

8.10 WORKER HEALTH & SAFETY

8.10.1 INTRODUCTION

This section describes health and safety issues that may be encountered during construction, operation and maintenance (O&M) of the proposed Kings River Conservation District Community Power Plant (KRCDD CPP) as well as the various programs and procedures to be established and implemented to mitigate these issues. The programs will be established in accordance with all applicable federal, state and local laws, ordinances, regulations and standards (LORS) to ensure the safety and well being of all the workers. This section also contains information on the safety training programs and general health and safety programs that will be prepared and implemented for the KRCDD CPP, including the methods of controlling anticipated hazards, fire protection information and applicable permitting agencies and contacts.

8.10.2 AFFECTED ENVIRONMENT

8.10.2.1 Project Site Area

KRCDD is proposing to develop the KRCDD CPP, a nominal 565-megawatt (MW) natural gas-fired combined-cycle base load power plant. The plant will be located near the City of Parlier, in Fresno County on an approximately 32-acre project site. The site is located in an area currently zoned for agriculture and being used predominately for agricultural purposes (vineyards). Existing structures on the project site include a vacant rural dwelling, detached garage and barn. Approximately 15 acres of a 40-acre parcel to the immediate south of the project site will be used for temporary staging and parking during construction. The KRCDD CPP project site, construction staging area and associated linear facilities as described below are shown on Figure 1-3 in Chapter 1, Executive Summary.

Natural gas for the KRCDD CPP will be provided by a new approximately 26-mile long 20-inch underground pipeline interconnection to the Southern California Gas Company (SCG) Line 7000 near the City of Visalia, California. The new gas pipeline will primarily follow existing roads and be located in public right-of-way. Five construction staging areas have also been identified for use during construction of the gas pipeline, each with an approximate size of 200 feet by 200 feet.

The KRCDD CPP will deliver electric power to the Pacific Gas & Electric Company (PG&E) transmission grid through a new approximately five mile-long 230-kilovolt (kV) radial transmission line between the on-site 230-kV switchyard site and PG&E's McCall Substation. The transmission line will cross both private property and public right-of-way.

The primary source of process makeup water for the KRCDD CPP will be recycled water delivered by new underground pipeline interconnections to the Parlier Wastewater Treatment

Plant (WWTP) and the Sanger WWTP effluent percolation and evaporation ponds located on Lincoln Avenue (i.e., Lincoln Ponds). The Parlier WWTP is located adjacent to the north of the plant site, and the interconnection will be located at the northern plant site boundary. The proposed interconnection to the Sanger Lincoln ponds is approximately five miles north and will be located primarily along existing roadways. Currently two options are being considered for the water pipeline interconnection to Lincoln Ponds (i.e., Water Supply Pipeline Option 1 and Option 2). Up to four new shallow wells recovering percolated effluent will provide a back-up cooling water supply.

Potable water for domestic use will be supplied by a new groundwater well to be installed on the project site. There is no offsite linear associated with the potable water supply. Domestic wastewater will be discharged to the Parlier WWTP. The sewer interconnection is located on the northern boundary of the project site with no offsite linear.

8.10.3 ENVIRONMENTAL CONSEQUENCES

The California Energy Commission (CEC) will be using excerpts from the California Environmental Quality Act (CEQA) Environmental Checklist to assess the potential for significant impacts associated with the KRCDD CPP. The CEQA checklist does not contain specific questions on worker health and safety. Related questions to worker health and safety are addressed in other sections of this AFC, including Noise, Hazardous Materials and Waste Management, which are sections 8.2, 8.8, and 8.9, respectively.

8.10.3.1 Impact Assessment

Certain construction and O&M activities associated with the proposed KRCDD CPP have the potential to expose workers to a wide variety of physical and chemical hazards. To evaluate these physical and chemical hazards, a hazard analysis was prepared and is provided below in Table 8.10-1. The analysis identifies the hazards anticipated during construction and ongoing O&M of the KRCDD CPP and also identifies the particular safety programs, which should be developed and implemented to mitigate and appropriately manage those hazards.

This list of potential hazards provided below in Table 8.10-1, is generic to facilities of this type. Construction hazards will be further evaluated during appropriate phases of construction activities to identify site-specific hazards and develop appropriate controls. O&M hazards also will be modified as appropriate to account for changes in plant operations or equipment used. Worker exposure to these hazards will be minimized through adherence to appropriate engineering design criteria, implementation of appropriate administrative procedures, use of Personal Protective Equipment (PPE), and compliance with the applicable health and safety LORS as discussed below.



Table 8.10-1 Hazard Analysis – Construction and O&M KRCD CPP			
Activity	Exposure Potential*	Potential Hazard	Proposed Control Strategies
Motor Vehicle and Heavy Equipment Operation	C, O&M	Employee injury and property damage from collisions with workers and/or facility equipment.	Implement motor vehicle and heavy equipment safety program. Ensure that operators are properly trained.
Forklift Operation	C, O&M	Employee injury and property damage from collisions with workers and/or facility equipment.	Implement forklift training, operation and safety program.
Trenching and Excavation	C, O&M	Employee injury and property damage from collapse of trenches and excavations or contact with underground utilities.	Implement an excavation and trenching safety program, ensure operators are properly trained. Require appropriate permits be obtained prior to initiating excavation or trenching.
Work at Elevation	C, O&M	Employee injury due to falls from the same level and elevated areas.	Implement a fall protection program that requires fall protection systems whenever unprotected work is performed at greater than a 6-foot height.
General Project Work	C, O&M	Employee injury resulting from a slip, trip, or fall.	Maintain good housekeeping, adequate lighting, clear walkways, compliant stairways, and railings as appropriate.
Crane and Derrick Operations	C, O&M	Employee injuries and property damage due to falling loads.	Implement hoisting and rigging safety program. Ensure that operators are properly trained.
Hot Work (including cutting & welding)	C, O&M	Employee injuries and property damage due to fire or explosion.	Implement fire protection and prevention program, require Hot Work permits, and ensure that welders, pipe fitters, etc. are properly trained.
Working with Flammable and Combustible Liquids	C, O&M	Employee injuries and property damage due to fire or explosion.	Implement fire protection and prevention program that includes proper procedures for the proper storage and use of flammable or combustible liquids.
Concrete/Forms Work	C	Employee injuries due to work at height, slips, trips, and falls.	Wear fall protection gear when working at heights, protect exposed rebar, and maintain good housekeeping.



Table 8.10-1 Hazard Analysis – Construction and O&M KRCD CPP			
Activity	Exposure Potential*	Potential Hazard	Proposed Control Strategies
Electrical Work	C, O&M	Employee injuries due to contact with energized parts.	Implement energy control program including Lock Out/Tag Out (LO/TO) of energized sources.
Materials Handling	C, O&M	Employee injuries due to improper lifting.	Implement an ergonomics program and train employees in proper lifting techniques.
Confined Space Entries	C, O&M	Employee injuries due to suffocation, exposure to toxic materials, engulfment, etc.	Implement a confined space program, including obtaining permits and implementing procedures and air monitoring requirements.
Compressed Gas Storage	C, O&M	Employee injuries and equipment damage due to explosive release of pressure.	Implement a compressed gas safety program, including procedures for proper use and storage.
Construction and Testing of High Pressure Steam and Air Systems	C	Employee injuries and property damage due to failure of pressurized system components or unexpected release of pressure.	Implement a pressure vessel and pipeline safety program and an electrical safety program.
Power Tool Use	C, O&M	Employee injuries due to improper use, or use of damaged power tools.	Implement procedures for inspecting power tools before operations and training of employees on the proper use and care of power tools.
Working with or Near Hazardous or Toxic Materials	C, O&M	Employee injuries due to exposure to hazardous and/or toxic materials.	Implement hazard communication program and exposure control procedures including: engineering controls, administrative controls, and PPE for activities that may expose employees to hazardous/toxic materials.
Working With or Near Noisy Equipment	C, O&M	Employee overexposure to noise.	Implement a hearing conservation program to include: identifying high noise activities and sources, sound level monitoring, and PPE.
Working With or Near Exposed Machinery	C, O&M	Employee injuries from entanglement in rotating or moving equipment.	Develop and implement machine guarding equipment LO/TO procedures.



Table 8.10-1 Hazard Analysis – Construction and O&M KRCD CPP			
Activity	Exposure Potential*	Potential Hazard	Proposed Control Strategies
Troubleshooting of Plant Systems and General Operational Activities	O&M	Employee injury and property damage from contact with potentially hazardous energy sources (including electrical, thermal and mechanical).	Implement an electrical safety program.
Ammonia Storage	O&M	Potential ammonia release from the plant site.	Implement an emergency action Program and a risk management plan. (Also see Section 8.8, Hazardous Materials).
General Plant Operation Activities	O&M	Employee injury and property damage from inadequate walking and work surfaces.	Implement a housekeeping and material handling and storage program. Ensure that operators are properly trained.
		Employee overexposure to occupational noise.	Implement a hearing conservation program and a PPE program. Ensure that operators are properly trained.
		Employee injury from improper lifting and carrying of materials and equipment.	Implement a back injury prevention program. Ensure that operators are properly trained.
		Employee injury and property damage from unsafe driving.	Implement a safe driving program. Ensure that operators are properly trained.
		Employee overexposure to hazardous gases, vapors, dusts, and fumes.	Implement a hazard communication program, respiratory protection program, a PPE program and an employee exposure-monitoring program. Ensure that operators are properly trained.
		Reporting and repair of hazardous conditions.	Implement an injury and illness prevention program (IIPP). Ensure that operators are properly trained.
		Employee exposure to heat and cold stress.	Implement a heat and cold stress monitoring and control program. Ensure that operators are properly trained.
		Ergonomic injuries to employees.	Implement an ergonomic awareness program. Ensure that operators are properly trained.



Table 8.10-1 Hazard Analysis – Construction and O&M KRCD CPP			
Activity	Exposure Potential*	Potential Hazard	Proposed Control Strategies
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.
*C = Construction O&M = Operation and Maintenance			

8.10.3.2 Construction Impacts

Worker Training

The programs identified above in Table 8.10-1 will provide procedures to be followed to achieve particular health and safety objectives. Workers participating in the construction of the proposed KRCD CPP will be required to participate in applicable safety training programs designed to protect themselves and others from injuries during construction activities. Table 8-10-2 provides an overview of the training programs that will be available to construction personnel and that will be implemented as applicable. All construction personnel will be required to attend a basic site safety orientation-training course. Additional training will then be required based upon individual job responsibilities. All training courses will be documented and attendance records will be maintained at the local job site. As appropriate, audits will be performed to determine whether proper work practices are being implemented to mitigate hazardous conditions and to evaluate plan compliance with applicable regulatory guidelines.

Table 8.10-2 Construction Training Programs KRCD CPP	
Training Course	Target Employees
Site Safety Orientation	All
IIPP	All
Emergency Action Plan	All
Heavy Equipment Safety Program	Employees working on, near, or with heavy equipment.
Forklift Operator Training	Employees working on, near, or with forklifts.
Trenching and Excavation Safety Program	Employees working in or near trenches or excavations.
Fall Protection Program	Employees required to work at elevation (>6 feet).
Scaffolding Safety Program	Employees required to erect or use scaffolding.
Hoisting and Rigging Safety Program	Employees responsible for performing and/or supervising hoisting and rigging.
Crane Safety Program	Employees supervising or performing crane operations.



Table 8.10-2 Construction Training Programs KRCDD CPP	
Training Course	Target Employees
Flammable and Combustible Liquid Storage and Handling	Employees responsible for the handling and storage of flammable or combustible liquids or gases.
Hot Work Program	Employees, including pipe fitters and welders, performing work involving an ignition source.
Hazardous Energy Control (LO/TO)	Employees performing LO/TO.
Electrical Safety	Employees required to work on electrical systems and equipment.
Permit Required Confined Space	Employees required to supervise or perform confined space entry.
Hand and Portable Power Tool Safety	All
Housekeeping Policy and Program	All
Hearing Conservation	All
Safe Lifting Program	All
Safe Driving Program	Employees supervising or driving motor vehicles.
Hazard Communication	All
Pressure Safety	Employees supervising or working on pressurized systems or equipment.
Line Breaking Safety	Employees performing general maintenance or working on pressurized systems or equipment.
Respiratory Protection Program	All employees required to wear respiratory protection.
Fire Prevention Program	All
Hazardous Work Operations and Emergency Responses (HAZWOPER)/First Responder	Employees working around hazardous materials or waste.

Health and Safety Programs

During construction of the proposed KRCDD CPP, necessary health and safety programs will be developed and implemented to both mitigate identified workplace hazards and to protect workers' health and safety. Construction plans will include a Construction IIPP, Fire Protection and Prevention Plan, and a PPE Program. Brief descriptions of the purposes of the plans as well as draft outlines are included in Appendix 8.10-1. In addition to the plans in Appendix 8.10-1, the additional plans and programs identified in Table 8.10-2 will be developed and implemented as appropriate. As indicated above, each safety procedure developed to control and mitigate potential site hazards will require some form of training. Training will be delivered in various ways, depending on the plan requirements, the complexity of the topic, the characteristics of the workforce, and the degree of risk associated with each of the identified hazards. As appropriate, audits will be performed to determine whether proper work practices are being implemented to mitigate hazardous conditions and to evaluate plan compliance with applicable regulatory guidelines.



8.10.3.3 Operation and Maintenance Impacts

Worker Training

Workers participating in O&M of the proposed KRCD CPP will be required to participate in applicable safety training programs designed to protect themselves and others from injuries while working at the site. Table 8.10-3 provides an overview of the O&M training programs that will be implemented as applicable.

Table 8.10-3 Operation and Maintenance Training Programs KRCD CPP	
Training Course	Target Employees
Site Safety Orientation	All
IIPP	All
Emergency Action Plan	All
PPE Program	All
Trenching and Excavation Safety Program	Employees performing or supervising work or near trenches or excavations.
100% Fall Protection Program	Employees required to use fall protection.
Hoisting and Rigging Safety Program	Employees responsible for the oversight or conduct of hoisting and rigging.
Forklift Operator Training	Employees working on, near, or with forklifts.
Crane Safety Program	Employees supervising or performing crane operations.
Flammable and Combustible Liquid Storage and Handling	Employees responsible for the handling and storage of flammable or combustible liquids or gases.
Hot Work Program	Employees, including pipe fitters and welders, performing work involving an ignition source.
Hazardous Energy Control (LO/TO)	Employees performing LO/TO.
Electrical Safety	Employees required to supervise or work on electrical systems and equipment.
Permit Required Confined Space	Employees required to supervise or perform confined space entry.
Hand and Portable Power Tool Safety	All
Housekeeping Policy and Program	All
Hearing Conservation	All
Safe Lifting Program	All
Safe Driving Program	Employees supervising or driving motor vehicles.
Hazard Communication	All
Pressure Safety	Employees supervising or working on pressurized systems or equipment.
Line Breaking Safety	Employees performing general maintenance or working on pressurized systems or equipment.



Table 8.10-3 Operation and Maintenance Training Programs KRCD CPP	
Training Course	Target Employees
Relief Valve Maintenance and Testing	Employees performing maintenance or testing of relief valves.
Respiratory Protection Program	All employees required to wear respiratory protection.
Fire Prevention Program	All
Fire Protection Plan	All
HAZWOPER/First Responder	Employees working with hazardous materials or waste.

Health and Safety Programs

Upon completion of construction and commencement of O&M activities, the construction health and safety plans will become operations-oriented plans focusing on hazards and controls necessary during O&M activities. O&M plans will include the IIPP, Fire Protection and Prevention Program, Emergency Action Program and PPE Program. Brief descriptions of the purposes of the plans as well as draft outlines are included in Appendix 8.10-1. In addition to the plans in Appendix 8.10-1, the additional plans and programs identified in Table 8.10-3 will be developed and implemented as appropriate. The plans will be contained in written documents that will be kept at specific locations at the plant site. Each 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 or involved with welding/cutting operations will receive training under the Fire Protection and Prevention Program. Training will be delivered in various ways, depending on the plan requirements, the complexity of the topic, the characteristics of the workforce, and the degree of risk associated with each of the identified hazards. As appropriate, audits will be performed to determine whether proper work practices are being implemented to mitigate hazardous conditions and to evaluate plan compliance with applicable regulatory guidelines.

8.10.3.4 Fire Protection

The Fresno County Fire Protection District (FCFPD) is one of five special districts in Fresno County that provide fire protection to residents outside of incorporated cities. The FCFPD serves nearly 50 percent of the total area in Fresno County, including the KRCD CPP site. The FCFPD has 13 permanently staffed stations, each serving an area of approximately 170 square miles. The Fire Station closest to the KRCD CPP is Fire Station 83 - Selma, which is located at 11500 East Mountain View Avenue (FCFPD, 2006). The station is located approximately 3.79 miles from the KRCDPP project site and would respond to a call from the KRCD CPP site in approximately nine minutes. A draft Fire Prevention Plan is provided in Appendix 8.10-1.



8.10.3.5 Fuel Handling and Fire Protection

A complete description of KRCDD CPP fuel handling system is included in Chapter 2, Project Description, Section 2.5.8 and in Chapter 5, Natural Gas Supply. A complete description of the KRCDD CPP fire suppression system is included in Chapter 2, Project Description, Section 2.5.14.

8.10.4 PROPOSED MITIGATION MEASURES

Worker exposure to potential hazards will be minimized through adherence to appropriate engineering design criteria, implementation of appropriate administrative procedures, use of PPE, and compliance with the applicable health and safety LORS presented below in Section 8.10.6 and in Table 8.10.4. No significant unavoidable adverse impacts to worker health and safety are anticipated as result of the proposed KRCDD CPP. No additional mitigation measures are proposed.

8.10.5 CUMULATIVE IMPACTS

There will be no cumulative impacts on worker health and safety resulting from either construction or O&M activities associated with the proposed KRCDD CPP.

8.10.6 LAWS, ORDINANCES, REGULATIONS AND STANDARDS

The construction and O&M of the KRCDD CPP will be in compliance with all applicable LORS. Table 8.10-4 provides a summary of federal, state and local LORS that relate to worker health and safety.

Regulation/Standard	Applicable LORS	Requirement/Compliance
Federal Occupational Safety and Health Act (OSHA)	Title 29, Code of Federal Regulations (CFR), Part 1910.	Contains minimum federal occupations health and safety regulations for the general industry.
	Title 29, CFR Part 1926.	Contains minimum federal health and safety regulations for the construction industry.
California Occupational Safety and Health Act of 1973/ California Health and Safety Administration (Cal/OSHA) ¹	Title 8, California Code of Regulations (CCR).	Establishes Cal/OSHA and the minimum health and safety standards for construction and general industry operations in California.
	Title 8, CCR, Section 339.	Requires a listing of hazardous chemicals relating to the Hazardous Substance Information and Training Act.



Table 8.10-4 Worker Health and Safety LORS KRCD CPP		
Regulation/Standard	Applicable LORS	Requirement/Compliance
	Title 8, CCR, Sections 450, et seq. and 560, et seq.	Established safety orders for pressurized vessels including: air tanks, anhydrous ammonia, and general safe work practices.
	Title 8, CCR, Section 750, et seq.	Establishes safety orders for work with high pressure steam.
	Title 8, CCR, Construction Safety Orders (Sections 1500, et seq. and 1938, et seq.).	Establishes safety orders for construction work.
	Title 8, CCR, Sections 1528, et seq. and 3380, et seq.	Requirements for PPE.
	Title 8, CCR, Section 1537, et seq.	Requirements for controlling exposure to hazardous air contaminants.
	Title 8, CCR, Section 1539, et seq.	Requirements for excavation and trenching.
	Title 8, CCR, Section 1590, et seq.	Requirement for addressing hazards associated with traffic accidents, earth-moving and hauling.
	Title 8, CCR, Section 1604, et seq.	Requirements for construction hoists.
	Title 8, CCR, Sections 1620, et seq. and 1635, et seq.	Requirements for railings, ramps, stairs, access and egress, openings in floors, roofs and walls, and temporary floors.
	Title 8, CCR, Section 1660, et seq.	Requirements for scaffolding.
	Title 8, CCR, Sections 1680, et seq. and 1708, et seq.	Requirements for saws, power-actuated tools, and miscellaneous tools and equipment.
	Title 8, CCR, Sections 1709, et seq. and 1722, et seq.	Requirements for steel reinforcing, concrete pouring, and structural steel erection operations.
	Title 8, CCR, Section 1760, et seq.	Electrical requirements for construction work.
	Title 8, CCR, Sections 1920 et seq. and 1938 et seq.	Requirements for construction-related fire protection and prevention.
	Title 8, CCR, Electrical Safety Orders (Section 2300, et seq.)	Establishes safety orders for the installation of low and high voltage electrical systems.
	Title 8, CCR, General Industry Orders (Section 3200, et seq.)	Establishes safety orders for general industry work and ongoing O&M.
	Title 8, CCR, Section 3203, et seq.	Requirements for IIPP.



Table 8.10-4 Worker Health and Safety LORS KRCD CPP		
Regulation/Standard	Applicable LORS	Requirement/Compliance
	Title 8, CCR, Sections 3620, et seq. and 3920, et seq.	Requirements for mobile equipment operation.
	Title 8, CCR, Section 3940, et seq.	Requirements for addressing hazards associated with power transmission equipment.
	Title 8, CCR, Section 4794, et seq.	Requirements for compressed gases and gas systems for cutting and welding.
	Title 8, CCR, Section 4850, et seq.	Requirements for electrical welding.
	Title 8, CCR, Sections 4884, et seq. and 5049 et seq.	Requirements for cranes and other hoisting equipment.
	Title 8, CCR, Section 5110, et seq.	Requirements for the control of ergonomic hazards.
	Title 8, CCR, Sections 5139, et seq. and 5160 et seq.	Requirements for the control of hazardous substances, including Hazardous Communication program requirements.
	Title 8, CCR, Section 5150, et seq.	Requirements for combined space entry.
	Title 8, CCR, Section 5160, et seq.	Requirements for addressing hazardous substances and processes.
	Title 8, CCR, Section 5192, et seq.	Requirements for conducting hazardous waste and emergency response operations.
	Title 8, CCR, Section 5194, et seq.	Requirements for employee exposure to dusts, fumes, mists, vapors and gases.
	Title 8, CCR, Sections 6150, et seq., 6165, et seq., 6170, et seq., and 6184 et seq.	Requirements for fire protection and prevention.
	Title 8, CCR, Part 6.	Provides health and safety requirements for working with tanks and boilers.
California Labor Code	Section 6500-6510.	To protect employees whose worksite potentially involves a substantial risk of injury, the KRCD CPP will obtain permits prior to the initiation of any practices, work, method, operation, or process of employment for: (1) Construction of trenches or excavations that are five feet or deeper and into which a person is required to descend. (2) The construction of any building, structure, falsework, or scaffolding more than three stories high



Table 8.10-4 Worker Health and Safety LORS KRCD CPP		
Regulation/Standard	Applicable LORS	Requirement/Compliance
		or the equivalent height. (3) The demolition of any building, structure, falsework, or scaffold more than three stories high or the equivalent height. (4) The underground use of diesel engines in work in mines and tunnels.
California Health and Safety Code	Section 25500 to 25520 (Business and Area Plans).	Requires that every facility that handles, treats, stores or disposes of more than the threshold quantity of hazardous material to establish business and area plans relating to the handling and release or threatened release of hazardous materials. Also requires the submission of an annual inventory or hazardous materials.
	Section 25531 to 25543.3 (Hazardous Materials Management).	Requires that every new or modified facility that handles, treats, stores, or disposes of more than the threshold quantity of any of the listed acutely hazardous materials must prepare and maintain a Risk Management Plan (RMP).
Uniform Fire Code	Article 80	Requires the prevention, control, and mitigation of dangerous conditions relating to the storage, dispensing, use, and handling of hazardous materials and the information needed by emergency response personnel.
National Fire Protection Association (NFPA)	Section 10: Standard for Portable Fire Extinguishers.	Requirements for the selection, placement, inspection, maintenance, and employee training for the use of portable fire extinguishers.
	Section 11: Standard for Low, Medium and High Expansion Foam and Compressed Air Foam Systems.	Requirements for the design, installation, operation or maintenance of expansion foam and compressed air systems.
	Section 12: Standard on Carbon Dioxide Fire Extinguishing Systems.	Requirements and use for the installation and use of carbon dioxide extinguishing systems.



Table 8.10-4 Worker Health and Safety LORS KRCD CPP		
Regulation/Standard	Applicable LORS	Requirement/Compliance
	Section 13: Standard for the Installation of Sprinkler Systems Section 13A: Recommended Practice for the Inspection, Testing, and Maintenance of Sprinkler Systems.	Guidelines for the selection, installation and testing of fire sprinkler systems.
	Section 14: Standard for the Installation of Standpipe and Hose Systems.	Guidelines for the selection and installation of standpipe and hose fire protection.
	Section 15: Standard for Water Spray Fixed System.	Guidelines for the selection and installation of fixed water spray systems.
	Section 17: Standard for Dry Chemical Extinguishing System.	Provides the minimum requirements for dry chemical fire-extinguishing systems that discharge dry chemical from fixed nozzles or hand hose lines by means of expellant gas.
	Section 22: Standard for Water Tanks for Private Fire Protection.	Provides the minimum requirements for the design, construction, installation, and maintenance of tanks and accessory equipment that supply water for private fire protection.
	Section 24: Standard for the Installation of Private Fire Service Mains and their Appurtenances.	Requirements for the installation of private fire service mains and appurtenances.
	Section 26: Recommended Practices for the Supervision of Valves Controlling Water Supplies.	Provides guidance for the installation and supervision of valves used to control water supplies.
	Section 30: Flammable and Combustible Liquids Code.	Requirements for storage, transfer, and use of flammable and combustible liquids.
	Section 37: Standard for the Installation and Use of Stationary Combustion Engines and Gas Turbines.	Provides fire protection requirements for the installation and use of combustion engines and gas turbines.
	Section 50A: Standard for Gaseous Hydrogen Systems.	Provides fire protection requirements for hydrogen systems.
	Section 54: National Fuel Gas Code.	Provides fire protection requirements for the use of fuel gas.



Table 8.10-4 Worker Health and Safety LORS KRCD CPP		
Regulation/Standard	Applicable LORS	Requirement/Compliance
	Section 70: National Electric Code.	Guidance on the safe selection and work practices associated with the design, installation, construction and maintenance of electrical systems.
	Section 70B: Recommended Practice for Electrical Equipment Maintenance.	Provides preventive maintenance for electrical, electronic, and communication systems and equipment.
	Section 70E: Standard for Electrical Safety in the Workplace.	Provides electrical safety requirements for employee workplaces that are necessary for the practical safeguarding of employees in their pursuit of gainful employment.
	Section 71: Standard for the Installation, Maintenance, and Use of Central Station Signaling Systems.	Provides requirements for the installation, maintenance, and use of central station signaling systems.
	Section 72A: Standard for the Installation, Maintenance and use of Local Protective Signaling Systems for Guard's Tour, Fire Alarm and Supervisory Services.	Requirements for installation, maintenance and use of local protective signaling systems.
	Section 72E: Standard on Automatic Fire Detection.	Requirements for automatic fire detection.
	Section 72F: Standard for the Installation, Maintenance and Use of Emergency Voice/Alarm Communication Systems.	Provides requirements for the installation, maintenance, and use of emergency communication systems.
	Section 78: Lighting Protection Code.	Provides requirements for lighting protection.
	Section 80: Standard for Fire Doors and Other Opening Protectives.	Regulates the installation and maintenance of assemblies and devices used to protect openings in walls, floors, and ceilings.
	Section 90A: Standard for the Installation of Air Conditioning and Ventilating Systems.	Standard covers the construction, installation, operation, and maintenance of systems for air conditioning and ventilating.
	Section 101: Life Safety Code.	Requirements for the design and construction of means of egress from facilities.
	Section 291: Recommended Practice for Fire Flow Testing and Marking of Hydrants.	Provide for the fire flow testing and marking of hydrants.



Table 8.10-4 Worker Health and Safety LORS KRCD CPP		
Regulation/Standard	Applicable LORS	Requirement/Compliance
	Section 850: Recommended Practice for Fire Protection for Electric Generating Plants and High Voltage Direct Current Converter Stations.	Provides recommendations for fire prevention and fire protection for electric generating plants.
	Section 1961: Standard for Fire Hose.	Provides for the design and construction requirements for new fire hose, the testing required to verify the design and construction, and the inspection and testing required of all new fire hoses.
	Section 1962: Standard for the Inspection, Care, and Use of Fire Hose, Couplings, and Nozzles and the Service Testing of Fire Hose.	Provides for the inspection, care, and use of fire hose, fire hose couplings, and fire-fighting nozzles; the service testing of fire hose; and the associated record-keeping.
	Section 1963: Standard for Fire Hose Connection.	Provides performance requirements for new fire hose couplings and adapters.
American National Standards Institute (ANSI) American Society for Mechanical Engineers (ASME)	Boiler and Pressure Vessel Code.	Provides specifications and requirements for boilers and pressure vessels.
	ANSI B31.2: Fuel Gas Piping.	Provides specifications and requirements for fuel gas piping.
Fresno County Environmental Health Division	The Fresno County Environmental Health Division is the Certified Unified Program Agency (CUPA) for the project. The CUPA is responsible for oversight and approval of the Hazardous Materials Business Plan (HMBP), RMP and is the agency to contact in the event of an emergency release of hazardous material.	The KRCD CPP will file its HMBP or HMBP type document and RMP with the CUPA and will contact the CUPA should an emergency release of hazardous material occur.
<p>¹Cal/OSHA was created to enforce effective standards, assist and encourage employers to maintain safe and healthful working conditions, and to provide for enforcement, research, information, education and training in the field of occupational safety and health. Cal/OSHA has primary jurisdiction for implementing the act and for worker health and safety. These regulations are provided for reference purposes and apply as referenced in Cal-OSHA occupations health and safety regulations.</p>		

8.10.7 REQUIRED PERMITS AND AGENCY CONTACTS

The proposed KRCD CPP will also require several permits and authorizations from agencies whose responsibility it is to protect worker health and safety. Permits that will likely be required

by the proposed project are discussed below in Table 8.10-5. These permits would be obtained on as needed basis from the local Cal-OSHA district or field office. Since the permits will likely be required at various points in the construction process, no specific permitting schedule is provided.

Table 8.10-5 Health and Safety Permits KRCD CPP			
Permit	Issuing Agency	Application Requirements	Permit Schedule
Trenching and Excavation Permit	Cal-OSHA	Required for trenches and excavations more than five feet deep and into which personnel are required to enter or which are adjacent to structures.	Submit completed permit application to Cal-OSHA district or field office prior to commencing trenching/excavation.
Construction Permit	Cal-OSHA	Required for construction of buildings, structures, scaffolding, or falsework more than three stories high.	Submit completed permit application to Cal-OSHA district or field office prior to commencing construction.
Demolition Permit	Cal-OSHA	Required for demolition of any building, structure, or the dismantling of scaffolding or falsework more than three stories high.	Submit completed permit application to Cal-OSHA district or field office prior to commencing demolition.

There are also several regulatory agencies responsible for ensuring worker health and safety and implementing the LORS addressed previously in Table 8.10-4. Contact information for applicable agencies is included in Table 8.10-6 below.

Table 8.10-6 Agency Contacts – Worker Health and Safety KRCD CPP	
Agency Name and Address	Telephone
Fresno County Office of Emergency Services 1221 Fulton Mall, Third Floor Fresno, CA 93775	(559) 445-3391
Fresno County Environmental Health Services 1221 Fulton Mall, Third Floor Fresno, CA 93775	(559) 445-3357
Fresno County Fire Protection District - #84 Selma 11500 Mountain View Avenue Selma, CA 93662	(559) 896-3378



Table 8.10-6 Agency Contacts – Worker Health and Safety KRCDD CPP	
Agency Name and Address	Telephone
Cal-OSHA-District Office-Sacramento 2424 Arden Way, Suite 165 Sacramento, CA 95825	(916) 263-0704
Cal-OSHA-Central Valley-Fresno 2550 Mariposa Street, Suite 4000 Fresno, CA 93721	(559) 454-1295
Tulare County Environmental Health Services 5957 South Mooney Boulevard Visalia, CA 93277	(559) 733-6441

8.10.8 REFERENCES

California Code of Regulations, Title 8. General Industry Safety Orders, (Chapter 4, Subchapter 7) and Construction Safety Orders (Chapter 4, Subchapter 4).

Code of Federal Regulations, Title 29, Part 26, Health and Safety for Construction, and Title 29, Part 1910, Occupation Safety and Health Standards.

Department of Industrial Relations. 2006. State of California website at: <http://www.dir.ca.gov>.

Fresno County Fire Protection District. 2006. Fire Station #83. Website at: <http://www.fcfpd.org>.

Kings River Conservation District. 2003. Kings River Conservation District Peaking Plant Application – Small Power Plant Exemption. November 2003.

National Fire Protection Association, 2000. A Compilation of NFPA Codes, Standards, Recommended Practices and Guides; Quincy, MA. Website at: <http://www.nfpa.org>.

