DOCKETED	
Docket Number:	24-OPT-04
Project Title:	Potentia-Viridi Battery Energy Storage System
TN #:	258048
Document Title:	Health and Safety Plan
Description:	This Plan describes the anticipated best management practices for health, safety and environmental conditions potentially encountered at the Project during construction, operations and decommissioning
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Submitter Role:	Applicant Representative
Submission Date:	7/26/2024 11:06:27 AM
Docketed Date:	7/26/2002

Appendix 10
Health and Safety Plan

Health and Safety Plan

Potentia-Viridi Battery Energy Storage System

JULY 2024

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Acronyms and Abbreviations

Acronym/Abbreviation	Definition
CalOSHA	California Division of Occupational Safety and Health
CERS	California Environmental Reporting System, which is a State of California electronic database used to submit site information regarding environmental plans.
CUPA	Certified Unified Program Agency, the agency having local oversight for SPCC Plans in California
CTCP	Construction Traffic Control Plan
CWMP	Construction Waste Management Plan
DCP	Dust Control Plan
ECP	Erosion Control Plan
ERP	Emergency Response Plan
FCR	Federal Code of Regulations. SPCC Plans are covered under FCR Title 40, Part 112
Health and Safety Administrator	Person responsibility to administrate the Health and Safety Plan (this Plan) at the Project.
HMBP	Hazardous Materials Business Plan
JHA	Job Hazard Analysis
OSHA	Federal Occupational Safety and Health Administration
SPCC	Spill Prevention Control and Countermeasure Plan
WEAP	Worker Environmental Awareness Program Training

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1 Introduction

Levy Alameda, LLC (Applicant), a wholly owned subsidiary of Obra Maestra Renewables, LLC, proposes to construct, operate, and eventually repower or decommission the 400-megawatt (MW) Potentia-Viridi Battery Energy Storage System (Project) on approximately 85 acres in eastern Alameda County. The primary components of the Project include an up to 3,200 megawatt-hour (MWh) battery energy storage system (BESS) facility, an operations and maintenance (O&M) building, a project substation, a 500 kilovolt (kV) overhead intertie transmission (gen-tie) line, and interconnection facilities within the Pacific Gas and Electric (PG&E) owned and operated Tesla Substation (Figures 1 and 2).

This Health and Safety Plan ("Plan") has been written as part of the project development documents to describe anticipated best management practices for health, safety and environmental conditions potentially encountered at the Project during construction, operations and decommissioning. Health and Safety Plans are "living documents" in that the documents will change based on changing activities, subcontractors and personnel at the project site. This originally submitted documentation will need to be reviewed regularly and any changes will need to be updated just prior to construction, during the operating life of the Project, as regulations change, and during decommissioning.

1.1 Health and Safety Plan Purpose

The Occupational Safety and Health Administration (OSHA) is part of the United States Department of Labor. The mission of OSHA is to assure that "workers have safe and healthful working conditions free from unlawful retaliation" (OSHA, 2024). OSHA gains its authority under Title 29 of the Code of Federal Regulations, Part 1910. OSHA protects workers by setting and enforcing standards; providing outreach, education, and assistance to US Workers regarding those standards; and issuing permits, licenses, certifications, registrations and approvals (OSHA, 2024).

Federal OSHA and California's Division of Occupational Safety and Health referred to as CalOSHA are similar in mission. CalOSHA aims to protect and improve the health of workers in California through measures that are at least as effective as Federal OSHA standards. Technically CalOSHA is a State Plan which has been approved by OSHA and is regulated in California under California Title 8, Industrial Relations Chapter 3.2. In 1991, California mandated that all employers with at least one employee have a written and effective Injury Illness Prevention Program (IIPP) that must align with Title 8 CCR, Section 3203 of the General Safety Orders.

The Purpose of this Health and Safety Plan is to is to provide a high-level programmatic document with recommendations for necessary best management practices for anticipated safety and health concerns at the Project. Individual employer IIPPs may vary based on each companies own hazards and company preferences but should be at least as effective at protecting worker safety and health.

1.2 Health and Safety Plan Elements

Health and Safety Plans should be a written program, a copy of which should be maintained at a central worksite with employee access, establishing effective injury and illness prevention programs and consist of the following elements:

- Responsibility
- Compliance
- Communication
- Hazard Assessment
- Accident/Exposure Investigation
- Hazard Correction
- Training and Instruction
- Employee access to the Health and Safety Information
- Recordkeeping

2 Project Description

Levy Alameda, LLC (Applicant), a wholly owned subsidiary of Obra Maestra Renewables, LLC, proposes to construct, operate, and eventually repower or decommission the 400-megawatt (MW) Potentia-Viridi Battery Energy Storage System (Project) on approximately 85 acres in eastern Alameda County. The primary components of the Project include an up to 3,200 megawatt-hour (MWh) battery energy storage system (BESS) facility, an operations and maintenance (O&M) building, a project substation, a 500 kilovolt (kV) overhead intertie transmission (gen-tie) line, and interconnection facilities within the Pacific Gas and Electric (PG&E) owned and operated Tesla Substation.

The Project would draw electricity from the power grid to charge and store electrical energy and discharge back to the power grid when the stored energy is needed. The Project would provide several benefits to the power grid, including reducing the need to operate natural gas power plants to balance intermittent renewable generation and serving as an additional capacity resource that would enhance grid reliability. The Project would be remotely operated and monitored year-round and be available to receive or deliver energy 24 hours a day and 365 days a year.

2.1 Project Location

The Project site is located at 17257 Patterson Pass Road, Tracy, CA 95377. The property is southwest of Interstate 580 and Interstate 205 on a portion Alameda County Assessor's Parcel Number 99B-7890-002-04. The Project area consists of approximately 70 acres. The gen-tie line would extend southeast from the Project substation, crossing Patterson Pass Rd, and then proceed east to the Tesla Substation. The Project's gen-tie line would be sited on APNs 99B-7890-2-4, 99B-7890-2-6, and 99B-7885-12. The Project site has land use and zoning designation of Agriculture. The area surrounding the Tesla Substation is sparsely developed for residential use, with the nearest residence, which is also owned by the same landowner leasing the area for the Project's gen-tie line, is approximately 1,500 feet southeast of the Project site and 560 feet south of the proposed gen-tie line.

2.2 Project Components

Project components include the Battery Energy Storage System (BESS) Enclosures, Power Conversion Systems (PCS), Medium voltage (MV) Collection System, Project Substation, Control Building, and Telecommunications Facilities, Access Roads, Laydown Yards, Stormwater Facilities and Outfall, Site Security and Fencing, including fire detection system, and an Operations and Maintenance Building. This section provides details of each component.

- **Battery Energy Storage System (BESS).** The energy storage facility would utilize a modular and containerized BESS. The initial Project concept has been developed assuming lithium iron phosphate (LFP) cells. It is anticipated ESS enclosure height will not exceed 12 feet. The structures may also have a heating, ventilation, and air conditioning (HVAC) system for optimal performance and safety.
- **Power Conversion Systems (PCS).** The PCS would convert electric energy from AC to DC when the energy is transferred from the grid to the battery, and from DC to AC when the energy is transferred from the battery to the grid.
- **Project Substation.** A Project substation is anticipated to be constructed adjacent to the BESS facilities. The power to and from the BESS would be passed through a final interconnection step-up transformer to convert it from 34.5 kV to 500-kV high-voltage for delivery to the PG&E Tesla Substation.

- **Telecommunications Facilities.** Fiber-optic cables will be used to connect the Project site switchyard with the PG&E point of interconnection and to existing fiber-optic lines for remote monitoring. Fiber optic cable may require trenching for installation or it may be place on poles or a combination of both.
- **Access Roads.** Access to the Project site would be provided via new private driveways to the north of the site, off of Patterson Pass Road and to the southeast of the site, off of Patterson Pass Road.
- **Laydown Yards.** One laydown yard would be maintained just north of the central project substation area. This yard would be used during both construction and operation of the BESS facility.
- **Site Security, Lighting, and Fencing.** The Project would be enclosed at the perimeter by a 6-foot to 8-foot-tall security fence. Lighting would only be in areas where it is required for safety, security, or operations. Security cameras will be placed on site and monitored 7 days a week and 24 hours per day.
- **Fire detection system.** Multiple fire detection systems will be installed on-site and within the individual BESS enclosures including an infrared camera system and an onboard battery management system (BMS). In the event of an anomaly, the system will shut down and mitigate the hazard. The BESS enclosures are designed and constructed in such a way that fire would not propagate from one enclosure to a neighboring enclosure in the event of a thermal runaway.
- **Operations and Maintenance Building.** An O&M building would be constructed within the primary laydown yard for the Project's anticipated three full-time operations staff.
- **Generation Tie-Line.** Electrical energy would be transmitted to and from the Project substation to the existing Tesla PG&E Substation through a proposed 500-kV gen-tie line. The gen-tie line would extend southeast from the facility to the Tesla PG&E Substation.

2.3 Project Schedule

Construction Schedule:

Initial mobilization and site preparation is anticipated to begin no later than Q1 2026 and testing and commissioning is anticipated to conclude no later than Q2 2028. It is anticipated that construction crews would work 8 to 10 hours per day, with work occurring Monday through Friday. Environmental clearance surveys would be performed at the Project site prior to commencement of construction activities. Construction activities would include the following:

- **Site preparation.** Prior to construction, environmental clearance surveys would be performed. Erosion and sediment control measures will be installed prior to the start of major earthworks activities. Rough grading and grubbing/vegetation removal would be performed. Detention basins and stormwater facilities would be created for hydrologic control. Stabilized construction entrances and exits would be installed.
- **Site Grading and Civil Work.** Grading is anticipated to include up to approximately 588,018 cubic yards (cy) of cut and up to approximately 344,900 cy of fill, resulting in up to approximately 243,118 cy of export material. The BESS facility site access roads and driveways would be graded, compacted, and surfaced with gravel or aggregate. The project perimeter fence and access gates would then be constructed.
- **Foundations and Underground Equipment Installation.** A grounding grid and underground conduit would be installed below grade beneath the project substation area and BESS components. The main power transformers (MPTs) foundations within the substation area are anticipated to be concrete slab foundations poured into excavations up to 10 feet deep. Foundations for the control building, static masts, other aboveground substation equipment, O&M building, BESS enclosures, PCS units, DC/DC converters, and

BESS auxiliary transformers and panels are anticipated to be pile foundations embedded up to 40 feet below ground level. Additional underground work would include trenching for the placement of underground electrical and communications lines.

- **BESS and Project Substation Equipment Installation.** Major equipment would be delivered and offloaded directly into place with a crane or heavy equipment when possible or stored at one of the laydown areas near its permanent location and installed at a later date. Electrical wiring would be installed underground, at-grade, and above ground, depending on the application and location.
- **Gen-Tie Structure Erection.** The transmission structure access path may be bladed, compacted, and surfaced with gravel where necessary to facilitate access. Cast-in-place concrete foundations would be installed. Fiber optic utility poles would be direct embedded in holes up to 8 feet deep.
- **Gen-Tie Stringing and Pulling.** Conductors would be strung between transmission structures and cables would be pulled through one segment of the transmission line at a time.
- **PG&E-Owned Gen-Tie Segment and Interconnection Facilities within Tesla Substation Footprint.** PG&E would construct the segment of the gen-tie between the POCO and the POI within the Tesla Substation, and the fiber optic routes between the POCO and the PG&E control building within the Tesla Substation footprint.
- **Testing and Commissioning.** After installation, equipment will be tested and commissioned. Commissioning work will be completed by qualified personnel.

Operation Schedule:

Upon completion of construction temporary facilities and temporary oil storage will be removed from the project site. The Project is anticipated to be operated by a team of operations and maintenance specialists who will be trained in protocols of spill management and control until the project reaches the end of its useful life.

Decomissioning Schedule:

At the end of the Project's operational term, it may be determined that the facility will be decommissioned and deconstructed. The Project would utilize best management practices during decommissioning similar to that during construction to minimize the potential for oil spills and leaks to occur during project component disposal. Oils will be disposed of as required by local, state and federal regulations in place at the time of decommissioning.

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3 Responsibility

Health, Safety and Environmental Awareness orientation is mandatory for all employees working on the Project. In addition, supervisors and personnel performing certain work activities may be required to receive more detailed training to emphasize the specific safety and environmental hazards associated with specific work activities (e.g., grading, excavating, vehicle fueling, electrical hazards, dust control, paints/coatings application). Formal training sessions will be supplemented by informal "toolbox" sessions that will be conducted in the "field" to emphasize new requirements or reinforce previously presented information.

3.1 Health and Safety Plan Administrator

The Health and Safety administrator for the Project site is listed in the table below. The responsibilities of the Health and Safety Administrator include the following:

- Updating the workplace Health and Safety Plan
- Establishing procedures for employee reporting of workplace hazards, accidents, injuries, illnesses, and general safety concerns.
- Implementing the provisions of the Health and Safety Plan.
- Making sure that accidents, injuries, illnesses, and exposures in the workplace are investigated and reported in accordance with Title 8 CCR §3203(a)(5), Cal OSHA 170 and OSHA 1904.39.
- Taking action when hazards are identified at the Project.
- Providing health and safety training is available to employees.
  - Providing additional training to supervisors
  - Providing additional training, as required by Title 8 CCR §3203, to employees who may encounter specific hazards (for example hazardous materials, physical hazards (electrical or mechanical), night work, etc.)
- Have familiarity with site specific health, safety and environmental Plans that have been created for specific hazards at the project site. A list of site-specific plans developed for this Project is provided below in Table 2.

Table 1. Facility Information and Health and Safety Program Administrator

	Project
Facility Name	Potentia-Viridi Battery Energy Storage System
Facility Address	17257 Patterson Pass Road Tracy, CA 95377
Facility Phone number	TBD
Facility Mailing Address	17257 Patterson Pass Road, Tracy, CA 95377
Owner or Operator Name	Levy Alameda, LLC
Owner Or Operator Address	155 Wellington Street W, Suite 2930 Toronto, Ontario M5V 3H1, Canada
Health and Safety Program Administrator	EHS Manager or Site Project Manager

3.2 All Employees

Safety and Environmental Awareness orientation is part of the onboarding that all employees must complete prior to being allowed to work on the Project. The Project will maintain records of all persons attending the orientation. The orientation provides general guidance on:

- Attending Health, Safety and Environmental Training
- Understanding the procedures for employee reporting of workplace hazards, accidents, injuries, illnesses, and general safety concerns.
- Understanding emergency response and notification requirements.
- Understanding their roles and responsibilities in relation to the Health and Safety Plan.
- Understanding their roles and responsibilities in protecting other workers and the environment.
- Understanding the Project's environmental commitments, laws and regulations governing environmental compliance.
- Recognition and communication of potential environmental hazards that may be encountered at the Project (e.g., unanticipated discoveries, spills, erosion control, hazardous materials, dust control).
- Reporting "near miss" incidents to their direct supervisor and/or the Health and Safety Administrator.

3.3 Supervisor Responsibilities

In addition to new-hire orientation and training, all supervision including Contractors will be required to attend additional Supervisor Training to emphasize their responsibilities. This training will aid them in recognizing and responding to environmental incidents and ensuring they understand the requirements well enough to explain them to their subordinates. The Training will emphasize:

- Following supervisor requirements during emergency response and notification
- Understanding health, safety, and environmental requirements for tasks they directly supervise.
- Evaluating the safety performance of workers that they directly supervise.
- Providing additional training to workers under their supervision whose safety performance is deficient.
- Following the Health and Safety Plan policies for workers who failure to comply with safe and healthful work practices.

3.4 Project Health and Safety Plans

The following Health, Safety and Environmental Plans have been developed for the Project. The plans describe in detail procedures, site facility components, worker responsibilities, training, and facility contacts for different subject areas. The list of plans in Table 2 should be reviewed periodically and updated as new site-specific plans are created for the project.

Table 2. Site Specific Health and Safety Plans

Plan Name	General Description and Topics Covered
Dust Control Plan (DCP)	Describes the measures to be taken by the Project and its contractors and subcontractors to address implementation and monitoring of dust control measures in accordance with federal, state, and local regulations during construction.
Emergency Response Plan (ERP)	Describes the emergency actions, employee training and emergency response for the Project on the following subject areas: Assembly and muster points, onsite emergency equipment and coordination with offsite agencies and facilities, site fire and explosion hazards, severe weather and earthquakes, medical emergencies, and security incidents.
Erosion and Sediment Control Plan (ECP)	The purpose of this preliminary erosion control plan is to provide a high-level programmatic document with recommendations for necessary construction best management practices within the project where applicable to prevent surface water pollution.
Hazardous Materials Business Plan (HMBP)	Describes anticipated hazardous materials, employee training and emergency and spill response related to hazardous materials for the Project during construction, operations, and decommissioning.
Spill Prevention Control and Countermeasure Plan (SPCC)	Describes anticipated oil storage location and type at the Project site and the procedures for inspection, response and employee training required during construction, operations, and decommissioning.
Construction Traffic Management Plan (CTMP)	Describes how the Project and its contractors plan to reduce traffic impacts during the peak phase of Project construction.
Construction Waste Management Plan (CWMP)	The CWMP provides a structure for proper waste management procedures and to implement waste minimization and recycling efforts in order to reduce the volume of waste generated during the construction of the Project.
Worker Environmental Awareness Program Training (WEAP)	Providing information so that workers are aware of site-specific regulations pertaining to environmental resources and the legal consequences for not following these regulations.

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4 Health and Safety Procedures

4.1 Pre-work Job Hazard Analysis

OSHA defines a job hazard analysis (JHA) as "a technique that focuses on job tasks as a way to identify hazards before they occur" (OSHA, 2002). JHAs are a best management practice used by construction and utility companies to review jobsite hazards daily, just before the start of a task to help identify uncontrolled hazards in the work area and take steps to mitigate (eliminate or reduce) those hazards (potential for harm, injury, or illness) prior to the start of work.

A sample JHA form has been included in Appendix A.

4.1.1 Review of Site and Industry History

Jobsite hazard analysis begins with reviewing the specific jobsite tasks that workers will carry out at the project site and identifying those tasks that have the following components:

- Historically high incident or illness rates,
- Potential to cause severe or disabling injuries or illness,
- Are those such that one simple human error could lead to a sever accident or injury,
- Are new or have undergone recent changes in process or procedure, and
- Those tasks which are complex enough that they may require long or written instructions.

With the above information, the Project Safety and Health Administrator or their delegate (which may be a person in charge of safety or environmental oversight at a contractor or subcontractor) should conduct a preliminary review of the hazards that they know exist in the current work area.

4.1.2 How to Identify Workplace Hazards

Project Safety and Health Administrators, their delegates, or supervisors should break down the identified hazardous tasks into steps and discuss the uncontrolled hazards and recommend solutions for each step.

A JHA is used to answer the following questions:

- What could go wrong when doing this task?
- What are the consequences?
- How might this occur?
- What could be a contributing factor to the hazard?
- How likely is the hazard to occur?

The objective of the JHA is to describe the task and hazard in a detailed enough manner to identify and mitigate the risks without getting overly detailed. When beginning new tasks, it can helpful to ask employees who have

performed the job previously for their input on risks and safety. Good hazard analysis describes (briefly) the following:

- Where is the task occurring? (environment)
- Who is performing the task and who will be exposed to the work? (exposure)
- What would precipitate a hazard? (trigger)
- What is the outcome of the hazard? (consequence).
- Is there any other contributing factor that may be important? For example, is the work area secure, or could others come into the work area without notice.

4.1.3 Correcting Identified Hazards

Information gathered from JHAs can be controlled by various methods. Health and Safety Administrators, their delegates and supervisors should recognize that some hazards may not be able to be controlled by control devices currently in place. The team should identify if a person specializing in safety controls should be consulted, if additional engineering controls are required, or if additional personal protective equipment should be utilized.

Control methods for identified hazards are generally described in one of the following categories. OSHA recommends that the order of precedence and effectiveness of hazard controls are the following (OSHA, 2002):

- **Engineering Controls:** Engineering Controls may require a change in the design of the facility, equipment or process to remove the hazard, enclose the hazard, isolate the hazard or substitute the process with a new less hazardous process.
- **Administrative Controls:** Are procedural controls such as work permits, safe work practices, exposure time limitations and controls, monitors, alarms, buddy systems and training.
- **Personal Protective Equipment (PPE)** – such as gloves, respirators, hearing protection, hardhats, sturdy boots, and protective clothing. PPE is acceptable only when engineering controls are not feasible or cannot totally eliminate the hazard identified, when safe work practices do not provide sufficient protection and during emergencies when engineering controls are not feasible (OSHA, 2002).

4.1.4 Project Construction, Decommissioning, and Operations Hazard Analysis

The hazard analysis for Project construction and decommissioning activities is presented in Table 3 and the hazard analysis prepared for Project operation is presented in Table 4. The types of hazards anticipated during construction, operation, and decommissioning are similar, thus there is duplication between the tables.

Programs and plans described in this section set forth the methods that will be followed to achieve particular health and safety objectives. The programs or plans will be in written and electronic formats that will be kept at specific locations in the facility and readily available to staff and first responders. Each program or plan will contain job specific training requirements that are translated into detailed training courses. These courses are taught to construction and operating personnel as needed.

Table 3. Construction and Decommissioning Hazard Analysis

Activity	Hazard[a]	Control
Motor vehicle and heavy equipment use	▪ Employee injury and property damage from collisions between people and equipment	▪ Motor Vehicle and Heavy Equipment Safety Program
Forklift operation	▪ Same as heavy equipment	▪ Forklift Operation Program
Trench and excavation	▪ Employee injury and property damage from the collapse of trenches and excavations or exposure to fumes or vapors that have collected in the trench/excavation	▪ Excavation/Trenching Program ▪ Confined Space Training
Working at elevated locations	▪ Falls from the same level and elevated areas	▪ Fall Prevention Program ▪ Scaffolding/Ladder Safety Program ▪ Articulating Boom Platforms Program ▪ Working at Heights
Using cranes	▪ Property damage from falling loads ▪ Employee injuries from falling loads ▪ Injuries and property damage from contact with crane	▪ Crane and Material Handling Program ▪ Critical Lift Studies as necessary ▪ Crane Operator Certification
Working with flammable and combustible liquids	▪ Fire/spills	▪ Fire Protection and Prevention Program ▪ Housekeeping and Material Handling and Storage Program
Hot work (including cutting and welding)	▪ Employee injury and property damage from fire ▪ Exposure to fumes during cutting and welding ▪ Ocular exposure to ultraviolet and infrared radiation during cutting and welding	▪ Hot Work Safety Program ▪ Respiratory Protection Program ▪ Employee Exposure Monitoring Program ▪ PPE Program ▪ Fire Protection and Prevention Program
Inspection and maintenance of temporary systems used during construction activities	▪ Employee injury and property damage from contact with hazardous energy sources (e.g., electrical, thermal, and mechanical)	▪ Electrical Safety Program ▪ LO/TO Program

Table 3. Construction and Decommissioning Hazard Analysis

Activity	Hazard[a]	Control
Working on electrical equipment and systems	▪ Employee contact with live electricity and energized equipment	▪ Electrical Safety Program ▪ PPE Program
Exposure to hazardous waste	▪ Personnel who are working with or have the potential to be exposed to contaminated soil, groundwater, or debris during construction	▪ Hazardous Waste Program
Confined space entry	▪ Employee injury from physical and chemical hazards	▪ Permit-required, Confined-space Entry program
General construction activity	▪ Employee injury from hand and portable power tools	▪ Hand and Portable Power Tool Safety Program ▪ PPE Program ▪ Powder-actuated Tools Program
	▪ Employee injury/property damage from inadequate walking and working surfaces	▪ Housekeeping and Material Handling and Storage Program
	▪ Employee exposure to occupational noise	▪ Hearing Conservation Program ▪ PPE Program
	▪ Employee injury from improper lifting and carrying materials and equipment	▪ Back Injury Prevention Program
	▪ Employee injury to head, eye/face, hand, body, foot, and skin	▪ PPE Program
	▪ Employee exposure to hazardous gases, vapors, dusts, and fumes	▪ Hazard Communication Program ▪ Respiratory Protection Program ▪ PPE Program ▪ Air Monitoring Program
	▪ Employee exposure to various hazards ▪ Reporting of hazardous conditions during construction	▪ Injury and Illness Prevention Program
	▪ Heat and cold stress	▪ Heat and Cold Stress Monitoring Control Program

Table 3. Construction and Decommissioning Hazard Analysis

Activity	Hazard[a]	Control
Working Outdoors/Remote	▪ Employee working alone outdoors could suffer an injury ▪ Lightning Strike during a storm	▪ Working alone/Man Down plan ▪ Lightning Procedure

Notes: LO/TO = lock-out/tag-out; PPE = personal protective equipment
[a] The hazards and hazard controls provided are generic to construction and decommissioning activities. During various phases of construction and decommissioning, additional hazard analysis would be performed to evaluate the relevant hazards more specifically and to develop appropriate controls.

Table 4. Operation Hazard Analysis

Activity	Hazard[a]	Control
Motor vehicle and heavy equipment use	▪ Employee injury and property damage from collisions between people and equipment	▪ Motor Vehicle and Heavy Equipment Safety Program
Forklift operation	▪ Same as heavy equipment	▪ Forklift Operation Program
Trench and excavation	▪ Employee injury and property damage from the collapse of trenches and excavations	▪ Excavation/Trenching Program ▪ Confined Space Training
Working at elevated locations	▪ Falls from the same level and elevated areas	▪ Fall Prevention Program ▪ Scaffolding/Ladder Safety Program ▪ Working at Heights
Using cranes and derricks	▪ Property damage from falling loads ▪ Employee injuries from falling loads ▪ Injuries and property damage from contact with crane or derrick	▪ Crane and Material Handling Program ▪ Critical Lift Studies as necessary ▪ Crane Operator Certification
Working with flammable and combustible liquids	▪ Fire/spills	▪ Fire Protection and Prevention Program
Working with hazardous materials	▪ Employee injury (chemical burns, inhalation, digestion, absorption)	▪ Safe Use Handling Procedures ▪ Job Specific Training ▪ PPE Program ▪ Spill Response Procedures ▪ Emergency Response Program
Hot work (including cutting and welding)	▪ Employee injury and property damage from fire	▪ Hot Work Safety Program ▪ Respiratory Protection Program

Table 4. Operation Hazard Analysis

Activity	Hazard[a]	Control
	▪ Exposure to fumes during cutting and welding Ocular exposure to ultraviolet and infrared radiation during cutting and welding	▪ Employee Exposure Monitoring Program ▪ PPE Program ▪ Fire Protection and Prevention Program ▪ Hexavalent Chromium Program
Troubleshooting and maintenance of systems and general operational activities	▪ Employee injury and property damage from contact with hazardous energy sources (e.g., electrical, thermal, and mechanical)	▪ Electrical Safety Program ▪ LO/TO Program
Working on electrical equipment and systems	▪ Employee contact with live electricity	▪ Electrical Safety Program ▪ PPE Program
Confined space entry	▪ Employee injury from physical and chemical hazards	▪ Confined-space Program
General operation activities	▪ Employee injury from hand and portable power tools	▪ Hand and Portable Power Tool Safety Program ▪ PPE
	▪ Employee injury and property damage from inadequate walking and work surfaces	▪ Housekeeping and Material Handling and Storage Program
	▪ Employee overexposure to occupational noise	▪ Hearing Conservation Program ▪ PPE Program
	▪ Employee injury from improper lifting and carrying materials and equipment	▪ Back Injury Prevention Program
	▪ Employee injury and property damage from unsafe driving	▪ Safe Driving Program
	▪ Employee overexposure to hazardous gases, vapors, dusts, and fumes	▪ Hazard Communication Program ▪ Respiratory Protection Program ▪ PPE Program ▪ Employee Exposure Monitoring Program
	▪ Reporting and repairing hazardous conditions	▪ Injury and Illness Prevention Program
	▪ Heat and cold stress	▪ Heat and Cold Stress Monitoring and Control Program
	▪ Ergonomic injuries	▪ Ergonomic Awareness Program

Table 4. Operation Hazard Analysis

Activity	Hazard[a]	Control
Working Outdoors	▪ Employee working alone outdoors could suffer an injury ▪ Lightning Strike during a storm	▪ Working alone/Man Down Plan ▪ Lightning Procedure ▪ Heat Stress Training & Management
Biological Hazards	▪ Wildlife Hazards	▪ Emergency Response Plan ▪ Working Alone/Man Down Plan ▪ Pest Management Protocol
Motor vehicle and heavy equipment use	▪ Employee injury and property damage from collisions between people and equipment	▪ Motor Vehicle and Heavy Equipment Safety Program
Forklift operation	▪ Same as heavy equipment	▪ Forklift Operation Program
Trench and excavation	▪ Employee injury and property damage from the collapse of trenches and excavations	▪ Excavation/Trenching Program ▪ Confined Space Training
Working at elevated locations	▪ Falls from the same level and elevated areas	▪ Fall Prevention Program ▪ Scaffolding/Ladder Safety Program ▪ Working at Heights
Using cranes and derricks	▪ Property damage from falling loads ▪ Employee injuries from falling loads ▪ Injuries and property damage from contact with crane or derrick	▪ Crane and Material Handling Program ▪ Critical Lift Studies as necessary ▪ Crane Operator Certification
Working with flammable and combustible liquids	▪ Fire/spills	▪ Fire Protection and Prevention Program
Working with hazardous materials	▪ Employee injury (chemical burns, inhalation, digestion, absorption)	▪ Safe Use Handling Procedures ▪ Job Specific Training ▪ PPE Program ▪ Spill Response Procedures ▪ Emergency Response Program

[a] The hazards and hazard controls provided are generic to operations. During various phases of operation additional hazard analysis will be performed to evaluate the relevant hazards more specifically and to develop appropriate controls.

4.2 Hazard Assessment and Inspection

Project Safety and Health Administrators, their delegates, or supervisors should conduct periodic inspections to identify and evaluate hazards in the workplace. Periodic inspections should be conducted when changes occur at the Project such as:

- When new substances, processes, procedures or equipment are brought onsite that present a new hazard.
- When new hazards are identified.
- When workplace related injuries or illnesses occur.
- When employees, supervisors or contractors are assigned a new task.

4.3 Hazard Correction and Stop Work Authority

When unsafe or unhealthy work conditions have been identified or have been reported by an employee, the Project Safety and Health Administrators, their delegates, or supervisors should ensure that the condition is reviewed in a timely manner (FCR Title 29. Subtitle B, Chapter XIV, Standard 1977.12 Discrimination Against Employees Exercising Rights Under the Williams Steiger Occupational Safety and Health Act of 1970).

Employees at this project site have the right to stop work if they believe working conditions are unsafe or unhealthful if ALL the following are true:

- Where possible, the employee has asked their supervisor or the site Health and Safety Administrator to eliminate the danger and the danger remains, and
- The work is being refused in “good faith”. The employee genuinely believes that an imminent danger exists, and a reasonable person would agree that there is a real danger of death or serious injury.
- There isn’t enough time, due to the urgency of the hazard, to get it corrected through regular enforcement channels such as use of a JHA or safety inspection.

Employees should take the following steps:

- Ask Supervisor or the site Health and Safety Administrator to correct the hazard, or to assign other work.
- Tell Supervisor or the site Health and Safety Administrator that they will not perform the work unless and until the hazard is corrected.
- Remain at the worksite until ordered to leave by their supervisor or the site Health and Safety Administrator.

4.4 Injury and illness investigations

In California, injury and illness investigations are covered under Title 8 CCR §3203(a)(5). Severe injuries including reporting workplace related fatalities, inpatient hospitalizations, amputations, or loss of an eye are covered in more detail under Cal OSHA 170 and OSHA 1904.39. The basic procedures for investigating accidents, injuries, and illnesses, and hazardous substance exposures are described below:

- Interview injured employees and witnesses.

- Gathering available incident information including photos of the accident scene and pertinent employee information.
- Determine the cause of the accident or exposure.
- Take corrective action to prevent accident/exposure from reoccurring.
- Identifying and addressing underlying factors that may have contributed to the incident where feasible.
- Investigating “near miss” incidents when reported.
- Recording findings and actions taken.

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5 Training

5.1 Communication with Employees about Safety

Supervisors are responsible for communicating with their employees about the occupational health and safety hazards and protections available at the workplace. The communication should be in a manner that is easily understandable by all employees (Title 8 CCR §3203(a)(3)).

The following are ways by which the site may communicate health and safety information polices at the Project:

- New Employee Worker Safety Orientation, generally given on the first day of work at the project or shortly before.
- Worker Environmental Awareness Program Training, generally given on the first day of work at the project or shortly before.
- Tailgate training.
- Site wide safety updates and posted signage.
- Regularly scheduled safety meetings (daily, weekly, monthly, or annually)
- Electronic safety training modules accessible online or in the site Safety Trailer.

5.2 Communication with Project Management about Safety

Employee's may communicate safety, health, and environmental concerns to the Project management in the following manner:

- Directly to their supervisor,
- To the site Safety and Health Administrator or their designee (each contractors Site Safety Officer).
- Use of a health and safety committee, if available.
- An anonymous hotline for reporting information to management about workplace safety hazards without fear of reprisal.

5.3 Training and Instruction Timing

Personnel should be trained in safety methods part of their daily responsibilities in the proper operation and maintenance of equipment. Formal employee training will be conducted:

- When a new employee starts at the project site,
- When a supervisor or the Health and Safety Administrator has identified the need for additional training or retraining,

- When a refresher of applicable safety topics should be conducted as required by state, local and federal regulations, or
- When additional training is provided, as needed, for new equipment or regulations

5.3.1 Construction and Decommissioning Health and Safety Programs

Safety programs would be developed and implemented during construction and decommissioning activities. Table 5 sets forth the Health and Safety Programs that would be provided to the construction and decommissioning personnel. These programs and their major components are outlined below.

Table 5. Construction and Decommissioning Training Programs

Training Course	Target Employees
Injury and Illness Prevention Training ▪ Philosophy and safety commitment ▪ Safety leadership and responsibilities ▪ Accountability ▪ Employee communication ▪ Planning "job hazard analysis and pre-task" ▪ Compliance with work rules and safe work practices ▪ Measurement of compliance and effectiveness of prevention methods, and inspections/audits ▪ Communication of performance and implementation of necessary improvements ▪ Training and other communication requirements	All
Emergency Action Program/Plan ▪ Emergency procedures for the protection of personnel, equipment, the environment, and materials: - Fire and emergency reporting procedures - Response actions for accidents involving personnel and/or property - Site assembly and emergency evacuation route procedures - Natural disaster response ▪ Reporting and notification procedures for emergencies and contacts, including offsite and local authorities: - Alarm and communication systems - Spill response, prevention, and control action plan - Emergency response equipment	All

Table 5. Construction and Decommissioning Training Programs

Training Course	Target Employees
- Emergency personnel (response team) responsibilities and notification roster - Training requirements	
PPE Training ▪ Personal protective devices ▪ Hazard analysis ▪ Training ▪ Head protection ▪ Eye/face protection ▪ Body protection ▪ Hand protection ▪ Foot protection ▪ Skin protection ▪ Fall protection ▪ Electrical arc flash protection ▪ Respiratory protection ▪ Hearing protection	All
Motor Vehicle and Heavy Equipment Safety Training ▪ Operation and maintenance of vehicles ▪ Inspection ▪ PPE ▪ Training	Employees working on, ear, or with heavy equipment or vehicles
Forklift Operation Training ▪ Trained and certified operators ▪ Fueling operations ▪ Safe operating parameters ▪ Training	Employees operating forklifts
Excavation/Trenching Safety Training ▪ Shoring, sloping, and benching requirements ▪ Cal/OSHA permit requirements ▪ Inspection ▪ Air monitoring ▪ Access and egress	Employees involved with trenching or excavation
Fall Protection Training ▪ Evaluation of fall hazards	Employees working at heights greater than 6 feet required to use fall protection

Table 5. Construction and Decommissioning Training Programs

Training Course	Target Employees
▪ Protection devices ▪ Training	
Scaffolding/Ladder Safety Training ▪ Construction and inspection of equipment ▪ Proper use ▪ Training	Employees required to erect or use scaffolding
Crane Safety Training ▪ Certified and licensed operators ▪ Inspection of equipment ▪ Load ratings ▪ Safe operating parameters ▪ Training	Employees supervising or performing crane operations
Fire Protection and Prevention Training ▪ General requirements ▪ Housekeeping and proper material storage ▪ Employee alarm/communication system ▪ Portable fire extinguishers ▪ Fixed firefighting equipment ▪ Fire control and containment ▪ Flammable and combustible liquid storage ▪ Dispensing and disposal of flammable liquids ▪ Service and refueling areas ▪ Training	Employees responsible for the handling and storage of flammable or combustible liquids or gases
Hazard Communication Training ▪ Labeling requirements ▪ Storage and handling ▪ Safety data sheets ▪ Chemical inventory ▪ Training	Employees handling or working with hazardous materials
Hazardous Waste ▪ Evaluation of hazard ▪ Training ▪ Air monitoring ▪ Medical surveillance ▪ Health and Safety Plan preparation	Employees handling or excavating hazardous waste

Table 5. Construction and Decommissioning Training Programs

Training Course	Target Employees
Hot Work Safety Training ▪ Welding and cutting procedures ▪ Acetylene and fuel gas safety procedures ▪ Fire watch ▪ Hot work permit ▪ PPE ▪ Training	Employees performing hot work
Electrical Safety Training ▪ Grounding procedure ▪ Overhead and underground utilities ▪ Utility clearance ▪ Assured Grounding Program/Ground Fault Circuit Interrupters ▪ Training	Employees performing LO/TO or working on systems that require LO/TO activities Employees required to work on electrical systems and equipment, or use electrical equipment and cords
Permit-required Confined-space Entry Training ▪ Air monitoring and ventilation requirements ▪ Rescue procedures ▪ LO/TO and blocking, blinding, and blanking requirements ▪ Permit completion ▪ Training	Employees required to supervise or perform confined-space entry activities
Hand and Portable Power Tool Safety Training ▪ Guarding and proper operation ▪ Training	Employees who will be operating hand and portable power tools
Powder-actuated Tool Safety Training ▪ Operator qualification ▪ Inspection requirements ▪ Repair requirements ▪ Storage requirements ▪ Training	Employees who will be operating powder-actuated tools
Heat Stress and Cold Stress Safety Training ▪ Monitoring requirements ▪ Prevention and control	Employees who are exposed to temperature extremes
Hearing Conservation Training ▪ Identifying high-noise environments ▪ Exposure monitoring ▪ Medical surveillance requirements	All

Table 5. Construction and Decommissioning Training Programs

Training Course	Target Employees
▪ Hearing-protective devices ▪ Training	
Back Injury Prevention Training ▪ Proper lifting and material handling procedures ▪ Training	All
Safe Driving Training ▪ Operation and maintenance of vehicles ▪ Inspection ▪ PPE ▪ Training	Employees supervising or driving motor vehicles
Respiratory Protection Training ▪ Selection and use ▪ Storage ▪ Fit testing ▪ Medical requirements ▪ Inspection and repair ▪ Training	All employees required to wear respiratory protection
First Aid, CPR, and Automated External Defibrillator ▪ General requirements ▪ Written program ▪ Training ▪ Maintenance	All
Worker Exposure Awareness Training ▪ Exposure evaluation ▪ Monitoring requirements ▪ Reporting of results ▪ Medical surveillance ▪ Training	All
LO/TO Program ▪ Allocation of devices (e.g., locks, tags, and adaptors) ▪ LO/TO sequencing ▪ Types/magnitudes of energy ▪ Types/locations of machines ▪ Verification ▪ Training	Employees performing LO/TO or required to work on electrical systems and equipment

Table 5. Construction and Decommissioning Training Programs

Training Course	Target Employees
Worker Environmental Awareness Training • Wildlife identification • Cultural resource identification • Reporting requirements • Training	All

5.3.2 Operations Health and Safety Programs

Upon completion of construction and commencement of operations, the construction Health and Safety Plan would transition into an operation-oriented program reflecting the hazards and controls necessary during operation. Table 6 sets forth the Operations Health and Safety Program that would be provided to the operations personnel.

Table 6. Operations Training Program

Training Course	Target Employees
Injury and Illness Prevention Training ▪ Personnel with the responsibility and authority for implementing the plan ▪ Safety and health policy ▪ Work rules and safe work practices ▪ System for ensuring that employees comply with safe work practices ▪ Employee communications ▪ Identification and evaluation of workplace hazards ▪ Methods and/or procedures for correcting unsafe or unhealthy conditions, work practices, and work procedures in a timely manner based on the severity of the hazards ▪ Specific safety procedures (see Operation Safety Program)	All
Emergency Action Plan *This program/plan is part of the Risk Management Plan and Process Safety Management Program.* ▪ Emergency escape procedures and emergency escape route assignments ▪ Procedures to be followed by employees who remain to operate critical plant operations before they evacuate ▪ Procedures to account for all employees after emergency evacuation has been completed	All

Table 6. Operations Training Program

Training Course	Target Employees
▪ Rescue and medical duties for those employees performing them ▪ Fire and emergency reporting procedures ▪ Alarm and communication system ▪ Personnel to contact for information on plan contents ▪ Training requirements	
PPE Training ▪ Hazard analysis and prescription of PPE ▪ Personal protective devices ▪ Head protection ▪ Eye and face protection ▪ Body protection ▪ Hand protection ▪ Foot protection ▪ Skin protection ▪ Sanitation ▪ Safety belts and lifelines for fall protection ▪ Protection for electrical shock ▪ Medical services and first aid/blood-borne pathogens ▪ Respiratory protective equipment ▪ Hearing protection ▪ Life safety ▪ Training	All
Excavation/Trenching Safety training ▪ Shoring, sloping, and benching requirements ▪ Cal/OSHA permit requirements ▪ Inspection ▪ Air monitoring ▪ Access and egress	Employees involved with trenching or excavation
Scaffolding/Ladder Safety Training ▪ Construction and inspection of equipment ▪ Proper use ▪ Training	Employees required to erect or use scaffolding
Fall Protection Training ▪ Evaluation of fall hazards	Employees required to use fall protection

Table 6. Operations Training Program

Training Course	Target Employees
▪ Protection devices ▪ Training	
Forklift Operator Training ▪ Trained and certified operators ▪ Fueling operations ▪ Safe operating parameters ▪ Training	Employees operating forklifts
Workplace Ergonomics ▪ Identification of personnel at risk ▪ Evaluation of personnel ▪ Workplace and job activity modifications ▪ Training	Employees performing repetitive activities
Fire Protection and Prevention Training ▪ General requirements ▪ Fire hazard inventory, including ignition sources and mitigation ▪ Housekeeping and proper materials storage ▪ Employee alarm/communication system ▪ Portable fire extinguishers ▪ Fixed firefighting equipment ▪ Fire control ▪ Flammable and combustible liquid storage ▪ Use of flammable and combustible liquids ▪ Dispensing and disposal of liquids ▪ Training ▪ Personnel to contact for information on plan contents	All
Hot Work Safety Training ▪ -Welding and cutting procedures ▪ -Acetylene and fuel gas safety ▪ -Fire Watch ▪ -Hot work permit ▪ -PPE ▪ -Training	Employees performing hot work
Electrical Safety Training ▪ Grounding procedure ▪ Overhead and underground utilities ▪ Utility clearance	Employees performing LO/TO or required to work on electrical systems and equipment

Table 6. Operations Training Program

Training Course	Target Employees
▪ Training ▪ High Voltage Switching	
Permit-required Confined-space Entry ▪ Air monitoring and ventilation requirements ▪ Rescue procedures ▪ LO/TO and blocking, blinding, and blanking requirements ▪ Permit completion ▪ Training	Employees required to supervise or perform confined-space entry
Hand and Portable Power Tool Safety Training ▪ Guarding and proper operation ▪ Training	Employees operating hand and portable power tools
Heat Stress and Cold Stress Safety Training ▪ Monitoring requirements ▪ Prevention and control	Employees exposed to temperature extremes
Hearing Conservation Training ▪ Identifying high-noise environments ▪ Exposure monitoring ▪ Medical surveillance requirements ▪ Hearing-protective devices ▪ Training	All
Crane Safety Training ▪ Certified and licensed operators ▪ Inspection of equipment ▪ Load ratings ▪ Safe operating parameters ▪ TrainingEmployees supervising or performing crane operations	Employees supervising or performing crane operations
Articulating Boom Platforms Program ▪ Inspection of equipment ▪ Load ratings ▪ Safe operating parameters ▪ Operator training	All employees required to operate or conduct maintenance using articulating boom lift.
Back Injury Prevention Training ▪ Proper lifting and material-handling procedures ▪ Training	All
Safe Driving Training ▪ Inspection and Maintenance	Employees supervising or driving motor vehicles

Table 6. Operations Training Program

Training Course	Target Employees
▪ Training	
Hazard Communication Training ▪ Labeling requirements ▪ Storage and handling ▪ Safety data sheets ▪ Chemical inventory ▪ Training	Employees handling or working around hazardous materials
Respiratory Protection Program ▪ Selection and use ▪ Storage ▪ Fit testing ▪ Medical requirements ▪ Inspection and repair ▪ Training	All employees required to wear respiratory protection
First Aid, CPR, and Automated External Defibrillator ▪ General requirements ▪ Written program ▪ Training ▪ Maintenance	All
Worker Exposure Awareness Training ▪ Exposure evaluation ▪ Monitoring requirements ▪ Reporting of results ▪ Medical surveillance ▪ Training	All
LO/TO Program ▪ Allocation of LO/TO devices (e.g., locks, tags, and adaptors) ▪ Machine-specific LO/TO procedures ▪ Steps for verification of isolation ▪ Training (Affected and Authorized and Interaction with Energized Electrics) ▪ Annual program review	Employees performing LO/TO or required to work on electrical systems and equipment

5.4 Documentation and Record Keeping

This Plan should be available to all employees within a reasonable timeframe. Documents may be kept electronically so long as they are in a format that can be shown to the employee upon request for their review.

Jobsite safety and training records should be kept for at least one year, and as a best management practice should be kept for a period of 5 years. These records may be stored electronically, and copies may be kept in individual employee files.

6 References

California Department of Industrial Relations, 2023, Injury Illness Prevention Plan Template, www.dir.ca.gov/dosh/dosh_publications , August 2023.

OSHA, 2002, OSHA bulletin 3071 Job Hazard Analysis.

OSHA, 2024, Occupational Safety and Health Administration website accessed June 14, 204 (https://www.osha.gov/aboutosha)

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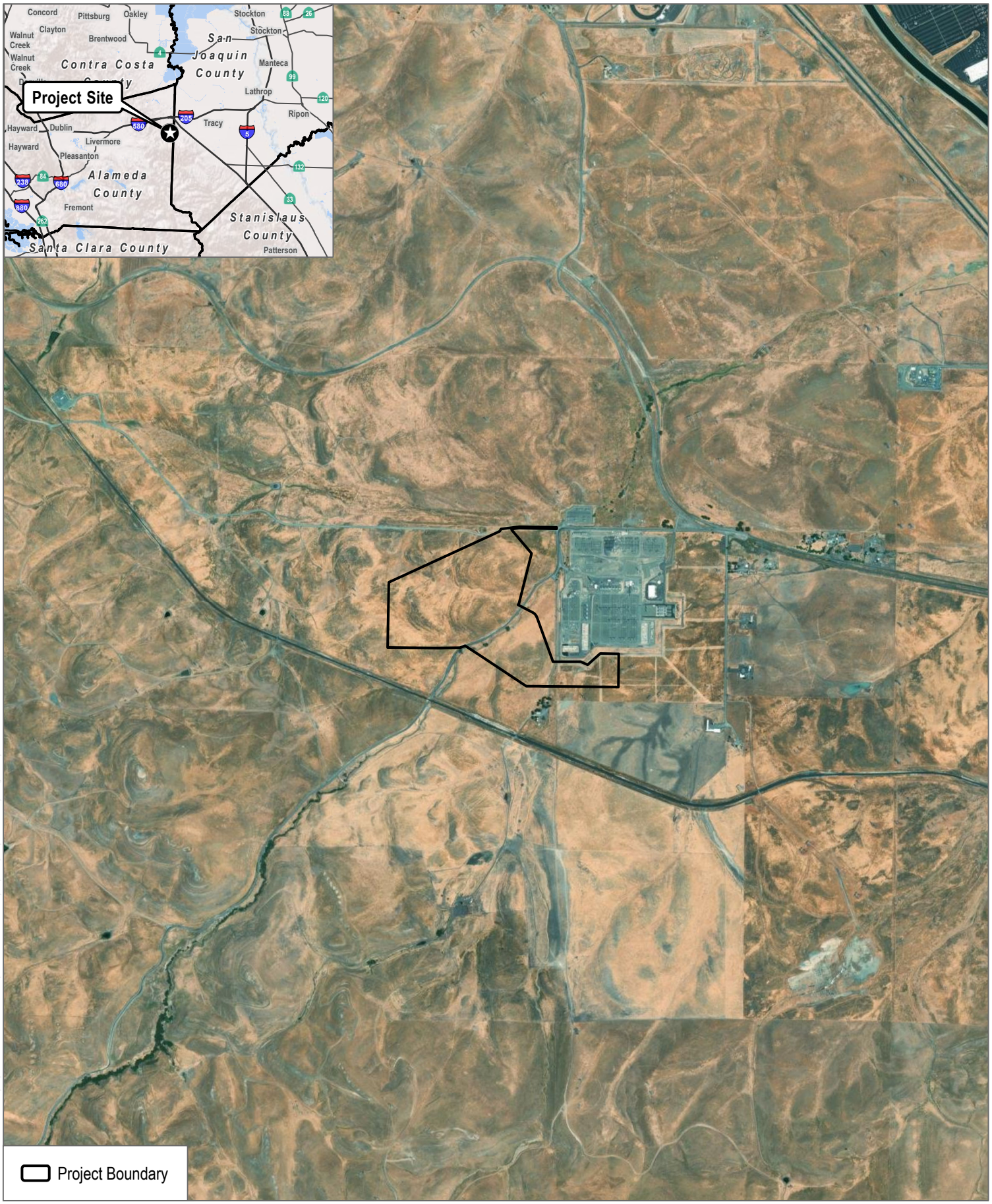

SOURCE: Bing Maps 2023

DUDEK

0 500 1,000 Feet

FIGURE 1

Project Location

Potentia Viridi BESS Project

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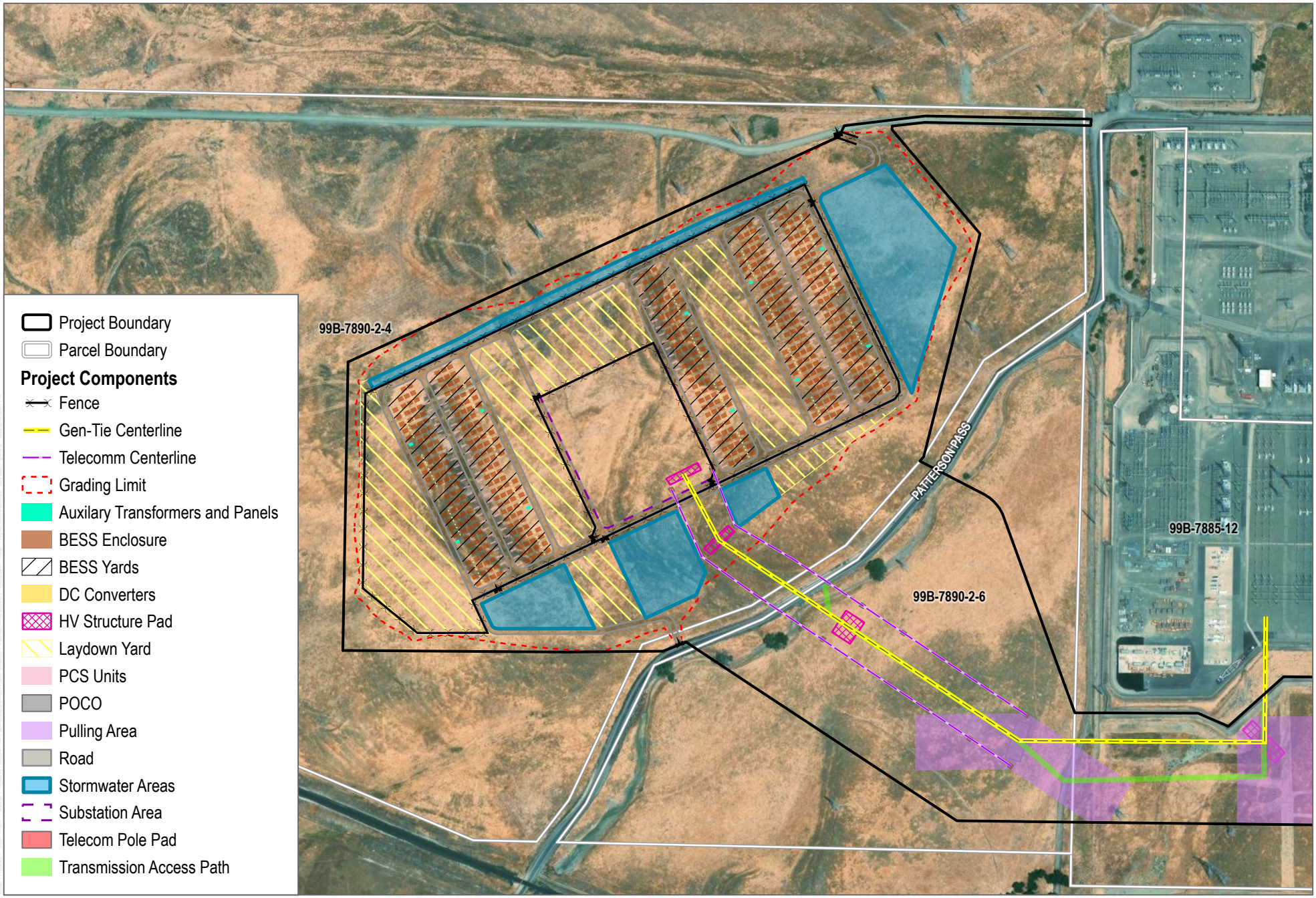

SOURCE: Bing Maps 2023, County of Alameda 2022

DUDEK

0 230 460 Feet

FIGURE 2

Project Components

Potentia Viridi BESS Project

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Appendix A

Example Job Hazard Analysis Form

Job Hazard Analysis Form

Project	Project
Facility Name	Potentia-Viridi Battery Energy Storage System
Facility Address	17257 Patterson Pass Road
Supervisor Name	
Date	
Task #:	**Task Description:**
Hazard Type:	**Hazard Description:**
Consequence:	**Hazard Controls:**
Comment/Rational:	

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