Union Pacific Railroad Beverly Hills Site, 9315 Civic Center Drive, Beverly Hills, California

Removal Action Work Plan

Final

February 2021

Union Pacific Railroad
Technical Certification

This removal action work plan was prepared under the direction of a Registered Civil Engineer in the State of California.

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Date
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Acronyms and Abbreviations

µg/L microgram(s) per liter
95UCL 95 percent upper confidence limit
amsl above mean sea level
AQMD Air Quality Management District
ARAR applicable or relevant and appropriate requirement
bgs below ground surface
BHLC Beverly Hills Land Company
CCR California Code of Regulations
CEQA California Environmental Quality Act
CFR Code of Federal Regulations
COC chemical of concern
COPC chemical of potential concern
DTSC California Environmental Protection Agency, Department of Toxic Substances Control
EPA U.S. Environmental Protection Agency
EPC exposure point concentration
HHRA human health risk assessment
HSC California Health and Safety Code
HSP health and safety plan
I Interstate
IC institutional control
IS/ND Initial Study/Negative Declaration
Jacobs Jacobs Engineering Group Inc.
LUC land use control
mg/kg milligram(s) per kilogram
mg/L milligram(s) per liter
mm millimeter(s)
OSHA Occupational Safety and Health Administration
PCB polychlorinated biphenyl
PPE personal protective equipment
PRG preliminary remediation goal
RAO removal action objective
RAW removal action work plan
RCRA Resource Conservation and Recovery Act
RI remedial investigation
ROW right-of-way
STLC soluble threshold limit concentration
<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
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<tbody>
<tr>
<td>SVOC</td>
<td>semivolatile organic compound</td>
</tr>
<tr>
<td>TBC</td>
<td>to be considered</td>
</tr>
<tr>
<td>TPH</td>
<td>total petroleum hydrocarbons</td>
</tr>
<tr>
<td>TPH-g</td>
<td>total petroleum hydrocarbons as gasoline</td>
</tr>
<tr>
<td>TRPH</td>
<td>total recoverable petroleum hydrocarbon</td>
</tr>
<tr>
<td>TTLC</td>
<td>total threshold limit concentration</td>
</tr>
<tr>
<td>UPRR</td>
<td>Union Pacific Railroad</td>
</tr>
<tr>
<td>VCA</td>
<td>Voluntary Cleanup Agreement</td>
</tr>
<tr>
<td>VOC</td>
<td>volatile organic compound</td>
</tr>
<tr>
<td>yd&lt;sup&gt;3&lt;/sup&gt;</td>
<td>cubic yard(s)</td>
</tr>
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</table>
1. Introduction

On behalf of Union Pacific Railroad (UPRR), Jacobs Engineering Group Inc. (Jacobs) has prepared this removal action work plan (RAW) to support selection of an appropriate removal action for arsenic in soil at the UPRR Beverly Hills site (site) located at 9315 Civic Center Drive in Beverly Hills, California (Figure 1). The site has also been known as "Beverly Hills Lots 12 & 13". The site consists of approximately 5 acres and includes Lots 12 and 13, as well as a small Triangle Section east of Lot 13. UPRR entered the site into a Voluntary Cleanup Agreement (VCA) (Docket Number HSA-A 04/05-066) with the California Environmental Protection Agency, Department of Toxic Substances Control (DTSC) in December 2004 (DTSC, 2005).

This RAW was prepared in compliance with the VCA, California Health and Safety Code (HSC) Sections 25323.1 and 25356.1, and the DTSC Guidance Memorandum, Removal Action Workplans – Senate Bill 1706 (1998) and Proven Technologies and Remedies Guidance, Remediation of Metals in Soil (2008). Pursuant to HSC Section 25356.1, the RAW is one of two remedy selection documents that may be prepared for a hazardous substance release site, and it is appropriate for removal actions that are projected to cost less than $2 million. In California HSC Section 25356.1, a RAW is defined as "a work plan prepared or approved by DTSC or the Regional Water Quality Control Board (Regional Board) which is developed to carry out a removal action, in an effective manner, that is protective of the public health and safety and the environment."

1.1 Objectives

The objectives of this RAW include the following:

- Present and evaluate existing site conditions
- Establish appropriate removal action objectives (RAOs) for protection of human health and the environment
- Evaluate removal action alternatives and identify a recommendation for a preferred removal action for the site that is protective of human health and the environment

1.2 Organization

To accomplish these objectives and to satisfy regulatory requirements, this RAW is organized as follows:

- Objectives, site description and background, and purpose (Section 1)
- Previous investigations, site geology and hydrogeology, nature and extent of arsenic in soil identified as a chemical of concern (COC), and risk assessment (Section 2)
- Goals to be achieved by the removal action, including narrative RAOs, a review of applicable or relevant and appropriate requirements (ARARs), numerical removal goals, and identification of areas that will be targeted for the removal action (Section 3)
- Analysis of the alternatives considered and rejected, as well as the basis for the selection or rejection based on an evaluation of each of the alternatives' relative performance against three evaluation criteria (effectiveness, implementability, and cost) (Section 4)
- Description of the recommended alternative, implementation plan, and completion reporting activities (Section 5)
- Sampling and Analysis Plan (Section 6)
- Transportation Plan (Section 7)
- Site Restoration Plan (Section 8)
- Health and Safety Plan (HSP) (Section 9)
- Public participation (Section 10)
1.3 Site Description and Background

The site is located at 9315 Civic Center Drive in Beverly Hills, California, and consists of three areas (Lots 12 and 13 and a small Triangle Section (excluding the city right-of-way [ROW]) located east of Lot 13) with Los Angeles County Assessor’s Identification Numbers 4342-015-038, 4342-015-039, 4342-015-040, and 4342-015-041. The site is the former railroad ROW adjacent to Santa Monica Boulevard, between Alpine Avenue and North Doheny Drive (Figure 2).

The site is divided into Operable Units 1 (Lots 12 and 13) and 2 (Triangle Section) and is approximately 3,600 feet long and 60 feet wide. The site covers approximately 5 acres, with the majority of the site unpaved. A chain-link fence surrounds the entire site. Ground elevations range from 255 feet above mean sea level (amsl) at the southwestern end of the site to 235 feet amsl at the northeastern end, with the site gently sloping from the south to the north.

1.3.1 Land Use

The site is currently vacant, open space. The current land use zoning is for transportation use. Land use in the vicinity of the site is fully developed as commercial, residential, and light industrial properties. The site is surrounded on all sides by public roadways, with Santa Monica Roadway serving as a high-traffic corridor. Figure 2 depicts the site plan and the surrounding community.

1.3.2 Adjacent Properties

The property is located in a mixed-use area of the City of Beverly Hills that includes commercial and residential land uses. Parcels to the north are residential and consist of single-family homes. Parcels to the south are a mix of residential and commercial land use. Commercial parcels consist of office buildings, rehabilitation facilities, salons, art galleries, film studios, public parking, and hotels. Residential parcels consist of apartment complexes. Parcels to the east and west of the property are public roadways.

1.3.3 Site History

The site was occupied by the railroad ROW from 1926 to approximately 1998 (CH2M, 2006). Aerial photographs indicate that the railroad, operated by the Pacific Electric Railway Company, was active from 1928 until between 1971 and 1979 (Lindmark, 1998a). A series of aerial photographs from years 1952, 1969, 1970, 1979, 1986, 1988, 1990, 1993, 1995, and 1998, did not indicate evidence that the site had been used for any purpose other than a railroad ROW (either active or inactive).
1.4 **Purpose**

Based on previous investigations conducted at the site from 1998 through 2010 and a risk assessment (Section 2.5), DTSC has determined that further action is required to address the presence of arsenic detected in soil samples collected from the site. Following completion of the public comment period, DTSC will consider and respond to comments received. The RAW will be revised, as necessary, in responses to comments. If significant changes are not required, DTSC will then approve the RAW for implementation. After the selected remedy has been implemented, it will be documented in a Completion Report.
2. Site Characterization

The following subsections present a summary of previous investigations conducted at the site from 1998 through 2010, site geology and hydrogeology, nature and extent of COCs in soil, and potential site risks.

2.1 Previous Investigations

Several investigations were performed during due diligence for property transfers and, more recently, in compliance with the VCA to characterize the site.

The following documents pertaining to the site were prepared:

- *Proposed Phase I and II Environmental Investigation, Railroad Right-of-Way between North Doheny and Alpine Drives, Beverly Hills, CA 90210* (Lindmark, 1998a)
- *Phase I and II Environmental Investigation, Railroad Right-of-Way between North Doheny and Alpine Drives, Beverly Hills, CA 90210* (Lindmark, 1998b)
- *Results of Arsenic Reanalysis and Arsenic Investigation Performed Subsequent to the Stage 2 - Phase II Environmental Site Investigation* (RWG, 2003)
- *Remedial Investigation (RI), Beverly Hills Land Corporation Site, 9315 Civic Center Drive, Beverly Hills, CA* (CH2M, 2006)
- *Remedial Design Investigation Report, Beverly Hills Land Corporation Site (Lots 12 and 13), Beverly Hills, California* (CH2M, 2007a)
- *Groundwater Summary Report, Beverly Hills Land Corporation Site, 9315 Civic Center Drive, Beverly Hills, California* (CH2M, 2008a)
- *Results of October 2008 Groundwater Investigation, 9315 Civic Center Drive (Lots 12 and 13) – Beverly Hills Land Company, Beverly Hills, California* (CH2M, 2008b)
- *Well Abandonment, Monitoring Wells MW-1 and MW-2, BHLC at 9315 Civic Center Drive, Beverly Hills, CA* (CH2M, 2010)

2.1.1 1998 Phase I and Phase II

Phases I and II investigations consisted of a records search and a soil sampling investigation performed in 1998 (Lindmark, 1998b). The Phase II soil sampling investigation consisted of advancing 35 soil borings to depths of 100 feet below ground surface (bgs) and excavating two exploratory trenches to 8 feet bgs (one trench at each end of the ROW).

Soil samples collected from these borings were analyzed for the following:

- Total petroleum hydrocarbons (TPH) by U.S. Environmental Protection Agency (EPA) Method 8015M
- Halogenated and aromatic volatile organic compounds (VOCs) by EPA Method 8010/8020
- pH by EPA Method 9045

One composited sample was analyzed for the following:

- Semivolatile organic compounds (SVOCs) by EPA Method 8270
- Herbicides by EPA Method 8150
No VOCs or SVOCs were detected in the soil samples analyzed. Three soil samples collected at 0.5 foot bgs contained detectable levels of TPH (quantified as heavy oil) at 220 milligrams per kilogram (mg/kg). The pH of the soil samples ranged from 6.91 to 8.73.

Groundwater samples were collected in four of the soil borings advanced during the Phase II investigation. The groundwater samples were analyzed for TPH as gasoline (TPH-g) by EPA Method 8015M; benzene, toluene, ethylbenzene, and xylenes with methyl tertiary butyl ether by EPA Method 8020; and halogenated VOCs by EPA Method 8010. The compounds listed above were not detected in the groundwater samples, with the exception of xylenes (0.9 microgram per liter [µg/L]) and chloroform (1.2 µg/L).

No soil or groundwater samples were analyzed for metals or polychlorinated biphenyls (PCBs) during the 1998 Phase II investigation.

### 2.1.2 2003 Stage 2 – Phase II Investigation

The Stage 2 – Phase II investigation consisted of advancing 36 soil borings to various depths (Lindmark, 2003). Eight soil borings were advanced to depths ranging from 48 to 55 feet bgs and 28 soil borings were advanced to a depth of 5 feet bgs.

Soil samples collected from these borings were analyzed for the following (not all samples were analyzed for all analyses):

- TPH by EPA Method 8015M
- VOCs (including TPH-g) by EPA Methods 8260B and 418.1
- SVOCs by EPA Method 8270
- Herbicides by EPA Method 8151A
- PCBs by EPA Method 8082
- Title 22 metals (total threshold limit concentration [TTLC]) by EPA Method 6010B/7471A
- Creosote by EPA Method 8015

The following analytes were not detected at or above the respective method reporting limits in any samples analyzed: TPH-g, TPH as diesel, VOCs, SVOCs, herbicides, PCBs, and creosote.

Title 22 metals were initially analyzed in four soil samples collected during the investigation. Arsenic was the only metal detected with concentrations above the former residential preliminary remediation goal (PRG) (EPA, 2004). Based on these results, all of the soil samples collected during the Stage 2 – Phase II investigation were analyzed for arsenic. Concentrations of arsenic ranged from 5.3 to 229 mg/kg (RWG, 2003).

In October 2003, 66 additional soil samples were collected and analyzed for arsenic by EPA Method 6010B. Concentrations of arsenic ranged from non-detect (0.25 mg/kg) to 996 mg/kg.

Groundwater samples collected during the Stage 2 – Phase II investigation were analyzed for TPH-g and VOCs. TPH-g was not detected in any of the groundwater samples. Acetone was detected at a concentration of 58.1 µg/L in groundwater sample LE19-GW and was not detected in any other groundwater samples. Chloroform was detected in groundwater samples LE10-GW and LE25-GW at concentrations of 1.8 and 1.5 µg/L, respectively, and was not detected in any other groundwater samples. Acetone and chloroform are common laboratory contaminants. No other VOCs were detected in any of the groundwater samples collected during the Stage 2 – Phase II investigation (Lindmark, 2003). None of the groundwater samples were analyzed for metals.
2.1.3 2006 Remedial Investigation

The 2006 RI consisted of advancing 12 soil borings (SB1 to SB12) from the ground surface to approximately 50 feet bgs at various locations throughout the site in accordance with the RI Work Plan (CH2M, 2005). Soil samples were collected at depths ranging from 2.5 to 50 feet bgs (Figures 3a through 3d). Five background soil samples were also collected from five soil boring locations (BK-1 to BK-5) at depths ranging from 2 to 5.5 feet bgs to develop a background or ambient arsenic concentration (Figure 2). Groundwater samples were collected from four locations (SB1, SB5, SB8, and SB11).

Soil and groundwater samples collected from these borings were analyzed for the following (not all samples were analyzed for all analyses):

- Total metals using EPA Method 6010B
- Soluble threshold limit concentration (STLC)
- Bioavailability

The following 20 metals were detected in soil samples: aluminum, arsenic, barium, beryllium, cadmium, calcium, chromium, cobalt, copper, iron, lead, magnesium, manganese, molybdenum, nickel, potassium, selenium, thallium, vanadium, and zinc. Antimony, silver, and sodium were not detected. Arsenic was the only metal detected at concentrations above PRGs (EPA, 2004). Total arsenic was detected in the soil samples at concentrations ranging from 16 to 356 mg/kg. Arsenic was detected in background samples at concentrations ranging from 7.5 to 27.3 mg/kg.

The following 18 metals were detected in groundwater samples: aluminum, arsenic, barium, cadmium, calcium, chromium, cobalt, copper, iron, lead, magnesium, manganese, molybdenum, nickel, potassium, sodium, vanadium, and zinc. The maximum detected results were aluminum at 29.4 milligrams per liter (mg/L), arsenic at 0.035 mg/L, barium at 0.8 mg/L, cadmium at 0.03 mg/L, calcium at 282 mg/L, chromium at 0.39 mg/L, cobalt at 0.29 mg/L, copper at 0.74 mg/L, iron at 84.5 mg/L, lead at 0.011 mg/L, magnesium at 108 mg/L, manganese at 9.5 mg/L, molybdenum at 0.082 mg/L, nickel at 0.61 mg/L, potassium at 10.9 mg/L, sodium at 125 mg/L, vanadium at 0.15 mg/L, and zinc at 23.6 mg/L.

Arsenic solubility was assessed on 11 soil samples (Table 1) using the STLC test in accordance with the RI Work Plan (CH2M, 2005). These samples were collected from borings SB2, SB5, SB8, and SB11 at sample depths ranging from 2 to 5.5 feet bgs because the highest arsenic concentrations were observed in the upper 5 feet of soil. One sample (SB5 at 10 feet bgs) was collected at 10 feet bgs to test the solubility of arsenic in native material. Arsenic was not detected in the leachate from the STLC soil samples except for the sample at SB5 (collected at 2 feet bgs), which had arsenic concentration of 84.5 mg/kg and a corresponding STLC of 2.1 mg/L. STLC test results indicated that elevated arsenic concentrations in the shallow soils are not leaching to the deeper soils. This was proven through a groundwater investigation conducted from 2009 to 2010 (Section 2.1.5).

The bioavailability of arsenic was assessed in nine samples in accordance with the RI Work Plan (CH2M, 2005). Total arsenic in the samples ranged from 16 to 356 mg/kg. The bioavailability study indicated that as total arsenic concentration increased above 100 mg/kg, 30 to 40 percent of that total concentration was potentially bioavailable (CH2M, 2006). These data were evaluated in the Human Health Risk Assessment (HHRA) (CH2M, 2007b) (Section 2.4), which assessed risks from exposure to site soils and concluded that the bioavailability of arsenic in soil results in a lower overall risk estimate.

2.1.4 2007 Remedial Design Investigation

A remedial design investigation was conducted in 2007 at the site for remedial planning purposes; the investigation consisted of advancing 55 soil borings (A100 to A155) from the ground surface to approximately 10 feet bgs (CH2M, 2007a). Soil samples were collected at depths of 5, 7, and 10 feet bgs to delineate the vertical extent of arsenic at concentrations above background (ambient conditions). The results were incorporated into the database of arsenic concentrations in site soils. The distribution of arsenic in site soils is shown on Figures 3a through 3d.
2.1.5 2008 Groundwater Investigation

A groundwater investigation was conducted in 2008 at the site. Eight grab groundwater samples were collected from borehole locations BH-01 through BH-08 and analyzed for arsenic. Boreholes 1 through 4 were sampled to obtain arsenic concentrations from onsite locations near sources of highest arsenic soil concentrations either at depth or near the surface. Boreholes 5 through 8 were sampled to obtain arsenic concentrations offsite upgradient, downgradient, or crossgradient locations, depending on groundwater elevation results and groundwater flow direction.

For offsite borings, total arsenic concentrations ranged from non-detect (below reporting limits) in the samples collected from BH-07 to 22 µg/L at BH-08. For onsite borings, total arsenic concentrations in the collected samples ranged from 40 µg/L at BH-04 to 270 µg/L at BH-02.

2.1.6 2009 through 2010 Groundwater Investigation

To confirm the findings of the arsenic solubility testing and to confirm that groundwater beneath the site does not present a complete exposure pathway, a groundwater investigation was conducted from 2009 to 2010. Two wells were installed in 2009, and the wells were sampled in October 2009 and March 2010. DTSC collected split samples during the March 2010 sampling event. The maximum total arsenic was detected at a concentration of 1.2 µg/L and maximum dissolved arsenic was detected at a concentration of 1.6 µg/L. DTSC approved the abandonment of the wells in June 2010 and concluded that “based on the long time existence of arsenic in soils and the groundwater sampling results, DTSC does not believe that arsenic contamination in soils is a threat to groundwater quality” (DTSC, 2010).

2.2 Site Geology and Hydrogeology

The site is located within the Coastal Plain of Los Angeles County, in the northwestern portion of the Central Groundwater Basin. The Central Basin is bounded on the north and east by the Hollywood Basin and a series of low-lying hills, on the west by the Santa Monica Basin, and on the south by the Los Angeles-Orange County line (DWR, 1961).

Site geology and hydrogeology is based on soil boring logs from the RI (CH2M, 2007a), the Stage 2 – Phase II investigation (Lindmark, 2003), and the 2009 through 2010 groundwater investigation. A geological cross section for the site is shown on Figure 4. Borings from the center of the ROW were used to create the cross section.

Non-native fill material was identified throughout the site. The thickness of the fill material ranges from approximately 5 feet bgs at the northeastern portion of the site to 10 feet bgs at the southwestern portion of the site (Figure 4). The soil, including both fill and native material, was described as primarily silty or clayey sand, with a few isolated clay lenses. The soil beneath the site is consistent with deposits in the recent alluvium, which is known to be present throughout the Hollywood Basin (DWR, 1961).

Groundwater in sediments underlying the site is replenished by percolation of precipitation and by subsurface flow from alluvial channels originating in the Santa Monica Mountains to the north. The regional groundwater flow near the site is generally to the south-southeast because of the orientation of the alluvial channels and general slope of the watershed from the Santa Monica Mountains in the area (DWR, 1961). Groundwater was encountered at approximately 45 to 52 feet bgs during the Stage 2 – Phase II investigation (Lindmark, 2003). Seasonal fluctuations of the groundwater do occur. Depths to groundwater beneath the site ranged from approximately 50 to 60 feet bgs during the 2009 and 2010 groundwater investigation.

2.3 Nature and Extent of Arsenic in Soil

The following subsection presents the nature and extent of arsenic in soil based on previous investigations at the site. Almost 50 soil samples have been collected at the site between 0.5 and 50 feet bgs. Previous sampling focused on remedial investigation within the site boundaries with few samples collected offsite. Sampling offsite would have been challenging due to heavily used public roadways on all sides of the site. Results from previous investigations indicate that concentrations of arsenic in soil range
from 16 to 996 mg/kg, with the highest concentrations observed in soil (primarily within fill material) from 0 to 5 feet bgs along the center of the ROW (Table 2 and Figures 3a through 3d). With few exceptions, the highest concentrations of arsenic in soils are within the shallow soils along the centerline of the site and decrease in concentrations away from the centerline of the site. While some data gaps exist, the data is considered adequate for evaluating remedial action alternatives for the site. Additional soil samples (Appendix F) will be collected to better define remedial target areas prior to removal action activities.

Exposure point concentrations (EPCs) were calculated and evaluated for arsenic at the site. EPCs are estimated chemical concentrations that a receptor might contact in an exposure medium. The EPCs for soil at the site were calculated using a statistical estimate of an upper bound on the average exposure concentrations in accordance with EPA recommendations for statistical analysis of monitoring data (EPA, 2011a).

The EPC is based on the 95UCL of the mean concentration for an exposure area or medium. The UCL was calculated using the most recent statistical recommendations (EPA, 2011a) provided with ProUCL software, Version 4.1.00 (EPA, 2011b). Parametric and nonparametric methods were used to compute the 95UCLs. Parametric methods (where parametric indicates a reliance on a distributional assumption), including those based on the normal distribution, gamma distribution, and lognormal distribution, were recommended. The potential parametric approaches include setting proxy levels for non-detect results that are based on the distributional assumption. In addition, multiple nonparametric methods (that is, not reliant on a distributional assumption) have been proposed for environmental data sets; these methods include various Kaplan-Meier calculations that do not use specific proxy levels for each non-detect result. The most appropriate method for calculating the 95UCL for arsenic was based on sample size, goodness of fit to distributions, variability, and skewness.

The arsenic data set was divided into two unique sample areas by assigning each sample to one of the units (Operable Units 1 and 2). EPCs for arsenic were calculated for each of these sample areas. The EPC for arsenic in soil samples collected from Operable Unit 1 is 95.7 mg/kg and the EPC for arsenic in soil samples collected from Operable Unit 2 is 142.1 mg/kg. A summary of the statistical assessment of arsenic concentrations in soil samples from the site is presented in Table 3. The numerical results of the 95UCL statistical evaluation for arsenic are included in Appendix B.

The STLC analysis and the groundwater investigation have shown that the arsenic in soils is not leachable and has not impacted groundwater. Arsenic in soils is not migrating from the shallow soils and centerline of the site. Arsenic has not impacted groundwater at the site (Section 2.1.5) and migration to groundwater is considered an incomplete pathway.

The source of elevated concentrations of arsenic present in shallow soils along the centerline of the site is unknown. Human receptors may be exposed to arsenic in soil through ingestion of soil and dermal contact with the soil. Dust generation from the site was demonstrated to not be a concern (Geomatrix, 2004).

### 2.4 Conceptual Site Model

The site was a former railroad ROW and there were no known railroad operations. The source of arsenic at the site is also unknown and is likely associated with fill material at the site. Arsenic likely migrated into shallow soil, adhering to soil particles. Soil sample data does not indicate elevated levels of arsenic in soil below 5 feet bgs. Likewise, arsenic was not detected at elevated levels in groundwater samples collected at the site. Potential migration pathways and receptors are described in Section 2.5.

### 2.5 Risk Assessment

An HHRA was completed in May 2007 to evaluate potential future risks to human health from arsenic detected in soil within the site (CH2M, 2007b). Potential risks to human health and the environment (ecological receptors) were evaluated by considering the concentrations of arsenic detected in soil, current and potential future uses of the site, and the different ways that exposure to arsenic may occur (exposure scenarios). For a potential risk to be present, first a complete pathway, a potential receptor,
and an exposure route must be identified (exposure scenario). Second, arsenic in soil at the site must be present at concentrations that could pose a cancer risk or non-cancer health effect.

Under existing site conditions and considering the location, likely future use, and limited vegetation and habitat, no complete exposure pathways for ecological receptors were identified; potential ecological risks were not evaluated.

The HHRA consisted of the following components:
- Selection of chemicals of potential concern (COPCs)
- Exposure Assessment
- Toxicity Assessment
- Risk Characterization

2.5.1 Identification of Chemicals of Potential Concern

COPCs in soil were identified using data collected from 2003 through 2006. A total of 310 soil samples collected from 0 to 10 feet bgs at the site as part of the Stage 2 – Phase II investigation (Lindmark, 2003), arsenic reanalysis and arsenic investigation (RWG, 2003), and the RI (CH2M, 2006) were used in the HHRA.

Arsenic was identified as the only COPC for soil.

No COPCs for groundwater were identified.

2.5.2 Risk Assessment Summary

The HHRA concluded that excess lifetime cancer risks and hazard quotient estimates for exposure to arsenic in soil at the site are above the DTSC regulatory point of departure value of $1 \times 10^{-6}$ and 1, respectively, for all human health exposure scenarios evaluated. A removal action goal of 27.3 mg/kg for arsenic, based on background concentrations, was recommended as protective of human health for residential and commercial/industrial scenarios.

Subsequent risk assessment discussions with DTSC, and the DTSC independent risk analysis, established an arsenic background concentration of 25 mg/kg (DTSC, 2010).
3. Removal Action Goals and Objectives

Site characterization indicates the presence of arsenic in soils above background concentrations at the site. RAOS were developed based on the current environmental conditions and the potential future use of the site.

Based on the RAOS, removal goals were established that are protective of human health and the environment and consistent with the determined arsenic background concentrations in the area. The background concentration and therefore the removal goal were developed for the site from (1) information obtained during investigations of the site and the surrounding area, and (2) risk management decisions based on anticipated future use of the site. Information used to develop the removal goal includes laboratory analytical data, hydrogeologic data, soil leaching analysis, Site-specific risk evaluation, and statistical analysis of the dataset to establish the background concentration conducted in accordance with the DTSC guidance document Arsenic Strategies – Determination of Arsenic Remediation – Development of Arsenic Cleanup Goals for Proposed and Existing School Sites (DTSC, 2007).

In addition, a review of pertinent laws, regulations, and other criteria was performed to identify ARARs and other criteria to be considered (TBC) for remediating the site. A summary of the potentially applicable ARARs and TBCs is presented in Appendix C.

The following sections present narrative RAOS, ARARs, and other TBCs for cleaning up the site.

3.1 Removal Action Objectives

RAOs are narrative statements that are used to define media-specific cleanup levels for protecting human health and the environment. The RAO for the site is to reduce potential human exposure by occupational workers, construction workers, or hypothetical future residents via dermal contact, incidental ingestion, and inhalation of dust to arsenic-impacted soil above the background level (25 mg/kg). The DTSC (2010) established a site-specific background concentration of arsenic following the procedures presented in the DTSC Guidance Document, Arsenic Strategies: Determination of Arsenic Remediation – Determination of Arsenic Cleanup Goals for Proposed and Existing School Sites (DTSC, 2007), using the arsenic data collected from the site. Based on this evaluation, DTSC established an upper-bound arsenic concentration of 25 mg/kg, which it considered to be representative of background conditions at this particular site and recommended an arsenic cleanup goal of 25 mg/kg for those areas where future receptors may contact surface soils. DTSC also noted that higher concentrations of arsenic may be left onsite depending on site-specific considerations, such as road or other similar caps or covering that would limit exposure (DTSC, 2010). Copies of correspondence from DTSC are provided in Appendix D.

3.2 Applicable or Relevant and Appropriate Requirements

The development of remedial actions requires reviewing and applying ARARs so that compliance with applicable laws and regulations is achieved by the overall remedial action. Applicable requirements are those cleanup standards, criteria, or limitations promulgated under federal or state law that specifically address the situation at a site. If a requirement is not legally applicable, the requirement is evaluated to determine whether it is relevant and appropriate. Relevant and appropriate requirements are cleanup standards; standards of control; and other substantive environmental protection requirements, criteria, or limitations promulgated under federal or state law that, while not applicable, address problems or situations sufficiently similar to the circumstances of the proposed response action and are well suited to the conditions of the site.

A requirement may not meet the definition of an ARAR as previously described, but a requirement might still be useful in determining whether to take action at a site and to what degree action is necessary. This can be particularly true when there are no ARARs for a site, action, or contaminant. Such requirements are called “TBC” criteria.
TBC criteria are non-promulgated advisories or guidance issued by federal or state government that are not legally binding but may provide useful information or recommended procedures for remedial action. Although TBC criteria do not have the status of ARARs, they are considered along with ARARs to establish the required level of cleanup for protection of health or the environment. The critical difference between a TBC criterion and an ARAR is that the responsible party is not required to comply with or meet a TBC criterion when choosing a remedial action.

ARARs are a key consideration in the analysis of removal action alternatives because the alternatives must comply with ARARs to be further considered. Compliance with ARARs often has a significant effect on the cost and implementability of a particular alternative during both implementation and long-term operation. ARARs are generally classified as chemical-, location-, or action-specific, as described below:

- **Chemical-specific Requirements**: Chemical-specific ARARs include those laws and requirements that regulate the release to the environment of materials possessing certain chemical or physical characteristics or containing specified chemical compounds. These requirements generally set health- or risk-based concentration limits or discharge limitations for specific hazardous substances.

- **Location-specific Requirements**: Location-specific ARARs relate to the geographical or physical position of the site, rather than the nature of the contaminants or the proposed site remedial actions.

- **Action-specific Requirements**: Action-specific requirements are technology- or activity-based requirements or limitations on actions taken with respect to hazardous wastes or hazardous substances.

A summary of the potentially applicable ARARs and TBCs is presented in Appendix C.

### 3.3 Removal Action Goals

Removal action goals were selected based on the DTSC cleanup guidelines (DTSC, 2012) developed to assist developers and financial institutions determine accurate costs associated with potential development of the site, as follows:

- **Landscape Areas** (such as ground level planters and open space):
  - 0 to 2 feet bgs less than 25 mg/kg
  - 2 to 5 feet bgs less than 75 mg/kg
  - Greater than 5 feet bgs left in place

- **Hardscape Areas** (such as under buildings, parking lots, and sidewalks):
  - 0 to 3 feet bgs less than 75 mg/kg
  - Greater than 3 feet bgs left in place

While the cleanup guidelines were originally developed by DTSC to be implemented after a development plan for the site has been approved, they have been applied in this RAW to develop and evaluate removal action alternatives capable of achieving the RAO based on current and potential future land use scenarios.
4. Development and Analysis of Removal Action Alternatives

The purpose of this section of the RAW is to identify and screen possible removal action alternatives that may best achieve the RAO discussed in Section 3. Four potential removal action alternatives were identified, and each was evaluated against three evaluation criteria (effectiveness, implementability, and cost) to support selection of a preferred removal action alternative (Sections 4.2 and 4.3).

4.1 Identification and Analysis of Removal Action Alternatives

The response actions for addressing arsenic in soils at the site include no action, asphalt capping in place with institutional controls (ICs), excavation and offsite disposal, and soil covering with limited excavation, offsite disposal, and ICs. Screening of these response actions using three evaluation criteria (effectiveness, implementability, and cost) was conducted to assemble removal action alternatives for further evaluation. Based on this screening, the following four removal action alternatives were assembled:

- Alternative 1—No Action
- Alternative 2—Consolidation and Asphalt Capping in Place with ICs
- Alternative 3—Excavation with Offsite Disposal
- Alternative 4—Soil Cover with Limited Excavation, Offsite Disposal, and ICs
- Alternative 5—Excavation with Offsite Disposal during Development

4.1.1 Alternative 1—No Action

As required by DTSC, the Alternative 1 was included to provide baseline conditions against which other alternatives can be compared. Alternative 1 would not require implementing any remedial actions at the site and no costs would be incurred. This action includes no ICs, no capping or removal of soil, and no monitoring. Under this alternative, no provisions would be made to maintain the existing soil and no measures would be instituted to restrict future activities.

4.1.2 Alternative 2—Consolidation and Asphalt Capping in Place with Institutional Controls

Alternative 2 would consist of capping the ground surface where arsenic concentrations are greater than 25 mg/kg. The proposed areas to be capped include areas where arsenic concentrations in soil samples exceed 25 mg/kg at the ground surface (Figures 3a through 3d).

The cap would consist of 4 inches of subbase and a 2-inch thick asphalt cap. Weed block fabric and a pre-emergent herbicide would be applied to the ground surface prior to the placement of the subbase and asphalt. The asphalt cap would restrict the potential for people to come into contact with the arsenic-impacted soil. Limited excavations (approximately 400 cubic yards [yd³]) would be conducted to remove soils with arsenic concentrations greater than 25 mg/kg from surface soils at the perimeters of the site. The excavated soil would be moved and placed within the center line of the ROW (20 feet wide) to be capped. In this alternative, approximately 51,000 square feet (1.17 acres) would be capped. The capped areas would be graded to drain into the City of Beverly Hills stormwater drainage system.

ICs in the form of a land use restriction would be executed between the landowners and DTSC to ensure that the cap is maintained and that future use of the property is consistent with the purpose and maintenance of the cap. The ICs would restrict future use of the property for sensitive uses, such as daycare centers, hospitals or care facilities, and single-family residences. An maintenance plan would be submitted for approval by DTSC. The maintenance plan would require routine inspections and reporting on the condition of the cap and repairs to the cap (such as periodic sealing and crack repair) so that the remedy remains protective. An maintenance agreement would be submitted by the owners, with DTSC specifying the maintenance requirements. The landowners would provide financial assurances for future maintenance of the cap. A soil management plan providing guidance on how to manage soils in the event of future disturbance or excavation of the caps would be submitted by the landowners for approval by
DTSC. The soil management plan would specify how arsenic-impacted soils would be identified, characterized, handled, and disposed, and how the protection of the capped areas would be restored. An additional IC would include posting signage at the site notifying potential excavators of the presence of arsenic-impacted soil and providing guidance for soil disturbance and management requirements.

4.1.3 Alternative 3—Excavation with Offsite Disposal

Alternative 3 consists of excavating arsenic-contaminated soils consistent with the DTSC cleanup guidelines.

Assuming the land use remains open space, the DTSC cleanup guidelines for landscape areas were applied to identify areas where soils would be excavated to a depth up to 2 feet bgs (the depth of excavation may be shallower than 2 feet bgs based on pre-construction sampling as described in Section 5.1) where concentrations of arsenic are greater than 25 mg/kg, and to a depth of 5 feet bgs where concentrations are greater than 75 mg/kg. Excavation would not be conducted at depths below 5 feet bgs. Based on the distribution of arsenic sample results (Figures 3a through 3d), approximately 14,700 yd³ of soil would be excavated and disposed of offsite.

Excavation and offsite disposal of soil would consist of removing and transporting the soil to an appropriate, permitted offsite facility for disposal. Excavation, stockpiling, loading, and onsite grading would be conducted with excavators, front-end loaders, graders, and other appropriate equipment. Excavation and grading operations would generate dust. Therefore, suppressants, water, or other forms of dust control may be required during construction, and workers may be required to use personal protective equipment (PPE) to reduce exposure to arsenic in dust during construction.

Confirmation samples would be collected from the sidewalls and bottom of the excavations during the removal action to verify that soils meet the removal goals for the various depths and areas.

Excavation areas would then be backfilled with clean, imported soil and the site would be restored by hydroseeding.

4.1.4 Alternative 4—Soil Cover with Limited Excavation, Offsite Disposal, and Institutional Controls

Alternative 4 consists of excavating arsenic-impacted soils at limited locations, and establishment of a soil cover across the site. Like Alternative 3, assuming the land use remains open space, the DTSC cleanup guidelines for landscape areas were applied to identify areas where soils would be excavated to a depth up to 2 feet bgs where concentrations of arsenic are greater than 25 mg/kg. Excavation would not be conducted at depths below 2 feet bgs. Based on the distribution of arsenic sample results (Figures 3a through 3d), approximately 4,400 yd³ of soil would be excavated and disposed of offsite.

Excavation and offsite disposal of soil would consist of removing and transporting the soil to an appropriate, permitted offsite facility for disposal. Excavation, stockpiling, loading, and onsite grading would be conducted with excavators, front-end loaders, graders, and other appropriate equipment. Excavation and grading operations would generate dust. Therefore, suppressants, water, and other forms of dust control may be required during construction, and workers may be required to use PPE to reduce exposure to arsenic in dust during construction.

Confirmation samples would be collected from the sidewalls of the excavations during the removal action to verify that soils meet the removal goals for the shallow areas.

The soil cover will then be established by emplacing clean, imported soil within the excavation areas and the site would be restored by hydroseeding to reduce surface runoff and erosion. Following excavation and soil cover placement, the unimpacted soil from 0 to at least 2 feet bgs, which may include a combination of native and imported soil applied to the removal areas, would establish the 2-foot soil cover across the site consistent with the current grade.
ICs in the form of a land use restriction would be executed between the landowners and DTSC to ensure that the areas where arsenic-impacted soil at concentrations above the DTSC-provided removal levels (depth- and location-dependent) are maintained, and that future use of the property is consistent with the purpose and maintenance of those areas. The ICs would restrict future use of the property for sensitive uses, such as daycare centers, hospitals or care facilities, and single-family residences. The landowners would provide financial assurances for future maintenance. A soil management plan would be submitted providing guidance on how to manage soils in the event of future disturbance of soil beneath 2 feet bgs for approval by DTSC. The soil management plan would specify how arsenic-impacted soils would be identified, characterized, handled, and disposed, and how the disturbed areas would be restored.

4.1.5 Alternative 5 — Excavation with Offsite Disposal during Development

Based on recent conversations with BHLC, BHLC is pursing development of the site. Alternative 5 has been developed to accommodate potential development activities. Alternative 5 consists of excavating arsenic-impacted soils, similar to Alternative 4, but would leave excavated areas within the proposed development footprint open (for example, no imported soil placement) to allow construction to proceed. The soil cover will be placed within areas excavated as part of Alternative 5 but outside of the proposed development footprint. This approach is contingent on the property owner obtaining the appropriate permits and approvals to allow construction to proceed by the start of mobilization activities for this remedial alternative. If the construction schedule does not align with the removal action schedule, then this alternative would be implemented like Alternative 4.

Like Alternatives 3 and 4, the DTSC cleanup guidelines for landscape areas were applied to identify areas where soils would be excavated to a depth up to 2 feet bgs where concentrations of arsenic are greater than 25 mg/kg. Based on the distribution of arsenic sample results (Figures 3a through 3d), approximately 4,400 yd³ of soil would be excavated and disposed of offsite prior to development-related excavation.

Confirmation samples would be collected from the sidewalls of the excavations during the removal action to verify that soils meet the removal goals for the shallow areas.

The clean, imported soil cover will be placed within areas excavated as part of Alternative 5 but outside of the proposed development footprint. The soil cover would be hydroseeded to reduce surface runoff and erosion. Following excavation and soil cover placement in these areas, the unimpacted soil from 0 to at least 2 feet bgs, which may include a combination of native and imported soil applied to the removal areas, would establish the 2-foot soil cover consistent with the current grade.

Excavation and offsite disposal of soil would consist of removing and transporting the soil to an appropriate, permitted offsite facility for disposal. Excavation, stockpiling, loading, and onsite grading (where necessary) would be conducted with excavators, front-end loaders, graders, and other appropriate equipment. Excavation and grading operations would generate dust. Therefore, suppressants, water, and other forms of dust control may be required during construction, and workers may be required to use PPE to reduce exposure to arsenic in dust during construction.

If necessary, ICs in the form of a land use restriction would be executed between the landowners and DTSC to ensure that the areas where arsenic-impacted soil at concentrations above the DTSC-provided removal levels (depth- and location-dependent) are maintained, and that future use of the property is consistent with the purpose and maintenance of those areas. The ICs would restrict future use of the property for sensitive uses, such as daycare centers, hospitals or care facilities, and single-family residences. The landowners would provide financial assurances for future maintenance. A soil management plan would be submitted providing guidance on how to manage soils in the event of future disturbance of soil beneath 2 feet bgs for approval by DTSC. The soil management plan would specify how arsenic-impacted soils would be identified, characterized, handled, and disposed, and how the disturbed areas would be restored.
4.2 Evaluation Criteria

Each removal action alternative was independently evaluated against three criteria—effectiveness, technical implementability, and relative cost—without consideration of the other alternatives. The relative performance of each of the alternatives was then compared to support the selection of a preferred removal alternative. The evaluation criteria are as follows:

- **Effectiveness**—Effectiveness considers the ability of each alternative to protect human health and the environment. 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 RAO.
  - Compliance with ARARs/TBCs—This criterion evaluates the ability of the removal alternative to comply with ARARs and TBCs.
  - Short-term Effectiveness—This criterion evaluates the effects of the removal alternative during the construction and implementation phase until removal objectives are met. It accounts for the protection of workers and the community during removal activities and also evaluates environmental impacts resulting from implementing the removal action.
  - Long-term Effectiveness and Permanence—This criterion addresses issues related to the management of residual risk remaining onsite after a removal action has been performed and has met its objectives. 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 removal technology to be employed will result in significant reduction in toxicity, mobility, or volume of the hazardous substances.

- **Implementability**—Implementability considers the technical and administrative feasibility of implementing the alternative, as well as the availability of necessary equipment and services. This includes the ability to design and perform the removal alternative; the ability to obtain the necessary equipment and services; the ability to monitor the performance and effectiveness of the removal alternative; and the ability to obtain necessary permits and approvals from agencies, the State, and the community.

- **Cost**—This criterion considers the relative cost of each technology based on estimated fixed capital costs for initial construction plus the ongoing maintenance costs. The actual costs are dependent on true labor and material costs, competitive market conditions, project scope, and the implementation schedule.

4.3 Analysis of Removal Action Alternatives

The three criteria as applied to each alternative are discussed in the following subsections.

4.3.1 Alternative 1—No Action

4.3.1.1 Effectiveness

Alternative 1 would not require implementing any measures at the site and would still include a land use control (LUC). No activities would disturb site soil, and therefore, no short-term risks to site workers or the community would occur as a result of implementing Alternative 1. However, under Alternative 1, arsenic would remain in the soil at concentrations that would not support future reuse of the site and there would be no reduction in potential risks. This alternative does not meet the effectiveness criterion. As a result, acceptance by the State would be unobtainable.
4.3.2 Alternative 2—Consolidation and Asphalt Capping in Place with Institutional Controls

4.3.2.1 Effectiveness

Alternative 2 has the potential to address potential risks to human health from arsenic in soil and to comply with ARARs. Alternative 2 would require minimal disturbance of the arsenic-impacted soils. There would be little exposure to arsenic in soils in the short term, and risks would be low. With capping, arsenic would remain onsite and would require long-term inspection and maintenance to meet ARARs and to maintain adequate long-term protection of human health and the environment.

Periodic inspections would be required to check for settlement, cracking, ponding of water, erosion, and naturally occurring invasion of deep-rooted plants. Precautions would need to be taken so that the integrity of the cap is not compromised by land use activities. ICs, as discussed in Section 4.1.2, would need to be put in place so that the cap is not compromised and to manage soils and restore the cap in the event that the cap and the underlying soil are disturbed.

Capping in place would not lessen the toxicity or the volume of arsenic-impacted soils; however, it would reduce potential exposure of impacted soil and limit infiltration of surface water. As noted, the STLC test results indicated that arsenic concentrations in the shallow soils are not leaching to the deeper soils.

4.3.2.2 Implementability

Capping in place is a relatively simple technology that is easily implemented and can be quickly installed. Because arsenic in soils would be left in place, obtaining permits, regulatory approvals, and community acceptance may be difficult.

4.3.2.3 Cost

Containment technologies typically involve low to moderate costs. Industry costs for the placement of an asphalt cap, not including mobilization, permitting, and site preparation activities, are approximately $3.00 per square foot.

4.3.3 Alternative 3—Excavation with Offsite Disposal

4.3.3.1 Effectiveness

Alternative 3 has the potential to address potential risks to human health from arsenic in soil and to comply with ARARs. Potential short-term risks to onsite workers, public health, and the environment could result from dust or particulates generated during excavation and soil-handling activities, such as stockpiling, loading, or grading. These risks can be mitigated by using PPE for onsite workers and engineering controls, such as dust suppressants and additional traffic and equipment operating standards, for the protection of the surrounding community and to meet the ARARs. Excavation and removal would remove arsenic-impacted soils from the site so that long-term risks are reduced while achieving the RAO.

Removing arsenic-impacted soils from the site does not reduce the toxicity or volume of the arsenic. By placing the impacted soil in an engineered landfill suitable for receiving arsenic-impacted soil, the mobility of arsenic can be reduced. Some grading of surface or shallow soils would likely be required within the footprint of future building and parking areas of Operable Unit 1 during construction, leaving some arsenic-impacted soil under the buildings or parking areas. While this leaves arsenic-impacted soil onsite, it is under an impervious structure, thereby reducing the potential for any exposure pathway. ICs, as described in Section 4.1.3, would be put in place by the property owners so that future disturbance is minimized and managed properly in the event that the soils need to be dug up or exposed.
4.3.3.2 Implementability

Excavation, offsite disposal, grading, and compaction are well-proven, readily implementable technologies that are common methods for cleaning up contaminated sites. The process is relatively simple with proven results. The equipment and labor required to implement this alternative are uncomplicated and readily available. The shallow depths of excavation or re-grading at the site for the removal of arsenic-impacted soils make excavation implementable. It is anticipated that regulatory approval would be granted because this is a proven and permanent technology. However, this alternative would involve considerable disruption to traffic in the area, and may not be accepted by the community.

4.3.3.3 Cost

The estimated cost to load, transport, and dispose of the impacted soils is approximately $110 per ton, not including engineering, permitting, and other preconstruction site preparation activities. This estimate includes loading, transportation, and disposal at an approved offsite disposal facility. The grading of surface or shallow soils would take place as part of the building or parking area construction.

The cost analysis bases the disposal costs on non-hazardous disposal. The investigation-derived wastes resulting from soil cutting from drilling operations onsite have been profiled and characterized as non-hazardous wastes. The excavated and stockpiled soils would be sampled and profiled to determine the proper characterization for disposal.

4.3.4 Alternative 4— Soil Cover with Limited Excavation, Offsite Disposal, and Institutional Controls

4.3.4.1 Effectiveness

Alternative 4 has the potential to address potential risks to human health from arsenic in soil and to comply with ARARs. The technical effectiveness of excavation for addressing soils containing arsenic receives a high rating. It is an effective technology for addressing soils containing arsenic and its limits can be adapted to accommodate unexpected contamination. A soil cover involves installing a surface cover over the remaining arsenic-impacted soil to limit direct contact between receptors and impacted soil, and to reduce precipitation from infiltrating the subsurface. Cover systems provide a stable surface over the impacted soil. Cover construction is typically performed with standard construction equipment and requires little specialized knowledge. With a soil cover at the site, arsenic-impacted soil remains in place and future land use restriction will not be minimized, thus, the technical effectiveness of a soil cover received a medium rating.

4.3.4.2 Implementability

Implementability of excavation is moderately high. The excavation in alternative 4 is shallow and standard earthwork equipment and construction methods would be used. Potential implementation issues associated with excavation include the need for engineering controls (for example, dust suppression) to protect workers and the public during remediation activities. Because the soil cover will consist of unimpacted soil, including soil cover for removal areas, implementability of a soil cover receives an easy rating.

4.3.4.3 Cost

Capital costs for excavation and offsite disposal are moderate and less than Alternative 3, because less soil would be excavated.
4.3.5 Alternative 5— Excavation with Offsite Disposal during Development

4.3.5.1 Effectiveness

Alternative 5 has the potential to address potential risks to human health from arsenic in soil and to comply with ARARs. The technical effectiveness of excavation for addressing soils containing arsenic receives a high rating. It is an effective technology for addressing soils containing arsenic and its limits can be adapted to accommodate unexpected contamination. A soil cover, if necessary, involves installing a surface soil cover over the remaining arsenic-impacted soil to limit direct contact between receptors and impacted soil, and to reduce precipitation from infiltrating the subsurface. Cover systems provide a stable surface over the impacted soil. Cover construction is typically performed with standard construction equipment and requires little specialized knowledge. With a soil cover at the site, arsenic-impacted soil remains in place and future land use restriction will not be minimized, thus, the technical effectiveness of a soil cover received a medium rating.

4.3.5.2 Implementability

Implementability of excavation is moderately high. The excavation in alternative 5 is shallow and standard earthwork equipment and construction methods would be used. Potential implementation issues associated with excavation include the need for engineering controls (for example, dust suppression) to protect workers and the public during remediation activities. Because the soil cover, if necessary, will consist of unimpacted soil, including soil cover for removal areas, implementability of a soil cover receives an easy rating.

4.3.5.3 Cost

Capital costs for excavation and offsite disposal are moderate and less than Alternative 3 and 4, because less soil would be excavated and less soil cover would be required.

4.4 Comparative Analysis of Removal Action Alternatives

A comparative analysis was conducted to identify the advantages and disadvantages of each removal alternative. The comparative analysis of the removal alternatives was conducted to address the criteria listed in Section 4.2.

4.4.1 Effectiveness

Under Alternative 1, the impacts associated with arsenic would not be addressed. Consequently, there would be no reduction in the potential risks and the RAO would not be achieved. Alternatives 1 and 2 do not involve activities that would significantly disturb the impacted soil. Therefore, there would be no short-term risks to onsite workers or the community as a result of implementing these alternatives. Alternatives 3, 4, and 5 would require removing, handling, and transporting the impacted soil, resulting in higher short-term exposure risks. However, it is expected that these risks can be sufficiently mitigated through site control measures.

Alternatives 2, 3, 4, and 5 reduce or eliminate with various degrees of effectiveness potential exposure to arsenic, and therefore accomplish the RAO. Once implemented, Alternative 2 would require long-term monitoring to ensure its effectiveness. In addition, future changes in land use could disturb the soil. Because concentrations of arsenic would be left onsite, ICs would be required. Alternatives 3, 4, and 5 would remove arsenic from the site to specified depths. Because concentrations of arsenic would be left onsite, ICs would be required. Based upon this evaluation, Alternative 3 (excavation with offsite disposal and institutional controls) is favored under this criterion because it removes the largest quantity of arsenic-impacted soils.
4.4.2 Implementability

No measures would be implemented for Alternative 1. Alternatives 2, 3, 4, and 5 are both well-proven, readily implementable technologies. However, it is more than likely that Alternative 2 would not be accepted by the State because it does not remove arsenic-impacted soils above the RAO. Alternative 4 would require removal of less removal of arsenic-impacted soil and less disruption to the community. Alternative 5 would require less soil cover and less disruption of the community. Accordingly, Alternative 5 (excavation with offsite disposal during development) is favored by this criterion.

4.4.3 Cost

A summary of estimated costs to implement the proposed alternatives is presented in Table 4. The cost estimates are feasibility study-level costs and are developed to an accuracy range of -30 percent to +50 percent. The sources of these cost estimates include vendors, estimates for similar projects, standard costing guidance documents, and professional judgment. Cost details are presented in Appendix E. Alternative 3 (excavation with offsite disposal) is the highest cost alternative and Alternative 5 (excavation with offsite disposal during development) is the least costly alternative.

4.5 Recommended Removal Action Alternative

Based on the evaluation of alternatives presented in Sections 4.3 and 4.4, the preferred and recommended removal action alternative for the site is Alternative 5 (excavation with offsite disposal during development). Alternative 1 (no action) does not address the potential risks posed by arsenic in the shallow soil, and arsenic would remain in soil at concentrations that would not support future reuse of the site. Alternative 2 (capping in place with ICs), while providing some reduction in the potential mobility and potential risks from arsenic, does not remove the arsenic-impacted soil and limits future reuse of the site without further remediation. Alternative 3 (excavation with offsite disposal) removes arsenic-impacted soil based the DTSC guidelines and allows for reuse of the site, while reducing potential arsenic mobility and providing protection from exposure to remaining arsenic in soil at the site. Alternative 4 (soil cover with excavation, offsite disposal, and ICs) provides similar level of protectiveness as Alternative 3, but is significantly less disruptive to the community. Alternative 5 (excavation with offsite disposal during development) provides the similar level of protectiveness as Alternative 3 and 4, but is significantly less disruptive to the community and consistent with potential development of the site.
5. Implementation Plan

Implementation of Alternative 5 (excavation with offsite disposal during development), the preferred removal action for the site, consists of a series of tasks. The following subsections discuss the following tasks and their associated activities:

- Selecting excavation locations
- Permitting, notifications, utility clearance, and site preparation
- Excavation methodology and confirmation sampling
- ICs
- Control measures
- Dust monitoring during excavation
- Decontamination
- Field variances
- Reporting

BHLC has indicated the intent to conduct construction activities within the site. Preparation for implementing the removal action will be conducted in coordination with BHLC to attempt to conduct removal action activities in concert with construction activities conducted by BHLC. If applicable, construction activities may be conducted immediately after removal action excavation and confirmation sampling, which would negate the need to place the soil cover within the removal areas.

5.1 Selecting Excavation Locations

To better define removal areas, additional soil sampling will be conducted prior to initiation of excavation activities (Appendix F).

Excavation will be conducted up to 2 feet bgs where arsenic concentrations exceed 25 mg/kg within the site boundaries (Figures 5a through 5d). Based on the distribution of data, the approximate volume of soil to be excavated is 4,400 yd³. However, removal areas and depths will be modified based on the results of preconstruction investigation sampling conducted prior to initiation of excavation activities. Removal areas will be defined by soil samples with arsenic concentrations above 25 mg/kg. Removal areas will be centered on sample locations where arsenic concentrations exceed 25 mg/kg and extend half way to the nearest sample location where arsenic concentrations are less than 25 mg/kg. Based on the proposed 25-foot sampling grid, excavation grids are anticipated to be at least 25 by 25 feet in dimension. Arsenic concentrations in soil samples collected at 2 feet bgs are considered representative of soils below 2 feet bgs and are not used to identify removal areas. Excavation will not be conducted outside the site boundaries and deeper than 2 feet bgs within the site boundaries. The proposed excavation dimensions were established for cost estimating purposes and as an initial attempt to efficiently conduct excavation and confirmation sampling operations to achieve the remedial action objectives. Ultimately, the extent of the removal areas will be based on the results of confirmation sample results.

5.2 Permitting, Notifications, Utility Clearance, and Site Preparation

The following activities will be completed prior to beginning the removal action:

- Grading permits will be obtained from the City of Beverly Hills. The current estimate is that approximately 4,400 yd³ of arsenic-impacted soil will be removed from the site. The removal action will be conducted under this grading permit.
- Underground Service Alert will be contacted for utility clearance at least 3 working days before beginning fieldwork. In addition, a private subsurface utility service will complete a supplemental search for underground utilities within the site. A work zone will be established at each removal area. A temporary fence, where necessary, will be erected at the site at the time of remedy implementation. The fence will remain in place during the removal actions. Each work zone, all within the existing fence line, will be identified using yellow caution tape. The work zones will include the removal area in addition to a working perimeter of a minimum of 15 feet for personnel and equipment. The work zone...
may be modified as appropriate during planning and construction. Access to the work zone will be restricted to personnel required to conduct and oversee the removal action.

- Other site preparation activities include clearing and grubbing of shrubs, grasses/weeds and debris from the removal areas to be performed, setting up and providing dust monitoring and control for the removal action, and preparing a contractor staging area for equipment and decontamination areas. Select trees within the site may be removed to facilitate the proposed removal action.

It is likely that limited lane closure and traffic control will need to be implemented as part of the removal action.

5.3 Excavation Methodology and Confirmation Sampling

Excavation will be implemented as follows:

- Excavation will be performed in accordance with the guidelines presented in California Occupational Safety and Health Administration, California Code of Regulations (CCR), Title 8, Division 1, Chapter 4, Subchapter 4, Article 6 – Excavations (Sections 1539 through 1541) and South Coast Air Quality Management District (AQMD) Regulation IV – Prohibitions, including Rule 401 – Visible Emissions, Rule 402 – Nuisance, and Rule 403 – Fugitive Dust.

- Excavations for the removal action will be conducted up to 2 feet bgs with a backhoe or excavator. The excavated soils will be stockpiled in accordance with the remediation waste staging requirements in HSC, Division 20, Chapter 6.5, Article 2, Section 25123.3[b][4][B], as follows:
  - Stockpiles will be constructed within the work zone or adjacent to the work zone and on a level surface. Stockpiles will be constructed to minimize the footprint of the stockpile area. The stockpile will remain covered with a minimum of 6-millimeter (mm) plastic, except when soil is being placed or removed. The soil stockpiles will be constructed with berms (or straw wattle) and plastic liners (20-mil-thick minimum on the bottom in paved areas, 60-mil base in unpaved areas). Stockpiles will be sized so that overlapped seams are not required in the lining.
  - The stockpile covers will be weighed down with sand bags, used tires, or other means so that the stockpiles remain covered during periods of high winds. Site controls, including the existing site fencing, around the piles will be maintained in good condition at all times, including during non-working hours, until the stockpiles are removed from the work zone.
  - Erosion control measures will be employed to minimize the contribution of stockpiled soil to surface runoff and wind-generated particulate matter.
  - The arsenic-impacted stockpile soil will not remain onsite for longer than 90 days.
  - The stockpiled soils will not contain free liquids.
  - The stockpiles will be inspected weekly and after storms to verify that the controls for windblown dispersion and precipitation runoff and runon are functioning properly.

- The stockpiles will be composite sampled for arsenic and other analytes as required by the disposal facilities, for profiling for disposal. Four subsamples composited into one sample will be collected for every 500 yd³ of stockpiled material. For the first 500 yd³ of excavated soils, two composite samples will be taken for every 100 yd³. After 500 yd³ has been sampled, one composite sample per every 500 yd³ will be taken for waste disposal classification. The profiling analytical data will be reviewed to determine the appropriate soil classification (non-hazardous, non-Resource Conservation and Recovery Act [RCRA] hazardous or RCRA hazardous) and to select the appropriate disposal facility. DTSC will be notified and will approve the proposed determination and disposal facility.

- Upon selection of the appropriate disposal facility, the stockpiles will be loaded into trucks for transport to the disposal facility. Loading will be conducted with a front-end loader. Dust control during loading will be implemented by limiting the drop height from the loader and with water spray. Trucks will be tarped and dry brushed prior to leaving the site.
After the final stockpile is removed from the site, the stockpile area and any materials or equipment associated with the stockpile area will be inspected for contamination and remediated as necessary within 30 days after the last stockpile is removed.

The stockpile area will be certified by a registered engineer for compliance with the previously listed measures.

Confirmation sampling and analysis to determine residual concentrations remaining at the site and whether the removal goals have been met (Section 6.1).

In the event that cultural resources are found during the course of remediation activities, work will be suspended while a qualified archaeologist makes an assessment of the area and arrangements are made to protect or preserve any resources that are located.

In the event of the accidental discovery or recognition of any human remains during ground disturbance activities, excavation or disturbance of the site or any nearby area shall stop immediately and the County Coroner notified to determine its origin. Procedures prescribed under CEQA Guidelines, CCR Section 15064.5(e), and Health and Safety Code Section 7050.5 will be implemented to ensure compliance with the appropriate California laws and regulations in protecting cultural resources.

5.4 Soil Cover Demarcation

As presented in Section 5.1, excavation of arsenic-impacted soil will be conducted up to 2 feet bgs. A demarcation layer will be installed within areas where arsenic-impacted soil was excavated up to 2 feet bgs and where arsenic-impacted soil remains in place at depths greater than 2 feet bgs to provide a physical indicator for the protection of potential construction workers performing excavation in these areas. In these areas, the demarcation layer will be placed directly on the soil surface before soil cover placement. Demarcation material consisting of polyvinyl chloride caution and warning tape will be placed in a 10-foot spaced grid pattern.

Following completion of the removal action, a collection of maps will be prepared showing the location of soil samples, excavation areas, and demarcation areas to be incorporated into the maintenance plan.

5.5 Institutional Controls

ICs are used to stop or reduce the exposure of human receptors. ICs are non-engineering mechanisms used so that the intended future land use is consistent with cleanup and engineering controls (for example, caps and soil covers). ICs where contamination remains in place include LUCs and soil management plan. LUCs are used when DTSC has determined that it is safe to leave specific types of contamination at a property as long as defined restrictions are adhered to. LUCs allow ongoing use of the property as long as a site maintains the ICs and that the future use complies with the LUC. The LUC for the site will restrict future use of the property to prevent sensitive uses, such as daycare centers, hospitals or care facilities, and single-family residences. DTSC and the property owner(s) enter a LUC that allows ongoing use of the property where arsenic-impacted soil remains. The LUC will document, including graphical illustration, where arsenic-impacted soil remains, at what depths, and at what concentrations. Common LUC provisions include stating that a remedial system should not be disturbed, limiting soil disturbance, or disallowing sensitive uses. Restrictions identified in LUCs apply to affected areas only and are not more restrictive than is needed to protect human health and the environment.

The ICs will also include a soil management plan that specify the requirements for proper soil management should future site activities disturb arsenic-impacted soil and for the routine inspection, maintenance, and reporting on the containment and landscaped areas. Additionally, signs will be posted at the site notifying potential excavators of the presence of arsenic-impacted soil and providing guidance for soil disturbance and management requirements.
5.6 Control Measures

During the removal of the arsenic-impacted soil, control measures will include site security, site access control, noise control, cultural resources protection, and dust source and receptor control.

5.6.1 Site Security

A chain-link fence surrounds the entire site. If and where fencing is not present at the time of the removal action, a temporary fence will be erected. The fences will serve to separate the work zones from the surrounding community, provide protection for the equipment, allow site control for a safe working environment, and prevent unauthorized entry into the work zone.

5.6.2 Site Access

During work activities, site access will be limited to authorized personnel. A sign-in log will be maintained at each work zone to document the entry and exit of all personnel.

For Lots 12 and 13, equipment and truck access and egress during the removal action will be from Civic Center Drive and not from the busier Santa Monica Boulevard, Beverly Boulevard, or Doheny Drive.

For the Triangle Section, a lane closure will likely be required on Santa Monica Boulevard (city ROW) for staging of equipment and trucks to complete the removal action.

5.6.3 Noise

Field activities during the proposed remedial action are not expected to exceed City of Beverly Hills noise ordinance guidelines. Removal action activities will take place only between the City-permitted construction hours of 8:00 AM and 6:00 PM Monday through Friday, excluding public holidays.

5.6.4 Cultural Resources Protection

Because the upper 5 to 10 feet of soil at the site and surrounding area consist of fill materials, as described in Section 2.2, there is little potential for cultural or archaeological resources to be encountered. Nonetheless, in the event resources of historical, archaeological or cultural significance or human remains are located, work will cease as required by 14 CCR, Section 15064.5. In the unlikely event that deposits of paleontological materials or Native American artifacts are encountered during ground-disturbing activities, work will be redirected to avoid further impact to the discovery. Project personnel will not collect or move any possible paleontological materials or Native American artifacts. A Native American monitor will be present during excavation activities. A qualified archaeologist or paleontologist will be contacted to evaluate paleontological materials if discovered during the excavation and to make recommendations for the treatment of potential discoveries in consultation with DTSC and other agencies, as appropriate.

5.6.5 Dust Sources and Receptors

The primary dust sources within the work zone will be exposed soil during excavation, stockpiling, and truck-loading activities. Potential dust receptors include construction workers, the nearby community, offsite pedestrians, and vehicle traffic around the site. Dust control will be implemented to prevent offsite migration of dust during excavation activities. A construction barrier will be considered to mitigate noise and dust after consulting with public participation to evaluate the level of community concern.
5.6.5.1 Dust Monitoring

Dust monitoring strategies and methodologies will follow the South Coast AQMD Rule 1466. This includes monitoring and abating dusts generated by wind or by the remediation equipment at the site. The methods will be implemented and stated in detail in a dust control and monitoring plan. These dust control strategies will be implemented during the removal action to achieve the following goals:

- Identify and measure dust generated during the removal actions, along with decontamination procedures to assign the appropriate level of PPE
- Identify and measure dust at points along the site perimeter; conduct dust monitoring to measure potential exposure to the surrounding community as a result of the removal actions
- Provide real-time information to the dust control monitor so that the appropriate dust control measure can be implemented

The dust monitoring plan will provide specific details and state the requirements called out for in Rule 1466. This will include, but not be limited to, visible dust limitation, particulate matter less than 10 micrometers in aerodynamic diameter levels, track out limitations, etc. Action levels will be stated and contingent actions listed.

The dust control and monitoring plan will be submitted to DTSC for review and approval.

5.6.5.2 Dust Suppression Measures

Dust suppression measures to be implemented include having a water truck or fire hydrant with sufficient hose available at all times during soil excavation, stockpiling, handling, and loading activities. A specified worker will provide dust suppression (for example, water) to generating sources as necessary; however, the amount of water will be limited to avoid generating surface water runoff. If the dust cannot be suppressed using the identified measures, then work will cease until additional measures can be implemented or until meteorological conditions are favorable.

5.7 Decontamination

5.7.1 Equipment Decontamination

Heavy equipment used to perform the excavation will be dry-broom cleaned to remove the bulk of soil or debris that remains on the equipment after it exits the work zone. In most cases, this will be sufficient to allow egress from the site. If dry-broom cleaning is not successful in cleaning the equipment, a pressure washer or steam cleaner will be used to clean the equipment. Personnel operating the pressure washer or steam cleaner will wear appropriate PPE, as required by a site-specific HSP. The equipment will be placed in a temporary decontamination cell that will allow collection of the wash water and debris removed from the equipment. The temporary decontamination cell will be constructed using plastic film on the ground and berms under the edges of the plastic to contain the water. The temporary decontamination cell material, debris, and wastewater will be appropriately disposed. If necessary, temporary decontamination cells will be constructed on Lots 12 and 13 and the Triangle Section so that public streets do not need to be crossed to complete the equipment decontamination. South Coast AQMD Rule 1466 will be followed on limiting track out contamination from site vehicles.

5.7.2 Personnel Decontamination

This work will be performed in Level D PPE, which consists of coveralls, safety-toe work boots, safety glasses, hard hats, traffic vests, and ear protection, as required for worker protection. Personnel will use disposable PPE to minimize decontamination when exiting the exclusion zone. Used disposable PPE will be doffed and placed in garbage bags in the hazard reduction zone. The garbage bags containing the used PPE will be placed in the contaminated soil stockpile areas and will be disposed with the waste soil.
5.8 Field Variances

Variance from the work plan will be discussed with DTSC prior to action being taken except for emergencies (when an immediate response is required). DTSC will be notified if an emergency response is implemented. The field variance will be documented in the Removal Action Completion Report prepared for the project.

5.9 Implementation Schedule

It is anticipated that the selected remedial alternative will be implemented approximately 7 months following submittal of this RAW. This provides time to obtain the permits, obtain competitive bids, and complete excavation. The schedule could be modified to sequence work in coordination with potential construction/development of Lot 12. The remediation is anticipated to last approximately 2 months. A summary of the schedule is presented in Table 5.

5.10 Removal Action Completion Report

A removal action completion report summarizing excavation activities will be submitted to DTSC for review and comment approximately 8 weeks following completion of the excavation activities and receipt of the weigh tickets from the disposal facility. The report will include a brief summary of the excavation activities, a summary table of the pre-construction investigation and confirmation sampling analytical results, a figure showing the pre-construction investigation and confirmation sampling locations and the removal areas, waste profiling analytical data, disposal documentation (waste manifests) for the excavated soil, a discussion of field variance from this RAW completed during the removal action, and a request for no further action status for the site.
6. **Sampling and Analysis Plan**

The proposed removal action will require the collection and analysis of samples to confirm the removal of arsenic-impacted soil. Sampling will be conducted in general accordance with the applicable field procedures, quality assurance/quality control protocols, and quality assurance project plan that will be prepared. The following subsections describe confirmation sampling and waste disposal classification sampling.

6.1 **Confirmation Sampling of Excavated Areas**

During the removal action, confirmation samples will be collected from the sidewalls of the excavations to verify that removal goals, which are dependent on depth, are met and that the RAO is achieved. Sidewall samples will be collected one per every 10 feet of sidewall and at approximately 1 foot bgs (half the distance to the bottom of the excavation). Bottom samples are not anticipated, because excavation is not planned below 2 feet bgs. Confirmation samples will be collected by placing soil into a laboratory-provided container (glass, brass, or stainless steel) directly from the sidewalls of the excavation.

Confirmation samples will be forwarded to a state-certified laboratory for analysis for arsenic by EPA Method 6010B on a rush turnaround basis.

Confirmation soil sampling results will be compared with removal goals to confirm that the RAO has been met and to document the remaining arsenic concentrations at the site. If a confirmation sample result exceeds the removal goals for arsenic of 25 mg/kg, over-excavation of arsenic-impacted soil will be conducted to the extent feasible.

6.2 **Waste Disposal Classification Sampling**

Soils management, profiling, and waste classification details are presented in Section 5.3. The profiling soil samples will be forwarded to a state-certified laboratory for analysis for arsenic by EPA Method 6010B and additional analyses as may be required by a specific disposal facility for profiling purposes. Analysis will be on a rush turnaround basis.
7. Transportation Plan

The proposed removal action will require use of existing heavily-traveled roadways. A site-specific transportation plan will be prepared in accordance with state and local regulations. The following subsections present a summary of a preliminary transportation plan.

7.1 Characteristics and Destination of Soil to be Transported Offsite

Elevated levels of arsenic have been detected in site soils. Total arsenic has been detected at concentrations up to 996 mg/kg and STLC up to 2.1 mg/L. The TTLC for hazardous waste classification for arsenic is 500 mg/kg. The STLC for hazardous waste classification is 5 mg/L for soluble arsenic. The toxicity characteristic leaching procedure limit for classifying arsenic-impacted soil as a hazardous waste under RCRA is 5 mg/L. The excavation soils will be stockpiled onsite and will be composite sampled for waste profiling. A State-certified analytical laboratory will analyze the samples for arsenic and other profiling analyses as may be required by the disposal facilities. Depending on the results from the stockpiles, the site soils may be disposed of as non-hazardous waste, non-RCRA hazardous waste, or RCRA hazardous waste.

If the profiling analysis shows the arsenic-impacted soil to be a RCRA or non-RCRA hazardous waste, UPRR will obtain an EPA Identification Number from DTSC for the proper management of the soils. Compliance with the DTSC requirements for hazardous waste generation, temporary onsite storage, transportation, and disposal will be required. Within 90 days after its generation, the hazardous waste will be transported offsite for disposal. Any shipment of hazardous waste will be transported by a registered hazardous waste hauler under a Uniform Hazardous Waste Manifest. Land ban requirements will be followed as necessary. Any shipment of non-hazardous waste will be transported under a bill of lading.

Waste is anticipated to be disposed of as follows:

- RCRA hazardous waste: Waste Management, Kettleman Hills Landfill, 35251 Old Skyline Highway, Kettleman City, California 93239.
- Non-RCRA hazardous waste: Copper Mountain Landfill, 3485 E. County 12th Street, Welton, Arizona 85356.
- Non-hazardous waste: Waste Management, Asuza Landfill, 1121 West Gladstone Street, Azusa, California 91702.

Alternate appropriate disposal facilities may be considered at the time of site work depending on capacity and availability.

7.2 Truck Transportation

Assuming that 6,600 tons of soil are removed, and assuming that each truck carries approximately 20 tons per load, an estimated 330 truckloads of soil will leave the site. Depending on hazard classification, destination, available trucks, loading rate, and the scheduling of the removal actions, it is estimated that approximately 10 trucks per day will leave the site during an approximate 6-week period. Open-top trailers will be covered before leaving the site.

All permitted disposal facilities operate a certified weight station at their facility. Each truck will be weighed before and after offloading its payload. Weigh tickets or bills of lading will be provided to the removal action subcontractor after all the soil has been shipped offsite. The anticipated truck routes to the previously listed disposal facilities follows.

Trucks leaving the site with soils for disposal at Kettleman Hills will travel as follows:

- Exit the site onto Civic Center Drive and head southwest
- Turn right onto Burton Way and then right again onto North Canon Drive
- From North Canon Drive, take the first left onto Santa Monica Boulevard
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- Proceed southwest on Santa Monica Boulevard approximately 4 miles to Cotner Avenue
- Turn right onto Cotner Avenue and merge onto Interstate (I) 405 North/Santa Monica Freeway
- Continue on I-405 North for approximately 84 miles and then merge onto I-5 North
- Continue on I-5 North for approximately 175 miles
- Exit onto CA-41 South (Exit 309 on I-5 North)
- Follow signs to CA-41 South and then turn left on CA-41 South in approximately 3 miles
- Turn right onto Old State Highway and then left into the Kettleman Hills Facility

Trucks leaving the site with soils for disposal at Copper Mountain will travel as follows:
- Exit the site onto Civic Center Drive and head northeast
- Turn right onto Beverly Boulevard, then turn right onto Civic Center Drive
- Make a slight right turn onto Santa Monica Boulevard heading east
- Turn right onto US-101 South/Hollywood Freeway
- Continue for approximately 13 miles and then merge on I-5 South
- Continue on I-5 South for approximately 115 miles
- Merge onto I-805 South
- Take Exit 17B on I-805 South and merge onto I-8 East toward El Centro
- Take Exit 3 for Avenue 3E toward Arizona 280 South
- Turn right onto South Avenue 3E and continue to East 32nd Street
- Turn left onto East 32nd Street for 1 mile
- Turn right onto South Avenue 4E for 1 mile
- Turn left onto East 40th Street/East County 12th Street
- Turn left into Copper Mountain Facility

Trucks leaving the site with soils for disposal at Azusa will travel as follows:
- Exit the site onto Civic Center Drive and head northeast
- Turn right onto Beverly Boulevard, then turn right onto Civic Center Drive
- Make a slight right turn onto Santa Monica Boulevard heading east
- Turn right onto US-101 South/Hollywood Freeway
- Continue for approximately 5 miles and then merge on I-10 East
- Continue on I-10 East for approximately 12 miles
- Take Exit 31B to I-605 North and continue for approximately 5 miles
- Take Exit 27A onto I-210 East/foothill freeway toward San Bernardino
- Take Exit 38 for Irwindale Avenue
- Turn right onto North Irwindale Avenue and continue for 1 mile
- Turn left onto West Gladstone Street
- Turn left into Asuza Landfill

Truck traffic through the City of Beverly Hills will be limited to between 7:30 AM and 4:00 PM.

Before leaving the site, each truck driver will be instructed to notify the site manager. Each truck driver will be provided with a Uniform Hazardous Waste Manifest or bill of lading and the cellular phone number for the site manager. It will be the responsibility of the site manager to notify UPRR of any unforeseen incidents. UPRR will also notify DTSC. Each truck driver will be instructed to use the freeway Call Box System (if available), a cellular telephone, and/or their radio dispatch system to call for roadside assistance and to report roadside emergencies.

7.3 Site Traffic Control

During soil transport activities, trucks will enter Operable Unit 1 from Civic Center Boulevard. During loading operations, trucks will be staged adjacent to Operable Unit 2 in a lane closed to traffic on Beverly Boulevard. A flag person will be located at each site to assist the truck drivers to safely enter and exit the site. Drivers of onsite trucks will be in communication with the site trucking coordinator. In addition, all
vehicles driving onsite will be required to maintain slow speeds (that is, less than 5 miles per hour) for safety and for dust control purposes.

Prior to exiting the site, vehicles will be swept to remove any extra soil from areas not covered or protected. A 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 site manager will be responsible for inspecting each truck to check that the payloads are adequately covered, that the trucks are cleaned of excess soil and properly placarded, and that the truck manifests have 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 to safely merge with traffic on Civic Center Boulevard.

7.4 Record Keeping

The removal action contractor performing loading, transportation, and disposal of soil will be responsible for maintaining a field logbook, which will serve to document observations, personnel onsite, equipment arrival and departure times, and other important project information. Logbook entries will be complete and accurate enough to permit reconstruction of field activities. Logbooks will be bound 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.

If the soil is profiled as hazardous waste under California regulations, the Uniform Hazardous Waste Manifest form will be used to track the movement of soil from the point of generation to the point of ultimate disposition. The hazardous waste manifests will include the following information:

- Name and address of the generator, transporter, and the destination facility
- U.S. Department of Transportation description of the waste being transported and any associated hazards
- Waste quantity
- Name and phone number of a contact in case of an emergency
- EPA Hazardous Waste Generator Number
- Other information required by EPA and/or DTSC

Any soil that is profiled as non-hazardous and sent offsite for disposal will be documented using a bill of lading form. At a minimum, this form will include the following information:

- Generator name and address
- Transportation company
- Accepting facility name and address
- Waste shipping name and description

Prior to transporting the excavated soil offsite, an authorized representative of UPRR will sign each Uniform Hazardous Waste Manifest or bill of lading. The removal action site manager will maintain one copy of all Uniform Hazardous Waste Manifests or bills of lading onsite.
8. **Site Restoration Plan**

Clean imported soil from offsite sources will be placed within removal areas to establish the soil cover. The offsite sources will be identified during preparation for the proposed removal action. Before delivery of the imported fill to the work zone, fill source material samples will be collected and will be analyzed by a California-certified laboratory in accordance with DTSC Clean Fill Guidelines (DTSC, 2001). One soil sample will be collected for every 250 yd³ of imported soil used up to 1,000 yd³ and then one soil sample per each additional 500 yd³ of imported soil used. Depending on the source of fill material, the samples may be analyzed for the following:

- Heavy metals (EPA Method 6010B)
- Organochlorine pesticides (EPA Method 8081B/8080A)
- Polynuclear aromatic hydrocarbons (EPA Method 8310 or 8270)
- VOCs (EPA Method 8021/8260B)
- SVOC by EPA Method 8270C
- PCBs (EPA Method 8082/8080A)
- TPH (EPA Method 8015 Modified)
- Asbestos (Occupational Safety and Health Administration [OSHA] Method ID-191)

Samples will be reported in dry weight. Geotechnical analysis will also be performed to generate compaction curves for in-place compaction testing that will be conducted during soil cover placement operations.

Geotechnical analysis of imported fill material, including laboratory compaction tests, will be performed to generate moisture-density curves. Assuming the imported soil appears to be uniform in composition, one four-point composite sample will be collected for geotechnical analysis to generate a three-point moisture-density curve using modified Proctor methods (ASTM-D1557). If imported soil does not appear to be homogeneous, additional soil samples for geotechnical analysis will be considered. The moisture-density curves will be used to determine the optimum moisture content for in-place field density compaction testing conducted during soil cover placement operations. In-place field density compaction testing will be performed using a nuclear density gauge operated by trained personnel.

If construction/development activities within the site are conducted by BHLC soon after removal action excavation, the soil cover will not be emplaced within removal areas to allow for continued excavation and construction in accordance with the potential development plan of the site. In the event that construction permits are not obtained for development purposes prior to initiation of removal action activities conducted in accordance with this RAW, a 2-foot soil cover will be established to minimize the duration for open removal areas.

Imported soil will be placed within removal areas to establish the soil cover to meet existing surrounding grades and the boundaries of the removal areas will be established using a professional survey. Boundary monuments will be installed to establish the location of emplaced imported soil, where necessary.

Following potential soil cover placement activities, the ground surface will be seeded and maintained to reduce surface runoff and erosion. An maintenance plan will be prepared that describes the approach to conduct inspection and repairs to reduce damage to the soil cover from burrowing animals.

The maintenance plan will document how the soil cover will be maintained (such as: inspections, repairs to drainage controls, and maintenance of the two-foot-thick soil cover and vegetation) following completion of the removal action. This maintenance plan will be reviewed and approved by DTSC to ensure that the soil cover remains protective of human health and the environment.
9. Health and Safety Plan

Contractors involved in the removal action will be responsible for operating in accordance with the most current requirements of State and Federal Standards for Hazardous Waste Operations and Emergency Response (CCR, Title 8, Section 5192; 29 Code of Federal Regulations [CFR] 1910.120). Onsite personnel are responsible for operating in accordance with all applicable regulations of OSHA outlined in the State General Industry and Construction Safety Orders (CCR, Title 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.

In addition, the California OSHA Construction Safety Orders (especially CCR, Title 8, Sections 1539 and 1541) will be followed as appropriate. Specific requirements are identified as follows:

- Utility locating will be conducted prior to initiating the removal action.
- No workers involved in the removal action will enter an excavation greater than 5 feet in depth.

A site-specific HSP will be prepared for the site in accordance with current health and safety standards as specified by the federal and California OSHAs and submitted to DTSC prior to initiation of field work.

The provisions of the HSP are mandatory for all personnel involved in the removal action. The contractor and its subcontractors conducting the removal action in association with this RAW will either adopt and abide by the HSP or shall develop their own safety plans that, at a minimum, meet the requirements of the HSP. All onsite personnel shall read the HSP and sign the “Plan Acceptance Form” before starting site activities.
10. Public Participation

The public participation requirements for the RAW process include (1) developing a community profile; (2) publishing in the Beverly Hills Courier a Public Notice of the availability of the RAW for a 30-day public review and comment period, which also describes that the site complies with the CEQA requirements; (3) making the RAW and other supporting documents available at the DTSC Chatsworth office and in the Beverly Hills Library; and (4) responding to public comments received on the RAW and CEQA documents. In accordance with a Community Profile prepared for this site, the following additional activities will be conducted:

- A fact sheet will be sent out to the site mailing list describing the site and the proposed removal action (date to be determined).
- The public review and comment period will be 30 days.
- A public meeting or workshop will be held if there is sufficient community interest (date to be determined).
- Site documents will be available in electronic format on the DTSC publicly accessible EnviroStor database.

Once the public comment period is completed, DTSC will review and respond to the comments received. The RAW will be revised, as necessary, to address the comments received. If significant changes to the RAW are required, the RAW will be revised and will be resubmitted for public review and comment. If significant changes are not required to the RAW, the RAW will be modified and DTSC will approve the modified RAW for implementation.
11. California Environmental Quality Act Documentation

CEQA, modeled after the National Environmental Policy Act 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 developed to ensure comprehensive environmental review of cumulative impacts prior to project approval. CEQA has no agency enforcement tool; however, challenges are allowed in courts.

A CEQA project has a potential for resulting in a direct physical change in the environment or 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, unless an exemption applies.

As part of the DTSC CEQA process, DTSC conducted two Biological Rarefind surveys for the Beverly Hills and Hollywood areas. DTSC concluded that these surveys do not identify any species that may exist within the site’s area of potential effect. DTSC also determined that this project is considered exempt since it will not have a significant negative impact on the human health and the environment because it will prevent, minimize, stabilize, mitigate, or eliminate the release or threat of release of a hazardous waste or substance. The excavation will also not require the onsite use of a hazardous waste incinerator or thermal treatment unit, and will not require the relocation of residences or businesses. In accordance with CEQA, an Initial Study/Negative Declaration (IS/ND) has been prepared and reviewed by DTSC. This IS/ND evaluated the proposed removal action and states that the proposed removal action will not have a significant effect on human health and the environment.
12. References


CH2M HILL, Inc. (CH2M). 2006. *Remedial Investigation, Beverly Hills Land Corporation Site, 9315 Civic Center Drive, Beverly Hills, CA.*


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* Sample was sieved to yield particles less than 500 micromolar for the bioavailability test

* Converted dry wt data to wet wt data assuming a moisture content of 15 percent

Notes:
- mg/kg = milligram(s) per kilogram
- mg/L = milligram(s) per liter
- NA = not analyzed
- Qual = qualifier
- STLC = soluble threshold limit concentration
- U = not detected
- wt = weight
Table 2. Summary of Analytical Soil Data for Arsenic
Removal Action Work Plan, Union Pacific Railroad Beverly Hills Site,
9315 Civic Center Drive, Beverly Hills, California

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9315 Civic Center Drive, Beverly Hills, California

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Removal Action Work Plan, Union Pacific Railroad Beverly Hills Site,
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<td>UNK</td>
<td>0.5 - 1</td>
<td>N</td>
<td>15.6</td>
</tr>
<tr>
<td>SS10</td>
<td>UNK</td>
<td>0.5 - 1</td>
<td>N</td>
<td>25.5</td>
</tr>
<tr>
<td>SS11</td>
<td>UNK</td>
<td>0.5 - 1</td>
<td>N</td>
<td>24.2</td>
</tr>
<tr>
<td>SS12</td>
<td>UNK</td>
<td>0.5 - 1</td>
<td>N</td>
<td>46.3</td>
</tr>
<tr>
<td>SS13</td>
<td>UNK</td>
<td>0.5 - 1</td>
<td>N</td>
<td>26.8</td>
</tr>
<tr>
<td>SS14</td>
<td>UNK</td>
<td>0.5 - 1</td>
<td>N</td>
<td>82</td>
</tr>
</tbody>
</table>

Notes:
FD = field duplicate
J = estimated result
mg/kg = milligram(s) per kilogram
N = normal sample
UNK = unknown
Table 3. Statistical Assessment of Soil Arsenic Concentrations

Removal Action Work Plan, Union Pacific Railroad Beverly Hills Site, 9315 Civic Center Drive, Beverly Hills, California

<table>
<thead>
<tr>
<th>Sample Area</th>
<th>Sample Size</th>
<th>Average Concentration (mg/kg)</th>
<th>Minimum Concentration (mg/kg)</th>
<th>Maximum Concentration (mg/kg)</th>
<th>95UCL (mg/kg)</th>
<th>EPC (mg/kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operable Unit 1 – Lots 12 and 13</td>
<td>245</td>
<td>70</td>
<td>0.55</td>
<td>966</td>
<td>95.7</td>
<td>95.7</td>
</tr>
<tr>
<td>Operable Unit 2 – Triangle Section</td>
<td>26</td>
<td>74</td>
<td>4.33</td>
<td>266</td>
<td>142.1</td>
<td>142.1</td>
</tr>
</tbody>
</table>

Notes:
Value based on 95 percent Chebyshev Upper Confidence Limit (EPA, 2011b)
95UCL = 95 percent upper confidence limit
EPC = exposure point concentration
mg/kg = milligram(s) per kilogram
Table 4. Alternative Cost Estimate
Removal Action Work Plan, Union Pacific Railroad Beverly Hills Site, 9315 Civic Center Drive, Beverly Hills, California

<table>
<thead>
<tr>
<th>Alternative</th>
<th>Present Worth Cost ($)</th>
<th>Comment Summary</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. No action</td>
<td>$0</td>
<td>No cost would be associated with implementing Alternative 1 because no action would be taken.</td>
</tr>
<tr>
<td>2. Capping in place, and Institutional Controls</td>
<td>$1,991,000 (assumes 15 years of maintenance)</td>
<td>Easily implemented. Effective in reducing exposure to shallow arsenic-impacted soils. Existing perimeter fencing reduces damage to the cap and potential exposure to underlying soils. Requires institutional controls, Operation and Maintenance Plan, and a Soil Management Plan approved by DTSC. Requires annual inspection, reporting, and routine maintenance.</td>
</tr>
<tr>
<td>3. Excavation and offsite disposal/onsite containment</td>
<td>$5,501,000</td>
<td>Highest cost alternative. Provides greatest long-term effectiveness but has greater short-term impacts and risk. Soils disposed offsite reduce mobility by placement in an engineered landfill. Site restoration may include soil cover establishment and hydroseeding.</td>
</tr>
<tr>
<td>4. Soil Cover with Limited Excavation, Offsite Disposal, and Institutional Controls</td>
<td>$1,949,000</td>
<td>Provides long-term and short-term effectiveness. Soils disposed offsite reduce mobility by placement in an engineered landfill. A 2-foot soil cover will reduce potential exposure of remaining arsenic-impacted soil to human receptors. Site restoration may include soil cover establishment and hydroseeding. Institutional controls will be prepared by property owner and approved by DTSC.</td>
</tr>
<tr>
<td>5. Excavation with Offsite Disposal during Development</td>
<td>$1,508,000</td>
<td>Least cost alternative. Provides long-term and short-term effectiveness. Soil excavated during development of the site and disposed offsite reduce mobility by placement in an engineered landfill. A 2-foot soil cover will reduce potential exposure of remaining arsenic-impacted soil to human receptors, if required. Site restoration may include soil cover establishment and hydroseeding. Institutional controls may be prepared by property owner and approved by DTSC.</td>
</tr>
</tbody>
</table>

*Costs presented are 2019 costs.

Notes:
DTSC = California Environmental Protection Agency, Department of Toxic Substances Control
**Table 5. Estimated Construction Schedule**

*Removal Action Work Plan, Union Pacific Railroad Beverly Hills Site, 9315 Civic Center Drive, Beverly Hills, California*

<table>
<thead>
<tr>
<th>Activity</th>
<th>Tentative Schedule</th>
</tr>
</thead>
<tbody>
<tr>
<td>Submittal of Final RAW</td>
<td>February 2021</td>
</tr>
<tr>
<td>Pre-construction investigation</td>
<td>May - June 2021 (2 months)</td>
</tr>
<tr>
<td>Remedial design</td>
<td>July - August 2021 (2 months)</td>
</tr>
<tr>
<td>Contractor procurement</td>
<td>September - October 2021 (2 months)</td>
</tr>
<tr>
<td>Permit procurement and preconstruction preparation</td>
<td>November - December 2021 (2 months)</td>
</tr>
<tr>
<td>Removal action implementation</td>
<td>January - March 2022 (3 months)</td>
</tr>
</tbody>
</table>

Note:
Some tasks may be initiated prior to completing the proceeding task
Figures
FIGURE 1
Site Location
Removal Action Work Plan
Union Pacific Railroad Beverly Hills Site,
9315 Civic Center Drive,
Beverly Hills, California

- Triangle Section
- Lot 12
- Lot 13

Service Layer Credits: Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community
FIGURE 2
Background Sample Locations
Removal Action Work Plan
Union Pacific Railroad Beverly Hills Site, 9315 Civic Center Drive, Beverly Hills, California

LEGEND
- Background Sample Locations
- Cross Section
- Site

Image Credits:
Hexagon Valtus Aerial Imagery, Date Collected: 02/15/2018, Source: MapMart
Soil Sample Location

Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

Notes:
- Location ID
- Sample Depth
- Soil Concentration (mg/kg)
- Soil Concentration (Field Duplicate) (mg/kg)

mg/kg = milligrams per kilogram

Figure 3 a
Arsenic Concentration in Soil
Removal Action Work Plan
Union Pacific Railroad Beverly Hills Site, 3915 Civic Center Drive, Beverly Hills, California

Jacobs
Approx. Elevation (feet above mean sea level)

Series borings completed by Landmark Engineering on 06/03/03 and 06/04/03
Series borings completed by CH2M HILL between 08/01/05 and 08/07/05

Weathered bedrock

Arsenic levels in mg/kg

SM = Silty Sand
SC = Clayey Sand
SP = Poorly Graded Sand
SW = Well Graded Sand
GM = Silty Gravel
CG = Clayey Gravel
WB = Weathered Bedrock
GP = Poorly Graded Gravel
ML = Silt
CL = Lean Clay

Approximate depth to groundwater (06/03/03, 06/04/03, and 08/01/05-08/03/05)

Inferred perched groundwater surface 08/2005

Figure 4
Geological Cross-Section with Arsenic Data
Removal Action Work Plan
Union Pacific Railroad Beverly Hills Site, 8315 Civic Center Drive, Beverly Hills, California
Figure 5a  
Arsenic Concentration in Soil
Removal Action Work Plan
Union Pacific Railroad Beverly Hills Site,  
9315 Civic Center Drive,  
Beverly Hills, California

1 inch = 61 feet

Notes:
mg/kg = milligrams per kilogram
bgs = below ground surface

Location ID  
Sample Depth  
Soil Concentration (mg/kg)  
Soil Concentration [Field Duplicate] (mg/kg)

LEGEND  
Soil Sample Location  
Excavation 0-2 feet bgs  
County Parcels  
Site  
County Parcels
Appendix A
Administrative Record
Appendix A. Administrative Record

Removal Action Work Plan, Union Pacific Railroad Beverly Hills Site, 9315 Civic Center Drive, Beverly Hills, California

A.1 Administrative Record List

The following is a non-exclusive list of records, documents, and other communications relied upon in the development of the Removal Action Work Plan for the Beverly Hills Lots 12 and 13 Site. The list is divided into the following sections: (1) Statutes, regulations, and guidance documents; (2) reports; and (3) correspondence, including letters, electronic mails, and phone notes. The documents are listed in chronological order within each section.

A.1.1 Statutes, Regulations, and Guidance

DOCDATE: September 1986
DOCTYPE: Statute
AUTHOR/AFF: U.S. Congress

DOCDATE: October 1988
DOCTYPE: Guidance
TITLE/SUMM: Guidance for Conducting Remedial Investigations and Feasibility Studies Under CERCLA
AUTHOR/AFF: U.S. Environmental Protection Agency (U.S. EPA)

DOCDATE: December 1989
DOCTYPE: Guidance

DOCDATE: June 1992
DOCTYPE: Statute
TITLE/SUMM: Porter-Cologne Water Quality Control Act
AUTHOR/AFF: California State Water Resources Control Board
DOCDATE: 1996
DOCTYPE: Guidance
AUTHOR/AFF: U.S. EPA, Office of Solid Waste and Emergency Response

DOCDATE: October 2001
DOCTYPE: Guidance
TITLE/SUMM: DTSC Public Participation Manual
AUTHOR/AFF: DTSC
DOCDATE: August 2002
DOCTYPE: Guidance
TITLE/SUMM: South Coast Air Quality Management District (SCAQMD) CEQA Handbook, Mitigation Measures Controlling Dust From Construction and Demolition
AUTHOR/AFF: SCAQMD

DOCDATE: 13 December 2004
DOCTYPE: Agreement
TITLE/SUMM: Voluntary Cleanup Agreement, Docket No. HSA-A 04/05-066, In the Matter of 9315 Civic Center Drive
Appendix A – Administrative Record

Center Drive, Beverly Hills, CA. February.
AUTHOR/AFF: DTSC

DOCDATE: 28 August 2008
DOCTYPE: Guidance Memorandum
TITLE/SUMM: Proven Technologies and Remedies Guidance, Remediation of Metals in Soil, Appendix C-3.
AUTHOR/AFF: California Department of Toxic Substances Control (DTSC)

DOCDATE: February 2009
DOCTYPE: Guidance
AUTHOR/AFF: U.S. EPA

DOCDATE: 2010
DOCTYPE: Regulation
TITLE/SUMM: California Code of Regulations, Title 8, Division 1, Chapter 4, Subchapter 4 – Construction Safety Orders, and Subchapter 7 – General Industry Safety Orders
AUTHOR/AFF: California Department of Industrial Relations, Division of Occupational Safety and Health

DOCDATE: 2010
DOCTYPE: Regulation
TITLE/SUMM: California Code of Regulations, Title 22, Division 4.5
AUTHOR/AFF: State of California

DOCDATE: 2010
DOCTYPE: Statutes
TITLE/SUMM: California Health and Safety Code, Division 20, Chapters 6.5 and 6.8
AUTHOR/AFF: State of California

DOCDATE: 2010
DOCTYPE: REGULATION
TITLE/SUMM: 40 Code of Federal Regulations (CFR) Part 300, National Oil and Hazardous Substances Pollution Contingency Plan
AUTHOR/AFF: U.S. Government

DOCDATE: 2010
DOCTYPE: Regulation
TITLE/SUMM: 40 CFR Chapter 1 Part 6 Appendix A
AUTHOR/AFF: U.S. Government

DOCDATE: 2010
DOCTYPE: Regulation
TITLE/SUMM: 40 CFR Subchapter I (Parts 260 - 282)
AUTHOR/AFF: U.S. Government

DOCDATE: January 2010
DOCTYPE: Statutes and Guidelines
TITLE/SUMM: California Environmental Quality Act Statutes and Guidelines
AUTHOR/AFF: California Resources Agency

DOCDATE: 2010
DOCTYPE: Regulation
TITLE/SUMM: California Code of Regulations, Title 23, Division 3, Chapter 15
AUTHOR/AFF: State of California
A.1.2 Correspondence

DOCDATE: 9 July 2010
DOCTYPE: Letter
TITLE/SUMM: Approval of Groundwater Monitoring Well Sampling Summary and Well Abandonment Letter for Beverly Hills Lots 12 and 13 in Beverly Hills, California
AUTHOR/AFF: DTSC

DOCDATE: 23 December 2010
DOCTYPE: Memorandum
TITLE/SUMM: HERO Evaluation of Site Arsenic Data, Beverly Hills, California
AUTHOR/AFF: DTSC

DOCDATE: 21 May 2012
DOCTYPE: Letter
TITLE/SUMM: Arsenic Cleanup Levels Regarding Beverly Hills Lots 12 and 13 Site Located in Beverly Hills, California
AUTHOR/AFF: DTSC

DOCDATE: August 2012
DOCTYPE: Letter
TITLE/SUMM: Comments on the DRAFT Removal Action Work Plan, Beverly Hills Land Corporation Site, Beverly Hills, California, dated August 2012
AUTHOR/AFF: California Environmental Protection Agency, Department of Toxic Substances Control (DTSC)

A.1.3 Reports

DOCDATE: 1961
DOCTYPE: Report
AUTHOR/AFF: State of California

DOCDATE: 23 July 2004
DOCTYPE: Report
AUTHOR/AFF: Geomatrix

DOCDATE: 30 June 1998
DOCTYPE: Report
TITLE/SUMM: Proposed Phase I and II Environmental Investigation, Railroad Right-of-Way between North Doheny and Alpine Drives, Beverly Hills, CA 90210.
AUTHOR/AFF: Lindmark Engineering
DOCDATE: 12 November 1998
DOCTYPE: Report
TITLE/SUMM: Phase I and II Environmental Investigation, Railroad Right-of-Way between North Doheny and Alpine Drives, Beverly Hills, CA 90210.
AUTHOR/AFF: Lindmark Engineering

DOCDATE: 30 June 2003
DOCTYPE: Report
AUTHOR/AFF: Lindmark Engineering

DOCDATE: March 2005
DOCTYPE: Report
TITLE/SUMM: Remedial Investigation Work Plan, Beverly Hills Land Corporation Site (Lots 12 and 13).
AUTHOR/AFF: CH2M HILL

DOCDATE: 2006
DOCTYPE: Report
TITLE/SUMM: Remedial Investigation, Beverly Hills Land Corporation Site, 9315 Civic Center Drive, Beverly Hills, CA.
AUTHOR/AFF: CH2M HILL

DOCDATE: March 2007
DOCTYPE: Report
TITLE/SUMM: Remedial Investigation Work Plan, Beverly Hills Land Corporation Site (Lots 12 and 13).
AUTHOR/AFF: CH2M HILL
Appendix B

95UCL Statistical Evaluation
### General UCL Statistics for Data Sets with Non-Detects

**User Selected Options**
- From File: Worksheet.wst
- Full Precision: OFF
- Confidence Coefficient: 95%
- Number of Bootstrap Operations: 10000

#### Lots 12/13

<table>
<thead>
<tr>
<th>Statistic</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>UCL</td>
<td>39.8</td>
</tr>
<tr>
<td>DL/2 UCL</td>
<td>79.7</td>
</tr>
<tr>
<td>MLE UCL</td>
<td>78.1</td>
</tr>
<tr>
<td>BCA UCL</td>
<td>82.2</td>
</tr>
</tbody>
</table>

### Other Statistics
- **Lot12/13**
- **General Statistics**
- **Number of Valid Data**: 245
- **Number of Detected Data**: 243
- **Number of Distinct Detected Data**: 203
- **Number of Non-Detect Data**: 2
- **Percent Non-Detects**: 0.82%

#### Raw Statistics
- **Minimum Detected**: 0.55
- **Maximum Detected**: 996
- **Mean of Detected**: 70.47
- **SD of Detected**: 93.03

#### Data not Normal at 5% Significance Level
- **Assuming Normal Distribution**
- **Assuming Lognormal Distribution**
- **Log ROS Method**
- **Log-Biased Method**
- **Gamma Distribution Test with Detected Values Only**
- **Data Distribution Test with Detected Values Only**
- **A-D Test Statistic**: 6.444

#### Kaplan-Meier (KM) Method
- **Kaplan-Meier (KM) Method**: 39.9

#### Nonparametric Statistics
- **A-D Test Statistic**: 0.939
- **k star (bias corrected)**: 0.939
- **nu star**: 84.8
- **A-D Test Statistic**: 6.444
- **5% A-D Critical Value**: 0.787

#### Other
- **95% DL/2 Substitution Method**: 71.7
- **Mean**: 69.91
- **SD**: 92.86

---

**Appendix B. Upper Confidence Limit (UCL) Calculations – Lots 12 and 13**

Removal Action Work Plan, Union Pacific Railroad Beverly Hills Site, 9315 Civic Center Drive, Beverly Hills, California
## Lots 12 and 13 Database

### Appendix B. Upper Confidence Limit (UCL) Calculations – Lots 12 and 13

Removal Action Work Plan, Union Pacific Railroad Beverly Hills Site, 9315 Civic Center Drive, Beverly Hills, California

### General UCL Statistics for Data Sets with Non-Detects

<table>
<thead>
<tr>
<th>User Selected Options</th>
<th>Arsenic</th>
<th>d_Arsenic</th>
<th>Arsenic</th>
<th>d_Arsenic</th>
<th>Arsenic</th>
<th>d_Arsenic</th>
</tr>
</thead>
<tbody>
<tr>
<td>K-S Test Statistic</td>
<td>0.787</td>
<td>69.9</td>
<td>92.9</td>
<td>1</td>
<td>191</td>
<td>229</td>
</tr>
<tr>
<td>5% K-S Critical Value</td>
<td>0.0606</td>
<td>92.67</td>
<td>94.7</td>
<td>1</td>
<td>63.7</td>
<td>63.7</td>
</tr>
<tr>
<td>Data not Gamma Distributed at 5% Significance Level</td>
<td>95% KM (t) UCL</td>
<td>79.7</td>
<td>103</td>
<td>1</td>
<td>83.3</td>
<td>83.3</td>
</tr>
<tr>
<td></td>
<td>95% KM (z) UCL</td>
<td>79.66</td>
<td>24.2</td>
<td>1</td>
<td>12.7</td>
<td>12.7</td>
</tr>
<tr>
<td>Asssuming Gamma Distribution</td>
<td>95% KM (Jackknife) UCL</td>
<td>79.7</td>
<td>16.3</td>
<td>1</td>
<td>9.80</td>
<td>9.80</td>
</tr>
<tr>
<td></td>
<td>95% KM (bootstrap t) UCL</td>
<td>79.7</td>
<td>16.3</td>
<td>1</td>
<td>9.80</td>
<td>9.80</td>
</tr>
<tr>
<td>Minimum</td>
<td>1.00E-06</td>
<td>82.23</td>
<td>46.3</td>
<td>1</td>
<td>75.0</td>
<td>75.0</td>
</tr>
<tr>
<td>Maximum</td>
<td>996</td>
<td>95% KM (BCA) UCL</td>
<td>80.61</td>
<td>426</td>
<td>1</td>
<td>0.55</td>
</tr>
<tr>
<td>Mean</td>
<td>69.9</td>
<td>95% KM (Percentile Bootstrap) UCL</td>
<td>80.04</td>
<td>131</td>
<td>1</td>
<td>19.2</td>
</tr>
<tr>
<td>Median</td>
<td>26.9</td>
<td>95% KM (Chebyshev) UCL</td>
<td>95.76</td>
<td>2.9</td>
<td>0</td>
<td>9.2</td>
</tr>
<tr>
<td>SD</td>
<td>92.86</td>
<td>95% KM (Chebyshev) UCL</td>
<td>107</td>
<td>135</td>
<td>135</td>
<td></td>
</tr>
<tr>
<td>k star</td>
<td>0.788</td>
<td>95% KM (Chebyshev) UCL</td>
<td>128.9</td>
<td>108</td>
<td>108</td>
<td></td>
</tr>
<tr>
<td>Theta star</td>
<td>88.73</td>
<td>61.7</td>
<td>1</td>
<td>114</td>
<td>114</td>
<td></td>
</tr>
<tr>
<td>Nu star</td>
<td>386</td>
<td>Potential UCLs to Use</td>
<td>6.67</td>
<td>1</td>
<td>142</td>
<td>142</td>
</tr>
<tr>
<td>AppChi2</td>
<td>341.4</td>
<td>95% KM (Chebyshev) UCL</td>
<td>95.76</td>
<td>21.3</td>
<td>1</td>
<td>5.00</td>
</tr>
<tr>
<td>95% Gamma Approximate UCL (Use when n &gt;= 40)</td>
<td>79.01</td>
<td>163</td>
<td>1</td>
<td>92.3</td>
<td>92.3</td>
<td></td>
</tr>
<tr>
<td>95% Adjusted Gamma UCL (Use when n &lt; 40)</td>
<td>79.07</td>
<td>182</td>
<td>1</td>
<td>98</td>
<td>98</td>
<td></td>
</tr>
<tr>
<td>Note: DL/2 is not a recommended method.</td>
<td>29.6</td>
<td>1</td>
<td>208</td>
<td>208</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.

For additional insight, the user may want to consult a statistician.
### General UCL Statistics for Data Sets with Non-Detects

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>From File</td>
<td>Worksheet.wst</td>
<td></td>
</tr>
<tr>
<td>Full Precision</td>
<td>OFF</td>
<td></td>
</tr>
<tr>
<td>Confidence Coefficient</td>
<td>95%</td>
<td></td>
</tr>
<tr>
<td>Number of Bootstrap Operations</td>
<td>10,000</td>
<td></td>
</tr>
<tr>
<td>Arsenic</td>
<td></td>
<td></td>
</tr>
<tr>
<td>General Statistics</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of Valid Observations</td>
<td>26</td>
<td>Number of Distinct Observations 26</td>
</tr>
<tr>
<td>Raw Statistics</td>
<td></td>
<td>Log-transformed Statistics</td>
</tr>
<tr>
<td>Minimum</td>
<td>4.33</td>
<td>Minimum of Log Data 1.466</td>
</tr>
<tr>
<td>Maximum</td>
<td>266</td>
<td>Maximum of Log Data 5.583</td>
</tr>
<tr>
<td>Mean</td>
<td>73.64 Mean of log Data 3.476</td>
<td></td>
</tr>
<tr>
<td>Geometric Mean</td>
<td>32.29</td>
<td>5D of log Data 1.463</td>
</tr>
<tr>
<td>Median</td>
<td>39.3</td>
<td></td>
</tr>
<tr>
<td>SD</td>
<td>8.03</td>
<td></td>
</tr>
<tr>
<td>Std. Error of Mean</td>
<td>15.7</td>
<td></td>
</tr>
<tr>
<td>Coefficient of Variation</td>
<td>1.087</td>
<td></td>
</tr>
<tr>
<td>Skewness</td>
<td>1.092</td>
<td></td>
</tr>
<tr>
<td>Relevant UCL Statistics</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Normal Distribution Test</td>
<td></td>
<td>Lognormal Distribution Test</td>
</tr>
<tr>
<td>Shapiro Wilk Test Statistic</td>
<td>0.824</td>
<td>Shapiro Wilk Test Statistic 0.882</td>
</tr>
<tr>
<td>Shapiro Wilk Critical Value</td>
<td>0.92</td>
<td>Shapiro Wilk Critical Value 0.92</td>
</tr>
<tr>
<td>Data not Normal at 5% Significance Level</td>
<td></td>
<td>Data not Lognormal at 5% Significance Level</td>
</tr>
<tr>
<td>Assuming Normal Distribution</td>
<td></td>
<td></td>
</tr>
<tr>
<td>95% Student's-t UCL</td>
<td>100.5</td>
<td>95% H-UCL 237.6</td>
</tr>
<tr>
<td>95% UCLs (Adjusted for Skewness)</td>
<td>221.8</td>
<td>95% Chebyshev (MVUE) UCL 280</td>
</tr>
<tr>
<td>95% Adjusted-CLT UCL (Chen-1995)</td>
<td>103.1</td>
<td>95% Chebyshev (MVUE) UCL 394.4</td>
</tr>
<tr>
<td>95% Modified-t UCL (Johnson-1978)</td>
<td>101.0</td>
<td>99% Chebyshev (MVUE) UCL</td>
</tr>
<tr>
<td>Gamma Distribution Test</td>
<td></td>
<td></td>
</tr>
<tr>
<td>k star (bias corrected)</td>
<td>0.67</td>
<td>Data do not follow a Discernable Distribution (0.05)</td>
</tr>
<tr>
<td>Theta Star</td>
<td>109.8</td>
<td></td>
</tr>
<tr>
<td>MLE of Mean</td>
<td>73.64</td>
<td></td>
</tr>
<tr>
<td>MLE of Standard Deviation</td>
<td>89.94</td>
<td></td>
</tr>
<tr>
<td>nu star</td>
<td>34.86</td>
<td></td>
</tr>
<tr>
<td>Approximate Chi Square Value (.05)</td>
<td>22.36</td>
<td>Nonparametric Statistics</td>
</tr>
<tr>
<td>Adjusted Level of Significance</td>
<td>0.0398</td>
<td>95% CLT UCL 99.46</td>
</tr>
<tr>
<td>Adjusted Chi Square Value</td>
<td>21.69</td>
<td>95% Jackknife UCL 100.5</td>
</tr>
<tr>
<td>Anderson-Darling Test Statistic</td>
<td>1.009</td>
<td>95% Bootstrap-t UCL 104.7</td>
</tr>
<tr>
<td>Anderson-Darling 5% Critical Value</td>
<td>0.786</td>
<td>95% Hall's Bootstrap UCL 103.3</td>
</tr>
<tr>
<td>Kolmogorov-Smirnov Test Statistic</td>
<td>0.191</td>
<td>95% Percentile Bootstrap UCL 99.66</td>
</tr>
</tbody>
</table>

The statistics provided are based on the selected options and the data set specified. The calculations are performed using various methods to estimate the upper confidence limit (UCL) for the observed data, including normal and lognormal distributions, as well as other parametric and nonparametric tests.
## Triangle Area Database

**Appendix B. Upper Confidence Limit (UCL) Calculations – Triangle Area**

*Removal Action Work Plan, Union Pacific Railroad Beverly Hills Site, 9315 Civic Center Drive, Beverly Hills, California*

### General UCL Statistics for Data Sets with Non-Detects

<table>
<thead>
<tr>
<th>Statistic</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kolmogorov-Smirnov 5% Critical Value</td>
<td>0.178</td>
</tr>
<tr>
<td>Data not Gamma Distributed at 5% Significance Level</td>
<td>95% Chebyshev(Mean, Sd) UCL</td>
</tr>
<tr>
<td></td>
<td>97.5% Chebyshev(Mean, Sd) UCL</td>
</tr>
<tr>
<td>Assum ing Gamma Distribution</td>
<td>99% Chebyshev(Mean, Sd) UCL</td>
</tr>
<tr>
<td>95% Approximate Gamma UCL (Use when n &gt;= 40)</td>
<td>114.8</td>
</tr>
<tr>
<td>95% Adjusted Gamma UCL (Use when n &lt; 40)</td>
<td>118.4</td>
</tr>
</tbody>
</table>

| Potential UCL to Use                      | Use 95% Chebyshev (Mean, Sd) UCL | 142.1 |

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL. These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002) and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.
Appendix C

Applicable or Relevant and Appropriate Requirements
## Appendix C. Applicable or Relevant and Appropriate Requirements

### Table C-1. Potential Chemical-specific Applicable or Relevant and Appropriate Requirements

*Removal Action Work Plan, Union Pacific Railroad Beverly Hills Site, 9315 Civic Center Drive, Beverly Hills, California*

<table>
<thead>
<tr>
<th>Standard, Requirement, Criterion, or Limitation</th>
<th>ARAR Status</th>
<th>Description</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>RCRA Hazardous Waste</strong></td>
<td>Potential</td>
<td><strong>Federal act that classifies and regulates hazardous waste and facilities that treat, store, or dispose hazardous waste.</strong> A hazardous waste is considered a RCRA hazardous waste if it exhibits any of the characteristics of ignitability, corrosivity, reactivity, or toxicity, or if it is listed as a hazardous waste. Most waste determinations will focus on whether the generated waste (e.g., contaminated soil and treatment residuals) could be classified as toxicity-characteristic waste as defined by the contaminant concentrations.</td>
<td>Applicable for determining whether soil impacted by arsenic is a RCRA hazardous waste. Soil generated during construction, excavation, or remedial activities must be characterized. If the soil is RCRA hazardous, it must be managed in accordance with Title 22 requirements for RCRA hazardous waste.</td>
</tr>
<tr>
<td>Determination Title 22 CCR, Division 4.5, Chapter 11, 66261.21, 66261.22(a)(1), 66261.22(a)(2), 66261.23, and 66261.24(a)(1) or Article 4, Chapter 11</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>California Hazardous Waste</strong></td>
<td>Potential</td>
<td><strong>State act that classifies and regulates State-specific, non-RCRA hazardous wastes and facilities that treat, store, or dispose of non-RCRA hazardous wastes. Wastes can be classified as non-RCRA, State-only hazardous wastes if they exceed the soluble threshold limit concentration or total threshold limit concentration values.</strong></td>
<td>Applicable for determining whether soil impacted with arsenic is a State-only, non-RCRA hazardous waste. Wastes generated during construction, excavation, or remedial activities must be characterized. If the soil is non-RCRA hazardous, it must be managed in accordance with State hazardous waste management requirements.</td>
</tr>
<tr>
<td>Determination 22 CCR 66262.22(a)(3), 66262.22(a)(4), 66261.24(a)(2) through (a)(8)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Notes:**

ARAR = applicable or relevant and appropriate requirement  
CCR = California Code of Regulations  
RCRA = Resource Conservation and Recovery Act
Table C-2. Potential Location-specific Applicable or Relevant and Appropriate Requirements

Removal Action Work Plan, Beverly Hills Lots 12 and 13 Site, Beverly Hills, California

<table>
<thead>
<tr>
<th>Location</th>
<th>Requirement</th>
<th>ARAR Status</th>
<th>Description</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Within area where action may cause irreparable harm, loss, or destruction of significant artifacts</td>
<td>National Archaeological and Historic Preservation Act (16 USC Section 469); 36 CFR Part 65</td>
<td>Not applicable</td>
<td>Alteration of terrain that threatens significant scientific, prehistoric, historic, or archaeological data and may require actions to recover and preserve artifacts.</td>
<td>The proposed actions will not alter or destroy known prehistoric or historic archaeological features. The site is developed, and no known cultural resources have been identified.</td>
</tr>
</tbody>
</table>

Notes:

ARAR = applicable or relevant and appropriate requirement
CFR = Code of Federal Regulations
USC = United States Code
### Table C-3. Potential Action-specific Applicable or Relevant and Appropriate Requirements

*Removal Action Work Plan, Beverly Hills Lots 12 and 13 Site, Beverly Hills, California*

<table>
<thead>
<tr>
<th>Action</th>
<th>Standard, Requirement, Criterion, or Limitation</th>
<th>ARAR Status</th>
<th>Description</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cleanup of releases to the environment</td>
<td>27 CCR 20080 and 20090 23 CCR 2510 and 2511</td>
<td>Potential</td>
<td>Actions taken at the direction of a public agency to clean up pollution that are intended to contain wastes at the place of release must implement applicable provisions of 27 CCR Division 2, Subdivision 1 and 23 CCR Chapter 15 to the extent feasible. Engineered alternatives to prescriptive standards are allowed if the prescriptive standard is not feasible, and the engineered alternative is consistent with the performance goal of the prescriptive standard and affords equivalent protection against water quality impairment.</td>
<td>Applicable if contaminated soil is allowed to remain in place.</td>
</tr>
<tr>
<td>Remediation with contaminants remaining in place</td>
<td>27 CCR 21090 23 CCR 2581</td>
<td>Potential</td>
<td>Landfills must be closed in a manner that meets specified requirements for a final cover, and for post-closure maintenance.</td>
<td>Applicable if contaminated soil is allowed to remain in place.</td>
</tr>
<tr>
<td>Hazardous waste transport</td>
<td>22 CCR Division 4.5, Chapter 13</td>
<td>Potentially applicable</td>
<td>Standards applicable to transporters of hazardous waste in California.</td>
<td>Applicable if the wastes are characterized as RCRA or non-RCRA hazardous waste.</td>
</tr>
<tr>
<td>Control of air emissions from construction activities</td>
<td>South Coast AQMD Rule 401-Visible Emissions, 402-Nuisance, and 403-Fugitive Dusts</td>
<td>Applicable</td>
<td>Limits visible particulate emissions to the property line and requires implementation of specified dust control measures.</td>
<td>Applicable to removal actions that may result in the production of visible emissions and fugitive dust.</td>
</tr>
<tr>
<td>Soil stockpiling</td>
<td>California Health and Safety Code Section 25123.3 (a)(2) and 25123.3(b)(4)(B)</td>
<td>Potentially applicable</td>
<td>State requirements for remediation staging in stockpiles of non-RCRA hazardous waste.</td>
<td>These requirements must be met for hazardous wastes to be staged in stockpiles without requiring a permit.</td>
</tr>
<tr>
<td>Worker protection in hazardous waste cleanup</td>
<td>Cal OSHA (8 CCR 5192)</td>
<td>Potentially applicable</td>
<td>Requires workers in hazardous waste cleanup operations to perform operations in accordance with Cal OSHA health and safety requirements.</td>
<td>Applicable if soils are determined to be RCRA or non-RCRA hazardous waste.</td>
</tr>
<tr>
<td>Hazardous waste generation: generator requirements</td>
<td>22 CCR Division 4.5, Chapter 12</td>
<td>Potentially applicable</td>
<td>Requirements for waste identification; obtaining an EPA Identification Number; use of the hazardous waste manifest; packaging, marking and labeling; accumulation time; recordkeeping and reporting.</td>
<td>Applicable to onsite activities involving generation and onsite management of hazardous waste.</td>
</tr>
</tbody>
</table>
### Table C-3. Potential Action-specific Applicable or Relevant and Appropriate Requirements

**Removal Action Work Plan, Beverly Hills Lots 12 and 13 Site, Beverly Hills, California**

<table>
<thead>
<tr>
<th>Action</th>
<th>Standard, Requirement, Criterion, or Limitation</th>
<th>ARAR Status</th>
<th>Description</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hazardous waste generation: preparedness and prevention</td>
<td>22 CCR Division 4.5, Chapter 15, Article 3</td>
<td>Potentially applicable</td>
<td>Requirements for preparing for and preventing releases of hazardous waste, including specified spill control, fire control and communication equipment in hazardous waste management areas, maintaining adequate aisle space for hazardous waste containers, and making arrangements with local authorities for emergency response.</td>
<td>Applicable to onsite activities involving generation and onsite management of hazardous waste.</td>
</tr>
<tr>
<td>Hazardous waste generation: contingency plan and emergency procedures</td>
<td>22 CCR Division 4.5, Chapter 15, Article 4</td>
<td>Potentially applicable</td>
<td>Requirements for preparing a Contingency Plan and taking specified actions in response to releases of hazardous waste.</td>
<td>Applicable to onsite activities involving generation and onsite management of hazardous waste.</td>
</tr>
<tr>
<td>Hazardous waste generation: training</td>
<td>22 CCR 66265.16</td>
<td>Potentially applicable</td>
<td>Requirements for presenting training on contingency plan and hazardous waste management duties to employees managing hazardous waste.</td>
<td>Applicable to onsite activities involving generation and onsite management of hazardous waste.</td>
</tr>
<tr>
<td>Hazardous waste generation: container management</td>
<td>22 CCR Division 4.5, Chapter 15, Article 10</td>
<td>Potentially applicable</td>
<td>Requirements for managing hazardous waste containers, including maintaining containers in good condition, keeping containers closed, and minimum setback distances for containers of ignitable or reactive waste.</td>
<td>Applicable to onsite activities involving generation and onsite management of hazardous waste.</td>
</tr>
<tr>
<td>Cleanup of releases to the environment</td>
<td>22 CCR 66264.550 through 66264.552.5</td>
<td>Potentially applicable</td>
<td>Establishes requirements for CAMUs created during permit-exempt remedial activities. Creation of a CAMU does not trigger the land disposal restriction and minimum technology requirements that apply to permitted hazardous waste disposal units.</td>
<td>May be potentially applicable to alternatives that allow hazardous waste to remain onsite.</td>
</tr>
<tr>
<td>Cleanup of releases to the environment</td>
<td>Title 22, CCR, Section 66264.553</td>
<td>Potentially applicable</td>
<td>For temporary tanks and container storage areas used for treatment or storage of hazardous remediation waste during corrective action activities, it might be determined that a design, operating, or closure standard applicable to such units might be replaced by alternative requirements that are protective of human health or the environment. The temporary unit might be in place for 1 year with the possibility of a 1-year extension.</td>
<td>This provision would allow for temporary storage of hazardous waste that is excavated and stored at the site.</td>
</tr>
</tbody>
</table>
## Table C-3. Potential Action-specific Applicable or Relevant and Appropriate Requirements

**Removal Action Work Plan, Beverly Hills Lots 12 and 13 Site, Beverly Hills, California**

<table>
<thead>
<tr>
<th>Action</th>
<th>Standard, Requirement, Criterion, or Limitation</th>
<th>ARAR Status</th>
<th>Description</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Land use restrictions</td>
<td>22 CCR, Section 67391.1</td>
<td>Potentially applicable</td>
<td>Except as provided in Section 67391.1(e)(2) and (f), a land use covenant imposing appropriate limitations on land use shall be executed and recorded when hazardous materials, hazardous wastes or constituents, or hazardous substances will remain at the property at levels which are not suitable for unrestricted use of the land.</td>
<td>When waste is left in place above standards for unrestricted use, an appropriate land use covenant must be recorded.</td>
</tr>
<tr>
<td>Discharge of stormwater from construction activity</td>
<td>General NPDES Permit for Discharges of Storm Water Associated With Construction Activity Water Quality Order 2009-0009-DWQ</td>
<td>Potentially applicable</td>
<td>Establishes requirements to prevent discharges of pollutants to stormwater from construction activities that disturb 1 or more acres of soil, including requirements to implement best management practices and perform monitoring of stormwater discharges.</td>
<td>Applicable if remedial activities disturb 1 or more acres of soil.</td>
</tr>
<tr>
<td>Onsite management of hazardous materials or hazardous waste: Hazardous Materials Release Response Plans and Inventory</td>
<td>California Health and Safety Code Division 20, Chapter 6.95 19 CCR Division 2, Chapter 4, Article 4</td>
<td>Potentially applicable</td>
<td>Requires reporting of releases or threatened releases to Office of Emergency Services and the Certified Unified Program Agency. Requires preparation of Hazardous Materials Business Plan that contains specified information, including hazardous materials inventory and procedures to respond to releases, if hazardous materials or waste are present onsite in greater than threshold quantities.</td>
<td>Applicable if remediation activities cause regulated quantities of hazardous materials or waste to be present onsite.</td>
</tr>
<tr>
<td>Conducting activities that cause exposure to Proposition 65-listed substances</td>
<td>Cal. Health and Safety Code, Division 20, Chapter 6.6,</td>
<td>Applicable</td>
<td>Requires warnings of exposure to listed chemicals above specified concentrations or risk levels. Prohibits discharge of listed chemicals to sources of drinking water.</td>
<td>Arsenic is a Proposition 65-listed substance.</td>
</tr>
</tbody>
</table>

Notes:

AQMD = Air Quality Management District
ARAR = applicable or relevant and appropriate requirement
Cal OSHA = California Occupational Safety and Health Administration
CAMU = corrective action management unit
CCR = California Code of Regulations
CEQA = California Environmental Quality Act
CFR = Code of Federal Regulations
DTSC = California Environmental Protection Agency, Department of Toxic Substances Control
LDR = land discharge requirement
RCRA = Resource Conservation and Recovery Act
TBC = to be considered
WDR = waste discharge requirements
TO: Robert Krug  
Project Manager - Cleanup Program  
Chatsworth, CA

FROM: William S. Bosan, Ph.D.  
Senior Toxicologist  
Human and Ecological Risk Office  
Cypress, CA

DATE: December 23, 2010

SUBJECT: HERO Evaluation of Site Arsenic Data, Beverly Hills Land Corp. Site

PCA: 12060 Site Code: 301247-11

Background

The Human and Ecological Risk Office (HERO) evaluated the arsenic data set for the above-referenced site, located in Beverly Hills, California. The site is part of the right-of-way of the former Pacific Electric Railway, which operated as public transportation on Santa Monica Boulevard until the 1970's. Previously, an arsenic concentration of 27.3 mg/kg was proposed as the upper-bound "background level" for this site.

Evaluation of Arsenic Data

Mr. Robert Krug, DTSC Project Manager, provided HERO with the arsenic data for the site, which included data collected at the surface, two feet below ground surface (bgs.), five feet bgs., ten feet bgs., and more than ten feet bgs. HERO previously evaluated soil arsenic data collected from proposed school sites throughout southern California and established an ambient, upper-bound arsenic concentration in soil of 12 mg/kg. The arsenic data for this Beverly Hills Site appear elevated in comparison to most of Los Angeles County, so HERO decided to evaluate the data by depth for the site. The arsenic data were evaluated using the DTSC Guidance Document: Arsenic Strategies: Determination of Arsenic Remediation - Development of Arsenic Cleanup Goals for Proposed and Existing School Sites, available at www.dtsc.ca.gov/AssessingRisk/humanrisk2.cfm#guidance.
The approach used a visual evaluation of the data plots (graphical evaluation) by creating normality plots (i.e., probability plots) of the arsenic data by depth in order to evaluate the arsenic data distributions at differing depths. Consistent with the arsenic data throughout southern California, the Beverly Hills Site data appeared to be log-normally distributed. Consequently, all plots were based on log-transformed data values.

Figure 1 presents the site arsenic data distributions by depth. The surface and two-feet depths show the highest concentrations of arsenic and also exhibit multiple inflection points, indicating multiple populations within the distribution. This is consistent with what has been observed at other railroad right-of-way sites in southern California with site-related arsenic contamination. The five-foot, ten-foot and deeper arsenic samples overlap and exhibit an inflection point at approximately log 1.4 or 25 mg/kg. While some contamination is noted at the five-foot depth, the deeper samples appear to be relatively un-impacted by site activities and are most likely representative of background conditions.

Figure 2 shows the probability plot for all arsenic data on-site in all depth groups. Consistent with the depth-specific plots shown in Figure 1, an inflection point is clearly seen at approximately log 1.4, or 25 mg/kg arsenic.
Conclusions

Using the graphical evaluation of arsenic data for the Beverly Hills Land Corp. Site, HERO established an upper-bound arsenic concentration of 25 mg/kg, which it considers representative of background conditions at this particular site. Arsenic detections above 25 mg/kg would be considered site-related contamination. Therefore, HERO recommends an arsenic cleanup goal of 25 mg/kg for those areas on-site where future receptors may directly contact site soils. Note, higher concentrations of arsenic may be left on-site depending on site-specific considerations, such as a road or other similar caps or coverings which would limit exposure. If you have additional questions, please contact me at (714) 484-5399 or bbosan@dtsc.ca.gov.

Reviewed by:

James M. Polisini, Ph.D.
Senior Toxicologist
Human and Ecological Risk Office
May 21, 2012

Mr. Jim E. Diel
Manager of Environmental Site Remediation
Union Pacific Railroad
9451 Atkinson Street, Suite 100
Roseville, California 95747

ARSENIC CLEANUP LEVELS REGARDING THE BEVERLY HILLS LOTS 12 & 13 SITE LOCATED IN BEVERLY HILLS, CALIFORNIA

Dear Mr. Diel:

The Department of Toxic Substances Control (DTSC) and representatives for Union Pacific Railroad, Beverly Hills Land Company, and CH2MHiIl met on April 12, 2012 to discuss the delay in submitting a draft RAW/RAP. It was determined that it would be helpful if DTSC could provide an arsenic cleanup level guideline to assist developers and financial institutions determine accurate costs associated with any potential development plan of the site. Below is the guideline that DTSC has determined:

For Remediation of Future Landscape Areas:
0-2 Feet < 25 ppm
2-5 Feet < 75 ppm
Below 5 Feet = Left in Place

For Remediation of Future Hardscape Areas:
0-3 Feet < 75 ppm
Below 3 Feet = Left in Place

A Land Use Covenant (LUC) would be required if these cleanup levels are used. Included in the LUC would be a soil management plan that specifies the actions to be taken when future site activities require the disturbance of any elevated arsenic soils left in place.
Mr. Jim Diel  
May 21, 2012  
Page 2  

If you have any questions please call me at (818) 717-6562 or email me at Rkrug@dtsc.ca.gov, or you may contact my Branch Chief, Steve Lavinger, at (818) 717-6528.

Sincerely,  

[Signature]  

Robert Krug  
Project Manager  
Brownfields and Environmental Restoration Program – Chatsworth Office  

cc:  Mr. Eugene M. St. John, Jr.  
Beverly Hills Land Company  
136 El Camino, Suite 416  
Beverly Hills, CA 90212  

Mr. Jim Curtis, P.E.  
CH2M Hill - Project Manager  
2485 Natomas Park Drive, Suite 600  
Sacramento, California 95833-2937  

Stephane D. Nguyen  
Reed Smith  
1901 Avenue of the Stars, Suite 700  
Los Angeles, California 90067-6078  

Brian J. Jacobs, P.G., C.HG.  
Principal Scientist/Vice President  
URS Corporation  
915 Wilshire Boulevard, Suite 700  
Los Angeles, California 90017
Appendix E
Cost Estimate
Union Pacific Railroad Beverly Hills Site
9315 Civic Center Drive, Beverly Hills, CA

Alternative 2: Capping

Assumptions:
Alternative 2 would consist of capping the ground surface where arsenic concentrations are greater than 25 mg/kg.
Excavation of 400 cubic yards of material at concentrations greater than 25 mg/kg from perimeter of site and placement along centerline of site to be capped.
2-inch asphalt cap with 4-inch roadbase, primarily down center line of Site and extending out to 10 to 15 feet of center line either side, depending on location.
All trees and shrubs are within 5 to 10 feet of sidewalk, perimeter of the site. No major tree or shrub removal.
City will allow runoff to City storm drains. Storm drains are located within 100 feet of lot discharge points, no deeper than 10 feet, and no traffic lanes to cross. One lane closure required for each connection to storm drain.
Assumes no environmental assessment by the City.
Assumes no encroachment permit will be needed.
Existing fencing and landscaping to remain in place.

<table>
<thead>
<tr>
<th>Description</th>
<th>Quantity</th>
<th>Units</th>
<th>Unit Cost</th>
<th>Item Cost</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mobilization, Office, and Facilities</td>
<td>1 LS</td>
<td>100,000</td>
<td>$100,000</td>
<td>$100,000</td>
<td></td>
</tr>
<tr>
<td>City Plan Check</td>
<td>1 LS</td>
<td>1,500</td>
<td>$1,500</td>
<td>$1,500</td>
<td></td>
</tr>
<tr>
<td>City Grading Permit</td>
<td>2% of</td>
<td>590,772</td>
<td>$11,815</td>
<td>City website, fees, and taxes</td>
<td></td>
</tr>
<tr>
<td>City Heavy Haul Permit</td>
<td>1 EA</td>
<td>1,500</td>
<td>$1,500</td>
<td>Assumes 50 trips, City website, fees, and taxes</td>
<td></td>
</tr>
<tr>
<td>Construction Stormwater Pollution Prevention Plan</td>
<td>1 LS</td>
<td>12,500</td>
<td>$12,500</td>
<td></td>
<td></td>
</tr>
<tr>
<td>City ROW Encroachment Permit</td>
<td>5000 LS</td>
<td></td>
<td>$0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Traffic Control</td>
<td>10 DAYS</td>
<td>$1,500</td>
<td>$15,000</td>
<td>Blocking one lane of Santa Monica Boulevard, two-man crew and signs</td>
<td></td>
</tr>
<tr>
<td>Construct Decon Pads</td>
<td>4 EA</td>
<td>8,100</td>
<td>$32,400</td>
<td>Dry brush</td>
<td></td>
</tr>
<tr>
<td>Sidewalk/Curb and Gutter Replacement Permit Fee</td>
<td>2 EA</td>
<td>1,000</td>
<td>$2,000</td>
<td>City website, fees, taxes</td>
<td></td>
</tr>
<tr>
<td><strong>General Site Preparation Subtotal</strong></td>
<td></td>
<td></td>
<td></td>
<td><strong>$176,775</strong></td>
<td></td>
</tr>
</tbody>
</table>

**Construction**

<table>
<thead>
<tr>
<th>Description</th>
<th>Quantity</th>
<th>Units</th>
<th>Unit Cost</th>
<th>Item Cost</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dust Control</td>
<td>1 LS</td>
<td>20,000</td>
<td>$20,000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Light Clear and Grub, Prepare Areas of Hot-spot Removal, and Capping</td>
<td>41,250 SF</td>
<td>0.20</td>
<td>$8,250</td>
<td>Small debris, small branches, no concrete, 1 ton of material each lot</td>
<td></td>
</tr>
<tr>
<td>Dispose of Clear and Grub Material</td>
<td>3 TON</td>
<td>300</td>
<td>$900</td>
<td>Municipal waste, SoCal disposal, 4 miles one way</td>
<td></td>
</tr>
<tr>
<td><strong>Capping</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hot Spot Removal at Perimeter of Site</td>
<td>400 CY</td>
<td>30</td>
<td>$12,000</td>
<td>Excavation of small hot spots and placement along center line of site</td>
<td></td>
</tr>
<tr>
<td>Slighty, Compact, and Rough Grading</td>
<td>77320 SF</td>
<td>0.25</td>
<td>$19,330</td>
<td></td>
<td></td>
</tr>
<tr>
<td>AC Base Material, Procure, and Place</td>
<td>950 TON</td>
<td>25</td>
<td>$23,750</td>
<td>4-inch ABII compacted, 1.5 ton/cubic yard</td>
<td></td>
</tr>
<tr>
<td>Weed Block – Pre-emergent Application</td>
<td>1.33 ACRE</td>
<td>250</td>
<td>$334</td>
<td>quart/acre mix concentrate in 25 gallons water</td>
<td></td>
</tr>
<tr>
<td>Weed Block – Pre-emergent Application – Second Application</td>
<td>1.33 ACRE</td>
<td>250</td>
<td>$334</td>
<td>quart/acre mix concentrate in 25 gallons water, apply 100 days after first application</td>
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<tr>
<td>Weed Block Membrane</td>
<td>75000 SF</td>
<td>0.50</td>
<td>$37,500</td>
<td>Two layers, placed in perpendicular direction</td>
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<tr>
<td>Paving</td>
<td>68000 SF</td>
<td>3</td>
<td>$204,000</td>
<td>3,200 feet long x 20 feet wide; 2 inches asphalt</td>
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<tr>
<td>Asphalt Curb and Gutter</td>
<td>7500 LF</td>
<td>5</td>
<td>$37,500</td>
<td>6 inch AC curb to direct stormwater to two discharge points, one at each end of parcel</td>
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<tr>
<td>Construct Drop Inlet Onsite</td>
<td>7 EA</td>
<td>5,000</td>
<td>$35,000</td>
<td></td>
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</tr>
<tr>
<td>Utility Clearance</td>
<td>2 LS</td>
<td>2,500</td>
<td>$5,000</td>
<td>Clear utilities for connection to City storm drains</td>
<td></td>
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<tr>
<td>Remove, Replace Section of Existing Fence</td>
<td>7 EA</td>
<td>1,500</td>
<td>$10,500</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Remove, Replace Section of Sidewalk</td>
<td>7 EA</td>
<td>2,400</td>
<td>$16,800</td>
<td>3 feet wide, 5 feet long, 4 inches thick</td>
<td></td>
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<tr>
<td>Lane Closure</td>
<td>7 EA</td>
<td>3,000</td>
<td>$21,000</td>
<td>3 days each</td>
<td></td>
</tr>
<tr>
<td>City Street AC Removal</td>
<td>7 EA</td>
<td>2,500</td>
<td>$17,500</td>
<td>10 feet wide, 100 feet long, 4 inches thick</td>
<td></td>
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<tr>
<td>Excavate, Expose Stormdrain, Stockpile Soil</td>
<td>1330 CY</td>
<td>30</td>
<td>$39,900</td>
<td>Maximum 10 feet deep</td>
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<tr>
<td>Pipe Placement and Connection</td>
<td>420 LF</td>
<td>40</td>
<td>$16,800</td>
<td>6-inch concrete connect to 12-inch concrete</td>
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<tr>
<td>Pipe Bedding</td>
<td>30 CY</td>
<td>35</td>
<td>$1,050</td>
<td>Sand</td>
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<tr>
<td>Backfill Excavation</td>
<td>1305 CY</td>
<td>10</td>
<td>$13,050</td>
<td>Reuse soil</td>
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<tr>
<td>Repave City Street</td>
<td>7 EA</td>
<td>5,000</td>
<td>$35,000</td>
<td>10 feet wide, 100 feet long, 4 inches thick</td>
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<tr>
<td>Street Sweep</td>
<td>6 DY</td>
<td>1,500</td>
<td>$9,000</td>
<td>Three separate mobilizations</td>
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<tr>
<td>Dispose of Miscellaneous Construction Debris</td>
<td>45 TONS</td>
<td>50</td>
<td>$2,250</td>
<td>Municipal waste, 15 cubic yards soil plus AC; SoCal Disposal, 4 miles one way</td>
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<tr>
<td>Transport and Dispose of Decon Soil</td>
<td>1 TONS</td>
<td>600</td>
<td>$600</td>
<td>Azusa Landfill, Rico cost, 45 miles one way</td>
<td></td>
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<tr>
<td>Construction Inspection</td>
<td>8 HR</td>
<td>125</td>
<td>$1,000</td>
<td>City website, fees, and taxes, 4 hours per lot</td>
<td></td>
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<tr>
<td>Stormwater Pollution Prevention Plan Inspection</td>
<td>10 HR</td>
<td>125</td>
<td>$1,250</td>
<td>City website, fees, and taxes, 3 hours per lot</td>
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<tr>
<td>Sidewalk/Curb and Gutter/Pavement Replacement Inspection</td>
<td>9 SF</td>
<td>125.00</td>
<td>$1,125</td>
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<tr>
<td><strong>Construction Subtotal</strong></td>
<td></td>
<td></td>
<td></td>
<td><strong>$590,720</strong></td>
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</table>

**Subtotal Capital Cost**

<table>
<thead>
<tr>
<th>Description</th>
<th>Quantity</th>
<th>Units</th>
<th>Unit Cost</th>
<th>Item Cost</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Site Work Allowance</td>
<td>5% of</td>
<td>767,435</td>
<td>$38,372</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Utility Allowance</td>
<td>5% of</td>
<td>767,435</td>
<td>$38,372</td>
<td>Allowance for the repair and/or re-routing of underground or above ground utilities</td>
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</tr>
<tr>
<td>Safety Allowance</td>
<td>2% of</td>
<td>767,435</td>
<td>$15,349</td>
<td></td>
<td></td>
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<tr>
<td>Miscellaneous Equipment Allowance</td>
<td>7% of</td>
<td>767,435</td>
<td>$53,720</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Subtotal Capital Cost</strong></td>
<td></td>
<td></td>
<td></td>
<td><strong>$913,248</strong></td>
<td></td>
</tr>
<tr>
<td>Project Management</td>
<td>8% of</td>
<td>913,248</td>
<td>73,060</td>
<td>Includes preparation of long-term Operation and Maintenance Plan</td>
<td></td>
</tr>
<tr>
<td>Design</td>
<td>12% of</td>
<td>913,248</td>
<td>109,590</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Permitting</td>
<td>8% of</td>
<td>913,248</td>
<td>73,060</td>
<td></td>
<td></td>
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<tr>
<td>Construction Management</td>
<td>14% of</td>
<td>913,248</td>
<td>127,185</td>
<td></td>
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<tr>
<td><strong>UnDefined Scope</strong></td>
<td>20% of</td>
<td>1,296,812</td>
<td>259,362</td>
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<td></td>
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<tr>
<td><strong>CAPITAL COST</strong></td>
<td></td>
<td></td>
<td></td>
<td><strong>$1,556,000 (Rounded)</strong></td>
<td></td>
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</tbody>
</table>
### Assumptions:
- PE not needed for annual inspection
- Sealing paved area once every 5 years
- Assumes 100 linear feet of cracks/1,000 feet of length
- No fence and landscape maintenance

### Annual O&M Costs
#### Construction (this occurs every 5 years)

<table>
<thead>
<tr>
<th>Description</th>
<th>Quantity</th>
<th>Rate</th>
<th>Cost</th>
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</thead>
<tbody>
<tr>
<td>Clean surface for sealing</td>
<td>1 LS</td>
<td>$240</td>
<td>$240</td>
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<tr>
<td>Caulk or sand cracks</td>
<td>720 LF</td>
<td>$4</td>
<td>$576</td>
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<tr>
<td>Slurry seal surface</td>
<td>50820 SF</td>
<td>$1</td>
<td>$10,164</td>
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<tr>
<td>Tech 2 Labor</td>
<td>80 hrs</td>
<td>$90</td>
<td>$7,200</td>
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<tr>
<td>Engineer Labor</td>
<td>40 hrs</td>
<td>$117</td>
<td>$4,680</td>
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<tr>
<td>Maintenance Items</td>
<td>24 MO</td>
<td>$250</td>
<td>$6,000</td>
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<tr>
<td>Travel</td>
<td>2 WK</td>
<td>$250</td>
<td>$500</td>
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</table>

**Subtotal Annual O&M Costs**

$29,000 Rounded

**Total Operation & Maintenance Cost**

15 yrs $29,000 $435,000

**Total Project Cost**

$1,991,000 (Rounded)

**Class 5 Estimate Range:**
- 50% $2,986,500
- -30% $1,393,700

---

This estimate is not an offer for construction and/or project execution. These ACEC Classification 5 cost estimates are intended to reflect the actual installed costs within the range of -30% and +50% of the costs indicated. The cost estimate has been prepared for guidance in project evaluation and implementation from the information available at the time of the estimate. The final costs of the project will depend on actual labor and material costs and competitive variable factors. Because of this, project feasibility and funding needs must be carefully reviewed prior to making specific decisions to help insure proper project evaluation and adequate funding.
**Assumptions:**
- Excavation of entire site per DTSC cleanup guidelines for the site. 2,500SF Exc/sample exceedance
- Backfill with imported fill
- No operation and maintenance once disposal is completed.

### Description

<table>
<thead>
<tr>
<th>Description</th>
<th>Quantity</th>
<th>Units</th>
<th>Unit Cost</th>
<th>Item Cost</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Construction</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Investigation</td>
<td>1</td>
<td>LS</td>
<td></td>
<td>$102,068</td>
<td></td>
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<tr>
<td>Mobilization</td>
<td>1</td>
<td>LS</td>
<td></td>
<td>$50,000</td>
<td></td>
</tr>
<tr>
<td>Prepare Dust Control/Monitoring Plan</td>
<td>1</td>
<td>LS</td>
<td></td>
<td>$6,200</td>
<td></td>
</tr>
<tr>
<td>Prepare Traffic Plan</td>
<td>1</td>
<td>LS</td>
<td></td>
<td>$12,300</td>
<td></td>
</tr>
<tr>
<td>Preparatory Work Plan</td>
<td>1</td>
<td>LS</td>
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<td>$9,800</td>
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<td>LOAD</td>
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<td></td>
<td></td>
<td>$207,972</td>
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<tr>
<td>Site Preparation</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Construct/Relocate/Remove Decon Pad</td>
<td>3</td>
<td>LOCATION</td>
<td></td>
<td>$8,100</td>
<td>$24,300</td>
</tr>
<tr>
<td>Site Preparation Subtotal</td>
<td></td>
<td></td>
<td></td>
<td>$24,300</td>
<td></td>
</tr>
<tr>
<td>Excavate, Load, Transport, and Dispose</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Excavate Soil Lot 12, Lot 13, Triangle, 0-2 ft bgs</td>
<td>1,296</td>
<td>CY</td>
<td></td>
<td>$15</td>
<td>$19,444</td>
</tr>
<tr>
<td>Excavate - Overexcavation 0-2 ft bgs (25%)</td>
<td>324</td>
<td>CY</td>
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<td>$20</td>
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<tr>
<td>Excavate Soil Lot 12, Lot 13, Triangle, 0-5 ft bgs</td>
<td>13,426</td>
<td>CY</td>
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<td>$15</td>
<td>$201,389</td>
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<td>3,356</td>
<td>CY</td>
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<td>Load Soil Lot 12, Lot 13, Triangle</td>
<td>14,722</td>
<td>CY</td>
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<td>$117,778</td>
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<td>$29,444</td>
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<td>Survey Control at 2 feet</td>
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<td>DAYS</td>
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<td>Profile Sampling</td>
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<td>Confirmation Sampling</td>
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<td>Ambient Air Sampling</td>
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<td>Transport</td>
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<td>Disposal</td>
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<td>Street Sweeping</td>
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<td>$51,758</td>
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<td>Decontamination</td>
<td>35</td>
<td>DAYS</td>
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<td>$1,100</td>
<td>$37,956</td>
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<td>Site Restoration</td>
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<tr>
<td>Purchase and Place Import Fill</td>
<td>18,403</td>
<td>CY</td>
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<tr>
<td>Rough Grading</td>
<td>205,000</td>
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<tr>
<td>Allowances</td>
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<td>Undefined Scope</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td>-50%</td>
<td>$2,750,500</td>
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</tbody>
</table>

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## Assumptions:
- Excavation of entire site per ONLY DTSC cleanup guidelines for soil from 0-2 feet bgs
- 2,500SF Exc/sample exceedance
- 2-foot clean surface soil following excavation and backfill to provide soil cap
- Includes deed restriction restricting/managing below 2 feet bgs
- Backfill with imported fill

### Construction

<table>
<thead>
<tr>
<th>Description</th>
<th>Quantity</th>
<th>Units</th>
<th>Unit Cost</th>
<th>Item Cost</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Soil Sampling Investigation</td>
<td>1</td>
<td>LS</td>
<td></td>
<td>$102,068</td>
<td>Hand auger to 5 feet bgs at 230 (30ft centers) locations; Collect 3 samples per boring for arsenic analysis; 1 hr per boring for 2 people; 6 people (2 person teams) can complete 24 locations per day</td>
</tr>
<tr>
<td>Mobilization</td>
<td>1</td>
<td>LS</td>
<td></td>
<td>$50,000</td>
<td></td>
</tr>
<tr>
<td>Prepare Dust Control/Monitoring Plan</td>
<td>1</td>
<td>LS</td>
<td></td>
<td>$6,200</td>
<td></td>
</tr>
<tr>
<td>Prepare Traffic Plan</td>
<td>1</td>
<td>LS</td>
<td></td>
<td>$12,300</td>
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<tr>
<td>Prepare Transportation Plan</td>
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<td>417</td>
<td>LOAD</td>
<td>$20</td>
<td>$8,333</td>
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**Preconstruction and Mobilization Subtotal** $188,701

### Site Preparation

<table>
<thead>
<tr>
<th>Description</th>
<th>Quantity</th>
<th>Units</th>
<th>Unit Cost</th>
<th>Item Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Construct/Relocate/Remove Decon Pad</td>
<td>3</td>
<td>LOCATION</td>
<td>$8,100</td>
<td>$24,300</td>
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</table>

**Site Preparation Subtotal** $24,300

### Excavate, Load, Transport, and Dispose

<table>
<thead>
<tr>
<th>Description</th>
<th>Quantity</th>
<th>Units</th>
<th>Unit Cost</th>
<th>Item Cost</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Excavate Soil Lot 12, Lot 13, Triangle, 0-2 ft bgs</td>
<td>4,444</td>
<td>CY</td>
<td>$15</td>
<td>$66,667</td>
<td>2,500SF Exc/sample exceedance</td>
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<tr>
<td>Excavate - Overexcavation 0-2 ft bgs (25%)</td>
<td>1,111</td>
<td>CY</td>
<td>$20</td>
<td>$22,222</td>
<td>25% of mass excavation</td>
</tr>
<tr>
<td>Excavate Soil Lot 12, Lot 13, Triangle, 0-5 ft bgs</td>
<td>- CY</td>
<td>$15</td>
<td>$0</td>
<td>2,500SF Exc/sample exceedance</td>
<td></td>
</tr>
<tr>
<td>Excavate - Overexcavation 0-5 ft bgs (25%)</td>
<td>- CY</td>
<td>$20</td>
<td>$0</td>
<td>25% of mass excavation</td>
<td></td>
</tr>
<tr>
<td>Load Soil Lot 12, Lot 13, Triangle</td>
<td>4,444</td>
<td>CY</td>
<td>$8</td>
<td>$35,556</td>
<td></td>
</tr>
<tr>
<td>Load - Overexcavation (25%)</td>
<td>1,111</td>
<td>CY</td>
<td>$8</td>
<td>$8,889</td>
<td>25% of mass excavation</td>
</tr>
<tr>
<td>Survey Control at 2 feet</td>
<td>3</td>
<td>DAYS</td>
<td>$3,100</td>
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<tr>
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<td>$160.00</td>
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<td>MO</td>
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<tr>
<td>Transport</td>
<td>8,333</td>
<td>TON</td>
<td>$35.00</td>
<td>$291,667</td>
<td>1.5 tons/cubic yard, Azuza landfill, 26 miles one way</td>
</tr>
<tr>
<td>Disposal</td>
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<td>TON</td>
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**Excavation, Load, Transport, and Dispose Subtotal** $723,391

### Site Restoration

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<th>Quantity</th>
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<th>Unit Cost</th>
<th>Item Cost</th>
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**Site Restoration Subtotal** $723,472

### Subtotal Capital Cost

- **Site Work Allowance** 3% CF $1,209,865 $36,296
- **Safety Allowance** 2% CF $1,209,865 $24,197
- **Miscellaneous Equipment Allowance** 5% CF $1,209,865 $60,493

**Subtotal Capital Cost** $1,330,851

### Subtotal Capital Cost

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**Total Project Cost** $1,948,000

**Class 5 Estimate Range:** 100% $3,896,000

-50% $974,000

This estimate is not an offer for construction and/or project execution. These AACE Classification 5 cost estimates are intended to reflect the actual installed costs within the range of -50% and +100% of the costs indicated. The cost estimate has been prepared for guidance in project evaluation and implementation from the information available at the time of the estimate. The final costs of the project will depend on actual labor and material costs and competitive variable factors. Because of this, project feasibility and funding needs must be carefully reviewed prior to making specific decisions to help insure proper project evaluation and adequate funding.
Assumptions:
Excavation of entire site per ONLY DTSC cleanup guidelines for soil from 0-2 feet bgs 2,500SF Exc/sample exceedance
2-foot clean surface soil following excavation and backfill to provide soil cap
Assumes development excavation will continue to remove additional soil to 5 feet bgs or a soil cap and institutional controls will be developed.

**Union Pacific Railroad Beverly Hills Site**
9315 Civic Center Drive, Beverly Hills, CA

**Alternative 5: Load, Transport, and Haul Impacted Soil During Development, Onsite Containment**

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<tr>
<td>Soil Sampling Investigation</td>
<td>1</td>
<td>LS</td>
<td>$102,068</td>
<td>$102,068</td>
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Class 5 Estimate Range: 100% $3,016,000
-50% $754,000

This estimate is not an offer for construction and/or project execution. These AACE Classification 5 cost estimates are intended to reflect the actual installed costs within the range of -50% and +100% of the costs indicated. The cost estimate has been prepared for guidance in project evaluation and implementation from the information available at the time of the estimate. The final costs of the project will depend on actual labor and material costs and competitive variable factors. Because of this, project feasibility and funding needs must be carefully reviewed prior to making specific decisions to help insure proper project evaluation and adequate funding.
Appendix F

Pre-Construction Investigation Work Plan
Union Pacific Railroad Beverly Hills Site, 9315 Civic Center Drive, Beverly Hills, California

Project No: UPSRWA05
Document Title: Pre-Construction Investigation Work Plan
Document No.: PPS0430201349PDX
Date: February 2021
Client Name: Union Pacific Railroad
Project Manager: David Hodson

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Technical Certification

This work plan has been prepared under the direction of a Registered Civil Engineer in the State of California.

David J. Hodson, P.E. No. C71737
Project Manager

2/8/2021
Date
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**Figures**  

<table>
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<th>Figure</th>
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<td>2-1</td>
<td>Proposed Sampling Grid</td>
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## Acronyms and Abbreviations

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<tr>
<th>Abbreviation</th>
<th>Description</th>
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<tr>
<td>bgs</td>
<td>below ground surface</td>
</tr>
<tr>
<td>DQO</td>
<td>data quality objective</td>
</tr>
<tr>
<td>DTSC</td>
<td>California Environmental Protection Agency, Department of Toxic Substances Control</td>
</tr>
<tr>
<td>FD</td>
<td>field duplicate</td>
</tr>
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<td>HAZWOPER</td>
<td>Hazardous Waste Operations and Emergency Response</td>
</tr>
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<td>Jacobs</td>
<td>Jacobs Engineering Group Inc.</td>
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<tr>
<td>QC</td>
<td>quality control</td>
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<td>ROW</td>
<td>right-of-way</td>
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<td>UPRR</td>
<td>Union Pacific Railroad</td>
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1. **Introduction**

On behalf of Union Pacific Railroad (UPRR), Jacobs Engineering Group Inc. (Jacobs) has prepared this work plan to support pre-construction delineation of proposed removal action areas at the UPRR Beverly Hills site (site) located at 9315 Civic Center Drive in Beverly Hills, California (Figure 1-1). The site is also known as “Beverly Hills Lots 12 & 13” and consists of approximately 5 acres, including Lots 12 and 13, as well as a small triangular section east of Lot 13. UPRR entered the site into a Voluntary Cleanup Agreement (Docket Number HSA-A 04/05-066) with the California Environmental Protection Agency, Department of Toxic Substances Control (DTSC) in December 2004 (DTSC, 2005).

1.1 **Purpose and Scope**

The proposed sampling includes soil sample collection and analysis to refine areas requiring removal of arsenic-impacted soil at the site (Jacobs, 2020). Soil samples will be collected on 25-foot grid spacing across the site to identify potential removal areas that would be reasonable to excavate, if necessary, using typical excavation equipment. Soil samples will be collected at ground surface and 1 foot below ground surface (bgs) to evaluate where potential removal areas will extend to either 1 or 2 feet bgs.

1.2 **Report Organization**

This work plan is organized into the following sections:

- **Section 1, Introduction**, presents the document purpose and general organization.
- **Section 2, Data Quality Objectives**, proposes data quality objectives (DQOs) associated with the proposed sampling activities.
- **Section 3, Sampling and Analysis Plan**, describes the proposed methodology for conducting sampling and analysis for the proposed sampling activities.
- **Section 4, References**, presents the references used to prepare this document.

1.3 **Site Background**

The site is located at 9315 Civic Center Drive in Beverly Hills, California, and consists of three areas (Lots 12 and 13 and a small triangular section located east of Lot 13) with Los Angeles County Assessor’s Identification Numbers 4342-015-038, 4342-015-040, 4342-015-041, and 4342-015-039. The site is the former railroad right-of-way (ROW) adjacent to Santa Monica Boulevard, between Alpine Avenue and North Doheny Drive (Figure 1-1).

The site was occupied by the railroad ROW from 1926 to approximately 1998 (CH2M, 2006). Aerial photographs indicate that the railroad, operated by the Pacific Electric Railway Company, was active from 1928 until between 1971 and 1979 (Lindmark, 1998). A series of aerial photographs from 1952, 1969, 1970, 1979, 1986, 1988, 1990, 1993, 1995, and 1998 did not indicate evidence that the site had been used for purposes other than a railroad ROW (either active or inactive).

In 1998, UPRR, the successor in interest to Pacific Electric Railway Company, transferred the site to Beverly Hills Land Company, the site’s current owner.

The site was a former railroad ROW, and there are no known railroad operations. Previous investigation activities (Jacobs, 2020) identified elevated levels of arsenic in soil. The arsenic source at the site is also unknown and is likely associated with fill material at the site. Arsenic likely migrated into shallow soil, adhering to soil particles. Soil sample data do not indicate elevated levels of arsenic in soil below 5 feet bgs. Likewise, arsenic was not detected at elevated levels in groundwater samples collected at the site.
2. **Data Quality Objectives**

This section presents a summary of project objectives and DQOs.

2.1 **Objectives and Problem Definition**

This work plan proposes a pre-construction investigation to collect soil samples for arsenic analysis to assess areas with elevated levels of arsenic that require removal.

2.2 **Data Quality Objectives**

Data collected from the proposed sampling activities will be used to obtain representative measurements of arsenic in soil to adequately refine proposed removal action areas to reduce the volume of arsenic-impacted soil at the site.

2.3 **Data Management**

Pre-construction investigation sampling will generate analytical soil data across the site up to 1 foot bgs. Sample location data will be obtained using a handheld GPS device with sub-meter accuracy to identify the location of soil samples to support identification of excavation areas. Soil analytical data will be obtained quantifying levels of arsenic to compare against removal action goals to support development of excavation volumes. Data will be validated and managed in a database.

The data management system will be designed to provide ready access to information for statistical summary and analysis. Data will be reviewed by project subject matter experts. Quality control review will be conducted by a senior scientist and any questionable data will be reviewed and resolved.
3. **Sampling and Analysis Plan**

This section presents the activities associated with the proposed sampling plan.

3.1 **Field Preparation Activities**

Workers involved in soil-disturbing activities will be advised of the potential presence of hazardous substances in site soil in advance of field work, and field personnel will have appropriate training and qualifications for the anticipated work (for example, Occupational Safety and Health Administration Hazardous Waste Operations and Emergency Response [HAZWOPER] training, if necessary). Fieldwork will be performed in accordance with site health and safety procedures by staff who are appropriately informed, trained, and certified to complete the work.

The following tasks will be completed before the field activities described in this work plan:

- Update the site-specific health and safety plan to identify the chemical and physical hazards associated with the additional investigation activities.
- Conduct one pre-investigation site visit to identify sampling locations, which will be marked with white paint.
- Contact Underground Service Alert for utility clearance, and work with a private subsurface utility locating company to survey the sampling locations for subsurface utilities.
- Obtain applicable access agreements for sampling.

3.2 **Soil Sampling**

Sample locations will be based on an approximate grid with 25-foot spacing, as shown on Figures 2-1a through 2-1d. The 25-foot spacing aligns with anticipated 25-foot removal action areas. Samples will be collected at 0.5-foot depths at ground surface and 1 foot bgs. Hand augering will be conducted to reach the desired sample depth. Soil samples will be collected directly from the hand auger. Hand auger boreholes will be backfilled using clean, imported fill.

Sample locations will be determined through field measurements, using a mechanical measuring wheel. A flag will be placed with a location identification at each sampling location. Sample locations will be surveyed using a handheld global positioning system instrument with sub-meter accuracy.

Samples will be placed in glass jars for the analysis to be conducted. In general, a minimum of 8 ounces of sample material (or as determined necessary case by case) should be collected for each soil sample. Sample containers will be sealed, labeled with a sample identification number in indelible ink, and stored in accordance with industry standard practice and chain-of-custody procedures. Each sample must be assigned a unique identification number for documentation and tracking purposes. Chain-of-custody protocols will be followed. If multi-use sampling equipment is used during sampling, the equipment will be decontaminated after each use.

Accurate field records must be maintained to document soil disturbance and sampling activities. Specifically, the field sampling records should include the following, at a minimum:

- Description of the soil sampling location and purpose
- Entity and field personnel responsible for the soil disturbance
- Sampling location (sketch or description)
- Sample date and time
- Soil characteristics (for example, odor and color)
- Sample collection method
- Sample identification
- Photographs, if possible
3.3 Sample Analysis

Soil samples will be forwarded to a state-certified laboratory for analysis for arsenic by U.S. Environmental Protection Agency Method 6010B on a normal turnaround basis. The reporting limit will be 0.25 milligram per kilogram.

3.4 Field and Laboratory Quality Control Samples

Quality control (QC) samples will be collected to assist in determining data quality and reliability. QC samples collected in the field include field duplicates (FDs) and laboratory QC samples (MS and MSD analyses). In addition equipment blanks, temperature blanks and trip blanks are submitted to support QC objectives. QC samples will be collected using the same procedures and immediately following collection of the target or "normal" sample.

FDs will be collected at a rate of 10 percent for soil samples (1 in 10 samples). An FD is an independent sample collected as close as possible to the original sample from the same source, and is used to assess sampling precision. FDs will be labeled as "FD" and packaged in the same manner as normal samples so the laboratory cannot distinguish between normal samples and duplicates. Each FD will be taken using the same sampling and preservation method as other samples.

Laboratory QC samples will be collected to perform MS and MSD analyses. MS/MSD samples will be collected at a frequency of 5 percent for soil and water samples (1 in 20 samples). A MS is an aliquot of a sample that is spiked with a known concentration of target analyte(s) in the laboratory. An MS analysis provides a measure of the method accuracy. A MSD is an additional sample same as the MS and is used to determine the precision of the method. Three times the normal sample volume will be collected for MS/MSD laboratory QC samples. Laboratory QC samples will be labeled as such on sample bottles and chain-of-custody forms.

For each sampling event that includes decontamination of sampling equipment for soil an equipment blank should be taken for each matrix and be analyzed for the analytes reported in that matrix. One equipment blank should be taken per matrix for each event, week or 20 normal samples, whichever is more frequent.

One temperature blank will be included with each cooler shipment containing soil and water samples (regardless of targeted analysis) sent to the laboratory. Temperature blanks provide a means of verifying that samples have been maintained at the proper temperature (0-6 degrees Celsius) following collection and during transport to the laboratory. The laboratory will supply the temperature blank as part of each bottle order request (to be returned with the batch of samples).

3.5 Waste Management

Soil (cuttings) and liquid (decontamination fluids) investigation-derived waste generated during sampling activities will be stored in U.S. Department of Transportation-approved drums and sampled to determine waste characteristics before being disposed of at an approved, offsite disposal facility in compliance with applicable laws and regulations.

3.6 Estimated Project Schedule

Sampling activities are intended to be conducted immediately prior to removal action activities to refine the proposed removal action activities and are expected to be completed within 2 weeks.

3.7 Reporting

Sampling activity results will be used to refine proposed removal action activities. Prior to establishing the proposed removal action activities, proposed removal action areas, based on sample results, will be
shared with DTSC to verify compliance with removal action objectives. Following completion of removal action activities, the proposed sampling activity results will be described in a post-construction report.

This report will incorporate investigation results and include the following:

- A brief description of the site
- Modifications to the sampling plan presented in this work plan that are based on field conditions
- Field activity results
- Figures showing the site vicinity and sampling locations
- Tables summarizing laboratory analytical data for soil samples
- Data quality evaluation report
- Supporting documentation, such as chain-of-custody forms, analytical reports, lithologic logs, and field documentation
- Conclusions from the investigation and recommendations, as appropriate
4. References


CH2M HILL, Inc. (CH2M). 2006. Remedial Investigation, Beverly Hills Land Corporation Site, 9315 Civic Center Drive, Beverly Hills, CA.


Figures
Pre-Construction Investigation Work Plan
Union Pacific Railroad Beverly Hills Site,
9315 Civic Center Drive,
Beverly Hills, California
Figure 2-1a
Pre-Construction Investigation Work Plan
Union Pacific Railroad Beverly Hills Site,
9315 Civic Center Drive,
Beverly Hills, California

Soil Sample Location:

Legend:

Site
County Parcels
Soil Sample Location
Sampling Grid

Notes:
Location ID
Sample Depth
Soil Concentration (mg/kg)
Soil Concentration (Field Duplicate) (mg/kg)

mg/kg = milligrams per kilogram

1 inch = 61 feet
CALIFORNIA ENVIRONMENTAL QUALITY ACT
INITIAL STUDY

The Department of Toxic Substances Control (DTSC) has completed the following document for this project in accordance with the California Environmental Quality Act (CEQA) [Pub. Resources Code, div. 13, § 21000 et seq] and accompanying Guidelines [Cal. Code Regs., tit. 14, § 15000 et seq].

PROJECT TITLE:
Union Pacific Railroad Beverly Hills Removal Action Workplan

CALSTARS CODING:
301247

PROJECT ADDRESS:
9315 Civic Center Drive

CITY:
Beverly Hills

COUNTY:
Los Angeles

PROJECT SPONSOR:
Union Pacific Railroad Company (UPRR)

CONTACT:
Kristen Stevens
Union Pacific Railroad

PHONE:
(562) 756-0076

APPROVAL ACTION UNDER CONSIDERATION BY DTSC:

- [ ] Initial Permit Issuance
- [x] Removal Action Workplan
- [ ] Permit Renewal
- [ ] Permit Modification
- [ ] Closure Plan
- [ ] Remedial Action Plan
- [ ] Interim Removal
- [ ] Regulations

STATUTORY AUTHORITY:

- [ ] California H&SC, Chap. 6.5
- [ ] California H&SC, Chap. 6.8
- [x] Other (specify): H&SC 25355.5 (a)(1)(C)

DTSC PROGRAM/ ADDRESS:
Department of Toxic Substances Control
Site Mitigation and Restoration Program
9211 Oakdale Avenue
Chatsworth, California 91311

CONTACT:
Sara Vela

PHONE:
(818) 717 - 6618

PROJECT DESCRIPTION:
The California Department of Toxic Substances Control (DTSC), pursuant to authority granted under Chapter 6.8 Section 25355.5 (a)(1)(C) of the Health and Safety Code (H&SC), is considering approval of a draft Removal Action Workplan (RAW) for the proposed project hereinafter the “Site” or “Project Area” or “Area of Potential Effect” (APE), as submitted by the Jacobs Engineering Group, Inc. (Jacobs) on behalf of the Union Pacific Railroad Company (UPRR). The purpose of the project is to minimize human exposure to elevated levels of arsenic in soil that exceeds the project-specific cleanup levels for potential commercial, multi-use, and multiple unit housing purposes at the Site.

The RAW evaluates removal action alternatives and identifies a preferred removal action based on comparative analysis of alternatives. The preferred removal action (Alternative #5) for the Site includes excavation and disposal of 4,400 cubic yards of arsenic-impacted soil up to 2 feet below ground surface (bgs) and disposal of contaminated soil at an appropriately permitted landfill and establishment of a 2-foot soil cover. Up to approximately 4,400 cubic yards of clean imported soil may be used to backfill the excavations. However, if approved development of the Site is conducted concurrently with remedial excavation activities, some areas may not be backfilled to accommodate development plans. Results from previous investigations (CH2M HILL, Inc., 2006) indicate that concentrations of arsenic in soil range from 16 to 996 mg/kg, with the highest concentrations observed in soil (primarily within fill material) from 0 to 5 feet bgs along the center of the Site, which is a former railroad right-of-way. The proposed project is anticipated to commence following approval of the RAW and would take approximately 6 weeks to complete.

Upon completion of the RAW, a Land Use Covenant (LUC) in the form of deed restrictions/Institutional Controls (IC’s) will be implemented and filed with the property deed at the County Recorder’s Office to prohibit future soil disturbances unless conducted and managed in accordance with a DTSC-approved Soil Management Plan, prohibit the use of the property as a single-family residences, hospital, school, daycare center and limit the Site use to commercial, multi-use, and multiple unit housing purposes.
DTSC is overseeing the Removal Action at the Site under a Voluntary Cleanup Agreement (VCA) (Docket No. HSA 04/05-066) with the UPRR. Information on the site is available on DTSC’s website at http://www.envirostor.dtsc.ca.gov/public/.

DTSC’s Envirostor database number for this Site is 19400017, and the site code is 301247.

PROJECT BACKGROUND

From 1926 to approximately 1998, the Site was occupied by the railroad right-of-way (CH2M HILL, Inc., 2006). Aerial photographs indicate that the railroad, operated by the Pacific Electric Railway Company, was active from 1928 until between 1971 and 1979 (Lindmark, 1998). Aerial photographs from years 1952, 1969, 1970, 1979, 1986, 1988, 1990, 1993, 1995, and 1998, do not indicate evidence that the Site had been used for any purpose other than a railroad right-of-way (either active or inactive).

Union Pacific Railroad Company (UPRR), the successor in interest to Pacific Electric Railway Company, transferred the Site to the Beverly Hills Land Company (BHLC) in 1998. BHLC is the current owner of the Site. The Site is currently designated as a “Railroad” in the City’s General Plan Land Use Map and is zoned “T-1”. A “T-1” zoning allows for railroad-related uses, and certain other uses as provided in Title 10 (Land Use and Zoning) of the Beverly Hills Municipal Code. The actual future development and use of the Site will require compliance with applicable laws (including zoning and land use) that are in effect at such time.

Previous environmental investigations at the Site were conducted from 1998 through 2010. Sampling for several contaminants (for example, VOCs, metals, TPH, SVOCs, herbicides, PCBs, and creosote) identified soil contamination from arsenic. Results from previous investigations indicate that concentrations of arsenic in soil range from 16 to 996 mg/kg, with the highest concentrations observed in soil (primarily within fill material) from 0 to 5 feet bgs along the center of the former railroad right-of-way. With few exceptions, the highest concentrations of arsenic in soils are within the shallow soils along the centerline of the Site and decrease in concentrations away from the centerline of the Site. The source of elevated concentrations of arsenic present in shallow soils along the centerline of the Site is unknown. Human receptors may be exposed to arsenic in soil through ingestion of soil and dermal contact with the soil.

Groundwater has been encountered at depths from 45-52 feet bgs and is not impacted with arsenic from the Site.

STAGING AND MOBILIZATION

Prior to conducting field activities, applicable permits will be obtained. The contractor will delineate the equipment staging areas, access routes, and temporary soil stockpile locations as necessary. Site preparation activities include: marking of excavation boundaries, utility clearance, installation of barriers and/or privacy fencing), and installation of traffic control features. All necessary equipment and personnel will be mobilized to the Site prior to the initiation of remedial excavation activities.

The Site will be fenced during the removal actions. The existing fence will serve to separate the work zones from the surrounding community, provide protection for the equipment, allow site control for a safe working environment, and prevent unauthorized entry into the work zone.

During work activities, site access will be limited to authorized personnel. Equipment and truck access and egress to and from Lots 12 and 13 during the removal action will be from Civic Center Drive. A lane closure will likely be required on Santa Monica Boulevard for staging of equipment and trucks to complete the removal action for the Triangle Section. During off-work hours, access to the Site will be restricted by locking the gate.

Construction equipment will be mobilized to the Site to conduct the excavation and transportation activities. A typical list of equipment to be utilized includes, but is not limited to the following, with the contractor responsible for ultimate selection based on their preferred means and methods:

- Hydraulic excavator with buckets, sheep’s foot, tampers, rollers, etc.
- Water trucks and water tanks
- Front end loader
- Haul trucks
- Erosion control, dust control, and stockpile management materials

Soil will be stockpiled or loaded into hauler trucks or roll-off bins. Truck boxes or roll-off bins will be covered with a secured tarp before they leave the Site. Field activities during the proposed remedial action are not expected to exceed City of Beverly Hills noise ordinance guidelines. Soil removal activities will take place only between the City of Beverly Hills permitted construction hours of 8:00 a.m. and 6:00 p.m. Monday through Friday. Excavation will
consist of removing 6,600 tons (4,400 cubic yards) of impacted soil in trucks with a capacity of 20 tons per load, requiring an estimated 330 truckloads of soil to leave the Site. It is estimated that up to 11 trucks per day will be leaving the Site during an approximate 6-week period. Up to 6,600 tons (4,400 cubic yards) of clean backfill may be imported in trucks with a capacity of 25 tons per load, requiring an estimated 264 truckloads of soil to enter the Site. It is estimated that up to 9 trucks per day will be entering the Site during an approximate 6-week period. Open-top trailers will be covered before leaving the Site. Truck traffic through the City of Beverly Hills will be limited to between 7:30 a.m. and 4:00 p.m. Truck traffic will be managed through implementation of a Traffic Management Plan that will maintain traffic circulation and safety.

PROJECT ACTIVITIES

The remedial activities proposed in the RAW include the following:

- **Soil Excavation** consisting of removing 6,600 tons (4,400 cubic yards) of arsenic-impacted soil from several areas within the Site:
  - Excavation will be performed in accordance with the guidelines presented in California Occupational Safety and Health Administration, Title 8, California Code of Regulations (CCR) (i.e., 8 CCR), Division 1, Chapter 4, Subchapter 4, Article 6 – Excavations (Sections 1539 through 1541).
  - Excavations for the removal action will be up to 2 feet bgs.
  - Removal will be accomplished with a backhoe or excavator. Soil stockpiling will be conducted in accordance with the remediation waste staging requirements in HSC, Division 20, Chapter 6.5, Article 2, Section 25123.3[b][4][B]).
  - The stockpiles will be composite sampled for arsenic and other analytes as required by the disposal facilities for profiling for disposal will be collected for every 500 cubic yards of stockpiled material. For the first 500 cubic yards of excavated soils, two samples will be taken for every 100 cubic yards, after 500 cubic yards has been sampled then one sample per every 500 cubic yards will be taken for waste disposal classification. The profiling analytical data will be reviewed to determine the appropriate soil classification (non-hazardous, non-RCRA hazardous or RCRA hazardous) and to select the appropriate disposal facility. However, the soil is expected to be non-hazardous. DTSC will be notified and will approve the proposed determination and disposal facility.
  - Upon selection of the appropriate disposal facility, soil will be loaded into trucks for transport to the disposal facility. Loading will be conducted with a front end loader. Dust control during loading will be implemented by limiting the drop height from the loader and with water spray. All trucks will be tarped and dry brushed prior to leaving the Site.
  - Stockpile areas will be inspected for contamination and remediated as necessary within 30 days after the last stockpile is removed.
  - Confirmation sampling and analysis for arsenic will be conducted to determine residual concentrations remaining at the Site and whether the removal goals have been met.
  - At completion of excavation activities, the excavations will be backfilled with up to 4,4000 cubic yards or approximately 264 truckloads of imported clean soil (approximately 9 truckloads per day), and the backfilled soil will be compacted. If approved development of the Site is conducted concurrently with remedial excavation activities, some areas may not be backfilled to accommodate development plans.
  - During the proposed excavation, no unauthorized persons will be allowed within the working exclusion and control zones on-site. The Site is currently surrounded by an existing permanent fence with gates that are locked after business hours. Additionally, barrier fences will be installed to restrict access to sensitive areas such as exclusion zones.
  - Clean backfill material and surrounding remaining soil with concentrations below the removal action goals will establish a 2-foot soil cover to reduce exposure to arsenic-impacted soil remaining below 2 feet bgs.
  - Soil cover inspection will be conducted in accordance with a maintenance and monitoring plan.

LAND USE COVENANTS (LUC)/INSTITUTIONAL CONTROLS

In addition to the physical elements described above, the preferred alternative would include Land Use Controls (LUC) and Institutional Controls (IC’s) formally adopted that restrict the following activities at the Site:
A deed notice will be recorded to notify the public about the existence of the contamination. ICs will be implemented that would restrict single family residential development, and soil disturbance without DTSC approval.

A plan will be developed to specify the roles and responsibilities for implementing, monitoring, and enforcing the ICs.

Five-year reviews and reporting will be conducted to ensure the continued effectiveness of the ICs.

As part of the RAW, a maintenance and monitoring plan would be prepared to specify all monitoring requirements associated with the remediation. Monitoring would ensure that the remedy remains in place and be effective.

**PERMITS AND NOTIFICATIONS:**

Prior to excavation activities, grading permits will be obtained for the project. The work will conform to applicable codes for dust control, erosion control, and disposal.

Permits will be available at the Site throughout the duration of the project.

Notification to the California Division of Occupational Safety and Health of the excavation activities to be performed at the Site.

**SUPPRESSION OF FUGITIVE DUST EMISSIONS**

Dust control measures will include: wet suppression of exposed soil during excavation, loading and unloading of contaminated soil, and backfill operations; trucks transporting impacted soil will be covered with tarps and the covers secured prior to leaving the Site; trucks will be cleaned prior to leaving the site; reduce speed on unpaved areas, and limit on-site traffic speed; cover and secure stockpiles and exposed areas at the end of each workday; and post signs on the fence surrounding the property, with DTSC contact information, for community use in the event of dust or other site-related issues during non-work hours. These dust control measures are consistent with the rules and Best Management Practices requirements of the South Coast Air Quality Management District (SCAQMD).

**AIR MONITORING**

Air monitoring will be conducted for the protection of nearby residents, on-site workers and the general public. Perimeter air monitoring will consist of air sampling at the Site boundaries routinely during excavation activities to verify the effectiveness of the dust control measures. Air sampling for inhalable contaminants using real-time, data logging aerosol monitors will be conducted during the earth movement work.

The proposed excavation areas and stockpile areas will not be adjacent to any off-site residence. Excavation areas will be controlled with physical barriers (e.g., perimeter fencing with wind screen) and air monitoring will be conducted throughout the duration of excavation, transportation activities, and backfill operations to ensure that dust levels do not exceed the fence line community action level. Removal action activities are expected to take approximately six weeks.

**PROJECT COMPLETION**

Temporary impacts resulting from project construction activities, including noise, dust, and traffic, are expected to last up to six weeks. During the excavation work, confirmation sampling will be conducted to verify that all soils containing arsenic have been properly removed at the Site. Excavation will continue until arsenic in Site soils are found to be less than corresponding removal action goals. Excavation areas will be backfilled with clean soil and the site will be seeded.

**PROJECT SCHEDULE:**

The Removal Action (excavation with off-site disposal and soil cover) will be completed within six weeks.

Figures:
Figure 1 – Site Location

Attachments:
ENVIRONMENTAL IMPACT ANALYSIS:

1. Aesthetics

Project Activities Likely to Create an Impact: None

Description of Baseline Environmental Conditions: The Project Site is a vacant undisturbed open space located along a paved, urbanized residential/commercial area, devoid of scenic vistas and surrounded by public roads with Santa Monica Boulevard bordering the Site on the northern site boundary. No aesthetic or scenic resources or vistas are present in the vicinity of the Site. The Site is a relatively flat open area with no/few trees or opportunities for scenic views adjacent to the Site. Project activities will not obstruct scenic resources or degrade the existing visual character of the area, including, but not limited to, trees, rock outcroppings, or historic buildings and will remain equivalent to existing conditions. No aesthetics impacts will occur from project activities no changes to visual appearance of the Site will result from project activities. No change to the visual appearance of the Site will occur because no designated scenic or county highways are in the vicinity of the Site (California Scenic Highway Mapping System, 2019). No rock outcroppings or historic buildings within a state scenic highway would be affected because no such resources are present on or near the Site. Implementation of the proposed project will not contribute to additional light within the Site area. The proposed project activities will take place during daylight hours and no changes in lighting will result from project activities, no impacts will occur to aesthetics from lighting. Because no aesthetics impacts would occur from project activities, no further analysis is deemed necessary.

Analysis as to whether or not project activities would:

a. Have a substantial adverse effect on a scenic vista.

Impact Analysis:

Conclusion:
- Potentially Significant Impact
- Less Than Significant With Mitigation Incorporated
- Less Than Significant Impact
- No Impact

b. Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings and historic buildings within a state scenic highway.

Impact Analysis:

Conclusion:
- Potentially Significant Impact
- Less Than Significant With Mitigation Incorporated
- Less Than Significant Impact
- No Impact

c. In nonurbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?

Impact Analysis:

Conclusion:
- Potentially Significant Impact
- Less Than Significant With Mitigation Incorporated
- Less Than Significant Impact
- No Impact

d. Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area.

Impact Analysis:
Conclusion:
☐ Potentially Significant Impact
☐ Less Than Significant With Mitigation Incorporated
☐ Less Than Significant Impact
☒ No Impact

References used:
- RAW, 2019.
- Google Earth;
- California Department of Transportation Scenic Highway Mapping System, Website accessed 2019.
- http://www.dot.ca.gov/hq/LandArch/scenic_highways/

2. Agricultural and Forestry Resources

Project Activities Likely to Create an Impact: None.

Description of Baseline Environmental Conditions: The Site is vacant undisturbed land, located within an urban commercial/residential setting. No agricultural activities will occur onsite or near the Site. The Site is located on land previously used by the Pacific Electric Railway Company. None of the soils identified on the Site are designated by the California Department of Conservation (CDC) to be Prime Farmland. The CDC has determined that the soils within the Site are designated as either Other Land or Urban and Built-Up Land. Project activities will not convert prime farmland, unique farmland or farmland with statewide importance, Farmland Mapping and Monitoring Program of the California Resources Agency, or conflict with the existing zoning, agricultural or the Williamson Act. The proposed project involves the removal of contaminated soil at property located within an urbanized environment, surrounded by residential and commercial land uses, and devoid of agricultural resources. The proposed project will not require any modification to the property that would convert the classification of farmland to a non-agricultural use or conflict with zoning for agricultural use or a Williamson Act contract. Therefore, no further analysis is deemed necessary.

Analysis as to whether or not project activities would:

a. Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland) as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use.

Impact Analysis:

Conclusion:
☐ Potentially Significant Impact
☐ Less Than Significant With Mitigation Incorporated
☐ Less Than Significant Impact
☒ No Impact

b. Conflict with existing zoning or agriculture use, or Williamson Act contract.

Impact Analysis:

Conclusion:
☐ Potentially Significant Impact
☐ Less Than Significant With Mitigation Incorporated
☐ Less Than Significant Impact
☒ No Impact

c. Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g)).

Impact Analysis:

Conclusion:
☐ Potentially Significant Impact
☐ Less Than Significant With Mitigation Incorporated
d. Result in the loss of forest land or conversion of forest land to non-forest use.

Impact Analysis:

Conclusion:

- Potentially Significant Impact
- Less Than Significant With Mitigation Incorporated
- Less Than Significant Impact
- No Impact

References:
- City of Beverly Hills 2010, General Plan
  http://www.conservation.ca.gov/dlrp/lca/Pages/Index.aspx
- City of Beverly Hills Zoning Map

3. Air Quality

Project Activities Likely to Create an Impact:

- Presence and operation of excavation and construction equipment (may include excavator, backhoe, and/or front-end loader) and field staff vehicles;
- Generation of fugitive dust and particulates at the excavation zone, decontamination areas, general work areas, stockpile areas;
- Truck loading areas, truck staging/parking areas, and truck routes;
- Excavation of impacted soil by using appropriate construction equipment, and loading excavated soil and debris onto dump trucks;
- Transportation of impacted soil to appropriate off-site permitted disposal facilities;
- Transportation of clean fill material from off-site locations onto the project Site; and
- Backfill of excavated areas using clean fill materials.

Description of Baseline Environmental Conditions: The project is located within the South Coast Air Basin (SCAB), a 6,600 square-mile area which consists of the non-desert portions of the Los Angeles, Riverside, and San Bernardino Counties, and all of Orange County. The SCAB is generally characterized as having mild climate with cool breezes, occasionally interrupted by periods of extremely hot weather, winter storms, or Santa Ana winds. The SCAB is an area of high air pollution potential and is under the jurisdiction of the SCAQMD. The SCAB has been designated a nonattainment area for federal and/or state standards for ozone (O₃), particulate matter with aerodynamic diameter less than or equal to 10 microns (PM₁₀), and particulate matter with aerodynamic diameter less than or equal to 2.5 microns (PM₂.₅). SCAQMD monitors air quality in Los Angeles, Orange and Riverside Counties and has adopted an Air Quality Management Plan (AQMP) to reduce air pollution to healthy levels.

The U.S. Environmental Protection Agency established national ambient air quality standards (NAAQS) pursuant to adoption of the federal Clean Air Act. The California Air Resources Board (CARB) established California ambient air quality standards (CAAQS) under the mandate of the Mulford-Carrell Act. CAAQS have been established for O₃, carbon monoxide (CO), nitrogen dioxide (NO₂), sulfur dioxide (SO₂), PM₁₀, PM₂.₅, lead, sulfates, hydrogen sulfide, vinyl chloride and visibility reducing particles. Local control in air quality management is provided by the State through air pollution control districts or air quality management districts, including the SCAQMD for the Site area. SCAQMD monitors air quality...
quality in the SCAB and has adopted an AQMP to reduce air pollution to healthful levels. A summary of NAAQS and CAAQS is provided in Table 1 and potential health effects in Table 2.

The annual average temperature for the Site area is 63.5 degrees Fahrenheit (°F) with a mean daily maximum temperature of 71.6 °F and a mean daily minimum temperature of 55.5 °F. Prevailing winds are relatively light to moderate breezes from both the easterly and westerly directions. Normal winds rarely exceed 12 miles per hour (MPH). Greatest wind velocities are generally associated with the Santa Ana Winds season, typically in late October through November, and can reach 80+ MPH.

Analysis as to whether or not project activities would:

a. Conflict with or obstruct implementation of the applicable air quality plan.

Impact Analysis: The Site is located in the SCAQMD’s Northwest Coastal Los Angeles (Area 2) area. The proposed soil removal activities, as listed above, will not conflict with or obstruct implementation of the applicable air quality plan. The proposed project activities (e.g., excavation and backfilling) might cause potential short-term (estimated to be approximately 6 weeks) emissions of particulate matter and/or equipment exhaust. Stationary and mobile sources of air emissions and odor include excavation of impacted soil and backfilling of clean soil using appropriate construction equipment, which may include excavators, backhoes, and loaders; loading impacted soil into trucks; and unloading clean soil at the Site.

SCAQMD has two rules which address excavation (Rules 1150 and 1166) and two rules which addresses fugitive dust (Rule 403 and 1466). Rule 1150 applies to the excavation of sanitary landfills and does not apply to this project. Rule 1166 applies to the excavation of soils containing volatile organic compounds (VOCs). VOCs are not a COC at the Site; therefore, Rule 1166 does not apply to this project.

Elements of Rule 1466, applies to any owner or operator conducting earth-moving activities of soil with applicable toxic air contaminant(s) as defined in paragraph (c)(15) of the rule that have been identified as contaminant(s) of concern at a site. The rule focuses on the toxic air contaminants listed in Table I of the rule. The provisions in Rule 1466 include ambient PM10 monitoring, dust control measures, notification, signage, and recordkeeping requirements. Rule 1466 allows for alternative dust control measures, ambient dust concentration limits, and other provisions provided they are approved by the Executive Officer. The rule does not apply to earth-moving activities of soil with applicable toxic air contaminant(s) of less than 50 cubic yards. Protocols for control of potential dust emissions, have been incorporated into the project. Excavation, backfilling, loading/unloading, and transport of impacted and clean soils will follow Rule 1466 prevention, reduction, and control measures for dust emissions. However, notification to the SCAQMD is required only for large operations (disturbing more than 50 acres or moving more than 5,000 cubic yards per day). Therefore, no notification or filing of a Fugitive Dust Emission Control Plan is required due to the project size.

Air quality impacts are determined according to the criteria set by the federal, state and local pollution standards. The short term impacts of the criteria air pollutants (i.e., VOC, CO, NO₂, SO₂, PM₁₀, and PM₂.₅) emitted by the fugitive dust and construction equipment during construction activities have been analyzed. Control measures will be instituted to prevent excessive amounts of fugitive dust and vehicle emissions, as necessary, during all phases of project implementation. The SCAQMD Guidelines describe such measures.
### Table 1. Federal and State Ambient Air Quality Standards

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Averaging Time</th>
<th>NAAQS (ppm) (µg/m³)</th>
<th>CAAQS (ppm) (µg/m³)</th>
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</thead>
<tbody>
<tr>
<td>Ozone (O₃)</td>
<td>8 Hour</td>
<td>0.07 ppm (137 µg/m³)</td>
<td>0.070 ppm (137 µg/m³)</td>
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<tr>
<td></td>
<td>1 Hour</td>
<td>—</td>
<td>0.09 ppm (180 µg/m³)</td>
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<tr>
<td>Carbon Monoxide (CO)</td>
<td>8 Hour</td>
<td>9 ppm (10 mg/m³)</td>
<td>9 ppm (10 mg/m³)</td>
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<tr>
<td></td>
<td>1 Hour</td>
<td>35 ppm (40 mg/m³)</td>
<td>20 ppm (23 mg/m³)</td>
</tr>
<tr>
<td>Nitrogen Dioxide (NO₂)</td>
<td>Annual</td>
<td>0.053 ppm (100 µg/m³)</td>
<td>0.030 ppm (57 µg/m³)</td>
</tr>
<tr>
<td></td>
<td>Arithmetic Mean</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>1 Hour</td>
<td>0.100 ppm (188 µg/m³)</td>
<td>0.18 ppm (339 µg/m³)</td>
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<tr>
<td>Sulfur Dioxide (SO₂)</td>
<td>24 Hour</td>
<td>—</td>
<td>0.04 ppm (105 µg/m³)</td>
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<tr>
<td></td>
<td>3 Hour</td>
<td>0.5 ppm (1,300 µg/m³)</td>
<td>—</td>
</tr>
<tr>
<td></td>
<td>1 Hour</td>
<td>0.075 ppm (196 µg/m³)</td>
<td>0.25 ppm (655 µg/m³)</td>
</tr>
<tr>
<td>Respirable Particulate Matter (PM₁₀)</td>
<td>Annual Arithmetic Mean</td>
<td>—</td>
<td>20 µg/m³</td>
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<tr>
<td></td>
<td>24 Hour</td>
<td>150 µg/m³</td>
<td>50 µg/m³</td>
</tr>
<tr>
<td>Fine Particulate Matter (PM₂.₅)</td>
<td>Annual Arithmetic Mean</td>
<td>12 µg/m³</td>
<td>12 µg/m³</td>
</tr>
<tr>
<td></td>
<td>24 Hour</td>
<td>35 µg/m³</td>
<td>—</td>
</tr>
<tr>
<td>Sulfates (SO₄)</td>
<td>24 Hour</td>
<td>—</td>
<td>25 µg/m³</td>
</tr>
<tr>
<td>Lead</td>
<td>30 Day Average</td>
<td>—</td>
<td>1.5 µg/m³</td>
</tr>
<tr>
<td></td>
<td>Rolling 3- Month Average</td>
<td>0.15 µg/m³</td>
<td>—</td>
</tr>
<tr>
<td>Hydrogen Sulfide (H₂S)</td>
<td>1 Hour</td>
<td>—</td>
<td>0.03 ppm (42 µg/m³)</td>
</tr>
<tr>
<td>Vinyl Chloride (chloroethene)</td>
<td>24 Hour</td>
<td>—</td>
<td>0.01 ppm (26 µg/m³)</td>
</tr>
<tr>
<td>Visibility Reducing Particulates</td>
<td>8 Hour</td>
<td>—</td>
<td>Extinction coefficient of 0.23 per kilometer— visibility of 10 miles or more due to particles when relative humidity is less than 70 percent.</td>
</tr>
</tbody>
</table>

**SOURCE:** California Air Resources Board, Ambient Air Quality Standards, [http://www.arb.ca.gov/research/aaqs/CAAQS/CAAQS.htm](http://www.arb.ca.gov/research/aaqs/CAAQS/CAAQS.htm), accessed October 23, 2019

---

### Table 2. Potential Health Effects of Air Pollutants

<table>
<thead>
<tr>
<th>Air Pollutant</th>
<th>Primary Source</th>
<th>Primary Health and Welfare Effects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lead (Pb)</td>
<td>Contaminated soil</td>
<td>Behavioral and hearing disabilities in children; Nervous system impairment</td>
</tr>
<tr>
<td>Sulfur Dioxide (SO₂)</td>
<td>Combustion of sulfur-containing fossil fuels; Smelting of sulfur-bearing metal ores; Industrial processes</td>
<td>Aggravation of respiratory diseases (asthma, emphysema); Reduced lung function</td>
</tr>
<tr>
<td>Carbon Monoxide (CO)</td>
<td>Incomplete combustion of fuels and other carbon-containing substances, such as motor vehicle exhaust; Natural events, such as decomposition of organic matter</td>
<td>Aggravation of some heart diseases (angina); Reduced tolerance for exercise; Impairment of mental function; Impairment of fetal development; Death at high levels of exposure</td>
</tr>
<tr>
<td>Nitrogen Dioxide (NO₂)</td>
<td>Motor vehicle exhaust; High-temperature stationary combustion; Atmospheric reactions</td>
<td>Aggravation of respiratory illness</td>
</tr>
</tbody>
</table>
Table 2. Potential Health Effects of Air Pollutants

<table>
<thead>
<tr>
<th>Air Pollutant</th>
<th>Primary Source</th>
<th>Primary Health and Welfare Effects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ozone (O₃)</td>
<td>Atmospheric reaction of organic gases with nitrogen oxides in sunlight</td>
<td>Aggravation of respiratory and cardiovascular diseases; Reduced lung function, Increased cough and chest discomfort</td>
</tr>
<tr>
<td>Fine Particulate Matter (PM₁₀ and PM₂.₅)</td>
<td>Stationary combustion of solid fuels; Construction activities; Industrial processes; Atmospheric chemical reactions</td>
<td>Reduced lung function; Aggravation of respiratory &amp; cardio-respiratory diseases; Increases in mortality rate; Reduced lung function growth in children</td>
</tr>
</tbody>
</table>


In an effort to monitor the various concentrations of air pollutants throughout the SCAB, the SCAQMD has divided the region into 38 source receptor areas (SRA). The Site is located within SRA 2, which covers Northwest Coastal Los Angeles County. SCAQMD maintains an air quality monitoring station in this area. Criteria pollutants monitored at this station include CO, NO₂, and O₃. Table 3 shows a three year summary (2016 to 2018) of data collected at this station and identifies the corresponding CAAQS, if those standards are exceeded.

Table 3. 2016 – 2018 Criteria Pollutant Violations

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Pollutant Concentration &amp; Standards</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ozone (O₃)</td>
<td>Maximum 1-hr Concentration (ppm)</td>
<td>0.085</td>
<td>0.099</td>
<td>0.094</td>
</tr>
<tr>
<td></td>
<td>Days &gt; 0.09 ppm (State 1-hr standard)</td>
<td>0</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Maximum 8-hr Concentration (ppm)</td>
<td>0.073</td>
<td>0.077</td>
<td>0.073</td>
</tr>
<tr>
<td></td>
<td>Days &gt; 0.07 ppm (State 8-hr standard)</td>
<td>2</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Carbon Monoxide (CO)</td>
<td>Maximum 1-hr Concentration (ppm)</td>
<td>2.2</td>
<td>2.0</td>
<td>1.6</td>
</tr>
<tr>
<td></td>
<td>Maximum 8-hr Concentration (ppm)</td>
<td>1.1</td>
<td>1.2</td>
<td>1.3</td>
</tr>
<tr>
<td>Nitrogen Dioxide (NO₂)</td>
<td>Maximum 1-hr Concentration (ppm)</td>
<td>0.0545</td>
<td>0.0557</td>
<td>0.0647</td>
</tr>
<tr>
<td></td>
<td>Annual Arithmetic Mean Concentration (ppm)</td>
<td>0.0116</td>
<td>0.0102</td>
<td>0.0126</td>
</tr>
<tr>
<td>Sulfur Dioxide (SO₂)</td>
<td>Maximum 1-hr Concentration (ppm)</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td></td>
<td>Maximum 24-hr Concentration (ppm)</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>PM₂.₅</td>
<td>Maximum 24-hr Concentration (µg/m³)</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td></td>
<td>Annual Arithmetic Mean Concentration (µg/m³)</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>PM₁₀</td>
<td>Maximum 24-hr Concentration (µg/m³)</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td></td>
<td>Annual Arithmetic Mean Concentration (µg/m³)</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Particulates</td>
<td>Maximum 24-hr Concentration (µg/m³)</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td></td>
<td>Annual Arithmetic Mean Concentration (µg/m³)</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Lead</td>
<td>Maximum Monthly Average Concentration (µg/m³)</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td></td>
<td>Maximum Quarterly Average Concentration (µg/m³)</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Sulfate</td>
<td>Maximum 24-hr Concentration (µg/m³)</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>


N/A - Pollutant not monitored

Air quality impacts are determined according to the criteria set in the federal, State, and local pollution standards/regulations. Impacts would be considered significant if the proposed project emissions exceeded any of the criteria in Table 4:
Table 4. Air Quality Significance Thresholds (Mass Daily)

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Construction Threshold (lbs/day)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Volatile Organic Compounds (VOCs) [Reactive Organic Gases (ROGs)]</td>
<td>75</td>
</tr>
<tr>
<td>Carbon Monoxide (CO)</td>
<td>550</td>
</tr>
<tr>
<td>Nitrogen Oxides (NOₓ)</td>
<td>100</td>
</tr>
<tr>
<td>Sulfur Dioxide (SO₂)</td>
<td>150</td>
</tr>
<tr>
<td>Fine Particulate Matter (PM₂.₅)</td>
<td>55</td>
</tr>
<tr>
<td>Respirable Particulate Matter (PM₁₀)</td>
<td>150</td>
</tr>
<tr>
<td>Lead</td>
<td>3</td>
</tr>
</tbody>
</table>


Excavation, backfilling, loading/unloading, and transport of impacted and clean soils will follow applicable or relevant and appropriate requirements, including Rule 1466 prevention, reduction, and mitigation measures for fugitive dust emissions. However, notification to the SCAQMD is required only for large operations (disturbing more than 50 acres or moving more than 5,000 cubic yards per day). The RAW site area is approximately 5 acres and the entire project is expected to move approximately 8,800 cubic yards total of soil (including clean import soil) during a 6-week period. Therefore, no notification or filing of a Fugitive Dust Emission Control Plan is required due to project size. The SCAQMD is responsible for regulating sources of air pollution to ensure that the project activities maintain the CAAQS and NAAQS. The SCAQMD has developed regulations to control emissions. At a minimum, the project will evaluate and control potential emissions of particulate matter per Rule 1466 and visible emissions per Rule 401, as applicable.

Conclusion:
- Potentially Significant Impact
- Less Than Significant With Mitigation Incorporated
- Less Than Significant Impact
- No Impact

b. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or State ambient air quality standard?

Impact Analysis: The Final 2016 SCAQMD AQMP (Appendix II, page II-S-1) states: “In the Basin, Ozone (O₃) and fine particulate matter (PM₂.₅, particles less than 2.5 microns in diameter) are the pollutants of primary concern. For these, the U.S. EPA has designated the Basin as a nonattainment area for the NAAQS. The Basin had the highest number of days exceeding the federal ozone NAAQS of any urban area nationwide in 2015. State standards for ozone, PM₂.₅, and PM₁₀ are also not met in the Basin. The Basin is in attainment of the lead (Pb) NAAQS, with the final near-source monitoring location below the standard throughout the 2012 through 2015 time period. The District will request that U.S. EPA re-designate the Los Angeles County portion of the Basin as attainment for lead.” SCAQMD Guidelines provide that construction projects using typical construction equipment that emit precursors of O₃ are accommodated in the emission inventories of State and federally-required air plans and would not have a significant impact on the attainment and maintenance of O₃. Similarly, projects that do not exceed the thresholds of significance for PM₁₀ and PM₂.₅ would not be expected to have a significant impact on the attainment and maintenance of PM₁₀ and PM₂.₅.

As discussed above, potential emissions during the project construction activities would be monitored within the work area and the perimeter of the Site to ensure that applicable SCAQMD threshold limits for air pollutants would not be exceeded, particularly for the nonattainment pollutants PM₁₀ and PM₂.₅, and to comply with applicable provisions of SCAQMD regulations. Additionally, the proposed removal action will not include the construction of stationary sources requiring an Authority to Construct or Permit to Operate and will incorporate a number of project control measures.

The primary potential air quality project impacts would be dust emissions (generated from excavating and backfilling activities) and vehicle emissions (associated with operations of gasoline and diesel powered heavy-duty mobile construction equipment, haul trucks, and passenger vehicles). As discussed below, maximum regional and localized emissions would not exceed the SCAQMD daily significance thresholds. The emissions associated with the proposed RAW project included emissions during site preparation, excavation, backfilling, and transportation. The proposed project will not have a significant adverse impact on air quality, and therefore requires no mitigation measures. The following best management practices will, however; be implemented during the removal action, where feasible, to minimize project emissions.
• Individual truck idling in excess of five consecutive minutes will be prohibited, unless allowed under Title 13 of the California Code of Regulations §2485 (CARB’s Airborne Toxic Control Measure to Limit Diesel-Fueled Commercial Motor Vehicle Idling).

• Suspend the use of all construction equipment during first-stage smog alerts.

• Electricity or alternative fuels for on-site mobile equipment will be used instead of diesel equipment to the extent feasible.

• Electric equipment will be used to avoid emissions from gas or diesel equipment in portions of the project Site where electricity is available.

• Diesel-power construction equipment shall use low-sulfur diesel fuel, as defined in SCAQMD Rule 431.2.

• Suspend any excavating and grading operations when wind speeds (as instantaneous gusts) exceed 25 MPH.

• Minimize disturbed areas during construction.

• Minimize the drop height during soil stockpiling and loading/unloading operations.

• Ensure that all construction equipment is properly tuned and maintained prior to and for the duration of construction.

• Portable engines and portable engine-driven equipment units used at the project work Site, with the exception of on-road and off-road motor vehicles, require CARB Portable Equipment Registration or a SCAQMD permit.

• Dry brush equipment and trucks to remove soil prior to exiting the Site.

• Provide adequate ingress and egress to minimize vehicle idling and traffic congestion.

• All contractors will comply with all applicable SCAQMD rules (including Rule 1466) and regulations in carrying out project activities.

• To reduce the potential for significant hazardous air emissions, the following project controls are included in the RAW:
  o Maintain slow speeds with all vehicles
  o During dumping, minimize soil drop height into transportation trucks or stockpiles
  o During transport, cover or enclose trucks transporting soils
  o Increase freeboard requirements, and repair trucks exhibiting spillage due to leaks
  o Place stockpiled soil in areas shielded from prevailing winds
  o Maintain equipment engines in good condition
  o Cover soil stockpiles during non-work hours to abate dispersion by wind and rain

• Contractors will implement feasible measures, as necessary, to reduce construction emissions during high-emission construction phases from vehicles and other fuel driven construction engines and activities that generate fugitive dust. Specific control measures include:
  o Ensure that all construction equipment is properly serviced and maintained in good operating condition
  o Restricting engine idle time, to the extent practical, to no more than five minutes per Title 13 of the California Code of Regulations §2449 (CARB’s Regulation for In-Use Off-Road Diesel-Fueled Fleets)

• Excavation areas will be controlled with physical barriers (e.g., perimeter fencing with tarps), soil wetting and air monitoring (at property perimeter and work area) to avoid or control dust generation. Water will be used periodically to control any fugitive dust from blowing onto other properties. In times of high wind conditions (e.g., wind speed in excess of 25 MPH), all excavation areas will be securely covered to prevent excessive amounts of dust. The areas that require excavation and earth-moving operation will be minimized to prevent excessive amounts of dust.

• As soil is excavated, it will be temporarily stored in staging areas on-site until off-site transportation and disposal are available. At the staging areas, all excavated soils will be placed on an impermeable barrier and covered with tarps or other proper materials to prevent any runoff and/or dust generation. During non-extraction hours, excavated soil stockpiles will be covered with plastic sheeting or other physical barriers that minimize movement of
materials from the Site by wind, water, or any other mechanism. The temporary on-site storage of excavated soil wastes will be secured and properly labeled with hazardous waste signs until off-site transportation and disposal are ready.

- All excavated or import fill materials will be shipped in trucks covered with tarps.

Several elements of Rule 1466, such as protocols for mitigation of potential fugitive dust emissions, will be implemented. Specific measures will be applied, as follows:

- Particulate dust monitoring to be protective of both worker health and the surrounding community so as not to exceed a total dust action level of 0.05 mg/m³
- A dust monitoring program that will include meteorological monitoring, real-time monitoring using portable aerosol monitors, and confirmation sampling using PM₁₀ high-volume samplers
- Additional dust-suppression techniques such as: applying water on haul roads or paths, wetting equipment and excavation faces, spraying water on excavation-equipment buckets, covering excavated areas and material after excavations cease, and increasing the frequency of misting roads and stockpiles
- Suspension of work if additional suppression techniques fail to reduce particulate levels
- Misting may also be used on soil placed in the transport trucks. After the soil is loaded into the transport trucks, the soil will be covered with a tarp to prevent soil from spilling out of the truck during transport to the disposal facility.
- While on the site, all vehicles will maintain slow speeds (i.e., less than 5 MPH) for safety purposes and for dust control measures. Prior to departure, transport and dump trucks will be cleaned of loose debris clinging to the sides and/or wheels to minimize off-site contaminants.

Daily construction-related regional emissions for the project are presented in the table below (Table 5). As shown, maximum regional emissions would not exceed the SCAQMD daily significance thresholds for ROG, nitrogen oxides (NOₓ), CO, SO₂, PM₂.₅, and PM₁₀. The emissions associated with the proposed RAW project included emissions during site preparation, excavation, backfilling, and transportation. The Maximum Estimated Emissions presented in Table 5 and Table 6 were generated using CalEEMod (Attachment 1).

<table>
<thead>
<tr>
<th>RAW Activities</th>
<th>Maximum Estimated Emissions (pounds per day)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>ROG</td>
</tr>
<tr>
<td>Site Preparation, Excavation, Backfilling, and Transport</td>
<td>1.9</td>
</tr>
<tr>
<td>Maximum Regional Emissions Total</td>
<td>1.9</td>
</tr>
<tr>
<td>Regional Significance Threshold</td>
<td>75</td>
</tr>
<tr>
<td>Exceeds Threshold?</td>
<td>No</td>
</tr>
</tbody>
</table>


Note: Assumptions used with CalEEMod: 4,400 cubic yards excavated, 4,400 cubic yards imported, 5 acres graded; 32 miles one-way trip to closest disposal facility and source of backfill within SCAQMD.

Daily construction-related localized emissions for the RAW project are presented in Table 6. As shown, maximum localized emissions would not exceed the SCAQMD daily significance thresholds for NOₓ, CO, PM₂.₅, and PM₁₀. Localized Significance Thresholds are not applicable for ROG and SO₂. The emissions associated with the proposed RAW project included emissions during site preparation, excavation, and backfilling.

<table>
<thead>
<tr>
<th>RAW Activities</th>
<th>Maximum Estimated Emissions (pounds per day)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>NOₓ</td>
</tr>
<tr>
<td>Site Preparation, Excavation, and Backfilling</td>
<td>17.2</td>
</tr>
<tr>
<td>Maximum Localized Emissions Total</td>
<td>17.2</td>
</tr>
</tbody>
</table>
Localized Significance Threshold | 103 | 562 | 3 | 4
---|---|---|---|---
Exceeds Threshold? | No | No | No | No

Assumed 1 acre with a 25 meter receptor distance.

O₃, PM₁₀, and PM₂.₅ are the nonattainment pollutants for the project area. The proposed removal action is not expected to result in a cumulatively considerable net increase of O₃ because it will utilize typical construction equipment, presumed to be accommodated in the emission inventories of State and federally-required air plans. Similarly, the project is not expected to result in a cumulatively considerable net increase of PM₁₀ or PM₂.₅ because the project’s daily construction-related emissions, presented in Tables 5 and 6, will not exceed the SCAQMD’s regional and localized significance thresholds and will implement a number of fugitive dust control measures required by Rule 1466.

**Conclusion:**  
☐ Potentially Significant Impact  
☐ Less Than Significant With Mitigation Incorporated  
☒ Less Than Significant Impact  
☐ No Impact

c. Expose sensitive receptors to substantial pollutant concentrations.

**Impact Analysis:** The removal action does not expect to expose sensitive receptors to substantial pollutant concentrations. To control emissions of contaminants during remediation activities, air monitoring and dust control measures will be implemented. Air monitoring will be conducted in the work zone and at the Site perimeter, and control measures will be implemented to limit potential impact of contaminant exposure to sensitive receptors, as well as onsite workers and the general public.

The perimeter of the Site is currently enclosed with chain-linked fencing. Entrance to the site will be monitored during working hours. During off-work hours, access to the Site will be restricted by chain-link fence and padlock. Truck boxes or roll-off bins will be covered with a secured tarp before they leave the Site and, at the staging areas, all excavated soils will be placed on an impermeable barrier and covered with tarps or other proper materials to prevent any runoff and/or dust generation. During non-excavation hours, excavated soil stockpiles will be covered with plastic sheeting or other physical barriers that minimize movement of materials from the site by wind, water, or any other mechanism.

**Conclusion:**  
☐ Potentially Significant Impact  
☐ Less Than Significant With Mitigation Incorporated  
☒ Less Than Significant Impact  
☐ No Impact

d. Result in other emissions (such as those leading to odors adversely affecting a substantial number of people).

**Impact Analysis:** The removal action does not expect to emit any objectionable odor to the surrounding community. The proposed project (removal action) will not have a significant adverse impact on air quality. The dust and odor control measures to be implemented at the Site, such as soil wetting during excavation and backfilling, will control potential objectionable odors that may affect a substantial number of people.

**Conclusion:**  
☐ Potentially Significant Impact  
☐ Less Than Significant With Mitigation Incorporated  
☒ Less Than Significant Impact  
☐ No Impact

**References Used:**
- SCAQMD Rule 401 – Visible Emissions
- SCAQMD Rule 1466 – Particulate Emissions from Soil
- SCAQMD Rule 403 – Fugitive Dust
- SCAQMD Rule 431.2 – Sulfur Content of Liquid Fuels
- SCAQMD Rule 1150 – Excavation of Landfill Sites
- SCAQMD Rule 1166 – Volatile Organic Compounds Emissions from Decontaminations of Soil
- 13 CCR 2449 – Regulation for In-Use Off-Road Diesel-Fueled Fleets
- 13 CCR 2485 – Airborne Toxic Control Measure to Limit Diesel-Fueled Commercial Motor Vehicle Idling
4. Biological Resources

Project Activities Likely to Create an Impact: None.

Description of Baseline Environmental Conditions: The Site is located within a highly disturbed, developed, urbanized area, devoid of biological resources with no suitable wildlife habitat present. The surrounding area is comprised of residential and commercial land uses. The Site does not include any native vegetation or other resources that could support sensitive species or utilized as a migration corridor for species movement. Based on the site conditions, no potential exists for movement of species or impediments to native wildlife nursery sites. The proposed soil removal will occur in several areas within the 5 acre Site. No habitat is present for either wildlife or plant resources within the project area. The California Department of Fish and Wildlife’s Natural Diversity Database (CNDDB) was queried on August 5, 2020 to identify species reported within 1-mile of the project site. The CNDDB identified one occurrence of Busck’s gall moth (Carolella busckana) and one occurrence of hoary bat (Lasiurus cinereus), both of which overlap the project site; however, the Busk’s gall moth occurrence was last observed in 1929 and is identified by the CNDDB as extirpated. While both species are tracked by CNDDB as ‘Special Animals’, neither species has any protection under federal or state regulations. No jurisdictional waters of the United States of State of California are present onsite or would be affected offsite by the soil excavation and removal, or result in a take of habitat, disrupt breeding or migration patterns, or affect wetlands/riparian resources as none are located at the Site. There is no Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan are identified for the area of the project area. Because there are no impacts to biological resources, no further analysis is deemed necessary. Analysis as to whether or not project activities would:

a. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service.

Impact Analysis:

Conclusion:

☐ Potentially Significant Impact
☐ Less Than Significant With Mitigation Incorporated
☐ Less Than Significant Impact
X No Impact

b. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service.

Impact Analysis:

Conclusion:

☐ Potentially Significant Impact
☐ Less Than Significant With Mitigation Incorporated
☐ Less Than Significant Impact
X No Impact
c. Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.

Impact Analysis: See b. above.
Conclusion:
☐ Potentially Significant Impact
☐ Less Than Significant With Mitigation Incorporated
☐ Less Than Significant Impact
X No Impact

d. Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.

Impact Analysis:
Conclusion:
☐ Potentially Significant Impact
☐ Less Than Significant With Mitigation Incorporated
☐ Less Than Significant Impact
X No Impact

e. Conflict with local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.

Impact Analysis
Conclusion:
☐ Potentially Significant Impact
☐ Less Than Significant With Mitigation Incorporated
☐ Less Than Significant Impact
X No Impact

f. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

Impact Analysis
Conclusion:
☐ Potentially Significant Impact
☐ Less Than Significant With Mitigation Incorporated
☐ Less Than Significant Impact
X No Impact

References Used:
- California Department of Fish and Wildlife’s California RareFind 5 and Bios 5 Natural Diversity Database (CNDDDB), accessed October 14, 2019.

5. Cultural Resources

Project Activities Likely to Create an Impact: None.

Description of Baseline Environmental Conditions: The Site is located in a highly disturbed, developed, and urbanized residential and commercial area since 1938. The Site itself has been previously disturbed by subsurface activities associated with development, and operational activities. The removal action will not cause a permanent adverse change in the significance of a historical, archaeological, or other cultural resources. The Site is located within residential and commercial areas and surrounded by similar land uses. No unique paleontological resources or geologic features are known to exist onsite. No formal cemetery is located on-site or in close proximity to the property. Aerial photographs from years 1952, 1969, 1970, 1979, 1986, 1988, 1990, 1993, 1995, and 1998 do not indicate evidence that the Site had been used for any purpose other than a railroad right-of-way (either active or inactive).

A Sacred Lands search request was sent to the Native American Heritage Commission (NAHC). The NAHC responded on June 6, 2013 and stated that the presence of Native American traditional cultural places were not identified in the project area. A list of tribal contacts was provided by NAHC who may have an interest or knowledge of cultural resources in or near the project area.
As part of the consultation process, the NAHC recommends that local governments and project developers contact the listed tribal governments to determine if any cultural places could be impacted by project activities. Tribal project notification letters were sent to contacts on May 27, 2015. One response was received from the listed tribes. They requested that a Native American monitor be available in case anything was uncovered or discovered during the remediation activities. This has been incorporated into the RAW. There are no known prehistoric or historic archaeological structures in the general Site area, or any Native American cultural resources. Project activities will be conducted in a highly disturbed, urbanized industrial area with no known historical resources within the Site. No information from any previous development or site disturbance activities were found that would warrant a search of the Registry of Sacred Sites.

Site activities will, however, comply with 7050.5 of the California Health and Safety Code:

“In the event of discovery or recognition of any human remains in any location other than a dedicated cemetery, there shall be no further excavation or disturbance of the Site or any nearby area reasonably suspected to overlie adjacent remains until the coroner of the county in which the human remains are discovered has determined, in accordance with Chapter 10 (commencing with Section 27460) of Part 3 of Division 2 of Title 3 of the Government Code, that the remains are not subject to the provisions of Section 27491 of the Government Code or any other related provisions of law concerning investigation of the circumstances, manner and cause of any death, and the recommendations concerning the treatment and disposition of the human remains have been made to the person responsible for the excavation, or to his or her authorized representative, in the manner provided in Section 5097.98 of the Public Resources Code. The coroner shall make his or her determination within two working days from the time the person responsible for the excavation, or his or her authorized representative, notifies the coroner of the discovery or recognition of the human remains.”

(c) If the coroner determines that the remains are not subject to his or her authority and if the coroner recognizes the human remains to be those of a Native American or has reason to believe that they are those of a Native American, he or she shall contact, by telephone within 24 hours, the Native American Heritage Commission. Therefore, no further analysis is deemed necessary.

Analysis as to whether or not project activities would:

a. Cause a substantial adverse change in the significance of a historical resource as defined in 15064.5.

Impact Analysis:

Conclusion:

☐ Potentially Significant Impact
☐ Less Than Significant With Mitigation Incorporated
☐ Less Than Significant Impact
X No Impact

b. Cause a substantial adverse change in the significance of an archeological resource pursuant to 15064.5.

Impact Analysis:

Conclusion:

☐ Potentially Significant Impact
☐ Less Than Significant With Mitigation Incorporated
☐ Less Than Significant Impact
X No Impact

c. Disturb any human remains, including those interred outside of formal cemeteries.

Impact Analysis:

Conclusion:

☐ Potentially Significant Impact
☐ Less Than Significant With Mitigation Incorporated
☐ Less Than Significant Impact
X No Impact

References Used:
6. Energy

Project Activities Likely to Create an Impact: None.

Description of Baseline Environmental Conditions: The Site is located in a highly disturbed urban, industrial and commercial area. Topography at the Site is relatively flat, the land surface is covered with soil and vegetation. The surrounding property area consists of residential and commercial use. No housing is in close proximity to the Site or will be affected by the proposed removal action. No activities of the project will affect population growth, existing housing, or create the need for additional housing. The proposed project is a removal action to clean up contaminated soil. The project would not result in any new population and housing resources at the Site and would not add any infrastructure that would yield indirect growth. The project Site does not contain any existing residential users. Therefore, no further analysis is deemed necessary.

Analysis as to whether or not project activities would:

a. Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?

Impact Analysis:

Conclusion:

☐ Potentially Significant Impact
☐ Less Than Significant With Mitigation Incorporated
☐ Less Than Significant Impact
☒ No Impact

b. Conflict with or obstruct a state or local plan for renewable energy or energy efficiency.

Impact Analysis:

Conclusion:

☐ Potentially Significant Impact
☐ Less Than Significant With Mitigation Incorporated
☐ Less Than Significant Impact
☒ No Impact

References Used:

7. Geology and Soils

Project Activities Likely to Create an Impact:

- Excavation of impacted soils using appropriate construction equipment (i.e., excavator, backhoe, and/or front end loader), and loading excavated soil and debris onto dump trucks;
- Conduct dust suppression activities during excavation and backfilling activities; and
- Backfill of all excavated areas using clean soils.

Description of Baseline Environmental Conditions: The Site is located in a highly disturbed and developed, capped, urbanized residential/commercial area within Southern, California. It is bounded by the northern portion of the Peninsular Ranges Geomorphic Province and in the southern portion of the Los Angeles Basin on the Southern California Coastal Plain. Southern California is an area of known seismic activity. Structures must be designed to comply with the Uniform Building Code (UBC) requirements if they are located in a seismically active area. The UBC is considered to be a standard safeguard
against major structural failures and loss of life. The UBC bases seismic design on minimum lateral seismic forces ("ground shaking"). The UBC requirements also consider liquefaction potential and establish stringent requirements for building foundations in areas potentially subject to liquefaction. The proposed project involves the removal of 3,550 cubic yards of arsenic contaminated soil from the 5 acre property. No buildings, structures or infrastructure will be part of the project that would be affected by seismic activity, liquefaction, expansive soils, or unstable geologic units. Further, the project itself will not cause geologic impacts to surrounding structures or facilities.

The project area comprises non-native fill material, the depth of which ranges from approximately 5 feet below ground surface at the northeastern portion of the Site to 10 feet below ground surface at the southwestern portion of the Site. The soil, including both fill and native material, is primarily silty or clayey sand, with a few isolated clay lenses. The soil beneath the Site is consistent with deposits in the recent alluvium, which is known to be present throughout the Hollywood Basin. The Site is relatively flat and slopes with the surrounding area. Ground elevations range from 255 feet above mean sea level (amsl) at the southwestern end of the Site to 235 feet amsl at the northeastern end, with the Site gently sloping from the south to the north.

Analysis as to whether or not project activities would:

c. Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:

i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault. (Refer to Division of Mines and Geology Special Publication 42).

ii. Strong seismic ground shaking.

iii. Seismic-related ground failure, including liquefaction.

iv. Landslides.

Impact Analysis: According to the most recent Alquist-Priolo Earthquake Fault Zoning Map, the nearest Special Studies Zone according to the map is approximately 3.0 miles southeast of the Site. Within this Zone, there are several NW-SE trending fault traces characterized as an active section of the Newport-Inglewood fault system. The surface soil in the vicinity of the Site is part of the Yolo association and consists of alluvial materials associated with the nearby Dominguez Channel drainage system. These soils have moderate permeability. Soils observed during past investigations (CH2M HILL, Inc., 2006) included mostly silt, silty and clayey sand. For excavation areas deeper than 5 feet below ground surface, the sidewalls will be sloped if needed. The Site is relatively flat with little potential for soil erosion. Excavation depths are anticipated up to 5 feet bgs, and excavation will be conducted to maintain a 1:1 or flatter slope for excavation deeper than 5 feet bgs; project activities would not result in potential for landslides.

Conclusion:

☑ Potentially Significant Impact
☐ Less Than Significant With Mitigation Incorporated
☐ Less Than Significant Impact
☒ No Impact

d. Result in substantial soil erosion or the loss of topsoil.

Impact Analysis: The Site is almost flat and will not cause soil erosion. The shallow soils at the Site are fill material mixed with railroad ballast, and no topsoil exists onsite. The proposed project will not affect the stability of soils. Because no unstable geologic units or soils are onsite and because excavation methods will maintain appropriate slope ratios, no impacts will occur. The proposed project comprises soil removal, no buildings, structures or infrastructure will be constructed, and no changes in grade will occur.

Conclusion:

☐ Potentially Significant Impact
☐ Less Than Significant With Mitigation Incorporated
☐ Less Than Significant Impact
☒ No Impact

e. Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on or off-site landslide, lateral spreading, subsidence, liquefaction or collapse.
Impact Analysis: The proposed remedial action will not impact soil stability. During the remedial action, the excavation sides will either be shored or sloped for stability as needed. The proposed remedial action includes excavating soil that contains concentrations of arsenic above the cleanup goals.

Conclusion:
☐ Potentially Significant Impact
☐ Less Than Significant With Mitigation Incorporated
☒ Less Than Significant Impact
☐ No Impact

f. Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property.

Impact Analysis: Expansive soils are generally found in areas that historically were in a flood plain or lake area or hillside areas. The project area is not within or characterized by such locations and is in a flat and highly disturbed urbanized area. No expansive soils have been encountered at the Site. Therefore, the project would not create a risk to life or property. The proposed project will not affect, or be affected by, the presence or absence of expansive soils.

Conclusion:
☐ Potentially Significant Impact
☐ Less Than Significant With Mitigation Incorporated
☐ Less Than Significant Impact
☐ No Impact

g. Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of water.

Impact Analysis: No septic tanks or alternative non-sewer systems are proposed for the project, which is defined by the excavation of contaminated soils. The proposed project does not include any requirements to build infrastructure to support a wastewater disposal system or septic tanks and, therefore, no impact to waste disposal systems would occur.

Conclusion:
☐ Potentially Significant Impact
☐ Less Than Significant With Mitigation Incorporated
☐ Less Than Significant Impact
☐ No Impact

h. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.

Impact Analysis: No unique paleontological resources or geologic features are known to exist onsite.

Conclusion:
☐ Potentially Significant Impact
☐ Less Than Significant With Mitigation Incorporated
☐ Less Than Significant Impact
☒ No Impact

References Used:
- City of Beverly Hills “GoZone Map: http://gis.cityofbeverlyhills.com/giszoning/default.aspx
- Final EIR for City of Beverly Hills, section 5.7, Geology and Soils.
- Draft Removal Action Work Plan (Jacobs, 2019).

8. Greenhouse Gas Emissions

Project Activities Likely to Create an Impact:
• Presence and operation of excavation and construction equipment (may include excavator, backhoe, and/or front-end loader) and field staff vehicles;
• Truck loading areas, truck staging/parking areas, and truck routes;
• Excavation of impacted soil by using appropriate construction equipment, and loading excavated soil and debris onto dump trucks;
• Transportation of impacted soil to appropriate off-site permitted disposal facilities;
• Transportation of clean fill material from off-site locations onto the project Site; and
• Backfill of all excavated areas using clean fill materials.

Description of Baseline Environmental Conditions: Diesel equipment used during excavation and backfilling (e.g., excavator, backhoe, and/or front end loader) has the potential to generate greenhouse gas (GHG) emissions at the excavation zone, decontamination zone, general work areas, stockpile areas, truck loading/unloading, truck staging/parking areas and along truck routes.

GHGs are global pollutants, unlike criteria air pollutants and toxic air contaminants (TACs), which are pollutants of regional and local concern. Pollutants with localized air quality effects have relatively short atmospheric lifetimes (about 1 day), whereas GHGs have long atmospheric lifetimes (1 year to several thousand years). GHGs persist in the atmosphere for long time periods that enable them to be dispersed around the globe. Although the exact lifetime of any particular GHG molecule is dependent on multiple variables and cannot be determined, more carbon dioxide (CO₂) is emitted into the atmosphere than is sequestered by ocean uptake, vegetation, and other forms of sequestration.

Similarly, GHG impacts are global in nature, and the quantity of GHGs that would result in climate change is not precisely known. No single project would measurably contribute to a noticeable incremental change in the global average temperature, or to global, local, or micro climate. For CEQA review purposes, GHG impacts to global climate change are considered as cumulative impacts.

The SCAQMD has recommended an interim GHG significance threshold that would apply to stationary source/industrial projects and would include direct and indirect emissions during construction and operation. Following the Tier 3 screening level approach, construction emissions would be amortized over the life of the project, typically defined as 30 years, and added to the operational emissions for comparison to the significance threshold of 10,000 metric tons of carbon dioxide equivalent (CO₂e) per year. A project exceeding this threshold would be considered significant and require mitigation with regards to GHG emissions.

The GHG emissions resulting from the project’s soil excavation, backfill, and transport activities were evaluated using the Tier 3 methodology recommended by SCAQMD. However, because there are no operational activities associated with this project, the project life was conservatively considered to be 1 year instead of 30 and the operational emissions were set to zero. The results are presented in Table 7 below.

<table>
<thead>
<tr>
<th>RAW Activities</th>
<th>Maximum Estimated GHG Emissions (metric tons per year)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>CO₂</td>
</tr>
<tr>
<td>Site Preparation, Excavation, Backfilling, and Transport</td>
<td>72.43</td>
</tr>
<tr>
<td>Maximum Regional Emissions Total</td>
<td>72.43</td>
</tr>
<tr>
<td>Regional Significance Threshold</td>
<td>N/A</td>
</tr>
<tr>
<td>Exceeds Threshold?</td>
<td>N/A</td>
</tr>
</tbody>
</table>


Note: Assumptions used with CalEEMod: 4,400 cubic yards excavated, 4,400 cubic yards imported, 5 acres disturbed; 32 miles one-way trip to closest disposal facility and source of backfill within SCAQMD.

Although the project’s GHG emissions are expected to be minimal, Project controls that will be applied for the reduction of GHG emissions during construction activities are as follows:

• Use low-emissions or electric construction equipment or vehicles, where feasible
• Minimize unnecessary construction equipment or vehicle idling time
• Promote carpooling amongst construction workers
• Use properly sized construction equipment
• Maintain haul trucks according to the manufacturer’s recommendations
• Train operators to properly operate construction equipment

Analysis as to whether or not project activities would:

a. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.

Impact Analysis: Although equipment used for removing contaminated soil has the potential to result in GHG emissions, these emissions are expected to be much less than the SCAQMD’s significance threshold of 10,000 metric tons of CO₂e per year, as demonstrated in Table 7. Therefore, these emissions will not contribute significantly, either directly or indirectly, to impacts on the environment. No stationary sources or operational emissions (e.g. GHG/CO₂e) will be generated by the project.

Conclusion:
☐ Potentially Significant Impact
☐ Less Than Significant With Mitigation Incorporated
☒ Less Than Significant Impact
☐ No Impact

b. Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

Impact Analysis: The project will not conflict with an applicable plan, policy, or regulation adopted to reduce GHG emissions. The proposed project does not include the construction of permanent buildings, structures or facilities that would become long-term stationary sources of emissions, operational emissions or GHG emissions. Additionally, the minimal short-term construction GHG emissions will not interfere with the long-term goal of the Global Warming Solutions Act of 2006 (AB 32) to reduce GHG emissions to 1990 levels by 2020. The project also incorporates reduced vehicle and equipment idling time and carpooling, which are control measures identified by the California Air Pollution Control Officer’s Association.

Conclusion:
☐ Potentially Significant Impact
☐ Less Than Significant With Mitigation Incorporated
☐ Less Than Significant Impact
☒ No Impact

References Used:
➢ Air Emission Estimates using CalEEMod, Version 2016.3.2

9. Hazards and Hazardous Materials

Project Activities Likely to Create an Impact:

• Generation of fugitive dust and particulates at the excavation zone, decontamination areas, general work areas, stockpile areas;
• Truck loading areas, truck staging/parking areas, and truck routes;
• Excavation of impacted soil by using appropriate construction equipment, and loading excavated soil and debris onto dump trucks;
• Transportation of impacted soil to appropriate off-site permitted disposal facilities;
• Transportation of clean fill material from off-site locations onto the project Site; and
• Backfill of all excavated areas using clean fill materials.
Description of Baseline Environmental Conditions: The Site is located in a highly disturbed and developed, capped, urbanized commercial and residential area. Hazards and hazardous materials at the Site are limited to arsenic contaminated soils. Refer to the “Project Background” and “Selection of Site Remedy” sections within the Project Description section of this Initial Study, which discuss the Site contamination and cleanup goals for the Site. As discussed in the Project Description Section of this IS, hazards and hazardous materials are limited to arsenic-contaminated soils. Approximately 4,400 cubic yards of contaminated materials will be handled, transported and disposed of at a licensed facility permitted to accept the material in accordance with local, state and federal regulations. Potential receptors include building occupants, workers and the local industrial and commercial population in the vicinity of the project. The nature and extent of contamination at Site are based on nine phases of environmental investigations that were implemented between 1988 and 2010. Data collected from these investigations includes laboratory testing of numerous soil, and groundwater samples, as well as detailed field observations and documentation. The collective data from these efforts have been analyzed and presented in the Remedial Investigation Report (RI Report) dated August 2006. Based on the findings of the RI Report, arsenic has been identified as the chemical of concern (COC) present in site soils at concentrations up to 996 milligrams per kilograms (mg/kg), concentrations that could present potential risk to humans or environmental receptors (wildlife) if not addressed by further response. Chemical testing conducted during the remedial investigation process demonstrated that the elevated concentrations in soil were not soluble and not migrating. A groundwater investigation conducted in 2008 and 2009 confirmed these findings and demonstrated that arsenic had not migrated to groundwater.

As part of the RAW, remedial action objectives (RAOs) were developed to identify and screen remedial alternatives that protect human health and the environment and are consistent with reasonably anticipated land use. RAOs are media-specific (such as soil) goals for protecting human health and the environment that provide the foundation used to develop remedial alternatives. Excavation of COCs in soil would (1) ensure that exposure pathways would be eliminated for future commercial, multi-use, and multi-unit residential use, (2) prevent exposure to arsenic in soil to 2 to 5 feet below ground surface, and (3) reduce the potential for COCs in soil. The RAOs for the Site were developed for the reasonably anticipated future commercial and multi-unit residential land use consistent with the United States Environmental Protection Agency's (US EPA’s) land use directive for Comprehensive Environmental Response and Liability Act (CERCLA) remedy selection.

The remedial goals (RG) for the Site were established based on DTSC's determination of arsenic background in the area. The RGs established for the Site are to: a) protect public health and the environment from exposures to the COCs by inhalation, dermal contact and ingestion based on future industrial land uses, and for protection of construction workers; and b) meet all Applicable or Relevant and Appropriate Requirements (ARARs) for the Site cleanup.

The soil remedial goals established for the Site are as follows:

<table>
<thead>
<tr>
<th>COCs in Soil</th>
<th>Maximum Concentration (mg/kg)</th>
<th>Soil Remediation Goal milligrams per kilogram (mg/kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arsenic</td>
<td>996 mg/kg</td>
<td>0 to 2 feet &lt; 25 milligrams per kilogram (mg/kg)</td>
</tr>
</tbody>
</table>

Analysis as to whether or not project activities would:

a. Create a significant hazard to the public or the environment throughout the routine transport, use or disposal of hazardous materials.

Impact Analysis: The proposed remedial activities for the Site consist of site preparation, excavation of soil, confirmation soil sampling, transportation and disposal of soil to off-site permitted landfills, and site restoration. The proposed project would be implemented in accordance with applicable state and federal occupational and health safety standards as set forth in 29 Code of Federal Regulation (CFR) 1910 and 1926, California Health and Safety Regulations as set forth in Title 8, California Code of Regulations (CCR) 5192, for work at hazardous waste sites. A Health and Safety Plan (HASP) would be developed and implemented to minimize incidents, injury, and health risks associated with the remedial measures proposed at the Site. Additionally, the management of hazardous substances and/or potentially hazardous wastes, adherence to Site controls and plans, and the limited duration of the excavation activities (approximately 60 days) are anticipated to result in no significant hazard to the public or the environment from project activities. The HASP describes controls and procedures for health and safety risk monitoring during the implementation of project activities. For example, the HASP would include controls such as personal protective equipment that shall be used while performing work on the Site and procedures and engineering controls and safe work practices for the proper implementation of the work. In addition, the HASP includes health and safety air monitoring. Investigation-derived waste generated during performance monitoring activities is expected to be classified as nonhazardous. However, any remediation waste considered potentially hazardous would be properly managed in accordance with the Resource Conservation and Recovery Act (RCRA) and DTSC guidelines and transported for disposal off-site at a properly licensed hazardous waste...
transportation contractor with appropriate hazardous waste manifest, in accordance with California Department of Transportation (DOT) guidelines. Only Class I and II landfills with liner systems would be considered acceptable for material containing VOCs. Wastes would be characterized and profiled for landfill acceptance according to protocols established by the landfill permits. Adherence to the health safety standards and applicable permits would safeguard the public and the environment and prohibit the potential creation of any significant hazards through the routine transport, use or disposal of hazardous materials.

Conclusion:
☐ Potentially Significant Impact
☐ Less Than Significant With Mitigation Incorporated
☒ Less Than Significant Impact
☐ No Impact

b. Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.

Impact Analysis: The proposed project would result in a small potential for short-term exposure of Site workers to COPCs during project-related activities. However, exposure to contaminated soil at the Site is not expected as long as engineering and institutional controls are in place to maintain surface cover to prevent direct soil exposure to on-site industrial and commercial/office workers. As previously mentioned, the proposed project would be performed in accordance with applicable state and federal occupational and health safety standards. The site-specific HASP describes health and safety procedures, including emergency response, intended to minimize incidents, injury, and health risks associated with the remedial measures proposed at the Site. The potential for short-term exposure to on-site workers would be reduced. Overall, the proposed project is protective of human health and the environment by reducing the concentration of COCs in Site Soils.

Significant hazard to the public is not expected to occur based on the substantive nest management practices during excavation and transport of materials offsite. Impacts from dust and particulates at the excavation zone will be minimized through use of dust suppression activities, including:

- slowing the rate of work,
- restricting the rate of onsite travel to 5 miles per hour
- application of water or other dust suppressants,
- or the cessation of work until dust levels have returned to below the action level.

Excavation areas will be established with additional chain-link fence with attached visual barrier. Dust monitoring equipment will be used, and the on-site health and safety officer will provide visual monitoring. Air quality monitoring equipment will consist of handheld instruments calibrated to record real-time total dust concentrations.

Licensed haulers will transport excavated materials in accordance with Department of Transportation regulations and safety protocols when hauling hazardous materials. All driver will be trained on spill control, containment and failure procedures, who to contact in case of emergency while transporting the materials (e.g. California Highway Patrol), and how the truck is to be labeled to ensure the consistent communication of information to first responders.

If an accidental spill were to occur on the highway, Department of Transportation regulations for spills will be implemented. If a spill occurs, the driver of the truck will notify the local authorities for implementation of cleanup activities. Because the trucks will be appropriately labeled, any waste spill clean-up workers will be able to adequately don the appropriate protective gear to deal with this waste.

If an emergency or spill occurs during transport to the treatment facility, the driver of the hauling truck will use the following procedures:

- Park the vehicle in the most secure area available, away from homes, traffic, waterways, and businesses
- Stay with the vehicle until appropriate support has arrived; move a safe distance away from the vehicle or spill material if danger exists
- Notify the appropriate emergency contacts

Conclusion:
☐ Potentially Significant Impact
☐ Less Than Significant With Mitigation Incorporated
☒ Less Than Significant Impact
☐ No Impact
c. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances or waste within one-quarter mile of an existing or proposed school.

Impact Analysis: No acutely hazardous materials will be handled at the Site. The Site will be fenced, and access limited to authorized personnel only. The proposed air monitoring and pollution controls will reduce air impacts to the surrounding areas.

Conclusion:
☐ Potentially Significant Impact
☐ Less Than Significant With Mitigation Incorporated
☒ Less Than Significant Impact
☒ No Impact

d. Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to public or the environment.

Impact Analysis: The DTSC Envirostor™ database was searched for sites undergoing investigation and cleanup activities regulated by the agency. The Site was not included on the list of hazardous materials compiled pursuant to Government Code Section 65962.5.

Conclusion:
☐ Potentially Significant Impact
☐ Less Than Significant With Mitigation Incorporated
☒ Less Than Significant Impact
☒ No Impact

e. For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?

Impact Analysis: The project is not located within the area covered by an airport land use plan or within 2 miles of an airport. The Los Angeles International Airport is approximately 10 miles away from the Site. The project activities will not result in impacts to the airport.

Conclusion:
☐ Potentially Significant Impact
☐ Less Than Significant With Mitigation Incorporated
☐ Less Than Significant Impact
☒ No Impact

f. Impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan.

Impact Analysis: Project activities will not interfere with or impair the implementation of any emergency response or evacuation plan. A project-specific health and safety plan will be prepared for the project that will identify emergency response procedures.

Conclusion:
☐ Potentially Significant Impact
☐ Less Than Significant With Mitigation Incorporated
☐ Less Than Significant Impact
☒ No Impact

g. Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires.

Impact Analysis: The project is on a highly disturbed and commercial/residential area where wildlands are not present and intermixed with residences. Excavation and removal activities of contaminated soils would not result in activities posing a risk of wildland fires.

Conclusion:
Potentially Significant Impact
Less Than Significant With Mitigation Incorporated
Less Than Significant Impact
☒ No Impact

References Used:
- California Environmental Protection Agency, 20 Aprils 2014. Cortese List Data Resources web site, Cortese List Section 65962.5(a).
- DTSC Envirostor™, April 2014 search
- Draft Removal Action Work Plan (Jacobs, 2019)

10. Hydrology and Water Quality

Project Activities Likely to Create an Impact:
- Excavation equipment (i.e., excavator, backhoe, and/or front-end loader), and loading of excavated soil and debris onto dump trucks;
- Placement of protective measures at a storm drain around the excavation areas and stockpile areas, if needed, to divert surface water flow if present; and
- Dust suppression activities such as misting of excavation areas and equipment.

Description of Baseline Environmental Conditions: The Site is located in a highly disturbed and developed, capped, urbanized commercial and residential zoned area within the Coastal Plain of Los Angeles County, in the northwestern portion of the Central Groundwater Basin. The Central Groundwater Basin is bounded on the north and east by the Hollywood Basin and a series of low-lying hills, on the west by the Santa Monica Basin, and on the south by the Los Angeles-Orange County line. The project area is relatively flat with limited slopes and has an elevation of approximately 255 feet above mean sea level (amsl).

The surrounding property area consists of commercial use. Project activities will be conducted on developed land in areas containing either hardscape or concrete/asphalt; the completed project will be restored as its current condition with no structures built. The project is not located on or near the coast or any surface water bodies and is not a groundwater recharge area. Groundwater underlying the Site is replenished by percolation of precipitation and by subsurface flow from alluvial channels originating in the Santa Monica Mountains to the north. The regional groundwater flow near the Site is generally to the south-southeast, because of the orientation of the alluvial channels and general slope of the watershed from the Santa Monica Mountains in the area. Groundwater is at approximately 45 to 52 feet bgs.

Project water use for decontamination and dust suppression would be from a municipal water supply, and wastewater produced (decontamination water) will be properly disposed in accordance with applicable regulations. The Site is developed with existing drainage patterns, and implementation of RAW activities will not significantly impact existing drainage patterns. Dust suppression activities involving water (e.g., misting) will not be implemented to the extent of creating puddles or runoff.

A groundwater investigation was conducted at the Site in 2008 and 2009 that indicated that groundwater is not impacted with arsenic from the Site. Groundwater has been encountered at depths from 45-52 feet bgs. The investigation was conducted to assess if arsenic in soil at the Site had impacted groundwater. The maximum arsenic concentration in groundwater was 1.2 micrograms per liter (µg/L). The California Maximum Contaminant Level in groundwater is 10 µg/L. Soil sampling indicated arsenic in soils is not a threat to groundwater quality (DTSC, 2010).

The proposed project involves the excavation and removal of contaminated soil. No alternations to existing drainage or hydrology of the Site will occur and, therefore, no impacts are anticipated to occur to hydrology or water quality. No construction of buildings, structures or facilities will be occurred and, therefore, no structures will be placed within a flood zone, expose people to a significant risk of loss, substantially degrade water quality, or alter the course of a stream or river.

Project activities are proposed to occur during the dry weather season. Nevertheless, the following best management practices will be implemented to minimize possible storm water runoff:
- Covering of soil stockpiles during non-work hours to abate dispersion by wind and rain
• Periodic street sweeping to clean soil tracked onto City streets, and
• Placement of protective measures at a storm drain around the excavation areas and stockpile areas, if needed, to divert surface water flow if present

Analysis as to whether or not project activities would:

a. Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality.

Impact Analysis: The project will not result in a deterioration of water quality. Waste discharge requirements are not anticipated because the project activities will not establish any point discharges. Project activities are proposed to occur during the dry weather season (summer). Nevertheless, best management practices will be implemented to minimize storm water runoff issues at the Site in accordance with state and federal laws.

Conclusion:
☐ Potentially Significant Impact
☐ Less Than Significant With Mitigation Incorporated
☒ Less Than Significant Impact
☐ No Impact

b. Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin.

Impact Analysis: Water for dust suppression activities will be obtained from the local municipal water supply and not groundwater. There are no groundwater wells at the Site and municipal supplies are available from a nearby hydrant. At the time of construction, the contractor will obtain a permit for water use from the hydrant, install a meter and purchase water from the municipal supply. Quantities of water needed for dust control and equipment decontamination are minimal, applied only as needed so as not to cause run-off, and will evaporate shortly after application. As groundwater will not be used groundwater supplies will not be deleted or interfere with groundwater recharge.

Conclusion:
☐ Potentially Significant Impact
☐ Less Than Significant With Mitigation Incorporated
☒ Less Than Significant Impact
☐ No Impact

c. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:

   i. result in substantial erosion or siltation on or off-site;
   ii. substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;
   iii. create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or
   iv. impede or redirect flood flows

Impact Analysis: There are no adjacent surface water bodies to the Site. The proposed project does not include any site drainage features or planned stormwater drainage. Quantities of water needed for dust control and equipment decontamination during the implementation of the RAW are minimal and will be provided from the municipal water supply. No erosion or alteration of the existing drainage pattern of a stream or river would result on or off-site.

Conclusion:
☐ Potentially Significant Impact
☐ Less Than Significant With Mitigation Incorporated
☐ Less Than Significant Impact
☒ No Impact

d. In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation.

Impact Analysis: The Site is not located within or adjacent to a flood zone. The Site is not located in an area subject to inundation by seiche, tsunami or seiche zones. Quantities of water needed for dust control and equipment decontamination during the implementation of the RAW are minimal. No erosion or alteration of the existing drainage pattern of a stream or river would result on or off-site.
pattern of a stream or river would result during site restoration. Applicable erosion and sediment control measures shall be employed within the project area during the duration of the work in accordance with Stormwater Pollution Prevention Plan (SWPPP) requirements. Erosion and sediment control is achieved by implementing BMPs that are specific to this removal action.

Conclusion:
☐ Potentially Significant Impact
☐ Less Than Significant With Mitigation Incorporated
☒ Less Than Significant Impact
☐ No Impact

e. Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

Impact Analysis: The project does not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.

Conclusion:
☐ Potentially Significant Impact
☐ Less Than Significant With Mitigation Incorporated
☐ Less Than Significant Impact
☒ No Impact

References Used:
- Draft Removal Action Work Plan (Jacobs, 2019)
- FEMA 100-year flood zone mapper ([http://maps3.arcgisonline.com/ArcGIS/rest/services/A-16/FEMA_100-Year_Flood_Zones_in_the_USA/MapServer](http://maps3.arcgisonline.com/ArcGIS/rest/services/A-16/FEMA_100-Year_Flood_Zones_in_the_USA/MapServer))

11. Land Use and Planning

Project Activities Likely to Create an Impact:

- IC’s to prohibit the use of the property as a single family residences, hospital, school, daycare center and limit the Site use to commercial, multi-use, and multiple unit housing purposes.

Description of Baseline Environmental Conditions: The Site is approximately 5 acres and located on a vacant highly disturbed land, within an urban commercial/residential setting and is currently designated as a “Railroad” in the City’s General Plan Land Use Map and is zoned “T-1”. A “T-1” zoning allows for railroad-related uses, and certain other uses as provided in Title 10 (Land Use and Zoning) of the Beverly Hills Municipal Code. Because the Site is located in an area arsenic-impacted soil, implementation of removal actions may not allow for unrestricted reuse of the Site. Therefore, ICs will be filed with the appropriate County offices to prohibit future soil disturbances unless conducted and managed in accordance with a DTSC-approved Soil Management Plan. The IC would also prohibit the use of the property as a single family residences, hospital, school, daycare center and limit the Site use to commercial, multi-use, and multiple unit housing purposes. The proposed project is bordered by Civic Center Drive to the south, Santa Monica Boulevard to the north, Alpine Drive to the west and Doherty Drive to the east and divided by Beverly Boulevard between Lots 12 and 13. The split of Santa Monica Boulevard from two way traffic into two one way streets separates the Triangle Section from Lot 13. The Site is surrounded on all sides by public roadways, with Santa Monica Boulevard to the north serving as a high-traffic corridor.

Analysis as to whether or not project activities would:

a. Physically divide an established community.

Impact Analysis: The project will be within the current Site boundary and will not divide any community. The proposed project would be consistent with the existing land use designation. As part of the project operation, IC’s would be filed with the appropriate County offices to prevent single family residential home use at the Site (Refer to the proposed project activities section of this Initial Study).
Conclusion:
☐ Potentially Significant Impact
☐ Less Than Significant With Mitigation Incorporated
☒ Less Than Significant Impact
☐ No Impact

b. Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect.

Impact Analysis: The project will be within the current Site boundary and will not have any conflict with the current land use plan, policy, or regulation. The proposed project would be consistent with the existing land use designation. As part of the project operation, IC’s would be filed with the appropriate County offices to prevent single family residential home use at the Site (Refer to the proposed project activities section of this Initial Study).

Conclusion:
☐ Potentially Significant Impact
☐ Less Than Significant With Mitigation Incorporated
☐ Less Than Significant Impact
☒ No Impact

References:
➢ Draft Removal Action Work Plan (Jacobs, 2019)
➢ City of Beverly Hills 2012 General Plan

12. Mineral Resources

Project Activities Likely to Create an Impact: None

Description of Baseline Environmental Conditions: The Site is designated as a Mineral Resource Zone 1 (MRZ-1), indicating no mineral resources are present. A review of the City of Beverly Hills 2012 General Plan did not reveal the Site to contain any mineral resources. Hence, the proposed remediation program will not remove or affect any known mineral resources. Therefore, no further analysis of mineral resources is deemed necessary.

Analysis as to whether or not project activities would:

a. Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state.

Impact Analysis:

Conclusion:
☐ Potentially Significant Impact
☐ Less Than Significant With Mitigation Incorporated
☐ Less Than Significant Impact
☒ No Impact

b. Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan.

Impact Analysis:

Conclusion:
☐ Potentially Significant Impact
☐ Less Than Significant With Mitigation Incorporated
☐ Less Than Significant Impact
☒ No Impact

References:
➢ Surface Mining and Reclamation Act of 1975
➢ City of Beverly Hills 2012 General Plan
13. Noise

Project Activities Likely to Create an Impact:

- Excavation equipment (i.e., excavator, backhoe, and/or front-end loader), and loading of excavated soil and debris onto dump trucks;
- Transportation of impacted soil and debris to appropriate off-site permitted disposal facilities; and
- Transportation of clean fill material from off-site locations.

Description of Baseline Environmental Conditions: The Site is located in a highly disturbed and developed, urbanized residential and commercial area, immediately adjacent to Santa Monica Boulevard, CA State Highway Route 2, which is recognized as a major source of highway noise (80 Community Noise Equivalent Level) by the City of Beverly Hills Noise Element. The Beverly Hills Municipal Code Section 5-1-205 (Title 5, Article 2, Specific Noise Sources and Regulations, Construction) outlines the City's noise policies requiring hearing protection be provided to employees exposed to noise levels above 80 dBA or more on an eight-hour time-weighted average basis. The City's General Plan does not specify noise levels for industrial land use but noise exposure up to 80 dBA Community Noise Equivalent Level (CNEL) is normally acceptable (City of Beverly Hill, 2012). Existing noise in the project area primarily includes vehicle traffic and nearby industrial operations. The primary source of noise generated from the proposed project would be related to short-term excavation and construction activities. Noise during remedial activities would be consistent with noise levels in industrial area. The Site work area is located in an area where the noise level is generally 80 dBA. Noise Best Management Practices (e.g., limiting traffic speed, enclosing system blowers, using equipment with mufflers, earplugs, etc.) would ensure that project activities will not expose workers and people in the general vicinity of the proposed project to noise levels in excess of 80 dBA or more on an eight-hour time-weighted average basis. The City's General Plan does not specify noise levels for industrial land use but noise exposure up to 80 dBA Community Noise Equivalent Level (CNEL) is normally acceptable (City of Beverly Hill, 2012).

Analysis as to whether or not project activities would result in:

a. Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

Impact Analysis: Exterior noise standard for sensitive noise receptors is above 80 dBA, respectively, in the Noise Element of the Beverly Hills General Plan. The City regulates ambient noise via the City of Beverly Hills Code of Ordinances (Code Section 5-1-205 (Title 5, Article 2, Specific Noise Sources and Regulations, Restrictions On Construction Activity). A high level of ambient noise exists in the project vicinity current traffic and commercial activities. The project activities will be temporary and will not contribute to cumulative noise impacts as project activities are expected to be below the acceptable 80 dBA CNEL. The primary noise source in the project area is traffic noise from major streets serving the Site area. The proposed remedy will not cause an increase in existing noise levels nor will it expose people to severe noise levels.

Activities will be conducted between the hours of 8:00 a.m. and 6:00 p.m. for five days, Monday through Friday, which is in accordance with the Beverly Hills Municipal Code for noise. Noise monitoring will be conducted to assure compliance with the City of Beverly Hills Noise Ordinance. The use of haul trucks and heavy equipment (e.g., excavators, loaders, and dozers) associated with project activities would result in minor increases in ambient noise levels in the vicinity of the project site. Each anticipated piece of construction equipment at 50 feet is estimated to produce 75-80 dBA on average.

Conclusion:
- Potentially Significant Impact
- Potentially Significant Unless Mitigated
- Less Than Significant Impact
- No Impact

b. Generation of excessive groundborne vibration or groundborne noise levels.

Impact Analysis: The excavation is unlikely to generate any significant ground borne vibration or noise and would be limited to excavation of soils and loading and transport offsite to a permitted landfill. Proposed project could generate minor ground borne vibration from use of heavy equipment and haul trucks. Construction equipment such as excavators,
backhoes and haul trucks, would not generate vibrations that could result in ground borne noise or vibration above the industrial use standards for the area. There are no residential receptors near the Site. The nearest residential area is approximately 4.0 mile north of the Site. Vibration levels greater than 0.1 in/sec could be perceptible and possibly annoying to a human. Vibration producing equipment for this project is anticipated to have vibration levels of 0.035 to 0.089 inches per second (in/sec) at 25 feet from the source. Excessive ground borne vibration and/or ground borne noise (i.e., ground borne vibration or noise greater than 0.3 in/sec) are not anticipated during remedial or operational activities. Workers will be wearing appropriate hearing protection.

Conclusion:
☑ Potentially Significant Impact
☐ Less Than Significant With Mitigation Incorporated
☒ Less Than Significant Impact
☐ No Impact

c. For a project within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose other people residing or working in the project area to excessive noise levels?

Impact Analysis: This issue is not applicable to this Site. There is no airport land near the Site. There are no private airstrips within 5 miles of the Site

Conclusion:
☐ Potentially Significant Impact
☐ Less Than Significant With Mitigation Incorporated
☐ Less Than Significant Impact
☒ No Impact

References Used:
- City of Beverly Hills 2012, General Plan

### 14. Population and Housing

**Project Activities Likely to Create an Impact:** None

**Description of Baseline Environmental Conditions:** The Site is located in a highly disturbed urban, industrial and commercial area. Topography at the Site is relatively flat, the land surface is covered with soil and vegetation. The surrounding property area consists of residential and commercial use. No housing is in close proximity to the Site or will be affected by the proposed removal action. No activities of the project will affect population growth, existing housing, or create the need for additional housing. The proposed project is a removal action to clean up contaminated soil. The project would not result in any new population and housing resources at the Site and would not add any infrastructure that would yield indirect growth. The project Site does not contain any existing residential users. Therefore, no further analysis is deemed necessary.

**Analysis as to whether or not project activities would:**

a. Induce substantial unplanned population growth in area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure).

**Impact Analysis:**

**Conclusion:**
☐ Potentially Significant Impact
b. Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere.

Impact Analysis:

Conclusion:

- Potentially Significant Impact
- Less Than Significant With Mitigation Incorporated
- Less Than Significant Impact
- X No Impact

References:

- Draft Removal Action Work Plan (Jacobs, 2019)

### 15. Public Services

**Project Activities Likely to Create an Impact:** None

**Description of Baseline Environmental Conditions:** The City of Beverly Hills and the County of Los Angeles are responsible for operation and maintenance of the existing public service infrastructure at the Site, including maintenance of public roads surrounding the Site and the operation of the public water supply and sewer system. No schools or daycare facilities are located near the project area. Public services are provided to the Site by local municipalities and regional providers (e.g., Southern California Edison, Southern California Gas.) No permanent structures, buildings or facilities are part of the proposed project that will require public services or cause an impact on existing public services.

Implementation of the proposed project will involve use of the excavation equipment, trucks and/or bins, and a number of workers trained to handle the contaminated soil that is excavated and transported for disposal at permitted off-site landfills over approximately 6 weeks. No permanent or business structures are being built as a part of this remediation project. Work areas will be fenced to restrict access to the Site. Emergency vehicles and first responders will have adequate access to the Site via Santa Monica Boulevard, Alpine Drive or Doherty Drive.

Analysis as to whether or not project activities would:

a. Result in substantial adverse physical impacts associated with the provision of new or physically altered government facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the following public services:

- **Fire protection.** The Beverly Hills Fire Department Headquarters is located at 445 N. Rexford Drive, within a half mile of the Site. The Beverly Hills Fire Department Station #3 is located at 180 S. Doherty Drive, approximately one and a quarter miles from the Site. Emergency vehicles will enter and exit the Site from access gates to be located along Civic Center Drive.

- **Police protection.** The Beverly Hills Police Department is located at 464 N. Rexford Drive, within one third of a mile from the Site. Emergency vehicles will enter and exit the Site from access gates to be located along Civic Center Drive.

- **Schools** The Rodeo Elementary School is located at 605 Whittier Drive, 1.4 miles west of the Site. The Beverly Hills Unified School District is located at 205 S. Lasky Drive, 1.3 miles southwest of the Site. The Good Shepard Catholic School is located at 148 S. Linden Drive, 1.3 miles southwest of the Site.

- **Parks.** A City park is located approximately one quarter of a mile west of the Site on the north side of Santa Monica Boulevard.
• Other public facilities.

Impact Analysis: The County of Los Angeles and the City of Beverly Hills provide Public Services and facilities in the Site area. The public services provided include sewer service, water supply, storm drains, electricity, gas, telephone, fire protection, police protection, schools, and refuse collection. The project activities will not require, involve, or result in a change in the need for, or availability of, public services. There are no daycares, nurseries or schools located near the project area.

Conclusion:
- Potentially Significant Impact
- Less Than Significant With Mitigation Incorporated
- Less Than Significant Impact
- No Impact

References:
- Draft Removal Action Work Plan (Jacobs, 2019)
- City of Beverly Hills, Public Facilities: http://www.ci.beverlyhills.ca.us/about/city_services.asp

16. Recreation

Project Activities Likely to Create an Impact: None

Description of Baseline Environmental Conditions: The Site is located in a highly disturbed and developed, urbanized residential and commercial area. Topography at the Site is relatively flat, the land surface is covered with soil and vegetation. The surrounding property area consists of residential and commercial use. Project activities will be conducted on undeveloped land in areas containing landscaping or soil. The proposed project will not impact existing recreational facilities, nor require the construction of additional recreational facilities. Beverly Gardens Park is located approximately 400 feet southwest of the Site. West Hollywood Park is located approximately 1,000 feet northeast of the Site. Project activities will have no impact on parks or recreational facilities. Therefore, no further analysis is deemed necessary.

Analysis as to whether or not project activities would:

a. Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated.

Impact Analysis:

Conclusion:
- Potentially Significant Impact
- Less Than Significant With Mitigation Incorporated
- Less Than Significant Impact
- No Impact

b. Does the project include recreational facilities or require construction or expansion of recreational facilities which might have an adverse physical effect on the environment.

Impact Analysis:

Conclusion:
- Potentially Significant Impact
- Less Than Significant With Mitigation Incorporated
- Less Than Significant Impact
- No Impact

References:
- Draft Removal Action Work Plan (Jacobs, 2019)

17. Transportation

Project Activities Likely to Create an Impact:
• Construction-related traffic mobilization;
• Transportation of impacted soil and debris to appropriate off-site permitted disposal facilities; and
• Transportation of clean-fill material from off-site locations to on-Site locations.

Description of Baseline Environmental Conditions: The Site is located in a highly disturbed and developed, urbanized residential and commercial area. Transportation and disposal activities will be performed in accordance with applicable Federal, State and local laws, regulations, and ordinances. During soil transport activities, trucks will enter from Civic Center Drive for Lots 12 and 13. During loading operations, trucks will be staged adjacent to Triangle Section in a lane closed to traffic on Beverly Boulevard. A flag person will be located at each site to assist the truck drivers to safely enter and exit the Site. Transportation will be coordinated in such a manner that at any given time, onsite trucks will be in communication with the site trucking coordinator. In addition, all vehicles driving onsite will be required to maintain slow speeds (i.e., less than 5 miles per hour) for safety and for dust control purposes. Prior to exiting the Site, vehicles will be swept to remove any extra soil from areas not covered or protected. A cleanup/decontamination area will be set up as close to the loading area as possible to minimize spreading the impacted soil. Prior to the off-site transport, the site manager will be responsible for inspecting each truck to check that the payloads are adequately covered, that the trucks are cleaned of excess soil and properly placarded, and that the truck manifests have 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 to safely merge with traffic on Civic Center Boulevard.

Traffic flow patterns will be coordinated to ensure safe flow of traffic along Santa Monica Blvd and Civic Center Drive. These traffic flow patterns will be established through portable traffic signs or flag persons posted at the Site entrance and exit. Excavated soils will be hauled by a qualified (licensed/registered and insured) waste hauler in tarped trucks under manifests or proper shipping documents to a proper treatment/disposal facility. Approximately 330 truck trips will be required to transport the contaminated soil from the Site. The number of truck trips will not exceed the significance threshold of 350 heavy-duty truck round trips per day. The traffic Level of Service (LOS) is a professional industry standard by which the operating conditions of a given roadway segment or intersection are measured; LOS is defined on a scale of A-F; the intersection of Santa Monica Blvd and Wilshire Blvd, located approximately ½ miles southwest of the Site, has a LOS of F (forced and breakdown flow) during peak hours.

Analysis as to whether or not project activities would:

a. Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities.

Impact Analysis: The project will require approximately 10 trucks (330 truck trips) to transport contaminated soil from the Site and 10 trucks (264 truck trips) to transport clean backfill soil to the Site. This activity will take approximately 6 weeks. It is not expected that the trucks will cause an impact to the local facilities because entering and exiting the Site will be staggered throughout the day. Truck routes will avoid using interior residential streets as much as possible to minimize impact. Applicable City permits will also be obtained.

Conclusion:
☐ Potentially Significant Impact
☐ Less Than Significant With Mitigation Incorporated
☒ Less Than Significant Impact
☐ No Impact

b. Conflict or be inconsistent with CEQA Guidelines § 15064.3, subdivision (b).

Impact Analysis: The Site is within and surrounded by residential and commercial land uses. The Site is bounded by two major roads in close proximity. The Level of Service (LOS) for the intersection of Santa Monica Blvd and Wilshire Blvd, located approximately ½ miles southwest of the Site, has a LOS of F (forced and breakdown flow) during peak hours. Truck traffic from this project will avoid peak commute hours to minimize traffic impacts for the project area. There will not be any long term traffic impact. The increase in truck traffic will not exceed the LOS for this area.

Conclusion:
☐ Potentially Significant Impact
☐ Less Than Significant With Mitigation Incorporated
☒ Less Than Significant Impact
☐ No Impact
c. Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).

Impact Analysis: The project does not include changes to City streets. There will be no substantial increase in hazards due to design features or incompatible uses. Traffic flow patterns will be coordinated to ensure safe flow of traffic along Santa Monica Blvd and Civic Center Blvd. These traffic flow patterns will be established through portable traffic signs or flag persons posted at the Site entrance and exit. The project does not include design features to change or alter the existing setting.

Conclusion:
☐ Potentially Significant Impact
☐ Less Than Significant With Mitigation Incorporated
☐ Less Than Significant Impact
☒ No Impact

d. Result in inadequate emergency access.

Impact Analysis: The project will not alter or change the existing emergency access routes at Santa Monica Blvd and Civic Center Blvd.

Conclusion:
☐ Potentially Significant Impact
☐ Less Than Significant With Mitigation Incorporated
☐ Less Than Significant Impact
☒ No Impact

References:
- Google Earth, accessed 20 January 2015;
- Draft Removal Action Work Plan (Jacobs, 2019)
- City of Beverly Hills – Traffic Plan: [http://www.ci.beverlyhills.ca.us/depts/engineering/traffic_engineering_n_signals/traffic_maps.asp](http://www.ci.beverlyhills.ca.us/depts/engineering/traffic_engineering_n_signals/traffic_maps.asp)

18. Tribal Cultural Resources

Project Activities Likely to Create an Impact: None.

Description of Baseline Environmental Conditions: The Site is located in a highly disturbed, developed, and urbanized residential and commercial area since 1938. The Site itself has been previously disturbed by subsurface activities associated with development, and operational activities. The removal action will not cause a permanent adverse change in the significance of a historical, archaeological, or other cultural resources. The Site is located within residential and commercial areas and surrounded by similar land uses.

A Sacred Lands search request was sent to the Native American Heritage Commission (NAHC). The NAHC responded on June 6, 2013 and stated that the presence of Native American traditional cultural places were not identified in the project area. A list of tribal contacts was provided by NAHC who may have an interest or knowledge of cultural resources in or near the project area.

DTSC’s Office of Environmental Justice and Tribal Affairs (EJTA) contacted the Native American Heritage Commission (NAHC) about this Site Tribal project notification letters were sent to contacts on May 27, 2015. One response was received from the listed tribes. They requested that a Native American monitor be available in case anything was uncovered or discovered during the remediation activities. This has been incorporated into the RAW. There are no known prehistoric or historic archaeological structures in the general Site area, or any Native American cultural resources. Project activities will be conducted in a highly disturbed, urbanized industrial area with no known historical resources within the Site. No information from any previous development or site disturbance activities were found that would warrant a search of the Registry of Sacred Sites.

As a precaution, the Removal Action Workplan (RAW) includes the following recommendation: If any potential pre-historic or historic-era materials are discovered during excavation activities, all work in that area will be halted or diverted until a
qualified archaeologist can evaluate the nature and significance of the finds. If the materials are found to be Native American in origin, immediately contact any of the Tribal Contacts on the list provided by NAHC to alert them of the discovery. DTSC staff and property owner are also to be immediately notified and informed of this situation. After discussion with any of the Tribal Contacts and/or their respective Cultural Resources Managers and in collaboration with DTSC (including the Office of Environmental Justice and Tribal Affairs) and the property owner, implement any measures deemed necessary to record and/or protect the pre-historic or historic resources.

In addition, the contractors performing the remedial activities on the Site are to be alerted to be observant and aware that they may encounter potential Native American cultural or archaeological resources and/or human remains.

In the event of accidental discovery or recognition of any human remains during ground disturbing activities, excavation or disturbance of the Site or any nearby area shall stop immediately, and the County Coroner notified to determine its origin. The coroner will determine disposition within 48 hours. If the remains are Native American, the coroner will be responsible for contacting the NAHC within 24 hours. The NAHC will identify and notify the person(s) who might be the most likely descendent (MLD) who will make recommendations for the appropriate and dignified treatment of the remains (Public Resources Code, section 5097.98). The descendants shall complete their inspection and make recommendations or preferences for treatment within 48 hours of being granted access to the Site (CEQA Guidelines, CCR section 15064.5(e); HSC section 7050.5).

In the event of accidental discovery or recognition of any human remains during ground disturbing activities, excavation or disturbance of the Site or any nearby area shall stop immediately, and the County Coroner notified to determine its origin. The coroner will determine disposition within 48 hours. If the remains are Native American, the coroner will be responsible for contacting the NAHC within 24 hours. The NAHC will identify and notify the person(s) who might be the most likely descendent (MLD) who will make recommendations for the appropriate and dignified treatment of the remains (Public Resources Code, section 5097.98). The descendants shall complete their inspection and make recommendations or preferences for treatment within 48 hours of being granted access to the Site (CEQA Guidelines, CCR section 15064.5(e); HSC section 7050.5).

In the event of accidental discovery of potential cultural or archaeological resources, immediately suspend excavation activities in the immediate area and surrounding 50 feet until a qualified archaeologist can evaluate the nature and significance of the discovery. Immediately contact any of the Tribal Contacts on the list provided by NAHC to alert them of the discovery. DTSC staff and property owner are also to be immediately notified and informed of this situation. After discussion with any of the Tribal Contacts and/or their respective Cultural Resources Managers and in collaboration with DTSC (including the Office of Environmental Justice and Tribal Affairs) and the property owner, implement any measures deemed necessary to record and/or protect the cultural or archaeological resources.

Analysis as to whether or not project activities would:

a. Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code § 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:

b.

i) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or

Impact Analysis:

□ Potentially Significant Impact  
□ Less Than Significant With Mitigation Incorporated  
□ Less Than Significant Impact  
X No Impact

ii) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code § 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code § 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

Impact Analysis: No significant Tribal Cultural Resources have been identified at the Site. The Native American Heritage Commission identified several potential Native American Tribes interested in the Site. Tribal project notification letters were sent to contacts on May 27, 2015. One response was received from the listed tribes. They requested that a Native American monitor be available in case anything was uncovered or discovered during the remediation activities. DTSC will consult with any Native American Tribe requesting consultation on the Site. If requested by one of the tribes, tribal monitoring will be present during project activities. If any archaeological resources are uncovered during Site work, project activities will be halted and a Tribal representative(s) and/or a qualified archaeologist will be contacted immediately. Finding archeological resources is unlikely, so no impact is expected.
Conclusion:
☐ Potentially Significant Impact
☐ Less Than Significant With Mitigation Incorporated
☐ Less Than Significant Impact
☒ No Impact

References Used:

19. Utilities and Service Systems

Project Activities Likely to Create an Impact:
- Minimal runoff from dust suppression activities

Description of Baseline Environmental Conditions: The project does not involve use of existing wastewater infrastructure. Water for dust suppression will be obtained from municipal water supplies. No water treatment facilities will be constructed. Site is located in a highly disturbed and developed, urbanized residential and commercial area. Topography at the Site is relatively flat, the land surface site is covered with vegetation and soil. The surrounding property area consists of residential and commercial use. The proposed project is planned at property currently undeveloped. The proposed project involves a removal action associated with contaminated soil. No buildings, structures or infrastructure will be built or added to the property as a result of the project. In addition, remediation activities are expected to be temporary, and will not generate the need for additional utilities or service systems. The project is not expected to generate wastewater. The project activities will not require the construction of new wastewater treatment facilities or expansion of existing facilities. Existing facilities will be sufficient to carry out the project. The project will not require new construction or expansion of storm water drainage. Existing drainage will be sufficient to carry out the project. Excavated soils will be managed as potentially hazardous wastes and transported by trucks to permitted landfills for disposal; actual determination of waste classification will be based on profile samples collected from soils to be disposed prior to or during implementation of the proposed project.

Analysis as to whether or not project activities would:

a. Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board (RWQCB).

Impact Analysis: Waste waters generated from the planned removal action include equipment decontamination waste waters and sanitary waste waters contained within portable toilets. Waste waters generated by decontaminating equipment will be stored in a portable poly tank and disposed of off-site. A contractor will be retained to provide, maintain and remove the portable sanitary toilets required during construction activities. No permits associated with these waste waters will be required by the RWQCB.

Conclusion:
☐ Potentially Significant Impact
☐ Less Than Significant With Mitigation Incorporated
☐ Less Than Significant Impact
☒ No Impact

b. Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.

Impact Analysis: None required.

Conclusion:
☐ Potentially Significant Impact
☐ Less Than Significant With Mitigation Incorporated
☐ Less Than Significant Impact
☒ No Impact
c. Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.

Impact Analysis: No stormwater drainage facilities will be constructed or expanded.

Conclusion:
☐ Potentially Significant Impact
☐ Less Than Significant With Mitigation Incorporated
☒ Less Than Significant Impact
☐ No Impact

d. Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed.

Impact Analysis: Water use will be limited to dust suppression and vehicle decontamination onsite. Volumes projected for use are minimal and will not require new or expanded entitlements.

Conclusion:
☐ Potentially Significant Impact
☐ Less Than Significant With Mitigation Incorporated
☒ Less Than Significant Impact
☐ No Impact

e. Result in determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the projects projected demand in addition to the providers existing commitments.

Impact Analysis: Waste water generated will be limited to water use for vehicle decontamination, which will be collected onsite then taken off-site for disposal. As stated above, short-term workers would be on-site during construction activities; as a result, limited wastewater would be generated. Temporary port-a-pots would be utilized by construction workers, and emptied for off-site transport by a managing company. Therefore, no change to the existing wastewater treatment provider's capacity will be needed.

Conclusion:
☐ Potentially Significant Impact
☐ Less Than Significant With Mitigation Incorporated
☒ Less Than Significant Impact
☐ No Impact

f. Be served by a landfill with sufficient permitted capacity to accommodate the projects solid waste disposal needs.

Impact Analysis: The proposed project is not expected to generate solid waste (e.g. municipal refuse) in an amount that would require the transportation and disposal to a Class III non-hazardous landfill. Any excavated material or debris accumulated during the Removal Action will be transported to a licensed facility permitted to accept the material. Only licensed disposal facilities that have current solid waste facility permits, have permits to accept the material as profiled, and have sufficient capacity to accept the material will be used.

Conclusion:
☐ Potentially Significant Impact
☐ Less Than Significant With Mitigation Incorporated
☒ Less Than Significant Impact
☐ No Impact

g. Comply with federal, state, and local statutes and regulations related to solid waste.

Impact Analysis: The project will comply with all applicable statutes and regulations related to solid waste generation and disposal pursuant to California Public Resources Code. Title 27, Division 2, Sections §40000-40002, and 40508.

Conclusion:
☐ Potentially Significant Impact
☐ Less Than Significant With Mitigation Incorporated
☐ Less Than Significant Impact
☒ No Impact
20. Wildfire

Project Activities Likely to Create an Impact: None

Description of Baseline Environmental Conditions: The Site is located in a highly disturbed, developed, and urbanized residential and commercial area with little or no trees. The Site is not located in or near state responsibility areas or lands classified as very high fire hazard severity zones. Therefore, no further analysis is deemed necessary.

Analysis as to whether or not project activities would:

a. Substantially impair an adopted emergency response plan or emergency evacuation plan.

   Impact Analysis:
   
   Conclusion:
   ☐ Potentially Significant Impact
   ☐ Less Than Significant With Mitigation Incorporated
   ☒ Less Than Significant Impact
   ☐ No Impact

b. Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire.

   Impact Analysis:
   
   Conclusion:
   ☐ Potentially Significant Impact
   ☐ Less Than Significant With Mitigation Incorporated
   ☒ Less Than Significant Impact
   ☒ No Impact

c. Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment.

   Impact Analysis:
   
   Conclusion:
   ☐ Potentially Significant Impact
   ☐ Less Than Significant With Mitigation Incorporated
   ☒ Less Than Significant Impact
   ☒ No Impact

d. Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes.

   Impact Analysis:
   
   Conclusion:
   ☐ Potentially Significant Impact
   ☐ Less Than Significant With Mitigation Incorporated
   ☒ Less Than Significant Impact
   ☒ No Impact

References Used:

- Draft Removal Action Work Plan (Jacobs, 2019)
- City of Beverly Hills – Traffic Plan: http://www.ci.beverlyhills.ca.us/depts/engineering/traffic_engineering_n_signals/traffic_maps.asp
21. Mandatory Findings of Significance

a. Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory.

Conclusion:
- Potentially Significant Impact
- Less Than Significant With Mitigation Incorporated
- Less Than Significant Impact
- No Impact

b. Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)

Conclusion:
- Potentially Significant Impact
- Less Than Significant With Mitigation Incorporated
- Less Than Significant Impact
- No Impact

c. Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly.

Conclusion:
- Potentially Significant Impact
- Less Than Significant With Mitigation Incorporated
- Less Than Significant Impact
- No Impact

References Used:
- Draft Removal Action Work Plan (Jacobs, 2019)

Determination of Appropriate Environmental Document:
Based on evidence provided in this Initial Study, DTSC makes the following determination:
- The proposed project COULD NOT HAVE a significant effect on the environment. A Negative Declaration will be prepared.
- The proposed project COULD HAVE a significant effect on the environment. However, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A Mitigated Negative Declaration will be prepared.
- The proposed project MAY HAVE a significant effect on the environment. An Environmental Impact Report is required. However, all potentially significant effects have been analyzed adequately in an earlier document pursuant to applicable standards, and (a) have been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An Environmental Impact Report is required, but it must analyze only the effects that remain to be addressed.
- The proposed project COULD HAVE a significant effect on the environment. However, all potentially significant effects (a) have been analyzed adequately in an earlier Environmental Impact Report or Negative Declaration pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier Environmental Impact Report or Negative Declaration, including revisions or mitigation measures that are imposed upon the proposed project. Therefore, nothing further is required.
Certification:
I hereby certify that the statements furnished above and in the attached exhibits, present the data and information required for this initial study evaluation to the best of my ability and that the facts, statements and information presented are true and correct to the best of my knowledge and belief.

Sara Vela
Preparer’s Signature
09/11/2020
Preparer’s Name
Environmental Scientist
Preparer’s Title
(818) 717-6618
Phone

Haissam Y. Salloum, P.E.
Supervising Hazardous Substances Engineer II
Branch Chief Name
Branch Chief Title
09/15/2020
Branch Chief Signature
09/15/2020
Date
Phone
## Acronyms and Abbreviations

<table>
<thead>
<tr>
<th>Acronym/Abbreviation</th>
<th>Definition</th>
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<tr>
<td>amsl</td>
<td>above mean sea level</td>
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<tr>
<td>bgs</td>
<td>below ground surface</td>
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<td>U. S. Environmental Protection Agency</td>
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<td>milligram(s) per liter</td>
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<td>Union Pacific Railroad</td>
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<tr>
<td>USFWS</td>
<td>United States Fish and Wildlife Service</td>
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<tr>
<td>VCA</td>
<td>Voluntary Cleanup Agreement</td>
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<tr>
<td>VOC</td>
<td>volatile organic compound</td>
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<td>WDR</td>
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1. Introduction

This technical memorandum describes the approach used to estimate air emissions from construction activities associated with the proposed removal action for the remedy of arsenic in soil at the Union Pacific Railroad (UPRR) Beverly Hills located at 9315 Civic Center Drive, Beverly Hills, California. The air pollutants of concern for this project are criteria pollutants for which ambient air quality standards exist. The following sections will briefly describe the project, methodology, data and assumptions used to estimate emissions, and results.

2. Project Description

The Beverly Hills Land Company (BHLC) site is located at 9315 Civic Center Drive in Beverly Hills, California, and consists of three parcels (Lot 12, Lot 13, and a small Triangle Section east of Lot 13). The BHLC site is the former railroad right-of-way (ROW) adjacent to Santa Monica Boulevard between Alpine Avenue and North Doheny Drive, which is currently vacant, open space (Jacobs, pending). Land use in the vicinity of the BHLC site is fully developed as residential and commercial properties. The BHLC site is approximately 5 acres, the majority of which is unpaved, with mature trees lining the north and south sides of Lot 13 (Jacobs, pending). The BHLC site was occupied by the railroad ROW from 1926 until approximately 1998. Previous investigations have indicated that the BHLC site contains arsenic-impacted soil, which must now be addressed by UPPR. Regulatory oversight is provided by the California Environmental Protection Agency, Department of Toxics Substances Control (Jacobs, pending).

The proposed removal action includes the excavation and offsite transport of approximately 4,400 cubic yards (6,600 tons) of arsenic-impacted soil, as well as the import and backfilling of approximately 4,400 cubic yards of clean soil. Excavated soil may be stockpiled for up to 90 days before offsite transport to an appropriate disposal facility. The proposed field efforts – including soil excavation, onsite stockpiling, backfilling, and offsite transport for soil exports and imports – are expected to last approximately 6 weeks (Jacobs, pending).
3. Methodology

Onsite and offsite project emissions were divided into two categories: vehicle and construction equipment exhaust and fugitive dust from vehicle and construction equipment, including material movement (for example, excavation, stockpiling, backfilling, and loading/unloading). The following criteria pollutant emissions were estimated: reactive organic gases (ROG), carbon monoxide (CO), nitrogen oxides (NOx), sulfur dioxide (SO2), particulate matter having an aerodynamic equivalent diameter of 10 microns or less (PM10), and particulate matter having an aerodynamic equivalent diameter of 2.5 microns or less (PM2.5).

Fugitive dust, construction equipment exhaust, and vehicle exhaust emissions were estimated using the California Emissions Estimator Model (CalEEMod; version 2016.3.2). CalEEMod is a statewide computer model developed by BREEZE Software, a division of Trinity Consultants (BREEZE Software), in collaboration with the South Coast Air Quality Management District (SCAQMD) to quantify criteria pollutant emissions associated with the construction activities from a variety of land use projects (BREEZE Software, 2017). Developed in cooperation with air districts throughout the State of California, CalEEMod is intended to standardize air quality analyses while allowing air districts to provide specific defaults reflecting regional conditions, regulations, and policies (SCAQMD et al., 2011). CalEEMod incorporates the California Air Resources Board’s emission factor models for off-road construction equipment (OFFROAD2011; version 3) and on-road vehicles (EMFAC2014; revised May 2015) as well as portions of the U.S. Environmental Protection Agency's AP-42, Fifth Edition, Compilation of Air Pollutant Emission Factors.

4. Data and Assumptions

To the extent possible, site-specific data were used as input to CalEEMod. Site-specific data were either provided by project engineers or obtained from the Removal Action Work Plan Beverly Hills Land Company Site Beverly Hills, California (Jacobs, pending). Where site-specific data were not available, conservative assumptions were made based on the project description. Defaults provided within CalEEMod for the project location were assumed representative unless otherwise noted. The following subsections describe the data entered into CalEEMod. Note that data related to operation, vegetation, demolition, and architectural coatings were not entered or updated, if defaults were available, because these activities are not expected as part of this project. Therefore, any emissions estimates associated with these activities were disregarded in the model output.

4.1 Project Characteristics

The project location was selected as Los Angeles County, in which Beverly Hills, California is located. The county selection dictated the wind speed, precipitation frequency, and land use used within CalEEMod. The climate zone was selected to be 11, which is the climate zone value for Beverly Hills, California, as listed in Appendix F of the CalEEMod User’s Guide (BREEZE Software, 2017).

4.2 Land Use

It was assumed that a Commercial land use category would best represent the future use of the former railroad ROW. The project area assigned to this land use category was set equal to the BHLC site (5 acres), which includes the soil excavation, stockpiling, backfilling, and truck loading/unloading areas (Jacobs, pending).

4.3 Construction

4.3.1 Schedule

It was conservatively assumed that soil excavation, onsite stockpiling, backfilling, and offsite transport activities would occur simultaneously within a 6-week period (Jacobs, pending). Because the bulk of the construction activities would involve material movement, they were assumed to be best represented by
the Grading Phase in CalEEMod. The 6-week Grading Phase was arbitrarily assigned to begin in October 2020, assuming 5 days per week, resulting in a total of 30 construction work days.

4.3.2 Off-road Equipment

The anticipated heavy equipment used during the proposed removal action includes an excavator, front-end loader, water truck, haul trucks, and worker commute vehicles (pickup trucks). The following modifications and assumptions were made to the anticipated equipment to accommodate entry into CalEEMod:

- The water truck was assumed to be best represented by the Off-Highway Truck category.
- Although the excavator and front-end loader would be used for material movement activities, CalEEMod’s methodology for estimating fugitive dust emissions from material movement depends on grader activity. As a result, one grader was added to the equipment list.
- Although the construction workers are expected to be onsite from 8 a.m. to 6 p.m., it was assumed that all equipment used during the Grading Phase would operate an average of 8 hours per day over the 30-day construction period.
- The CalEEMod default horsepower ratings and load factors were assumed appropriate for equipment selected.
- Pickup trucks and haul trucks were not entered as off-road equipment within CalEEMod because they are primarily expected to travel on paved roads to and from the site.

4.3.3 Material Movement

Material Movement includes soil excavation, onsite stockpiling, backfilling, and truck loading and unloading. It was conservatively assumed that the excavated soil (4,400 cubic yards) would be exported offsite and was, therefore, entered into CalEEMod as the quantity of material exported during the Grading Phase. The excavated areas will be backfilled with up to 4,400 cubic yards of clean soil, which was entered into CalEEMod as the quantity of material imported during the Grading Phase. The total acres graded were set equal to 15 acres based on the assumption that 0.5 acre could be graded per day during the 30-day Grading Phase; this approach is consistent with the methodology provided in Appendix A of the CalEEMod User’s Guide (BREEZE Software, 2017).

4.3.4 Trips and Vehicle Miles Traveled

For the Grading Phase, CalEEMod estimated that 1,100 truck hauling roundtrips would be necessary to haul the quantity of soil exported and imported. This value was reduced to 594 (330 for soil exports and 264 for soil imports) per the estimate provided in the Removal Action Work Plan Beverly Hills Land Company Site Beverly Hills, California (Jacobs, pending). The CalEEMod default trip length of 20 miles for haul routes was increased to 32 miles because the selected disposal facility is located in Asuza, California, which is approximately 32 miles from the BHLC site. Although the clean backfill is expected to be sourced only 25 miles from the BHLC site, CalEEMod only allows for entry of a single haul trip distance; therefore, the larger distance of 32 miles was conservatively used for all haul trips. Similarly, the CalEEMod default number of daily worker roundtrips of 10 was reduced to 5 to be consistent with engineering estimates. The CalEEMod default trip length of 14.7 miles for worker commutes was reduced to 10 miles because construction workers are expected to stay in a hotel near the BHLC site.

5. Results

Impacts to air quality are evaluated based on the proposed project construction criteria pollutant emissions. A project that generates emissions exceeding the applicable thresholds of significance would be considered to have a significant impact on air quality and would require mitigation.
Table 1 presents the thresholds that were used for evaluating the project’s significance as well as the estimated project construction emissions. The air quality significance thresholds were taken from the 2019 revisions to the SCAQMD CEQA Air Quality Handbook, which was adopted in April 1993 to assist local jurisdictions and lead agencies in complying with the requirements of CEQA regarding potentially adverse impacts to air quality (SCAQMD, 1993, 2019).1

As demonstrated in Table 1, ROG, CO, NOx, SO2, PM10, and PM2.5 emissions are below the thresholds of significance. As a result, the proposed construction activities at the BHLC site are not expected to have a significant impact on air quality and will not require mitigation.

Table 1. Comparison of Criteria Pollutant Emissions to the SCAQMD Thresholds of Significance
Construction Air Emission Estimates, Proposed Removal Action at the Union Pacific Railroad Beverly Hills Site, 9315 Civic Center Drive, Beverly Hills, California

<table>
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<th>Pollutant</th>
<th>Thresholds of Significance</th>
<th>Project Construction Emissions a</th>
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</thead>
<tbody>
<tr>
<td>ROG</td>
<td>75 pounds per day</td>
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<tr>
<td>CO</td>
<td>550 pounds per day</td>
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<td>NOx</td>
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<td>SO2</td>
<td>150 pounds per day</td>
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<td>150 pounds per day</td>
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<tr>
<td>PM2.5</td>
<td>55 pounds per day</td>
<td>0.9 pounds per day</td>
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</table>

a These emissions in pounds per day were scaled from the CalEEMod output of tons per year by a factor of 2,000 pounds per ton/30 days per year.

6. References


South Coast Air Quality Management District, Bay Area Air Quality Management District, Sacramento Metropolitan Air Quality Management District, San Joaquin Valley Air Pollution Control District, Santa Barbara County Air Pollution Control District, and San Luis Obispo County Air Pollution Control District (SCAQMD et al.). 2011. Technical Paper: Methodology Reasoning and Policy Development of the California Emission Estimator Model. July.

1 Note that SCAQMD is in the process of developing an “Air Quality Analysis Guidance Handbook” to replace the CEQA Air Quality Handbook.
REFERENCES


California Department of Fish & Wildlife Natural Diversity Database: http://www.dfg.ca.gov/biogeodata/cnddb/


CH2M HILL, Inc., 2006. Remedial Investigation Beverly Hills Land Company Site, 3915 Civic Center Drive, Beverly Hills, California


Department of Toxic Substances Control. Envirostor™, April 2014 web search

FEMA 100-year flood zone mapper (http://maps3.arcgisonline.com/ArcGIS/rest/services/A-16/FEMA_100-Year_Flood_Zones_in_the_USA/MapServer)


1.0 Project Characteristics

1.1 Land Usage

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<tr>
<th>Land Uses</th>
<th>Size</th>
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<th>Lot Acreage</th>
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</table>

1.2 Other Project Characteristics

- **Urbanization**: Urban
- **Wind Speed (m/s)**: 2.2
- **Precipitation Freq (Days)**: 33
- **Climate Zone**: 11
- **Operational Year**: 2020

**Utility Company**

- **CO2 Intensity (lb/MWhr)**: 0
- **CH4 Intensity (lb/MWhr)**: 0
- **N2O Intensity (lb/MWhr)**: 0

1.3 User Entered Comments & Non-Default Data
Project Characteristics - Project is located in Beverly Hills, California.

Land Use - Project area was set equal to the size of the BHLC site.

Construction Phase - It was assumed that all activities would occur simultaneously within a 6-week period.

Off-road Equipment - The equipment list was provided by project engineers; equipment was assumed to operate 8 hrs/day, on average.

Trips and VMT - Project engineers indicate: 5 workers/day, traveling 20 roundtrip miles; 330 export trips, traveling 32 miles to Asuza, CA; and 264 import trips. Although imported backfill is from only 25 miles away, used the export distance of 32 miles.

Grading - Set the Total Acres Graded to 15, which is consistent with the CalEEMod default assumption that 0.5 acres could be graded per day.

Vehicle Trips - There will be no operational emissions associated with this project.

Consumer Products - There will be no operational emissions associated with this project.

Area Coating - There will be no operational emissions associated with this project.

Landscape Equipment - There will be no operational emissions associated with this project.

Energy Use - There will be no operational emissions associated with this project.

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2.0 Emissions Summary
## 2.1 Overall Construction

### Unmitigated Construction

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<th>NOx</th>
<th>CO</th>
<th>SO2</th>
<th>Fugitive PM10</th>
<th>Exhaust PM10</th>
<th>PM10 Total</th>
<th>Fugitive PM2.5</th>
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<th>PM2.5 Total</th>
<th>Bio- CO2</th>
<th>NBio- CO2</th>
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### Mitigated Construction

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**Date:** 10/24/2019 8:07 PM  
**Page:** 4 of 18  
**BHLC - Los Angeles-South Coast County, Annual**
2.2 Overall Operational

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3.0 Construction Detail

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Acres of Grading (Site Preparation Phase): 0
3.1 Mitigation Measures Construction

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Acres of Grading (Grading Phase): 15

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)
### 3.2 Grading - 2020

#### Unmitigated Construction On-Site

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<th>CO</th>
<th>SO2</th>
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<th>Exhaust PM10</th>
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<th>NBio-CO2</th>
<th>Total CO2</th>
<th>CH4</th>
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### 4.1 Mitigation Measures Mobile

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<th>Exhaust PM10</th>
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<th>Fugitive PM2.5</th>
<th>Exhaust PM2.5</th>
<th>PM2.5 Total</th>
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### 4.2 Trip Summary Information

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### 4.4 Fleet Mix

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<th>LDT2</th>
<th>MDV</th>
<th>LHD1</th>
<th>LHD2</th>
<th>MHD</th>
<th>HHD</th>
<th>OBUS</th>
<th>UBUS</th>
<th>MCY</th>
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5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

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<th>CO</th>
<th>SO2</th>
<th>Fugitive PM10</th>
<th>Exhaust PM10</th>
<th>PM10 Total</th>
<th>Fugitive PM2.5</th>
<th>Exhaust PM2.5</th>
<th>PM2.5 Total</th>
<th>Bio- CO2</th>
<th>NBio- CO2</th>
<th>Total CO2</th>
<th>CH4</th>
<th>N2O</th>
<th>CO2e</th>
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</tr>
</tbody>
</table>
### 5.2 Energy by Land Use - Natural Gas

#### Unmitigated

| Land Use         | NaturalGas Use | ROG  | NOx  | CO   | SO2  | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4  | N2O  | CO2e  |
|------------------|----------------|------|------|------|------|---------------|--------------|------------|---------------|--------------|------------|----------|---------|----------|----------|------|------|-------|
| User Defined     | 0              | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Commercial       |                |      |      |      |      |               |              |            |                |              |            |          |         |          |        |      |       |
| Total            | 0.0000         | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |

#### Mitigated

| Land Use         | NaturalGas Use | ROG  | NOx  | CO   | SO2  | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4  | N2O  | CO2e  |
|------------------|----------------|------|------|------|------|---------------|--------------|------------|---------------|--------------|------------|----------|---------|----------|----------|------|------|-------|
| User Defined     | 0              | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Commercial       |                |      |      |      |      |               |              |            |                |              |            |          |         |          |        |      |       |
| Total            | 0.0000         | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
### 5.3 Energy by Land Use - Electricity

#### Unmitigated

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<th>CH4 MT/yr</th>
<th>N2O MT/yr</th>
<th>CO2e MT/yr</th>
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</thead>
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#### Mitigated

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<th>Land Use</th>
<th>Electricity Use kWh/yr</th>
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<th>CH4 MT/yr</th>
<th>N2O MT/yr</th>
<th>CO2e MT/yr</th>
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### 6.0 Area Detail

### 6.1 Mitigation Measures Area
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<th>Exhaust PM10</th>
<th>PM10 Total</th>
<th>Fugitive PM2.5</th>
<th>Exhaust PM2.5</th>
<th>PM2.5 Total</th>
<th>Bio- CO2</th>
<th>NBio- CO2</th>
<th>Total CO2</th>
<th>CH4</th>
<th>N2O</th>
<th>CO2e</th>
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### 6.2 Area by SubCategory

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<th>Bio- CO2</th>
<th>NBio- CO2</th>
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<th>CH4</th>
<th>N2O</th>
<th>CO2e</th>
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### 6.2 Area by SubCategory

**Mitigated**

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<th>Exhaust PM10</th>
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<th>Exhaust PM2.5</th>
<th>PM2.5 Total</th>
<th>Bio-CO2</th>
<th>NBio-CO2</th>
<th>Total CO2</th>
<th>CH4</th>
<th>N2O</th>
<th>CO2e</th>
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</tbody>
</table>

| Total              | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |               |              |            |               |              |         |         |           |      |      |       |

### 7.0 Water Detail

### 7.1 Mitigation Measures Water
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<th>CO2e</th>
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### 7.2 Water by Land Use

**Unmitigated**

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7.2 Water by Land Use

**Mitigated**

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<tr>
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<th>Indoor/Outdoor Use</th>
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<th>CH4</th>
<th>N2O</th>
<th>CO2e</th>
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8.0 Waste Detail

8.1 Mitigation Measures Waste

**Category/Year**

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## 8.2 Waste by Land Use

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### Mitigated

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<th>N2O</th>
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## 9.0 Operational Offroad

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10.0 Stationary Equipment

**Fire Pumps and Emergency Generators**

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**Boilers**

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**User Defined Equipment**

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11.0 Vegetation
Appendix H
Negative Declaration and Notice of Determination
Subject: ☑️ DRAFT ✗ FINAL ☑️ MITIGATED

Project Title: Union Pacific Railroad Beverly Hills

State Clearinghouse No.: 

Project Location: 9315 Civic Center Drive, Beverly Hills CA 90210

County: Los Angeles

Project Description:

The California Department of Toxic Substances Control (DTSC), pursuant to authority granted under Chapter 6.8 Section 25355.5 (a)(1)(C) of the Health and Safety Code (H&SC), is considering approval of a draft Removal Action Workplan (RAW) for the proposed project hereinafter the “Site” or “Project Area” or “Area of Potential Effect” (APE), as submitted by the Jacobs Engineering Group, Inc. (Jacobs) on behalf of the Union Pacific Railroad Company (UPRR). The purpose of the project is to minimize human exposure to elevated levels of arsenic in soil that exceeds the project-specific cleanup levels for potential commercial, multi-use, and multiple unit housing purposes at the Site.

The RAW evaluates removal action alternatives and identifies a preferred removal action based on comparative analysis of alternatives. The preferred removal action (Alternative #5) for the Site includes excavation and disposal of 4,400 cubic yards of arsenic-impacted soil up to 2 feet below ground surface (bgs) and disposal of contaminated soil at an appropriately permitted landfill and establishment of a 2-foot soil cover. Up to approximately 4,400 cubic yards of clean imported soil may be used to backfill the excavations. However, if approved development of the Site is conducted concurrently with remedial excavation activities, some areas may not be backfilled to accommodate development plans. Results from previous investigations (CH2M HILL, Inc., 2006) indicate that concentrations of arsenic in soil range from 16 to 996 mg/kg, with the highest concentrations observed in soil (primarily within fill material) from 0 to 5 feet bgs along the center of the Site, which is a former railroad right-of-way. The proposed project is anticipated to commence following approval of the RAW and would take approximately 6 weeks to complete.

Upon completion of the RAW, a Land Use Covenant (LUC) in the form of deed restrictions/Institutional Controls (IC’s) will be implemented and filed with the property deed at the County Recorder’s Office to prohibit future soil disturbances unless conducted and managed in accordance with a DTSC-approved Soil Management Plan, prohibit the use of the property as a single-family residences, hospital, school, daycare center and limit the Site use to commercial, multi-use, and multiple unit housing purposes.1.

Proposed Project Activities

As mentioned above, the proposed project will be a soil excavation. Following are details regarding the soil excavation proposed:

- Soil Excavation consisting of removing 6,600 tons (4,400 cubic yards) of arsenic-impacted soil from several areas within the Site:
- Excavation will be performed in accordance with the guidelines presented in California Occupational Safety and Health Administration, Title 8, California Code of Regulations (CCR) (i.e., 8 CCR), Division 1, Chapter 4, Subchapter 4, Article 6 – Excavations (Sections 1539 through 1541).
- Excavations for the removal action will be up to 2 feet bgs.
- Removal will be accomplished with a backhoe or excavator. Soil stockpiling will be conducted in accordance with the remediation waste staging requirements in HSC, Division 20, Chapter 6.5, Article 2, Section 25123.3[b][4][B]).
- The stockpiles will be composite sampled for arsenic and other analytes as required by the disposal facilities for profiling for disposal will be collected for every 500 cubic yards of stockpiled material. For the first 500 cubic yards of excavated soils, two samples will be taken for every 100 cubic yards, after 500 cubic yards has been sampled then one sample per every 500 cubic yards will be taken for waste disposal classification. The profiling analytical
Data will be reviewed to determine the appropriate soil classification (non-hazardous, non-RCRA hazardous or RCRA hazardous) and to select the appropriate disposal facility. However, the soil is expected to be non-hazardous. DTSC will be notified and will approve the proposed determination and disposal facility.

- Upon selection of the appropriate disposal facility, soil will be loaded into trucks for transport to the disposal facility. Loading will be conducted with a front end loader. Dust control during loading will be implemented by limiting the drop height from the loader and with water spray. All trucks will be tarped and dry brushed prior to leaving the Site.
- Stockpile areas will be inspected for contamination and remediated as necessary within 30 days after the last stockpile is removed.
- Confirmation sampling and analysis for arsenic will be conducted to determine residual concentrations remaining at the Site and whether the removal goals have been met.
- At completion of excavation activities, the excavations will be backfilled with up to 4,400 cubic yards or approximately 264 truckloads of imported clean soil (approximately 9 truckloads per day), and the backfilled soil will be compacted. If approved development of the Site is conducted concurrently with remedial excavation activities, some areas may not be backfilled to accommodate development plans.
- During the proposed excavation, no unauthorized persons will be allowed within the working exclusion and control zones on-site. The Site is currently surrounded by an existing permanent fence with gates that are locked after business hours. Additionally, barrier fences will be installed to restrict access to sensitive areas such as exclusion zones.
- Clean backfill material and surrounding remaining soil with concentrations below the removal action goals will establish a 2-foot soil cover to reduce exposure to arsenic-impacted soil remaining below 2 feet bgs.
- Soil cover inspection will be conducted in accordance with a maintenance and monitoring plan.

2. Construction Schedule and Duration

Temporary impacts resulting from project construction activities, including noise, dust, and traffic, are expected to last up to six weeks. During the excavation work, confirmation sampling will be conducted to verify that all soils containing arsenic have been properly removed at the Site. Excavation will continue until arsenic in Site soils are found to be less than corresponding removal action goals. Excavation areas will be backfilled with clean soil and the site will be seeded.

PROJECT SCHEDULE:
The Removal Action (excavation with off-site disposal and soil cover) will be completed within six weeks.

Figures:
Figure 1 – Site Location
Figure 2 – Site Map

1. Operations and Maintenance

Upon completion of construction activities, remediation systems operations and maintenance (O&M) would occur. Annual maintenance of soil cover, with monitoring and reporting are anticipated.

Finding of Significant Effect on Environment: After conducting an Initial Study of the potential environmental impacts of the proposed project, DTSC has determined that implementation of the proposed project COULD HAVE a significant effect on the environment. An Initial Study supporting this finding is attached.

Mitigation Measures:

Cultural resources: All Union Pacific Railroad Beverly Hills prior operational history will be detailed on Recording Historical Resources DPR 523 forms prior to initiating ground disturbing activities on the project. Union Pacific Railroad will also have a Native American Cultural Monitor during soil excavation activities.

If evidence of archaeological resources (e.g., chipped or groundstone, historic debris, building foundations, or human bone) is identified during ground disturbing activities, all work within 60 feet of the discovery site will stop until a qualified archaeologist can conduct formal recordation and assess the significance of the find.

Site activities should comply with 7050.5 of the California Health and Safety Code: (b) In the event of discovery or recognition of any human remains in any location other than a dedicated cemetery, there shall be no further excavation or
disturbance of the Site or any nearby area reasonably suspected to overlie adjacent remains until the coroner of the county in which the human remains are discovered has determined, in accordance with Chapter 10 (commencing with Section 27460) of Part 3 of Division 2 of Title 3 of the Government Code, that the remains are not subject to the provisions of Section 27491 of the Government Code or any other related provisions of law concerning investigation of the circumstances, manner and cause of any death, and the recommendations concerning the treatment and disposition of the human remains have been made to the person responsible for the excavation, or to his or her authorized representative, in the manner provided in Section 5097.98 of the Public Resources Code. The coroner shall make his or her determination within two working days from the time the person responsible for the excavation, or his or her authorized representative, notifies the coroner of the discovery or recognition of the human remains. (c) If the coroner determines that the remains are not subject to his or her authority and if the coroner recognizes the human remains to be those of a Native American, or has reason to believe that they are those of a Native American, he or she shall contact, by telephone within 24 hours, the Native American Heritage Commission.

[Signature]

Haissam Y. Salloum, P.E.
Branch Chief Name

Supervising HSE II
Branch Chief Title

01/29/2021
Date

(818)717-6538
Phone #
FIGURE 1
Site Location
Removal Action Work Plan
Union Pacific Railroad Beverly Hills Site,
9315 Civic Center Drive,
Beverly Hills, California
FIGURE 2
Background Sample Locations
Removal Action Work Plan
Union Pacific Railroad Beverly Hills Site,
9315 Civic Center Drive,
Beverly Hills, California

Image Credits:
Hexagon Valtus Aerial Imagery, Date
Collected: 02/15/2018, Source: MapMart
Notice of Determination

To:
Office of Planning and Research
U.S. Mail: P.O. Box 3044
Sacramento, CA 95812-3044
Street Address: 1400 Tenth St., Rm 113
Sacramento, CA 95814

☑ County Clerk
County of: Los Angeles
Address: P.O. Box 1208
Norwalk, California 90650-1208

From:
Public Agency: DTSC, Department of Toxic Substances Control
Address: 9211 Oakdale Avenue
Chatsworth, California 91311
Contact: Sara Vela
Phone: 818 717-6618

Lead Agency (if different from above):
Address:
Contact:
Phone:

SUBJECT: Filing of Notice of Determination in compliance with Section 21108 or 21152 of the Public Resources Code.

State Clearinghouse Number (if submitted to State Clearinghouse): 2020090440

Project Title: Union Pacific Railroad Beverly Hills

Project Applicant: Union Pacific Railroad

Project Location (include county): Beverly Hills, Los Angeles County

Project Description:
The RAW evaluates removal action alternatives and identifies a preferred removal action based on comparative analysis of alternatives. The preferred removal action (Alternative #5) for the Site includes excavation and disposal of 4,400 cubic yards of arsenic-impacted soil up to 2 feet below ground surface (bgs) and disposal of contaminated soil at an appropriately permitted landfill and establishment of a 2-foot soil cover. Up to approximately 4,400 cubic yards of clean imported soil may be used to backfill.

This is to advise that the Department of Toxic Substances Control ☐ has approved the above (☐ Lead Agency or ☐ Responsible Agency) described project on January 27, 2021 and has made the following determinations regarding the above described project.

1. The project [☐ will ☐ will not] have a significant effect on the environment.
2. ☐ An Environmental Impact Report was prepared for this project pursuant to the provisions of CEQA.
   ☐ A Negative Declaration was prepared for this project pursuant to the provisions of CEQA.
3. Mitigation measures [☐ were ☐ were not] made a condition of the approval of the project.
4. A mitigation reporting or monitoring plan [☐ was ☐ was not] adopted for this project.
5. A statement of Overriding Considerations [☐ was ☐ was not] adopted for this project.
6. Findings [☐ were ☐ were not] made pursuant to the provisions of CEQA.

This is to certify that the final EIR with comments and responses and record of project approval, or the negative Declaration, is available to the General Public at:
https://dtsc.ca.gov/union-pacific-railroad-beverly-hills/

Signature (Public Agency): ___________________________ Title: Branch Chief

Date: 02/05/2021 ___________________________ Date Received for filing at OPR: ___________________________
Appendix I
Response to Public Comments
January 27, 2021

RESPONSE TO PUBLIC COMMENTS ON THE REMOVAL ACTION WORKPLAN AND CALIFORNIA ENVIRONMENTAL QUALITY ACT NEGATIVE DECLARATION FOR THE UNION PACIFIC RAILROAD BEVERLY HILLS SITE, 9315 CIVIC CENTER DRIVE, BEVERLY HILLS (SITE CODE: 301247)

Dear Community Member:

Enclosed is the Department of Toxic Substances Control (DTSC) responses to comments received during the public comment period for the Removal Action Workplan (RAW) and the California Environmental Quality Act (CEQA) Negative Declaration. The RAW proposes to excavate and dispose of arsenic contaminated soil at a licensed facility from the Union Pacific Railroad Beverly Hills Site, also known as Beverly Hills Lots 12 & 13. The comment period started on September 23, 2020 and ended on October 22, 2020.

DTSC also completed a CEQA Initial Study and determined that the actions proposed in the RAW will not have an impact on the environment. Based on the public comments received the cleanup actions proposed in the RAW and the Negative Declaration were finalized. DTSC approved the RAW on January 27, 2021 and will file the Negative Declaration with the State Clearing House. These and all documents related to the subject site are available to the public on Envirostor using the following link https://www.envirostor.dtsc.ca.gov/public/profile_report.asp?global_id=19400017

If you have any questions, contact Ms. Sara Vela at (818) 717-6618, or e-mail at Sara.Vela@dtsc.ca.gov.

Sincerely

Haissam Y. Salloum, P.E.
Branch Chief
Site Mitigation & Restoration Program - Chatsworth
RESPONSE TO PUBLIC COMMENTS ON
UNION PACIFIC RAILROAD BEVERLY HILLS REMOVAL ACTION WORKPLAN
AND
CALIFORNIA ENVIRONMENTAL QUALITY ACT NEGATIVE DECLARATION

Comment #1 – Rose Norton
As a 63-year resident of the City and a former chair of the Beverly Hills Planning Commission, I object in the strongest manner to disturbing and excavating the arsenic-poisoned land under the former train tracks on Santa Monica Boulevard.

The Beverly Hills Land Company illegally cut the trees in 2015 and scattered toxic dust on the adjacent neighborhood. This violation is noted in the State files. The residents do not trust them to do the right thing.

Of the available options, I would like to recommend capping the soil with asphalt and/or leaving it alone -- Option 4.1.2.

Any proposal to transport over 1,320,000 pounds (6,600 tons) of toxic soil through our neighborhoods is unacceptable.

This is a railroad track easement, it is insufficient for an industrial office complex of 11 over-code scaled buildings proposed for this barely accessible site.

I strongly object to any development on the toxic site.

Response to Comment #1:
The purpose of the RAW is to address environmental cleanup of the site and not potential development. Alternative 5 (Excavation with Offsite Disposal during Development) has been recommended because it removes the contaminated soil and places controls on the use of the property to reduce potential exposure to deeper contaminated soil and is therefore the most protective alternative evaluated. Contaminated soil will be transported in a manner that minimizes disturbance to the community in accordance with city and state requirements.
Comment #2 – Mike D. Weiner and Shari Weiner
I am writing in reference to the proposed development project on the Union Pacific Railroad Beverly Hills site located at 9101 to 9350 N Santa Monica Boulevard and 9100 to 9349 Civic Center Drive. I currently own condominiums on North Oakhurst Drive as principal residences for my family between Beverly Boulevard and Civic Center Drive and have serious concerns on increased traffic as well as safety and the potential adverse effects on our property values that would undoubtedly result from the proposed development project including low income housing. While there are certainly apartments in the neighborhood, we purchased our properties on their inclusion within Beverly Hills for safety and schooling as well as eventual property valuation and appreciation. The proposed development will bring much more density as well as unsupportable and quite frankly, untenable demands on our public services – this is not in keeping with the values of Beverly Hills or which we pay substantial taxes. Both of Beverly Boulevard and Santa Monica Boulevard are already very congested thoroughfares and developing this 5+ acre site with its accompanying traffic and density will only make matters worse, let alone on the surrounding neighborhood streets, including Civic Center Drive which currently is a closed cul-de-sac; opening the west-end to Beverly Boulevard will result in substantial unintended pass-through traffic impairing safety and the nature of our neighborhood. The demands are not supportable by our infrastructure. This development project is short-sided and is purely an attempt by the landowner to attempt to realize value irrespective of the consequence to the neighborhood. Enough. There is already substantial ongoing development underway now, including the condominium developments on North Palm and Beverly Boulevard, on North Oakhurst and Civic Center Drive, on each of Oakhurst, Palm and Maple between Burton Way and Beverly Boulevard, on Beverly Boulevard east of Doheny, on Doheny north and south of Beverly Boulevard, and at the Four Seasons Residences. This Project should not be approved and especially so without fulsome environmental impact studies, including expected ingress and egress streets. Its negative effects will reach into the neighborhoods south of Santa Monica Boulevard as well as the “flats” north of the Boulevard.

Response to Comment #2:
The purpose of the RAW is to address environmental cleanup of the site and not potential development as detailed in our response to Comment #1.

Comment #3 – Steve Mayer
Please permit this communication to provide public comment upon the Union Pacific Railroad site (Lots 12 & 13), relative to the draft Negative Declaration, Initial Study and the draft Removal Action Work Plan:

Summary
(1) What is clear is that at least one public hearing should be held. A second public hearing involving the City of Beverly Hills City Council should also be held

(2) None of the alternatives involve the complete removal of all contaminants,
Response to Public Comments
January 27, 2021

no matter how deep. That is the only solution that is acceptable to many residents in Beverly Hills.

(3) It is not clear if the Agency sent Public Notice to the petitioners from 2015, as submitted by Lionel Ephraim.

(4) It is not clear why Union Pacific Railroad is now proceeding when the development plans of the current landowner are under review by the City of Beverly Hills.

The current proposed development plans will likely involve two levels of subterranean parking. Would Union Pacific Railway be responsible for full remediation? If not, why not?

(5) The draft Negative Declaration does not allow single-family residential development, but does allow multi-family residential development. There is no explanation for that inconsistency. The most pressing need for the City of Beverly Hills, per State of California edict, is affordable housing. Lots 12 & 13 are some of the few remaining parcels in the City that can accommodate such state requirements. If senior congregate housing was developed, how would those seniors be safe if a single-family homeowner would be at risk?

(6) One of the developer’s future options could be to sell office condominium units in a Creative Office campus. How would the ultimate unit holders be protected by Union Pacific Railroad, if the containments migrated closer to the surface?

(7) Another of the developer’s option is to donate Lot 13 to the City of Beverly Hills for park use and/or other uses. Why was there not any “Proposed Sampling Grids” in the “Figures” section of Lot 13 in the proposed RAW? How can the public approve the RAW if there is no information regarding Lot 13? Also, should not the potential use of Lot 13 be of concern to the Union Pacific Railroad? For decades, people utilized Lot 13 as a recreation location for walking their dogs or personal walks. Why has not Union Pacific Railway assessed if such users were exposed, and determined its liability, and why has it not been included in the draft RAW?

Initial Study
The Initial Study is invalid, due to at least 16 errors from incorrect or broken hyperlinks. Some will question whether the Preparer or the Branch Chief actually reviewed the references, thereby invalidating the Certification on Page 41. “Certification: I hereby certify that the statements furnished above and in the attached exhibits, present the data and information required for this initial study evaluation to the best of my ability and that the facts, statements and information presented are true and correct to the best of my knowledge and belief.”

At the least, the Initial Study must be corrected and re-noticed.
The specifics are:
On page 7, the link to the “City of Beverly Hills 2010, General Plan” generates an error message of “Page Not Found”.
On Page 15, the link to the “Final Program EIR for the City of Beverly Hills, Community Development. Section 5.5” generates an error message of “Opps! That Page Can’t Be Found.” The website is not the City’s website.
On Page 16, the link to the City of Beverly Hills Zoning Map” generates an error message of “404 Not Found”.
On Page 18, the link to the “Community Development Plan For the City of Beverly Hills” generated an error message of “Hmm. We’re having trouble finding that site. We cannot connect to the server at www.ci.beverlyhills.ca.us.”.
On Page 18, the link to the “City of Beverly Hills Community Development Site” generated an error message of “Opps! That Page Can’t Be Found.” The website is not the City’s website.
On Page 18, the link to the “Significant Historical Properties In the City of Beverly Hills” generated an error message of “Opps! That Page Can’t Be Found.” The website is not the City’s website.
On Page 20, the link to the City of Beverly Hills GoZone Map” generates an error message of “404 Not Found”.
On Page 25, the link to the City of Beverly Hills Zoning Maps” generates an error message of “404 Not Found”.
On Page 25, the link to the “City of Beverly Hills, Traffic Plan” generated an error message of “Hmm. We’re having trouble finding that site. We cannot connect to the server at www.ci.beverlyhills.ca.us.”.
On Page 29, the link to the City of Beverly Hills Zoning Maps” generates an error message of “404 Not Found”.
On Page 31, the link to the “Final Program EIR for the City of Beverly Hills, Community Development. Section 5.6, Noise” generates an error message of “Opps! That Page Can’t Be Found.” The website is not the City’s website.
On Page 31, the link to the “City of Beverly Hills Noise Ordinance” generated an error message of “System Message. Unable To Load File.”
On Page 33, the link to the “City of Beverly Hills, Public Facilities” generated an error message of “Hmm. We’re having trouble finding that site. We cannot connect to the server at www.ci.beverlyhills.ca.us.”
On Page 35, the link to the “City of Beverly Hills, Traffic Plan” generated an error message of “Hmm. We’re having trouble finding that site. We cannot connect to the server at www.ci.beverlyhills.ca.us.”
On Page 37, the link to the “Significant Historical Properties In the City of Beverly Hills” generated an error message of “Opps! That Page Can’t Be Found.” The website is not the City’s website.
On Page 39, the link to the “City of Beverly Hills, Traffic Plan” generated an error message of “Hmm. We’re having trouble finding that site. We cannot connect to the server at www.ci.beverlyhills.ca.us.”
**Negative Declaration**

To begin, on Page 1, Paragraph 3, it concludes with:
“… prohibits the use of the property as a single-family residences, hospital, school, daycare center and limit the Site use to commercial, multi-use, and multiple unit housing purposes.”

One either has residential use or not. If the remediated site is not suitable for “single family residences,” why is it compatible for “multiple unit housing purposes.”

What has been proposed by BHLC is “creative office” that would involve excavation of multiple levels of contaminated soil. Last, even though this is a draft document, where are the “Figures” (i.e. Figure 1 – Site Location and Figure 2 - Site Map)? What else is missing?

**Response to Comment #3:**

**Summary**

1. Thank you for your comment. The DTSC did not conduct a public hearing based on the lack of interest in project. The limited interest is memorialized by a survey that was conducted in August 2019, previous public engagement initiatives and this public comment period. Details of each can be found in our database [https://www.envirostor.dtsc.ca.gov/public/profile_report.asp?global_id=19400017 &mytab=activities](https://www.envirostor.dtsc.ca.gov/public/profile_report.asp?global_id=19400017 &mytab=activities). DTSC is committed to facilitating transparency by providing access to information and project staff. Please contact the public participation specialist, Chinh Sheow at e-mail Chinh.Sheow@dtsc.ca.gov if you have any questions.

2. The recommended remedy includes a combination of removal of contaminated soil and institutional controls to reduce potential exposure to remaining contaminated soil. Contaminated soil will be removed up to 2 feet below ground surface (bgs). Institutional controls will be established reducing potential exposure to remaining contaminated soil beneath 2 feet bgs. This approach balances reducing potential exposure to arsenic while minimizing the impacts to the community.

3. Regarding 2015 activity for public notice, the DTSC published a Public Notice in the Beverly Hills Courier newspaper at the start of the comment period. At the same time, a Community Update was mailed to the 1,342 recipients of the mailing list. The mailing list consists of the addresses within a ¼ mile of the Site as well as any person or organization who contacted DTSC requesting to be put on the mailing list. While UPRR retains responsibility for environmental cleanup of the site, they do not own the property. Therefore, environmental cleanup is being conducted separately from potential development proposed by the property owner. The recommended remedy (Alternative 5) proposes excavation during development if potential development is scheduled during a similar timeframe. However, remedial implementation is intended to be conducted regardless of any approved development plans and would not be delayed to align with the construction schedule for potential development. Any remediation associated with potential development of the site outside of the identified removal areas will be conducted as part of those development activities.
4. The Negative Declaration neither allows or disallows certain types of development of the site. The remedy includes institutional controls, including a Land Use Covenant executed by DTSC to prohibit the use of the property for single-family residences, hospital, school, and daycare center and limits the Site use to commercial, multi-use, and multiple unit housing purposes. These land use types have lower risk than single-family residences that can be managed using other institutional controls such as prohibition of soil disturbance below 2 feet bgs.

5. Residual arsenic in soil beneath 2 feet bgs is unlikely to migrate to the ground surface, because there are no natural mechanisms for this type of migration.

6. As shown in 2-1b-d of Appendix F, sampling is proposed within Lot 13.

**Initial Study**
The hyperlinks will be revised.

**Negative Declaration**
The Negative Declaration neither allows or disallows certain types of development of the site. The Negative Declaration describes the reasons why the proposed environmental cleanup project will not have a significant effect on the environment and, therefore, does not require the preparation of an environmental impact report. The remedy includes institutional controls, including a Land Use Covenant executed by DTSC to prohibit the use of the property for single-family residences, hospital, school, and daycare center and limits the Site use to commercial, multi-use, and multiple unit housing purposes. These land use types have lower risk than single-family residences that can be managed using other institutional controls that would regulate potential soil disturbance below 2 feet bgs.

**Comment #4 – Brooks Yang, Beverly Hills, CA**
As someone who lives very close to this site and often walks my dog along Civic Center Drive, I'm very happy to see the proposed RAW put forward. I fully support an effort to clean up the land. Thank you.

*Response to Comment #4:*
Comment noted.

**Comment #5 – Barry S. Rubin, Beverly Hills, CA**
My comment regarding the above RAW is to request that whichever plan is adopted insure and guarantee that the environment, the land, the adjacent properties and area remain safe, protected and free from pollution, contamination and all known hazards and are in full compliance with and to the strictest safety standards applicable to such a project.

*Response to Comment #5:*
Thank you for your comment. The DTSC understands your concern and will keep the community updated through Envirostor on the DTSC public website.
Comment #6 – Dr. Philip H. Ruben, Beverly Hills, CA
I walk around that area all the time. I am highly sensitive to all of those poisons in the soil and the dust.

Response to Comment #6:
Thank you for your comment. The DTSC understands your concern and will keep the community updated through Envirostor on the DTSC public website.

Comment #7 – Phil Savenick
As a homeowner, I am very concerned about disturbing the toxic site on Santa Monica Boulevard. The Beverly Hills Land Company illegally clear cut the trees in October of 2015 thus spewing toxic dust on the neighborhood.

They are not trustworthy.

I would like to recommend capping the soil with asphalt and leaving it a transportation zone. Option 4.1.2

The idea of over 300 dump truck loads containing 6,600 tons of toxic soil being excavated and driven through our neighborhoods presents an unacceptable risk.

In our present economy, there is no need for an industrial office complex of 11 buildings to be built on a barely accessible site.

I firmly object to any development on the toxic site.

Response to Comment #7:
The purpose of the RAW is to address environmental cleanup of the site and not potential development. Removal of contaminated soil reduces potential exposure of residual arsenic in soil to 2 feet bgs, which is more protective to the community compared to capping.

Comment #8 – Dr. William Brenner, Beverly Hills, CA
I have been a BH resident and taxpayer since 1976. The scandal of this site was and still is Beverly Hills’s “Mulholland Drive.” Urban corruption on a large scale. The developer and the City’s employees and politicians were complicit. The site should be a public park or a dog park, not a reward for the developer.

Response to Comment #8:
The purpose of the RAW is to address environmental cleanup of the site and not potential development.

Comment #9 – Bruce Howard, Beverly Hills Land Company Attorney
The Beverly Hills Land Company (“BHLC”) owns the property addressed in the proposed Removal Action Work Plan (“RAW”) for the Beverly Hills Lots 12 and 13. These are our comments on the current draft of the RAW.
The RAW proposes, as part of the remedy, to impose institutional controls on the property. The proposed institutional controls would limit future uses of the property and would make the BHLC and persons obtaining, buying and leasing the property from BHLC responsible for the management of the contamination deposited at the property by Union Pacific. Such institutional controls may not be imposed without the express, written consent of the landowner. BHLC does not agree and has never agreed to the institutional controls contained in the RAW or any other institutional controls that would limit the use of the property.

Response to Comment #9:
The proposed remedy in the RAW considers site specific target goals to prevent potential exposures to arsenic on the surface and shallow surface of the property. Deeper contaminated soil can be managed in place with institutional controls or may be removed in the future if needed. California Code of Regulations Section 67391.1 requires that land use covenants (LUC) are recorded when hazardous substances will remain at the property at levels which are not suitable for unrestricted use of the land. Subsequent mitigation measures or remediation goals may be proposed to amend or eliminate an LUC to meet specific land use requirements.

Comment #10 – Letter from Mr. David Yelton, CBO, Deputy Building Official, Beverly Hills, CA (see next page)
October 21, 2020

Ms. Sara Vela, Project Manager  
Department of Toxic Substances Control  
9211 Oakdale Avenue  
Chatsworth, CA 91311

Subject: City of Beverly Hills Peer Review by Lindmark Engineering’s peer review of Jacobs Engineering Group, Inc. Draft Removal Action Work Plan (RAW) for the property known as Lots 12, 13, and 13A on behalf of the responsible party, the Union Pacific Railroad, and comments on the DTSC’s CEQA Initial Study for the property known as Lots 12, 13, and 13A in the City of Beverly Hills, California, 90210

Dear Sara,

The City is enclosing Lindmark Engineering’s review of Jacobs’s Draft Removal Action Work Plan (RAW), dated September 18, 2020 for the property known as Lots 12, 13, and 13A. Jacobs prepared the RAW on behalf of the responsible party, the Union Pacific Railroad (UPRR). Also provided are comments to the DTSC’s CEQA Initial Study dated September 15, 2020 for Lots 12, 13, and 13A.

As Lindmark’s review outlines, the RAW is inadequate in several aspects; most notably, it assumes there were no railroad operations and arsenic weed abatement at the site, no significant vertical migration of arsenic in soil, and no groundwater contamination from arsenic releases at the site. Due to these improper assumptions, only a portion of the arsenic-impacted soil is proposed to be removed and the groundwater contamination, including off-site migration, is not addressed. Furthermore, arsenic contamination on adjoining City rights-of-way is not addressed.

The groundwater contamination of arsenic is of great concern given the City water wells in the site vicinity and presence of elevated arsenic levels in the water supply within 100 feet of the site.

The City wants the site and adjoining City rights-of-way to be remediated to safe levels and to ensure that the remediation is implemented in a manner to prevent off-site migration of dust in compliance with all applicable DTSC and AQMD requirements. The City requests that all tasks, assessments and remediation recommended in the enclosure hereto be completed and paid for by the UPRR prior to issuance of a No Further Action letter for the site. Access to City rights-of-way will require an access agreement.

The City objects to contamination being left in place at the site at levels that will require future Institutional Controls affecting City property. Institutional controls, after the completion of remediation on City rights-of-way, are not acceptable to the City, including for Lots 13 and 13A,
which will be deeded to the City. The City requests that the site be remediated in a manner that will not result in future regulatory oversight and dust monitoring of the City rights-of-way and Lots 13 and 13A after they have been remediated.

On October 21, 2020, the City submitted reference documents to the DTSC via the City’s large file dropbox (“BevyBox”) file transfer system. One of these documents contained development plans for Lot 12 dated April 17, 2020. According to the plans, the entire footprint of Lot 12 will be excavated to a depth of 25 feet and developed with 2-story subterranean parking and eleven 3- and 4-story above grade office buildings.

According to your website (“Envirostor”), DTSC will revise the draft RAW and CEQA Initial Study after the City has approved a redevelopment plan, then recirculate for public review and comment along with another public meeting. However, the revised RAW and the CEQA Initial Study do not address the proposed development and your Community Update Notice did not mention the development plans.

Since the excavation for the development of Lot 12 could generate approximately 109,000 cubic yards of arsenic-contaminated soil we think it is imperative that the development plans are incorporated into the RAW and CEQA Initial Study for which the community is supposed to provide comments.

Sincerely,

David Yelton


Lindmark Engineering comments dated October 21, 2020, Project No. 2020-260, titled Review of DTSC’s CEQA Initial Study, dated September 15, 2020 for Lots 12, 13 and 13A.

cc: Haissam Salloum, Supervisor (DTSC)
Chinh Sheow, Public Participation (DTSC)
Gamaliel Ortiz, Public Information Officer (DTSC)
Ulf Lindmark, PE, BCEE, Senior Principal, Lindmark Engineering
George Chavez, City Manager
Nancy Hunt-Coffey, Assistant City Manager
Susan Healy Keene, Director of Community Development
Ryan Gohlich, City Planner
Masa Alkire, Principal Planner
Raj Patel, City Building Official
Shana Epstein, Director of Public Works
Daren Grilley, City Engineer
Vincent Damasse, Water Resources Manager
Laurence Wiener, City Attorney
Lisa Bond, Assistant City Attorney
On August 4, 2020 the City of Beverly Hills submitted its peer review consultant Lindmark Engineering's review of Jacobs's December 2019 removal action work plan (RAW) for Lots 12, 13 and 13A to the DTSC. Last month Jacobs issued a revised RAW dated September 18, 2020, and DTSC issued a CEQA Initial Study dated September 15, 2020. Attached are Lindmark’s reviews of these documents. Most references cited are hyperlinked in the reports. The documents which are not hyperlinked and for which pdfs exist are attached in respective RAW and CEQA folders. Also included is a cover letter signed by David Yelton, Deputy Building Official that conveys the files to the DTSC.

**Lot 13A**

The RAW does not refer to the lot located on the island west of Doheny Drive as Lot 13A but calls it the *Triangle Section*. However, the entire island, composed of Lot 13A and the adjoining City-rights-of-way, is roughly shaped as a triangle while Lot 13A is composed of two triangles and one rectangle. The RAW is not proposing to further investigate the City rights-of-way on the island, but only Lot 13A. Therefore, the term *Triangle Section* is misleading.

**Topography**

The topographic slope across the site is to the southeast (USGS, 1995) which is also the prevailing flow direction of shallow perched groundwater in the site vicinity (Lindmark, 2002a); (Lindmark, 2002b).

**Historic Site Use**

A railroad was operated on the site from approximately 1909 to 1954 when passenger service ended (Wikipedia-Pacific Electric-Beverly Hills). A photograph from circa 1910 shows Beverly Hill's first train station located on the southwest corner of Santa Monica Boulevard and Canon Drive (Water and Power Associates). Freight service continued past 1954, but in the 1960s all service ended, and the railroad was removed (LE, 2017). Photographs of the railroad illustrating the tracks and freight and passenger operations are contained in Attachment B.

**Source of Arsenic Contamination**

The source of the arsenic contamination detected in soil at the site is not unknown, or associated with import fill, but is from historic applications of sodium arsenite which was sprayed on the tracks and the railroad right-of-way using tank cars. According to an October 10, 1928 article in the Pacific Electric Magazine (Attachment C), weed killing using water-soluble sodium arsenite was the more economical weed destroyer at that time which coincides with the time of railroad operations at the site. Sodium arsenite is freely soluble in water (NCBI) and therefore arsenic in a liquid solution would percolate through the soil.

Interestingly, the 1928 article discusses the emerging use of diesel fuel as a weed killer with one of the benefits being the settling of dust. Diesel fuel was probably later used at the site as there is evidence of dark staining on the railroad right-of-way, see Photo 1,
Attachment B. Unlike arsenic, which is persistent in the subsurface, diesel fuel applied at the ground surface would tend to degrade over time.

**Limitations of Investigatory Data used by the RAW**
The RAW is based on the evaluation of arsenic soil sampling data obtained from 1998 to 2007 and groundwater data from 1998 to 2010. The soil samples were almost exclusively taken from within the boundaries of the site. The locations of soil samples collected through 2007 with detected arsenic concentrations, and proposed excavations, are shown on Jacobs’s figures contained in Attachment A. The RAW does not refer to CH2M Hill’s (CH2M) 2015 Removal Action Work Plan (CH2M, 2015), but many sections of the RAW appear to be copied from this 2015 removal action work plan.

Between 2015 and 2018, a large number of soil samples were collected at the ground surface and at 0.5 and 2 feet bgs by Rincon Consultants and LE. The assessments are presented in reports listed in the reference section. The sample locations are shown on Figures LE5a through LE5d contained in Attachment D. LE believes an incorporation of these data into the RAW would have revealed that the approach to remediate the arsenic investigation as outlined in the RAW would be inadequate.

**Arsenic Leachability**
The RAW states STLC analyses of soil have shown arsenic not to be leachable and has not impacted groundwater. The RAW further states that arsenic in soils is not migrating from the shallow soils and the centerline of the site. However, the above referenced STLC analyses were run on samples containing a maximum of 90.5 mg/kg arsenic. The maximum concentration of arsenic detected to date at the site (996 mg/kg) is an order of magnitude greater. This maximum concentration was detected at 2 feet bgs in A18 located near the east end of Lot 13 (Figure 5d).

In 2016, LE analyzed five soil samples with arsenic concentrations ranging from 53.8 to 123 mg/kg for STLC (LE, 2016). The sample with the highest arsenic concentration (C19) had an STLC of 7.13 milligrams per liter (mg/L). Since that concentration exceeded 5 mg/L it would designate any excavated soil at that specific location and depth as a hazardous waste and further indicate that the arsenic is leachable. Sample C19 was collected from the surface of the soil at an approximate depth of 0.1 feet bgs in an area on Lot 12 (Figure LE5b), inside the curb west of Beverly Boulevard which was deemed to be free of contamination in the RAW and not proposed to be excavated.

In Table 1, contained in Attachment E, LE used linear regression to find the best fitting straight line through the points with total arsenic in mg/kg on the x-axis and the STLC values (mg/L) on the y-axis. The fitted line has a strong correlation (0.854) and the 5 mg/L STLC value is intersected by a total concentration of 112.8 mg/kg. Based on 95 percent confidence, an arsenic concentration less than 104.4 mg/kg would not have an STLC of 5 mg/L while a concentration over 121.2 mg/kg with 95 percent confidence would exceed 5 mg/L. Theoretically, an arsenic concentration of 50 mg/kg could have an STLC of 5 mg/L, and would need to be tested for waste profiling purposes, but LE
will assume that an arsenic concentration of 121.2 mg/kg or greater will have an STLC above 5 mg/L that would designate any profiled soil as hazardous.

The soil analytical data for SB02 drilled in 2006 and located near the western end of Lot 12 (Figure 5a) show the presence of elevated arsenic concentrations (152 mg/kg) into the native soil at a depth of 30 feet bgs which indicates vertical migration. This sample was not STLC tested but the elevated concentration suggests a probable exceedance of 5 mg/L if it had been STLC tested. A sample collected at 10 feet bgs in this boring had an even higher arsenic concentration (160 mg/kg) but was also not STLC tested. The samples from this boring that were STLC tested were collected from 2 and 5 feet bgs and had a maximum concentration of only 29.5 mg/kg. This concentration is below the minimum concentration (50 mg/kg) that could render the soil as hazardous based on STLC testing and therefore there was no need to STLC test those samples but the samples with the higher concentrations should have been STLC tested.

**Distribution of Arsenic in Soil**
The conceptual site model presented in the RAW assumes there were no railroad operations and that arsenic was brought to the site in fill material. Based on these assumptions, and other assumptions mentioned above, the remediation options were evaluated and one selected, *Excavation with Off-Site Disposal during Development.*

Based on LE’s evaluation of the historic operations, there were two parallel tracks for westbound and eastbound traffic, see photographs in Attachment B. Therefore, the spaying of water soluble sodium arsenite from the tank cars would likely have occurred from both tracks and would have been distributed a distance away from the tracks. Furthermore, LE believes after the dirt near the tracks had dried out, dust would be generated that would spread the arsenic farther away, including off-site.

Based on LE’s dust monitoring in the area, the prevailing wind direction is to the northeast. However, the worst-case scenario for dust migration would likely occur during Santa Ana conditions when the prevailing wind direction is to the southwest. LE believes, this may, at least in part, explain the greater distribution of arsenic to the south of the site compared to the north.

**Ground Surface to 5 Feet Below Ground Surface**
The RAW assumes arsenic concentrations detected at 2 feet bgs belong to the depth interval 2 to 5 feet bgs even if there were no sample data collected above 2 feet bgs. LE believes concentrations detected at 2 feet bgs are not necessarily only representative of soils below 2 feet bgs, but there is an equal chance a concentration at 2 feet bgs would be similar to a concentration at 1.99 feet bgs or 2.01 feet bgs. As an example, the western end of Lot 12 is not designated for excavation of arsenic-impacted soil due to arsenic concentrations at 2 feet bgs in LE1, SB3 and SB1 at 36.2 mg/kg, 44.9 mg/kg and 37.4 mg/kg, respectively, which are attributed in the RAW to soils below 2 feet bgs. However, a surface soil sample collected from approximately 0.1 feet bgs in C1, approximately 20 feet west of LE1 (Figure LE5a), had an arsenic concentration of 53.8 mg/kg and, therefore, the soils in the western end of Lot 12 should be excavated.
since shallow arsenic concentrations in that area are elevated, above the 25 mg/kg action level.

The great variability in arsenic concentrations laterally and vertically in shallow soil is also illustrated by the data for the eastern end of Lot 12 (Figure 5b) which is also not designated for excavation in the RAW. Although the arsenic concentrations in A6 at 0.5, 2 and 5 feet bgs were below 25 mg/kg, they were above 25 mg/kg in nearby surface soil samples, RS18 (56.3 mg/kg) and C19 (123 mg/kg), see Figure LE5b. Furthermore, the arsenic concentration in C19 was hazardous (LE, 2016).

In Lot 13, no excavation is proposed at LE16 near the west end of Lot 13 (Figure 5b) where the arsenic concentration at 2 feet bgs was 107 mg/kg, because it was assumed, without basis, that the soil above would have a concentration less than 25 mg/kg. Several other similar examples exist in the RAW where the soil is not proposed to be excavated.

The areas of LE7, 150 feet west of Elm Drive, (Figure 5a) and LE11, 100 feet west of Maple Drive, (Figure 5b) which had arsenic concentrations of 196 mg/kg and 168 mg/kg, respectively, at 2 feet bgs were also not proposed for excavation although the soil would likely have been designated as hazardous if it had been tested. Although no sample was taken above 2 feet bgs in LE7, the RAW assumes this soil has a concentration below 25 mg/kg and will be left as a 2-foot cover on top. Since 196 mg/kg is above the 75 mg/kg action level from 2 to 5 feet bgs (for landscape areas) the RAW assumes the existing soil above 2 feet bgs will serve as a cover and the soil from 2 to 5 feet will be managed by a deed restriction and would require soil management in case it is disturbed.

Except for the 40-foot wide Lot 13A, located within the island east of Lot 13, the site is 60 feet wide. However, as mentioned earlier there were two parallel tracks for eastbound and westbound traffic. Therefore, the centerline of the site will be between the two tracks and not at the centerline of a single track. As a consequence, the distribution of arsenic will be greater across the width of the site than if it had been a single track. Based on supplemental arsenic results discussed above and the arsenic results for five columns of step-out borings across the site: A31 through A32 (in Lot 12), A38 through A37 (in Lot 12), A43 through A44 (in Lot 13), A49 through A48 (in Lot 13), and A55 through A56 (in Lot 13A), LE believes the entire site is likely impacted above a concentration of 25 mg/kg down to 2 feet bgs and a significant portion of the site has arsenic concentrations above 75 mg/kg from 2 feet to 5 feet bgs, see table below.

<table>
<thead>
<tr>
<th>Sample Step-Out Borings</th>
<th>0-2 feet bgs &gt; 25 mg/kg No. Samples/Total Samples</th>
<th>2-5 feet bgs &gt; 75 mg/kg No. Samples/Total Samples</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Lot 12</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A31-A29-A27-A21-LE2-A28-A30-A32</td>
<td>12/14 (85.7%)</td>
<td>8/14 (57.1%)</td>
</tr>
</tbody>
</table>
Arsenic contamination above the 25 mg/kg action level in shallow soil also extends off-site. As mentioned earlier, an elevated arsenic concentration was detected in C1 at 0.1 feet bg. C1 was taken from the City right-of-way west of Lot 12. Therefore, this right-of-way, which was used for railroad operations, is impacted by arsenic contamination above the 25 mg/kg action level.

Based on the sampling done for the eucalyptus grove in the City right-of-way south of Lot 13 in 2018 (LE, 2019), the arsenic concentrations in samples collected at 2 feet bgs ranged from 6.41 mg/kg to 88 mg/kg with a mean concentration of 22.2 mg/kg and a 95 percent upper confidence limit (UCL) of 27.9 mg/kg. Elevated arsenic concentrations were found to extend at least 10 feet south of Lot 13. The soil waste profile sample had an arsenic concentration of 21.1 mg/kg (Lindmark, 2019). No arsenic northeast from Site No. 51 (Figure LE5d). Also, the City right-of-way immediately north of Lot 13A has not been tested for arsenic.

There is little arsenic data for the proposed subterranean parking extension on Lot 12, 23 feet south of the property line. Because this area is outside the railroad right-of-way immediately north of Lot 13A has not been tested for arsenic. There is little arsenic data for the proposed subterranean parking extension on Lot 12, 23 feet south of the property line. Because this area is outside the railroad right-of-way, the arsenic impact will likely be limited to shallow soil. Two borings, BK-1 and BK-2, were drilled on Civic Center Drive close to the 23-foot extension line (Figure 5a). The arsenic concentrations ranged from 17.4 mg/kg to 27.3 mg/kg with the highest concentration detected in BK-1 at 2 feet bgs. Based on data south of Lot 13, the arsenic concentrations decrease with distance away from the former railroad-right-of-way, and this will likely also be the case for the area south of Lot 12.
5 Feet Below Ground Surface to 50 Feet Below Ground Surface
Since soil will be excavated to a depth of approximately 25 feet bgs within Lot 12, the concentrations of arsenic with depth is of importance and are summarized in the table below.

| Lot 12 – Arsenic Concentrations in Soil at 5 feet bgs and Below |
|------------------|------------------|------------------|------------------|
| Depth (feet)     | No. Samples      | Mean Concentration | Concentration Range |
|                 |                  | (mg/kg)           | (mg/kg)           |
| 5                | 67               | 32.1              | 10-203            |
| 10               | 10               | 37.1              | 18.7-160          |
| 15               | 6                | 14.9              | 5.03-21.9         |
| 20               | 9                | 13.5              | 7.2-17.0          |
| 25               | 5                | 14.5              | 12.3-16.4         |
| 30               | 7                | 36.0              | 9.5-152           |
| 35               | 5                | 14.1              | 10.3-18.0         |
| 40               | 7                | 16.5              | 11.3-25.7         |
| 45               | 5                | 17.3              | 14.5-20.0         |
| 50               | 7                | 15.0              | 12.9-18.5         |

Although there are fewer samples that have been collected below 5 feet than at 5 feet, there does not appear to be a significant reduction from 5 to 10 feet bgs, and at 30 feet bgs the mean concentration increases to 36.0 mg/kg from 14.5 mg/kg at 25 feet. This increase results from the high concentration of 152 mg/kg in one sample taken at 30 feet bgs but indicates that high concentrations, that would likely designate soil as hazardous, persist to greater depths.

The concentrations of arsenic with depth for Lot 13 and 13A are summarized in the table below.

| Lot 13 and 13A – Arsenic Concentrations in Soil at 5 feet bgs and Below |
|------------------|------------------|------------------|------------------|
| Depth (feet)     | No. Samples      | Mean Concentration | Concentration Range |
|                 |                  | (mg/kg)           | (mg/kg)           |
| 5                | 99               | 33.0              | 2.4-336           |
| 10               | 14               | 12.5              | 6.54-21.6         |
| 15               | 9                | 6.9               | 1.98-10.7         |
| 20               | 9                | 16.8              | 3.1-51.9          |
| 25               | 4                | 16.7              | 10.2-22.1         |
| 30               | 7                | 15.1              | 12.1-24.5         |
| 35               | 5                | 16.0              | 12.7-20.1         |
| 40               | 3                | 19.4              | 17.9-28.3         |
| 45               | 4                | 23.0              | 11.3-43.2         |

The average concentrations at depth are similar to those below Lot 12. The increase in arsenic concentrations from 30 feet bgs at 5-foot increments to 45 feet bgs indicate vertical migration through the soil which appears to have impacted groundwater.
**Railroad Ballast**

Based on boring logs, gravel base materials were found below the surface at SB10 (1 foot thick) and SB11 (1.5 feet thick) in Lot 13, Figure 5d. SB10 and SB11 were approximately drilled 20 feet apart. LE believes the gravel is likely associated with ballast installed for the two tracks. Therefore, the gravel at SB10 would represent ballast for the northern track and the gravel at SB11 ballast for the southern track. Therefore, the centerline of the site would likely not be the centerline of one of the tracks, but between the two tracks. LE believes the arsenic water solution would have quickly penetrated through the gravel into the underlying soil. When railroads are abandoned, the spurs and ties are typically removed, but the ballast left in place. Although the ties typically would be removed, remnants of ties such as pieces of wood and metals may be encountered.

Based on an Internet search, the standard railroad gauge was 4 feet 8.5 inches or 4.7 feet (Wikipedia- Pacific Electric). As the ballast had to support the spurs and ties, the width of the ballast would reasonably be about 6 feet and the volume of gravel beneath the site would, therefore, be approximately 1,900 cubic yards assuming an average thickness of 1.25 feet, a width of 6 feet and a length of 3,400 feet per track.

**Groundwater Condition**

The RAW does not address the groundwater sampling in 2006 and 2008 by CH2M. In 2006, CH2M obtained groundwater samples from four borings: SB1, SB5, SB8, and SB11. The arsenic concentrations ranged from 10 micrograms per liter (μg/L) to 35 μg/L (CH2M, 2006). The highest concentration beneath Lot 12 was detected in SB5, 35 μg/L at 54 feet bgs (Figure 5b), and the highest concentration beneath Lot 13 was detected in SB11, 20 μg/L, at 35 feet bgs (Figure 5d). At that time (in 2006) the EPA Maximum Contaminant Level (MCL) was 50 μg/L. Based on this MCL, the DTSC determined no remediation of groundwater was required (DTSC, 2008). On November 28, 2008, the MCL for arsenic was lowered to 10 μg/L.

In October 2008, CH2M obtained groundwater samples from eight boreholes, No. 1 through No. 8, located onsite and offsite (CH2M, 2008a). The concentration of arsenic in groundwater ranged to 270 μg/L. Based on groundwater elevation measurements taken from eight boreholes by CH2M in 2008 (CH2M, 2008a), the groundwater flow direction is shown to the northwest across Lot 12 and to the west-northwest across Lot 13. These flow directions are opposite of the topographical slope and prevailing shallow groundwater flow direction in the site vicinity. The gradient was approximately 1 percent which is a fairly steep gradient. The arsenic concentrations in groundwater beneath Lot 12 were 70 μg/L (No.1) and 270 μg/L (No. 2) and beneath Lot 13, 140 μg/L (No. 3) and 40 μg/L (No. 4).

Groundwater samples were also collected and analyzed from boreholes north and south of Lots 12 and 13; however, no samples were collected immediately downgradient of the two hot-spots (No. 1 and No. 3).
In October 2008, the highest concentration detected north of the site was 5.3 μg/L in No. 5 on Foothill Road, 450 feet northwest of Lot 12. The highest concentration south of the site was 22 μg/L in No. 8, 300 feet southeast of Lot 13, on Oakhurst Drive. LE believes the arsenic concentration in No. 8 indicates probable movement of arsenic in groundwater from the site to the southeast based on the prevailing flow direction and suggest the finding of a reverse groundwater flow in 2008 (CH2M, 2008a) could have resulted from communication between the shallow groundwater and deeper, usable groundwater zones within which well 4 is perforated. LE found no soil sampling data for the eight boreholes. Arsenic sampling data would have been especially useful for the borings drilled off-site to establish background concentrations at depth. LE found no boring logs for No. 1 through No. 8.

Based on the arsenic data from the eight boreholes, CH2M prepared a work plan (CH2M, 2008b) to install five monitoring wells (MW-1 through MW-5). MW-2 and MW-4 were proposed to be located near the hot spots on Lot 12 and 13; however, only the two proposed wells near the hot spots were installed in 2009 and relabeled MW-1 and MW-2 (CH2M, 2009). LE found no boring logs for MW-1 and MW-2. MW-1 was located near the middle of Lot 12 (Figure 5a) in an area designated for excavation.

MW-2 was located near the middle of Lot 13 (Figure 5c) also in an area designated for excavation. The wells were sampled twice. The maximum total arsenic concentrations detected in MW-1 and MW-2 were 1.2 μg/L and 4.1 μg/L, respectively (CH2M, 2010). In the groundwater samples collected from MW-1 in October 2009, the dissolved arsenic concentrations were higher than the total arsenic concentrations which should not be the case since the samples were filtered before the dissolved arsenic analyses. However, the report (CH2M, 2010) provided no explanation.

In the boring for MW-1, the maximum arsenic concentration in soil was 63 mg/kg at 0.5 feet bgs (see Figure 5a). From 10 feet bgs to 50 feet bgs in MW-1, the maximum arsenic concentration was 19 mg/kg (at 10 feet bgs). In the boring for MW-2 (see Figure 5c), the maximum arsenic concentration in soil, 350 mg/kg, was detected at 0.5 feet bgs. From 10 feet bgs to 35 feet bgs in MW-2 the maximum arsenic concentration was 21 mg/kg (at 30 feet bgs).

The wells were abandoned in 2010. CH2M’s workplan (CH2M, 2008b) states “the monitoring wells will be abandoned in accordance with Los Angeles County and City of Beverly Hills well abandonment requirements”. However, LE has not been able to obtain information regarding well sampling field records, well elevations and coordinates, groundwater elevations, well installation details, and permits for installation and abandonment. Since the wells were installed through highly arsenic-contaminated soil, the proper abandonment of the wells is of particular importance.

No groundwater elevation data for the wells were provided in the referenced reports LE reviewed. The assumption by CH2M was that the groundwater flow direction would be perpendicular to the centerline of the site and flow to the northwest. If that had been the case, the groundwater elevations in MW-1 and MW-2 would have been identical.
However, at a minimum three wells are needed to locally establish a groundwater flow direction and gradient. Furthermore, as mentioned earlier, the assumed groundwater flow direction (northwest) is opposite of the topographical slope across the site and in the site vicinity.

In DTSC’s letter approving the abandonment of the two wells (DTSC 2010), DTSC stated the site “had elevated levels of arsenic in soil down to groundwater”. DTSC also stated that “hydropunch samples and the two rounds of well samples all show that arsenic in groundwater is below the allowed MCL of 10 μg/L”. However, it should be noted that many hydropunch samples had arsenic concentrations above the MCL, ranging to 270 μg/L. Therefore, LE believes the hydropunch sampling results, 27 times higher than the MCL, did not justify the closure of the groundwater case for the site.

**Water Supply Wells**

The RAW also does not address the four City water wells located in relative proximity to the site. The wells are used for drinking water production and are equipped by cement annular seals extending to 324 feet bgs. These seals are intended to work in conjunction with natural clay aquitards to prevent any potential vertical migration of contaminants downward toward the perforated intervals of these wells. Additionally, these wells extract their supply from the two deepest aquifers within the San Pedro Formation (Lindmark, 2002).

The nearest water supply well in the vicinity of the site is well 4 located north of North Santa Monica Boulevard, approximately 100 feet north of the site but not within 500 feet of the previous monitoring wells, MW-1 and MW-2. Well 4 is the City well with the historically highest arsenic concentrations detected. In 2008 the average arsenic concentration was 17.5 μg/L with a range from 15.7 μg/L to 18.2 μg/L (City, 2009). In 2018, well 4 was tested during rehabilitation (GTC, 2019). The testing was done in four zones and the results ranged from 8.6 μg/L to 11 μg/L. The report does not identify the specific depth intervals of each zone.

Based on a piloting report for the City’s water treatment plant (Carollo, 2018), the highest mean arsenic concentration recorded in April 2016 (21.5 μg/L) was in well 4 which also had concentrations that exceeded the water quality objectives for total dissolved solids and manganese.

**Applicable AQMD Rule**

Based on the arsenic concentrations, LE believes AQMD Rule 1466 *Control of Particulate Emissions from Soils with Toxic Air Contaminants* applies to this RAW and supersedes Rule 403 as the primary applicable AQMD rule. Rule 1466 was not mentioned in the December 2019 RAW, but is referenced in this revised version. Rule 1466 has much more rigorous requirements regarding notifications, training, monitoring and implementation than Rule 403 and will affect the scope, cost, and schedule of the soil removal action; however, the estimated cost of RAW implementation was not changed in this RAW.
Proposed Excavations
The RAW evaluates several remedial alternatives and selects Alternative 5, *Excavation with Off-Site Disposal during Development*. In the initial presentation of the alternatives in the RAW, this alternative is not mentioned to have ICs, i.e. deed restriction and future soil management, but later it becomes clear ICs will be necessary.

The RAW proposes that the soil removal actions will be completed once the designated areas have been excavated to a depth of maximum 2 feet bgs and sidewall verification samples (one per 10 feet of sidewall taken at 1 foot bgs) indicate concentrations are below 25 mg/kg, and at that time a Removal Action Completion Report will be submitted to the DTSC with a request for no further action status for the site. For landscaped areas, the arsenic action level is 25 mg/kg from 0 to 2 feet bgs and 75 mg/kg from 2 to 5 feet bgs (DTSC, 2012). The basis for leaving arsenic-contaminated soil in-place above a concentration of 75 mg/kg is that the upper 2-foot soil layer, assumed to meet the cleanup level (25 mg/kg), will serve as a cover.

LE believes there is no basis for attributing the arsenic concentrations at 2 feet bgs only to the range 2 to 5 feet bgs, and the higher cleanup level of 75 mg/kg, as the lower cleanup level, 25 mg/kg, would have applied if the sample had been collected at any fraction of an inch above 2 feet bgs which is within the margin of accuracy for field measurements of sampling depths. Therefore, to be conservative, the results for 2 feet bgs should be applied to both the upper 2 feet of soil with a cleanup level of 25 mg/kg and the 2-foot to 5-foot depth range with a cleanup level of 75 mg/kg.

LE believes collecting verification sidewall samples at 10-foot intervals at 1 foot bgs is not a viable approach because sampling results for immediately adjacent soil borings and even duplicate samples show significant variability in arsenic concentrations within soil samples taken inches apart. The great variability of arsenic concentrations within small volumes of soil taken within 6 inches apart is illustrated by duplicate results of some soil samples, e.g. SB11 at 10.5 feet bgs which had a concentration of 21.6 mg/kg with a duplicate result of 12.1 mg/kg (78 percent lower).

LE believes not excavating the entire footprint of the site will lead to a significant risk of leaving highly arsenic-contaminated soil near the ground surface, such as at C19 where the soil meets hazardous characteristics. C19 was taken at 0.1 feet bgs in an area not proposed for excavation.

If Lot 12 were not proposed to be excavated to approximately 25 feet bgs, LE believes the UPPR would have to excavate all soil within that lot to 5 feet bgs to meet the action levels. Therefore, the excavations could not be terminated at 2 feet bgs. Furthermore, as discussed in our recommendations below, dust monitoring and regulatory oversight for Lot 12 will need to continue in full force until the excavation has been completed. While the excavation below 5 feet bgs is driven by the proposed development, the arsenic-impacted soil will result in costs for dust monitoring and regulatory oversight, as well as disposal cost for the soil, which would not be incurred if the soil were clean.
**Arsenic Analytical Method**
Previous arsenic analyses at and around the site have used EPA Method 6010B which is a method accredited by the California Environmental Laboratory Accreditation Program (ELAP), (SWRCB, 2006). However, the RAW is proposing to use EPA Method 6010D for pre-construction and post-construction confirmation samples. The RAW proposes EPA Method 6010B only for import soil. Since EPA Method 6010D is not an ELAP accredited method, LE does not recommend its use on this project.

**Excavation Depth**
The RAW is not consistent regarding the proposed excavation depths. The proposed excavation depth is stated in three different ways as “2 feet bgs”, “up to 2 feet bgs” and “less than 2 feet bgs” but no explanation is provided how decisions will be made to determine the excavation depth.

**Arsenic Contamination of Adjoining City Rights-of-Way**
The RAW states off-site sampling was challenging due to heavily used public roadways on all sides of the site (Section 2.3, pg. 2-4).

Jacobs attached its response to DTSC’s comments on the August 2020 RAW to the letter transmitting the RAW. The DTSC commented that the arsenic characterization should extend to background concentrations regardless of property lines or depth. In response to this comment Jacobs stated arsenic characterization is not proposed outside the site boundaries due to physical imitations by the presence of busy streets.

As the figures in the RAW illustrate the site does not adjoin streets to the west of Lot 12, south of Lot 13 and north of Lot 13A. The arsenic contamination in these City rights-of-way have not been adequately characterized. Furthermore, LE understands the City is more than willing to issue a public-right-of-way permit should it become necessary to drill from the public roadway.

**Pre-Construction Investigation Work Plan**
The RAW attaches a Pre-Construction Investigation Work Plan dated May 2020.

Based on DTSC’s comments included with the RAW, in response to the December 2019 RAW, in January 2020 DTSC provided a rationale for a 10-foot spacing grid for pre-construction soil sampling to identify additional potential excavation areas. Jacobs responded the 25-foot spacing was selected to align with 25-foot removal action areas.

LE does not believe the sampling spacing grid should be the same size as the excavation areas, but a fraction of 25 feet and take into account that the arsenic did not result from the placement of fill material but from discharges of arsenic in a liquid solution from two parallel tracks.

Because the entire footprint of Lot 12 will be excavated to 25 feet bgs, LE believes there is no purpose to delineate arsenic excavation areas within Lot 12. If there was an
attempt to delineate clean soil within Lot 12 on a 25-foot grid, LE believes the probability is high these designated “clean areas” would fail a robust verification sampling protocol using a tighter grid.

LE does not agree with the RAW’s assumption that an arsenic concentration above the cleanup level at 2 foot bgs means that the soil above 2 feet bgs in that sample location is clean (i.e. less than 25 mg/kg). To the contrary we believe the opposite is more likely and unless the soil has been tested and verified to be clean, it must be assumed to be contaminated above the cleanup level.

Given the process which was used for weed abatement using arsenic and the known variability of arsenic concentrations within small areas, LE believes a grid of maximum 10 feet should be used and the samples at 2 feet bgs which exceeded 25 mg/kg should be included in the areas to be excavated. The same sampling grid (10 feet maximum) should be used for the adjoining City rights-of-way; however, these areas will require step-out borings on a tighter spacing (perpendicular to Lots 13 and 13A) probably maximum 2 feet apart.

Soil Cover Demarcation
In areas proposed to be excavated up to 2 feet bgs, the RAW proposes placement of a demarcation layer consisting of polyvinyl chloride tape at the bottom of the excavations in a 10-foot spaced grid pattern.

The stated purpose is to warn potential future construction workers of the arsenic contamination below the demarcation tape. LE does not believe a 10-foot spaced grid is adequate since shallow trenches could be only 2 feet wide. Therefore, if this approach is deemed acceptable, the spacing should be on a 2-foot spaced grid.

RECOMMENDATIONS
Lots 13 and 13A
Remedial action should be designed to limit or preferably eliminate long term operation and maintenance costs associated with ICs. Therefore, LE recommends the entire footprint of Lots 13 and 13A be excavated based on the historic spraying of sodium arsenite and pervasive spread of arsenic over the entire lots. Since Lots 13 and 13A are proposed for park/recreational use, LE believes an excavation to minimum 2 feet for the entire lots and capping with clean import soil will be sufficient as long as the DTSC would not require dust monitoring and regulatory oversight for future park maintenance and landscaping activities.

At the locations where utilities intersect Lots 13 and 13A, or any arsenic-impacted City-right-of-way, LE recommends trenches be dug to the bottom of the utilities and be backfilled with clean import soil.

Detectable warning tape should be placed over the utilities so they can be located in the future. The trenches will need to be of adequate width so the utilities can be dug out in the future without contacting adjacent arsenic-impacted soil below 2 feet bgs. In
addition, LE recommends the placement of demarcation tape, as proposed in the RAW, but at a 2-foot spaced grid.

LE does not recommend a soil cover thickness of less than 2 feet since there are soils between 2 and 5-foot depths that will meet the hazardous waste characteristics criteria based on the maximum arsenic concentration at 5 feet bgs (336 mg/kg) and LE’s STLC evaluation.

For the City right-of-way south of Lot 13, additional sampling will be needed to determine the extent of soil removal to meet the 25 mg/kg action level. Additional sampling will also be needed on the City-owned portion of the island directly north of Lot 13A. Any arsenic-impacted soil on City rights-of-way above the 25 mg/kg action level should be remediated in the same way as on Lots 13 and 13A.

The ballast material left from the railroad tracks should be located and completely removed from the site along with any remnant pieces of wood and metals associated with ties. This waste will need to be profiled separately.

Based on the elevated arsenic concentrations, HAZWOPER certification will be required for all site workers involved in the excavation and handling of arsenic-contaminated soil. DTSC oversight and AQMD monitoring will be required until all impacted soils have been removed, the site restored and DTSC has approved regulatory closure.

Lot 12
Since the arsenic-impacted City right-of-way west of Lot 12 will not be developed LE believes an excavation to minimum 2 feet for the entire right-of-way and capping with clean import soil will be sufficient as long as the DTSC will not require dust monitoring and regulatory oversight for future landscaping activities. Any utilities intersecting the City right-of-way should be addressed as described for Lots 13 and 13A, and demarcation tape added in a 2-foot spaced grid.

The ballast material left from the railroad tracks should be located and completely removed from the site along with any remnant pieces of wood and metals associated with ties. This waste will need to be profiled separately.

The probability that soil will be hazardous is greatest for the shallow soil in the upper 5-feet and decreases with depth. Therefore, it is important that the shallow soil is stockpiled separately from deeper soil and not mixed.

Based on the arsenic data from ground surface to 10 feet bgs, and the arsenic concentration in SB2 at 30 feet bgs (152 mg/kg), LE believes arsenic concentrations meeting the STLC criterion for hazardous will likely be encountered within Lot 12 in spots extending to depths near the bottom of the proposed excavation for the subterranean parking. Therefore, LE recommends DTSC oversight and AQMD monitoring until all arsenic-impacted soils have been removed. Based on the elevated
arsenic concentrations at depth, HAZWOPER certification will be required for all site workers involved in the excavation and handling of arsenic-contaminated soil.

Even if waste profile samples would not designate the excavated soil as hazardous, the average arsenic concentrations are above normal background for California soils and DTSC’s general cleanup goal of 12 mg/kg for California sites (DTSC, 2009); therefore, the excavated soil cannot be reused and must be disposed at a permitted facility that accepts elevated non-hazardous arsenic-contaminated soils.

The monitoring with oversight from the DTSC and AQMD will need to begin with the drilling and excavation for shoring installation or as soon as equipment with the potential to generate dust is brought on-site.

**Groundwater**
In order to better evaluate the groundwater data for wells MW-1 and MW-2, LE recommends that the UPPR provide well sampling field records, well elevations and coordinates, groundwater elevations, well installation details, and permits for installation and abandonment. Since the wells were installed through highly arsenic-contaminated soil, the proper abandonment of the wells, in accordance with the requirements of the Los Angeles County - Department of Public Health, is of particular importance.

Based on the elevated arsenic concentrations in groundwater beneath the site, ranging to 270 ug/L, the measured groundwater flow direction toward municipal well 4, and the persistent arsenic concentrations in well 4 above the MCL, LE believes a Site Conceptual Model should be prepared, considering the water production wells, groundwater flow directions, and all arsenic data.

To further assess the arsenic impact on groundwater, LE recommends a comprehensive hydrogeological investigation, and preliminary recommends the installation of two groundwater monitoring wells on Lot 12 and 13 in the vicinity of the arsenic-impacted well 4. LE also recommends two wells on Lots 12 and 13 at the two hot spots, No. 2 and No. 3, and two wells both north and south of the site for a total of eight wells. The installation details and locations of the wells should be determined with input from the City, the City’s environmental consultant, and in consultation with the California Regional Water Quality Control Board-Los Angeles Region, if requested by the City.

LE understands that well 4 is currently not in operation. LE recommends the new monitoring wells be installed and monitored before groundwater extraction resumes. When the wells are drilled, the borings must be logged and soil samples for arsenic analysis should be collected at 2 feet and 5 feet bgs and on 5-foot intervals below to the bottom of the borings. LE does not believe the groundwater samples should be filtered since MCLs at the source are based on unfiltered water.

**REFERENCES**


5. California Department of Toxic Substance Control (DTSC), *Voluntary Cleanup Agreement, Docket No. HSA VCA-17/18-152. In the Matter of: Beverly Hills Lots 12 and 13, 9100-9350 North Santa Monica Boulevard and 9101-9349 Civic Center Drive, Beverly Hills, Proponent: City of Beverly Hills*, August 1, 2018. [https://www.envirostor.dtsc.ca.gov/public/deliverable_documents/8233187615/Bevery%20Hills%20Lot%20%26%2312%3B%20City%20%26%2312%3B%20Hills%5FVCA%5F80118%2Epdf](https://www.envirostor.dtsc.ca.gov/public/deliverable_documents/8233187615/Bevery%20Hills%20Lot%20%26%2312%3B%20City%20%26%2312%3B%20Hills%5FVCA%5F80118%2Epdf).


11. CH2M Hill (CH2M), *Figure 2-Proposed Monitoring Well Locations*, August 28, 2009.


30. South Coast Air Quality Control District (AQMD), *Rule 1466, Control of Particulate Emissions from*, dated December 1, 2017.


Response to Comment #10:
Lot 13A - The RAW will be revised to clarify that the “Triangle Section” excludes the City rights-of-way, since the site does not include City property.

Sources of Arsenic Contamination - The comment references a magazine article describing the use of sodium arsenite as a weed killer. The article does not describe its use at the project site and also describes other weed removal methods that do not use sodium arsenite. Thus, while sodium arsenite has been historically used as a weed killing agent, there is no evidence it was used at the Site for this purpose. The distribution of arsenic does not provide definitive evidence that sodium arsenite was applied at the site.

Limitations of Investigatory Data used by the RAW - The RAW includes a plan to collect additional samples to identify areas that require excavation.

Arsenic Leachability - While some characterization soil samples indicate soils exceeding the hazardous waste threshold, waste characterization and profiling will be based on waste profile samples collected as part of the proposed removal action.

Distribution of Arsenic in Soil - The RAW presents the plan to collect additional samples to better assess where removal of impacted soil is warranted as part of the environmental cleanup activities. Construction of the proposed subterranean parking structure by the property owner as part of potential development activities has not been approved and management of soil resulting from such an excavation is not covered in the RAW.

Excavation to depths below 2 feet bgs is not planned in the RAW. As described later in this response, DTSC has concluded that groundwater at the site is not impacted by arsenic.

Groundwater Conditions – Hydro-punch samples are used for screening and investigation purposes rather than to demonstrate compliance with aquifer water quality standards because they may be less representative of groundwater conditions than samples collected from monitoring wells using more rigorous sampling methods (purging using low-flow) that better represent aquifer conditions. Monitoring wells MW-1 and MW-2 were installed in the areas where the highest arsenic concentrations in groundwater were observed and the wells were sampled to confirm the results of the hydro-punch sampling. Arsenic concentrations in samples collected from these wells were below the MCL. Based on these results, DTSC has concluded that groundwater at the site is not impacted by arsenic.

Lindmark Engineering (1998, 2003) concluded that groundwater in the alluvium beneath the site is discontinuous and perched (not connected with the regional aquifer system). The hydro-punch samples referenced in the comment were collected from this discontinuous groundwater zone at depths between 35 and 54 feet bgs. Subsequent samples from monitoring wells MW-1 and MW-2 demonstrated that this shallow
groundwater zone was not impacted by arsenic. The usable aquifers in the area range from 180 feet bgs to 720 feet bgs. Given that the shallow groundwater zone is not impacted by arsenic at the site, there is no reason to suspect that the deeper aquifers are impacted. A risk assessment (CH2M, 2007) concluded that the arsenic was unlikely to migrate downward into these aquifers and that the exposure pathway for arsenic in groundwater was incomplete.


Water Supply Wells - As noted in the comment, the City’s wells draw water from the deepest aquifer units, which range from about 540 to 720 feet bgs. These aquifer units are several hundred feet deeper than the shallow groundwater zone, are hydraulically confined and there does not appear to be connection between them and the discontinuous groundwater zone beneath the site. The cement seal in well 4 provides additional protection against vertical migration of shallow groundwater into the well. Also, as described previously, the shallow groundwater zone was demonstrated to be unimpacted by arsenic. The presence of elevated manganese and total dissolved solids in well 4 likely is representative of the deeper aquifer and does not indicate impacts from the site.

Proposed Excavation - While previous data for samples collected at 2 feet bgs are not being used to determine removal areas from ground surface to 2 feet bgs, additional samples will be collected as part of pre-design investigation activities to evaluate the need to remove soil in areas where arsenic levels exceed the cleanup goal at 2 feet bgs. These data, in combination with previous project-related data, will be used to define soil removal areas in accordance with the RAW.

Arsenic Analytical Method - The RAW will be revised to propose EPA Method 6010B for all sample analysis for arsenic.

Excavation Depth - The RAW will be revised to use consistent nomenclature when describing the proposed depth of excavation.

Arsenic Contamination of Adjoining City Rights-of-Way - The RAW only pertains to the area within the property boundary.
Pre-Construction Investigation Work Plan - The RAW presents the plan to collect additional samples to better assess where removal of impacted soil is warranted as part of the environmental cleanup, which includes removal of impacted soil up to 2 feet bgs. Any soil removal conducted beneath 2 feet bgs is not part of the proposed removal action, but rather potential development activities not covered by the RAW.

While data for samples collected at 2 feet bgs is not being used to determine removal areas from ground surface to 2 feet bgs, additional samples will be collected as part of pre-design investigation activities to evaluate the need to remove soil in areas where arsenic levels exceed the cleanup goal at 2 feet bgs within the property boundaries.

Soil Cover Demarcation - In addition to the use of demarcation tape, an additional institutional control will include posting signage at the site notifying potential excavators of the presence of arsenic-impacted soil and providing guidance for soil disturbance and management requirements.

RECOMMENDATIONS, Lots 13 and 13A - The existing data does not support removal of soil within the entire lot and doing so would be cost prohibitive. The RAW presents the plan to collect additional samples to further assess where removal of impacted soil is warranted in accordance with the RAW to address areas where data gaps exist.

Potential future excavations below 2 feet bgs associated with development are not part of the RAW. Environmental cleanup excavation will be limited to the properties described in the RAW and will not be conducted in the City right-of-way. Additional excavation associated with potential development (not covered under the RAW) would be required to be conducted in accordance with plans approved by DTSC.

Ballast will be removed during the proposed action if it is present at a depth of less than 2 feet bgs in an area where the arsenic concentration exceeds 25 mg/kg.

RECOMMENDATIONS, Lots 12 - The existing data does not support removal of soil within the entire lot and doing so would be cost prohibitive. The RAW presents the plan to collect additional samples to better assess where removal of impacted soil as part of environmental cleanup is warranted in accordance with the RAW. Excavation is not proposed within the City right-of-way. Excavation associated with any potential development by the land owner is not covered under the RAW.

RECOMMENDATIONS, Groundwater - Well construction, sampling, and abandonment documentation will be made available to the public. Additional groundwater assessment, including sampling and well installation, is not warranted. Based on historical investigation, it is not believed that arsenic contamination in soils is a threat to groundwater quality, based on the longtime existence of arsenic in soils and the groundwater sampling results. Previous groundwater investigations have demonstrated that the shallow groundwater zone at the site is not impacted by arsenic and is not connected to the regional aquifers used as a water supply.
Comment #11 – Letter from Department of Transportation, District 7- Office of Regional Planning, Los Angeles, CA. (See next page)
Dear Sara Vela,

Thank you for including the California Department of Transportation (Caltrans) in the environmental review process for the above referenced project. The Removal Action Work Plan (RAW) evaluates removal action alternatives and identifies a preferred removal action based on comparative analysis of alternatives. The preferred removal action (Alternative #5) for the Site includes excavation and disposal of 4,400 cubic yards of arsenic-impacted soil up to 2 feet below ground surface (bgs) and disposal of contaminated soil at an appropriately permitted landfill and establishment of a 2-foot soil cover. Up to approximately 4,400 cubic yards of clean imported soil may be used to backfill the excavations. However, if approved development of the Site is conducted concurrently with remedial excavation activities, some areas may not be backfilled to accommodate development plans. The proposed project is anticipated to commence following approval of the RAW and would take approximately 6 weeks to complete. Upon completion of the RAW, a Land Use Covenant (LUC) in the form of deed restrictions/Institutional Controls (IC’s) will be implemented.

The nearest State facilities to the proposed project are Interstate 405 and State Route 2. After reviewing the ND, Caltrans has the following comments:

All anticipated truck routes identified in Section 7 of the Removal Action Work Plan will involve the use of State Highways. Before any contaminated material is removed the Caltrans Office of Permits must be contacted to determine the appropriate combination of permits that will be
required. Below is guidance on three plan packages that may be required prior to issuance of permits.

**Excavation Transportation and Disposal Plan Guidance Excavation Plan (EP)**
The EP must discuss all activities proposed under the requested permit that involve the excavation of contaminated soil. The EP must include:

1. Schedule for excavation of contaminated areas.
2. Soil volume estimates for each contaminated area.
3. Identification of and figure showing temporary staging areas for soil stockpiles (off Caltrans right-of-way).
4. Methods to secure and prevent access to the staging areas.
5. Soil excavation and stockpiling procedures.
6. Types of containers to be used.
7. Decontamination process.

If soil stockpiling is necessary, all stockpiles shall be located off Caltrans R/W. Stockpiles must not be located upslope from or allow entrance into storm drains, inlets, or waters of the State or placed in locations where they may come in contact with surface water run on or run off. Soil stockpiles must be placed on and covered with plastic sheeting and wetted with water to suppress dust and reduce the possibility of contamination becoming airborne. Excavation and handling of contaminated material must not result in visible dust migration. The contractor must have a water truck or tank on the job site at all times while clearing and grubbing and performing earthwork operations in work areas. Apply water to prevent visible dust.

**Sampling and Analysis Plan (SAP)**
The SAP must include discussion of all characterization sampling, excavation, and construction activities that involve handling potentially contaminated soil during work under the permit. The SAP must provide sufficient detail to completely characterize the material proposed for excavation and disposal. The SAP must list criteria for waste profile characterization of the contaminated material to determine whether the waste is unregulated, designated waste, non-RCRA (California) hazardous waste, or RCRA hazardous waste. The SAP must also include disposal options (e.g., Class 3, Class 2, or Class 1). The SAP must comply with Cal/OSHA regulations and meet the specifications contained in USEPA, "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods" (SW-846), Volume II: Field Manual, Chapter Nine, Section 9.1. The SAP must include the following elements:

1. Description of Proposed Activities.
2. Data Quality Objective Process;
   2.1 Project task and problem definition,
   2.2 Data quality objectives,
   2.3 Data quality indicators,
   2.4 Data review and validation,

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2.5 Data Management.
2.6 Field Methodologies and Procedures for sampling
3. Sampling Rationale including sample location and number of samples.
4. Field Methodologies and Procedures for sampling
5. Sample Handling Procedures;
   5.1 Collection and transfer of samples to new or laboratory-certified clean container
       under proper chain of custody to an Environmental Laboratory Accreditation
       Program (ELAP) certified laboratory.
   5.2 Contaminated material and water samples analyzed within the holding times
6. Decontamination.
7. Disposal of staging area contaminated material, water, and IDW.
8. Quality Assurance/Quality Control (QA/QC) Laboratory and Field procedures.
9. Statistical Analysis of the sample data in accordance with EPA SW-846 Test Methods for
   Evaluating Solid Waste.
10. Schedule for field work.

Transportation and Disposal Plan (TDP)
The TDP must be prepared based on the analytical findings outlined in the SAP, identifying non-
hazardous and/or hazardous disposal requirements for the contaminated material. The TDP must
conform to the regulations of the DTSC and the Cal-OSHA. The plan must describe the
procedures that will be followed to minimize potential health, safety, and environmental risks
resulting from movement of contaminated material and equipment during on-site and off-site
transport. The TDP must contain, but not be limited to the following elements:
   1. Transportation, safety, and waste disposal schedule.
   2. Locations of contaminated material.
   3. Analytical results of contaminated material.
   4. Characteristics of contaminated material to be transported with description of appearance,
       source, approximate quantity, nature of the contaminants and their associated hazards.
   5. Dust control measures.
   6. Air monitoring.
   7. Identity of transporters and proof of valid hauler registration.
   8. Location, type, number, and capacity of equipment, containers, and transport vehicles.
   9. Analytical laboratory certified by ELAP.
  10. Truck loading and staging areas.
  11. Transportation route from each contaminated area of excavation to staging areas.
  12. Transportation equipment and routes of transport.
  13. Traffic Control and loading procedures.
  14. Decontamination of trucks prior to leaving the loading area.
  15. Inspection of vehicles prior to leaving site.
  16. Method for preventing spills and tracking contaminated soil and spilling contaminated
      water onto public roads.
  17. Spill contingency plan for accidental off-site releases.

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to enhance California’s economy and livability”
18. Destination and disposition of contaminated soil and water.
19. Record Keeping.

If you have any questions, please contact project coordinator Anthony Higgins, at anthony.higgins@dot.ca.gov and refer to GTS# 07-LA-2020-03376.

Sincerely,

MIYA EDMONSON
MIYA EDMONSON
IGR/CEQA Branch Chief
cc: Scott Morgan, State Clearinghouse
Response to Comment #11:
The advance information regarding permit application materials is appreciated and will be used to support the permit application process.
Comment #12 – Letter from Lijin Sun, J.D., South Coast Air Quality Management District, Diamond Bar, CA (See Next Page)
South Coast Air Quality Management District (South Coast AQMD) staff appreciates the opportunity to comment on the above-mentioned document. The Department of Toxic Substances Control (DTSC) is the CEQA Lead Agency for the Proposed Project. The following comments are meant as guidance for the Lead Agency and should be incorporated into the Final ND.

South Coast AQMD Staff’s Summary of Project Description
The Lead Agency proposed to develop cleanup actions to remove soil contaminated with arsenic on five acres (Proposed Project). The Proposed Project is located on the southeast corner of Santa Monica Boulevard and North Doheny Drive in the City of Beverly Hills. Construction of the Proposed Project is expected to take six weeks. Soil excavation consists of removing 6,600 tons (4,400 cubic yards) of arsenic-contaminated soil. At completion of excavation activities, the excavations will be backfilled with up to 4,400 cubic yards or approximately 264 truckloads of imported clean soil (approximately nine truckloads per day), and the backfilled soil will be compacted.

South Coast AQMD Staff’s Comments

CEQA Air Quality Analysis

According to the ND, the Lead Agency did not quantify the Proposed Project’s construction emissions from soil excavation activities, which will require the use of trucks to transport arsenic-contaminated soil and clean soil. The ND also did not identify the permitted hazardous disposal facility that will accept the disposal of arsenic-contaminated soil from the Proposed Project to determine the appropriate truck trip length and calculate construction emissions from haul truck trips. Arsenic-contaminated soil may need to be disposed at a permitted hazardous disposal facility outside Los Angeles County or State of California.

One of the basic purposes of CEQA is to inform government decision makers and the public about the potential, significant environmental effects of proposed activities (CEQA Guidelines

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1 ND. Page 2.
2 Ibid.
3 Ibid.
Section 15002(a)(1)). A negative declaration is appropriate when the Lead Agency finds that the project will not have a significant effect on the environment (CEQA Guidelines Sections 15070 to 15075). Reasons to support this finding shall be documented in the initial study. Without quantifying emissions from excavation activities, the ND has not made that documentation which serves as substantial evidence to support a fair argument that the Proposed Project would not have any adverse effects on air quality. Therefore, South Coast AQMD staff recommends that the Lead Agency identify the permitted hazardous disposal facility that the Proposed Project will use to dispose arsenic-contaminated soil and the locations that the Proposed Project will use to obtain clean soil, disclose them in the Final ND, calculate the Proposed Project’s construction emissions from truck trips for hauling contaminated and clean soil based on the appropriate one-way trip length, and compare the construction emissions to South Coast AQMD’s regional air quality CEQA significance thresholds to determine the level of significance for the Proposed Project’s air quality impacts in the Final ND.

**Mitigation Measures**

In the event that the Proposed Project results in significant adverse air quality impacts during construction, CEQA requires that all feasible mitigation measures that go beyond what is required by law be utilized to minimize these impacts. Any impacts resulting from mitigation measures must also be analyzed. South Coast AQMD staff recommends that the Lead Agency require the use of zero-emissions (ZE) or near-zero emission (NZE) on-road haul trucks such as heavy-duty trucks with natural gas engines that meet the California Air Resources Board (CARB)’s adopted optional NOx emissions standard at 0.02 grams per brake horsepower-hour (g/bhp-hr), if and when feasible. At a minimum, require the use of 2010 model year4 that meet CARB’s 2010 engine emissions standards at 0.01 g/bhp-hr of particulate matter (PM) and 0.20 g/bhp-hr of NOx emissions or newer, cleaner trucks. Include environmental analyses to evaluate and identify sufficient electricity and supportive infrastructures in the Energy and Utilities and Service Systems Sections in the Final ND, where appropriate. Include the requirement in applicable bid documents, purchase orders, and contracts. Operators shall maintain records of all trucks associated with project construction to document that each truck used meets these emission standards, and make the records available for inspection. The Lead Agency should conduct regular inspections to the maximum extent feasible to ensure compliance.

**South Coast AQMD Rules**

Arsenic is among the applicable toxic air contaminants listed in South Coast AQMD Rule 1466 – Control of Particulate Emissions from Soils with Toxic Air Contaminants5. It is recommended that the Final ND and the Final Removal Action Workplan (RAW) include clarification on whether the DTSC, or other agencies listed in Rule 1466(b), have designated, or plan to designate, the site for the contaminant listed

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4 CARB adopted the statewide Truck and Bus Regulation in 2010. The Regulation requires diesel trucks and buses that operate in California to be upgraded to reduce emissions. Newer heavier trucks and buses must meet particulate matter filter requirements beginning January 1, 2012. Lighter and older heavier trucks must be replaced starting January 1, 2015. By January 1, 2023, nearly all trucks and buses will need to have 2010 model year engines or equivalent. More information on the CARB’s Truck and Bus Regulation is available at: [https://www.arb.ca.gov/msprog/onrdiesel/onrdiesel.htm](https://www.arb.ca.gov/msprog/onrdiesel/onrdiesel.htm).

as a concern subject to Rule 1466. Since more than 50 cubic yards of contaminated soil will be excavated, the site would be subject to South Coast AQMD Rule 1466 requirements if designated pursuant to the provisions of 1466(b)(1). It is recommended that applicable Rule 1466 requirements be incorporated into the Final ND and the Final RAW if the site is so designated. Additionally, the Final ND and the Final RAW should ensure excavation and soil movement operations will comply with South Coast AQMD Regulation IV-Prohibitions, such as Rule 401 – Visible Emissions, Rule 402 – Nuisance, and Rule 403 – Fugitive Dust.

Conclusion
Pursuant to CEQA Guidelines Section 15074, prior to approving the Proposed Project, the Lead Agency shall consider the ND for adoption together with any comments received during the public review process. Please provide South Coast AQMD with written responses to all comments contained herein prior to the adoption of the Final MND. When responding to issues raised in the comments, responses should provide sufficient details giving reasons why specific comments and suggestions are not accepted. There should be good faith, reasoned analysis in response. Conclusory statements unsupported by factual information do not facilitate the purpose and goal of CEQA on public disclosure and are not meaningful, informative, or useful to decision makers and the public who are interested in the Proposed Project. Further, when the Lead Agency makes the finding that the recommended mitigation measure is not feasible, the Lead Agency should describe the specific reasons supported by substantial evidence for rejecting it in the Final MND (CEQA Guidelines Sections 15070 and 15074.1).

South Coast AQMD staff is available to work with the Lead Agency to address any air quality questions that may arise from this comment letter. If you have any questions or wish to discuss the comments related to CEQA air quality analysis and mitigation measures, please contact me at lsun@aqmd.gov. If you have any questions or wish to discuss the comments related to South Coast AQMD rules, please contact Mr. John Anderson, Air Quality Analysis and Compliance Supervisor, at janderson@aqmd.gov.

Sincerely,

Lijin Sun
Lijin Sun, J.D.
Program Supervisor, CEQA IGR
Planning, Rule Development & Area Sources

LS/JA
LAC201001-06
Control Number

Response to Comment #12:
The Initial Study (Section 3) includes an estimate of emissions from proposed excavation and transportation activities. The proposed project is not anticipated to result in significant adverse air impacts.

The Initial Study identifies a non-hazardous disposal facility for estimating emissions since waste is assumed to meet disposal requirements as non-hazardous waste.

The RAW states that a dust monitoring plan will be prepared that will provide specific details and state the requirements called out for in Rule 1466.

The RAW has been revised to state that excavation will be performed in accordance with South Coast Air Quality Management District’s Regulation IV – Prohibitions, including Rule 401 – Visible Emissions, Rule 402 – Nuisance, and Rule 403 – Fugitive Dust.