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Forensic Analytical Consulting Services

February 1, 2025

Environmental Health and Safety Plan

Santa Clara Valley Open Space Authority
Spreckels Wetland Enhancement Project

Prepared for:

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SIGNATURE PAGE

Santa Clara Valley Open Space Authority

Spreckels Wetland Enhancement Project

Santa Clara County, California

ENVIRONMENTAL HEALTH AND SAFETY PLAN

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Preparation Date	February 1, 2025	
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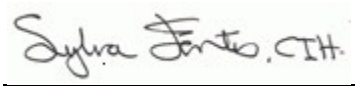
APPROVALS:



Sylvia Fontes, MS, CIH — February 1, 2025

Rachel Clemons, Open Space Authority — February 1, 2025

Chelsea Blackmore, PhD, RPA, Albion Environmental — February 1, 2025

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Table 1 Abbreviations and Acronyms	
Acronym	**Definition**
%	Percent
µ	Micron
µg	Micrograms
µg/m^3	Micrograms per cubic meter
ACGIH®	Formerly the American Conference of Governmental Industrial Hygienists
AL	Action Level
ASTM	American Society for Testing and Materials
C	Ceiling
Cal/OSHA	California Division of Occupational Safety and Health
CCR	California Code of Regulations
CDC	Centers for Disease Control and Prevention
CIH	Certified Industrial Hygienist
COC	Contaminant(s) of Concern
COVID-19	Coronavirus Disease 2019
CPR	Cardiopulmonary Resuscitation
CRZ	Contamination Reduction Zone
dBA	Decibels on the A-weighted scale
EHASP	Environmental Health and Safety Plan
ESL	Environmental Screening Level
EZ	Exclusion Zone
FACS	Forensic Analytical Consulting Services
IDLH	Immediately Dangerous to Life and Health
IIPP	Injury and Illness Prevention Program
JHA	Job Hazard Analysis
kg	kilograms
lpm	Liters per minute
MCE	Mixed Cellulose Ester
mg	Milligrams
mg/kg	Milligrams per kilogram
mg/m^3	Milligrams per cubic meter
NEA	Negative Exposure Assessment
NIOSH	National Institute for Occupational Safety and Health
ºF	Degrees Fahrenheit
OSHA	Occupational Safety and Health Administration
PEL	Permissible Exposure Limit

Table 1 Abbreviations and Acronyms	
Acronym	**Definition**
PID	Photoionization Detector
PM	Project Manager
PPE	Personal Protective Equipment
PPM	Parts Per Million
PTP	Pre-Task Planning
REL	Recommended Exposure Limit
RWQCB	Regional Water Quality Control Board
SDS	Safety Data Sheet
SFBRWQCB	San Francisco Bay Regional Water Quality Control Board
SSHM	Site Safety and Health Manager
STEL	Short Term Exposure Limit
STLC	Soluble Threshold Limit Concentration
SZ	Support Zone
TLV®	Threshold Limit Value
TWA	Time-Weighted Average
UV	Ultraviolet

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1. INCIDENT NOTIFICATION AND REPORTING

The emergency contact information is provided below.

Table 2 Emergency Contacts	
PROJECT ROLE	**CONTACT INFORMATION**
Santa Clara Valley Open Space Authority Project Manager	Rachel Clemons 669-210-9161 rclemons@openspaceauthority.com
Albion Environmental Project Manager	Chelsea Blackmore 510-610-0781 cblackmore@albionenvironmental.com
Albion Environmental Field Director	Matthew Manigault 805-452-6578 mmanigault@albionenvironmental.com
Albion Environmental Site Safety Health Manager	Brittney Biasi 831-251-2587 bbiasi@albionenvironmental.com
Forensic Analytical Consulting Services Senior Certified Industrial Hygienist	Sylvia Fontes, CIH 530-906-6560 sylvia.fontes@facs.com
Medical Facilities Kaiser Permanente San Jose Medical Center 250 Hospital Pkwy, San Jose, CA 95119 Good Samaritan Hospital 2425 Samaritan Dr. San Jose, CA 95124	408-972-3000javascript:void(0) 408-559-2011
Emergency	911

Santa Clara Valley Open Space Authority's Emergency Action Plan is incorporated into this Environmental Health and Safety Plan (EHASP) by reference.

Figure 1 provides a location map for Kaiser Permanente San Jose Medical Center and directions are provided below.

Kaiser Permanente San Jose Emergency Room Directions (5.4 miles):

- Head north on Santa Teresa Blvd. 5.1 mi
- Turn right onto Cottle Rd. 0.1 mi
- Turn right into Hospital Pkwy 0.2 mi
- Destination will be on the right

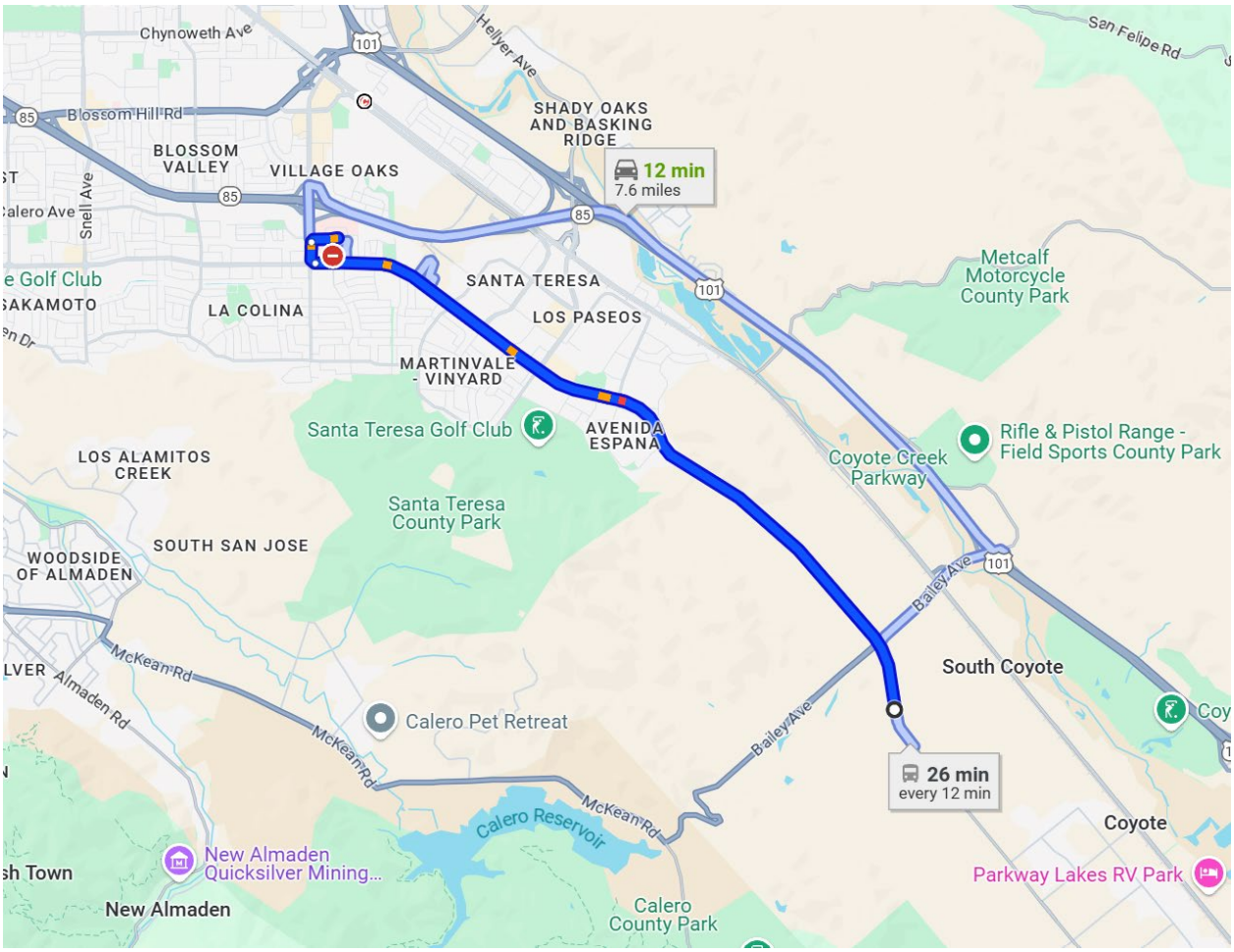

Figure 1. Kaiser Permanente San Jose Emergency Room Route

Figure 2 provides a location map for Good Samaritan Hospital and directions are provided below.

Good Samaritan Hospital Emergency Room Directions (15.4 miles):

- Head north on Santa Teresa Blvd. 0.4 mi
- Turn right Bailey Ave. 1.0 mi
- Use any lane to merge onto US-101 N via ramp to San Jose 0.3 mi
- Merge onto US-101 N 2.8 mi
- Keep right at the fork to continue on CA-85 N 9.6 mi
  Follow signs for Cupertino/Mtn View
- Take exit 9 for Union Ave. 0.3 mi
- Turn right onto Union Ave. 0.1 mi
- Turn right at the 1st cross street onto Samaritan Dr. 0.8 mi
- Destination will be on the right

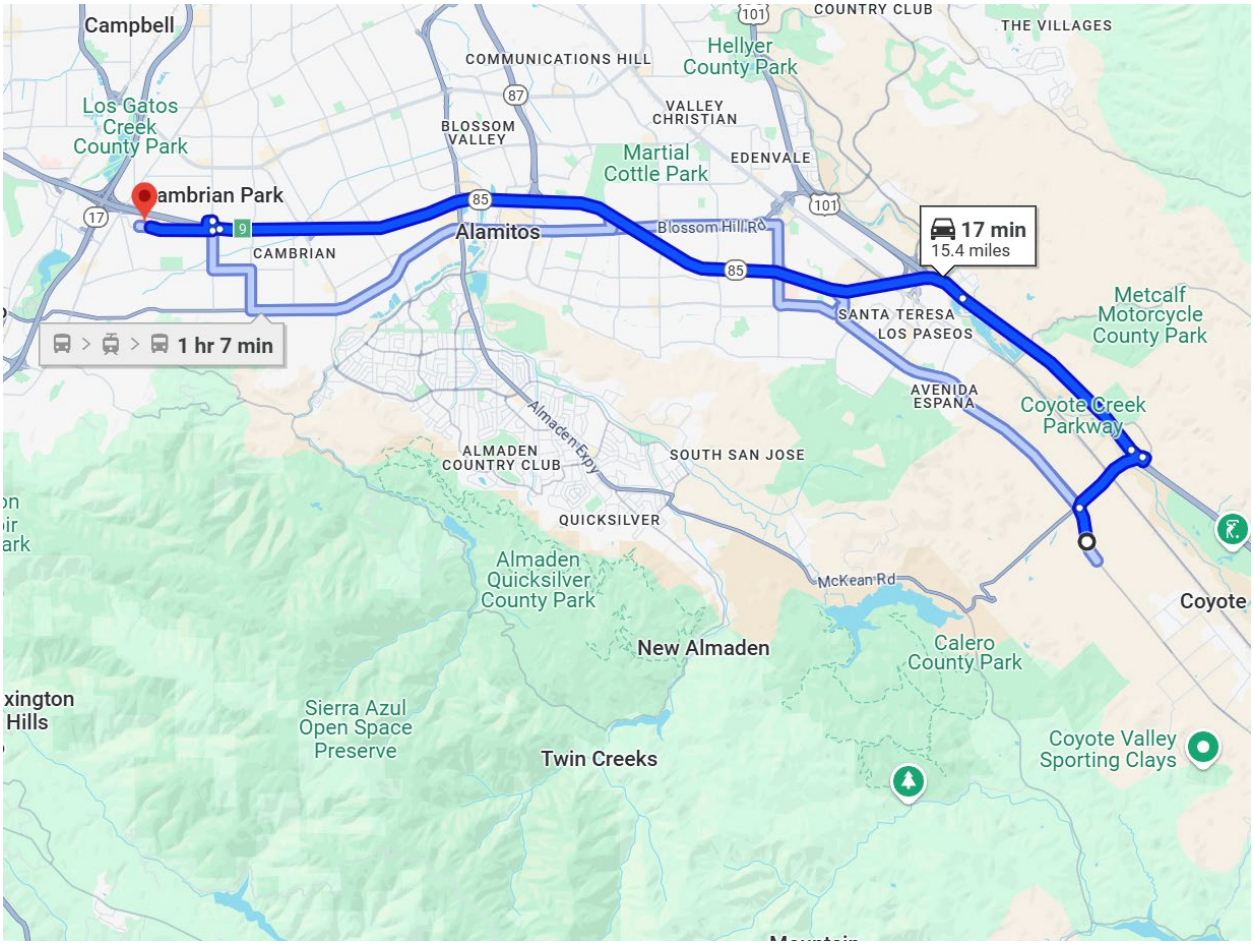

Figure 2. Good Samaritan Hospital Emergency Room Route

2. INJURY REPORTING REQUIREMENTS

Emergency medical procedures will include the following:

- Non-life-threatening injuries and illnesses will be managed with first aid treatment, as appropriate.
- Life threatening illnesses or injuries will require an immediate emergency call to 911. Refer to the emergency response plan provided in Section 1.0 Incident Notification and Reporting. When calling 911 you must initially state “I have a medical emergency.” This statement routes you directly to medical services rather than placing your call-in line with other types of emergencies.

Serious Incidents must be reported to the Project Manager (PM) immediately. Serious incidents are those that involve any of the following:

- Work related death, life threatening injury, or illness of a Santa Clara Valley Open Space Authority employee, Contractor, or general public.
- Missing person.
- Acts or threats of terrorism.
- Event that involves a fire, explosion, or property damage.
- Spill or release of hazardous materials or substances that involve a significant threat of imminent harm to site workers, neighboring facilities, the community, or the environment.
- Unanticipated sub-surface conditions.

All other injuries or illnesses (even those that are minor and may only require First Aid) that occur at work must be reported to the supervisor.

3. ORGANIZATIONAL STRUCTURE

3.1. Applicability

This EHASP is prepared to address site work performed by Santa Clara Valley Open Space Authority and their Contractors. Santa Clara Valley Open Space Authority assumes responsibility for implementation of the EHASP for their employees and those of their Contractors.

This EHASP is an addendum that supplements Santa Clara Valley Open Space Authority's and their Contractors':

- Illness and Injury Prevention Program (IIPP) required by the California Division of Occupational Safety and Health (Cal/OSHA)
- Hazard Communication Program
- Respiratory Protection Program
- COVID-19 Prevention Program

This document is written as a site-specific EHASP to be implemented when the potential for exposure to subsurface contaminants is expected.

This EHASP applies to:

- All Santa Clara Valley Open Space Authority's staff, including Contractors of; and
- All visitors to the project site where Santa Clara Valley Open Space Authority's employees are working (including visitors from the Client, the government, the public, and other staff of Santa Clara Valley Open Space Authority).

This EHASP applies to third-party contractors, their workers, their Contractors, their visitors, and other persons not under the direct supervision of Santa Clara Valley Open Space Authority.

This EHASP defines the procedures and requirements for the health and safety of Santa Clara Valley Open Space Authority's staff, contracted sub-contractors, and visitors when they are physically on the work site and contamination is present. The work site includes the project area (as defined by the contract documents) and the project offices, trailers, storage areas and other facilities thereon.

This EHASP will be kept on site during field activities and will be reviewed, as necessary. The EHASP will be amended or revised as project activities or conditions change or when supplemental information becomes available.

All Santa Clara Valley Open Space Authority's staff and Contractors must sign the EHASP Acknowledgement form included in this document as **Appendix A** to acknowledge review of this document. Copies of the signature page will be maintained onsite by Santa Clara Valley Open Space Authority's Site Safety and Health Manager (SSHM) and in the project files.

3.2. Safe Work Policy

It is the policy of Santa Clara Valley Open Space Authority to perform work in the safest manner possible. Safety must never be compromised. To fulfill the requirements of this policy, an organized and effective health and safety program must be carried out at each location where work is performed.

Santa Clara Valley Open Space Authority believe that all injuries are preventable, and we are dedicated to the goal of a safe work environment. To achieve this goal, every employee on the project must assume responsibility for safety.

Every employee is empowered to:

- conduct their work in a safe manner.
- stop work immediately to correct any unsafe condition that is encountered.
- take corrective actions so that work may proceed in a safe manner.

Safety, occupational health, and environmental protection will not be sacrificed for production. These elements are integrated into quality control, cost reduction, and job performance, and are crucial to our success.

3.3. Health and Safety Commitment

Santa Clara Valley Open Space Authority has embraced a philosophy for health and safety excellence. The primary driving force behind this commitment to health and safety is simple: employees, contractors, and partners are Santa Clara Valley Open Space Authority's most significant asset and Santa Clara Valley Open Space Authority management values their safety, health, and welfare. Also, senior management believes that all injuries are preventable. Santa Clara Valley Open Space Authority's safety culture empowers employees at all levels to accept ownership for safety and take whatever actions are necessary to prevent injury. Our organization is committed to world-class performance in health and safety and understands that world-class performance in health and safety is a critical element in overall mission success.

Santa Clara Valley Open Space Authority is committed: to the prevention of personal injuries, occupational illnesses, and damage to equipment and property in all its operations; to the protection of the general public and other employers whenever they come in contact with the organization's work; and to the prevention of pollution and environmental degradation.

Organization management, field supervisors, and employees plan safety into each work task in order to prevent occupational injuries and illnesses. The ultimate success of Santa Clara Valley Open Space Authority's health and safety program depends on the full cooperation and participation of each employee.

Santa Clara Valley Open Space Authority management extends its full commitment to health and safety excellence.

3.4. Project-Specific Health, Safety and Environmental Goals

All management and employees are to strive to meet the project-specific Health, Safety, and the Environment goals outlined below. The team will be successful, only if everyone makes a concerted effort to accomplish these goals. The goals allow the project to stay focused on optimizing the health and safety of all project personnel and, therefore, making the project a great success.

The Project's goals and objectives are provided below:

- Perform all work in a safe manner.
- Stop work immediately to correct any unsafe condition or act that is observed or encountered.

- Immediately report unsafe conditions and unsafe actions to the Project Manager (PM).
- Create an injury-free environment.
- Have zero injuries or incidents.
- Provide management leadership for health and safety by communicating performance expectations, reviewing, and tracking performance, and leading by example.
- Ensure effective implementation of the Environmental Health and Safety Plan (EHASP) through education, delegation, and teamwork.
- Ensure 100% participation in health and safety compliance.
- Continuously improve our health and safety performance.
- Maintain free and open lines of communication.
- Make a personal commitment to health and safety as a value.
- Focus health and safety improvements on high-risk groups.
- Continue strong employee involvement initiatives.
- Achieve health and safety excellence.

3.5. Project Organization and Responsibilities

The roles and responsibilities of the PM, SSHM, and employees of Open Space Authority and its Contractors are provided in the following sections.

3.5.1. Project Manager

The PM is responsible for providing adequate resources (budget and staff) for project-specific implementation of the health and safety management process. The PM has overall management responsibility for the tasks listed below:

- Incorporate standard terms and conditions and contract-specific health and safety roles and responsibilities in contract and subcontract agreements (including flow-down requirements to lower tier Contractors).
- Ensure that the overall, job-specific, health and safety goals are fully and continuously implemented.
- Support and implement use of stop-work orders when employee, Contractor, or other entities' safety performances are not adequate.
- Select safe and competent Contractors by:
    - Choosing potential Contractors based on technical ability and health and safety performance.
    - Ensuring health and safety submittals, subcontract agreements, and appropriate site-specific safety procedures are in place and accepted prior to field mobilization.
- Ensure copies of training and medical monitoring records, and site-specific safety procedures are being maintained in the project file accessible to site personnel.
- Provide oversight of Contractor health and safety practices per this site-specific health and safety plan.
- Verify this EHASP is current and amended when project activities or conditions change.

3.5.2. Site Safety and Health Manager

The SSHM is responsible for verifying that the project is conducted in a safe manner. There may be a different SSHM for each task included in the scope. The SSHM will be designated at the start of each task. The responsibilities for each SSHM include the following specific obligations:

- Verify Open Space Authority's site personnel and Contractor personnel read the EHASP and sign the EHASP Acknowledgement Form prior to commencing field activities.
- Hold and/or verify that safety meetings are conducted and documented in the project file initially and daily throughout the course of the project and as tasks or hazards change.
- Verify that project health and safety forms and permits are being used as outlined in this EHASP.
- Perform oversight and assessments of Contractor health and safety practices per Santa Clara Valley Open Space Authority's site-specific safety plan and the Contractor's EHASP.
- Verify appropriate personal protective equipment (PPE) usage, availability, and training.
- Ensure that the overall, job-specific, health and safety goals are fully and continuously implemented.
- Verify that the field health and safety training is being delivered as needed based on project-specific hazards and activities.
- Contact the PM in the event of an incident.
- When an apparent imminent danger exists, immediately remove all affected Santa Clara Valley Open Space Authority employees and Contractors, notify Contractor safety representative, stop affected work until adequate corrective measures are implemented, and notify the PM.
- Document all verbal health and safety-related communications in project field logbook, daily reports, or other records.

3.5.3. Contractor

Contractors must comply with the following activities, and are responsible to:

- Comply with all local, state, and federal safety standards.
- Comply with project and owner safety requirements.
- Comply with and follow Santa Clara Valley Open Space Authority's EHASP.
- Actively participate in the project health and safety program and either hold or attend and participate in all required safety meetings.
- Provide a qualified safety representative to interface with the PM.
- Maintain safety equipment and PPE for their employees.
- Maintain and replace safety protection systems damaged or removed by the Contractor's operations.
- Notify Santa Clara Valley Open Space Authority's SSHM of any accident, injury, or incident (including spills or releases) immediately and submit reports to Santa Clara Valley Open Space Authority within 48 business hours. Formal corrective action plans are to be generated and implemented within three business days.

- Conduct and document weekly safety inspections of project-specific tasks and associated work areas.
- Conduct site-specific and job-specific training for all Contractor employees, including review of Santa Clara Valley Open Space Authority's EHASP, Contractor EHASPs, and sign appropriate sign-off forms.
- Determine and implement necessary controls and corrective actions to correct unsafe conditions.

Contractors are required to comply with Santa Clara Valley Open Space Authority's site-specific EHASP and other plans. Contractors are responsible for the health and safety procedures specific to their work and are required to submit their procedures to Santa Clara Valley Open Space Authority for review and acceptance by the Santa Clara Valley Open Space Authority's PM and SSHM before the start of field work.

Contractors are also required to prepare Job Hazard Analysis (JHAs) before beginning each activity posing hazards to their personnel. The Pre-Task Planning (PTP) shall identify the principal steps of the activity, potential health and safety hazards for each step and recommended control measures for each identified hazard. In addition, a list of the equipment to be used to perform the activity, inspection requirements, and training requirements for the safe operation of the equipment listed must be identified.

3.5.4. Employee Responsibilities

All personnel are assigned responsibility for safe and healthy operations. For any operation, individuals have full authority to stop work and initiate immediate corrective action or control. In addition, each worker has a right and responsibility to report unsafe conditions or practices.

Each employee is responsible for the following performance objectives:

- Ensure proper decontamination has been completed, prior to exiting the exclusion zone and before entering project trailers, restrooms, or other buildings.
- Each employee on the project has the obligation and authority to shut down any perceived unsafe work and during employee orientation, each employee will be informed of their authority to do so.
- Perform work in a safe manner.
- Follow all safety rules and procedures.
- Utilize all tools and equipment in a safe manner.
- Wear all required PPE.
- Wash hands after working near disturbed soil and before eating, drinking, smoking, using the toilet, and going home.
- Perform work in accordance with organizational policies, and report injuries, illnesses, and unsafe conditions.
- Report all incidents immediately to the SSHM, and file proper forms.
- Report all hazardous conditions and/or hazardous activities immediately to the SSHM for corrective action.

4. SITE CHARACTERIZATION

This section describes site background information, expected site contaminants, and project hazard analysis. The following documents are part of this project and incorporated into the EHASP by reference:

- Soil Sampling and Analysis Report, Spreckels Wetland Watershed Restoration Project, San Jose, California, Geocon Consultants, Inc., September 19, 2024.
- Proposal to Provide a Phase II Evaluation for Spreckels Refuse Dump 1 for the Spreckels Wetland Enhancement Project, Santa Clara County, California, Albion, November 21, 2024.

4.1. Site Background

Spreckels Wetland is a discrete 8-acre wetland complex located at the base of scenic Spreckels Hill in North Cayote Valley, Santa Clara County, California. The wetland contains a mix of riparian woodland and wetland species such as rushes, sedges and willows. The wetland is negatively impacted by invasive species and litter.

The Spreckels Wetland Enhancement Project will include debris removal and habitat restoration of the Spreckels Refuse Dump 1 located in Santa Clara County, California. In 2024, Albion provided a Phase I survey and Extended Phase I cultural resources inventory for the project. The study recorded the presence of a historic-era archaeological site (Spreckels Refuse Dump 1).

Per Albion:

“The site is comprised of historic-era refuse including pull top cans, glass bottles, sheet metal, paint cans, metal barrels, wood posts, concrete, mattress parts, tires, and other construction debris. The materials identified in the historic-era dump appear to date post-1960 based on the identification of screw top glass bottles, pull tabs, machine made bottles, and plastic milk jugs.”

Per Geocon Consultants, Inc.:

“On July 13, 2022, Geocon personnel collected nine samples from the upper one foot of soil at locations identified by SCVOSA personnel. Geocon submitted the soil samples to California Laboratory Services for the following laboratory analyses:

- CAM 17 metals by Method 6020 and 7471A
- Organochlorine pesticides (OCPs) by Method 8081A

Based on the total metals results, four soil samples were further analyzed for Soluble Threshold Limit Concentration (STLC) soluble metals using the WET test method and two samples were further analyzed for TCLP soluble metals using the TCLP test method.

Except for zinc, CAM 17 metals were reported in site samples at concentrations less than their respective TTLC values. Total zinc was reported in Sample #7 at a concentration of 5,200 milligrams per kilogram (mg/kg), exceeding the TTLC of 5,000 mg/kg. Remaining zinc samples were reported at concentrations below the TTLC and below ten times the STLC of 250 milligrams per liter (mg/l).

Copper, mercury, and zinc were reported at total concentrations exceeding ten times their respective STLCs in Sample #7. This sample was further analyzed by the WET method and the soluble WET concentrations did not exceed the respective copper, mercury, or zinc STLCs.

Total lead was reported at concentrations exceeding ten times its STLC of 5 mg/l in Samples #4, #5, #7, and #9. These samples were further analyzed by the WET method and the soluble WET lead concentrations in Samples #4 and #7 exceeded the lead STLC of 5 mg/l. These samples were also analyzed for soluble TCLP lead and the reported concentrations did not exceed the TCLP of 5 mg/l.

Based on the reported total and soluble metals concentrations, soil represented by Samples #4 and #7 would be classified as hazardous waste.

It is also noted that the reported concentrations of total cadmium (Samples #4 and #7), total copper (Sample #7), total lead (Samples #4, #5, #7, and #9), and total zinc (Samples #4, #5, and #7) exceeded their respective terrestrial habitat Environmental Screening Levels (ESLs). Total vanadium was also reported in seven of the nine samples at concentrations exceeding its terrestrial habitat ESL; however, the reported concentrations are consistent with naturally occurring background concentrations.

The OCP 4,4'-DDT was reported in one sample at the residential direct exposure ESL of 1.9 mg/kg. The OCPs 4,4'-DDD and 4,4'-DDE were either not detected at or above laboratory reporting limits or were reported at concentrations less than their respective residential ESLs. Remaining OCPs were not detected above laboratory reporting limits.

It is also noted that the reported concentrations of 4,4'-DDT (Sample #1, #3, #7, and #9) exceeded the terrestrial habitat ESL."

"Geocon concludes that soil has been impacted by the disposal of refuse, including metal debris and possible past OCP use. Geocon recommends that soil represented by Samples #4 and #7 be managed as California hazardous waste. The presence of metals and OCPs in soil should not pose an unacceptable risk for short-term-duration workers investigating possible cultural resources…"

Figure 3 depicts the Location of the soil samples collected by Geocon.

Figure 3. Geocon's Soil Sampling Locations

4.1.1. Comparison of Soil Data Results to Environmental Screening Levels

In order to identify potential contaminants of concern that could be encountered by the workers engaged in the habitat restoration project, FACS compared the soil samples analytical results to Environmental Screening Levels (ESLs) published in January 2019 by the San Francisco Bay Regional Water Quality Board (SFBRWQB). According to the SFBRWQCB:

> *"ESLs are considered to be protective for typical bay area sites. Under most circumstances…the presence of a chemical in soil, soil gas, or groundwater at concentrations below the corresponding ESL can be assumed to not pose a significant threat to human health, water resources, or the environment."*

Nine (9) samples were collected by Geocon from the upper one foot of soil at locations identified by SCVOSA personnel.

***Soil Contaminants – Metals*:** Twelve (12) metals above the method detection limits were reported in the soil samples collected at the site. The results are summarized below.

- **Arsenic (As)** was detected in five of the nine soil samples collected, with detected concentrations ranging from 3.3 mg/kg to 14 mg/kg, all of which exceeds both construction worker value of 0.98 mg/kg (non-cancer hazard) and 2 mg/kg (cancer risk).
- Barium (Ba) was identified in all nine soil samples collected, with detected concentrations ranging from 120 mg/kg to 360 mg/kg, which is below the construction worker value of 3,000 mg/kg (non-cancer hazard). A cancer risk ESL has not been established.
- Beryllium (Be) was found in one of the nine soil samples collected, with a detected concentration of 1.2 mg/kg, which is below both constructor worker values of 180 mg/kg (cancer risk) and 27 mg/kg (non-cancer hazard).
- Cadmium (Cd) was found in two of the nine soil samples collected with detected concentrations of 2.6 and 7.6 mg/kg, which is below both 110 mg/kg (cancer risk) and 51 mg/kg (non-cancer hazard).
- Chromium (Cr) was found in all nine soil samples collected with detected concentrations ranging from 21 to 49 mg/kg. Construction Worker ESLs for total chromium have not been established.
- Cobalt (Co) was found in all nine soil samples collected with detected concentrations ranging from6.4 to 20 14 mg/kg, which is below both constructor worker values of 49 mg/kg (cancer risk) and 28 mg/kg (non-cancer hazard).
- Copper (Cu) was found in all nine soil samples collected with detected concentrations ranging from 25 to 290 mg/kg which are below the construction worker value of 14,000 mg/kg (non-cancer risk). A cancer risk ESL has not been established.
- **Lead (Pb)** was found in all nine soil samples collected with detected concentrations ranging from 10 to 970 mg/kg in both samples, which are below the construction worker value of 2,700 mg/kg (cancer risk). Two of the nine samples exceeded the construction worker value of 160 mg/kg (non-cancer hazard).
- Mercury (Hg) was found in six of the nine soil samples collected with detected concentrations ranging from 0.11 to 2.0 mg/kg, which are below the construction worker value of 44 mg/kg (non-cancer hazard). A cancer risk ESL has not been established.

- Molybdenum (Mo) was found in two of the nine soil samples collected with detected concentrations of 4.7 and 6.0 mg/kg, which is below the construction worker value of 1,800 mg/kg (non-cancer risk). An ESL for cancer risk has not been established.
- Nickel (Ni) was found in all nine soil samples collected with detected concentrations ranging from 33 to 75 mg/kg which are below both constructor worker values of 1,700 mg/kg (cancer risk) and 86 mg/kg (non-cancer hazard).
- Vanadium was found in all nine soil samples collected with detected concentrations ranging from 16 to 42 mg/kg which is below the construction worker value of 470 mg/kg (non-cancer hazard). A cancer risk ESL has not been established.
- Zinc was found in all nine soil samples collected with detected concentrations ranging from 77 to 5,200 mg/kg which are below the construction worker value of 110,000 mg/kg (non-cancer hazard). A cancer risk ESL has not been established.

Soil Contaminants – Organochlorine Pesticides: Dichlorodiphenyldichloroethane (4,4'-DDD), Dichlorodiphenyldichloroethylene (4,4'-DDE) and Dichlorodiphenyltrichloroethane (4,4'-DDT) were identified in the soil samples at levels below their respective ESLs.

- 4,4'-DDD was measured in two of the nine samples collected at 0.80 and 0.0060 mg/kg, which are below the cancer risk of 81 mg/kg. There is no ESL for non-cancer hazard.
- 4,4'-DDE was measured in three of the nine samples collected at concentrations ranging from 0.0086 to 0.31 mg/kg, which are below the cancer risk of 57 mg/kg. There is no ESL for non-cancer hazard.
- 4,4'-DDT was measured in four of the nine samples collected at concentrations ranging from 0.0043 to 1.9 mg/kg which are below the cancer risk ESL of 57 mg/kg and below the non-cancer ESL of 140 mg/kg.

4.1.2. Hazardous Waste Work Zones

The STLC and Toxicity Characteristic Leaching Procedure (TCLP) tests were used to determine if site soils meet hazardous California regulations (CCR Title 22, Section 66261.3) and/or Federal (40 CFR Part 261) hazardous waste criteria, respectively. Based on STLC lead results, the soils in multiple areas of the work site are classified as California hazardous waste.

Chromium TCLP results did not meet federal hazardous waste criterion. TCLP lead analysis was not performed. Nickel TCLP criterion has not been established. Based on these results, the site soils do not meet federal hazardous waste criteria.

4.2. Applicable Occupational Safety and Health Regulations

All activities associated with work on this site will be in compliance with federal occupational health regulations as this property is operated by a federal agency. Regulations applicable to specific site contaminants are as follows:

- Cal/OSHA Title 8 – General Duty Clause
- Cal/OSHA Title 8, §8414– Personal Protective Equipment
- Cal/OSHA Title 8, §1541– Excavations
- Cal/OSHA Title 8, §5155 - Airborne Contaminants
- Cal/OSHA Title 8, Article 107 – Gases, Vapors, Fumes, Dusts, and Mists
- Cal/OSHA Title 8, §3205 – COVID-19 Prevention

- Cal/OSHA Title 8, §5194 – Hazard Communication
- Cal/OSHA Title 8, §5192 – Hazardous Waste and Emergency Response
- Cal/OSHA Title 8 CCR §5214. Inorganic Arsenic.
- Cal/OSHA Title 8 CCR §5198. Lead.

4.3. Description of Tasks

Santa Clara Valley Open Space Authority scope of work involves the following tasks:

- Historical/archeological evaluation of objects within debris piles.
- Removal of debris piles.

4.4. Contaminants of Concern

In general, exposure to contaminants can occur through inhalation (e.g., of dust, aerosol, or vapor), skin or eye contact (e.g., with concentrated contaminant), and ingestion (e.g., from residues on hands, face, etc.). Some contaminants may act only at the site of entry (e.g., skin, throat and/or digestive tract), while others may be absorbed into the bloodstream (e.g., through skin, lungs and/or digestive tract) and affect other tissues, organs and/or systems.

The potential for an adverse health effect is a result of: (1) the inherent toxicity of the contaminant; (2) the dose (level, duration and frequency of exposure) received; (3) the route of exposure (e.g., inhalation and/or ingestion); and (4) the health status and susceptibility of the individual.

4.4.1. Cal/OSHA Permissible Exposure Limits

Permissible exposure limits (PELs) for inhalation of airborne contaminants have been established under Cal/*OSHA Standard* Title 8, §*5155 – Airborne Contaminants*. The Permissible Exposure Limit (PEL) is the upper limit of allowable exposure to an airborne contaminant for any employee on any day. PELs may include Time-weighted Average (*TWA)* values (for 8-hour time weighted average exposures), *STEL* values (short-term exposure limits for 15-minute exposures), and/or *Ceiling* values (for peak exposures).

PELs are generally expressed in mg/m^3 (milligrams of contaminant per cubic meter of air) for particulates. Gas and vapor concentrations are conventionally expressed in ppm (parts per million).

Comprehensive substance-specific standards established for some contaminants (e.g., Cal/O*SHA Standard* §*5214 – Inorganic Arsenic)* may include an *Action Level*. The Action Level is the 8-hour average employee exposure level at or above which certain actions are required, such as worker training and medical surveillance.

Cal/OSHA PELs are enforceable regulatory limits. A combination of engineering controls, safe work practices, and personal protective equipment must be implemented, as required, to control exposures to below the PELs and TLVs®. Cal/OSHA recommends that employers consider using the alternative occupational exposure limits because the Agency believes that exposures above some of these alternative occupational exposure limits may be hazardous to workers, even when the exposure levels are in compliance with the relevant PELs.

4.4.2. Recommended Exposure Limits

ACGIH® (formerly the American Conference of Governmental Industrial Hygienists) has established occupational exposure limits known as Threshold Limit Values (TLVs®) and the National Institute for Occupational Safety and Health (NIOSH) has established Recommended Exposure Limits (RELs). ACGIH® TLVs® and NIOSH RELs are recommended limits only. The most current TLVs® are published annually by ACGIH®) while the most current RELs are available from NIOSH (www.cdc.gov/niosh).

Immediately dangerous to life or health air concentration values (IDLH values) developed by NIOSH characterize the high-risk exposure concentrations and conditions and are used as a component of respirator selection criteria first developed in the mid-1970s. IDLH values are established (1) to ensure that the worker can escape from a given contaminated environment in the event of failure of the respiratory protection equipment and (2) to indicate a maximum level above which only a highly reliable breathing apparatus, providing maximum worker protection, is permitted.

Table 3 below summarizes the site's potential contaminant of concern (COCs), their occupational exposure limits, the basis of the ACGIH® TLV®, and IDLH concentrations.

Table 3 Contaminant of Concern

Contaminant	Cal/OSHA PEL	ACGIH® TLV® TWA	TLV® Basis	IDLH
Arsenic	0.01 mg/m^3	0.01 mg/m^3	Lung cancer	5 mg/m^3
Lead	0.01 mg/m^3	0.05 mg/m^3	Central nervous system and peripheral nervous system impairment; Hematological effect	100 mg/m^3

mg/m^3 = milligrams per cubic meter
Cal/OSHA PEL= Permissible Exposure Limit (PEL) mandated by the Occupational Safety and Health Administration
ACGIH® TLV® = Threshold Limit Value (TLV) recommended by ACGIH (formerly the American Conference of Governmental Industrial Hygienists) TLV® Basis – Source, 2024 TLVs® and BEIs®, Based on the Documentation of the Threshold Limit Values for Chemical Substances and Physical Agents published by ACGIH®
TWA = 8-hour Time-Weighted Average
IDLH = Immediately Dangerous to Life or Health Concentrations (source: NIOSH Pocket Guide to Chemical Hazards)

With site contaminant controls (see Section 7.0 Site Contaminant Control Plan), safe work practices, good personal hygiene, and the proper use of personal protective equipment, exposures related to soil and debris contaminants at the site are not expected to be hazardous to worker health. However, worker exposure monitoring must be performed to verify the efficacy of site control measures, particularly with respect to potential asbestos exposures.

4.4.3. Prop 65

The State of California (in accordance with Proposition 65) has determined that several compounds listed in Table 3 are human carcinogens, animal carcinogens, and/or reproductive toxicants. The following notice is presented to personnel who may have access to the site as a result of the planned subsurface activities and who are required to read and acknowledge this health and safety plan:

> ⚠ WARNING: Entering this area can expose you to chemicals known to the State of California to cause cancer or reproductive harm, including arsenic. For more information go to www.P65Warnings.ca.gov.

4.5. Project Hazard Analysis

Employees are trained on a hierarchy of controls during their hazardous materials training and reminded of them throughout the execution of projects. The hierarchy of controls is:

- Elimination of the hazards.
- Substitution.
- Engineering controls (e.g., use of water to control dust).
- Warnings (e.g., establish exclusion zones to keep untrained people away from hazardous material work).
- Administrative controls (e.g., implement a work-rest schedule to reduce chance of heat stress).
- Use of PPE e.g. (use of respirators when required, recommended or when action levels are exceeded) including proper usage, and maintenance.

Hazard controls and safe work practices are summarized in the following sections of this EHASP:

- Worker Exposure Monitoring (Section 5.0)
- Personal Protective Equipment (Section 6.0)
- Site Contaminant Control Plan (Section 7.0)
- Training and Safety Meetings (Section 8.0)
- Emergency Response Plan (Section 9.0)
- Spill Containment Procedures (Section 10.0)
- Standard Operating Procedures (Section 11.0)

4.5.1. Job Hazard Analysis

A JHA must be developed by each Contractor for each contracted job activity. The JHA shall define the work tasks required to perform each activity, along with potential health and safety hazards and recommended control measures for each hazard. In addition, a listing of the equipment to be used to perform the activity, inspection requirements to be performed and training requirements for the safe operation of the equipment listed must be identified. Workers are briefed on the pre-task before performing the work and their input is solicited prior, during, and after the performance of work to further identify the hazards posed and control measures required. Anticipated JHAs for the project are listed in Table 4.

Table 4 Job Hazard Analysis (JHAs)		
REF #	**JHA/TASK TITLE:**	**COMMENTS:**
1.	Mobilization	
2.	Initial Site Set-up	
3.	Loading and Transport of Equipment	
4.	Site Dust Control	
5.	Historical/Archeological evaluation of debris and litter	
6.	Wet Decontamination of Trucks/Vehicles	
7.	Stockpile Management	
8.	Wetlands Rehabilitation	
9.	Traffic Control	
10.	Trucking Debris/Litter	
11.	Water Truck Operation	
12.	Wet Decon with Pressure Washer	

4.5.2. Contractor Job Hazard Analysis

Santa Clara Valley Open Space Authority's Contractors are required to provide their JHAs specific to their scope of work on the project for review by Santa Clara Valley Open Space Authority. Each Contractor shall submit JHA documents for their field activities, as defined in their scope of work, along with their project-specific health and safety plan and procedures, to their client contact, prior to the start of field work. These may be submitted via email. Additions or changes in field activities, equipment, tools, or material used to perform work or hazards not addressed in existing JHA documents requires either a new JHA to be prepared or an existing JHA document to be revised.

5. EXPOSURE MONITORING

5.1. Contaminant Exposure Monitoring Selection Criteria

Contaminants of concern for worker exposure monitoring were selected based on the following criteria:

- Specified or required by a regulatory agency (e.g., Cal/OSHA, EPA, etc.).
- Contaminants with subsurface concentrations exceeding Environmental Screening Levels.
- Most hazardous to human health.
- Prevalence of contaminants at the site.
- Representative of other contaminants within the same hazard category.
- Validated air sampling methodology.

Based on the above criteria, the following contaminants were selected for worker exposure monitoring:

- Arsenic
- Lead

The objective of this exposure monitoring program is to perform an exposure assessment to confirm that contaminant control practices being followed by the contractors working at the site are providing adequate protection for the Santa Clara Valley Open Space Authority's employees and its Contractors. If any of the contaminants related to the soils at the site are detected at concentrations greater than Cal/OSHA Action Levels or 50% of a Cal/OSHA PEL (if no Cal/OSHA Action Level exists), the SSHM will be notified, and appropriate response actions will be implemented.

5.2. Exposure Monitoring Plan

The air monitoring program is detailed below. The objective of this monitoring is to perform exposure assessments in order to determine if: 1) dust management practices followed are providing adequate protection and 2) the level of respiratory protection is sufficient given the exposure monitoring results. **Table 5 Worker Exposure Monitoring Plan** summarizes the site contaminant monitoring requirements, action levels, and response actions to be utilized. Note that Table 5 is based on the available site data and reports as referenced in **Section 4.0 Site Characterization**. Should additional subsurface data be discovered, or new subsurface analytical data is developed, Santa Clara Valley Open Space Authority shall be responsible for providing FACS with the additional data. FACS will modify the EHASP as appropriate.

5.2.1. Metals (Arsenic and Lead)

Representative personal air monitoring for arsenic and lead will be performed in 'Locus 2" where soil sample #7 was collected. using personal sampling pumps calibrated to a flow rate of approximately 2-3 liters per minute (lpm) and using 37-mm (millimeter), 0.8-µm (micron [µ]) pore, mixed cellulose ester (MCE) filters, with analysis by NIOSH method 7303 (or equivalent). Air samples shall be analyzed and reported on a normal turnaround time. Air monitoring will be

performed in the breathing zone of a representative number of personnel engaged in soil disturbance activities during the work shift.

5.2.2. Termination of Exposure Monitoring

Arsenic Negative Exposure Assessment (NEA)

In accordance with Cal/OSHA Title 8 CCR §5214. Inorganic Arsenic, exposure monitoring for arsenic can be terminated when the results of two consecutive employee air sampling events **for each representative soil disturbance task**, taken at least seven days apart, demonstrate that employee exposures are below the arsenic action level of 0.005 mg/m^3 (full shift monitoring).

Lead Negative Initial Determination (NEA)

In accordance with Cal/OSHA Title 8 CCR §5198. Lead, exposure monitoring for lead can be terminated when the results of the initial determination reveals an employee's exposure to be below the action level (2 µg/m^3), further measurements are not required except as otherwise provided by the regulation.

The task for cultural resource investigation will occur in one workday, therefore, monitoring will only be conducted for one day.

5.2.3. Exposure Monitoring Documentation

Air monitoring documentation will be recorded. Field notes will include: date and time, description of monitoring location (for example, in breathing zone, at source), names of monitored workers and their tasks, and site locations. Actions taken will be documented in field log. Exposure records (air sampling) must be preserved for the duration of employment plus thirty years. Ensure that copies of the field logbook are maintained in the project file.

Table 5 summarizes the site monitoring requirements, monitoring locations, action levels, and response actions to be utilized. Note that **Table 5** is based on the available site data and reports as referenced in **Section 4.0 Site Characterization**. Should additional subsurface data be discovered, or new subsurface analytical data is developed, Santa Clara Valley Open Space Authority shall be responsible for providing FACS with the additional data. FACS will modify the required worker exposure monitoring program, as appropriate.

Table 5 Exposure Monitoring Plan				
Contaminant of Concern	**Monitoring Circumstances (Locus 2)**	**Action Level**	**Response Action**	**Sample Methodology/ Analytical Method**
Arsenic	Debris removal and soil disturbance work: Workers: Daily, continuous full shift for each representative soil disturbing task.	> 0.005 mg/m^3	Contact SSHM to determine appropriate action.	37 mm MCE filter cassettes used to collect air samples for analysis by NIOSH Method 7303 ICP/MS.
Lead	Debris removal and soil disturbance work: Workers: Daily, continuous full shift for each representative soil disturbing task.	> 0.002 mg/m^3	Contact SSHM to determine appropriate action.	37 mm MCE filter cassettes used to collect air samples for analysis by NIOSH Method 7303 ICP/MS.
< = Less than; > = Greater than; ≤ = less than or equal to; ≥ = greater than or equal to				

5.3. Odors

During performance of debris removal and soil disturbance work, odor emitting material may be encountered. Personnel that perceive unknown or chemical odors during soil disturbance activities will immediately STOP WORK in the area and notify the SSHM or the Project Superintendent. The SSHM will take necessary action to have the odor and its source evaluated.

In the event that odors are perceived, the following actions should be taken:

- Work should STOP.
- Personnel should exit the trench, excavation, manhole, etc.
- The PM and SSHM should be notified.
- The SSHM should notify the site's industrial hygienist.

The industrial hygienist shall obtain and use a calibrated direct reading, multi-gas meter equipped with a 10.6 eV lamp photoionization detector (PID) to evaluate the work area and advise Santa Clara Valley Open Space Authority on control measures and respirator usage.

5.4. Unidentified or Unknown Substances

Personnel that observe or encounter unidentified or unknown substances in soils during debris removal or soil disturbance activities will immediately STOP WORK in the area and notify the SSHM. The SSHM will take necessary action to have the unidentified/unknown substance evaluated.

5.5. Recordkeeping

Employee exposure and medical surveillance records generated as a result of the site work at the project will be maintained in accordance with Cal/*OSHA 3204 - Access to employee exposure and medical records.*, as follows:

- Medical records will be maintained for at least the duration of employment plus thirty years, except records of employees employed for <1 year, which will be provided to the employee upon termination.
- Exposure assessment records will be maintained by Santa Clara Valley Open Space Authority and each Contractor for a minimum duration of 30 years.
- Exposure monitoring results shall be provided to the affected employees as soon as possible but not later than 5 working days following receipt of monitoring results.
- Access to employee medical and exposure records, for examination and copying, shall be provided to the employee or designated representative within 15 days of request.

Santa Clara Valley Open Space Authority will only maintain exposure and medical records for its employees. Contractors are responsible for maintaining exposure and medical records of their employees.

6. PERSONAL PROTECTIVE EQUIPMENT

Personal protective equipment must be worn by employees when actual or potential hazards exist, and engineering controls or administrative practices cannot adequately control those hazards. Contractors will supply equipment for their own personnel.

Verification and certification of assigned PPE by task is completed by the SSHM that approved this plan. The level of protection may be upgraded or downgraded, as deemed necessary by the SSHM. The criteria to upgrade or downgrade protection for site personnel are described in **Sections 6.1 and 6.2**, below.

6.1. Modified Level C

The job site is located in an area where respiratory protection is required. Accordingly, Level C protection will be required to be worn by site personnel engaged in debris removal and other soil disturbing activities until a negative exposure determination/assessment has been established in order to minimize inhalation of subsurface contaminants. Additionally, Level C PPE will be required for work tasks with documented exposures above the OSHA PELs or ALs. **Table 6** presents Level C PPE to be worn until a negative exposure assessment/determination has been established and/or if exposure monitoring shows exposures to COCs above the project's Action Levels.

Air-purifying respirators cartridges will be changed at least once daily. This cartridge change-out frequency is appropriate for this site on the basis of the concentrations of contaminants detected in the subsurface and anticipated airborne concentrations of these contaminants. However, the respirator cartridge change-out schedule may be modified based on personal monitoring results. Furthermore, the respirator cartridge shall also be changed if the filter becomes damaged, soiled, breathing becomes difficult, or odor breakthrough is perceived by the wearer.

Furthermore, the type of respiratory protection may be upgraded if air sampling results indicate the need for respiratory protection with higher assigned protection factor.

Until air monitoring data shows that contaminant levels are below the action levels specified in Section 5.0, Santa Clara Valley Open Space Authority personnel and their contractors performing soil disturbance work specified in **Section 5.0** of this EHASP will wear Level C PPE which includes wearing respiratory protection.

Santa Clara Valley Open Space Authority and its Contractors must utilize standardized procedures for respirator fit testing.

Table 6 Modified Level C PPE Specifications		
Task	**Level**	**PPE**
• Cultural resource investigation. • All soil disturbance and handling activities, including debris removal. • Work in areas where site action levels are exceeded.	Modified Level C	• NIOSH approved respirator with Organic Vapor/P100 pre-filters. • Full body coverall (e.g., Tyvek® suits). • ASTM approved work boots. • Nitrile gloves or nitrile coated gloves. • Safety goggles. • Safety vest. • Earplugs when working near loud (> 85 dBA) noise sources. • Hard hat.
Upgrade		**Downgrade**
• Request from individual performing tasks. • Change in work tasks that will increase contact or potential contact with hazardous materials. • Air monitoring results indicate the need for respiratory protection with higher protection factor or change in cartridge type.		• Contaminant levels are below the action levels stated in **Table 5 in Section 5.0 Exposure Monitoring** • Change in site conditions that decrease the hazard. • Change in work task that will reduce contact with hazardous materials.
ASTM = American Standards for Testing and Materials		

6.2. Modified Level D

For personnel who do **not** engage in soil disturbance activities, Level D personal protective equipment is expected to be sufficient, *unless*:

- personnel are working in close proximity to areas/operations where debris removal and soil disturbance are being performed.
- air sampling results indicate contaminant levels in excess of the specified EHASP action levels in **Table 5 of Section 5.0 Exposure Monitoring**.

If mitigation measures are not sufficient to control worker exposures to subsurface contaminants below the specified action levels, the level of protection will be upgraded to Level C.

Santa Clara Valley Open Space Authority personnel and their sub-contractors performing soil disturbance work will have personal protective equipment requirements downgraded to Level D PPE upon receiving objective data in the form of air sampling results that consistently demonstrate that exposures to environmental site contaminants are below the action levels specified in this EHASP. PPE downgrade can occur when personal monitoring results, *taken at least seven days apart,* indicate that worker exposures are below the action levels (i.e., negative exposure assessment) specified in **Table 5 of Section 5.0 Exposure Monitoring**.

Santa Clara Valley Open Space Authority and Contractor personnel will wear equipment to protect against the potential physical and chemical hazards that have been identified herein and those that become apparent in the field. Level D personal protection will be required, at a minimum, by the SSHM for all site activities at the Site. **Table 7** presents the Level D PPE to be worn for specific tasks to reduce exposures to COCs.

Table 7 Modified Level D PPE Specifications

Applicability	Level	PPE
• Personnel not engaged in soil disturbance activities. • Soil disturbance tasks with Negative Exposure Assessment Results.	Modified Level D	• Long sleeve shirts and full-length pants. • ASTM approved work boots. • Nitrile gloves or nitrile coated gloves. • Safety goggles. • Safety vest. • Earplugs when working near loud (> 85 dBA) noise sources. • Hard hat.
Upgrade		**Downgrade**
• Air monitoring results indicate levels of contaminants exceed action levels specified in **Table 5, Section 5.0 Exposure Monitoring**. • Change in work tasks that will increase contact or potential contact with hazardous materials.		• Not applicable

NOTES:
Performing a task that requires an upgrade to a higher level of protection (e.g., Modified Level D to Level C) is permitted only when the PPE requirements have been approved by the PM and SSHM.
ASTM = American Standards for Testing and Materials

The requirement for workers to wear Tyvek® suits is necessitated by the dermal hazards posed by the contaminants of concern as indicated below:

- **Arsenic** – Arsenic compounds are skin irritants. Symptoms include erythema (redness) and swelling with papules and blisters (in more severe cases). Allergic contact dermatitis has been reported in occupational exposure to arsenic dusts. The development of contact dermatitis may be due to the arsenic dust collecting on workers' skin. Chemical conjunctivitis with redness, swelling and pain has also been observed in workers exposed to arsenic dusts in air and is usually accompanied by facial dermatitis.

Accordingly, Tyvek® suits (for debris removal workers) and long sleeve shirts and full-length pants (all other site personnel) should be worn to prevent direct skin contact with soil. Personnel that wear long sleeve shirts and full-length pants are advised to strictly adhere to personal hygiene practices stated in **Section 7.4 Personal Hygiene** of this EHASP.

6.3. Minimize Take Home Exposure Risks

Numerous studies in the scientific literature have documented that workers' clothing, hair, shoes, and tools that are covered with workplace contaminants can result in exposures to family members and subsequent development of diseases caused by exposure. Familial exposure resulting from contact with contaminated worker clothing is known as para-occupational exposure. In order to prevent para-occupational exposures, work clothes should be stored separately from street clothes. At the end of the shift, workers are advised to remove work clothes (including work boots), place the work clothes in plastic bags, and change into street clothes before driving home. Vehicle interiors should be cleaned using damp methods and HEPA vacuums.

In order to further minimize take home exposure risks to family members, especially children, long sleeve shirts and full-length pants worn at the job site should be placed directly into washing machines, ***without shaking out the clothes***. Prior to making contact with family members, personnel are advised to immediately shower to remove any soil that came in contact with skin and hair.

6.4. Maintenance of PPE

All PPE will be inspected when received from the distributor, prior to use, and whenever questions arise as to the proper functioning of the equipment. PPE will be inspected for:

- General cleanliness
- Material degradation
- Proper functioning of adjustable, moving, or mechanical parts

Protective equipment must be stored properly to prevent damage or malfunction due to exposure to moisture, sunlight, damaging chemicals, extreme temperatures, and impact. Many equipment failures can be directly attributed to improper storage.

All PPE must be cleaned by employees prior to storage, according to the manufacturer's recommendations. PPE will not be stored in a wet condition. PPE hung up to dry will be located in an area free from contamination.

Improperly functioning equipment must be immediately removed from service. Replacement PPE will be provided by Santa Clara Valley Open Space Authority and/or the contractor that directly employs personnel.

6.5. Medical Surveillance

Respiratory protection will be required for workers, if dust mitigation measures are not sufficient to prevent personnel exposure to soil particulate contaminants below specified EHASP action limits. Work tasks and personal air monitoring results will be utilized to determine the need for respiratory protection. Should it be required, personnel will complete a medical exam and be fit tested in the appropriate respiratory protection.

7. SITE CONTAMINANT CONTROL PLAN

This site contaminant control plan will be implemented when there is a potential for workers to be exposed to contaminants released from soils or contaminated debris.

7.1. Dust Controls

In order to minimize exposures to airborne dust resulting from soil disturbance activities, dust control measures shall be implemented. These controls, to the extent that they are feasible and applicable, shall include, but not be limited to:

- Cleaning or decontaminating equipment to ensure that no equipment or workers track soil out of the work area.
- Limiting vehicle speeds to 10 miles per hour or less on unpaved portions of the site.
- Limiting personnel access to the work area.
- Prior to disturbance, application of water in contaminated debris or soil work areas, as needed, in order to maintain soil moisture, minimize dust generation, and **prevent visible dust emissions.**
- Wetting piles of material and covering them with tarps, plastic sheeting, or other items when material is not being added to or removed from the pile.
- After wetting, sweep all paved access roads, parking areas, and staging areas as needed. **Dry sweeping is prohibited**.
- Continuously misting the work area.
- Installing wind barriers around the work area.
- Minimizing drop heights while loading transportation vehicles.
- Covering the contaminate debris or soil and/or maintain at least two feet of freeboard for trucks hauling soil within the site.

Required and recommended dust control/suppression methods can be found in the following publicly available document:

- Bay Area Air Quality Management District's California Environmental Quality Act Site Control Procedures

Site control procedures are established to prevent the spread of contamination throughout the site. The SSHM will implement site control procedures during all site activities that impact the contaminated soil.

Site control procedures include the following bulleted items:

- Establish an exclusion zone (See Figure 4 on page 39)
- Establish on-site communication consisting of the following:
- Line-of-sight and hand signals.
- Two-way radio.
- Establish and maintain the "buddy system."

7.2. Personal Hygiene

Good hygiene is essential for personal health and to reduce the potential of cross-contamination when working with hazardous materials:

- Never touch soil directly.
- Always wear personal protective equipment when performing debris removal and soil disturbance work.
- Keep hands away from nose, mouth, and eyes during work.
- Keep areas of broken skin (chapped, burned, etc.) covered.
- After removal of Tyvek suits or coveralls, workers should perform HEPA vacuuming of their work clothes to remove dust.
- Work boots should be HEPA vacuumed and workers should use a boot wash to remove debris and potential contaminants from the surfaces (strings, sole, etc.) of the boots.
- Wash hands with soap and water prior to eating, drinking, or smoking.

7.3. Work Area Zones

A three-zone approach will be used to control areas where site contaminants exist. Access will be allowed only after verification of appropriate training and medical qualification. The three-zone approach shall include an Exclusion Zone (EZ), Contamination Reduction Zone (CRZ) and a Support Zone (SZ).

Specific work control zones shall be established to include work involved with contaminated soils. Site work zones should be modified in the field as necessary, based on such factors as equipment used, air monitoring results, environmental conditions, or alteration of work plans. The following guidelines shall be used for establishing and revising these preliminary zone designations.

7.3.1. Exclusion Zone

The EZ is where activities take place that may involve exposure to site contaminants and/or hazardous materials or conditions. This zone shall be demarcated to prevent unauthorized entry. This EZ will be large enough to allow adequate space for the activity to be completed, including field personnel and equipment, as well as necessary emergency equipment.

The EZ shall be demarcated with some form of physical barrier or signage. The physical barrier or signage shall be placed so that they are visible to personnel approaching or working in the area. Barriers and boundary markers shall be removed when no longer needed.

7.3.2. Contamination Reduction Zone

The CRZ is established between the EZ and the SZ, preferably upwind of the contaminated area, *if possible*. The CRZ provides an area for decontamination of personnel, portable handheld equipment and tools, and heavy equipment. In addition, the CRZ serves as access for heavy equipment and emergency support services.

7.3.3. Support Zone

The SZ is an uncontaminated area (trailers, offices, field vehicles, etc.) that will serve as the field support area for most operations. The SZ provides field team communications and staging for emergency response. Appropriate sanitary facilities and safety and emergency response

equipment will be located in this zone. Potentially contaminated personnel/materials are not allowed in this zone. The only exception will be appropriately packaged and decontaminated materials, or personnel with medical emergencies that cannot be decontaminated.

7.4. Decontamination

Santa Clara Valley Open Space Authority has established decontamination areas to prevent the spread of contamination. Decontamination areas should be located upwind of the work area where possible and should consider any adjacent or nearby projects and personnel. The SSHM must monitor the decontamination procedures and their effectiveness. Decontamination procedures found to be ineffective will be modified by the SSHM and approved by the SSHM. The SSHM must ensure that procedures are established for disposing of materials generated on the site.

No eating, drinking, or smoking is permitted in contaminated areas and in exclusion or decontamination zones. The SSHM should establish areas for eating and drinking. **Figure 4** provides the Santa Clara Valley Open Space Authority's logistics plan. This includes demarcated areas for decontamination of equipment and personnel prior to leaving the site.

7.4.1. Contamination Prevention

Preventing or avoiding contamination of personnel, tools, and equipment will be considered in planning work activities at all field locations. Good contamination prevention and avoidance practices will assist in preventing worker exposure and result in a more efficient decontamination process. Procedures for contamination prevention and avoidance include the following:

- Do not walk-through areas of obvious or known contamination.
- Do not directly handle or touch contaminated materials.
- Make sure there are no cuts or tears in PPE.
- Take particular care to protect any skin injuries.
- Do not eat or drink in contaminated work areas.
- Do not carry food, beverages, tobacco, or flame-producing equipment into contaminated work areas.
- Minimize the number of personnel and amount of equipment in contaminated areas to that necessary for accomplishing the work.
- Choose tools and equipment with nonporous exterior surfaces that can be easily cleaned and decontaminated.
- Cover monitoring and sampling equipment with clear plastic, leaving openings for the sampling ports, as necessary.
- Minimize the number of tools and equipment necessary in contaminated areas.

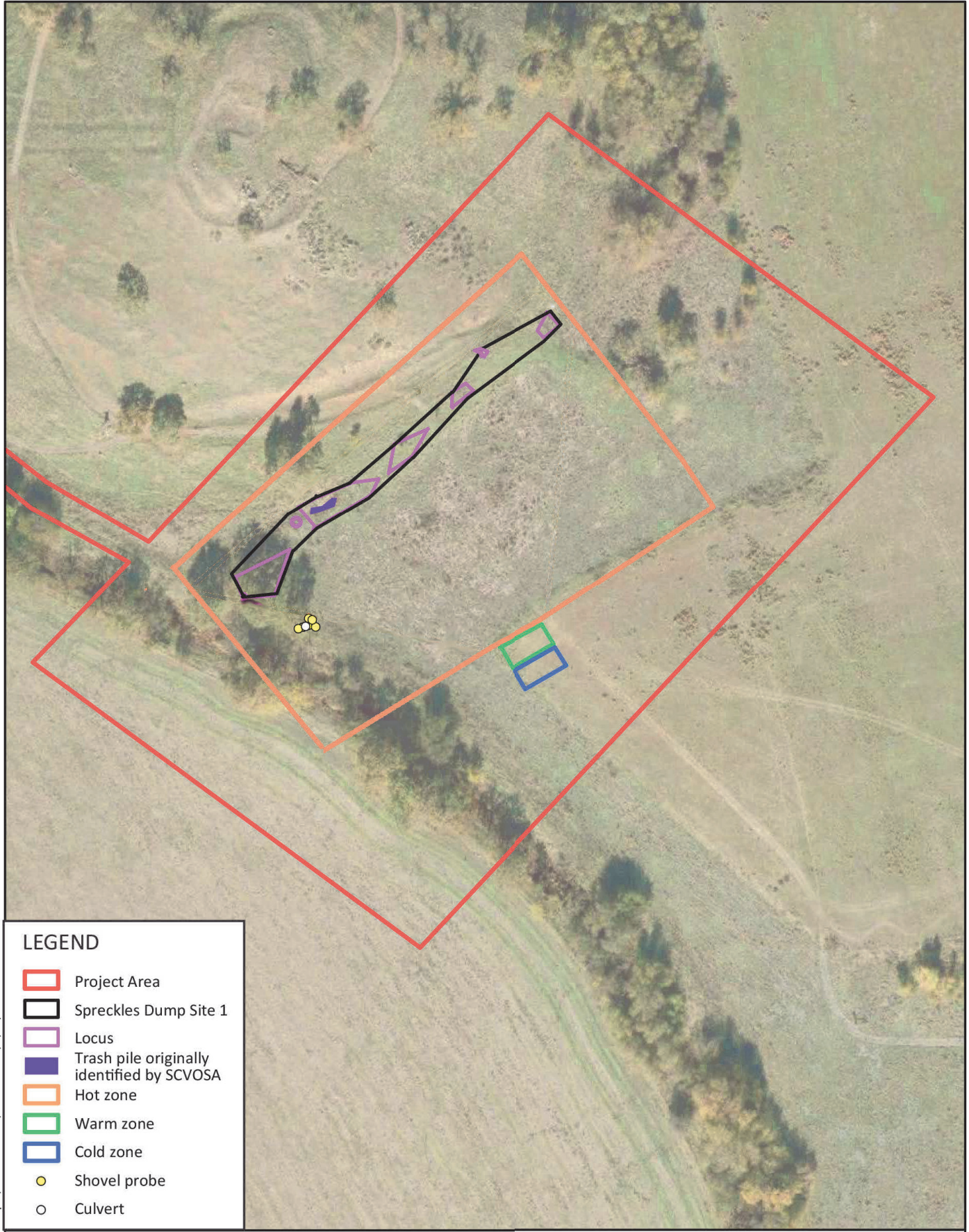

Figure X. Safety zones.

File name: Figure_X_SafetyZones.pdf, J2024-509.04, Stella D'Oro, 1/15/2025

7.4.2. Personnel and Equipment Decontamination

Personnel exiting a work area must ensure that they are not spreading potential contamination off site. Personal decontamination will be completed in demarcated areas prior to leaving the site. Equipment that has come into contact with contaminated media must also be cleaned/ decontaminated before it leaves the project site.

Tables 8 and 9 provide specific decontamination procedures to be followed for Modified Level D and Level C, respectively, prior to workers leaving the exclusion zone.

Table 8 Decontamination Procedures for Modified Level D		
Station 1:	Equipment Drop	Deposit equipment used in the EZ (tools, sampling devices and containers, monitoring instruments, radios, etc.) on plastic drop cloths. Segregation at the drop reduces the probability of cross contamination. During hot weather operations, a cool-down station may be set up within this area.
Station 2:	Glove Removal	Remove gloves; deposit in container with plastic liner.
Station 3:	Boot Wash	Apply water and scrub boots with a brush.
Station 4:	Field Wash	Hands and face are thoroughly washed. Shower as soon as possible.

Table 9 Decontamination Procedures for Modified Level C		
Station 1:	Equipment Drop	Deposit equipment used in the EZ (tools, sampling devices and containers, monitoring instruments, radios, etc.) on plastic drop cloths. Segregation at the drop reduces the probability of cross contamination. During hot weather operations, a cool-down station may be set up within this area.
Station 2:	Full body coverall and Glove Removal	Remove full body coverall suit and gloves; deposit in container with plastic liner. Perform HEPA vacuuming of clothing worn under coveralls.
Station 3:	Cartridge or respirator change	If worker leaves EZ to change the respirator cartridge (or respirator), this is the last step in the decontamination procedure. Worker's cartridge is exchanged, new outer gloves and boot covers are donned, joints are taped, and worker returns to duty.
Station 4:	Boot Wash	Apply water and scrub boots with a brush.
Station 5:	Respirator face piece removal	Respirator is removed. Avoid touching face with fingers. Facepiece is deposited on plastic sheet.
Station 6:	Field Wash	Hands and face are thoroughly washed. Shower as soon as possible.

7.4.3. Decontamination during Medical Emergencies

Standard personnel decontamination practices will be followed whenever possible. For emergency lifesaving first aid and/or medical treatment, normal decontamination procedures may need to be abbreviated or omitted. In this situation, site personnel shall accompany contaminated victims to advise emergency response personnel on potential contamination present and proper decontamination procedures.

Outer garments may be removed, if they do not cause delays, interfere with treatment, or aggravate the problem. Protective clothing can be cut away. If outer garments cannot be safely removed, a plastic barrier between the individual and clean surfaces should be used to help prevent contaminating the inside of ambulances or medical personnel. Outer garments can then be removed at the medical facility.

7.5. Diagram of Personnel-Decontamination Line

Figure 5 illustrates a conceptual establishment of work zones, including the decontamination line. Work zones are to be modified by the SSHM to accommodate task-specific requirements.

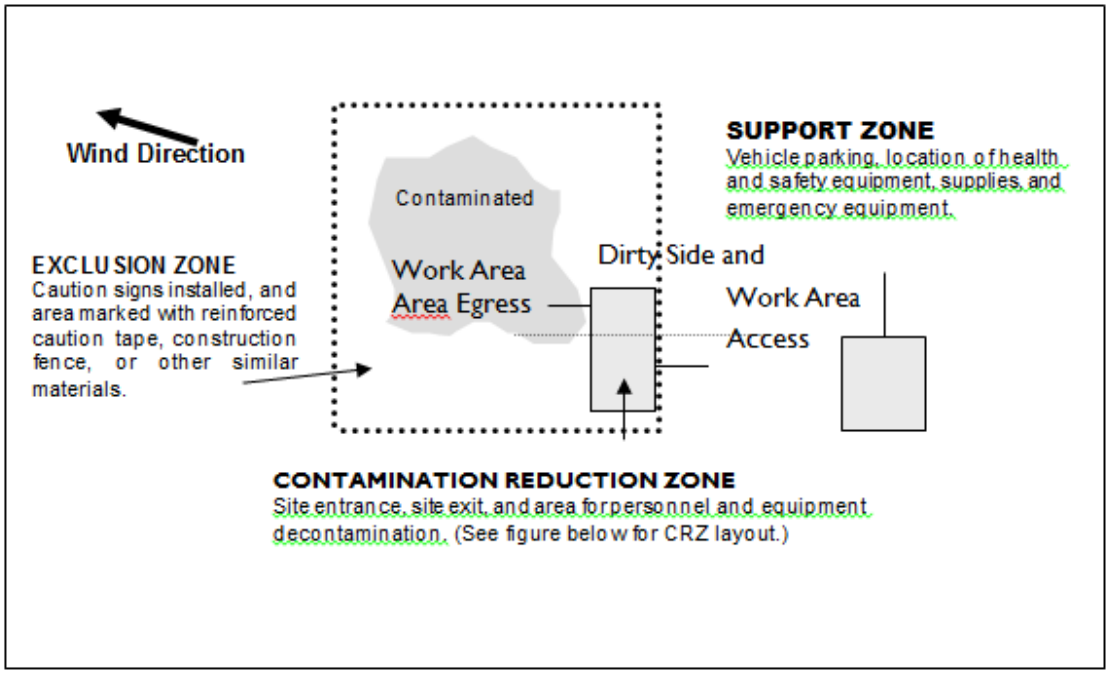

Figure 5. Work Area Set Up

8. TRAINING AND SAFETY MEETINGS

All Santa Clara Valley Open Space Authority and Contractor employees engaging in this project will ensure they receive training consistent with site conditions and Cal/OSHA requirements for their respective tasks.

8.1. All Site Personnel

8.1.1. General Training

The SSHM maintains responsibility for ensuring project specific training is completed and documented in the project files for each of their team members. The following safety activities are required:

- Pre-mobilization safety meeting with the SSHM and PM. This will provide an overview of the EHASP, subsurface hazards, dust control plan, personal protective equipment requirements, and the exposure monitoring plan.
- A review of this EHASP and signing the EHASP Acknowledgement page located in the Appendix A.
- Injury and Illness Prevention Program Training in accordance *with Cal/OSHA Title 8 CCR §3203.*
- Hazard communication training in accordance with Cal/*OSHA Hazard Communication Standard, 5194* (**See Section 8.1.2 below**).

The following training will be provided to Santa Clara Vally Open Space Authority's employees and their sub-contractors, as needed, based upon their individual job tasks:

- Heat Stress Prevention.
- Training on this EHASP.

8.1.2. Hazard Communication Training

Information concerning soil contaminant hazards will be provided to all personnel who will work at the project site during excavation activities, per the requirements of Cal/*OSHA Hazard Communication Standard, 5194*.

Training will include:

- The potential health hazards of worker exposure to site contaminants.
- The operations and activities that may result ill skin, eye and/or inhalation exposures.
- Protective measures that will be used to minimize exposure hazards.
- The provisions and requirements of the Environmental Health, Safety and Work Plan.
- Employee access to training materials and to exposure and medical records.

Training will be provided during a pre-job meeting. Santa Clara Valley Open Space Authority will ensure that all project personnel (including Contractor personnel) are fully trained in the contents, provisions, and requirements of this EHASP prior to performing project work addressed in the EHASP.

8.2. Daily Safety Meetings

Daily safety meetings are to be held with all project personnel in attendance to review the hazards posed and required health and safety procedures and JHAs (**See Section 4.5.1 Job Hazard** Analysis) that apply for each day's project activities.

- The applicable JHAs will be reviewed by each team at the start of each day. This document must be kept in the project's electronic files and onsite during the duration of the field work. Revisions are to be made by the SSHM or PM if conditions change.
- A review of each task to be completed that day by Santa Clara Valley Open Space Authority's staff and all Contractors.
- A review of the health and safety issues related to each task.
- Health and safety procedures to be followed.

At the start of each day's activities, the SSHM completes a Daily Safety Meeting Form, with input from the work crew, during their daily safety meeting. The day's tasks, personnel, tools and equipment that will be used to perform these tasks are listed, along with the hazards posed and required health and safety procedures, as identified in the EHASP and JHAs. The use of daily safety meeting promotes worker participation in the hazard recognition and control process while reinforcing the task-specific hazard and required health and safety procedures with the crew each day.

9. EMERGENCY RESPONSE PLAN

The SSHM or designee remains responsible for implementing the emergency response plan. The plan includes:

- Post the "Emergency Contacts" page and route to the hospital (See Section 1.0 Incident Notification and Reporting) located in each vehicle. Communicate the information to on-site personnel and keep it updated.
- Review changed site conditions, on-site operations, and personnel availability in relation to emergency response procedures.
- Inventory and check site emergency equipment, supplies, and potable water.
- Communicate emergency procedures for personnel injury, exposures, fires, explosions, and releases.
- Brief new workers on the emergency response plan.
- The SSHM will evaluate emergency response actions and initiate appropriate follow-up actions.

9.1. Incident Response

During fires, explosions, or chemical releases, actions to be taken include the following:

- Notify emergency services.
- Shut down operations and evacuate the immediate work area.
- Account for personnel at the designated assembly area(s). A designated assembly area will be determined by each team during the morning safety meeting. The designated area will be documented on the meeting notes.
- Assess the need for site evacuation and evacuate the site as warranted.
- Notify the PM and SSHM.
- Notify and submit reports to clients as required in contract.

Small fires or spills posing minimal safety or health hazards may be controlled with on-site spill kits or fire extinguishers without evacuating the site. When in doubt evacuate. Follow the incident reporting procedures in the **Section 1.0 Incident Notification and Reporting** of this EHASP.

9.2. Life-Threatening Medical Treatment

Emergency medical treatment is needed when there is a life-threatening injury (such as severe bleeding, loss of consciousness, breathing or heart has stopped). When in doubt if an injury is life-threatening or not, treat it as needing emergency medical treatment.

- Notify 911 or other appropriate emergency response authorities as listed in the "Emergency Contacts" page located in Section 1.0 Incident Notification and Reporting.
- The SSHM will assume charge during a medical emergency, until the ambulance arrives or until the injured person is admitted to the emergency room.
- Prevent further injury, perform decontamination (if applicable) where feasible; lifesaving and first aid or medical treatment takes priority.
- Initiate first aid and cardiopulmonary resuscitation (CPR) where feasible.

- Notify the SSHM and PM.
- Make certain that the injured person is accompanied to the emergency room.
- Notify and submit reports to the PM immediately.

9.3. Evacuation

    - Evacuation routes (and alternative) are to be specified on the site map.
- Evacuation route(s) and assembly area(s) will be designated by the SSHM or designee before work begins.
- Personnel will assemble at the assembly area(s) upon hearing the emergency signal for evacuation.
- The SSHM and a “buddy” will remain on the site after the site has been evacuated (if safe) to assist local responders and advise them of the nature and location of the incident.
- The SSHM will account for all personnel in the onsite assembly area.
- A designated person will account for personnel at alternate assembly area(s).
- The SSHM will follow the incident reporting procedures in the Section 1.0 **Incident Notification and Reporting** section of this EHASP.

9.4. Other Emergency Conditions

In the event of an environmental emergency, fire, earthquake, disaster, civil unrest, or other emergency, the SSHM will coordinate the emergency action. The general response plan is as follows:

- Employees will be directed to a safe area outside of the main access point.
- If necessary, call or send for emergency medical assistance.
- Stabilize the area, if safe.
- Start rescue operations. if safe.
- Provide first-aid if trained.
- Coordinate direction of emergency vehicles.

10. SPILL/RELEASE CONTAINMENT PROCEDURES

Santa Clara Valley Open Space Authority and Contractor personnel working at the project site shall be knowledgeable of the potential health, safety and environmental concerns associated with substances that could potentially be released at the project site (i.e., contaminated soil).

Personnel causing or discovering a spill/release shall (only if safe to do so):

- stop or contain the spill immediately (if possible) or note source. Shut off the source, if possible. If unsafe conditions exist, leave the area, call emergency services, inform nearby personnel, notify the site supervisors, and initiate incident reporting process.
- notify the SSHM immediately.
- extinguish sources of ignition (flames, sparks, hot surfaces, cigarettes).
- clear personnel from the spill location and barricade the area.
- use available spill control equipment in an effort to ensure that fires, explosions, and releases do not occur, recur, or spread.
- use sorbent materials to control the spill at the source.
- attempt to identify the character, exact source, amount, and extent of the released materials. Identification of the spilled material should be made as soon as possible so that the appropriate cleanup procedure can be determined.
- assess possible hazards to human health or the environment as a result of the release, fire or explosion.
- follow incident notification, reporting, and investigation in Section 1.0 Incident Notification and Reporting of this EHASP.

11. STANDARD OPERATING PROCEDURES

This section provides safe work practices and control measures used to reduce or eliminate potential hazards. It is a summarized list of requirements. Always consult the SSHM if there are any questions regarding these procedures.

11.1. Hazard Communication

The SSHM is to perform the following:

- Complete an inventory of chemicals brought on site.
- Confirm that an inventory of chemicals brought on site by Santa Clara Valley Open Space Authority's Contractors is available.
- Request or confirm locations of Safety Data Sheets (SDS) from the client, contractors, and Contractors for chemicals to which Santa Clara Valley Open Space Authority employees potentially are exposed.
- Obtain an SDS for each hazardous chemical and include on the chemical inventory sheet and add the SDS to the SDS binder that will be located onsite before or as the chemicals arrive on site.
- Label chemical containers with the identity of the chemical and with hazard warnings, and store properly.
- Give employees required chemical-specific Hazard Communication training.
- Store all materials properly, giving consideration to compatibility, quantity limits, secondary containment, fire prevention, and environmental conditions.

The following are general guidelines for storing chemicals and other hazardous materials:

- Keep acids away from bases.
- Keep oxidizers (nitric acid, nitrates, peroxides, chlorates) and organics away from inorganic reducing agents (metals).
- Keep flammables and corrosives in appropriate storage cabinets.
- Do not store paper or other combustibles near flammables.
- Use secondary containment and lipped shelving that is secured.
- Have a fire suppression system available.

11.2. General Safe Work Practices

The following are general requirements applicable to all portions of the work:

- Site work should be performed during daylight hours whenever possible.
- Good housekeeping must be maintained at all times in all project work areas and vehicles.
- Common paths of travel should be established and kept free from the accumulation of materials.
- Specific areas should be designated for the proper storage of materials.
- Tools, equipment, materials, and supplies shall be stored in an orderly manner.

- As work progresses, scrap and unessential materials must be neatly stored or removed from the work area.
- Containers should be provided for collecting trash and other debris and shall be removed at regular intervals.
- All spills shall be quickly cleaned up.
- Do not fight or horseplay while conducting the FACS' business.
- Do not use or possess firearms or other weapons while conducting the Santa Clara Valley Open Space Authority's business.
- Do not remove or make ineffective safeguards or safety devices attached to any piece of equipment.
- Report unsafe equipment, defective or frayed electrical cords, and unguarded machinery to your supervisor.
- Do not wear jewelry, loose clothing, wristwatches, and other loose accessories when within arm's reach of moving machinery.
- Remove waste and debris from the workplace and dispose of in accordance with federal, state, and local regulations.
- Check the work area to determine what problems or hazards may exist.

11.3. Heavy Equipment

When Santa Clara Valley Open Space Authority personnel are exposed to heavy equipment, the following safe work practices/hazard controls shall be implemented:

- Never approach operating equipment from the rear. Always make positive eye contact with the operator and confirm that the operator has stopped the motion of the equipment.
- Never approach the side of operating equipment; remain outside of the swing and turning radius.
- Maintain distance from pinch points of operating equipment.
- Never turn your back on any operating equipment.
- Never climb onto operating equipment or operate contractor/Contractor equipment.
- Never ride contractor/Contractor equipment unless it is designed to accommodate passengers and equipped with firmly attached passenger seat.
- Never work or walk under a suspended load.
- Never use equipment as a personnel lift; do not ride excavator buckets or crane hooks.
- Always stay alert and maintain a safe distance from operating equipment, especially equipment on cross slopes and unstable terrain.
- Wear a high visibility safety vest or high visibility clothing.
- Stay as clear as possible of all hoisting operations. Loads shall not be hoisted overhead of personnel.
- Do not wear loose-fitting clothing or other items such as rings or watches that could get caught in moving parts. Long hair must be restrained.

11.4. Fire Prevention

Follow the fire prevention and control procedures listed below.

11.4.1. Fire Extinguishers and General Fire Prevention Practices

- When 5 gallons (19 liters) or more of a flammable or combustible liquid is being used, an extinguisher must be within 50 feet (15.2 meters). Therefore, each vehicle will contain one fire extinguisher. Extinguishers must:
  - be maintained in a fully charged and operable condition.
  - be visually inspected each month.
  - undergo a maintenance check each year.
- No smoking will be allowed while operating equipment or while walking or working in areas with vegetation.
- Smoke only in cleared areas.
- In areas where smoking is allowed, completely extinguish all burning tobacco and matches and discard them in ash trays, not on the ground.
- Instruct all field personnel about emergency response for fire events.
- Clear away all flammable material for a minimum of 10 feet, including snags (fallen or standing dead trees), from areas of operation where a spark, fire, or flame could be generated.
- If a fire does start by accident, immediate steps will be taken to extinguish it (if it is safe to do so) only during the incipient stage of the fire.

11.4.2. Portable Fire Extinguisher Use

Before using a portable fire extinguisher, be sure you have an unobstructed escape route should you fail to extinguish the fire. This is critical! Know what materials are burning and be sure the extinguisher you are using is capable of fighting the fire. Consider the possible danger posed by nearby toxic or highly flammable materials being impinged by the fire.

- Keep your back to an escape route.
- Stand 8 to 20 feet away from the fire, depending on the size of the fire. Often, people will approach to within a few feet to begin extinguisher application and the force of the projected agent will scatter the burning material, spreading the fire.
- It is always better to begin application too far away and then approach, rather than the opposite.

To discharge the extinguisher, follow the four-step **PASS** procedure:

- *P* ULL: PULL the pin. This unlocks the operating lever and allows you to discharge the extinguisher. The pin will be tied in place with a plastic tie, which can make pulling the pin out difficult. Trick: Twist the pin, using your wrist, to break the plastic tie as you pull. This makes removal considerably easier.
- *A* IM: AIM low. Point the extinguisher hose (or nozzle) at the base of the fire. Hold the extinguisher canister in a vertical position during use.
- *S* QUEEZE: SQUEEZE the handle lever. This discharges the extinguisher agent. Squeeze the lever ALL the way down. Do not worry about "saving" your extinguishing agent - you actually want to empty the extinguisher as rapidly as possible. Fully discharge the unit. During use, releasing the lever will stop the discharge.
- *S* WEEP: SWEEP from side to side. Moving carefully toward the fire, keep the extinguisher aimed at the base of the fire and sweep back and forth until the flames appear to be out. Watch the fire area. If the fire reignites, repeat the process.

If the fire does not begin to go out immediately, leave the area at once!

WARNING: Portable fire extinguishers discharge faster than most people think. A 10 lb. ABC unit will completely discharge within 15-17 seconds.

VERIFY. Always be sure the fire department inspects the fire site, even if you think you have extinguished the fire. They will record the incident, which may prove necessary for insurance purposes.

11.5. Manual Lifting

Various materials and equipment may be handled manually during project operations.

Workers should be properly positioned when pulling or prying objects. If necessary, wear protective gloves and clothing (i.e., aprons) when handling loads with sharp or rough edges or when there is the potential for chemical exposure.

Care should be taken when lifting and handling heavy or bulky items to avoid back injuries. The following fundamentals address the proper lifting techniques that are essential in preventing back injuries:

- The size, shape, and weight of the object to be lifted must first be considered.
- The anticipated path to be taken by the lifter should be considered for the presence of slip, trip, and fall hazards.
- Those who have not been trained in proper lifting techniques shall not lift heavy objects.
- If an object is large or not easily carried by one person, two (or more) people shall be utilized to lift the object following the appropriate techniques outlined below.
- Face the load squarely, get a firm footing and spread your feet 12-14 inches apart and, if possible, place one foot alongside the object being lifted.
- Bend your knees and get a good grip on the object. Keep your back straight, vertical, and lift by straightening your legs.

- Keep the load close to your body throughout the entire lifting process.
- If it is necessary to turn, change your foot position, DO NOT TWIST YOUR BODY.
- When the load is heavy or awkward, use teamwork. Lift slowly and evenly together.
- When two or more workers are required to handle the same object, workers shall coordinate the effort so that the load is lifted uniformly and that the weight is equally divided between the individuals carrying the load. When carrying the object, each worker, if possible, shall face the direction in which the object is being carried.
- When placing an object down, the stance and position are identical to that for lifting. The legs are bent at the knees and the object lowered.

11.6. Tool Safety

Personnel are instructed and trained to abide by the following basic rules to prevent injuries when using hand and power tools:

- Keep all tools in good condition with regular maintenance.
- Use the right tool for the job.
- Examine each tool for damage before use and do not use damaged tools.
- Operate tools according to the manufacturers' instructions.
- Provide and use properly the right personal protective equipment.

11.6.1. Electric Tools

The most serious hazards posed by the use of electric tools are electrical burns and shocks. To protect the user from shock and burns, electric tools must have a three-wire cord with a ground and be plugged into a grounded receptacle, be double insulated, or be powered by a low-voltage isolation transformer. Three-wire cords contain two current-carrying conductors and a grounding conductor. Any time an adapter is used to accommodate a two-hole receptacle, the adapter wire must be attached to a known ground. The third prong must never be removed from the plug.

The following practices should be followed when using electric tools:

- Operate electric tools within their design limitations.
- Use gloves and appropriate safety footwear when using electric tools.
- Store electric tools in a dry place when not in use.
- Do not use electric tools in damp or wet locations unless they are approved for that purpose.
- Keep work areas well lighted when operating electric tools.
- Ensure that cords from electric tools do not present a tripping hazard.

11.7. Slips, Trips, and Fall

Approximately, 37% of all reported workplace injuries were as a result of a slip, trip or fall, with 28% of all fatalities in the workplace being caused by a slip, trip or fall. The severity of injury varies between the type of accident fatalities being attributed to injuries from falls. Slips and trips result from some a kind of unintended or unexpected change in the contact between the feet and the ground or walking surface. This fact shows that good housekeeping, quality of walking surfaces

(flooring), selection of proper footwear, and appropriate pace of walking are critical for preventing fall incidents.

Good housekeeping is the first and the most important (fundamental) level of preventing falls due to slips and trips. It includes:

- Cleaning all spills immediately.
- Marking spills and wet areas.
- Mopping or sweeping debris from floors.
- Removing obstacles from walkways and always keeping walkways free of clutter.
- Securing (tacking, taping, etc.) mats, rugs and carpets that do not lay flat.
- Covering cables that cross walkways.
- Keeping working areas and walkways well lit.
- Replacing used light bulbs and faulty switches.

Personnel can reduce the risk of slipping on wet flooring by:

- Taking your time and paying attention to where you are going.
- Adjusting your stride to a pace that is suitable for the walking surface and the tasks you are doing.
- Walking with the feet pointed slightly outward.
- Making wide turns at corners.

Personnel can reduce the risk of tripping by:

- Keeping walking areas clear from clutter or obstructions.
- Keeping flooring in good condition.
- Always using installed light sources that provide sufficient light for your tasks.
- Using a flashlight if you enter a dark room where there is no light.
- Making sure that things you are carrying or pushing do not prevent you from seeing any obstructions, spills, etc.

In areas workers spend considerable time outdoors, prevention of fall incidents should focus on selecting proper footwear. Since there is no footwear with anti-slip properties for every condition, consultation with manufacturers is highly recommended.

11.8. Noise

Noise exposure will occur during site activities, especially when working around heavy equipment. Noise has been defined as unwanted sound. OSHA's occupational noise standard allows 90 decibels [dBA] for a full 8 hours and for a lesser time when the levels exceed 90 dBA. It is usually safe to assume that if you need to shout to be heard at arm's length, the noise level is at 90 dBA or above. Based on the nature of activities to be performed on site, the use of heavy equipment, power tools and other noise producing devices, personnel may be exposed to noise levels in excess of the allowable limits. Therefore, hearing protection will be utilized by personnel operating or working around heavy equipment, maintenance equipment or power tools.

- Areas or equipment emitting noise levels at or above 85 dBA, hearing protection must be worn (e.g., drill rig, backhoe).
- Employees exposed to 85 dBA or a noise dose of 50% must participate in the Hearing Conservation program including initial and annual (as required) audiograms.
- Hearing protection will be maintained in a clean and reliable condition, inspected prior to use and after any occurrence to identify any deterioration or damage, and damaged or deteriorated hearing protection repaired or discarded.
- In work areas where actual or potential high noise levels are present at any time, hearing protection must be worn by employees working or walking through the area.
- Areas where tasks requiring hearing protection are taking place may become hearing protection required areas as long as that specific task is taking place.
- High noise areas requiring hearing protection should be posted or employees must be informed of the requirements in an equivalent manner.

11.9. Sanitation

11.9.1. Potable Water

As required by Ca/OSHA, each contractor is required to provide water to their personnel. All sources of drinking water shall be maintained in a clean and sanitary condition. Portable drinking water dispensers shall be equipped with a faucet or drinking fountain, shall be capable of being tightly closed and shall be otherwise designed, constructed and serviced so that sanitary conditions are maintained. Such dispensers shall be clearly marked as to their contents.

Open containers for drinking water, from which water is dipped or poured, are prohibited. Portable drinking water dispensers, water coolers, and water jugs are prohibited.

11.9.2. Non-Potable Water

Outlets for non-potable water will be identified to indicate clearly that the water is unsafe and is not to be used for drinking, washing, or cooking purposes.

11.9.3. Handwashing and Sanitizing Facilities

Wash stations and/or hand sanitizers that are effective against COVID-19 at entrances to the jobsite and in multiple locations dispersed throughout the jobsite as warranted. All personnel must use these facilities to prevent the spread of germs or illness. Employees should clean their hands before eating or smoking, and after using toilet facilities. Personnel are advised to frequently wash hands with soap and water for at least 20 seconds or use hand sanitizer with at least 60% alcohol. Handwashing stations will be cleaned and disinfected regularly to ensure sanitary conditions.

11.9.4. Toilet Facilities

Flushing toilet facilities will be provided at the site by the general contractors. Restrooms will be cleaned and disinfected regularly to ensure sanitary conditions. The number of toilets and urinals provided will meet or exceed OSHA standards at a minimum.

11.9.5. Removal of Trash

Disposal containers constructed of smooth, corrosive resistant, easily cleanable, or disposable, material shall be provided for the disposal of waste food. The number, size, and location of such receptacles shall encourage their use and not result in overfilling. Receptacles shall be emptied

at least once each working day, unless unused, and shall be maintained in a clean and sanitary condition. Receptacles shall be provided Material with solid tight-fitting covers unless sanitary conditions can be maintained without use of a cover.

11.9.6. Eating and Drinking

Eating and drinking (other than water) is only permitted in break areas designated by Santa Clara Valley Open Space Authority. These areas will be maintained as assigned to prevent unsanitary conditions and the entrance of/harboring of rodents, insects, and other vermin. Trash receptacles at break areas will be lined with bags. All personnel are prohibited from consuming food or beverages in a toilet room, nor in any area exposed to toxic material or infectious agents. No food or beverage shall be stored in toilet rooms or in areas exposed to a toxic material or infectious agents. Personnel are required to maintain social distancing (minimum of 6 feet of physical separation) between workers and other site personnel. Lunch and work break times will be staggered, to the extent feasible, to prevent to reduce the quantity of workers that accumulate in break areas.

11.9.7. Housekeeping

Effective housekeeping for all Contractors includes keeping work areas neat and orderly; maintaining floors free of slip and trip hazards; and removing of waste materials (e.g., paper, cardboard) and other fire hazards from work areas. It also requires paying attention to important details such as the layout of the whole workplace and material storage. Materials brought to the site must be coordinated with Santa Clara Valley Open Space Authority job superintendents.

Effective housekeeping shall be an ongoing operation, and not to be accomplished with *hit-and-miss* cleanups done occasionally. Poor housekeeping involves keeping the area clear of:

- tripping hazards such as loose objects on floors, stairs, and platforms.
- hazards becoming falling objects.
- slippery, greasy, wet, or dirty surfaces.
- conditions that create striking against, projecting, poorly stacked, or misplaced material hazards.
- hazard that may result in cutting, puncturing, or tearing the skin of hands or other parts of the body on hazards such as projecting nails, wire, or steel strapping.

Contractors must maintain good housekeeping plans and execute them each workday. Good housekeeping plans must address the orderly storage and movement of materials from point of entry to exit, including a safe material flow plan that ensures minimal handling. The plans also address that work areas are not used as storage areas by having workers move materials to and from work areas as needed. Trash removal must occur throughout the workday.

Contractors shall ensure that worker training is part of the housekeeping program, including how to work safely with the products they use. The usage of signage will also be part of the housekeeping program to protect other workers of hazardous work conditions such as wet or slippery floor conditions and the importance of ongoing cleanup and reporting any unusual conditions.

Cleaning and organization must be done regularly, not just at the end of the shift. Integrating housekeeping into jobs can help ensure this is done. The contractor's housekeeping program must identify and assign responsibilities to employees for the following tasks:

- clean up during the shift
- day-to-day cleanup
- waste disposal
- removal of unused materials
- inspection to ensure cleanup is complete

The plans must also include the orderly arrangement of operations, tools, equipment, and supplies.

To ensure the plans are being effectively implemented, Contractors will inspect their areas to identify deficiencies as a part of the overall workplace inspection program and will assist in the maintenance of the program and ensuring safe working conditions.

11.10. Heat Stress

Heat stress during this project will be a concern. Adherence to this procedure will be extremely important to prevent heat stress illnesses from occurring.

11.10.1. Heat-Related Illnesses

There are four typical types of heat-related illnesses (result of heat strain) resulting from prolonged exposure to high thermal environments (stressor which causes the strain). These are described in the sections below.

11.10.1.1. Heat Rash (Prickly Heat)

Heat rash is a painful temporary condition caused by clogged sweat pores. Heat rash is caused by the plugging of sweat ducts due to the swelling of the moist keratin layer of the skin which leads to inflammation of the sweat glands. Heat rash appears as tiny red bumps on the skin and can impair sweating, resulting in diminished heat tolerance. Signs and symptoms include:

- tiny raised blustered red blisters or small pimples.
- pricking sensations or itching during heat exposure.

The rash is most likely to occur on the neck and upper chest, in the groin, under the breasts, and in elbow creases.

Heat rash is usually a mild, temporary condition, although it decreases the body's ability to tolerate heat, as well as being a nuisance.

Treatment: Heat rash can usually be cured by providing cool areas; body powder may also help absorb moisture.

11.10.1.2. Heat Cramps

Heat cramps are characterized by painful intermittent spasms of the voluntary muscles following hard physical work in a hot environment. Heat cramps usually occur after heavy sweating, and often begin at the end of the workday. The cramps are caused by a loss of electrolytes, principally

salt. This results in fluids leaving the blood and collecting in muscle tissue, resulting in painful spasms. Symptoms include muscle pain or spasms in the abdomen, arms, or legs.

Heat syncope is a condition caused by pooling of the blood in the extremities, usually related to activities where the person stands without moving for a period of time or sudden rising from a sitting or lying position. Factors that may contribute to heat syncope include dehydration and lack of acclimatization. The reduced blood volume to the head can cause fainting, which may in turn cause injuries. Symptoms include:

- Light-headedness
- Dizziness
- Fainting

Treatment: Increase water ingestion. Eat normally throughout the day to replace electrolytes.

11.10.1.3. Heat Exhaustion

Heat exhaustion occurs when the body's thermoregulatory system is not functioning efficiently. Symptoms of heat exhaustion include:

- Heavy sweating
- Extreme weakness or fatigue
- Low blood pressure
- Rapid pulse
- Dizziness, confusion
- Nausea
- Clammy, moist skin
- Pale or flushed complexion
- Muscle cramps
- Normal or slightly depressed body temperature
- Fast and shallow breathing

This is the most common form of serious heat illness encountered during employment activities. Any worker who is a victim of heat exhaustion may not be exposed to a hot working environment for an absolute minimum of 24 hours and, if fainting has occurred, the victim should not return to work until authorized by a physician.

Treatment. Move victim to a cool area, loosen clothing, and place in a head-low (shock prevention) position, and provide rest and plenty of fluids. Do not give coffee, tea or alcoholic beverages.

11.10.1.4. Heat Stroke

This is the most serious heat disorder and is life-threatening. Heat stroke is a true medical emergency. This results when the body's heat-dissipating system is overwhelmed and shuts down (thermoregulatory failure). Heat stroke results in a continual rise in the victim's deep core body temperature, which is fatal if not checked. Symptoms may include:

- Hot, dry skin; no perspiration
- Hallucinations
- Chills
- Throbbing headache
- High body temperature
- Confusion and/or dizziness
- Slurred speech

Unconsciousness may occur.

Treatment: **Call 911.** First aid consists of immediately moving victim to a cool area; cool the body slowly by immersion in tepid (slightly warm) water or sponging the body with tepid water; treat for shock and obtain immediate medical assistance. Treatment response time is critical when assisting a victim of heat stroke! Do not give coffee, tea or alcoholic beverages.

11.10.2. General Heat Stress First Aid

First aid for heat stress conditions consists of proper evaluation of their condition, cooling the victim down, and rehydration. Specific actions which should be taken include:

- First-aid trained persons should be summoned to assist in evaluation of the victim's condition.
- If heat stroke is suspected, outside medical responders should be immediately contacted, as this condition should be considered immediately life-threatening. Call 911 immediately.
- Impermeable clothing should be removed as soon as possible following the required decontamination steps, unless the delay could compromise the victim's health.
- The victim's clothing should be loosened to aid air circulation.
- The victim should be moved to a shaded, cooler location, preferably air-conditioned.
- The victim should sit or lie down if they are dizzy or at risk of losing consciousness.
- The victim should be encouraged to drink cool water if they are not nauseous or losing consciousness.
- The victim may be cooled down further by:
    - Moistening the head, neck, torso and clothing with tepid water.
    - Spraying, sponging, or showering them with tepid water; and
    - Fanning their body, gently.
- To minimize the risk of shock, do not drench them with cold water, use tepid water, unless advised to do so by medical personnel.

11.10.2.1. Sunburn Prevention

Field staff need to remain aware of the potential for sunburn. Sunburn symptoms may include:

- Red, warm, and tender skin
- Swollen skin

- Blistering
- Headache
- Fever
- Nausea
- Fatigue

Take the following steps to protect yourself from exposure to UV radiation:

- Provide shaded or indoor break areas. Inside a vehicle is sufficient
- Wear sunscreen with a minimum of Sun Protection Factor (SPF) 15

Sunscreens should be reapplied at least every 2 hours and each time a person gets out of the water or perspires heavily. Some sunscreens may also lose efficacy when applied with insect repellents, necessitating more frequent application when the two products are used together. Follow the application directions on the sunscreen bottle.

Sunburn First Aid. There is no quick cure for minor sunburn; however, symptoms can be treated with aspirin, acetaminophen, or ibuprofen to relieve pain and headache and reduce fever. Also, drinking plenty of water helps to replace fluid losses. Cool baths or the gentle application of cool wet cloths on the burned area may also provide some comfort. Workers with sunburns should avoid further exposure until the burn has resolved. Additional symptomatic relief may be achieved through the application of a topical moisturizing cream, aloe, or 1% hydrocortisone cream. A low-dose (0.5%-1%) hydrocortisone cream, which is sold over the counter, may be helpful in reducing the burning sensation and swelling and speeding up healing.

If blistering occurs, lightly bandage or cover the area with gauze to prevent infection. The blisters should not be broken, as this will slow the healing process and increase the risk of infection. When the blisters break and the skin peels, dried fragments may be removed, and an antiseptic ointment or hydrocortisone cream may be applied. Seek medical attention if any of the following occur:

- Severe sunburns covering more than 15% of the body
- Dehydration
- High fever (>101°F)
- Extreme pain that persists for longer than 48 hours

11.10.2.2. Provision of Water (or other drinking fluids)

Fluids are a key preventative measure to minimize the risk of heat related illnesses. Each employee should have at least one quart per employee per hour for the entire shift. Each truck will carry at least 5 gallons of drinking water. This must be replenished at the beginning of each day. In addition, each employee is responsible for having a method to carry water with them throughout the day.

Coffee, tea and other warm and caffeinated beverages must be avoided. In addition, sport drinks and electrolyte replacement drinks are to be consumed in very limited quantities (one per day) as these contain sugar, which utilizes the bodies water reserves to digest, thus dehydrating the individual.

Employees are encouraged to maximize water intake and realize that thirst is not an adequate indicator of sweat loss. Water should be consumed at a target rate of one cup every 20 minutes at a minimum.

If water containers are being shared by employees, disposable/single use drinking cups need to be provided, or employees may use their own cup. In addition, a supervisor or designated employee shall be assigned to monitor the quantity and condition of the water.

11.10.2.3. Access to Shade (Rest Area)

Access to rest and shade or other cooling measures are important preventative steps to minimize the risk of heat related illnesses. Employees suffering from (or exhibiting symptoms of) heat illness or believing a preventative recovery period is needed, will be provided access to an area with shade that is either open to the air or provided with ventilation or cooling for a period of no less than five minutes. Such access to shade shall be permitted at all times.

The rest area should be shaded from the sun. Air-conditioned trailers and work vehicles make good rest areas. When possible, rest areas should be readily accessible and near supplies of drinking fluids.

11.10.2.4. Additional Health Measures

To help prevent the onset of heat-related disorders, employees should practice additional good health measures, such as

- The workers should be as physically fit as possible. This is especially important concerning hot work. Obesity predisposes individuals to heat disorders.
- Older workers are at a disadvantage in hot work because the aging process results in a sluggish response of sweat glands, resulting in a less effective control of body temperature.
- A victim of a heat-related disorder is permanently predisposed to suffering a recurrence.
- Every worker is unique in his/her ability to handle heat. Work/rest periods should be based on the individual's capacity to safely handle the heat, not on a predetermined or inflexible time length.
- Alcohol has been commonly associated with the occurrence of heat-related disorders. Alcohol reduces heat tolerance.
- Inform female workers of the possible adverse consequences of hot work while pregnant, due to elevated core body temperatures.

12. UNANTICIPATED SITE CONDITIONS

If unanticipated site conditions are encountered (e.g., uncontrolled dust levels and/or other potential site contaminants), work in the area will be suspended until an assessment of potential exposure can be completed and, as appropriate, additional protective measures are implemented.

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Appendix A
Health and Safety Forms

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Environmental Health and Safety Plan Receipt and Acceptance Form
Santa Clara Valley Open Space Authority
Spreckels Wetland Enhancement Project
Santa Clara County, California

I have received a copy of the Environmental Health and Safety Plan prepared for the above-referenced site and activities. I have read and understood its contents and I agree that I will abide by its requirements.

Name/Signature	Organization	Date

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Hazard Awareness Training
Santa Clara Valley Open Space Authority
Spreckels Wetland Enhancement Project
Santa Clara County, California

Instructor: David Brinkerhoff, CIH – Director of Environmental Health Services

Name/Signature	Organization	Date