5.16 Worker Health and Safety

This section summarizes the worker health and safety issues that may be encountered during the construction and operation of the proposed Chula Vista Energy Upgrade Project (CVEUP). Because of the subject matter, this section follows a slightly different format than other sections in Section 5.0. Instead of a standard discussion of affected environment, followed by the project's environmental consequences and proposed mitigation measures for significant impacts, this section contains worker safety information, including the laws, ordinances, regulations and standards (LORS) that apply to this project. Section 5.16.1 is a brief description of the work environment and setting. Section 5.16.2 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 on site. Section 5.16.3 discusses the applicable LORS. Section 5.16.4 lists the regulatory agencies involved and key agency contacts. Section 5.16.5 presents permits required and the permitting schedules.

5.16.1 Setting

The CVEUP will consist of the installation and operation of two General Electric LM6000 combustion turbine generators (CTG). The facility will be located in the Chula Vista (City), San Diego County, California, on a 3.8-acre parcel. The project site is located in the City of Chula Vista's Main Street Industrial Corridor and within the City's Light Industrial zoning district. It will be operated for a period of 30 years or more.

5.16.2 Health and Safety Programs

5.16.2.1 Environmental Checklist

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

5.16.2.2 Hazard Analysis

Workers will be exposed to construction and plant operation safety hazards. A hazard analysis is included below to evaluate these hazards and assess control measures. The analysis identifies the hazards anticipated during construction and operation, and indicates which safety programs should be developed and implemented to mitigate and appropriately manage those hazards. The hazard analysis for construction activities is presented in Table 5.16-1; the hazard analysis prepared for plant operation is presented in Table 5.16-2. Because the types of hazards anticipated during plant construction and operation are similar, there is duplication between the tables.

Programs are overall plans that set forth the method or methods that will be followed to achieve particular health and safety objectives. For example, the Fire Protection and Prevention Program will describe what has to be done to protect against and prevent fires. This will include equipment required, such as alarm systems and firefighting equipment, and procedures to follow to protect against fires. The Emergency Action Program/Plan will describe escape procedures, rescue and medical procedures, alarm and communication

systems, and response procedures for every hazardous material that can migrate, such as ammonia. The programs or plans are set forth in written documents that are usually kept at specific locations within the facility.

Each program or plan will contain training requirements that are translated into detailed training courses. These courses are taught to plant construction and operating personnel, as needed. For example, all plant operating personnel will receive training in escape procedures under the Emergency Action Program/Plan, but only those working with flammables will receive training under the Fire Protection and Prevention Program.

Tables 5.16-1 and 5.16-2, which list construction and operation activities and associated hazards, also show (under the "Control" column) the program designed to reduce the occurrence of each hazard.

TABLE 5.16-1
Construction Hazard Analysis for the CVEUP

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
Trenching and excavation	Employee injury and property damage from the collapse of trenches and excavations or exposure to fumes or vapors which have collected in the trench/excavation	Excavation/Trenching Program
Working at elevated locations	Falls from the same level and elevated areas	Fall Prevention Program Scaffolding/Ladder Safety Program Articulating Boom Platforms Program
Use of cranes and derricks	Property damage from falling loads; employee injuries from falling loads; and injuries and property damage from contact with crane or derrick	Crane and Material Handling Program 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; Personal Protective Equipment (PPE) Program
Inspection and maintenance of temporary systems used during construction activities	Employee injury and property damage from contact with hazardous energy sources (electrical, thermal, mechanical, etc.)	Electrical Safety Program

TABLE 5.16-1
Construction Hazard Analysis for the CVEUP

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[b]	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
General construction activity	Employee injury/property damage from inadequate walking and work surfaces	Housekeeping and Material Handling and Storage Program
General construction activity	Employee exposure to occupational noise	Hearing Conservation Program PPE Program
General construction activity	Employee injury from improper lifting and carrying of materials and equipment	Back Injury Prevention Program
General construction activity	Employee injury to head, eye/face, hand, body, foot, and skin	PPE Program
General construction activity	Employee exposure to hazardous gases, vapors, dusts, and fumes	Hazard Communication Program; Respiratory Protection Program; PPE Program; Air Monitoring Program
General construction activity	Employee exposure to various hazards; reporting of hazardous conditions during construction	Injury and Illness Prevention Program
General construction activity	Heat and cold stress	Heat and Cold Stress Monitoring and Control Program
Construction and testing of high-pressure steam and air systems	Employee injury and property damage due to failure of pressurized system components or unexpected release of pressure	Pressure Vessel and Pipeline Safety Program; Electrical Safety Program

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

[b] Because neither construction nor operation of the CVEUP will involve contact with groundwater, there will be no contact with contaminated groundwater

TABLE 5.16-2
Operation Hazard Analysis for the CVEUP

Activity	Hazard*	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 operations	Same as heavy equipment	Forklift Operation Program
Trenching and excavation	Employee injury and property damage from the collapse of trenches and excavations	Excavation/Trenching Program
Working at elevated locations	Falls from the same level and elevated areas	Fall Protection Program; Scaffolding/Ladder Safety Program
Use of cranes or 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
Working with flammable and combustible liquids	Fire/spills	Fire Protection and Prevention Program
Working with hazardous materials	Employee injury due to ingestion, inhalation, dermal contact	Hazard Communication 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
Troubleshooting and maintenance of plant systems and general operational activities	Employee injury and property damage from contact with hazardous energy sources (electrical, thermal, mechanical, etc.)	Electrical Safety 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	Permit-Required; Confined-Space Entry Program
General plant operation activities	Employee injuries from hand and portable power tools	Hand and Portable Power Tool Safety Program; PPE Program
General plant operation activities	Employee injury and property damage from inadequate walking and work surfaces	Housekeeping and Material Handling and Storage Program
General plant operation activities	Employee overexposure to occupational noise	Hearing Conservation Program; PPE Program
General plant operation activities	Employee injury from improper lifting and carrying of materials and equipment	Back Injury Prevention Program

TABLE 5.16-2
Operation Hazard Analysis for the CVEUP

Activity	Hazard*	Control
General plant operation activities	Employee injury and property damage from unsafe driving	Safe Driving Program
General plant operation activities	Employee overexposure to hazardous gases, vapors, dusts, and fumes	Hazard Communication Program; Respiratory Protection Program; PPE Program; Employee Exposure Monitoring Program
General plant operation activities	Reporting and repair of hazardous conditions	Injury and Illness Prevention Program
General plant operation activities	Heat and cold stress	Heat and Cold Stress Monitoring and Control Program
General plant operation activities	Ergonomic injuries	Ergonomic Awareness Program
Maintenance and repair of high-pressure steam and air systems	Employee injury and property damage due to failure of pressurized system components or unexpected release of pressure	Pressure Vessel and Pipeline Safety Program; Electrical Safety Program
Ammonia storage	Ammonia release	Emergency Action Program/Plan; Risk Management Plan (RMP) (see Section 8.12)

* The hazard and hazard controls provided are generic to operational activities. This hazard analysis may have to be updated if plant operations change or new equipment is added that was not considered during this evaluation.

5.16.2.3 Training and Safety Programs

To protect the safety and health of workers during the construction and operation of the CVEUP, 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 sections contain information on the anticipated content of the health and safety programs.

5.16.2.3.1 Construction Health and Safety Program

The following construction safety programs will be developed and implemented during construction of the CVEUP as outlined in the following lists.

Injury and Illness Prevention Program

- Philosophy and safety commitment
- Safety leadership and responsibilities
- Accountability
- Specific core safety processes (see Construction Safety Programs later in this section)
- 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, 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

Personal Protective Equipment Program

- Personal protective devices
- Head protection
- Eye/face protection
- Body protection
- Hand protection
- Foot protection
- Skin protection
- Fall protection
- High-voltage protection
- Respiratory protection
- Hearing protection
- Hazard analysis
- Training

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
- Bomb threat response procedures
- Site assembly and emergency evacuation route procedures
- Natural disasters 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 Occupational Safety and Health Administration (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

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 (HSP) preparation

Hot Work Safety Program

- Welding and cutting 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
- Lock-out/tag-out (LO/TO) procedures
- Overhead and underground utilities
- Utility clearance
- Assured Grounding Program/GFCI's
- 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

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
- Material Safety Data Sheets (MSDS)
- 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

Pressure Vessel and Pipeline Safety Program

- Line-breaking program
- Equipment inspection and maintenance
- Blocking, bleeding, and blanking
- Training

5.16.2.3.2 Operation Health and Safety Program

Upon completion of construction and commencement of operations at CVEUP, the construction HSP will transition into an operations-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 Plant Operation Safety Program)
- Training and instruction

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 (Part of the Risk Management Plan)

- 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 rescue and medical duties
- Fire and emergency reporting procedures
- Alarm and communication system
- Personnel to contact for information on plan contents
- Response procedure for ammonia release
- Training requirements

Personal Protective Equipment 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 life lines for fall protection
- Protection for electric shock
- Medical services and first aid/bloodborne pathogens
- Respiratory protective equipment
- Hearing protection
- Training

Plant 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

Crane and Material Handling Program

- Certified and licensed operators
- Inspection of equipment
- Load ratings
- Safe operating parameters
- Training

Hot Work Safety Program

- Welding and cutting procedures
- 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
- LO/TO procedures
- Overhead and underground utilities
- Utility clearance
- 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

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
- MSDS
- 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

Pressure Vessel and Pipeline Safety Program

- Line-breaking policy
- Equipment inspection and maintenance
- Blocking, bleeding, and blanking
- Communication
- Training

Safe Driving Program

- Inspection and maintenance
- Training

5.16.2.3.3 Safety Training

To ensure that employees recognize and understand how to protect themselves from potential hazards during this project, comprehensive training programs for construction and operation will be implemented as indicated in Tables 5.16-3 and 5.16-4. Each of the safety procedures developed to control and mitigate potential site hazards will require some form of training. Training will be delivered in various 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 5.16-3 and 5.16-4 summarize the safety training programs that will be provided to construction and operations personnel, respectively.

TABLE 5.16-3
Construction Training Program for the CVEUP

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 or 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
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
Electrical Safety Training	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 that will be operating hand and portable power tools
Heat Stress and Cold Stress Safety Training	Employees that are exposed to temperature extremes
Hearing Conservation Training	All
Back Injury Prevention Training	All
Safe Driving Training	Employees supervising or driving motor vehicles
Pressure Vessel and Pipeline Safety Training	Employees supervising or working on pressurized systems or equipment
Respiratory Protection Training	All employees required to wear respiratory protection
Fire Protection and Prevention Training	All

TABLE 5.16-4
Operations Training Program for the CVEUP

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 flammable or combustible liquids or gasses
Hot Work Safety Training	Employees performing hot work
Electrical Safety Training	Employees performing LO/TO
Electrical Safety	Employees 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 that will be operating hand and portable power tools
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
Pressure Vessel and Pipeline Safety Training	Employees supervising or working on pressurized systems or equipment
Respiratory Protection Program	All employees required to wear respiratory protection
Fire Protection and Prevention Training	All
First Aid, CPR, and Automated External Defibrillator	All

5.16.2.4 Fire Protection

There are eight fire stations in the Chula Vista, California. Fire Station #5, located at 391 Oxford Street, Chula Vista, California 91911, is approximately 1.8 miles to the northwest of the project site and is the closest fire station to the project site. Approximate response time from Fire Station #5 to the project site would be 5 minutes.

5.16.3 Laws, Ordinances, Regulations, and Standards

CVEUP construction and operation will be conducted in accordance with all applicable LORS. Table 5.16-5 summarize, the federal, state and local (San Diego County) LORS relating to worker health and safety. Table 5.16-5 also provides a summary of the applicable national consensus standards.

TABLE 5.16.5
Laws, Ordinances, Regulations, and Standards for Worker Health and Safety

LORS	Requirements/Applicability	Administering Agency
Federal		
Title 29 CFR Part 1910	Contains the minimum occupational safety and health standards for general industry in the United States	OSHA
Title 29 CFR Part 1926	Contains the minimum occupational safety and health standards for the 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	
8 California Code of Regulations (CCR) 339	Requires list of hazardous chemicals relating to the Hazardous Substance Information and Training Act	Cal-OSHA
8 CCR 450	Addresses hazards associated with pressurized vessels	Cal-OSHA
8 CCR 750	Addresses hazards associated with high-pressure steam	Cal-OSHA
8 CCR 1509	Addresses requirements for construction, accident, and prevention plans	Cal-OSHA
8 CCR 1509, et seq., and 1684, et seq.	Addresses construction hazards, including head, hand, and foot injuries and noise and electrical shock	Cal-OSHA
8 CCR 1528, et seq., and 3380, et seq.	Requirements for PPE	Cal-OSHA
8 CCR 1597, et seq., and 1590, et seq.	Requirements addressing the hazards associated with traffic accidents and earth-moving	Cal-OSHA
8 CCR 1604, et seq.	Requirements for construction hoist equipment	Cal-OSHA
8 CCR 1620, et seq., and 1723, et seq.	Addresses miscellaneous hazards	Cal-OSHA
8 CCR 1709, et seq.	Requirements for steel reinforcing, concrete pouring, and structural steel erection operations	Cal-OSHA
8 CCR 1920, et seq.	Requirements for fire protection systems	Cal-OSHA

TABLE 5.16.5
Laws, Ordinances, Regulations, and Standards for Worker Health and Safety

LORS	Requirements/Applicability	Administering Agency
8 CCR 2300, et seq., and 2320, et seq.	Requirements for addressing low-voltage electrical hazards	Cal-OSHA
8 CCR 2395, et seq.	Addresses electrical installation requirements	Cal-OSHA
8 CCR 2700, et seq.	Addresses high-voltage electrical hazards	Cal-OSHA
8 CCR 3200, et seq., and 5139, et seq.	Requirements for control of hazardous substances	Cal-OSHA
8 CCR 3203, et seq.	Requirements for operational accident prevention programs	Cal-OSHA
8 CCR 3270, et seq., and 3209, et seq.	Requirements for evacuation plans and procedures	Cal-OSHA
8 CCR 3301, et seq.	Requirements for addressing miscellaneous hazards, including hot pipes, hot surfaces, compressed air systems, relief valves, enclosed areas containing flammable or hazardous materials, rotation equipment, pipelines, and vehicle-loading dock operations	Cal-OSHA
8 CCR 3360, et seq.	Addresses requirements for sanitary conditions	Cal-OSHA
8 CCR 3511, et seq., and 3555, et seq.	Requirements for addressing hazards associated with stationary engines, compressors, and portable, pneumatic, and electrically powered tools	Cal-OSHA
8 CCR 3649, et seq., and 3700, et seq.	Requirements for addressing hazards associated with field vehicles	Cal-OSHA
8 CCR 3940, et seq.	Requirements for addressing hazards associated with power transmission, compressed air, and gas equipment	Cal-OSHA
8 CCR 5109, et seq.	Requirements for addressing construction accident and prevention programs	Cal-OSHA
8 CCR 5110, et seq.	Requirements for the implementation of an ergonomics program	Cal-OSHA
8 CCR 5139, et seq.	Requirements for addressing hazards associated with welding, sandblasting, grinding, and spray-coating	Cal-OSHA
8 CCR 5150, et seq.	Requirements for confined space entry	Cal-OSHA
8 CCR 5155, et seq.	Requirements for use of respirators and for controlling employee exposure to airborne contaminants	Cal-OSHA
8 CCR 5160, et seq.	Requirements for addressing hot, flammable, poisonous, corrosive, and irritant substances	Cal-OSHA
8 CCR 5192, et seq.	Requirements for conducting emergency response operations	Cal-OSHA
8 CCR 5193, et seq.	Requirements for controlling employee exposure to blood borne pathogens associated with exposure to raw sewage water and body fluids associated with first aid/CPR duties	Cal-OSHA
8 CCR 5194, et seq.	Requirements for employee exposure to dusts, fumes, mists, vapors, and gases	Cal-OSHA

TABLE 5.16.5
Laws, Ordinances, Regulations, and Standards for Worker Health and Safety

LORS	Requirements/Applicability	Administering Agency
8 CCR 5405, et seq.; 5426, et seq.; 5465, et seq.; 5500, et seq.; 5521, et seq.; 5545, et seq.; 5554, et seq.; 5565, et seq.; 5583, et seq.; and 5606, et seq.	Requirements for flammable liquids, gases, and vapors	Cal-OSHA
8 CCR 5583, et seq.	Requirements for design, construction, and installation of venting, diking, valving, and supports	Cal-OSHA
8 CCR 6150, et seq.; 6151, et seq.; 6165, et seq.; 6170, et seq.; and 6175, et seq.	Fire protection requirements	Cal-OSHA
Title 24, Part 3, California Electrical Code	The Cal/OSHA electrical safety regulations incorporate the requirements of the Uniform Electrical Code located in Title 24, Part 3	Cal-OSHA
8 CCR, Part 6	Provides health and safety requirements for working with tanks and boilers	Cal-OSHA
Health and Safety Code Section 25531, et seq.	Requires that every new or modified facility that handles, treats, stores, or disposes of more than the threshold quantity of any of the listed regulated materials prepare and maintain an RMP	Cal-OSHA
Health and Safety Code Sections 25500 through 25541	Requires the preparation of a Hazardous Material Business Plan (HMBP) that details emergency response plans for a hazardous materials emergency at the facility	Cal-OSHA
Local		
Specific hazardous material handling requirements	Provides response agencies with necessary information to address emergencies	Chula Vista Fire Department
Emergency Response Plan	Allows response agency to integrate CVEUP emergency response activities into any response actions	Chula Vista Fire Department
Business Plan	Provides response agency with overview of CVEUP purpose and operations	Chula Vista Fire Department
RMP (Certified Unified Program Agency [CUPA], administered by the County)	Provides response agency with detailed review of risks and hazards located at CVEUP and mitigation implemented to control risks or hazards	Chula Vista Fire Department
National Standards		
Uniform Fire Code, Article 80	Addresses the prevention, control, and mitigation of dangerous conditions related to storage, dispensing, use, and handling of hazardous materials and information needed by emergency response personnel	Chula Vista Fire Department

TABLE 5.16.5
Laws, Ordinances, Regulations, and Standards for Worker Health and Safety

LORS	Requirements/Applicability	Administering Agency
National Fire Protection Association (NFPA) 10, Standard for Portable Fire Extinguishers	Requirements for selection, placement, inspection, maintenance, and employee training for portable fire extinguishers	Chula Vista Fire Department
NFPA 11, Standard for Low-Expansion Foam and Combined Agent Systems	Requirements for installation and use of low-expansion foam and combined-agent systems	Chula Vista Fire Department
NFPA 11A, Standard for Medium- and High-Expansion Foam Systems	Requirements for installation and use of medium- and high-expansion foam systems	Chula Vista Fire Department
NFPA 12, Standard on Carbon Dioxide Extinguishing Systems	Requirements for installation and use of carbon dioxide extinguishing systems	Chula Vista Fire Department
NFPA 13, Standard for Installation of Sprinkler Systems	Guidelines for selection and installation of fire sprinkler systems	Chula Vista Fire Department
NFPA 13A, Recommended Practice for the Inspection, Testing, and Maintenance of Sprinkler Systems	Guidance for inspection, testing, and maintenance of sprinkler systems	Chula Vista Fire Department
NFPA 14, Standard for the Installation of Standpipe and Hose Systems	Guidelines for selection and installation of standpipe and hose systems	Chula Vista Fire Department
NFPA 15, Standard for Water Spray Fixed Systems	Guidelines for selection and installation of water spray fixed systems	Chula Vista Fire Department
NFPA 17, Standard for Dry Chemical Extinguishing Systems	Guidance for selection and use of dry chemical extinguishing systems	Chula Vista Fire Department
NFPA 20, Standard for the Installation of Centrifugal Fire Pumps	Guidance for selection and installation of centrifugal fire pumps	Chula Vista Fire Department
NFPA 22, Standard for Water Tanks for Private Fire Protection	Requirements for water tanks for private fire protection	Chula Vista Fire Department
NFPA 24, Standard for the Installation of Private Fire Service Mains and Their Appurtenances	Requirements for private fire service mains and their appurtenances	Chula Vista Fire Department

TABLE 5.16.5
Laws, Ordinances, Regulations, and Standards for Worker Health and Safety

LORS	Requirements/Applicability	Administering Agency
NFPA 26, Recommended Practice for the Supervision of Valves Controlling Water Supplies	Supervision guidance for valves controlling water supplies	Chula Vista Fire Department
NFPA 30, Flammable and Combustible Liquid Code	Requirements for storage and use of flammable and combustible liquids	Chula Vista Fire Department
NFPA 37, Standard for the Installation and Use of Stationary Combustion Engines and Gas Turbines	Fire protection requirements for installation and use of combustion engines and gas turbines	Chula Vista Fire Department
NFPA 50A, Standard for Gaseous Hydrogen Systems at Consumer Sites	Fire protection requirements for hydrogen systems	Chula Vista Fire Department
NFPA 54, National Fuel Gas Code	Fire protection requirements for use of fuel gases	Chula Vista Fire Department
NFPA 59A, Standard for the Storage and Handling of Liquefied Petroleum Gases	Requirements for storage and handling of liquefied petroleum gases	Chula Vista Fire Department
NFPA 68, Guide for Explosion Venting	Guidance in design of facilities for explosion venting	Chula Vista Fire Department
NFPA 70, National Electric Code	Guidance on safe selection and design, installation, maintenance, and construction of electrical systems	Chula Vista Fire Department
NFPA 70B, Recommended Practice for Electrical Equipment Maintenance	Guidance on electrical equipment maintenance	Chula Vista Fire Department
NFPA 70E, Standard for Electrical Safety Requirements for Employee Workplaces	Employee safety requirements for working with electrical equipment	Chula Vista Fire Department
NFPA 71, Standard for the Installation, Maintenance, and Use of Central Station Signaling Systems	Requirements for installation, maintenance, and use of central station signaling systems	Chula Vista Fire Department
NFPA 72A, Standard for the Installation, Maintenance and Use of Local Protective Signaling Systems for Guard's Tour, Fire Alarm and Supervisory Service	Requirements for installation, maintenance, and use of local protective signaling systems	Chula Vista Fire Department

TABLE 5.16.5
Laws, Ordinances, Regulations, and Standards for Worker Health and Safety

LORS	Requirements/Applicability	Administering Agency
NFPA 72E, Standard on Automatic Fire Detection	Requirements for automatic fire detection	Chula Vista Fire Department
NFPA 72F, Standard for the Installation, Maintenance and Use of Emergency Voice/Alarm of Communication Systems	Requirements for installation, maintenance, and use of emergency and alarm communications systems	Chula Vista Fire Department
NFPA 72H, Guide for Testing Procedures for Local, Auxiliary, Remote Station and Proprietary Protective Signaling Systems	Testing procedures for types of signaling systems anticipated for facility	Chula Vista Fire Department
NFPA 75, Standard for the Protection of Electronic Computer/Data Processing Equipment	Requirements for fire protection systems used to protect computer systems	Chula Vista Fire Department
NFPA 78, Lightning Protection Code	Lightning protection requirements	Chula Vista Fire Department
NFPA 80, Standard for Fire Doors and Windows	Requirements for fire doors and windows	Chula Vista Fire Department
NFPA 90A, Standard for the Installation of Air Conditioning and Ventilating Systems	Requirements for installation of air conditioning and ventilating systems	Chula Vista Fire Department
NFPA 101, Code for Safety to Life from Fire in Buildings and Structures	Requirements for design of means of exiting the facility	Chula Vista Fire Department
NFPA 291, Recommended Practice for Fire Flow Testing and Marking of Hydrants	Guidelines for testing and marking of fire hydrants	Chula Vista Fire Department
NFPA 850, Recommended Practice for Fire Protection for Fossil Fuel Steam Electric Generating Plants	Requirements for fire protection in fossil-fuel steam electric generating plants	Chula Vista Fire Department
NFPA 1961, Standard for Fire Hose	Specifications for fire hoses	Chula Vista Fire Department
NFPA 1962, Standard for the Care, Maintenance, and Use of Fire Hose Including Connections and Nozzles	Requirements for care, maintenance, and use of fire hoses	Chula Vista Fire Department

TABLE 5.16.5
Laws, Ordinances, Regulations, and Standards for Worker Health and Safety

LORS	Requirements/Applicability	Administering Agency
NFPA 1963, Standard for Screw Threads and Gaskets for Fire Hose Connections	Specifications for fire hose connections	Chula Vista Fire Department
American National Standards Institute/American Society of Mechanical Engineers (ANSI/ASME), Boiler and Pressure Vessel Code	Specifications and requirements for pressure vessels	N/A
ANSI, B31.2, Fuel Gas Piping	Specifications and requirements for fuel gas piping	N/A

5.16.4 Involved Agencies and Agency Contacts

Several agencies are involved to ensure protection of worker health and safety. Agency contacts relative to worker health and safety and fire are shown in Table 5.16-7.

TABLE 5.16-7
Agency Contacts

Issue	Agency	Contact
Hazardous Waste Land and Water Quality Community Health	San Diego Environmental Health Department	1255 Imperial Ave, 3rd Floor San Diego, CA 92101 (619) 338-2222 FAX: (619) 338-2377
Fire Response	Chula Vista Fire Department	Fire Station #5 391 Oxford Street Chula Vista, CA (619) 691-5055
Worker Health and Safety	Cal-OSHA, San Diego	7575 Metropolitan Drive, Ste. 207 San Diego, CA 92108 (619) 767-2280

5.16.5 Permits Required and Permit Schedule

Table 5.16-8 lists applicable permits related to the protection of worker health and safety for CVEUP certification. The activities covered and application requirements to obtain each permit are provided.

All permits noted in Table 5.16-8 may be obtained from any Cal-OSHA district or field office as needed. Notification requirements are listed as 24 hours because the permits may be

required at several points in the construction of the plant or during operations; no specific permitting schedule is provided.

TABLE 5.16-8
Permits and Permit Schedule

Permit	Agency Contact	Schedule
Trenching and excavation permit	Any Cal-OSHA district or field office	Submit completed permit application to any Cal-OSHA district or field office prior to commencing construction
Permit to erect a fixed tower crane	Any Cal-OSHA district or field office	Submit completed permit application to any Cal-OSHA district or field office at least 24 hours prior to initiation of activity
Pressure vessel permit	Any Cal-OSHA district or field office	Submit completed permit application to any Cal-OSHA district or field office prior to commencing construction