

5.16 Worker Health and Safety

This section analyzes the worker health and safety issues that may be encountered during construction and operation of the Redondo Beach Energy Project (RBEP). Because of the subject matter, this section follows a slightly different format than other sections in Section 5.0 of this AFC. 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 the construction and operation of RBEP, and the demolition of existing units at the Redondo Beach Generating Station. Section 5.16.1 is a brief description of the construction and demolition, and the operation work environment and setting of RBEP. Section 5.16.2 describes the project's fuel handling system. Section 5.16.3 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 5.16.4 discusses the applicable LORS. Section 5.16.5 lists the regulatory agencies involved and key agency contacts, and Section 5.16.6 presents permits required and the permitting schedules. Section 5.16.7 provides the references used to prepare this section.

AES Southland Development, LLC (AES-SLD) considers worker safety to be its number one priority. A cornerstone policy for the delivery of all of AES-SLD's global projects and operations provides all workers, whether they are employees or contractors, with the right and responsibility to stop work on any job if unsafe conditions or behaviors are observed during the construction or operational phase of a project. RBEP will adhere to AES-SLD's corporate commitment and policies for worker health and safety, and safe work plans will be developed prior to the commencement of construction, demolition, and operational activities.

5.16.1 Setting

RBEP is a 496-megawatt¹ natural-gas-fired power plant, consisting of one 3-on-1 combined-cycle gas turbine power block. The power block includes three combustion turbine generators (CTG), three supplemental-fired heat recovery steam generators (HRSG), one steam turbine generator, an air-cooled condenser, and related ancillary equipment. RBEP will be constructed entirely within the existing approximately 50-acre Redondo Beach Generating Station site in Redondo Beach, California. The project will use the existing onsite potable water, natural gas, stormwater, process wastewater, and sanitary pipelines and electrical transmission facilities. No offsite linear developments are proposed as part of the project.

RBEP will use potable water, provided by the California Water Service Company, for construction water and for operational process and sanitary uses. During RBEP operation, stormwater and process wastewater will be discharged to a retention basin and then ultimately to the Pacific Ocean via an existing permitted outfall. Sanitary wastewater will be conveyed to the Los Angeles County Sanitation District via the existing City of Redondo Beach sewer connection. A new onsite 230-kilovolt (kV) transmission interconnection will connect the RBEP power block to the existing onsite Southern California Edison (SCE) 230-kV switchyard.

Construction and demolition activities at the project site are anticipated to last 60 months, from January 2016 until December 2020. The first activities to occur onsite will be the dismantling and partial removal of existing Units 1–4. The major generating equipment including steam turbines, generators, boilers, and duct work will be removed, leaving the administration building and western portion of the building that houses Units 1–4 intact. These buildings will be left standing temporarily to provide screening between the construction site of the new power block and Harbor Drive. Construction of the new power block will begin in the first quarter of 2017 and continue through to the end of the second quarter 2019, when it will be ready for commercial operation. Although operational, construction will continue through 2019 including construction of the new control building and the relocation of the Wyland Whaling Wall. The existing Units 5–8 and auxiliary boiler No. 17 will remain in service until the second quarter of 2018. Units 5–8 and auxiliary boiler No. 17 will be demolished starting the first quarter of 2019 through the fourth quarter of 2020. During the demolition and removal of Units 5–8, the Wyland

¹ Referenced to site ambient average temperature (SAAT) conditions of 63.3°F dry bulb and 58.5°F wet bulb temperature.

Whaling Wall will be dismantled and moved to a new location directly in front of the new power block. Finally, the remaining buildings and structures left standing will be demolished and removed by the end of 2020.

All laydown and construction parking areas will be located within the existing Redondo Beach Generating Station fence line, as shown in Figure 2.1-1. Approximately 17 acres onsite will be used for construction laydown and parking. All construction equipment and supplies will be trucked directly to the site.

5.16.2 Fuel Handling System

The RBEP CTGs will only combust natural gas. Natural gas will be delivered to the site via the existing Southern California Gas Company (SoCalGas) high-pressure natural gas pipeline that enters the Redondo Beach Generating Station on the east side of the facility near the existing SCE 230-kV switchyard. Within the project boundaries a valve, piping, and metering station is operated and maintained by SoCalGas from which gas is routed to the onsite combustion sources. The high-pressure natural gas pipeline is a 20-inch-diameter line that operates at a nominal 145 pounds per square inch (psi). The existing natural gas metering station at the Redondo Beach Generating Station will remain in service for continued operation of Units 5 through 8 during RBEP construction, and continue to be used for RBEP. No new metering station will be built for RBEP. The natural gas will flow from the metering station to a gas pressure control station, and gas scrubber/filtering equipment. Prior to being supplied to the CTGs, the natural gas will be compressed, scrubbed, and filtered consistent with the turbine vendor recommendations. The natural gas used in the HRSG duct burner will not require gas compression, but will require filtering and scrubbing performed at the gas metering station. The natural gas for the building heating systems will flow through the metering station and gas pressure control station, and will not require compression, or filtering.

5.16.3 Health and Safety Programs

5.16.3.1 Environmental Checklist

Health and safety impacts analyzed in this AFC are evaluated with respect to the California Environmental Quality Act (CEQA) checklist. However, the CEQA checklist does not have specific questions for worker health and safety. The analysis below, however, is consistent with the analysis routinely conducted by CEC staff related to worker health and safety. Related analyses are also included in Section 5.5, Hazardous Materials Management, and Section 5.7, Noise.

5.16.3.2 Hazard Analysis

Workers will be exposed to RBEP construction/demolition and 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/demolition, and operation, and indicates which safety programs should be developed and implemented to mitigate and appropriately manage those hazards. The hazard analysis for construction/demolition 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 construction/ demolition and operation activities 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 in the facility.

Each program or plan will contain minimum training requirements that are translated into detailed training courses for plant construction/ demolition and operating personnel and will adhere to the Project Owner's corporate safety policy and all applicable Occupation Safety and Health Administration (OSHA) and California Occupational Safety and Health Administration (Cal/OSHA) regulations. Training will be provided to construction/

demolition 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 list construction/demolition and operation activities and associated hazards, and includes in the "Control" column the program designed to reduce the occurrence of each hazard.

TABLE 5.16-1
Hazard Analysis for RBEP Construction/Demolition Activities

| 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 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 that 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, Fire Protection and Prevention Program; Hexavalent Chromium 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; Lock-Out/Tag-Out Program |
| Working on electrical equipment and systems | Employee contact with live electricity and energized equipment | Electrical Safety Program; PPE Program |
| Exposure to asbestos and lead | Personnel who are working with or have the potential to be exposed to asbestos and lead during demolition of existing facility | Asbestos and Lead 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/demolition | 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 |
| General construction activity | Employee injury/property damage from inadequate walking and work surfaces | Housekeeping and Material Handling and Storage Program |

TABLE 5.16-1
Hazard Analysis for RBEP Construction/Demolition Activities

| Activity | Hazard* | Control |
|---|---|---|
| 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; Lock-Out/Tag-Out Program |

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

TABLE 5.16-2
Hazard Analysis for RBEP Operation Activities

| 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; Hexavalent Chromium Program |

TABLE 5.16-2
Hazard Analysis for RBEP Operation Activities

| Activity | Hazard* | Control |
|---|--|---|
| Transformer Fires | Employee injury and property damage from fire; | A transformer fire protection plan will be included within the 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; Lock-Out/Tag-Out 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 |
| 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; Lock-Out/Tag-Out Program |
| Ammonia storage | Ammonia release | Emergency Action Program/Plan; Risk Management Plan (RMP) |

*The hazard and hazard controls provided are generic to operational activities. Task specific hazard analysis is required for all medium and high risk work activities in the operational phase.

5.16.3.3 Training and Safety Programs

To protect the safety and health of workers during RBEP construction and operation, and demolition of the Redondo Beach Generating Station facilities, health and safety programs designed to mitigate hazards and comply with applicable regulations will be implemented. Periodic internal 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. A comprehensive Environmental, Health and Safety audit will be conducted on an annual basis during the construction phase and every 3 years during RBEP operation.

Specific training program content for all construction/demolition employees will be required of all construction/demolition contractors. All construction/demolition workers will be required to attend an RBEP site safety orientation prior to being allowed to work at the site and are required to follow all federal, state and local employee safety rules and regulations and RBEP safety programs while on site. Construction/demolition worker safety related certifications and licenses will be verified during the pre-qualification process using PICS² and/or a RBEP internal validation process.

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

5.16.3.3.1 Construction Health and Safety Program The following construction/demolition safety programs will be developed and implemented during construction/demolition of the RBEP 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
- Transformer fire protection and prevention
- Flammable and combustible liquid storage
- Dispensing and disposal of flammable liquids
- Service and refueling areas
- Training

Personal Protective Equipment 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

² PICS is a third-party contractor qualifying system for safety training, performance and work history.

- 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
- Bomb threat response procedures
- 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
- 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

Hexavalent Chromium Program

- Exposure determination
- Monitoring schedule requirements
- Reporting of results (employee notification)
- Recordkeeping
- Establish regulated areas
- Establish hygiene control areas
- Controls implementation
- Medical surveillance
- Training

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 (GFCIs)
- Training

Lock-out/Tag-Out Program

- Allocation of devices (locks, tags, and adaptors)
- Lock-out/tag-out sequencing

- Types/magnitudes of energy
- Types/locations of machines
- Verification
- Training

Permit-required Confined-space Entry Program

- Air monitoring and ventilation requirements
- Rescue procedures
- Lock-out/tag-out 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
- Material 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

- Training

Pressure Vessel and Pipeline Safety Program

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

5.16.3.3.2 Operation Health and Safety Program

Upon completion of construction and commencement of operations at RBEP, 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 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

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 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
- 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

Lock-out/Tag-Out Program

- Allocation of lock-out/tag-out devices (locks, tags, and adaptors)
- Machine specific lock-out/tag-out 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
- Lock-out/tag-out 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
- 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

5.16.3.3.3 Safety Training

To ensure that employees recognize and understand how to protect themselves from potential hazards during this project, comprehensive training programs for construction/demolition and operations personnel 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. Training for construction/demolition personnel will be prepared and conducted by the Engineering, Procurement, and Construction (EPC) contractor, and operational training will be prepared and conducted by the Property Owner.

Tables 5.16-3 and 5.16-4 summarizes the safety training programs that will be provided to construction/demolition personnel (prepared and conducted by the EPC contractor) and operations personnel (prepared and conducted by the Project Owner), respectively. Specific details regarding what will be included in the training are located in sections 5.16.3.3.1 and 5.16.3.3.2.

TABLE 5.16-3

RBEP Proposed Construction/Demolition Training Program (to be prepared and conducted by EPC contractor)

| 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 |
| Lock-out/Tag-out Training | Employees performing lock-out/tag-out or working on systems that require lock-out/tag-out 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 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 |
| 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 |
| Fire Protection and Prevention Training | All |

TABLE 5.16-3

RBEP Proposed Construction/Demolition Training Program (to be prepared and conducted by EPC contractor)

| Training Course | Target Employees |
|---|---|
| First Aid, CPR, and Automated External Defibrillator | All |
| Hexavalent Chromium Program | Employees handling or working with hazardous materials/waste containing hexavalent chromium |
| Articulating Boom Platforms Program | Employees supervising or performing articulating boom operations |
| Employee Exposure Monitoring Program | Employees handling or working with hazardous materials/waste |
| Housekeeping and Material Handling and Safety Program | All |

TABLE 5.16-4

RBEP Operations Training Program (to be prepared and conducted by Project Owner)

| 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 |
| Lock Out/Tag Out Training | Employees performing lock-out/tag-out activities |
| Electrical Safety Training | 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 | Qualified Electrical Employees and Affected Emergency Responders |
| Motor Vehicle and Heavy Equipment Safety Program | All |
| Articulating Boom Platforms Program | Employees supervising or performing articulating boom operations |
| Employee Exposure Monitoring Program | Employees handling or working with hazardous materials/waste |
| Housekeeping and Material Handling and Storage Program | All |

5.16.3.4 Fire Protection

The Redondo Beach Fire Department has three fire stations. The closest fire station to RBEP is Redondo Beach Fire Department's Station No. 3 at 280 Marina Way in Redondo Beach, California, 90277. The station is approximately 0.3 mile away and would provide the first response to a fire at the project site, with an approximate 2-minute response time 80 percent of the time. Mutual and automatic aid response would come from the other fire stations in the Redondo Beach Fire Department and, if necessary, from nearby Los Angeles County fire departments (Madrigal, 2012). AES-SLD has engaged the Redondo Beach Fire Department in discussions regarding the project's fire protection needs and the Redondo Beach Fire Department's ability to respond. RBEP's onsite fire suppression system is described in Section 2.0, Project Description, and Appendix 2D, Engineering Design Criteria.

5.16.4 Laws, Ordinances, Regulations, and Standards

RBEP construction/demolition and operation will be conducted in accordance with all applicable LORS.

Table 5.16-5 summarizes the federal, state, and local (Los Angeles County and Redondo Beach) 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 | AFC Section Explaining Conformance |
|--|--|--|------------------------------------|
| Federal | | | |
| Title 29 Code of Federal Regulations (CFR) Part 1910 | Contains the minimum occupational safety and health standards for general industry in the United States | Occupational Health and Safety Administration (OSHA) | Section 5.16.3 |
| Title 29 CFR Part 1926 | Contains the minimum occupational safety and health standards for the construction industry in the United States | OSHA | Section 5.16.3 |
| State | | | |
| California Occupational Safety and Health Act, 1970 | Establishes minimum safety and health standards for construction and general industry operations in California | Cal/OSHA | Section 5.16.3 |
| 8 California Code of Regulations (CCR) 339 | Requires list of hazardous chemicals relating to the Hazardous Substance Information and Training Act | Cal/OSHA | Section 5.16.3 |
| 8 CCR 450 | Addresses hazards associated with pressurized vessels | Cal/OSHA | Section 5.16.3 |
| 8 CCR 750 | Addresses hazards associated with high-pressure steam | Cal/OSHA | Section 5.16.3 |
| 8 CCR 1509 | Addresses requirements for construction, accident, and prevention plans | Cal/OSHA | Section 5.16.3 |
| 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 | Section 5.16.3 |
| 8 CCR 1528, et seq., and 3380, et seq. | Requirements for PPE | Cal/OSHA | Section 5.16.3 |
| 8 CCR 1532, and 5206 | Addresses Chromium IV (Hexavalent Chromium) | Cal/OSHA | Section 5.16.3 |
| 8 CCR 1597, et seq., and 1590, et seq. | Requirements addressing the hazards associated with traffic accidents and earth-moving | Cal/OSHA | Section 5.16.3 |

TABLE 5.16-5
Laws, Ordinances, Regulations, and Standards for Worker Health and Safety

| LORS | Requirements/Applicability | Administering Agency | AFC Section Explaining Conformance |
|--|---|----------------------|------------------------------------|
| 8 CCR 1604, et seq. | Requirements for construction hoist equipment | Cal/OSHA | Section 5.16.3 |
| 8 CCR 1620, et seq., and 1723, et seq. | Addresses miscellaneous hazards | Cal/OSHA | Section 5.16.3 |
| 8 CCR 1709, et seq. | Requirements for steel reinforcing, concrete pouring, and structural steel erection operations | Cal/OSHA | Section 5.16.3 |
| 8 CCR 1920, et seq. | Requirements for fire protection systems | Cal/OSHA | Section 5.16.3 |
| 8 CCR 2300, et seq., and 2320, et seq. | Requirements for addressing low-voltage electrical hazards | Cal/OSHA | Section 5.16.3 |
| 8 CCR 2395, et seq. | Addresses electrical installation requirements | Cal/OSHA | Section 5.16.3 |
| 8 CCR 2700, et seq. | Addresses high-voltage electrical hazards | Cal/OSHA | Section 5.16.3 |
| 8 CCR 3200, et seq., and 5139, et seq. | Requirements for control of hazardous substances | Cal/OSHA | Section 5.16.3 |
| 8 CCR 3203, et seq. | Requirements for operational accident prevention programs | Cal/OSHA | Section 5.16.3 |
| 8 CCR 3270, et seq., and 3209, et seq. | Requirements for evacuation plans and procedures | Cal/OSHA | Section 5.16.3 |
| 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 | Section 5.16.3 |
| 8 CCR 3360, et seq. | Addresses requirements for sanitary conditions | Cal/OSHA | Section 5.16.3 |
| 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 | Section 5.16.3 |
| 8 CCR 3649, et seq., and 3700, et seq. | Requirements for addressing hazards associated with field vehicles | Cal/OSHA | Section 5.16.3 |
| 8 CCR 3940, et seq. | Requirements for addressing hazards associated with power transmission, compressed air, and gas equipment | Cal/OSHA | Section 5.16.3 |
| 8 CCR 5109, et seq. | Requirements for addressing construction accident and prevention programs | Cal/OSHA | Section 5.16.3 |
| 8 CCR 5110, et seq. | Requirements for the implementation of an ergonomics program | Cal/OSHA | Section 5.16.3 |
| 8 CCR 5139, et seq. | Requirements for addressing hazards associated with welding, sandblasting, grinding, and spray-coating | Cal/OSHA | Section 5.16.3 |
| 8 CCR 5150, et seq. | Requirements for confined space entry | Cal/OSHA | Section 5.16.3 |

TABLE 5.16-5
Laws, Ordinances, Regulations, and Standards for Worker Health and Safety

| LORS | Requirements/Applicability | Administering Agency | AFC Section Explaining Conformance |
|--|---|------------------------------------|------------------------------------|
| 8 CCR 5155, et seq. | Requirements for use of respirators and for controlling employee exposure to airborne contaminants | Cal/OSHA | Section 5.16.3 |
| 8 CCR 5160, et seq. | Requirements for addressing hot, flammable, poisonous, corrosive, and irritant substances | Cal/OSHA | Section 5.16.3 |
| 8 CCR 5192, et seq. | Requirements for conducting emergency response operations | Cal/OSHA | Section 5.16.3 |
| 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 | Section 5.16.3 |
| 8 CCR 5194, et seq. | Requirements for employee exposure to dusts, fumes, mists, vapors, and gases | Cal/OSHA | Section 5.16.3 |
| 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 | Section 5.16.3 |
| 8 CCR 5583, et seq. | Requirements for design, construction, and installation of venting, diking, valving, and supports | Cal/OSHA | Section 5.16.3 |
| 8 CCR 6150, et seq.; 6151, et seq.; 6165, et seq.; 6170, et seq.; and 6175, et seq. | Fire protection requirements | Cal/OSHA | Section 5.16.3 |
| 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 | Section 5.16.3 |
| 8 CCR, Part 6 | Provides health and safety requirements for working with tanks and boilers | Cal/OSHA | Section 5.16.3 |
| 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 | Section 5.16.3 |
| 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 | Section 5.16.3 |
| Local | | | |
| Los Angeles County, Title 32, Section 100 | Adopts the 2010 California Fire Code, and enforcement by Los Angeles County Fire Department | Los Angeles County Fire Department | Section 5.16.3 |
| Redondo Beach Municipal Code, Title 3, Chapter 4, Article 1 | Adopts the 2010 California Fire Code, and enforcement by Redondo Beach Fire Department | Redondo Beach Fire Department | Section 5.16.3 |

TABLE 5.16-5
Laws, Ordinances, Regulations, and Standards for Worker Health and Safety

| LORS | Requirements/Applicability | Administering Agency | AFC Section Explaining Conformance |
|--|---|---|------------------------------------|
| Business Plan | Provides response agency with overview of RBEP purpose and operations | Certified Unified Program Agency, administered by the Redondo Beach Fire Department | Section 5.16.3 |
| 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 | Redondo Beach Fire Department | Section 5.16.3 |
| National Fire Protection Association (NFPA) 10, Standard for Portable Fire Extinguishers | Requirements for selection, placement, inspection, maintenance, and employee training for portable fire extinguishers | Redondo Beach Fire Department | Section 5.16.3 |
| NFPA 11, Standard for Low-Expansion Foam and Combined Agent Systems | Requirements for installation and use of low-expansion foam and combined-agent systems | Redondo Beach Fire Department | Section 5.16.3 |
| NFPA 11A, Standard for Medium- and High- Expansion Foam Systems | Requirements for installation and use of medium- and high-expansion foam systems | Redondo Beach Fire Department | Section 5.16.3 |
| NFPA 12, Standard on Carbon Dioxide Extinguishing Systems | Requirements for installation and use of carbon dioxide extinguishing systems | Redondo Beach Fire Department | Section 5.16.3 |
| NFPA 13, Standard for Installation of Sprinkler Systems | Guidelines for selection and installation of fire sprinkler systems | Redondo Beach Fire Department | Section 5.16.3 |
| NFPA 13A, Recommended Practice for the Inspection, Testing, and Maintenance of Sprinkler Systems | Guidance for inspection, testing, and maintenance of sprinkler systems | Redondo Beach Fire Department | Section 5.16.3 |
| NFPA 14, Standard for the Installation of Standpipe and Hose Systems | Guidelines for selection and installation of standpipe and hose systems | Redondo Beach Fire Department | Section 5.16.3 |
| NFPA 15, Standard for Water Spray Fixed Systems | Guidelines for selection and installation of water spray fixed systems | Redondo Beach Fire Department | Section 5.16.3 |
| NFPA 17, Standard for Dry Chemical Extinguishing Systems | Guidance for selection and use of dry chemical extinguishing systems | Redondo Beach Fire Department | Section 5.16.3 |
| NFPA 20, Standard for the Installation of Centrifugal Fire Pumps | Guidance for selection and installation of centrifugal fire pumps | Redondo Beach Fire Department | Section 5.16.3 |
| NFPA 22, Standard for Water Tanks for Private Fire Protection | Requirements for water tanks for private fire protection | Redondo Beach Fire Department | Section 5.16.3 |
| NFPA 24, Standard for the Installation of Private Fire Service Mains and Their Appurtenances | Requirements for private fire service mains and their appurtenances | Redondo Beach Fire Department | Section 5.16.3 |

TABLE 5.16-5
Laws, Ordinances, Regulations, and Standards for Worker Health and Safety

| LORS | Requirements/Applicability | Administering Agency | AFC Section Explaining Conformance |
|---|--|-------------------------------|---|
| NFPA 26, Recommended Practice for the Supervision of Valves Controlling Water Supplies | Supervision guidance for valves controlling water supplies | Redondo Beach Fire Department | Section 5.16.3 |
| NFPA 30, Flammable and Combustible Liquid Code | Requirements for storage and use of flammable and combustible liquids | Redondo Beach Fire Department | Section 5.16.3 |
| 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 | Redondo Beach Fire Department | Section 5.16.3 |
| NFPA 50A, Standard for Gaseous Hydrogen Systems at Consumer Sites | Fire protection requirements for hydrogen systems | Redondo Beach Fire Department | Section 5.16.3 |
| NFPA 54, National Fuel Gas Code | Fire protection requirements for use of fuel gases | Redondo Beach Fire Department | Section 5.16.3 |
| NFPA 59A, Standard for the Storage and Handling of Liquefied Petroleum Gases | Requirements for storage and handling of liquefied petroleum gases | Redondo Beach Fire Department | Section 5.16.3 |
| NFPA 68, Guide for Explosion Venting | Guidance in design of facilities for explosion venting | Redondo Beach Fire Department | Section 5.16.3 |
| NFPA 70, National Electric Code | Guidance on safe selection and design, installation, maintenance, and construction of electrical systems | Redondo Beach Fire Department | Section 5.16.3 |
| NFPA 70B, Recommended Practice for Electrical Equipment Maintenance | Guidance on electrical equipment maintenance | Redondo Beach Fire Department | Section 5.16.3 |
| NFPA 70E, Standard for Electrical Safety Requirements for Employee Workplaces | Employee safety requirements for working with electrical equipment | Redondo Beach Fire Department | Section 5.16.3 |
| 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 | Redondo Beach Fire Department | Section 5.16.3 |
| 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 | Redondo Beach Fire Department | Section 5.16.3 |
| NFPA 72E, Standard on Automatic Fire Detection | Requirements for automatic fire detection | Redondo Beach Fire Department | Section 5.16.3 |
| 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 | Redondo Beach Fire Department | Section 5.16.3 |

TABLE 5.16-5
Laws, Ordinances, Regulations, and Standards for Worker Health and Safety

| LORS | Requirements/Applicability | Administering Agency | AFC Section Explaining Conformance |
|---|--|-------------------------------|------------------------------------|
| 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 | Redondo Beach Fire Department | Section 5.16.3 |
| NFPA 75, Standard for the Protection of Electronic Computer/Data Processing Equipment | Requirements for fire protection systems used to protect computer systems | Redondo Beach Fire Department | Section 5.16.3 |
| NFPA 78, Lightning Protection Code | Lightning protection requirements | Redondo Beach Fire Department | Section 5.16.3 |
| NFPA 80, Standard for Fire Doors and Windows | Requirements for fire doors and windows | Redondo Beach Fire Department | Section 5.16.3 |
| NFPA 90A, Standard for the Installation of Air Conditioning and Ventilating Systems | Requirements for installation of air conditioning and ventilating systems | Redondo Beach Fire Department | Section 5.16.3 |
| NFPA 101, Code for Safety to Life from Fire in Buildings and Structures | Requirements for design of means of exiting the facility | Redondo Beach Fire Department | Section 5.16.3 |
| NFPA 291, Recommended Practice for Fire Flow Testing and Marking of Hydrants | Guidelines for testing and marking of fire hydrants | Redondo Beach Fire Department | Section 5.16.3 |
| 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 | Redondo Beach Fire Department | Section 5.16.3 |
| NFPA 1961, Standard for Fire Hose | Specifications for fire hoses | Redondo Beach Fire Department | Section 5.16.3 |
| 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 | Redondo Beach Fire Department | Section 5.16.3 |
| NFPA 1963, Standard for Screw Threads and Gaskets for Fire Hose Connections | Specifications for fire hose connections | Redondo Beach Fire Department | Section 5.16.3 |
| American National Standards Institute/American Society of Mechanical Engineers (ANSI/ASME), Boiler and Pressure Vessel Code | Specifications and requirements for pressure vessels | N/A | Section 5.16.3 |
| ANSI, B31.2, Fuel Gas Piping | Specifications and requirements for fuel gas piping | N/A | Section 5.16.3 |

Sources: City of Redondo Beach, 2012; Madrigal, 2012; Uyehara, 2012

5.16.5 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 5.16-6.

TABLE 5.16-6

Agency Contacts for Worker Health and Safety

| Issue | Agency | Persons Contacted |
|---|---|--|
| CUPA Participating Agency for Hazardous Materials Inventory and Emergency Business Plan and Risk Management Plan, Fire Department Permits, Hazardous Materials Response, SPCC | Redondo Beach Fire Department | Dan Madrigal, Fire Chief City of Redondo Beach 401 S. Broadway, Redondo Beach, CA 90277 (310) 318-0625 Dan.Madrigal@Redondo.org |
| CUPA for all other CUPA Programs (UST) | County of Los Angeles Fire Department-Health Hazardous Materials Division | Stan Uyehara, Inspector Southwest County District Office 24330 Narbonne Ave. Lomita, CA 90717 (310) 534-6270 SUyehara@fire.lacounty.gov |
| Worker Health and Safety | Cal/OSHA, Torrance District Office | Marissa Cordeta, Officer on Duty 680 Knox Street, Suite 100 Torrance, CA 90502 (310) 516-3734 |
| Fire Protection | Redondo Beach Fire Department | Dan Madrigal, Fire Chief City of Redondo Beach 401 S. Broadway, Redondo Beach, CA 90277 (310) 318-0625 Dan.Madrigal@Redondo.org |

5.16.6 Permits and Permit Schedule

Table 5.16-7 lists applicable permits related to the protection of worker health and safety for RBEP certification. The activities covered and application requirements to obtain each permit are provided.

All permits noted in Table 5.16-7 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 5.16-7

Permits and Permit Schedule for Worker Health and Safety

| Permit | Agency Contact | Schedule/Steps |
|-------------------------------------|---------------------------------------|--|
| 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 |

5.16.7 References

City of Redondo Beach. 2012. City of Redondo Beach Fire Department website, accessed April 2012 at <http://www.redondo.org/depts/fire/default.asp>.

Cordeta, Marissa / CalOSHA Torrance District Office, Officer on Duty. 2012. Personal communication with Jessica Brandt/CH2M HILL. May 30.

Madrigal, Dan / Redondo Beach Fire Department, Chief. 2012. Personal communication with Jessica Brandt/CH2M HILL. June 26.

Uyehara, Stan / Los Angeles County Fire Department- Health Hazardous Materials Division, Inspector. 2012. Personal communication with Jessica Brandt/CH2M HILL. April 25.