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Description:	This subsection summarizes the worker health and safety issues that may be encountered during construction and operation of the proposed Project.
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4.16 Worker Health and Safety

This subsection summarizes the worker health and safety issues that may be encountered during construction and operation of the proposed Project. Because of the subject matter, this subsection follows a slightly different format than other subsections in Section 4. Instead of a standard discussion of affected environment followed by the Project's environmental consequences and proposed mitigation measures for significant impacts, this subsection contains worker safety information, including the laws, ordinances, regulations, and standards (LORS) that apply to the proposed Project. Section 4.16.1 describes the health and safety programs in terms of analyses conducted to identify hazards and also the safety compliance and training programs that will be established onsite. Section 4.16.2 discusses the applicable LORS. Section 4.16.3 lists the regulatory agencies involved and key agency contacts. Section 4.16.4 provides information regarding required permits and permitting schedules.

4.16.1 Health and Safety Program

4.16.1.1 Environmental Analysis

Impacts would generally be evaluated with respect to the California Environmental Quality Act (CEQA) checklist, which does not have specific questions for worker health and safety. Related questions are addressed in Section 5.5, Hazardous Materials Management, and Section 5.7, Noise.

4.16.1.2 Hazard Analysis

Workers will be potentially exposed to activities that pose potential safety hazards. A hazard analysis is included to evaluate the hazards and assess control measures. The analysis identifies the hazards anticipated during construction and operation and indicate which safety programs should be developed and implemented to avoid, mitigate, and appropriately manage those hazards. The hazard analysis for construction activities is presented in Table 4.16-1; the hazard analysis prepared for operation is presented in Table 4.16-2. The types of hazards anticipated during construction and operation 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 4.16-1. Construction Hazard Analysis

Activity	Hazard ^a	Control
Motor vehicle and heavy equipment use	<ul style="list-style-type: none"> ▪ Employee injury and property damage from collisions between people and equipment 	<ul style="list-style-type: none"> ▪ Motor Vehicle and Heavy Equipment Safety Program
Forklift operation	<ul style="list-style-type: none"> ▪ Same as heavy equipment 	<ul style="list-style-type: none"> ▪ Forklift Operation Program
Trench and excavation	<ul style="list-style-type: none"> ▪ Employee injury and property damage from the collapse of trenches and excavations or exposure to fumes or vapors that 	<ul style="list-style-type: none"> ▪ Excavation/Trenching Program ▪ Confined Space Training

Table 4.16-1. Construction Hazard Analysis

Activity	Hazard ^a	Control
	have collected in the trench/excavation	
Working at elevated locations	<ul style="list-style-type: none"> ▪ Falls from the same level and elevated areas 	<ul style="list-style-type: none"> ▪ Fall Prevention Program ▪ Scaffolding/Ladder Safety Program ▪ Articulating Boom Platforms Program ▪ Working at Heights
Using cranes	<ul style="list-style-type: none"> ▪ Property damage from falling loads ▪ Employee injuries from falling loads ▪ Injuries and property damage from contact with crane 	<ul style="list-style-type: none"> ▪ Crane and Material Handling Program ▪ Critical Lift Studies as necessary ▪ Crane Operator Certification
Working with flammable and combustible liquids	<ul style="list-style-type: none"> ▪ Fire/spills 	<ul style="list-style-type: none"> ▪ Fire Protection and Prevention Program ▪ Housekeeping and Material Handling and Storage Program
Hot work (including cutting and welding)	<ul style="list-style-type: none"> ▪ 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 	<ul style="list-style-type: none"> ▪ 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	<ul style="list-style-type: none"> ▪ Employee injury and property damage from contact with hazardous energy sources (e.g., electrical, thermal, and mechanical) 	<ul style="list-style-type: none"> ▪ Electrical Safety Program ▪ LO/TO Program
Working on electrical equipment and systems	<ul style="list-style-type: none"> ▪ Employee contact with live electricity and energized equipment 	<ul style="list-style-type: none"> ▪ Electrical Safety Program ▪ LO/TO Program ▪ PPE Program
Exposure to hazardous waste	<ul style="list-style-type: none"> ▪ Personnel who are working with or have the potential to be exposed to contaminated soil, groundwater, or debris during construction 	<ul style="list-style-type: none"> ▪ Hazardous Waste Program
Confined space entry	<ul style="list-style-type: none"> ▪ Employee injury from physical and chemical hazards 	<ul style="list-style-type: none"> ▪ Permit-required, Confined-space Entry program, air monitoring requirements
General construction activity	<ul style="list-style-type: none"> ▪ Employee injury from hand and portable power tools 	<ul style="list-style-type: none"> ▪ Hand and Portable Power Tool Safety Program ▪ PPE Program ▪ Powder-actuated Tools Program

Table 4.16-1. Construction Hazard Analysis

Activity	Hazard ^a	Control
	<ul style="list-style-type: none"> Employee injury/property damage from inadequate walking and working surfaces 	<ul style="list-style-type: none"> Housekeeping and Material Handling and Storage Program
	<ul style="list-style-type: none"> Employee exposure to occupational noise 	<ul style="list-style-type: none"> Hearing Conservation Program PPE Program
	<ul style="list-style-type: none"> Employee injury from improper lifting and carrying materials and equipment 	<ul style="list-style-type: none"> Back Injury Prevention Program
	<ul style="list-style-type: none"> Employee injury to head, eye/face, hand, body, foot, and skin 	<ul style="list-style-type: none"> PPE Program
	<ul style="list-style-type: none"> Employee exposure to hazardous gases, vapors, dusts, and fumes 	<ul style="list-style-type: none"> Hazard Communication Program Respiratory Protection Program PPE Program Air Monitoring Program
	<ul style="list-style-type: none"> Employee exposure to various hazards Reporting of hazardous conditions during construction 	<ul style="list-style-type: none"> Injury and Illness Prevention Program
	<ul style="list-style-type: none"> Heat and cold stress 	<ul style="list-style-type: none"> Heat and Cold Stress Monitoring Control Program
Working Outdoors/Remote	<ul style="list-style-type: none"> Employee working alone outdoors could suffer an injury Lightning Strike during a storm 	<ul style="list-style-type: none"> 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 activities. During various phases of construction, additional hazard analysis will be performed to evaluate the relevant hazards more specifically and to develop appropriate controls.

Table 4.16-2. Operation Hazard Analysis for the Compass Energy Storage Facility

Activity	Hazard ^a	Control
Motor vehicle and heavy equipment use	<ul style="list-style-type: none"> Employee injury and property damage from collisions between people and equipment 	<ul style="list-style-type: none"> Motor Vehicle and Heavy Equipment Safety Program
Forklift operation	<ul style="list-style-type: none"> Same as heavy equipment 	<ul style="list-style-type: none"> Forklift Operation Program
Trench and excavation	<ul style="list-style-type: none"> Employee injury and property damage from the collapse of trenches and excavations 	<ul style="list-style-type: none"> Excavation/Trenching Program Confined Space Training
Working at elevated locations	<ul style="list-style-type: none"> Falls from the same level and elevated areas 	<ul style="list-style-type: none"> Fall Prevention Program Scaffolding/Ladder Safety Program Working at Heights
Using cranes and derricks	<ul style="list-style-type: none"> Property damage from falling loads Employee injuries from falling loads 	<ul style="list-style-type: none"> Crane and Material Handling Program Critical Lift Studies as necessary

Table 4.16-2. Operation Hazard Analysis for the Compass Energy Storage Facility

Activity	Hazard ^a	Control
	<ul style="list-style-type: none"> ▪ Injuries and property damage from contact with crane or derrick 	<ul style="list-style-type: none"> ▪ Crane Operator Certification
Working with flammable and combustible liquids	<ul style="list-style-type: none"> ▪ Fire/spills 	<ul style="list-style-type: none"> ▪ Fire Protection and Prevention Program
Working with hazardous materials	<ul style="list-style-type: none"> ▪ Employee injury (chemical burns, inhalation, digestion, absorption) 	<ul style="list-style-type: none"> ▪ Safe Use Handling Procedures ▪ Job Specific Training ▪ PPE Program ▪ Spill Response Procedures ▪ Emergency Response Program
Hot work (including cutting and welding)	<ul style="list-style-type: none"> ▪ 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 	<ul style="list-style-type: none"> ▪ Hot Work Safety Program ▪ Respiratory Protection Program ▪ Employee Exposure Monitoring Program ▪ PPE Program ▪ Fire Protection and Prevention Program ▪ Hexavalent Chromium Program
Troubleshooting and maintenance of systems and general operational activities	<ul style="list-style-type: none"> ▪ Employee injury and property damage from contact with hazardous energy sources (e.g., electrical, thermal, and mechanical) 	<ul style="list-style-type: none"> ▪ Electrical Safety Program ▪ LO/TO Program
Working on electrical equipment and systems	<ul style="list-style-type: none"> ▪ Employee contact with live electricity 	<ul style="list-style-type: none"> ▪ Electrical Safety Program ▪ PPE Program
Confined space entry	<ul style="list-style-type: none"> ▪ Employee injury from physical and chemical hazards 	<ul style="list-style-type: none"> ▪ Confined-space Program
General operation activities	<ul style="list-style-type: none"> ▪ Employee injury from hand and portable power tools 	<ul style="list-style-type: none"> ▪ Hand and Portable Power Tool Safety Program ▪ PPE
	<ul style="list-style-type: none"> ▪ Employee injury and property damage from inadequate walking and work surfaces 	<ul style="list-style-type: none"> ▪ Housekeeping and Material Handling and Storage Program
	<ul style="list-style-type: none"> ▪ Employee overexposure to occupational noise 	<ul style="list-style-type: none"> ▪ Hearing Conservation Program ▪ PPE Program
	<ul style="list-style-type: none"> ▪ Employee injury from improper lifting and carrying materials and equipment 	<ul style="list-style-type: none"> ▪ Back Injury Prevention Program
	<ul style="list-style-type: none"> ▪ Employee injury and property damage from unsafe driving 	<ul style="list-style-type: none"> ▪ Safe Driving Program
	<ul style="list-style-type: none"> ▪ Employee overexposure to hazardous gases, vapors, dusts, and fumes 	<ul style="list-style-type: none"> ▪ Hazard Communication Program ▪ Respiratory Protection Program ▪ PPE Program ▪ Employee Exposure Monitoring Program
	<ul style="list-style-type: none"> ▪ Reporting and repairing hazardous conditions 	<ul style="list-style-type: none"> ▪ Injury and Illness Prevention Program

Table 4.16-2. Operation Hazard Analysis for the Compass Energy Storage Facility

Activity	Hazard ^a	Control
	<ul style="list-style-type: none"> ▪ Heat and cold stress 	<ul style="list-style-type: none"> ▪ Heat and Cold Stress Monitoring and Control Program
	<ul style="list-style-type: none"> ▪ Ergonomic injuries 	<ul style="list-style-type: none"> ▪ Ergonomic Awareness Program
Working Outdoors	<ul style="list-style-type: none"> ▪ Employee working alone outdoors could suffer an injury ▪ Lightning Strike during a storm 	<ul style="list-style-type: none"> ▪ Working alone/Man Down Plan ▪ Lightning Procedure ▪ Heat Stress Training and Management
Biological Hazards	<ul style="list-style-type: none"> ▪ Wildlife Hazards ▪ 	<ul style="list-style-type: none"> ▪ Emergency Response Plan ▪ Working Alone/Man Down Plan ▪ Pest Management Protocol

^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.

4.16.1.3 Training and Safety Programs

To protect the safety and health of workers during the construction and operation of the BESS, health and safety programs designed to mitigate hazards and comply with applicable regulations will be implemented. Periodic audits will be performed by qualified individuals to determine whether proper work practices are being used to mitigate hazardous conditions and to evaluate regulatory compliance.

The following subsections contain information on the anticipated content of the health and safety programs.

4.16.1.3.1 Construction Health and Safety Program

The following construction safety programs will be developed and implemented during construction of the BESS as outlined:

Injury and Illness Prevention Program

- 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

Fire Protection and Prevention Program

- 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

PPE Program

- 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

First Aid, CPR, and Automated External Defibrillator

- General requirements
- Written program
- Training
- Maintenance

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
- Emergency personnel (response team) responsibilities and notification roster
- Training requirements

Construction Safety Programs

- **Motor Vehicle and Heavy Equipment Safety Program**
 - Operation and maintenance of vehicles
 - Inspection
 - PPE
 - Training
- **Forklift Operation Program**
 - Trained and certified operators
 - Fueling operations
 - Safe operating parameters
 - Training
- **Excavation/Trenching Program**
 - Shoring, sloping, and benching requirements
 - California Division of Occupational Safety and Health (Cal/OSHA) permit requirements
 - Inspection
 - Access and egress
- **Fall Protection Program**
 - Evaluation of fall hazards
 - Protective devices
 - Training
- **Scaffolding/Ladder Safety Program**
 - Inspection of equipment
 - Load ratings
 - Safe operating parameters
 - Operator training
- **Crane and Material Handling Program**
 - Certified and licensed operators
 - Inspection of equipment
 - Load ratings
 - Safe operating parameters
 - Training
- **Hazardous Waste Program**
 - Evaluation of hazard

- Training
- Air monitoring
- Medical surveillance
- Health and Safety Plan preparation
- **Hot Work Safety Program**
 - Welding and cutting procedures
 - Acetylene and fuel gas safety procedures
 - Fire watch
 - Hot work permit
 - PPE
 - Training
- **Employee Exposure Monitoring Program**
 - Exposure evaluation
 - Monitoring requirements
 - Reporting of results
 - Medical surveillance
 - Training
- **Electrical Safety Program**
 - Grounding procedure
 - Overhead and underground utilities
 - Utility clearance
 - Assured Grounding Program/Ground Fault Circuit Interrupters
 - Training
- **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
- **Permit-required Confined-space Entry Program**
 - Air monitoring and ventilation requirements
 - Rescue procedures
 - LO/TO and blocking, blinding, and blanking requirements
 - Permit completion
 - Training

- **Hand and Portable Power Tool Safety Program**
 - Guarding and proper operation
 - Training
- **Powder-actuated Tool Safety Program**
 - Operator qualification
 - Inspection requirements
 - Repair requirements
 - Storage requirements
 - Training
- **Housekeeping and Material Handling and Storage Program**
 - Storage requirements
 - Walkways and work surfaces
 - Equipment handling requirements
 - Training
- **Hearing Conservation Program**
 - Identifying high-noise environments
 - Exposure monitoring
 - Medical surveillance requirements
 - Hearing-protective devices
 - Training
- **Back Injury Prevention Program**
 - Proper lifting and material handling procedures
 - Training
- **Hazard Communication Program**
 - Labeling requirements
 - Storage and handling
 - Safety data sheets
 - Chemical inventory
 - Training
- **Respiratory Protection Program**
 - Selection and use
 - Storage
 - Fit testing
 - Medical requirements
 - Inspection and repair
 - Training

- **Heat and Cold Stress Monitoring and Control Program**
 - Monitoring requirements
 - Prevention and control

4.16.1.3.2 Operations Health and Safety Program

Upon completion of construction and commencement of operations, the construction Health and Safety Plan will transition into an operation-oriented program reflecting the hazards and controls necessary during operation. The following outline sets forth the topics that will be included in the Operations Health and Safety Program:

- **Injury and Illness Prevention Program**
 - 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)
- **First Aid, CPR, and Automated External Defibrillator**
 - General requirements
 - Written program
 - Training
 - Maintenance
- **Fire Protection and Prevention Program**
 - 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

- **Emergency Action Program/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
 - 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 Program**
 - 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
- **Operation Safety Program**
 - Motor Vehicle and Heavy Equipment Safety Program
 - Operation and maintenance of vehicles
 - Inspection
 - PPE
 - Training
- **Forklift Operation Program**
 - Trained and certified operators
 - Fueling operations
 - Safe operating parameters
 - Training

- **Excavation/Trenching Program**
 - Shoring, sloping, and benching requirements
 - Cal/OSHA permit requirements
 - Inspection
 - Air monitoring
 - Access and egress
- **Fall Protection Program**
 - Evaluation of fall hazards
 - Protection devices
 - Training
- **Scaffolding/Ladder Safety Program**
 - Construction and inspection of equipment
 - Proper use
 - Training
- **Articulating Boom Platforms Program**
 - Inspection of equipment
 - Load ratings
 - Safe operating parameters
 - Operator training
- **Hot Work Safety Program**
 - Welding and cutting procedures
 - Acetylene and fuel gas safety
 - Fire Watch
 - Hot work permit
 - PPE
 - Training
- **Workplace Ergonomics Program**
 - Identification of personnel at risk
 - Evaluation of personnel
 - Workplace and job activity modifications
 - Training
- **Employee Exposure Monitoring Program**
 - Exposure evaluation
 - Monitoring requirements
 - Reporting of results
 - Medical surveillance
 - Training
 - Electrical Safety Program

- Grounding procedure
- Overhead and underground utilities
- Utility clearance
- Training
- High Voltage Switching
- **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
- **Permit-required Confined-space Entry Program**
 - Air monitoring and ventilation requirements
 - Rescue procedures
 - LO/TO and blocking, blinding, and blanking requirements
 - Permit completion
 - Training
- **Hand and Portable Power Tool Safety Program**
 - Guarding and proper operation
 - Training
- **Housekeeping and Material Handling and Storage Program**
 - Storage requirements
 - Walkways and work surfaces
 - Equipment handling requirements
 - Training
- **Hearing Conservation Program**
 - Identifying high-noise environments
 - Exposure monitoring
 - Medical surveillance requirements
 - Hearing-protective devices
 - Training
- **Back Injury Prevention Program**
 - Proper lifting and material-handling procedures
 - Training
- **Hazard Communication Program**
 - Labeling requirements
 - Storage and handling
 - Safety data sheets

- Chemical inventory
- Training
- **Respiratory Protection Program**
 - Selection and use
 - Storage
 - Fit testing
 - Medical requirements
 - Inspection and repair
 - Training
- **Heat and Cold Stress Monitoring and Control Program**
 - Monitoring requirements
 - Prevention and control
- **Safe Driving Program**
 - Inspection and Maintenance
 - Training

4.16.1.3.3 Safety Training

To ensure that employees recognize and understand how to protect themselves from potential hazards, comprehensive training programs for construction and operation will be implemented as indicated in Tables 4.16-3 and 4.16-4. Each of the safety procedures developed to control and mitigate potential site hazards will require some form of training. Training will be delivered in a variety of ways depending on the requirements of Cal/OSHA standards, the complexity of the topic, the characteristics of the workforce, and the degree of risk associated with each of the identified hazards.

Tables 4.16-3 and 4.16-4 summarize the safety training programs that will be provided to construction and operations personnel, respectively.

Table 4.16-3. Construction Training Program

Training Course	Target Employees
Injury and Illness Prevention Training	All
Emergency Action Program/Plan	All
PPE Training	All
Motor Vehicle and Heavy Equipment Safety Training	Employees working on, near, or with heavy equipment or vehicles
Forklift Operation Training	Employees operating forklifts
Excavation/Trenching Safety Training	Employees involved with trenching or excavation
Fall Protection Training	Employees working at heights greater than 6 feet required to use fall protection
Scaffolding/Ladder Safety Training	Employees required to erect or use scaffolding
Crane Safety Training	Employees supervising or performing crane operations
Fire Protection and Prevention Training	Employees responsible for the handling and storage of flammable or combustible liquids or gases

Table 4.16-3. Construction Training Program

Training Course	Target Employees
Hazard Communication Training	Employees handling or working with hazardous materials
Hazardous Waste	Employees handling or excavating hazardous waste
Hot Work Safety Training	Employees performing hot work
Electrical Safety 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	Employees required to supervise or perform confined-space entry activities
Hand and Portable Power Tool Safety Training	Employees who will be operating hand and portable power tools
Powder-actuated Tool Safety Training	Employees who will be operating powder-actuated tools
Heat Stress and Cold Stress Safety Training	Employees who are exposed to temperature extremes
Hearing Conservation Training	All
Back Injury Prevention Training	All
Safe Driving Training	Employees supervising or driving motor vehicles
Respiratory Protection Training	All employees required to wear respiratory protection
Fire Protection and Prevention Training	All
First Aid, CPR, and Automated External Defibrillator	All
Worker Exposure Awareness Training	All
Worker Environmental Awareness Training	All

Table 4.16-4. Operations Training Program

Training Course	Target Employees
Injury and Illness Prevention Training	All
Emergency Action Plan	All
PPE Training	All
Excavation/Trenching Safety training	Employees involved with trenching or excavation
Scaffolding/Ladder Safety Training	Employees required to erect or use scaffolding
Fall Protection Training	Employees required to use fall protection
Forklift Operator Training	Employees operating forklifts
Crane Safety Training	Employees supervising or performing crane operations
Workplace Ergonomics	Employees performing repetitive activities
Fire Protection and Prevention Training	Employees responsible for the handling and storage of batteries or flammable or combustible liquids or gasses
Hot Work Safety Training	Employees performing hot work
Electrical Safety Training	Employees performing LO/TO or required to work on electrical systems and equipment
Permit-required Confined-space Entry	Employees required to supervise or perform confined-space entry
Hand and Portable Power Tool Safety Training	Employees operating hand and portable power tools

Table 4.16-4. Operations Training Program

Training Course	Target Employees
Heat Stress and Cold Stress Safety Training	Employees exposed to temperature extremes
Hearing Conservation Training	All
Back Injury Prevention Training	All
Safe Driving Training	Employees Supervising or driving motor vehicles
Hazard Communication Training	Employees handling or working around hazardous materials
Respiratory Protection Program	All employees required to wear respiratory protection
Fire Protection and Prevention Training	All
First Aid, CPR, and Automated External Defibrillator	All
Worker Exposure Awareness Training	All
Worker Environmental Awareness Training	All

4.16.1.4 Fire Protection

In addition to this Fire Protection Section related to worker health and safety, additional Fire Prevention actions will be taken as discussed herein at Section 4.17 - Wildfire and Fire Prevention. The applicant will prepare a detailed Hazard Mitigation Analysis and Emergency Response Plan, consistent with SB 38, and in coordination with local public safety agencies, and will include annual training and coordination. (See herein at Section 4.17)

The fire suppression system (FSS) within the BESS units is composed of smoke detectors, gas detectors, and aerosols, which serve the primary purpose of preventing fire spread in time should any open flame or gas signal appear in the battery system.

Fire suppression at the site will incorporate facilities designed in compliance with California Fire Code (CFC). The BESS will consist of NFPA 855 Standard compliant, and UL certified systems. These systems include built-in failsafe and cooling systems designed to prevent thermal runaway and the spread of fire. In addition to fire suppression, a fire protection system will be installed to automatically shut down any affected battery storage components and prevent the spread of the fire to other battery storage modules.

A fire wall will be installed around the perimeter of the development area for fire protection purposes – both to prevent wildfire from impacting the site and to reduce the chance of an on-site fire from escaping beyond the property.

Based on an evaluation of the proposed Project and the fire environment at the Project location, the following elements will be incorporated into the Project to address fire protection.

- Project to be compliant with 2022 CFC 1206, Electrical Energy Storage Systems
- Project to be compliant with OCFCA Guideline G-10, Stationary Storage Battery Systems (Stationary Lead Acid Battery Systems)
- Fire suppression systems inside each container as proposed (NFPA 855 Standard compliant)
- 20-foot fuel modification zone (FMZ) – entire area within walls to be void of vegetative fuel – gravel or similar surface

- 10-foot FMZ – vegetation maintenance area around outside perimeter of wall
- 10-foot-tall perimeter precast, decorative concrete walls to OCFA satisfaction
- Landscaped areas to include fire-resistant landscaping consistent with fuel modification zone requirements
- Maintain FMZs twice-yearly or more as needed
- 20-foot wide access roads per OCFA standards
- Hydrants located per OCFA standards

The closest fire station is Orange County Fire Authority Station No. 9 located at 9 Shops Boulevard in Mission Viejo, CA. Station No. 9 is 1.66 miles northwest of site and will provide first response to fire at the BESS site. Unless specified by local agencies, the Fire Station No. 9 will be contacted in the event of a fire or emergency spill.

4.16.2 Laws, Ordinances, Regulations, and Standards

The construction and operation of the BESS will be conducted in accordance with all applicable laws, ordinances, regulations, and standards (LORS). Table 4.16-5 summarizes the federal, state, and local (Orange County) LORS relating to worker health and safety. Table 4.16-5 also provides a summary of the applicable national consensus standards.

Table 4.16-5. Laws, Ordinances, Regulations, and Standards

LORS	Requirements/ Applicability	Administering Agency
Federal		
Title 29 Code of Federal Regulations Part 1910	Contains the minimum occupational safety and health standards for general industry in the United States	OSHA
Title 29 Code of Federal Regulations Part 1926	Contains the minimum occupational safety and health standards for construction industry in the United States	OSHA
State		
California Occupational Safety and Health Act, 1970	Establishes minimum safety and health standards for construction and general industry operations in California	Cal/OSHA
Title 24, Part 3, California Electrical Code	Requirements for electrical safety, which include the Uniform Electrical Code, Title 24, Part 3	Cal/OSHA
Title 24, Part 9, Chapter 6, Section 608	California Fire Code requirements for stationary storage battery systems	Cal/OSHA
Health and Safety Code Sections 25500 through 25541	Requirements for the preparation of a Hazardous Material Business Plan that details emergency response plans for a hazardous materials emergency at the facility	Cal/OSHA
Local		
Specific hazardous material handling requirements	Hazardous materials used or stored shall conform to the Uniform Fire Code.	Orange County Health Care Agency Environmental Health Division / Orange County Fire Authority

Table 4.16-5. Laws, Ordinances, Regulations, and Standards

LORS	Requirements/ Applicability	Administering Agency
Hazardous Materials Business Plan	Orange County Environmental Health Division is the designated CUPA and is responsible for administering Hazardous Materials Business Plans.	Orange County Health Care Agency Environmental Health Division
OCFA Guideline G-10, Stationary Storage Battery Systems (Stationary Lead Acid Battery Systems)	The guideline outlines the requirements and regulations for stationary storage battery systems.	OCFA
National Standards		
National Fire Protection Association (NFPA) 855 Standard for the Installation of Stationary Energy Storage Systems	This standard provides the minimum requirements for mitigating the hazards associated with BESS.	NFPA

Notes: NFPA = National Fire Protection Association; CUPA = Certified Unified Program Agency; OSHA = Occupational Safety and Health Administration; OCFA = Orange County Fire Authority

4.16.3 Agencies and Agency Contacts

Applicable agency contacts for worker health and safety are shown in Table 4.16-6. A HMBP has been prepared and is included as Appendix 4.5A, however, approval of the HMBP from the Orange County Health Care Agency Environmental Health Division would be superseded by CEC approval of the Project under the opt-in program. In addition, the Project would be designed per OCFA requirements and standards for BESS, however, approval from the OCFA would also be superseded by CEC approval of the Project under the opt-in program.

Table 4.16-6. Permits and Agency Contacts

Issue/Approval	Agency Contact	Applicability
Worker Health and Safety	Cal/OSHA, Region 3, Santa Ana District Office Ujitha Perera, District Manager (714) 558-4451	Incident reporting
Hazardous Materials Business Plan (HMBP)*	Orange County Health Care Agency Environmental Health Division 1241 E Dyer Rd., #120, Santa Ana, California 92705 (714) 433-6000	Hazardous materials compliance
Plan Approval*	OCFA Planning and Development Services Section 1 Fire Authority Road, Building A, Irvine, California 92602 (714) 573-6100	Fire protection compliance

* Approval of the HMBP from the Orange County Health Care Agency Environmental Health Division would be superseded by CEC approval of the Project under the opt-in program. In addition, approval from the OCFA would also be superseded by CEC approval of the Project under the opt-in program.

4.16.4 Permits and Permit Schedule

There are no applicable permits or permit schedule for worker health and safety. Pending Project approval from the CEC, construction of the Project would commence.

4.16.5 References

"Cal/OSHA Enforcement Unit Regional and District Offices." State of California Department of Industrial Relations, www.dir.ca.gov/dosh/DistrictOffices.htm. Accessed 16 Mar. 2023.

"CUPA Hazardous Materials Disclosure & Business Emergency Plan." Orange County Health Care Agency, ohealthinfo.com/services-programs/environment-food-safety/hazardous-materials-waste/hazardous-material-disclosure. Accessed 16 Mar. 2023.

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