)	mg/kg	0.78	70		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Vanadium (6010B)	mg/kg	390	240	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Zinc (6010B)	mg/kg	23,000	2,500	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Organchlorine Pesticides [OCPs] (USEPA Method 8081A)																											
		Discrete Sample Screening Level[a]	Composited Sample Screening Level [2][b]																								
alpha-BHC	ug/kg	86	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
gamma-BHC	ug/kg	570	250, 160, 125	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
beta-BHC	ug/kg	300	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
delta-BHC	ug/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Heptachlor	ug/kg	130[2]	60, 40, 20	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Aldrin	ug/kg	33[2]	16, 10, 5	140	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Heptachlor epoxide	ug/kg	70	--	4,700	160	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
gamma-Chlordane[d]	ug/kg	1,700, 430[2]	215, 140, 105	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
alpha-Chlordane[d]	ug/kg	1,700, 430[2]	215, 140, 105	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Endosulfan I	ug/kg	450,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4,4'-DDE	ug/kg	1,600[2]	800, 530, 400	1,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dieldrin	ug/kg	35[2]	16, 10, 5	8,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Endrin	ug/kg	19,000	--	200	400	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4,4'-DDD	ug/kg	2,300[2]	1150, 760, 575	1,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Endosulfan II	ug/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4,4'-DDT	ug/kg	1,600[2]	800, 530, 400	1,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Endrin aldehyde	ug/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Endosulfan sulfate	ug/kg	380,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Methoxychlor	ug/kg	320,000	--	100,000	200,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Endrin ketone	ug/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Toxaphene	ug/kg	450	--	5,000	10,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chlordane (tech)[d]	ug/kg	1,700, 430[2]	215, 140, 105	2500	600	< 8.5	38	< 8.5	110	< 8.5	150	--	45	--	--	970	--	29	--	440	1,300	9.7	< 8.5	300	34	< 8.5	< 8.5	190
Extractions																											
arsenic, STLC	mg/l	--	--	5	5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
arsenic, TCLP	mg/l	--	--	5	5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
lead, STLC	mg/l	--	--	5	5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
lead, TCLP	mg/l	--	--	5	5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chlordane, TCLP	mg/l	--	--	0.25	0.03	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.0027	--	--	--	--	--	--	--

TABLE 2
SOIL ANALYTICAL RESULTS
PEA-E SITE INVESTIGATION
Elizabeth Learning Center
Cudahy, California

Sample Location		Residential Soil Screening Level (April 2019)[a]			SB-34A	SB-34B	SB-34B	SB-34C	SB-34C	SB-35	SB-35	SB-36	SB-36	SB-36	SB-37	SB-37	SB-37	SB-37	SB-37A	SB-37A	SB-37A	SB-37A	SB-37B	SB-37B	SB-37B	SB-37B	SB-37C
Sample ID					SB-34A-1.5	SB-34B-1	SB-34B-1.5	SB-34C-1	SB-34C-1.5	SB-35-0.7	SB-35-3	SB-36-0.8	SB-36-0.8-DUP	SB-36-3	SB-37-1	SB-37-1-DUP	SB-37-1.5	SB-37-3	SB-37A-1	SB-37A-1-DUP	SB-37A-1.5	SB-37A-1.5-DUP	SB-37B-1	SB-37B-1 DUP	SB-37B-1.5	SB-37B-1.5 DUP	SB-37C-1
Sample Depth (feet bgs):					1-1.5	0.5-1	1-1.5	0.5-1	1-1.5	0.2-0.7	2.5-3	0.3-0.8	0.3-0.8	2.5-3	0.5-1	0.5-1	1-1.5	2.5-3	0.5-1	0.5-1	1-1.5	1-1.5	0.5-1	0.5-1	1-1.5	1-1.5	0.5-1
Sample Date:			STLC	TCLP	7/8/2019	7/8/2019	7/8/2019	7/8/2019	7/8/2019	6/11/2019	6/11/2019	6/10/2019	6/10/2019	6/10/2019	6/10/2019	6/10/2019	6/10/2019	6/10/2019	6/10/2019	7/8/2019	7/8/2019	7/8/2019	7/8/2019	7/8/2019	7/8/2019	7/8/2019	7/8/2019	7/8/2019
Polychlorinated Biphenyls [PCBs] (USEPA Method 8082)																											
**Aroclor 1260*	ug/kg	240	--	--	--	--	--	--	--	< 16	< 16	< 16	< 16	< 16	--	--	--	--	--	--	--	--	--	--	--	--	--
All Other Compounds Non-Detect	ug/kg	Varies	--	--	--	--	--	--	--	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--	--	--	--	--
Volatile Organic Compounds [VOCs] (USEPA Method 8260B/5035)																											
All Compounds Non-Detect	ug/kg	Varies	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total Petroleum Hydrocarbons [TPH] (8015M)																											
C4-C12	mg/kg	100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C13-C22	mg/kg	100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C23-C40	mg/kg	100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons [PAHs] (USEPA Method 8270SIM)																											
2-Methyl--phthalene	ug/kg	240,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Ace--phthene	ug/kg	3,600,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Ace--phthylene	ug/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Anthracene	ug/kg	17,000,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(a)anthracene	ug/kg	1,100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(a)pyrene	ug/kg	110	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(b)fluoranthene	ug/kg	1,100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(g,h,i)perylene	ug/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(k)fluoranthene	ug/kg	11,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chrysene	ug/kg	110,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dibenzo(a,h)anthracene	ug/kg	28	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Fluoranthene	ug/kg	2,400,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Fluorene	ug/kg	2,300,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Indeno(1,2,3-c,d)pyrene	ug/kg	1,100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Naphthalene	ug/kg	2,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Phenanthrene	ug/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Pyrene	ug/kg	1,800,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(a)pyrene Equivalence[c]	ug/kg	900[3]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Asbestos (qualitative)																											
Asbestos (qualitative)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Notes:
bgs below ground surface
-- Not available
NA Not applicable
ND Not detected above the reporting limit
mg/kg milligrams per kilogram
ug/kg micrograms per kilogram
mg/l milligrams per liter
TTLC Total Threshold Limit Concentration
STLC Soluble Threshold Limit Concentration
TCLP Toxicity Leaching Characteristic Procedure
BHC benzene hexachloride
DDD dichlorodiphenyldichloroethane
DDE dichlorodiphenyldichloroethylene
DDT dichlorodiphenyltrichloroethane

[1] California background concentration range for arsenic.
[2] Screening value is from DTSC Interim Guidance, Evaulation of School Sites with Potential Soil Contamination as a Result of Lead from Lead-Based Paint, Organochlorine Pesticides from Termiticides, and Polychlorinated Biphenyls from Electrical Transformers, June 9 2006.
[3] Carcinogenic PAH background concentration for Southern California (Environ, 2002).
a Value is the lower of the California Department of Toxic Substance Control Note 3 Screening Levels (CA DTSC-SLs), April 2019, or EPA Regional Screening Levels (RSLs), April 2019, for residential soil.
b Screening value is listed as x,y,z where x=1:2 composite ratio, y=1:3 composite ratio, and z=1:4 composite ratio
c The Benzo(a)pyrene Equivalence (B[a]P-TE) concentration is calculated for each sample by multiplying each PAH chemical concentration by its Toxic Equivalency Factor. The Toxic Equivalency Factors are summed to obtain the Benzo(a)pyrene Equivalence concentration for the sample. (Nisbet and LaGoy, 1992). If the sample concentration was below the laboratory reporting limit, the laboratory reporting limit was used for the calculation.
d CA DTSC-SL for residential soil for chlordane was updated to 1,700 ug/kg in April, 2019. Step-out sampling was performed based on the chlordane screening level from [2]. However, results from sampling were compared against this updated 1,700 ug/kg screening level.

Results highlighted in yellow exceed their respective screening values.
Results highlighted in blue exceed their respective hazardous waste criteria.

TABLE 2
SOIL ANALYTICAL RESULTS
PEA-E SITE INVESTIGATION
Elizabeth Learning Center
Cudahy, California
(Page 13 of 36)

Sample Location		Residential Soil Screening Level (April 2019)[a]			SB-37C	SB-37C	SB-37C	SB-38	SB-38	SB-39	SB-39	SB-40	SB-40	SB-40	SB-41	SB-41	SB-41	SB-42	SB-42	SB-43	SB-43	SB-44	SB-44	SB-44	SB-44A	SB-44A	SB-44A	SB-44B	SB-44B
Sample ID					SB-37C-1-DUP	SB-37C-1.5	SB-37C-1.5-DUP	SB-38-0.9	SB-38-3	SB-39-0.8	SB-39-3	SB-40-1	SB-40-1-DUP	SB-40-3	SB-41-1.3	SB-41-1.8	SB-41-3	SB-42-1.2	SB-42-3	SB-43-0.9	SB-43-3	SB-44-0.5	SB-44-1	SB-44-3	SB-44A-1.3	SB-44A-1.8	SB-44A-3	SB-44B-1.3	SB-44B-1.8
Sample Depth (feet bgs):					0.5-1	1-1.5	1-1.5	0.4-0.9	2.5-3	0.3-0.8	2.5-3	0.5-1	0.5-1	2.5-3	0.8-1.3	1.3-1.8	2.5-3	0.7-1.2	2.5-3	0.4-0.9	2.5-3	0-0.5	0.5-1	2.5-3	0.8-1.3	1.3-1.8	2.5-3	0.8-1.3	1.3-1.8
Sample Date:			STLC	TCLP	7/8/2019	7/8/2019	7/8/2019	6/10/2019	6/10/2019	6/10/2019	6/10/2019	6/10/2019	6/10/2019	6/10/2019	6/11/2019	6/11/2019	6/11/2019	6/11/2019	6/11/2019	6/10/2019	6/10/2019	6/11/2019	6/11/2019	6/11/2019	7/8/2019	7/8/2019	7/8/2019	7/8/2019	7/8/2019
Metals (TTLC, USEPA Method 6010B/7471A)																													
Antimony (6010B)	mg/kg	31	150		--	--	--	--	--	--	--	< 2.0	< 2.0	< 2.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Arsenic (6010B)	mg/kg	12[1]	50	100	--	--	--	--	--	--	--	< 1.0	< 1.0	< 1.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Arsenic (6020)	mg/kg	12 - 19.6 [1]	50	100	--	--	--	--	--	--	--	1.4	1.2	< 1.0	--	--	--	3.8	3.2	--	--	--	--	--	--	--	--	--	--
Barium (6010B)	mg/kg	15,000	1,000	2,000	--	--	--	--	--	--	--	61	68	66	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Beryllium (6010B)	mg/kg	16	7.5		--	--	--	--	--	--	--	< 1.0	< 1.0	< 1.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Cadmium (6010B)	mg/kg	71	10	20	--	--	--	--	--	--	--	< 1.0	< 1.0	< 1.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chromium (6010B)	mg/kg	120,000	50	100	--	--	--	--	--	--	--	7.8	9.3	8.3	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Cobalt (6010B)	mg/kg	23	800	--	--	--	--	--	--	--	--	5.4	6.0	6.1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Copper (6010B)	mg/kg	3,100	250	--	--	--	--	--	--	--	--	7.3	9.2	7.2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Lead (6010B)	mg/kg	80[2]	50	100	--	--	--	33	< 1.0	31	1.2	4.3	12	< 1.0	86	15	59	4.9	6.4	35	7.5	280	22	1.4	21	33	3.2	56	22
Mercury (7471A)	mg/kg	11	2	4	--	--	--	--	--	--	--	0.11	< 0.10	< 0.10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Molybdenum (6010B)	mg/kg	390	3,500	--	--	--	--	--	--	--	--	< 1.0	< 1.0	< 1.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Nickel (6010B)	mg/kg	820	200	--	--	--	--	--	--	--	--	5.3	6.1	5.9	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Selenium (6010B)	mg/kg	390	10	20	--	--	--	--	--	--	--	< 1.0	< 1.0	< 1.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Silver (6010B)	mg/kg	390	50	100	--	--	--	--	--	--	--	< 1.0	< 1.0	< 1.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Thallium (6010B)	mg/kg	0.78	70		--	--	--	--	--	--	--	< 1.0	< 1.0	< 1.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Vanadium (6010B)	mg/kg	390	240	--	--	--	--	--	--	--	--	19	21	21	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Zinc (6010B)	mg/kg	23,000	2,500	--	--	--	--	--	--	--	--	35	45	30	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Organochlorine Pesticides [OCPs] (USEPA Method 8081A)																													
		Discrete Sample Screening Level[a]	Composited Sample Screening Level [2][b]																										
alpha-BHC	ug/kg	86	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
gamma-BHC	ug/kg	570	250, 160, 125	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
beta-BHC	ug/kg	300	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
delta-BHC	ug/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Heptachlor	ug/kg	130[2]	60, 40, 20	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Aldrin	ug/kg	33[2]	16, 10, 5	140	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Heptachlor epoxide	ug/kg	70	--	4,700	160	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
gamma-Chlordane[d]	ug/kg	1,700, 430[2]	215, 140, 105	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
alpha-Chlordane[d]	ug/kg	1,700, 430[2]	215, 140, 105	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Endosulfan I	ug/kg	450,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4,4'-DDE	ug/kg	1,600[2]	800, 530, 400	1,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dieldrin	ug/kg	35[2]	16, 10, 5	8,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Endrin	ug/kg	19,000	--	200	400	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4,4'-DDD	ug/kg	2,300[2]	1150, 760, 575	1,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Endosulfan II	ug/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4,4'-DDT	ug/kg	1,600[2]	800, 530, 400	1,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Endrin aldehyde	ug/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Endosulfan sulfate	ug/kg	380,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Methoxychlor	ug/kg	320,000	--	100,000	200,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Endrin ketone	ug/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Toxaphene	ug/kg	450	--	5,000	10,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chlordane (tech)[d]	ug/kg	1,700, 430[2]	215, 140, 105	2500	600	290	< 8.5	35	--	--	--	--	21	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Extractions																													
arsenic, STLC	mg/l	--	--	5	5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
arsenic, TCLP	mg/l	--	--	5	5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
lead, STLC	mg/l	--	--	5	5	--	--	--	--	--	--	--	--	--	1.4	--	--	--	--	--	--	36	--	--	--	--	--	--	--
lead, TCLP	mg/l	--	--	5	5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.37	--	--	--	--	--	--	--
Chlordane, TCLP	mg/l	--	--	0.25	0.03	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

TABLE 2
SOIL ANALYTICAL RESULTS
PEA-E SITE INVESTIGATION
Elizabeth Learning Center
Cudahy, California
(Page 14 of 36)

Sample Location		Residential Soil Screening Level (April 2019)[a]	STLC	TCLP	SB-37C	SB-37C	SB-37C	SB-38	SB-38	SB-39	SB-39	SB-40	SB-40	SB-40	SB-41	SB-41	SB-41	SB-42	SB-42	SB-43	SB-43	SB-44	SB-44	SB-44	SB-44A	SB-44A	SB-44A	SB-44B	SB-44B
Sample ID					SB-37C-1-DUP	SB-37C-1.5	SB-37C-1.5-DUP	SB-38-0.9	SB-38-3	SB-39-0.8	SB-39-3	SB-40-1	SB-40-1-DUP	SB-40-3	SB-41-1.3	SB-41-1.8	SB-41-3	SB-42-1.2	SB-42-3	SB-43-0.9	SB-43-3	SB-44-0.5	SB-44-1	SB-44-3	SB-44A-1.3	SB-44A-1.8	SB-44A-3	SB-44B-1.3	SB-44B-1.8
Sample Depth (feet bgs):					0.5-1	1-1.5	1-1.5	0.4-0.9	2.5-3	0.3-0.8	2.5-3	0.5-1	0.5-1	2.5-3	0.8-1.3	1.3-1.8	2.5-3	0.7-1.2	2.5-3	0.4-0.9	2.5-3	0-0.5	0.5-1	2.5-3	0.8-1.3	1.3-1.8	2.5-3	0.8-1.3	1.3-1.8
Sample Date:					7/8/2019	7/8/2019	7/8/2019	6/10/2019	6/10/2019	6/10/2019	6/10/2019	6/10/2019	6/10/2019	6/10/2019	6/11/2019	6/11/2019	6/11/2019	6/11/2019	6/11/2019	6/10/2019	6/10/2019	6/11/2019	6/11/2019	6/11/2019	7/8/2019	7/8/2019	7/8/2019	7/8/2019	7/8/2019
Polychlorinated Biphenyls [PCBs] (USEPA Method 8082)																													
**Aroclor 1260*	ug/kg	240	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
All Other Compounds Non-Detect	ug/kg	Varies	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Volatile Organic Compounds [VOCs] (USEPA Method 8260B/5035)																													
All Compounds Non-Detect	ug/kg	Varies	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total Petroleum Hydrocarbons [TPH] (8015M)																													
C4-C12	mg/kg	100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C13-C22	mg/kg	100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C23-C40	mg/kg	100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons [PAHs] (USEPA Method 8270SIM)																													
2-Methyl--phthalene	ug/kg	240,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Ace--phthene	ug/kg	3,600,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Ace--phthylene	ug/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Anthracene	ug/kg	17,000,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(a)anthracene	ug/kg	1,100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(a)pyrene	ug/kg	110	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(b)fluoranthene	ug/kg	1,100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(g,h,i)perylene	ug/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(k)fluoranthene	ug/kg	11,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chrysene	ug/kg	110,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dibenzo(a,h)anthracene	ug/kg	28	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Fluoranthene	ug/kg	2,400,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Fluorene	ug/kg	2,300,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Indeno(1,2,3-c,d)pyrene	ug/kg	1,100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Naphthalene	ug/kg	2,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Phenanthrene	ug/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Pyrene	ug/kg	1,800,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(a)pyrene Equivalence[c]	ug/kg	900[3]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Asbestos (qualitative)																													
Asbestos (qualitative)	--	--	--	--	--	--	--	--	--	--	--	ND	--	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Notes:
bgs below ground surface
-- Not available
NA Not applicable
ND Not detected above the reporting limit
mg/kg milligrams per kilogram
ug/kg micrograms per kilogram
mg/l milligrams per liter
TTLC Total Threshold Limit Concentration
STLC Soluble Threshold Limit Concentration
TCLP Toxicity Leaching Characteristic Procedure
BHC benzene hexachloride
DDD dichlorodiphenyldichloroethane
DDE dichlorodiphenyldichloroethylene
DDT dichlorodiphenyltrichloroethane

[1] California background concentration range for arsenic.
[2] Screening value is from DTSC Interim Guidance, Evaulation of School Sites with Potential Soil Contamination as a Result of Lead from Lead-Based Paint, Organochlorine Pesticides from Termiticides, and Polychlorinated Biphenyls from Electrical Transformers, June 9 2006.
[3] Carcinogenic PAH background concentration for Southern California (Environ, 2002).
a Value is the lower of the California Department of Toxic Substance Control Note 3 Screening Levels (CA DTSC-SLs), April 2019, or EPA Regional Screening Levels (RSLs), April 2019, for residential soil.
b Screening value is listed as x,y,z where x=1:2 composite ratio, y=1:3 composite ratio, and z=1:4 composite ratio
c The Benzo(a)pyrene Equivalence (B[a]P-TE) concentration is calculated for each sample by multiplying each PAH chemical concentration by its Toxic Equivalency Factor. The Toxic Equivalency Factors are summed to obtain the Benzo(a)pyrene Equivalence concentration for the sample. (Nisbet and LaGoy, 1992). If the sample concentration was below the laboratory reporting limit, the laboratory reporting limit was used for the calculation.
d CA DTSC-SL for residential soil for chlordane was updated to 1,700 ug/kg in April, 2019. Step-out sampling was performed based on the chlordane screening level from [2]. However, results from sampling were compared against this updated 1,700 ug/kg screening level.

Results highlighted in yellow exceed their respective screening values.
Results highlighted in blue exceed their respective hazardous waste criteria.

TABLE 2
SOIL ANALYTICAL RESULTS
PEA-E SITE INVESTIGATION
Elizabeth Learning Center
Cudahy, California
(Page 15 of 36)

Sample Location		Residential Soil Screening Level (April 2019)[a]			SB-44B	SB-44C	SB-44C	SB-44C	SB-44D	SB-44D	SB-44D	SB-44E	SB-44E	SB-44E	SB-45	SB-45	SB-45	SB-46	SB-46	SB-47	SB-47	SB-48	SB-48	SB-49	SB-49	SB-49	SB-49	SB-50	SB-50	SB-50
Sample ID					SB-44B-3	SB-44C-1.3	SB-44C-1.8	SB-44C-3	SB-44D-1.3	SB-44D-1.8	SB-44D-3	SB-44E-1.3	SB-44E-1.8	SB-44E-3	SB-45-0.5	SB-45-1	SB-45-3	SB-46-0.5	SB-46-3	SB-47-1.5	SB-47-3	SB-48-0.5	SB-48-3	SB-49-0.9	SB-49-0.9-DUP	SB-49-3	SB-49-3-DUP	SB-50-0.8	SB-50-1.3	SB-50-3
Sample Depth (feet bgs):					2.5-3	0.8-1.3	1.3-1.8	2.5-3	0.8-1.3	1.3-1.8	2.5-3	0.8-1.3	1.3-1.8	2.5-3	0-0.5	0.5-1	2.5-3	0-0.5	2.5-3	1-1.5	2.5-3	0-0.5	2.5-3	0.4-0.9	0.4-0.9	2.5-3	2.5-3	0.3-0.8	0.8-1.3	2.5-3
Sample Date:			STLC	TCLP	7/8/2019	7/8/2019	7/8/2019	7/8/2019	7/8/2019	7/8/2019	7/8/2019	7/8/2019	7/8/2019	7/8/2019	6/11/2019	6/11/2019	6/11/2019	6/13/2019	6/13/2019	6/13/2019	6/13/2019	6/13/2019	6/13/2019	6/12/2019	6/12/2019	6/12/2019	6/12/2019	6/12/2019	6/12/2019	6/12/2019
Metals (TTLC, USEPA Method 6010B/7471A)																														
Antimony (6010B)	mg/kg	31	150		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Arsenic (6010B)	mg/kg	12[1]	50	100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Arsenic (6020)	mg/kg	12 - 19.6 [1]	50	100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Barium (6010B)	mg/kg	15,000	1,000	2,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Beryllium (6010B)	mg/kg	16	7.5		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Cadmium (6010B)	mg/kg	71	10	20	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chromium (6010B)	mg/kg	120,000	50	100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Cobalt (6010B)	mg/kg	23	800	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Copper (6010B)	mg/kg	3,100	250	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Lead (6010B)	mg/kg	80[2]	50	100	4.5	310	50	2.0	14	34	< 1.0	18	23	4.0	230	89	1.9	74	1.3	26	< 1.0	12	1.9	61	11	< 1.0	< 1.0	140	6.0	1.0
Mercury (7471A)	mg/kg	11	2	4	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Molybdenum (6010B)	mg/kg	390	3,500	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Nickel (6010B)	mg/kg	820	200	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Selenium (6010B)	mg/kg	390	10	20	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Silver (6010B)	mg/kg	390	50	100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Thallium (6010B)	mg/kg	0.78	70		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Vanadium (6010B)	mg/kg	390	240	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Zinc (6010B)	mg/kg	23,000	2,500	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Organochlorine Pesticides [OCPs] (USEPA Method 8081A)																														
		Discrete Sample Screening Level[a]	Composited Sample Screening Level [2][b]																												
alpha-BHC	ug/kg	86	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
gamma-BHC	ug/kg	570	250, 160, 125	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
beta-BHC	ug/kg	300	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
delta-BHC	ug/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Heptachlor	ug/kg	130[2]	60, 40, 20	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Aldrin	ug/kg	33[2]	16, 10, 5	140	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Heptachlor epoxide	ug/kg	70	--	4,700	160	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
gamma-Chlordane[d]	ug/kg	1,700, 430[2]	215, 140, 105	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
alpha-Chlordane[d]	ug/kg	1,700, 430[2]	215, 140, 105	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Endosulfan I	ug/kg	450,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4,4'-DDE	ug/kg	1,600[2]	800, 530, 400	1,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dieldrin	ug/kg	35[2]	16, 10, 5	8,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 2.0	--	--	--	--	--	--	--
Endrin	ug/kg	19,000	--	200	400	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4,4'-DDD	ug/kg	2,300[2]	1150, 760, 575	1,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Endosulfan II	ug/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4,4'-DDT	ug/kg	1,600[2]	800, 530, 400	1,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Endrin aldehyde	ug/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Endosulfan sulfate	ug/kg	380,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Methoxychlor	ug/kg	320,000	--	--	100,000	200,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Endrin ketone	ug/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Toxaphene	ug/kg	450	--	5,000	10,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chlordane (tech)[d]	ug/kg	1,700, 430[2]	215, 140, 105	2500	600	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Extractions																														
arsenic, STLC	mg/l	--	--	5	5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
arsenic, TCLP	mg/l	--	--	5	5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
lead, STLC	mg/l	--	--	5	5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
lead, TCLP	mg/l	--	--	5	5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chlordane, TCLP	mg/l	--	--	0.25	0.03	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

TABLE 2
SOIL ANALYTICAL RESULTS
PEA-E SITE INVESTIGATION
Elizabeth Learning Center
Cudahy, California
(Page 16 of 36)

Sample Location		Residential Soil Screening Level (April 2019)[a]			SB-44B	SB-44C	SB-44C	SB-44C	SB-44D	SB-44D	SB-44D	SB-44E	SB-44E	SB-44E	SB-45	SB-45	SB-45	SB-46	SB-46	SB-47	SB-47	SB-48	SB-48	SB-49	SB-49	SB-49	SB-49	SB-50	SB-50	SB-50
Sample ID					SB-44B-3	SB-44C-1.3	SB-44C-1.8	SB-44C-3	SB-44D-1.3	SB-44D-1.8	SB-44D-3	SB-44E-1.3	SB-44E-1.8	SB-44E-3	SB-45-0.5	SB-45-1	SB-45-3	SB-46-0.5	SB-46-3	SB-47-1.5	SB-47-3	SB-48-0.5	SB-48-3	SB-49-0.9	SB-49-0.9-DUP	SB-49-3	SB-49-3-DUP	SB-50-0.8	SB-50-1.3	SB-50-3
Sample Depth (feet bgs):					2.5-3	0.8-1.3	1.3-1.8	2.5-3	0.8-1.3	1.3-1.8	2.5-3	0.8-1.3	1.3-1.8	2.5-3	0-0.5	0.5-1	2.5-3	0-0.5	2.5-3	1-1.5	2.5-3	0-0.5	2.5-3	0.4-0.9	0.4-0.9	2.5-3	2.5-3	0.3-0.8	0.8-1.3	2.5-3
Sample Date:			STLC	TCLP	7/8/2019	7/8/2019	7/8/2019	7/8/2019	7/8/2019	7/8/2019	7/8/2019	7/8/2019	7/8/2019	7/8/2019	6/11/2019	6/11/2019	6/11/2019	6/13/2019	6/13/2019	6/13/2019	6/13/2019	6/13/2019	6/13/2019	6/12/2019	6/12/2019	6/12/2019	6/12/2019	6/12/2019	6/12/2019	6/12/2019
Polychlorinated Biphenyls [PCBs] (USEPA Method 8082)																														
*Aroclor 1260	ug/kg	240	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
All Other Compounds Non-Detect	ug/kg	Varies	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Volatile Organic Compounds [VOCs] (USEPA Method 8260B/5035)																														
All Compounds Non-Detect	ug/kg	Varies	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total Petroleum Hydrocarbons [TPH] (8015M)																														
C4-C12	mg/kg	100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C13-C22	mg/kg	100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C23-C40	mg/kg	100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons [PAHs] (USEPA Method 8270SIM)																														
2-Methyl--phthalene	ug/kg	240,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Ace--phthene	ug/kg	3,600,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Ace--phthylene	ug/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Anthracene	ug/kg	17,000,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(a)anthracene	ug/kg	1,100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(a)pyrene	ug/kg	110	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(b)fluoranthene	ug/kg	1,100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(g,h,i)perylene	ug/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(k)fluoranthene	ug/kg	11,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chrysene	ug/kg	110,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dibenzo(a,h)anthracene	ug/kg	28	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Fluoranthene	ug/kg	2,400,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Fluorene	ug/kg	2,300,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Indeno(1,2,3-c,d)pyrene	ug/kg	1,100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Naphthalene	ug/kg	2,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Phenanthrene	ug/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Pyrene	ug/kg	1,800,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(a)pyrene Equivalence[c]	ug/kg	900[3]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Asbestos (qualitative)																														
Asbestos (qualitative)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Notes:
bgs below ground surface
-- Not available
NA Not applicable
ND Not detected above the reporting limit
mg/kg milligrams per kilogram
ug/kg micrograms per kilogram
mg/l milligrams per liter
TTLC Total Threshold Limit Concentration
STLC Soluble Threshold Limit Concentration
TCLP Toxicity Leaching Characteristic Procedure
BHC benzene hexachloride
DDD dichlorodiphenyldichloroethane
DDE dichlorodiphenyldichloroethylene
DDT dichlorodiphenyltrichloroethane

[1] California background concentration range for arsenic.
[2] Screening value is from DTSC Interim Guidance, Evaulation of School Sites with Potential Soil Contamination as a Result of Lead from Lead-Based Paint, Organochlorine Pesticides from Termiticides, and Polychlorinated Biphenyls from Electrical Transformers, June 9 2006.
[3] Carcinogenic PAH background concentration for Southern California (Environ, 2002).
a Value is the lower of the California Department of Toxic Substance Control Note 3 Screening Levels (CA DTSC-SLs), April 2019, or EPA Regional Screening Levels (RSLs), April 2019, for residential soil.
b Screening value is listed as x,y,z where x=1:2 composite ratio, y=1:3 composite ratio, and z=1:4 composite ratio
c The Benzo(a)pyrene Equivalence (B[a]P-TE) concentration is calculated for each sample by multiplying each PAH chemical concentration by its Toxic Equivalency Factor. The Toxic Equivalency Factors are summed to obtain the Benzo(a)pyrene Equivalence concentration for the sample. (Nisbet and LaGoy, 1992). If the sample concentration was below the laboratory reporting limit, the laboratory reporting limit was used for the calculation.
d CA DTSC-SL for residential soil for chlordane was updated to 1,700 ug/kg in April, 2019. Step-out sampling was performed based on the chlordane screening level from [2]. However, results from sampling were compared against this updated 1,700 ug/kg screening level.

Results highlighted in yellow exceed their respective screening values.
Results highlighted in blue exceed their respective hazardous waste criteria.

TABLE 2
SOIL ANALYTICAL RESULTS
PEA-E SITE INVESTIGATION
Elizabeth Learning Center
Cudahy, California
(Page 17 of 36)

Sample Location		Residential Soil Screening Level (April 2019)[a]			SB-50A	SB-50A	SB-50A	SB-50A	SB-50B	SB-50B	SB-50C	SB-50C	SB-51	SB-51	SB-52	SB-52	SB-52	SB-53	SB-53	SB-54	SB-54	SB-55	SB-55	SB-56	SB-56	SB-57	SB-57	SB-58	SB-58
Sample ID					SB-50A-0.8	SB-50A-0.8-DUP	SB-50A-1.3	SB-50A-1.3-DUP	SB-50B-0.8	SB-50B-1.3	SB-50C-0.8	SB-50C-1.3	SB-51-0.8	SB-51-3	SB-52-1.3	SB-52-3	SB-52-3-DUP	SB-53-1.3	SB-53-3	SB-54-1.3	SB-54-3	SB-55-0.8	SB-55-3	SB-56-0.5	SB-56-3	SB-57-0.5	SB-57-3	SB-58-1.3	SB-58-3
Sample Depth (feet bgs):					0.3-0.8	0.3-0.8	0.8-1.3	0.8-1.3	0.3-0.8	0.8-1.3	0.3-0.8	0.8-1.3	0.3-0.8	2.5-3	0.8-1.3	2.5-3	2.5-3	0.8-1.3	2.5-3	0.8-1.3	2.5-3	0.3-0.8	2.5-3	0-0.5	2.5-3	0-0.5	2.5-3	0.8-1.3	2.5-3
Sample Date:			STLC	TCLP	7/9/2019	7/9/2019	7/9/2019	7/9/2019	7/9/2019	7/9/2019	7/9/2019	7/9/2019	6/12/2019	6/12/2019	6/11/2019	6/11/2019	6/11/2019	6/12/2019	6/12/2019	6/12/2019	6/12/2019	6/12/2019	6/12/2019	6/12/2019	6/12/2019	6/12/2019	6/12/2019	6/12/2019	6/12/2019	6/12/2019
Metals (TTLC, USEPA Method 6010B/7471A)																													
Antimony (6010B)	mg/kg	31	150		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 2.0	< 2.0	--	--	--	--	--	--	--	--
Arsenic (6010B)	mg/kg	12[1]	50	100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1.0	< 1.0	--	--	--	--	--	--	--	--
Arsenic (6020)	mg/kg	12 - 19.6 [1]	50	100	--	--	--	--	--	--	--	--	--	--	2.7	< 1.0	< 1.0	--	--	< 1.0	< 1.0	--	--	--	--	--	--	--	--
Barium (6010B)	mg/kg	15,000	1,000	2,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	49	38	--	--	--	--	--	--	--	--
Beryllium (6010B)	mg/kg	16	7.5		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1.0	< 1.0	--	--	--	--	--	--	--	--
Cadmium (6010B)	mg/kg	71	10	20	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1.0	< 1.0	--	--	--	--	--	--	--	--
Chromium (6010B)	mg/kg	120,000	50	100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	7.1	4.1	--	--	--	--	--	--	--	--
Cobalt (6010B)	mg/kg	23	800	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	5.2	3.4	--	--	--	--	--	--	--	--
Copper (6010B)	mg/kg	3,100	250	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	5.6	3.3	--	--	--	--	--	--	--	--
Lead (6010B)	mg/kg	80[2]	50	100	100	250	21	19	37	2.7	5.4	3.7	43	11	40	2.1	< 1.0	57	< 1.0	< 1.0	< 1.0	9.5	2.1	14	8.2	13	1.1	29	< 1.0
Mercury (7471A)	mg/kg	11	2	4	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.10	< 0.10	--	--	--	--	--	--	--	--
Molybdenum (6010B)	mg/kg	390	3,500	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1.0	< 1.0	--	--	--	--	--	--	--	--
Nickel (6010B)	mg/kg	820	200	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	4.5	2.8	--	--	--	--	--	--	--	--
Selenium (6010B)	mg/kg	390	10	20	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1.0	< 1.0	--	--	--	--	--	--	--	--
Silver (6010B)	mg/kg	390	50	100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1.0	< 1.0	--	--	--	--	--	--	--	--
Thallium (6010B)	mg/kg	0.78	70		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1.0	< 1.0	--	--	--	--	--	--	--	--
Vanadium (6010B)	mg/kg	390	240	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	21	12	--	--	--	--	--	--	--	--
Zinc (6010B)	mg/kg	23,000	2,500	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	26	17	--	--	--	--	--	--	--	--
Organchlorine Pesticides [OCPs] (USEPA Method 8081A)																													
		Discrete Sample Screening Level[a]	Composited Sample Screening Level [2][b]																										
alpha-BHC	ug/kg	86	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
gamma-BHC	ug/kg	570	250, 160, 125	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
beta-BHC	ug/kg	300	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
delta-BHC	ug/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Heptachlor	ug/kg	130[2]	60, 40, 20	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Aldrin	ug/kg	33[2]	16, 10, 5	140	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Heptachlor epoxide	ug/kg	70	--	4,700	160	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
gamma-Chlordane[d]	ug/kg	1,700, 430[2]	215, 140, 105	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
alpha-Chlordane[d]	ug/kg	1,700, 430[2]	215, 140, 105	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Endosulfan I	ug/kg	450,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4,4'-DDE	ug/kg	1,600[2]	800, 530, 400	1,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dieldrin	ug/kg	35[2]	16, 10, 5	8,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Endrin	ug/kg	19,000	--	200	400	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4,4'-DDD	ug/kg	2,300[2]	1150, 760, 575	1,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Endosulfan II	ug/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4,4'-DDT	ug/kg	1,600[2]	800, 530, 400	1,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Endrin aldehyde	ug/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Endosulfan sulfate	ug/kg	380,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Methoxychlor	ug/kg	320,000	--	100,000	200,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Endrin ketone	ug/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Toxaphene	ug/kg	450	--	5,000	10,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chlordane (tech)[d]	ug/kg	1,700, 430[2]	215, 140, 105	2500	600	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Extractions																													
arsenic, STLC	mg/l	--	--	5	5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
arsenic, TCLP	mg/l	--	--	5	5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
lead, STLC	mg/l	--	--	5	5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
lead, TCLP	mg/l	--	--	5	5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chlordane, TCLP	mg/l	--	--	0.25	0.03	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

TABLE 2
SOIL ANALYTICAL RESULTS
PEA-E SITE INVESTIGATION
Elizabeth Learning Center
Cudahy, California
(Page 18 of 36)

Sample Location		Residential Soil Screening Level (April 2019)[a]			SB-50A	SB-50A	SB-50A	SB-50A	SB-50B	SB-50B	SB-50C	SB-50C	SB-51	SB-51	SB-52	SB-52	SB-52	SB-53	SB-53	SB-54	SB-54	SB-55	SB-55	SB-56	SB-56	SB-57	SB-57	SB-58	SB-58
Sample ID					SB-50A-0.8	SB-50A-0.8-DUP	SB-50A-1.3	SB-50A-1.3-DUP	SB-50B-0.8	SB-50B-1.3	SB-50C-0.8	SB-50C-1.3	SB-51-0.8	SB-51-3	SB-52-1.3	SB-52-3	SB-52-3-DUP	SB-53-1.3	SB-53-3	SB-54-1.3	SB-54-3	SB-55-0.8	SB-55-3	SB-56-0.5	SB-56-3	SB-57-0.5	SB-57-3	SB-58-1.3	SB-58-3
Sample Depth (feet bgs):					0.3-0.8	0.3-0.8	0.8-1.3	0.8-1.3	0.3-0.8	0.8-1.3	0.3-0.8	0.8-1.3	0.3-0.8	2.5-3	0.8-1.3	2.5-3	2.5-3	0.8-1.3	2.5-3	0.8-1.3	2.5-3	0.3-0.8	2.5-3	0-0.5	2.5-3	0-0.5	2.5-3	0.8-1.3	2.5-3
Sample Date:			STLC	TCLP	7/9/2019	7/9/2019	7/9/2019	7/9/2019	7/9/2019	7/9/2019	7/9/2019	7/9/2019	6/12/2019	6/12/2019	6/11/2019	6/11/2019	6/11/2019	6/12/2019	6/12/2019	6/12/2019	6/12/2019	6/12/2019	6/12/2019	6/12/2019	6/12/2019	6/12/2019	6/12/2019	6/12/2019	6/12/2019	6/12/2019
Polychlorinated Biphenyls [PCBs] (USEPA Method 8082)																													
*Aroclor 1260	ug/kg	240	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
*All Other Compounds Non-Detect	ug/kg	Varies	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Volatile Organic Compounds [VOCs] (USEPA Method 8260B/5035)																													
All Compounds Non-Detect	ug/kg	Varies	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total Petroleum Hydrocarbons [TPH] (8015M)																													
C4-C12	mg/kg	100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C13-C22	mg/kg	100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C23-C40	mg/kg	100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons [PAHs] (USEPA Method 8270SIM)																													
2-Methyl--phthalene	ug/kg	240,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Ace--phthene	ug/kg	3,600,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Ace--phthylene	ug/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Anthracene	ug/kg	17,000,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(a)anthracene	ug/kg	1,100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(a)pyrene	ug/kg	110	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(b)fluoranthene	ug/kg	1,100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(g,h,i)perylene	ug/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(k)fluoranthene	ug/kg	11,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chrysene	ug/kg	110,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dibenzo(a,h)anthracene	ug/kg	28	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Fluoranthene	ug/kg	2,400,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Fluorene	ug/kg	2,300,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Indeno(1,2,3-c,d)pyrene	ug/kg	1,100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Naphthalene	ug/kg	2,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Phenanthrene	ug/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Pyrene	ug/kg	1,800,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(a)pyrene Equivalence[c]	ug/kg	900[3]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Asbestos (qualitative)																													
Asbestos (qualitative)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	ND	ND	--	--	--	--	--	--	--	--

Notes:
bgs below ground surface
-- Not available
NA Not applicable
ND Not detected above the reporting limit
mg/kg milligrams per kilogram
ug/kg micrograms per kilogram
mg/l milligrams per liter
TTLC Total Threshold Limit Concentration
STLC Soluble Threshold Limit Concentration
TCLP Toxicity Leaching Characteristic Procedure
BHC benzene hexachloride
DDD dichlorodiphenyldichloroethane
DDE dichlorodiphenyldichloroethylene
DDT dichlorodiphenyltrichloroethane

[1] California background concentration range for arsenic.
[2] Screening value is from DTSC Interim Guidance, Evaulation of School Sites with Potential Soil Contamination as a Result of Lead from Lead-Based Paint, Organochlorine Pesticides from Termiticides, and Polychlorinated Biphenyls from Electrical Transformers, June 9 2006.
[3] Carcinogenic PAH background concentration for Southern California (Environ, 2002).
a Value is the lower of the California Department of Toxic Substance Control Note 3 Screening Levels (CA DTSC-SLs), April 2019, or EPA Regional Screening Levels (RSLs), April 2019, for residential soil.
b Screening value is listed as x,y,z where x=1:2 composite ratio, y=1:3 composite ratio, and z=1:4 composite ratio
c The Benzo(a)pyrene Equivalence (B[a]P-TE) concentration is calculated for each sample by multiplying each PAH chemical concentration by its Toxic Equivalency Factor. The Toxic Equivalency Factors are summed to obtain the Benzo(a)pyrene Equivalence concentration for the sample. (Nisbet and LaGoy, 1992). If the sample concentration was below the laboratory reporting limit, the laboratory reporting limit was used for the calculation.
d CA DTSC-SL for residential soil for chlordane was updated to 1,700 ug/kg in April, 2019. Step-out sampling was performed based on the chlordane screening level from [2]. However, results from sampling were compared against this updated 1,700 ug/kg screening level.

Results highlighted in yellow exceed their respective screening values.
Results highlighted in blue exceed their respective hazardous waste criteria.

TABLE 2
SOIL ANALYTICAL RESULTS
PEA-E SITE INVESTIGATION
Elizabeth Learning Center
Cudahy, California
(Page 19 of 36)

Sample Location		Residential Soil Screening Level (April 2019)[a]			SB-59	SB-59	SB-59	SB-59	SB-59A	SB-59A	SB-59A	SB-59A	SB-59A	SB-59A	SB-59B	SB-59B	SB-59B	SB-59C	SB-59C	SB-59C	SB-59C	SB-59C	SB-59C	SB-60	SB-60	SB-60
Sample ID					SB-59-1.3	SB-59-1.3-DUP	SB-59-1.8	SB-59-3	SB-59A-1.3	SB-59A-1.3-DUP	SB-59A-1.8	SB-59A-1.8-DUP	SB-59A-3	SB-59A-3-DUP	SB-59B-1.3	SB-59B-1.8	SB-59B-3	SB-59C-1.3	SB-59C-1.3-DUP	SB-59C-1.8	SB-59C-1.8-DUP	SB-59C-3	SB-59C-3-DUP	SB-60-1.3	SB-60-3	SB-60-3-DUP
Sample Depth (feet bgs):					0.8-1.3	0.8-1.3	1.3-1.8	2.5-3	0.8-1.3	0.8-1.3	1.3-1.8	1.3-1.8	2.5-3	2.5-3	0.8-1.3	1.3-1.8	2.5-3	0.8-1.3	0.8-1.3	1.3-1.8	1.3-1.8	2.5-3	2.5-3	0.8-1.3	2.5-3	2.5-3
Sample Date:			STLC	TCLP	6/12/2019	6/12/2019	6/12/2019	6/12/2019	7/9/2019	7/9/2019	7/9/2019	7/9/2019	7/9/2019	7/9/2019	7/9/2019	7/9/2019	7/9/2019	7/9/2019	7/9/2019	7/9/2019	7/9/2019	7/9/2019	7/9/2019	6/11/2019	6/11/2019	6/11/2019
Metals (TTLC, USEPA Method 6010B/7471A)																										
Antimony (6010B)	mg/kg	31	150		< 2.0	< 2.0	--	< 2.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Arsenic (6010B)	mg/kg	12[1]	50	100	74	130	--	< 1.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Arsenic (6020)	mg/kg	12 - 19.6 [1]	50	100	84	140	45	< 1.0	110	120	62	42	< 1.0	< 1.0	79	< 1.0	< 0.99	95	120	41	14	1.5	1.1	--	--	--
Barium (6010B)	mg/kg	15,000	1,000	2,000	56	70	--	43	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Beryllium (6010B)	mg/kg	16	7.5		< 1.0	< 1.0	--	< 1.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Cadmium (6010B)	mg/kg	71	10	20	< 1.0	< 1.0	--	< 1.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chromium (6010B)	mg/kg	120,000	50	100	16	24	--	5.4	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Cobalt (6010B)	mg/kg	23	800	--	6.4	7.6	--	4.2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Copper (6010B)	mg/kg	3,100	250	--	6.0	12	--	4.3	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Lead (6010B)	mg/kg	80[2]	50	100	17	40	--	< 1.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	5.0	< 1.0	< 1.0
Mercury (7471A)	mg/kg	11	2	4	0.11	< 0.10	--	< 0.10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Molybdenum (6010B)	mg/kg	390	3,500	--	< 1.0	< 1.0	--	< 1.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Nickel (6010B)	mg/kg	820	200	--	7.1	11	--	3.6	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Selenium (6010B)	mg/kg	390	10	20	< 1.0	< 1.0	--	< 1.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Silver (6010B)	mg/kg	390	50	100	< 1.0	< 1.0	--	< 1.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Thallium (6010B)	mg/kg	0.78	70		< 1.0	< 1.0	--	< 1.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Vanadium (6010B)	mg/kg	390	240	--	31	38	--	17	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Zinc (6010B)	mg/kg	23,000	2,500	--	42	47	--	20	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Organchlorine Pesticides [OCPs] (USEPA Method 8081A)																										
		Discrete Sample Screening Level[a]	Composited Sample Screening Level [2][b]																							
alpha-BHC	ug/kg	86	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
gamma-BHC	ug/kg	570	250, 160, 125	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
beta-BHC	ug/kg	300	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
delta-BHC	ug/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Heptachlor	ug/kg	130[2]	60, 40, 20	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Aldrin	ug/kg	33[2]	16, 10, 5	140	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Heptachlor epoxide	ug/kg	70	--	4,700	160	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
gamma-Chlordane[d]	ug/kg	1,700, 430[2]	215, 140, 105	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
alpha-Chlordane[d]	ug/kg	1,700, 430[2]	215, 140, 105	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Endosulfan I	ug/kg	450,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4,4'-DDE	ug/kg	1,600[2]	800, 530, 400	1,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dieldrin	ug/kg	35[2]	16, 10, 5	8,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Endrin	ug/kg	19,000	--	200	400	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4,4'-DDD	ug/kg	2,300[2]	1150, 760, 575	1,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Endosulfan II	ug/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4,4'-DDT	ug/kg	1,600[2]	800, 530, 400	1,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Endrin aldehyde	ug/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Endosulfan sulfate	ug/kg	380,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Methoxychlor	ug/kg	320,000	--	100,000	200,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Endrin ketone	ug/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Toxaphene	ug/kg	450	--	5,000	10,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chlordane (tech)[d]	ug/kg	1,700, 430[2]	215, 140, 105	2500	600	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Extractions																										
arsenic, STLC	mg/l	--	--	5	5	6.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
arsenic, TCLP	mg/l	--	--	5	5	1.3	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
lead, STLC	mg/l	--	--	5	5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
lead, TCLP	mg/l	--	--	5	5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chlordane, TCLP	mg/l	--	--	0.25	0.03	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

TABLE 2
SOIL ANALYTICAL RESULTS
PEA-E SITE INVESTIGATION
Elizabeth Learning Center
Cudahy, California
(Page 20 of 36)

Sample Location		Residential Soil Screening Level (April 2019)[a]			SB-59	SB-59	SB-59	SB-59	SB-59A	SB-59A	SB-59A	SB-59A	SB-59A	SB-59A	SB-59B	SB-59B	SB-59B	SB-59C	SB-59C	SB-59C	SB-59C	SB-59C	SB-59C	SB-60	SB-60	SB-60
Sample ID					SB-59-1.3	SB-59-1.3-DUP	SB-59-1.8	SB-59-3	SB-59A-1.3	SB-59A-1.3-DUP	SB-59A-1.8	SB-59A-1.8-DUP	SB-59A-3	SB-59A-3-DUP	SB-59B-1.3	SB-59B-1.8	SB-59B-3	SB-59C-1.3	SB-59C-1.3-DUP	SB-59C-1.8	SB-59C-1.8-DUP	SB-59C-3	SB-59C-3-DUP	SB-60-1.3	SB-60-3	SB-60-3-DUP
Sample Depth (feet bgs):					0.8-1.3	0.8-1.3	1.3-1.8	2.5-3	0.8-1.3	0.8-1.3	1.3-1.8	1.3-1.8	2.5-3	2.5-3	0.8-1.3	1.3-1.8	2.5-3	0.8-1.3	0.8-1.3	1.3-1.8	1.3-1.8	2.5-3	2.5-3	0.8-1.3	2.5-3	2.5-3
Sample Date:			STLC	TCLP	6/12/2019	6/12/2019	6/12/2019	6/12/2019	7/9/2019	7/9/2019	7/9/2019	7/9/2019	7/9/2019	7/9/2019	7/9/2019	7/9/2019	7/9/2019	7/9/2019	7/9/2019	7/9/2019	7/9/2019	7/9/2019	7/9/2019	6/11/2019	6/11/2019	6/11/2019
Polychlorinated Biphenyls [PCBs] (USEPA Method 8082)																										
*Aroclor 1260	ug/kg	240	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
*All Other Compounds Non-Detect	ug/kg	Varies	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Volatile Organic Compounds [VOCs] (USEPA Method 8260B/5035)																										
All Compounds Non-Detect	ug/kg	Varies	--	--	ND	--	--	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total Petroleum Hydrocarbons [TPH] (8015M)																										
C4-C12	mg/kg	100	--	--	< 1.0	< 1.0	--	< 1.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C13-C22	mg/kg	100	--	--	1.4	1.7	--	< 1.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C23-C40	mg/kg	100	--	--	13	21	--	< 1.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons [PAHs] (USEPA Method 8270SIM)																										
2-Methyl--phthalene	ug/kg	240,000	--	--	< 5.0	< 25	--	< 5.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Ace--phthene	ug/kg	3,600,000	--	--	< 5.0	< 25	--	< 5.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Ace--phthylene	ug/kg	--	--	--	< 5.0	< 25	--	< 5.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Anthracene	ug/kg	17,000,000	--	--	< 5.0	< 25	--	< 5.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(a)anthracene	ug/kg	1,100	--	--	< 5.0	< 25	--	< 5.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(a)pyrene	ug/kg	110	--	--	< 5.0	< 25	--	< 5.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(b)fluoranthene	ug/kg	1,100	--	--	< 5.0	< 25	--	< 5.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(g,h,i)perylene	ug/kg	--	--	--	< 5.0	< 25	--	< 5.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(k)fluoranthene	ug/kg	11,000	--	--	< 5.0	< 25	--	< 5.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chrysene	ug/kg	110,000	--	--	< 5.0	< 25	--	< 5.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dibenzo(a,h)anthracene	ug/kg	28	--	--	< 5.0	< 25	--	< 5.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Fluoranthene	ug/kg	2,400,000	--	--	< 5.0	< 25	--	< 5.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Fluorene	ug/kg	2,300,000	--	--	< 5.0	< 25	--	< 5.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Indeno(1,2,3-c,d)pyrene	ug/kg	1,100	--	--	< 5.0	< 25	--	< 5.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Naphthalene	ug/kg	2,000	--	--	< 5.0	< 25	--	< 5.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Phenanthrene	ug/kg	--	--	--	< 5.0	< 25	--	< 5.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Pyrene	ug/kg	1,800,000	--	--	< 5.0	< 25	--	< 5.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(a)pyrene Equivalence[c]	ug/kg	900[3]	--	--	NA	NA	--	NA	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Asbestos (qualitative)																										
Asbestos (qualitative)	--	--	--	--	ND	--	--	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Notes:
bgs below ground surface
-- Not available
NA Not applicable
ND Not detected above the reporting limit
mg/kg milligrams per kilogram
ug/kg micrograms per kilogram
mg/l milligrams per liter
TTLC Total Threshold Limit Concentration
STLC Soluble Threshold Limit Concentration
TCLP Toxicity Leaching Characteristic Procedure
BHC benzene hexachloride
DDD dichlorodiphenyldichloroethane
DDE dichlorodiphenyldichloroethylene
DDT dichlorodiphenyltrichloroethane

[1] California background concentration range for arsenic.
[2] Screening value is from DTSC Interim Guidance, Evaulation of School Sites with Potential Soil Contamination as a Result of Lead from Lead-Based Paint, Organochlorine Pesticides from Termiticides, and Polychlorinated Biphenyls from Electrical Transformers, June 9 2006.
[3] Carcinogenic PAH background concentration for Southern California (Environ, 2002).
a Value is the lower of the California Department of Toxic Substance Control Note 3 Screening Levels (CA DTSC-SLs), April 2019, or EPA Regional Screening Levels (RSLs), April 2019, for residential soil.
b Screening value is listed as x,y,z where x=1:2 composite ratio, y=1:3 composite ratio, and z=1:4 composite ratio
c The Benzo(a)pyrene Equivalence (B[a]P-TE) concentration is calculated for each sample by multiplying each PAH chemical concentration by its Toxic Equivalency Factor. The Toxic Equivalency Factors are summed to obtain the Benzo(a)pyrene Equivalence concentration for the sample. (Nisbet and LaGoy, 1992). If the sample concentration was below the laboratory reporting limit, the laboratory reporting limit was used for the calculation.
d CA DTSC-SL for residential soil for chlordane was updated to 1,700 ug/kg in April, 2019. Step-out sampling was performed based on the chlordane screening level from [2]. However, results from sampling were compared against this updated 1,700 ug/kg screening level.

Results highlighted in yellow exceed their respective screening values.
Results highlighted in blue exceed their respective hazardous waste criteria.

TABLE 2
SOIL ANALYTICAL RESULTS
PEA-E SITE INVESTIGATION
Elizabeth Learning Center
Cudahy, California
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Sample Location		Residential Soil Screening Level (April 2019)[a]			SB-61	SB-61	SB-61	SB-61	SB-62	SB-62	SB-62	SB-63	SB-63	SB-64	SB-64	SB-65	SB-65	SB-66	SB-66	SB-67	SB-67	SB-67	SB-67	SB-68	SB-68	SB-68	SB-68A	SB-68A	SB-68B	SB-68B
Sample ID					SB-61-0.5	SB-61-0.5-DUP	SB-61-3	SB-61-3-DUP	SB-62-1.2	SB-62-1.7	SB-62-3	SB-63-0.9	SB-63-3	SB-64-0.5	SB-64-3	SB-65-0.5	SB-65-3	SB-66-1.3	SB-66-3	SB-67-1.3	SB-67-1.3-DUP	SB-67-3	SB-67-3-DUP	SB-68-0.5	SB-68-1	SB-68-3	SB-68A-0.5	SB-68A-1	SB-68B-0.5	SB-68B-1
Sample Depth (feet bgs):					0-0.5	0-0.5	2.5-3	2.5-3	0.7-1.2	1.2-1.7	2.5-3	0.4-0.9	2.5-3	0-0.5	2.5-3	0-0.5	2.5-3	0.8-1.3	2.5-3	0.8-1.3	0.8-1.3	2.5-3	2.5-3	0-0.5	0.5-1	2.5-3	0-0.5	0.5-1	0-0.5	0.5-1
Sample Date:					6/12/2019	6/12/2019	6/12/2019	6/12/2019	6/11/2019	6/11/2019	6/11/2019	6/12/2019	6/12/2019	6/12/2019	6/12/2019	6/12/2019	6/12/2019	6/12/2019	6/12/2019	6/12/2019	6/12/2019	6/12/2019	6/12/2019	6/13/2019	6/13/2019	6/13/2019	7/8/2019	7/8/2019	7/8/2019	7/8/2019
Metals (TTLC, USEPA Method 6010B/7471A)																														
Antimony (6010B)	mg/kg	31	150		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 2.0	--	< 2.0	--	--	--	--	--	--	--	--
Arsenic (6010B)	mg/kg	12[1]	50	100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1.0	--	< 1.0	--	--	--	--	--	--	--	--
Arsenic (6020)	mg/kg	12 - 19.6 [1]	50	100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1.1	1.2	< 1.0	< 1.0	--	--	--	--	--	--	--
Barium (6010B)	mg/kg	15,000	1,000	2,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	46	--	58	--	--	--	--	--	--	--	--
Beryllium (6010B)	mg/kg	16	7.5		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1.0	--	< 1.0	--	--	--	--	--	--	--	--
Cadmium (6010B)	mg/kg	71	10	20	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1.0	--	< 1.0	--	--	--	--	--	--	--	--
Chromium (6010B)	mg/kg	120,000	50	100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	7.2	--	6.4	--	--	--	--	--	--	--	--
Cobalt (6010B)	mg/kg	23	800	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	4.9	--	5.2	--	--	--	--	--	--	--	--
Copper (6010B)	mg/kg	3,100	250	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	5.6	--	5.1	--	--	--	--	--	--	--	--
Lead (6010B)	mg/kg	80[2]	50	100	20	22	19	13	440	22	1.4	11	5.7	34	7.9	28	1.9	7.9	< 1.0	6.3	--	< 1.0	--	150	17	6.8	32	22	66	23
Mercury (7471A)	mg/kg	11	2	4	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.14	--	< 0.10	--	--	--	--	--	--	--	--
Molybdenum (6010B)	mg/kg	390	3,500	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1.0	--	< 1.0	--	--	--	--	--	--	--	--
Nickel (6010B)	mg/kg	820	200	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	4.5	--	4.6	--	--	--	--	--	--	--	--
Selenium (6010B)	mg/kg	390	10	20	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1.0	--	< 1.0	--	--	--	--	--	--	--	--
Silver (6010B)	mg/kg	390	50	100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1.0	--	< 1.0	--	--	--	--	--	--	--	--
Thallium (6010B)	mg/kg	0.78	70		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1.0	--	< 1.0	--	--	--	--	--	--	--	--
Vanadium (6010B)	mg/kg	390	240	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	21	--	18	--	--	--	--	--	--	--	--
Zinc (6010B)	mg/kg	23,000	2,500	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	32	--	25	--	--	--	--	--	--	--	--
Organochlorine Pesticides [OCPs] (USEPA Method 8081A)																														
		Discrete Sample Screening Level[a]	Composited Sample Screening Level [2][b]																												
alpha-BHC	ug/kg	86	--	--	--	--	--	--	--	--	--	--	--	< 1.0	< 1.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
gamma-BHC	ug/kg	570	250, 160, 125	--	--	--	--	--	--	--	--	--	--	< 1.0	< 1.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
beta-BHC	ug/kg	300	--	--	--	--	--	--	--	--	--	--	--	< 1.0	< 1.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
delta-BHC	ug/kg	--	--	--	--	--	--	--	--	--	--	--	--	< 1.0	< 1.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Heptachlor	ug/kg	130[2]	60, 40, 20	--	--	--	--	--	--	--	--	--	--	< 1.0	< 1.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Aldrin	ug/kg	33[2]	16, 10, 5	140	--	--	--	--	--	--	--	--	--	< 1.0	< 1.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Heptachlor epoxide	ug/kg	70	--	4,700	160	--	--	--	--	--	--	--	--	< 1.0	< 1.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
gamma-Chlordane[d]	ug/kg	1,700, 430[2]	215, 140, 105	--	--	--	--	--	--	--	--	--	--	< 1.0	< 1.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
alpha-Chlordane[d]	ug/kg	1,700, 430[2]	215, 140, 105	--	--	--	--	--	--	--	--	--	--	< 1.0	< 1.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Endosulfan I	ug/kg	450,000	--	--	--	--	--	--	--	--	--	--	--	< 1.0	< 1.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4,4'-DDE	ug/kg	1,600[2]	800, 530, 400	1,000	--	--	--	--	--	--	--	--	--	< 2.0	< 2.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dieldrin	ug/kg	35[2]	16, 10, 5	8,000	--	--	--	--	--	--	--	--	--	< 2.0	< 2.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Endrin	ug/kg	19,000	--	200	400	--	--	--	--	--	--	--	--	< 2.0	< 2.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4,4'-DDD	ug/kg	2,300[2]	1150, 760, 575	1,000	--	--	--	--	--	--	--	--	--	< 2.0	< 2.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Endosulfan II	ug/kg	--	--	--	--	--	--	--	--	--	--	--	--	< 2.0	< 2.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4,4'-DDT	ug/kg	1,600[2]	800, 530, 400	1,000	--	--	--	--	--	--	--	--	--	< 2.0	< 2.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Endrin aldehyde	ug/kg	--	--	--	--	--	--	--	--	--	--	--	--	< 2.0	< 2.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Endosulfan sulfate	ug/kg	380,000	--	--	--	--	--	--	--	--	--	--	--	< 2.0	< 2.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Methoxychlor	ug/kg	320,000	--	--	100,000	200,000	--	--	--	--	--	--	--	< 5.0	< 5.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Endrin ketone	ug/kg	--	--	--	--	--	--	--	--	--	--	--	--	< 2.0	< 2.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Toxaphene	ug/kg	450	--	5,000	10,000	--	--	--	--	--	--	--	--	< 50	< 50	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chlordane (tech)[d]	ug/kg	1,700, 430[2]	215, 140, 105	2500	600	--	--	--	--	--	--	--	--	< 8.5	< 8.5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Extractions																														
arsenic, STLC	mg/l	--	--	5	5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
arsenic, TCLP	mg/l	--	--	5	5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
lead, STLC	mg/l	--	--	5	5	--	--	--	--	91	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
lead, TCLP	mg/l	--	--	5	5	--	--	--	--	5.2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chlordane, TCLP	mg/l	--	--	0.25	0.03	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

TABLE 2
SOIL ANALYTICAL RESULTS
PEA-E SITE INVESTIGATION
Elizabeth Learning Center
Cudahy, California
(Page 22 of 36)

Sample Location		Residential Soil Screening Level (April 2019)[a]			SB-61	SB-61	SB-61	SB-61	SB-62	SB-62	SB-62	SB-63	SB-63	SB-64	SB-64	SB-65	SB-65	SB-66	SB-66	SB-67	SB-67	SB-67	SB-67	SB-68	SB-68	SB-68	SB-68A	SB-68A	SB-68B	SB-68B
Sample ID					SB-61-0.5	SB-61-0.5-DUP	SB-61-3	SB-61-3-DUP	SB-62-1.2	SB-62-1.7	SB-62-3	SB-63-0.9	SB-63-3	SB-64-0.5	SB-64-3	SB-65-0.5	SB-65-3	SB-66-1.3	SB-66-3	SB-67-1.3	SB-67-1.3-DUP	SB-67-3	SB-67-3-DUP	SB-68-0.5	SB-68-1	SB-68-3	SB-68A-0.5	SB-68A-1	SB-68B-0.5	SB-68B-1
Sample Depth (feet bgs):					0-0.5	0-0.5	2.5-3	2.5-3	0.7-1.2	1.2-1.7	2.5-3	0.4-0.9	2.5-3	0-0.5	2.5-3	0-0.5	2.5-3	0.8-1.3	2.5-3	0.8-1.3	0.8-1.3	2.5-3	2.5-3	0-0.5	0.5-1	2.5-3	0-0.5	0.5-1	0-0.5	0.5-1
Sample Date:			STLC	TCLP	6/12/2019	6/12/2019	6/12/2019	6/12/2019	6/11/2019	6/11/2019	6/11/2019	6/12/2019	6/12/2019	6/12/2019	6/12/2019	6/12/2019	6/12/2019	6/12/2019	6/12/2019	6/12/2019	6/12/2019	6/12/2019	6/12/2019	6/13/2019	6/13/2019	6/13/2019	7/8/2019	7/8/2019	7/8/2019	7/8/2019
Polychlorinated Biphenyls [PCBs] (USEPA Method 8082)																														
*Aroclor 1260	ug/kg	240	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
All Other Compounds Non-Detect	ug/kg	Varies	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Volatile Organic Compounds [VOCs] (USEPA Method 8260B/5035)																														
All Compounds Non-Detect	ug/kg	Varies	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total Petroleum Hydrocarbons [TPH] (8015M)																														
C4-C12	mg/kg	100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C13-C22	mg/kg	100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C23-C40	mg/kg	100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons [PAHs] (USEPA Method 8270SIM)																														
2-Methyl--phthalene	ug/kg	240,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Ace--phthene	ug/kg	3,600,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Ace--phthylene	ug/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Anthracene	ug/kg	17,000,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(a)anthracene	ug/kg	1,100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(a)pyrene	ug/kg	110	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(b)fluoranthene	ug/kg	1,100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(g,h,i)perylene	ug/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(k)fluoranthene	ug/kg	11,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chrysene	ug/kg	110,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dibenzo(a,h)anthracene	ug/kg	28	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Fluoranthene	ug/kg	2,400,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Fluorene	ug/kg	2,300,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Indeno(1,2,3-c,d)pyrene	ug/kg	1,100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Naphthalene	ug/kg	2,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Phenanthrene	ug/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Pyrene	ug/kg	1,800,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(a)pyrene Equivalence[c]	ug/kg	900[3]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Asbestos (qualitative)																														
Asbestos (qualitative)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	ND	--	ND	--	--	--	--	--	--	--	--

Notes:

bgs	below ground surface
--	Not available
NA	Not applicable
ND	Not detected above the reporting limit
mg/kg	milligrams per kilogram
ug/kg	micrograms per kilogram
mg/l	milligrams per liter
TTLC	Total Threshold Limit Concentration
STLC	Soluble Threshold Limit Concentration
TCLP	Toxicity Leaching Characteristic Procedure
BHC	benzene hexachloride
DDD	dichlorodiphenyldichloroethane
DDE	dichlorodiphenyldichloroethylene
DDT	dichlorodiphenyltrichloroethane

[1] California background concentration range for arsenic.

[2] Screening value is from DTSC Interim Guidance, Evaulation of School Sites with Potential Soil Contamination as a Result of Lead from Lead-Based Paint, Organochlorine Pesticides from Termiticides, and Polychlorinated Biphenyls from Electrical Transformers, June 9 2006.

[3] Carcinogenic PAH background concentration for Southern California (Environ, 2002).

a Value is the lower of the California Department of Toxic Substance Control Note 3 Screening Levels (CA DTSC-SLs), April 2019, or EPA Regional Screening Levels (RSLs), April 2019, for residential soil.

b Screening value is listed as x,y,z where x=1:2 composite ratio, y=1:3 composite ratio, and z=1:4 composite ratio

c The Benzo(a)pyrene Equivalence (B[a]P-TE) concentration is calculated for each sample by multiplying each PAH chemical concentration by its Toxic Equivalency Factor. The Toxic Equivalency Factors are summed to obtain the Benzo(a)pyrene Equivalence concentration for the sample. (Nisbet and LaGoy, 1992). If the sample concentration was below the laboratory reporting limit, the laboratory reporting limit was used for the calculation.

d CA DTSC-SL for residential soil for chlordane was updated to 1,700 ug/kg in April, 2019. Step-out sampling was performed based on the chlordane screening level from [2]. However, results from sampling were compared against this updated 1,700 ug/kg screening level.

Results highlighted in yellow exceed their respective screening values.

Results highlighted in blue exceed their respective hazardous waste criteria.

TABLE 2
SOIL ANALYTICAL RESULTS
PEA-E SITE INVESTIGATION
Elizabeth Learning Center
Cudahy, California

Sample Location		Residential Soil Screening Level (April 2019)[a]	STLC	TCLP	SB-69	SB-69	SB-70	SB-70	SB-71	SB-71	SB-72	SB-72	SB-72	SB-73	SB-73	SB-73	SB-74	SB-74	SB-75	SB-75	SB-76	SB-76	SB-77	SB-77	SB-77	SB-78	SB-78	SB-78	SB-78A	SB-78A	SB-78B
Sample ID					SB-69-1.1	SB-69-3	SB-70-1.2	SB-70-3	SB-71-1.1	SB-71-3	SB-72-1.2	SB-72-3	SB-72-3-DUP	SB-73-1.1	SB-73-3	SB-73-3-DUP	SB-74-1.2	SB-74-3	SB-75-1.3	SB-75-3	SB-76-0.5	SB-76-3	SB-77-1.1	SB-77-1.6	SB-77-3	SB-78-0.8	SB-78-1.3	SB-78-3	SB-78A-0.8	SB-78A-1.3	SB-78B-0.8
Sample Depth (feet bgs):					0.6-1.1	2.5-3	0.7-1.2	2.5-3	0.6-1.1	2.5-3	0.7-1.2	2.5-3	2.5-3	0.6-1.1	2.5-3	2.5-3	0.7-1.2	2.5-3	0.8-1.3	2.5-3	0-0.5	2.5-3	0.6-1.1	1.1-1.6	2.5-3	0.3-0.8	0.8-1.3	2.5-3	0.3-0.8	0.8-1.3	0.3-0.8
Sample Date:					6/13/2019	6/13/2019	6/11/2019	6/11/2019	6/11/2019	6/11/2019	6/11/2019	6/11/2019	6/11/2019	6/11/2019	6/11/2019	6/11/2019	6/11/2019	6/11/2019	6/11/2019	6/11/2019	6/13/2019	6/13/2019	6/11/2019	6/11/2019	6/11/2019	6/13/2019	6/13/2019	6/13/2019	7/8/2019	7/8/2019	7/8/2019
Metals (TTLC, USEPA Method 6010B/7471A)																															
Antimony (6010B)	mg/kg	31	150		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 2.0	--	< 2.0	--	--	--	--	--	--
Arsenic (6010B)	mg/kg	12[1]	50	100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	13	--	1.1	--	--	--	--	--	--
Arsenic (6020)	mg/kg	12 - 19.6 [1]	50	100	--	--	< 1.0	< 1.0	--	--	--	--	--	--	--	--	--	--	--	--	4.9	6.1	13	8.0	1.5	--	--	--	--	--	--
Barium (6010B)	mg/kg	15,000	1,000	2,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	95	--	50	--	--	--	--	--	--
Beryllium (6010B)	mg/kg	16	7.5		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1.0	--	< 1.0	--	--	--	--	--	--
Cadmium (6010B)	mg/kg	71	10	20	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1.0	--	< 1.0	--	--	--	--	--	--
Chromium (6010B)	mg/kg	120,000	50	100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	11	--	7.0	--	--	--	--	--	--
Cobalt (6010B)	mg/kg	23	800	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	5.8	--	4.9	--	--	--	--	--	--
Copper (6010B)	mg/kg	3,100	250	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	12	--	7.4	--	--	--	--	--	--
Lead (6010B)	mg/kg	80[2]	50	100	6.3	3.4	19	< 1.0	7.9	< 1.0	1.9	< 1.0	< 1.0	24	1.5	4.1	13	< 1.0	20	< 1.0	67	2.1	16	--	16	160	2.7	< 1.0	26	12	29
Mercury (7471A)	mg/kg	11	2	4	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.10	--	< 0.10	--	--	--	--	--	--
Molybdenum (6010B)	mg/kg	390	3,500	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1.0	--	< 1.0	--	--	--	--	--	--
Nickel (6010B)	mg/kg	820	200	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	10	--	5.0	--	--	--	--	--	--
Selenium (6010B)	mg/kg	390	10	20	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1.0	--	< 1.0	--	--	--	--	--	--
Silver (6010B)	mg/kg	390	50	100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1.0	--	< 1.0	--	--	--	--	--	--
Thallium (6010B)	mg/kg	0.78	70		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1.0	--	< 1.0	--	--	--	--	--	--
Vanadium (6010B)	mg/kg	390	240	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	24	--	21	--	--	--	--	--	--
Zinc (6010B)	mg/kg	23,000	2,500	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	56	--	34	--	--	--	--	--	--
Organochlorine Pesticides [OCPs] (USEPA Method 8081A)																															
		Discrete Sample Screening Level[a]	Composited Sample Screening Level [2][b]																														
alpha-BHC	ug/kg	86	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
gamma-BHC	ug/kg	570	250, 160, 125	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
beta-BHC	ug/kg	300	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
delta-BHC	ug/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Heptachlor	ug/kg	130[2]	60, 40, 20	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Aldrin	ug/kg	33[2]	16, 10, 5	140	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Heptachlor epoxide	ug/kg	70	--	4,700	160	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
gamma-Chlordane[d]	ug/kg	1,700, 430[2]	215, 140, 105	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
alpha-Chlordane[d]	ug/kg	1,700, 430[2]	215, 140, 105	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Endosulfan I	ug/kg	450,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4,4'-DDE	ug/kg	1,600[2]	800, 530, 400	1,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dieldrin	ug/kg	35[2]	16, 10, 5	8,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Endrin	ug/kg	19,000	--	200	400	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4,4'-DDD	ug/kg	2,300[2]	1150, 760, 575	1,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Endosulfan II	ug/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4,4'-DDT	ug/kg	1,600[2]	800, 530, 400	1,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Endrin aldehyde	ug/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Endosulfan sulfate	ug/kg	380,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Methoxychlor	ug/kg	320,000	--	100,000	200,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Endrin ketone	ug/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Toxaphene	ug/kg	450	--	5,000	10,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chlordane (tech)[d]	ug/kg	1,700, 430[2]	215, 140, 105	2500	600	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Extractions																															
arsenic, STLC	mg/l	--	--	5	5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
arsenic, TCLP	mg/l	--	--	5	5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
lead, STLC	mg/l	--	--	5	5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1.7	--	--	--	--	--	--
lead, TCLP	mg/l	--	--	5	5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.25	--	--	--	--	--	--
Chlordane, TCLP	mg/l	--	--	0.25	0.03	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

TABLE 2
SOIL ANALYTICAL RESULTS
PEA-E SITE INVESTIGATION
Elizabeth Learning Center
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Sample Location		Residential Soil Screening Level (April 2019)[a]	STLC	TCLP	SB-69	SB-69	SB-70	SB-70	SB-71	SB-71	SB-72	SB-72	SB-72	SB-73	SB-73	SB-73	SB-74	SB-74	SB-75	SB-75	SB-76	SB-76	SB-77	SB-77	SB-77	SB-78	SB-78	SB-78	SB-78A	SB-78A	SB-78B
Sample ID					SB-69-1.1	SB-69-3	SB-70-1.2	SB-70-3	SB-71-1.1	SB-71-3	SB-72-1.2	SB-72-3	SB-72-3-DUP	SB-73-1.1	SB-73-3	SB-73-3-DUP	SB-74-1.2	SB-74-3	SB-75-1.3	SB-75-3	SB-76-0.5	SB-76-3	SB-77-1.1	SB-77-1.6	SB-77-3	SB-78-0.8	SB-78-1.3	SB-78-3	SB-78A-0.8	SB-78A-1.3	SB-78B-0.8
Sample Depth (feet bgs):					0.6-1.1	2.5-3	0.7-1.2	2.5-3	0.6-1.1	2.5-3	0.7-1.2	2.5-3	2.5-3	0.6-1.1	2.5-3	2.5-3	0.7-1.2	2.5-3	0.8-1.3	2.5-3	0-0.5	2.5-3	0.6-1.1	1.1-1.6	2.5-3	0.3-0.8	0.8-1.3	2.5-3	0.3-0.8	0.8-1.3	0.3-0.8
Sample Date:					6/13/2019	6/13/2019	6/11/2019	6/11/2019	6/11/2019	6/11/2019	6/11/2019	6/11/2019	6/11/2019	6/11/2019	6/11/2019	6/11/2019	6/11/2019	6/11/2019	6/11/2019	6/11/2019	6/13/2019	6/13/2019	6/11/2019	6/11/2019	6/11/2019	6/13/2019	6/13/2019	6/13/2019	7/8/2019	7/8/2019	7/8/2019
Polychlorinated Biphenyls [PCBs] (USEPA Method 8082)																															
*Aroclor 1260	ug/kg	240	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 16	--	< 16	--	--	--	--	--	--
All Other Compounds Non-Detect	ug/kg	Varies	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	ND	--	ND	--	--	--	--	--	--
Volatile Organic Compounds [VOCs] (USEPA Method 8260B/5035)																															
All Compounds Non-Detect	ug/kg	Varies	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	ND	--	ND	--	--	--	--	--	--
Total Petroleum Hydrocarbons [TPH] (8015M)																															
C4-C12	mg/kg	100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1.0	--	< 1.0	--	--	--	--	--	--
C13-C22	mg/kg	100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	4.3	--	1.4	--	--	--	--	--	--
C23-C40	mg/kg	100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	82	--	16	--	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons [PAHs] (USEPA Method 8270SIM)																															
2-Methyl--phthalene	ug/kg	240,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 25	--	< 5.0	--	--	--	--	--	--
Ace--phthene	ug/kg	3,600,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 25	--	< 5.0	--	--	--	--	--	--
Ace--phthylene	ug/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 25	--	< 5.0	--	--	--	--	--	--
Anthracene	ug/kg	17,000,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 25	--	< 5.0	--	--	--	--	--	--
Benzo(a)anthracene	ug/kg	1,100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 25	--	< 5.0	--	--	--	--	--	--
Benzo(a)pyrene	ug/kg	110	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 25	--	< 5.0	--	--	--	--	--	--
Benzo(b)fluoranthene	ug/kg	1,100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	33	--	< 5.0	--	--	--	--	--	--
Benzo(g,h,i)perylene	ug/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	27	--	< 5.0	--	--	--	--	--	--
Benzo(k)fluoranthene	ug/kg	11,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 25	--	< 5.0	--	--	--	--	--	--
Chrysene	ug/kg	110,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 25	--	< 5.0	--	--	--	--	--	--
Dibenzo(a,h)anthracene	ug/kg	28	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 25	--	< 5.0	--	--	--	--	--	--
Fluoranthene	ug/kg	2,400,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 25	--	< 5.0	--	--	--	--	--	--
Fluorene	ug/kg	2,300,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 25	--	< 5.0	--	--	--	--	--	--
Indeno(1,2,3-c,d)pyrene	ug/kg	1,100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 25	--	< 5.0	--	--	--	--	--	--
Naphthalene	ug/kg	2,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 25	--	< 5.0	--	--	--	--	--	--
Phenanthrene	ug/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 25	--	< 5.0	--	--	--	--	--	--
Pyrene	ug/kg	1,800,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 25	--	< 5.0	--	--	--	--	--	--
Benzo(a)pyrene Equivalence[c]	ug/kg	900[3]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	62	--	NA	--	--	--	--	--	--
Asbestos (qualitative)																															
Asbestos (qualitative)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Notes:
bgs below ground surface
-- Not available
NA Not applicable
ND Not detected above the reporting limit
mg/kg milligrams per kilogram
ug/kg micrograms per kilogram
mg/l milligrams per liter
TTLC Total Threshold Limit Concentration
STLC Soluble Threshold Limit Concentration
TCLP Toxicity Leaching Characteristic Procedure
BHC benzene hexachloride
DDD dichlorodiphenyldichloroethane
DDE dichlorodiphenyldichloroethylene
DDT dichlorodiphenyltrichloroethane

[1] California background concentration range for arsenic.
[2] Screening value is from DTSC Interim Guidance, Evaulation of School Sites with Potential Soil Contamination as a Result of Lead from Lead-Based Paint, Organochlorine Pesticides from Termiticides, and Polychlorinated Biphenyls from Electrical Transformers, June 9 2006.
[3] Carcinogenic PAH background concentration for Southern California (Environ, 2002).
a Value is the lower of the California Department of Toxic Substance Control Note 3 Screening Levels (CA DTSC-SLs), April 2019, or EPA Regional Screening Levels (RSLs), April 2019, for residential soil.
b Screening value is listed as x,y,z where x=1:2 composite ratio, y=1:3 composite ratio, and z=1:4 composite ratio
c The Benzo(a)pyrene Equivalence (B[a]P-TE) concentration is calculated for each sample by multiplying each PAH chemical concentration by its Toxic Equivalency Factor. The Toxic Equivalency Factors are summed to obtain the Benzo(a)pyrene Equivalence concentration for the sample. (Nisbet and LaGoy, 1992). If the sample concentration was below the laboratory reporting limit, the laboratory reporting limit was used for the calculation.
d CA DTSC-SL for residential soil for chlordane was updated to 1,700 ug/kg in April, 2019. Step-out sampling was performed based on the chlordane screening level from [2]. However, results from sampling were compared against this updated 1,700 ug/kg screening level.

Results highlighted in yellow exceed their respective screening values.
Results highlighted in blue exceed their respective hazardous waste criteria.

TABLE 2
SOIL ANALYTICAL RESULTS
PEA-E SITE INVESTIGATION
Elizabeth Learning Center
Cudahy, California
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Sample Location		Residential Soil Screening Level (April 2019)[a]			SB-78B	SB-78C	SB-78C	SB-79	SB-79	SB-80	SB-80	SB-81	SB-81	SB-81	SB-81	SB-82	SB-82	SB-82	SB-82	SB-83	SB-83	SB-84	SB-84	SB-84	SB-85	SB-85	SB-85	SB-86	SB-86
Sample ID					SB-78B-1.3	SB-78C-0.8	SB-78C-1.3	SB-79-0.5	SB-79-3	SB-80-1.2	SB-80-3	SB-81-0.9	SB-81-0.9-DUP	SB-81-3	SB-81-3-DUP	SB-82-0.8	SB-82-0.8-DUP	SB-82-3	SB-82-3-DUP	SB-83-1.3	SB-83-3	SB-84-1.2	SB-84-1.2-DUP	SB-84-3	SB-85-1.3	SB-85-3	SB-85-3-DUP	SB-86-1.5	SB-86-2
Sample Depth (feet bgs):					0.8-1.3	0.3-0.8	0.8-1.3	0-0.5	2.5-3	0.7-1.2	2.5-3	0.4-0.9	0.4-0.9	2.5-3	2.5-3	0.3-0.8	0.3-0.8	2.5-3	2.5-3	0.8-1.3	2.5-3	0.7-1.2	0.7-1.2	2.5-3	0.8-1.3	2.5-3	2.5-3	1-1.5	1.5-2
Sample Date:			STLC	TCLP	7/8/2019	7/8/2019	7/8/2019	6/11/2019	6/11/2019	6/11/2019	6/11/2019	6/12/2019	6/12/2019	6/12/2019	6/12/2019	6/12/2019	6/12/2019	6/12/2019	6/12/2019	6/12/2019	6/13/2019	6/13/2019	6/13/2019	6/13/2019	6/13/2019	6/13/2019	6/13/2019	6/13/2019	6/13/2019	6/13/2019
Metals (TTLC, USEPA Method 6010B/7471A)																													
Antimony (6010B)	mg/kg	31	150		--	--	--	< 2.0	< 2.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Arsenic (6010B)	mg/kg	12[1]	50	100	--	--	--	3.4	1.3	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Arsenic (6020)	mg/kg	12 - 19.6 [1]	50	100	--	--	--	4.3	2.3	--	--	--	--	--	--	--	--	--	--	1.1	< 1.0	< 1.0	3.1	< 1.0	3.5	1.7	1.9	--	--
Barium (6010B)	mg/kg	15,000	1,000	2,000	--	--	--	82	77	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Beryllium (6010B)	mg/kg	16	7.5		--	--	--	< 1.0	< 1.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Cadmium (6010B)	mg/kg	71	10	20	--	--	--	< 1.0	< 1.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chromium (6010B)	mg/kg	120,000	50	100	--	--	--	14	9.7	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Cobalt (6010B)	mg/kg	23	800	--	--	--	--	8.8	5.9	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Copper (6010B)	mg/kg	3,100	250	--	--	--	--	20	11	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Lead (6010B)	mg/kg	80[2]	50	100	15	25	< 1.0	29	18	13	25	28	72	8.8	17	13	4.7	< 1.0	< 1.0	7.2	< 1.0	14	21	< 1.0	17	4.2	2.0	98	4.1
Mercury (7471A)	mg/kg	11	2	4	--	--	--	< 0.10	< 0.10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Molybdenum (6010B)	mg/kg	390	3,500	--	--	--	--	< 1.0	< 1.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Nickel (6010B)	mg/kg	820	200	--	--	--	--	12	6.8	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Selenium (6010B)	mg/kg	390	10	20	--	--	--	< 1.0	< 1.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Silver (6010B)	mg/kg	390	50	100	--	--	--	< 1.0	< 1.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Thallium (6010B)	mg/kg	0.78	70		--	--	--	< 1.0	< 1.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Vanadium (6010B)	mg/kg	390	240	--	--	--	--	26	25	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Zinc (6010B)	mg/kg	23,000	2,500	--	--	--	--	180	70	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Organchlorine Pesticides [OCPs] (USEPA Method 8081A)																													
		Discrete Sample Screening Level[a]	Composited Sample Screening Level [2][b]																												
alpha-BHC	ug/kg	86	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
gamma-BHC	ug/kg	570	250, 160, 125	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
beta-BHC	ug/kg	300	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
delta-BHC	ug/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Heptachlor	ug/kg	130[2]	60, 40, 20	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Aldrin	ug/kg	33[2]	16, 10, 5	140	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Heptachlor epoxide	ug/kg	70	--	4,700	160	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
gamma-Chlordane[d]	ug/kg	1,700, 430[2]	215, 140, 105	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
alpha-Chlordane[d]	ug/kg	1,700, 430[2]	215, 140, 105	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Endosulfan I	ug/kg	450,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4,4'-DDE	ug/kg	1,600[2]	800, 530, 400	1,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dieldrin	ug/kg	35[2]	16, 10, 5	8,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Endrin	ug/kg	19,000	--	200	400	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4,4'-DDD	ug/kg	2,300[2]	1150, 760, 575	1,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Endosulfan II	ug/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4,4'-DDT	ug/kg	1,600[2]	800, 530, 400	1,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Endrin aldehyde	ug/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Endosulfan sulfate	ug/kg	380,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Methoxychlor	ug/kg	320,000	--	100,000	200,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Endrin ketone	ug/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Toxaphene	ug/kg	450	--	5,000	10,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chlordane (tech)[d]	ug/kg	1,700, 430[2]	215, 140, 105	2500	600	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Extractions																													
arsenic, STLC	mg/l	--	--	5	5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
arsenic, TCLP	mg/l	--	--	5	5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
lead, STLC	mg/l	--	--	5	5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	13	--
lead, TCLP	mg/l	--	--	5	5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chlordane, TCLP	mg/l	--	--	0.25	0.03	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

TABLE 2
SOIL ANALYTICAL RESULTS
PEA-E SITE INVESTIGATION
Elizabeth Learning Center
Cudahy, California
(Page 26 of 36)

Sample Location		Residential Soil Screening Level (April 2019)[a]	STLC	TCLP	SB-78B	SB-78C	SB-78C	SB-79	SB-79	SB-80	SB-80	SB-81	SB-81	SB-81	SB-81	SB-82	SB-82	SB-82	SB-82	SB-83	SB-83	SB-84	SB-84	SB-84	SB-85	SB-85	SB-85	SB-86	SB-86
Sample ID					SB-78B-1.3	SB-78C-0.8	SB-78C-1.3	SB-79-0.5	SB-79-3	SB-80-1.2	SB-80-3	SB-81-0.9	SB-81-0.9-DUP	SB-81-3	SB-81-3-DUP	SB-82-0.8	SB-82-0.8-DUP	SB-82-3	SB-82-3-DUP	SB-83-1.3	SB-83-3	SB-84-1.2	SB-84-1.2-DUP	SB-84-3	SB-85-1.3	SB-85-3	SB-85-3-DUP	SB-86-1.5	SB-86-2
Sample Depth (feet bgs):					0.8-1.3	0.3-0.8	0.8-1.3	0-0.5	2.5-3	0.7-1.2	2.5-3	0.4-0.9	0.4-0.9	2.5-3	2.5-3	0.3-0.8	0.3-0.8	2.5-3	2.5-3	0.8-1.3	2.5-3	0.7-1.2	0.7-1.2	2.5-3	0.8-1.3	2.5-3	2.5-3	1-1.5	1.5-2
Sample Date:					7/8/2019	7/8/2019	7/8/2019	6/11/2019	6/11/2019	6/11/2019	6/11/2019	6/12/2019	6/12/2019	6/12/2019	6/12/2019	6/12/2019	6/12/2019	6/12/2019	6/12/2019	6/13/2019	6/13/2019	6/13/2019	6/13/2019	6/13/2019	6/13/2019	6/13/2019	6/13/2019	6/13/2019	6/13/2019
Polychlorinated Biphenyls [PCBs] (USEPA Method 8082)																													
*Aroclor 1260	ug/kg	240	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
All Other Compounds Non-Detect	ug/kg	Varies	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Volatile Organic Compounds [VOCs] (USEPA Method 8260B/5035)																													
All Compounds Non-Detect	ug/kg	Varies	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total Petroleum Hydrocarbons [TPH] (8015M)																													
C4-C12	mg/kg	100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C13-C22	mg/kg	100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C23-C40	mg/kg	100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons [PAHs] (USEPA Method 8270SIM)																													
2-Methyl--phthalene	ug/kg	240,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Ace--phthene	ug/kg	3,600,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Ace--phthylene	ug/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Anthracene	ug/kg	17,000,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(a)anthracene	ug/kg	1,100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(a)pyrene	ug/kg	110	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(b)fluoranthene	ug/kg	1,100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(g,h,i)perylene	ug/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(k)fluoranthene	ug/kg	11,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chrysene	ug/kg	110,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dibenzo(a,h)anthracene	ug/kg	28	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Fluoranthene	ug/kg	2,400,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Fluorene	ug/kg	2,300,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Indeno(1,2,3-c,d)pyrene	ug/kg	1,100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Naphthalene	ug/kg	2,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Phenanthrene	ug/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Pyrene	ug/kg	1,800,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(a)pyrene Equivalence[c]	ug/kg	900[3]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Asbestos (qualitative)																													
Asbestos (qualitative)	--	--	--	--	--	--	--	ND	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Notes:
bgs below ground surface
-- Not available
NA Not applicable
ND Not detected above the reporting limit
mg/kg milligrams per kilogram
ug/kg micrograms per kilogram
mg/l milligrams per liter
TTLC Total Threshold Limit Concentration
STLC Soluble Threshold Limit Concentration
TCLP Toxicity Leaching Characteristic Procedure
BHC benzene hexachloride
DDD dichlorodiphenyldichloroethane
DDE dichlorodiphenyldichloroethylene
DDT dichlorodiphenyltrichloroethane

[1] California background concentration range for arsenic.
[2] Screening value is from DTSC Interim Guidance, Evaulation of School Sites with Potential Soil Contamination as a Result of Lead from Lead-Based Paint, Organochlorine Pesticides from Termiticides, and Polychlorinated Biphenyls from Electrical Transformers, June 9 2006.
[3] Carcinogenic PAH background concentration for Southern California (Environ, 2002).
a Value is the lower of the California Department of Toxic Substance Control Note 3 Screening Levels (CA DTSC-SLs), April 2019, or EPA Regional Screening Levels (RSLs), April 2019, for residential soil.
b Screening value is listed as x,y,z where x=1:2 composite ratio, y=1:3 composite ratio, and z=1:4 composite ratio
c The Benzo(a)pyrene Equivalence (B[a]P-TE) concentration is calculated for each sample by multiplying each PAH chemical concentration by its Toxic Equivalency Factor. The Toxic Equivalency Factors are summed to obtain the Benzo(a)pyrene Equivalence concentration for the sample. (Nisbet and LaGoy, 1992). If the sample concentration was below the laboratory reporting limit, the laboratory reporting limit was used for the calculation.
d CA DTSC-SL for residential soil for chlordane was updated to 1,700 ug/kg in April, 2019. Step-out sampling was performed based on the chlordane screening level from [2]. However, results from sampling were compared against this updated 1,700 ug/kg screening level.

Results highlighted in yellow exceed their respective screening values.
Results highlighted in blue exceed their respective hazardous waste criteria.

TABLE 2
SOIL ANALYTICAL RESULTS
PEA-E SITE INVESTIGATION
Elizabeth Learning Center
Cudahy, California
(Page 27 of 36)

Sample Location		Residential Soil Screening Level (April 2019)[a]			SB-86	SB-86A	SB-86A	SB-87	SB-87	SB-88	SB-88	SB-88	SB-88A	SB-88A	SB-88A	SB-88A	SB-88B	SB-88B	SB-88B	SB-88B	SB-88C	SB-88C	SB-88C	SB-88C	SB-89	SB-89	SB-90	SB-90
Sample ID					SB-86-3	SB-86A-1.5	SB-86A-2	SB-87-0.8	SB-87-3	SB-88-1.5	SB-88-2	SB-88-3	SB-88A-1.5	SB-88A-1.5-DUP	SB-88A-2	SB-88A-2-DUP	SB-88B-1.5	SB-88B-1.5-DUP	SB-88B-2	SB-88B-2-DUP	SB-88C-1.5	SB-88C-1.5-DUP	SB-88C-2	SB-88C-2-DUP	SB-89-1.2	SB-89-3	SB-90-1.2	SB-90-3
Sample Depth (feet bgs):					2.5-3	1-1.5	1.5-2	0.3-0.8	2.5-3	1-1.5	1.5-2	2.5-3	1-1.5	1-1.5	1.5-2	1.5-2	1-1.5	1-1.5	1.5-2	1.5-2	1-1.5	1-1.5	1.5-2	1.5-2	0.7-1.2	2.5-3	0.7-1.2	2.5-3
Sample Date:			STLC	TCLP	6/13/2019	7/9/2019	7/9/2019	6/12/2019	6/12/2019	6/13/2019	6/13/2019	6/13/2019	7/9/2019	7/9/2019	7/9/2019	7/9/2019	7/9/2019	7/9/2019	7/9/2019	7/9/2019	7/9/2019	7/9/2019	7/9/2019	7/9/2019	6/13/2019	6/13/2019	6/11/2019	6/11/2019
Metals (TTLC, USEPA Method 6010B/7471A)																												
Antimony (6010B)	mg/kg	31	150		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Arsenic (6010B)	mg/kg	12[1]	50	100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Arsenic (6020)	mg/kg	12 - 19.6 [1]	50	100	--	--	--	--	--	30	3.9	< 1.0	2.0	15	1.2	1.1	24	18	< 1.0	1.0	2.3	1.3	1.7	< 1.0	6.3	8.1	7.8	2.2
Barium (6010B)	mg/kg	15,000	1,000	2,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Beryllium (6010B)	mg/kg	16	7.5		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Cadmium (6010B)	mg/kg	71	10	20	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chromium (6010B)	mg/kg	120,000	50	100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Cobalt (6010B)	mg/kg	23	800	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Copper (6010B)	mg/kg	3,100	250	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Lead (6010B)	mg/kg	80[2]	50	100	1.8	21	2.7	20	1.4	190	18	< 1.0	42	100	3.5	5.0	120	79	5.7	7.4	36	27	21	3.3	50	6.7	5.4	24
Mercury (7471A)	mg/kg	11	2	4	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Molybdenum (6010B)	mg/kg	390	3,500	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Nickel (6010B)	mg/kg	820	200	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Selenium (6010B)	mg/kg	390	10	20	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Silver (6010B)	mg/kg	390	50	100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Thallium (6010B)	mg/kg	0.78	70		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Vanadium (6010B)	mg/kg	390	240	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Zinc (6010B)	mg/kg	23,000	2,500	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Organchlorine Pesticides [OCPs] (USEPA Method 8081A)																												
		Discrete Sample Screening Level[a]	Composited Sample Screening Level [2][b]																										
alpha-BHC	ug/kg	86	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
gamma-BHC	ug/kg	570	250, 160, 125	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
beta-BHC	ug/kg	300	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
delta-BHC	ug/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Heptachlor	ug/kg	130[2]	60, 40, 20	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Aldrin	ug/kg	33[2]	16, 10, 5	140	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Heptachlor epoxide	ug/kg	70	--	4,700	160	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
gamma-Chlordane[d]	ug/kg	1,700, 430[2]	215, 140, 105	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
alpha-Chlordane[d]	ug/kg	1,700, 430[2]	215, 140, 105	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Endosulfan I	ug/kg	450,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4,4'-DDE	ug/kg	1,600[2]	800, 530, 400	1,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dieldrin	ug/kg	35[2]	16, 10, 5	8,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Endrin	ug/kg	19,000	--	200	400	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4,4'-DDD	ug/kg	2,300[2]	1150, 760, 575	1,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Endosulfan II	ug/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4,4'-DDT	ug/kg	1,600[2]	800, 530, 400	1,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Endrin aldehyde	ug/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Endosulfan sulfate	ug/kg	380,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Methoxychlor	ug/kg	320,000	--	100,000	200,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Endrin ketone	ug/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Toxaphene	ug/kg	450	--	5,000	10,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chlordane (tech)[d]	ug/kg	1,700, 430[2]	215, 140, 105	2500	600	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Extractions																												
arsenic, STLC	mg/l	--	--	5	5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
arsenic, TCLP	mg/l	--	--	5	5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
lead, STLC	mg/l	--	--	5	5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
lead, TCLP	mg/l	--	--	5	5	--	--	--	--	--	< 0.25	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chlordane, TCLP	mg/l	--	--	0.25	0.03	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

TABLE 2
SOIL ANALYTICAL RESULTS
PEA-E SITE INVESTIGATION
Elizabeth Learning Center
Cudahy, California
(Page 28 of 36)

Sample Location		Residential Soil Screening Level (April 2019)[a]			SB-86	SB-86A	SB-86A	SB-87	SB-87	SB-88	SB-88	SB-88	SB-88A	SB-88A	SB-88A	SB-88A	SB-88B	SB-88B	SB-88B	SB-88B	SB-88C	SB-88C	SB-88C	SB-88C	SB-89	SB-89	SB-90	SB-90
Sample ID					SB-86-3	SB-86A-1.5	SB-86A-2	SB-87-0.8	SB-87-3	SB-88-1.5	SB-88-2	SB-88-3	SB-88A-1.5	SB-88A-1.5-DUP	SB-88A-2	SB-88A-2-DUP	SB-88B-1.5	SB-88B-1.5-DUP	SB-88B-2	SB-88B-2-DUP	SB-88C-1.5	SB-88C-1.5-DUP	SB-88C-2	SB-88C-2-DUP	SB-89-1.2	SB-89-3	SB-90-1.2	SB-90-3
Sample Depth (feet bgs):					2.5-3	1-1.5	1.5-2	0.3-0.8	2.5-3	1-1.5	1.5-2	2.5-3	1-1.5	1-1.5	1.5-2	1.5-2	1-1.5	1-1.5	1.5-2	1.5-2	1-1.5	1-1.5	1.5-2	1.5-2	0.7-1.2	2.5-3	0.7-1.2	2.5-3
Sample Date:			STLC	TCLP	6/13/2019	7/9/2019	7/9/2019	6/12/2019	6/12/2019	6/13/2019	6/13/2019	6/13/2019	7/9/2019	7/9/2019	7/9/2019	7/9/2019	7/9/2019	7/9/2019	7/9/2019	7/9/2019	7/9/2019	7/9/2019	7/9/2019	7/9/2019	6/13/2019	6/13/2019	6/11/2019	6/11/2019
Polychlorinated Biphenyls [PCBs] (USEPA Method 8082)																												
*Aroclor 1260	ug/kg	240	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
All Other Compounds Non-Detect	ug/kg	Varies	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Volatile Organic Compounds [VOCs] (USEPA Method 8260B/5035)																												
All Compounds Non-Detect	ug/kg	Varies	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total Petroleum Hydrocarbons [TPH] (8015M)																												
C4-C12	mg/kg	100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C13-C22	mg/kg	100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C23-C40	mg/kg	100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons [PAHs] (USEPA Method 8270SIM)																												
2-Methyl--phthalene	ug/kg	240,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Ace--phthene	ug/kg	3,600,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Ace--phthylene	ug/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Anthracene	ug/kg	17,000,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(a)anthracene	ug/kg	1,100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(a)pyrene	ug/kg	110	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(b)fluoranthene	ug/kg	1,100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(g,h,i)perylene	ug/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(k)fluoranthene	ug/kg	11,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chrysene	ug/kg	110,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dibenzo(a,h)anthracene	ug/kg	28	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Fluoranthene	ug/kg	2,400,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Fluorene	ug/kg	2,300,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Indeno(1,2,3-c,d)pyrene	ug/kg	1,100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Naphthalene	ug/kg	2,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Phenanthrene	ug/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Pyrene	ug/kg	1,800,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(a)pyrene Equivalence[c]	ug/kg	900[3]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Asbestos (qualitative)																												
Asbestos (qualitative)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Notes:

bgs	below ground surface
--	Not available
NA	Not applicable
ND	Not detected above the reporting limit
mg/kg	milligrams per kilogram
ug/kg	micrograms per kilogram
mg/l	milligrams per liter
TTLC	Total Threshold Limit Concentration
STLC	Soluble Threshold Limit Concentration
TCLP	Toxicity Leaching Characteristic Procedure
BHC	benzene hexachloride
DDD	dichlorodiphenyldichloroethane
DDE	dichlorodiphenyldichloroethylene
DDT	dichlorodiphenyltrichloroethane

[1] California background concentration range for arsenic.

[2] Screening value is from DTSC Interim Guidance, Evaulation of School Sites with Potential Soil Contamination as a Result of Lead from Lead-Based Paint, Organochlorine Pesticides from Termiticides, and Polychlorinated Biphenyls from Electrical Transformers, June 9 2006.

[3] Carcinogenic PAH background concentration for Southern California (Environ, 2002).

a Value is the lower of the California Department of Toxic Substance Control Note 3 Screening Levels (CA DTSC-SLs), April 2019, or EPA Regional Screening Levels (RSLs), April 2019, for residential soil.

b Screening value is listed as x,y,z where x=1:2 composite ratio, y=1:3 composite ratio, and z=1:4 composite ratio

c The Benzo(a)pyrene Equivalence (B[a]P-TE) concentration is calculated for each sample by multiplying each PAH chemical concentration by its Toxic Equivalency Factor. The Toxic Equivalency Factors are summed to obtain the Benzo(a)pyrene Equivalence concentration for the sample. (Nisbet and LaGoy, 1992). If the sample concentration was below the laboratory reporting limit, the laboratory reporting limit was used for the calculation.

d CA DTSC-SL for residential soil for chlordane was updated to 1,700 ug/kg in April, 2019. Step-out sampling was performed based on the chlordane screening level from [2]. However, results from sampling were compared against this updated 1,700 ug/kg screening level.

Results highlighted in yellow exceed their respective screening values.

Results highlighted in blue exceed their respective hazardous waste criteria.

TABLE 2
SOIL ANALYTICAL RESULTS
PEA-E SITE INVESTIGATION
Elizabeth Learning Center
Cudahy, California
(Page 29 of 36)

Sample Location		Residential Soil Screening Level (April 2019)[a]			SB-04/69	SB-04/69	SB-06/49/81/82	SB-06/49/81/82	SB-06/49/81/82	SB-06/49/81/82	SB-9/8/7/11	SB-9/8/7/11	SB-10/12/48	SB-10/12/48	SB-13/74/75	SB-13/74/75	SB-14/90/79	SB-14/90/79	SB-17/18/19/43	SB-17/18/19/43	SB-20/26/28/39
Sample ID					SB-04/69-1	SB-04/69-3	SB-06/49/81/82-0.9	SB-06/49/81/82-0.9-DUP	SB-06/49/81/82-3	SB-06/49/81/82-3-DUP	SB-9/8/7/11-1.2	SB-9/8/7/11-3	SB-10/12/48-1.2	SB-10/12/48-3	SB-13/74/75-1.3	SB-13/74/75-3	SB-14/90/79-1.2	SB-14/90/79-3	SB-17/18/19/43-1	SB-17/18/19/43-3	SB-20/26/28/39-0.8
Sample Depth (feet bgs):					0.5-1	2.5-3	0.4-0.9	0.4-0.9	2.5-3	2.5-3	0.7-1.2	2.5-3	0.7-1.2	2.5-3	0.8-1.3	2.5-3	0.7-1.2	2.5-3	0.5-1	2.5-3	0.3-0.8
Sample Date:			STLC	TCLP	6/13/2019	6/13/2019	6/12/2019	6/12/2019	6/12/2019	6/12/2019	6/11/2019	6/11/2019	6/13/2019	6/13/2019	6/11/2019	6/11/2019	6/11/2019	6/11/2019	6/10/2019	6/10/2019	6/10/2019
Metals (TTLC, USEPA Method 6010B/7471A)																					
Antimony (6010B)	mg/kg	31	150		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Arsenic (6010B)	mg/kg	12[1]	50	100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Arsenic (6020)	mg/kg	12 - 19.6 [1]	50	100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Barium (6010B)	mg/kg	15,000	1,000	2,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Beryllium (6010B)	mg/kg	16	7.5		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Cadmium (6010B)	mg/kg	71	10	20	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chromium (6010B)	mg/kg	120,000	50	100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Cobalt (6010B)	mg/kg	23	800	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Copper (6010B)	mg/kg	3,100	250	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Lead (6010B)	mg/kg	80[2]	50	100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Mercury (7471A)	mg/kg	11	2	4	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Molybdenum (6010B)	mg/kg	390	3,500	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Nickel (6010B)	mg/kg	820	200	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Selenium (6010B)	mg/kg	390	10	20	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Silver (6010B)	mg/kg	390	50	100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Thallium (6010B)	mg/kg	0.78	70		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Vanadium (6010B)	mg/kg	390	240	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Zinc (6010B)	mg/kg	23,000	2,500	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Organchlorine Pesticides [OCPs] (USEPA Method 8081A)																					
		Discrete Sample Screening Level[a]	Composited Sample Screening Level [2][b]																		
alpha-BHC	ug/kg	86	--	--	--	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
gamma-BHC	ug/kg	570	250, 160, 125	--	--	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
beta-BHC	ug/kg	300	--	--	--	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
delta-BHC	ug/kg	--	--	--	--	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Heptachlor	ug/kg	130[2]	60, 40, 20	--	--	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aldrin	ug/kg	33[2]	16, 10, 5	140	--	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Heptachlor epoxide	ug/kg	70	--	4,700	160	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
gamma-Chlordane[d]	ug/kg	1,700, 430[2]	215, 140, 105	--	--	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	7.2	< 1.0	5.2	< 1.0	4.7	< 1.0	< 1.0	1.3	2.2	1.8	3.4
alpha-Chlordane[d]	ug/kg	1,700, 430[2]	215, 140, 105	--	--	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	7.2	2.1	6.5	< 1.0	6.5	1.0	< 1.0	1.2	2.2	1.8	3.5
Endosulfan I	ug/kg	450,000	--	--	--	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
4,4'-DDE	ug/kg	1,600[2]	800, 530, 400	1,000	--	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	79	< 2.0	< 2.0	< 2.0	< 2.0	17	< 2.0	3.7	2.3
Dieldrin	ug/kg	35[2]	16, 10, 5	8,000	--	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	17	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	3.2	< 2.0	4.4
Endrin	ug/kg	19,000	--	200	400	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
4,4'-DDD	ug/kg	2,300[2]	1150, 760, 575	1,000	--	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	2.6	< 2.0	< 2.0	< 2.0
Endosulfan II	ug/kg	--	--	--	--	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
4,4'-DDT	ug/kg	1,600[2]	800, 530, 400	1,000	--	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	85	< 2.0	< 2.0	< 2.0	< 2.0	24	< 2.0	< 2.0	2.1
Endrin aldehyde	ug/kg	--	--	--	--	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Endosulfan sulfate	ug/kg	380,000	--	--	--	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Methoxychlor	ug/kg	320,000	--	100,000	200,000	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Endrin ketone	ug/kg	--	--	--	--	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Toxaphene	ug/kg	450	--	5,000	10,000	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50
Chlordane (tech)[d]	ug/kg	1,700, 430[2]	215, 140, 105	2500	600	< 8.5	< 8.5	< 8.5	< 8.5	< 8.5	< 8.5	79	15	51	< 8.5	51	9.4	< 8.5	16	23	20	37
Extractions																						
arsenic, STLC	mg/l	--	--	5	5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
arsenic, TCLP	mg/l	--	--	5	5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
lead, STLC	mg/l	--	--	5	5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
lead, TCLP	mg/l	--	--	5	5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chlordane, TCLP	mg/l	--	--	0.25	0.03	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

TABLE 2
SOIL ANALYTICAL RESULTS
PEA-E SITE INVESTIGATION
Elizabeth Learning Center
Cudahy, California

Sample Location		Residential Soil Screening Level (April 2019)[a]			SB-04/69	SB-04/69	SB-06/49/81/82	SB-06/49/81/82	SB-06/49/81/82	SB-06/49/81/82	SB-9/8/7/11	SB-9/8/7/11	SB-10/12/48	SB-10/12/48	SB-13/74/75	SB-13/74/75	SB-14/90/79	SB-14/90/79	SB-17/18/19/43	SB-17/18/19/43	SB-20/26/28/39
Sample ID					SB-04/69-1	SB-04/69-3	SB-06/49/81/82-0.9	SB-06/49/81/82-0.9-DUP	SB-06/49/81/82-3	SB-06/49/81/82-3-DUP	SB-9/8/7/11-1.2	SB-9/8/7/11-3	SB-10/12/48-1.2	SB-10/12/48-3	SB-13/74/75-1.3	SB-13/74/75-3	SB-14/90/79-1.2	SB-14/90/79-3	SB-17/18/19/43-1	SB-17/18/19/43-3	SB-20/26/28/39-0.8
Sample Depth (feet bgs):					0.5-1	2.5-3	0.4-0.9	0.4-0.9	2.5-3	2.5-3	0.7-1.2	2.5-3	0.7-1.2	2.5-3	0.8-1.3	2.5-3	0.7-1.2	2.5-3	0.5-1	2.5-3	0.3-0.8
Sample Date:			STLC	TCLP	6/13/2019	6/13/2019	6/12/2019	6/12/2019	6/12/2019	6/12/2019	6/11/2019	6/11/2019	6/13/2019	6/13/2019	6/11/2019	6/11/2019	6/11/2019	6/11/2019	6/10/2019	6/10/2019	6/10/2019
Polychlorinated Biphenyls [PCBs] (USEPA Method 8082)																					
*Aroclor 1260	ug/kg	240	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
All Other Compounds Non-Detect	ug/kg	Varies	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Volatile Organic Compounds [VOCs] (USEPA Method 8260B/5035)																					
All Compounds Non-Detect	ug/kg	Varies	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total Petroleum Hydrocarbons [TPH] (8015M)																					
C4-C12	mg/kg	100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C13-C22	mg/kg	100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C23-C40	mg/kg	100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons [PAHs] (USEPA Method 8270SIM)																					
2-Methyl--phthalene	ug/kg	240,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Ace--phthene	ug/kg	3,600,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Ace--phthylene	ug/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Anthracene	ug/kg	17,000,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(a)anthracene	ug/kg	1,100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(a)pyrene	ug/kg	110	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(b)fluoranthene	ug/kg	1,100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(g,h,i)perylene	ug/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(k)fluoranthene	ug/kg	11,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chrysene	ug/kg	110,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dibenzo(a,h)anthracene	ug/kg	28	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Fluoranthene	ug/kg	2,400,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Fluorene	ug/kg	2,300,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Indeno(1,2,3-c,d)pyrene	ug/kg	1,100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Naphthalene	ug/kg	2,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Phenanthrene	ug/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Pyrene	ug/kg	1,800,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(a)pyrene Equivalence[c]	ug/kg	900[3]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Asbestos (qualitative)																					
Asbestos (qualitative)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Notes:
bgs below ground surface
-- Not available
NA Not applicable
ND Not detected above the reporting limit
mg/kg milligrams per kilogram
ug/kg micrograms per kilogram
mg/l milligrams per liter
TTLC Total Threshold Limit Concentration
STLC Soluble Threshold Limit Concentration
TCLP Toxicity Leaching Characteristic Procedure
BHC benzene hexachloride
DDD dichlorodiphenyldichloroethane
DDE dichlorodiphenyldichloroethylene
DDT dichlorodiphenyltrichloroethane

[1] California background concentration range for arsenic.
[2] Screening value is from DTSC Interim Guidance, Evaulation of School Sites with Potential Soil Contamination as a Result of Lead from Lead-Based Paint, Organochlorine Pesticides from Termiticides, and Polychlorinated Biphenyls from Electrical Transformers, June 9 2006.
[3] Carcinogenic PAH background concentration for Southern California (Environ, 2002).
a Value is the lower of the California Department of Toxic Substance Control Note 3 Screening Levels (CA DTSC-SLs), April 2019, or EPA Regional Screening Levels (RSLs), April 2019, for residential soil.
b Screening value is listed as x,y,z where x=1:2 composite ratio, y=1:3 composite ratio, and z=1:4 composite ratio
c The Benzo(a)pyrene Equivalence (B[a]P-TE) concentration is calculated for each sample by multiplying each PAH chemical concentration by its Toxic Equivalency Factor. The Toxic Equivalency Factors are summed to obtain the Benzo(a)pyrene Equivalence concentration for the sample. (Nisbet and LaGoy, 1992). If the sample concentration was below the laboratory reporting limit, the laboratory reporting limit was used for the calculation.
d CA DTSC-SL for residential soil for chlordane was updated to 1,700 ug/kg in April, 2019. Step-out sampling was performed based on the chlordane screening level from [2]. However, results from sampling were compared against this updated 1,700 ug/kg screening level.

Results highlighted in yellow exceed their respective screening values.
Results highlighted in blue exceed their respective hazardous waste criteria.

TABLE 2
SOIL ANALYTICAL RESULTS
PEA-E SITE INVESTIGATION
Elizabeth Learning Center
Cudahy, California
(Page 31 of 36)

Sample Location		Residential Soil Screening Level (April 2019)[a]			SB-20/26/28/39	SB-21/22/23/25	SB-21/22/23/25	SB-24/29/27	SB-24/29/27	SB-30/31/38	SB-30/31/38	SB-32/33/34/35	SB-32/33/34/35	SB-36/37/40	SB-36/37/40	SB-36/37/40	SB-42/80/15	SB-42/80/15	SB-45/62	SB-50/51/56	SB-50/51/56	SB-53/54/47
Sample ID					SB-20/26/28/39-3	SB-21/22/23/25-0.8	SB-21/22/23/25-3	SB-24/29/27-1	SB-24/29/27-3	SB-30/31/38-1	SB-30/31/38-3	SB-32/33/34/35-1	SB-32/33/34/35-3	SB-36/37/40-1	SB-36/37/40-1-DUP	SB-36/37/40/-3	SB-42/80/15-1.2	SB-42/80/15-3	SB-45/62-3	SB-50/51/56-0.8	SB-50/51/56-3	SB-53/54/47-1.3
Sample Depth (feet bgs):					2.5-3	0.3-0.8	2.5-3	0.5-1	2.5-3	0.5-1	2.5-3	0.5-1	2.5-3	0.5-1	0.5-1	2.5-3	0.7-1.2	2.5-3	2.5-3	0.3-0.8	2.5-3	0.8-1.3
Sample Date:			STLC	TCLP	6/10/2019	6/10/2019	6/10/2019	6/10/2019	6/10/2019	6/10/2019	6/10/2019	6/11/2019	6/11/2019	6/10/2019	6/10/2019	6/10/2019	6/11/2019	6/11/2019	6/11/2019	6/12/2019	6/12/2019	6/12/2019
Metals (TTLC, USEPA Method 6010B/7471A)																					
Antimony (6010B)	mg/kg	31	150		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Arsenic (6010B)	mg/kg	12[1]	50	100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Arsenic (6020)	mg/kg	12 - 19.6 [1]	50	100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Barium (6010B)	mg/kg	15,000	1,000	2,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Beryllium (6010B)	mg/kg	16	7.5		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Cadmium (6010B)	mg/kg	71	10	20	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chromium (6010B)	mg/kg	120,000	50	100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Cobalt (6010B)	mg/kg	23	800	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Copper (6010B)	mg/kg	3,100	250	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Lead (6010B)	mg/kg	80[2]	50	100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Mercury (7471A)	mg/kg	11	2	4	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Molybdenum (6010B)	mg/kg	390	3,500	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Nickel (6010B)	mg/kg	820	200	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Selenium (6010B)	mg/kg	390	10	20	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Silver (6010B)	mg/kg	390	50	100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Thallium (6010B)	mg/kg	0.78	70		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Vanadium (6010B)	mg/kg	390	240	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Zinc (6010B)	mg/kg	23,000	2,500	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Organchlorine Pesticides [OCPs] (USEPA Method 8081A)																						
		Discrete Sample Screening Level[a]	Composited Sample Screening Level [2][b]																			
alpha-BHC	ug/kg	86	--	--	--	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
gamma-BHC	ug/kg	570	250, 160, 125	--	--	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
beta-BHC	ug/kg	300	--	--	--	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
delta-BHC	ug/kg	--	--	--	--	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Heptachlor	ug/kg	130[2]	60, 40, 20	--	--	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aldrin	ug/kg	33[2]	16, 10, 5	140	--	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Heptachlor epoxide	ug/kg	70	--	4,700	160	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
gamma-Chlordane[d]	ug/kg	1,700, 430[2]	215, 140, 105	--	--	1.2	26	1.7	6.6	< 1.0	5.3	< 1.0	25	< 1.0	33	8.0	< 1.0	< 1.0	1.4	< 1.0	< 1.0	< 1.0	< 1.0
alpha-Chlordane[d]	ug/kg	1,700, 430[2]	215, 140, 105	--	--	1.3	27	1.8	6.6	< 1.0	5.4	< 1.0	26	< 1.0	31	7.8	< 1.0	< 1.0	1.3	< 1.0	< 1.0	< 1.0	< 1.0
Endosulfan I	ug/kg	450,000	--	--	--	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
4,4'-DDE	ug/kg	1,600[2]	800, 530, 400	1,000	--	< 2.0	< 2.0	< 2.0	3.6	< 2.0	4.5	< 2.0	4.8	< 2.0	3.4	4.8	< 2.0	< 2.0	< 2.0	< 2.0	4.0	< 2.0	< 2.0
Dieldrin	ug/kg	35[2]	16, 10, 5	8,000	--	< 2.0	3.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	3.9	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Endrin	ug/kg	19,000	--	200	400	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
4,4'-DDD	ug/kg	2,300[2]	1150, 760, 575	1,000	--	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	3.2	2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Endosulfan II	ug/kg	--	--	--	--	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
4,4'-DDT	ug/kg	1,600[2]	800, 530, 400	1,000	--	< 2.0	2.2	< 2.0	2.3	< 2.0	< 2.0	< 2.0	6.0	< 2.0	3.8	2.5	< 2.0	< 2.0	2.9	< 2.0	3.4	< 2.0	< 2.0
Endrin aldehyde	ug/kg	--	--	--	--	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Endosulfan sulfate	ug/kg	380,000	--	--	--	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Methoxychlor	ug/kg	320,000	--	100,000	200,000	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Endrin ketone	ug/kg	--	--	--	--	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Toxaphene	ug/kg	450	--	5,000	10,000	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50
Chlordane (tech)[d]	ug/kg	1,700, 430[2]	215, 140, 105	2500	600	13	260	18	57	< 8.5	50	< 8.5	270	< 8.5	310	85	< 8.5	< 8.5	12	< 8.5	9.0	< 8.5	< 8.5
Extractions																						
arsenic, STLC	mg/l	--	--	5	5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
arsenic, TCLP	mg/l	--	--	5	5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
lead, STLC	mg/l	--	--	5	5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
lead, TCLP	mg/l	--	--	5	5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chlordane, TCLP	mg/l	--	--	0.25	0.03	--	--	--	--	--	--	--	--	--	--		--	--	--	--	--	--	--

TABLE 2
SOIL ANALYTICAL RESULTS
PEA-E SITE INVESTIGATION
Elizabeth Learning Center
Cudahy, California

Sample Location		Residential Soil Screening Level (April 2019)[a]	STLC	TCLP	SB-20/26/28/39	SB-21/22/23/25	SB-21/22/23/25	SB-24/29/27	SB-24/29/27	SB-30/31/38	SB-30/31/38	SB-32/33/34/35	SB-32/33/34/35	SB-36/37/40	SB-36/37/40	SB-36/37/40	SB-42/80/15	SB-42/80/15	SB-45/62	SB-50/51/56	SB-50/51/56	SB-53/54/47
Sample ID					SB-20/26/28/39-3	SB-21/22/23/25-0.8	SB-21/22/23/25-3	SB-24/29/27-1	SB-24/29/27-3	SB-30/31/38-1	SB-30/31/38-3	SB-32/33/34/35-1	SB-32/33/34/35-3	SB-36/37/40-1	SB-36/37/40-1-DUP	SB-36/37/40/-3	SB-42/80/15-1.2	SB-42/80/15-3	SB-45/62-3	SB-50/51/56-0.8	SB-50/51/56-3	SB-53/54/47-1.3
Sample Depth (feet bgs):					2.5-3	0.3-0.8	2.5-3	0.5-1	2.5-3	0.5-1	2.5-3	0.5-1	2.5-3	0.5-1	0.5-1	2.5-3	0.7-1.2	2.5-3	2.5-3	0.3-0.8	2.5-3	0.8-1.3
Sample Date:					6/10/2019	6/10/2019	6/10/2019	6/10/2019	6/10/2019	6/10/2019	6/10/2019	6/11/2019	6/11/2019	6/10/2019	6/10/2019	6/10/2019	6/11/2019	6/11/2019	6/11/2019	6/12/2019	6/12/2019	6/12/2019
Polychlorinated Biphenyls [PCBs] (USEPA Method 8082)																						
*Aroclor 1260	ug/kg	240	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
All Other Compounds Non-Detect	ug/kg	Varies	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Volatile Organic Compounds [VOCs] (USEPA Method 8260B/5035)																						
All Compounds Non-Detect	ug/kg	Varies	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total Petroleum Hydrocarbons [TPH] (8015M)																						
C4-C12	mg/kg	100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C13-C22	mg/kg	100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C23-C40	mg/kg	100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons [PAHs] (USEPA Method 8270SIM)																						
2-Methyl--phthalene	ug/kg	240,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Ace--phthene	ug/kg	3,600,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Ace--phthylene	ug/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Anthracene	ug/kg	17,000,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(a)anthracene	ug/kg	1,100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(a)pyrene	ug/kg	110	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(b)fluoranthene	ug/kg	1,100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(g,h,i)perylene	ug/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(k)fluoranthene	ug/kg	11,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chrysene	ug/kg	110,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dibenzo(a,h)anthracene	ug/kg	28	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Fluoranthene	ug/kg	2,400,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Fluorene	ug/kg	2,300,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Indeno(1,2,3-c,d)pyrene	ug/kg	1,100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Naphthalene	ug/kg	2,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Phenanthrene	ug/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Pyrene	ug/kg	1,800,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(a)pyrene Equivalence[c]	ug/kg	900[3]	--	--	--	--	--	--	--	--	--	--	--	--		--	--	--	--	--	--	--
Asbestos (qualitative)																						
Asbestos (qualitative)	--	--	--	--	--	--	--	--	--	--	--	--	--	--		--	--	--	--	--	--	--

Notes:
bgs below ground surface
-- Not available
NA Not applicable
ND Not detected above the reporting limit
mg/kg milligrams per kilogram
ug/kg micrograms per kilogram
mg/l milligrams per liter
TTLC Total Threshold Limit Concentration
STLC Soluble Threshold Limit Concentration
TCLP Toxicity Leaching Characteristic Procedure
BHC benzene hexachloride
DDD dichlorodiphenyldichloroethane
DDE dichlorodiphenyldichloroethylene
DDT dichlorodiphenyltrichloroethane

[1] California background concentration range for arsenic.
[2] Screening value is from DTSC Interim Guidance, Evaulation of School Sites with Potential Soil Contamination as a Result of Lead from Lead-Based Paint, Organochlorine Pesticides from Termiticides, and Polychlorinated Biphenyls from Electrical Transformers, June 9 2006.
[3] Carcinogenic PAH background concentration for Southern California (Environ, 2002).
a Value is the lower of the California Department of Toxic Substance Control Note 3 Screening Levels (CA DTSC-SLs), April 2019, or EPA Regional Screening Levels (RSLs), April 2019, for residential soil.
b Screening value is listed as x,y,z where x=1:2 composite ratio, y=1:3 composite ratio, and z=1:4 composite ratio
c The Benzo(a)pyrene Equivalence (B[a]P-TE) concentration is calculated for each sample by multiplying each PAH chemical concentration by its Toxic Equivalency Factor. The Toxic Equivalency Factors are summed to obtain the Benzo(a)pyrene Equivalence concentration for the sample. (Nisbet and LaGoy, 1992). If the sample concentration was below the laboratory reporting limit, the laboratory reporting limit was used for the calculation.
d CA DTSC-SL for residential soil for chlordane was updated to 1,700 ug/kg in April, 2019. Step-out sampling was performed based on the chlordane screening level from [2]. However, results from sampling were compared against this updated 1,700 ug/kg screening level.

Results highlighted in yellow exceed their respective screening values.
Results highlighted in blue exceed their respective hazardous waste criteria.

TABLE 2
SOIL ANALYTICAL RESULTS
PEA-E SITE INVESTIGATION
Elizabeth Learning Center
Cudahy, California
(Page 33 of 36)

Sample Location		Residential Soil Screening Level (April 2019)[a]			SB-53/54/47	SB-57/58/59	SB-57/58/59	SB-60/52/73/72	SB-60/52/73/72	SB-60/52/73/72	SB-61/65	SB-61/65	SB-62/45	SB-64/66/67	SB-64/66/67	SB-68/76/78	SB-68/76/78	SB-68/76/78	SB-68/76/78	SB-71/70/5	SB-71/70/5	SB-77/41/44
Sample ID					SB-53/54/47-3	SB-57/58/59-1.3	SB-57/58/59-3	SB-60/52/73/72-1.3	SB-60/52/73/72-3	SB-60/52/73/72-3-DUP	SB-61/65-0.5	SB-61/65-3	SB-62/45-1	SB-64/66/67-1.3	SB-64/66/67-3	SB-68/76/78-0.5	SB-68/76/78-0.5-DUP	SB-68/76/78-3	SB-68/76/78-3-DUP	SB-71/70/5-1.1	SB-71/70/5-3	SB-77/41/44-1
Sample Depth (feet bgs):					2.5-3	0.8-1.3	2.5-3	0.8-1.3	2.5-3	2.5-3	0-0.5	2.5-3	0.5-1	0.8-1.3	2.5-3	0-0.5	0-0.5	2.5-3	2.5-3	0.6-1.1	2.5-3	0.5-1
Sample Date:			STLC	TCLP	6/12/2019	6/12/2019	6/12/2019	6/11/2019	6/11/2019	6/11/2019	6/12/2019	6/12/2019	6/11/2019	6/12/2019	6/12/2019	6/13/2019	6/13/2019	6/13/2019	6/13/2019	6/11/2019	6/11/2019	6/11/2019
Metals (TTLC, USEPA Method 6010B/7471A)																						
Antimony (6010B)	mg/kg	31	150		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Arsenic (6010B)	mg/kg	12[1]	50	100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Arsenic (6020)	mg/kg	12 - 19.6 [1]	50	100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Barium (6010B)	mg/kg	15,000	1,000	2,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Beryllium (6010B)	mg/kg	16	7.5		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Cadmium (6010B)	mg/kg	71	10	20	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chromium (6010B)	mg/kg	120,000	50	100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Cobalt (6010B)	mg/kg	23	800	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Copper (6010B)	mg/kg	3,100	250	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Lead (6010B)	mg/kg	80[2]	50	100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Mercury (7471A)	mg/kg	11	2	4	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Molybdenum (6010B)	mg/kg	390	3,500	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Nickel (6010B)	mg/kg	820	200	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Selenium (6010B)	mg/kg	390	10	20	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Silver (6010B)	mg/kg	390	50	100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Thallium (6010B)	mg/kg	0.78	70		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Vanadium (6010B)	mg/kg	390	240	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Zinc (6010B)	mg/kg	23,000	2,500	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Organchlorine Pesticides [OCPs] (USEPA Method 8081A)																						
		Discrete Sample Screening Level[a]	Composited Sample Screening Level [2][b]																			
alpha-BHC	ug/kg	86	--	--	--	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
gamma-BHC	ug/kg	570	250, 160, 125	--	--	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
beta-BHC	ug/kg	300	--	--	--	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
delta-BHC	ug/kg	--	--	--	--	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Heptachlor	ug/kg	130[2]	60, 40, 20	--	--	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aldrin	ug/kg	33[2]	16, 10, 5	140	--	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Heptachlor epoxide	ug/kg	70	--	4,700	160	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
gamma-Chlordane[d]	ug/kg	1,700, 430[2]	215, 140, 105	--	--	< 1.0	1.3	< 1.0	2.1	< 1.0	< 1.0	1.6	< 1.0	< 1.0	< 1.0	< 1.0	4.2	4.7	< 1.0	< 1.0	< 1.0	< 1.0	2.4
alpha-Chlordane[d]	ug/kg	1,700, 430[2]	215, 140, 105	--	--	< 1.0	1.8	< 1.0	3.4	< 1.0	< 1.0	1.3	< 1.0	< 1.0	< 1.0	< 1.0	6.1	6.8	< 1.0	< 1.0	< 1.0	< 1.0	1.8
Endosulfan I	ug/kg	450,000	--	--	--	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
4,4'-DDE	ug/kg	1,600[2]	800, 530, 400	1,000	--	< 2.0	3.3	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	2.0	< 2.0	19	23	< 2.0	< 2.0	< 2.0	< 2.0	5.4
Dieldrin	ug/kg	35[2]	16, 10, 5	8,000	--	< 2.0	4.7	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	4.2	5.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Endrin	ug/kg	19,000	--	200	400	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
4,4'-DDD	ug/kg	2,300[2]	1150, 760, 575	1,000	--	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	3.4	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Endosulfan II	ug/kg	--	--	--	--	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
4,4'-DDT	ug/kg	1,600[2]	800, 530, 400	1,000	--	< 2.0	8.8	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	16	30	< 2.0	< 2.0	< 2.0	< 2.0	18
Endrin aldehyde	ug/kg	--	--	--	--	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Endosulfan sulfate	ug/kg	380,000	--	--	--	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Methoxychlor	ug/kg	320,000	--	100,000	200,000	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Endrin ketone	ug/kg	--	--	--	--	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Toxaphene	ug/kg	450	--	5,000	10,000	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50
Chlordane (tech)[d]	ug/kg	1,700, 430[2]	215, 140, 105	2500	600	< 8.5	13	< 8.5	29	< 8.5	< 8.5	19	< 8.5	< 8.5	< 8.5	< 8.5	61	70	< 8.5	< 8.5	< 8.5	< 8.5	19
Extractions																							
arsenic, STLC	mg/l	--	--	5	5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
arsenic, TCLP	mg/l	--	--	5	5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
lead, STLC	mg/l	--	--	5	5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
lead, TCLP	mg/l	--	--	5	5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chlordane, TCLP	mg/l	--	--	0.25	0.03	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

TABLE 2
SOIL ANALYTICAL RESULTS
PEA-E SITE INVESTIGATION
Elizabeth Learning Center
Cudahy, California
(Page 34 of 36)

Sample Location		Residential Soil Screening Level (April 2019)[a]	STLC	TCLP	SB-53/54/47	SB-57/58/59	SB-57/58/59	SB-60/52/73/72	SB-60/52/73/72	SB-60/52/73/72	SB-61/65	SB-61/65	SB-62/45	SB-64/66/67	SB-64/66/67	SB-68/76/78	SB-68/76/78	SB-68/76/78	SB-68/76/78	SB-71/70/5	SB-71/70/5	SB-77/41/44
Sample ID					SB-53/54/47-3	SB-57/58/59-1.3	SB-57/58/59-3	SB-60/52/73/72-1.3	SB-60/52/73/72-3	SB-60/52/73/72-3-DUP	SB-61/65-0.5	SB-61/65-3	SB-62/45-1	SB-64/66/67-1.3	SB-64/66/67-3	SB-68/76/78-0.5	SB-68/76/78-0.5-DUP	SB-68/76/78-3	SB-68/76/78-3-DUP	SB-71/70/5-1.1	SB-71/70/5-3	SB-77/41/44-1
Sample Depth (feet bgs):					2.5-3	0.8-1.3	2.5-3	0.8-1.3	2.5-3	2.5-3	0-0.5	2.5-3	0.5-1	0.8-1.3	2.5-3	0-0.5	0-0.5	2.5-3	2.5-3	0.6-1.1	2.5-3	0.5-1
Sample Date:					6/12/2019	6/12/2019	6/12/2019	6/11/2019	6/11/2019	6/11/2019	6/12/2019	6/12/2019	6/11/2019	6/12/2019	6/12/2019	6/13/2019	6/13/2019	6/13/2019	6/13/2019	6/11/2019	6/11/2019	6/11/2019
Polychlorinated Biphenyls [PCBs] (USEPA Method 8082)																						
*Aroclor 1260	ug/kg	240	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
All Other Compounds Non-Detect	ug/kg	Varies	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Volatile Organic Compounds [VOCs] (USEPA Method 8260B/5035)																						
All Compounds Non-Detect	ug/kg	Varies	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total Petroleum Hydrocarbons [TPH] (8015M)																						
C4-C12	mg/kg	100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C13-C22	mg/kg	100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C23-C40	mg/kg	100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons [PAHs] (USEPA Method 8270SIM)																						
2-Methyl--phthalene	ug/kg	240,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Ace--phthene	ug/kg	3,600,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Ace--phthylene	ug/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Anthracene	ug/kg	17,000,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(a)anthracene	ug/kg	1,100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(a)pyrene	ug/kg	110	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(b)fluoranthene	ug/kg	1,100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(g,h,i)perylene	ug/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(k)fluoranthene	ug/kg	11,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chrysene	ug/kg	110,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dibenzo(a,h)anthracene	ug/kg	28	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Fluoranthene	ug/kg	2,400,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Fluorene	ug/kg	2,300,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Indeno(1,2,3-c,d)pyrene	ug/kg	1,100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Naphthalene	ug/kg	2,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Phenanthrene	ug/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Pyrene	ug/kg	1,800,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(a)pyrene Equivalence[c]	ug/kg	900[3]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Asbestos (qualitative)																						
Asbestos (qualitative)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Notes:
bgs below ground surface
-- Not available
NA Not applicable
ND Not detected above the reporting limit
mg/kg milligrams per kilogram
ug/kg micrograms per kilogram
mg/l milligrams per liter
TTLC Total Threshold Limit Concentration
STLC Soluble Threshold Limit Concentration
TCLP Toxicity Leaching Characteristic Procedure
BHC benzene hexachloride
DDD dichlorodiphenyldichloroethane
DDE dichlorodiphenyldichloroethylene
DDT dichlorodiphenyltrichloroethane

[1] California background concentration range for arsenic.
[2] Screening value is from DTSC Interim Guidance, Evaulation of School Sites with Potential Soil Contamination as a Result of Lead from Lead-Based Paint, Organochlorine Pesticides from Termiticides, and Polychlorinated Biphenyls from Electrical Transformers, June 9 2006.
[3] Carcinogenic PAH background concentration for Southern California (Environ, 2002).
a Value is the lower of the California Department of Toxic Substance Control Note 3 Screening Levels (CA DTSC-SLs), April 2019, or EPA Regional Screening Levels (RSLs), April 2019, for residential soil.
b Screening value is listed as x,y,z where x=1:2 composite ratio, y=1:3 composite ratio, and z=1:4 composite ratio
c The Benzo(a)pyrene Equivalence (B[a]P-TE) concentration is calculated for each sample by multiplying each PAH chemical concentration by its Toxic Equivalency Factor. The Toxic Equivalency Factors are summed to obtain the Benzo(a)pyrene Equivalence concentration for the sample. (Nisbet and LaGoy, 1992). If the sample concentration was below the laboratory reporting limit, the laboratory reporting limit was used for the calculation.
d CA DTSC-SL for residential soil for chlordane was updated to 1,700 ug/kg in April, 2019. Step-out sampling was performed based on the chlordane screening level from [2]. However, results from sampling were compared against this updated 1,700 ug/kg screening level.

Results highlighted in yellow exceed their respective screening values.
Results highlighted in blue exceed their respective hazardous waste criteria.

TABLE 2
SOIL ANALYTICAL RESULTS
PEA-E SITE INVESTIGATION
Elizabeth Learning Center
Cudahy, California
(Page 35 of 36)

Sample Location		Residential Soil Screening Level (April 2019)[a]		STLC	TCLP	SB-77/41/44	SB-87/55/3	SB-87/55/3
Sample ID						SB-77/41/44-3	SB-87/55/3-0.8	SB-87/55/3-3
Sample Depth (feet bgs):						2.5-3	0.3-0.8	2.5-3
Sample Date:						6/11/2019	6/12/2019	6/12/2019
Metals (TTLC, USEPA Method 6010B/7471A)								
Antimony (6010B)	mg/kg	31		150		--	--	--
Arsenic (6010B)	mg/kg	12[1]		50	100	--	--	--
Arsenic (6020)	mg/kg	12 - 19.6 [1]		50	100	--	--	--
Barium (6010B)	mg/kg	15,000		1,000	2,000	--	--	--
Beryllium (6010B)	mg/kg	16		7.5		--	--	--
Cadmium (6010B)	mg/kg	71		10	20	--	--	--
Chromium (6010B)	mg/kg	120,000		50	100	--	--	--
Cobalt (6010B)	mg/kg	23		800	--	--	--	--
Copper (6010B)	mg/kg	3,100		250	--	--	--	--
Lead (6010B)	mg/kg	80[2]		50	100	--	--	--
Mercury (7471A)	mg/kg	11		2	4	--	--	--
Molybdenum (6010B)	mg/kg	390		3,500	--	--	--	--
Nickel (6010B)	mg/kg	820		200	--	--	--	--
Selenium (6010B)	mg/kg	390		10	20	--	--	--
Silver (6010B)	mg/kg	390		50	100	--	--	--
Thallium (6010B)	mg/kg	0.78		70		--	--	--
Vanadium (6010B)	mg/kg	390		240	--	--	--	--
Zinc (6010B)	mg/kg	23,000		2,500	--	--	--	--
Organcohlorine Pesticides [OCPs] (USEPA Method 8081A)								
		Discrete Sample Screening Level[a]	Composited Sample Screening Level [2][b]					
alpha-BHC	ug/kg	86	--	--	--	< 1.0	< 1.0	< 1.0
gamma-BHC	ug/kg	570	250, 160, 125	--	--	< 1.0	< 1.0	< 1.0
beta-BHC	ug/kg	300	--	--	--	< 1.0	< 1.0	< 1.0
delta-BHC	ug/kg	--	--	--	--	< 1.0	< 1.0	< 1.0
Heptachlor	ug/kg	130[2]	60, 40, 20	--	--	< 1.0	< 1.0	< 1.0
Aldrin	ug/kg	33[2]	16, 10, 5	140	--	< 1.0	< 1.0	< 1.0
Heptachlor epoxide	ug/kg	70	--	4,700	160	< 1.0	< 1.0	< 1.0
gamma-Chlordane[d]	ug/kg	1,700, 430[2]	215, 140, 105	--	--	< 1.0	< 1.0	< 1.0
alpha-Chlordane[d]	ug/kg	1,700, 430[2]	215, 140, 105	--	--	< 1.0	< 1.0	< 1.0
Endosulfan I	ug/kg	450,000	--	--	--	< 1.0	< 1.0	< 1.0
4,4'-DDE	ug/kg	1,600[2]	800, 530, 400	1,000	--	< 2.0	< 2.0	< 2.0
Dieldrin	ug/kg	35[2]	16, 10, 5	8,000	--	< 2.0	< 2.0	< 2.0
Endrin	ug/kg	19,000	--	200	400	< 2.0	< 2.0	< 2.0
4,4'-DDD	ug/kg	2,300[2]	1150, 760, 575	1,000	--	< 2.0	< 2.0	< 2.0
Endosulfan II	ug/kg	--	--	--	--	< 2.0	< 2.0	< 2.0
4,4'-DDT	ug/kg	1,600[2]	800, 530, 400	1,000	--	< 2.0	< 2.0	< 2.0
Endrin aldehyde	ug/kg	--	--	--	--	< 2.0	< 2.0	< 2.0
Endosulfan sulfate	ug/kg	380,000	--	--	--	< 2.0	< 2.0	< 2.0
Methoxychlor	ug/kg	320,000	--	100,000	200,000	< 5.0	< 5.0	< 5.0
Endrin ketone	ug/kg	--	--	--	--	< 2.0	< 2.0	< 2.0
Toxaphene	ug/kg	450	--	5,000	10,000	< 50	< 50	< 50
Chlordane (tech)[d]	ug/kg	1,700, 430[2]	215, 140, 105	2500	600	< 8.5	< 8.5	< 8.5
Extractions								
arsenic, STLC	mg/l	--	--	5	5	--	--	--
arsenic, TCLP	mg/l	--	--	5	5	--	--	--
lead, STLC	mg/l	--	--	5	5	--	--	--
lead, TCLP	mg/l	--	--	5	5	--	--	--
Chlordane, TCLP	mg/l	--	--	0.25	0.03	--	--	--

TABLE 2
SOIL ANALYTICAL RESULTS
PEA-E SITE INVESTIGATION
Elizabeth Learning Center
Cudahy, California

Sample Location		Residential Soil Screening Level (April 2019)[a]	STLC	TCLP	SB-77/41/44	SB-87/55/3	SB-87/55/3
Sample ID					SB-77/41/44-3	SB-87/55/3-0.8	SB-87/55/3-3
Sample Depth (feet bgs):					2.5-3	0.3-0.8	2.5-3
Sample Date:					6/11/2019	6/12/2019	6/12/2019
Polychlorinated Biphenyls [PCBs] (USEPA Method 8082)							
*Aroclor 1260	ug/kg	240	--	--	--	--	--
All Other Compounds Non-Detect	ug/kg	Varies	--	--	--	--	--
Volatile Organic Compounds [VOCs] (USEPA Method 8260B/5035)							
All Compounds Non-Detect	ug/kg	Varies	--	--	--	--	--
Total Petroleum Hydrocarbons [TPH] (8015M)							
C4-C12	mg/kg	100	--	--	--	--	--
C13-C22	mg/kg	100	--	--	--	--	--
C23-C40	mg/kg	100	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons [PAHs] (USEPA Method 8270SIM)							
2-Methyl--phthalene	ug/kg	240,000	--	--	--	--	--
Ace--phthene	ug/kg	3,600,000	--	--	--	--	--
Ace--phthylene	ug/kg	--	--	--	--	--	--
Anthracene	ug/kg	17,000,000	--	--	--	--	--
Benzo(a)anthracene	ug/kg	1,100	--	--	--	--	--
Benzo(a)pyrene	ug/kg	110	--	--	--	--	--
Benzo(b)fluoranthene	ug/kg	1,100	--	--	--	--	--
Benzo(g,h,i)perylene	ug/kg	--	--	--	--	--	--
Benzo(k)fluoranthene	ug/kg	11,000	--	--	--	--	--
Chrysene	ug/kg	110,000	--	--	--	--	--
Dibenzo(a,h)anthracene	ug/kg	28	--	--	--	--	--
Fluoranthene	ug/kg	2,400,000	--	--	--	--	--
Fluorene	ug/kg	2,300,000	--	--	--	--	--
Indeno(1,2,3-c,d)pyrene	ug/kg	1,100	--	--	--	--	--
Naphthalene	ug/kg	2,000	--	--	--	--	--
Phenanthrene	ug/kg	--	--	--	--	--	--
Pyrene	ug/kg	1,800,000	--	--	--	--	--
Benzo(a)pyrene Equivalence[c]	ug/kg	900[3]	--	--	--	--	--
Asbestos (qualitative)							
Asbestos (qualitative)	--	--	--	--	--	--	--

Notes:

bgs	below ground surface
--	Not available
NA	Not applicable
ND	Not detected above the reporting limit
mg/kg	milligrams per kilogram
ug/kg	micrograms per kilogram
mg/l	milligrams per liter
TTLC	Total Threshold Limit Concentration
STLC	Soluble Threshold Limit Concentration
TCLP	Toxicity Leaching Characteristic Procedure
BHC	benzene hexachloride
DDD	dichlorodiphenyldichloroethane
DDE	dichlorodiphenyldichloroethylene
DDT	dichlorodiphenyltrichloroethane

[1] California background concentration range for arsenic.

[2] Screening value is from DTSC Interim Guidance, Evaulation of School Sites with Potential Soil Contamination as a Result of Lead from Lead-Based Paint, Organochlorine Pesticides from Termiticides, and Polychlorinated Biphenyls from Electrical Transformers, June 9 2006.

[3] Carcinogenic PAH background concentration for Southern California (Environ, 2002).

a Value is the lower of the California Department of Toxic Substance Control Note 3 Screening Levels (CA DTSC-SLs), April 2019, or EPA Regional Screening Levels (RSLs), April 2019, for residential soil.

b Screening value is listed as x,y,z where x=1:2 composite ratio, y=1:3 composite ratio, and z=1:4 composite ratio

c The Benzo(a)pyrene Equivalence (B[a]P-TE) concentration is calculated for each sample by multiplying each PAH chemical concentration by its Toxic Equivalency Factor. The Toxic Equivalency Factors are summed to obtain the Benzo(a)pyrene Equivalence concentration for the sample. (Nisbet and LaGoy, 1992). If the sample concentration was below the laboratory reporting limit, the laboratory reporting limit was used for the calculation.

d CA DTSC-SL for residential soil for chlordane was updated to 1,700 ug/kg in April, 2019. Step-out sampling was performed based on the chlordane screening level from [2]. However, results from sampling were compared against this updated 1,700 ug/kg screening level.

Results highlighted in yellow exceed their respective screening values.

Results highlighted in blue exceed their respective hazardous waste criteria.

TABLE 2

SOIL ANALYTICAL RESULTS SUMMARY - Metals
4811 Elizabeth Street
Cudahy, CA 90201

Sample Location				**B-1**	**B-1**	**B-2**	**B-2**	**B-2**	**B-3**	**B-3**
Sample Identification	**DTSC SL**	**US EPA RSL**	**Background**	**B-1-0.5**	**B-1-1.5**	**B-2-0.5**	**B-2-1.5**	**B-2-3**	**B-3-0.5**	**B-3-1.5**
Sample Date	**Resident Soil**	**Resident Soil**	**For Arsenic**	**01/06/2021**	**01/06/2021**	**01/06/2021**	**01/06/2021**	**1/6/2021**	**01/06/2021**	**01/06/2021**
Sample Depth	**Noncancer Endpoint**	**(THQ = 1.0)**	**in California**	**(0.5) ft BGS**	**(1.5) ft BGS**	**(0.5) ft BGS**	**(1.5) ft BGS**	**(3) ft BGS**	**(0.5) ft BGS**	**(1.5) ft BGS**
Metals										
Arsenic	NA	NA	12	4.01	3.28	**36.8**	**84.0**	**34.7**	3.22	**45.1**
Barium	NS	15000		153	123	86.3	80.0	--	133	92.9
Beryllium	16	160		0.618	0.639	0.359	0.289	--	0.693	0.392
Cadmium	71	71		0.725	<0.513	<0.503	<0.485	--	0.554	<0.478
Cobalt	NS	23		9.15	12.7	6.49	5.76	--	9.19	7.47
Chromium (III)	NS	120000		14.4	40.9	11.2	8.96	--	15.5	13.5
Copper	NS	3100		18.4	20.9	11.5	7.78	--	15.9	10.7
Mercury	1	11		0.0852	<0.0862	<0.0820	<0.0862	--	<0.0806	<0.0877
Molybdenum	NS	390		<0.485	<0.513	<0.503	<0.485	--	<0.485	<0.478
Nickel	820	1500		13.0	25.1	9.23	5.90	--	11.0	8.07
Vanadium	NS	390		32.0	59.6	25.0	21.5	--	35.9	29.7
Zinc	NS	23000		98.3	58.1	55.2	40.1	--	63.6	45.4
Lead	80	400		39.8	<5.13	18.8	5.41	--	17.8	6.18
All Other Compounds Non-Detect	Varies			ND	ND	ND	ND	ND	ND	ND

TABLE 2

SOIL ANALYTICAL RESULTS SUMMARY - Metals
4811 Elizabeth Street
Cudahy, CA 90201

Sample Location	**B-3**	**B-4**	**B-4**	**B-5**	**B-5**	**B-5**	**B-6**	**B-6**	**B-7**	**B-7**
Sample Identification	**B-3-3**	**B-4-0.5**	**B-4-1.5**	**B-5-0.5**	**B-5-1.5**	**B-5-3**	**B-6-0.5**	**B-6-1.5**	**B-7-0.5**	**B-7-1.5**
Sample Date	**1/6/2021**	**01/06/2021**	**01/06/2021**	**01/06/2021**	**01/06/2021**	**1/6/2021**	**01/06/2021**	**01/06/2021**	**01/06/2021**	**01/06/2021**
Sample Depth	**(3) ft BGS**	**(0.5) ft BGS**	**(1.5) ft BGS**	**(0.5) ft BGS**	**(1.5) ft BGS**	**(3) ft BGS**	**(0.5) ft BGS**	**(1.5) ft BGS**	**(0.5) ft BGS**	**(1.5) ft BGS**
Metals										
Arsenic	4.13	4.51	4.01	4.93	**91.2**	**66.8**	2.82	11.8	7.74	4.64
Barium	--	114	131	91.0	70.6	--	104	91.8	97.9	103
Beryllium	--	0.406	0.432	0.281	0.300	--	0.313	0.265	0.349	0.438
Cadmium	--	0.648	<0.503	<0.478	<0.505	--	0.855	<0.500	<0.513	<0.500
Cobalt	--	7.56	9.32	4.30	6.03	--	5.77	4.59	5.33	7.36
Chromium (III)	--	11.9	23.0	9.96	7.77	--	11.2	9.88	11.8	10.1
Copper	--	19.3	13.8	17.5	14.3	--	19.7	21.7	16.0	10.1
Mercury	--	<0.0877	<0.0847	<0.0794	<0.0806	--	<0.0877	<0.0820	<0.0877	<0.0806
Molybdenum	--	<0.490	<0.503	<0.478	<0.505	--	<0.503	<0.500	<0.513	<0.500
Nickel	--	11.1	12.1	9.18	6.04	--	8.14	9.98	11.8	8.02
Vanadium	--	25.0	36.5	19.5	20.5	--	21.5	19.5	21.9	25.2
Zinc	--	96.4	59.8	47.0	34.6	--	140	72.7	62.1	55.3
Lead	--	44.6	<5.03	23.1	<5.05	--	76.8	27.2	31.2	8.62
All Other Compounds Non-Detect	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

TABLE 2

SOIL ANALYTICAL RESULTS SUMMARY - Metals
4811 Elizabeth Street
Cudahy, CA 90201

Sample Location	**B-8**	**B-8**	**B-9**	**B-9**	**B-10**	**B-10**
Sample Identification	**B-8-0.5**	**B-8-1.5**	**B-9-0.5**	**B-9-1.5**	**B-10-0.5**	**B-10-1.5**
Sample Date	**01/06/2021**	**01/06/2021**	**01/06/2021**	**01/06/2021**	**01/06/2021**	**01/06/2021**
Sample Depth	**(0.5) ft BGS**	**(1.5) ft BGS**	**(0.5) ft BGS**	**(1.5) ft BGS**	**(0.5) ft BGS**	**(1.5) ft BGS**
Metals						
Arsenic	3.27	1.34	**12.4**	1.31	3.94	1.23
Barium	103	101	105	99.8	145	131
Beryllium	0.515	0.422	0.427	0.419	0.513	0.488
Cadmium	0.555	0.539	0.823	0.498	0.828	0.570
Cobalt	7.72	7.54	7.04	7.43	7.97	8.44
Chromium (III)	13.0	10.2	19.9	9.56	15.8	12.0
Copper	19.2	12.6	25.5	10.4	22.7	15.3
Mercury	0.107	<0.0833	0.0894	<0.0820	<0.0820	<0.0820
Molybdenum	<0.493	<0.493	<0.508	<0.490	0.592	<0.518
Nickel	10.3	7.73	12.0	7.74	13.2	9.12
Vanadium	27.3	24.3	25.1	24.4	31.2	27.9
Zinc	145	89.4	110	50.8	101	84.2
Lead	**197**	27.2	79.9	7.44	37.8	22.7
All Other Compounds Non-Detect	ND	ND	ND	ND	ND	ND

DTSC SL - Department of Toxic Substances Screening Levels
US EPA RSL - United States Environmental Protection Agency Regional Screening Levels (November 2020)
THQ - Target Hazard Quotient
BGS - below ground surface
ND - not detected above the reporting limit
< - reported was less than the indicated reporting limit
-- = not analyzed
NS - not specified
indicates
Analyzed by method: 6010B - Metals
Mercury analyzed by method: 7471A - Mercury (CVAA)
Arsenic analyzed by EPA Method: 6020 - Metals (ICP/MS)
All limits and results reported in miligrams per kilogram (mg/kg)

TABLE 2

SOIL ANALYTICAL RESULTS SUMMARY - Polycyclic Aromatic Hydrocarbons
4811 Elizabeth Street
Cudahy, CA 90201

Sample Location					**B-1**	**B-1**	**B-2**	**B-2**
Sample Identification	**DTSC SL**	**DTSC SL**	**US EPA RSL**	**DTSC SL**	**B-1-0.5**	**B-1-1.5**	**B-2-0.5**	**B-2-1.5**
Sample Date	**Resident Soil**	**Resident Soil**	**Resident Soil**	**PAH Background**	**01/06/2021**	**01/06/2021**	**01/06/2021**	**01/06/2021**
Sample Depth	**Cancer Endpoint**	**Noncancer Endpoint**	**(THQ = 1.0)**	**Cancer Endpoint**	**(0.5) ft BGS**	**(1.5) ft BGS**	**(0.5) ft BGS**	**(1.5) ft BGS**
PAHs								
Benzo[g,h.i]perylene	NS	NS	NS	900	<0.020	<0.020	<0.040	<0.020
All Other Compounds Non-Detect		Varies		900	ND	ND	ND	ND

TABLE 2

SOIL ANALYTICAL RESULTS SUMMARY - Polycyclic Aromatic Hydrocarbons
4811 Elizabeth Street
Cudahy, CA 90201

Sample Location	**B-3**	**B-3**	**B-4**	**B-4**	**B-5**	**B-5**	**B-6**	**B-6**	**B-7**
Sample Identification	**B-3-0.5**	**B-3-1.5**	**B-4-0.5**	**B-4-1.5**	**B-5-0.5**	**B-5-1.5**	**B-6-0.5**	**B-6-1.5**	**B-7-0.5**
Sample Date	**01/06/2021**	**01/06/2021**	**01/06/2021**	**01/06/2021**	**01/06/2021**	**01/06/2021**	**01/06/2021**	**01/06/2021**	**01/06/2021**
Sample Depth	**(0.5) ft BGS**	**(1.5) ft BGS**	**(0.5) ft BGS**	**(1.5) ft BGS**	**(0.5) ft BGS**	**(1.5) ft BGS**	**(0.5) ft BGS**	**(1.5) ft BGS**	**(0.5) ft BGS**
PAHs									
Benzo[g,h.i]perylene	<0.020	<0.020	<0.020	<0.020	0.055	<0.020	<0.020	<0.020	<0.039
All Other Compounds Non-Detect	ND	ND	ND	ND	ND	ND	ND	ND	ND

TABLE 2

SOIL ANALYTICAL RESULTS SUMMARY - Polycyclic Aromatic Hydrocarbons
4811 Elizabeth Street
Cudahy, CA 90201

Sample Location	**B-7**	**B-8**	**B-8**	**B-9**	**B-9**	**B-10**	**B-10**
Sample Identification	**B-7-1.5**	**B-8-0.5**	**B-8-1.5**	**B-9-0.5**	**B-9-1.5**	**B-10-0.5**	**B-10-1.5**
Sample Date	**01/06/2021**	**01/06/2021**	**01/06/2021**	**01/06/2021**	**01/06/2021**	**01/06/2021**	**01/06/2021**
Sample Depth	**(1.5) ft BGS**	**(0.5) ft BGS**	**(1.5) ft BGS**	**(0.5) ft BGS**	**(1.5) ft BGS**	**(0.5) ft BGS**	**(1.5) ft BGS**
PAHs							
Benzo[g,h.i]perylene	<0.020	<0.020	<0.020	<0.039	<0.020	<0.020	<0.039
All Other Compounds Non-Detect	ND	ND	ND	ND	ND	ND	ND

DTSC SL - Department of Toxic Substances Screening Levels (Human Health Risk Assessment Note 3 June 2020 - US EPA)
US EPA RSL - United States Environmental Protection Agency Regional Screening Levels (November 2020)
THQ - Target Hazard Quotient
BGS - below ground surface
< - reported was less than the indicated reporting limit
-- = not analyzed
ND - not detected above the reporting limit
NS - not specified
PAHs - Polycyclic Aromatic Hydrocarbons
Method: 8270C SIM - PAHs (GC/MS SIM)
All limits and results reported in miligrams per kilogram (mg/kg)

TABLE 2

SOIL ANALYTICAL RESULTS SUMMARY - Total Petroleum Hydrocarbons
4811 Elizabeth Street
Cudahy, CA 90201

Sample Location					**B-1**	**B-1**	**B-2**	**B-2**	**B-3**	**B-3**
Sample Identification	**DTSC SL**	**DTSC SL**	**US EPA RSL**	**SFBRWQCB**	**B-1-0.5**	**B-1-1.5**	**B-2-0.5**	**B-2-1.5**	**B-3-0.5**	**B-3-1.5**
Sample Date	**Resident Soil**	**Resident Soil**	**Resident Soil**	**Tier 1 ESLs**	**01/06/2021**	**01/06/2021**	**01/06/2021**	**01/06/2021**	**01/06/2021**	**01/06/2021**
Sample Depth	**Cancer Endpoint**	**Noncancer Endpoint**	**(THQ = 1.0)**	**2013**	**(0.5) ft BGS**	**(1.5) ft BGS**	**(0.5) ft BGS**	**(1.5) ft BGS**	**(0.5) ft BGS**	**(1.5) ft BGS**
Total Petroleum Hydrocarbons										
Gasoline Range Organics [C4-C12]	NS	NS	NS	770	<0.10	<0.10	<0.099	<0.099	<0.098	<0.099
Diesel Range Organics [C10-C28]	NS	NS	NS	240	52	7.1	76	<4.8	44	<5.0
Motor Oil Range Organics [C17-C44]	NS	NS	NS	10,000	190	<26	270	<24	120	<25

TABLE 2

SOIL ANALYTICAL RESULTS SUMMARY - Total Petroleum Hydrocarbons
4811 Elizabeth Street
Cudahy, CA 90201

Sample Location	**B-4**	**B-4**	**B-5**	**B-5**	**B-6**	**B-6**	**B-7**	**B-7**	**B-8**	**B-8**
Sample Identification	**B-4-0.5**	**B-4-1.5**	**B-5-0.5**	**B-5-1.5**	**B-6-0.5**	**B-6-1.5**	**B-7-0.5**	**B-7-1.5**	**B-8-0.5**	**B-8-1.5**
Sample Date	**01/06/2021**	**01/06/2021**	**01/06/2021**	**01/06/2021**	**01/06/2021**	**01/06/2021**	**01/06/2021**	**01/06/2021**	**01/06/2021**	**01/06/2021**
Sample Depth	**(0.5) ft BGS**	**(1.5) ft BGS**	**(0.5) ft BGS**	**(1.5) ft BGS**	**(0.5) ft BGS**	**(1.5) ft BGS**	**(0.5) ft BGS**	**(1.5) ft BGS**	**(0.5) ft BGS**	**(1.5) ft BGS**
Total Petroleum Hydrocarbons										
Gasoline Range Organics [C4-C12]	<0.10	<0.10	<0.10	<0.10	<0.099	<0.099	<0.10	<0.10	<0.099	<0.10
Diesel Range Organics [C10-C28]	47	<4.8	200	<5.0	37	130	150	17	48	<4.9
Motor Oil Range Organics [C17-C44]	160	<24	900	<25	110	590	740	39	140	<24

TABLE 2

SOIL ANALYTICAL RESULTS SUMMARY - Total Petroleum Hydrocarbons
4811 Elizabeth Street
Cudahy, CA 90201

Sample Location	**B-9**	**B-9**	**B-10**	**B-10**
Sample Identification	**B-9-0.5**	**B-9-1.5**	**B-10-0.5**	**B-10-1.5**
Sample Date	**01/06/2021**	**01/06/2021**	**01/06/2021**	**01/06/2021**
Sample Depth	**(0.5) ft BGS**	**(1.5) ft BGS**	**(0.5) ft BGS**	**(1.5) ft BGS**
Total Petroleum Hydrocarbons				
Gasoline Range Organics [C4-C12]	<0.099	<0.099	<0.10	<0.098
Diesel Range Organics [C10-C28]	97	<5.2	36	5.5
Motor Oil Range Organics [C17-C44]	390	<26	98	<25

DTSC SL - Department of Toxic Substances Screening Levels (Human Health Risk Assessment Note 3 June 2020 - US EPA)
US EPA RSL - United States Environmental Protection Agency Regional Screening Levels (November 2020)
SFBRWQCB Tier 1 ESLs - San Francisco Bay Regional Water Quality Contol Board Tier 1 Environmental Screening Levels (2013)
THQ - Target Hazard Quotient
< - reported was less than the indicated reporting limit
NS - not specified
DRO - Diesel Range Organics
Bold type indicates concentrations that exceeded the respective screening level.
Method: 8015B - Diesel Range Organics (DRO) (GC)
All limits and results reported in miligrams per kilogram (mg/kg)

TABLE 2

SOIL ANALYTICAL RESULTS SUMMARY - Organochlorine Pesticides
4811 Elizabeth Street
Cudahy, CA 90201

Sample Location				**B-1**	**B-1**	**B-2**	**B-2**	**B-3**	**B-3**	**B-4**
Sample Identification	**DTSC SL**	**DTSC SL**	**US EPA RSL**	**B-1-0.5**	**B-1-1.5**	**B-2-0.5**	**B-2-1.5**	**B-3-0.5**	**B-3-1.5**	**B-4-0.5**
Sample Date	**Resident Soil**	**Resident Soil**	**Resident Soil**	**01/06/2021**	**01/06/2021**	**01/06/2021**	**01/06/2021**	**01/06/2021**	**01/06/2021**	**01/06/2021**
Sample Depth	**Cancer Endpoint**	**Noncancer Endpoint**	**(THQ = 1.0)**	**(0.5) ft BGS**	**(1.5) ft BGS**	**(0.5) ft BGS**	**(1.5) ft BGS**	**(0.5) ft BGS**	**(1.5) ft BGS**	**(0.5) ft BGS**
Organochlorine Pesticides										
alpha-Chlordane	NS	NS	NS	<5.0	9.5	<5.0	<5.0	<5.0	<5.0	<5.0
gamma-Chlordane	NS	NS	NS	<5.0	17	<5.0	<5.0	<5.0	<5.0	<5.0
Chlordane	1700	35000	1700	<25	53	<25	<25	<25	<25	<25
Dieldrin	34	3200	NS	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
All Other Compounds Non-Detect		Varies		ND	ND	ND	ND	ND	ND	ND

TABLE 2

SOIL ANALYTICAL RESULTS SUMMARY - Organochlorine Pesticides
4811 Elizabeth Street
Cudahy, CA 90201

Sample Location	**B-4**	**B-5**	**B-5**	**B-6**	**B-6**	**B-6**	**B-7**	**B-7**	**B-8**	**B-8**
Sample Identification	**B-4-1.5**	**B-5-0.5**	**B-5-1.5**	**B-6-0.5**	**B-6-1.5**	**B-6-1.5**	**B-7-0.5**	**B-7-1.5**	**B-8-0.5**	**B-8-1.5**
Sample Date	**01/06/2021**	**01/06/2021**	**01/06/2021**	**01/06/2021**	**01/06/2021**	**1/7/2021**	**01/06/2021**	**01/06/2021**	**01/06/2021**	**01/06/2021**
Sample Depth	**(1.5) ft BGS**	**(0.5) ft BGS**	**(1.5) ft BGS**	**(0.5) ft BGS**	**(1.5) ft BGS**	**(3.0) ft BGS**	**(0.5) ft BGS**	**(1.5) ft BGS**	**(0.5) ft BGS**	**(1.5) ft BGS**
Organochlorine Pesticides										
alpha-Chlordane	<5.0	<5.0	<5.0	<5.0	<5.0	--	<5.0	<5.0	6.1	<5.0
gamma-Chlordane	<5.0	<5.0	<5.0	<5.0	7.2	--	<5.0	<5.0	7.4	<5.0
Chlordane	<25	<25	<25	<25	<25	--	<25	<25	<25	<25
Dieldrin	<5.0	<5.0	<5.0	<5.0	**36**	<5.0	<5.0	<5.0	8.8	<5.0
All Other Compounds Non-Detect	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

TABLE 2

SOIL ANALYTICAL RESULTS SUMMARY - Organochlorine Pesticides
4811 Elizabeth Street
Cudahy, CA 90201

Sample Location	**B-9**	**B-9**	**B-10**	**B-10**
Sample Identification	**B-9-0.5**	**B-9-1.5**	**B-10-0.5**	**B-10-1.5**
Sample Date	**01/06/2021**	**01/06/2021**	**01/06/2021**	**01/06/2021**
Sample Depth	**(0.5) ft BGS**	**(1.5) ft BGS**	**(0.5) ft BGS**	**(1.5) ft BGS**
Organochlorine Pesticides				
alpha-Chlordane	8.7	<5.0	<5.0	<5.0
gamma-Chlordane	8.5	<5.0	<5.0	<5.0
Chlordane	<25	<25	<25	<25
Dieldrin	<5.0	<5.0	<5.0	<5.0
All Other Compounds Non-Detect	ND	ND	ND	ND

DTSC SL - Department of Toxic Substances Screening Levels (Human Health Risk Assessment Note 3 June 2020 - US EPA)
US EPA RSL - United States Environmental Protection Agency Regional Screening Levels (November 2020)
THQ - Target Hazard Quotient
BGS - below ground surface
< - reported was less than the indicated reporting limit
ND - not detected above the reporting limit
NS - not specified
Bold type indicates concentrations that exceeded the respective screening level.
Method: 8081A - Organochlorine Pesticides (GC)
All limits and results reported in micrograms per kilogram (ug/kg)

TABLE 2

SOIL ANALYTICAL RESULTS SUMMARY - Volatile Organic Compounds
4811 Elizabeth Street
Cudahy, CA 90201

Sample Location				**B-1**	**B-1**	**B-2**	**B-2**	**B-3**	**B-3**	**B-4**
Sample Identification	**DTSC SL**	**DTSC SL**	**US EPA RSL**	**B-1-0.5**	**B-1-1.5**	**B-2-0.5**	**B-2-1.5**	**B-3-0.5**	**B-3-1.5**	**B-4-0.5**
Sample Date	**Resident Soil**	**Resident Soil**	**Resident Soil**	**01/06/2021**	**01/06/2021**	**01/06/2021**	**01/06/2021**	**01/06/2021**	**01/06/2021**	**01/06/2021**
Sample Depth	**Cancer Endpoint**	**Noncancer Endpoint**	**(THQ = 1.0)**	**(0.5) ft BGS**	**(1.5) ft BGS**	**(0.5) ft BGS**	**(1.5) ft BGS**	**(0.5) ft BGS**	**(1.5) ft BGS**	**(0.5) ft BGS**
VOCs										
Acetone	NS	NS	61000	<0.024	<0.019	0.030	<0.021	0.032	<0.020	0.046
Benzene	0.33	11	1.2	<0.0012	<0.00095	<0.00097	<0.0011	<0.00090	<0.00098	<0.00093
All Other Compounds Non-Detect		Varies		ND	ND	ND	ND	ND	ND	ND

TABLE 2

SOIL ANALYTICAL RESULTS SUMMARY - Volatile Organic Compounds
4811 Elizabeth Street
Cudahy, CA 90201

Sample Location	**B-4**	**B-5**	**B-5**	**B-6**	**B-6**	**B-7**	**B-7**	**B-8**	**B-8**	**B-9**
Sample Identification	**B-4-1.5**	**B-5-0.5**	**B-5-1.5**	**B-6-0.5**	**B-6-1.5**	**B-7-0.5**	**B-7-1.5**	**B-8-0.5**	**B-8-1.5**	**B-9-0.5**
Sample Date	**01/06/2021**	**01/06/2021**	**01/06/2021**	**01/06/2021**	**01/06/2021**	**01/06/2021**	**01/06/2021**	**01/06/2021**	**01/06/2021**	**01/06/2021**
Sample Depth	**(1.5) ft BGS**	**(0.5) ft BGS**	**(1.5) ft BGS**	**(0.5) ft BGS**	**(1.5) ft BGS**	**(0.5) ft BGS**	**(1.5) ft BGS**	**(0.5) ft BGS**	**(1.5) ft BGS**	**(0.5) ft BGS**
VOCs										
Acetone	<0.021	0.023	<0.022	0.026	0.087	0.056	<0.021	0.028	0.026	0.035
Benzene	<0.0011	<0.0011	<0.0011	<0.00097	<0.0017	<0.0012	<0.0011	<0.0012	0.0013	0.0017
All Other Compounds Non-Detect	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

TABLE 2

SOIL ANALYTICAL RESULTS SUMMARY - Volatile Organic Compounds
4811 Elizabeth Street
Cudahy, CA 90201

Sample Location	**B-9**	**B-10**	**B-10**
Sample Identification	**B-9-1.5**	**B-10-0.5**	**B-10-1.5**
Sample Date	**01/06/2021**	**01/06/2021**	**01/06/2021**
Sample Depth	**(1.5) ft BGS**	**(0.5) ft BGS**	**(1.5) ft BGS**
VOCs			
Acetone	0.032	0.045	0.021
Benzene	<0.0011	<0.0012	0.0011
All Other Compounds Non-Detect	ND	ND	ND

DTSC SL - Department of Toxic Substances Screening Levels (Human Health Risk Assessment Note 3 June 2020 - US EPA)
US EPA RSL - United States Environmental Protection Agency Regional Screening Levels (November 2020)
THQ - Target Hazard Quotient
< - reported was less than the indicated reporting limit
ND - not detected above the reporting limit
NS - not specified
VOCs - Volatile Organic Compounds
Bold type indicates concentrations that exceeded the respective screening level.
Method: 8260B - VOCs (GC/MS)
All limits and results reported in miligrams per kilogram (mg/kg)

TABLE 2

SOIL ANALYTICAL RESULTS SUMMARY - Metals and Dieldrin (STLC)
4811 Elizabeth Street
Cudahy, CA 90201

Sample Location		**B-2**	**B-5**	**B-6**	**B-6**	**B-8**	**B-9**
Sample Identification	**STLC**	**B-2-1.5**	**B-5-1.5**	**B-6-0.5**	**B-6-1.5**	**B-8-0.5**	**B-9-0.5**
Sample Date	**Regulatory Level**	**01/06/2021**	**01/06/2021**	**01/06/2021**	**01/06/2021**	**01/06/2021**	**01/06/2021**
Sample Depth		**(1.5) ft BGS**	**(1.5) ft BGS**	**(0.5) ft BGS**	**(1.5) ft BGS**	**(0.5) ft BGS**	**(0.5) ft BGS**
Metals							
Arsenic	5.0	**5.09**	4.93	--	--	--	--
Lead	5.0	--	--	4.01	--	**6.81**	3.87
Organochlorine Pesticides							
Dieldrin	0.8	--	--	--	<0.0005	--	--

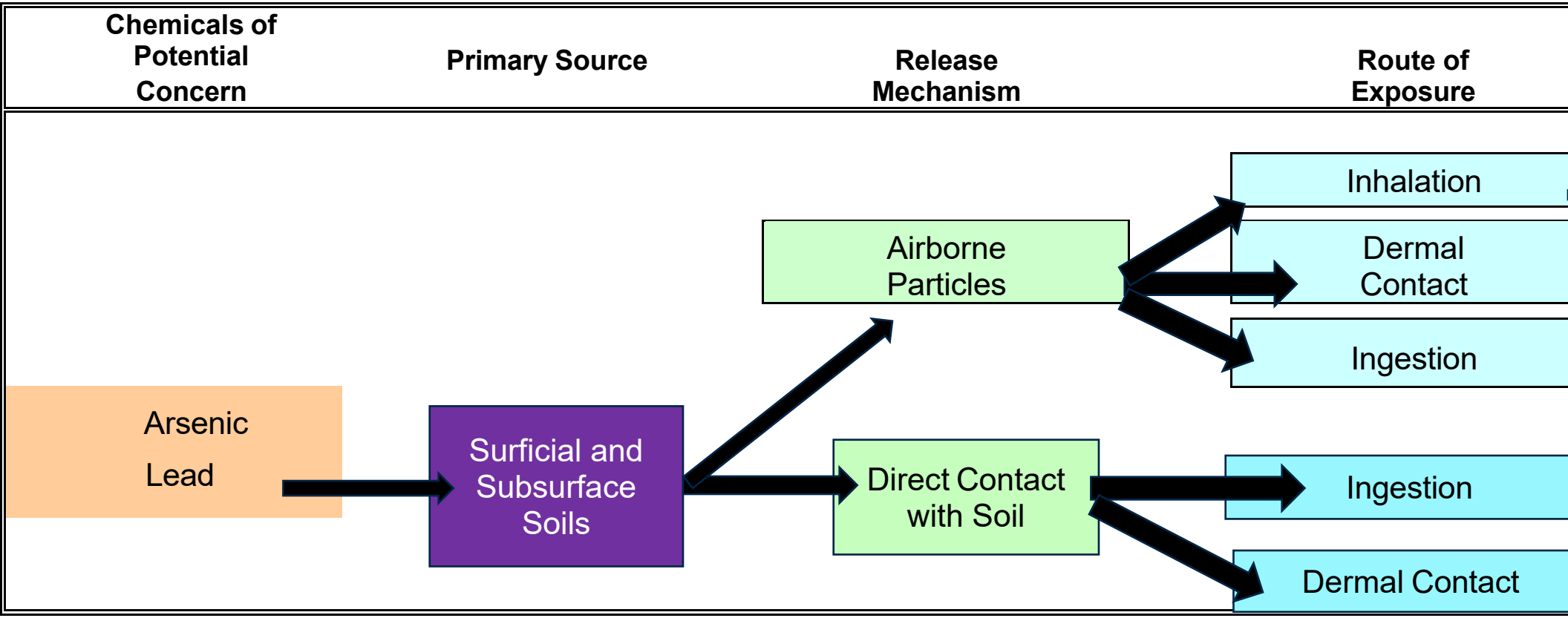
STLC - Soluble Threshold Limit Concentration
BGS - below ground surface
< - reported was less than the indicated reporting limit
-- = not analyzed
Bold type indicates concentrations that exceeded the respective screening level.
Metals analyzed by Method 6010B - STLC Citrate
Organochlorine pesticides analyzed by Method 8081A - STLC Citrate
All limits and results reported in miligrams per liter (mg/L)

Appendices

Appendix A

Conceptual Site Exposure Model

Appendix A: Conceptual Site Exposure Model



Appendix B

Community Profile

Community Profile Report

Elizabeth Learning Center

4811 Elizabeth Street, Cudahy, CA

Community demographics for Cudahy, CA according to the 2020 US Census is as follows:

- Population: 22,811
- Male: 48.5%
- Female: 51.5%
- Population 18 years and over: 61.3%
- Average household size: 4.14
- Population by race:
  - White: 64.1%
  - Black or African American: 0.7%
  - Native American: 0.3%
  - Asian: 0.2%
  - Native Hawaiian and Pacific Islander: 0.1%
  - Two or more races: 14.0%
  - Hispanic or Latino: 96.5%
  - White, not Hispanic or Latino: 2.1%

Local Participation and Involvement: A work notice announcing the PEA-E investigative activities was distributed to the local community in English and Spanish. The work notice was laminated and placed on gates/fences around the School property on June 5, 2019. Copies of the work notice were also distributed to nearby residents, businesses, School faculty/staff, and parents of students. The School was provided advance notice of the planned activities at least 48 hours prior to initiating field work.

Appendix C

Health and Safety Plan (HASP)

Site-Specific Health and Safety Plan

Elizabeth Learning Center Removal Action

Los Angeles Unified School District

July 19 2022
12580357|01|--
Approval Date: None

HEALTH AND SAFETY PLAN

Signature page

This HASP was electronically signed by the Project Manager and Safety Group within the HASP Builder Software. Fully approved HASP is printed without a DRAFT watermark.

Project Name: Elizabeth Learning Center Removal Action

Project Manager Approval Date: Karen Gale,
Safety Group Approval Date: Matthew (Matt) Downing,

Project Number: 12580357

Emergency Information

Contact	Phone Number	
Local Police South Gate Police Department 8620 California Ave South Gate, California United States 90280	+13235635400	
Fire Department	911	
Ambulance	911	
Local Hospital St. Francis Medical Center 3630 E Imperial Hwy Lynwood, California United States 90262	310-900-8900	
National Poison Center	(800) 222-1222	GHD - HSE Help Line Please call **(866) 529-4886** and provide: • Name and location of caller • Description of incident • Name of injured person(s) • Description of injuries • Phone number for return call
Project Manager Karen Gale	Work: 949-648-5208 Cell: 949-273-3988	
Site Supervisor Ryan Manning	Work: 949-648-5209 Cell: 949-565-5409	
GHD Regional S&H Manager Matthew (Matt) Downing	Work: (720) 974-0949 Cell: (720) 445-2055	
Client Contact **Lawrence Brown**	**213-241-4263**	
Client Site Contact		
Other Contact		
Site Health Officer	Phone:	
Person to verify hospital route:	Signature:	

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Appendix

Chemical Table

Appendix A - GHD Mandatory Documents

Tailgate Safety Meeting - Large
Tailgate Safety Meeting - Small
QSF-006 - Management of Change
QSF-019 Underground Utilities Checklist
HASP Amendment Form
HASP Acknowledgement Sheet
12580357-RPT-1-Figures 1-12.pdf

Appendix B - JSAs

Environmental-Soil Sampling
Environmental-Soil Sampling From Excavator Bucket
Environmental-Decontamination of Sampling Equipment and Personnel

(PPE Level D)
O_M-Derived Waste Drum Moving and Handling
Motor Vehicle - Driving
Construction-Excavation Oversight
Environmental-Drum Sampling for Non Hazardous Material
Remediation-Derived Waste Drum Moving and Handling
Surveying-Land Surveying
Mobilization-Demobilization
Construction Oversight
Environmental-Site Recon and Walkthrough

Appendix C - Safety Data Sheets (SDS)

Alconox SDS

Appendix D - Training Records

Record of Training Form

1. Introduction

1.1 GHD Values and Integrity Management Policy

At GHD, we commit to safe, ethical and respectful business behaviour in regard to both the internal conduct of our business and our engagement with external stakeholders and the public. The core values of Safety, Teamwork, Respect and Integrity will guide all of our activities. We will only seek work and participate in business transactions under high standards of corporate ethics and with complete integrity. Our projects will be undertaken in a manner that places safety as the top priority, with each of our employees empowered with Stop Work Authority throughout the execution of project work. GHD expects that all of its projects will be undertaken in an environment of teamwork and mutual respect, free from discrimination, harassment, bullying or other inappropriate behavior. We foster an open environment in which our people can report any improper practices or behaviour without fear of reprisal. All reported incidents will be investigated promptly with appropriate and equitable follow-up. GHD's integrity management policy and guidelines are available at http://www.ghdcanada.com/global/about-us/integrity-management.

1.2 Purpose

The purpose of this site specific health and safety plan (HASP) is to provide guidelines and establish procedures for reducing and controlling hazard exposure to the public, property, and personnel. The HASP is a living document and must continually evolve as site conditions and knowledge of the site activities develop.

This document has been developed to meet or exceed the requirements set forth by federal, state, and provincial legislation. If any procedure outlined in this plan conflicts with federal, state/provincial, and/or municipal law, prescribed standards, or client requirements, then the most stringent set of standards applies.

1.3 Stop Work Authority

All employees are empowered and expected to stop the work of coworkers, subcontractors, client employees, or other contractors if any person's safety or the environment are at risk. No repercussions will result from this action. Reporting of unsafe acts/condition (UA or UC) or Stop Work Authority (SWA) is completed with BWise and/or the GHD HSE app. Unsafe acts, conditions, stop work authority are now reported via the GHD HSE app.

The discovery of any condition that would suggest the existence of a situation more hazardous than anticipated results in the removal of site personnel from that area and re-evaluation of the hazard and the levels of protection.

1.4 Short Service Employee

The Employee is considered a Short Service Employee (SSE) if he/she has less than 6 months experience with his/her present employee, or in his/her present role. The individual is required to wear a fluorescent orange hardhat, as an obvious indicator of SSE status. Training and mentoring allows them to gain knowledge and experience in procedures and methods. In order for a new employee to work in the field, the following minimum training requirements must be met:

1. GHD New Employee Safety & Health Orientation training (on-line).
2. GHD HAZCOM (US)/WHIMIS (Canada)(on-line).
3. On-boarding completed with Human Resources.
4. Compliance training defined on the QSF-20 as it applies to field work to be conducted.
5. Client specific safety training.

A SSE's primary mentor is their direct Supervisor. GHD Supervisors are responsible for ensuring that a SSE completes the safety, field method, and quality training as appropriate to the work they are assigned. A SSE requires an On-site Mentor for all fieldwork. The On-site Mentor must have experience in the work they are mentoring and they are responsible for the close monitoring of the SSE.

Project team SSE make-up requirements are:

- A one-person project team cannot be a SSE.
- A two-person to four-person project team can have only one SSE.
- A five-person or more project team cannot have more than 20 percent SSE without a written variance from the GHD Corporate Manager of Safety & Health.

New hire employees that can provide sufficient documentation supporting previous experience in working under HSE program(s) similar to GHD's may be exempt from GHD's SSE program These exemptions are handled on a case-by-case basis and must be authorized by one of the following staff: the Corporate Manager of Safety & Health or a Senior Regional Safety & Health Manager. Details of the exemptions are covered in the full SSE Policy.

Clients may define specific SSE requirements for work at their facility or on their project. It is the responsibility of the Project Manager to communicate a client's specific requirements to the appropriate staff within GHD and project subcontractors. Client-specific SSE standards shall be posted on the Safety & Health Portal SSE Folder.

1.5 Project Management And Safety Organization

Project Manager – GHD – Karen Gale

The GHD Project Manager (PM) is responsible for the overall implementation, review, and approval of the HASP, and for ensuring that all safety and health (S&H) responsibilities are carried out. The PM will also ensure that appropriate resources are provided to support the project.

Site Supervisor – GHD – Ryan Manning

The Site Supervisor (SS) is responsible for:

- Ensuring that the HASP is reviewed, approved, and implemented.
- Communicating site requirements to site project personnel and subcontractors through site orientation.
- Consulting with the client/site representative regarding appropriate changes to the HASP.

- Conducting a daily tailgate safety meeting that communicates the site specific hazards. This meeting must be documented on the Tailgate Safety Meeting form in the appendix.
- Ensuring that all necessary cleanup and maintenance of safety equipment is conducted by project personnel.
- Verifying emergency phone numbers and services, including hospital and clinic locations.
- Completing, filing, and correctly submitting the forms attached to the HASP, including daily tailgate meetings, job safety analysis, and daily inspection checklists.
- Implementing risk-based safety procedures on all activities and enforcing safe work practices for project employees
- Observing ill effects on any crew member, especially those symptoms caused by cold/heat stress or chemical exposure.
- Overseeing the safety of visitors who enter the site.
- Maintaining communication with the client/site representative(s) and/or government inspectors/agencies.
- Providing and enforcing the use of safety equipment, personal protective equipment (PPE), and other items necessary for employee or community safety.
- Conducting job site inspections as a part of quality assurance for safety and health.
- Ordering the immediate shutdown of site activities in case of a medical emergency, unsafe condition, or unsafe practice.
- Reporting safety and health concerns to site and/or project management as necessary.

Regional HSE Manager GHD – Matthew (Matt) Downing

The Regional HSE Manager is a full time GHD employee who is trained as a safety and health professional and serves in a consulting role to the PM and SS regarding potential safety and health issues. The HSE Manager or trained designee must review, coordinate required changes with PM and provide the final approval of the HASP prior to work beginning on site.

Site personnel

All employees have a role in GHD's HSE program and a responsibility to implement the program. GHD personnel are responsible for:

- Engaging in all aspects of their tasks and jobs when they are prepared to do the job safely, well rested, and mentally prepared for work.
- Utilizing the STAR process before initiating work.
- Implementing Stop Work Authority for any operations that may cause injury, illness, or unsafe conditions to employees, subcontractors, or others.
- Assisting in the development and revision of Job Safety Analysis (JSA) forms that are appropriate to their current scope of work.
- Use, inspect and maintain PPE as required by JSA and site conditions.
- Preparing, submitting and reviewing safety observations using the GHD HSE app or appropriate forms
- Inspecting tools and other equipment before each use or as manufacturer dictates and documenting any defects.
- Correcting job site hazards when possible without endangering life or health.
- Reporting safety and health concerns to the SS, PM, HSE Manager, or SHO (if appointed).

Subcontractors

Subcontractors are responsible for:

- Developing and implementing their own HASP and complying with its contents.
- Attending an initial site orientation and subsequent safety meetings.
- Ensuring that their employees adhere to all site personnel requirements.
- Submitting required documentation to the SS regarding federal, state, or provincial requirements before beginning any work.

- Obtaining approval for the use of GHD's equipment.
- Observing and obeying all GHD/client requirements as well as any specific direction given by GHD's management team.
- Wearing any personal protective equipment required by their HASP and GHD at all times.
- Meeting all governing legislation/regulation/industry standards for equipment used on GHD projects.
- Verifying that all subcontractor employees have required training, medical clearance, and substance abuse testing as required by project.
- Not being in possession or under the influence of alcohol, incapacitating drugs, or medications.

In the event of conflicting safety procedures or requirements, personnel must implement those safety practices that afford the highest level of safety and protection. In addition, noncompliance with safety and health policies and procedures may subject the subcontractor to disciplinary action up to and including termination of their contract with GHD.

Equipment Operators

All equipment operators must meet all the requirements of site personnel listed above and are responsible for the safe operation of heavy equipment. Operators are responsible for conducting documented daily inspections on their equipment to ensure safe performance. Brakes, hydraulic lines, backup alarms, and fire extinguishers must be inspected routinely throughout the project. Equipment will be taken out of service if an unsafe condition occurs. Daily inspections must be provided to the GHD site supervisor prior to the equipment being used.

Authorized Visitors

Authorized visitors, as approved by **Karen Gale**, are provided with all relevant information regarding site operations and hazards as applicable to the purpose of their visit. Visitors may be required to be accompanied by authorized personnel.

1.6 Site Safety And Health Officer

The site safety and health officer (SHO) is responsible for assisting in the communication of site requirements to site project personnel and subcontractors and for carrying out the health and safety responsibilities include the ones listed under the site supervisor. The SHO has prior experience in working at similar sites. The SHO operates under the supervision of the PM, SS, and HSE Manager.

1.7 Recordkeeping

The SS shall establish and maintain records of all necessary and prudent monitoring activities as described below:

- Name and job classification of the employees involved on specific tasks.
- Air monitoring/sampling results and instrument calibration logs.
- Records of training acknowledgment forms (site specific training, toolbox meetings, etc.).
- Documentation of site inspections, results of inspections, and corrective actions implemented.
- Emergency reports describing any incidents or accidents.

1.8 Site HASP Amendments

Any change to the scope of work must be evaluated for its impact on the overall health and safety of the project and associated personnel. A minor change is one that adjusts already-documented hazards within the HASP and does not expose site personnel to chemicals above exposure limits, such as the introduction of a new JSA, or PPE that does not involve a change in respiratory protection. Amendments must be documented on the Site Health and Safety Plan Amendment Form located in Appendix, in addition to notifications to key personnel.

Significant changes to the scope of work require a rewrite by the PM and review/approval of the HASP by a HSE Manager.

1.9 Training Requirements

All personnel conducting work at this site shall have completed the appropriate safety and health training, as applicable to their job/task duties as it relates to the GHD Tiered Training System. The required training is referenced throughout the HASP and identified on each JSA form

1.10 Site Specific Training

An initial site specific training session or briefing shall be conducted by the PM or SS prior to commencement of work activities. During this initial training session, employees shall be instructed on the following topics:

- Personnel responsibilities
- Content and implementation of the HASP
- Site hazards and controls
- Site specific hazardous procedures (e.g., drilling, excavations, etc.)
- Training requirements
- PPE requirements
- Emergency information, including local emergency response team phone numbers, route to nearest hospital, incident reporting procedures, and emergency response procedures
- Instruction in the completion of required inspections and forms
- Location of safety equipment, such as portable eyewash, first aid kit, fire extinguishers, etc.

The various components of the project HASP will be presented, followed by an opportunity to ask questions to ensure that each attendee understands the HASP. Personnel will not be permitted to enter or work in potentially contaminated areas of the site until they have completed the site specific training session. Personnel successfully completing the training session shall sign the HASP Acknowledgement Form, which is presented as an Appendix.

In addition to the initial site briefing conducted at the commencement of the project, supplemental brief safety meetings shall be conducted by the SS to discuss potential safety and health hazards associated with upcoming tasks and necessary precautions to be taken.

1.11 Safety Meeting/ HASP Review

"Tailgate" safety meetings will take place each day prior to beginning the day's work. All site personnel will attend these safety meetings conducted by the SS. The safety meetings will cover specific safety and health issues, including the appropriate JSAs, site activities, changes in site conditions, and a review of topics covered in the site specific pre-entry briefing. The safety meetings will be documented each day with written sign in sheets containing a list of topics discussed. To assist with the compliance of documentation of the Tailgate safety meetings, there is a Tailgate Safety Meeting form located in the Appendix.

1.12 Fatigue Management

GHD employees and subcontractors are responsible for ensuring they are both physically and mentally fit to perform their job functions safely as part of GHD's Fatigue Management Program. GHD will use the following control measures to minimize fatigue during the project:

- Alter the work schedule to reduce the overall time a worker will perform physically demanding work.
- Monitoring employee behaviors for signs of fatigue.
- Eliminate or reduce where practicable the need to work extended hours, night shifts, or overtime.
- Use work-rest patterns during repetitive tasks to control fatigue and increase mental fitness.

GHD's work/rest balance requirements are referenced based on weight of the vehicle. Less than 10,000 lbs/4536 kg (passenger cars, pickup trucks, SUV) will follow the following guidelines:

- Maximum working time and/or driving and working time within one work day: 14 hours (extendable up to 16 hours if drive time < 4 hours and/or airplane travel is involved; this approach can be taken three times in a 7 day period)
- Maximum continuous drive time: 3 hours followed by a 15 minute break
- Maximum drive time per day: 9 hours (extendable up to 10 hours twice in 7 day period)

Employees that drive vehicles greater than 10,000 lbs/4,536 kg must meet the requirements of the transportation agency for which they work and travel.

Management, as represented by an employee's manager, Project Manager or any Principal, may grant a documented variance to the standard work/rest balance for specific employees for a period covering no longer than one week. Additional variances can be issued after for each week. For further information see Fatigue Management Program on the portal.

1.13 Management Of Change

Safety incidents are known to occur when key changes are not communicated to all stakeholders related to a project. Management of Change is covered by the GHD Quality Manual Section 7.3.7 Control of Project Changes and is documented using QSF-006 Management of Change Form (see Appendix).

The types of changes that are to be documented and communicated are:

- Project management/Resources (key personnel)
- Equipment
- Safety – this would not include daily changes to JSA when dirtied in the field.
- Field Operations/SOP

Form QSF-006 is the tool to document and communicate the change. The completed QSF-006 is to be filed in the GHD field folder of the project file.

1.14 Field Notes

All activities undertaken in the field must be correctly and completely recorded in bound field books, Quality System Field Data Record forms (QSF 200, QSF 400 , and QSF 500 Series D), or in some other GHD approved format (i.e., electronically, loose paper). All records will be kept in the GHD approved format specified for the activities undertaken. The formats have been established to ensure completeness and to provide consistency amongst the field staff regardless of which office they are from. Refer to Section 7 - Control of Monitoring and Measuring Equipment of the GHD Quality System Manual and Section 3.4.1 – Field Notes of the GHD Field Training Manual for more information regarding field note content requirements.

These field notes may be called as evidence in a court of law.

In addition to the formal field notes, field personnel are expected to keep running tables that summarize the field activities so that when questioned at any time during the project, a detailed status of the work completed and that yet to be done can be provided. These lists also serve as checklists to confirm that the correct number and sequence of samples, wells, boreholes, etc. have been collected or completed.

Upon completion of each project, all of the field documentation is brought back and suitably stored at the GHD office in which the field staff who performed the field work are located.

> *GHD demands that all field note entries are factual and accurate. Everyone recognizes that errors and omissions will be made on occasion. While GHD does not condone a level of effort that is incomplete or inaccurate, it is recognized that it may happen and most of our clients will understand these situations. However, anyone who is caught falsifying any record, no matter how small, will be immediately dismissed.*

2. History & Scope

2.1 Site History/Background

The Elizabeth Learning Center is located at 4811 Elizabeth Street in the city of Cudahy in Los Angeles County. The School property is owned and operated by LAUSD and is primarily located on land identified by the Los Angeles County Assessor's office as Parcel Number 6226-032-903. The School encompasses approximately 16.7 acres and is bound by Clara Street followed by a park and residences to the north, Elizabeth Street and residences to the south, a mix of residential and commercial properties to the west, and a park and residences to the east.

The majority of the Site is paved and is currently developed with educational and administration facilities, surface parking lots, a gymnasium, a cafeteria and temporary portable buildings. The School's buildings are located in the western and southern portions of the campus. Athletic fields are located at the northern portion of the campus. The current school layout and approximate year of construction of the historical and existing buildings are shown on Figure 2. There are 16 permanent buildings and 22 portable buildings, as well as 34 metal storage containers positioned throughout the campus.

2.2 Scope of Work Tasks

Fieldwork will be completed by properly trained and equipped hazardous waste workers. Impacted soil will be removed with a backhoe, bulldozer, tracked excavator, shovels or other types of earth moving equipment, as necessary. As soil is excavated, it will be loaded directly onto transportation trucks or temporarily stored on and covered by plastic sheeting in stockpile staging areas onsite. Use of roll-off bins in areas of limited access, with the capability to be covered for transport is also acceptable. In addition, California OSHA's Construction Safety Orders (especially 8 CCR 1539 and 1541) will be followed as appropriate.

To enable systematic review of the excavation areas identified for soil cleanup, the removal of impacted soil will be to the desired depth and lateral extent at each identified excavation area. Hand digging may be performed when utilities are encountered or exposed. Excavations in areas requiring confirmation sampling will be scheduled first as practical to expedite characterization in these areas. Based on results of confirmation sample results, an excavation of each additional grid of 5 feet by 5 feet and lift of 1-foot depth (approximately 1 CY) will proceed until the CGs are met.

Excavation areas will be controlled to avoid dust generation with physical barriers (such as perimeter fencing with windscreen), soil wetting, and air monitoring (at property perimeter and work area). Each excavation area will be secured and water will be used to control fugitive dust from blowing onto other properties. The Site will be controlled, and no excavation will be conducted in times of high wind conditions (e.g., wind speed in excess of 25 miles per hour) or inclement weather conditions.

This HASP covers the specific site activities that will be conducted by GHD personnel and their subcontractors. These activities listed here, and in the attached JSAs cover the tasks being performed onsite.

Driving, Site Reconnaissance and Walk through Activities, Mob/Demob of personnel, material, and equipment, Collection of Soil Samples, Collection of Soil Samples from an Excavator bucket, Excavation Oversight, Decontamination of Sampling Equipment and Personnel, Land Surveying for elevation and location, Derived Waste Drum Moving and Handling, Site Inspection(Construction), Haz/Non-Haz Waste Sampling (Drums)

If site operations are altered or if additional tasks are assigned, an addendum to this HASP shall be developed to address the specific hazards associated with these changes.

All addendums will be required to be developed in conjunction with project management and a GHD safety professional.

3. Chemical Hazards

3.1 Introduction To Chemical Hazards

This section identifies and evaluates the potential chemical hazards that may be encountered during the completion of this project. These hazards and the anticipated initial exposure levels are based on client data, historical data, etc.

Chemical exposures occur via four major routes of entry: absorption, inhalation, ingestion, and injection. A listing of the chemical contaminants of concern is found in the **Chemical Table** (Table 1) and The **Safety Data Sheets (SDSs),** for chemical products used on site, are also included in the Appendices. Both the Chemical Table and SDSs include exposure limits, signs and symptoms of exposure, chemical properties, and physical characteristics.

3.2 Control Measures

Before the proper control(s) can be selected, GHD personnel conduct a hazard evaluation of the process, activity, or material. A hazard evaluation may include reviewing information from a chemical container label, SDS, manufacturer, National Institute for Occupational Safety and Health (NIOSH) website, and other resources as needed; identifying route(s) of exposure; and evaluating the process/activity to determine if an exposure evaluation is needed. If necessary, a HSE Manager conducts and documents exposure evaluations.

Exposure to potential on site contaminants/chemicals, such as those listed in Table 1.0 and SDSs, include the following methods:

- Engineering controls such as wetting methods, ventilation, elimination, or substation.
- Administrative controls such as work rotation, training, or proper hygiene practices (washing facilities).
- Monitoring air concentrations with appropriate equipment in the breathing zone.
- Selecting and using personal protective equipment (PPE) such as gloves or respiratory protection.

JSAs are developed and revised to list the associated hazard controls on a task-specific basis.

3.3 Safety Data Sheets

SDSs are documents created by the chemical manufacturer that describe the substance. Some information found on an SDS includes: hazardous and physical characteristics, handling requirements, storage and disposal information, and signs and symptoms of exposure.

When working with hazardous chemicals, readily available and up-to-date SDSs are required for each chemical. GHD personnel and its subcontractors are responsible for obtaining and maintaining SDSs for their controlled products and for products that they are bringing onto site. All projects maintain an inventory of SDS and are made readily available to all employees and visitors.

3.4 Container Labels

All hazardous materials, hazardous waste, chemical containers, and chemical storage areas are appropriately labeled indicating the chemical identity, hazards present, and any relevant regulatory requirements. Labeling of all chemical containers assists emergency personnel and others in identifying hazards if a spill occurs or emergency situation arises.

Chemical container labeling is the responsibility of the individual who fills and/or uses the chemicals. All containers into which chemicals are transferred are legibly labeled in the language that can be understood by the employees who work with or in proximity (English, French, Spanish, etc.) and include the name of the chemical and appropriate hazard warnings.

3.5 Workers Training

All employees who may work in proximity to controlled products has and maintains current applicable training as appropriate to client, state, provincial or federal requirements, which may include: HAZCOM, WHMIS, TDG, or DOT. Records of training are readily available upon request.

4. Physical Hazards

4.1 Introduction To Physical Hazards

Physical Hazards are factors within the environment that can harm the body without necessarily touching it. Vibration and noise are examples of physical hazards. Physical hazards for this site have been identified in the following section. If the hazards change due to site conditions or additions to the scope of work, a Stop Work must be implemented and the conditions identified to the PM and RHSM.

In addition, personnel must be aware that the protective equipment identified in the JSA may limit dexterity and visibility and may increase the difficulty of performing some tasks.

4.2 Heavy Equipment

The following practices are adhered to by personnel operating heavy equipment (such as backhoes, excavators, bull dozers, rock trucks) and personnel working in the vicinity of heavy equipment.

- Heavy equipment is only operated by authorized, qualified operators.
- All equipment is inspected when equipment is initially mobilized, delivered to a job site, or after it is repaired and returned to service, to ensure that it meets all manufacturer and legislative specifications. Documentation of maintenance records must be available upon request.
- The operator inspects the equipment prior to each use and documents the first use on a daily basis. Documentation of this daily pre operational inspection is available upon request, and, if required, filed with the project files.
- Ensure operator conducts a 360-degree walk around of the equipment prior to entering the equipment
- Seat belts/restraining devices are used on heavy equipment that is not designed for stand up operation.
- Equipment/vehicles that are loaded by crane, excavator, loader, etc. have a cab shield and/or canopy to protect the operator.
- Personnel only ride in equipment that is designed for transporting individuals and have a fully functional seat and available restraining devices. “Piggybacking,” such as riding on fender steps or any place outside the cab, is not allowed.
- Personnel are not raised/lowered in buckets.
- Before leaving the equipment controls, the equipment is in its safe resting position or cribbed in a “dead” or neutral position. No controls are abandoned while under load.
- Before raising any booms, buckets, etc., overhead obstructions are checked.
- A competent spotter is used when moving heavy equipment, working within 10 feet of a stationary object, encroaching overhead utilities clearance minimums, in tight quarters, or with limited visibility.
- Employees involved in the operation do not wear any loose fitting clothing, as it can be caught in moving machinery.
- Personnel must wear an approved high-visibility safety vest where any vehicular traffic occurs.
- The work site should be designed to limit the operations being performed in reverse.
- Working areas are properly delineated to keep unauthorized individuals out. Personnel should never proceed into a work zone without making eye contact and receiving authorization from the operator or spotter to cross the path of heavy equipment. Authorization is given from outside the blind or crushing zones of the equipment.

4.3 Excavations

All GHD excavation and trenching operations that employees shall enter will be observed by a designated competent person. The competent person shall be responsible for evaluating and inspecting excavation and trenching operations to prevent possible cave-in and entrapment, and

to avoid other hazards presented by excavation activities.

Each employee in an excavation shall be protected from cave-ins by one of three systems:

- Sloping and benching systems
- Shoring
- Shielding systems

All excavation and trenching operations shall be conducted in accordance and in compliance with OSHA's Standards for the Construction Industry, specifically outlined in GHD's Safety and Health Program for excavation and trenching activities. At a minimum, the following safety guidelines shall be adhered to while conducting excavation and trenching activities:

- Excavation and trenching operations require pre planning to determine whether sloping or shoring systems are required, and to develop appropriate designs for such systems. Also, the estimated location of all underground installations must be determined before digging/drilling begins. Necessary clearances must be observed.
- If there are any nearby buildings, walls, sidewalks, trees, or roads that may be threatened or undermined by the excavation, or where the stability of any of these items may be endangered by the excavation, they must be removed or supported by adequate shoring, bracing, or underpinning.
- Excavations may not go below the base of footings, foundations, or retaining walls unless they are adequately supported or a person who is registered as a Professional Engineer (PE) has determined that they will not be affected by the soil removal. Civil engineers or those with licenses in a related discipline and experience should be consulted in the design and use of sloping and shoring systems. PE qualifications must be documented in writing.

Access and Egress

Personnel access and egress from trench and/or excavations are as follows:

- A stairway, ladder, ramp, or other means of egress must be provided in trenches greater than 4 feet deep and for every 25 feet of lateral travel.
- All ladders shall extend 3 feet above the top of the excavation.
- Structural ramps used for access or egress of equipment will be designed by a competent person qualified in structural design or by a licensed professional engineer.

Atmosphere Monitoring and Testing

Air quality is measured using three parameters: oxygen concentration, flammability, and the presence of hazardous substances.

Employees should not be exposed to atmospheres containing less than 19.5 percent oxygen or having a lower flammable limit greater than 10 percent, and employees should not be exposed to hazardous levels of atmospheric contaminants.

Whenever potentially hazardous atmospheres are suspected in excavations and trenches, the atmosphere shall be tested by a competent person. Detector tubes, gas monitors, and explosion meters are examples of monitoring equipment that may be used.

In the event that an unusual odor or liquid is suspected in excavations and trenches, the competent person shall stop work on the site and arrange for an air quality assessment and mitigation, if necessary.

Atmospheric testing and monitoring shall be performed bin excavations in or adjacent to landfill

areas, in areas where hazardous materials are/were stored, or in areas where the presence of hazardous materials is suspected.

Daily Inspections

The competent person shall perform daily inspections of excavations, the adjacent areas, and all protective systems for situations that could potentially result in slope failure.

Additionally, the competent person shall be aware of the potential for confined space situations and other hazardous work conditions.

The competent person shall inspect, evaluate, and complete the excavation checklist at the following intervals:

- Prior to the start of work, after each extended halt in work, and as needed throughout the shift, as new sections of the excavation or trench are opened.
- After every rainstorm and other natural or man made event that may increase the load on the walls of the excavation, or otherwise affect their stability.

The inspections shall be documented using the GHD Excavation Inspection Checklist attached to this HASP.

The competent person shall stop the work and instruct all employees to leave the excavation or trench when any potential hazards are detected. The competent person has the authority to immediately suspend work if any unsafe condition is detected.

4.4 Utility Clearances - OSHA

Extreme caution is needed when working around electrical power lines. Electricity flows through metal, wood, and many other conducting materials, including human beings. Elevated equipment such as drill rigs, backhoes, scaffolding, ladders, etc must remain the required distance away according to the local/state/provincial regulations.

These minimum requirements are:

Occupational safety and health act 1926.550(a)(15)

Operating voltage of overhead power	Operating voltage of overhead power safe limit of approach distance for persons and equipment
<50 kv	10 feet
>50 kv	20 feet

For lines rated over 50 kv, minimum clearance between the lines and any part of the crane or load shall be 10 feet plus 0.4 inch for each 1 kv, over 50 kv, or twice the length of the line insulator, but

never less than 10 feet.

- If any part of a machine may encroach these parameters, SWA is implemented, a review of the SOW is conducted with the PM and RHSM, and a spotter is used.
- If the client has requirements that exceed the above minimums, then the client requirements are used.

Underground Utilities

Underground utilities, if present, are to be clearly marked and identified prior to commencement of work. Follow applicable regulations and client requirements with regards to utility-locating requirements (e.g., One Call).

Personnel involved in intrusive work will:

- Confirm proposed excavation(s) and heavy truck routes are not in the area of subsurface utilities. This meeting is to be documented.
- Review and adhere to GHD's Subsurface Utility Clearance Protocol SOP at a minimum. Use air knifing or vacuum truck digging techniques inside 5 feet of the outside edge of an underground facility.
- Pre-clear holes to 120% of the drill diameter to a minimum depth of 5 feet below ground surface. Consider pre-clearing to greater depths in close proximity to process piping such as loading racks
- Locate boreholes a minimum distances of 5 feet perpendicular from utility mark-out lines
- **Complete the Property Access/Utility Clearance Data Sheet (QSF 019) prior to initiating excavation activities.**
- On private property, request that the owner of the service, locate and mark the service.
- If a service may pose a hazard and cannot be shut off or disconnected, request that the owner of the service supervise the uncovering of the service during the work.
- Identify the work that can be conducted with the assistance of the locator line service, coordinate document/drawing review, and inspect the site for manholes, catch basins, valve boxes, etc. that may indicate the direction/depth of underground installations. Marking indicates only the approximate location of buried lines.

The following are the Uniform Color Codes for utility locates

white proposed excavation
pink temporary survey marking
red electrical power lines,cables, conduit and lighting cables
yellow gas,oil, steam,petroleum or gaseous material
orange communication, alarm or signal lines,cables or conduit
blue potable water
purple reclaimed water, irrigation and slurry lines
green sewers and drain lines

4.5 Material Handling

Material handling and storage practices are conducted at the project site. Proper lifting reduces the hazard out of moving objects. No one person should handle, lift, or move 50 pounds or more by themself. Even if the object weighs less than 50 pounds, the configuration or shape of the object should be evaluated to see if two people should be used to lift the object.

Manual Lifting

Consider the following prior to a lift.

- Establish that you can lift the load safely.
- Inspect route to be travelled, confirming sufficient clearance.
- Look for any obstructions or spills.
- Inspect the object to determine how it should be grasped.
- Select and use containers with handles where practical.
- Look for any sharp edges, slivers, or other things that may cause personal injury.
- Do not move any object that will obstruct your field of vision when transporting the load.
- When lifting objects, use proper lifting techniques. Position the body so that the weight of the body is centered over the feet, which provides a more powerful line of thrust and ensures better balance. Start the lift with a thrust of the rear foot. Do not twist.

General Storage Practices

Storage of materials and supplies must not create a hazard. General storage area practices include the following:

- Bags, containers, bundles, etc. stored in tiers must be stacked, blocked, interlocked, and limited in height so that they are stable and secure against sliding or collapse.
- All stacked materials, cargo, etc. must be examined for sharp edges, protrusions, signs of damage, or other factors likely to cause injury to persons handling these objects. Defects are to be corrected as they are detected.
- Storage areas must be kept free from accumulation of materials that constitute hazards from tripping, fire, explosion, or pest harborage.
- Storage areas have provisions to minimize manual lifting and carrying. Aisles and passageways provide for the movement of mechanical lifting and conveyance devices.
- Stored materials do not block or obstruct access to emergency exits, fire extinguishers, alarm boxes, first aid equipment, lights, electrical control panels, or other control boxes.
- Hazardous materials are stored in accordance with the details outlined in the MSDS, or accepted guidelines from reputable agencies. Guidelines include details about the materials reactivity, corrosivity, flammability, etc., as well as appropriate signage.

4.6 Noise

Hearing protection is required for project activities when working in close proximity to machinery, drilling operations, or impact/power tools where noise levels may exceed the decibel range of 85 dBA.

When hearing a coworker at normal conversation distance is difficult or the noise level is approaching or exceeding 85 dBA, hearing protection such as earplugs or muffs must be available/worn by all site personnel and visitors that may be exposed to elevated levels of noise. Individuals who wear hearing protection are to be adequately trained in the safe use and handling of hearing PPE.

GHD employees who have the potential to be exposed to noise exceeding 85dba in the work environment will be enrolled in the GHD Hearing Conservation Program.

4.7 Cranes

The use of cranes carries many associated hazards. When cranes are brought on site for use, the following safety practices at a minimum are enforced.

- Only qualified operators are allowed to operate cranes on site. Records of training are made available and copies submitted to the SHO/site supervisor (SS) prior to work commencing.
- Crane operator/subcontractor provides a copy of the crane's annual inspection report to the SHO/SS prior to initiating operations.
- Operators of cranes and hoists make visual and operational inspections of the equipment prior to use. Any discrepancies that jeopardize the safe operation of the equipment are corrected prior to use. These inspections are documented via a daily inspection checklist or equivalent.
- The posted capacity of the crane is adhered to and overloading of the equipment is not allowed.
- The accessible swing radius of the crane is demarcated and/or barricaded to prevent employees from entering the area.
- The crane's load and boom is kept a minimum of 10 feet away from all overhead utilities. Any deviation must be approved by the project manager (PM) in conjunction with the regional safety and health manager (RSHM).
- A competent person investigates the soil for stability and determines the necessary amount of "cribbing/mudsills" to be placed under the outrigger pads or whether crane mats are necessary.
- No personnel are permitted to work under a suspended load.

Except for emergency communications, the operator only recognizes signs and signals from one designated competent signal person. If the operator looses line of site or communication with the signal person, the operator performs SWA and discontinues operation until communication has been re-established.

4.8 Rigging And Hoisting

If hoisting and rigging operations occur, the following standards apply as minimum guidelines.

- Only qualified competent personnel trained in safe rigging procedures are authorized to engage in rigging procedures. This includes understanding and use of recognized rigging methods and crane signals. Records of Training are available on site.
- Wire ropes, chains, ropes, and other rigging equipment are inspected prior to each use and as necessary during use to ensure their safety. Defective rigging equipment are tagged and immediately removed from service.
- No equipment is modified or used outside of its intended design.
- Rigging is not used unless the weight of the load falls within the rigging's manufacturer's safe work operating range. This must be verified by the authorized rigger prior to any "pick" or lifting operation.
- The proper length of rope or chain slings is used to avoid wide angle lifts and dangerous slack. Knotted ropes or lengths of ropes reduced by bolts, knots, or other keepers are not used.
- Tag lines are used during load movements unless they create an unsafe condition.
- Job or shop hooks and links and other makeshift fasteners are not used. When U bolts are used for eye splices, the U bolt is applied so the "U" section is in contact with the dead end of the rope.
- Wire ropes, chains, ropes, and other rigging equipment are stored where they will remain clean, dry, and protected from the weather, traffic, and corrosive fumes.

4.9 Confined Space Entry

Entry into a confined space will only be undertaken after remote methods have been tried and found not to be successful. If confined space entry is required, such work will only be undertaken following the guidelines presented in the GHD Safety and Health Program for Confined Space Entry work. This program and permit have been attached in the Appendix to this plan. If a subcontractor will be performing work at the site and wishes to use its own confined space SOP, then the subcontractor's SOP must minimally meet the requirements set forth in the GHD SOP. The program requirements can be located in the Appendix.

4.10 Fall Hazards

Personnel that will use ladders and have the potential hazard of working on elevated surfaces or platforms of 6 feet or greater during project activities shall follow GHD's Safety and Health Program for fall protection. The program requirements can be located in the Appendix. The fall protection program includes leading edge work, rooftop work, aerial lifts, ladders, and scaffolds. Specific guidelines for portable ladders are outlined below.

The emergency rescue plan for retrieving any worker who has fallen and is suspended in air is to be done any way possible without putting other employees in danger. Time is of the essence to prevent the development of a life threatening condition, such as orthostatic intolerance or suspension trauma, due to being suspended for a period of time. Rescue methods and equipment will be specific to the project site; however, the following information provides examples of typical rescue methods/equipment:

- A scissor lift or articulating boom already on site.
- Lower/raise worker by an acceptable physical and/or mechanical means (self rescue not acceptable as primary rescue method).
- A rescue team trained in above ground rescue techniques.
- A rope or cable system to lower employee to ground (requires point of attachment for rigging tackle).
- A crane man basket setup in advance for rescue.

4.11 Control Of Hazardous Energy (Loto)

Hazardous energy sources may be encountered during the servicing and maintenance of machines and equipment, in which the unexpected energization or start-up of the machines or equipment could cause injury to employees.

The minimum performance requirements to control hazardous energy requires that employers develop and implement an energy control program. The elements of an energy control program are as follows:

- Lockout/tagout
- Employee protection
- Energy control procedure
- Protective materials and hardware
- Periodic inspections
- Training and communication
- Energy isolation
- Employee notification

Project personnel who are required to conduct operations and maintenance activities that will require the isolation of an energy hazard through the use of a lockout/tagout device shall follow the GHD program requirements and written procedures for that operation. The program requirements can be located in the Appendix.

Employee Training

Employees authorized to attach and remove lockout/tagout devices shall be provided with initial training regarding the safe application, usage, and removal of such devices. Each authorized employee will receive training in the recognition of applicable hazardous energy sources, the type and magnitude of the associated energy, and the methods necessary for energy isolation and control.

All authorized employees will be provided with refresher training annually, or at more frequent intervals whenever the following conditions apply:

- A job assignment change.
- A change in machinery or equipment, or a process change that presents new hazards.
- A change in the energy control procedures.
- Possible deficiencies in the employee's understanding of the following:
  - The hazards associated with the energy that controls the machinery or equipment in the employee's work area.
  - Application and removal procedures for lockout/tagout devices.

Employees who work in areas where lockout/tagout procedures are used shall receive initial and annual refresher training in the purpose and use of lockout/tagout devices and principles behind their use.

4.12 Heat Stress

Heat stress is one of the most common illnesses faced by project personnel when working in elevated temperatures and/or humidity.

Prevention

The following procedures will be carried out to reduce heat stress:

- Heat stress monitoring.
- Acclimatization.
- Sun exposures.
- Work/rest regimes (schedule of breaks) in accordance with Occupational Health Clinics for Ontario Workers (OHCOW).
- Humidex Heat Stress Response Plan – mandatory breaks scheduled in summer months or during high risk activities for heat stress (based on ACGIH)
- Heat stress safety PPE (e.g., cool vests, bandanas)
- Cool potable water available
- Use of buddy system
- Seek shade - Shade is a good source of protection, but keep in mind that shade structures (e.g., trees, umbrellas, canopies) do not offer complete sun protection.

OHCOW Humidex Heat Stress Response Plan		
°F	**°C**	**Response**
77-84°F	25-29°C	•supply water to workers on an "as needed" basis
86-91°F	30-33°C	•post "heat stress alert" notice •encourage workers to drink extra water •start recording hourly temperature and relative humidity
93-98°F	34 37°C	•post "heat stress warning" notice •notify workers that they are drinking extra water •ensure workers are trained to recognize symptoms
100-102°F	38 39°C	•provide 15 minutes relief per hour •provide adequate cool (10 15°C) water, at least 1 cup (240 ml) of water every 20 minutes •workers with symptoms should seek medical attention
104-107°F	40 42°C	•provide 30 minutes relief per hour in addition to the provisions listed previously
109-111°F	43 44°C	•if feasible provide 45 minutes relief per hour in addition to the provisions listed above •if a 75% relief period is not feasible then stop work until the humidex is 42°C or less
113°F	45°C or over	•stop work until the humidex is 44°C or less
Note: Humidex plan is a simplified way of protecting workers from heat stress which is based on the 2007 ACGIH heat stress TLV® (threshold limit value®) which uses wet bulb globe temperatures (WBGT) to estimate heat strain. These WBGT's were translated into humidex		

Sun Exposure

Overexposure to sunlight is a common concern when field activities occur during warm weather

conditions. Overexposure can occur on clear, sunny days, as well as on overcast and cloudy days. The following steps should be taken to protect against overexposure to sunlight:

- Always use sunscreen on exposed body parts.
- Cover up.
- Wear safety rated sunglasses.
- Limit time in the midday sun.

4.13 Portable Ladders

When portable ladders are in use on work sites, the following guidelines apply as a minimum standard.

- Use the 4 to 1 ratio. The ladder feet are 1 foot away from what it leans against for every 4 feet in height to the point where the ladder rests.
- Never use a ladder in a horizontal position as a runway or a scaffold.
- Never place a ladder in front of a door that opens toward it unless the door is locked, blocked, or guarded by a person.
- Place a portable ladder so that both side rails provide secure footing on soft ground to prevent the ladder from sinking.
- Place the ladder's feet on a substantial and level base, not on a movable object.
- On uneven surfaces, use a block, wedge, or ladder foot.
- Always lash, block, or otherwise secure a ladder's footing on wet or oily pavement, a smooth floor, or an icy or metal surface..
- Do not lean a ladder against unsafe backing, such as loose boxes or barrels.
- Securely lash or otherwise fasten the ladder to prevent it from slipping when using a ladder to access to high places.
- Always extend the ladder at least three rungs (3 feet) above the point of support when gaining access to a roof or elevated platform.
- Always maintain three points of contact when ascending or descending. If material must be handled, place in a bag or bucket and raise or lower it with a rope.
- Always face the ladder when ascending or descending.
- Maintain clean, dry footwear as much as possible to prevent slipping on the rungs.

4.14 Slip, Trip, Hit, Fall

Slip/trip/hit/fall injuries are the most frequent of all injuries to workers. They occur for a wide variety of reasons, but can be minimized by the following prudent practices:

- Spot-check the work area to identify hazards and communicate hazards to on site personnel.
- Update/dirty the JSA to reflect changes.
- Keep work areas clean and free of clutter, especially in storage areas and walkways.
- Secure all loose clothing and ties, and remove jewelry that may pose an entanglement hazard.
- Establish, maintain, and utilize walkways that are free of slip and trip hazards.
- Utilize/install appropriate lighting for walking paths and working areas.
- Beware of slip/trip hazards such as wet floors, slippery floors, and uneven surfaces or terrain.
- Carry only loads you can see over (Refer to Material Handling for additional information).
- Refrain from the use of portable communication devices (cell phones, two-way radios) while traversing the site.
- Keep a safe buffer zone between workers using equipment and tools.

4.15 Aggressive Or Menacing Behavior

When confronted by an individual whose behavior becomes aggressive or menacing, remain as calm as possible. Avoid arguing with or physically confronting the individual. Attempt to distance yourself from the individual. Advise others in the area to leave the scene and request police assistance by having someone call the emergency number listed on the Emergency Contact Sheet. Use the team approach. A staff member who is physically unable to break away from an attacker should shout for help.

The use of physical force is justified when a person believes that such force is necessary to protect himself or herself against the use or imminent use of unlawful physical force by another person.

Should an aggressor only be interested in the taking or damaging of property, do not interfere. Obtain a description of the individual to provide to local authorities, including height, weight, race, sex, clothing, accent, unusual markings such as tattoos, piercings, scars, hair color, and weapon, if any.

Contact the HSE Help Line and file an incident report with your immediate supervisor as soon as it's safe to do so.

4.16 Adverse Weather Conditions

Adverse weather is the existence of or impending weather conditions such as heavy rain, freezing rain, sleet, snow, high winds (50km/30mph), dust storms, tornadoes, hurricanes, lightning, or any combination of weather that is either not reasonable or not safe for employee exposure. Stop Work Authority (SWA) is executed prior to these conditions as reasonably possible. The site is evacuated according to the emergency plan developed and listed in this Health and Safety Plan.

Based on their expertise and knowledge of manufacturer's recommendations for the equipment being operated, heavy equipment operators such as crane and drill rigs are responsible for advising the site supervisor whether it is safe to continue operations.

The site supervisor decides on the continuation or discontinuation of work based on current and pending weather conditions, the equipment manufacturer recommendations, and the equipment operator's recommendations.

5. Personal Protective Equipment

5.1 Introduction To PPE

Controlling a hazard at the source is the best way to protect employees. When engineering, work practice, and administrative controls are not able to protect our employees, GHD provides personal protective equipment (PPE) to its employees and ensures that the PPE is used appropriately. PPE is equipment worn as a barrier to minimize exposure to a variety of hazards.

This section covers applicable PPE requirements, which include eye, face, hand, head, foot, and respiratory protection.

5.2 Types of Personal Protective Equipment (PPE)

The type of PPE required for work varies based on the task being performed. The specific PPE required for each individual task is documented in the appropriate task-specific JSA. The recommended minimum PPE for GHD site work is as follows:

- Shirts with a minimum 6-inch sleeve.
- Long pants made from suitable sturdy material .
- Grade 1 protective footwear meeting CSA Z195 M92 (Canada)/ ANSI Z41.1 (US), green patched (triangle), steel-toed/puncture-resistant and electric shock-resistant sole with a 6-inch cuff, fully laced and secured, in material appropriate for weather and task.
- Safety glasses or goggles (based on the type of hazard – dust, splash, etc.), meeting CSA Z94.3 (Canada) or ANSI Z87.1 (US) standards.
- Hand protection such as gloves meeting standards EN 388 and ANSI 105-2000 as appropriate for the task as per JSA, with selection based on the hazards (abrasion, blade cut, tearing, puncture, and impact) associated with the task being performed.
- Reflective garment meeting CSA Z96 02 or ANSI 107 (as required).
- Type 1 Class E hardhat, meeting either CSA Z94.1 05, Z94.1 92, ANSI Z89.1, or Z89.1.
- Hearing protection meeting CSA/ANSI approved NRR of at least 20 dBA if noise levels exceed 85 dBA.

Additional minimum requirements for PPE include:

- All PPE are maintained in good condition with no rips, tears, or damage that compromise integrity.
- PPE is not loose fitting as to avoid entanglement issues.
- All PPE is disposed of and/or decontaminated at the conclusion of each workday. The most contaminated PPE is decontaminated first.
- All disposable equipment is removed before meal breaks and at the conclusion of the workday, and replaced with new equipment prior to commencing work.
- Reusable equipment (safety glasses, hard hats, goggles, etc.) is cleaned and sanitized according to GHD and/or manufacturer guidelines.
- Eating, drinking, chewing gum or tobacco, and smoking are prohibited while working in areas where the potential for chemical and/or explosive hazards may be present. Personnel must wash thoroughly before initiating any of the aforementioned activities.

5.3 Types Of Protective Material

No universal protective material exists. All materials will decompose, be permeated, or otherwise fail to protect under certain circumstances. Protective clothing can be constructed from a variety of materials for protection against exposure to specific physical, chemical, or biological hazards.

Fortunately, most manufacturers list guidelines for the use of their products. These guidelines usually concern gloves or coveralls and generally only measure rate of degradation, which is failure to maintain structure. A protective material may not necessarily degrade, but may allow a particular chemical to permeate its surface. For this reason, guidelines must be used with caution. When permeation tables are available, they are used in conjunction with degradation tables.

To obtain optimum usage from PPE, the following procedures are followed by all site personnel using PPE:

- When using disposable coveralls, don a clean, new garment after each rest break or at the beginning of each shift
- Inspect all clothing, gloves, and boots both prior to and during use for:
  - Imperfect seams
  - Non uniform coatings
  - Tears
  - Poorly functioning closures
- Inspect reusable garments, boots, and gloves both prior to and during use for:
  - Visible signs of chemical permeation
  - Swelling
  - Discoloration
  - Stiffness
  - Brittleness
  - Cracks
  - Any sign of puncture
  - Any sign of abrasion

Reusable gloves, boots, or coveralls exhibiting any of the characteristics listed above are discarded. PPE used in areas known or suspected to exhibit elevated concentrations of chemicals are not reused.

5.4 Respiratory Protection

Respiratory protection is sometimes required for personnel during project activities when action levels exceed the occupational exposure levels. When respirators are required, personnel identify and select the appropriate air purifying respirator and supporting cartridge medium, and follow the procedures and guidelines in their respective written Respiratory Protection program.

At a minimum, all personnel required to use this equipment are:

- Instructed in how to properly fit a respirator to achieve the required face piece to face seal for respiratory protective purposes.
- Medically cleared for the use of respiratory protection.
- Appropriately fitted for the selected respirator through established recognized fit testing methods (quantitative/qualitative), and documentation of fit is readily available.
- Free of beards, sideburns, eyeglasses, and upper or lower dentures that could affect the face seal.

Further regulations for the use of respiratory protection include:

- Cartridges are changed prior to breakthrough, daily, or when personnel begin to experience increased inhalation resistance or breakthrough of a chemical warning property.
- Respiratory equipment and other non disposable equipment are fully decontaminated.
- Appropriate action levels are established and documented based on the applicable occupational exposure limits.

NOTE: This HASP is not intended for the use of supplied air operations. For supplied air operations, the project manager and a GHD safety professional conduct a review of the scope of work.

GHD identifies the type of respirator and cartridge and documents on the applicable JSA for the affected tasks and on Table 2.

5.5 Respirator Cleaning

Respirator decontamination is conducted once daily at a minimum. Face pieces are disassembled, the cartridges are thrown away, and all other parts are placed in a cleansing solution. After an appropriate amount of time in the solution, the parts are removed and re seated with tap water.

Face pieces are allowed to air dry before being placed in sanitized bags and stored in a clean area.

5.6 Levels Of Protection

Protection levels provided by PPE selection are upgraded or downgraded based upon a change in site conditions or the review of the results of air monitoring or the initial exposure assessment monitoring program, if one was conducted.

When a significant change occurs, the hazards are reassessed. Some indicators of the need for reassessment are:

- Commencement of a new work phase.
- Change in job tasks during a work phase.
- Change of season/weather.
- Temperature extremes or individual medical considerations limiting the effectiveness of PPE.
- Chemicals other than those expected to be encountered are identified.
- Change in ambient levels of chemicals.
- Change in work scope that affects the degree of contact with areas of potentially elevated chemical presence MUST be re-evaluated.

All proposed changes to protection levels and PPE requirements are reviewed and approved prior to implementation by the SS.

6. Air Monitoring

6.1 Introduction To Air Monitoring

Inhalation hazards are caused from the intake of vapors and contaminated dust. Air monitoring shall be performed while intrusive activities are taking place to detect the presence and relative level of those air contaminants that are inhalation hazards. The purpose of air monitoring is to identify and quantify airborne contaminants in order to determine the level of worker protection needed. Initial screening for identification is often qualitative, but the determination of its concentration (quantification) must await subsequent testing.

All instruments will be calibrated on a daily basis in accordance with the manufacturer's guidelines. Records of all calibrations and real time measurements will be kept in a bound field logbook or documented via air monitoring and calibration log sheets.

Correction factors have been determined by the air monitoring equipment manufacturers that enable the user to quantify a large number of chemicals using only a single calibration gas, typically isobutylene for PIDs and methane for LEL. Applicable Correction Factors (CF) for either LEL or PIDs must be applied for known chemicals of concern. These CFs and how to apply them can be found in the air monitoring instrument operating manual or online from the manufacturers website under “Technical Notes”.

When air monitoring is required, the workers breathing zone(s) will be monitored and the results recorded. Additionally, when necessary, area samples at the following locations will be taken daily. Record time, location, and results of monitoring and actions taken based on the readings:

- Upwind of work areas to establish background concentrations.
- In support zone to check for contamination or migration of emissions.
- Downwind of work area to track any contaminants/emissions leaving the site.

The data collected throughout the monitoring effort shall be used to determine the appropriate levels of protection. **Action levels for upgrading or downgrading of PPE have been established on Table 2 and must be reviewed by your HSE Manager/Safety Professional**

6.2 Types Of Devices

Air monitoring equipment to be used during site activities shall consist of:

DATARAM DUST MONITOR

The MIE PDR Personal DataRam Dust Monitor is a direct reading aerosol photometer. The DataRam monitor is designed to detect aerosol dust or respirable dust in the ambient air. Aerosol is a term to describe fine particulates (solid or liquid) suspended in air. Concentrations are evaluated by two scales, which read from 0.01 to 10.0 mg/m3 and 0.1 to 100.0 mg/m3, respectively.

MULTI-GAS METER

The Multi Gas Meter is a combination gas monitor that detects % oxygen, carbon monoxide, hydrogen sulfide, and combustible gas, which simultaneously analyzes concentrations of each contaminant in air. When used properly, the portable oxygen indicator will read the percent oxygen in the immediate atmosphere. The normal ambient oxygen concentration is 20.9 percent at sea level. It is necessary to be apprised of such readings as they impact LEL readings and vice versa.

Action levels for each contaminant being monitored can be found in Table 2 (On-Site Air Monitoring Program Action Level Table), which includes parameters, action levels, and actions to be taken.

PHOTOIONIZATION DETECTOR (PID)

Exposure to volatile organic compounds (VOCs) shall be monitored with a photoionization detector (PID) with required eV lamp as per Table 1. The PID has the ability to detect organic vapor concentrations from 1 part per million (ppm) to 2,000 ppm. All PID monitoring shall be conducted in the breathing zone.

VISUAL DUST CONTROL

No special equipment will be used to monitor dust. Engineering techniques to reduce dust such as wetting methods, staying upwind of potential sources and operating equipment such that little dust is created will be implemented at the site.

6.3 Monitoring Frequency

Monitoring will be conducted continuously during ground intrusive activities or during any activity where airborne hazards (e.g., organic vapors) may be present. The monitoring equipment listed in this HASP for the work activity, relates to the initial levels of protection listed on the TABLE 2. If the results of the first hour of monitoring indicates contaminant concentrations are non detect, and no differing site conditions are observed, then the monitoring frequency may be decreased.

Monitoring results will be legibly documented each work day. They will note project name/number, date, time, serial number, date of last calibration, and the name of person performing calibration, name of person performing monitoring, monitor location within the site, and monitoring results. Daily documentation will be kept with the SS and included in the project file.

6.4 Safety And Health Action Levels

An action level is a point at which increased protection or cessation of activities is required due to the concentration of contaminants in the work area. All activities shall be initiated as per JSA requirements. The appropriate actions are to be taken at designated action levels. The initial action level(s) for site work can be located in **Table 2**.

In addition to the action level, an upgrade to Level C is required if:

- Any symptoms occur, as described on the Table 1 Signs and Symptoms
- Requested by an individual performing the task
- Any irritation to eye, nose, throat, or skin occurs

A work stoppage and evacuation (cease and desist) at the specific work area is required if levels in the breathing zone exceed the protection factor of the respirator.

7. Site Control

7.1 Introduction To Site Control

The purpose of site control is to minimize potential contamination of workers and protect the public from hazards found on site. Site control also includes site security for the protection of GHD employee and subcontractor when working in public areas. Site Control is especially important in emergency situations.

Site control, work area demarcation, and site security will be achieved through posting of signage and placement of barricades and or personnel. All controlled areas will have the appropriate signage posted. Barricades and warning signs will be placed to warn personnel of potential hazards. A standby person (spotter) may be utilized in place of barricades, where appropriate. The following materials may be used to barricade the work area and protect both public and GHD:

- High Visibility Tape, Rope or Chain
- Wood, Metal, Plastic Barrier
- Delineators

Approved pedestrian and vehicle traffic paths will be determined during Tailgate Safety Meetings based upon current site conditions and work locations. When applicable, one pathway should be established for heavy equipment and one for personnel decontamination.

The majority of site operations, as well as access to the site, could be controlled from the support zone. The support zone will provide for team communications, emergency response, and sanitary facilities. Appropriate safety and support equipment also will be located in this zone.

The support zone will be located upwind of site operations if possible, and would be used as a potential evacuation point if appropriate. No potentially contaminated personnel or materials are allowed in this zone.

7.2 Work Zone Demarcation

When performing work that could put yourself or others at risk, you must demarcate an Exclusion Zone around your work. This is typically done with yellow and black plastic "barricade tape." Use signs, placards, and other postings as necessary to warn others not to enter the demarcated area unless they have business in the area and have authorization to enter. Where appropriate, post special requirements for entry.

The levels and requirements for work zone demarcation is based on the task being performed or the requirements of the client.

7.3 Work Zone Demarcation Level 2

Is required for active or inactive retail sites when there is heavy equipment operation. Level 2 is to be set up to isolate the work area from public access.

- Excavation including test pitting and tank pulls
- Crane and Aerial lifts
- Anytime an excavation is being left open for any duration

These task require sawhorse barrier or temporary fencing which prevents the public from entering the work area. Signs must be posted indicating the required PPE.

7.4 Two-Person Crew/Buddy System

A Two-Person Crew or Buddy System shall be implemented to protect the employees and public when conducting high risk activies such as:

- Working near traffic
- Working ON or NEAR water
- Excessive noise to which hearing traffic or communication is difficult
- Confined or restricted spaces
- In an isolated area such as landfills or wooded areas
- Areas with high crime rates

When using the buddy system, visual contact must be maintained between crew members at all times, and crew members must observe each other for signs of chemical exposure, heat, or cold stress. Indications of adverse effects include, but are not limited to:

- Changes in complexion and skin coloration
- Changes in coordination
- Excessive salivation and pupillary response
- Changes in speech pattern.

Project personnel must also be aware of potential exposure to possible safety hazards, unsafe acts, or noncompliance with safety procedures. Individuals must inform their partners or fellow team members of non visible effects of exposure to toxic materials. The symptoms of such exposure may include:

- Headaches
- Dizziness
- Nausea
- Blurred vision
- Cramps
- Irritation of eyes, skin, or respiratory tract.

If protective equipment or noise levels impair communications, prearranged hand signals must be used for communication. Personnel must stay within line of sight of another team member.

7.5 Communication

Each member of the project team will be able to communicate with other team members at all times. Communications will be by way of:

- Cell Phones/Smart Phones
- Hand Signals

The primary means for external communication are telephones and radio. If telephone lines are not installed at a site, all team members should:

- Know the location of the nearest telephone
- Have the necessary telephone numbers readily available

Note: The authorized use of cellular phones must be cleared by the client prior to entering site.

The following procedures will be followed by all site workers when using a cell phone on site:

- No cell phone use while driving or operating equipment.
- No cell phone use while in the Exclusion Zone.
- If using a cell phone on site, find a location where you can safely use the phone. Do not walk around the site while using a cell phone.

Understanding of the following standard hand signals will be mandatory for all employees, regardless of other means of communication:

- Hand gripping throat — Cannot breathe
- Hands on top of head — Need assistance
- Thumbs up — OK, I'm alright, I understand
- Thumbs down — No, negative
- Gripping partner's wrist, or gripping both of your own hands on wrist (if partner is out of reach) – Leave area immediately

7.6 Decontamination And Hygiene

Decontamination

In general, everything that enters the site must either be decontaminated or properly discarded upon exit from the site. Prior to demobilization, potentially contaminated equipment will be decontaminated on a wash pad (decontamination pad), drum, or containment pad which then will be placed into appropriate container and labeled as hazardous waste and will be stored in a designated area until disposal arrangements are made.

The type of decontamination solution to be used is dependent on the type of chemical hazards. The decontamination solution for heavy equipment and for any reusable PPE is Alconox/Liqui nox soap. The MSDSs for Alconox/Liquinox will be located in the Appendix.

Personnel Decontamination Procedures

Personnel decontamination will be completed in accordance with the GHD Safety and Health Program for personnel decontamination. Wash water and sediments will be collected and stored with any runoff water collected for subsequent treatment/disposal. PPE, trash, etc. will be sent

off-Site for disposal. It will be kept separate from trash generated in clean areas of the Site.

All disposable equipment shall be doffed before meal breaks and at the conclusion of the workday and replaced with new equipment prior to commencing work.

Procedures for decontamination must be followed to prevent the spread of contamination and to eliminate the potential for chemical exposure.

Personnel - Decontamination will take place prior to exiting the contaminated work area.

Decontamination procedures are as follows:

Step 1 Remove all visible contamination and loose debris by washing with clean water.

Step 2 Remove all outer clothing that came in contact with the contamination (i.e., boot covers and outer gloves) and either dispose of in disposable container or wash in detergent solution and rinse.

Step 3 Remove protective clothing; dispose of in disposable container.

Step 4 Remove respirator, sanitize prior to reuse.

Step 5 Remove inner gloves, dispose of in disposable container.

Step 6 Wash and rinse hands.

General Safety and Personnel Hygiene

1. Eating at the site is prohibited, except in specifically designated areas. Designation of eating areas will be identified to each employee. The location of these areas may change over the duration of the project to maintain adequate separation from the active work area(s).
2. Smoking at the site is prohibited.
3. Individuals getting wet to the skin with effluent from the washing operation must wash the affected area immediately. If clothes in contact with skin are wet, then these must be changed.
4. Hands, face, neck, and other exposed areas must be washed with soap and water before eating, drinking, smoking, before using toilets, and before leaving the site.
5. All disposable coveralls and soiled gloves will be placed in covered containers at the end of every shift or sooner, if deemed necessary by the SHO. Wastes will be stored until proper disposal arrangements have been made.
6. Personnel working on site will not be permitted to wear facial hair that interferes with the mask to face seal on air purifying respirators.
7. All personnel performing or supervising work within the EZ must wear appropriate PPE, observe, and adhere to the personal hygiene related provisions of this section.
8. Personnel found to be disregarding the personal hygiene related provisions of this HASP will, at the discretion of the SHO, be barred from the site.

7.7 Social Protection

Security Measures

A site assessment should be made prior to performing work in high risk areas for violent crime. Additionally, it may be important to gather as much information as possible from the client, describing the location and social conditions of the area where work will be performed.

In the event it has been determined that this work will occur in an area of high risk, consideration

shall be given to providing on site security for the protection of the employee. This option may include services from a security agency, local law enforcement (if available), or the services of an off duty law enforcement officer. The Project Manager and/or Project Coordinator shall be contacted and provide authorization prior to making these arrangements.

Anti-social behavior means different things to different people – noisy neighbors who ruin the lives of those around them, 'crack houses' run by drug dealers, loitering by drunkards, people begging by cash points, abandoned cars, litter and graffiti, young people using airguns to threaten and intimidate or people using fireworks as weapons.

When in this situation, there is no single strategy that always works. Remember these tips when faced with work conditions in volatile neighborhoods:

Street Precautions

When walking to and from your vehicle, or in and around the work site:

- Be alert to your surroundings and the people around you, especially if you are alone or it is dark
- Whenever possible, travel with a colleague
- Stay in well lighted areas as much as possible
- Walk close to the curb; avoid doorways, bushes, and alleys where someone could hide
- Walk confidently, and at a steady pace; make eye contact with people when walking
- Do not respond to conversation from strangers on the street, continue walking

Harm Reduction

Do as much as you can to avoid a confrontation "anticipation and avoidance" are the key words.

- If you get caught up in a situation, try to talk to an aggressor without provoking them.
- Practice relaxation, as appearing fearful or stressed can actually provoke an attack.
- Remember that body language is important in aggressive situations, so maintain a comfortable distance between you and the aggressor.
- It may be more advisable to submit than to resist and risk severe injury or death. You will have to make this decision based on the circumstances. Be especially careful, if your attacker has a weapon.
- Avoid arguing with or physically confronting the individual. Attempt to distance yourself from the individual. Advise others in the area to leave the scene and request police assistance by having someone call the emergency number listed on the Emergency Contact Sheet. Use the team approach. A staff member who is physically unable to break away from an attacker should shout for help.
- Steady yourself if danger threatens. Panic can disable you, so again it's useful to learn how to keep control in a difficult situation.
- If you must fight back, adopt what police term the "bash and dash" approach. Primary targets are the eyes, nose, mouth, ears, throat, groin, knees, or shins; choose whichever is easiest to get to.
- Be aware that your attacker might be stronger than you, or may take what you are using in self defense and use it against you. It is often better just to shout loudly and run away.
- When confronted by an individual whose behavior becomes aggressive or menacing, remain as calm as possible. Avoid arguing with or physically confronting the individual. Attempt to distance yourself from the individual. Advise others in the area to leave the scene and request police assistance by having someone call the emergency number listed on the Emergency Contact Sheet. Use the team approach. If you are physically unable to break away from an attacker, shout for help.
- The use of physical force is justified when a person believes that such force is necessary to protect him or herself against the use or imminent use of unlawful physical force by another person. The use of physical force is also justified in the defense of another party, such as a co worker, who is being subjected to unlawful physical force. You can use any technique of legal self defense in order to halt or distract an attacker until law officers arrive on the scene.

- Should an aggressor only be interested in taking or damaging property, do not interfere. Obtain a description of the individual to provide to local authorities, including height, weight, race, sex, clothing, accent, unusual markings such as tattoos, facial piercing, scars, hair color, and weapon, if any.
- Shout 'fire' rather than 'help' – it can get more results.
- Stay alert and observant so that you can better describe your attacker and the assault to the police.
- Report the incident to the GHD Help Line and BWise and work with your PM and HSE Manager to complete the investigation

Drug Activity

The safe retrieval and disposal of used hypodermic needles and syringes:

- GHD employees must not handle or remove any hypodermic needles or syringes. You should contact the local Police Department, Fire Department, or Health Department for removal from the job site.
- If you are injured by a discarded needle you can receive a vaccination against Hepatitis B within 48 hours of the incident. Notify the GHD Help Line and seek medical attention, call 911 if necessary.
- If an accident occurs where a needle or other sharp object has punctured the skin, then the injured person should:
  - Encourage the wound to bleed gently
  - Wash well with soap under cold running water
  - Cover the wound with a waterproof dressing
  - Seek medical attention as soon as possible
  - Inform the SS and/or PM
  - Complete a GHD Incident Reporting Form

Car Jacking

You can help prevent yourself being a victim of car jacking by:

- Keeping your doors locked in built up areas, and trying to keep the windows wound up, especially at traffic lights
- Being aware of what people are doing around you
- Using the middle lane, if there is one, when waiting at junctions or lights, so that your car is harder to get to from the pavement
- Not stopping to help someone who has broken down (if you really want to help, pull over at the next garage or police station and call for help)
- Driving to the next garage or police station and reporting them if someone tries to pull you over for no reason

A car jackers may 'accidentally' bump into your car, aiming to get you out of the car so they can steal it. If this happens, you may choose not to get out of the car – especially if you do not think it is a genuine accident. Wind the window down a little bit to talk to them if you want to.

Aggressive or Menacing Behavior

Report to the GHD HSE Help Line, BWise and work with your PM and HSE Manager to complete the investigation.

7.8 Site Security

Site security is necessary to prevent the exposure of unauthorized, unprotected people to site hazards and to avoid interference with safe working procedures. Security shall be maintained outside of the actual work area(s) so as to prevent unauthorized entry into the work area(s). Members of the general public are to be protected from site hazards.

8. Emergency Procedures

8.1 Introduction Emergency Procedures

Emergencies can range from minor to serious conditions. Various procedures for responding to site emergencies are listed in this section. The PM or SS is responsible for contacting local emergency services, if necessary, for specific emergency situations. Various individual site characteristics will determine preliminary action to ensure that these entry procedures are successfully implemented in the event of an emergency. The project team will address necessary facility/client emergency protocols to ensure compatibility between this document and facility/client programs and expectations.

Field employees will identify the primary (on site) and secondary (off site) evacuation routes to muster locations prior to initiating work. A site map is provided in the Appendix.

At client facilities, site emergencies may be indicated by a fog horn or other loud audible sound. If an adjacent facility's alarm is activated, work will stop immediately, equipment will be de energized and/or secured as necessary for safety reasons and personnel will go immediately to the secondary evacuation location as indicated in pre-start and tailgate meetings.

Emergency evacuation drills will be conducted as deemed necessary by the SS, and documentation of the drills will be maintained by the SS in project file.

An Emergency Information Sheet containing the hospital location, directions, government agency phone numbers, emergency phone numbers, and a map with directions to the hospital is located in the Appendix.

8.2 Incident, Injury, Illness Reporting And Investigation

Any work related incident, injury, illness, exposure, vehicle accident, property loss and or security issues must be reported to your supervisor, the SS immediately. Stop Work Authority will be implemented. Provide care for any injured persons and secure the scene.

GHD will call the GHD PM and the GHD HSE Help Line. Personnel on site should maintain the work area as it was at the time of the incident until further directions are given by the GHD PM, a GHD Safety Professional. No GHD person on site has the authority to call a regulatory agency (environmental or OSHA); this shall be completed by GHD Leadership Team in conjunction with the client. Emergency medical care or support of fire departments is not a restricted call if immediately necessary to protect life and property.

The GHD PM and HSE Manager will coordinate with on site personnel to gather critical information. The GHD PM is responsible (or their designee) to enter the information into BWise within a 24 period from time of incident. The GHD PM is also responsible to contact the client, which a positive verbal contact is required. The GHD staff listed above will coordinate the completion of the investigation and placement of information into BWise. This same group of GHD staff will manage further communications with the client.

The report must be filed for the following circumstances:

- Incident, injury, illness, or exposure of an employee.
- Injury of a subcontractor.
- Damage, loss, or theft of property.
- Any motor vehicle accident, regardless of fault, which involves a company vehicle, rental vehicle, or personal vehicle while the employee is acting in the course of employment.
- Any sting, involving a puncture of the skin must immediately be reported to Work Care and follow all GHD reporting requirements
- Security Issues
- Environmental releases or loss of containment.

Occupational incidents resulting in employee injury or illness will be investigated by the SS. This investigation will focus on determining the cause of the incident and modifying future work activities to eliminate the hazard.

All employees have the right and obligation to report unsafe work conditions, previously unrecognized safety hazards, or safety violations of others. If you wish to make such a report, it may be made orally to your supervisor or other member of management, or you may submit your concern in writing, either signed or anonymously.

8.3 Emergency Equipment/First Aid

Safety equipment will be available for use by site personnel, located within 30 feet of the work area(s), and maintained at the site.

- First Aid kit(s), compliant with local jurisdictional requirements according to number of workers present
- Automated External Defibrillators (AEDs) are optional first aid response equipment for conditions related to heart stoppage. If a unit is on site, designated personnel must be trained in the specific AED unit in addition to First Aid and CPR certification, conduct monthly inspections, and contact listed AED Unit coordinator.
- Emergency eyewash bottles and/or an eyewash station lasting 15 minutes.
- Emergency alarms as a means to alert all personnel instantaneously for an emergency.
- Fire extinguisher (at a minimum, a 2A/10BC will be on site).

8.4 Emergency Procedures For Contaminated Personnel

Whenever possible, personnel should be decontaminated in the contamination reduction zone before administering first aid, without causing further harm to the patient.

- Skin Contact: Remove contaminated clothing, wash immediately with water, and use soap, if available.
- Inhalation: Remove victim from contaminated atmosphere. Remove any respiratory protection equipment. Initiate artificial respiration, if necessary. Transport to the hospital.
- Ingestion: Remove from contaminated atmosphere. Do not induce vomiting if victim is unconscious. Never induce vomiting when acids, alkalis, or petroleum products are suspected. Transport to the hospital, if necessary.

Any person transporting an injured/exposed person to a clinic or hospital for treatment should take with them directions to the hospital and a listing of the contaminants of concern to which they may have been exposed.

Any vehicle used to transport contaminated personnel will be cleaned or decontaminated, as necessary.

8.5 Site Evacuations

In the event of an emergency situation such as fire, explosion, or significant release of toxic gases, project personnel in the field will be notified by established communications to evacuate the area. In the event of an emergency, GHD personnel will gather at their primary mustering point for a head count. The SS will determine a primary and secondary muster point to be used as an assembly area in the event of an emergency. The secondary muster point will be located at least 90 degrees from the primary. These locations will be communicated to the work crew(s) during the Tailgate Safety Meeting (TGSM) as part of the site specific training prior to commencement of work activities, weekly thereafter, and prior to the advent of potentially threatening weather. Muster points will be identified in the site map attached to the HASP.

8.6 Spill And Release Contingencies

If a spill has occurred, the first step is personal safety, then controlling the spread of contamination, if possible. GHD personnel will immediately contact site management to inform them of the spill and activate emergency spill procedures.

9. Environmental Control Program

9.1 Introduction

This section of the HASP outlines measures to be implemented at the site to prevent hazards associated with environmental conditions.

9.2 Weather Monitoring

The SS will be responsible for checking weather forecasts for the next day and week of work to provide advance notification of any severe weather conditions. Severe weather conditions (e.g., heavy rains) may cause unsafe conditions at the site and in some situations work may have to be stopped.

9.3 Tornado Safety Policy And Procedures

Tornadoes occur most frequently between April and October from 3:00 to 7:00 p.m. but can occur any time. In most cases, tornadoes move from a west/southwest direction. A typical tornado is a swirling storm of short duration with winds up to 300 miles per hour and a near vacuum at its center. It appears as a rotating funnel shaped cloud, from gray to black in color, extending towards the ground from the base of a thundercloud.

Tornadoes usually only cover a limited geographical area and give off a roaring sound. A tornado is the most concentrated and destructive potential weather event at the Site. Tornadoes are usually the result of the interaction of a warm, moist air mass with a cool or cold air mass. Secondary effects of tornadoes include flash flooding, electric power outages, transportation system and communication system disruption, and fires.

Whenever weather conditions develop that indicate tornadoes are expected, the National Weather Service will issue a tornado watch to alert people in a designated area for a specific time period (normally 6 hours) to remain alert for approaching storms. The tornado watch is upgraded to a tornado warning when a funnel cloud (tornado) is actually sighted or indicated by weather radar.

When a tornado is approaching, Site personnel will only have a short time to react. Therefore, Site personnel must be prepared to react during periods of severe weather. Memorize the following tornado danger signs:

i) Approaching clouds of debris can mark the location of a tornado even if a funnel cloud is not visible

ii) Before a tornado hits, the wind may die down and the air can become very still/calm

iii) It is not uncommon to see clear, sunlit skies behind a tornado as they usually occur at/near the trailing edge of thunderstorms.

Tornado Evacuation Procedures

GHD and contractor personnel monitor weather related information provided by National Weather Service. If the National Weather Service issues a tornado warning, Site supervisor will activate the emergency response plan.

The "take shelter" warning signal is a "slow wail" of the alarm system. GHD Site personnel will evacuate the work zone(s) when a tornado watch has been issued by the National Weather Service. Personnel will contact the Project Management team to inform them they are leaving the site and provide them a location of the muster point (shelter) they are going. The Site Supervisor are responsible for work areas, they will check remote areas of the work zone(s) to ensure personnel have reacted to the alert. Personnel must proceed to the Site mustering point (shelter) and wait for further instructions. If a tornado watch is upgraded to a tornado warning, personnel will proceed to the designated tornado shelters. Once inside the shelter, conduct a head count to ensure that personnel are accounted for. In general, stay away from all windows and doors that lead to the outside. Remain in the shelter until the "all clear" signal is given by the Site Supervisor.

The tornado shelter most accessible to GHD personnel should be noted on the site map attached to this HASP

Directions to the shelter are to be communicated to Site personnel during initial Site safety orientation and throughout the tornado season during subsequent safety meetings.

If unable to reach the designated shelter, the best protection in a tornado is usually an underground area. If an underground area is not available, consider small interior rooms on the lowest floor without windows, hallways on the lowest floor away from doors and windows, rooms constructed with reinforced concrete/brick/block with a heavy concrete floor and roof, and protected areas away from doors and windows.

9.4 Rain And Snow

Excessive amounts of precipitation may cause potential safety hazards for work tasks. The hazards that would be most commonly associated are slipping, tripping, or falling due to slippery surfaces.

Severe weather conditions will result in work stoppage and the implementation of further emergency measures.

9.5 Temperature

Site activities are expected to be conducted year round. Temperature extremes may be experienced which require measures to be implemented to prevent health and safety hazards from occurring. Potential hazards arising from temperature extremes are heat stress and cold exposure.

9.6 Wind

High winds may be encountered at the site and these can cause hazards that may affect site personnel health and safety. Preventative measures that will be implemented if necessary are as follows:

i) Restrict site activities.

ii) Batten down light equipment or building materials.

iii) Partially enclose work areas.

iv) Reduce or Stop Work activities.

9.7 Lightning & Thunder

Light travels at a faster speed than sound, you can see a lightning bolt before the sound of thunder reaches you.

To judge how close lightning is, count the seconds between the flash and the thunder clap. Each second represents about 328 yards/300 meters. If you can count less than 30 seconds between the lightning strike and the thunder, the storm is less than 6.2 miles/10 km away and there is an 80 percent chance the next strike will happen within that 6.2 miles/10 kilometers.

Lightning may strike several miles/kilometers away from the parent cloud and therefore precautions should be taken even if the thunderstorm is not directly overhead.

If you hear thunder or see lightning, stop work immediately and seek safe shelter.

Remain sheltered for 30 minutes after hearing the last thunder before returning to work.

9.8 Outdoor Precautions During Severe Weather

- Keep a safe distance from tall objects, such as trees, hilltops, and telephone poles.
- Avoid projecting above the surrounding landscape. Seek shelter in low lying areas such as valleys, ditches, and depressions, but also be aware of flooding.
- Stay away from water. Don't go boating if a storm threatens. Move to land as quickly as possible if you are on the water. Lightning can strike the water and travel some distance from its point of contact. Don't stand in puddles even if you are wearing rubber boots.
- Stay away from objects that conduct electricity, such as tractors, metal fences, motorcycles, lawnmowers, and tall metal objects.
- Avoid being the highest point in an open area. Holding a conductive tool, holding an umbrella, can make you the tallest object and a target for lightning.
- You are safe inside a car during lightning, but don't park near or under trees or other tall objects, which may topple over during a storm. Be aware of downed power lines, which may be touching your car.
- In a forest, seek shelter in a low lying area under a thick growth of small trees or bushes.
- Be alert for flash floods, which are sometimes caused by heavy rainfall, if seeking shelter in a ditch or low lying area.
- If caught in a level field far from shelter and you feel your hair stand on end, lightning may be about to hit you. Kneel on the ground immediately, with feet together, place your hands on your knees and bend forward. Don't lie flat.
- If you are in a group in the open, spread out, keeping people several yards/meters apart.

9.9 Indoor Precautions During Severe Weather

- Before the storm hits, disconnect electrical appliances including radios and television sets. Do not touch them during the storm.
- Don't go outside unless absolutely necessary.
- Stay away from doors, windows, fireplaces, and anything that will conduct electricity, such as radiators, stoves, sinks, and metal pipes. Keep as many walls as possible between you and the outside.
- Don't handle electrical equipment or telephones. Use battery operated appliances only.

9.10 Flash Flooding

Floods are one of the most common hazards in low lying areas, however not all floods are alike. Some floods develop slowly, while others such a flash floods, can develop in just a few minutes and without visible signs of rain. Additionally, floods can be local, impacting a neighborhood or community, or very large, affecting entire river basins and multiple states.

Flash floods can occur within a few minutes or hours of excessive rainfall, a dam or levee failure, or a sudden release of water held by an ice jam. Flash floods often have a dangerous wall of roaring water carrying rocks, mud and other debris.
Be aware of flood hazards no matter where you live or work, but especially if you are in low-lying areas, near water, behind a levee or downstream from a dam. Even very small streams, gullies, creeks, culverts, dry streambeds or low-lying ground that appear harmless in dry weather can flood.

During the flood

- If any possibility of a flash flood, move immediately to higher ground. Do not wait for instructions to move.
- Be aware of stream, drainage channels, canyons and other areas known to flood suddenly.

If you must prepare to evacuate, you should do the following:

- Do not walk through moving water. Six inches of moving water can make you fall.
- If you have to walk in water, walk where the water is not moving. Use a stick to check the firmness or depth of the ground in front of you.
- Do not drive into flooded areas. If floodwaters rise around your car, abandon the car and move to higher ground if you can do so safely.
- Observe weather in the distance, rain in the hills can cause flooding in the valleys..Do not park your vehicle along streams, rivers or creeks, particularly during threatening conditions.

APPENDIX DOCUMENTS

Chemical Table

Chemical/CAS #	Chemical Name (Synonyms)	Exposure Limits	Routes Of Entry	Symptoms/Health Effects	Chemical Properties	Physical Characteristics	Concentration at Site
Arsenic CAS-7440-38-2	Arsenic CAS-7440-38-2	TLV: 0.01 mg/m3 PEL: 0.010 mg/m3 STEL: NE IDLH: 5 mg/m3 (as As)	Inhalation Absorption Ingestion	ACUTE: Contact dermatitis, gastrointestinal disturbances, ulceration of the nasal septum, and respiratory irritation. CHRONIC: Hyperpigmentation of the skin and cancers of the skin, lungs, and lymphatic system.	(FP) NA (VP) 0 mm (approx.) (IP) NA (UEL) NA (LEL) NA	Silver-gray or tin-white, brittle, odorless, solid.	140 mg/kg
Lead (metal) CAS-7439-92-1	Lead (metal) CAS-7439-92-1	TLV: 0.05 mg/m3 PEL: 0.05 mg/m3 STEL: NE IDLH: 100 mg/m3	Inhalation Ingestion Skin contact Eye contact	ACUTE: Lead is a cummulative poison, however, it may cause eye and skin irritation. CHRONIC: Effects blood, bone marrow, CNS, PNS and kidneys resulting in anemia, convulsions, peripheral nerve disease and kidney impairment. Toxicity to human reproduction or development.	(FP) NA (VP) NA (IP) NA (UEL) NA (LEL) NA	A heavy, ductile, soft, gray solid. Turns tarnished on exposure to air.	441 mg/kg

Job Safety Analysis (JSA)

Insert Name : Environmental-Soil Sampling From Excavator Bucket

Field staff must review job specific work plan and coordinate with project manager to verify that all up front logistics are completed prior to starting work including, but not limited to, permitting, access agreements, and notification to required contacts (e.g., site managers, inspectors, clients, subcontractors, etc.). Additionally, a tailgate safety meeting must be performed and documented at the beginning of each workday. **Stop, Think, Act, Review (STAR)** must be used prior to any activity. All personnel must possess the appropriate training prior to initiating scheduled tasks. Also consider weather conditions. GHD personnel have the authority and responsibility to use **Stop Work Authority (SWA).** Review this JHA initially and in the field prior to initiating the job, using the P66 RM "Go Card" to assist in identifying specific site hazards. Document by "dirtying" this JHA.

Date Issued/Revised:	07/19/2022 17:08:54	**Client:**	Los Angeles Unified School District		
Project Number:	12580357	**Created By:**	cra\rmanning	SIM OPS? YES/NO	SSE on site? YES/NO
Project Address:					
Key Equipment:	Air monitoring equipment, PPE, Excavation equipment Additional PPE: Tyvek if Level C initiated; gloves dependent on the task and chemical contamination present or suspected present				
Task-specific Training:	GHD Field Method Training on Soil Sampling Procedures; Mobile Equipment or Heavy Equipment Safety;				

Hard Hat	Gloves (ANSI/EN 388)	Eye Protection	Fall Protection	APR	Vest	PPE Clothing
☐ Type 1 (Top Impact)	☑ Chemical Protective (ie.Nitrile)	☑ ANSI/CSA Safety Glasses	☐ Harness	☐ Full Face Mask	☑ Class II (standard)	☐ Coveralls
☐ Type 2 (Side Impact)	☑ Level 1 - Light Duty	☐ Goggles/Spoggles	☐ Shock Absorbing Lanyard	☐ Half Face Mask	☐ Class III (Night or Highway Traffic)	☐ Fire Retardent Clothing (FRC)
☑ Class E (standard)	☐ Level 2 - Light Duty with Protection	☐ Face Shields	☐ Lifeline		☐ Anti-Static	☐ High Viz Clothing
☐ Class G	☐ Level 3 - Medium Duty	☐ Other*		**Cartridges**	☐ FRC	☐ Long Pants
	☐ Level 4 - Heavy Duty			☐ N95	☐ PFD	☐ Long Sleeve Shirts
Foot Protection	☐ High Viz	**Hearing Protection**	**Arc Flash/Shock Protection**	☐ P100		☑ Paper Tyvek (disposible)
☑)Industrial Grade Safety Boot	☐ Other*	☑ NOT Required for this task	☐ Hazard Category 2	☐ P95		☐ Polyethyene Tyvek

Hard Hat	Gloves (ANSI/EN 388)	Eye Protection	Fall Protection	APR	Vest	PPE Clothing
☐ Rubber Boots (industrial grade)		☐ Required	☐ Hazard Category 4	☐ R95		☐ Other*
☐ Hip Waders				☐ Organic Vapour		
	* see key equipment			☐ Speciality*		

Project Development Team		Modified by	Reviewed by	Date
Name	Signature			
Karen Gale				

Job steps[1]	Task activity	Potential hazard(s)[2]	Corrective measure(s)[3]	Person responsible (Print first and last names)
1	Discuss STAR and SWA.	• Site personnel not aware of STAR and SWA	• Project team (GHD) discusses importance of and documentation procedures for SWA during pre job safety meeting • Use SWA to stop any work that is unsafe	Site Personnel
2	Inspect and calibrate sampling and monitoring equipment.	• Lost time from improperly functioning equipment • Incorrect sampling procedures/collection due to malfunctioning equipment	• Ensure all equipment is functioning properly • Complete Quality Control documents	Sampling Technician
3	Prepare to collect soil samples: Technician will choose the location of the sample and communicate sample location to the operator.	• Back strain • Pinch points • Cuts • Punctures • Sample misidentification	• Use proper lifting techniques and buddy system if needed • Avoid placing hands/fingers in pinch point locations • Use proper tools when opening container packaging • Do not use fixed open blade knives when opening boxes or containers • Ensure the sample id label matches sample location with site plan/GHD site supervisor/subcontractor • Setup a safe area for technician to obtain sample from bucket	Sampling Technician
4	Obtaining the soil sample from the excavation via remote means – use the hydraulic excavator: Operator will place bucket on ground in a safe location after obtaining the sample from the agreed location.	• Excavation collapse • Contaminant exposure • Heavy equipment operation	• Stay clear of the edge of the excavation; demarcate areas that were undermined • Wear nitrile gloves and follow air monitoring program as per HASP • Follow JSAs specific for excavation and heavy equipment activities; maintain excavation safety • Be aware of swing radius of heavy equipment	Sampling Technician
5	Sample collection from excavator bucket: Operator will place heavy equipment in a zero energy state via lockout (interlocks) and placing bucket on ground. If not equipped with interlocks or equivalent safety devices then operator will shut off engine with bucket on ground. Technician will collect soil sample from the bucket once heavy equipment is in a zero energy state and leave the area.	• Contaminant exposure • Cuts from container breakage • Sample misidentification • Struck by/crushing injuries	• Wear nitrile gloves and replace between soil samples • Inspect glass bottles for breaks/cracks • Do not attempt to use any suspect containers • Communicate to all present not to distract the excavator operator • Establish eye/hand contact with excavator operator and approach when safe • Have operator activate hydraulic system kill switch if equipped and maintain two thumbs up visible to technician • If excavator is not equipped with a hydraulic system kill switch, then the operator must leave the cab prior to sample collection • Do not stand in front of or behind the bucket; stand to either side to collect sample • Close glass sample containers carefully to avoid breakage • Signal operator with thumps up when clear of swing radius • Check sample labels for accuracy prior to placing in cooler	Sampling Technician
6	Headspace screening of samples	• Contaminant exposure • Incorrect headspace readings	• Wear nitrile gloves • Ensure proper calibration of equipment	Sampling Technician

Job steps[1]	Task activity	Potential hazard(s)[2]	Corrective measure(s)[3]	Person responsible (Print first and last names)
7	Sample selection	• Bottle breakage • Contaminant exposure • Pinch points • Lost time due to incorrect sample selection	• Wear nitrile gloves when handling sample containers • Confirm selected samples are correct based on work plan selection criteria, PID readings, and soil boring logs • Avoid placing hands/fingers in pinch point locations (e.g., between cooler and lid)	Sampling Technician
8	Packing samples in cooler(s)	• Bottle breakage • Contaminant exposure • Cuts • Pinch points • Back strain • Lost time due to incorrect sample packaging or hold time exceedances	• Wear nitrile gloves when handling sample containers • Pack glass containers in bubble wrap • Check COC against sample labels and SSOW for accuracy before shipping • Avoid placing hands/fingers in pinch point locations (e.g., between cooler and lid) • Use proper lifting techniques and buddy system if needed • Ensure equipment and supplies are loaded correctly and do not shift during transport	Sampling Technician
9	Investigation derived waste (IDW) management	• Contaminant exposure • Heavy lifting • Pinch points • Slips/trips/fall hazards • Mislabeled waste	• Wear nitrile gloves when handling IDW • Use proper lifting techniques to transport/dispose of IDW into drums and use buddy system if needed • Avoid placing hands/fingers in pinch point locations • Maintain awareness of walking surfaces • Label IDW with generator, a contact number, identification of contents, and site location • Specify IDW as either hazardous or non hazardous material	Sampling Technician

1. Each Job or Task consists of a set of steps. Be sure to list all the steps in the sequence that they are performed. Specify the equipment or other details to set the basis for the potential (associated) hazards.
2. A hazard is a potential danger. What can go wrong? How can someone get hurt? Consider, but do not limit, the analysis to: **Contact** - victim is struck by or strikes an object; **Caught** - victim is caught on, caught in or caught between objects; **Fall** - victim falls to ground or lower level (includes slips and trips); **Exertion** - excessive strain or stress/ergonomics/lifting techniques; **Exposure** - inhalation/skin hazards. Specify the hazards and do not limit the description to a single word such as "Caught".
3. Aligning with the Job Steps, Task Activity Description, and Potential Hazard columns, describe what actions or procedures are necessary to eliminate or minimize the hazards. Be clear, concise and specific. Use objective, observable, and quantified terms. Avoid subjective general statements such as "be careful" or "use as appropriate".

Site Personnel Participating in JSA Review:
I have participated in the review and discussion of the Job Safety Analysis (JSA) listed on this document and understand the duties I am responsible to fulfill. As part of my work, I know I have the responsibility and obligation to STOP work with a Stop Work Authority (SWA) if conditions change and/or potential hazards have been identified.

Name/Company	Sign	Date

SSE(s) on job: _____ **Assigned mentor:** _____

Presenter Signature: _____ Date/Time: _____

My signature below indicates that all conditions and requirements listed above have been verified, met, and reviewed with all affected personnel prior to start of work.
Supervisor Signature: _____ Date/Time: _____

Location of Mustering Point: _____ Wind direction (current): _____

GHD Emergency contact (Name and verified phone number): _____

Supervisor Signature documenting Daily Debrief has been completed: _____

Job Safety Analysis (JSA)

Insert Name : Construction-Excavation Oversight

Field staff must review job specific work plan and coordinate with project manager to verify that all up front logistics are completed prior to starting work including, but not limited to, permitting, access agreements, and notification to required contacts (e.g., site managers, inspectors, clients, subcontractors, etc.). Additionally, a tailgate safety meeting must be performed and documented at the beginning of each workday. **Stop, Think, Act, Review (STAR)** must be used prior to any activity. All personnel must possess the appropriate training prior to initiating scheduled tasks. Also consider weather conditions. GHD personnel have the authority and responsibility to use **Stop Work Authority (SWA).** Review this JHA initially and in the field prior to initiating the job, using the P66 RM "Go Card" to assist in identifying specific site hazards. Document by "dirtying" this JHA.

Date Issued/Revised:	07/19/2022 17:08:56	**Client:**	Los Angeles Unified School District		
Project Number:	12580357	**Created By:**	cra\rmanning	SIM OPS? YES/NO	SSE on site? YES/NO
Project Address:					
Key Equipment:	Excavator; shoring with tabulated data sheet(s); ladder; air monitoring equipment (PID and 4-gas); Excavation Safety Checklist Additional PPE: Class II vest; leather gloves; Noise Reduction Rating (NRR) 20 hearing protection				
Task-specific Training:	40-Hour and 8-Hour HAZWOPER; PPE; Mobile Equipment Operations; Excavation Safety Training; Excavation Competent Person; Confined Space Entry				

Hard Hat	Gloves (ANSI/EN 388)	Eye Protection	Fall Protection	APR	Vest	PPE Clothing
☐ Type 1 (Top Impact)	☐ Chemical Protective (ie.Nitrile)	☑ ANSI/CSA Safety Glasses	☐ Harness	☐ Full Face Mask	☑ Class II (standard)	☐ Coveralls
☐ Type 2 (Side Impact)	☑ Level 1 - Light Duty	☐ Goggles/Spoggles	☐ Shock Absorbing Lanyard	☐ Half Face Mask	☐ Class III (Night or Highway Traffic)	☐ Fire Retardent Clothing (FRC)
☑ Class E (standard)	☐ Level 2 - Light Duty with Protection	☐ Face Shields	☐ Lifeline		☐ Anti-Static	☐ High Viz Clothing
☐ Class G	☐ Level 3 - Medium Duty	☐ Other*		**Cartridges**	☐ FRC	☐ Long Pants
	☐ Level 4 - Heavy Duty			☐ N95	☐ PFD	☐ Long Sleeve Shirts
Foot Protection	☐ High Viz	**Hearing Protection**	**Arc Flash/Shock Protection**	☐ P100		☐ Paper Tyvek (disposible)
☑)Industrial Grade Safety Boot	☐ Other*	☐ NOT Required for this task	☐ Hazard Category 2	☐ P95		☐ Polyethyene Tyvek

Hard Hat	Gloves (ANSI/EN 388)	Eye Protection	Fall Protection	APR	Vest	PPE Clothing
☐ Rubber Boots (industrial grade)		☑ Required	☐ Hazard Category 4	☐ R95		☐ Other*
☐ Hip Waders				☐ Organic Vapour		
	* see key equipment			☐ Speciality*		

Project Development Team		Modified by	Reviewed by	Date
Name	Signature			
Karen Gale				

Job steps[1]	Task activity	Potential hazard(s)[2]	Corrective measure(s)[3]	Person responsible (Print first and last names)
1	Perform the STAR process; discuss SWA; verify Permit to Excavate and Utility Clearance Form is completed (overhead and underground); verify excavation layout	• Underground utility strike • Overhead utilities	• QSF 019 and Permit to Excavate Forms completed and signed off • Utility Locate Ticket number on file within 10 days of excavation startup? • Mark work area and safe distances for overhead lines; use spotter as necessary	CRA Construction Oversight Person
2	Set up necessary work area and traffic controls	• Fall in • Caught between • struck by • Lifting hazards • Manual material handling • Back injury	• Demarcate site and work areas to ensure that personnel and truck/equipment traffic is maintained safely and smoothly • Stockpile and laydown area are set up properly • Perform a pre start meeting, inform subcontractor of safe lifting practices • Reduce travel distance when there is a need to carry/lift materials • Make sure grip is adequate; wear leather/cotton gloves when setting up barricades • Size up the load; if the object is too large or odd shaped OR is in excess of 50 pounds (23 kg) then assistance (mechanical or a buddy lift) will be required • Lift with the legs (bend at the knees and use the leg muscles) to protect the lower back and keep lower back in a neutral position • Avoid one handed carrying if possible; maintain awareness of footing	CRA Construction Oversight Person
3	Hand digging and potholing activities (where/if necessary based on utility locates)	Underground utility strike	• Use preventive techniques • Maintain proper utility clearances with heavy equipment and use hand digging/potholing when necessary • Refer to step 2 and the HASP for additional lifting information	CRA Construction Oversight Person
4	Heavy equipment operations to excavate and handle soils and waste materials	• Caught between and struck by hazards • Underground/overhead utilities	• Stay out of swing radius • Use spotters to verify clear route of travel and work area • Maintain eye contact with operator and/or signal operator • Keep soil 2 feet from edges • Inspect heavy equipment and document inspection • Ensure the above utility clearances and safe work protocols are followed	CRA Construction Oversight Person
5	Excavating activities	• Soil cave in • Noise hazard • Struck by/against hazards • Potential contact with chemical waste material, organic vapors, and particulate	• Keep proper distances from edge of excavation • Limit equipment operations in trench area • Keep work area free of trip hazards • Perform necessary soil classification • Use hearing protection as necessary • Wear designated PPE and conduct air monitoring	CRA Construction Oversight Person

Job steps[1]	Task activity	Potential hazard(s)[2]	Corrective measure(s)[3]	Person responsible (Print first and last names)
6	Excavation entry activities (if required)	• Soil cave in • Struck by/against hazards • Hazardous atmospheres • Slip/trip/fall hazards • Emergency egress	• Keep proper distances from edge of excavation • Limit equipment operations in trench area • Keep work area free of trip hazards • Perform necessary soil classification • Use daily inspection form to document/meet competent person inspection requirements • Inspect trench after any change in conditions (e.g., rain, equipment vibrations) • Provide fall protection measures • Utilize shoring equipment properly – ensure that tabulated data sheet is on site • Use 4 gas monitor and PID to screen excavation air prior to and during entry • Ladder safety and proper slope of ladder • Use harness and lifeline when entering trenches over 5 feet deep	CRA Construction Oversight Person

1. Each Job or Task consists of a set of steps. Be sure to list all the steps in the sequence that they are performed. Specify the equipment or other details to set the basis for the potential (associated) hazards.
2. A hazard is a potential danger. What can go wrong? How can someone get hurt? Consider, but do not limit, the analysis to: **Contact** - victim is struck by or strikes an object; **Caught** - victim is caught on, caught in or caught between objects; **Fall** - victim falls to ground or lower level (includes slips and trips); **Exertion** - excessive strain or stress/ergonomics/lifting techniques; **Exposure** - inhalation/skin hazards. Specify the hazards and do not limit the description to a single word such as "Caught".
3. Aligning with the Job Steps, Task Activity Description, and Potential Hazard columns, describe what actions or procedures are necessary to eliminate or minimize the hazards. Be clear, concise and specific. Use objective, observable, and quantified terms. Avoid subjective general statements such as "be careful" or "use as appropriate".

Site Personnel Participating in JSA Review:
I have participated in the review and discussion of the Job Safety Analysis (JSA) listed on this document and understand the duties I am responsible to fulfill. As part of my work, I know I have the responsibility and obligation to STOP work with a Stop Work Authority (SWA) if conditions change and/or potential hazards have been identified.

Name/Company	Sign	Date

SSE(s) on job: _____ **Assigned mentor:** _____

Presenter Signature: _____ Date/Time: _____

My signature below indicates that all conditions and requirements listed above have been verified, met, and reviewed with all affected personnel prior to start of work.
Supervisor Signature: _____ Date/Time: _____

Location of Mustering Point: _____ Wind direction (current): _____

GHD Emergency contact (Name and verified phone number): _____

Supervisor Signature documenting Daily Debrief has been completed: _____

Records of Training

Date: ____________ Project Name:__________________________________Project Number: ______________

Project Location: ____

Project Description ____

The Project Manager is ultimately responsible for the accuracy of the information on this Record of Training and ensuring GHD Employees and Subcontractors are familiar with the site and have the required training to do the task

Employee's Name:	Confined Space Entry	Excavation Safety	Fall Protection	GHS (HazCom/WHMIS)	Lock Out Tag Out (LOTO)	Motor Vehicle Safety	Aerial Lift	Other -	Other -	Other -	Other -
	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
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Appendix D

Quality Assurance Project Plan (QAPP)

Quality Assurance Project Plan

Elizabeth Learning Center
4811 Elizabeth Street
Cudahy, California

Los Angeles Unified School District

August 1, 2022

→ The Power of Commitment

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1. Introduction

This Quality Assurance Project Plan (QAPP) has been prepared for sampling conducted under this Removal Action Workplan (RAW), This QAPP incorporates the following references in establishing the project criteria:

- United States Environmental Protection Agency (USEPA), Guidance on Systematic Planning Using the Data Quality Objectives Process (USEPA, 2006);
- USEPA, Test Methods for Evaluating Solid Waste: Physical/Chemical Methods, SW-846, Revision 8 (USEPA, 2014)
- American National Standards Institute/American Society of Quality Control (ANSI/ASQC E4:1994), Specifications and Guidelines for Quality Systems for Environmental Data Collection and Environmental Technology Programs, 1994; and

The procedures described herein will be performed in accordance with the guidance, regulations, and documents presented in the project description.

2. Data Quality Objectives

The objective of collecting and analyzing environmental samples for this project is to confirm the effectiveness of the excavation and removal of soils containing chemicals of concern (COCs) arsenic and lead, exceeding established DTSC screening levels. This QAPP has been developed for use in conjunction with the confirmation and waste profile sampling activities to be undertaken at the Site, and QA/QC procedures and protocols that will be used during sample analysis. The QAPP will serve as a controlling mechanism during the removal action to ensure that a sufficient amount of data is collected, and that all data collected are valid, reliable, and defensible.

2.1 Data Quality Objectives

The field QA efforts will focus on ensuring that samples are representative of the conditions in the various environmental media at the time of sampling and that the field analytical approach is properly implemented. Both field-based analytical and off-site fixed-based subcontract laboratory QA efforts will be aimed primarily at ensuring that procedures provide sufficient accuracy and precision to reliably quantify contaminant levels in environmental samples. The subcontract laboratory will also ensure that analyzed portions are representative of each sample. Per USEPA (2006), the Data Quality Objectives (DQOs) are established to verify that the data collected are sufficient and of adequate quality for intended uses. The following five levels of data quality are recognized by the USEPA:

Screening (DQO Level I): This level provides the lowest data quality but the most rapid results. It is often used for health and safety monitoring, preliminary comparison to Applicable or Relevant and Appropriate Requirements (ARARs), and initial Site characterization to locate areas for subsequent and more accurate analysis. Data under DQO Level I is typically collected using portable field equipment. During this project, Level I will be used in in health and safety screenings.

Field Analyses (DQO Level II): Field analyses are performed using calibrated instruments and proven procedures equivalent to laboratory analyses to produce legally defensible data. This level provides rapid results and higher quality data than DQO Level I. QA/QC procedures are less extensive than DQO Level III, but more rigorous than Level I. No DQO Level II procedures will be used in this assessment.

Engineering (DQO Level III): This level provides an intermediate level of data quality and is often used for Site and waste characterization. Level III data is generated by laboratories using US EPA SW-848 procedures without full reporting requirements. Level III DQO will be followed in this project for waste profile analysis.

Confirmational (DQO Level IV): This provides the highest level of data quality and is used for risk assessment and evaluation purposes. Data analyses require full analytical and data validation procedures in accordance with USEPA recognized protocols, approved analytical methods and analytical detection limits. A Level IV-type data package, at a minimum, will include:

– Analytical Report(s);
– Chain-of-Custody;
– Narrative;
– Corrective Action Reports;
– Surrogate Recoveries for GC;
– GC/MS analysis and control limits;
– Detection limits and reporting limits;
– LCS/MS/MSD with control limits and method blanks

Level IV DQO will be followed in confirmation soil sampling following initial excavation of RA areas.

Non-Standard (DQO Level V): This level refers to analyses by non-standard protocols when exacting detection limits or analysis of an unusual chemical compound. The quality of control is typically similar to Level IV data. No DQO Level V procedures will be used as part of this project.

2.2 Problem Definition and Background

Soils impacted with arsenic and lead were found during the PEA-E investigation at the Site. The RAW as identified excavation and off-Site disposal of soils as the preferred RA alternative remedy. Confirmation soil samples will be collected and analyzed for arsenic and lead to assure the following cleanup goals (CG) are met:

- The DTSC Screening Level (DTSC-SL) of 80 milligrams per kilogram (mg/kg) for total lead in soils at school sites (DTSC, 2019).
- The DTSC-SL of 12 mg/kg for arsenic in soils at school sites (DTSC, 2008).

Waste profile samples will be collected for waste characterization suitable for acceptance at a designated landfill.

2.3 Project Task Description

This project includes the following:

– Preparation of a RAW;
– Remedial excavation and off-Site disposal;
– Confirmation soil sampling;
– Waste profiling;
– Preparation of a Removal Action Completion Report (RACR).

2.4 Project Quality Objectives

The necessary QA/QC procedures will be performed in accordance with acceptable protocols, and that the data generated meet the overall project objectives for precision and accuracy. Sampling and analysis procedures, personnel requirements, chain-of-custody and documentation requirements and specific criteria for evaluating data acceptability will be traceable. Procedures will be followed on how to address data deficiencies, data reduction and evaluation, and preparation of field observation reports, which will be produced so that outputs and accurate and technically sound.

2.5 Documentation and Records

All laboratory data package reports will contain the following:

- Case narrative
- A cover letter and Laboratory Manager's signature.
- Analytical reports for each sample submitted, which at a minimum include:
  - Results, reporting units for each parameter;
  - Project detection limits and reporting limits;
  - Date of extraction(s) and analyses;
  - List of project specified methodologies for each parameter; and
  - Dates of sample collection and laboratory report.
- QC Summary Forms
- LCS/MS/MSD with control limits and method blanks
- Corrective Action Reports;
- Surrogate Recoveries for GC;
- GC/MS analysis and control limits;

3. Data Generation and Acquisition

3.1 Sampling Process Design

The sampling objectives are as follows:

- To identify areas of the Site that pose risk to human and environmental health
- To assess performance of remedial excavation

Fifteen locations ranging in size from approximately 25 square feet to approximately 1750 square feet will be excavated between 1.5 and 4.5 feet below ground surface (bgs). Once complete, confirmation soil samples will be collected from the sidewalls and bottom of each excavated area as necessary to confirm that the soil left in-place does not exceed the CGs. Additional confirmation sampling will be collected if initial confirmation soil sample results are above the CGs.

3.2 Sampling Methods

Confirmation samples will be collected using a clean stainless-steel trowel and transferred directly into clean laboratory provided 4-oz jars with Teflon-lined plastic lids. The confirmation samples will be properly labeled, placed in individual Ziploc bags, and added directly to a cooler with ice.

3.3 Sample Handling and Custody

Samples will be delivered to a California ELAP-certified lab on the same day collected, and kept at temperatures between zero to six degrees Celcius.

3.4 Analytical Methods

The confirmation soil samples will be analyzed for arsenic and lead using USEPA Method 6010B. Samples will be extracted within 14 days and analyzed within 40 days of extraction. The laboratory will be instructed to report all

concentrations above the method detection limit (MDL) and below the practical quantification limit (PQL) as J-flag values. The required MDL and PQL for each parameter is listed below:

Parameter	Method	MDL (mg/kg)	PQL (mg/kg)
Lead	6010B	0.192	0.50
Arsenic	6010B	0.248	0.30

3.5 Quality Control

Quality control procedures outlined in SW-846 methodologies as well as DQOs outlined above will be followed in the laboratory and field.

3.5.1 Field QC Requirements

Two types of QC samples will be used during field sampling activities:

- Field duplicates: Once per day of RA work, primary and duplicate sample will be collected from a single source, labeled with unique sample IDs, and submitted to the laboratory without cross-referencing data and without identification as duplicates on the parameter request sheet.
- Equipment blanks: Equipment blanks will be used to evaluate if a sampling device (i.e. hand trowel) has been effectively cleaned. The sampling device will be washed with non-phosphate detergent, rinsed with tap water, and double rinsed with de-ionized water that will be poured over the device directly into sample bottles and submitted to the lab for analysis. One equipment blank will be collected per day and analyzed for arsenic and lead.

3.5.2 Laboratory QC Requirements

The laboratory will analyze the QC samples described in Section 3.5.1. The control limits and corrective actions for each parameter are specified in each analytical method.

For inorganic analyses of soil and water, the analytical methods require analyses of the following QC samples:

- Calibration verification following instrument calibration and once every tenth sample thereafter through the working day.
- Laboratory blank verification at instrument calibration and once every tenth sample thereafter through the working day to check instrument drift.
- Method blank analysis at a rate of once per batch of samples or one per 20 samples of a single matrix, whichever is more frequent, to evaluate contamination levels during preparation
- Matrix spike/matrix spike duplicate (MS/MSD) analyses at a rate of one per batch of samples for each matrix type (e.g., soil, water) and concentration level (e.g., low, medium) or one in 20 samples, whichever is more frequent. The MS/MSDs are used to check for the ability to accurately and precisely recover compounds of interest from the matrix.

The results of analyses of these QC samples will be used as independent, external checks on laboratory and field contamination.

3.6 Instrument/Equipment Testing, Inspection, and Maintenance

3.6.1 Field Instrumentation

All field equipment will be maintained according to the manufacturer's specifications and will be inspected prior to use.

3.6.2 Laboratory Equipment

Instrument maintenance logbooks are maintained in the laboratory. The logbooks shall contain a schedule of maintenance, as well as a complete history of past maintenance, both routine and non-routine, for that particular instrument.

Preventive maintenance is performed according to the procedures specified in the manufacturer's instrument manuals, including lubrication, source cleaning, and detector cleaning, and the frequency of such maintenance. Chromatographic carrier gas purification traps, injector liners, and injector septa are cleaned or replaced on a regular basis. Precision and accuracy data are examined for trends and excursion beyond control limits to determine evidence of instrument malfunction. Maintenance will be performed when an instrument begins to degrade as evidenced by the degradation of peak resolution, shift in calibration curves, decrease in sensitivity, or failure to meet one or another of the pre-determined QC criteria

3.7 Instrument Calibration and Frequency

3.7.1 Field Calibration Procedures

Where applicable, field equipment will be calibrated according to the manufacturer's recommendations but will be calibrated, at a minimum, at the beginning of each day (prior to first use). Calibration measurements will be recorded on the Calibration Log Form.

3.7.2 Laboratory Calibration Procedures

Laboratory equipment will be calibrated on a routine basis as specified by the machine manufacturer.

3.8 Data Management

Data used for project decisions and reports that were obtained from data tables, calculations, or analytical results will be verified by at least two project personnel prior to use. Data summaries will include "prepared by" and "checked by" field to note this process.

Data resulting from analytical results will be consistent with the methods and equations stated in the procedure. Individual laboratory supervisors will review data before forwarding it to the data management supervisor. Final reports will be QA'd by the laboratory QA manager for error before release. Final reports will include a QA/QC summary detailing the performed data assessment. Any discrepancies or deviations will be documented and explained.

4. Assessment and Oversight

Assessments and evaluations are designed to determine whether the QAPP is being implemented as approved, to increase confidence in the information obtained, and ultimately, to determine whether the information may be used for its intended purpose(s).

4.1 Technical Systems Audit

Audit programs are established and directed by the consultant's quality assurance staff to monitor that field and laboratory activities are performed in compliance with project controlling documents.

Laboratory audits include reviews of sample handling procedures, internal sample tracking, SOPs, analytical data documentation, QA/QC protocols, and data reporting. The selected mobile or offsite laboratory will be licensed by the State of California as a certified testing laboratory and will participate in the WP/WS Performance Program for hazardous waste, wastewater, and/or drinking water analyses.

4.2 Performance Evaluation Audits

Field audits focus on appropriateness of personnel assignments and expertise, availability of field equipment, adherence to project controlling documents for sample collection and identification, sample handling and transport, use of QA samples, chain-of-custody procedures, equipment decontamination and documentation. Field audits are not required but may be performed in the event significant discrepancies are identified that warrant evaluation of field practices.

Data audits will be performed on analytical results received from the laboratories. These audits will be accomplished through the process of data validation as described in Section 5 or may involve a more detailed review of laboratory analytical results. Data audits require the laboratory to submit complete raw data files to the consultant for validation. Staff or subcontracted chemists will perform a review of the data consistent with the level of effort described in the National Functional Guidelines. This level of validation consists of a detailed review of sample data, including verification of data calculations for calibration and quality control samples to assess if these data are consistent with method requirements. Upon request, the laboratory will make available supporting documentation in a timely fashion.

5. Data Validation and Usability

5.1 Data Review

Data review consists of examination to ensure that the data have been recorded, transmitted, and processed correctly. This includes checking for data entry, transcription, calculation, reduction, and transformation errors. It may also mean ensuring that there is a complete list of sample information available, such as sample matrixes, blanks, duplicates, shipping dates, preservatives, holding times, etc., and verifying that there are no programming errors. It is also a completeness check to evaluate if there are any deficiencies, such as data missing or integrity lost (for example, due to corruption or loss in storage or processing).

5.2 Data Verification

Data verification is the process for evaluating the completeness, correctness, and conformance/compliance of a specific data set against the method, procedural, or contractual specifications. It essentially evaluates performance against pre-determined specifications, for example, in an analytical method, or a software or hardware operations system.

5.3 Data Validation

Data validation is an analyte- and sample-specific process to evaluate the quality of a specific data set relative to the end use. It focuses on the project's specifications or needs, designed to meet the needs of the decision makers/data users and should note potentially unacceptable departures from the Quality Assurance Project Plan. The potential effects of the deviation will be evaluated during the data quality assessment.

Data verification will be completed internally by those generating the data or by an organization external to that group. Data validation is generally performed on the verified data later in the process and by someone independent or external to the data generator and the data user. These processes may occur both during and at the end of the project.

Data quality and utility depend on many factors including sampling methods, sample preparation, analytical methods, QC, and documentation. Subcontractors, such as laboratories or sampling personnel, will be advised of applicable documentation and procedural requirements. Once the data are assembled, satisfaction of validation criteria will be documented as listed below. Chemical data must meet criteria of: (1) quantitative statistical significance; (2) custody and document control; and (3) sample representativeness.

To evaluate the quantitative statistical significance of chemical data, items will be documented as appropriate (e.g., with laboratory records, with laboratory Standard Operating Procedures (SOPs) by reference to an approved SOP manual, or with equipment manufacturer/supplier records).

Documentation may be either direct (for example, listing of dates, names, and methodologies) or by reference to existing documents. Referenced documents will be specifically identified. The precise and retrievable location of nonstandard documents (e.g., in-house procedure manuals, chain-of-custody forms, and laboratory reports) will be stated.

To evaluate the completeness of data, the following will be checked:

- Sample presesrvation techniques and holding times;
- Use of proper sampling containers and equipment;
- Use of proper decontamination procedures;
- Use of proper laboratory techniques; and
- Compatibility between field and laboratory measurements.

5.4 Reconciliation with Data Quality Objectives

Data reconciliation requires evaluation of precision, accuracy, representativeness, and completeness (PARCC) criteria, field quality control results, and conformance to method standards.

5.4.1 Precision

Precision will be assessed by comparing the analytical results between duplicate spike analyses. Precision as percent relative difference will be calculated as follows for values significantly greater than the associated detection limit:

$$\text{Precision} = \left| \frac{(D_2 - D_1)}{(D_1 + D_2)/2} \right| \times 100$$

D_1 = matrix spike recovery

D_2 = matrix spike duplicate spike recovery

For results near the associated detection limits, precision will be assessed based on the following criteria:

Precision = | Original result – duplicate result | <CRDL[1]

5.4.2 Accuracy

Accuracy will be assessed by comparing a set of analytical results to the accepted or "true" values that would be expected. In general, MS/MSD and check sample recoveries will be used to assess accuracy. Accuracy as percent recovery will be calculated as follows:

[1] CRDL – Contract Required Detection Limit.

$$\text{Accuracy} = \frac{A-B}{C} \times 100$$

A = The analyte determined experimentally from the spike sample

B = The background level determined by a separate analysis of the unspiked sample

C = The amount of spike added

In some cases, MS and/or MSD recoveries may not be available due to elevated levels of the spiked analyte in the investigative sample. In such cases, accuracy will be assessed based on surrogate spike recoveries and/or laboratory control samples.

5.4.3 Representativeness

Representativeness is a qualitative parameter that expresses the degree to which the sample data are characteristic of actual conditions. This is evaluated by reviewing the QC results of blank samples and holding times. Positive results in blank samples suggest that compounds may have been introduced into samples during sample collection, transport, preparation, or analysis and may not be representative of site conditions. Equipment and field duplicates are used to represent sample collection and transport conditions, while method blanks are used to represent preparation and analysis conditions. Method blanks are prepared for each sample of a similar matrix extracted by the same method at a similar concentration.

5.4.4 Comparability

All samples will be collected in following a set of uniform and systematic methodology to allow for direct comparability of results.

5.4.5 Completeness

Completeness is a measure of the amount of valid data obtained from a measurement system compared with the amount that was expected to be obtained under normal conditions.

To be considered complete, the data set must contain all QC check analyses verifying precision and accuracy for the analytical protocol. In addition, all data are reviewed in terms of stated goals in order to determine if the database is sufficient.

When possible, the percent of completeness for each set of samples will be calculated as follows:

$$\text{Completeness} = \frac{\text{usable data obtained}}{\text{total data planned}} \times 100 \text{ percent}$$

6. Corrective Action

The need for corrective action may be identified by system or performance audits or by standard QC procedures. The essential steps in the corrective action system will be:

- Checking the predetermined limits for data acceptability beyond which corrective action is required
- Identifying and defining problems
- Assigning responsibility for investigating the problem
- Investigating and determining the cause of the problem
- Determination of a corrective action to eliminate the problem (this may include reanalysis or resampling and analyses)

– Assigning and accepting responsibility for implementing the corrective action
– Implementing the corrective action and evaluating the effectiveness
– Verifying that the corrective action has eliminated the problem
– Documenting the corrective action taken

For each measurement system, the laboratory QA/QC Officer will be responsible for initiating the corrective action and the Laboratory Project Manager will be responsible for implementing the corrective action.

Appendix E

Transportation Plan and Map

Transportation Plan

Elizabeth Learning Center
4811 Elizabeth Street
Cudahy, California

Los Angeles Unified School District

August 1, 2022

→ The Power of Commitment

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Figure index

Figure D-1: Truck Route Map

1. Introduction

GHD has prepared this Transportation Plan for the Removal Action Workplan (RAW) for the removal of arsenic and lead impacted soils in the comprehensive modernization area at the Elizabeth Learning Center, located at 4811 Elizabeth Street, Cudahy, California. The response action (RA) proposed in the RAW includes the excavation and off-site disposal of impacted soils. The objective of this Transportation Plan is to minimize potential impacts to the surrounding community and/or the environment during the removal, transportation, and disposal of impacted materials generated as part of the implementation of the RAW.

2. Offsite Transportation

This section presents measures and information that will minimize the potential health, safety, and environmental risks associated with the off-site transport of material generated during remediation. These include:

- Waste characterization;
- Destination of waste material;
- Decontamination methods;
- Mode of Transportation;
- Route of Transportation;
- Traffic control and loading procedures; and
- Recordkeeping.

2.1 Waste Characterization and Quantity

Some soil sample results from the PEA-E investigation generally contain COCs above the DTSC-SLs of 80 mg/kg lead and 12 mg/kg arsenic. Soluble testing was conducted using the waste extraction test (WET) Method to determine hazardous waste designation following California Title 22 when soil results exceeded the soluble threshold limit concentration (STLC) by a factor of 10 or more (50 mg/kg for arsenic and lead) but did not exceed the total threshold limit concentration (TTLC) value of 500 mg/kg for arsenic and lead. Toxicity characteristic leaching procedure (TCLP) was used to assess federal hazardous waste classification when the TTLC result exceeds the TCLP threshold by a factor of 20 or more (100 mg/kg for arsenic and lead). Soil in certain impacted areas with higher concentrations of arsenic and/or lead exceeded the STLC and/or TCLP and if excavated needs to be managed as Non-RCRA Hazardous Waste (California-hazardous) or RCRA Hazardous Waste (federal-hazardous) waste.

As detailed in the RAW, an estimated 335 cubic yards of arsenic and lead impacted soils are expected to be removed during the RA. Based on the results from the initial PEA-E, waste characterization is expected to be as follows:

- Approximately 56 cubic yards of soil to be considered non-hazardous.
- Approximately 91 cubic yards of soil are considered California-restricted non-RCRA hazardous waste.
- Approximately 188 cubic yards of soil are considered RCRA Hazardous waste.

2.2 Waste Profile

The waste material will be profiled will be based on existing analytical data from the PEA-E to the extent it is acceptable to the receiving facility. Additional samples may be collected for waste profiling purposes if the time

between the PEA-E and the RA does not allow existing data to be used. Additional samples can be collected either in advance before the excavation through hand auguring, or from stockpiled soil removed from the excavation work. Profile data will be submitted to the proposal facility, and the soil will be transported to the disposal facility once approval is obtained.

2.3 Waste Management

During the PEA-E investigation, elevated levels arsenic were detected up to 140 mg/kg in soils at the Site. Three samples (SB-59-1.3, B-2-1.5 and B-5-1.5) with concentrations over ten times the STLC/TCLP limit (50 mg/kg) were analyzed for arsenic using (WET) for STLC and/or TCLP by EPA Method 6010B. The resulting arsenic concentrations in the BS-59 and B-2 samples were above the STLC regulatory limit of 5 milligrams per liter (mg/L). Based on these results, the levels of arsenic around the area of SB-59 (AOC H) and B-2 (AOC C) are representative of Non-RCRA California Hazardous Waste and will be disposed of at a Class I Landfill. Arsenic concentrations in B-5 did not exceed TCLP/STLC limits and is representative of non-Hazardous Waste, to be disposed of at a pre-approved Class III Landfill.

Lead concentrations in soils at the site were detected up to 490 mg/kg. Twelve samples with concentrations over ten times the STLC/TCLP limit (50 mg/kg) were analyzed for arsenic using the WET for STLC and/or TCLP by EPA Method 6010B. Because lead results in select samples exceeded the TTLC/TCLP-lead, levels of lead in soils around AOC's C, I, J, K, are representative of RCRA Hazardous Waste under federal RCRA waste disposal regulations, to be disposed of at a Class I Landfill. Because lead results in select samples exceeded the STLC-lead, levels of lead in soils around AOC's A, B, G, and H are representative of Non-RCRA California Hazardous Waste and will be disposed of at a Class I Landfill or a properly permitted out-of-state disposal facility. Lead concentrations in AOC's L, M, N did not exceed TCLP/STLC limits and is representative of non-hazardous material and can be disposed of at an approved Class III Landfill.

As a portion of the wase is classified as hazardous and disposed of at a Class I Landfill, a USEPA ID number will be required. The EPA ID number for the Elizabeth Learning Center to be used for management of all hazardous wastes is CAR000193862. Compliance with federal and state requirements of hazardous waste generation, temporary on-Site storage, transportation, and disposal will be required for this RA. Hazardous waste containers will be properly labeled. Within 90 days of generation, the hazardous waste will be transported to the selected Class I landfill for disposal. Transportation will be completed by a DOT-registered hazardous waste transporter under a hazardous waste manifest.

2.4 Soil Staging

Excavated soil will be placed on an impermeable barrier base such as plastic sheeting and covered with tarps or other proper materials to prevent run-on and/or dust generation. If significant rainfall is anticipated, the staging areas will be bermed to contain potential run-off. When possible, excavated soils may be placed in covered roll-off bins or drums, or may be loaded directly onto transportation trucks. Soil wastes will be properly labeled and secured until offsite transportation and disposal are ready for loading. Hazardous waste will not be stored at the Site longer than 90 days after generation. Direct loading may take place concurrently with excavation operations, with access of loaders to the stockpile from outside of 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 or other physical barriers that minimize the movement of materials form the Site.

2.5 Requirements of Transporters

The RA contractor will be responsible for retaining transporters qualified for hauling the excavated soils offsite. The selected transporters will be fully licensed and insured to transport the soils. For transportation of hazardous wastes, the selected transporters will be a registered hazardous waste hauler.

2.6 Traffic Control Procedures

Soil from the excavation will be loaded into covered trucks and transported offsite to the designated disposal facility. Prior to loading, the trucks will be staged on-Site when possible to avoid impacts to the local street. It is anticipated that between 25 to 30 truckloads of soil from the RA will be removed offsite. All trucks will be required to maintain slow speeds at the site for safety and dust control purposes.

2.7 Truck Loading Operations

Excavation and loading operations will take place within the established local noise ordnances of 7:00 AM to 10:00 PM. An estimated 25 – 30 truckloads of impacted soils are expected to be removed from the Site. Trucks will enter the Site from the Clara Street entrance and will either be direct loaded from the excavation or directed to the location of the stockpiled soil. Prior to exiting the site, trucks will drive over a rumble plate and onto the Visqueen-covered decontamination area. The cleanup/decontamination area will be set up as close to the loading area as possible to minimize spreading the impacted. Their wheels and sides will be brushed with a dry brush, then exit via a right turn onto Elizabeth Street. The truck route is shown in Figure D1.

2.8 Shipment Documentation

A Uniform Hazardous Waste Manifest (UHWM) form will be used to track RCRA Hazardous and non-RCRA California hazardous wastes. Non-hazardous waste manifests will be used to track non-hazardous wastes. Prior to transporting the impacted soil off-Site, an authorized LAUSD representative will sign each waste manifest. All trucks leaving the site will require inspection by the environmental contractor to ensure proper loading, covering/sealing, decontamination, placarding, and manifesting. The waste transporter will then sign the manifest and distribute the generator's carbon copy to the RA contractor's site manager. Each waste manifest will be kept on-Site until the RA is completed. At a minimum, the waste manifest will include the following:

- Name and address of waste generator (LAUSD);
- Name and address of waste transporter;
- Name and address of disposal facility;
- Description of the waste; and
- Quantity of waste shipped

2.9 Transportation Routes

Transportation of impacted soils will be on arterial streets and freeways, approved for truck traffic, to minimize potential impact on the local neighborhood. There are numerous routes that can be taken to the designated disposal facility as determined by the RA contractor.

2.10 Recordkeeping

The environmental contractor will be responsible for maintaining daily field notes during the removal action activities. The daily reports will document, at a minimum, truck arrival and departure times, truck contents, and amount of trucks per day.

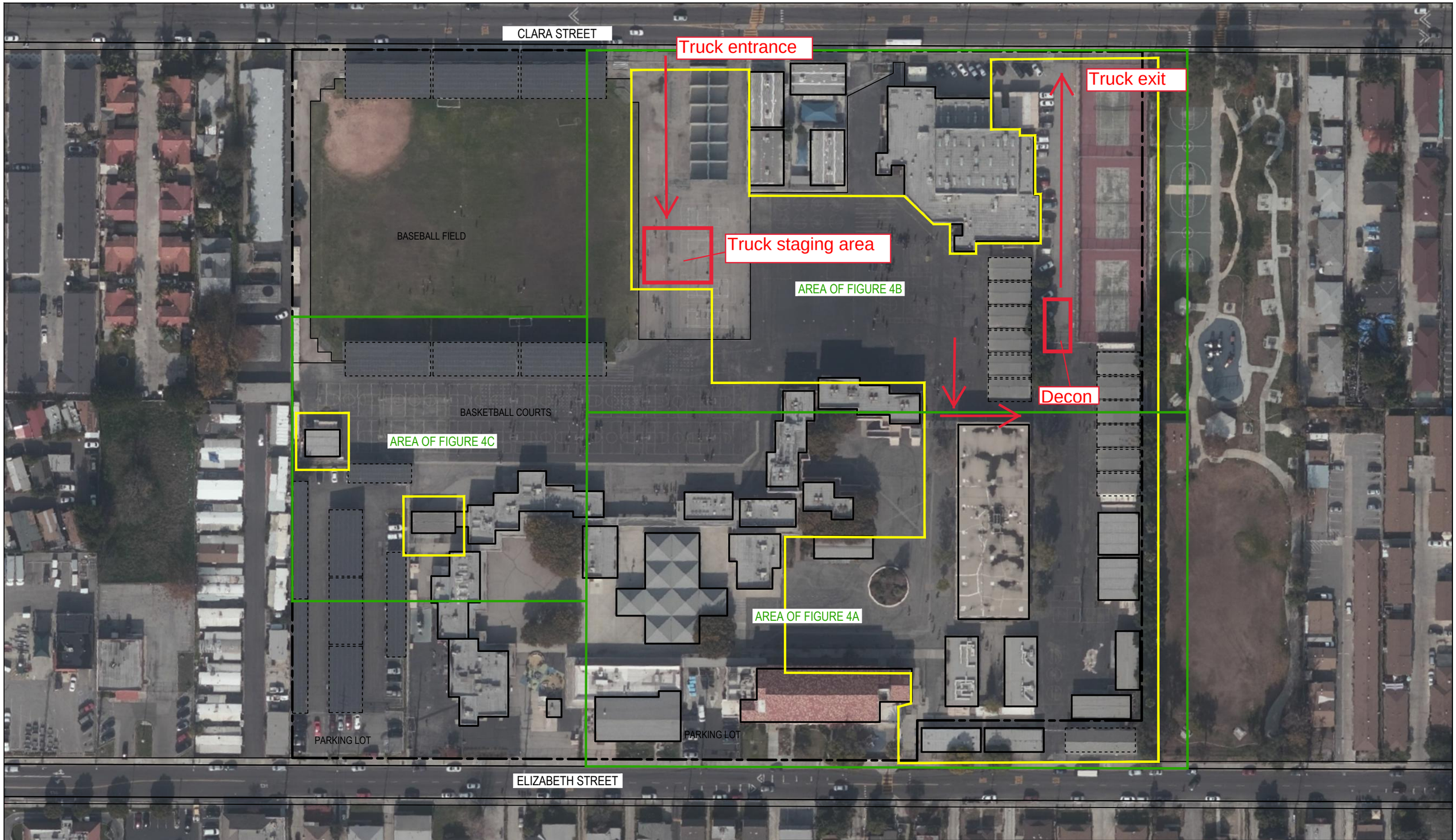
The generator's carbon copy of each manifest will be kept on-Site by the RA contractor until the RA is completed.

2.11 Health and Safety

The health and safety plan (HASP) is available as an appendix of the RAW. The HASP details notification procedures and contingency plans for accidents and breakdown in route. All drivers will be given a copy of the notification procedures prior to carrying impacted soil offsite.

2.12 Contingency Plan

Once the waste hauler is selected, a copy of their contingency plan will be attached to the Transportation Plan. The contingency plan should, at a minimum, include contaminant descriptions, a hazard analysis, and possible methods for the containment and cleanup of an accidental release. The contingency plan will contain sufficient information for the emergency service organizations to determine if evacuation is necessary. All drivers will carry a copy of the transportation plan and be trained to implement the provisions of the contingency plan for which they are adequately trained and equipped.



LEGEND

APPROXIMATE PROPERTY BOUNDARY LINE

APPROXIMATE AREA OF RENOVATION

APPROXIMATE FIGURE EXTENT INDICATOR

0 50 100 ft

N

GHD

Elizabeth Learning Center (LAUSD)
4811 ELIZABETH STREET
CUDAHY, CALIFORNIA

TRUCK ROUTE MAP

Project No. **12580357**
Date **July 2022**

FIGURE D-1

Filename: N:\US\Irvine\Projects\561\12580357\Digital_Design\ACAD\Figures\RPT001\12580357-GHD-00-00-RPT-EN-D114_SO-001.DWG
Plot Date: 18 July 2022 11:18 AM

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