Site Inspection Report

Central Metal
Huntington Park, Los Angeles County, California

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EXECUTIVE SUMMARY

The Central Metal site is located at 8201 Santa Fe Ave., Huntington Park, Los Angeles County, California. The approximately 11-acre site is located within an industrial corridor bound to the east and west by residential neighborhoods, specifically the unincorporated communities of Walnut Park to the east and Florence-Firestone to the west.

Industrial operations have been conducted at the site since at least the late 1920s, at which time the northeastern portion of the site was developed into a metal-tank manufacturing facility. These operations continued through the mid-1980s. A metal foundry also operated on the site during this time period. In the late 1980s, this portion of the site was converted into a scrap metal recycling facility that operated as Damille Metal Supply, Inc. (DMS) through at least the late 1990s. In 2002, Central Metal, Inc (CMI) acquired the facility and continued on-site metal recycling operations. CMI expanded its operations to the southwestern portion of the site in 2004, which had previously been occupied by rail lines, a train depot, and various other rail related buildings since the late 1800s. Scrap metal operations at the facility were terminated in 2016 after Los Angeles County did not grant a new Conditional Use Permit. The entirety of the site was purchased in December 2021 and is currently in the process of being converted into a U-Haul® truck rental and storage facility.

Historical on-site metal recycling operations generally included the sorting and cleaning of purchased scrap metal followed by the cutting and shredding of the metal into compact sizes for domestic and international shipment. During operations, various scrap metal and debris were stored across the exterior portions of the site in large, uncontained, and uncovered debris piles. A debris pile located on the north-central portion of the site in 2005 is estimated to have covered more than 23,000 square feet (ft^2) and been several stories in height.

In 2016, the U.S. Environmental Protection Agency (EPA) identified the site as a potentially hazardous waste site and entered it into the Superfund Enterprise Management System (SEMS). EPA completed a Preliminary Assessment (PA) for the site in 2018. Upon review of the PA, EPA determined that further investigation was warranted to determine if the site was a source of area-wide volatile organic compound (VOC) and/or metals groundwater contamination and, subsequently, initiated a Site Inspection (SI). As part of the SI, EPA conducted an on-site soil vapor survey and limited soil sampling event in April 2019 (Stage 1) followed by a more comprehensive soil and groundwater sampling event in June 2019 (Stage 2).

During the 2019 Stage 1 and Stage 2 SI Investigations, subsurface soils at the site were identified with elevated concentrations of metals, specifically arsenic, cadmium, cobalt, copper, lead, silver, and zinc. Tetrachloroethylene (PCE) was identified in soil vapor at a single location but was not detected in soil samples or in groundwater beneath the site. Based on the minimal VOC concentrations found in soil groundwater during the investigation, the site does not appear to be a significant source of area groundwater contamination.

During the course of the SI, EPA became aware that a debris pile on the facility had been containerized in December 2018 and subsequently sampled by CMI under the direction of the local Certified Unified Program Agency (CUPA). Analytical data indicated that the material was classified as a hazardous waste based on identified concentrations of arsenic, lead, and/or cadmium. Moreover, an investigation conducted in 2011 by the California Department of Toxic Substances Control (DTSC) also identified high levels of hazardous heavy metals in waste piles on the site, specifically lead, cadmium, and zinc.

Prompted by concerns raised by the surrounding community that windblown material from historical on-site debris piles had blown into their yards, EPA proceeded to complete a comprehensive aerial imagery analysis to assess the controls and volumes of historical debris piles as well as an analysis of the prevailing wind directions. Based on the results of this analysis, along with the site's proximity to large downwind residential populations, EPA concluded that a residential sampling effort was necessary to determine if hazardous metals from historical on-site debris piles, which may have had contamination similar to those found in the sampled debris pile, could have been deposited onto nearby residential properties.

EPA conducted the Stage 3 SI sampling event in two phases: a residential sampling phase, which was completed in August 2022; and a background sampling phase, which was completed in October 2022. Both phases included the collection of shallow (i.e., less than 4 inches) soil samples from areas of exposed soil using a four-point composite procedure and Incremental Sampling Methodology (ISM). During the residential phase, 63 properties were sampled within the Walnut Park residential neighborhood, downgradient with respect to the primary easterly wind direction, and 20 properties were sampled within the Florence-Firestone residential neighborhood, downgradient with respect to the secondary westerly wind direction. The background phase included the sampling of five publicly accessible areas to determine reference concentrations of metals in the urban environment in soils near the site but likely not impacted by the site.

Lead was identified at concentrations exceeding the assigned Hazard Ranking System (HRS) soil screening benchmark of 401 parts per million (ppm) at eight properties; arsenic was identified at concentrations exceeding the assigned HRS screening benchmark of 22 ppm at three properties.

In summary, there are minimal screening level exceedances; 11 out of 83 residences or 13% of the sample group. EPA is working with owners of the 11 properties to arrange additional sampling if requested. Residential sampling data does not indicate Central Metal as a significant source of lead, arsenic, or other metals in the subject neighborhoods. Specifically, concentrations within the sampled area are sporadic and do not indicate any correlation between magnitude and distance from the facility. Therefore, metal contamination in the sampled residential soils cannot be attributed to historical or current operations at the Central Metal site and are most likely a function of both historical and current stationary and non-stationary lead sources found in the surrounding Los Angeles metropolitan area.

1. INTRODUCTION

1.1 EPA Regulatory Authority

Under the authority of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA), Weston Solutions, Inc. (WESTON®) has been tasked to conduct a Site Inspection (SI) of the Central Metal site in Huntington Park, Los Angeles County, California. Acronym and abbreviations are listed in **Appendix A**.

The purpose of an SI is to evaluate a site with potential releases of a hazardous substance and its environs to assess the threats, if any, posed to public health, welfare, or the environment and to determine if further investigation under CERCLA is warranted. The site is then evaluated using U.S. Environmental Protection Agency (EPA) Hazard Ranking System (HRS) criteria to assess the relative threat associated with actual or potential releases of hazardous substances at the site. The HRS has been adopted by EPA to help set priorities for further evaluation and eventual remedial action at hazardous substance sites. The HRS is the primary method of determining a site's eligibility for placement on the National Priorities List (NPL). The NPL is a list compiled by EPA of uncontrolled hazardous substance releases in the United States that are priorities for long-term remedial evaluation and response.

This SI Report summarizes the findings of these preliminary investigative activities and establishes whether the site is eligible for NPL consideration based on the magnitude and extent of contamination attributable to the site. Ineligibility does not necessarily indicate that there is no contamination on the site only that, based on available data, the site does not currently meet the criteria for placement on the NPL; state and local authorities have different criteria and authorities which may allow them to move forward with additional assessment or remedial activities.

Unaltered petroleum products, as well as any substances that are purposefully added to the indigenous petroleum product during the refining process, are excluded from consideration under CERCLA. National Contingency Plan (NCP) factors are summarized in **Appendix B**. More information about the Superfund program is available on the EPA website at https://www.epa.gov/superfund/what-superfund.

1.2 EPA Regulatory History

The Central Metal site was identified as a potentially hazardous waste site and was entered into the Superfund Enterprise Management System (SEMS) on March 11, 2016 (CAN000903324). The site was formerly identified in SEMS as Damille Metal SVC (EPA, 2023a).

On behalf of EPA, WESTON® completed a Preliminary Assessment (PA) for the Central Metal site in January 2018. Upon review of the PA, EPA determined that further assessment was needed under CERCLA and initiated an SI. In support of the SI, WESTON completed soil vapor, soil, and groundwater sampling events at the site between April 2019 and June 2019 (EPA, 2023a WESTON, 2017; WESTON, 2020).

Upon review of information obtained during these events, EPA determined that off-site sampling of residential soils was required to adequately assess the site's eligibility for the NPL and expanded the scope of the ongoing SI to include a residential sampling component. Planning and execution of the residential sampling required working around COVID-19 and residential access constraints. WESTON completed the residential soil sampling events between August 2022 and October 2022.

The Central Metal site has multiple listings in the Resource Conservation and Recovery Act Information (RCRAInfo) system database including as: *Central Metal Inc* (Handler ID No. CAR000214700) and *U-Haul Moving & Storage of Alameda Corridors* (Handler ID Nos. CAC003161660 and CAC003241657); and *Central Metal Inc* (Handler ID: CAR000214700). No process information or handler classification is listed in the database (EPA, 2023b).

1.3 Apparent Problem

EPA determined that an SI was needed at the Central Metal site because of the following apparent problems:

- Between the late 1920s and the mid-1980s, the site was operated as a foundry and a corrugated metal-tank manufacturing facility. Between the late 1980s and 2016, the site was operated as a metal supply and industrial scrap metal recycling facility (Brash, 2019; DTSC, 2016; JTT, 2012; UCSB, 2023; WEECO, 2014)
- Between 1999 and 2001, more than three tons of tetrachloroethylene (PCE) were reported as being manifested from the site (DTSC, 2023a).
- Inspections conducted at the site by various state and local regulatory agencies resulted in the issuance of numerous Notices of Violation (NOVs) as a result of poor housekeeping, improper hazardous waste storage, and improper hazardous waste disposal (DTSC, 2012; DTSC, 2016; WESTON, 2017).
- The site is situated in an area of known volatile organic compound (VOC) contamination within the drinking water aquifers. The Miramonte well field is located approximately 0.8 mile west-northwest from the site where municipal supply wells have exhibited trichloroethylene (TCE) concentrations up to 25 micrograms per liter (µg/L) and PCE concentrations up to 1.5 µg/L. The federal Maximum Contaminant Level (MCL) for both PCE and TCE is 5.0 µg/L (RWQCB, 2023a).
- In March 2011, a California Department of Toxic Substances Control (DTSC) investigation at the site identified concentrations of metals, primarily lead and zinc, in on-site debris piles that exceeded hazardous waste criteria (DTSC, 2011).
- In December 2018, a debris pile on the site was containerized into 21 large roll-off bins and sampled under the direction of the local Certified Unified Program Agency

(CUPA). The containerized material was classified as hazardous waste based on the identified concentrations of arsenic, lead, and/or cadmium (Brash, 2019).

- A comprehensive analysis of historical aerial imagery indicated that former debris piles at the site, including the pile that had been containerized in 2018, were typically uncovered, or poorly covered. This information, in combination with local wind pattern analysis and verbal accounts provided to EPA by near-site residents, indicated a significant potential that fine-grained materials originating from historical on-site debris piles could have migrated through the air and been deposited onto nearby residential properties (**Attachment 2**; Google, 2023; WRCC, 2020).

2. SITE DESCRIPTION

2.1 Location and Description

(see Figure 1 through Figure 4)

The Central Metal site is located at 8201 Santa Fe Ave., Huntington Park, California. An additional address, 8240 Marbrisa Ave, is also associated with the site property. The geographic coordinates for the site are 33° 57' 47.31" North Latitude and 118° 13' 52.07" West Longitude. The site area exceeded the 80^{th} percentile in the United States for 10 of the 12 Environmental Justice (EJ) Indices (EPA, 2023c; Google, 2023; LACA, 2023).

The site comprises nine Los Angeles County assessor parcels and occupies approximately 11.1 acres in a mixed industrial and residential area of unincorporated southern Los Angeles County. The site is bordered to the north across Short Street by industrial businesses; to the west across the Alameda Corridor by industrial businesses, with residential buildings of the Florence-Firestone community beyond; to the south by an industrial recycling business; and to the east across Santa Fe Avenue by commercial businesses and residential buildings of the Walnut Park community. The southeastern portion of the site is bordered directly to the northeast by single-family homes. Portions of both the Walnut Park and Florence-Firestone (also known as Florence-Graham) residential communities in proximity to the site are composed primarily of single-family residences situated on parcels that are typically less than 0.25 acre in size; however, several multi-family and/or apartment complexes are also intermixed within the neighborhoods (**Appendix C**; Google, 2023; LACA, 2023).

For the purposes of this SI, two distinct operational areas were designated within the site boundaries based on the historical uses of the property. These areas are henceforth referred to as the Former Tank Manufacturing Area (FTMA) and the Former Railroad Area (FRA). The FTMA occupies approximately 4.0 acres at the northeastern portion of the site and includes five of the nine site parcels: 6202-036-009 and 6202-037-004, -006, -009, and -010. The FRA occupies approximately 7.1 acres at the southwestern portion of the site and includes the remaining four site parcels: 6202-036-010, -011, -012, and -013 (**Appendix C**; Google, 2023; LACA, 2023).

The site is currently occupied by three primary structures, including the following (**Appendix C**; Google, 2023; LACA, 2023; UCSB, 2023; WESTON, 2017):

- An approximately 53,000 square foot (ft^2) manufacturing and warehouse building (Warehouse) at the east-central portion of the site. This building includes a maintenance shop and hazardous waste storage area (HWSA) at the southern portion, and an aboveground storage tank (AST) area at the northern portion. The Warehouse was first constructed between 1923 and 1928 and expanded in multiple stages through the mid-1940s.

- An approximately 2,500 ft^2 office building (Main Office) at the northeast corner of the site. The Main Office was constructed between 1923 and 1928.

- A stormwater treatment system at the southwestern corner of the site, which was installed in approximately 2008.

Historically, the Warehouse included an additional approximately 62,000 ft^2 extension to the west of the current structure, which was reportedly demolished in 1988, and a small scale house to the north, which was removed in mid-2021. Railroad tracks bisected the property in a generally southeastern to northwestern direction until they were abandoned in the late 1990s, likely concurrent with the construction of the adjacent Alameda Corridor, and subsequently removed in the early 2000s. A railroad depot and associated structures were formerly located on the northwestern portion of the site from at least the late 1800s through approximately the mid-1960s. Prior to the installation of the existing stormwater treatment system, a historical stormwater treatment system was located at the north-central portion of the site (Google, 2023; LACA, 2023; LAPL, 2023; UCSB, 2023, WEECO, 2014).

Based on aerial imagery, numerous large scrap metal waste and debris piles, as well as various pieces of heavy equipment (e.g., metal sorters, metal crushers, excavators) were located on the property between at least 2003 and 2018. These piles, which were generally confined to the FTMA from 2003-2007 and from 2012-2018, appeared to encompass areas up to a 0.5 acre and to be several stories in height. The specific materials that comprised the various piles are not known; however, it is estimated that they were primarily a combination of metal and debris generated during metal recycling operations (**Attachment 2**; Brash, 2019; DTSC, 2011; Google, 2023).

The site is entirely fenced, and the surface of the site is entirely covered in pavement or buildings. However, prior to approximately 2007, the western portion of the site was unpaved. During SI investigative efforts conducted by EPA in April 2019 and June 2019, the concrete slab was found to vary from approximately 18 inches to 48 inches (**Appendix C**; Google, 2023).

2.2 Operational and Regulatory History

2.2.1 Operational History

(see Table 1)

The National Tank & Manufacturing Company (National Tank) presumably owned the FTMA portion of the Central Metal site from approximately the late 1920s through the mid-1980s. Historical ownership information of the FTMA prior to the late 1920s is not known. By 1989, the five FTMA parcels were owned by David Miller doing business as Damille Metal Supply, Inc. (DMS). In approximately 2002, Jong Uk Byun, doing business as Central Metal, Inc. (CMI), purchased the FTMA parcels and, in approximately 2004, purchased the remaining four Former Railroad Area (FRA) parcels. On December 31, 2021, the entirety of the site was purchased by the current corporate owner, 8201 Santa Fe (CA) LLC, a subsidiary of AMERCO Real Estate Company, a subsidiary of U-Haul® Holding Company (formerly AMERCO). Historical ownership information of the FRA is not known; however, these parcels were presumably owned by the Southern Pacific Railroad (SPRR) and its related entities (**Appendix D**; DTSC, 2023b, Google, 2023; JTT, 2012; LACFD, 1999; LACFD, 2002; WCAB, 1984; WEECO, 2014).

The current number of workers that regularly occupy the site is not known; however, during on-site SI activities in June 2019, up to a dozen administrative and/or maintenance workers were observed at the facility (**Appendix C**).

National Tank & Manufacturing Company (National Tank) / Ace Foundry

National Tank was historically a manufacturer of corrugated metal water-and-oil tanks that operated within the FTMA portion of the site from approximately the late 1920s through the mid-1980s. The specific tank manufacturing operations and hazardous materials associated with these operations are not known; however, the majority of operations are presumed to have occurred within the existing Warehouse. A machine shop was located at the southern portion of the Warehouse. Concurrent with National Tank operations, Ace Foundry operated within the former westward extension of the Warehouse from at least 1938 to 1979, presumably conducting metal casting activities. Ace Foundry operations included a cleaning room and a machine shop within the southern portion of the former Warehouse extension. No additional information is known regarding specific locations of foundry operations, use, or storage of hazardous substances, or if Ace Foundry and National Tank operations were interconnected (JTT, 2012; WCAB, 1984; WEECO, 2014).

Damille Metal Supply, Inc. (DMS)

Damille Metal Supply, Inc. (DMS) was an industrial scrap metal recycler that operated on the FTMA portion of the site from approximately 1989 through the late 1990s or early 2000s. Operations included buying and selling scrap metal, including at least aluminum, steel, copper, and titanium. Scrap metals were sorted on site, sheared or cut, and shipped off site. Hazardous waste manifests indicate that between 1999 and 2001, approximately 3.58 tons of PCE waste was generated at the site. The origin of this organic waste is not known. No additional information is known regarding specific activities or hazardous substances associated with DMS operations. Additional businesses reported as using addresses associated with the site during the DMS operational period include: L&S Metals; MCS, Inc.; and All Star Metals, Inc. Specific information regarding these businesses is not known; however, it is presumed that they were conducting activities related to scrap metal operations and were associated with DMS (DTSC, 2016; LACFD, 1999; LACFD, 2002; WEECO, 2014).

Central Metal, Inc. (CMI)

Central Metal, Inc. (CMI) operated on the site as an industrial metal supply and scrap metal recycling facility from approximately 2002 to 2016. CMI operations on the FRA portion of the site began in approximately 2004. On-site activities included purchasing scrap metals from various industries, primarily fabrication, manufacturing, and construction companies. Scrap metals were then sorted, cleaned, and cut or shredded into compact sizes for domestic and/or international shipment. Recycled metals included at least steel, aluminum, copper, brass, and stainless steel. The facility also received, stored, and resold electronic waste (e-waste) such as computer monitors, desktop towers, batteries, and other computer parts. Spent automobile batteries, hydraulic oil, motor oil, antifreeze, gasoline, and diesel fuel were stored on site. Historically, stormwater runoff from the site was reportedly treated at the northern portion of the facility before being discharged to the municipal stormwater system on Short Street. Beginning in approximately 2008, stormwater runoff was treated in a system located at the southwestern corner of the site and subsequently discharged to Alameda Street. The facility was "shuttered" in approximately July 2016 after failing to acquire a new Conditional Use Permit from Los Angeles County. Between approximately early 2020 and late 2021, the facility was used to store cargo shipping containers by an unknown operator, presumably under an agreement with CMI (**Appendix C**; Brash, 2019; DTSC, 2016; Google, 2023; LACFD, 2005; WEECO, 2014).

Based on aerial imagery and historical investigation reports, numerous large debris piles were located on the property between at least 2003 and 2018. These piles, which were generally confined to the FTMA portion of the site from 2003-2007 and from 2012-2018, included bulk and fine metal debris, e-waste, and floor sweepings. The piles encompassed areas up to 0.5 acre and were several stories in height. All piles were removed from the facility between 2018 and 2020. Although the specific materials that comprised all the various piles are not known, previous investigations that included sampling of on-site piles indicated elevated concentrations of hazardous metals and other compounds including, but not limited to, petroleum hydrocarbons and polychlorinated biphenyls (PCBs) (**Attachment 2**; Brash, 2019; DTSC, 2011; Google, 2023).

<u>*Southern Pacific Railroad (SPRR)*</u>

The FRA portion of the site was used for railroad operations by the Southern Pacific Railroad (SPRR) since at least 1875 and potentially since the late 1860s. Southern California's first railroad, the Los Angeles & San Pedro Railroad, was completed in 1869 and connected Los Angeles to the port at Wilmington. In 1872, SPRR acquired the railroad and completed the construction of the Santa Ana Branch line in 1875. The new branch connected the original branch line, the Wilmington Branch, to the cities of Anaheim, and later, Santa Ana. The Santa Ana Branch line bisected the site and junctioned with the Wilmington Branch, which ran parallel to the western edge of the site, at the northwestern corner of the site. An alternative junction was located approximately 0.25 mile south of the site. By 1896, a railroad depot had been constructed immediately south of the branch line junction at the northern portion of the FRA, which was originally named Florence Station and later changed to Firestone Park Station. Various railroad-related buildings were located within this area and included small offices and transloading buildings. The railroad buildings were removed in stages between the late 1950s and the early 1970s and the rail lines, both the on-site and adjacent-west branch segments, were abandoned and removed in the late 1990s and early 2000s, presumably due to the construction of the subgrade Alameda Corridor (LAPL, 2023; Spitzzeri, 2019; UCSB, 2023; WEI, 2021b).

<u>*U-Haul*</u>

U-Haul® began operating at the site in early 2022 in a limited capacity and is currently proposing to develop the property into a U-Haul Moving and Storage Store. Proposed on-site activities include self-storage, warehousing, truck and trailer rentals, maintenance of U-Haul vehicles, and retail sales. The project would include the demolition of the existing Main Office and stormwater treatment systems, the modification of the existing Warehouse into a truck rental area, and the construction of several new buildings including: an approximately 57,000 ft^2 single-story storage building at the northeastern portion of the site, an approximately 42,000 ft^2 four-story self-storage building at the southwestern portion of the site, and an approximately 29,000 ft^2 two-story vehicle repair building at the southeastern portion of the site (DTSC, 2023b).

2.2.2 State and Local Regulatory History

2.2.2.1 State of California

The Central Metal site is listed in the California Environmental Protection Agency, Department of Toxic Substances Control's (DTSC) Envirostor database as of September 2023. The site is listed in the database as: *U-Haul Moving & Storage of Alameda Corridors (Damille Metal Svc - Central Metals, Inc.* (Envirostor ID: 60002329), addressed at 8201 Santa Fe Ave. The site is listed as a *Voluntary Agreement* site that was *Active* as of April 26, 2023 (DTSC, 2023c).

In 2012, DTSC issued an Enforcement Order for Central Metal, Inc. in regard to violations of the California Health and Safety Code and the California Code of Regulations. During DTSC's March

2011 inspection of the site, it was documented that the facility had generated two piles of contaminated materials consisting of finely divided heavy metals and e-waste debris generated through the metal recycling operations. The facility failed to minimize and properly containerize leaking hazardous waste from broken battery cases, broken e-wastes, oily wastes and sludges, and heavy metal dusts inside and outside the facility. The facility complied with DTSC’s requirement to remove and properly dispose of the two contaminated soil piles at an authorized facility; more than 430 tons of contaminated soil was reported on waste manifests in 2011 (DTSC, 2012; DTSC, 2023a).

In August 2016, DTSC completed a Site Screening of the site for EPA as part of the Slauson-Alameda-Gage (SAG) Groundwater Discovery Project, which was focused on locating potential sites contributing to the area’s groundwater VOC contamination. Based on this screening, EPA determined that further assessment was needed (DTSC, 2016).

In May 2023, DTSC entered into a California Land Reuse and Revitalization Act (CLRRA) Agreement with the current corporate owner of the site, 8201 Santa Fe (CA), LLC, for the purposes of conducting additional environmental assessment and remediation, as needed (Docket No. HAS-FY22/23-116). A CLRRA agreement is a type of Voluntary Oversight Agreement offered by DTSC that provides limited liability protection for a bona fide purchaser, bona fide prospective purchaser, innocent landowner, contiguous property owner, or a ground tenant of a property if specific eligibility criteria are met (DTSC, 2023b).

The site is not listed in Regional Water Quality Control Board’s (RWQCB’s) GeoTracker database as of September 2023 (RWQCB, 2023b).

2.2.2.2 County of Los Angeles

The Los Angeles County Department of Public Works (LADPW) has issued numerous NOVs to the site. In 2004, 2005, and 2008 NOVs were issued for operating an unpermitted stormwater filtration system. An April 2016 Stormwater Certificate of Inspection noted that the facility was operating a permitted stormwater treatment system; however, the certificate was not re-issued due to deficient best management practices that consisted of inadequate employee training and inadequate filters within the treatment system. It is unknown if the facility complied and was re-issued the stormwater certificate (LADPW, 2004; LADPW, 2005; LADPW, 2008a; LADPW, 2008b; LADPW, 2016).

The local CUPA, which is the Los Angeles County Fire Department, Health Hazardous Materials Division (HHMD), has conducted numerous inspections on the site. In 1995, HHMD issued an NOV for inadequate waste disposal, inadequate hazardous materials storage, inadequate training, and inadequate maintenance of manifests. In 2005, HHMD issued an NOV for inadequate hazardous waste labeling and management, poor housekeeping, inadequate hazardous waste storage, and lack of required permits. In 2009, HHMD issued an NOV for poor housekeeping, improper labeling, inadequate hazardous waste storage, and improper employee training. In 2014, HHMD issued an NOV for failure to properly label hazardous waste accumulation containers, failure to dispose of hazardous waste within 180 days, and failure to properly close hazardous waste containers (LACFD, 1995; LACFD, 1999; LACFD, 2005; LACFD, 2009; LACFD, 2014).

3. INVESTIGATIVE EFFORTS

3.1 Previous Investigations

3.1.1 Non-Regulatory Investigations

3.1.1.1 2000 Subsurface Soil Investigation

In March 2000 and April 2000, a subsurface soil investigation was conducted within the FTMA, which is the first known environmental investigation conducted at the site. It is not known on whose behalf this investigation was conducted or whether any oversight was conducted by a local regulatory agency. During the investigation, nine borings were advanced to a total depth of 20 feet (ft) below ground surface (bgs). Three of the borings were located within the east-central portion of the Warehouse, one was located within the northwest portion of the Warehouse, three were located immediately southwest of the Warehouse adjacent to the maintenance shop, and two were located in the current scrap pile area at the central portion of the site. The total number of samples collected during the investigation is not known. Select samples were analyzed for total petroleum hydrocarbons (TPH), VOCs, metals, and PCBs. Reportedly, relatively low concentrations of TPH were identified in the 15 ft-bgs sample collected from the maintenance area at the southern side of the Warehouse. No additional samples reported detectable concentrations of the analyzed substances. The specific sampling program, including sampling methodology and analytical results are unknown (WEECO, 2014).

3.1.1.2 2001 CMI Subsurface Soil Investigation

In April 2001, CMI advanced four borings across the central and north-central portions of the FTMA to a total depth of 20 ft-bgs. Soil matrix samples were collected at 5 and 10 ft-bgs within each boring, resulting in a total of 10 field samples that were submitted for TPH and VOC analyses. Samples were collected in brass tubes using a slide hammer sampler. The 6-inch brass tubes were sealed using Teflon® sheeting and plastic caps. All samples were reported as “non-detect” for TPH and VOCs; however, the utilized sample collection methodology is not currently considered acceptable for VOC analysis due to the increased potential for contaminant volatilization. Samples were not submitted for metals analysis (WEECO, 2014).

3.1.1.3 2003 CMI Subsurface Soil Investigation

In December 2003, CMI advanced 16 borings across the FRA to a total depth of 30 ft-bgs. The specific locations of the borings are not known; however, four of the borings were reportedly advanced adjacent to the “previous railroad track” area whereas the remaining 12 were advanced within the “vacant lot” area. Within each boring, soil matrix samples were generally collected at 10 ft-bgs, 20 ft-bgs, and 30 ft-bgs. Forty-seven samples were collected, and 32 of these samples were submitted for TPH and VOC analysis. The remaining 15 samples were screened on-site using a photoionization detector (PID). Samples were collected in brass tubes using a slide hammer sampler. The 6-inch brass tubes were sealed using Teflon® sheeting and plastic caps. All samples were reported as "non-detect" for TPH and VOCs; however, the utilized sample collection methodology is not currently considered acceptable for VOC analysis due to the increased potential for contaminant volatilization. Samples were not submitted for metals analysis. Groundwater was not encountered during the investigation (WEECO, 2014).

3.1.1.4 2004 CMI Subsurface Soil Investigation

In September 2004, CMI advanced an additional five borings within the FRA to a total depth of 10 ft-bgs. The specific locations of the borings are not known; however, it was reported that they were advanced adjacent to the "previous railroad track area." Soil matrix samples were collected at 5 ft-bgs and 10 ft-bgs within each boring, resulting in a total of 10 field samples that were all submitted for TPH and VOC analysis. Samples were collected in the direct-push acetate liners. The liners were cut and sealed using Teflon sheeting and plastic caps. All samples were reported as "non-detect" for TPH and VOCs; however, the utilized sample collection methodology is not currently considered acceptable for VOC analysis due to the increased potential for contaminant volatilization. Samples were not submitted for metals analysis (WEECO, 2014).

3.1.1.5 2010 CMI Debris Pile Classification Sampling

In September 2010, CMI collected four solid matrix samples from two distinct on-site debris piles. The specific sampling methodology or sample locations are not known. Samples were reportedly analyzed for VOCs, TPH, and soluble metals. The specific analytical results are not known; however, all four of the samples reportedly exhibited soluble lead concentrations that exceeded state hazardous waste criteria with a maximum sample concentration of 50 milligrams per liter (mg/L). Both the Toxicity Characteristic Leaching Procedure (TCLP) and Soluble Threshold Limit Concentration (STLC) hazardous waste criteria for lead are 5 mg/L (DTSC, 2011).

3.1.1.6 2021 CMI Phase II Sampling
(see Table 2)

In September 2021, CMI advanced 14 soil borings, SV-21 through SV-34, within the FRA to a total depth of 15 ft-bgs. Within each boring, soil vapor probes were installed at 5 ft-bgs and 15 ft-bgs and soil matrix samples were collected at 2 ft-bgs, 5 ft-bgs, and 15 ft-bgs. An additional soil matrix sample, P-1, was collected from a depth of 6 inches within an area of exposed soil at the central portion of the site; the origin of this area of exposed soil is not known (e.g., machinery foundation excavation, etc.); however, it appears to have been formerly occupied by a debris pile. Soil vapor sampling and analyses was performed on-site using a mobile laboratory with all samples analyzed for VOCs and fuel oxygenates. Shallow soil matrix samples were initially analyzed for CAM 17 metals analysis (also known as Title 22 metals) with deeper samples only analyzed in borings where the shallow sample exhibited elevated concentrations. Soil matrix samples collected from borings that exhibited detectable concentrations of VOCs in soil vapor were also analyzed for VOCs. In addition, select soil matrix samples underwent solubility analysis where total metals concentrations exceeded assigned thresholds (WEI, 2021b).

The most elevated metal concentrations were generally exhibited in the near-surface soil sample, P-1, and included, but were not limited to: antimony (46 milligrams per kilogram [mg/kg]), arsenic (28 mg/kg), barium (2,600 mg/kg), cadmium (29 mg/kg), chromium (200 mg/kg), copper (5,700 mg/kg), lead (3,600 mg/kg), mercury (9.6 mg/kg), nickel (500 mg/kg), silver (5.7 mg/kg), and zinc (20,000 mg/kg). Based on the metals results of the 2 ft-bgs boring samples, three 5 ft-bgs samples were additionally analyzed and no 10 ft-bgs samples were analyzed. Five of the 17 analyzed boring samples exhibited an arsenic concentration greater than 14 mg/kg, with a maximum result of 78 mg/kg at boring SV-28 (west-central portion of FRA). Eight of the 17 analyzed boring samples exhibited a lead concentration greater than 41 mg/kg, with a maximum result of 190 mg/kg at boring SV-27 (east-central portion of FRA) (WEI, 2021b).

VOCs identified in the soil vapor survey included, but are not limited to, PCE, Freon 113, toluene, and total xylenes. Of the detected analytes, only PCE exhibited at concentrations exceeding corresponding EPA Vapor Intrusion Screening Levels (VISLs), which occurred in 7 of the 28 samples. PCE was detected in all soil vapor samples and ranged from 10 micrograms per cubic meter (μg/m^3) to 1,340 μg/m^3; shallower samples were generally more elevated than deeper samples. The maximum concentrations were identified in the samples collected from SV-21 (northwest portion of FRA) that exhibited 1,340 μg/m^3 (5 ft-bgs sample) and 1,290 μg/m^3 (15 ft-bgs sample). Based on the soil vapor data, twelve soil matrix samples were selected and submitted for VOC analysis. Benzene was the only VOC detected in the submitted samples and was identified in a single sample at a concentration of 4.9 micrograms per kilogram (μg/kg); the residential Regional Screening Level (RSL) for benzene is 1,200 μg/kg. The Resident and Commercial VISLs (May 2023) for PCE are 360 μg/m^3 and 1,570 μg/m^3, respectively (WEI, 2021b).

3.1.2 State and Local Regulatory Agency Investigations

3.1.2.1 2011 DTSC Debris Pile Sampling Investigation

(see Table 3)

In January 2011, DTSC received a complaint from local residents in the vicinity of the Central Metal site who were concerned that metal dusts from the facility may be impacting their properties. In March 2011, DTSC, accompanied by staff of the South Coast Air Quality Management District (AQMD) and HHMD, conducted an inspection of the site. During the inspection, DTSC collected five aqueous matrix (i.e., liquid, sludge, and sediment) samples from both on site and immediately off site, as well as 11 solid matrix samples from two distinct on-site debris piles, although the specific locations of these piles are unknown. All samples were analyzed for metals (both total and soluble) with a subset also being analyzed for TPH, mercury, and PCBs. Analytical results indicated that four of the five aqueous matrix samples exhibited soluble lead concentrations that exceeded state hazardous waste criteria, and one or more samples also exceeded the waste criteria for TPH, PCBs, and/or mercury. All solid matrix samples exhibited lead and zinc concentrations that exceeded hazardous waste criteria (both total and solid) with one sample also exceeding the soluble waste criteria for cadmium (DTSC, 2011; WEI, 2021a).

3.1.2.2 2017-2018 CUPA Debris Pile Investigation

(see Table 4)

In September 2017, the local CUPA, HHMD, collected a single solid matrix sample from an on-site debris pile during a routine inspection. The sample reportedly exhibited concentrations of both total lead and total zinc that exceeded the state hazardous waste criteria. However, neither the specific sample collection location nor the full analytical results are known. In December 2018, CMI, at the direction of HHMD, containerized the sampled pile into 21 roll-off bins and collected additional solid matrix samples for waste classification purposes that were analyzed for total metals. CMI conducted a statistical analysis of the analytical results and reported to HHMD that 7 of the 21 bins could be classified as hazardous waste based on total arsenic concentrations. Subsequently, the samples collected from the remaining 14 bins were additionally analyzed for soluble metals, which indicated that all 14 additional bins could be classified as hazardous waste based on soluble lead concentrations. One of the 14 bins also exceeded the soluble hazardous waste criteria for cadmium (Brash, 2019).

3.1.3 Previous Federal Regulatory Agency Investigations

No known previous federal regulatory agency sampling investigations have been conducted at the Central Metal site.

3.2 Site Inspection (SI) Sampling

Between April 2019 and October 2022, WESTON®, on behalf of EPA, conducted the SI sampling events at the Central Metal site. The Stage 1 SI sampling event (April 2019) included soil vapor sampling and subsurface soil matrix sampling. The primary objective of the Stage 1 event was to collect screening-level analytical data to support planning decisions for the subsequent Stage 2 event. The Stage 2 SI sampling event (June 2019) included subsurface soil matrix source sampling and groundwater release sampling. The primary objective of the Stage 2 investigation was to document information to be used in the HRS characterization process including additional source areas and levels of contamination in site soils and groundwater.

In August 2022, the Stage 3 SI Residential sampling event was completed, which included four-point composite soil matrix release sampling and Incremental Sampling Methodology (ISM) non-discrete soil sampling. The Stage 3 SI Background sampling event (October 2022) included four-point composite and ISM shallow soil matrix background sampling. A more detailed description of these sampling methodologies is provided in the Stage 3 Sampling and Analysis Plan (SAP) (**Attachment 4**). The primary objective of the Stage 3 investigation was to determine if residential properties downwind of the site exhibited elevated concentrations of hazardous metals in near-surface soils and, if so, determine if at least some portion of this contamination was a result of historical on-site activities.

Sampling methodology, locations, analyses, and analytical results are summarized below. The SAP for the Stage 1 and Stage 2 sampling events was approved by EPA in October 2018, and the SAP for the Stage 3 event was approved by EPA in June 2021. The Stage 1 and 2 SAP and the Stage 3 SAP are provided in **Attachment 3** and **Attachment 4**, respectively.

Based on the historical use of the site and the previous sampling events described in Section 3.1, the following contaminants of concern (COCs) were identified at the site: metals (specifically arsenic, cadmium, and lead) and VOCs (specifically PCE). In addition, based on the analytical results from the Stage 1 and Stage 2 portions of the SI investigation, additional COCs were identified including, but not limited to, the following: cobalt, copper, silver, zinc, 2-butanone (also known as methyl ethyl ketone [MEK]), acetone, bromodichloromethane (BDCM), carbon tetrachloride, methylene chloride (also known as dichloromethane), and m,p-xylene.

All Stage 1 soil vapor samples were analyzed for VOCs on-site during the sampling event by H&P Mobile Geochemistry, Inc., a WESTON®-contracted mobile laboratory, using EPA Method H&P 8260SV (modified SW-846 Method). All Stage 1 subsurface soil matrix samples were submitted under the EPA Contract Laboratory Program (CLP) to Bonner Analytical Testing Co. (Bonner) for CLP Metals analysis using Inductively Coupled Plasma Mass Spectrometry (ICP-MS) and Inductively Coupled Plasma Atomic Emission Spectroscopy (ICP-AES) (copper only) by EPA CLP Analytical Services (CLPAS) ISM02.4. Due to trace metal interference identified within a single sample delivery group, samples within that group were re-analyzed using ICP-AES for all metal constituents (including copper) and only the revised results are discussed below.

All Stage 2 subsurface soil matrix and groundwater samples were submitted under the EPA CLP to Bonner for CLP Metals analysis (using ICP-AES) by EPA CLPAS ISM02.4 or to Chemtech Consulting Group for CLP Trace Volatiles analysis (groundwater) and CLP Low and Medium Volatiles (soil) by EPA CLPAS SOM02.4.

All Stage 3 near-surface residential soil matrix data were submitted to Eurofins Environment Testing - Tacoma and analyzed for CAM 17 metals (including mercury) (using ICP-AES) by EPA Method 6010b and EPA Method 7471a (using Cold Vapor Atomic Absorption [CVAA]). ISM samples were processed at the laboratory in accordance with Interstate Technology Regulatory Council (ITRC) ISM-2 (October 2020) prior to analysis.

WESTON® validated the soil vapor data (Stage 1) and the near-surface soil matrix data (Stage 3) internally. The EPA Region 9 Quality Assurance (QA) Office validated the subsurface soil matrix

(Stage 1 and Stage 2) and groundwater (Stage 2) data. The complete validated analytical results are presented in **Attachment 7**.

3.2.1 Action Levels

In accordance with the HRS, the action levels to establish an observed release to groundwater or an area of observed soil contamination (AOC), as well as to establish an on-site source of contaminated soil, are "significantly above background" concentrations. "Significantly above background" is defined as three times the background concentration for all media. If the background concentration is below the analytical quantitation limit, then the default background level is the background sample quantitation limit (SQL). "Significantly above background" for this scenario is defined as a detect in the media (i.e., concentration at or above the SQL) where the analyte was not detected in the background media. In accordance with EPA, 1996 (Using Qualified Data to Document an Observed Release and Observed Contamination), qualified data (e.g., J-flagged) may be used to document an observed release or observed contamination by chemical analysis under the HRS by the application of specific adjustment factors to the data (see **Attachment 10**).

3.2.1.1 Source Action Level

(Groundwater Pathway) (see Table 6)

Soil matrix samples collected from Boring DMS-DP-10, which is located at the northeastern portion of the site, approximately 70 ft southwest of the Main Office and 70 ft north of the Warehouse, are designated as the source background soil samples for HRS purposes. Although the selected source background location is situated within the operational area of the site, the exhibited analyte concentrations in samples collected from this location appear unlikely to have been significantly impacted by on-site historical operations. An on-site source of hazardous materials, typically contaminated subsurface soils, must be established in order to assess whether a site has impacted, or has the potential to impact, underlying groundwater.

The assigned source background concentration for each analyte was determined by amalgamating the concentration data from each of the four discrete-depth soil samples. For any analyte with a reported SQL exceedance in the dataset, the background concentration was conservatively assigned as the arithmetic mean of the SQL-exceeding discrete-depth results plus three times the sample standard deviation of these results. For any analyte without an SQL exceedance, the background concentration was conservatively assigned as the maximum SQL value for that analyte within the combined Stage 1 and Stage 2 datasets.

VOC analytes were not reported at concentrations above their respective SQLs in any of the four discrete-depth source background soil samples. All antimony results reported for the source background soil samples were qualified as "rejected" due to a matrix spike recovery outside of QA criteria preventing the assigning of either a source background concentration or source action level for antimony in soil; however, antimony was not reported above SQLs within the Stage 1 or Stage 2 datasets. Metal analytes within the dataset that are not included within the Superfund Chemical Data Matrix (SCDM); specifically, calcium, magnesium, potassium, and sodium; were not assigned source action levels or evaluated as potential hazardous substance sources.

3.2.1.2 Groundwater Release Action Level
(Groundwater Pathway)

No groundwater monitoring wells are located on the Central Metal site. The nearest known monitoring wells to the site are located on the adjacent-south Jack Engle & Company site (northern parcel). Data collected from the seven-well monitoring network between approximately 1998 and 2010 have indicated a relatively low horizontal hydraulic gradient and a variable shallow groundwater flow direction; predominately from south-southeast to southwest. As such, the shallow groundwater flow direction beneath the Central Metal site is considered to be inadequately defined and, therefore, neither a background groundwater location nor a groundwater release action level can currently be assigned.

3.2.1.3 HRS Soil Screening Benchmark
(Soil Exposure Pathway) (see Figure 11 and Table 9)

Soil samples collected during the October 2022 Stage 3 Background Sampling Event were used to assign HRS soil screening benchmarks for metals in shallow soils. These project-specific benchmarks were used as the criteria to determine if metal concentrations identified in residential soils exceeded the HRS threshold of “significantly above background.” This event included the sampling of shallow soil samples within five designated background zones. These zones encompassed a variety of land-use settings including: two public parks, two road verges (e.g., parkway, greenbelt), and a tract of former residential lots that were being redeveloped into a new public park. These zones were all located within 1 mile of the site and were specifically selected to facilitate the estimation of an ambient urban metal concentration within shallow soil in the vicinity of the site. At each background zone, shallow soil samples were collected using ISM and four-point composite methodologies. The ISM analytical data was then averaged, first by zone, then by land-use type, and finally across all zones, to establish estimated background soil concentrations.

3.2.2 2019 EPA Stage 1 SI - Soil Vapor and Limited Soil Sampling

In April 2019, WESTON®, on behalf of EPA, conducted the Stage 1 SI sampling event at the Central Metal site. The Stage 1 event included soil vapor and soil matrix sampling at 20 non-biased sampling locations located across the site (SV-1 through SV-20), predominantly within the FTMA. The primary objective of the Stage 1 portion of the investigation was to provide information on the relative concentrations of metals and VOCs across the site to assist in the selection of subsequent on-site soil matrix and groundwater sampling (i.e., Stage 2). However, when used in combination with the source action levels assigned, subsequent to the Stage 2 event (see Section 3.2.1) the Stage 1 metals results can also be used under the HRS to establish hazardous substance source areas at the site.

Between April 8 and April 11, 2019, 37 soil vapor probes were installed across the site, which were subsequently analyzed using a WESTON-subcontracted mobile laboratory. The probes were installed at two distinct depths (approximately 5 ft-bgs and 15 ft-bgs) using direct-push (DP) technology. In addition, 38 soil matrix samples (not including duplicate or QA samples) were collected during the investigation. Soil samples were collected from depths of approximately 2 ft-bgs and 10 ft-bgs at each location and submitted to a fixed laboratory for metals analyses. Due to refusal issues, a soil vapor sample could not be collected from either of the targeted depths at SV-6 or from the 15-ft targeted depth at SV-13, and soil matrix samples could not be collected from the 10-ft targeted depths at either location.

3.2.2.1 Stage 1 Soil Vapor Results for VOCs

(see Figure 5 and Table 5)

Numerous VOC analytes were identified at detectable concentrations during the survey. Although soil vapor benchmarks are not applicable within the HRS, for contextual purposes, the soil vapor data collected during the investigation are compared to the May 2023 EPA Resident and Commercial Sub-slab and Near source Soil Gas VISLs. Three analytes, BDCM, carbon tetrachloride, and PCE, exceeded their respective Resident VISLs with BDCM and PCE also slightly exceeding their respective Commercial VISLs. TCE was not detected above reporting limits during the survey.

The maximum BDCM concentration of 13 $\mu g/m^3$ was identified in the 6 ft-bgs sample collected from SV-20 (southern portion of the FRA). The Resident and Commercial VISLs for BDCM are 2.5 $\mu g/m^3$ and 11 $\mu g/m^3$, respectively.

The maximum carbon tetrachloride concentration of 18 $\mu g/m^3$ was identified in the 6 ft-bgs sample collected from SV-10 (northwestern portion of the Warehouse). The Resident and Commercial VISLs for carbon tetrachloride are 16 $\mu g/m^3$ and 68 $\mu g/m^3$, respectively.

The maximum PCE concentration of 2,530 $\mu g/m^3$ was identified in the 6.5 ft-bgs sample collected from SV-14 (central portion of the Warehouse). The 16 ft-bgs sample from this location exhibited a PCE concentration of 2,190 $\mu g/m^3$. PCE was identified in 34 of the remaining 35 samples with concentrations that ranged from 8.0 $\mu g/m^3$ to 339 $\mu g/m^3$. The Resident and Commercial VISLs for PCE are 360 $\mu g/m^3$ and 1,570 $\mu g/m^3$, respectively.

3.2.2.2 Stage 1 Soil Sampling Results for Metals
(see Figure 6 and Table 6)

Metals identified at concentrations at or above their corresponding source action level in soil matrix source samples collected during the Stage 1 sampling event include arsenic, cadmium, cobalt, copper, lead, silver, and zinc. The most elevated metal concentrations identified during this event were generally exhibited in the 2 ft-bgs samples collected from adjacent west to the Warehouse and within the southern portion of the Warehouse. For contextual purposes, these results are also compared to the May 2023 EPA Residential and Industrial RSLs; however, RSLs are not appropriate for use as benchmarks under the HRS.

The assigned arsenic source action level of 14 mg/kg was exceeded by 2 of the 38 samples with a maximum concentration of 22 mg/kg (qualified as estimated), which was exhibited in the 2 ft-bgs sample collected from SV-12. The 2 ft-bgs sample collected from SV-13 exhibited an arsenic concentration of 16 mg/kg (qualified as estimated). The Residential and Industrial RSLs for arsenic are 0.68 mg/kg and 3.0 mg/kg, respectively.

The assigned cadmium source action level of 0.66 mg/kg was exceeded by 4 of the 38 samples with a maximum concentration of 2.5 mg/kg, which was exhibited in the 2 ft-bgs sample collected from SV-6. No deep sample was collected from SV-6 due to early refusal. The 2 ft-bgs samples collected from SV-9, SV-17, and SV-19 exhibited cadmium concentrations of 1.3 mg/kg (qualified as estimated), 1.4 mg/kg, and 1.1 mg/kg, respectively. The Residential and Industrial RSLs for cadmium are 7.1 mg/kg and 100 mg/kg, respectively.

The assigned cobalt source action level of 69 mg/kg was exceeded by 1 of the 38 samples with a concentration of 91 mg/kg, which was exhibited in the 2 ft-bgs sample collected from SV-9. The Residential and Industrial RSLs for cobalt are 23 mg/kg and 350 mg/kg, respectively.

The assigned copper source action level of 111 mg/kg was exceeded by 4 of the 38 samples with a maximum concentration of 165 mg/kg (qualified as estimated), which was exhibited in the 2 ft-bgs sample collected from SV-12. The 2 ft-bgs samples collected from SV-6, SV-9, and SV-17 exhibited copper concentrations of 133 mg/kg (qualified as estimated), 114 mg/kg, and 139 mg/kg, respectively. The Residential and Industrial RSLs for copper are 3,100 mg/kg and 47,000 mg/kg, respectively.

The assigned lead source action level of 41 mg/kg was exceeded by 5 of the 38 samples with a maximum concentration of 338 mg/kg, which was exhibited in the 2 ft-bgs sample collected from SV-6. No deep sample was collected from SV-6 due to early refusal. The 2 ft-bgs samples collected from SV-9, SV-17, SV-18, and SV-19 exhibited lead concentrations of 170 mg/kg, 301 mg/kg (qualified as biased high), 170 mg/kg (qualified as biased high), and 90 mg/kg (qualified as biased high), respectively. The Residential and Industrial RSLs for lead are 400 mg/kg and 800 mg/kg, respectively.

The assigned silver source action level of 1.3 mg/kg was exceeded by 4 of the 38 samples with a maximum concentration of 5.0 mg/kg, which was exhibited in the 2 ft-bgs sample collected from SV-6. No deep sample was collected from SV-6 due to early refusal. The 2 ft-bgs samples collected from SV-9, SV-12, and SV-13 exhibited silver concentrations of 4.3 mg/kg (qualified as estimated), 2.4 mg/kg (qualified as estimated), and 1.4 mg/kg (qualified as estimated), respectively. The Residential and Industrial RSLs for silver are 390 mg/kg and 5,800 mg/kg, respectively.

The assigned zinc source action level of 450 mg/kg was exceeded by 3 of the 38 samples with a maximum concentration of 778 mg/kg (qualified as biased high), which was exhibited in the 2 ft-bgs sample collected from SV-17. The field duplicate for this sample exhibited a zinc concentration of 464 mg/kg (qualified as biased high). The 2 ft-bgs samples collected from SV-6, and SV-19 exhibited zinc concentrations of 490 mg/kg (qualified as estimated) and 612 mg/kg (qualified as biased high), respectively. The Residential and Industrial RSLs for zinc are 23,000 mg/kg and 350,000 mg/kg, respectively.

3.2.3 2019 EPA Stage 2 SI - Soil and Groundwater Sampling

In June 2019, WESTON®, on behalf of EPA, conducted the Stage 2 SI sampling event at the Central Metal site. The Stage 2 event included both soil and groundwater sampling at selectively-biased sampling locations located across the site with samples analyzed for VOCs and metals. The primary objective of the Stage 2 portion of the investigation was to collect analytical data from site soils and groundwater to determine if an on-site hazardous substance source existed at the site and, if present, if it was a potential source of area-wide groundwater contamination.

Between June 17, 2019 and June 20, 2019, ten soil borings were advanced using DP technology to a maximum depth of 17 ft-bgs, and five groundwater borings were advanced using Cone Penetration Testing (CPT) technology to a maximum depth of 101 ft-bgs. Within each soil boring, samples were collected from four distinct depths of approximately 2 ft-bgs, 5 ft-bgs, 10 ft-bgs, and 15 ft-bgs. Forty soil samples (not included duplicate or QA samples) were submitted for fixed-laboratory VOC and metals analysis. Within each groundwater boring, a single groundwater sample was collected from the top of the underlying Gaspur aquifer. No perched or semi-perched water was identified between the ground surface and the top of the aquifer. Five groundwater samples (not including duplicate or QA samples) were submitted for fixed-laboratory VOC and total (i.e., not dissolved) metals analysis.

3.2.3.1 Stage 2 Sampling Results for VOCs

(see Figure 8 and Table 8)

Stage 2 - VOC Results in Soil

The only VOC identified at a concentration at or above its corresponding source action level in soil matrix source samples collected during the Stage 2 sampling event was acetone. Four additional VOC analytes were identified at detectable concentrations during the event including 2-butanone (also known as MEK), methylene chloride (also known as dichloromethane), m,p-xylene, and PCE. 2-butanone, acetone, and methylene chloride are common laboratory contaminants. For contextual purposes, these results are also compared to the May 2023 EPA Residential and Industrial RSLs; however, RSLs are not appropriate for use as benchmarks under the HRS.

The assigned acetone source action level of 31 µg/kg was exceeded by 2 of the 40 samples with a maximum concentration of 93 µg/kg (qualified as biased high), which was exhibited in the 3 ft-bgs sample collected from DP-3. The 5 ft-bgs sample collected from DP-8 exhibited an acetone concentration of 35 µg/kg (qualified as biased high). The Residential and Industrial RSLs for acetone are 70,000,000 µg/kg and 1,100,000,000 µg/kg, respectively.

PCE was only identified in a single sample, which was collected from 2 ft-bgs at DP-6 (central portion of Warehouse and adjacent to the maximum PCE result identified during the Stage 1 Soil Vapor Survey). This sample exhibited a PCE concentration of 2.2 µg/kg (qualified as estimated), which was below the SQL of 6.6 µg/kg. The assigned PCE source action level is 16 µg/kg. The Residential and Industrial RSLs for PCE are 24,000 µg/kg and 100,000 µg/kg, respectively.

Stage 2 - VOC Results in Groundwater

The only VOC analyte identified at a concentration at or above its corresponding SQL during the Stage 2 sampling event was acetone. Additional VOC analytes identified at concentrations below their SQL, but above their MDL, include 2-butanone (also known as MEK); benzene; carbon disulfide; m,p-xylene; toluene; trans 1,2-dichloroethylene (trans-1,2-DCE); and TCE. For contextual purposes, these results are also compared to the EPA MCLs, where applicable; although MCLs are not appropriate for use as benchmarks to establish a hazardous substance release under the HRS. Insufficient data was available to assign groundwater release action levels for the project (see Section 3.2.1).

The maximum acetone concentration of 14 µg/L was exhibited in the groundwater sample collected from CPT-4. The samples collected from CPT-1, CPT-2, CPT-3, and CPT-5 exhibited concentrations of 3.1 µg/L (qualified as estimated), 4.6 µg/L (qualified as estimated), 3.6 µg/L (qualified as estimated), and 5.1 µg/L, respectively. Acetone does not currently have a published MCL.

Chlorinated VOCs were identified in 2 of the 5 groundwater samples collected during the event. Trans-1,2-DCE was identified in the samples collected from CPT-2 and CPT-4 at concentrations of 0.12 µg/L (qualified as estimated) and 0.15 µg/L (qualified as estimated), respectively. TCE was identified in the sample collected from CPT-2, at a concentration of 0.21 µg/L (qualified as estimated). The SQL for both of these analytes in both of these samples is 0.50 µg/L. The MCLs for trans-1,2-DCE and TCE are 100 µg/L and 5.0 µg/L, respectively.

3.2.3.2 Stage 2 Sampling Results for Metals

(see Figure 7 and Table 7)

Stage 2 - Metal Results in Soil

Metals identified at concentrations at or above their corresponding action level in soil matrix source samples collected during the Stage 2 sampling event include cadmium, copper, lead, silver, and zinc. The most elevated metal concentrations identified during this event were generally exhibited in the 2 ft-bgs sample collected from within the southern portion of the Warehouse. For contextual purposes, these results are also compared to the May 2023 EPA Residential and Industrial RSLs; however, RSLs are not appropriate for use as benchmarks under the HRS.

The assigned cadmium source action level of 0.66 mg/kg was exceeded by 4 of the 40 samples with a maximum concentration of 7.6 mg/kg (qualified as estimated), which was exhibited in the 2 ft-bgs sample collected from DP-7. The 2 ft-bgs sample collected from DP-1 exhibited a cadmium concentration of 1.1 mg/kg (qualified as estimated). The 2 ft-bgs and 5 ft-bgs samples collected from DP-9 exhibited cadmium concentrations of 2.4 mg/kg (qualified as estimated) and 0.74 mg/kg (qualified as estimated), respectively. The Residential and Industrial RSLs for cadmium are 7.1 mg/kg and 100 mg/kg, respectively.

The assigned copper source action level of 111 mg/kg was exceeded by 1 of the 40 samples with a concentration of 245 mg/kg (qualified as estimated), which was exhibited in the 2 ft-bgs sample collected from DP-7. The Residential and Industrial RSLs for copper are 3,100 mg/kg and 47,000 mg/kg, respectively.

The assigned lead source action level of 41 mg/kg was exceeded by 6 of the 40 samples with a maximum concentration of 612 mg/kg, which was exhibited in the 2 ft-bgs sample collected from DP-7. The 2 ft-bgs samples collected from DP-1, DP-2, DP-4, DP-8, and DP-9 exhibited lead concentrations of 138 mg/kg, 138 mg/kg, 203 mg/kg, 49 mg/kg, and 152 mg/kg, respectively. The Residential and Industrial RSLs for lead are 400 mg/kg and 800 mg/kg, respectively.

The assigned silver source action level of 1.3 mg/kg was exceeded by 4 of the 40 samples with a maximum concentration of 1.9 mg/kg (qualified as estimated), which was exhibited in both the 2 ft-bgs sample collected from DP-7 and the 5 ft-bgs sample collected from DP-8. The 2 ft-bgs samples collected from DP-1 and DP-8 exhibited silver concentrations of 1.7 mg/kg (qualified as estimated) and 1.3 mg/kg (qualified as estimated), respectively. The Residential and Industrial RSLs for silver are 390 mg/kg and 5,800 mg/kg, respectively.

The assigned zinc source action level of 450 mg/kg was exceeded by 2 of the 40 samples with a maximum concentration of 3,160 mg/kg, which was exhibited in the 2 ft-bgs sample collected from DP-7. The 2 ft-bgs sample collected from DP-9 exhibited a zinc concentration of 661 mg/kg. The Residential and Industrial RSLs for zinc are 23,000 mg/kg and 350,000 mg/kg, respectively.

Stage 2 - Metal Results in Groundwater

Metals identified at concentrations at or above their corresponding SQL in groundwater samples collected during the Stage 2 sampling event include aluminum, arsenic, barium, beryllium, cadmium, chromium, cobalt, copper, iron, lead, manganese, nickel, silver, vanadium, and zinc. Human-health regulatory benchmarks, such as MCLs, are not appropriate for use as benchmarks to establish a hazardous substance release under the HRS. Additionally, samples were analyzed for total metals and, as such, analytical results are not comparable to regulatory benchmarks derived from dissolved metals criteria, such as MCLs. Groundwater release action levels for the project were not assigned due to insufficient information on the hydrogeologic conditions beneath the site (see Section 3.2.1).

Total metal concentrations were generally found to be highest in the samples collected from CPT-2 (located at the west-central portion of the site) and CPT-4 (located at the southeastern corner of the site). Specifically, samples collected from these locations generally exhibited total metal concentrations approximately 10 to 20 times higher than those exhibited at the other three groundwater sample locations. Total arsenic concentrations ranged from 28 µg/L (qualified as estimated) at CPT-3 to 100 µg/L (qualified as estimated) at CPT-4. Total cadmium concentrations ranged from non-detect (less than 5.0 µg/L) at CPT-1 and CPT-5 to 50 µg/L at CPT-2. Total cobalt concentrations ranged from 51 µg/L (qualified as estimated) at CPT-5 to 590 µg/L at CPT-2. Total lead concentrations ranged from 43 µg/L at CPT-5 to 935 µg/L (qualified as biased low) at CPT-4. Total silver concentrations ranged from 4.5 µg/L (qualified as estimated) to 63 µg/L (qualified as estimated) at CPT-4. Total zinc concentrations ranged from 476 µg/L at CPT-5 to 33,300 µg/L at CPT-4.

3.2.4 2022 EPA Stage 3 SI – Residential Soil Sampling

3.2.4.1 Stage 3 SI - Residential Phase

(see Figure 9, Figure 10, Figure 12, and Figure 13 and Table 9 through Table 13)

Between August 2022 and October 2022, WESTON®, on behalf of EPA, conducted the Stage 3 SI sampling event at the Central Metal site. The Stage 3 event, which was conducted in two phases, included near-surface soil matrix sampling at both selectively biased and non-biased locations within residential yards and publicly accessible spaces in the vicinity of the site. The first phase of the event, the residential phase, was focused on: collecting shallow soil release samples from downwind residential properties to determine if hazardous concentrations of metals, primarily arsenic and lead, were present; and to evaluate the spatial distribution of identified metals contamination to determine if the impacts were attributable to historical activities at the Central Metal facility. The second phase of the event, the background phase, was focused on collecting shallow soil from public spaces, primarily parks and road verges, in areas outside of the potential influence of potential contamination originating from the site and in a variety of directions from the site.

Prior to completing the first phase of the event, the site-adjacent residential neighborhoods were assessed based on their potential risk of being impacted by airborne deposition originating from the site, specifically with respect to distance and downwind direction. The portions of these neighborhoods deemed to be most at risk were divided into four residential zones (RZs) based on distance from the site and wind direction. Three zones (RZ-1 through RZ-3) were delineated within the Walnut Park neighborhood, which is located downwind with respect to the primary wind direction, and one zone (RZ-4) was delineated within the Florence-Firestone neighborhood, which is located downwind with respect to the secondary wind direction. Each RZ was further subdivided into three residential subzones (sub-RZs) based on proximity to primary and secondary wind directions, resulting in twelve sub-RZs, each comprised of approximately 40 residential properties. Subsequently, a comprehensive desktop review was completed to identify the residential properties within each subzone most suitable for sampling, primarily based on the amount of accessible unpaved areas, and EPA proceeded to request voluntary access to the identified properties.

Between August 1, 2022 and August 9, 2022, shallow soil samples (i.e., upper 4 inches) were collected from 83 properties within the adjacent residential neighborhoods to the site. Sixty-three of these properties were located within the Walnut Park neighborhood to the east of the site and 20 of these properties were located within the Florence-Firestone neighborhood to the northwest of the site. Between 5 and 10 properties were sampled within each of the 12 sub-RZs. The event included two different types of sampling methodology, four-point composite and ISM. The four-point composite samples were collected by taking four discrete soil aliquots within a 2-foot diameter circle, homogenizing on-site, and submitting the appropriate volume to the laboratory as single sample. The ISM samples were collected by taking between 30 and 60 discrete increments, homogenizing on-site, and submitting the entire volume to the laboratory for additional preparation in accordance with ITRC guidance. Three four-point composite samples were collected on each sampled residential property and one ISM sample was collected for each sub-RZ. A total of 249 four-point composite shallow soil samples and 12 ISM samples (not including duplicate, triplicate, or QA samples) were submitted for fixed-laboratory metals analysis during the residential phase of the Stage 3 event.

Residential Shallow Sampling Results

Metals identified at concentrations at or above their corresponding HRS soil screening benchmark in soil matrix release samples (i.e., four-point composite samples) collected during the Stage 3 event include antimony, arsenic, barium, cadmium, chromium, copper, lead, mercury, molybdenum, and zinc. HRS soil screening benchmarks were assigned per the methodology described in Section 3.2.1.3. ISM sample results are presented as the arithmetic mean of field QA (i.e., triplicate) samples, where applicable. For contextual purposes, these results are also compared to the May 2023 EPA Residential and Industrial RSLs; however, RSLs are not appropriate for use as benchmarks under the HRS.

The assigned antimony HRS soil screening benchmark of 5.9 mg/kg was exceeded by 1 of the 249 four-point composite samples with a concentration of 25 mg/kg. One of the 83 sampled properties exhibited at least one sample that exceeded the assigned antimony HRS soil screening benchmark. ISM samples exhibited antimony concentrations that ranged from 0.56 mg/kg (qualified as estimated) at RZ-2b to 1.6 mg/kg (qualified as estimated) at RZ-4a and RZ-4b. The Residential and Industrial RSLs for antimony are 31 mg/kg and 470 mg/kg, respectively.

The assigned arsenic HRS soil screening benchmark of 22 mg/kg was exceeded by 5 of the 249 four-point composite samples with a maximum concentration of 64 mg/kg. Three of the 83 sampled properties exhibited at least one sample that exceeded the assigned arsenic HRS soil screening benchmark. ISM samples exhibited arsenic concentrations that ranged from 3.3 mg/kg (qualified as estimated) at RZ-3c to 6.6 mg/kg at RZ-1a. The Residential and Industrial RSLs for arsenic are 0.68 mg/kg and 3.0 mg/kg, respectively.

The assigned barium HRS soil screening benchmark of 459 mg/kg was exceeded by 3 of the 249 four-point composite samples with a maximum concentration of 1,300 mg/kg. Three of the 83 sampled properties exhibited at least one sample that exceeded the assigned barium HRS soil screening benchmark. ISM samples exhibited barium concentrations that ranged from 130 mg/kg at RZ-3a, RZ-3c, and RZ-4a to 280 mg/kg at RZ-4b. The Residential and Industrial RSLs for barium are 15,000 mg/kg and 220,000 mg/kg, respectively.

The assigned cadmium HRS soil screening benchmark of 3.1 mg/kg was exceeded by 8 of the 249 four-point composite samples with a maximum concentration of 6.5 mg/kg. Eight of the 83 sampled properties exhibited at least one sample that exceeded the assigned cadmium HRS soil screening benchmark. ISM samples exhibited cadmium concentrations that ranged from 0.87 mg/kg (qualified as estimated) at RZ-3a to 1.8 mg/kg (qualified as estimated) at RZ-1c and RZ-4c. The Residential and Industrial RSLs for cadmium are 7.1 mg/kg and 100 mg/kg, respectively.

The assigned chromium HRS soil screening benchmark of 65 mg/kg was exceeded by 2 of the 249 four-point composite samples with a maximum concentration of 100 mg/kg. Two of the 83 sampled properties exhibited at least one sample that exceeded the assigned chromium HRS soil screening benchmark. ISM samples exhibited chromium concentrations that ranged from 16 mg/kg at RZ-4a to 28 mg/kg at RZ-1b. Residential and Industrial RSLs for total chromium have not been established.

The assigned copper HRS soil screening benchmark of 142 mg/kg was exceeded by 5 of the 249 four-point composite samples with a maximum concentration of 700 mg/kg. Five of the 83 sampled properties exhibited at least one sample that exceeded the assigned copper HRS soil screening benchmark. ISM samples exhibited copper concentrations that ranged from 32 mg/kg at RZ-3a to 61 mg/kg at RZ-4c. The Residential and Industrial RSLs for copper are 3,100 mg/kg and 47,000 mg/kg, respectively.

The assigned lead HRS soil screening benchmark of 401 mg/kg was exceeded by 12 of the 249 four-point composite samples with a maximum concentration of 960 mg/kg. Eight of the 83 sampled properties exhibited at least one sample that exceeded the assigned lead HRS soil screening benchmark. ISM samples exhibited lead concentrations that ranged from 147 mg/kg at RZ-3c to 243 mg/kg at RZ-2a. The Residential and Industrial RSLs for lead are 400 mg/kg and 800 mg/kg, respectively.

The assigned mercury HRS soil screening benchmark of 0.53 mg/kg was exceeded by 9 of the 249 four-point composite samples with a maximum concentration of 1.8 mg/kg. Nine of the 83 sampled properties exhibited at least one sample that exceeded the assigned mercury HRS soil screening benchmark. ISM samples exhibited mercury concentrations that ranged from 0.093 mg/kg at RZ-4a to 0.52 mg/kg (qualified as estimated) at RZ-2a. The Residential and Industrial RSLs for mercury are 11 mg/kg and 46 mg/kg, respectively.

The assigned molybdenum HRS soil screening benchmark of 3.3 mg/kg was exceeded by 2 of the 249 four-point composite samples with a maximum concentration of 4.3 mg/kg. Two of the 83 sampled properties exhibited at least one sample that exceeded the assigned molybdenum HRS soil screening benchmark. ISM samples exhibited molybdenum concentrations that ranged from 0.54 mg/kg (qualified as estimated) at RZ-2b to 1.4 mg/kg (qualified as estimated) at RZ-4c. The Residential and Industrial RSLs for molybdenum are 390 mg/kg and 5,800 mg/kg, respectively.

The assigned zinc HRS soil screening benchmark of 630 mg/kg was exceeded by 7 of the 249 four-point composite samples with a maximum concentration of 800 mg/kg. Seven of the 83 sampled properties exhibited at least one sample that exceeded the assigned zinc HRS soil screening benchmark. ISM samples exhibited zinc concentrations that ranged from 226 mg/kg (qualified as estimated) at RZ-3c to 380 mg/kg at RZ-4c. The Residential and Industrial RSLs for zinc are 23,000 mg/kg and 350,000 mg/kg, respectively.

None of the four-point composite samples collected during the residential sampling event exceeded the assigned HRS soil screening benchmarks for beryllium, cobalt, nickel, selenium, silver, thallium, or vanadium. The soil screening benchmarks and RSLs for these analytes are provided in **Table 9**.

3.2.4.2 Stage 3 SI - Background Phase

(see Figure 14 through Figure 19 and Table 14)

Between October 4, 2022 and October 10, 2022, shallow soil samples were collected from five publicly accessible areas using a similar methodology to the August 2022 residential phase. Each of the five publicly accessible areas was designated as a background sampling zone (BZ) with each BZ further divided into three background subzones (sub-BZs). Sampled BZs included: Roosevelt Park (BZ-1), located approximately 0.75 mile northwest of the site; the in-development Walnut Park Pocket Park (WPPP) (BZ-2), located approximately 0.5 mile northeast of the site; the Garden View Road Verge (BZ-3), located approximately 1.0 mile east of the site; the S. Gate Road Verge (BZ-4), located approximately 1.0 mile southeast of the site; and Washington Park (BZ-5), located approximately 0.75 mile southwest of the site. Only one subzone was delineated within WPPP (BZ-2) due to its relatively small size. Within each sub-BZ, five four-point composite samples were collected, and one ISM sample was collected. In addition, a portion of Cudahy Street located within the northern portion of the residential phase sampling area, was delineated as reference zone/subzone and sampled during the event using the same methodology as the background subzones. This reference zone was sampled to allow additional correlation and analysis between background road verge zones and those within the site's potential area of influence. Seventy four-point composite shallow soil samples and 14 ISM samples (not including duplicate, triplicate, or QA samples) were submitted for fixed-laboratory metals analysis during the background phase of the Stage 3 event.

4. HAZARD RANKING SYSTEM FACTORS

The HRS is the principal mechanism that EPA uses to place uncontrolled waste sites on the NPL. It is a numerically based scoring system that uses information from initial, limited investigations to assess the relative potential of sites to pose a threat to human health or the environment. The HRS uses a structured analysis approach to scoring sites. This approach assigns numerical values to factors that relate to risk based on conditions at the site. The factors are grouped into three categories:

- Likelihood that a site has released or has the potential to release hazardous substances into the environment
- Characteristics of the waste (e.g., toxicity and waste quantity)
- People or sensitive environments (targets) affected by the release

Four pathways can be scored under the HRS:

- Groundwater migration (drinking water)
- Surface water migration (drinking water, human food chain, sensitive environments)
- Soil exposure and subsurface intrusion (population, sensitive environments)
- Air migration (population, sensitive environments)

4.1 Sources of Contamination

For HRS purposes, a source is defined as an area where a hazardous substance has been deposited, stored, disposed, or placed, plus those soils that have become contaminated from migration of a hazardous substance.

Potential hazardous substance sources associated with the Central Metal site include, but may not be limited to, the following:

- On-site soils contaminated with metals, which are likely a result of historical on-site operations. Arsenic, cadmium, cobalt, copper, lead, silver, and zinc were identified during the 2019 SI investigations at concentrations significantly above background (see Section 3.2.2 and Section 3.2.3).
- On-site soils contaminated with VOCs, which are likely a result of historical on-site operations. Acetone was identified during the 2019 SI investigations at a concentration significantly above background (see Section 3.2.3).
- Historical waste debris piles that were documented to be present on site from approximately 2003 through 2018. Pile samples collected by state and local agencies in 2011 and 2018 indicated concentrations of arsenic, cadmium, lead, and zinc at

concentrations exceeding state hazardous waste benchmarks (**Attachment 2**; Brash, 2019; DTSC, 2011).

4.2 Groundwater Pathway

In determining a score for the groundwater migration pathway, the HRS evaluates the following factors: (1) the likelihood that sources at a site actually have released, or potentially could release, hazardous substances to groundwater; (2) the characteristics of the hazardous substances that are available for a release (i.e., toxicity, mobility, and quantity); and (3) the people (targets) who actually have been, or potentially could be, impacted by the release. For the targets component of the evaluation, the HRS focuses on the number of people who regularly obtain their drinking water from wells that are located within 4 miles of the site. The HRS emphasizes drinking water usage over other uses of groundwater (e.g., food crop irrigation and livestock watering) because, as a screening tool, it is designed to give the greatest weight to the most direct and extensively studied exposure routes.

4.2.1 Hydrogeological Setting

(see Table 15)

The Central Metal site lies within the Central Subbasin in the Coastal Plain of the Los Angeles Groundwater Basin. The Central Subbasin is generally bound to the north by the folded, uplifted and eroded Tertiary basement rocks of the La Brea High surface divide; to the northeast and east by the less permeable Tertiary rocks of the Elysian, Repetto, Merced, and Puente Hills; to the southeast by the Coyote Creek flood control channel (approximate Los Angeles County/Orange County boundary); and to the southwest by the Newport Inglewood Uplift, a regional anticline associated with the Newport Inglewood fault system. Geologic units typically found beneath the subbasin include Holocene-age alluvium, the upper Pleistocene Lakewood Formation, and the lower Pleistocene San Pedro Formation. The Los Angeles and San Gabriel rivers pass across the surface of the subbasin, primarily by way of engineered concrete channels, on their way to the Pacific Ocean. The average net annual precipitation in the subbasin is approximately 12 inches (DWR, 1961; DWR, 2004).

The Central Subbasin has historically been divided into the Los Angeles Forebay at the northwest, the Montebello Forebay at the north, the Whittier Area at the northeast, and the Central Basin Pressure Area at the center and southwest. However, these areal distinctions are appropriate for geographical purposes only and do not accurately represent hydrogeologic conditions within the areas. In actuality, the hydrogeologic forebays, which are generally characterized by unconfined and relatively interconnected aquifer systems, are limited to only small regions within the greater Forebay areas. The Montebello Forebay, as well as the Los Angeles Forebay to a lesser degree, serve as the primary groundwater recharge areas for both shallow and deep aquifers across the entirety of the subbasin. The Central Basin Pressure Area is generally characterized by confined aquifer systems separated by relatively impermeable clay layers, although semipermeable zones within these layers allow aquifers to be interconnected in some areas. These semipermeable zones gradually decrease in frequency and magnitude with increasing distance from the forebays (DWR, 1961; DWR, 2004).

The site is located within the southern portion of the Los Angeles Forebay geographical area; however, underlying hydrogeologic conditions are more accurately represented by those typically identified with the Central Basin Pressure area. Groundwater beneath the site is typically found within the coarser-grained sediments of the Holocene alluvium (Gaspur aquifer), the upper Pleistocene Lakewood Formation (Exposition and Gage aquifers), and the lower Pleistocene San Pedro Formation (Hollydale, Lynwood, Silverado, and Sunnyside aquifers). Throughout much of the subbasin, the Jefferson aquifer is described as present between the Hollydale and Lynwood aquifers; however, this aquifer is reportedly absent in the vicinity of the site. The elevations and depths of the aquifers underlying the site, as estimated from published source material, are presented in **Table 15**. Irregular patches of a perched or semi-perched aquifer are also present within the Holocene alluvium throughout much of the subbasin. Although significant amounts of water can be found within these perched water-bearing zones, they are often discontinuous over relatively short distances and have historically only had minimal economic benefit. Thus, these perched aquifers do not meet the criteria of an “aquifer” for HRS purposes (DWR, 1961; DWR, 2004).

For the purposes of this SI, the Gaspur aquifer beneath the site is defined as being between 90 and 145 ft-bgs; however, the base of this aquifer is considered approximate because no information was found regarding site-specific lithology below approximately 111 ft-bgs. Water-bearing units identified at shallower depths are defined as being associated with one or more perched (or semiperched) aquifers. These designations were assigned primarily based on CPT lithological profile reports that were developed during the completion of the Stage 2 SI investigation. The CPT Lithological Profile Reports developed during the SI investigation are presented in **Attachment 6** (DWR, 1961).

Throughout much of the subbasin, the Pleistocene-age aquifers are under confined conditions due to the presence of fine-grained, low-permeability interbedded sediments. Although these fine grained sediments, or aquicludes, generally restrict the downward migration of groundwater from overlying aquifers, semipermeable zones within the aquicludes allow aquifers to be interconnected in some areas. In addition, hydrogeologic modeling of multi-aquifer systems similar to that found in the Central Basin Pressure Area, has shown that groundwater wells screened across multiple aquifers (or wells with improperly constructed annular seals that cross multiple aquifers) can act as a direct pathway for the migration of significant volumes of shallow groundwater into deep confined aquifers when vertical hydraulic head variations create a downward hydraulic gradient. The process of this downward migration is increased in areas where the deeper aquifers have periods of high-volume pumping such as seasonal demand. Furthermore, additional studies have shown that liquids that are denser than water (i.e., dense non-aqueous phase liquids such as PCE and TCE) can migrate downward through a multi-aquifer well even when vertical hydraulic head variations create an upward hydraulic gradient. As of the end of the 2012-2013 fiscal year, there were 537 known extraction wells (306 active and 231 inactive) within the subbasin (AwwaRF, 2006; DWR, 1961; DWR, 2013; Johnson et al., 2011).

The State of California, Department of Water Resources' Bulletin No. 104 (Planned Utilization of the Ground Water Basins of the Coastal Plain of Los Angeles County) – Appendix A presents "idealized" geologic cross-sections transecting the Central Subbasin. These cross-sections indicate apparent areas of merged aquifers throughout much of the subbasin. However, with the exception of the Gaspur and Exposition aquifers, which are presented as merged throughout much of the local area, no zones of merged aquifers were indicated in the vicinity of the site. Aquifer interconnection within 2 miles of the site has been documented between the Gaspur and Exposition aquifers. Aquifer interconnections within 2 miles of the site have not been established between the Exposition and Gage, the Gage and Hollydale, the Hollydale and Lynwood, the Lynwood and Silverado, and the Silverado and Sunnyside (DWR, 1961).

The regional groundwater flow direction within the subbasin, which was calculated using data from wells screened within the Upper San Pedro Formation (Lynwood through Sunnyside aquifers), is generally to the southwest. Based upon data collected between 2007 and 2022, flow within these deeper aquifers in the vicinity of the site trended towards the southwest with temporal variations from west-southwest to south-southwest (WRD, 2023).

A perched (or semiperched) aquifer was not encountered during the 2019 Stage 2 SI investigation. However, because of the highly irregular and discontinuous nature of these perched water-bearing zones, there remains a potential that perched groundwater may exist beneath one or more portions of the site. In addition, based on the CPT lithological profiles, which are provided in **Attachment 6**, coarser units that have the potential to be water-bearing do exist between the ground surface and the depth of first groundwater, suggesting that perched water may be seasonally present beneath the site.

During the 2019 SI investigation, groundwater beneath the site was first encountered at depths that ranged from approximately 98 ft-bgs to 101 ft-bgs, consistent with the expected depths of the Gaspur aquifer. No groundwater monitoring wells are located on site. Groundwater data collected from between 1998 and 2010 on the property located immediately south of the site have reported a relatively low horizontal hydraulic gradient and a variable shallow groundwater flow direction; predominately from south-southeast to southwest. As such, the groundwater flow direction in the Gaspur aquifer beneath the site, as well as in the aquifers between the Gaspur and Lynwood, is considered to be unknown (AMEC, 2014).

During the SI investigation, the subsurface geology at the site was logged to a depth of 21 ft-bgs, the base of continuous coring. Subsurface materials primarily consisted of medium brown to light grey, fine- to coarse-grained silty-sands with interbedded lenses (typically less than 24 inches and most frequently observed between approximately 10 ft-bgs and 15 ft-bgs) of sands and sandy silts, which generally increased in grain size with depth. A dark brown-green clay was frequently encountered between approximately 18 ft-bgs and 20 ft-bgs. The lithological identifications are described in the sample logbook (**Attachment 9**).

Additionally, during the SI investigation, CPT technology was used to estimate the subsurface lithology to a total depth of approximately 111 ft-bgs. The interpreted Soil Behavior Type generated from the CPT generally indicated sand units from approximately 8 ft-bgs to 13 ft-bgs, 38 ft-bgs to 40 ft-bgs, 62 ft-bgs to 67 ft-bgs, 85 ft-bgs to 87 ft-bgs, and 90 ft-bgs to 111 ft-bgs (total depth). Between these sand units, the soils were generally indicated as sandy-silts and silty-sands with thin (less than 4 ft) interbedded lens of finer grained materials (e.g., clays). The CPT Lithological Profile Reports are presented in **Attachment 6**.

4.2.2 Groundwater Targets

(see Table 16)

The nearest HRS-eligible drinking water well to the site is the Nadeau Well 03; which is owned and operated by the Golden State Water Company (GSWC) and is located approximately 0.42 mile northwest of the site. This well has exhibited PCE and TCE concentrations up to 1.4 µg/L (August 2002) and 7.6 µg/L (September 2020), respectively. The federal MCL for both PCE and TCE is 5.0 µg/L (RWQCB, 2023a; WESTON, 2023).

There are 70 known active drinking water wells and four known maintained-standby wells located within the target distance limit (TDL) (i.e., 4 miles of established on-site sources). Water purveyors known to operate wells within the TDL include GSWC – Florence/Graham, City of South Gate, City of Huntington Park, Walnut Park Mutual Water Company (MWC), GSWC - Bell, Bell Gardens, Los Angeles Department of Water and Power (DWP), City of Lynwood, Tract 349 MWC, Park Water Company (Liberty) – Lynwood, Park Water Company (Liberty) – Compton, City of Compton, GSWC – Willowbrook, Lynwood Park MWC, Maywood MWC No. 1, Maywood MWC No. 2, Maywood MWC No. 3, GSWC – Southwest, Tract 180 MWC, City of Vernon, and Sativa-LA County Water District (CWD). Additional service information for these purveyors is presented in **Table 16** (WESTON, 2023).

4.2.3 Groundwater Pathway Conclusion

A release of hazardous substances from the site to groundwater within the Gaspur aquifer, or additional aquifers underlying the Gaspur aquifer, has not been established based on the results of the SI investigation. For HRS purposes, a release to groundwater is established when a hazardous substance is detected in a hydraulically downgradient well at a concentration significantly above background levels, and some portion of the release is attributable to the site. A hazardous substance is considered to be present at a concentration significantly above background levels when one of the following two criteria is met: (1) the hazardous substance is detected in the contaminated sample but not detected in the background samples, or (2) the hazardous substance is detected in the contaminated sample at a concentration equal to or greater than three times the maximum background level when the substance was detected in the background samples.

Results from the 2019 Stage 1 and Stage 2 SI investigations identified detectable concentrations of metals and VOCs within the Gaspur aquifer groundwater beneath the site (see Section 3.2.3). However, because the hydraulic gradient of this aquifer beneath the site has not been adequately defined, background concentrations could not be established and a release attributable to the site could not be established (see Section 3.2.1).

The geologic materials between the ground surface at the site and the top of the deepest identified aquifer, the Sunnyside, are generally characterized by confined aquifer systems, which are composed of relatively permeable sands through gravels and are separated by relatively impermeable clay through silt layers; although semipermeable zones within these layers allow one or more aquifers to be interconnected in some areas. Aquifer interconnection within 2 miles of the site has been documented between the Gaspur and Exposition aquifers. Aquifer interconnections within 2 miles of the site have not been established between the Exposition and Gage, the Gage and Hollydale, the Hollydale and Lynwood, the Lynwood and Silverado, and the Silverado and Sunnyside. There are 70 known active drinking water wells and four known standby drinking water wells within 4 miles of the site. These wells, which are operated by 20 distinct water purveyors, serve an apportioned population of approximately 390,000 (DWR, 1961; WESTON, 2017; WESTON, 2023).

4.3 Soil Exposure and Subsurface Intrusion Pathway

4.3.1 Soil Exposure

In determining the score for soil exposure, the HRS evaluates the following: (1) the likelihood that there is surficial contamination associated with the site (e.g., contaminated soil that is not covered by pavement or at least 2 feet of clean soil); (2) the characteristics of the hazardous substances in the surficial contamination (i.e., toxicity and quantity); and (3) the people or sensitive environments (targets) that actually have been, or potentially could be, exposed to the contamination. For the targets component of the evaluation, the HRS focuses on populations that are regularly and currently present on or within 200 feet of surficial contamination. The four populations that receive the most weight are residents, students, daycare attendees, and terrestrial sensitive environments.

4.3.1.1 Physical Conditions

The Central Metal site has been used for industrial operations since at least the late 1920s and is surrounded by industrial, commercial, and residential areas. During scrap metal operations, which occurred from approximately the late 1980s through 2016, various scrap metal and debris were stored across the exterior portions of the site in large, uncontained, and uncovered piles. A debris pile located on the north-central portion of the site in 2005 is estimated to have covered more than 23,000 ft^2 and been several stories in height. In 2018, under the direction of the local CUPA, an on-site debris pile was containerized, sampled, and subsequently classified as a hazardous waste based on identified concentrations of arsenic, lead, and cadmium. Moreover, a 2011 DTSC investigation also identified high levels of hazardous heavy metals in debris piles on the site. The site is entirely fenced and generally inaccessible to the public. The surface of the site is entirely covered in concrete or buildings (**Attachment 2**; Brash, 2019; DTSC, 2011; Google, 2023; WEECO, 2014; WESTON, 2017).

4.3.1.2 Soil Exposure Targets

The site is situated between two residential communities, the southwestern portion of Walnut Park to the east and the east-central portion of Florence-Firestone (also known as Florence-Graham) to the west. These communities are both composed of primarily single-family residential buildings situated on parcels that are typically less than 0.25 acre in size. Several multi-family and/or apartment complexes are also intermixed within the neighborhoods. The population within 1 mile of the site is estimated to be approximately 58,000. The number of workers that regularly occupy the site is unknown. There are no residents or sensitive environments on site (**Appendix C**; Google, 2023; EPA, 2023c).

Based on historical data within the basin, the local wind patterns at the site are estimated to resemble those at the Hawthorne Municipal Airport wind station, which is located approximately 6.5 miles west-southwest of the site. Based on mean wind speed data, the predominant wind flow direction is from the west-southwest and the secondary wind flow direction is from the east-southeast (WRCC, 2020).

4.3.1.3 Soil Exposure Conclusion

During the 2022 Stage 3 SI investigation, which included collecting shallow soil samples from 63 properties in the Walnut Park neighborhood and from 20 properties in the Florence-Firestone neighborhood, significantly elevated concentrations of metals, including lead and arsenic, were identified on a minority of the sampled properties (see Section 3.2.4). However, the relatively low frequency of HRS screening benchmark exceedances, as well as the lack of any apparent pattern in the spatial distribution of these exceedances, suggests that the identified metals contamination on the sampled residential properties is unlikely to be attributable to historical operations at the Central Metal site. As such, a release of hazardous substances from the site to off-site residential soils has not been established based on the results of the SI investigation.

4.3.2 Subsurface Intrusion

In determining the score for subsurface intrusion, the HRS evaluates the following: (1) the likelihood that sources at a site actually have released, or potentially could release, hazardous substances to regularly occupied structures; (2) the characteristics of the hazardous substances that are available for a release (i.e., toxicity, degradation, and quantity); and (3) the people (targets) who actually have been, or potentially could be, exposed to the contamination. For the targets component of the evaluation, the HRS focuses on populations living, attending school or daycare, or working in a regularly occupied structure with observed exposure or within an area of subsurface contamination.

During the 2019 Stage 1 and Stage 2 SI investigations, detectable concentrations of metals and VOCs were identified in the subsurface at the Central Metal site. Metals are not considered to represent a subsurface intrusion hazard. During this investigation, PCE was identified in a 2 ft-bgs soil matrix sample collected from the central portion of the Warehouse at a concentration of 2.2 µg/kg. The soil vapor survey completed as part of the SI identified three analytes that exceeded their respective Resident VISLs, with PCE being the most significant (see Section 3.2.2). The maximum PCE concentrations of 2,530 µg/m^3 and 2,190 µg/m^3 were identified in the 6.5 ft-bgs and 16 ft-bgs samples, respectively, which were collected from boring SV-14 at the central portion of the Warehouse. PCE was not identified above its Resident VISL in any additional soil vapor samples and was not identified at detectable concentrations in any additional soil matrix samples. Furthermore, during the 2021 subsurface investigation completed by CMI, PCE was identified at a maximum concentration of 1,340 µg/m^3 in on-site soil vapor and was not reported at detectable concentration in soil matrix samples (see Section 3.1.1.6). The Resident and Commercial VISLs for PCE are 360 µg/m^3 and 1,570 µg/m^3, respectively, and the residential RSL is 24,000 µg/kg.

The Central Metal facility was 'shuttered' in 2016 and had regularly occupied workspaces until at least 2019, primarily at the Main Office; however, the current status of these workspaces is not known. Based on the relatively limited scale, both in overall concentration and spatial distribution, of the subsurface PCE contamination identified in the 2019 EPA investigations and the 2021 CMI investigation, this contamination is not considered to represent a significant subsurface intrusion hazard to occupied off-site structures (**Appendix C**; Brash, 2019; WEI, 2021b).

4.4 Surface Water Pathway

To determine the score for the surface water pathway, the HRS evaluates the following: (1) the likelihood that sources at a site actually have released, or potentially could release, hazardous substances to surface water (e.g., streams, rivers, lakes, and oceans); (2) the characteristics of the hazardous substances that are available for a release (i.e., toxicity, persistence, bioaccumulation potential, and quantity); and (3) the people or sensitive environments (targets) that actually have been, or potentially could be, impacted by the release. For the targets component of the evaluation, the HRS focuses on drinking water intakes, fisheries, and sensitive environments associated with surface water bodies within 15 miles downstream of the site.

Surface water run-off from the Central Metal site is expected to flow from the paved surfaces at the site into curbside municipal stormwater drains located along adjacent public roadways and easements. The nearest surface water body to the site is Compton Creek, which is approximately 2.9 miles southwest. Compton Creek was channelized in concrete by the U.S. Army Corps of Engineers in approximately 1939 as part of a larger flood-control effort for the region. The Compton Creek watershed drains an area of approximately 42 square miles. The creek is channeled from south Los Angeles (near S. Main Street and W. 107th Street) for approximately 8.5 miles to the confluence of the creek with the Los Angeles River, approximately 5.5 miles north of where the river empties into the Pacific Ocean at San Pedro Bay. Flows in the both the creek and river are dominated by urban run-off. There are no surface water intakes, fisheries, or sensitive environments associated with Compton Creek or the Los Angeles River downstream of the site; however, there is a potential for fisheries and/or recreational areas to exist within San Pedro Bay (**Appendix C;** Google, 2023; UC, 2017).

4.5 Air Pathway

In determining the score for the air migration pathway, the HRS evaluates the following: (1) the likelihood that sources at a site actually have released, or potentially could release, hazardous substances to ambient outdoor air; (2) the characteristics of the hazardous substances that are available for a release (i.e., toxicity, mobility, and quantity); and (3) the people or sensitive environments (targets) who actually have been, or potentially could be, impacted by the release. For the targets component of the evaluation, the HRS focuses on regularly occupied residences, schools, and workplaces within 4 miles of the site. Transient populations, such as customers and travelers passing through the area, are not counted.

No hazardous substances sources applicable to the air migration pathway were identified. As of October 2022, the site was entirely fenced and generally inaccessible to the public. The entirety of the surface of the site was covered in concrete or buildings. Furthermore, all known potential hazardous substances sources relevant to the air pathway that were historically present at the site (i.e., debris piles) have been removed (**Appendix C**).

4.6 Hazard Ranking System Summary

The primary objective of the Central Metal SI investigation was to document information to be used in the HRS characterization process, including source areas and levels of contamination in on-site soil, soil vapor, and groundwater, as well as on residential properties downwind of the site.

Based on the results of this investigation, a release of hazardous substances from the site to the Gaspur aquifer, or to any aquifer underlying the Gaspur aquifer, has not been established.

Additionally, a release of hazardous substances from the site to the surface soils of adjacent residential neighborhoods via airborne processes has not been established.

The following HRS factors are considered to be most significant in regards to NPL consideration for the groundwater pathway:

- Hazardous substance sources at the site have been documented, consisting of subsurface soils contaminated during historical operations. Substances including acetone, arsenic, cadmium, cobalt, copper, lead, silver, and zinc were present in site soils at concentrations exceeding source action levels (i.e., significantly above background).
- The hydraulic gradient of the shallow aquifer beneath the site has not been adequately defined primarily due to the lack of an on-site, or sufficiently near-site, active groundwater monitoring well network. As such, background concentrations cannot be assigned, and hazardous substances identified in the groundwater beneath the site cannot be documented as attributable to historical on-site operations.
- The geologic materials between the site surface and the top of the Silverado aquifer are generally characterized by relatively permeable sands and gravels (aquifers) with interbedded confining zones (aquitards) of less permeable clays and silts.
- The nearest drinking water well is located less than 1/2 mile from the site.
- Drinking water wells within 4 miles of the site serve an apportioned population of approximately 390,000.

The following HRS factors are considered to be most significant in regards to NPL consideration for the soil exposure pathway:

- Hazardous substance sources have been documented as historically existing on the site including numerous debris piles that were present on site from approximately 2003 through 2018. Pile samples collected by state and local agencies in 2011 and 2018 indicated concentrations of arsenic, cadmium, lead, and zinc at concentrations exceeding state hazardous waste benchmarks.
- Based on the lack of discernable or significant patterns within the shallow soil residential data, specifically in terms of the frequency and spatial distribution of metals contamination, insufficient evidence was found to indicate soil contamination was attributable to historical on-site operations.
- The population within 1 mile of the site is estimated to be 58,000.

The following HRS factors are considered to have low significance in regards to NPL consideration:

- No drinking water intakes are associated with surface water within 15 miles downstream of the site. There is the potential, however, for fisheries and/or sensitive environments associated with the Pacific Ocean to exist within this target distance limit.

- There are no known schools, daycare centers, or sensitive environments on site.
- The site is fenced and generally inaccessible to the public.
- The surface of the site is covered with pavement or buildings.

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TABLES

Table 1: Site Chronology

Approximate Date Range	Source Area	Operator	Primary Operations
1870s – 1970s	FRA	Southern Pacific Railroad	Railroad depot and freight operations
1920s – 1980s	FTMA	National Tank & Manufacturing Co.	Corrugated metal tank manufacturing
1930s – 1970s	FTMA	Ace Foundry LTD	Metal casting
1970s – 2002	FRA	Southern Pacific Railroad	No significant operations
1989 – 2002	FTMA	Damille Metal Supply, Inc.	Industrial scrap metal recycling
1990s	FTMA	L&S Metals	Unknown
1990s	FTMA	MCS, Inc.	Unknown
1990s	FTMA	All Star Metals, Inc.	Unknown
2002 – 2016	FRA & FTMA	Central Metal, Inc.	Industrial scrap metal recycling
2016 – 2018	FRA & FTMA	Central Metal, Inc. (defunct)	No significant operations
2018 – 2020	FRA & FTMA	Central Metal, Inc. (defunct)	Facility cleanup and asset liquidation
2020 – 2022	FRA & FTMA	Unknown	Cargo Shipping Container Storage
2022 – Present	FRA & FTMA	U-Haul®	Bulk Storage

Definitions:
FRA = Former Railroad Area
FTMA = Former Tank Manufacturing Area

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Table 2: 2021 CMI Phase II Sampling Results Summary

Sample Location	Depth (ft)	Soil Matrix (mg/kg)					Soil Vapor ($\mu g/m^3$)	
		Arsenic	**Cd**	**Cobalt**	**Lead**	**Zinc**		**PCE**
Residential RSL		**0.68**	**7.1**	**23**	**400**	**23,000**	**Resident VISL**	**360**
Commercial RSL		**3**	**100**	**350**	**800**	**350,000**	**Commercial VISL**	**1,570**
P-1	0.5	28	29	47	3,600	20,000		--
SV-21	2	12	<0.52	17	130	320		--
	5	6.5	1.4	7.0	180	240		1,340
	15	--	--	--	--	--		1,290
SV-22	2	45	<0.48	11	140	230		--
	5	4.4	0.62	9.3	8.5	66		115
	15	--	--	--	--	--		14
SV-23	2	2.9	<0.52	9.2	10	70		--
	5	--	--	--	--	--		573
	15	--	--	--	--	--		48
SV-24	2	1.2	<0.51	5.9	2.4	34		--
	5	--	--	--	--	--		369
	15	--	--	--	--	--		42
SV-25	2	34	<0.49	9.9	120	170		--
	5	--	--	--	--	--		456
	15	--	--	--	--	--		90
SV-26	2	13	<0.50	11	15	71		--
	5	--	--	--	--	--		643
	15	--	--	--	--	--		162
SV-27	2	31	1.2	12	190	290		--
	5	3.0	0.48	7.4	4.1	51		10
	15	--	--	--	--	--		18
SV-28	2	78	<0.47	8.0	51	100		--
	5	--	--	--	--	--		60
	15	--	--	--	--	--		52
SV-29	2	3.0	<0.46	7.2	4.7	45		--
	5	--	--	--	--	--		143
	15	--	--	--	--	--		114
SV-30	2	23	<0.53	9.8	120	640		--
	5	--	--	--	--	--		189
	15	--	--	--	--	--		171
SV-31	2	7.8	1.0	14	100	310		--
	5	--	--	--	--	--		199
	15	--	--	--	--	--		54
SV-32	2	5.8	<0.46	12	35	120		--
	5	--	--	--	--	--		965
	15	--	--	--	--	--		181
SV-33	2	2.7	0.94	13	6.8	400		--
	5	--	--	--	--	--		16
	15	--	--	--	--	--		41
SV-34	2	5.3	<0.49	8.4	13	58		--
	5	--	--	--	--	--		125
	15	--	--	--	--	--		74

Definitions:
Cd = Cadmium
ft = feet
mg/kg = milligram per kilogram
PCE = Tetrachloroethylene
RSL = EPA Regional Screening Level (May 2023; THQ =1.0, Risk = 10-6)
VISL = EPA Vapor Intrusion Screening Level (Nov 2019; Target Sub-Slab; THQ =1.0, Risk = 10-6)
<## = Analyte not detected at or above indicated Sample Quantitation Limit (SQL)
μg/m3 = micrograms per cubic meter

References:
WEI, 2021b

Table 3: 2011 DTSC Debris Pile Sampling Results Summary

Sample Number	Sample Description	Contaminant(s)	Result *	Regulatory Limit
CM-01	Sample of sludge on the concrete just inside the facility	Lead (STLC) Diesel and oily wastes, PCBs present	**26 mg/L**	5.0 mg/L
CM-02 *	Liquid Sample taken from puddle of liquid outside of the facility	No hazardous waste levels of contaminants found, Oily wastes present		
CM-03	Sample from the sludge settled on the side of the drainage canal.	Lead (STLC) Oily wastes, ORO, presence of PCBs	**17 mg/L**	5.0 mg/L
CM-04	Sediment sample from the bottom of the drain channel	Lead (STLC) Diesel and oily wastes, PCBs present	**15 mg/L** **8,100 mg/kg** **20,000 mg/kg**	5.0 mg/L
CM-05	West Pile: Sample of contaminated soils	Lead (STLC) Zinc (STLC) Lead (TTLC) Zinc (TTLC)	**26 mg/L** **790 mg/L** **2,200 mg/kg** **11,000 mg/kg**	5.0 mg/L 250 mg/L 1,000 mg/kg 5,000 mg/kg
CM-06	West Pile: Sample of contaminated soils	Lead (STLC) Zinc (STLC) Lead (TTLC) Zinc (TTLC)	**67 mg/L** **320 mg/L** **2,000 mg/kg** **9,300 mg/kg**	5.0 mg/L 250 mg/L 1,000 mg/kg 5,000 mg/kg
CM-07	West Pile: Sample of contaminated soils	Lead (STLC) Zinc (STLC) Lead (TTLC) Zinc (TTLC)	**46 mg/L** **540 mg/L** **2,100 mg/kg** **12,000 mg/kg**	5.0 mg/L 250 mg/L 1,000 mg/kg 5,000 mg/kg
CM-08	West Pile: Sample of contaminated soils	Lead (STLC) Zinc (STLC) Lead (TTLC) Zinc (TTLC)	**54 mg/L** **1,100 mg/L** **2,400 mg/kg** **15,000 mg/kg**	5.0 mg/L 250 mg/L 1,000 mg/kg 5,000 mg/kg
CM-09	West Pile: Sample of contaminated soils	Lead (STLC) Zinc (STLC) Lead (TTLC) Zinc (TTLC)	**75 mg/L** **690 mg/L** **2,100 mg/kg** **13,000 mg/kg**	5.0 mg/L 250 mg/L 1,000 mg/kg 5,000 mg/kg
CM-10	West Pile: Northwest face. Sample of contaminated soils	Lead (STLC) Zinc (STLC) Lead (TTLC) Zinc (TTLC) Oily wastes, ORO, presence of PCBs	**81 mg/L** **390 mg/L** **1,700 mg/kg** **8,800 mg/kg**	5.0 mg/L 250 mg/L 1,000 mg/kg 5,000 mg/kg
CM-11	West Pile: Northwest face. Oily contaminated soils	Lead (STLC) Zinc (STLC) Lead (TTLC) Zinc (TTLC) Cadmium (STLC) Oily wastes, ORO, presence of PCBs	**42 mg/L** **320 mg/L** **1,600 mg/kg** **8,000 mg/kg** **2.1 mg/L**	5.0 mg/L 250 mg/L 1,000 mg/kg 5,000 mg/kg 1.0 mg/L

Definitions:
mg/kg = milligrams per kilogram
mg/L = milligrams per liter
ORO = oil range organics
PCB = polychlorinated biphenyl
STLC = soluble threshold limit concentration
TCLP = toxicity characteristic leaching procedure
TTLC = total threshold limit concentration

Notes:
Sample portions were all <100 micrograms unless denoted as liquids.
* = numbers in bold exceed the regulatory limits (STLC) or (TCLP)
** = Liquid sample

Reference:
DTSC, 2011

Sample Number	Sample Description	Contaminant(s)	Result *	Regulatory Limit
CM-12	East Pile of contaminated soils	Lead (STLC) Zinc (STLC) Lead (TTLC) Zinc (TTLC) Oily wastes, ORO, presence of PCBs	**63 mg/L** **550 mg/L** **2,700 mg/kg** **10,000 mg/kg**	5.0 mg/L 250 mg/L 1,000 mg/kg 5,000 mg/kg
CM-13	East Pile of contaminated soils	Lead (STLC) Zinc (STLC) Lead (TTLC) Zinc (TTLC) presence of PCBs	**63 mg/L** **550 mg/L** **2,700 mg/kg** **10,000 mg/kg**	5.0 mg/L 250 mg/L 1,000 mg/kg 5,000 mg/kg
CM-14	East Pile of contaminated soils	Lead (STLC) Zinc (STLC) Lead (TTLC) Zinc (TTLC) presence of PCBs	**68 mg/L** **780 mg/L** **2,300 mg/kg** **9,500 mg/kg**	5.0 mg/L 250 mg/L 1,000 mg/kg 5,000 mg/kg
CM-15	East Pile of contaminated soils	Lead (STLC) Zinc (STLC) Lead (TTLC) Zinc (TTLC) presence of PCBs	**95 mg/L** **720 mg/L** **2,800 mg/kg** **11,000 mg/kg**	5.0 mg/L 250 mg/L 1,000 mg/kg 5,000 mg/kg
CM-16 **	Sample from the puddle at the base of the electronic waste pile	Lead (STLC) Mercury (cold vapor)	**41 mg/L** **0.74 mg/L**	5.0 mg/L 0.2 mg/L

Definitions:
mg/kg = milligrams per kilogram
mg/L = milligrams per liter
ORO = oil range organics
PCB = polychlorinated biphenyl
STLC = soluble threshold limit concentration
TCLP = toxicity characteristic leaching procedure
TTLC = total threshold limit concentration

Notes:
Sample portions were all <100 micrograms unless denoted as liquids.
* = numbers in bold exceed the regulatory limits (STLC) or (TCLP)
** = Liquid sample

Reference:
DTSC, 2011

Table 4: 2018 CUPA Debris Pile Sampling Results Summary

Roll Away Bin No.	Sample (Pail) No.	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper	Lead	Mercury	Molybdenum	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc
Residential RSL		**31**	**0.68**	**15,000**	**160**	**7.1**	**--** (1)	**23**	**3,100**	**400**	**11**	**390**	**1,500**	**390**	**390**	**0.78**	**390**	**23,000**
Industrial RSL		**470**	**3.0**	**220,000**	**2,300**	**100**	**--** (1)	**350**	**47,000**	**800**	**46**	**5,800**	**22,000**	**5,800**	**5,800**	**12**	**5,800**	**350,000**
Max Result		**150**	**1,300**	**580**	**90**	**130**	**1,100**	**100**	**14,000**	**3,200**	**10**	**130**	**1,400**	**--**	**82**	**17**	**58**	**16,000**
1	1-4	**78**	<2.5	580	<0.60	**53**	370	**28**	800	**1,600**	<0.01	48	330	<2.6	15	<2.5	43	12,000
	1-6	**100**	<2.5	470	<0.60	**69**	1,000	**31**	2,700	**2,200**	<0.01	65	690	<2.6	18	<2.5	46	13,000
	1-7	**100**	**280**	480	<0.60	**33**	370	**23**	1,300	**1,500**	3.4	48	380	<2.6	33	**5.4**	24	11,000
	1-8	**82**	**390**	460	1.2	**35**	370	**44**	1,000	**1,500**	3.6	29	390	<2.6	34	**4.4**	23	11,000
2	2-1	**100**	**300**	440	<0.60	**39**	580	**24**	1,500	**1,900**	2.7	49	520	<2.6	32	**3.3**	28	13,000
	2-4	**110**	**260**	500	<0.60	**76**	530	**30**	1,900	**1,400**	3.2	53	370	<2.6	37	<2.5	30	10,000
	2-6	**120**	**240**	440	<0.60	**97**	520	**29**	**14,000**	**2,400**	4.1	32	440	<2.6	33	**2.6**	28	11,000
	2-9	**43**	<2.5	420	<0.60	**53**	290	**25**	1,100	**1,100**	<0.01	48	330	<2.6	16	<2.5	42	11,000
3	3-4	**44**	<2.5	350	<0.60	**57**	530	**30**	750	**1,200**	<0.01	78	430	<2.6	16	<2.5	42	11,000
	3-5	**89**	**390**	370	<0.60	**61**	340	18	1,200	**1,900**	2.4	24	340	<2.6	28	**3.5**	30	10,000
	3-8	**97**	**230**	480	<0.60	**42**	700	22	1,400	**1,500**	3.6	27	400	<2.6	33	**2.7**	24	11,000
	3-10	**85**	**200**	430	<0.60	**32**	270	21	1,200	**1,200**	3.3	23	300	<2.6	30	<2.5	25	9,600
4	4-2	**86**	**300**	360	<0.60	**47**	460	22	940	**1,100**	2.1	47	370	<2.6	31	<2.5	24	11,000
	4-5	**67**	<2.5	450	<0.60	**72**	990	**43**	1,200	**1,400**	3.9	63	710	<2.6	26	<2.5	45	11,000
	4-6	**42**	<2.5	390	<0.60	**72**	360	**27**	1,300	**1,400**	2.4	54	330	<2.6	23	<2.5	42	10,000
	4-7	**50**	<2.5	390	<0.60	**72**	630	**30**	870	**1,200**	<0.01	58	470	<2.6	16	<2.5	43	10,000
5	5-4	**66**	<2.5	500	<0.60	**42**	380	**27**	1,100	**2,800**	3.1	48	380	<2.6	82	<2.5	46	11,000
	5-7	**50**	<2.5	440	<0.60	**42**	390	**25**	1,200	**1,400**	<0.01	36	280	<2.6	15	<2.5	43	9,700
	5-8	**56**	<2.5	400	<0.60	**56**	520	**24**	2,100	**1,400**	<0.01	53	390	<2.6	16	<2.5	43	9,700
	5-9	**72**	**200**	450	<0.60	**36**	340	**39**	900	**1,100**	1.9	20	220	<2.6	27	<2.5	28	7,500
6	6-1	**87**	**160**	170	<0.60	**31**	230	21	550	**610**	2.1	39	170	<2.6	12	<2.5	28	7,100
	6-3	**52**	<2.5	470	<0.60	**48**	320	**40**	990	**1,400**	<0.01	34	320	<2.6	68	<2.5	40	13,000
	6-4	**55**	<2.5	420	<0.60	**47**	330	**41**	3,000	**1,700**	<0.01	45	380	<2.6	17	<2.5	46	11,000
	6-10	**86**	**220**	370	<0.60	**54**	350	20	780	**1,400**	3.2	26	290	<2.6	32	<2.5	33	11,000
7	7-1	**71**	**200**	340	<0.60	**28**	260	**27**	680	**1,400**	4.8	19	240	<2.6	28	<2.5	25	9,000
	7-6	**66**	**150**	320	<0.60	**24**	260	19	750	**1,300**	3	21	240	<2.6	22	<2.5	24	7,400
	7-7	**83**	**160**	240	<0.60	**24**	350	19	670	**870**	2.8	45	270	<2.6	18	<2.5	23	6,700
	7-10	**100**	**350**	320	<0.60	**54**	360	**28**	960	**1,100**	7.2	28	320	<2.6	31	<2.5	29	11,000

Roll Away Bin No.	Sample (Pail) No.	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper	Lead	Mercury	Molybdenum	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc
Residential RSL		**31**	**0.68**	**15,000**	**160**	**7.1**	**-- (1)**	**23**	**3,100**	**400**	**11**	**390**	**1,500**	**390**	**390**	**0.78**	**390**	**23,000**
Industrial RSL		**470**	**3.0**	**220,000**	**2,300**	**100**	**-- (1)**	**350**	**47,000**	**800**	**46**	**5,800**	**22,000**	**5,800**	**5,800**	**12**	**5,800**	**350,000**
Max Result		**150**	**1,300**	**580**	**90**	**130**	**1,100**	**100**	**14,000**	**3,200**	**10**	**130**	**1,400**	**--**	**82**	**17**	**58**	**16,000**
8	8-1	**110**	**230**	270	<0.60	**35**	330	**29**	1,400	**2,400**	2.2	37	320	<2.6	34	**7.2**	20	9,900
	8-5	**94**	**200**	280	<0.60	**32**	290	**30**	750	**930**	3.4	42	270	<2.6	15	**6.5**	30	8,100
	8-6	**47**	<2.5	430	<0.60	**38**	450	**34**	870	**1,100**	2.8	60	550	<2.6	21	<2.5	46	11,000
	8-8	**90**	**190**	220	<0.60	**52**	300	20	1,100	**1,100**	3.4	44	290	<2.6	33	**6.3**	36	7,300
9	9-2	**45**	<2.5	310	<0.60	**41**	370	**25**	1,400	**1,800**	2.5	59	340	<2.6	22	<2.5	47	11,000
	9-3	**90**	**260**	330	<0.60	**28**	210	20	1,600	**760**	3	27	240	<2.6	17	**5.7**	21	6,900
	9-9	**120**	**230**	210	<0.60	**48**	310	14	470	**1,100**	2.5	33	260	<2.6	15	**8.4**	28	5,100
	9-10	**75**	**220**	270	<0.60	**34**	270	**26**	890	**1,600**	3	130	670	<2.6	30	**4.4**	19	6,900
10	10-3	**100**	**190**	290	<0.60	**32**	240	21	1,200	**1,100**	3	23	230	<2.6	16	**5.8**	24	8,300
	10-4	**73**	**160**	170	<0.60	**19**	200	18	470	**410**	3.3	13	180	<2.6	11	**3.2**	23	6,300
	10-8	**58**	<2.5	300	<0.60	**25**	370	**31**	630	**1,000**	<0.01	27	270	<2.6	34	<2.5	43	8,000
	10-10	**56**	<2.5	310	<0.60	**38**	430	**36**	1,100	**1,100**	4.5	50	430	<2.6	22	<2.5	46	9,000
11	11-2	**120**	**180**	260	<0.60	**33**	460	**64**	1,200	**1,600**	9.9	34	510	<2.6	13	**3.7**	22	7,400
	11-5	**60**	<2.5	390	<0.60	**49**	540	**34**	2,100	**1,400**	4.4	65	440	<2.6	25	<2.5	42	11,000
	11-8	**64**	<2.5	330	<0.60	**64**	540	**45**	1,300	**2,100**	<0.01	53	520	<2.6	17	<2.5	44	11,000
	11-9	**110**	**240**	350	<0.60	**77**	420	**38**	2,100	**1,400**	5.9	47	440	<2.6	35	**4.8**	22	11,000
12	12-1	**59**	<2.5	350	<0.60	**57**	420	**34**	1,100	**1,700**	5.4	62	380	<2.6	25	<2.5	43	11,000
	12-5	**90**	<2.5	360	<0.60	**69**	710	**60**	1,800	**1,800**	10	86	660	<2.6	30	<2.5	40	11,000
	12-6	**79**	<2.5	450	<0.60	**57**	580	**53**	1,700	**2,300**	9.4	87	630	<2.6	30	<2.5	44	12,000
	12-10	**73**	<2.5	410	<0.60	**42**	530	**53**	1,000	**1,700**	<0.01	63	580	<2.6	21	<2.5	42	9,900
13	13-1	**81**	<2.5	410	<0.60	**46**	430	**58**	1,100	**3,000**	<0.01	61	540	<2.6	21	<2.5	40	10,000
	13-2	**91**	<2.5	380	4.2	**57**	360	**46**	1,800	**3,200**	<0.01	53	400	<2.6	19	<2.5	39	11,000
	13-3	**89**	**170**	250	3.5	**36**	280	**81**	1,400	**1,200**	9.9	41	330	<2.6	15	<2.5	20	7,300
	13-5	**99**	**180**	260	<0.60	**55**	310	**28**	1,400	**1,600**	7.2	42	280	<2.6	16	**4.6**	22	7,200
14	14-2	**100**	**230**	290	<0.60	**27**	630	**31**	**5,100**	**1,600**	7.5	36	430	<2.6	19	**4.8**	19	7,400
	14-6	**90**	<2.5	430	<0.60	**45**	540	**43**	1,600	**2,300**	7.9	93	490	<2.6	27	<2.5	44	11,000
	14-9	**62**	<2.5	380	<0.60	**42**	530	**94**	2,400	**1,200**	<0.01	89	520	<2.6	22	<2.5	45	11,000
	14-4	**70**	<2.5	290	1.7	**38**	570	**37**	1,200	**1,200**	<0.01	59	480	<2.6	22	<2.5	46	11,000
15	15-2	**100**	**260**	330	12	**39**	450	**49**	2,900	**1,300**	5.1	45	440	<2.6	37	**3.1**	22	11,000
	15-5	**86**	**160**	250	<0.60	**21**	280	**28**	650	**2,500**	8.5	30	300	<2.6	13	**2.9**	20	6,300
	15-6	**48**	<2.5	180	<0.60	**40**	390	**43**	1,300	**1,200**	5.8	66	380	<2.6	23	<2.5	39	11,000
	15-7	**84**	<2.5	290	<0.60	**51**	430	**26**	1,300	**2,600**	4.9	60	700	<2.6	24	<2.5	43	11,000

Roll Away Bin No.	Sample (Pail) No.	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper	Lead	Mercury	Molybdenum	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc
Residential RSL		**31**	**0.68**	**15,000**	**160**	**7.1**	**--** (1)	**23**	**3,100**	**400**	**11**	**390**	**1,500**	**390**	**390**	**0.78**	**390**	**23,000**
Industrial RSL		**470**	**3.0**	**220,000**	**2,300**	**100**	**--** (1)	**350**	**47,000**	**800**	**46**	**5,800**	**22,000**	**5,800**	**5,800**	**12**	**5,800**	**350,000**
Max Result		**150**	**1,300**	**580**	**90**	**130**	**1,100**	**100**	**14,000**	**3,200**	**10**	**130**	**1,400**	**--**	**82**	**17**	**58**	**16,000**
16	16-1	**92**	**190**	240	<0.60	**29**	400	**25**	760	**870**	6.4	47	310	<2.6	14	<2.5	17	6,400
	16-5	**70**	<2.5	360	<0.60	**55**	430	**40**	1,300	**1,500**	6.2	78	420	<2.6	24	<2.5	43	12,000
	16-7	**80**	<2.5	500	<0.60	**48**	470	**38**	1,100	**1,500**	7.4	80	430	<2.6	24	<2.5	53	11,000
	16-9	**110**	**210**	290	<0.60	**29**	310	**29**	1,500	**1,100**	6.3	50	300	<2.6	16	**5.2**	22	7,500
17	17-1	**82**	<2.5	430	2.9	**62**	660	**54**	2,800	**1,900**	8.3	110	1,400	<2.6	27	**2.9**	42	13,000
	17-4	**120**	**190**	290	<0.60	**26**	330	**39**	1,500	**2,000**	9	40	340	<2.6	15	**3.5**	23	9,100
	17-5	**100**	<2.5	470	<0.60	**40**	550	**55**	1,900	**2,300**	7.4	80	550	<2.6	24	<2.5	42	13,000
	17-6	**90**	<2.5	450	<0.60	**41**	470	**53**	**4,300**	**2,300**	7.2	94	620	<2.6	27	<2.5	49	16,000
18	18-3	**110**	<2.5	500	90	**34**	1,100	**100**	**6,600**	**1,400**	<0.01	62	440	<2.6	19	<2.5	39	11,000
	18-5	**110**	<2.5	460	<0.60	**120**	560	**61**	2,300	**2,900**	6.8	110	850	<2.6	25	<2.5	45	13,000
	18-7	**79**	<2.5	550	<0.60	**47**	730	**79**	2,100	**2,000**	5.2	110	550	<2.6	27	<2.5	58	12,000
	18-9	**78**	<2.5	330	<0.60	**36**	650	**50**	1,400	**1,400**	<0.01	49	700	<2.6	17	<2.5	38	10,000
19	19-3	**120**	**1,100**	370	<0.60	**36**	640	**55**	1,000	**1,600**	5.9	80	450	<2.6	40	**5.3**	24	10,000
	19-4	**110**	**260**	390	<0.60	**41**	450	**45**	1,200	**1,500**	6.7	69	530	<2.6	37	**4.6**	21	11,000
	19-5	**120**	**180**	240	<0.60	**36**	560	**29**	1,500	**2,300**	6.8	46	430	<2.6	22	**3.3**	18	7,300
	19-18	**110**	**250**	400	<0.60	**130**	570	**54**	960	**1,400**	6.9	50	510	<2.6	37	**4.2**	21	11,000
20	20-1	**110**	**230**	410	<0.60	**31**	860	**32**	2,700	**1,000**	3.7	92	660	<2.6	31	**3.4**	15	9,100
	20-2	**77**	**210**	290	<0.60	**28**	260	22	730	**1,300**	3.7	28	230	<2.6	28	**2.9**	19	8,600
	20-5	**94**	**230**	360	<0.60	**33**	420	**45**	2,100	**1,700**	5.5	43	360	<2.6	34	**6**	18	8,900
	20-8	**150**	**320**	440	<0.60	**61**	360	**33**	**3,300**	**1,500**	5.0	70	490	<2.6	27	**17**	34	11,000
21	21-4	**98**	**230**	310	<0.60	**25**	740	**47**	3,000	**1,500**	4.0	54	590	<2.6	34	**4.5**	15	7,400
	21-5	**96**	**170**	310	<0.60	**23**	270	**27**	590	**800**	4.4	30	250	<2.6	17	<2.5	20	6,900
	21-6	**110**	**1,300**	450	<0.60	**18**	180	12	700	**910**	2.4	34	180	<2.6	19	**11**	20	4,100
	21-7	**100**	**200**	370	<0.60	**30**	340	20	1,600	**1,800**	3.7	34	330	<2.6	34	<2.5	18	8,200

Notes:
All units are in milligrams per kilogram (mg/kg)
Values in **Bold** exceed residential Regional Screening Level (RSL) (May 2023; THQ =1.0, Risk = 10-6)
Values in **Bold and Underlined** exceed industrial RSL (May 2023; THQ =1.0, Risk = 10-6)
1 = an RSL for Total (i.e., unspeciated) chromium has not been established.

Reference:
Brash, 2019

Table 5: Soil Vapor Survey Results - Select VOCs

		Analyte (µg/m^3)															
Sample Location	**Sample Depth (ft-bgs)**	**1,1,1-Trichloroethane**	**1,2,4-Trimethylbenzene**	**4-Isopropyltoluene**	**Bromodichloromethane**	**Bromoform**	**Carbon Tetrachloride**	**Dibromomethane**	**Dichlorodifluoromethane**	**Ethylbenzene**	**Freon 113**	**m,p-Xylene**	**Methylene chloride**	**o-Xylene**	**Tetrachloroethylene**	**Toluene**	**Trichlorofluoromethane**
Resident VISL		**174,000**	**2,090**	**--**	**2.5**	**85**	**16**	**139**	**3,480**	**37**	**174,000**	**3,480**	**3,380**	**3,480**	**360**	**174,000**	**--**
Commercial VISL		**730,000**	**8,760**	**--**	**11**	**372**	**68**	**584**	**14,600**	**164**	**730,000**	**14,600**	**40,900**	**14,600**	**1,570**	**730,000**	**--**
SV-1	5.5	ND	ND	ND	ND	ND	ND	ND	375	ND	45	ND	ND	ND	36	11	390
	16	ND	ND	ND	ND	ND	ND	ND	467	ND	45	ND	ND	ND	32	ND	356
SV-2	6.5	ND	15	79	ND	ND	ND	ND	371	8.0	28	36	ND	12	84	12	181
	16	ND	ND	23	ND	ND	ND	ND	631	ND	58	ND	ND	ND	166	ND	359
SV-3	6.0	ND	ND	22	ND	ND	ND	ND	180	11	33	50	ND	16	62	ND	106
	16	ND	ND	23	ND	ND	ND	ND	200	ND	34	ND	ND	ND	55	ND	105
SV-4	6.0	ND	ND	29	ND	ND	ND	ND	111	ND	23	ND	ND	ND	169	ND	94
	16	ND	21	121	ND	ND	ND	ND	109	ND	20	24	ND	10	132	ND	83
SV-5	6.0	ND	ND	ND	ND	ND	ND	ND	165	ND	24	ND	ND	ND	38	ND	141
	16	ND	ND	ND	ND	ND	ND	ND	243	ND	30	ND	ND	ND	45	ND	170
SV-6 (1)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
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SV-7	6.0	ND	ND	ND	ND	ND	ND	ND	137	ND	35	ND	ND	ND	41	ND	165
	15.5	ND	ND	ND	ND	ND	ND	ND	157	ND	35	ND	ND	ND	59	ND	168
SV-8	6.0	ND	ND	ND	ND	ND	ND	ND	81 / 97	ND	20 / 23	ND	ND	ND	151 / 184	ND	104 / 127
	16	ND	ND	ND	ND	ND	ND	ND	115	ND	29	ND	ND	ND	161	17	148
SV-9	5.5	22	ND	ND	ND	ND	ND	ND	86	ND	ND	ND	ND	ND	19	ND	128
	15.5	25	ND	ND	ND	ND	ND	ND	99	ND	19	ND	ND	ND	22	14	157
SV-10	6.0	ND	ND	ND	ND	ND	**<u>18</u>**	ND	40	ND	21	ND	ND	ND	162	ND	262
	15.5	ND	ND	ND	ND	ND	12	ND	56	ND	27	ND	ND	ND	28	20	314
SV-11	5.5	ND	ND	26	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	101	13	236
	16	ND	ND	15	ND	ND	9.0	ND	53	ND	33	ND	ND	ND	339	11	424
SV-12	6.5	26	ND	ND	ND	ND	ND	ND	60	ND	101	ND	ND	ND	57	9.0	1,310
	14.5	35	ND	ND	ND	ND	ND	ND	76	ND	109	ND	ND	ND	103	ND	1,380
SV-13 (1)	3.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	137	ND	222
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SV-14	6.5	18	ND	ND	ND	ND	ND	ND	ND	ND	26	ND	ND	ND	**<u>2,530</u>**	ND	468
	16	24	ND	ND	ND	ND	ND	ND	25	ND	37	ND	ND	ND	**<u>2,190</u>**	12	682
SV-15	6	73	ND	ND	ND	ND	13	ND	ND	ND	22	ND	ND	ND	60	11	404
	15.5	99	ND	ND	ND	ND	ND	ND	ND	ND	31	ND	ND	ND	113	ND	511
SV-16	6.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	19	ND	ND	ND	68	ND	332
	15.5	44 / 43	ND	ND	ND	ND	8.0 / ND	ND	ND	ND	20 / 24	ND	ND	ND	74 / 72	ND	388 / 403
SV-17	6.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	28	ND	77
	16	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	52	ND	97
SV-18	6.0	ND	ND	9.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	147	ND	**37**
	16	ND	ND	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	156	ND	**39**
SV-19	6.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	16	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	8.0	ND	ND
SV-20	6.0	ND	10	34	**<u>13</u>**	16	ND	13	52	ND	1,920	20	12	ND	22	14	26
	15.5	ND	ND	ND	ND	ND	ND	ND	60	ND	2,240	ND	ND	ND	35	10	17

<u>Notes:</u>
All values are reported in µg/m3
<u>Bold and Underlined</u> values indicate results that exceed Resident VISL
Samples collected in April 2019
All other reported analytes did not exceed analytical reporting limits
1 = no value indicates that a probe was not installed due to early refusal

<u>Definitions:</u>
ft-bgs = feet below ground surface
ND = Analyte did not exceed analytical reporting limit
VISL = EPA Vapor Intrusion Screening Level (May 2023; Target Sub-Slab; THQ =1.0, Risk = 10^{-6})
µg/m3 = micrograms per cubic meter
-- = no value

Table 6: Stage 1 Soil Sampling Results - Select Metals

Sample Location	Sample Depth (ft)	Analyte				
		Arsenic (As)	**Cadmium (Cd)**	**Cobalt (Co)**	**Lead (Pb)**	**Zinc (Zn)**
Source Action Level [1]		**14**	**0.66**	**69**	**41**	**450**
Residential RSL		**0.68**	**7.1**	**23**	**400**	**23,000**
Industrial RSL		**3.0**	**100**	**350**	**800**	**350,000**
SV-1	2	3.3	0.22 [J]	17	8.0	103 [J]
	10	0.83	<0.45	5.2	1.6	41 [J]
SV-2	2	2.7	0.18 [J]	13	14	108 [J]
	10	0.89	<0.49	4.1	1.5	25 [J]
SV3	2	2.5	0.13 [J]	12	7.5	74 [J]
	10	0.97	0.093 [J]	4.6	1.3	20 [J]
SV4	2	2.6	0.16 [J]	13	5.5	81 [J]
	10	1.0	<0.45	4.2	1.4	26 [J]
SV-5	2	3.1	0.25 [J]	21	7.1	92 [J]
	10	0.76	<0.54	3.2	1.3	21 [J]
SV-6 [2]	2	8.3	**2.5**	61	**338**	**490 [J]**
SV-7	2	2.3	0.22 [J]	6.4	27	41 [J]
	10	1.1	<0.44	4.9	6.5	31 [J]
SV-8	2	3.2 / 2.3	0.20 [J] / 0.14 [J]	14 / 13 [J]	31 / 11 [J+]	91 [J] / 80 [J+]
	10	2.9	<0.47	3.5 [J]	1.8	19
SV-9	2	7.9 [J]	**1.3 [J]**	**91**	**170**	190
	10	1.3	<0.53	4.6 [J]	1.7	25
SV-10	2	2.7 [J]	<0.56	11	4.5	62
	10	1.6	<0.51	5.2	1.8	27
SV-11	2	3.6 [J] / 2.7	<0.56 / 0.13 [J]	13 / 13 [J]	13 / 13 [J+]	84 / 85 [J+]
	10	0.93 [J]	<0.50	4.1 [J]	1.2	20
SV-12	2	**22 [J]**	<0.66	38 [J]	33 [J]	65 [J]
	10	2.6 [J]	<0.54	9.9	3.6	58
SV-13 [2]	2	**16 [J]**	<0.58	10	12	86
SV-14	2	2.2 / 2.3	0.11 [J] / 0.12 [J]	9.7 [J] / 11 [J]	4.0 [J+] / 4.6 [J+]	58 [J+] / 64 [J+]
	10	0.75	<0.51	2.8 [J]	1.0 [J+]	18 [J+]
SV-15	2	3.8	0.25 [J]	17 [J]	6.1 [J+]	90 [J+]
	10	1.3	<0.50	4.2 [J]	1.5 [J+]	26 [J+]
SV-16	2	2.6	0.12 [J]	13 [J]	4.3 [J+]	76 [J+]
	10	0.64	<0.44	3.3 [J]	1.3 [J+]	21 [J+]
SV-17	2	5.5 / 5.0	**1.4 / 1.4**	13 [J] / 13 [J]	**301 [J+] / 199 [J+]**	**778 [J+] / 464 [J+]**
	10	0.96	<0.50	4.2 [J]	2.0 [J+]	28 [J+]
SV-18	2	3.0	0.63	8.9 [J]	**170 [J+]**	367 [J+]
	10	1.2	<0.48	5.1 [J]	2.2 [J+]	31 [J+]
SV-19	2	5.4	**1.1**	16 [J]	**90 [J+]**	**612 [J+]**
	10	0.74	<0.47	4.9 [J]	2.0 [J+]	33 [J+]
SV-20	2	2.0	0.13 [J]	9.8 [J]	6.3 [J+]	65 [J+]
	10	1.2	<0.48	3.9 [J]	1.4 [J+]	23 [J+]

Notes:
All values are reported in mg/kg
Bold & Underlined values indicate results that exceed Source Action Level
Samples collected in April 2019
1 = Per the HRS, the action level to establish an on-site source of contaminated soil is 'significantly above background" (see Section 3.2.1).
2 = 10-foot sample not collected due to early refusal

Definitions:
J = The result is an estimated quantity
J+ = The result is an estimated quantity, but the result may be biased high
J- = The result is an estimated quantity, but the result may be biased low
mg/kg = milligram per kilogram
RSL = EPA Regional Screening Level (May 2023; THQ =1.0, Risk = 10-6)
<## = Analyte not detected at or above indicated Sample Quantitation Limit (SQL)

Source Action Levels:

Antimony = 7.9	Lead = 41
Arsenic = 14	Manganese = 2,240
Barium = 861	Nickel = 83
Beryllium = 1.3	Selenium = 4.6
Cadmium = 0.66	Silver = 1.3
Chromium = 130	Thallium = 3.3
Cobalt = 69	Vanadium = 263
Copper = 111	Zinc = 450

Table 7: Stage 2 Soil Sampling Results - Select Metals

Sample Location	Sample Depth (ft)	Analyte Arsenic (As)	Cadmium (Cd)	Cobalt (Co)	Lead (Pb)	Zinc (Zn)
Source Action Level (1)		14	0.66	69	41	450
Residential RSL		0.68	7.1	23	400	23,000
Industrial RSL		3.0	100	350	800	350,000
DP-1	2	9.6 J	**<u>1.1 J</u>**	12 J	**<u>138</u>**	183
	5	2.0 / 2.7 J	<0.52 / <0.49	6.4 J / 7.3 J	2.0 / 2.0	33 / 42
	10	2.4 / 1.9 J	<0.52 / <0.49	5.9 J / 5.4 J	1.9 / 1.3	29 / 29
	15	4.9 J	<0.60	12 J	7.7	72
DP-2	2	3.5	0.65 J	6.2 J	**<u>138</u>**	263
	5	4.9 J	<0.57	11 J	13	104
	10	2.3	<0.60	<6.0	1.7	24
	15	2.2	<0.48	5.9 J	1.9	27
DP-3	3	3.4 J	<0.54	11 J	29 J	90
	5	2.5 J	<0.55	22 J	6.2 J	69
	10	1.6 J	<0.52	5.8 J	2.3 J	31
	15	3.6 J	<0.56	13 J	4.6 J	78
DP-4	2	6.0 J	<0.56	5.8 J	**<u>203</u>**	94
	5	4.0 J	<0.55	9.9 J	4.0	60
	10	1.8 J	<0.53	5.7 J	1.8	26
	15	2.9 J	<0.52	6.6 J	2.1	37
DP-5	2	3.1 J	<0.55	11 J	4.9 J	64
	5	1.4 J	<0.47	6.8 J	2.4 J	37
	10	2.2 J	<0.49	<4.9	1.4 J	20
	15	4.7 J	<0.61	15 J	6.6 J	91
DP-6	2	4.9 J	<0.54	12 J	5.0	69
	5	2.0 J / 2.4 J	<0.52 / <0.52	<5.2 / 6.4 J	1.5 / 1.9	28 / 35
	10	1.7 J	<0.49	<4.9	1.1	22
	15	6.8 J	<0.53	8.9 J	3.0	54
DP-7	2	8.3 J	**<u>7.6 J</u>**	13 J	**<u>612</u>**	**<u>3,160</u>**
	5	2.6	<0.52	5.7 J	2.1	28
	10	2.2	<0.49	<4.9	1.6	21
	15	2.8	<0.50	7.0 J	2.6	36
DP-8	2	5.3 J	0.56 J	12 J	**<u>49</u>**	161
	5	6.2 J / 7.8 J	<0.64 / <0.66	16 J / 19 J	5.9 J / 6.8 J	94 / 109
	10	2.3 J	<0.48	6.8 J	1.9	38
	15	4.1 J	<0.56	12 J	3.8	75
DP-9	2	13 J	**<u>2.4 J</u>**	11 J	**<u>152</u>**	**<u>661</u>**
	5	6.4 J	**<u>0.74 J</u>**	19 J	15	120
	10	2.1	<0.51	<5.1	1.6	23
	15	2.4	<0.51	5.8 J	2.2	28
DP-10	2	2.6 J	<0.53	11 J	8.5 J	65
	5	2.1 J	<0.55	8.5 J	3.2 J	47
	10	0.74 J	<0.49	<4.9	1.3 J	21
	15	3.4 J	<0.60	16 J	5.1 J	95

<u>Notes:</u>
All values are reported in mg/kg
<u>Bold & Underlined</u> values indicate results that exceed Source Action Level
Samples collected in June 2019
1 = Per the HRS, the action level to establish an on-site source of contaminated soil is 'significantly above background" (see Section 3.2.1).

<u>Definitions:</u>
J = The result is an estimated quantity
J+ = The result is an estimated quantity, but the result may be biased high
J- = The result is an estimated quantity, but the result may be biased low
mg/kg = milligram per kilogram
RSL = EPA Regional Screening Level (May 2023; THQ =1.0, Risk = 10-6)
<## = Analyte not detected at or above indicated Sample Quantitation Limit (SQL)

Table 8: Stage 2 Groundwater Sampling Results Summary - Select Analytes

Sample Location	Screened Interval (ft-bgs)	Analyte							
		VOCs			Total Metals				
		Acetone	t-1,2-DCE	TCE	Arsenic (As)	Cadmium (Cd)	Cobalt (Co)	Lead (Pb)	Zinc (Zn)
Federal MCL		--	100	5.0	*Not Applicable* (1)				
CPT-1	96 - 100	3.1 J	<0.50	<0.50	35	<5.0	64 J	66	619
CPT-2	95 - 99	4.6 J	0.12 J	0.21 J	51 J	50 J	590 J	455 J-	5,080 J
CPT-3	92 - 96	<5.0 / 3.6 J	<0.50 /<0.50	<0.50 /<0.50	40 J / 28 J	<25 /<10	276 J / 182 J	155 J- / 125 J-	1,760 J / 1,290 J
CPT-4	96 - 100	14	0.15 J	<0.50	100 J	31 J	<250	935 J-	33,300 J
CPT-5	99 - 103	5.1	<0.50	<0.50	27	<5.0	51 J	43	476

Notes:
All values are reported in micrograms per liter (µg/L)
Samples collected in June 2019
1 = Total Metal concentrations are not comparable to regulatory benchmarks derived from Dissolved Metal criteria, such as MCLs.
Qualifier Definitions:
J = The result is an estimated quantity
J+ = The result is an estimated quantity, but the result may be biased high
J- = The result is an estimated quantity, but the result may be biased low

Definitions:
MCL = Maximum Contaminant Level
t-1,2-DCE = Trans-1,2-dichloroethylene
TCE = Trichloroethylene
VOC = Volatile Organic Compound
µg/L = microgram per liter
<## = Analyte not detected at or above indicated Sample Quantitation Limit (SQL)

Table 9: Stage 3 – Residential Soil Sampling – HRS Soil Screening Benchmarks

Analyte	HRS Soil Screening Benchmark [1]	Residential RSL [2]	Industrial RSL [2]
Antimony	**5.9**	31	470
Arsenic	**22**	0.68	3.0
Barium	**459**	15,000	220,000
Beryllium	**1.3**	160	2,300
Cadmium	**3.1**	7.1	100
Chromium	**65**	-- [2]	-- [2]
Cobalt	**26**	23	350
Copper	**142**	3,100	47,000
Lead	**401**	400	800
Mercury	**0.53**	11	46
Molybdenum	**3.3**	390	5,800
Nickel	**84**	1,500	22,000
Selenium	**9.2**	390	5,800
Silver	**4.7**	390	5,800
Thallium	**3.9**	0.78	12
Vanadium	**107**	390	5,800
Zinc	**630**	23,000	350,000

Notes:
1 = The HRS Soil Screening Benchmark is used to establish a harardous substance release in the HRS soil exposure pathway and is based on three times the background soil concentration. See Section 3.2.1.3 for a description of the methodology used to develop these values.
2 = EPA RSLs are presented for contextual purposes but are not appropriate for use as benchmarks under the HRS.
3 = an RSL for Total (i.e., unspeciated) chromium has not been established.

Definitions:
HRS =Hazard Ranking System
RSL = EPA Regional Screening Level (May 2023; THQ =1.0, Risk = 10-6)

Table 10: Stage 3 – Residential Soil Sampling Results – Four-Point Composite

Sub-RZ	Property	Sample No.	Yard	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper	Lead	Mercury	Mo	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc
				Analyte																
HRS Soil Screening Benchmark (1)				5.9	22	459	1.3	3.1	65	26	142	401	0.53	3.3	84	9.2	4.7	3.9	107	630
Residential RSL				31	0.68	15,000	160	7.1	-- (2)	23	3,100	400	11	390	1,500	390	390	0.78	390	23,000
RZ-1a	HR1A01	HR1A01-01	Front	0.95 JQK	9.1	170	<0.97	1.1	25	12	39	140	0.11	1.0 JQK	28 JK	<4.9	<2.4	1.7 JQK	44	200
RZ-1a	HR1A01	HR1A01-02	Front	4.6	19	330	<1.1	1.4	29	14	65	150	0.17	0.91 JQK	25 JK	<5.5	<2.7	2.0 JQK	49	260
RZ-1a	HR1A01	HR1A01-03	Front	1.2 JQK	8.6	190	<1.2	1.3	27	14	38	110	0.13	0.85 JQK	26 JK	<6.0	<3.0	1.9 JQK	50	250
RZ-1a	HR1A01	HR1A01-03 (D)	Front	1.2 JQK	10	190	<1.1	0.74 JQK	28	14	40	110	0.16	0.84 JQK	39	<5.6	<2.8	<5.6	53	260
RZ-1a	HR1A02	HR1A02-01	Front	0.61 JQK	4.4	150	<1.0	0.97 JQK	28	13	42	89	0.11	0.91 JQK	21 JK	<5.2	<2.6	2.0 JQK	49	170
RZ-1a	HR1A02	HR1A02-02	Rear	1.3 JQK	9.5	220	<1.1	1.9	51	13	55	170	0.25	0.83 JQK	24 JK	<5.3	<2.6	1.4 JQK	47	280
RZ-1a	HR1A02	HR1A02-03	Rear	1.8 JQK	9.8	230	<0.92	2.4	49	13	70	270	0.26	1.2 JQK	26 JK	<4.6	0.55 JQK	1.9 JQK	47	380
RZ-1a	HR1A03	HR1A03-01	Front	0.50 JQK	5.8	160	0.62 JQK	1.4	25	10	48	140 JK	0.20 JK	1.5 JQK	23	<6.2	<3.1	1.3 JQK	41	270
RZ-1a	HR1A03	HR1A03-02	Rear	1.6 JQK	5.0	**460**	0.63 JQK	1.8	32	11	75	380 JK	0.17 JK	1.1 JQK	26	<5.5	0.62 JQK	1.0 JQK	42	570
RZ-1a	HR1A03	HR1A03-03	Rear	1.2 JQK	4.4	200	0.69 JQK	1.4	28	12	44	120 JK	0.17 JK	1.0 JQK	22	0.47 JQK	<2.7	1.1 JQK	46	290
RZ-1a	HR1A04	HR1A04-01	Front	1.7 JQK	6.3	160 JK	<0.95	**4.0**	28	12	54	150	0.13 JK	1.7 JQK	27	<4.8	<2.4	<4.8	46 JK	500
RZ-1a	HR1A04	HR1A04-02	Rear	1.4 JQK	7.1	200 JK	<1.0	1.3	27	12	58	130	0.12 JK	1.4 JQK	23	<5.1	<2.5	<5.1	47 JK	320
RZ-1a	HR1A04	HR1A04-03	Rear	1.0 JQK	7.7	200 JK	<1.0	0.69 JQK	26	13	110	140	0.12 JK	0.95 JQK	32	<5.1	<2.6	<5.1	48 JK	380
RZ-1a	HR1A05	HR1A05-01	Rear	1.6 JQK	4.7	190 JK	0.43 JQK	1.5	25	8.5	50	180	0.13 JK	1.4 JQK	21	<4.9	<2.4	1.1 JQK	35 JK	350
RZ-1a	HR1A05	HR1A05-02	Rear	1.8 JQK	5.1	240 JK	0.50 JQK	1.5	27	9.6	56	210	0.15 JK	1.4 JQK	27	<5.0	<2.5	<5.0	39 JK	400
RZ-1a	HR1A05	HR1A05-03	Rear	1.5 JQK	5.3	340 JK	0.53 JQK	1.6	29	10	73	250	0.28 JK	1.0 JQK	20	<5.1	<2.6	2.0 JQK	38 JK	620
RZ-1a	HR1A05	HR1A05-03 (D)	Rear	1.7 JQK	5.2	380	0.53 JQK	2.0	28	11	73	270 JK	0.22 JK	1.0 JQK	20	<5.1	0.63 JQK	0.98 JQK	40	**660**
RZ-1b	HR1B01	HR1B01-01	Front	<2.8	2.9	86 JK	<0.95	0.61 JQK	14	6.9	22	75	0.081 JK	0.47 JQK	11	<4.7	<2.4	<4.7	29 JK	110
RZ-1b	HR1B01	HR1B01-02	Rear	1.2 JQK	3.3	170 JK	<1.0	2.3	22	6.5	45	280	0.14 JK	1.4 JQK	18	<5.2	<2.6	<5.2	27 JK	180
RZ-1b	HR1B01	HR1B01-03	Rear	0.91 JQK	5.0	280 JK	<0.97	2.1	23	7.0	46	300	0.16 JK	0.91 JQK	14	<4.8	<2.4	<4.8	27 JK	400
RZ-1b	HR1B01	HR1B01-03 (D)	Rear	1.4 JQK	5.0	310	<1.0	1.6	27	6.4	44	310	0.15	0.98 JQK	14	<5.2	<2.6	<5.2	24	410
RZ-1b	HR1B02	HR1B02-01	Front	1.0 JQK	4.3	140 JK	<0.94	2.1	25	12	40	170	0.19 JK	0.83 JQK	20	<4.7	<2.3	<4.7	45 JK	250
RZ-1b	HR1B02	HR1B02-02	Rear	1.3 JQK	4.7	210 JK	<0.91	1.1	23	9.9	40	230	0.22 JK	0.85 JQK	17	<4.6	<2.3	<4.6	41 JK	230
RZ-1b	HR1B02	HR1B02-03	Rear	1.2 JQK	7.5	270 JK	<0.96	1.6	25	12	56	190	0.18 JK	0.46 JQK	16	<4.8	<2.4	<4.8	45 JK	440
RZ-1b	HR1B03	HR1B03-01	Front	0.97 JQK	7.2	160 JK	<0.87	**3.7**	51	12	60	140	**0.99**	0.78 JQK	30 JK	<4.4	1.1 JQK	2.0 JQK	45	260 JK
RZ-1b	HR1B03	HR1B03-02	Rear	1.3 JQK	4.8	210 JK	<0.93	1.5	33	9.4	46	240	0.44 JK	0.93 JQK	23 JK	<4.6	0.81 JQK	1.3 JQK	38	280
RZ-1b	HR1B03	HR1B03-03	Rear	1.0 JQK	5.2	170 JK	<0.89	2.1	38	11	43	200	0.35 JK	0.74 JQK	17 JK	<4.4	0.75 JQK	1.6 JQK	42	330
RZ-1b	HR1B04	HR1B04-01	Front	2.3 JQK	**51**	150 JK	<1.1	1.0 JQK	24	12	38	110	0.22 JK	0.86 JQK	19 JK	<5.3	<2.6	2.1 JQK	46	200
RZ-1b	HR1B04	HR1B04-02	Front	1.9 JQK	**64**	160 JK	<0.91	0.80 JQK	26	14	34	67	0.10 JK	0.77 JQK	20 JK	<4.5	<2.3	2.1 JQK	52	140
RZ-1b	HR1B04	HR1B04-03	Front	1.0 JQK	**29**	140 JK	<0.95	0.82 JQK	24	12	31	75	0.11 JK	0.96 JQK	18 JK	<4.7	<2.4	1.4 JQK	51	200
RZ-1b	HR1B05	HR1B05-01	Front	1.2 JQK	6.1	170 JK	<0.93	1.4	27	13	51	210	0.21 JK	1.1 JQK	33 JK	<4.6	<2.3	2.0 JQK	48	290
RZ-1b	HR1B05	HR1B05-02	Front	2.7 JK	5.1	160 JK	<0.75	2.4	27	12	55	180	0.14 JK	1.2 JQK	22 JK	<3.7	<1.9	<3.7	47	290
RZ-1b	HR1B05	HR1B05-03	Rear	2.3 JK	4.9	220 JK	<0.73	**3.5**	27	12	46	200	0.18 JK	0.79 JQK	31 JK	<3.6	<1.8	<3.6	46	290
RZ-1b	HR1B06	HR1B06-01	Rear	0.89 JQK	4.7 JK	200	<0.59	1.3	23	18	68	170	0.15 JK	1.1 JQK	17	<2.9	0.45 JQK	0.68 JQK	29	310
RZ-1b	HR1B06	HR1B06-02	Front	0.32 JQK	2.3 JK	98	<0.77	0.75 JQK	15	5.8	29	67	0.10 JK	0.55 JQK	13	<3.9	<1.9	0.96 JQK	24	170
RZ-1b	HR1B06	HR1B06-03	Front	0.71 JQK	2.6 JK	100	<0.58	1.0 JK	17	6.2	31	100	0.26 JK	0.64 JQK	14	<2.9	<1.4	0.86 JQK	25	180
RZ-1b	HR1B07	HR1B07-01	Front	2.6	9.9 JK	190	<0.64	2.7 JK	34	14	67	140	0.30 JK	2.0	35	0.53 JQK	<1.6	<3.2	50	280
RZ-1b	HR1B07	HR1B07-02	Rear	2.2	8.7 JK	200	<0.69	2.6 JK	31	15	50	130	0.23 JK	0.95 JQK	32	<3.5	<1.7	<3.5	51	270
RZ-1b	HR1B07	HR1B07-03	Rear	3.2	13 JK	210	<1.0	**3.1** JK	35	15	67	150	0.24 JK	1.6 JQK	30	<5.1	<2.6	<5.1	54	380
RZ-1b	HR1B08	HR1B08-01	Front	0.95 JQK	2.3 JQK	120 JK	0.25 JQK	1.8	24	4.8	30	180	0.33 JK	0.72 JQK	16	<5.1	<2.6	<5.1	22 JK	200
RZ-1b	HR1B08	HR1B08-02	Rear	0.93 JQK	5.2	220 JK	0.36 JQK	2.7	38	7.7	51	270	0.20 JK	0.96 JQK	25	<4.7	<2.3	0.57 JQK	31 JK	520
RZ-1b	HR1B08	HR1B08-03	Rear	1.3 JQK	4.2	200 JK	0.38 JQK	1.8	29	7.9	44	200	**0.71** JK	0.72 JQK	17	<4.6	<2.3	<4.6	33 JK	380
RZ-1b	HR1B09	HR1B09-01	Front	0.79 JQK	5.0	140 JK	<0.93	0.70 JQK	23	11	43	86	0.10 JK	0.97 JQK	17 JK	<4.6	<2.3	1.9 JQK	45	220
RZ-1b	HR1B09	HR1B09-02	Rear	1.4 JQK	4.3	170 JK	<0.80	1.3	25	10	46	150	0.16 JK	0.89 JQK	16 JK	<4.0	<2.0	0.89 JQK	40	270
RZ-1b	HR1B09	HR1B09-03	Rear	0.93 JQK	7.5	160 JK	<0.83	0.86	24	11	53	140	0.12 JK	1.1 JQK	17 JK	<4.1	<2.1	1.6 JQK	42	240
RZ-1b	HR1B10	HR1B10-01	Front	0.77 JQK	3.2	110 JK	<0.77	0.71 JQK	21	8.2	33	78	0.10 JK	0.56 JQK	26 JK	<3.8	<1.9	0.82 JQK	34	190
RZ-1b	HR1B10	HR1B10-02	Rear	<2.8	5.5	120 JK	<0.94	1.0	36	7.2	29	110	0.095 JK	0.39 JQK	10 JK	<4.7	<2.3	<4.7	37	190
RZ-1b	HR1B10	HR1B10-03	Rear	0.89 JQK	6.0	190 JK	<0.75	1.6	40	8.0	36	190	0.18 JK	0.60 JQK	13 JK	<3.7	0.75 JQK	0.39 JQK	36	320
RZ-1b	HR1B10	HR1B10-03 (D)	Rear	1.1 JQK	6.9	220	<1.0	2.1	43	8.4	42	240	0.18	0.86 JQK	14	<5.1	<2.6	<5.1	34	410

Sub-RZ	Property	Sample No.	Yard	Analyte																
				Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper	Lead	Mercury	Mo	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc
HRS Soil Screening Benchmark [(1)]				**5.9**	**22**	**459**	**1.3**	**3.1**	**65**	**26**	**142**	**401**	**0.53**	**3.3**	**84**	**9.2**	**4.7**	**3.9**	**107**	**630**
Residential RSL				**31**	**0.68**	**15,000**	**160**	**7.1**	**-- [(2)]**	**23**	**3,100**	**400**	**11**	**390**	**1,500**	**390**	**390**	**0.78**	**390**	**23,000**
	HR1C01	HR1C01-01	Front	1.1 [JQK]	7.6	180 [JK]	<0.99	0.80 [JQK]	32	14	51	150	0.17 [JK]	1.3 [JQK]	23	<4.9	<2.5	<4.9	55 [JK]	260
	HR1C01	HR1C01-02	Rear	2.2 [JQK]	8.3	290 [JK]	<0.87	1.6	44	13	110	**430**	0.14 [JK]	**4.3**	82	<4.3	0.50 [JQK]	<4.3	41 [JK]	460
	HR1C01	HR1C01-03	Rear	1.4 [JQK]	5.9	230 [JK]	<0.98	1.3	32	14	73	200	0.12 [JK]	1.6 [JQK]	35	<4.9	<2.5	<4.9	50 [JK]	400
	HR1C02	HR1C02-01	Front	0.80 [JQK]	5.1	170	0.47 [JQK]	1.2	28	9.0	46	120 [JK]	0.15 [JK]	0.85 [JQK]	20	<5.7	<2.8	0.64 [JQK]	38	200
	HR1C02	HR1C02-01 [(D)]	Front	0.52 [JQK]	5.0	150	0.45 [JQK]	1.2	28	9.0	43	120 [JK]	0.15 [JK]	0.77 [JQK]	20	<5.9	<2.9	1.1 [JQK]	37	200
	HR1C02	HR1C02-02	Front	<3.2	3.9	130	0.36 [JQK]	1.2	23	7.1	42	110 [JK]	0.19 [JK]	0.47 [JQK]	13	<5.4	<2.7	0.73 [JQK]	24	260
	HR1C02	HR1C02-03	Front	0.63 [JQK]	6.3	150	0.45 [JQK]	1.5	30	8.7	50	150 [JK]	0.23 [JK]	0.86 [JQK]	24	<5.3	<2.7	<5.3	36	360
	HR1C03	HR1C03-01	Front	2.3 [JQK]	5.5	160 [JK]	<1.1	2.9	29	13	63	170	0.24 [JK]	1.0 [JQK]	23	<5.4	<2.7	<5.4	50 [JK]	280
	HR1C03	HR1C03-02	Rear	1.7 [JQK]	5.9	200 [JK]	<1.0	1.4	33	14	79	170	0.14 [JK]	1.4 [JQK]	33	<5.2	<2.6	<5.2	52 [JK]	350
	HR1C03	HR1C03-03	Rear	1.2 [JQK]	5.1	190 [JK]	<1.0	1.0	28	13	57	130	0.13 [JK]	0.74 [JQK]	44	<5.1	<2.5	<5.1	50 [JK]	210
	HR1C04	HR1C04-01	Front	0.60 [JQK]	5.5	180 [JK]	<1.0	0.91 [JQK]	19	7.3	34 [JK]	250	0.18	0.45 [JQK]	13	<5.0	<2.5	<5.0	32 [JK]	490
	HR1C04	HR1C04-02	Rear	0.70 [JQK]	5.8	200 [JK]	<1.0	0.77 [JQK]	19	6.9	31 [JK]	230	0.17	0.41 [JQK]	15	<5.0	<2.5	<5.0	29 [JK]	440
RZ-1c	HR1C04	HR1C04-03	Rear	0.97 [JQK]	7.2	130 [JK]	<1.0	0.92 [JQK]	28	8.1	58 [JK]	260	0.16	0.95 [JQK]	16	<5.0	<2.5	<5.0	37 [JK]	300
	HR1C05	HR1C05-01	Front	2.5	4.1	140 [JK]	<0.56	3.0	24	11	70 [JK]	270 [JK]	0.20	1.1	24 [JK]	<2.8	<1.4	<2.8	41 [JK]	270
	HR1C05	HR1C05-02	Rear	0.61 [JQK]	5.3 [JK]	140	<1.0	1.0	22	13	45 [JK]	150 [JK]	0.18	0.91 [JQK]	47 [JK]	<5.0	<2.5	<5.0	46 [JK]	240
	HR1C05	HR1C05-03	Rear	2.6	3.4	140 [JK]	<0.53	**3.9**	24	11	59 [JK]	290 [JK]	0.15	1.1	25 [JK]	<2.7	<1.3	<2.7	40 [JK]	300
	HR1C06	HR1C06-01	Front	0.73 [JQK]	3.4	96 [JK]	<0.98	0.92 [JQK]	24	7.1	36	120	0.18 [JK]	0.50 [JQK]	17	<4.9	<2.5	<4.9	31 [JK]	160
	HR1C06	HR1C06-01 [(D)]	Front	0.70 [JQK]	3.0	94	<0.84	1.3	24	7.1	36	110	0.17 [JK]	0.61 [JQK]	17	<4.2	0.53 [JQK]	1.3 [JQK]	30 [JK]	150
	HR1C06	HR1C06-02	Front	0.96 [JQK]	4.4	110 [JK]	<0.96	2.3	29	7.3	44	150	0.19 [JK]	0.63 [JQK]	28	<4.8	0.61 [JQK]	<4.8	32 [JK]	220
	HR1C06	HR1C06-02 [(D)]	Front	0.63 [JQK]	3.5	100	<0.56	2.1	28	7.2	41	140	0.21 [JK]	0.60 [JQK]	27	<2.8	0.51 [JQK]	1.6 [JQK]	30 [JK]	210
	HR1C06	HR1C06-03	Front	0.99 [JQK]	4.4	130 [JK]	<0.96	1.1	28	8.7	42	150	0.15 [JK]	0.60 [JQK]	18	<4.8	0.58 [JQK]	<4.8	37 [JK]	210
	HR1C06	HR1C06-03 [(D)]	Front	0.76 [JQK]	3.7	170	<0.80	1.4	26	8.0	40	170	0.19 [JK]	0.60 [JQK]	17	<4.0	0.47 [JQK]	1.4 [JQK]	33 [JK]	190
	HR1C07	HR1C07-01	Front	0.82 [JQK]	5.7	**720**	<1.3	2.6	41	14	57	250	0.20	1.4 [JQK]	26 [JK]	<6.4	<3.2	2.1 [JQK]	50	530
	HR1C07	HR1C07-02	Rear	1.8 [JQK]	4.9	210	<1.0	1.6	30	13	55	180	0.24	0.92 [JQK]	22 [JK]	<5.2	<2.6	2.2 [JQK]	48	260
	HR1C07	HR1C07-03	Rear	1.2 [JQK]	4.8	270	<1.0	1.5	29	12	60	190	0.13	1.3 [JQK]	22 [JK]	<5.2	<2.6	1.4 [JQK]	45	280
	HR2A01	HR2A01-01	Rear	1.1 [JQK]	6.1 [JK]	280	<1.1	2.2 [JK]	31	13	**700**	**910**	0.50 [JK]	1.4 [JQK]	34	<5.4	<2.7	1.8 [JQK]	51	490
	HR2A01	HR2A01-02	Rear	0.90 [JQK]	6.3 [JK]	250	<1.2	2.2 [JK]	33	12	60	**740**	0.38 [JK]	1.1 [JQK]	63	<6.1	<3.1	2.0 [JQK]	48	410
	HR2A01	HR2A01-03	Front	0.84 [JQK]	7.6 [JK]	210	<0.89	3.0 [JK]	46	13	74	**440**	**0.58** [JK]	0.98 [JQK]	23	<4.4	0.89 [JQK]	1.9 [JQK]	51	290
	HR2A02	HR2A02-01	Front	0.47 [JQK]	4.2	100 [JK]	<0.97	1.0	34	7.5	23 [JK]	140	0.26 [JK]	0.73 [JQK]	15	<4.8	<2.4	0.69 [JQK]	32 [JK]	180
	HR2A02	HR2A02-02	Rear	1.7 [JQK]	12	200 [JK]	<0.72	2.0	**77**	9.1	43 [JK]	210	0.26 [JK]	2.7	21	<3.6	0.46 [JQK]	1.3 [JQK]	38 [JK]	380
	HR2A02	HR2A02-03	Rear	1.8 [JQK]	10	220 [JK]	<0.92	2.1	62	8.9	42 [JK]	310	0.25 [JK]	1.7 [JQK]	19	<4.6	<2.3	0.98 [JQK]	38 [JK]	450
	HR2A03	HR2A03-01	Front	0.60 [JQK]	3.3	100 [JK]	<1.1	0.71 [JQK]	18	7.9	22 [JK]	76	0.12 [JK]	0.75 [JQK]	16	<5.3	<2.7	1.3 [JQK]	34 [JK]	140
	HR2A03	HR2A03-02	Front	0.36 [JQK]	3.2	100 [JK]	<0.74	0.80	19	8.0	22 [JK]	77	0.097 [JK]	0.77 [JQK]	13	<3.7	<1.8	1.0 [JQK]	34 [JK]	160
	HR2A03	HR2A03-03	Rear	0.40 [JQK]	5.1	120 [JK]	<1.1	0.99 [JQK]	20	8.6	45 [JK]	96	0.15 [JK]	0.89 [JQK]	15	<5.4	<2.7	1.5 [JQK]	37 [JK]	270
	HR2A04	HR2A04-01	Front	0.61 [JQK]	3.0	260	0.36 [JQK]	1.2	23	7.0	38	150 [JK]	0.10 [JK]	1.3 [JQK]	18	<4.8	<2.4	0.58 [JQK]	29	220
	HR2A04	HR2A04-02	Rear	1.1 [JQK]	2.9 [JQK]	130	0.26 [JQK]	1.5	18	5.5	42	270 [JK]	0.21 [JK]	1.1 [JQK]	24	<5.1	<2.5	<5.1	24	370
RZ-2a	HR2A04	HR2A04-02 [(D)]	Rear	1.0 [JQK]	3.2	140	0.30 [JQK]	1.6	19	6.1	42	230 [JK]	**0.55** [JK]	0.67 [JQK]	26	<5.1	<2.5	<5.1	27	370
	HR2A04	HR2A04-03	Rear	1.2 [JQK]	3.0	120	0.31 [JQK]	1.5	20	6.5	44	170 [JK]	0.20 [JK]	0.81 [JQK]	21	<5.0	<2.5	<5.0	27	290
	HR2A05	HR2A05-01	Front	0.81 [JQK]	4.1	130 [JK]	<0.94	0.98	21	9.1	38	150	0.17 [JK]	0.90 [JQK]	27	<4.7	<2.3	<4.7	41 [JK]	320
	HR2A05	HR2A05-02	Front	0.66 [JQK]	3.8	130 [JK]	<0.92	0.66 [JQK]	23	9.7	33	150	0.12 [JK]	0.45 [JQK]	17	<4.6	<2.3	<4.6	47 [JK]	200
	HR2A05	HR2A05-02 [(D)]	Front	0.76 [JQK]	2.5 [JQK]	120	0.38 [JQK]	1.1	20	7.2	31	160 [JK]	0.12 [JK]	0.51 [JQK]	16	<4.6	<2.3	0.47 [JQK]	35	200
	HR2A05	HR2A05-03	Rear	2.1 [JQK]	4.9	260 [JK]	<0.97	1.8	22	7.7	64	**410**	0.19 [JK]	0.76 [JQK]	23	<4.9	0.85 [JQK]	<4.9	36 [JK]	**770**
	HR2A06	HR2A06-01	Front	0.40 [JQK]	2.7 [JK]	120	<0.79	1.1 [JK]	17	6.8	27	160	0.27 [JK]	0.53 [JQK]	14	<4.0	<2.0	0.69 [JQK]	30	230
	HR2A06	HR2A06-02	Front	0.46 [JQK]	2.3 [JQK]	92	<0.83	0.87 [JK]	15	6.5	26	120	0.30 [JK]	0.53 [JQK]	13	<4.2	<2.1	0.84 [JQK]	28	180
	HR2A06	HR2A06-03	Rear	1.5 [JQK]	4.2 [JK]	210	<0.63	2.7 [JK]	22	7.4	34	300	**1.8** [JK]	0.68 [JQK]	24	<3.1	<1.6	0.84 [JQK]	32	520
	HR2A07	HR2A07-01	Front	<3.6	1.9 [JQK]	85 [JK]	<1.2	0.45 [JQK]	16	7.2	16	49	0.12 [JK]	0.33 [JQK]	11	<6.0	<3.0	<6.0	30 [JK]	110
	HR2A07	HR2A07-02	Front	<3.0	2.7 [JQK]	110 [JK]	<1.0	0.61 [JQK]	16	8.2	21	48	0.25 [JK]	0.40 [JQK]	12	<5.1	<2.5	<5.1	33 [JK]	160
	HR2A07	HR2A07-03	Rear	1.9 [JQK]	8.7	250 [JK]	<1.1	1.6	33	11	**320**	360	0.38 [JK]	1.3 [JQK]	23	<5.5	<2.7	<5.5	42 [JK]	**800**
	HR2B01	HR2B01-01	Front	1.1 [JQK]	2.5 [JQK]	120 [JK]	0.26 [JQK]	0.76 [JQK]	17	5.4	33	110	0.11 [JK]	0.68 [JQK]	12	<4.4	<2.2	0.66 [JQK]	27 [JK]	250
	HR2B01	HR2B01-02	Rear	2.2 [JQK]	2.7 [JQK]	120 [JK]	0.33 [JQK]	0.82 [JQK]	16	6.6	22	190	0.17 [JK]	0.22 [JQK]	13	<4.9	<2.5	<4.9	33 [JK]	170
	HR2B01	HR2B01-03	Rear	0.67 [JQK]	3.1	160 [JK]	0.32 [JQK]	0.96 [JQK]	20	6.5	42	190	0.16 [JK]	0.48 [JQK]	19	<4.9	<2.5	<4.9	33 [JK]	330
	HR2B02	HR2B02-01	Front	0.79 [JQK]	3.1	110	<0.93	0.63 [JQK]	16	6.8	28	140	0.25	0.66 [JQK]	14	<4.6	<2.3	<4.6	27	220
	HR2B02	HR2B02-02	Rear	1.9 [JQK]	2.9 [JQK]	170	<1.0	0.66 [JQK]	17	6.6	41	160	0.21	0.77 [JQK]	14	<5.0	<2.5	<5.0	24	350
	HR2B02	HR2B02-03	Rear	0.80 [JQK]	3.3	110	<1.0	0.33 [JQK]	11	5.8	18	92	0.14	0.29 [JQK]	8.3	<5.2	<2.6	<5.2	22	190

Sub-RZ	Property	Sample No.	Yard	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper	Lead	Mercury	Mo	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc
				Analyte																
HRS Soil Screening Benchmark [1]				**5.9**	**22**	**459**	**1.3**	**3.1**	**65**	**26**	**142**	**401**	**0.53**	**3.3**	**84**	**9.2**	**4.7**	**3.9**	**107**	**630**
Residential RSL				**31**	**0.68**	**15,000**	**160**	**7.1**	**-- [2]**	**23**	**3,100**	**400**	**11**	**390**	**1,500**	**390**	**390**	**0.78**	**390**	**23,000**
	HR2B03	HR2B03-01	Front	0.80 [JQK]	4.4	110 [JK]	<0.88	1.0	20	8.0	28	140	0.22 [JK]	0.56 [JQK]	15 [JK]	<4.4	<2.2	1.0 [JQK]	34	240
	HR2B03	HR2B03-02	Rear	0.63 [JQK]	2.4 [JQK]	130 [JK]	<0.83	0.91	18	8.3	29	150	0.31 [JK]	0.47 [JQK]	13 [JK]	<4.1	<2.1	0.63 [JQK]	36	260
	HR2B03	HR2B03-03	Rear	1.1 [JQK]	3.8	170 [JK]	<0.88	1.2	25	9.0	44	200	0.35 [JK]	0.97 [JQK]	22 [JK]	<4.4	0.66 [JQK]	0.45 [JQK]	37	310
	HR2B04	HR2B04-01	Front	1.1 [JQK]	5.3	130	<0.89	0.51 [JQK]	22	8.5	32	180	0.25	1.1 [JQK]	16	<4.4	<2.2	<4.4	37	270
RZ-2b	HR2B04	HR2B04-02	Rear	0.66 [JQK]	4.9	150	<0.95	0.80 [JQK]	20	7.9	38	160	0.15	0.46 [JQK]	17	<4.8	<2.4	<4.8	37	310
	HR2B04	HR2B04-03	Rear	0.73 [JQK]	5.1	230	<0.92	0.82 [JQK]	31	7.8	49	210	0.23	1.4 [JQK]	19	<4.6	<2.3	<4.6	30	360
	HR2B05	HR2B05-01	Front	0.83 [JQK]	3.0	120	<0.94	1.0	27	8.0	34	130	0.25 [JK]	0.87 [JQK]	14	<4.7	<2.4	<4.7	36	210
	HR2B05	HR2B05-02	Rear	0.45 [JQK]	3.3	130	<0.90	1.0	26	8.1	34	150	0.23 [JK]	0.60 [JQK]	16	<4.5	<2.2	<4.5	38	270
	HR2B05	HR2B05-03	Rear	0.79 [JQK]	3.6	150	<0.91	1.5	26	7.5	37	240	0.31 [JK]	0.68 [JQK]	17	<4.6	0.52 [JQK]	<4.6	35	370
	HR2B06	HR2B06-01	Rear	1.2 [JQK]	2.8 [JK]	240	<0.88	1.4 [JK]	27	9.5	45	250	0.49 [JK]	0.62 [JQK]	17	<4.4	<2.2	1.0 [JQK]	35	370
	HR2B06	HR2B06-02	Rear	1.1 [JQK]	3.0 [JK]	190	<0.71	1.7 [JK]	26	8.3	42	240	**0.55** [JK]	0.62 [JQK]	17	<3.6	<1.8	1.0 [JQK]	31	380
	HR2B06	HR2B06-03	Front	0.63 [JQK]	3.1 [JK]	110	<0.73	1.2 [JK]	21	7.2	25	76	0.43 [JK]	0.45 [JQK]	14	<3.6	0.53 [JQK]	0.66 [JQK]	30	190
	HR2B07	HR2B07-01	Front	0.37 [JQK]	2.5 [JK]	100	<0.68	0.59 [JQK]	18	6.4	30	69	0.14 [JK]	0.54 [JQK]	15	<3.4	0.69 [JQK]	1.3 [JQK]	25	130
	HR2B07	HR2B07-02	Front	0.52 [JQK]	2.8 [JK]	120	<0.89	0.86 [JQK]	20	6.1	44	75	0.25 [JK]	0.77 [JQK]	14	<4.4	0.92 [JQK]	1.1 [JQK]	24	180
	HR2B07	HR2B07-03	Rear	4.0	6.5 [JK]	140	<0.59	1.2 [JK]	20	6.9	47	380	0.15 [JK]	0.78 [JQK]	13	<2.9	0.38 [JQK]	1.2 [JQK]	26	310
	HR2C01	HR2C01-01	Front	0.33 [JQK]	3.9	110 [JK]	<1.1	0.55 [JQK]	21	8.1	33	84	0.24 [JK]	0.47 [JQK]	19	<5.6	<2.8	<5.6	33 [JK]	180
	HR2C01	HR2C01-02	Rear	1.2 [JQK]	12	210 [JK]	<0.90	1.1	29	11	57	180	0.27 [JK]	0.67 [JQK]	18	<4.5	0.80 [JQK]	<4.5	42 [JK]	350
	HR2C01	HR2C01-03	Rear	1.0 [JQK]	16	170 [JK]	<1.0	1.3	28	10	47	150	0.27 [JK]	0.59 [JQK]	25	<5.0	1.1 [JQK]	<5.0	39 [JK]	290
	HR2C02	HR2C02-01	Front	0.62 [JQK]	9.6	130	<1.0	0.99 [JQK]	17	7.9	35	250	0.15 [JK]	0.79 [JQK]	14	<5.2	<2.6	<5.2	29	220
	HR2C02	HR2C02-02	Front	0.64 [JQK]	9.5	150	<1.0	0.62 [JQK]	17	8.5	32	190	0.21 [JK]	0.73 [JQK]	15	<5.2	<2.6	<5.2	31	260
	HR2C02	HR2C02-03	Front	0.65 [JQK]	4.2	120	<1.1	0.63 [JQK]	16	7.3	31	140	0.27 [JK]	0.72 [JQK]	14	<5.3	<2.6	<5.3	29	190
	HR2C03	HR2C03-01	Front	0.54 [JQK]	3.3	110 [JK]	0.37 [JQK]	0.78 [JQK]	19	7.2	32	120	0.12 [JK]	0.68 [JQK]	18	<5.0	<2.5	<5.0	35 [JK]	190
	HR2C03	HR2C03-02	Rear	0.56 [JQK]	3.5	110 [JK]	0.33 [JQK]	0.73 [JQK]	18	6.6	26	89	0.12 [JK]	0.49 [JQK]	12	<4.5	<2.2	<4.5	32 [JK]	160
	HR2C03	HR2C03-03	Rear	0.73 [JQK]	3.1	140 [JK]	0.41 [JQK]	0.96 [JQK]	20	7.8	34	130	0.081 [JK]	0.71 [JQK]	14	<5.0	<2.5	1.9 [JQK]	35 [JK]	240
	HR2C04	HR2C04-01	Front	0.76 [JQK]	2.5 [JQK]	100 [JK]	<0.94	0.57 [JQK]	17	6.7	38	74	0.16 [JK]	0.59 [JQK]	11	<4.7	0.64 [JQK]	<4.7	28 [JK]	170
	HR2C04	HR2C04-01 [(D)]	Front	0.45 [JQK]	2.3 [JQK]	110	0.30 [JQK]	0.96	17	5.8	39	85 [JK]	0.18 [JK]	0.68 [JQK]	12	<4.7	0.53 [JQK]	1.2 [JQK]	25	180
RZ-2c	HR2C04	HR2C04-02	Rear	0.81 [JQK]	3.8	140 [JK]	<0.93	0.92 [JQK]	20	7.4	41	130	0.27 [JK]	0.61 [JQK]	14	<4.6	<2.3	<4.6	31 [JK]	260
	HR2C04	HR2C04-03	Rear	0.96 [JQK]	3.1	140	<0.79	1.5	21	7.4	44	130	0.14 [JK]	0.82 [JQK]	18	<3.9	0.60 [JQK]	1.9 [JQK]	30 [JK]	260
	HR2C05	HR2C05-01	Front	1.0 [JQK]	13	110 [JK]	<1.2	1.7	28	8.5	45	130	0.22 [JK]	0.46 [JQK]	16	<5.9	<3.0	<5.9	40 [JK]	180
	HR2C05	HR2C05-02	Rear	0.77 [JQK]	**23**	120 [JK]	<1.2	2.0	21	8.1	40	120	0.40 [JK]	0.47 [JQK]	13	<6.1	<3.0	<6.1	37 [JK]	290
	HR2C05	HR2C05-03	Rear	0.61 [JQK]	3.4	110 [JK]	<0.93	0.98	23	8.3	34 [JK]	120 [JK]	0.16	0.43 [JQK]	13	<4.6	<2.3	<4.6	40 [JK]	230
	HR2C05	HR2C05-03 [(D)]	Rear	0.65 [JQK]	3.3	110	<0.99	0.91 [JQK]	23	8.0	32	110	0.14	0.41 [JQK]	13	<5.0	<2.5	<5.0	38	220
	HR2C06	HR2C06-01	Front	0.64 [JQK]	2.6 [JQK]	120 [JK]	<1.1	1.1	22	8.1	43 [JK]	120	0.26 [JK]	1.3 [JQK]	26	<5.3	<2.6	1.3 [JQK]	35 [JK]	220
	HR2C06	HR2C06-02	Rear	1.2 [JQK]	7.1	350 [JK]	<1.0	**3.1**	34	9.6	68 [JK]	**550**	0.19 [JK]	1.2 [JQK]	25	<5.2	0.61 [JQK]	1.1 [JQK]	39 [JK]	**680**
	HR2C06	HR2C06-03	Rear	1.1 [JQK]	6.0	300 [JK]	<0.91	2.1	31	11	55 [JK]	**430**	0.15 [JK]	0.91 [JQK]	17	<4.6	0.64 [JQK]	1.1 [JQK]	44 [JK]	500
	HR2C07	HR2C07-01	Front	0.76 [JQK]	9.1	140 [JK]	<1.1	1.6	33	9.4	42 [JK]	230 [JK]	0.23	0.72 [JQK]	20	<5.6	<2.8	<5.6	36 [JK]	250
	HR2C07	HR2C07-02	Rear	0.56 [JQK]	9.0	150 [JK]	<1.0	1.2	29	9.1	39 [JK]	160 [JK]	0.26	0.58 [JQK]	15	<5.0	0.58 [JQK]	<5.0	35 [JK]	240
	HR2C07	HR2C07-03	Rear	0.52 [JQK]	7.5	130 [JK]	<0.97	1.2	29	9.7	41 [JK]	98 [JK]	0.28	0.54 [JQK]	14	<4.8	<2.4	<4.8	37 [JK]	210
	HR3A01	HR3A01-01	Side	1.3 [JQK]	4.9 [JK]	130	<0.53	1.9 [JK]	20	9.5	34	84	0.11 [JK]	0.47 [JQK]	29	<2.7	<1.3	<2.7	39	290
	HR3A01	HR3A01-02	Rear	0.61 [JQK]	6.1 [JK]	110 [JK]	<0.95	1.3	22 [JK]	9.1 [JK]	28 [JK]	90	0.078 [JK]	0.47 [JQK]	16 [JK]	0.48 [JQK]	<2.4	1.2 [JQK]	39 [JK]	330
	HR3A01	HR3A01-03	Front	0.83 [JQK]	6.2 [JK]	110 [JK]	<1.0	1.2	22 [JK]	9.5 [JK]	33 [JK]	93	0.12 [JK]	0.81 [JQK]	17 [JK]	0.71 [JQK]	<2.5	1.2 [JQK]	40 [JK]	340
	HR3A02	HR3A02-01	Rear	0.95 [JQK]	7.9 [JK]	180 [JK]	<1.0	1.2	24 [JK]	9.1 [JK]	41 [JK]	290	0.21 [JK]	0.86 [JQK]	17 [JK]	0.53 [JQK]	<2.5	1.5 [JQK]	39 [JK]	280
	HR3A02	HR3A02-02	Side	0.79 [JQK]	11 [JK]	140 [JK]	<0.96	1.7	24 [JK]	9.0 [JK]	40 [JK]	310	0.23 [JK]	0.73 [JQK]	50 [JK]	0.54 [JQK]	0.54 [JQK]	1.6 [JQK]	39 [JK]	300
	HR3A02	HR3A02-03	Front	0.58 [JQK]	4.8 [JK]	140 [JK]	<1.1	0.97 [JQK]	23 [JK]	8.7 [JK]	37 [JK]	150	0.28 [JK]	0.83 [JQK]	22 [JK]	0.55 [JQK]	1.0 [JQK]	1.3 [JQK]	38 [JK]	250
	HR3A03	HR3A03-01	Front	1.0 [JQK]	3.2 [JK]	150 [JK]	<1.1	0.80 [JQK]	19 [JK]	8.1 [JK]	38 [JK]	110	0.21 [JK]	0.70 [JQK]	15 [JK]	<5.4	<2.7	0.89 [JQK]	37 [JK]	180
RZ-3a	HR3A03	HR3A03-02	Rear	1.1 [JQK]	4.5 [JK]	220 [JK]	<0.91	1.1	46 [JK]	8.5 [JK]	47 [JK]	**530**	**0.61** [JK]	**4.1**	23 [JK]	0.89 [JQK]	1.2 [JQK]	1.4 [JQK]	36 [JK]	340
	HR3A03	HR3A03-03	Rear	1.3 [JQK]	4.9 [JK]	280 [JK]	<0.90	1.1	19 [JK]	8.1 [JK]	40 [JK]	**720**	0.33 [JK]	0.48 [JQK]	32 [JK]	1.2 [JQK]	0.89 [JQK]	1.3 [JQK]	37 [JK]	440
	HR3A04	HR3A04-01	Rear	0.53 [JQK]	4.6 [JK]	110 [JK]	<0.97	0.65 [JQK]	16 [JK]	6.6 [JK]	27 [JK]	96	0.27 [JK]	0.62 [JQK]	17 [JK]	<4.8	0.54 [JQK]	<4.8	37 [JK]	190
	HR3A04	HR3A04-02	Rear	0.74 [JQK]	4.2 [JK]	100 [JK]	<0.94	0.63 [JQK]	17 [JK]	7.2 [JK]	29 [JK]	130	**1.3** [JK]	0.44 [JQK]	20 [JK]	0.61 [JQK]	<2.3	0.47 [JQK]	39 [JK]	180
	HR3A04	HR3A04-03	Front	0.73 [JQK]	3.4 [JK]	120 [JK]	<0.95	0.68 [JQK]	17 [JK]	6.6 [JK]	35 [JK]	110	0.41 [JK]	0.57 [JQK]	20 [JK]	0.71 [JQK]	<2.4	1.0 [JQK]	31 [JK]	200
	HR3A05	HR3A05-01	Rear	1.2 [JQK]	5.0 [JK]	220 [JK]	<0.93	0.88 [JQK]	18 [JK]	7.4 [JK]	32 [JK]	140	0.21 [JK]	0.45 [JQK]	12 [JK]	<4.7	<2.3	0.60 [JQK]	37 [JK]	340
	HR3A05	HR3A05-02	Front	0.95 [JQK]	4.0 [JK]	130 [JK]	<1.0	0.78 [JQK]	19 [JK]	8.2 [JK]	31 [JK]	140	0.26 [JK]	0.64 [JQK]	20 [JK]	0.47 [JQK]	<2.6	0.65 [JQK]	40 [JK]	210
	HR3A05	HR3A05-03	Front	0.39 [JQK]	2.3 [JQK]	96 [JK]	<0.92	0.45 [JQK]	14 [JK]	6.4 [JK]	21 [JK]	78	0.34 [JK]	0.34 [JQK]	11 [JK]	0.37 [JQK]	<2.3	0.77 [JQK]	32 [JK]	140

Sub-RZ	Property	Sample No.	Yard	Analyte																
				Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper	Lead	Mercury	Mo	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc
HRS Soil Screening Benchmark [(1)]				5.9	22	459	1.3	3.1	65	26	142	401	0.53	3.3	84	9.2	4.7	3.9	107	630
Residential RSL				31	0.68	15,000	160	7.1	-- [(2)]	23	3,100	400	11	390	1,500	390	390	0.78	390	23,000
RZ-3b	HR3B01	HR3B01-01	Front	0.54 [JQK]	2.5	140 [JK]	<0.81	0.76 [JQK]	19	8.8	26 [JK]	95	0.099 [JK]	0.48 [JQK]	19	<4.1	<2.0	0.57 [JQK]	40 [JK]	160
	HR3B01	HR3B01-02	Rear	1.1 [JQK]	7.3	280 [JK]	<0.77	1.9	28	10	57 [JK]	290	0.31 [JK]	0.73 [JQK]	16	<3.9	0.65 [JQK]	<3.9	48 [JK]	320
	HR3B01	HR3B01-03	Rear	1.9	4.9	190 [JK]	<0.64	1.3	25	8.2	55 [JK]	200	0.19 [JK]	0.72 [JQK]	15	<3.2	0.57 [JQK]	0.45 [JQK]	41 [JK]	260
	HR3B02	HR3B02-01	Front	0.54 [JQK]	3.0	110 [JK]	<0.91	0.75 [JQK]	21	11	27 [JK]	110	0.080 [JK]	0.65 [JQK]	17	<4.5	<2.3	0.92 [JQK]	48 [JK]	150
	HR3B02	HR3B02-01 [(D)]	Front	0.92 [JQK]	3.6	110	<0.98	0.33 [JQK]	20	10	26	98	0.17	0.93 [JQK]	16	<4.9	<2.5	<4.9	45	140
	HR3B02	HR3B02-02	Rear	1.8 [JQK]	2.7	240 [JK]	<0.92	1.2	20	8.5	31 [JK]	150	0.15 [JK]	0.49 [JQK]	13	<4.6	<2.3	1.1 [JQK]	36 [JK]	340
	HR3B02	HR3B02-03	Rear	1.2 [JQK]	3.5	260 [JK]	<1.0	1.2	21	8.9	37 [JK]	180	0.10 [JK]	0.61 [JQK]	16	<5.2	<2.6	1.1 [JQK]	38 [JK]	310
	HR3B03	HR3B03-01	Front	0.56 [JQK]	2.9 [JQK]	110	<1.2	0.63 [JQK]	17	8.7	24	64	0.13 [JK]	0.60 [JQK]	13	<6.0	<3.0	1.4 [JQK]	38 [JK]	130
	HR3B03	HR3B03-02	Rear	0.59 [JQK]	2.9	120	<0.85	0.89	21	10	27	84	0.13 [JK]	0.50 [JQK]	45	<4.2	<2.1	0.74 [JQK]	42 [JK]	150
	HR3B03	HR3B03-03	Rear	0.92 [JQK]	3.0	170	<0.93	1.5	21	9.3	41	160	0.24 [JK]	0.73 [JQK]	16	<4.7	<2.3	1.7 [JQK]	38 [JK]	280
	HR3B04	HR3B04-01	Front	0.69 [JQK]	3.2 [JQK]	140	<1.1	0.99 [JQK]	21	9.6	30	100	0.23 [JK]	0.53 [JQK]	21	<5.5	<2.8	1.4 [JQK]	39 [JK]	190
	HR3B04	HR3B04-02	Rear	1.2 [JQK]	5.0	160	<1.0	1.2	22	9.0	39	140	0.30 [JK]	0.63 [JQK]	15	<5.2	<2.6	1.2 [JQK]	38 [JK]	250
	HR3B04	HR3B04-03	Rear	0.85 [JQK]	4.0	190	<1.1	1.1	23	9.2	33	120	0.16 [JK]	0.65 [JQK]	20	<5.7	<2.8	0.90 [JQK]	39 [JK]	260
	HR3B05	HR3B05-01	Front	0.80 [JQK]	3.1	140	<0.88	0.88	22	8.8	34	130	0.33 [JK]	0.58 [JQK]	20	<4.4	0.51 [JQK]	1.3 [JQK]	40 [JK]	290
	HR3B05	HR3B05-02	Rear	1.5 [JQK]	5.5	310	<0.90	1.8	26	9.5	48	**850**	0.23 [JK]	0.80 [JQK]	19	<4.5	0.82 [JQK]	1.7 [JQK]	41 [JK]	**630**
	HR3B05	HR3B05-03	Rear	1.0 [JQK]	3.3	210	<0.90	1.1	24	9.8	40	330	0.22 [JK]	0.67 [JQK]	15	<4.5	0.70 [JQK]	2.7 [JQK]	40 [JK]	440
	HR3B06	HR3B06-01	Front	0.36 [JQK]	2.2	110 [JK]	<0.64	0.80	19	8.1	26 [JK]	95	0.11 [JK]	0.37 [JQK]	14	<3.2	<1.6	0.72 [JQK]	37 [JK]	150
	HR3B06	HR3B06-01 [(D)]	Front	0.67 [JQK]	2.3	100	<0.73	0.74	18	7.7	25	86	0.16 [JK]	0.32 [JQK]	13	<3.7	<1.8	1.1 [JQK]	34 [JK]	140
	HR3B06	HR3B06-02	Rear	1.1 [JQK]	2.8 [JQK]	200 [JK]	<0.97	1.4	19	8.6	35 [JK]	270	0.15 [JK]	0.63 [JQK]	24	<4.9	0.63 [JQK]	0.70 [JQK]	36 [JK]	400
	HR3B06	HR3B06-03	Rear	1.3 [JQK]	2.1	150 [JK]	<0.62	1.2	16	7.6	32 [JK]	180	0.19 [JK]	0.43 [JQK]	14	<3.1	<1.5	0.73 [JQK]	33 [JK]	290
	HR3B07	HR3B07-01	Front	0.82 [JQK]	5.5	100 [JK]	<1.1	0.98 [JQK]	23	7.9	32 [JK]	92 [JK]	0.17	0.40 [JQK]	23	<5.3	<2.6	<5.3	34 [JK]	150
	HR3B07	HR3B07-02	Rear	1.2 [JQK]	4.9	180 [JK]	<0.99	1.8	22	8.5	45 [JK]	200 [JK]	0.27	0.92 [JQK]	18	<5.0	0.61 [JQK]	<5.0	33 [JK]	380
	HR3B07	HR3B07-03	Front	1.5 [JQK]	3.5 [JQK]	260 [JK]	<1.2	1.1 [JQK]	24	8.1	36 [JK]	210 [JK]	0.15	0.54 [JQK]	14	<6.2	<3.1	<6.2	33 [JK]	280
	HR3B08	HR3B08-01	Front	0.67 [JQK]	5.2	150 [JK]	0.34 [JQK]	2.5	**100**	7.0	46	160	0.31 [JK]	0.83 [JQK]	20	<5.3	<2.6	1.1 [JQK]	34 [JK]	280
	HR3B08	HR3B08-02	Rear	0.64 [JQK]	6.3	190 [JK]	0.40 [JQK]	1.6	45	6.9	41	280	0.31 [JK]	0.53 [JQK]	15	<5.1	<2.6	<5.1	34 [JK]	290
	HR3B08	HR3B08-03	Rear	0.88 [JQK]	8.5	240 [JK]	0.35 [JQK]	2.0	46	7.1	51	370	0.21 [JK]	0.43 [JQK]	18	<5.0	<2.5	0.68 [JQK]	34 [JK]	430
RZ-3c	HR3C01	HR3C01-01	Front	0.95 [JQK]	3.0	130 [JK]	<0.78	0.59 [JQK]	24	10	34 [JK]	130 [JK]	0.18	0.87 [JQK]	28 [JK]	<3.9	<2.0	<3.9	39 [JK]	160
	HR3C01	HR3C01-02	Rear	1.1 [JQK]	3.9	130 [JK]	<0.74	1.1	24	9.4	46 [JK]	160 [JK]	0.35	0.92 [JQK]	18 [JK]	<3.7	<1.9	<3.7	39 [JK]	260
	HR3C01	HR3C01-03	Rear	1.6 [JQK]	2.2	110 [JK]	<0.57	1.7	18	9.3	33 [JK]	83 [JK]	0.12	0.46 [JQK]	13 [JK]	<2.9	<1.4	<2.9	37 [JK]	180
	HR3C01	HR3C01-03 [(D)]	Rear	0.68 [JQK]	2.6 [JQK]	130 [JK]	<1.0	0.35 [JQK]	19	9.5 [JK]	36 [JK]	97 [JK]	0.10 [JK]	0.56 [JQK]	15 [JK]	<5.0	<2.5	<5.0	36 [JK]	200 [JK]
	HR3C02	HR3C02-01	Front	0.63 [JQK]	4.2	96	<0.94	0.87 [JQK]	17	8.1	25	72	0.12 [JK]	0.41 [JQK]	17	<4.7	<2.3	1.2 [JQK]	38 [JK]	200
	HR3C02	HR3C02-01 [(D)]	Front	0.69 [JQK]	3.8	94	0.31 [JQK]	0.85 [JQK]	16	6.1	26	78 [JK]	0.10 [JK]	0.48 [JQK]	24	<5.4	<2.7	<5.4	32	200
	HR3C02	HR3C02-02	Rear	0.69 [JQK]	2.5 [JQK]	120	<0.99	0.98 [JQK]	24	10	34	110	0.29 [JK]	0.52 [JQK]	22	<4.9	<2.5	1.0 [JQK]	44 [JK]	210
	HR3C02	HR3C02-03	Rear	1.1 [JQK]	5.1	130	<0.93	1.4	25	9.5	34	180	0.19 [JK]	0.55 [JQK]	14	<4.6	<2.3	1.4 [JQK]	40 [JK]	290
	HR3C03	HR3C03-01	Front	1.1 [JQK]	2.5 [JQK]	120 [JK]	0.33 [JQK]	0.62 [JQK]	35	6.3	24	88	0.11 [JK]	0.40 [JQK]	13	<5.2	<2.6	0.72 [JQK]	31 [JK]	160
	HR3C03	HR3C03-02	Rear	5.1	4.7	210 [JK]	0.34 [JQK]	0.57 [JQK]	53	6.7	43	280	0.42 [JK]	1.0 [JQK]	20	<4.9	<2.5	1.2 [JQK]	34 [JK]	210
	HR3C03	HR3C03-03	Rear	1.0 [JQK]	4.1	150 [JK]	0.38 [JQK]	1.9	20	7.7	37	110	0.14 [JK]	0.52 [JQK]	15	<4.4	<2.2	0.84 [JQK]	32 [JK]	460
	HR3C03	HR3C03-03 [(D)]	Rear	0.92 [JQK]	3.8	150	0.43 [JQK]	2.1	21	7.9	38	110 [JK]	0.19 [JK]	0.62 [JQK]	16	<4.8	<2.4	1.5 [JQK]	34	460
	HR3C04	HR3C04-01	Front	0.80 [JQK]	2.5 [JQK]	110	0.32 [JQK]	1.3	21	6.0	30	97 [JK]	0.13 [JK]	0.54 [JQK]	16	<4.6	<2.3	0.89 [JQK]	29	160
	HR3C04	HR3C04-02	Rear	0.76 [JQK]	8.7	140	0.40 [JQK]	1.1	19	7.3	33	120 [JK]	0.096 [JK]	0.81 [JQK]	16	<4.8	<2.4	0.81 [JQK]	33	240
	HR3C04	HR3C04-03	Rear	0.76 [JQK]	3.5	120	0.32 [JQK]	1.5	18	6.2	29	110 [JK]	0.14 [JK]	0.72 [JQK]	17	<4.8	<2.4	0.57 [JQK]	29	210
	HR3C05	HR3C05-01	Front	0.80 [JQK]	3.2	150 [JK]	<1.0	0.84 [JQK]	22	9.1	34 [JK]	170	0.18	0.66 [JQK]	15	<5.0	<2.5	<5.0	35 [JK]	250
	HR3C05	HR3C05-02	Rear	0.57 [JQK]	2.7 [JQK]	200 [JK]	<1.1	1.2	21	7.8	30 [JK]	330	**1.2**	0.72 [JQK]	13	<5.3	<2.6	<5.3	29 [JK]	360
	HR3C05	HR3C05-03	Rear	0.85 [JQK]	2.5 [JQK]	140 [JK]	<1.0	0.77 [JQK]	19	8.5	27 [JK]	140	0.20	0.51 [JQK]	14	<5.0	<2.5	<5.0	32 [JK]	200
	HR3C05	HR3C05-03 [(D)]	Rear	0.70 [JQK]	2.3 [JQK]	130	<1.1	0.71 [JQK]	19	9.0	28	140	0.20	0.58 [JQK]	19	<5.4	<2.7	<5.4	31	200
	HR3C07	HR3C07-01	Front	0.36 [JQK]	2.6	97 [JK]	<0.69	0.70	18	8.5	27 [JK]	44	0.093 [JK]	0.62 [JQK]	17	<3.5	<1.7	1.2 [JQK]	35 [JK]	110
	HR3C07	HR3C07-02	Front	0.48 [JQK]	3.1	110 [JK]	<0.67	0.78	20	9.5	30 [JK]	44	0.13 [JK]	0.77 [JQK]	16	<3.3	<1.7	1.3 [JQK]	41 [JK]	110
	HR3C07	HR3C07-03	Front	0.32 [JQK]	2.9	94 [JK]	<0.67	0.69	17	8.3	26 [JK]	44	0.088 [JK]	0.50 [JQK]	23	<3.3	<1.7	1.2 [JQK]	35 [JK]	100
	HR3C08	HR3C08-01	Front	0.71 [JQK]	2.9	130	<0.71	1.1	22	9.2	35	98	0.20 [JK]	0.82 [JQK]	16	<3.6	<1.8	1.4 [JQK]	37 [JK]	200
	HR3C08	HR3C08-02	Front	0.94 [JQK]	2.9	120	<0.85	1.3	22	9.5	35	130	0.16 [JK]	0.83 [JQK]	17	<4.3	<2.1	1.9 [JQK]	38 [JK]	230
	HR3C08	HR3C08-03	Rear	1.5 [JQK]	4.4	330	<0.74	2.1	21	8.2	58	310	0.37 [JK]	0.96 [JQK]	16	<3.7	0.54 [JQK]	2.1 [JQK]	33 [JK]	470

Sub-RZ	Property	Sample No.	Yard	Analyte																
				Antimony	**Arsenic**	**Barium**	**Beryllium**	**Cadmium**	**Chromium**	**Cobalt**	**Copper**	**Lead**	**Mercury**	**Mo**	**Nickel**	**Selenium**	**Silver**	**Thallium**	**Vanadium**	**Zinc**
HRS Soil Screening Benchmark (1)				**5.9**	**22**	**459**	**1.3**	**3.1**	**65**	**26**	**142**	**401**	**0.53**	**3.3**	**84**	**9.2**	**4.7**	**3.9**	**107**	**630**
Residential RSL				**31**	**0.68**	**15,000**	**160**	**7.1**	**-- (2)**	**23**	**3,100**	**400**	**11**	**390**	**1,500**	**390**	**390**	**0.78**	**390**	**23,000**
RZ-4a	HR4A01	HR4A01-01	Front	0.49 JQK	2.0 JQK	92	<1.1	0.29 JQK	12	5.8	25	59	0.079 JK	0.35 JQK	10	<5.3	<2.6	<5.3	24	160
RZ-4a	HR4A01	HR4A01-02	Rear	4.5 JK	2.0 JQK	120	<1.0	0.69 JQK	13	5.4	33	120	0.091 JK	0.84 JQK	11	<5.1	<2.5	<5.1	22	270
RZ-4a	HR4A01	HR4A01-03	Rear	0.99 JQK	1.7 JQK	120	<1.0	0.49 JQK	11	4.3	37	120	0.057 JK	0.74 JQK	8.5	<5.2	<2.6	<5.2	19	210
RZ-4a	HR4A02	HR4A02-01	Front	1.0 JQK	3.5	150	<0.96	0.19 JQK	22	11	27	76 JK	0.056 JK	0.80 JQK	25 JK	<4.8	<2.4	<4.8	42	170
RZ-4a	HR4A02	HR4A02-02	Front	1.1 JQK	3.3	120	<0.99	0.40 JQK	18	7.9	24	92 JK	0.055 JK	0.71 JQK	17 JK	<5.0	<2.5	<5.0	32	210
RZ-4a	HR4A02	HR4A02-02 (D)	Front	1.0 JQK	3.1	130	<0.91	0.42 JQK	18	8.1	23	90 JK	0.053 JK	0.46 JQK	15 JK	<4.5	<2.3	<4.5	32	210
RZ-4a	HR4A02	HR4A02-03	Front	1.3 JQK	3.9	120	<0.93	0.24 JQK	19	9.1	22	97 JK	0.043 JK	0.42 JQK	14 JK	<4.6	<2.3	<4.6	37	200
RZ-4a	HR4A03	HR4A03-01	Front	0.42 JQK	4.4	130 JK	<1.0	0.72 JQK	18	6.1	30	72	0.093 JH	0.83 JQK	14	<5.2	<2.6	<5.2	28	180
RZ-4a	HR4A03	HR4A03-02	Front	0.89 JQK	5.8	140 JK	<0.99	0.69 JQK	17	6.3	26	95	0.16 JH	0.56 JQK	13	<5.0	<2.5	<5.0	29	190
RZ-4a	HR4A03	HR4A03-03	Rear	3.4	3.9	190 JK	<1.0	1.7 JK	22	7.0	50	280	0.10 JH	0.73 JQK	19	<5.0	<2.5	<5.0	36	430
RZ-4a	HR4A04	HR4A04-01	Front	0.51 JQK	7.4	100 JK	<0.96	0.53 JQK	26	8.1	29	38	0.093 JH	1.6 JQK	23	<4.8	<2.4	<4.8	44	130
RZ-4a	HR4A04	HR4A04-02	Rear	1.6 JQK	7.7	150 JK	<1.0	0.53 JQK	29	12	**470**	180	0.14 JH	0.86 JQK	20	<5.0	3.3	<5.0	51	310
RZ-4a	HR4A04	HR4A04-03	Rear	0.92 JQK	8.1	150 JK	<0.94	0.75 JQK	30	14	40	100	0.17 JH	1.3 JQK	33	<4.7	<2.4	<4.7	51	180
RZ-4a	HR4A06	HR4A06-01	Front	0.50 JQK	4.5	110 JK	<0.71	0.74	18	8.9	32 JK	95 JK	0.072	0.72 JQK	19 JK	<3.6	<1.8	<3.6	35 JK	220
RZ-4a	HR4A06	HR4A06-01 (D)	Front	0.28 JQK	5.1 JK	120 JK	<1.0	0.51 JQK	18	8.5 JK	29 JK	86 JK	0.096 JK	0.62 JQK	15 JK	<5.1	<2.5	<5.1	33 JK	220 JK
RZ-4a	HR4A06	HR4A06-02	Front	1.0 JQK	7.2	110 JK	<0.70	0.95	19	9.2	32 JK	110 JK	0.084	0.74 JQK	22 JK	<3.5	<1.7	<3.5	35 JK	220
RZ-4a	HR4A06	HR4A06-03	Rear	1.1 JQK	4.1	150 JK	<0.58	1.4	20	8.5	44 JK	140 JK	0.19	0.77 JQK	20 JK	<2.9	<1.4	<2.9	34 JK	320
RZ-4a	HR4A07	HR4A07-01	Front	0.59 JQK	2.5 JQK	120	<1.1	0.66 JQK	19	6.1	27	110 JK	0.16 JK	0.43 JQK	11 JK	<5.7	<2.9	<5.7	28	180
RZ-4a	HR4A07	HR4A07-02	Front	0.58 JQK	2.1 JQK	120	<1.1	1.2	21	5.8	23	130 JK	0.20 JK	0.28 JQK	10 JK	<5.5	0.94 JQK	<5.5	26	180
RZ-4a	HR4A07	HR4A07-03	Front	0.54 JQK	2.5 JQK	140	<1.2	0.99 JQK	30	7.4	30	140 JK	0.13 JK	2.0 JQK	19 JK	<5.8	1.0 JQK	<5.8	33	190
RZ-4a	HR4A08	HR4A08-01	Front	0.40 JQK	6.5	120	<0.94	0.61 JQK	15	8.1	30	140	0.088 JK	0.71 JQK	16	<4.7	<2.4	<4.7	28	430
RZ-4a	HR4A08	HR4A08-01 (D)	Front	0.54 JQK	6.4	130	<1.0	0.65 JQK	16	8.3	32	130	0.11 JK	0.81 JQK	17	<5.1	<2.6	<5.1	29	430
RZ-4a	HR4A08	HR4A08-02	Front	0.72 JQK	4.0	140	<1.0	0.46 JQK	20	7.8	28	140	0.092 JK	0.56 JQK	15	<5.1	<2.6	<5.1	26	220
RZ-4a	HR4A08	HR4A08-03	Front	0.62 JQK	3.6	120	<0.90	0.42 JQK	14	7.1	31	130	0.10 JK	0.66 JQK	22	<4.5	<2.3	<4.5	26	200
RZ-4b	HR4B01	HR4B01-01	Front	0.80 JQK	4.1	160	<1.2	0.61 JQK	22	10	37	140 JK	0.13 JK	0.78 JQK	19 JK	<6.0	<3.0	<6.0	38	230
RZ-4b	HR4B01	HR4B01-02	Side	1.3 JQK	5.6	190	<0.98	1.0	24	12	44	160 JK	0.11 JK	1.3 JQK	21 JK	<4.9	<2.4	<4.9	44	440
RZ-4b	HR4B01	HR4B01-03	Side	1.4 JQK	4.6	180	<1.0	0.85 JQK	23	10	48	150 JK	0.15 JK	1.4 JQK	22 JK	<5.0	<2.5	<5.0	39	340
RZ-4b	HR4B02	HR4B02-01	Front	0.80 JQK	3.6	150	<1.0	0.69 JQK	20	7.0	39	140 JK	0.19 JK	0.86 JQK	17 JK	<5.2	0.79 JQK	<5.2	28	260
RZ-4b	HR4B02	HR4B02-01 (D)	Front	1.1 JQK	4.3	170	<0.99	0.86 JQK	20	7.8	44	170 JK	0.21 JK	0.81 JQK	19 JK	<5.0	0.59 JQK	<5.0	30	290
RZ-4b	HR4B02	HR4B02-02	Rear	1.9 JQK	3.4	350	<0.97	1.0	21	8.2	49	320 JK	0.16 JK	0.83 JQK	16 JK	<4.9	<2.4	<4.9	31	440
RZ-4b	HR4B02	HR4B02-03	Rear	2.7 JQK	3.5	380	<0.97	1.7	23	8.9	54	**560** JK	0.16 JK	0.99 JQK	17 JK	<4.8	<2.4	<4.8	33	**660**
RZ-4b	HR4B03	HR4B03-01	Front	0.93 JQK	4.4	120 JK	<1.1	2.8 JK	20	9.6	28	73	0.11 JH	0.66 JQK	18	<5.5	<2.8	<5.5	36	260
RZ-4b	HR4B03	HR4B03-02	Rear	**25**	6.1	140 JK	<0.96	1.1 JK	20	9.8	33	**960**	0.15 JH	0.54 JQK	20	<4.8	<2.4	<4.8	37	280
RZ-4b	HR4B03	HR4B03-03	Front	0.92 JQK	4.8	150 JK	<0.98	0.70 JQK	25	11	33	74	0.14 JH	0.81 JQK	19	<4.9	<2.4	<4.9	41	190
RZ-4b	HR4B04	HR4B04-01	Front	1.8 JQK	4.1	180 JK	<0.96	1.5	24	11	59 JK	160 JK	0.14	1.3 JQK	28 JK	<4.8	<2.4	<4.8	39 JK	410
RZ-4b	HR4B04	HR4B04-02	Rear	5.5	6.2	300 JK	<0.59	2.3	35	13	93 JK	300 JK	0.20	3.1	30 JK	<3.0	0.73 JQK	<3.0	43 JK	570
RZ-4b	HR4B04	HR4B04-03	Rear	4.6	5.3	310 JK	<0.93	2.3	38	13	77 JK	290 JK	0.22	1.2 JQK	25 JK	<4.6	<2.3	<4.6	48 JK	570
RZ-4b	HR4B04	HR4B04-03 (D)	Rear	4.5 JK	4.7 JK	320 JK	<1.1	1.8	30	13 JK	69 JK	250 JK	0.21 JK	1.2 JQK	24 JK	<5.4	<2.7	<5.4	46 JK	570 JK
RZ-4b	HR4B05	HR4B05-01	Front	0.49 JQK	3.9	130 JK	<1.0	0.63 JQK	21	11	35 JK	59 JK	0.10	1.1 JQK	21 JK	<5.1	<2.6	<5.1	44 JK	240
RZ-4b	HR4B05	HR4B05-02	Rear	2.5	5.1	210 JK	<0.66	2.2	32	11	87 JK	140 JK	0.13	1.0 JQK	29 JK	<3.3	<1.7	<3.3	42 JK	340
RZ-4b	HR4B05	HR4B05-03	Rear	2.1 JQK	6.4	390 JK	<0.99	0.96 JQK	25	9.6	**190** JK	300 JK	0.23	1.6 JQK	23 JK	<5.0	<2.5	<5.0	36 JK	**660**
RZ-4b	HR4B06	HR4B06-01	Front	0.87 JQK	3.6	130	<1.0	0.49 JQK	16	7.1	28	98 JK	0.10 JK	0.41 JQK	11 JK	<5.1	<2.6	<5.1	29	170
RZ-4b	HR4B06	HR4B06-01 (D)	Front	0.30 JQK	3.2	110	<1.1	0.57 JQK	14	6.9	26	87	0.11 JK	0.40 JQK	12	<5.3	<2.7	<5.3	26	160
RZ-4b	HR4B06	HR4B06-02	Rear	0.88 JQK	4.4	180	<0.89	1.2	19	8.6	57	130 JK	0.092 JK	0.84 JQK	15 JK	<4.5	<2.2	<4.5	34	230
RZ-4b	HR4B06	HR4B06-03	Rear	0.27 JQK	3.6	**1,300**	<0.95	1.3	23	11	49	65 JK	0.15 JK	0.86 JQK	18 JK	<4.8	<2.4	<4.8	42	190
	HR4C01	HR4C01-01	Front	1.3 JQK	6.3	350 JK	<0.92	1.0	33	12	59 JK	210	0.17	1.4 JQK	37	<4.6	<2.3	<4.6	46 JK	320
	HR4C01	HR4C01-02	Rear	1.2 JQK	4.7	230 JK	<0.98	0.48 JQK	27	13	**200** JK	150	0.33	0.61 JQK	26	<4.9	<2.4	<4.9	49 JK	270
	HR4C01	HR4C01-03	Rear	0.98 JQK	4.3	200 JK	<1.0	0.40 JQK	25	12	45 JK	98	0.18	0.74 JQK	27	<5.1	<2.5	<5.1	44 JK	270
	HR4C02	HR4C02-01	Rear	1.2 JQK	7.0	150 JK	<0.97	0.11 JQK	29	14	35	23	0.089 JH	0.63 JQK	23	<4.9	<2.4	<4.9	49	97
	HR4C02	HR4C02-02	Rear	1.1 JQK	5.7	130 JK	<1.1	1.4 JK	42	11	38	100	0.12 JH	0.90 JQK	28	<5.3	<2.6	<5.3	41	130
	HR4C02	HR4C02-03	Rear	2.2 JQK	5.0	140 JK	<0.95	**6.5** JK	31	11	72	130	0.15 JH	1.4 JQK	38	<4.7	<2.4	<4.7	39	240
	HR4C03	HR4C03-01	Front	2.1 JQK	3.3	180 JK	<0.74	2.4	26	14	55 JK	87 JK	0.12	1.0 JQK	25	0.39 JQK	<1.8	<3.7	48 JK	310
	HR4C03	HR4C03-02	Rear	1.4 JQK	5.2	220 JK	<1.2	1.1 JQK	28	14	68 JK	120 JK	0.19	1.1 JQK	22 JK	<5.8	<2.9	<5.8	49 JK	320
	HR4C03	HR4C03-03	Rear	2.4 JQK	9.3	270 JK	<0.84	3.0	32	16	65 JK	210 JK	0.25	1.2 JQK	25 JK	0.73 JQK	<2.1	<4.2	58 JK	380

Sub-RZ	Property	Sample No.	Yard	Analyte																
				Antimony	**Arsenic**	**Barium**	**Beryllium**	**Cadmium**	**Chromium**	**Cobalt**	**Copper**	**Lead**	**Mercury**	**Mo**	**Nickel**	**Selenium**	**Silver**	**Thallium**	**Vanadium**	**Zinc**
HRS Soil Screening Benchmark (1)				**5.9**	**22**	**459**	**1.3**	**3.1**	**65**	**26**	**142**	**401**	**0.53**	**3.3**	**84**	**9.2**	**4.7**	**3.9**	**107**	**630**
Residential RSL				**31**	**0.68**	**15,000**	**160**	**7.1**	**-- (2)**	**23**	**3,100**	**400**	**11**	**390**	**1,500**	**390**	**390**	**0.78**	**390**	**23,000**
RZ-4c	HR4C04	HR4C04-01	Front	0.92 JQK	**<u>30</u>**	160 JK	<1.0	0.48 JQK	24	13 JK	44 JK	74 JK	0.16 JK	1.2 JQK	22 JK	<5.1	<2.5	<5.1	46 JK	210 JK
	HR4C04	HR4C04-02	Side	1.5 JQK	4.1 JK	250 JK	<0.96	1.3	25	10 JK	47 JK	260 JK	0.22 JK	1.0 JQK	22 JK	<4.8	<2.4	<4.8	40 JK	430 JK
	HR4C04	HR4C04-03	Rear	1.7 JQK	4.3 JK	200 JK	<0.91	1.5	27	9.7 JK	70 JK	200 JK	0.23 JK	1.9	27 JK	<4.5	<2.3	<4.5	36 JK	490 JK
	HR4C05	HR4C05-01	Front	0.92 JQK	5.5 JK	210 JK	<0.98	0.70 JQK	31	14 JK	48 JK	130 JK	0.19 JK	0.89 JQK	36 JK	<4.9	<2.4	<4.9	51 JK	280 JK
	HR4C05	HR4C05-02	Front	<3.2	1.9 JQK	66 JK	<1.1	<1.1	9.8	4.7 JK	17 JK	79 JK	0.12 JK	0.18 JQK	7.9 JK	<5.3	<2.7	<5.3	23 JK	81 JK
	HR4C05	HR4C05-03	Rear	0.97 JQK	6.0 JK	220 JK	<1.1	1.1	39	13 JK	58 JK	120 JK	0.35 JK	0.86 JQK	27 JK	<5.3	<2.6	<5.3	47 JK	340 JK
	HR4C06	HR4C06-01	Rear	2.3 JQK	4.2	140 JK	<0.95	1.5 JK	27	12	52	110	0.13 JH	1.4 JQK	25	<4.8	<2.4	<4.8	46	260
	HR4C06	HR4C06-02	Rear	1.1 JQK	4.1	140 JK	<0.92	1.0 JK	29	13	46	100	0.097 JH	1.3 JQK	26	<4.6	<2.3	<4.6	48	210
	HR4C06	HR4C06-02 (D)	Rear	0.95 JQK	4.2	170 JK	<0.94	1.2 JK	26	13	45	95	0.14 JH	1.3 JQK	28	<4.7	<2.4	<4.7	48	190
	HR4C06	HR4C06-03	Front	1.1 JQK	4.7	190 JK	<0.95	1.5 JK	33	14	61	130	0.16 JH	1.3 JQK	33	<4.8	<2.4	<4.8	51	300
	HR4C07	HR4C07-01	Front	1.6 JQK	6.8	230 JK	<1.0	1.3 JK	32	16	50	140	0.19 JH	1.2 JQK	29	<5.1	<2.6	<5.1	56	340
	HR4C07	HR4C07-02	Rear	2.2 JQK	5.7	380 JK	<1.0	**<u>3.1</u>** JK	35	14	84	350	0.23 JH	1.4 JQK	39	<5.2	0.68 JQK	<5.2	54	420
	HR4C07	HR4C07-03	Rear	1.3 JQK	6.5	220 JK	<0.98	1.7 JK	32	14	62	170	0.13 JH	1.4 JQK	23	<4.9	1.0 JQK	<4.9	52	410

<u>Notes:</u>
all values are reported in mg/kg
bold & Underlined values indicate results that exceed HRS Soil Screening Benchmark
Samples collected in August 2022
1 = Per the HRS, the action level to establish a harardous substance release in the soil exposure pathway is 'significantly above background" (see Section 3.2.1).
2 = an RSL for Total (i.e., unspeciated) chromium has not been established.
D = Field Duplicate Sample

<u>Qualifier Definitions:</u>
H = High Bias
J = The result is an estimated quantity
K = Unknown Bias
L = Low Bias
Q = The reported result is less than the SQL

<u>Definitions:</u>
HRS = Hazard Ranking System
mg/kg = milligram per kilogram
MO = Molybdenum
RSL = EPA Regional Screening Level (May 2023; THQ =1.0, Risk = 10-6)
RZ = Residential Sampling Zone
SQL = Sample Quantitation Limit
<## = Analyte not detected at or above indicated Sample Quantitation Limit (SQL)

Table 11: Stage 3 – Residential Soil Sampling Results – ISM

Sub-RZ	Sample No.	Analyte																
		Antimony	**Arsenic**	**Barium**	**Beryllium**	**Cadmium**	**Chromium**	**Cobalt**	**Copper**	**Lead**	**Mercury**	**Mo**	**Nickel**	**Selenium**	**Silver**	**Thallium**	**Vanadium**	**Zinc**
Residential RSL		**31**	**0.68**	**15,000**	**160**	**7.1**	**-- (1)**	**23**	**3,100**	**400**	**11**	**390**	**1,500**	**390**	**390**	**0.78**	**390**	**23,000**
RZ-1a	IR1A-01	1.4 JQK	6.6	210	0.58 JQK	1.6 JQK	27	9.6	57	190	0.16	1.1 JQK	45	<9.6	<4.8	4.7 JQK	40	350
RZ-1b	IR1B-01	1.1 JQK	6.1	180	0.40 JQK	1.7 JQK	27	7.3	45	190	0.23	0.85 JQK	20	<9.4	<4.7	2.8 JQK	31	300
RZ-1b	IR1B-02	0.93 JQK	6.6	190	0.46 JQK	1.6 JQK	27	7.5	47	170	0.18	0.77 JQK	24	<9.5	<4.7	3.9 JQK	35	300
RZ-1b	IR1B-03	1.4 JQK	6.9	170	0.45 JQK	1.7 JQK	30	7.4	46	180	0.27	0.72 JQK	24	<9.3	<4.7	4.1 JQK	33	290
RZ-1b	IR1B-AV (2)	1.1 JQK	6.5	180	0.44 JQK	1.7 JQK	28	7.4	46	180	0.23	0.78 JQK	23	<9.5	<4.7	3.6 JQK	33	297
RZ-1c	IR1C-01	1.2 JQK	4.6 JQK	150	0.45 JQK	1.8 JQK	22	7.5	51	240	0.16	0.88 JQK	27	<9.3	<4.6	3.0 JQK	34	270
RZ-2a	IR2A-01	0.56 JQK	4.1 JQK	150	0.34 JQK	1.3 JQK	23	6.3	35	220	0.55 JK	0.74 JQK	14 JK	<9.4	<4.7	2.8 JQK	29	300
RZ-2a	IR2A-02	1.2 JQK	5.2 JQK	200	0.39 JQK	1.5 JQK	30	6.3	37	220	0.25 JK	1.1 JQK	29 JK	<9.4	<4.7	3.0 JQK	32	320
RZ-2a	IR2A-03	1.1 JQK	4.3 JQK	150	0.35 JQK	1.3 JQK	26	6.0	37	290	0.26 JK	0.87 JQK	15 JK	<9.4	<4.7	3.0 JQK	29	300
RZ-2a	IR2A-AV (2)	0.95 JQK	4.5 JQK	167	0.36 JQK	1.4 JQK	26	6.2	36	243	0.35 JK	0.90 JQK	19 JK	<9.4	<4.7	2.9 JQK	30	307
RZ-2b	IR2B-01	0.56 JQK	3.7 JQK	150	0.38 JQK	1.1 JQK	18	5.8	34	150	0.25	0.54 JQK	13	<9.6	<4.8	3.0 JQK	33	260
RZ-2c	IR2C-01	0.76 JQK	5.7	140	0.37 JQK	1.3 JQK	22	6.4	40	170	0.31	0.61 JQK	19	<9.3	<4.6	3.8 JQK	32	250
RZ-3a	IR3A-01	0.62 JQK	4.7 JQK	130	0.34 JQK	0.87 JQK	21	5.9	32	170	0.26	0.60 JQK	20	<9.3	<4.7	2.9 JQK	31	230
RZ-3b	IR3B-01	0.63 JQK	4.2 JQK	170	0.40 JQK	1.2 JQK	27	6.5	37	180	0.18	0.67 JQK	16	<9.3	<4.7	3.7 JQK	36	280
RZ-3c	IR3C-01	0.76 JQK	2.8 JQK	130	0.35 JQK	1.0 JQK	19	6.4	35	140	0.16	0.63 JQK	16	<9.5	<4.7	3.2 JQK	32	220
RZ-3c	IR3C-02	0.76 JQK	3.4 JQK	130	0.38 JQK	1.0 JQK	19	6.6	37	120	0.17	0.52 JQK	19	<9.5	<4.7	3.0 JQK	32	240
RZ-3c	IR3C-03	0.95 JQK	3.7 JQK	130	0.36 JQK	1.1 JQK	19	6.6	38	180	0.17	0.67 JQK	17	<9.3	<4.7	3.0 JQK	33	220
RZ-3c	IR3C-AV (2)	0.82 JQK	3.3 JQK	130	0.36 JQK	1.0 JQK	19	6.5	37	147	0.17	0.61 JQK	17	<9.5	<4.7	3.1 JQK	32	227
RZ-4a	IR4A-01	0.67 JQK	3.6 JQK	130	0.34 JQK	0.97 JQK	16	5.7	34	150	0.09	0.82 JQK	14	<9.3	<4.7	2.4 JQK	29	230
RZ-4b	IR4B-01	1.6 JQK	3.8 JQK	280	0.43 JQK	1.6 JQK	20	7.3	55	220	0.16	0.89 JQK	17	<9.5	<4.8	4.4 JQK	34	360
RZ-4c	IR4C-01	1.6 JQK	5.5	220	0.73 JQK	1.8 JQK	27	10	61	170	0.23	1.4 JQK	33	<9.2	<4.6	5.4 JQK	42	380

Notes:
- all values are reported in mg/kg
- Samples collected in August 2022
- 1 = an RSL for Total (i.e., unspeciated) chromium has not been established.
- 2 = "-AV" Result is Arithmetic Mean of Primary (-01), Duplicate (-02), and Triplicate (-03) Sample Results

Qualifier Definitions:
- H = High Bias
- J = The result is an estimated quantity
- K = Unknown Bias
- L = Low Bias
- Q = The reported result is less than the SQL

Definitions:
- ISM = Incremental Sampling Methodology
- mg/kg = milligram per kilogram
- MO = Molybdenum
- RSL = EPA Regional Screening Level (May 2023; THQ =1.0, Risk = 10-6)
- RZ = Residential Sampling Zone
- SQL = Sample Quantitation Limit
- <## = Analyte not detected at or above indicated Sample Quantitation Limit (SQL)

Table 12: Stage 3 – Residential Soil Sampling – Lead Results Summary

Residential Zone	Residential Subzone (2)	Residential Shallow Soil Sample Results & Locations (1) (F = Front Yard; R = Rear Yard; S = Side Yard)																													
Assigned Subzone Property No:		01			02			03			04			05			06			07			08			09			10		
Property Sample No:		-01	-02	03	-01	-02	03	-01	-02	03	-01	-02	03	-01	-02	03	-01	-02	03	-01	-02	03	-01	-02	03	-01	-02	03	-01	-02	03
RZ-1 (Walnut Park)	**RZ-1a**	140	150	110	89	170	270	*140*	*380*	*120*	150	130	140	180	210	*270*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	(HR1A)	F	F	F	F	R	R	F	R	R	F	R	R	R	R	R	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	RZ-1b	75	280	310	170	230	190	140	240	200	110	67	75	210	180	200	170	67	100	140	130	150	180	270	200	86	150	140	78	110	240
	(HR1B)	F	R	R	F	R	R	F	R	R	F	F	F	F	F	R	R	F	F	F	R	R	F	R	R	F	R	R	F	R	R
	RZ-1c	150	**430**	200	*120*	*110*	*150*	170	170	130	250	230	260	*270*	*150*	*290*	120	150	170	250	180	190	--	--	--	--	--	--	--	--	--
	(HR1C)	F	R	R	F	F	F	F	R	R	F	R	R	F	R	R	F	F	F	F	R	R	--	--	--	--	--	--	--	--	--
RZ-2 (Walnut Park)	**RZ-2a**	**910**	**740**	**440**	140	210	310	76	77	96	*150*	*270*	*170*	150	*160*	**410**	160	120	300	49	48	360	--	--	--	--	--	--	--	--	--
	(HR2A)	R	R	F	F	R	R	F	F	R	F	R	R	F	F	R	F	F	R	F	F	R	--	--	--	--	--	--	--	--	--
	RZ-2b	110	190	190	140	160	92	140	150	200	180	160	210	130	150	240	250	240	76	69	75	380	--	--	--	--	--	--	--	--	--
	(HR2B)	F	R	R	F	R	R	F	R	R	F	R	R	F	R	R	R	R	F	F	F	R	--	--	--	--	--	--	--	--	--
	RZ-2c	84	180	150	250	190	140	120	89	130	*85*	130	130	130	120	*120*	120	**550**	**430**	*230*	*160*	*98*	--	--	--	--	--	--	--	--	--
	(HR2C)	F	R	R	F	F	F	F	R	R	F	R	R	F	R	R	F	R	R	F	R	R	--	--	--	--	--	--	--	--	--
RZ-3 (Walnut Park)	**RZ-3a**	84	90	93	290	310	150	110	**530**	**720**	96	130	110	140	140	78	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	(HR3A)	S	R	F	R	S	F	F	R	R	R	R	F	R	F	F	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	RZ-3b	95	290	200	110	150	180	64	84	160	100	140	120	130	**850**	330	95	270	180	*92*	*200*	*210*	160	280	370	--	--	--	--	--	--
	(HR3B)	F	R	R	F	R	R	F	R	R	F	R	R	F	R	R	F	R	R	F	R	F	F	R	R	--	--	--	--	--	--
	RZ-3c	*130*	*160*	*97*	*78*	110	180	88	280	110	*97*	*120*	*110*	170	330	140	--	--	--	44	44	44	98	130	310	--	--	--	--	--	--
	(HR3C)	F	R	R	F	R	R	F	R	R	F	R	R	F	R	R	--	--	--	F	F	F	F	F	R	--	--	--	--	--	--
RZ-4 (Florence-Firestone)	**RZ-4a**	59	120	120	*76*	*92*	*97*	72	95	280	38	180	100	--	--	--	*95*	*110*	*140*	*110*	*130*	*140*	140	140	130	--	--	--	--	--	--
	(HR4A)	F	R	R	F	F	F	F	F	R	F	R	R	--	--	--	F	F	R	F	F	F	F	F	F	--	--	--	--	--	--
	RZ-4b	*140*	*160*	*150*	*170*	*320*	***560***	73	**960**	74	*160*	*300*	*290*	*59*	*140*	*300*	*98*	*130*	*65*	--	--	--	--	--	--	--	--	--	--	--	--
	(HR4B)	F	S	S	F	R	R	F	R	F	F	R	R	F	R	R	F	R	R	--	--	--	--	--	--	--	--	--	--	--	--
	RZ-4c	210	150	98	23	100	130	*87*	*120*	*210*	*74*	*260*	*200*	*130*	*79*	*120*	110	100	130	140	350	170	--	--	--	--	--	--	--	--	--
	(HR4C)	F	R	R	R	R	R	F	R	R	F	S	R	F	F	R	R	R	F	F	R	R	--	--	--	--	--	--	--	--	--

Notes:
All values are reported in mg/kg
Bold & Underlined values indicate results that exceed the lead HRS Soil Screening Benchmark of 401 mg/kg (see Section 3.2.1.3)
Italic values indicate results are estimated (i.e., J-flagged)
For duplicate samplest, only the greater of the two values is presented.
Samples collected in August 2022
1 = Presented values are from the Four-Point Composite sample dataset. Incremental Sample Methodology (ISM) results are provided in Table 11
2 = Text in parentheses is the subzone sample code (e.g., HR1A indicates subzone RZ-1a in sample ID No. HR1A02-03; with "02" indicating the 2nd property within that subzone and "-03" indicating the third sample from that property)

Definitions:
mg/kg = milligrams per kilogram
-- = Not Applicable

Table 13: Stage 3 – Residential Soil Sampling – Arsenic Results Summary

Residential Zone	Residential Subzone (2)	Residential Shallow Soil Sample Results & Locations (1) (F = Front Yard; R = Rear Yard; S = Side Yard)																													
Assigned Subzone Property No:		01			02			03			04			05			06			07			08			09			10		
	Property Sample No:	-01	-02	03	-01	-02	03	-01	-02	03	-01	-02	03	-01	-02	03	-01	-02	03	-01	-02	03	-01	-02	03	-01	-02	03	-01	-02	03
RZ-1 (Walnut Park)	RZ-1a	9.1	19	10	4.4	9.5	9.8	5.8	5.0	4.4	6.3	7.1	7.7	4.7	5.1	5.3	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	(HR1A)	F	F	F	F	R	R	F	R	R	F	R	R	R	R	R	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	RZ-1b	2.9	3.3	5.0	4.3	4.7	7.5	7.2	4.8	5.2	**51**	**64**	**29**	6.1	5.1	4.9	*4.7*	*2.3*	*2.6*	*9.9*	*8.7*	*13*	*2.3*	5.2	4.2	5.0	4.3	7.5	3.2	5.5	6.9
	(HR1B)	F	R	R	F	R	R	F	R	R	F	F	F	F	F	R	R	F	F	F	R	R	F	R	R	F	R	R	F	R	R
	RZ-1c	7.6	8.3	5.9	5.1	3.9	6.3	5.5	5.9	5.1	5.5	5.8	7.2	4.1	*5.3*	3.4	3.4	4.4	4.4	5.7	4.9	4.8	--	--	--	--	--	--	--	--	--
	(HR1C)	F	R	R	F	F	F	F	R	R	F	R	R	F	R	R	F	F	F	F	R	R	--	--	--	--	--	--	--	--	--
RZ-2 (Walnut Park)	RZ-2a	*6.1*	*6.3*	*7.6*	4.2	12	10	3.3	3.2	5.1	3.0	3.2	3.0	4.1	3.8	4.9	*2.7*	*2.3*	*4.2*	*1.9*	*2.7*	8.7	--	--	--	--	--	--	--	--	--
	(HR2A)	R	R	F	F	R	R	F	F	R	F	R	R	F	F	R	F	F	R	F	F	R	--	--	--	--	--	--	--	--	--
	RZ-2b	*2.5*	*2.7*	3.1	3.1	*2.9*	3.3	4.4	*2.4*	3.8	5.3	4.9	5.1	3.0	3.3	3.6	*2.8*	*3.0*	*3.1*	*2.5*	*2.8*	*6.5*	--	--	--	--	--	--	--	--	--
	(HR2B)	F	R	R	F	R	R	F	R	R	F	R	R	F	R	R	R	R	F	F	F	R	--	--	--	--	--	--	--	--	--
	RZ-2c	3.9	12	16	9.6	9.5	4.2	3.3	3.5	3.1	*2.5*	3.8	3.1	13	**23**	3.4	*2.6*	7.1	6.0	9.1	9.0	7.5	--	--	--	--	--	--	--	--	--
	(HR2C)	F	R	R	F	F	F	F	R	R	F	R	R	F	R	R	F	R	R	F	R	R	--	--	--	--	--	--	--	--	--
RZ-3 (Walnut Park)	RZ-3a	*4.9*	*6.1*	*6.2*	*7.9*	*11*	*4.8*	*3.2*	*4.5*	*4.9*	*4.6*	*4.2*	*3.4*	*5.0*	*4.0*	*2.3*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	(HR3A)	S	R	F	R	S	F	F	R	R	R	R	F	R	F	F	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	RZ-3b	2.5	7.3	4.9	3.6	2.7	3.5	*2.9*	2.9	3.0	*3.2*	5.0	4.0	3.1	5.5	3.3	2.3	*2.8*	2.1	5.5	4.9	*3.5*	5.2	6.3	8.5	--	--	--	--	--	--
	(HR3B)	F	R	R	F	R	R	F	R	R	F	R	R	F	R	R	F	R	R	F	R	F	F	R	R	--	--	--	--	--	--
	RZ-3c	3.0	3.9	*2.6*	4.2	*2.5*	5.1	*2.5*	4.7	4.1	*2.5*	8.7	3.5	3.2	*2.7*	*2.5*	--	--	--	2.6	3.1	2.9	2.9	2.9	4.4	--	--	--	--	--	--
	(HR3C)	F	R	R	F	R	R	F	R	R	F	R	R	F	R	R	--	--	--	F	F	F	F	F	R	--	--	--	--	--	--
RZ-4 (Florence-Firestone)	RZ-4a	*2.0*	*2.0*	*1.7*	3.5	3.3	3.9	4.4	5.8	3.9	7.4	7.7	8.1	--	--	--	*5.1*	7.2	4.1	*2.5*	*2.1*	*2.5*	6.5	4.0	3.6	--	--	--	--	--	--
	(HR4A)	F	R	R	F	F	F	F	F	R	F	R	R	--	--	--	F	F	R	F	F	F	F	F	F	--	--	--	--	--	--
	RZ-4b	4.1	5.6	4.6	4.3	3.4	3.5	4.4	6.1	4.8	4.1	6.2	5.3	3.9	5.1	6.4	3.6	4.4	3.6	--	--	--	--	--	--	--	--	--	--	--	--
	(HR4B)	F	S	S	F	R	R	F	R	F	F	R	R	F	R	R	F	R	R	--	--	--	--	--	--	--	--	--	--	--	--
	RZ-4c	6.3	4.7	4.3	7.0	5.7	5.0	3.3	5.2	9.3	**30**	*4.1*	*4.3*	*5.5*	*1.9*	*6.0*	4.2	4.2	4.7	6.8	5.7	6.5	--	--	--	--	--	--	--	--	--
	(HR4C)	F	R	R	R	R	R	F	R	R	F	S	R	F	F	R	R	R	F	F	R	R	--	--	--	--	--	--	--	--	--

Notes:
All values are reported in mg/kg
Bold & Underlined values indicate results that exceed the lead HRS Soil Screening Benchmark of 401 mg/kg (see Section 3.2.1.3)
Italic values indicate results are estimated (i.e., J-flagged)
For duplicate samplest, only the greater of the two values is presented.
Samples collected in August 2022
1 = Presented values are from the Four-Point Composite sample dataset. Incremental Sample Methodology (ISM) results are provided in Table 11
2 = Text in parentheses is the subzone sample code (e.g., HR1A indicates subzone RZ-1a in sample ID No. HR1A02-03; with "02" indicating the 2nd property within that subzone and "-03" indicating the third sample from that property)

Definitions:
mg/kg = milligrams per kilogram
-- = Not Applicable

Table 14: Stage 3 – Background Soil Sampling Results

Sample Type	sub-BZ	Sample No.	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper	Lead	Mercury	Mo	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc
			Analyte																
		Residential RSL	**31**	**0.68**	**15,000**	**160**	**7.1**	**-- (1)**	**23**	**3,100**	**400**	**11**	**390**	**1,500**	**390**	**390**	**0.78**	**390**	**23,000**
											Franklin D. Roosevelt Park (BZ-1)								
4-Point Comp.	BZ-1A	HB1A-01	0.35 JQK	4.4	130	0.89 JQK	0.36 JQK	20	9.1	30	39	0.16	0.64 JQK	62 JK	<4.9	<2.5	3.3 JQK	45	110
	BZ-1A	HB1A-02	<2.3	3.7	120	0.83	0.32 JQK	17	8.3	28	22	0.064	0.69 JQK	55 JK	<3.9	<1.9	3.0 JQK	42	82
	BZ-1A	HB1A-03	0.99 JQK	4.7	180	0.88 JQK	0.90	22	9.2	56	120	0.17	0.99 JQK	34 JK	<4.5	<2.2	3.5 JQK	43	310
	BZ-1A	HB1A-04	1.9 JQK	5.3	150	0.84 JQK	0.87 JQK	23	8.9	50	160	0.10	0.99 JQK	75 JK	<4.9	<2.5	3.5 JQK	43	250
	BZ-1A	HB1A-05	0.46 JQK	4.0	120	0.74 JQK	0.36 JQK	17	7.6	26	33	0.071	1.0 JQK	20 JK	<4.7	<2.4	2.7 JQK	38	100
	BZ-1A	HB1A-05 (D)	0.48 JQK	4.0	110	0.65 JQK	0.36 JQK	16	7.1	25	32	0.084	0.98 JQK	19 JK	<3.7	<1.9	2.4 JQK	35	94
ISM	BZ-1A	IB1A-01	0.89 JQK	4.3 JQK	140 JK	0.60 JQK	0.49 JQK	19	8.7	37	66 JK	0.15	0.90 JQK	45 JK	<9.6	<4.8	2.0 JQK	37	180 JK
	BZ-1A	IB1A-02	1.3 JQK	3.6 JQK	120 JK	0.55 JQK	0.56 JQK	17	8.1	37	71 JK	0.15	0.74 JQK	31 JK	<9.2	<4.6	1.8 JQK	37	170 JK
	BZ-1A	IB1A-03	0.73 JQK	4.5 JQK	150 JK	0.58 JQK	0.52 JQK	20	8.3	39	89 JK	0.17	0.83 JQK	30 JK	<9.9	<4.9	1.5 JQK	38	210 JK
	BZ-1A	IB1A-AV (2)	0.97 JQK	4.1 JQK	137 JK	0.58 JQK	0.52 JQK	19	8.4	38	75 JK	0.16	0.82 JQK	35 JK	<9.9	<4.9	1.8 JQK	37	187 JK
4-Point Comp.	BZ-1B	HB1B-01	0.70 JQK	4.2	120	0.71 JQK	0.47 JQK	18	7.3	43	56	0.13	0.84 JQK	44 JK	<5.0	<2.5	2.6 JQK	38	150
	BZ-1B	HB1B-02	1.4 JQK	6.1	180	0.91 JQK	1.5	25	9.8	61	270	0.19	1.4 JQK	46 JK	<4.8	<2.4	3.6 JQK	48	340
	BZ-1B	HB1B-03	0.62 JQK	4.6	140	0.80 JQK	0.56 JQK	19	8.1	34	60	0.17	1.0 JQK	21 JK	<4.6	<2.3	2.7 JQK	42	160
	BZ-1B	HB1B-04	0.25 JQK	3.5	100	0.73	0.30 JQK	16	7.2	34	29	0.093	0.70 JQK	48 JK	<3.3	<1.7	2.2 JQK	37	86
	BZ-1B	HB1B-04 (D)	0.43 JQK	3.7	110	0.77	0.34 JQK	16	7.6	26	30	0.085	0.68 JQK	18 JK	<3.3	<1.6	2.1 JQK	39	88
	BZ-1B	HB1B-05	<2.8	3.3	130	0.68 JQK	0.25 JQK	14	6.6	32	710	0.064	0.81 JQK	54 JK	<4.6	<2.3	2.2 JQK	34	120
ISM	BZ-1B	IB1B-01	0.84 JQK	3.8 JQK	140 JK	0.61 JQK	0.44 JQK	19	8.6	35	65 JK	0.10	0.81 JQK	40 JK	<9.4	<4.7	1.3 JQK	39	160 JK
	BZ-1B	IB1B-02	<6.9	3.4 JQK	130 JK	0.57 JQK	0.34 JQK	17	7.9	31	60 JK	0.10	0.65 JQK	24 JK	<11	<5.7	2.3 JQK	37	150 JK
	BZ-1B	IB1B-03	0.93 JQK	3.8 JQK	140 JK	0.59 JQK	0.45 JQK	18	8.5	40	82 JK	0.12	0.83 JQK	31 JK	<9.5	<4.8	<9.5	36	160 JK
	BZ-1B	IB1B-AV (2)	0.89 JQK	3.7 JQK	137 JK	0.59 JQK	0.41 JQK	18	8.3	35	69 JK	0.11	0.76 JQK	32 JK	<11	<5.7	1.8 JQK	37	157 JK
4-Point Comp.	BZ-1C	HB1C-01	0.50 JQK	3.1	110 JK	0.56 JQK	0.39 JQK	18	6.9	29	34 JK	0.073	0.63 JQK	50	<4.2	<2.1	1.8 JQK	34	110
	BZ-1C	HB1C-02	0.67 JQK	3.7	150 JK	0.58 JQK	0.73 JQK	19	7.5	36	100 JK	0.11	1.0 JQK	46	<3.7	<1.9	1.8 JQK	35	260
	BZ-1C	HB1C-03	2.2 JQK	3.7	180 JK	0.59 JQK	0.72 JQK	20	7.1	42	140 JK	0.10	1.3 JQK	33	<4.7	<2.3	1.8 JQK	34	220
	BZ-1C	HB1C-04	0.41 JQK	3.5	150 JK	0.66 JQK	0.56 JQK	20	8.4	23	28 JK	0.056	0.77 JQK	48	<3.6	<1.8	1.7 JQK	37	120
	BZ-1C	HB1C-05	0.66 JQK	4.7	120 JK	0.60 JQK	0.69 JQK	19	7.7	38	61 JK	0.31	0.92 JQK	67	<3.5	<1.8	1.8 JQK	35	140
ISM	BZ-1C	IB1C-01	0.78 JQK	3.9 JQK	140 JK	0.52 JQK	0.36 JQK	17	6.9	34	68 JK	0.12	0.97 JQK	40 JK	<9.4	<4.7	1.3 JQK	34	160 JK
	BZ-1C	IB1C-02	0.89 JQK	3.7 JQK	150 JK	0.54 JQK	0.45 JQK	17	7.4	34	72 JK	0.12	1.2 JQK	120 JK	<8.9	<4.5	1.9 JQK	35	180 JK
	BZ-1C	IB1C-03	0.74 JQK	4.1 JQK	140 JK	0.51 JQK	0.44 JQK	16	6.9	30	69 JK	0.11	0.98 JQK	19 JK	<9.1	<4.6	1.0 JQK	33	160 JK
	BZ-1C	IB1C-AV (2)	0.80 JQK	3.9 JQK	143 JK	0.52 JQK	0.42 JQK	17	7.1	33	70 JK	0.12	1.1 JQK	60 JK	<9.4	<4.7	1.4 JQK	34	167 JK
											Walnut Park Pocket Park (BZ-2)								
4-Point Comp.	BZ-2A	HB2A-01	<2.6	4.1	120 JK	0.58 JQK	0.63 JQK	20	8.1	26	40 JK	0.14	0.57 JQK	33	<4.3	<2.2	2.0 JQK	36	310
	BZ-2A	HB2A-02	0.42 JQK	6.1	130 JK	0.53 JQK	0.75 JQK	21	7.6	46	93 JK	0.26	0.95 JQK	38	<4.7	<2.3	1.8 JQK	35	200
	BZ-2A	HB2A-03	0.26 JQK	3.8	140 JK	0.58 JQK	0.68 JQK	21	8.2	26	90 JK	0.22	0.55 JQK	55	<4.3	<2.2	2.0 JQK	37	180
	BZ-2A	HB2A-04	0.86 JQK	18	150 JK	0.54 JQK	0.80	24	7.4	36	140 JK	0.18	0.53 JQK	44	<3.6	<1.8	2.0 JQK	36	200
	BZ-2A	HB2A-05	0.80 JQK	6.4	130 JK	0.53 JQK	1.4	22	7.7	39	200 JK	0.21	0.72 JQK	25	<3.7	<1.9	1.9 JQK	36	280
ISM	BZ-2A	IB2A-01	0.88 JQK	4.9 JQK	110 JK	0.46 JQK	0.56 JQK	15 JK	7.4	32 JK	91 JK	0.21	0.38 JQK	26 JK	<9.5	<4.7	2.0 JQK	32	170
	BZ-2A	IB2A-02	<5.6	4.8 JQK	140 JK	0.49 JQK	0.53 JQK	20 JK	7.9	36 JK	100 JK	0.21	0.65 JQK	26 JK	<9.4	<4.7	1.7 JQK	33	170
	BZ-2A	IB2A-03	1.4 JQK	6.0	130 JK	0.50 JQK	0.59 JQK	20 JK	7.9	35 JK	95 JK	0.23	0.56 JQK	30 JK	<9.2	<4.6	1.8 JQK	34	180
	BZ-2A	IB2A-AV (2)	1.1 JQK	5.2	127 JK	0.48 JQK	0.56 JQK	18 JK	7.7	34 JK	95 JK	0.22	0.53 JQK	27 JK	<9.5	<4.7	1.8 JQK	33	173
											Garden View Road Verge (BZ-3)								
4-Point Comp.	BZ-3A	HB3A-01	2.9	3.9	180	0.37 JQK	1.5	24	9.2	48	190	0.21	1.8	22	0.43 JQK	<2.3	<4.6	42	350
	BZ-3A	HB3A-02	3.2	4.3	170	0.48 JQK	1.5	25	10	50	230	0.20	1.1 JQK	32	0.31 JQK	<1.9	<3.8	41	330
	BZ-3A	HB3A-03	3.0	6.3	150	0.49 JQK	1.2	36	10	41	160	0.18	1.0 JQK	23	<4.3	<2.1	<4.3	48	210
	BZ-3A	HB3A-04	2.3 JQK	2.9	160	0.41 JQK	0.98	27	9.0	40	130	0.19	1.3 JQK	19	<4.4	<2.2	<4.4	39	210
	BZ-3A	HB3A-05	2.8 JQK	8.7	170	0.51 JQK	0.94 JQK	26	11	45	120	0.18	1.0 JQK	26	0.44 JQK	<2.6	<5.1	46	240
ISM	BZ-3A	IB3A-01	2.2 JQK	6.4	200	0.61 JQK	1.5 JQK	29	9.7	61	200	0.20 JK	1.4 JQK	29	<9.3	<4.6	1.4 JQK	38	360
	BZ-3A	IB3A-02	1.7 JQK	6.2	190	0.63 JQK	1.2 JQK	28	9.2	55	170	0.15 JK	1.3 JQK	24	<9.5	<4.7	1.5 JQK	38	310
	BZ-3A	IB3A-03	1.3 JQK	7.2	190	0.61 JQK	1.2 JQK	31	9.1	86	180	0.17 JK	1.4 JQK	22	<9.3	<4.7	1.6 JQK	37	260
	BZ-3A	IB3A-AV (2)	1.7 JQK	6.6	193	0.62 JQK	1.3 JQK	29	9.3	67	183	0.17 JK	1.4 JQK	25	<9.5	<4.7	1.5 JQK	38	310
4-Point Comp.	BZ-3B	HB3B-01	3.9	220	170 JK	0.57 JQK	1.3	41	11	42	1,600 JK	0.21 JK	1.2 JQK	31	0.30 JQK	<1.7	<3.4	48 JK	220 JK
	BZ-3B	HB3B-02	4.1	40	130 JK	0.48 JQK	1.2	31	9.3	35	160 JK	0.18 JK	0.96 JQK	33	0.84 JQK	<2.3	<4.6	43 JK	240 JK
	BZ-3B	HB3B-03	2.8	15	120 JK	0.42 JQK	0.76	20	9.2	33	180 JK	0.19 JK	0.91 JQK	26	<3.7	<1.9	<3.7	40 JK	200 JK
	BZ-3B	HB3B-03 (D)	1.3 JQK	18	140 JK	0.85	1.4	20 JK	9.9	39	220 JK	0.19 JK	0.78 JQK	24	<4.1	0.61 JQK	2.6 JQK	42	260 JK
	BZ-3B	HB3B-04	2.2 JQK	8.6	150 JK	0.61 JQK	0.75 JQK	25	11	36	79 JK	0.29 JK	1.1 JQK	23	<4.7	<2.4	<4.7	47 JK	150 JK
	BZ-3B	HB3B-05	2.9	4.9	180 JK	0.58 JQK	1.3	32	12	52	140 JK	0.21 JK	1.0 JQK	33	<4.2	<2.1	<4.2	51 JK	280 JK

Sample Type	sub-BZ	Sample No.	Analyte																
			Antimony	**Arsenic**	**Barium**	**Beryllium**	**Cadmium**	**Chromium**	**Cobalt**	**Copper**	**Lead**	**Mercury**	**Mo**	**Nickel**	**Selenium**	**Silver**	**Thallium**	**Vanadium**	**Zinc**
		Residential RSL	**31**	**0.68**	**15,000**	**160**	**7.1**	**-- [(1)]**	**23**	**3,100**	**400**	**11**	**390**	**1,500**	**390**	**390**	**0.78**	**390**	**23,000**
ISM	BZ-3B	IB3B-01	1.8 [JQK]	11	170	0.62 [JQK]	0.94 [JQK]	27	9.0	47	180	0.25 [JK]	1.3 [JQK]	25	<9.2	<4.6	1.6 [JQK]	38	240
	BZ-3B	IB3B-02	1.4 [JQK]	14	180	0.63 [JQK]	0.92 [JQK]	27	9.2	43	200	0.17 [JK]	1.4 [JQK]	27	<9.6	<4.8	2.0 [JQK]	39	220
	BZ-3B	IB3B-03	2.2 [JQK]	16	170	0.62 [JQK]	0.98 [JQK]	27	9.3	47	200	0.18 [JK]	1.2 [JQK]	27	<9.4	<4.7	1.7 [JQK]	39	220
	BZ-3B	IB3B-AV [(2)]	1.8 [JQK]	14	173	0.62 [JQK]	0.95 [JQK]	27	9.2	46	193	0.20 [JK]	1.3 [JQK]	26	<9.6	<4.8	1.8 [JQK]	39	227
4-Point Comp.	BZ-3C	HB3C-01	0.82 [JQK]	2.7	120 [JK]	0.58 [JQK]	0.95	19 [JK]	6.5	30	99 [JK]	0.15 [JH]	0.76 [JQK]	15	<4.5	<2.3	1.7 [JQK]	30	130 [JK]
	BZ-3C	HB3C-02	1.7 [JQK]	4.5	130 [JK]	0.75 [JQK]	1.3	19 [JK]	9.0	47	160 [JK]	0.17 [JH]	0.78 [JQK]	47	<4.7	<2.4	2.1 [JQK]	39	280 [JK]
	BZ-3C	HB3C-03	0.76 [JQK]	2.4 [JQK]	95 [JK]	0.49 [JQK]	0.71 [JQK]	11 [JK]	5.7	24	170 [JK]	0.34 [JH]	0.52 [JQK]	24	<4.4	<2.2	1.7 [JQK]	27	130 [JK]
	BZ-3C	HB3C-04	1.3 [JQK]	4.7	140 [JK]	0.72 [JQK]	1.6	22 [JK]	9.9	49	140 [JK]	0.10 [JH]	1.1 [JQK]	23	<4.6	<2.3	2.4 [JQK]	40	240 [JK]
	BZ-3C	HB3C-05	1.2 [JQK]	4.8	170 [JK]	0.82 [JQK]	1.6	27 [JK]	9.6	51	170 [JK]	0.38 [JH]	0.92 [JQK]	39	<4.5	0.50 [JQK]	2.3 [JQK]	41	290 [JK]
ISM	BZ-3C	IB3C-01	2.4 [JQK]	4.5 [JQK]	150	0.51 [JQK]	0.90 [JQK]	20	7.5	45	170	0.17 [JK]	1.1 [JQK]	20	<9.6	<4.8	2.2 [JQK]	32	230
	BZ-3C	IB3C-02	1.3 [JQK]	5.6	150	0.47 [JQK]	0.98 [JQK]	21	7.0	50	180	0.17 [JK]	0.98 [JQK]	16	<9.1	<4.6	1.5 [JQK]	31	260
	BZ-3C	IB3C-03	1.9 [JQK]	3.1 [JQK]	130	0.18 [JQK]	1.2 [JQK]	17 [JK]	6.7	42 [JK]	170	0.24 [JK]	0.82 [JQK]	15 [JK]	<9.3	<4.7	<9.3	23 [JK]	220
	BZ-3C	IB3C-AV [(2)]	1.9 [JQK]	4.4 [JQK]	143	0.39 [JQK]	1.0 [JQK]	19 [JK]	7.1	46 [JK]	173	0.19 [JK]	0.97 [JQK]	17 [JK]	<9.6	<4.8	1.9 [JQK]	29 [JK]	237
S. Gate Road Verge (BZ-4)																			
4-Point Comp.	BZ-4A	HB4A-01	1.6 [JQK]	6.4	210 [JK]	1.1	1.8	31 [JK]	13	60	170 [JK]	0.16 [JL]	1.4 [JQK]	47	<4.6	0.7 [JQK]	2.9 [JQK]	55	440 [JK]
	BZ-4A	HB4A-02	2.7 [JK]	6.1	180 [JK]	0.82	1.8	25 [JK]	11	65	380 [JK]	0.40 [JL]	1.8	31	<3.7	0.45 [JQK]	2.3 [JQK]	44	400 [JK]
	BZ-4A	HB4A-02 [(D)]	2.2 [JQK]	6.5	180 [JK]	0.92	2.0	26 [JK]	12	71	370 [JK]	0.55	1.9	30	<4.4	0.62 [JQK]	2.6 [JQK]	48	450 [JK]
	BZ-4A	HB4A-03	2.1 [JQK]	55	170 [JK]	0.88 [JQK]	1.3	22 [JK]	11	55	560 [JK]	0.16 [JL]	1.3 [JQK]	30	<4.7	<2.4	2.4 [JQK]	43	310 [JK]
	BZ-4A	HB4A-04	1.5 [JQK]	5.7	160 [JK]	0.98	1.4	27 [JK]	12	44	120 [JK]	0.12 [JL]	1.3 [JQK]	23	<4.5	0.87 [JQK]	3.2 [JQK]	51	190 [JK]
	BZ-4A	HB4A-05	1.6 [JQK]	5.0	170 [JK]	0.98 [JQK]	1.4	23 [JK]	12	53	160 [JK]	0.11 [JL]	1.5 [JQK]	24	<4.9	<2.5	3.4 [JQK]	48	240 [JK]
ISM	BZ-4A	IB4A-01	2.1 [JQK]	6.8	170	0.35 [JQK]	1.5 [JQK]	23 [JK]	10	48 [JK]	170	0.15 [JK]	1.1 [JQK]	20 [JK]	<9.5	<4.8	<9.5	36 [JK]	210
	BZ-4A	IB4A-02	3.3 [JQK]	8.3	190	0.34 [JQK]	1.7 [JQK]	26 [JK]	11	56 [JK]	160	0.18 [JK]	1.3 [JQK]	28 [JK]	<9.5	<4.7	1.1 [JQK]	46 [JK]	230
	BZ-4A	IB4A-03	3.1 [JQK]	8.0	190	0.35 [JQK]	1.7 [JQK]	26 [JK]	11	65 [JK]	170	0.15 [JK]	1.5 [JQK]	36 [JK]	<9.6	<4.8	<9.6	45 [JK]	240
	BZ-4A	IB4A-AV [(2)]	2.8 [JQK]	7.7	183	0.35 [JQK]	1.6 [JQK]	25 [JK]	11	56 [JK]	167	0.16 [JK]	1.3 [JQK]	28 [JK]	<9.6	<4.8	1.1 [JQK]	42 [JK]	227
4-Point Comp.	BZ-4B	HB4B-01	2.0 [JQK]	5.1	180 [JK]	0.89 [JQK]	1.9	32 [JK]	12	63	330 [JK]	0.16 [JL]	1.9	31	<4.6	0.59 [JQK]	3.1 [JQK]	47	400 [JK]
	BZ-4B	HB4B-02	1.6 [JQK]	4.3	140 [JK]	0.73 [JQK]	1.2	19 [JK]	9.0	39	200 [JK]	0.11 [JL]	1.1 [JQK]	23	<4.4	<2.2	2.4 [JQK]	40	200 [JK]
	BZ-4B	HB4B-03	2.3 [JQK]	2.8	130 [JL]	0.39 [JQK]	0.75 [JQK]	19 [JK]	8.7	31	120 [JK]	0.072 [JL]	0.93 [JQK]	17	<4.2	<2.1	<4.2	40	150 [JL]
	BZ-4B	HB4B-04	2.6 [JQK]	6.9	150 [JL]	0.35 [JQK]	0.90 [JQK]	22 [JK]	10	38	120 [JK]	0.10 [JL]	1.2 [JQK]	20	<5.0	<2.5	<5.0	43	170 [JL]
	BZ-4B	HB4B-05	4.0 [JK]	4.6	170 [JL]	0.30 [JQK]	0.89 [JK]	20 [JK]	7.9	45	130 [JK]	0.18 [JL]	1.1 [JQK]	21	0.39 [JQK]	<1.7	<3.3	36	210 [JL]
ISM	BZ-4B	IB4B-01	3.0 [JQK]	4.0 [JQK]	160	0.26 [JQK]	1.5 [JQK]	24	9.9	49	160	0.14 [JH]	1.3 [JQK]	24	<9.5	<4.8	<9.5	42	390
	BZ-4B	IB4B-02	3.0 [JQK]	6.0	170	0.27 [JQK]	1.6 [JQK]	25	10	50	190	0.16 [JH]	1.3 [JQK]	27	<9.1	<4.6	<9.1	42	210
	BZ-4B	IB4B-03	3.2 [JQK]	5.8	170	0.25 [JQK]	1.6 [JQK]	27	11	52	200	0.18 [JH]	1.4 [JQK]	37	<9.6	<4.8	<9.6	45	220
	BZ-4B	IB4B-AV [(2)]	3.1 [JQK]	5.3 [JQK]	167	0.26 [JQK]	1.6 [JQK]	25	10	50	183	0.16 [JH]	1.3 [JQK]	29	<9.6	<4.8	<9.6	43	273
4-Point Comp.	BZ-4C	HB4C-01	2.8 [JK]	3.5	160 [JL]	0.47 [JQK]	0.84 [JK]	23 [JK]	9.8	37	100 [JK]	0.12 [JL]	0.86 [JQK]	23	0.55 [JQK]	<2.1	<4.2	43	160 [JL]
	BZ-4C	HB4C-02	3.1 [JK]	3.2	250 [JL]	0.52 [JQK]	1.5 [JK]	27 [JK]	10	54	180 [JK]	0.16 [JL]	1.4 [JQK]	24	0.58 [JQK]	<2.1	<4.2	43	330 [JL]
	BZ-4C	HB4C-03	2.3 [JQK]	5.4	160 [JL]	0.43 [JQK]	0.87 [JQK]	24 [JK]	9.6	42	200 [JK]	0.16 [JL]	1.4 [JQK]	24	0.54 [JQK]	<2.3	<4.6	43	200 [JL]
	BZ-4C	HB4C-04	2.7 [JK]	6.4	170 [JL]	0.56 [JQK]	0.97 [JK]	26 [JK]	9.7	43	140 [JK]	0.20 [JL]	1.1 [JQK]	35	0.50 [JQK]	<1.8	<3.6	46	190 [JL]
	BZ-4C	HB4C-05	2.5 [JK]	4.8	150 [JL]	0.48 [JQK]	1.3 [JK]	28 [JK]	9.4	38	130 [JK]	0.21 [JL]	0.79 [JQK]	19	0.51 [JQK]	<2.0	<3.9	41	170 [JL]
	BZ-4C	HB4C-05 [(D)]	1.5 [JQK]	6.2	160 [JK]	0.93 [JQK]	1.9	28 [JK]	11	47	150 [JK]	0.14 [JK]	0.91 [JQK]	22	<5.0	<2.5	2.3 [JQK]	46	210 [JK]
ISM	BZ-4C	IB4C-01	2.8 [JQK]	4.8 [JQK]	170	0.30 [JQK]	1.8	25 [JK]	10	52 [JK]	230	0.28 [JK]	1.4 [JQK]	21 [JK]	<9.4	<4.7	<9.4	41 [JK]	250
	BZ-4C	IB4C-02	2.2 [JQK]	3.9 [JQK]	150	0.34 [JQK]	1.5 [JQK]	17 [JK]	8.4	43 [JK]	200	0.34 [JK]	1.0 [JQK]	16 [JK]	<9.2	<4.6	<9.2	28 [JK]	210
	BZ-4C	IB4C-03	3.1 [JQK]	4.4 [JQK]	170	0.33 [JQK]	1.7 [JQK]	24 [JK]	10	52 [JK]	220	0.29 [JK]	1.2 [JQK]	20 [JK]	<9.1	<4.6	<9.1	43 [JK]	250
	BZ-4C	IB4C-AV [(2)]	2.7 [JQK]	4.4 [JQK]	163	0.32 [JQK]	1.7 [JQK]	22 [JK]	9.5	49 [JK]	217	0.30 [JK]	1.2 [JQK]	19 [JK]	<9.4	<4.7	<9.4	37 [JK]	237
Leon H. Washington Park (BZ-5)																			
4-Point Comp.	BZ-5A	HB5A-01	3.7 [JK]	25	110 [JL]	0.32 [JQK]	0.39 [JQK]	18 [JK]	8.0	48	59 [JK]	0.065 [JH]	0.71 [JQK]	28	0.33 [JQK]	<1.4	<2.8	34	180 [JL]
	BZ-5A	HB5A-02	3.7 [JK]	25	140 [JL]	0.44 [JQK]	0.69 [JQK]	22 [JK]	9.4	48	90 [JK]	0.14 [JH]	1.5 [JQK]	21	0.57 [JQK]	<2.0	<4.1	43	160 [JL]
	BZ-5A	HB5A-03	4.8 [JK]	14	130 [JL]	0.39 [JQK]	0.62 [JQK]	24 [JK]	9.8	44	65 [JK]	0.095 [JH]	1.2 [JQK]	22	0.53 [JQK]	<2.3	<4.6	43	140 [JL]
	BZ-5A	HB5A-04	4.3 [JK]	20	110 [JL]	0.32 [JQK]	0.57 [JQK]	18 [JK]	7.9	58	69 [JK]	0.16 [JH]	1.0 [JQK]	20	<4.9	<2.5	<4.9	35	150 [JL]
	BZ-5A	HB5A-04 [(D)]	3.5 [JK]	24	120 [JK]	0.65 [JQK]	1.2	19 [JK]	8.9	76	85 [JK]	0.13 [JK]	1.2 [JQK]	24	<4.5	<2.3	2.5 [JQK]	37	200 [JK]
	BZ-5A	HB5A-05	3.9	19	140 [JL]	0.33 [JQK]	0.56 [JQK]	49 [JK]	7.8	58	74 [JK]	0.18 [JH]	2.3	19	1.7 [JQK]	<2.7	<5.4	41	170 [JL]
ISM	BZ-5A	IB5A-01	3.3 [JQK]	15	130	0.22 [JQK]	1.2 [JQK]	22	8.9	58	96	0.13 [JH]	1.6 [JQK]	32	<9.5	<4.7	0.80 [JQK]	37	160
	BZ-5A	IB5A-02	3.3 [JQK]	18	140	0.23 [JQK]	1.1 [JQK]	22	8.9	59	75	0.12 [JH]	2.0 [JQK]	27	<9.4	<4.7	<9.4	34	160
	BZ-5A	IB5A-03	2.4 [JQK]	14	110	0.20 [JQK]	0.87 [JQK]	16	7.4	49	60	0.12 [JH]	1.2 [JQK]	21	<9.4	<4.7	<9.4	27	140
	BZ-5A	IB5A-AV [(2)]	3.0 [JQK]	16	127	0.22 [JQK]	1.1 [JQK]	20	8.4	55	77	0.12 [JH]	1.6 [JQK]	27	<9.5	<4.7	0.80 [JQK]	33	153
4-Point Comp.	BZ-5B	HB5B-01	4.0 [JK]	16	240 [JL]	0.34 [JQK]	0.82 [JQK]	21 [JH]	7.9	57	240 [JK]	0.25 [JH]	1.7 [JQK]	21	0.57 [JQK]	<2.6	<5.2	34	290 [JL]
	BZ-5B	HB5B-02	3.2 [JK]	15	120 [JL]	0.52 [JQK]	0.30 [JQK]	25 [JK]	9.7	43	45 [JK]	0.099 [JH]	1.0 [JQK]	34	0.27 [JQK]	<1.7	<3.3	43	100 [JL]
	BZ-5B	HB5B-03	4.6 [JK]	41	120 [JL]	0.40 [JQK]	5.2 [JK]	23 [JK]	8.4	58	52 [JK]	0.12 [JH]	1.8	25	<3.4	<1.7	<3.4	37	120 [JL]
	BZ-5B	HB5B-04	4.2	18 [JK]	180 [JL]	0.45 [JQK]	0.97 [JK]	28 [JK]	11	72	110 [JK]	0.23 [JH]	1.4 [JQK]	28	0.95 [JQK]	<2.2	<4.4	46	230 [JL]
	BZ-5B	HB5B-05	3.6 [JK]	9.8	150 [JL]	0.29 [JQK]	0.77 [JQK]	22 [JK]	8.8	63	110 [JK]	0.18 [JH]	1.2 [JQK]	21	0.38 [JQK]	<2.3	<4.7	36	260 [JL]

Sample Type	sub-BZ	Sample No.	Analyte																
			Antimony	**Arsenic**	**Barium**	**Beryllium**	**Cadmium**	**Chromium**	**Cobalt**	**Copper**	**Lead**	**Mercury**	**Mo**	**Nickel**	**Selenium**	**Silver**	**Thallium**	**Vanadium**	**Zinc**
Residential RSL			**31**	**0.68**	**15,000**	**160**	**7.1**	**-- (1)**	**23**	**3,100**	**400**	**11**	**390**	**1,500**	**390**	**390**	**0.78**	**390**	**23,000**
ISM	BZ-5B	IB5B-01	3.3 JQK	14	130	0.20 JQK	1.1 JQK	19	8.2	62	86	0.12	1.2 JQK	26	<9.3	<4.7	<9.3	30	180
ISM	BZ-5B	IB5B-02	3.5 JQK	14	130	0.20 JQK	1.1 JQK	19	7.6	62	87	0.16	1.4 JQK	25	<9.2	<4.6	<9.2	28	180
ISM	BZ-5B	IB5B-03	2.7 JQK	15	130	0.20 JQK	1.1 JQK	21	7.9	60	94	0.15	1.5 JQK	32	0.84 JQK	<4.7	<9.3	29	180
ISM	BZ-5B	IB5B-AV (2)	3.2 JQK	14	130	0.20 JQK	1.1 JQK	20	7.9	61	89	0.14	1.4 JQK	28	0.84 JQK	<4.7	<9.3	29	180
4-Point Comp.	BZ-5C	HB5C-01	1.0 JQK	8.3	110 JL	0.60 JQK	0.79 JK	19 JK	8.3	41	51 JK	0.13 JH	0.98 JQK	40	<3.2	0.39 JQK	2.0 JQK	38	140 JL
4-Point Comp.	BZ-5C	HB5C-02	4.3	17	490 JL	0.44 JQK	0.87 JK	37 JK	9.2	62	130 JK	0.58 JH	2.4	33	0.95 JQK	<2.0	<4.0	39	270 JL
4-Point Comp.	BZ-5C	HB5C-03	3.6	16	130 JL	0.44 JQK	0.48 JQK	25 JK	9.3	47	55 JK	0.092 JH	1.2 JQK	52	0.68 JQK	<2.1	<4.2	40	120 JL
4-Point Comp.	BZ-5C	HB5C-04	3.1	13	130 JL	0.45 JQK	0.50 JQK	30 JK	10	50	38 JK	0.06 JK	2.0	52	<4.5	<2.2	<4.5	40	130 JL
4-Point Comp.	BZ-5C	HB5C-05	3.3	19	130 JL	0.44 JQK	0.61 JQK	22 JK	9.4	48	62 JK	0.13 JK	1.3 JQK	25	0.56 JQK	<1.8	<3.7	41	140 JL
ISM	BZ-5C	IB5C-01	3.0 JQK	14	200	0.23 JQK	1.1 JQK	19	8.0	56	65	0.12	1.5 JQK	28	<9.4	<4.7	<9.4	30	160
ISM	BZ-5C	IB5C-02	2.7 JQK	12	140	0.21 JQK	0.93 JQK	17	7.3	49	58	0.12	1.2 JQK	23	<9.2	<4.6	<9.2	29	140
ISM	BZ-5C	IB5C-03	2.8 JQK	15	160	0.21 JQK	1.1 JQK	18	8.4	53	70	0.13	1.9 JQK	27	<9.2	<4.6	<9.2	29	160
ISM	BZ-5C	IB5C-AV (2)	2.8 JQK	14	167	0.22 JQK	1.0 JQK	18	7.9	53	64	0.12	1.5 JQK	26	<9.4	<4.7	<9.4	29	153
Cudahy Road Verge Reference Area																			
4-Point Comp.	BZ-6A	HB6A-01	0.97 JQK	4.1	150 JK	0.60 JQK	1.1	24	8.7	49	180 JK	0.081	1.0 JQK	47	<3.5	<1.8	1.9 JQK	36	240
4-Point Comp.	BZ-6A	HB6A-02	0.76 JQK	3.5	150 JK	0.48 JQK	1.2	23	7.1	38	170 JK	0.17	0.85 JQK	21	<3.7	<1.8	1.6 JQK	35	240
4-Point Comp.	BZ-6A	HB6A-02 (D)	0.58 JQK	3.6	140 JK	0.46 JQK	1.0	21	6.6	34	170 JK	0.20	0.78 JQK	21	<4.2	<2.1	1.8 JQK	33	230
4-Point Comp.	BZ-6A	HB6A-03	0.38 JQK	6.2	140 JK	0.64 JQK	0.86 JQK	22	8.9	46	73 JK	0.39	1.2 JQK	20	<4.4	<2.2	2.6 JQK	37	270
4-Point Comp.	BZ-6A	HB6A-04	0.48 JQK	3.5	130 JK	0.46 JQK	0.90 JQK	27	6.9	39	94 JK	0.080	0.89 JQK	45	<4.7	<2.3	1.5 JQK	35	200
4-Point Comp.	BZ-6A	HB6A-05	0.43 JQK	3.4	120 JK	0.43 JQK	0.95	19	6.4	42	110 JK	0.11	1.0 JQK	53	<3.9	<1.9	1.5 JQK	30	190
ISM	BZ-6A	IB6A-01	1.3 JQK	4.8 JQK	140 JK	0.44 JQK	1.1 JQK	23 JK	7.1	45 JK	200 JK	0.21	1.0 JQK	20 JK	<9.4	<4.7	2.2 JQK	31	240
ISM	BZ-6A	IB6A-02	1.2 JQK	4.3 JQK	150 JK	0.40 JQK	1.0 JQK	22 JK	6.6	48 JK	200 JK	0.18	1.3 JQK	24 JK	<9.5	<4.7	1.7 JQK	30	260
ISM	BZ-6A	IB6A-03	1.3 JQK	4.7 JQK	140 JK	0.42 JQK	1.1 JQK	21 JK	6.8	43 JK	180 JK	0.16	0.97 JQK	24 JK	<9.4	<4.7	1.3 JQK	30	250
ISM	BZ-6A	IB6A-AV (2)	1.3 JQK	4.6 JQK	143 JK	0.42 JQK	1.1 JQK	22 JK	6.8	45 JK	193 JK	0.18	1.1 JQK	23 JK	<9.5	<4.7	1.7 JQK	30	250

Notes:
- all values are reported in mg/kg
- Samples collected in October 2022
- 1 = an RSL for Total (i.e., unspeciated) chromium has not been established.
- 2 = "-AV" Result is Arithmetic Mean of Primary (-01), Duplicate (-02), and Triplicate (-03) Sample Results
- D = Field Duplicate Sample

Qualifier Definitions:
- H = High Bias
- J = The result is an estimated quantity
- K = Unknown Bias
- L = Low Bias
- Q = The reported result is less than the SQL

Definitions:
- ISM = Incremental Sampling Methodology
- mg/kg = milligram per kilogram
- MO = Molybdenum
- RSL = EPA Regional Screening Level (May 2023; THQ =1.0, Risk = 10-6)
- BZ = Background Sampling Zone
- SQL = Sample Quantitation Limit
- <## = Analyte not detected at or above indicated Sample Quantitation Limit (SQL)

Table 15: Bulletin 104 Aquifer Elevations near Site

Aquifer	Estimated Elevation (ft amsl)		Estimated Depth (ft-bgs)	
	Top	Base	Top	Base
Gaspur	45	-5	95	145
Exposition	-25	-90	165	230
Gage	-155	-220	295	360
Hollydale	-320	-365	460	505
Lynwood	-480	-575	620	715
Silverado	-640	-775	780	915
Sunnyside	-1020	-1320	1160	1460

Definitions:
amsl = above mean sea level
bgs = below ground surface
ft = feet

Reference:
DWR, 1961

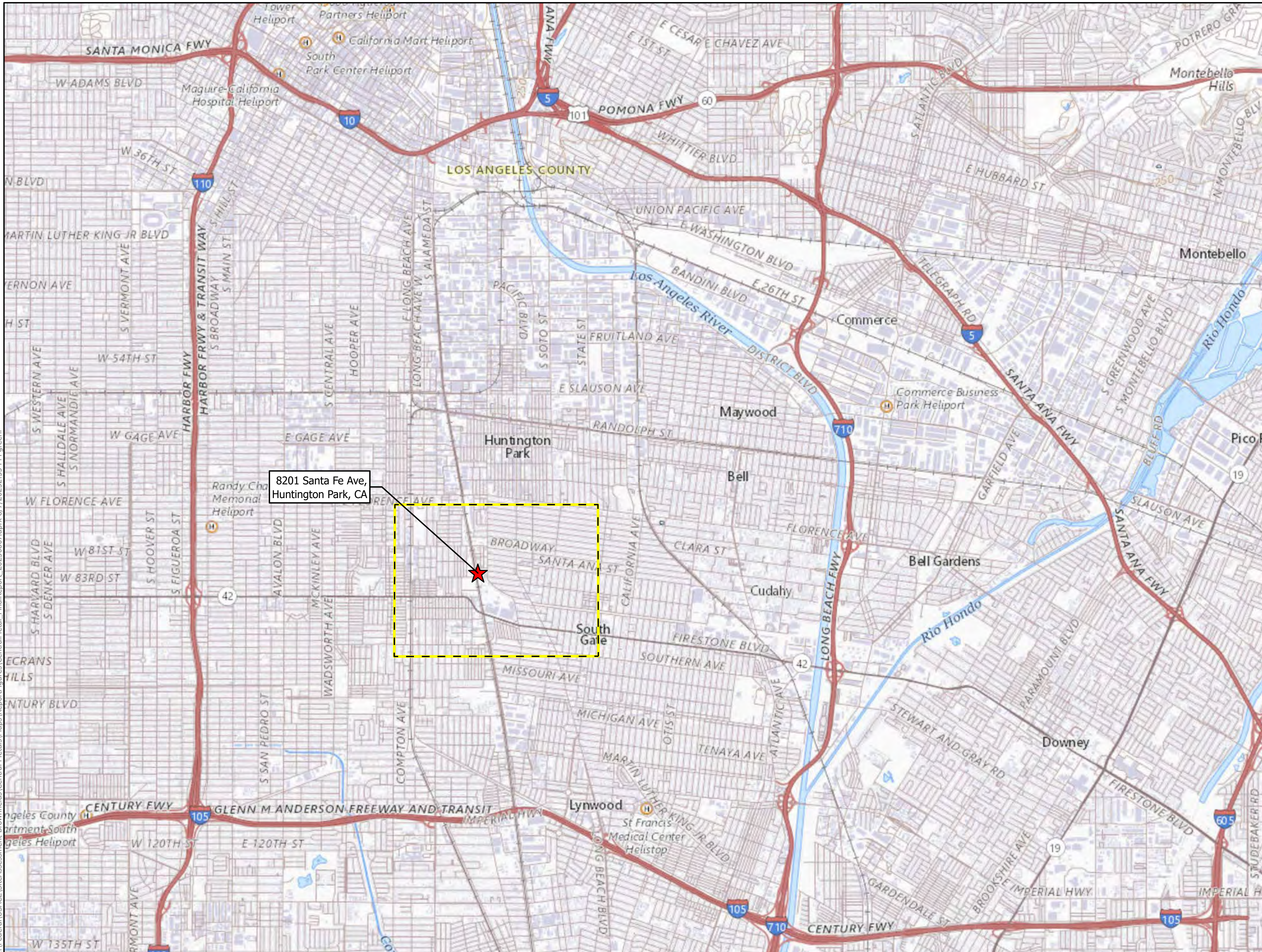
Table 16: Water Purveyors Operating Active Wells Within the Target Distance Limit

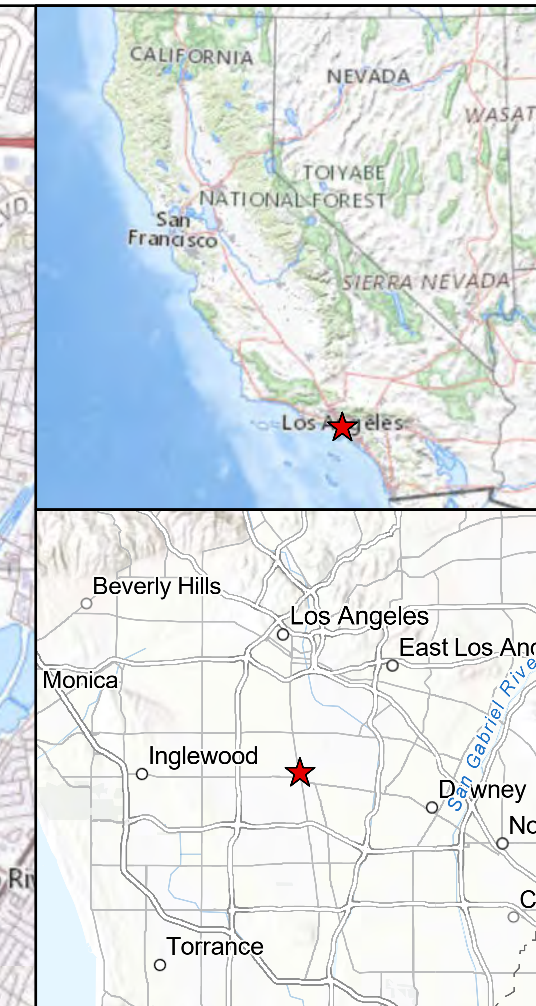
Water Company Name	No. of Wells in System (1)	Total Population Served (2)	No. of Wells Within 4 Miles (1)
Golden State Water Co. - Florence/Graham	7	62,970	7
City of South Gate	8	76,443	8
City of Huntington Park	5	15,275	5
Walnut Park Mutual Water Company	3	16,180	3
Golden State Water Co. - Bell, Bell Gardens	6	54,309	4
Los Angeles Dept. of Water and Power	44	3,868,811	4
City of Lynwood	5	66,967	5
Tract 349 Mutual Water Company	2	3,132	2
PWC (Liberty) - Lynwood	2	24,171	1
PWC (Liberty) - Compton	2	23,802	1
City of Compton	6	74,877	3
Golden State Water Co. - Willowbrook	2	10,615	2
Lynwood Park Mutual Water Company	3	2,300	3
Maywood Mutual Water Company #1	2	5,500	2
Maywood Mutual Water Company #2	2	6,349	2
Maywood Mutual Water Company #3	3	9,500	3
Golden State Water Co. - Southwest	13	275,369	2
Tract 180 Mutual Water Company	2	14,000	2
City of Vernon - no standby	8	28,000	8
Sativa-LA County Water District	2	4,385	2

Notes:
1 = Does not include standby wells unless otherwise noted
2 = Includes population served by water sources other than groundwater (e.g., imported surface water)

Reference:
Weston, 2023

FIGURES





Legend

- ★ Central Metal Site Location
- Site Inspection (SI) Project Area

0 Miles 2

FIGURE 1
SITE LOCATION MAP

Central Metal
Site Inspection Report
Huntington Park, Los Angeles County, CA

Prepared For
U.S. Environmental
Protection Agency, Region 9

Prepared By
Weston Solutions, Inc.
Concord, CA 94520
September 2023

EPA ID No.:	**WESTON Task Order:**
CAN000903324	12767.900.004.2000.02

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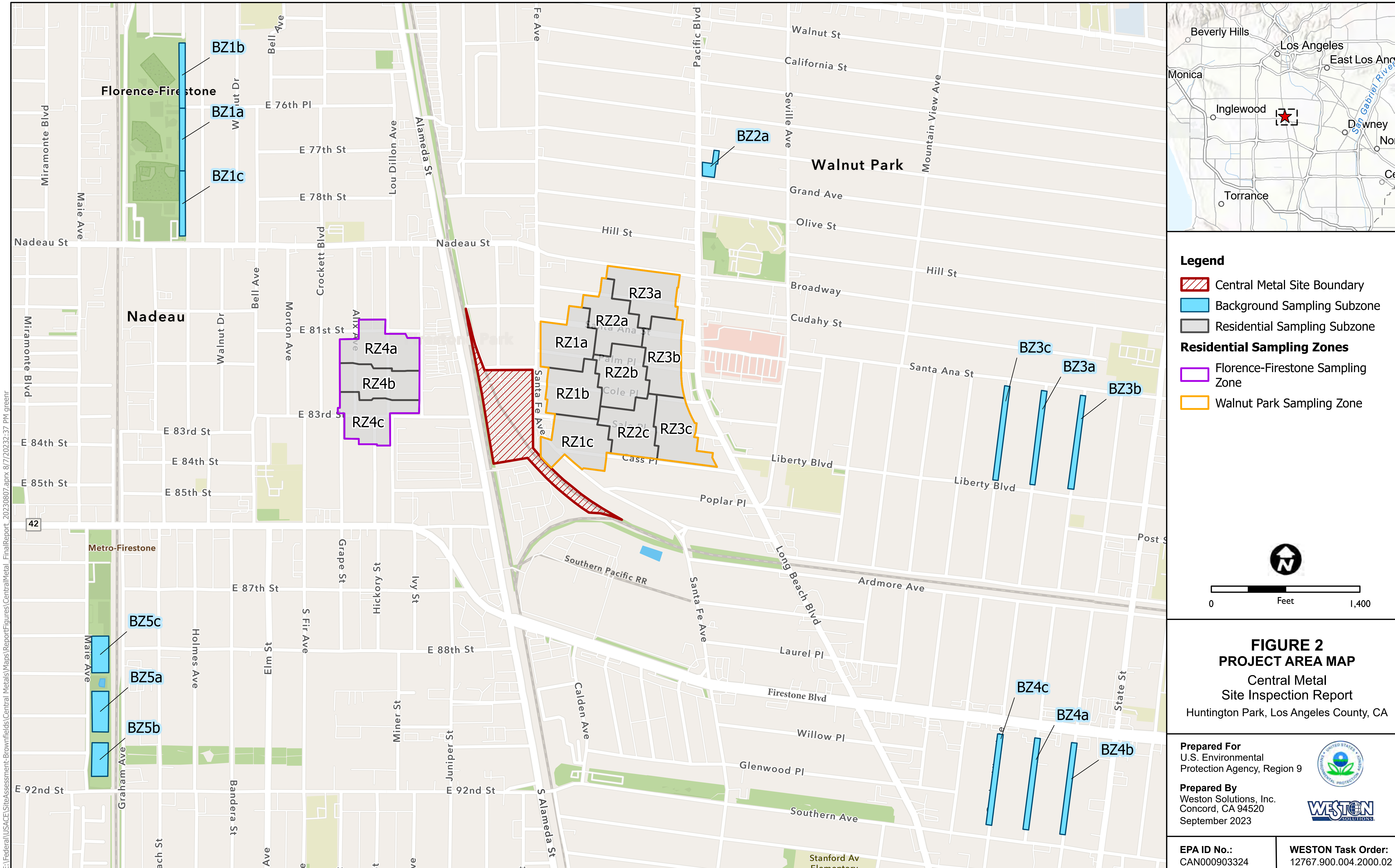
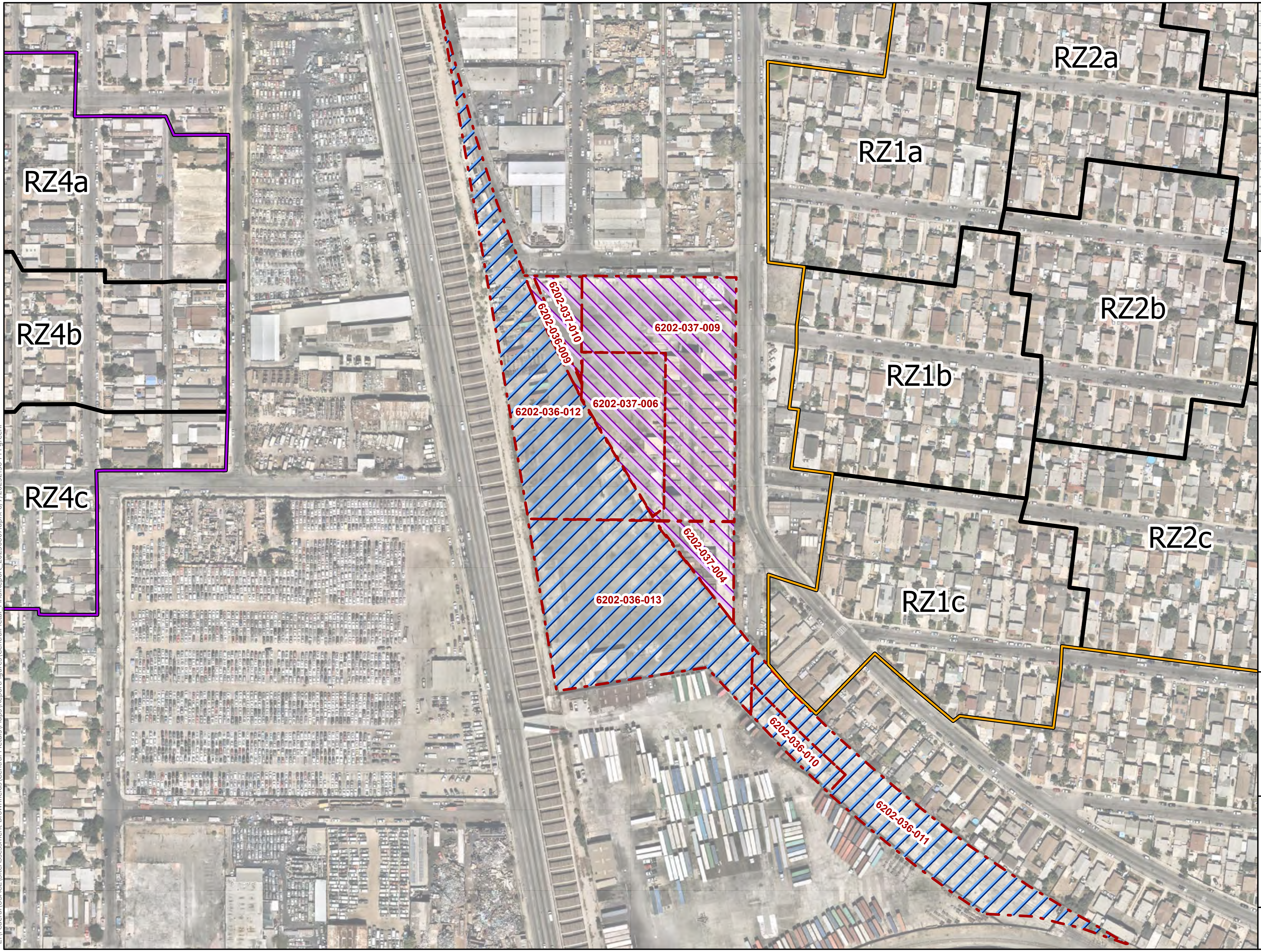
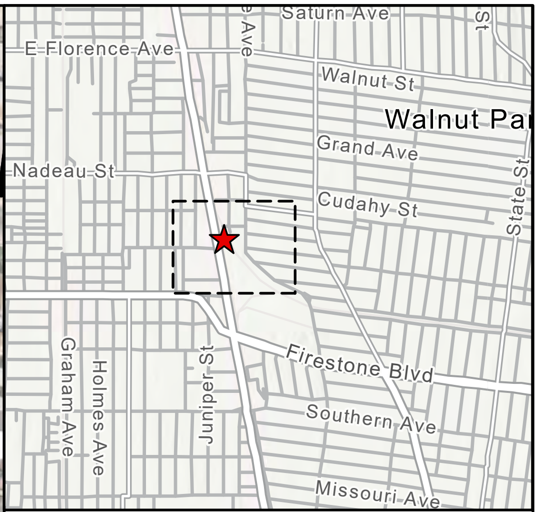


FIGURE 2
PROJECT AREA MAP
Central Metal
Site Inspection Report
Huntington Park, Los Angeles County, CA





Legend

- Parcel Boundary
- Former Railroad Area (FRA)
- Former Tank Manufacturing Area (FTMA)
- Residential Sampling Subzone

Residential Sampling Zones

- Florence-Firestone Sampling Zone
- Walnut Park Sampling Zone

Notes:
Imagery Source: NearMap 8/27/2023

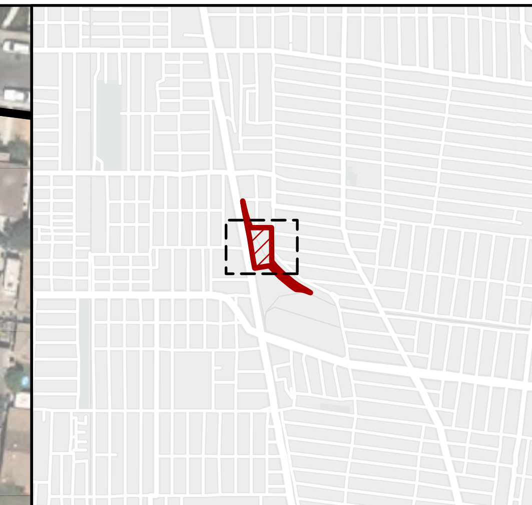
0 Feet 350

FIGURE 3
PARCEL LAYOUT MAP
Central Metal
Site Inspection Report
Huntington Park, Los Angeles County, CA

Prepared For
U.S. Environmental Protection Agency, Region 9

Prepared By
Weston Solutions, Inc.
Concord, CA 94520
September 2023

EPA ID No.:	**WESTON Task Order:**
CAN000903324	12767.900.004.2000.02



Legend

- Existing Site Structure
- Historical Site Feature
- Residential Sampling Subzone
- Central Metal Site Boundary

Notes:
Imagery Source: NearMap 8/27/2023

0 Feet 200

FIGURE 4
SITE LAYOUT MAP
Central Metal
Site Inspection Report
Huntington Park, Los Angeles County, CA

Prepared For
U.S. Environmental Protection Agency, Region 9

Prepared By
Weston Solutions, Inc.
Concord, CA 94520
September 2023

EPA ID No.:	**WESTON Task Order:**
CAN000903324	12767.900.004.2000.02

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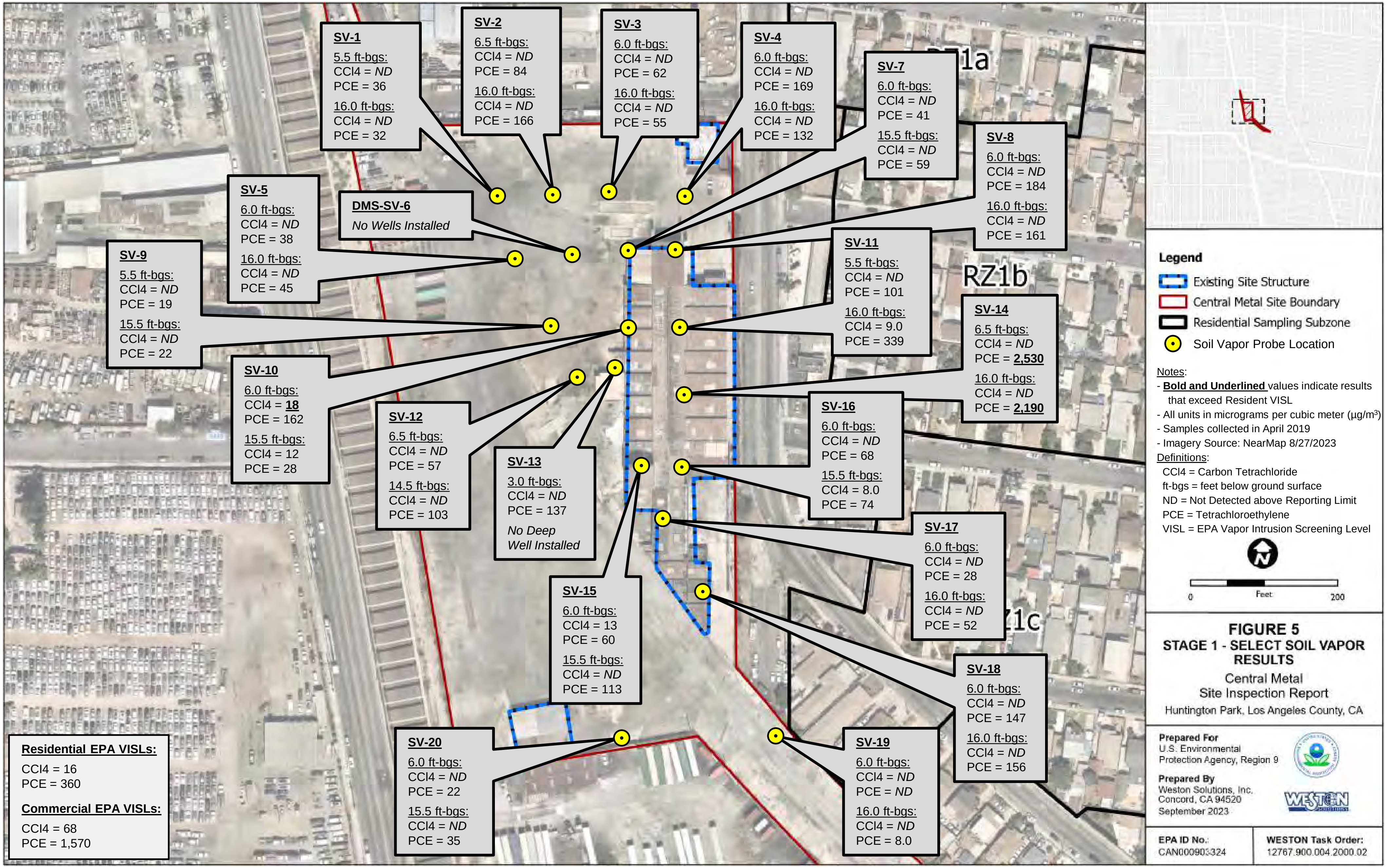

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PCE = 36
16.0 ft-bgs:
CCl4 = ND
PCE = 32
SV-2
6.5 ft-bgs:
CCl4 = ND
PCE = 84
16.0 ft-bgs:
CCl4 = ND
PCE = 166
SV-3
6.0 ft-bgs:
CCl4 = ND
PCE = 62
16.0 ft-bgs:
CCl4 = ND
PCE = 55
SV-4
6.0 ft-bgs:
CCl4 = ND
PCE = 169
16.0 ft-bgs:
CCl4 = ND
PCE = 132
SV-7
6.0 ft-bgs:
CCl4 = ND
PCE = 41
15.5 ft-bgs:
CCl4 = ND
PCE = 59
RZ1a
SV-8
6.0 ft-bgs:
CCl4 = ND
PCE = 184
16.0 ft-bgs:
CCl4 = ND
PCE = 161
SV-5
6.0 ft-bgs:
CCl4 = ND
PCE = 38
16.0 ft-bgs:
CCl4 = ND
PCE = 45
DMS-SV-6
No Wells Installed
SV-9
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PCE = 19
15.5 ft-bgs:
CCl4 = ND
PCE = 22
SV-11
5.5 ft-bgs:
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PCE = 101
16.0 ft-bgs:
CCl4 = 9.0
PCE = 339
RZ1b
SV-14
6.5 ft-bgs:
CCl4 = ND
PCE = 2,530
16.0 ft-bgs:
CCl4 = ND
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SV-13
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PCE = 137
No Deep Well Installed
SV-16
6.0 ft-bgs:
CCl4 = ND
PCE = 68
15.5 ft-bgs:
CCl4 = 8.0
PCE = 74
SV-17
6.0 ft-bgs:
CCl4 = ND
PCE = 28
16.0 ft-bgs:
CCl4 = ND
PCE = 52
Z1c
SV-15
6.0 ft-bgs:
CCl4 = 13
PCE = 60
15.5 ft-bgs:
CCl4 = ND
PCE = 113
SV-18
6.0 ft-bgs:
CCl4 = ND
PCE = 147
16.0 ft-bgs:
CCl4 = ND
PCE = 156
SV-20
6.0 ft-bgs:
CCl4 = ND
PCE = 22
15.5 ft-bgs:
CCl4 = ND
PCE = 35
SV-19
6.0 ft-bgs:
CCl4 = ND
PCE = ND
16.0 ft-bgs:
CCl4 = ND
PCE = 8.0
Residential EPA VISLs:
CCl4 = 16
PCE = 360
Commercial EPA VISLs:
CCl4 = 68
PCE = 1,570
Legend
Existing Site Structure
Central Metal Site Boundary
Residential Sampling Subzone
Soil Vapor Probe Location
Notes:
- Bold and Underlined values indicate results that exceed Resident VISL
- All units in micrograms per cubic meter (μg/m³)
- Samples collected in April 2019
- Imagery Source: NearMap 8/27/2023
Definitions:
CCl4 = Carbon Tetrachloride
ft-bgs = feet below ground surface
ND = Not Detected above Reporting Limit
PCE = Tetrachloroethylene
VISL = EPA Vapor Intrusion Screening Level
N
0
Feet
200
FIGURE 5
STAGE 1 - SELECT SOIL VAPOR RESULTS
Central Metal
Site Inspection Report
Huntington Park, Los Angeles County, CA
Prepared For
U.S. Environmental Protection Agency, Region 9
Prepared By
Weston Solutions, Inc.
Concord, CA 94520
September 2023
EPA ID No.:
CAN000903324
WESTON Task Order:
12767.900.004.2000.02

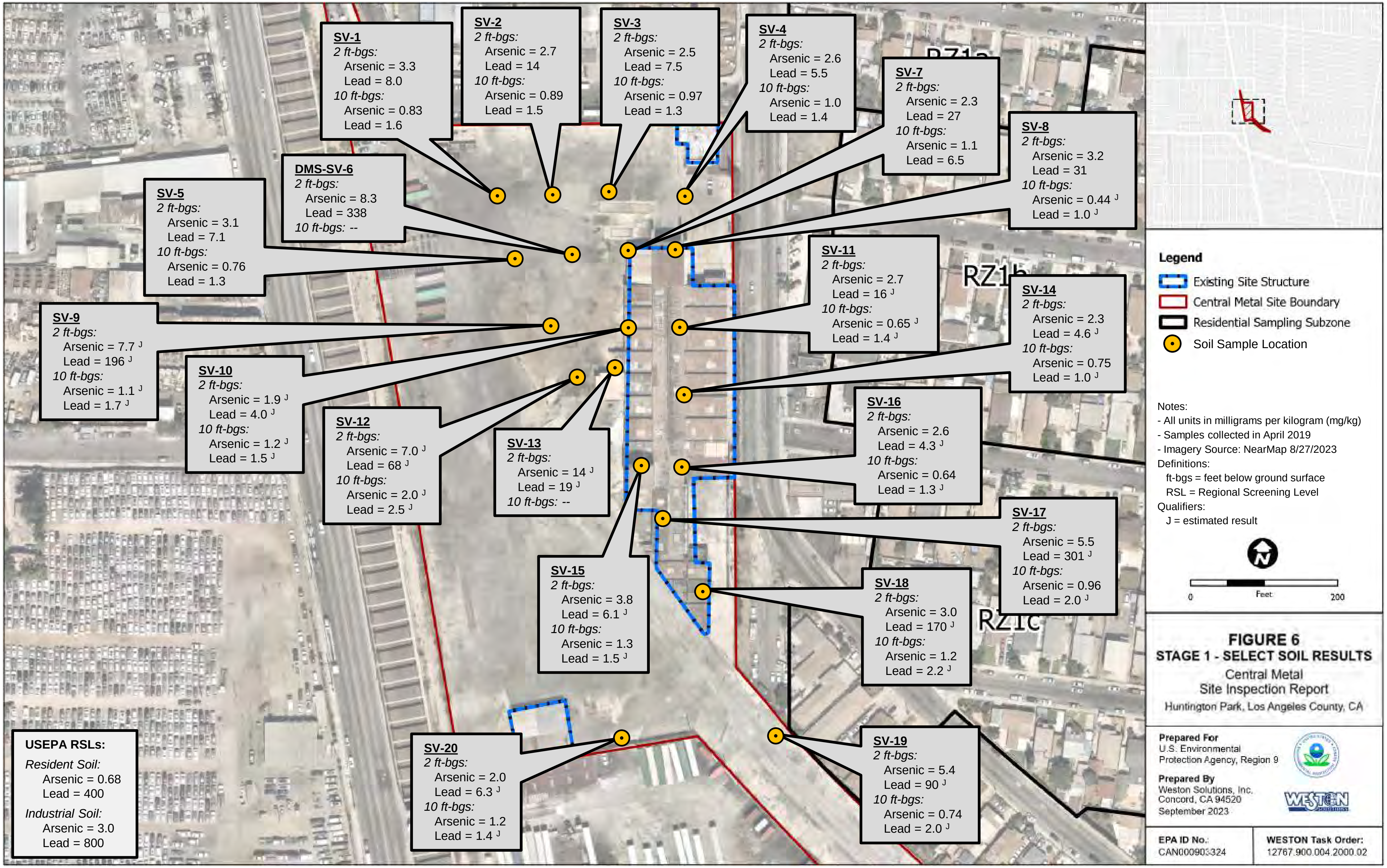
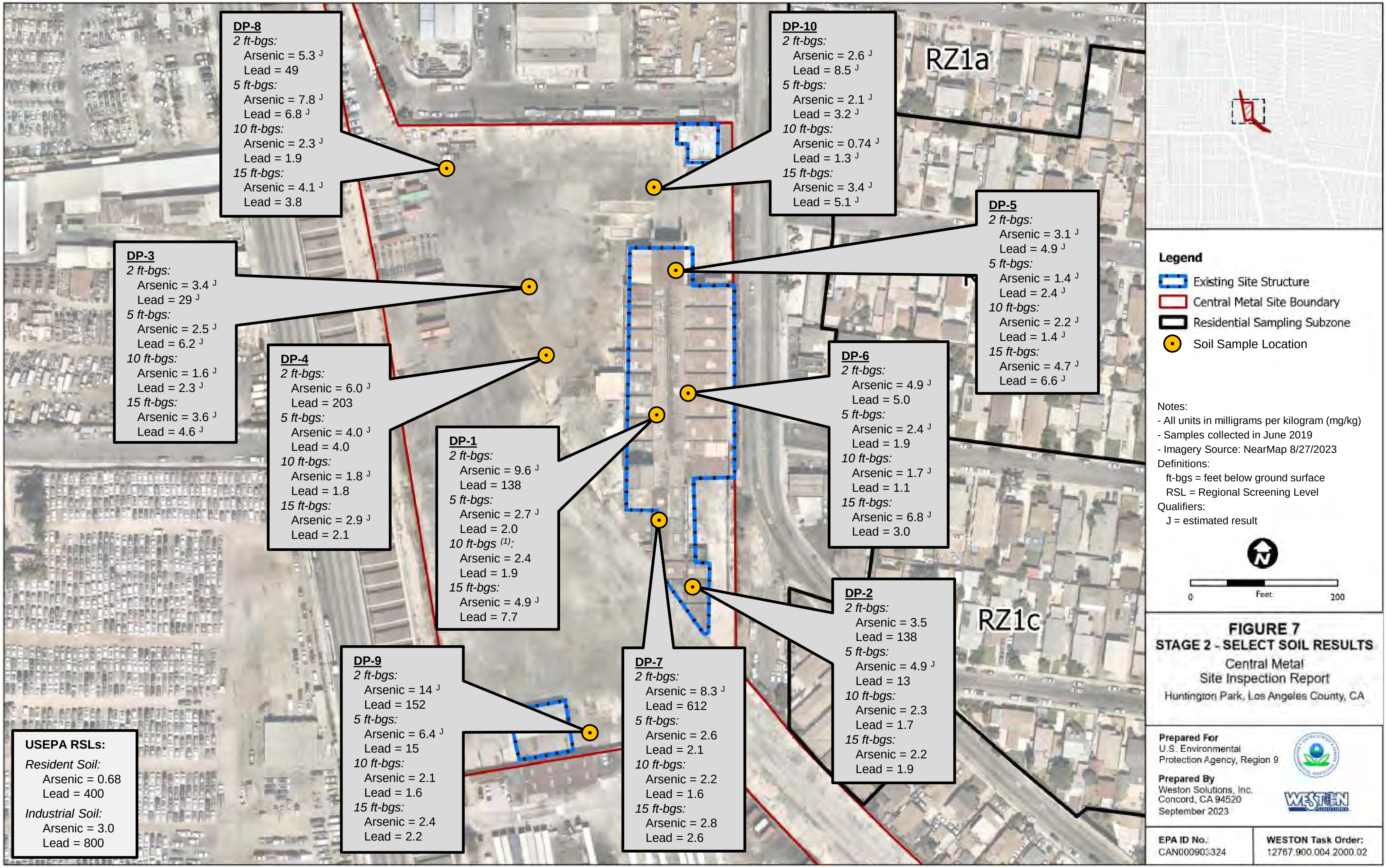


FIGURE 6
STAGE 1 - SELECT SOIL RESULTS
Central Metal
Site Inspection Report
Huntington Park, Los Angeles County, CA


DP-8
2 ft-bgs:
Arsenic = 5.3 J
Lead = 49
5 ft-bgs:
Arsenic = 7.8 J
Lead = 6.8 J
10 ft-bgs:
Arsenic = 2.3 J
Lead = 1.9
15 ft-bgs:
Arsenic = 4.1 J
Lead = 3.8
DP-10
2 ft-bgs:
Arsenic = 2.6 J
Lead = 8.5 J
5 ft-bgs:
Arsenic = 2.1 J
Lead = 3.2 J
10 ft-bgs:
Arsenic = 0.74 J
Lead = 1.3 J
15 ft-bgs:
Arsenic = 3.4 J
Lead = 5.1 J
RZ1a
DP-5
2 ft-bgs:
Arsenic = 3.1 J
Lead = 4.9 J
5 ft-bgs:
Arsenic = 1.4 J
Lead = 2.4 J
10 ft-bgs:
Arsenic = 2.2 J
Lead = 1.4 J
15 ft-bgs:
Arsenic = 4.7 J
Lead = 6.6 J
DP-3
2 ft-bgs:
Arsenic = 3.4 J
Lead = 29 J
5 ft-bgs:
Arsenic = 2.5 J
Lead = 6.2 J
10 ft-bgs:
Arsenic = 1.6 J
Lead = 2.3 J
15 ft-bgs:
Arsenic = 3.6 J
Lead = 4.6 J
DP-4
2 ft-bgs:
Arsenic = 6.0 J
Lead = 203
5 ft-bgs:
Arsenic = 4.0 J
Lead = 4.0
10 ft-bgs:
Arsenic = 1.8 J
Lead = 1.8
15 ft-bgs:
Arsenic = 2.9 J
Lead = 2.1
DP-6
2 ft-bgs:
Arsenic = 4.9 J
Lead = 5.0
5 ft-bgs:
Arsenic = 2.4 J
Lead = 1.9
10 ft-bgs:
Arsenic = 1.7 J
Lead = 1.1
15 ft-bgs:
Arsenic = 6.8 J
Lead = 3.0
DP-1
2 ft-bgs:
Arsenic = 9.6 J
Lead = 138
5 ft-bgs:
Arsenic = 2.7 J
Lead = 2.0
10 ft-bgs (1):
Arsenic = 2.4
Lead = 1.9
15 ft-bgs:
Arsenic = 4.9 J
Lead = 7.7
DP-2
2 ft-bgs:
Arsenic = 3.5
Lead = 138
5 ft-bgs:
Arsenic = 4.9 J
Lead = 13
10 ft-bgs:
Arsenic = 2.3
Lead = 1.7
15 ft-bgs:
Arsenic = 2.2
Lead = 1.9
RZ1c
DP-9
2 ft-bgs:
Arsenic = 14 J
Lead = 152
5 ft-bgs:
Arsenic = 6.4 J
Lead = 15
10 ft-bgs:
Arsenic = 2.1
Lead = 1.6
15 ft-bgs:
Arsenic = 2.4
Lead = 2.2
DP-7
2 ft-bgs:
Arsenic = 8.3 J
Lead = 612
5 ft-bgs:
Arsenic = 2.6
Lead = 2.1
10 ft-bgs:
Arsenic = 2.2
Lead = 1.6
15 ft-bgs:
Arsenic = 2.8
Lead = 2.6
USEPA RSLs:
Resident Soil:
Arsenic = 0.68
Lead = 400
Industrial Soil:
Arsenic = 3.0
Lead = 800
Legend
Existing Site Structure
Central Metal Site Boundary
Residential Sampling Subzone
Soil Sample Location
Notes:
- All units in milligrams per kilogram (mg/kg)
- Samples collected in June 2019
- Imagery Source: NearMap 8/27/2023
Definitions:
ft-bgs = feet below ground surface
RSL = Regional Screening Level
Qualifiers:
J = estimated result
N
0
Feet
200
FIGURE 7
STAGE 2 - SELECT SOIL RESULTS
Central Metal
Site Inspection Report
Huntington Park, Los Angeles County, CA
Prepared For
U.S. Environmental
Protection Agency, Region 9
Prepared By
Weston Solutions, Inc.
Concord, CA 94520
September 2023
EPA ID No.:
CAN000903324
WESTON Task Order:
12767.900.004.2000.02

Legend

- Existing Site Structure
- Central Metal Site Boundary
- Residential Sampling Subzone
- Groundwater Sample Location

Notes:
- All units in micrograms per kilogram (µg/kg)
- Samples collected in June 2019
- Imagery Source: NearMap 8/27/2023

Definitions:
DCE = Dichloroethylene
ft-bgs = feet below ground surface
ND = Not Detected above reporting limit
TCE = Trichloroethylene

Qualifiers:
J = estimated result

N

0 Feet 200

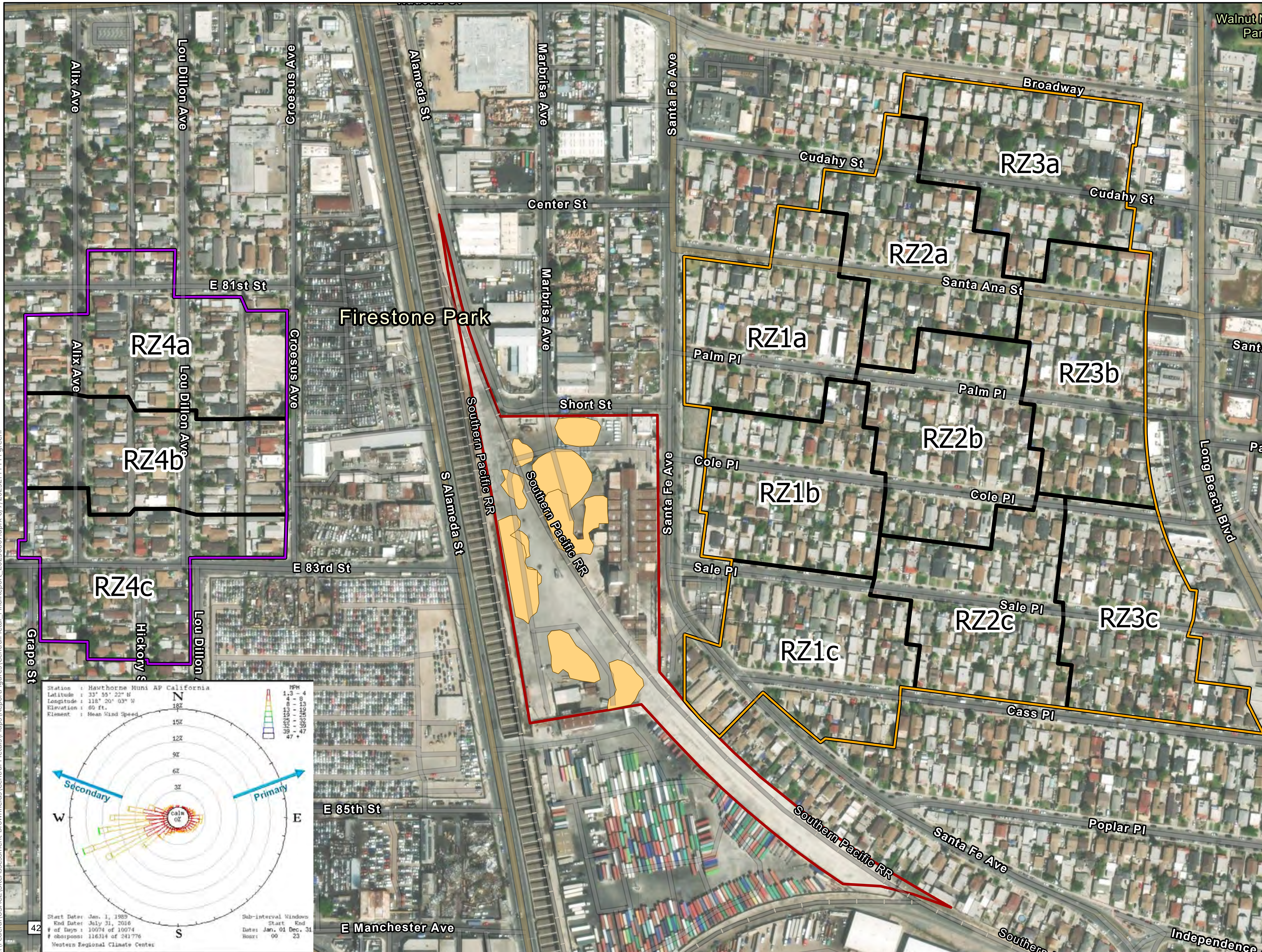
FIGURE 8
STAGE 2 - SELECT GROUNDWATER RESULTS
Central Metal
Site Inspection Report
Huntington Park, Los Angeles County, CA

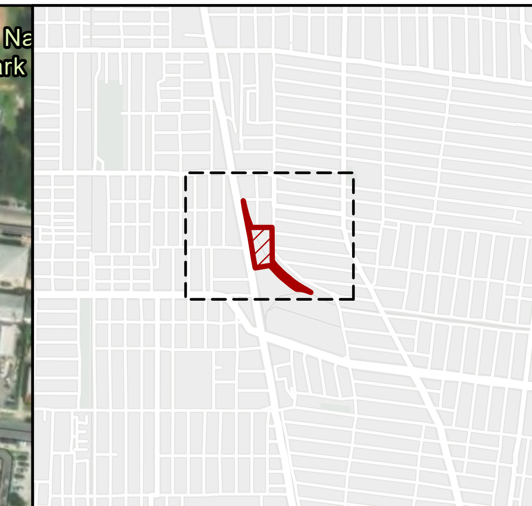
Prepared For
U.S. Environmental Protection Agency, Region 9

Prepared By
Weston Solutions, Inc.
Concord, CA 94520
September 2023

EPA ID No.: CAN000903324

WESTON Task Order: 12767.900.004.2000.02





Legend

- Residential Sampling Subzone
- Central Metal Site Boundary
- Historical Debris Pile

Residential Sampling Zones

- Florence-Firestone Sampling Zone
- Walnut Park Sampling Zone

Notes:
Imagery Source: NearMap 8/27/2023

0 Feet 480

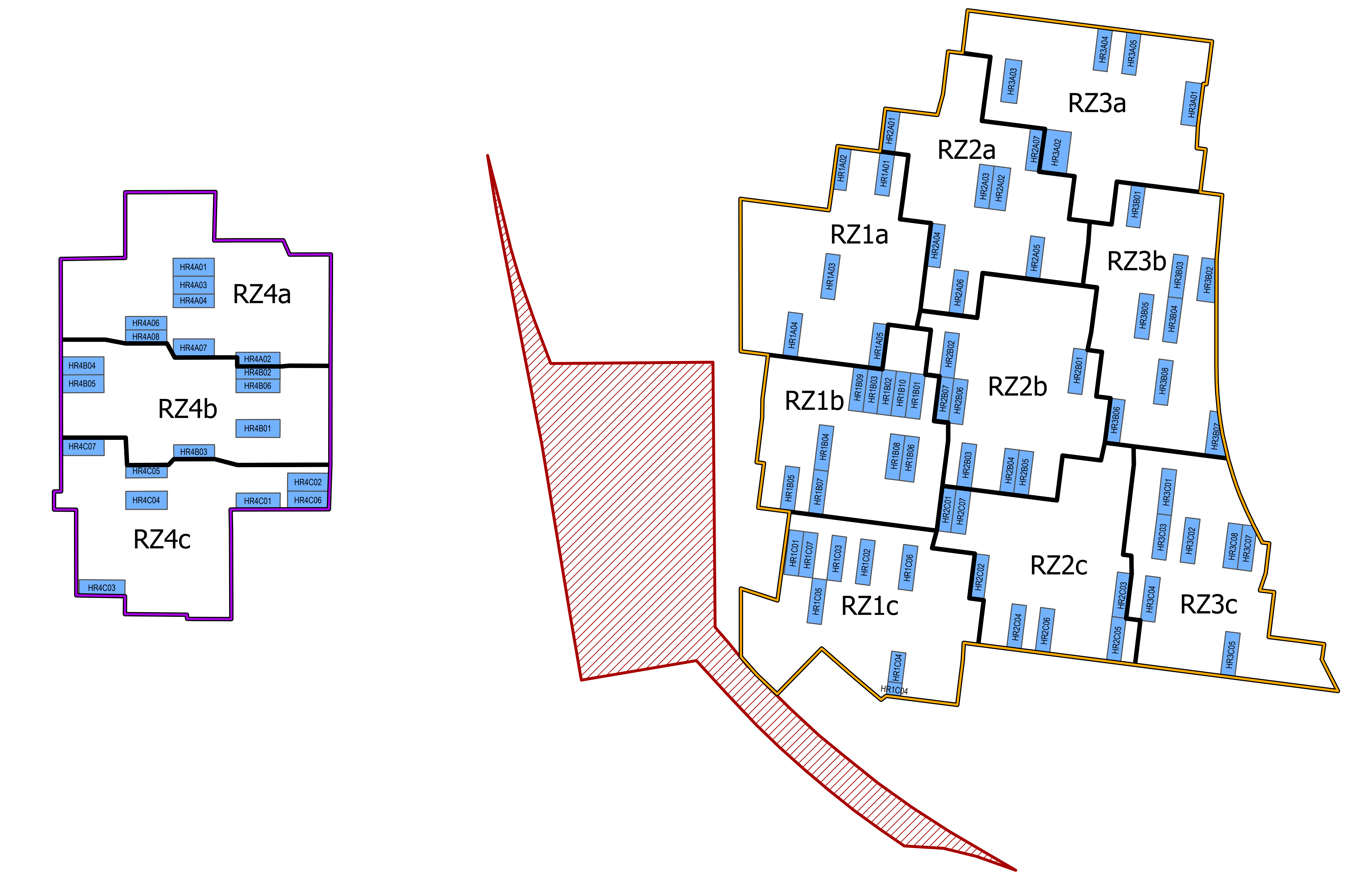
FIGURE 9
STAGE 3 - RESIDENTIAL NEIGHBORHOOD LAYOUT MAP
Central Metal
Site Inspection Report
Huntington Park, Los Angeles County, CA

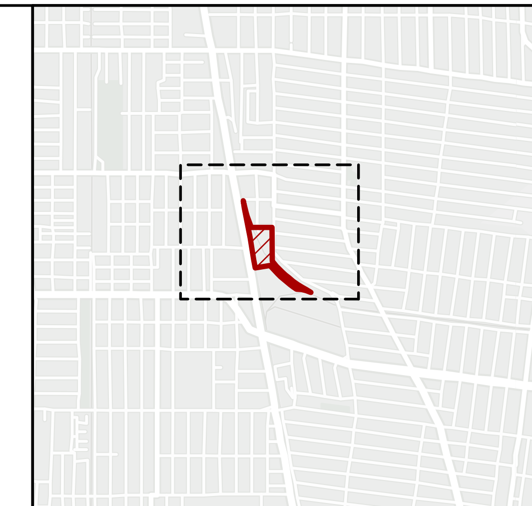
Prepared For
U.S. Environmental Protection Agency, Region 9

Prepared By
Weston Solutions, Inc.
Concord, CA 94520
September 2023

EPA ID No.: CAN000903324

WESTON Task Order: 12767.900.004.2000.02





Legend

- Central Metal Site Boundary
- Sampled Residential Parcel
- Residential Sampling Subzone

Residential Sampling Zones

- Florence-Firestone Sampling Zone
- Walnut Park Sampling Zone

Notes:

0 Feet 500

FIGURE 10
STAGE 3 RESIDENTIAL SAMPLED PROPERTY LAYOUT

Central Metal
Site Inspection Report

Huntington Park, Los Angeles County, CA

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Prepared By
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Concord, CA 94520
September 2023

EPA ID No.:	**WESTON Task Order:**
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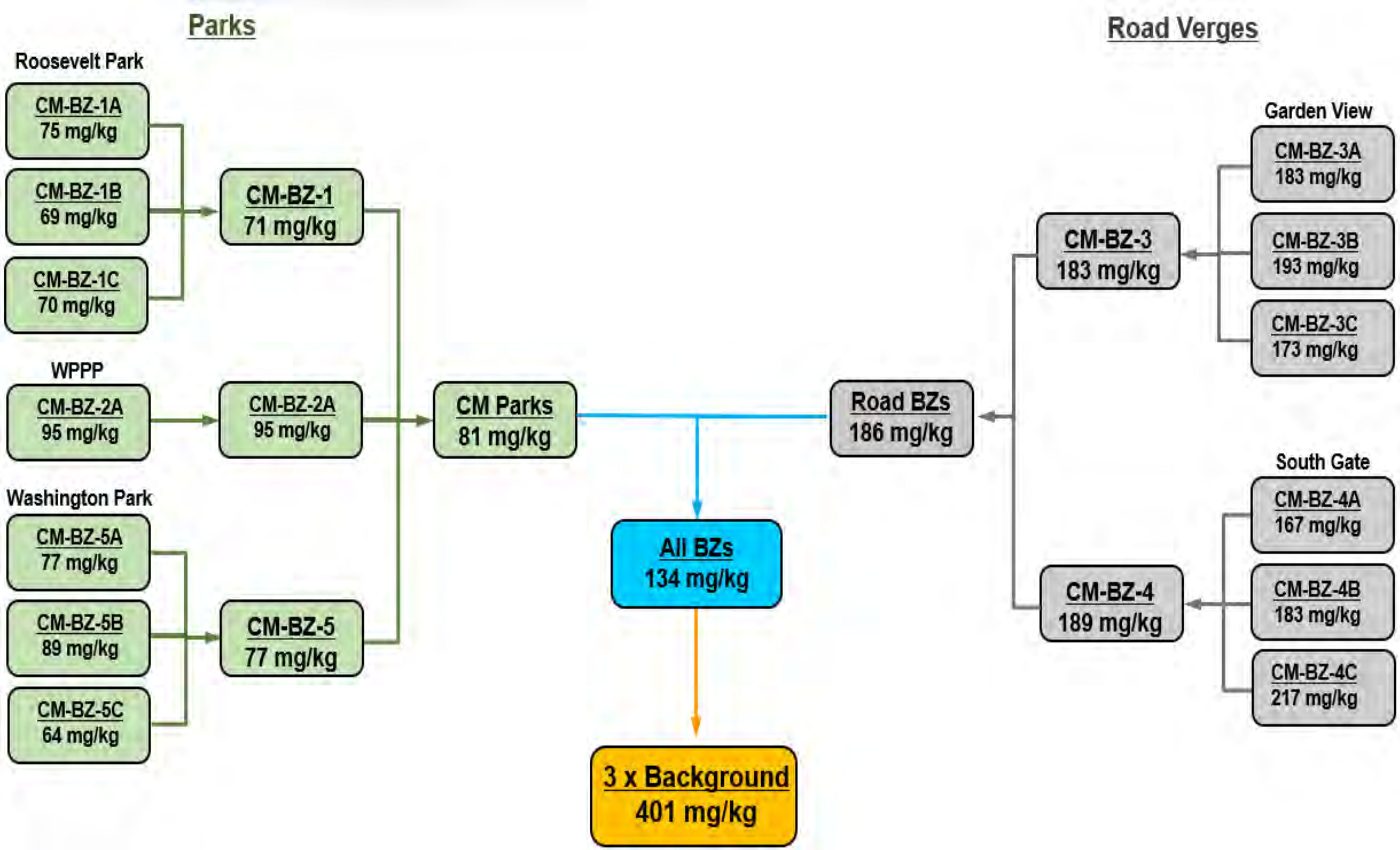

Notes:
1) All results in mg/kg (milligrams per kilogram)
2) BZ = Background Zone
3) HRS = Hazard Ranking System

FIGURE 11
METHODOLOGY FOR DETERMINING HRS SCREENING BENCHMARKS

Central Metal
Site Inspection Report
Huntington Park, Los Angeles County, CA

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Prepared By
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September 2023

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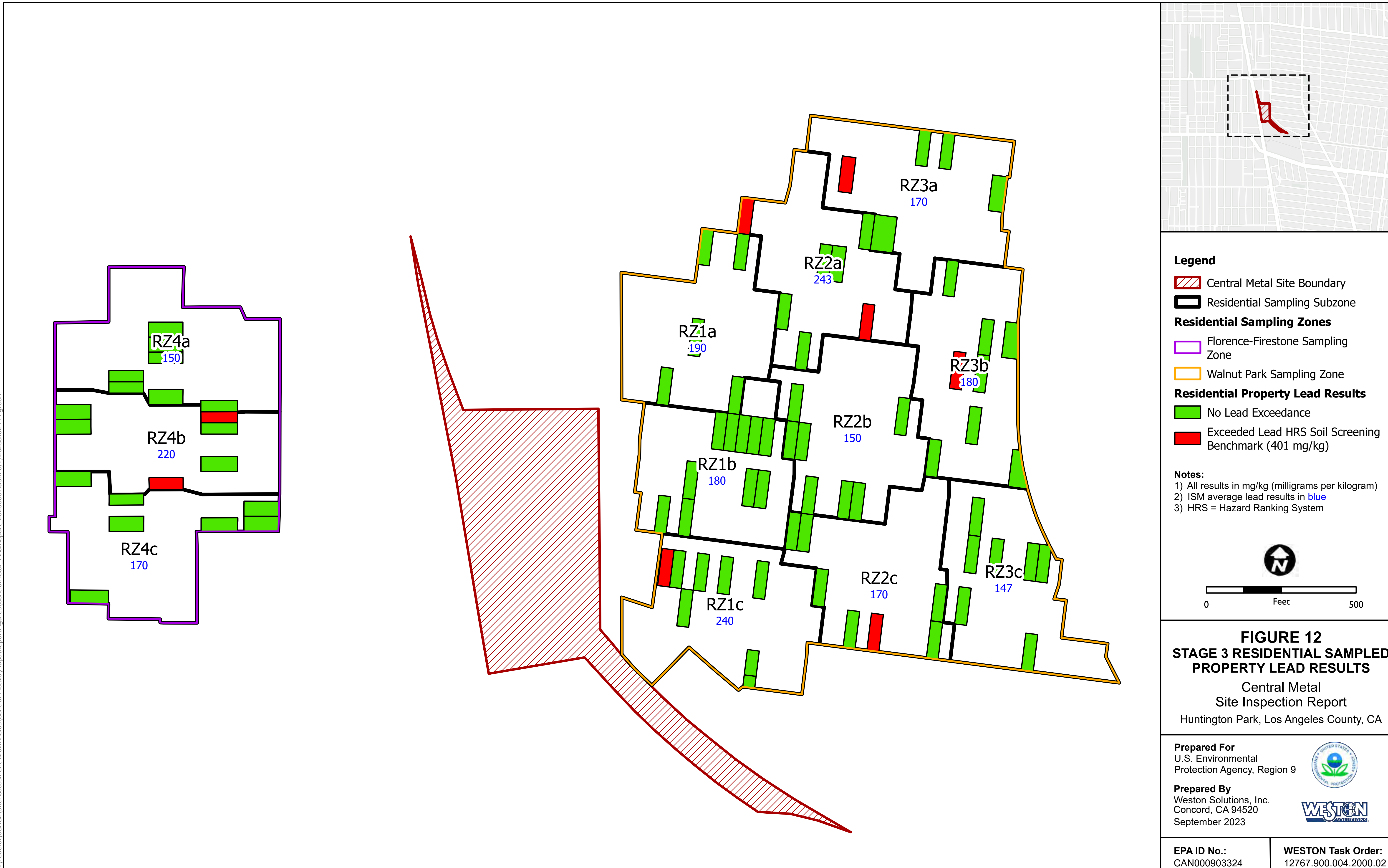

FIGURE 12
STAGE 3 RESIDENTIAL SAMPLED PROPERTY LEAD RESULTS

Central Metal
Site Inspection Report
Huntington Park, Los Angeles County, CA

Prepared For
U.S. Environmental Protection Agency, Region 9

Prepared By
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Concord, CA 94520
September 2023

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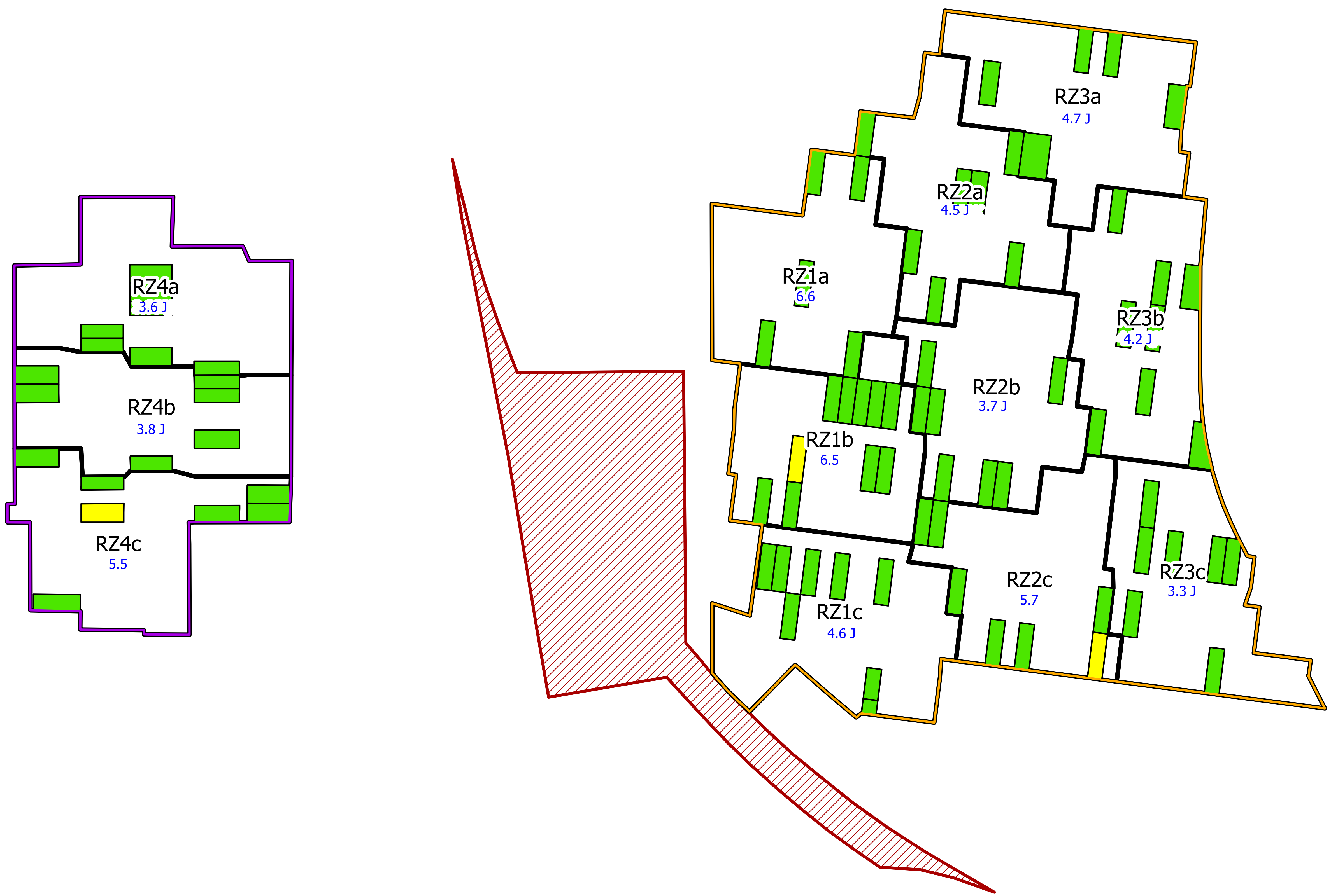

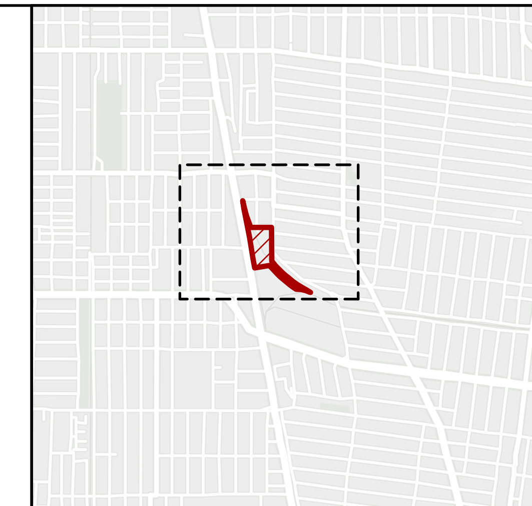

Legend

- Former Central Metal Site Boundary
- Residential Sampling Subzone

Residential Sampling Zones

- Florence-Firestone Sampling Zone
- Walnut Park Sampling Zone

Residential Property Arsenic Results

- No Arsenic Exceedance
- Exceeded Arsenic HRS Soil Screening Benchmark (22 mg/kg)

Notes:
1) All results in mg/kg (milligrams per kilogram)
2) ISM average lead results in blue
3) HRS = Hazard Ranking System
4) J = Estimated

0 Feet 500

FIGURE 13
STAGE 3 RESIDENTIAL SAMPLED PROPERTY ARSENIC RESULTS

Central Metal
Site Inspection Report
Huntington Park, Los Angeles County, CA

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U.S. Environmental Protection Agency, Region 9

Prepared By
Weston Solutions, Inc.
Concord, CA 94520
September 2023

EPA ID No.:
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WESTON Task Order:
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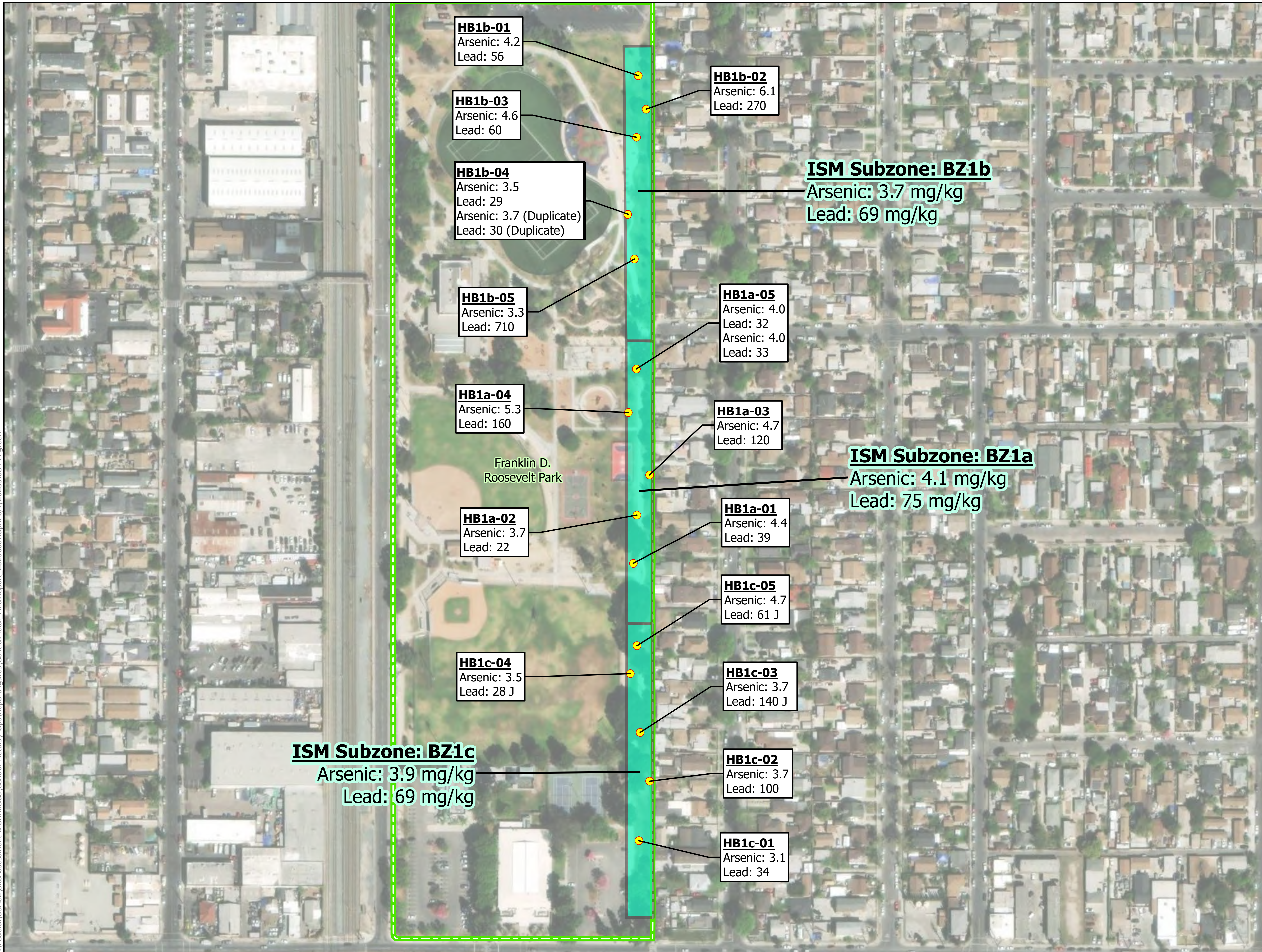

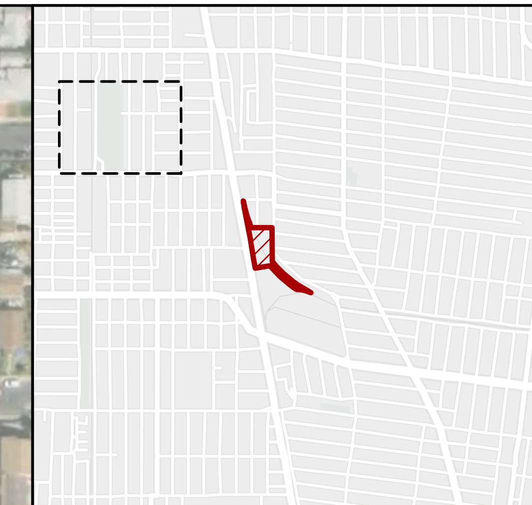

Legend

- 4-PC Soil Sampling Location
- Central Metal Site Boundary
- Background Sampling Subzones
- Park Boundaries

Notes:
1) 4-PC = Four-Point Composite
2) All results in mg/kg (milligrams per kilogram)
3) J = Estimated

0 Feet 350

FIGURE 14

STAGE 3 - BZ1 SAMPLING RESULTS FOR ARSENIC AND LEAD

Central Metal
Site Inspection Report
Huntington Park, Los Angeles County, CA

Prepared For
U.S. Environmental Protection Agency, Region 9

Prepared By
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Concord, CA 94520
September 2023

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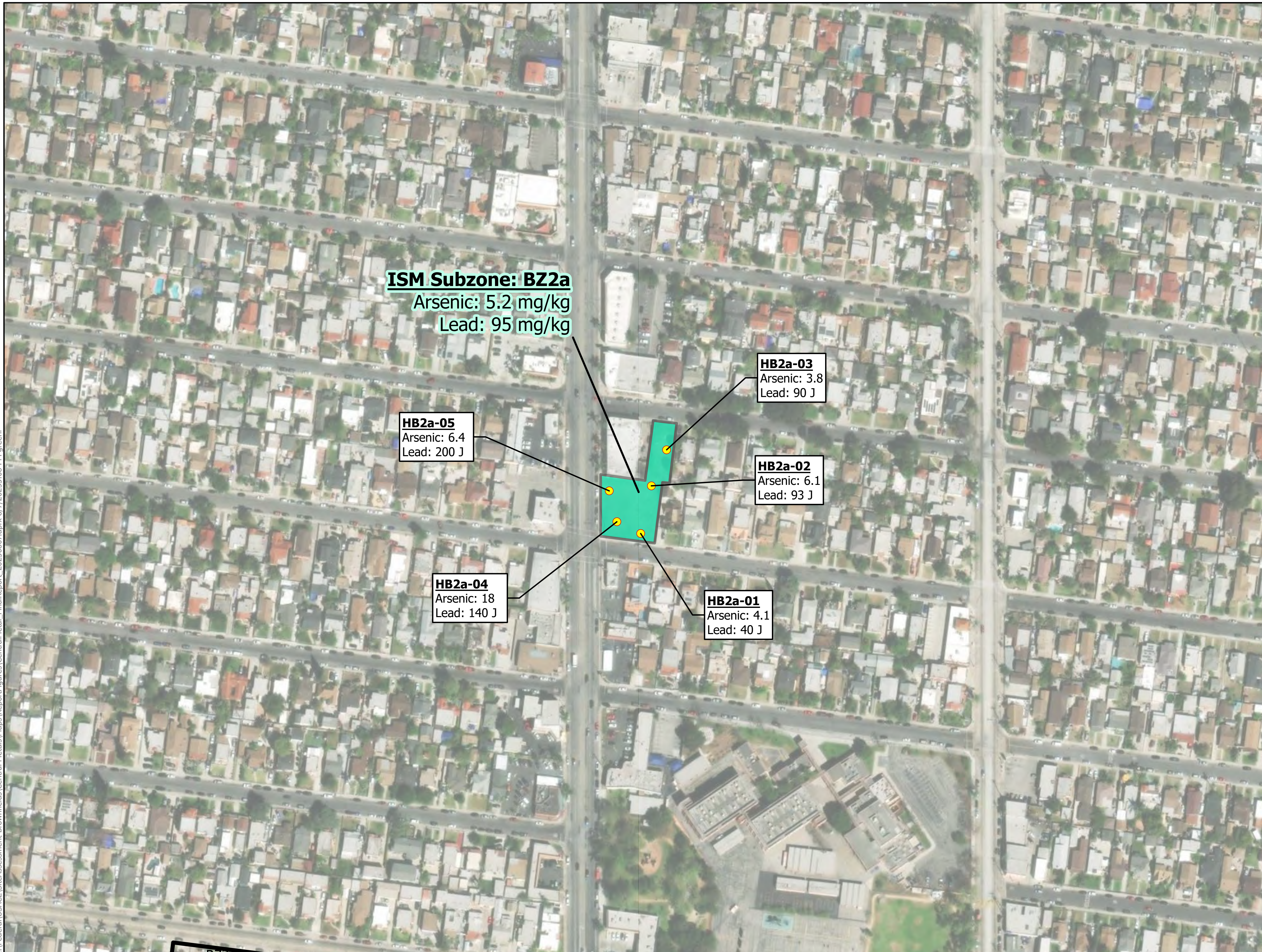

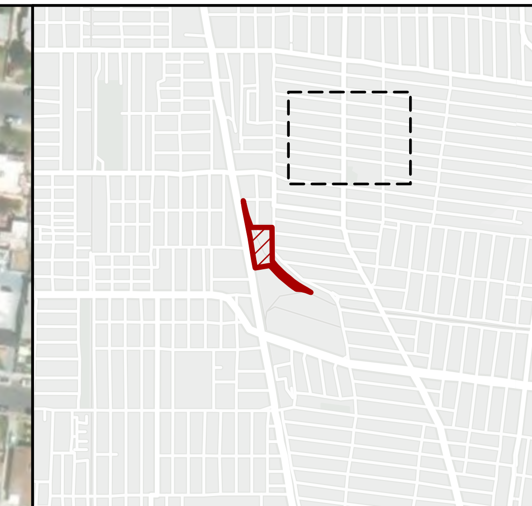

Legend

- 4-PC Soil Sampling Location
- Central Metal Site Boundary
- Background Sampling Subzones
- Residential Sampling Subzones

Notes:
1) 4-PC = Four-Point Composite
2) All results in mg/kg (milligrams per kilogram)
3) J = Estimated

0 Feet 350

FIGURE 15

STAGE 3 - BZ2 SAMPLING RESULTS FOR ARSENIC AND LEAD

Central Metal
Site Inspection Report
Huntington Park, Los Angeles County, CA

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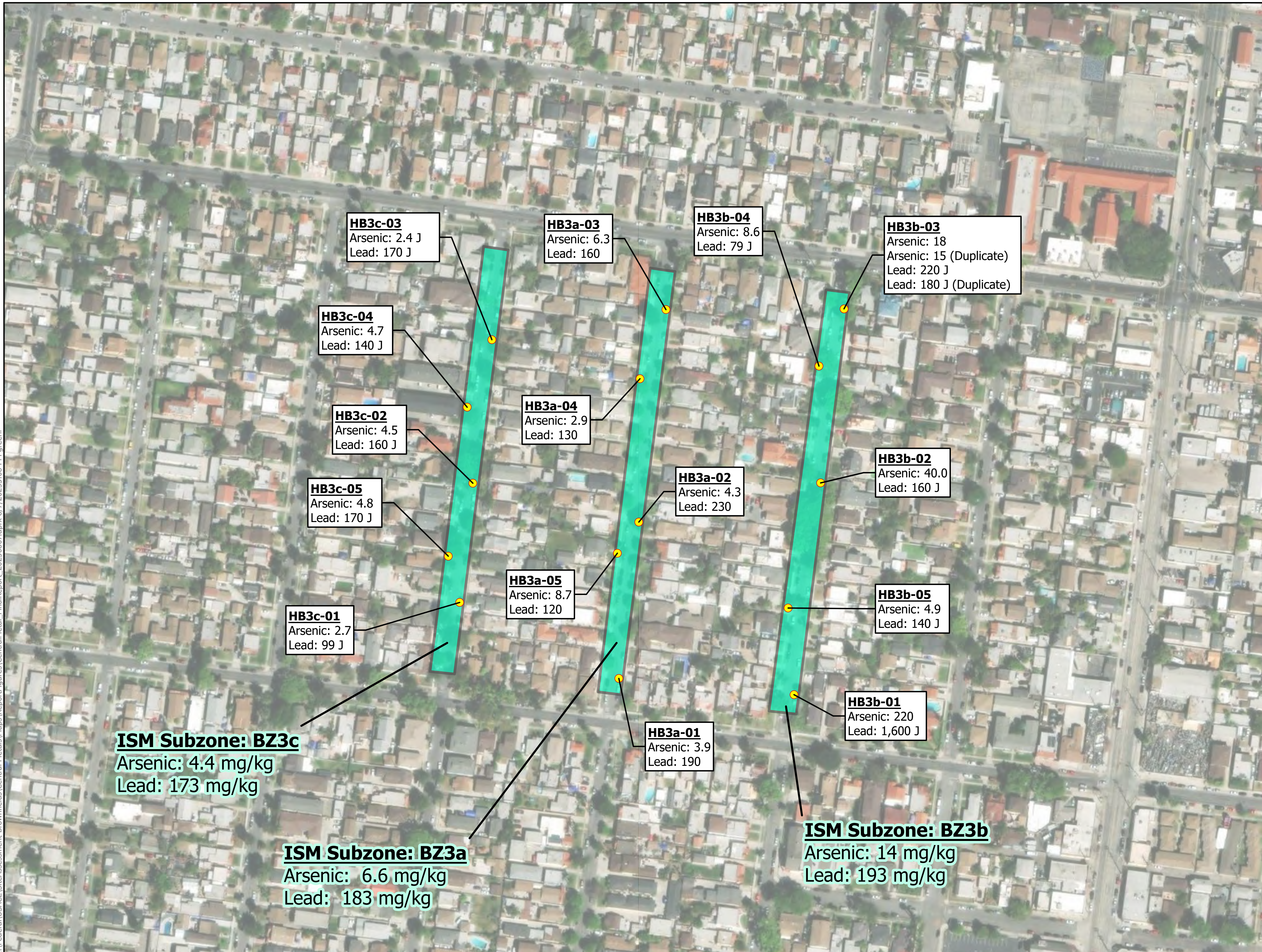
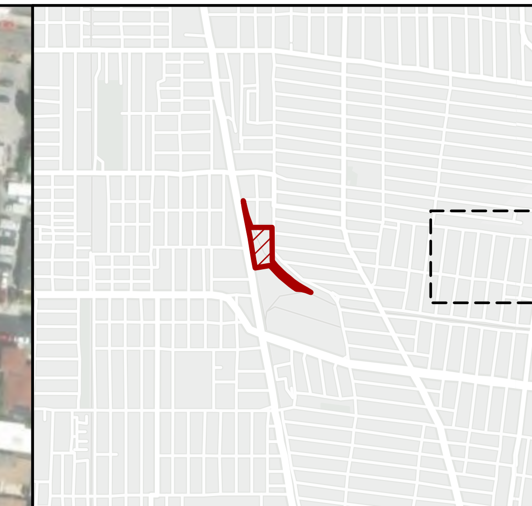
Prepared By
Weston Solutions, Inc.
Concord, CA 94520
September 2023

EPA ID No.:	**WESTON Task Order:**
CAN000903324	12767.900.004.2000.02





Legend

- 4-PC Soil Sampling Location
- Central Metal Site Boundary
- Background Sampling Subzones

Notes:
1) 4-PC = Four-Point Composite
2) All results in mg/kg (milligrams per kilogram)
3) J = Estimated

0 Feet 350

FIGURE 16

STAGE 3 - BZ3 SAMPLING RESULTS FOR ARSENIC AND LEAD

Central Metal
Site Inspection Report
Huntington Park, Los Angeles County, CA

Prepared For
U.S. Environmental Protection Agency, Region 9

Prepared By
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Concord, CA 94520
September 2023

EPA ID No.:	**WESTON Task Order:**
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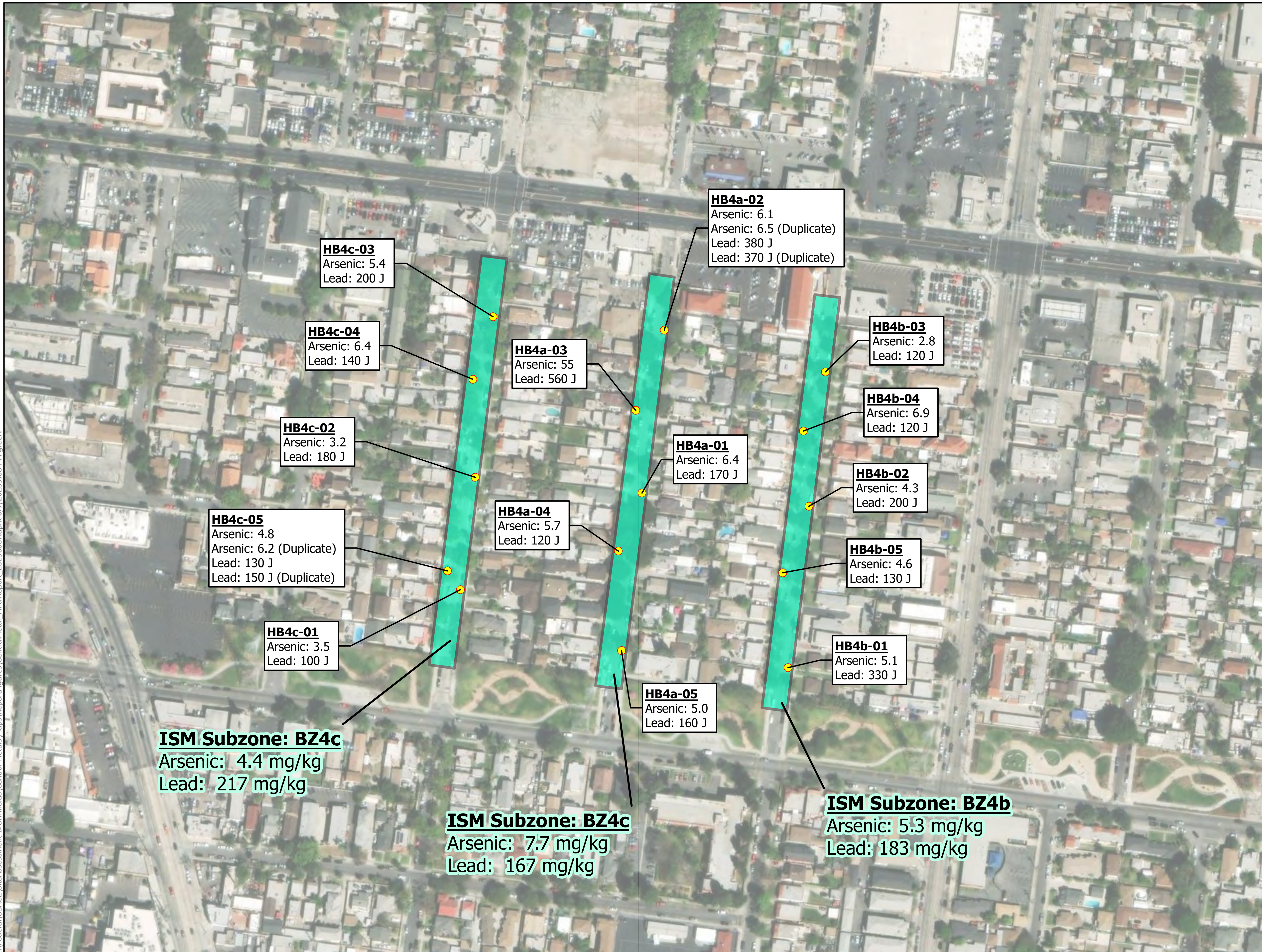

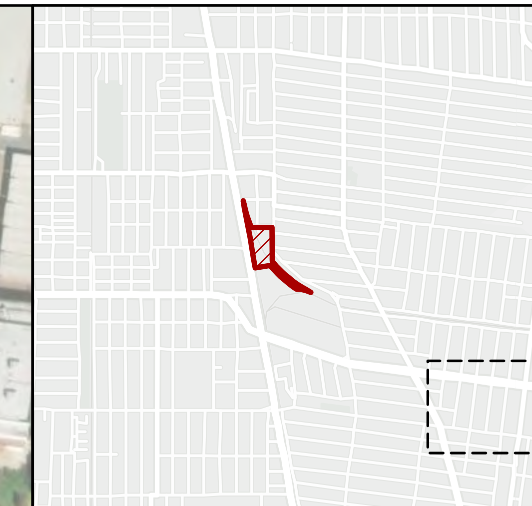

Legend

- 4-PC Soil Sampling Location
- Central Metal Site Boundary
- Background Sampling Subzones

Notes:
1) 4-PC = Four-Point Composite
2) All results in mg/kg (milligrams per kilogram)
3) J = Estimated

0 Feet 350

FIGURE 17

STAGE 3 - BZ4 SAMPLING RESULTS FOR ARSENIC AND LEAD

Central Metal
Site Inspection Report
Huntington Park, Los Angeles County, CA

Prepared For
U.S. Environmental Protection Agency, Region 9

Prepared By
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Concord, CA 94520
September 2023

EPA ID No.:	WESTON Task Order:
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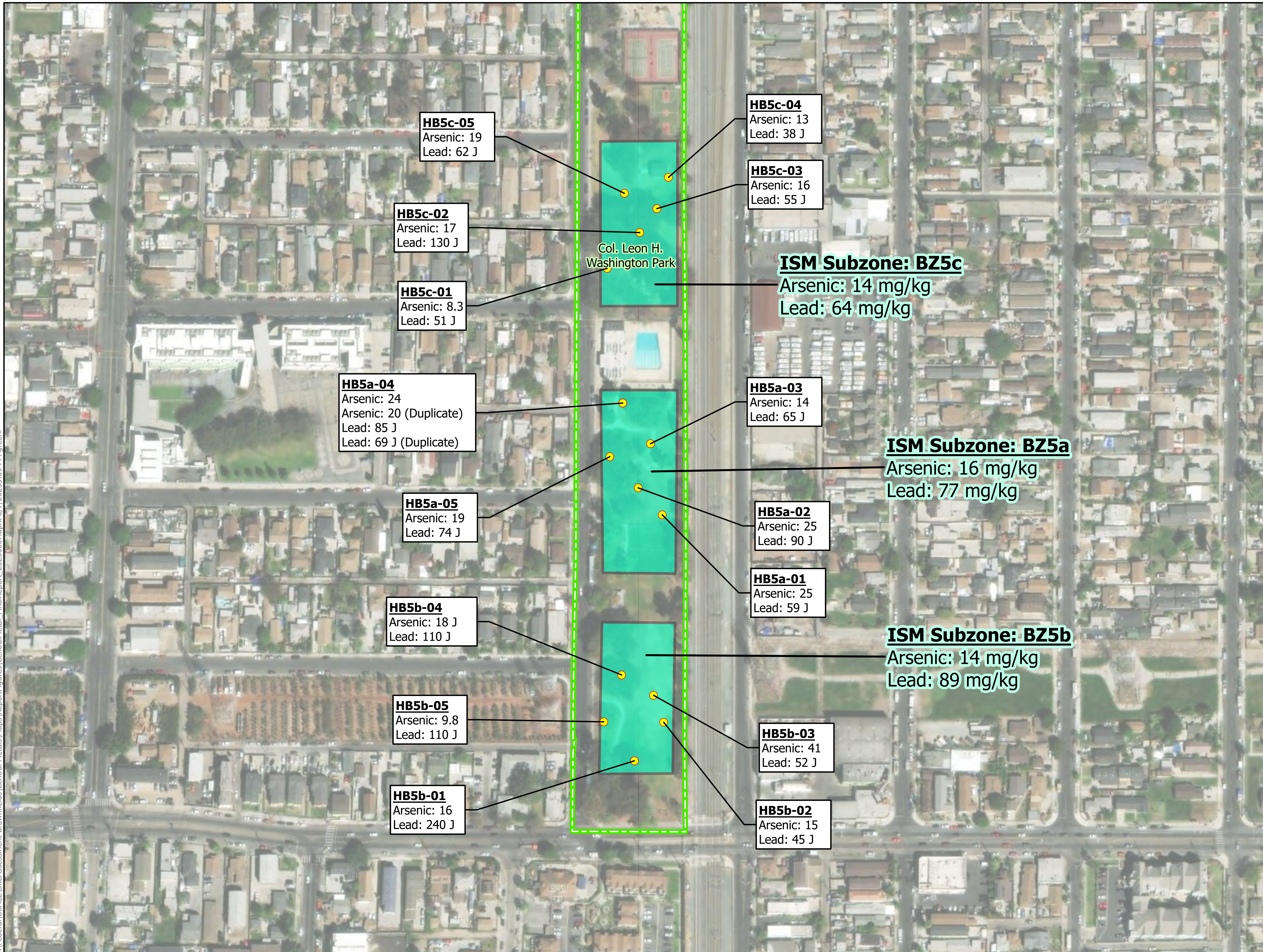

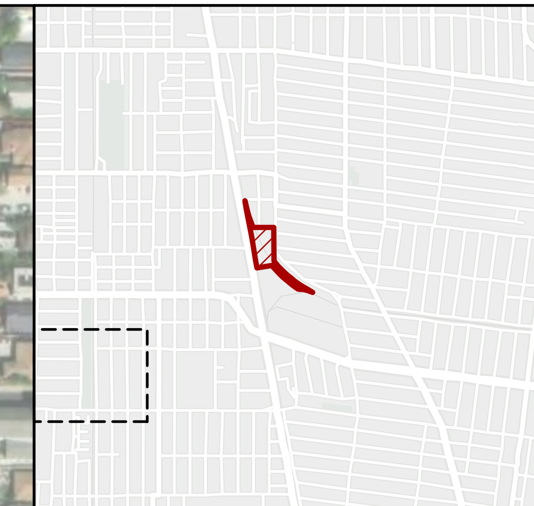

Legend

- 4-PC Soil Sampling Location
- Central Metal Site Boundary
- Background Sampling Subzones
- Park Boundaries

Notes:
1) 4-PC = Four-Point Composite
2) All results in mg/kg (milligrams per kilogram)
3) J = Estimated

0 Feet 350

FIGURE 18

STAGE 3 - BZ5 SAMPLING RESULTS FOR ARSENIC AND LEAD

Central Metal
Site Inspection Report
Huntington Park, Los Angeles County, CA

Prepared For
U.S. Environmental Protection Agency, Region 9

Prepared By
Weston Solutions, Inc.
Concord, CA 94520
September 2023

EPA ID No.:	WESTON Task Order:
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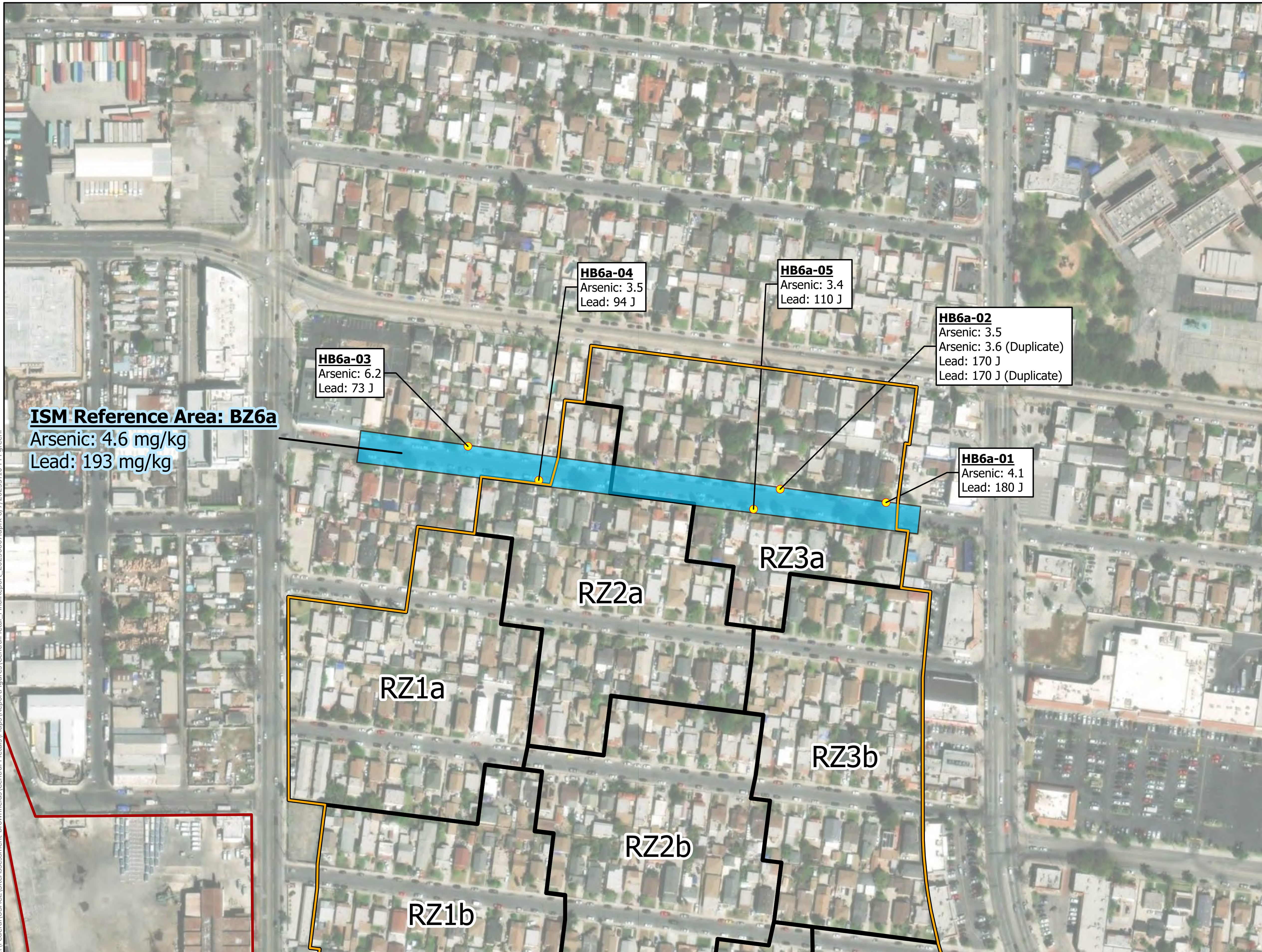

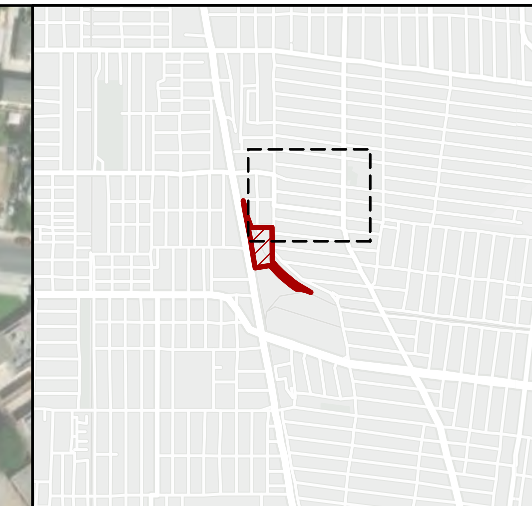

Legend

- 4-PC Soil Sampling Location
- Central Metal Site Boundary
- Reference Sampling Area
- Residential Sampling Subzone

Residential Sampling Zones

- Florence-Firestone Sampling Zone
- Walnut Park Sampling Zone

Notes:
1) 4-PC = Four-Point Composite
2) All results in mg/kg (milligrams per kilogram)
3) J = Estimated

N

0 Feet 350

FIGURE 19

STAGE 3 REFERENCE AREA SAMPLING RESULTS FOR ARSENIC AND LEAD

Central Metal
Site Inspection Report
Huntington Park, Los Angeles County, CA

Prepared For
U.S. Environmental Protection Agency, Region 9

Prepared By
Weston Solutions, Inc.
Concord, CA 94520
September 2023

EPA ID No.:	**WESTON Task Order:**
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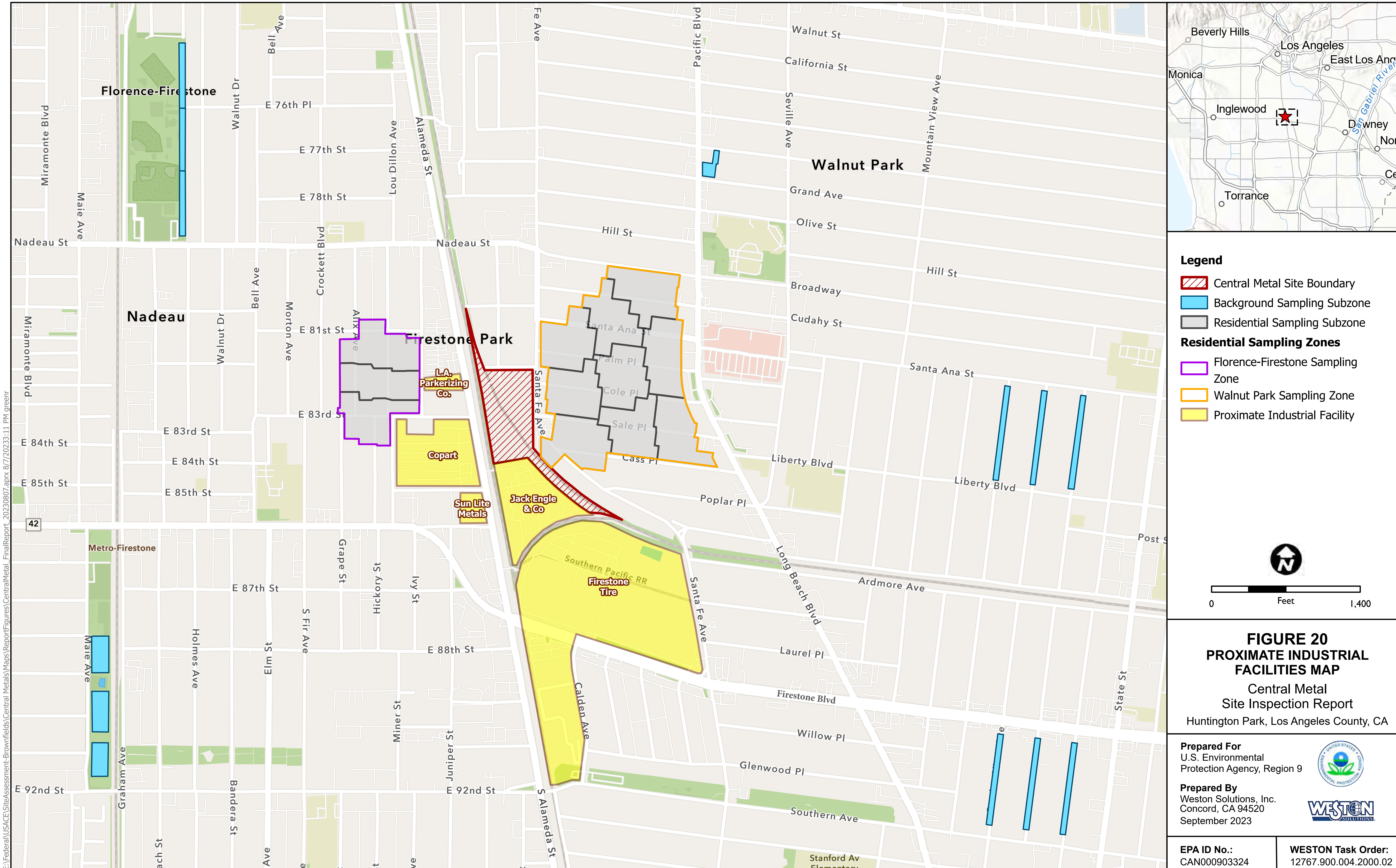


FIGURE 20
PROXIMATE INDUSTRIAL FACILITIES MAP
Central Metal
Site Inspection Report
Huntington Park, Los Angeles County, CA

APPENDICES

APPENDIX A
ACRONYMS AND ABBREVIATIONS

%	percent
>	greater than
µg/L	microgram per liter
µg/m^3	microgram per cubic meter
AOC	area of observed soil contamination
AQMD	Air Quality Management District
BDCM	bromodichloromethane
Bonner	Bonner Analytical Testing Co.
BZ	background sampling zone
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act of 1980
CLPAS	Contract Laboratory Program Analytical Services
CLRRA	California Land Reuse and Revitalization Act
CMI	Central Metal, Inc.
CPT	Cone Penetrating Testing
CUPA	Certified Unified Program Agency
CVAA	Cold Vapor Atomic Absorption
CWD	County Water District
DCE	dichloroethylene
DMS	Damille Metal Supply Inc.
DP	direct-push
DTSC	Department of Toxic Substance Control
DWP	Department of Water and Power
EJ	Environmental Justice
EPA	U.S. Environmental Protection Agency
e-waste	electronic waste
FRA	former railroad area
ft	feet (foot)
ft^2	feet squared (foot squared)
FTMA	former tank manufacturing area
GSWC	Golden State Water Company
HHMD	Health Hazardous Materials Division
HRS	Hazard Ranking System
HWSA	hazardous waste storage area
ICP-MS	Inductively Coupled Plasma Mass Spectrometry

ICP-AES	Inductively Coupled Plasma Atomic Emission Spectroscopy
ID	Identification
ISM	Incremental Sampling Methodology
ITRC	Interstate Technology Regulatory Council
MCL	Maximum Contaminant Level
mg/kg	milligram per kilogram
mg/L	milligram per liter
MWC	mutual water company
NAICS	The North American Industry Classification System
National Tank	National Tank & Manufacturing Company
NCP	National Contingency Plan
NOV	Notice of Violation
NPL	National Priorities List
PA	Preliminary Assessment
PCE	tetrachloroethylene
PID	photo ionization detector
ppm	parts per million
QA	quality assurance
RCRAInfo	Resource Conservation and Recovery Act Information
RSL	regional screening levels
RWQCB	Regional Water Quality Control Board
RZ	residential sampling zone
SAG	Slauson-Alameda-Gage
SAP	Sampling and Analysis Plan
SEMS	Superfund Enterprise Management System
SI	Site Inspection
SPRR	Southern Pacific Railroad
SQL	Sample Quantification Limit
STLC	Soluble Threshold Limit Concentration
Sub-BZ	background sampling subzone
Sub-RZ	residential sampling subzone
TCE	trichloroethylene
TCLP	Toxicity Characteristic Leaching Procedure
TDL	target distance limit

TPH	total petroleum hydrocarbons
trans-1,2 DCE	trans 1, 2-dichloroethylene
U.S.	United States
USACE	United States Army Corps of Engineers
VISL	vapor intrusion screening level
VOC	volatile organic compound
WPPP	Walnut Park Pocket Park
WESTON®	Weston Solutions, Inc.

APPENDIX B
REMOVAL EVALUATION CONSIDERATIONS

Appendix B
National Contingency Plan Removal Evaluation Considerations

If the answer to question·1 is "No", or if the answer to any question of 2 through 8 is, '"Yes", the site is ineligible for CERCLA evaluation and the decision at the bottom of this page is "No Further Action Under CERCLA". A "yes" answers to questions 9 through 16 identifies sites that may not be appropriate for CERCLA evaluation without further justification. If a question cannot be answered, explain why in the Comments section below.

#	Question	Unknown	Yes	No
1.	Has a release of hazardous substances, pollutants, or contaminants occurred?	☐	☒	☐
2.	Does the release or threat of release consist only of crude oil or unaltered petroleum product?		☐	☒
3.	Is the site subject to corrective action under RCRA Subtitle C (hazardous waste treatment, storage, or disposal facility)?		☐	☒
4.	Does the release or threatened release fall under the jurisdiction of the Uranium Mill Tailings Radiation Control Act (UMTRCA)?		☐	☒
5.	Does the release or threatened release fall under the jurisdiction of the Atomic Energy Act (AEA)?		☐	☒
6.	Is the release or threatened release a result of a legal application of pesticides under Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA)?		☐	☒
7.	Is the release or threatened release regulated under the Oil Pollution Act (OPA)?		☐	☒
8.	Is the release or threatened release permitted under the Nuclear Regulatory Commission (NRC)?		☐	☒
9.	Is the site a federal facility?		☐	☒
10.	Is the site outside of U.S. boundaries?		☐	☒
11.	Is the site outside of EPA, Region IX borders?		☐	☒
12.	Is the site within Native American Tribal lands?		☐	☒
13.	Is the site currently under the control and management of a state/local agency? If yes, which agencies? Describe below.		☐	☒
14.	Is the site currently operating?		☐	☒
15.	Is the site address valid?		☒	☐
16.	Has the site been investigated under an alias?		☐	☒

Comments:

APPENDIX C
SITE RECONNAISSANCE INTERVIEW AND OBSERVATION REPORT/ PHOTOGRAPHIC DOCUMENTATION

SITE RECONNAISSANCE INTERVIEW AND OBSERVATIONS REPORT/PHOTOGRAPHIC DOCUMENTATION

DATES: April 8 – April 11, 2019 and June 17 – 20, 2019.

OBSERVATIONS MADE BY: Brian P. Reilly, Weston Solutions, Inc. (WESTON)

SITE: Central Metal (formerly Damille Metals SVC)

EPA ID: CAN000903324

The following information was obtained primarily during the Site Inspection (SI) sampling efforts, which include the Stage 1 effort in April 2019 and the Stage 2 effort in June 2019:

The site was located in a mixed industrial and residential area of unincorporated southern Los Angeles County, immediately southwest of the city of Huntington Park. The site was signed with the address of 8201 Santa Fe Avenue. The site appeared to be entirely enclosed behind a combined corrugated metal and chain link fence.

The site was bordered to the north and west by industrial businesses;; to the south by an industrial recycling business; and to the east by commercial businesses and residential buildings. The southeastern portion of the site is bordered directly to the northeast by single-family homes.

During the SI sampling events, the site was generally divided into two operational areas including the main warehouse-type building and office building portion of the site to the east, and the mostly vacant portion of the site to the west. A generally northwest-southeast trending fence divided the two portions of the site.

The facility was occupied by three primary structures including a large warehouse building at the east-central portion of the site, a single-story office building at the northeastern corner of the site, and a stormwater treatment system at the southwestern corner of the site. The warehouse building including several smaller sub-areas within including a hazardous waste storage area and a maintenance shop at the southern portion and an aboveground storage tank area at the northern portion.

In addition to the permanent structures, numerous large industrial scrap metal machines, presumably metal sorters and crushers) were located on the facility, primarily at the north-central area, the southwestern area, and the central area, immediately west of the large warehouse building. Several excavators equipped with ‘claws’ were also located across the facility. Several large debris piles were observed on the facility during the events, primarily in the area immediately west of the large warehouse building.

During the Stage 2 event, approximately two dozen large roll-off bins were observed being stored under cover within the large warehouse building. The bins were of varying types and sizes and were generally covered by tarps. Placards affixed to some of the bins indicated that the contained materials were classified as a California hazardous waste based on concentrations of arsenic, lead, and cadmium.

The site appeared to be entirely fenced and inaccessible to the public. The main entrance gates were located at the northeastern portion of the site, immediately west of and immediately south of the main office building. The surface of the site appeared to be entirely covered in pavement or buildings. During the Stage 1 and 2 sampling events, the concrete slab, or slabs in some areas, were found to vary from about 18 to 48 inches in thickness. No apparent sensitive environments, such as wetlands, were observed on site. No schools, daycares, or residential buildings were observed within the bounds of the facility. No stormwater drains were observed on the site and surface water from the site likely flows from paved areas of the site into the municipal stormwater drains located along Santa Fe Avenue (east) and Short Street (north) and/or into the subgrade Alameda Corridor railway (west). No evidence of commercial agriculture, commercial silviculture, commercial livestock production, or commercial livestock grazing were observed on site.

During the events, the only employees that appeared to regularly work at the facility included one or two administrative assistants in the office building and between 5 and 10 general maintenance workers across the facility. None of the major equipment at the site was observed being used and the on-site workers appeared to primarily be repairing vehicles and/or organizing and inventorying the facility.

PHOTOGRAPH LOG

Project Name: Central Metal – Site Inspection	**Site Location:** Los Angeles, CA	**EPA ID No:** CAN000903324

Photo No. **1**	**Date:** 3/27/2018
Direction Photograph Taken: North-Northwest	
Description: Main Office building from Santa Fe Ave; near intersection with Short St.	

Photo No. **2**	**Date:** 3/27/2018
Direction Photograph Taken: East	
Description: Main Office building. Primary facility entrance gates at photo-right and photo-left.	

PHOTOGRAPH LOG		
Project Name: Central Metal – Site Inspection	**Site Location:** Los Angeles, CA	**EPA ID No:** CAN000903324

Photo No. 3

Date: 3/27/2018

Direction Photograph Taken:
South

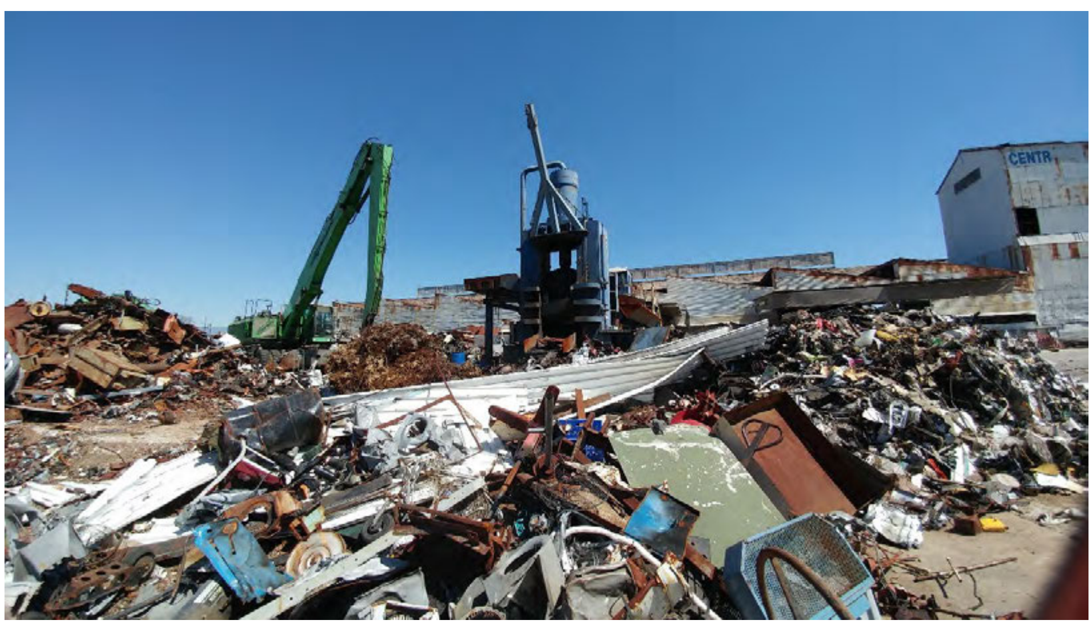
Description:
Debris piles located on western side of Warehouse building (former Warehouse extension building and foundry area)

Photo No. 4

Date: 3/27/2018

Direction Photograph Taken:
East

Description:
Uncovered and uncontained debris piles located immediately west of Warehouse building



PHOTOGRAPH LOG		
Project Name: Central Metal – Site Inspection	**Site Location:** Los Angeles, CA	**EPA ID No:** CAN000903324

Photo No. 5 | **Date:** 3/27/2018

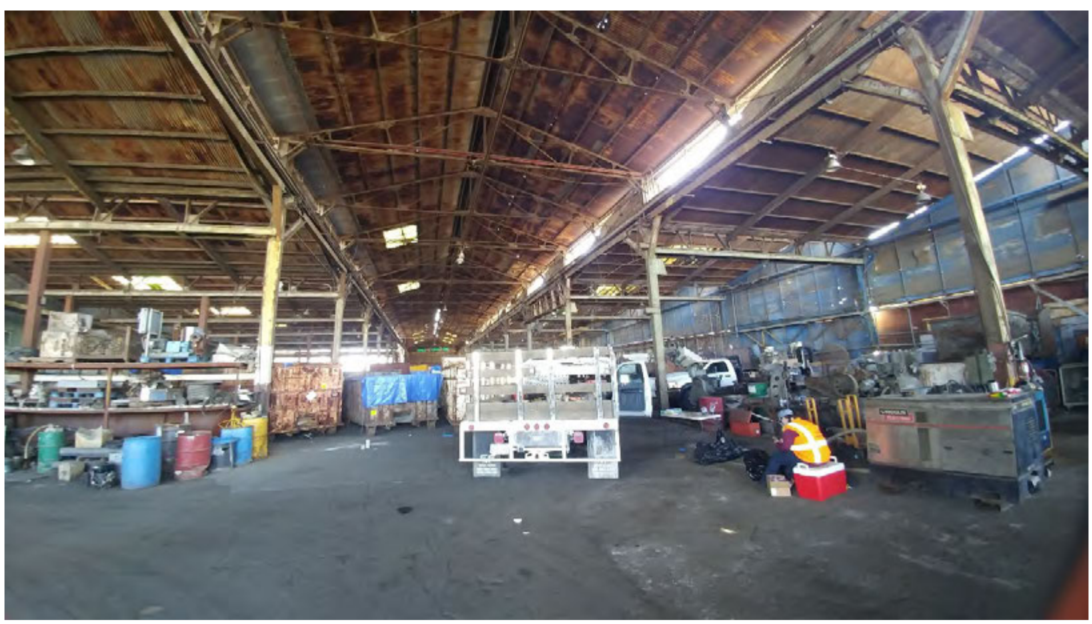
Direction Photograph Taken:
North

Description:
Interior of Warehouse building

Photo No. 6 | **Date:** 4/9/2019

Direction Photograph Taken:
South

Description:
Interior of Warehouse building during Stage 1 event. Note roll-off bins with mounted placards in background.



PHOTOGRAPH LOG

Project Name: Central Metal – Site Inspection	Site Location: Los Angeles, CA	EPA ID No: CAN000903324

Photo No. 7 | **Date:** 4/10/2019

Direction Photograph Taken:
South

Description:
Yard immediately west of Warehouse building and Warehouse building exterior (photo left)

Photo No. 8 | **Date:** 4/10/2019

Direction Photograph Taken:
Southeast

Description:
Yard immediately west of Warehouse building and Warehouse building exterior. Note scalehouse (since removed) at photo left.

PHOTOGRAPH LOG

Project Name: Central Metal – Site Inspection	Site Location: Los Angeles, CA	EPA ID No: CAN000903324

Photo No. 9 | **Date:** 4/10/2019

Direction Photograph Taken:
South

Description:
Mobile laboratory parked between Warehouse and Main Office building; used to analyze soil vapor samples collected during Stage 1 event.

Photo No. 10 | **Date:** 4/10/2019

Direction Photograph Taken:
South

Description:
Advancement of boring SV-9 (central portion of site) during Stage 1 SI event.

APPENDIX D
CONTACT LOG AND CONTACT REPORTS

CONTACT LOG

SITE: Central Metal
EPA ID: CAN000903324

NAME	AFFILIATION	PHONE	DATE	INFORMATION
Willow	Los Angeles County, Office of the Assessor	(562) 256-1701	05/18/2023	See Contact Report 1

CONTACT REPORT 1

AGENCY/AFFILIATION: County of Los Angeles		
DEPARTMENT: Office of the Assessor, South District Office		
ADDRESS/CITY: 1401 E. Willow Street, Signal Hill		
COUNTY/STATE/ZIP: Los Angeles, California, 90755		
CONTACT(S)	TITLE	PHONE
Willow	Assessment Clerk	(562) 256-1701
PERSON MAKING CONTACT: Brian P. Reilly		DATE: 18 May 2023
SUBJECT: Parcel Ownership Information		
SITE NAME: Central Metal		EPA ID#: CAN000903324

The current owner and recorded owner address of all nine of the parcels associated with the Central Metal site (6202-036-009, -010, -011, -012, and -013; and 6202-037-004, -006, -009) as indicated by the Assessor's Office is: 8201 Santa Fe (CA) LLC, addressed at 2727 North Central Avenue, 5N; Phoenix, AZ 85004.

APPENDIX E
TRANSMITTAL LIST

TRANSMITTAL LIST

Date: **September 2023**
Site Name: **Central Metal**
EPA ID No.: **CAN000903324**

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A copy of the Site Inspection (SI) report for the above-referenced site should be sent to the following recipients:

8201 Santa Fe (CA), LLC
Site Owner
c/o Haley Ziesemer
2727 North Central Avenue, 5N
Phoenix, AZ 85004

Javier Hinojosa
CA Department of Toxic Substances Control
Chatsworth Regional Office
9211 Oakdale Avenue
Chatsworth, CA 91311

Lee Barocas
County of Los Angeles Department of Parks and Recreation
Land Management and Compliance
1000 S. Fremont Avenue
Building A-9 West - Unit #40
Alhambra, California 91803

U.S. Environmental Protection Agency, Superfund Records Center
c/o Matt Mitguard
USEPA - Superfund Division
75 Hawthorne Street, SFD-6-1
San Francisco, CA 94105

ATTACHMENTS

ATTACHMENT 1
REFERENCES

ATTACHMENT 2
DEBRIS PILE TIMELAPSE

ATTACHMENT 3
SAMPLING AND ANALYSIS PLAN (SAP) – STAGE 1 & 2

ATTACHMENT 4
SAMPLING AND ANALYSIS PLAN (SAP) – STAGE 3

ATTACHMENT 5
SAMPLE NO. – CLP CORRELATION TABLES

ATTACHMENT 6
CPT LITHOLOGICAL PROFILE REPORTS

ATTACHMENT 7
LABORATORY REPORTS – STAGE 1 & 2

ATTACHMENT 8
LABORATORY REPORTS – STAGE 3

ATTACHMENT 9
FIELD SAMPLING LOGBOOK

ATTACHMENT 10
EPA DOCUMENT 540-F-94-028