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ENVIRONMENTAL SITE MANAGEMENT PLAN

FORMER VALLCO SHOPPING MALL 10123 NORTH WOLFE ROAD, CUPERTINO, CALIFORNIA

APRIL 2019 REVISED JUNE 2019

PREPARED FOR:

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1 INTRODUCTION

On behalf of Vallco Property Owner, LLC (Vallco), WSP has prepared this Environmental Site Management Plan (ESMP) for the former Vallco Shopping Mall property located at 10123 North Wolfe Road in Cupertino, California (Site, Figure 1). This ESMP has been prepared to provide a framework to manage excavated soils during redevelopment activities at the Site.

1.1 SITE REDEVELOPMENT PLAN

The Site is anticipated to be used for commercial and residential buildings, subsurface and surface parking areas, and landscaping. In September 2018, the City of Cupertino approved a project for the Site that will include 2,402 residential units, up to 485,912 square feet of retail/entertainment uses, and 1,981,447 square feet of office uses. The project was approved pursuant to newly enacted legislation, SB 35. Approximately 10,500 parking spaces will be provided in both above-and below ground structures. The plan includes two publicly accessible town squares and a connected green roof.

Planned development includes extensive subsurface parking that will require excavation of soil to a depth of 20 to 30 ft-bgs across much of the Site (Figure 2). It is anticipated that between 1.4 and 1.8 million cubic yards of soil will be removed as part of the redevelopment. Based on information available in the California Geotracker database, the depth to groundwater beneath the Site is approximately 80 to 90 feet bgs; therefore, groundwater will not be encountered during the Site redevelopment activities.

Pre-redevelopment activities will include the demolition of the Mall building structures, including foundations and associated subsurface utilities, and all associated parking garages/structures. The Site demolition is expected occur in phases, as documented in Figure 3.

1.2 OBJECTIVES OF ESMP

The purpose of this ESMP is to provide a process to properly evaluate, manage and dispose of excavated soil during demolition and redevelopment activities. The ESMP also includes procedures in the event that unknown contamination is encountered during excavation and grading activities.

This SMP is organized as follows:

- Section 2: Environmental Conditions
- Section 3: Construction Measures
- Section 4: Reporting Requirements

1.3 INTENDED USERS OF ESMP

This ESMP is primarily intended to be used by the general contractor and the construction workers who may come into contact with soil beneath the Site. The ESMP presents measures to be implemented during construction by construction workers to mitigate potential risks to human health and the environment if impacted soil is encountered. The ESMP also includes procedures to be followed if previously unknown contamination is encountered during construction activities.

The property owner is Vallco Property Owner, LLC (Vallco). The General Contractor (Contractor) for the project is anticipated to be Devcon Construction, Inc. (Devcon) of Milpitas, California.

The specific responsibilities for Vallco and the Contractor in connection with the redevelopment are described below.

- **Property Owner/Vallco:** As the property owner, Vallco is primarily responsible for any environmental issues related to redevelopment of the Site. Vallco is responsible for communication between the entities identified in this ESMP and for all interaction with the applicable regulatory agencies. For soils excavated during redevelopment, Vallco will profile soils to determine their disposition and will, as appropriate, select the appropriate disposal facilities for all soils generated from the activities through the redevelopment phase.
- **Contractor:** Contractor will be responsible for implementation of all pre-redevelopment elements, as well as those during redevelopment if impacted or suspect soil is encountered.

1.4 PROJECT PERSONNEL

The following personnel have been identified for the project. Personnel should be updated as the project progresses, as necessary.

Property Owner/ Responsible Party (Site Management)	Vallco Property Owner, LLC 965 Page Mill Road Palo Alto, CA 94304	Nandy Kumar <u>nkumar@shcmllc.com</u> Paul Hansen <u>phansen@shcmllc.com</u>
General Contractor	Devcon Construction Inc 690 Gibraltar Dr. Milpitas, CA 95035	Daisy Pereira <u>dpereira@Devcon-const.com</u>
Environmental Consultant / Vallco Representative	WSP USA Inc. 2025 Gateway Place, Suite 348 San Jose, CA 95110	Rick Freudenberger <u>Rick.Freudenberger@wsp.com</u> Elena Robertson <u>Elena.Robertson@wsp.com</u>

2 ENVIRONMENTAL CONDITIONS

2.1 SITE SETTING

The Site is located at 10123 North Wolfe Road in Cupertino, California (Figure 1). The Site is owned by Vallco and is approximately 50 acres that is occupied by the mostly vacant Vallco Shopping Mall (the Mall). The Mall consists of one irregularly shaped two-story, steel- framed building (connected by bridge across Wolfe Road) and two small detached buildings. The two-story building is part of the enclosed former shopping Mall with approximately 1.5 million square feet of floor space that was constructed between 1974 and 1979 and renovated in 1988 and 2006. The Mall had approximately 110 tenant spaces and was anchored by Macy's, Sears, and J.C. Penney.

According to the U.S. Geological Survey Cupertino, California quadrangle (7.5-minute series) map, the ground elevation of the subject property is approximately 185 feet above mean sea level. The site is located on relatively flat land with the property sloping slightly to the northeast. The general area surrounding the Site is residential and commercial. The subject property is bound to the north by Highway 280 and to the east and south by Calabazas Creek.

The U. S. Department of Agriculture Soil Conservation Service indicates that the soils at the subject property are classified as Botella. The soils texture is identified as a clay loam. The bedrock underlying the property consists of rocks from the Quaternary Series.

2.2 GEOLOGY & HYDROGEOLOGY

The Site is located in the Santa Clara Valley, and is underlain by unconsolidated alluvial sediments, consisting of fine-grained (low permeability) deposits interbedded with coarse-grained (higher permeability) sediments. Soils encountered during an on-site soil investigation in October 2018 performed by WSP consisted predominately of clays followed by silty sands or poor and well graded sands. Fill material appeared as lean clays and extended between five to ten feet below ground surface (ft-bgs) and in some locations, as deep as 20 ft-bgs.

Based on information available in the California Geotracker database, a nearby site (TOSCO Global ID: TO608575840) measured groundwater ranging historically from 70.86 ft-bgs (May 2006) to 90.70 ft-bgs (December 2008) with a general groundwater flow direction of northeast. A Phase I Environmental Site Assessment (Phase I ESA) prepared by Cornerstone Earth Group (Cornerstone, 2018) identifies this groundwater zone as being perched and found only intermittently across the Site between depths of 80 and 95 ft-bgs. Groundwater elevations measured from previous on-site groundwater monitoring wells located at the former J.C. Penney automotive repair facility ranged from 120 to 140 ft-bgs between 1990 and 1993. Since excavation will only extend to 20 to 30 ft-bgs, groundwater is not expected to be encountered during re-development.

2.3 SUMMARY OF ENVIRONMENTAL CONDITIONS

2.3.1 HISTORICAL SITE USE

WSP performed a Phase I ESA of the Site, documented in a report dated January 7, 2014 and updated in a letter report dated January 11, 2016. The major findings of these reports are summarized below:

Based on a review of historical aerial photographs, prior to construction of the initial Mall buildings in 1974-1979, the area surrounding the Site was developed with orchards, agricultural land, and farmhouses.

A Sears Automotive Center was constructed at the property in 1970 on the southwest side of the Mall property. The Sears Automotive Center was referenced as a Leaking Underground Storage Tank (LUST) site on the state Geotracker website. Four gasoline and two motor oil underground storage tanks (USTs) were removed from the Sears Automotive Center site in 1985. Dispenser islands and product lines were removed from the site in 1994. Seven borings were installed and sampling was conducted in soil and groundwater in 1999 to assess hydrocarbon concentrations at the site. Groundwater was not encountered in any of the borings at a depth of 44 ft-bgs. Concentrations of ethylbenzene, total xylenes, and lead were reported below regulatory action levels and the site was granted case closure on December 6, 1999, with the Santa Clara Valley Water District (SCVWD) concluding that any residual contamination in the subsurface relating to the former USTs is minimal.

J.C. Penney, located adjacent and to the east of the Mall property, was also listed as a LUST site in the environmental database report. Two USTs, one 350-gallon diesel tank and one 350-gallon waste oil tank, were removed from the site on November 15, 1989. Three hundred and three tons of contaminated soil was removed from the UST excavations. A 750-gallon waste oil/water sump was closed in-place on January 21, 1994. Confirmation soil samples were collected beneath the oil/water sump prior to the closure; no contaminants of concern (COCs) were detected. Groundwater monitoring results collected from four monitoring wells installed on the J.C. Penney site indicated that there were no detectable levels of target chemical constituents. The site was granted case closure on September 1, 1994 by the SCVWD.

With the closure of the two former automotive centers, the Santa Clara County Fire Department (SCCFD) requires implementation of an approved closure plan. The Closure Plan for the Former Sears Automotive Center was submitted to the SCCFD on March 25, 2019 and approved by the SCCFD by letter dated April 11, 2019. A similar closure plan will be submitted to the SCCFD for the former J.C. Penney Automotive Center. The closure activities of the Sears and J.C. Penney premises will be monitored and coordinated with the SCCFD to ensure that no material residual hazardous materials or contaminants remain following closure. Any remaining subsurface sumps/separators will be properly abandoned or removed as part of the closure activities.

A closure plan for the Western portion of the mall was approved and implemented in November-December 2018. A similar closure plan for the Eastern portion of the mall will also be prepared and submitted to the SCCFD for review and approval. The closure activities addressed, among other things, removal of one of the three generators within the mall and decommissioning of all the elevators in the West side of the mall (including removal of the hydraulic fluids). During the inspection of the elevators, there was no evidence of any release of hydraulic fluids. All these activities were conducted under the oversight of the SCCFD. With respect to the hydraulic fluids within the former elevators, a letter dated June 20, 2019 from the elevator manufacturer (KONE Inc.), confirmed that the hydraulic fluids within their elevators do not contain volatile organic compounds (VOCs) or polychlorinated biphenyls (PCBs). The SCCFD approved the West Side Closure Plan Letter report by their letter dated December 12, 2018.

Given the historical uses of portions of the Site, any future subsurface disturbance (excavation or fill) during redevelopment activities should be performed with care and an awareness of possible past releases of chemicals or petroleum products in these areas. To this end, this ESMP applies to all redevelopment activities to ensure that excavated soils are sampled and properly handled/disposed, unknown contamination, if encountered, is appropriately addressed, and that imported fill materials are screened/analyzed before their use on the property. These areas are each identified as potential areas of concern and will be handled in accordance with Section 3.2.

2.3.2 ENVIRONMENTAL INVESTIGATIONS

In addition to the investigations and Site data associated with the regulatory closure of the two former automotive facilities, three phases of soil investigations were conducted to (a) assess environmental site conditions in connection with the planned development and (b) address potential residual subsurface environmental concerns such as the historical agricultural use of the Site and the former Sears Automotive Center. A Site Characterization Report that summarizes analytical results and Site conditions was generated by WSP and is included as Appendix A. The Site Characterization Report includes data summary tables and respective laboratory analytical reports.

SOIL INVESTIGATIONS

In September 2016, Vallco retained Geosphere to conduct a subsurface investigation to collect various discrete soil samples at the Site as part of an accompanying geotechnical investigation. A total of eight borings were advanced. A total of 32 soil samples were collected and analyzed for volatile organic compounds (VOCs) by EPA method 8260B; semi-volatile organic compounds (SVOCs) by EPA method 8260B; semi-volatile organic compounds (SVOCs) by EPA method 8270D; polycyclic aromatic hydrocarbons (PAHs) by EPA method 8270D selected ion monitoring (SIM); total petroleum hydrocarbons (TPH) as gasoline (TPH-g), as diesel (TPH-d), and as motor oil (TPH-mo) by EPA Method 8015C; pesticides by EPA Method 8081; polychlorinated biphenyls (PCBs) by EPA method 8082A; title 22 metals; 2,3,7,8-tetrachlorodibenzodioxin (TCDD) by method 1613B; and asbestos by method 435.

In October 2018, Vallco retained WSP to conduct a further subsurface investigation at the Site to provide additional information concerning subsurface conditions across the entire Site. The investigation included the installation of 15 borings. Samples were collected for Title 22 metals by EPA Method 6010B; TPH-g, TPH-d, and TPH-mo by EPA Method 8015M; SVOCs and PAHs by EPA Method 8270; herbicides by EPA Method 8151; and pesticides by EPA Method 8081. All soil sample locations and depths were analyzed for Title 22 metals and TPH-g,-d, and -mo. Soil samples collected at depths of approximately 1 and 5 ft-bgs were additionally analyzed for SVOCs, PAHs, herbicides, and pesticides at all locations.

On January 10, 2019, WSP collected additional soil samples from seven boring locations on the south side of the Mall property, east of the former Sears Center, to address the potential for lead, pesticide, or arsenic impacts around former farmhouse buildings. Samples were collected by hand auger at the following depths, 0.5, 1, 2, and 3 ft-bgs. All samples were analyzed for pesticides (by EPA Method 8081A), and lead and arsenic (by EPA Method 6020). A summary of sample locations is included in Figure 4.

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As identified in Cornerstone's Phase I ESA, the Statewide Environmental Evaluation and Planning System (SWEEPS) UST database lists seven USTs as having been located at the Site and the records only confirm the removal of six USTs. Additionally, a building plan from 1969 for the former Sears Automotive center depicted a 1,000-gallon waste oil UST on the west side of the building. Accordingly, the Cornerstone Phase I ESA recommends further investigation, including a geophysical survey, to identify whether a seventh UST in the SWEEPS UST database remains at the former Sears Automotive Center.

To address the possibility that any USTs remain in the vicinity of the former Sears Automotive Center, WSP performed a geophysical ground penetrating radar (GPR) survey on January 25, 2019 and a series of test pits around a suspected abandoned access port on March 26, 2019. The GPR survey showed no evidence of any underground tanks on the west or east sides of the Sears automotive building. The test pits revealed that the suspected access port was an abandoned storm drain. A metal pipe was located beneath the abandoned storm drain that ran perpendicular to the building. The end of the pipe was found to be capped off and determined to be the pipe that lead to a former used oil tank (Figure 5). Additional description of field activities is included in the Site Characterization Report in Appendix A.

Although WSP's investigation discussed above clearly demonstrates that no UST remains beneath the former Sears Automotive Center, this area is still identified as a potential area of concern for purposes of this ESMP. Soil excavation work in this area will be handled as discussed in section 3.2 of this report.

As noted earlier, an East Side closure plan and a specific closure plan for the J.C. Penney Automotive Center will be submitted to the SCCFD for review and approval. All closure/demolition activities on the East Side of the mall will be carried out in a manner consistent with this ESMP. Analytical Results

All analytical results have been compared to Environmental Screening Levels (ESLs) for residential human health risks as established by the San Francisco Regional Water Quality Control Board (RWQCB), revised January 2019, associated with residential direct soil exposure. Additionally, analytical results have been compared to Regional Screening Levels (RSLs) for human health risks as established by the Department of Toxic Substance Control (DTSC), revised November 2018.

No metals (excluding cobalt), TPH, SVOC, PAH, or herbicides were detected in any of the samples at concentrations that exceeded their respective residential screening levels. Additionally, results from samples collected for asbestos and 2,3,7,8-TCDD by Geosphere were all below laboratory reporting limits. Geosphere also analyzed samples for VOCs, of which only 2- Butanone (MEK) and methylene chloride were detected above laboratory reporting limits. Concentrations of methylene chloride did not exceed the ESL or RSL.

A total of 60 samples were analyzed for pesticides from 32 samples collected by Geosphere (8 borings) and 28 samples collected by WSP (21 borings) at various depths across the Site. Two of the 60 samples analyzed for pesticides contained dieldrin that exceeded the residential RSL. One of those samples also exceeded the residential ESL. There is no evidence to suggest the widespread presence of dieldrin at the Site above applicable screening levels. A 95% upper confidence level of the mean (95% UCL) dieldrin concentration was calculated using EPA's ProUCL Version 5.1. The 95% UCL for dieldrin of 2.1 μ g/kg is well below both the ESL (38 μ g/kg) and RSL (34 μ g/kg).

Cobalt was detected in one out of the 102 samples analyzed for the compound at a concentration of 23 mg/kg, which is the same concentration as the residential ESL and RSL. The Kearney Foundation of Soil Science reported in 1996 (Kearny, 1996) that soil samples collected in northern California frequently contain higher concentrations of cobalt which they attributed to ultramafic and volcanic rocks found in the area. The detection of cobalt at the concentration of the screening levels is isolated to only one sample of the 102 collected indicating there is no evidence to suggest the widespread presence of cobalt at the Site above applicable screening levels.

Based on the above results for dieldrin and cobalt and the fact that no other analytes exceeded residential screening levels, WSP finds that historical agricultural operations at the Site did not impact soils with pesticide, arsenic, or lead. In addition, there was no evidence of any impacts/exceedances of ESLs for TPH (or any other constituents) in the samples from seven borings (Figure 6) in proximity to the former Sears Automotive Center.

A total of 32 samples collected by Geosphere (8 borings) were analyzed for PCBs. Two samples contained detections of PCBs (both Arochlor 1254): E5-1 (523 µg/kg) and E8-1 (25.6 µg/kg). The results of those samples were compared to current ESLs for residential human health risks and RSLs for residential human health risks. Only the E5-1 sample collected at one foot bgs with 523 µg/kg exceeded the residential ESL and RSL. PCBs were not detected in the samples collected in the E-5 boring at five feet bgs (E5-2) and 10 feet bgs (E5-3). The PCB concentration in sample E5-1 is less than the most conservative High Occupancy Cleanup Level of 1,000 µg/kg established in the Toxic Substances Control Act (TSCA; 40 CFR 761.61). TSCA's High Occupancy Cleanup Level is consistent with residential and commercial land use.¹ Thus, PCB concentrations detected at the site are below the TSCA health-protective value of 1 mg/kg and further assessment of PCBs would not be required under TSCA. In addition, since PCBs were not detected in 30 of 32 samples collected, there is no evidence to suggest the widespread presence of PCBs at the Site at any level.

Despite the fact that the detection of PCBs at boring E-5 less than the TSCA cleanup level, because the detection was above the ESL and RSL, the area from which the sample was taken will be segregated and defined during redevelopment excavation activities. The area surrounding boring E-5 will undergo special attention during excavation for redevelopment and confirmation sampling will be performed to ensure removal of the PCBs. Details of this surgical removal of the PCBs are included within Section 3.3 of this Report.

Other than the single PCB exceedance, the analytical results indicate that no demonstrable environmental impacts upon soils exists at the Site and as such, WSP does not anticipate encountering impacted soils that exceed the respective residential ESLs.

2.3.3 RESIDENTIAL SCREENING LEVELS

Based on the above assessment of environmental conditions at the Site, soils containing COCs at levels that exceed residential ESLs are not anticipated to be encountered. As such, Site conditions during soil excavation should not pose an unacceptable risk to Site construction workers.

¹ As defined in TSCA, the term "high occupancy area" means any area where PCB remediation waste has been disposed of on-site and where occupancy for any individual not wearing dermal and respiratory protection for a calendar year is: 840 hours or more (an average of 16.8 hours or more per week) for non-porous surfaces and 335 hours or more (an average of 6.7 hours or more per week) for bulk PCB remediation waste. Examples could include a residence, school, day care center, sleeping quarters, a single or multiple occupancy 40 hours per week work station, a school class room, a cafeteria in an industrial facility, a control room, and a work station at an assembly line (40 CFR 761.3).

For purposes of this ESMP, two areas have been designated areas of potential concern at the Site: the former Sears Automotive Center and the former J.C. Penney Automotive Center. The excavation of soils in these two areas will be handled as described in section 3.2. Any soil with notable staining or odor or that exceeds the residential ESLs will be considered as impacted soil. If impacted soils are encountered during excavation (considered unlikely), impacted soil will be handled as described in section 3.4. Residential ESLs as well as gross contamination levels and residential odor nuisance levels will be the screening levels that are applied to any unknown contamination that may be encountered during construction.

3 CONSTRUCTION MEASURES

Following demolition of structures and utilities, soil inspection and sampling will be conducted as follows in order to arrange for proper disposition of the excavated soils as described in this section.

3.1 ENVIRONMENTAL HEALTH AND SAFETY

3.1.1 WORKER HEALTH AND SAFETY

The Contractor shall be responsible for its own Health and Safety Program (HASP), including exposure monitoring of its workers and subcontractors. Contractor and Vallco have the authority to stop work in cases where safety hazards are observed. The Contractor shall develop and maintain for the duration of the project a safety program that will effectively incorporate and implement all required safety provisions of OSHA, state-specific worker safety requirements, Uniform Fire Code, and standard industry practices.

The Contractor shall prepare a Site-specific HASP, compliant with U.S. Department of Labor, Occupational Safety and Health Administration (OSHA) as described in 29 CFR 1910.120 and CalOSHA as described in 8 CCR 5192. The Contractor shall provide Vallco a copy of the HASP prior to commencement of any activities requiring or recommending implementation of a HASP. The Contractor shall be solely responsible for the implementation of the HASP throughout the duration of Site work.

If unknown soil contamination is discovered through observation, monitoring, or laboratory analysis, soils will be screened as documented in section 3.4and compared to the RWQCB ESLs for construction workers (Appendix B). If soil exhibits exceedances of the ESLs for construction workers, then workers that have the potential for exposure to the impacted soil should be at a minimum 40-hour Hazardous Waste Operations and Emergency Response (HAZWOPER) trained personnel, with foreman also having additional eight-hour supervisory training.

3.1.2 ENVIRONMENTAL CONTROL MEASURES

DUST CONTROL

The Contractor shall handle soil in a manner to minimize the potential for generation of airborne dust. The Contractor will monitor for airborne dust as required by its Health and Safety Plan. In accordance with Bay Area Air Quality Management District (BAAQMD) regulations, no visible dust may leave the site. The Contractor will be responsible for visually monitoring and implementing dust control measures such that no visible dust leaves the Site. Dust generating activities that will be mitigated include those associated with excavation activities, creation of soil stockpiles, truck traffic on unpaved areas of the Site, ambient wind traversing soil stockpiles, and loading of Site soil into transportation vehicles.

At a minimum, the Contractor shall conduct visual air monitoring to confirm the efficacy of dust control procedures. As appropriate, the Contractor shall modify demolition and construction procedures to control emissions of dust.

To address the potential for dust above applicable human health protection thresholds, the Contractor shall implement all applicable mitigation measures during construction. Dust control should be

performed by applying water with a low-pressure spray system. Low volumes of potable, reclaimed and/or treated dewatering water should be routinely spread in areas where dust may be generated because of development activities. If observations of visible dust indicate that the dust control measures are not adequate, then the Contractor shall implement additional engineering control measures, i.e., if visual dust is observable. These additional measures should include, but are not limited to:

- change of work procedures;
- wetting of surfaces;
- covering of exposed soil with plastic sheeting;
- use of dust palliatives; and
- reducing vehicle speeds.

EQUIPMENT CLEANING

Equipment (e.g., trucks and excavation equipment) that is exposed to Site soil during development activities will be cleaned prior to movement out of active work zones and leaving the Site. To minimize the spread of soil and dust, it is recommended that the equipment be dry-brushed for removal of material from the truck body and tires prior to exiting work zones. It is recommended that equipment exiting the Site be inspected and logged for compliance by the Contractor with the Site cleaning requirements.

If impacted soil is encountered, construction equipment and vehicles that contact impacted soil on the Site will be decontaminated prior to leaving the area of impacted soil associated with the Site. As above, decontamination methods will consist of scraping, brushing, and/or vacuuming to remove dirt on vehicle exteriors and wheels. If dry methods are not adequate, methods such as steam cleaning, high pressure washing, and cleaning solutions will be used. If generated, wash water resulting from decontamination activities will be collected and managed in accordance with all applicable laws and regulations.

STORMWATER

During Site development activities, storm water best management practices (BMPs) should be followed in accordance with the Contractor's Stormwater Pollution Prevention Plan (SWPPP) to be prepared for the Site. The BMPs for the Site development activities should include: use of fiber rolls; inlet protection; stabilized construction entrance; covering soil stockpiles with plastic sheeting or tarps during significant rainfall events; landscape and paving; street cleaning and catch basin cleaning.

If impacted soil or groundwater is encountered, stormwater pollution controls specific to environmental cleanup operations are intended to isolate stormwater in areas of cleanup operations and prevent contaminants from leaving the Site, co-mingling with water in other parts of the development project, or entering the stormwater system. Such controls will be based on BMPs such as those described in the California Stormwater Quality Association handbook for construction activities (CASQA, 2015). As described above, on-site sediment and erosion protection controls will be the primary methods for minimizing discharges of sediments from the Site.

STOCKPILE MANAGEMENT

Based on the results of soil investigations detailed herein, impacted soils are not anticipated to be encountered during construction excavation; however, isolated soil impacts from historical Site operations may be present.

During excavation, Vallco will oversee and will direct the Contractor to perform the following soil handling activities:

- Based upon soil investigations and observations during excavation, it is anticipated that the vast majority of excavated soil will not require special handling or segregation as impacted and will be stockpiled, moisture controlled, and completely covered to prevent fugitive dust.
- In the potential areas of concern, as described in Section 3.2, soil will be field screened by the Vallco representative for evidence of contaminant impacts, such as discoloration or staining, odors, unusual foreign materials, or organic vapors (measured by a photoionization detector). Using these indicators, the Vallco representative may direct the segregation of the soil into stockpiles, storage bins, or directly loaded into haul-off trucks for profiling and ultimate disposal to appropriate locations. Using these soil handling procedures, impacted soil will be segregated from non-impacted soil.
- The Contractor will be responsible for performing visual screening in other areas of the Site where it is highly unlikely that potentially impacted soil will be encountered. If such soil is encountered, the Contractor will notify Vallco and the procedures in Section 3.2 will be followed.
- Fill material and native material may also be separated during excavation based on characterization data or observations of impacts.
- If suspect impacted soil is to be segregated and stockpiled, the soil must be placed on a minimum 10-mil-thick polyethylene sheeting (or approved-equivalent impermeable sheet), completely covered and secured by the same impermeable sheeting, moisture controlled, and bermed when the soil is not actively being handled. All soil stockpiles must be covered at the end of each work day and handled using BMPs under the site-specific SWPPP. The SWPPP shall be consistent and in accordance with all applicable local/state rules and regulations.

3.2 POST- DEMOLITION SOIL SCREENING FOR AREAS OF CONCERN

As identified in Section 2.3 and described below, there are two primary potential areas of concern at the Site: the former Sears Automotive Center, the former J.C. Penney Automotive Center. The Cupertino Ice Center is also an area that may require specific attention. The SCCFD requires implementation of the approved closure plan for the former Sears Automotive Center due to the presence of an oil-water separator, hydraulic lifts, petroleum fluid pipelines, battery storage area, and lead containing materials (WSP, 25 March 2019). Similarly, the J.C. Penney former automotive center will require a closure plan to address an abandoned in-place UST, the presence of hydraulic lifts, the existence of four inactive groundwater monitoring wells, and associated piping.

A closure plan for the Sears Automotive Center was submitted to the SCCFD (Appendix C) on March 25, 2019 and approved on April 11, 2019, and includes soil sampling under the oil-water separator, remnant piping and any other subsurface equipment for proper characterization and subsequent disposal.

A similar closure plan will be prepared for the J.C. Penney Automotive Center for submission to the SCCFD. The closure plan will also include soil sampling under buried piping as well as include attention to the removal of a 750-gallon UST abandoned in place. Additionally, the four inactive groundwater monitoring wells located on the J.C. Penney premises will be located and abandoned in accordance with the SCVWD well standards.

In addition, as noted in Cornerstone's Phase I ESA, refrigeration equipment located in the Cupertino Ice Center was observed to have oil staining and a spill (approximately 1 to 2 gallons) of oily water on the concrete floor slab. Cornerstone did not find it to be likely that the noted staining and spill would have significantly impacted underlying soil quality; however, to ensure underlying soil in this area is not impacted, the area will be surveyed as described below.

During excavation of the soil in these potential areas of concern (Figure 7), an Environmental Professional will be present to observe underlying soil for evidence of potential impacts and, if observed, collect soil samples in accordance with Section 3.4. The Environmental Professional will also walk the potential areas of concern on a 25-foot grid as follows:

Soil samples will be screened in the field for the presence of VOCs using the following screening method:

- at a minimum, a representative soil sample will be collected from points on a 25 foot grid of the area and placed into an unused re-sealable plastic bag with a minimum volume of one quart, until the container is approximately one-half full;
- the plastic bag will be sealed and the soil within it will be crumbled by hand, if possible, to expose fresh surfaces;
- after at least 2 minutes, the plastic bag will be opened just enough to allow the probe of the organic vapor meter ("OVM") to be inserted into the headspace of the plastic bag;

if the OM reading exceeds the 25 parts per million by volume ("ppmv") continuously for 10 seconds or more, the soil will be considered "potentially contaminated with volatile chemicals." Then the procedures identified in Section 3.4 will be followed.

3.3 PCB EXCAVATION

As noted in Section 2.3.3, a single sample from Geosphere boring E-5 one foot below ground surface (sample E5-1) contained PCBs at 523 μ g/kg, above the residential ESL and RSL, and is considered a potential area of concern. During redevelopment excavation activities, the soil in area surrounding the sample E5-1 will be addressed separately from the mass excavation; soil surrounding and in the vicinity of sample E5-1 will be excavated as described below.

WSP located boring E-5 from surface evidence and markings and recorded its location using GPS. Figure 8 illustrates the proposed excavation layout and confirmation sampling for the E5-1 location. Sample E5-2 was taken from boring E-5 at five feet below ground surface and did not contain PCBs. Therefore, the initial excavation will be 15 feet by 15 feet and 5 feet deep (approximately 42 cubic yards). Following the excavation, nine confirmation samples will be collected from the bottom of the excavation in a grid pattern as shown on Figure 8. Sidewall samples will be taken from each of the four excavation sidewalls at 2.5 feet below ground surface. All soil samples will be analyzed for PCBs using EPA Method 8082A. Should any results yield PCB concentrations exceeding residential ESLs or RSLs, additional vertical and/or lateral excavation will be performed and similar patterns of bottom and sidewall confirmation sampling will be performed until there is no evidence of PCBs that exceed residential ESLs or RSLs. All excavated soils will be segregated from other soil from the Site, stockpiled, and characterized for disposal at a properly licensed disposal facility.

3.4 MANAGING STAINED OR ODOROUS SOIL

If impacted soils are observed or encountered (visual staining, odor, etc.) during excavation (considered unlikely), the Contractor shall promptly notify Vallco and the Vallco representative. To protect worker health and safety and to ensure accurate results, the Vallco representative shall conduct observations and, as necessary, conduct monitoring/sampling of the suspect media. Initial identification of hazardous substances will be performed by the Vallco representative based on visual olfactory observations, or monitoring with a photoionization detector (PID).

A Vapor Encroachment Assessment was performed and is detailed in the Site Characterization Report (SCR). The Assessment identified two potential onsite sources of VOCs: the Sears Automotive Center and the J.C. Penney Automotive Center, the two areas of most concern on the Site that will be specifically addressed by Closure Plans submitted to the SCCFD and by other measures detailed herein regarding soil vapor sampling and soil gas probes or wells, as necessary.

If newly found soil impacts are discovered during demolition, Site development activities, or during the screening of the potential areas of concern, the following actions shall be taken:

- 1 Initial Discovery : Prior to any activity by the Contractor in the immediate vicinity, the Vallco representative shall make an initial determination within the field using visual and olfactory observations and PID equipment. Upon the confirmation by the Vallco representative of the discovery of newly found soil impacts, operations within the immediate area shall cease and the Contractor should secure the area using suitable barriers (i.e., caution tape, construction fencing,, etc).
- 2 **Evaluation** : If observations and field tests indicate impacted soil, the Vallco representative shall notify Vallco of the initial discovery of newly found soil impacts. Samples will be collected for laboratory analysis and any earthwork operations will remain suspended in the area of suspected impacted soil pending review of the laboratory analytical results. Soil samples will be analyzed for the following constituents :
 - TPH-g, TPH-d and TPH-mo using EPA Method 8015M;
 - VOCs using EPA Methods 5035 and 8260;
 - PCBs using EPA Method 8082A
 - Cadmium, chromium, lead, nickel, and zinc by EPA Method 6020; and
 - Moisture content to allow for conversion to dry weight for comparison to screening criteria.

The list of analytes should be modified accordingly if conditions or historical use in a given area indicate that other laboratory analyses would be appropriate.

3 Data Review : If chemical concentrations in the evaluation sample are less than residential ESLs, then soil excavation activites can continue and no special precautions are required. If residential

ESLs are exceeded in the evaluation sample, then Vallco or its representative will notify theSCCFD. Excavated soil that is impacted will be stockpiled separately from unimpacted soil. Excavated impacted soil will characterized and disposed of appropriately and separately from unimpacted soil.

Under consultation, approval, and oversight by the SCCFD, confirmation samples will be collected to document removal of impacted soil to confirm that remaining soils meet unrestricted land use criteria (RWQCB's ESLs for residential land use). For excavations that are 625 square feet or smaller (e.g., 25 feet by 25 feet), then a total of five confirmation samples will be collected : 1 per sidewall and 1 per bottom. For larger excavations, confirmation soil samples will be collected at lateral and vertical intervals approved by the SCCFD(including bottom and sidewalls of the excavation) and analyses will be limited to only those compounds that exceeded residential ESLs in the evaluation sample.

Excavation activities can resume as normal once the impacted soil has been removed and segregated. .

3.5 PROTOCOLS FOR MANAGING SUBSURFACE STRUCTURES

As noted in Section 3.2, subsurface piping and components remain in the ground at the former Sears and J.C. Penney Automotive Centers. A closure plan for the former Sears Automotive Center has been submitted to and approved by the SCCFD (WSP, 25 March 2019) and a similar closure plan will be submitted for the former J.C. Penney Automotive Center. The closure plans include (or will include) details concerning soil sampling and specific analyses in general and specifically beneath and along underground piping paths to determine if there were any significant releases. In addition, a Vallco representative will be present during excavation activities in these two areas to ensure remaining subsurface equipment is properly removed and to observe underlying soil for evidence of potential impacts. Additionally, the four groundwater monitoring wells located at the J.C. Penney Automotive Center will be abandoned in accordance with the SCVWD well standards. A permit will be obtained from the SCVWD prior to the abandonment. A 750-gallon UST was abandoned in place at the J.C. Penney Automotive Center. Proper removal of this UST will be documented in the associated closure plan and coordinated in conjunction with the SCCDEH.

Although evidence suggests it is highly unlikely, special consideration is necessary if any unknown USTs are encountered. The removal of USTs is regulated by the SCCFD. The investigation and remediation of UST releases is regulated by SCCDEH, with oversight from the RWQCB. The Contractor shall immediately notify Vallco upon discovering any UST at the property. Removal and sampling of the UST will be performed in accordance with permit requirements from the SCCFD.

If a non-UST below-grade structure that could have contained chemicals of concern is encountered during earthwork, the structure and associated piping or other appurtenances will be removed in accordance with applicable laws and regulations. Any stained and odorous soil will be sampled and managed in accordance the procedures described in Section 3.4.

3.6 MANAGING EXCAVATED SOIL

The overwhelming majority of excavated soil is anticipated to be disposed of off-site. Soil disposal arrangements will be managed by the General Contractor. Soil waste profile applications will be submitted to potential receiving facilities once the excavation contractor has determined which are to be considered for use. The waste profile applications will be prepared by Vallco and include submittal of all data produced at the site and clarification as to which areas are being evaluated for acceptance by the receiving facilities.

3.6.1 DISPOSAL CHARECTERIZATION SAMPLING

Based on existing soil analytical results, discussed in detail in the Site Characterization Report (Appendix A), excavated soil is expected to meet compliance with the residential ESLs. Additional profiling for off-site disposal of excavated soil will be handled in accordance with the receiving facility.

3.6.2 SOIL DISPOSAL

Any characterized "pre-existing" hazardous/impacted soil will be hauled offsite to the appropriate receiving facility and manifested with Vallco identified as the generator. The receiving facilities will be reviewed and approved by Vallco.

3.7 IMPORT SOIL

The only import soil anticipated at the site is topsoil and base rock. The contractor will be responsible to conform with DTSC's Information Advisory, Clean Imported Fill Material, October 2001 for screening of imported topsoil, base rock, and other material.

4 REPORTING REQUIREMENTS

A closure implementation report will be generated with the closure of the former Sears and J.C. Penney Automotive centers and submitted to the SCCFD, with a courtesy copy provided to the City. The soil screening performed at the former Sears and J.C. Penney Automotive centers will also be documented in an ESMP completion report and submitted to the SCCFD, with a copy to the City. If impacted soils are uncovered during excavation activities, the analysis and subsequent disposal of the impacted soil will be documented in the ESMP completion report.

ACRONYMS

µg/l	micrograms per liter
EPA	Environmental Protection Agency
MDL	method detection limit
QA/QC	quality assurance/quality control
RWQCB	San Francisco Bay Regional Water Quality Control Board
RL	reporting limit
SVOCs	semi-volatile organic compounds
ТРН	total petroleum hydrocarbons
TPH-d	total petroleum hydrocarbons as diesel
TPH-g	total petroleum hydrocarbons as gasoline
ТРН-то	total petroleum hydrocarbons as motor oil
РАН	Polycyclic aromatic hydrocarbons
TCDD	Tetrachlorodibenzodioxin
UST	underground storage tank
LUST	leaking underground storage tank
WSP	WSP USA, Inc.
SCCFD	Santa Clara County Fire Department
REC	Recognized Environmental Condition
Ft-bgs	Feet below ground surface
ESL	Environmental Screening Level
RSL	Regional Screening Level
ESA	Environmental Site Assessment
USCS	Unified Soil Classification System
GPR	Ground Penetrating Radar
ESMP	Environmental Site Management Plan
РСВ	Polychlorinated Biphenyl
SCVWD	Santa Clara Valley Water District
EPA	Environmental Protection Agency
PID	Photoionization detector
SCCDEH	Santa Clara County Department of Environmental Health

REFERENCES

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Duverge. 2011. Establishing Background Arsenic in Soil of the Urbanized San Francisco Bay Region. December.

Cornerstone Earth Group. 2018. Phase I Environmental Site Assessment, Vallco Special Area Specific Plan Parcels, Cupertino, California. February 26.

Kearny Foundation Special Report. 1996. Background Concentrations of Trace and Major Elements in California Soils. March.

Santa Clara Valley Water District. 1999. Fuel Leak Site Case Closure – Sears Automotive Center, 10101 North Wolfe Road, Cupertino, CA 95014; Case No. 14-486. December 6.

Santa Clara Valley Water District. 1994. Underground Storage Tank (UST) Case Closure – J.C. Penney Store No., 10150 North Wolfe Road, Cupertino, CA 95014; Case No. 27H. September 1.

WSP. 2014. Phase I Environmental Site Assessment, Vallco Fashion Mall, 10123 North Wolfe Road, Cupertino, California. January 7.

WSP. 2016. Updated Information to the January 7, 2014 Phase I Environmental Site Assessment, Vallco Fashion Mall in Cupertino, California. January 11.













VALLCO PARKWAY











NORTH WOLFE ROAD EX GAS LINE - EX CMH LINE SHORING EX. ELEC. LINE -170 EX. 15" 55 LIM BASEMENT PAD FFE 153.0'

SECTION 3













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A SITE CHARACTERIZATION REPORT (UNDER REVISION)

APPENDIX

B

RWQCB ENVIRONMENTAL SCREENING LEVELS FOR CONSTRUCTION WORKERS

January 2019 (Rev	v. 1)						Sι	ummar	y of So	il ES	Ls (n	n <mark>g/kg)</mark>					
			D	irect Exposur Risk Levels	e Human Hea s (Table S-1)	lth		Terrestrial H (Tab	labitat Levels le S-2)	Leach Groundwa (Tabl	ning to ater Levels le S-3)		Odd	or Nuisance Le (Table S-5)	vels		
Chemicals	CAS No.	Resid Shallo Expo	lential: ow Soil osure	Comm Indus Shallo Expo	erical/ strial: ow Soil osure	Constructi Any La Any Depth S	on Worker: nd Use/ coil Exposure	Significantly Vegetated Area	Minimally Vegetated Area	Drinking	Non- drinking	Gross Contamin- ation Levels (Table S-4)	Res: Shallow Soil	Com/Ind: Shallow Soil	Any Land Use: Any Soil	Soil Tier 1 ESL	Basis
		Cancer Risk	Non- cancer Hazard	Cancer Risk	Non- cancer Hazard	Cancer Risk	Non- cancer Hazard	Examples: Parkland or single family homes with yards	Examples: High density residential or commercial/ industrial areas	Water	Water		Exposure	Exposure	Exposure (CW)		
Acenaphthene [PAH]	83-32-9		3.6E+03		4.5E+04		1.0E+04	6.6E+03	4.6E+04	1.2E+01	1.2E+01	1.2E+02	1.0E+03	2.5E+03	2.5E+03	1.2E+01	Leaching
Acenaphthylene [PAH]	208-96-8									6.4E+00	6.4E+00	5.9E+01	5.0E+02	1.0E+03	1.0E+03	6.4E+00	Leaching
Acetone	67-64-1		6.1E+04		6.7E+05		2.7E+05	5.6E+01	5.6E+01	9.2E-01	9.2E-01	1.1E+05	5.0E+02	1.0E+03	1.0E+03	9.2E-01	Leaching
Aldrin	309-00-2	3.5E-02	2.1E+00	1.5E-01	2.9E+01	1.0E+00	7.4E+00	2.4E-03	1.0E-01	8.4E+00	8.4E+00	8.4E+00	1.0E+03	2.5E+03	2.5E+03	2.4E-03	Terr Habitat
Anthracene [PAH]	120-12-7		1.8E+04		2.3E+05		5.0E+04	3.1E+00	4.0E+01	1.9E+00	1.9E+00	4.1E+00	5.0E+02	1.0E+03	1.0E+03	1.9E+00	Leaching
Antimony	7440-36-0		1.1E+01		1.6E+02		5.0E+01	2.5E+01	5.0E+01							1.1E+01	NC-Hazard
Arsenic	7440-38-2	6.7E-02	2.6E-01	3.1E-01	3.6E+00	2.0E+00	9.8E-01	2.5E+01	5.0E+01							6.7E-02	Canc-Risk
Barium	7440-39-3		1.5E+04		2.2E+05		3.0E+03	3.9E+02	6.7E+02							3.9E+02	Terr Habitat
Benzene	71-43-2	3.3E-01	1.1E+01	1.4E+00	4.7E+01	3.3E+01	4.5E+01	6.0E+01	3.1E+02	2.5E-02	2.5E-02	1.9E+03	5.0E+02	1.0E+03	1.0E+03	2.5E-02	Leaching
Benzo[a]anthracene [PAH]	56-55-3	1.1E+00		2.0E+01		1.1E+02		6.3E-01	1.3E+00	1.0E+01	1.0E+01	1.0E+01	5.0E+02	1.0E+03	1.0E+03	6.3E-01	Terr Habitat
Benzo[a]pyrene [PAH]	50-32-8	1.1E-01	1.8E+01	2.1E+00	2.2E+02	1.1E+01	1.0E+01	2.5E+01	9.0E+01	5.7E+00	5.7E+00	5.7E+00	5.0E+02	1.0E+03	1.0E+03	1.1E-01	Canc-Risk
Benzo[b]fluoranthene [PAH]	205-99-2	1.1E+00		2.1E+01		1.1E+02				5.4E+00	7.5E+01	5.4E+00	5.0E+02	1.0E+03	1.0E+03	1.1E+00	Canc-Risk
Benzo[g,h,i]perylene [PAH]	191-24-2							8.3E+00	1.7E+01	2.7E+01	2.7E+01	2.5E+00	5.0E+02	1.0E+03	1.0E+03	2.5E+00	Gross Contam
Benzo[k]fluoranthene [PAH]	207-08-9	1.1E+01		2.1E+02		9.1E+02		9.5E+00	1.9E+01	4.8E+00	3.9E+01	2.8E+00	5.0E+02	1.0E+03	1.0E+03	2.8E+00	Gross Contam
Beryllium	7440-41-7	1.6E+03	1.6E+01	6.9E+03	2.3E+02	1.8E+02	2.7E+01	5.0E+00	1.0E+01							5.0E+00	Terr Habitat
1,1-Biphenyl	92-52-4	6.8E+01	4.7E+01	2.9E+02	2.0E+02	1.7E+03	1.8E+02			4.2E-01	4.2E+00	2.3E+02	5.0E+02	1.0E+03	1.0E+03	4.2E-01	Leaching
Bis(2-chloroethyl) ether	111-44-4	1.0E-01		4.7E-01		6.4E+00				3.4E-05	3.1E-02	5.0E+03	5.0E+02	1.0E+03	1.0E+03	3.4E-05	Leaching
Bis(2-chloro-1-methylethyl) ether	108-60-1	5.0E+00	3.1E+03	2.3E+01	4.7E+04	2.7E+02	1.4E+04			5.1E-03	8.7E-01	1.0E+03	5.0E+02	1.0E+03	1.0E+03	5.1E-03	Leaching
Bis(2-ethylhexyl) phthalate	117-81-7	3.9E+01	1.3E+03	1.6E+02	1.6E+04	9.5E+02	3.8E+03	8.0E-01	3.5E+01	1.9E+02	6.4E+02	1.9E+02	5.0E+02	1.0E+03	1.0E+03	8.0E-01	Terr Habitat
Boron	7440-42-8		1.6E+04		2.3E+05		4.5E+04	1.2E+02	1.2E+02							1.2E+02	l err Habitat
Bromodichloromethane	75-27-4	2.9E-01	1.6E+03	1.3E+00	2.3E+04	2.8E+01	7.1E+03			1.6E-02	1.6E-02	9.3E+02	1.0E+03	2.5E+03	2.5E+03	1.6E-02	Leaching
Bromotorm (Tribromomethane)	75-25-2	1.8E+01	1.6E+03	8.0E+01	2.3E+04	1.2E+03	7.1E+03			6.9E-01	1.0E+00	9.2E+02	5.0E+02	1.0E+03	1.0E+03	6.9E-01	Leaching
Bromomethane	74-83-9		6.9E+00		3.0E+01		2.9E+01			3.6E-01	8.3E-01	3.5E+03	5.0E+02	1.0E+03	1.0E+03	3.6E-01	Leaching
	7440-43-9	9.1E+02	7.8E+01	4.0E+03	1.1E+03	1.1E+02	5.1E+01	1.9E+00	1.9E+00							1.9E+00	Terr Habitat
Cadmium (water)	7440-43-9																
Carbon tetrachloride	56-23-5	1.0E-01	5.3E+01	4.4E-01	2.5E+02	1.0E+01	2.2E+02	7.3E+00	1.5E+01	1.1E-02	1.1E-02	4.5E+02	5.0E+02	1.0E+03	1.0E+03	1.1E-02	Leaching
Chlordane	12789-03-6	4.8E-01	3.6E+01	2.2E+00	5.0E+02	1.4E+01	1.3E+02	8.5E-03	8.5E-03	2.3E+01	2.3E+01	2.3E+01	1.0E+03	2.5E+03	2.5E+03	8.5E-03	Terr Habitat
p-Chioroaniline	106-47-8	3.5E+00	3.1E+02	1.6E+01	4.7E+03	1.2E+02	1.4E+03	2.5E+01	5.0E+01	6.7E-03	9.1E-02	3.0E+03	5.0E+02	1.0E+03	1.0E+03	6.7E-03	Leaching
Chlorobenzene	108-90-7		2.7E+02		1.3E+03		1.2E+03	7.5E+00	1.5E+01	1.4E+00	1.4E+00	7.5E+02	5.0E+02	1.0E+03	1.0E+03	1.4E+00	Leaching
Chloroform	75-00-3		1.4E+04		5.9E+04		5.9E+04			1.2E+00	1.2E+01	2.1E+03	5.0E+02	1.0E+03	1.0E+03	1.2E+00	Leaching
Chlorotorm	67-66-3	3.2E-01	2.0E+02	1.4E+00	1.0E+03	3.4E+01	8.6E+02	4.3E+01	8.5E+01	2.3E-02	2.3E-02	2.6E+03	5.0E+02	1.0E+03	1.0E+03	2.3E-02	Leaching
Chlorometnane	74-87-3	-	1.1E+02		4.7E+02	-	4.7E+02			1.1E+01	1.5E+01	1.3E+03	1.0E+02	5.0E+02	5.0E+02	1.1E+01	Leaching
2-Chlorophenol	95-57-6		3.9E+02		5.0E+03		1.0E+03	2.0E+00	3.9E+00	1.2E-02	1.2E-01	2.7E+04	1.0E+02	5.0E+02	5.0E+02	1.2E-02	Leaching Terr Hebitet
	7440-47-3							1.6E+02	1.6E+02							1.6E+02	Terr Habitat
	16065-83-1		1.2E+05	 6.2E.00	1.8E+06		5.3E+05									1.2E+05	NC-Hazard
	218-01 0	3.0E-01	2.3E+02	0.2E+00	3.5E+03	2.0E+00 0.1E+02	4.0E+02	1.UE+U1	1.00+01	 2.2E+00	 1.0E+01	 2 2E+00	5.05.02	1.0E+02	 1.0E+02	3.0E-01	Leaching
	7440-49	1.10+02	2.3E+01	2.1E+U3	3.55.02	3.1E+03	2.8E+01	5.0E+00	1.02+01	2.20+00	1.02+01	2.20+00	0.0E+02	1.02+03	1.02+03	2.2E+00	NC-Horord
Coppor	7440-48-4	4.2E+02	2.3E+01	1.9E+03	3.3E+02	4.90+01	2.00+01	5.UE+U1	1.UE+U2 2.0E+02							2.30+01	Torr Hobitot
Cupper	1440-50-8		3.1E+03		4.7 =+04		1.404	1.0E+U2	3.UE+U2						 E 0E 102	1.0E+U2	
	52 70 2		5.5E+00	2.15.00	2.5E+01		2.2E+01	1.1E-01	1.1E-01	3.4E-03	3.4E-03	1.9E+04	1.0E+02	5.0E+02	5.0E+02	3.4E-03	Conc Diak
	124 49 1	1.1E-UT	1.65+02	2.10+00	 2.2E+04	2.05+02	7.15+02			2.90+01	3.9E+02	2.9E+U1	5.0E+02	1.UE+U3	1.UE+U3	1.1E-01 2.5E-04	Loophing
1.2 dibromo 2 oblorestesses	124-40-1	0.3E+00	1.0E+03	3.9E+U1	2.3E+04	2.9E+02	2.05.04			3.3E-U1	5.0E.04	0.0E+02	1.UE+U2	5.0E+02	3.0E+02	3.3E-UI	Leaching
1,2-ubromo-3-cnioropropane	90-12-8	4.4E-03	4.8E+00	5.9E-02	2.0E+01	1.1E+00	2.0E+01			5.9E-04	5.9E-04	9.9E+02	5.0E+02	1.0E+03	1.0E+03	5.9E-04	Leaching
1,2-Dibiomoethane	106-93-4	3.6E-02	7.2E+00	1.6E-01	3.0E+01	3.3E+00	3.0E+01			5.3E-04	1.9E-03	1.3E+03	5.0E+02	1.0E+03	1.0E+03	5.3E-04	Leaching

January 2019 (Rev	v. 1)						Sı	ummar	y of So	il ES	Ls (n	ng/kg)					
			D	irect Exposur Risk Levels	e Human Hea s (Table S-1)	lth		Terrestrial H (Tab	Habitat Levels le S-2)	Leach Groundwa (Tabl	ning to ater Levels le S-3)		Odo	r Nuisance Le (Table S-5)	vels		
Chemicals	CAS No.	Resid Shallo Expo	lential: ow Soil osure	Comm Indus Shallo Expo	erical/ strial: ow Soil osure	Constructi Any La Any Depth S	on Worker: nd Use/ coil Exposure	Significantly Vegetated Area	Minimally Vegetated Area	Drinking	Non- drinking	Gross Contamin- ation Levels (Table S-4)	Res: Shallow Soil	Com/Ind: Shallow Soil	Any Land Use: Any Soil	Soil Tier 1 ESL	Basis
		Cancer Risk	Non- cancer Hazard	Cancer Risk	Non- cancer Hazard	Cancer Risk	Non- cancer Hazard	Examples: Parkland or single family homes with yards	Examples: High density residential or commercial/ industrial areas	Water	Water		Exposure	Exposure	Exposure (CW)		
1,2-Dichlorobenzene	95-50-1		1.8E+03		9.4E+03		7.8E+03	4.3E+00	8.5E+00	1.0E+00	1.0E+00	3.8E+02	1.0E+03	2.5E+03	2.5E+03	1.0E+00	Leaching
1,3-Dichlorobenzene	541-73-1							6.0E+00	1.2E+01	7.4E+00	7.4E+00	6.1E+02	1.0E+02	5.0E+02	5.0E+02	6.0E+00	Terr Habitat
1,4-Dichlorobenzene	106-46-7	2.6E+00	3.4E+03	1.2E+01	2.6E+04	2.8E+02	1.5E+04	4.5E+00	9.0E+00	2.0E-01	2.0E-01	1.9E+02	5.0E+02	1.0E+03	1.0E+03	2.0E-01	Leaching
3,3-Dichlorobenzidine	91-94-1	5.8E-01		2.7E+00		2.0E+01				2.5E-02	1.3E+02	6.0E+01	5.0E+02	1.0E+03	1.0E+03	2.5E-02	Leaching
DDD	72-54-8	2.7E+00		1.2E+01		8.1E+01		8.5E+00	1.7E+01	6.5E+01	6.5E+01	6.5E+01	5.0E+02	1.0E+03	1.0E+03	2.7E+00	Canc-Risk
DDE	72-55-9	1.8E+00		8.3E+00		5.7E+01		3.3E-01	6.5E-01	2.9E+01	2.9E+01	2.9E+01	5.0E+02	1.0E+03	1.0E+03	3.3E-01	Terr Habitat
DDT	50-29-3	1.9E+00	3.7E+01	8.5E+00	5.2E+02	5.7E+01	1.4E+02	1.1E-03	7.8E+00	5.6E+00	5.6E+00	5.6E+00	5.0E+02	1.0E+03	1.0E+03	1.1E-03	Terr Habitat
1,1-Dichloroethane	75-34-3	3.6E+00	1.6E+04	1.6E+01	2.3E+05	3.7E+02	7.1E+04	1.1E+01	2.1E+01	2.0E-01	3.1E-01	1.7E+03	5.0E+02	1.0E+03	1.0E+03	2.0E-01	Leaching
1,2-Dichloroethane	107-06-2	4.7E-01	3.2E+01	2.1E+00	1.4E+02	4.5E+01	1.3E+02	2.9E+01	2.9E+01	7.0E-03	3.1E-02	3.0E+03	1.0E+02	5.0E+02	5.0E+02	7.0E-03	Leaching
1,1-Dichloroethene	75-35-4		8.3E+01		3.5E+02		3.5E+02	4.3E+01	1.3E+02	5.4E-01	4.2E+00	1.2E+03	5.0E+02	1.0E+03	1.0E+03	5.4E-01	Leaching
cis-1,2-Dichloroethene	156-59-2		1.9E+01		8.5E+01		7.8E+01	8.4E+01	9.4E+02	1.9E-01	1.6E+00	2.4E+03	1.0E+02	5.0E+02	5.0E+02	1.9E-01	Leaching
trans-1,2-Dichloroethene	156-60-5		1.3E+02		6.0E+02		5.7E+02	8.4E+01	9.4E+02	6.5E-01	1.4E+01	1.9E+03	5.0E+02	1.0E+03	1.0E+03	6.5E-01	Leaching
2,4-Dichlorophenol	120-83-2		2.3E+02		3.5E+03		1.1E+03	2.1E+00		7.5E-03	7.5E-02	5.6E+03	5.0E+02	1.0E+03	1.0E+03	7.5E-03	Leaching
1,2-Dichloropropane	78-87-5	1.0E+00	1.6E+01	4.4E+00	6.6E+01	9.9E+01	6.6E+01	3.1E+01	6.3E+01	6.5E-02	6.5E-02	1.4E+03	1.0E+02	5.0E+02	5.0E+02	6.5E-02	Leaching
1,3-Dichloropropene	542-75-6	5.7E-01	7.2E+01	2.5E+00	3.1E+02	5.3E+01	3.0E+02	3.1E+01	6.3E+01	1.7E-02	4.0E-02	1.6E+03	5.0E+02	1.0E+03	1.0E+03	1.7E-02	Leaching
Dieldrin	60-57-1	3.7E-02	3.5E+00	1.6E-01	4.8E+01	1.1E+00	1.2E+01	9.6E-04	1.1E-01	4.6E-04	6.3E-03	2.4E+01	5.0E+02	1.0E+03	1.0E+03	4.6E-04	Leaching
Diethyl phthalate	84-66-2		5.1E+04		6.6E+05		1.5E+05	1.3E+01	2.7E+01	2.5E-02	2.5E-02	7.7E+02	5.0E+02	1.0E+03	1.0E+03	2.5E-02	Leaching
Dimethyl phthalate	131-11-3							2.1E+01	4.2E+01	3.5E-02	3.5E-02	4.7E+03	5.0E+02	1.0E+03	1.0E+03	3.5E-02	Leaching
2.4-Dimethylphenol	105-67-9		1.6E+03		2.3E+04		7.1E+03			8.1E+00	8.9E+00	2.4E+04	1.0E+02	5.0E+02	5.0E+02	8.1E+00	Leaching
2,4-Dinitrophenol	51-28-5		1.6E+02		2.3E+03		7.1E+02			3.0E+00	5.7E+00	8.0E+03	5.0E+02	1.0E+03	1.0E+03	3.0E+00	Leaching
2,4-Dinitrotoluene	121-14-2	2.2E+00	1.6E+02	1.1E+01	2.3E+03	7.9E+01	7.1E+02			2.3E-02	1.1E+01	7.2E+02	5.0E+02	1.0E+03	1.0E+03	2.3E-02	Leaching
1.4-Dioxane	123-91-1	4.7E+00	8.1E+02	2.2E+01	4.5E+03	2.1E+02	3.4E+03	1.8E+00	1.8E+00	1.7E-04	8.4E-01	1.2E+05	5.0E+02	1.0E+03	1.0E+03	1.7E-04	Leaching
Dioxin (2.3.7.8-TCDD)	1746-01-6	4.8E-06	5.1E-05	2.2E-05	7.2E-04	1.5E-04	2.0E-04	1.3E-05	9.9E-05	3.0E-01	3.0E-01	3.0E-01	5.0E+02	1.0E+03	1.0E+03	4.8E-06	Canc-Risk
Endosulfan	115-29-7		4.2E+02		5.8E+03		1.5E+03	2.3E-02	3.8E-01	9.8E-03	9.8E-03	1.3E+01	5.0E+02	1.0E+03	1.0E+03	9.8E-03	Leaching
Endrin	72-20-8		2.1E+01		2.9E+02		7.4E+01	1.1E-03	1.1E-03	7.6E-03	7.6E-03	3.0E+01	5.0E+02	1.0E+03	1.0E+03	1.1E-03	Terr Habitat
Ethylbenzene	100-41-4	5.9E+00	3.4E+03	2.6E+01	2.1E+04	5.4E+02	1.5E+04	9.0E+01	4.3E+02	4.3E-01	4.3E-01	4.9E+02	5.0E+02	1.0E+03	1.0E+03	4.3E-01	Leaching
Eluoranthene [PAH]	206-44-0		2.4E+03		3.0E+04		6.7E+03	6.9E-01	1.2E+05	8.6E+01	8.6E+01	8.6E+01	5.0E+02	1.0E+03	1.0E+03	6.9E-01	Terr Habitat
Fluorene (PAH)	86-73-7		2 4E+03		3.0E+04		6 7E+03			6.0E+00	6.0E+00	9.4E+01	5.0E+02	1.0E+03	1.0E+03	6.0E+00	Leaching
Heptachlor	76-44-8	1.2E-01	3.5E+01	5.3E-01	4.8E+02	3.7E+00	1.2E+02	2.5E-01	5.0E-01	4.4E+01	4.4E+01	4.4E+01	1.0E+03	2.5E+03	2.5E+03	1.2E-01	Canc-Risk
Heptachlor epoxide	1024-57-3	6 2E-02	9 1E-01	2 8E-01	1.3E+01	1.9E+00	3 2E+00			1.8E-04	6.0E-03	1.2E+01	1.0E+03	2.5E+03	2.5E+03	1.8E-04	Leaching
Hexachlorobenzene	118-74-1	1.8E-01	5.6E+01	7.8E-01	7 7E+02	7.7E+00	2.0E+02	1.3E+02	2.5E+02	8.0E-04	8.2E-02	2.3E-01	5.0E+02	1.0E+03	1.0E+03	8.0E-04	Leaching
Hexachlorobutadiene	87-68-3	1.0E 01	7.8E+01	5.3E+00	1.2E+03	1.0E+02	3.5E+02			2.8E-02	6.2E-02	1.7E+01	5.0E+02	1.0E+03	1.0E+03	2.8E-02	Leaching
g-Hexachlorocyclobexane (Lindane)	58-89-9	5.5E-01	2 1E+01	2.5E+00	2.9E+02	1.6E+01	7.4E+01	7.4E+00	1 5E+01	7.4E-03	7.4E-03	1.2E+02	5.0E+02	1.0E+03	1.0E+03	7.4E-03	Leaching
Heyachloroethane	67-72-1	1.8E±00	3.8E±01	7.8E+00	3.7E±02	1.3E±02	1.75+02	7.42100	1.02101	1.4E-02	0.2E-02	6.7E±01	5.0E+02	1.0E+03	1.0E+03	1.4E 00	Leaching
Indepo[1.2.3-c d]pyrepe [PAH]	103-30-5	1.0E+00	3.02+01	2 1E+00	5.7 2 +02	1.3E+02	1.22+02	4.8E-01	9.5E-01	1.5E-02	3.2E+02	2.3E+00	5.0E+02	1.0E+03	1.0E+03	1.3E-02	Terr Habitat
	7420.02.1	0.25+01	9.0E+01	2.12+01	2 2E 102	2.7E+02	1.65.02	4.0E-01	3.3E-01	1.02+01	3.22+01	2.32+00	3.0L+02	1.02+03	1.02+03	4.0E-01	Terr Habitat
Mercury (elemental)	7439-97-6	0.22701	1.3E+01	5.0L+02	1.9E±02	2.7 2 +03	4.4E+01	1.5E+01	2.0E+01				5.0E±02	1.0E±03	1.0E±03	1 3E+01	NC-Hazard
Methoxychlor	72-43-5		3.5E±02		4.8E±02		1.4L+01	1.3=-01	4 1F±03	1 3E-02	 1 3⊑_02	 1 6E±01	5.0E+02	1.0E+03	1.0E+03	1.3E+01	Leaching
Methylong ableride	75.00.2	1.05.00	2.15:02	2.55,04	2.55.02	4.05.02	1.45.02	0.9E 01	2.05.00	1.35-02	1.0E-02	2.25+02	5.05+02	1.00103	1.05+03	1.35-02	Loophing
Methyl ethyl kotopo	79 02 2	1.90+00	3.1E+UZ	2.02+01	2.02+03	4.90+02	1.405	3.0E-U1	2.00+00	6.1E+00	1.50-01	3.30+03	5.02+02	1.02+03	1.02+03	6.15.00	Leaching
Method is shut diretons	10-33-3		2.1 =+04		2.02+03		1.45.05	4.46+01	0.02+01	0.12+00	F 4E 04	2.00+04	1.00-02	F.0E+03	1.02+03	0.12+00	Leaching
	108-10-1		3.4E+04		1.4E+05		1.4E+05			3.6E-01	5.1E-01	3.4E+03	1.0E+02	5.0E+02	5.0E+02	3.6E-01	Leaching
2 Mothylaaphtholoac	22301-92-0		0.30+00		0.2E+U1		1.9E+U1	3.4E-02	3.4E-02		0.05.04	2 05.00	1.0E+02	3.0E+02	5.0E+02	3.4E-UZ	
	31-37-0	4.75.04	2.40+02		3.UE+U3		0./ =+02			0.0E-U1	0.0E-UT	3.0E+U2	5.UE+U2	1.UE+U3	1.UE+U3	0.0E-01	Leaching
wetnyl tertiary butyl ether (MIBE)	1634-04-4	4./E+01	1.6E+04	2.1E+02	6.6E+04	4.1E+03	6.5E+04	3.1E+01	6.3E+01	2.8E-02	2.5E+00	9.0E+03	1.0E+02	5.0E+02	5.0E+02	2.8E-02	Leaching

January 2019 (Rev	v. 1)	Summary of Soil ESLs (mg/kg)															
			D	irect Exposure Risk Levels	e Human Heal (Table S-1)	th		Terrestrial I (Tab	labitat Levels le S-2)	Leach Groundwa (Tabl	ning to ater Levels e S-3)		Odd	or Nuisance Le (Table S-5)	evels		
Chemicals	CAS No.	Resid Shallo Expo	lential: ow Soil osure	Comm Indus Shallo Expo	erical/ strial: w Soil osure	Constructi Any La Any Depth S	on Worker: nd Use/ oil Exposure	Significantly Vegetated Area	Minimally Vegetated Area	Drinking	Non- drinking	Gross Contamin- ation Levels (Table S-4)	Res: Shallow Soil	Com/Ind: Shallow Soil	Any Land Use: Any Soil	Soil Tier 1 ESL	Basis
		Cancer Risk	Non- cancer Hazard	Cancer Risk	Non- cancer Hazard	Cancer Risk	Non- cancer Hazard	Examples: Parkland or single family homes with yards	Examples: High density residential or commercial/ industrial areas	Water	Water	· · ·	Exposure	Exposure	Exposure (CW)		
Molybdenum	7439-98-7		3.9E+02		5.8E+03		1.8E+03	6.9E+00	4.0E+01							6.9E+00	Terr Habitat
Naphthalene [PAH]	91-20-3	3.8E+00	1.3E+02	1.7E+01	5.8E+02	4.0E+02	5.0E+02	7.5E-01	2.8E+01	4.2E-02	1.2E+00	2.8E+02	5.0E+02	1.0E+03	1.0E+03	4.2E-02	Leaching
Nickel	7440-02-0	1.5E+04	8.2E+02	6.4E+04	1.1E+04	1.7E+03	8.6E+01	1.3E+02	3.4E+02	-						8.6E+01	NC-Hazard
Pentachlorophenol	87-86-5	1.0E+00	2.5E+02	4.0E+00	2.8E+03	2.0E+01	5.6E+02	1.3E-02	3.9E+01	9.8E-02	7.7E-01	5.1E+01	5.0E+02	1.0E+03	1.0E+03	1.3E-02	Terr Habitat
Perchlorate	7790-98-9		5.5E+01		8.2E+02		2.5E+02									5.5E+01	NC-Hazard
Petroleum - Gasoline			4.3E+02		2.0E+03		1.8E+03	1.2E+02	1.2E+02	1.1E+03	4.9E+03	1.0E+03	1.0E+02	5.0E+02	5.0E+02	1.0E+02	Odor/Nuis
Petroleum - Stoddard Solvent			2.6E+02		1.4E+03		1.1E+03	2.6E+02	2.6E+02	1.3E+03	8.0E+03	2.3E+03	1.0E+02	5.0E+02	5.0E+02	1.0E+02	Odor/Nuis
Petroleum - Jet Fuel			2.7E+02		1.4E+03		1.1E+03	2.6E+02	2.6E+02	1.3E+03	8.0E+03	2.3E+03	1.0E+02	5.0E+02	5.0E+02	1.0E+02	Odor/Nuis
Petroleum - Diesel			2.6E+02		1.2E+03		1.1E+03	2.6E+02	2.6E+02	1.1E+03	7.3E+03	2.3E+03	5.0E+02	1.0E+03	1.0E+03	2.6E+02	NC-Hazard
Petroleum - HOPs																	
Petroleum - Motor Oil			1.2E+04		1.8E+05		5.4E+04	1.6E+03	1.6E+03			5.1E+03				1.6E+03	Terr Habitat
Phenanthrene [PAH]	85-01-8							7.8E+00	1.6E+01	1.1E+01	1.1E+01	6.9E+01	5.0E+02	1.0E+03	1.0E+03	7.8E+00	Terr Habitat
Phenol	108-95-2		2.3E+04		3.5E+05		9.8E+04	9.4E+00	9.4E+00	1.6E-01	1.8E+01	1.0E+05	5.0E+02	1.0E+03	1.0E+03	1.6E-01	Leaching
Polychlorinated biphenyls (PCBs)	1336-36-3	2.3E-01		9.4E-01		5.5E+00		1.1E+00	1.1E+00	3.3E+02	3.3E+02	3.3E+02	5.0E+02	1.0E+03	1.0E+03	2.3E-01	Canc-Risk
Pyrene [PAH]	129-00-0		1.8E+03		2.3E+04		5.0E+03	4.7E+03	9.9E+04	4.5E+01	4.5E+01	4.5E+01	5.0E+02	1.0E+03	1.0E+03	4.5E+01	Leaching
Selenium	7782-49-2		3.9E+02		5.8E+03		1.7E+03	2.4E+00	5.5E+00							2.4E+00	Terr Habitat
Silver	7440-22-4		3.9E+02		5.8E+03		1.8E+03	2.5E+01	5.0E+01							2.5E+01	Terr Habitat
Styrene	100-42-5		5.7E+03		3.3E+04		2.5E+04	2.2E+01	4.3E+01	9.2E-01	1.0E+01	8.7E+02	5.0E+02	1.0E+03	1.0E+03	9.2E-01	Leaching
tert-Butyl alcohol	75-65-0									7.5E-02	1.1E+02	3.2E+05	1.0E+02	5.0E+02	5.0E+02	7.5E-02	Leaching
1,1,1,2-Tetrachloroethane	630-20-6	2.0E+00	2.3E+03	8.9E+00	3.5E+04	1.9E+02	1.1E+04			1.7E-02	1.1E-01	7.0E+02	1.0E+02	5.0E+02	5.0E+02	1.7E-02	Leaching
1,1,2,2-Tetrachloroethane	79-34-5	6.1E-01	1.6E+03	2.7E+00	2.3E+04	4.9E+01	7.1E+03			1.8E-02	5.8E-02	1.9E+03	5.0E+02	1.0E+03	1.0E+03	1.8E-02	Leaching
Tetrachloroethene	127-18-4	5.9E-01	8.2E+01	2.7E+00	3.9E+02	3.3E+01	3.5E+02	4.5E+00	4.3E+01	8.0E-02	8.0E-02	1.7E+02	5.0E+02	1.0E+03	1.0E+03	8.0E-02	Leaching
Thallium	7440-28-0		7.8E-01		1.2E+01		3.5E+00	1.8E+00	4.5E+00							7.8E-01	NC-Hazard
Toluene	108-88-3		1.1E+03		5.3E+03		4.7E+03	1.4E+02	6.6E+02	3.2E+00	1.0E+01	8.1E+02	5.0E+02	1.0E+03	1.0E+03	3.2E+00	Leaching
Toxaphene	8001-35-2	5.1E-01		2.2E+00		1.4E+01				2.5E+02	2.5E+02	2.5E+02	5.0E+02	1.0E+03	1.0E+03	5.1E-01	Canc-Risk
1,2,4-Trichlorobenzene	120-82-1	2.4E+01	5.9E+01	1.1E+02	2.6E+02	8.5E+02	2.4E+02	1.6E+01	3.0E+01	1.2E+00	6.0E+00	4.2E+02	5.0E+02	1.0E+03	1.0E+03	1.2E+00	Leaching
1,1,1-Trichloroethane	71-55-6		1.7E+03		7.3E+03		7.2E+03	2.2E+01	4.4E+01	7.0E+00	7.0E+00	6.5E+02	5.0E+02	1.0E+03	1.0E+03	7.0E+00	Leaching
1,1,2-Trichloroethane	79-00-5	1.2E+00	1.5E+00	5.1E+00	6.4E+00	1.1E+02	6.3E+00	1.0E+02	2.0E+02	7.6E-02	7.9E-02	2.2E+03	1.0E+02	5.0E+02	5.0E+02	7.6E-02	Leaching
Trichloroethene	79-01-6	9.5E-01	4.2E+00	6.1E+00	1.9E+01	1.3E+02	1.8E+01	8.1E+00	2.5E+02	8.5E-02	8.5E-02	7.0E+02	5.0E+02	1.0E+03	1.0E+03	8.5E-02	Leaching
2,4,5-Trichlorophenol	95-95-4		7.8E+03		1.2E+05		3.5E+04	5.5E+00	1.0E+01	2.9E+00	2.9E+00	1.2E+04	5.0E+02	1.0E+03	1.0E+03	2.9E+00	Leaching
2,4,6-Trichlorophenol	88-06-2	9.9E+00	7.8E+01	4.7E+01	1.2E+03	3.5E+02	3.5E+02	5.5E+00	1.0E+01	4.0E-02	3.1E+01	1.9E+03	1.0E+02	5.0E+02	5.0E+02	4.0E-02	Leaching
1,2,3-Trichloropropane	96-18-4	2.3E-02	4.9E+00	1.1E-01	2.1E+01	8.3E-01	2.0E+01			1.1E-04	1.3E-04	1.4E+03	1.0E+02	5.0E+02	5.0E+02	1.1E-04	Leaching
Vanadium	7440-62-2		3.9E+02		5.8E+03		4.7E+02	1.8E+01	1.8E+01							1.8E+01	Terr Habitat
Vinyl chloride	75-01-4	8.3E-03	7.0E+01	1.5E-01	3.8E+02	3.4E+00	3.0E+02	4.3E+00	8.5E+00	1.5E-03	1.5E-03	3.9E+03	5.0E+02	1.0E+03	1.0E+03	1.5E-03	Leaching
Xylenes	1330-20-7		5.8E+02		2.5E+03		2.4E+03	5.5E+01	2.1E+02	2.1E+00	1.0E+01	2.7E+02	5.0E+02	1.0E+03	1.0E+03	2.1E+00	Leaching
Zinc	7440-66-6		2.3E+04		3.5E+05		1.1E+05	3.4E+02	3.4E+02							3.4E+02	Terr Habitat
								•									

Notes:

Cadmium (Water): Groundwater levels do not apply to cadmium in soil so no soil level are listed.
 Petroleum - HOPs: Soil ESLs have not been developed at this time.

Abbreviations:

Canc - Cancer

Com/Ind - Commercial/Industrial

Contam - Contamination

CW - Construction Worker

DDD - Dichlorodiphenyldichloroethane

DDE - Dichlorodiphenyldichloroethene

January 2019 (Re	v. 1)						Sı	ummar	y of So	il ES	Ls (n	ng/kg)					
Chemicals			Direct Exposure Human Health Risk Levels (Table S-1)					Terrestrial Habitat Levels (Table S-2)		Leaching to Groundwater Levels (Table S-3)			Odor Nuisance Levels (Table S-5)				
	CAS No.	Residential: Shallow Soil Exposure		Commerical/ Industrial: Shallow Soil Exposure		Construction Worker: Any Land Use/ Any Depth Soil Exposure		Significantly Vegetated Area	Minimally Vegetated Area	Drinking	Non-	Gross Contamin- ation Non- Levels	Res:	Com/Ind:	Any Land Use:	Soil Tier 1 ESL	Basis
		Cancer Risk	Non- cancer Hazard	Cancer Risk	Non- cancer Hazard	Cancer Risk	Non- cancer Hazard	Examples: Parkland or single family homes with yards	Examples: High density residential or commercial/ industrial areas	Water	Water	(1256 5-4)	Exposure	Exposure	Exposure (CW)		
DDT - Dichlorodiphenyltrichloroethane Exp - Exposure HOPs - Hydrocarbon Oxidation Products (NC - Noncancer Odor/Nuis - Odor Nuisance	biodegradation n	netabolites and	l photo-oxidati	on products of	petroleum hyc	drocarbons). Se	ee User's Guid	e Chapter 4 for fur	ther information.								

PAH - Polycyclic aromatic hydrocarbon Res - Residential

TCDD - Tetrachlorodibenzodioxin

Terr - Terrestrial



C SEARS AUTOMOTIVE CENTER CLOSURE PLAN





14700 Winchester Blvd., Los Gatos, CA 95032-1818 (408) 378-4010 • (408) 378-9342 (fax) • www.sccfd.org

FIRE DEPARTMENT SANTA CLARA COUNTY

	re ka		Cupert	ino	
Name of Business VALLCO FAS	HION MALL - SEARS	5			
THE BUSINESS LISTED ABOVI THE PROVISIONS OF Cuperti S AUTHORIZED TO COMME Facility Closure SUBJECT TO COMPLIANCE W AND THE FOLLOWING CONI	E, HAVING APPLIED I ino Municipal Code, Chapt ENCE WITH THE FOLI AG HazMat ITH APPLICABLE CO DITIONS:	PURSUANT TO er 9.12 LOWING PROJE <u>Closure</u> DES AND ORDI	CT: NANCES	NO This permit do of any dicuise re not. transferable use, or, bectapala require a new pe	TICE. es not take the place quired by daw and is Any change in the cy of premises shall runit.
	POST C	NS MAY BE GROUNDS FO	R REVOCATION OF PEI	RMIT Ini	tials
	PREMIS	ES PEREZ, I	.ORENZO		Z. V.
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Organized as the Santa Clara County Central Fire Protection District

Serving Santa Clara County and the communities of Campbell, Cupertino, Los Altos, Los Altos Hills, Los Gatos, Monte Sereno, and Saratoga





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PLAN	40	
REVIEW No.	19	

19 1122

BLDG PERMIT No.

PLAN REVIEW COMMENTS

FIRE DEPARTMENT SANTA CLARA COUNTY

This closure shall comply with the following:

1. 2016 California Fire Code (CFC), as adopted by the City of Cupertino, 2. Chapter 9.12 of the Cupertino Municipal Code (CMC)

The scope of this plan review includes the following: • Former Sears Automotive Center Facility Closure-**Please notify this office** <u>immediately</u> if the above description is incorrect so that necessary changes to the plan review may be incorporated.

Inspections:

Comment #1: Visual inspections of the areas to verify that the facility and environment are free of hazardous materials as a result of previous use is required. Please call to schedule inspections to witness conditions and possible sampling of the elevator, piping, and hydraulic lifts including their respective areas. I must observe the sampling of the lead, oil-water separator, acid chamber, and tank potholing. Call 408-341-4443 to set times for facility appointments. [CFC 106.2]

Post Closure Report:

Comment #2: The post closure report containing the final disposition of hazardous materials and analytical results from sampling at Vallco Shopping Mall is required. [CFC 5001.6.3]

APPROVED subject to conditions noted above. Please call to arrange for an inspection at least 48 hours in advance. Applicant is also required to maintain copy of permit application and approval with conditions on site. [CFC 105.3.5]

The applicant and applicant's agents shall carry out the proposed activity in compliance with all laws and regulations applicable thereto, whether specified or not, and in complete accordance with approved plans and specifications. [CFC 105.3.6 and 105.4.4]

This approval shall not be construed to be an approval of a violation of the provisions of the California Fire Code or of other laws or regulations of the jurisdiction. Any inspections presuming to give authority to violate or waive provisions of such laws or regulations shall not be

city CUP	PLANS S	SPECS			AS	OCCUPANCY	CONST. TYPE	E Applic	ntName Richard Fre	eudenberger	дате 04-11-2019	PAGE 	1
SEC/FLOOR	AREA			LOAD	PR A	oject descript G HazMat	non Closure	2		рвојест туре ов system Facility Closure			
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TABULAR FI	RE FLOW						N FOR FIRE SP	PRINKLERS	REQUIRED FIRE F	LOW @ 20 PSI	ву Perez,	, Lorenza)
				Or	gani	zed as the S	Santa Clara	a County	Central Fire P	rotection District			
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WSP USA 2025 Gateway Place Suite 348 San Jose, CA 95110

Tel.:+1 408 453-6100 Fax: +1 408 453-0496 wsp.com

March 26, 2019

Mr. Lorenzo Perez Hazardous Materials Specialist Santa Clara County Fire Department 14700 Winchester Blvd. Los Gatos, CA 95032

Subject: Closure Plan for Former Sears Automotive Center, Former Vallco Shopping Mall

Dear Mr. Perez,

This Closure Plan documents and presents a specific plan to address each of the items identified and discussed during your October 9, 2018 inspection of the former Sears Automotive Center located in the southwestern corner parking area of the former Vallco Shopping Mall (Site). It also includes items noted in your e-mail to Rick Freudenberger of WSP on March 12, 2019. The purpose of the inspection and the e-mail was to identify the items to be addressed in connection with final closure of the former service center. Present during the inspection were you, on behalf of the Santa Clara County Fire Department (SCCFD); and Rick Freudenberger; Mike Rohde of Sand Hill Property Company; and Paul Hansen of Sand Hill Construction Management.

PRE-DEMOLITION ACTIVITIES

Prior to demolition of the building, WSP will conduct the following activities to assure the proper identification and management of any potentially hazardous building materials during demolition activities:

- 1 <u>Elevator</u>: The elevator within the building has been decommissioned and the hydraulic oil removed for proper disposal. Documentation regarding this disposal will be provided to the SCCFD.
- 2 Battery Storage Areas: Wipe samples from the floors and lower portions of the walls in the battery storage areas in the basement and first floor will be collected and analyzed for lead. Locations of wipe samples are shown in the attached photo log. A total of approximately 52 wipe samples for analysis of lead are proposed. Results will be reported to the SCCFD and include comparisons to the applicable lead wipe standard of two hundred and fifty micrograms per square foot (250µg/ft2) for interior horizontal surfaces;. The results of the Report will provide the demolition contractor with the necessary information to ensure that any lead containing materials have been properly identified and will be safely removed and properly disposed of during demolition activities.
- 3 <u>Polychlorinated Biphenyls (PCBs)</u>: Samples will be taken of any caulk/building materials suspected of containing PCBs. Locations of material samples will be determined based on field observations. Results will be reported to the SCCFD and include comparisons to applicable PCB standards.
- 4 <u>Piping</u>: Piping that formerly distributed grease, oil, and other petroleum fluids remains along interior building walls, ceilings and the basement. In some areas, concrete floor and walls show staining from residual petroleum liquids, most notably in the basement. Oil stains on the floor were also observed in the area of two former air compressors. Major stained areas will be cleaned prior to demolition and the



piping and oil stained concrete will be segregated and disposed of properly. Documentation for the disposal of any hazardous materials will be provided to the SCCFD.

- 5 <u>Hydraulic Lifts</u>: There are a number of former hydraulic lifts within the service bay. The lift cylinders have been removed and the steel casings filled with concrete. The lifts in the northern portion of the building do not extend into the basement and hydraulic fluid piping and reservoirs may remain in these lifts. The steel casings for all of the former hydraulic lifts will be removed and the area around/within the casings will be inspected to ensure that any residual piping/reservoirs are cleaned/removed and any residual oil is removed for proper disposal. Documentation for the disposal of any hazardous materials will be provided to the SCCFD.
- 6 <u>Alleged Underground Storage Tank (UST) Location:</u> Two exploratory trenches that are approximately 10 feet long will be excavated to about five feet below ground surface in the area of the alleged UST; the trenches will be perpendicular to each other to create an 'X' with the center of the 'X' located at a concrete square located west of the former Sears automotive building (Figure 1). This concrete square located have been located east of and between two former oil USTs removed in 1994.

For your information, to address the possibility that any USTs remain onsite, WSP performed a geophysical GPR survey on January 25, 2019 around the former Sears Automotive Center. The survey consisted of a metal sweep performed with a Fisher TW-6 MiScope to determine the presence of any metal pipes leading to or from the suspected area of the former tanks removed in 1994 and a ground penetrating radar (GPR) scan performed with a MALA easy locator to determine if there were any indications of any underground storage tank present beneath the ground surface. The survey extended across the area proposed above for the exploratory trenches and showed no evidence of any existing underground tanks there or on the west or east sides of the Sears automotive building. The geophysical survey report is attached.

DURING DEMOLITION ACTIVITIES

WSP will conduct the following additional activities during demolition:

- 1 <u>Stained Equipment:</u> Any equipment/tanks/surfaces stained with petroleum products (not identified above) will be segregated and disposed of properly. Documentation for the disposal of any hazardous materials will be provided to the SCCFD.
- 2 <u>Oil-Water Separator and Acid Neutralization Chamber:</u> A below-ground oil/water separator exists outside the northeast corner of the building and a former acid neutralization chamber (previously emptied and closed by and filling with gravel) is located near the southeastern corner of the building (Figure 1). The oil/water separator and the acid neutralization chamber will be cleaned, as necessary, and the units removed for proper disposal. Following removal of the oil-water separator and acid neutralization chamber and any associated piping, soil samples will be collected from beneath the units and along the underground piping paths to determine if there were any significant releases. Preliminary proposed sample locations are shown on Figure 1 (attached). The soil samples will be analyzed for the following constituents per Santa Clara County guidelines :
 - TPHG and TPHD by EPA method 8015 (fuel scan)
 - Hexane Extractable Materials by EPA 9071B



- Volatile Organic Compounds, w/chlorinated hydrocarbons (full scan) by EPA method 8260B
- PCB's by EPA method 8082A
- Cd, Cr, Pb, Ni, and Zn by EPA 6010B
- Semi Volatile Organic Compounds (SVOCs) including Polycyclic Aromatic Hydrocarbons (PAHs) by EPA method 8270
- 3 <u>Unknown UST</u>: If any previously undetected UST and/or associated piping is discovered during the exploratory trenches proposed above, appropriates measures will be taken and regulatory permits will be obtained to arrange for removal and appropriate sampling of surrounding soils (beneath any piping and the UST) to obtain tank closure.

Documentation for the disposal of any hazardous materials removed during demolition activities will be provided to the SCCFD.

Following your review and approval of this Closure Plan, we will provide information concerning scheduling of the noted activities.

Please don't hesitate to contact us if you have any questions, comments, or require additional information.

Kind regards,

Ruhard E. Freudenklige

Richard E. Freudenberger Executive Vice President

Encl.

cc: Mike Rohde, Sand Hill Property Company Paul Hansen, Sand Hill Construction Management

PHOTOGRAPHIC LOG					
Sand Hill Properties			Former Vallco Mall	31401588.001	
			Cupertino, California		
	1				
Photo No.	Date				
1	March 25,	2019			
Photo No.Date1March 25, 2019Northeast corner of former SearsAutomotive Building, first floor.Three wipe samples will becollected along the floor and threealong the wall.		Sears loor. be three			



PHOTOGRAPHIC LOG					
Sand Hill Properties			Former Vallco Mall	31401588.001	
			Cupertino, California		
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Photo No.	Date	
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samples to be co	ollected along the	
floor, adjacent t	o each side of the	
side walls and o	one in the corner.	
Three wipe sample	les will be taken on	
the wall above	where each floor	As the set of the set
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PHOTOGRAPHIC LOG				
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Photo No.	Date					

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	2019 Sears vipe eas of e wipe e the	2019 Sears vipe e the PHOTOGRAPHIC LOG Former Vallco Mall Cupertino, California			





	PHOTOGRAPHIC LOG	
Sand Hill Properties	Former Vallco Mall	31401588.001
	Cupertino, California	



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California Utility Locators PO Box 67066 Scotts Valley, CA 95067 831-239-6057

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Palo Alto, CA 94304		1-28-2	019			
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