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5.7 WORKER SAFETY AND HEALTH

Hydrogen Energy California LLC (HECA LLC) is proposing an Integrated Gasification Combined Cycle (IGCC) polygeneration project (HECA or Project). The Project will gasify a fuel blend of 75 percent coal and 25 percent petroleum coke (petcoke) to produce synthesis gas (syngas). Syngas produced via gasification will be purified to hydrogen-rich fuel, and used to generate a nominal 300 megawatts (MW) of low-carbon baseload electricity in a Combined Cycle Power Block, low-carbon nitrogen-based products in an integrated Manufacturing Complex, and carbon dioxide (CO_2) for use in enhanced oil recovery (EOR). CO_2 from HECA will be transported by pipeline for use in EOR in the adjacent Elk Hills Oil Field (EHOF), which is owned and operated by Occidental of Elk Hills, Inc. (OEHI). The EOR process results in sequestration (storage) of the CO_2.

Terms used throughout this section are defined as follows:

- **Project or HECA.** The HECA IGCC electrical generation facility, low-carbon nitrogen-based products Manufacturing Complex, and associated equipment and processes, including its linear facilities.

- **Project Site or HECA Project Site.** The 453-acre parcel of land on which the HECA IGCC electrical generation facility, low-carbon nitrogen-based products Manufacturing Complex, and associated equipment and processes (excluding off-site portions of linear facilities), will be located.

- **OEHI Project.** The use of CO_2 for EOR at the EHOF and resulting sequestration, including the CO_2 pipeline, EOR processing facility, and associated equipment.

- **OEHI Project Site.** The portion of land within the EHOF on which the OEHI Project will be located and where the CO_2 produced by HECA will be used for EOR and resulting sequestration**.**

- **Controlled Area.** The 653 acres of land adjacent to the Project Site over which HECA will control access and future land uses.

This introduction provides brief descriptions of both the Project and the OEHI Project. Additional HECA Project description details are provided in Section 2.0. Additional OEHI Project description details are provided in Appendix A of this Application for Certification (AFC) Amendment.

HECA Project Linear Facilities

The HECA Project includes the following linear facilities, which extend off the Project Site (see Figure 2-7, Project Location Map):

- **Electrical transmission line.** An approximately 2-mile-long electrical transmission line will interconnect the Project to a future Pacific Gas and Electric Company (PG&E) switching station east of the Project Site.

- **Natural gas supply pipeline.** An approximately 13-mile-long natural gas interconnection will be made with PG&E natural gas pipelines located north of the Project Site.

- **Water supply pipelines and wells.** An approximately 15-mile-long process water supply line and up to five new groundwater wells will be installed by the Buena Vista Water Storage District (BVWSD) to supply brackish groundwater from northwest of the Project Site. An approximately 1-mile-long water supply line from the West Kern Water District (WKWD) east of the Project Site will provide potable water.

- **Coal transportation.** HECA is considering two alternatives for transporting coal to the Project Site:

  — **Alternative 1, rail transportation.** An approximately 5-mile-long new industrial railroad spur that will connect the Project Site to the existing San Joaquin Valley Railroad (SJVRR) Buttonwillow railroad line, north of the Project Site. This railroad spur will also be used to transport some HECA products to market.

  — **Alternative 2, truck transportation.** An approximately 27-mile-long truck transport route via existing roads from an existing coal transloading facility northeast of the Project Site. This alternative was presented in the 2009 Revised AFC.

OEHI Project

OEHI will be installing the CO_2 pipeline from the Project Site to the EHOF, as well as installing the EOR Processing Facility, including any associated wells and pipelines needed in the EHOF for CO_2 EOR and sequestration. The following is a brief description of the OEHI Project, which is described in more detail in Appendix A of this AFC Amendment:

- **CO_2 EOR Processing Facility.** The CO_2 EOR Processing Facility and 13 satellites are expected to occupy approximately 136 acres within the EHOF. The facility will use 720 producing and injection wells: 570 existing wells and 150 new well installations. Approximately 652 miles of new pipeline will also be installed in the EHOF.

- **CO_2 pipeline.** An approximately 3-mile-long CO_2 pipeline will transfer the CO_2 from the HECA Project Site south to the OEHI CO_2 EOR Processing Facility.

This section addresses safety and health issues for the HECA Project and for the CO_2 linear. It describes or outlines systems and procedures that will be developed and implemented to provide occupational safety and health protection for the Project workers ("workers" as used in this Section refers to employees, contractors, or subcontractors). These systems and procedures will be designed to comply with applicable worker health and safety laws, ordinances, regulations, and standards (LORS), including those established by Title 8 California Code of Regulations (CCR), Chapter 4 Division of Industrial Safety, Subchapter 4 Construction Safety Orders, Subchapter 5 Electrical Safety Orders, Subchapter 7 General Industry Safety Orders (GISO), Industrial Railroads, and Subchapter 7 GISO with special attention paid to § 3203, Injury and Illness Prevention Program (IIPP).

The analysis included in this section focuses on the HECA Project as well as the CO_2 pipeline associated with the OEHI Project. The analysis of the CO_2 EOR Processing Facility associated with the OEHI Project is included in Appendix A-1, Section 4.7, Hazards and Hazardous Materials, of this AFC Amendment.

5.7.1 Affected Environment

The Project includes the construction, commissioning, and operation of the gasification and Project facilities, as well as the Manufacturing Complex and linear facilities. Maps depicting the Project Site layout are presented in Figure 2-5, Preliminary Plot Plan.

5.7.2 Environmental Consequences

5.7.2.1 Occupational Health and Safety

Construction, commissioning, operation, and maintenance activities may expose workers to the hazards identified in Table 5.7-1, Potential Worker Hazards during Facility Construction, Commissioning and Operation. Exposure to these hazards will be minimized through adherence to appropriate engineering design criteria and administrative controls, use of appropriate personal protective equipment (PPE), and compliance with applicable health and safety LORS as described in this section. The programs, regulations, and preventative measures intended to control potential worker health and safety impacts associated with these hazards are described in the remainder of this section.

Construction/Commissioning Health and Safety Program

To protect the health and safety of workers during construction and commissioning of the Project, the construction contractor will implement a Construction Health and Safety Program consistent with all applicable LORS. As a result of the implementation of the Construction Health and Safety Program, and the other construction protection programs described below, potential impacts to worker health and safety during construction will be less than significant.

Construction/Commissioning Injury and Illness Prevention Program

The Construction/Commissioning Health and Safety Program will meet the California Department of Industrial Relations, Division of Occupational Safety and Health (Cal/OSHA) IIPP requirements. The IIPP will include requirements for:

- A written Code of Safe Practices for construction activities.
- Identification of the person or persons responsible for implementing the program.
- IIPP training for responsible supervision
- Posting the Code of Safe Practices at a conspicuous location at each job site office or providing it to each supervisor who will have it readily available.
- A system for identifying workplace hazards, including inspections.
- A system for ensuring worker compliance with the IIPP.
- Conducting “toolbox” or “tailgate” meetings to discuss job hazards and controls.

- Methods of communicating with workers that encourage workers to identify and report unsafe activities and conditions.
- Procedures for correcting unsafe conditions and activities.
- Training of employees who are newly employed on the Project.

Construction/Commissioning Written Health and Safety Programs

Written safety programs will be implemented in conjunction with the Code of Safe Practices. These may include:

- Accident, Incident, and Near-Miss Reporting Procedures
- Bloodborne Pathogens Exposure Control Program
- Compressed Gas and Air Handling System Procedures
- Confined Space Entry Procedures
- Contractor Safety Program
- Electrical Safety Procedures
- Emergency Action Plan and Emergency Response Procedures
- Ergonomics
- Excavation, Trenching, and Shoring Procedures
- Fall Protection Program
- Fire Protection
- Hand Tools and Equipment Guarding Safety Procedures
- Hazard Communication Plan, including California's Proposition 65 requirements
- Hazardous Materials Handling Procedures
- Hazardous Waste Handling Procedures and Awareness Training
- Hearing Conservation Program
- Heat Stress/Cold Stress Prevention
- Heavy Equipment Procedures
- Hoist/Chain/Wire Rope/Webs/Slings/Crane Procedures
- Hot Work Procedures (welding, cutting, and brazing)
- Job Safety Analysis
- Industrial Hygiene Program
- Industrial Truck (Forklift) Procedures
- Ladder, Scaffold, and Work Platform Procedures
- Lockout/Tagout Procedures
- Motor Vehicle Safety Procedures
- Musculoskeletal Disorder Prevention Program (ergonomics, lifting)
- New Employee Orientation and Training
- Personal Protective Equipment Program
- Portable Electric and Pneumatic Tool Procedures
- Respiratory Protection Program
- Root Cause Analysis
- Safety and Housekeeping Inspection Program
- Safety Committee and Toolbox/Tailgate Safety Meetings

- Security Program
- Signs, Tags, and Barricade Procedures
- Slip, Trip, and Fall Prevention Program
- Subcontractor safety management policy
- Tool (Power-Operated) Procedures
- Powder actuated tool procedures
- Vehicle Traffic Control Program – Railroad Yard

Construction/Commissioning Safety Training Program

Table 5.7-2, Worker and Contractor Training Programs, outlines the basic types of information and training that workers will receive prior to the start of work, throughout construction/ commissioning, and into operation/maintenance. The Project site construction contractor will incorporate these programs and training sessions into its Construction Health and Safety Plans.

Construction/Commissioning Personal Protective Equipment Program

Workers must use the required PPE during construction/commissioning. Required PPE will be approved for use by the construction safety manager. PPE will be distinctly marked to facilitate identification, and will be used only in accordance with the manufacturer's instructions. The construction safety manager will ensure that the PPE will be of such design, fit, and durability as to provide adequate protection against the hazards for which it is designed. The type of PPE required for each job task will be described in the job safety analysis (JSA) for that task, which will be provided to workers as appropriate. The use of PPE required for Project site activities includes, but is not limited to, the items specified in Table 5.7-3, Basic Protective Equipment Guide, and will comply with Cal/OSHA requirements. All protective insulating PPE will comply with the Electrical Safety Codes.

A Respiratory Protection Program will be implemented in compliance with Title 8 of the CCR § 5144 and GISO requirements. The program will include respirator training, fit testing (qualitative or quantitative), monitoring, selection, and other necessary provisions. The work atmosphere will be tested/sampled per the Program in order to determine the need for respiratory protection and the effectiveness of controls.

Construction/Commissioning Fire Protection and Prevention Plan

The Project will rely on both on-site fire protection systems and local fire protection services. A Fire Protection and Prevention Plan will be developed consistent with Kern County requirements and other applicable LORS. The plan will be followed throughout all phases of construction. The specified firefighting equipment and training will be provided to Project site personnel.

During construction and commissioning, the permanent facility fire protection system will be placed in service as early as practicable. An interim fire protection system will be in place during construction and commissioning until the permanent system is completed. The fire protection systems for the Project site are described in Section 2.9.12, Plant Auxiliaries. Construction fire regulations in 8 CCR § 1620 *et seq*. will be followed as necessary to prevent construction-related fires. Applicable local fire requirements include but are not limited to:

- The most recent edition of the California Fire Code and all applicable National Fire Protection Association (NFPA) standards (24 CCR Part 9)

- Uniform Fire Code Standards, NFPA 1, 2009

- California Building Code Title 24, CCR (24 CCR § 3, *et seq*.)

The local responding fire officials will be given information (Hazardous Materials Business Plan) on the Project site hazards and the location of these hazards, and the information will be included in the emergency response plans. Special attention will be paid to operations involving open flames, such as welding and use of flammable materials. Personnel involved in such operations will be given appropriate training. A fire watch utilizing appropriately classed extinguishers or other equipment will be maintained during hot work operations. However, Project site personnel will not be expected to fight fires past the incipient stage.

Materials brought on site must conform to contract requirements, particularly regarding flame resistance or fireproof characteristics. Specific materials in this category include fuels, paints, solvents, plastic materials, lumber, paper, boxes, and crating materials. Specific attention will be given to compressed gas, fuel, solvent, and paint storage. Electrical wiring and equipment located inside storage rooms used for Class I liquids will be in accordance with applicable regulations. Outside storage areas will be graded to divert (possible) spills away from buildings, and will be kept clear of vegetation and other combustible materials. Precautions will be taken to protect storage areas against tampering where necessary.

On-site fire prevention during construction will consist of portable and fixed firefighting equipment. Portable firefighting equipment will consist of hand-held fire extinguishers and small hose lines in conformance with Cal/OSHA and the NFPA for potential types of fire associated with construction activities. Project site personnel will be trained in on-site fire prevention and response as part of the Fire Protection and Prevention Plan. Periodic fire prevention inspections will be conducted per the Fire Protection and Prevention Plan.

The Fire Protection and Prevention Plan will require that fire extinguishers are inspected routinely and replaced immediately if defective or in need of recharge. All firefighting equipment will be conspicuously located and marked with unobstructed access. A water supply of sufficient volume, duration, and pressure to operate the required firefighting equipment will be provided on site. Designated, approved storage areas and properly identified containers for flammable materials will be used with adequate fire control services.

5.7.2.2 Plant Operational Safety Program

The locations of potential worker hazards during the operational phase are listed in Table 5.7-4, Location of Potential Worker Hazards at the Project (Operational Phase). Programs that address, mitigate, and avoid these potential hazards to worker safety will include:

- Regular worker education and training in safe work practices for general and particular task areas, as summarized in Table 5.7-2, Worker and Contractor Training Programs.

- Communication to Project site workers of hazards in accordance with federal and state standards
- Accident, incident and near-miss evaluations
- Administrative safety procedures
- Emergency response
- Fire prevention and fire response
- Security
- Maintenance of safety performance data
- Vehicle Traffic Control (including Railroad Yard for Alternative 1 [Rail Transportation])

All operations personnel will be provided with written safety guidance. Construction safety programs and procedures that apply to facility operations will be incorporated into the operational safety program for the plant. With the implementation of the protection programs described below, impacts to worker health and safety during operations will be less than significant.

5.7.2.3 Operations Injury Illness Prevention Program

The primary mitigation measures for worker hazards during operation will be contained in the IIPP, which is required by 8 CCR § 3203. The written IIPP will require implementation of the following:

- Identity of person(s) with authority and responsibility for implementing the program
- A system for ensuring that workers comply with safe and healthy work practices
- A system for communicating with workers in a readily understandable form
- Procedures for identifying and evaluating workplace hazards, including inspections to identify hazards and unsafe conditions
- Methods for correcting unhealthy/unsafe conditions in a timely manner
- Methods of documenting inspections and training and maintaining records
- A training program for:
  - Establishing the program initially
  - New, transferred, or promoted workers
  - New processes and equipment
  - Periodic refresher training

The IIPP will designate a safety representative who is responsible for implementing the program. It will also describe safety training for new workers and procedures for tracking safety training. The IIPP will provide a JSA for each job. The JSA will identify safety hazards related to each work task and establish procedures for avoiding, correcting, reporting, and notifying workers of these hazards.

5.7.2.4 Operational Written Safety Programs

The IIPP will be used in conjunction with other written safety programs to help safeguard worker health and safety. These programs may include the following:

- Accident, Incident, and Near-Miss Reporting Procedures
- Bloodborne Pathogens Exposure Control Program
- Chemical Hygiene Plan for laboratory chemical use
- Code of Safe Practices for Equipment and Operation
- Compressed Gas and Air Handling Systems
- Confined Space Entry Procedures
- Electrical Safety Procedures
- Emergency Action Plan
- Emergency Response Procedures
- Fall Protection Program
- Fire Protection and Prevention Plan
- First Aid/cardiopulmonary resuscitation/automated external defibrillator
- Hand Tools and Equipment Guarding Safety Procedures
- Hazard Communication Plan, including California's Proposition 65 requirements
- Hazardous Materials Handling Procedures
- Hazardous Waste Handling Procedures and Awareness Training
- Hearing Conservation Program
- Heat Stress/Cold Stress Prevention
- Heavy Equipment Procedures
- Hoist/Chain/Wire Rope/Webs/Rope Slings/Cranes Procedures
- Hot Work Program (welding, cutting, and brazing)
- Industrial Hygiene Program
- Industrial Truck (Forklifts) Procedures
- Ladders, Scaffolds, and Work Platform Procedures
- Lockout/Tagout Procedures
- Motor Vehicle Safety Procedures
- Musculoskeletal Disorder Prevention Program (ergonomics, lifting)
- New Employee Orientation and Training
- Personal Protective Equipment Program
- Portable Electric and Pneumatic Tool Procedures
- Process Safety Information and Management Procedures
- Respiratory Protection Program
- Safety and Housekeeping Inspection Program
- Safety Committee and Toolbox/Tailgate Safety Meetings
- Security Program
- Stop Work Authority
- Signs, Tags, and Barricades
- Slips, Trips, and Falls Prevention Program
- Subcontractor Safety Management Policy
- Tools (Power and powder actuated-Operated) Procedures
- Vehicle Traffic Control Program – Railroad Yard

These programs will be reviewed as appropriate to determine if they are affected by any new regulations and to determine the effectiveness of their implementation. Other written programs

or plans may relate to worker safety in that they enable work to be performed in a safe manner. These include standard operating procedures, worker qualifications programs, and Project site security.

5.7.2.5 Operations Safety Training Program

All Project workers will be given instructions regarding their responsibility for safe conduct of their work at the time the worker is first hired or retained, and as an ongoing training program of hazard recognition and avoidance. Table 5.7-2, Worker and Contractor Training Programs, outlines the basic types of information and training required for workers of the Project during operations and maintenance.

Workers will be instructed in the safety regulations pertinent to their employment tasks. Information and training on safe working conditions, work practices, and protective equipment requirements will be communicated in the following manner:

- New, promoted, or transferred workers will receive safety training orientation.
- Weekly and/or monthly safety meetings will be held with workers.
- Toolbox/tailgate safety meetings will be conducted routinely and prior to engaging work activities for each crew. General safety topics and specific hazards that may be encountered will be discussed. Comments and suggestions from all workers will be encouraged and shared.
- Regularly scheduled health and safety meetings will be held for supervisors.
- Hazard communication training, including California's Proposition 65 warnings and discharge prohibitions, will be conducted for each new hazardous material that is introduced to the workplace.
- Material Safety Data Sheets will be provided and maintained for all appropriate chemicals.
- A bulletin board with required regulatory postings and other information will be maintained at the Project site.
- Warning signs will be conspicuously posted in hazardous areas.

Safety training including the information below will be required for each new worker as described below:

- A list of safe work rules for the Project will be explained to each new worker.
- A copy of the applicable Safe Work Practices will be given to each new worker.
- The Hazard Communication Program and other applicable training and requirements for personal protection for the types of hazards that may be encountered at the Project site will be explained to workers. This training will be documented.

- Unusual hazards that are found on site will be explained in detail to each new worker, including any specific requirements for personal protection.

- Safety requirements for the new worker's specific job assignment will be explained by the worker's supervisor upon initial assignment and upon any reassignment.

5.7.2.6 Operations Personal Protective Equipment Program

In accordance with the Operations Personal Protective Equipment program, personal protective clothing and equipment will be used during specified work operations. Each worker will be provided the following information pertaining to the protective clothing and equipment:

- Proper use and maintenance
- When the protective clothing and equipment are to be used
- Benefits and limitations
- When and how the protective clothing and equipment are to be replaced

Each worker will be checked for proper fit and to see if the worker is medically capable of wearing the equipment.

All safety equipment will meet National Institute of Occupational Safety and Health or American National Standards Institute standards and will have all required markings, numbers, or certificates of approval. Table 5.7-3, Basic Protective Equipment Guide, contains a list of the basic protective equipment that will be used at the Project site.

5.7.2.7 Hazardous Materials Handling and Storage

Various hazardous materials will be stored and used during construction and operation of the Project. Chemicals will be stored, handled, and used so as to minimize risks to workers. All hazardous materials will be appropriately labeled and stored in hazardous materials storage facilities, as described in more detail in Section 5.12, Hazardous Materials.

Bulk hazardous liquids will be stored in aboveground storage tanks. Other hazardous materials will be stored in their delivery containers. Hazardous materials storage and chemical feed areas will be installed within secondary containment or curbing to contain leaks and spills. The containment areas will be sized to hold an appropriate volume (considering the potential for the local hazard contingencies) as designated by a California registered Professional Engineer. At a minimum, this volume will equal the full contents of the largest single tank plus sufficient capacity for precipitation from a 25-year, 24-hour storm event in the case of outdoor storage tanks.

A risk management plan (RMP) will be developed for the storage and use of any of the substances, as defined in § 112(r) of the Clean Air Act, in excess of their specific regulatory threshold. Specific California Accidental Release Prevention and/or RMP program requirements will be to be fulfilled. The RMP will detail specific safety requirements, procedures, and training to protect workers from exposure.

Depending on applicability, a Process Safety Management program consisting of an initial process hazard analysis (hazard evaluation) on processes covered by 29 CFR 1910.119 will be performed. The process hazard analysis shall be appropriate to the complexity of the process and shall identify, evaluate, and control the hazards involved in the process. At least every five years after the completion of the initial process hazard analysis, the process hazard analysis shall be updated and revalidated to assure that it is consistent with current processes.

Safety showers and eyewash stations will be provided in or adjacent to corrosive chemical storage areas and in required areas in accordance with regulatory requirements. The PPE and spill response equipment for the exposure and cleanup will be readily available for plant personnel for use during spill containment and cleanup activities. A hazardous material emergency response team, trained in the handling of these emergencies and accidental releases of hazardous materials, will be available to the Project through contracted services. Emergency contact numbers will be available for spill response contractors and for notification of local agencies of spill incidents. These and other emergency procedures will be detailed in the Project Emergency Action Plan.

5.7.2.8 Evaluation of the CO_2 Vent Impacts on Worker Safety

The CO_2 vent stack will allow for start-up and intermittent emergency venting of produced CO_2 when the CO_2 compression, transportation, or injection system is unavailable. The CO_2 vent exhaust stream will be nearly all CO_2. A 260-foot stack height was chosen to satisfy HECA's inherently safe design practices to minimize ground-level CO_2 concentrations in the event of a CO_2 vent under very low wind speeds. To ensure workers are not exposed to high levels of CO_2, a dispersion modeling analysis was conducted with the PHAST (Process Hazard Analysis Software Tool) model. The model evaluated four venting scenarios (reduced to full venting rate) and four meteorological conditions (unstable to stable atmosphere).

The model predictions were compared to the Immediately Dangerous to Life and Health concentration, which is the threshold of unacceptable exposure to plant personnel based on a 30-minute exposure and the Cal/OSHA permissible exposure time weighted average for an 8-hour period.

The model predicted that neither exposure threshold was exceeded at ground level or off-site for any of the meteorological conditions examined. The closest location where workers could be at an elevated height is on the work platforms located on the gasifier structure about 330 feet southwest from the CO_2 vent and 260 feet above grade. The model predicted that workers would not be exposed to the Immediately Dangerous to Life and Health threshold at this location but could be exposed to the Cal/OSHA time-weighted average threshold if they remained on the gasifier structure for 8 hours.

Administrative controls, including CO_2 detectors (with alarms) on the gasifier platform, air packs, and worker training, would ensure that workers could vacate areas exposed to high levels of CO_2 to prevent prolonged exposure. A description of the modeling, including input parameters and output graphics, is provided in Appendix E-13, CO_2 Vent Study.

5.7.2.9 Operations Emergency Action Plan/Emergency Response Plan

In addition to the incorporation of various safety and environmental features and design measures to minimize emergencies and their effects on public and worker safety, the Project will develop a site-specific Emergency Action Plan/Emergency Response Plan. A typical plan outline is provided in Table 5.7-5, Sample Emergency Action/Emergency Response Plan Outline. This plan will be designed to address potential emergencies, including hazardous materials releases, fires, bomb threats, pressure vessel ruptures, and other catastrophic events. It will describe evacuation routes, warning devices, points of contact, assembly areas, responsibilities, and other actions to be taken in the event of an emergency. The plan will include a layout map and a fire extinguisher location list, and will describe arrangements with local emergency response agencies for responding to emergencies. The plan will be reviewed and updated, as appropriate, by the Operations Safety Manager.

5.7.2.10 Operations Fire Protection and Prevention Plan

In accordance with the Operations Fire Protection and Prevention Plan, fire protection at the Project site will include measures to safeguard human life, prevent personnel injury, preserve property, and minimize downtime due to fire or explosion. It will address sprinkler systems, water supplies, fire extinguishers, adequate exits, fire-safe construction, reduction of ignition sources, and control of fuel sources.

The Fire Protection and Prevention Plan will provide for fire protection practices, including routine inspections of the Project site by the designated safety representative. The plan will require prompt action to correct situations deemed to be a fire hazard, and it will identify firefighting equipment and systems at the Project site as well as methods to safely store flammable and combustible materials. Facilities will be designed by a California Registered Fire Protection Engineer, and fire protection equipment will be installed and maintained in accordance with all applicable NFPA standards and recommendations. A fire reporting protocol and an investigation protocol will be detailed in the Fire Protection and Prevention Plan. The plan will be reviewed and updated annually.

The comprehensive on-site fire protection system and procedures will be designed and implemented to protect both personnel and property. A Program Fire Protection and Prevention Plan will be developed to address:

- Names and/or job titles responsible for maintaining equipment and accumulation of flammable or combustible material control
- Procedures in the event of fire, including evacuation procedures
- Fire alarm and protection equipment
- System and equipment maintenance
- Monthly inspections
- Annual inspections
- Firefighting demonstrations
- Housekeeping practices
- Training

Fire Suppression

The following fire suppression systems will be incorporated into the Fire Protection and Prevention Plan as needed for proper protection from fire hazards:

- **CO_2 Fire Protection System.** This system protects the combustion turbines and accessory equipment compartments from fire. The system will have fire detection sensors in all compartments.

- **Aqueous Fire-Fighting Foam.** This system will be used for fire protection at the methanol tanks.

- **Deluge Spray System.** This system provides fire protection to the generator transformers, auxiliary power transformer, and lube-oil equipment in the event of fire. The deluge system will be fed by the firewater storage and supply system.

- **Fire Hydrants/Hose Stations.** This system will supplement the plant fire protection system. Water will be supplied from the plant firewater system. These will be located at approximately 300-foot intervals around the facility in accordance with NFPA 850 and local fire codes.

- **Sprinkler System.** This system will provide protection to the administration and maintenance buildings.

- **Smoke Detectors, Combustible Gas Detectors, and Hand-Held Fire Extinguishers.** These will be provided at all locations having potential fire hazards due to the presence of combustible liquids, solids, or other highly flammable materials, and where major property damage could result. Hand-held fire extinguishers will be strategically located at code-approved intervals throughout the facility and selected for the appropriate class of service.

Water will be used as the primary extinguishing agent. Chemical and gas extinguishing agents (permanently installed or in portable extinguishers) will be provided in special hazard areas where water will be ineffective or harmful to the equipment being protected.

The Project on-site fire suppression systems will be backed up by fire suppression support from the Kern County Fire Department. Both fire and emergency services will be provided from Kern County Fire Department Station 26 and other Kern County resources as needed. Firewater will be supplied from the firewater distribution system as described in Section 2.9.9, Fire Protection System.

5.7.2.11 OEHI Project

An analysis of worker safety in connection with the OEHI Project is included in Appendix A-1, Section 4.7, Hazards and Hazardous Materials, of this AFC Amendment. Appendix A-1 concludes that the OEHI Project will not have significant adverse impacts on worker safety.

5.7.3 Mitigation Measures

With the implementation of the health and safety protection programs described above, the Project would not result in any significant environmental impacts to worker health or safety during construction or operations. As a result, no mitigation measures for worker health or safety are necessary.

5.7.4 Laws, Ordinances, Regulations, and Standards

The following LORS are applicable or potentially applicable to the Project in the context of the public and occupational safety and health protection measures addressed in this section and in Section 5.6, Public Health. LORS applicable to worker safety are summarized in Table 5.7-6, Summary of LORS – Worker Safety.

5.7.4.1 Federal

Occupational Safety and Health Act of 1970 (Occupational Safety and Health Administration), 29 United States Code § 651 et seq.*; 29 Code of Federal Regulations § 1910* et seq.*; and 29 Code of Federal Regulations § 1926* et seq.

The authority establishes occupational safety and health standards (§1910) (i.e., permissible exposure limits for toxic air contaminants [§ 1910.100], electrical protective equipment requirements [§ 1910.137], Process Safety Management [§ 1910.119], electrical workers safety standards [§ 1910.269], and the requirement that information concerning the hazards associated with the use of all chemicals is transmitted from employers to workers [§ 1910.1200]) and safety and health regulations for construction (§ 1926). Subpart I of § 1910 and Subpart E of § 1926 address PPE.

Under the Operational Status Agreement of October 5, 1989 between the federal Occupational Safety and Health Administration (OSHA) and Cal/OSHA, the state resumed full enforcement responsibility for most of the relevant federal standards and regulations (55 Federal Reg. 18610 [July 12, 1990]; 29 CFR § 1952.172). Federal OSHA has retained concurrent enforcement jurisdiction with respect to certain federal standards, including standards relating to hazardous materials at 29 CFR § 1910.120).

The administering agencies for the above authority are OSHA and Cal/OSHA.

Department of Labor, Safety and Health Regulations for Construction Promulgated Under § 333 of the Contract Work Hours and Safety Standards Act, 40 United States Code 327 et seq.

The code establishes safety and health regulations for construction. The requirements for this regulation are all addressed in Title 8 CCR, Chapter 4, Subchapter 4, General Construction Safety Orders.

The administering agencies for the above authority are OSHA and Cal/OSHA.

Uniform Fire Code Article 80

The article includes provisions for storage and handling of hazardous materials. Considerable overlap exists between this code and Chapter 6.95 of the Health and Safety Code. However, the fire code does contain independent provisions regarding fire protection and neutralization systems for emergency venting (§ 80.303, D, Compressed Gases). Other articles that may be applicable include Article 4, Permits, and Article 79, Flammable and Combustible Liquids.

The administering agency for the above authority is the Kern County Environmental Health Services Department.

National Fire Protection Association

The NFPA prescribes minimum requirements necessary to establish a reasonable level of fire safety and property protection from the hazards created by fire and explosion. The standards apply to the manufacture, testing, and maintenance of the equipment.

The administering agency for the above authority is the Kern County Fire Prevention Division.

Site Security

Chemical Facility Anti-Terrorism Standards 6 Code of Federal Regulations Part 27

The standards establish a Chemical Security Assessment Tool, Ammonium Nitrate Security Program, Chemical-Terrorism Vulnerability Information (CVI), and chemical sector/facility training.

The administering agency for the above authority is the Department of Homeland Security.

Compliance

The Project will comply with all federal LORS by developing appropriate plans and policies as well as by measures described in Section 5.7.2, Environmental Consequences, and Section 5.7.4, Mitigation Measures.

5.7.4.2 State

Title 8 California Code of Regulations

These authorities prescribe general occupational safety and health regulations and standards in addition to the construction and industrial safety regulations, standards, and orders. The Project will comply with applicable sections of 8 CCR, Chapter 4, Subchapter 7 and 24 CCR. Specifically, 8 CCR § 1509 (Construction) and § 3203 (General Industry) include requirements for ensuring that employers have an effective work site IIPP. The CCR, Title 8, § 5189, requires facility owners to develop and implement effective Safety Management Plans to ensure that large quantities of hazardous materials are handled safely. Although such requirements primarily

provide for the protection of workers, they also indirectly improve public safety and are coordinated with the RMP process.

California Health and Safety Code § 25500

This code requires companies that handle hazardous materials in sufficient quantities to develop a Hazardous Materials Business Plan (HMBP). The HMBP includes the basic information on the location, type, quantity, and health risks of hazardous materials handled, stored, used, or disposed of that could be accidentally released into the environment; training new personnel; and annual training of all personnel in safety procedures to follow in the event of a release of hazardous materials. It also includes an emergency response plan and identifies the business representative assigned to assist emergency personnel in the event of a release.

The California Health and Safety Code § 25531, directs facility owners storing or handling acutely hazardous materials in reportable quantities to develop an RMP and submit it to appropriate local authorities, the U.S. Environmental Protection Agency, and the designated local administering agency for review and approval. The RMP includes an evaluation of the potential impacts associated with an accidental release, the likelihood of an accidental release occurring, the magnitude of potential human exposure, any pre-existing evaluations or studies of the material, the likelihood of the substance being handled in the manner indicated, and the accident history of the material. This new, recently developed program supersedes the California Risk Management and Prevention Plan and is known as the California Accidental Release Program. The Project will develop and submit an RMP prior to initial operation.

Compliance

The Project will comply with all state LORS by developing appropriate plans and policies as well as by measures described in Section 5.7.2, Environmental Consequences, and Section 5.7.4, Mitigation Measures.

5.7.4.3 Local

The Kern County Environmental Health Services Department is the administering local authority, and Certified Unified Program Agency, responsible for the HMBP and RMP.

Compliance

The Project will comply with all local LORS and will develop an HMBP for construction and operation of the new facility, and will develop an RMP for operation of the new facility. In addition, the Project will continue compliance by updating the appropriate plans and policies as well as by the measures described in Section 5.7.2, Environmental Consequences, and Section 5.7.4, Mitigation Measures.

5.7.5 Involved Agencies and Agency Contacts

Agencies with jurisdiction to issue applicable permits and/or enforce LORS related to worker safety are shown in Table 5.7-7, Agency Contacts.

5.7.6 Safety-Related Permits/Plans Required and Schedule

The safety-related permits/plans required for this Project are listed in Table 5.7-8, Applicable Permits. An HMBP will be developed prior to construction and will be updated prior to operation. An RMP will be developed and a Process Safety Management program initial process hazard analysis will be performed prior to the on-site production and storage of anhydrous ammonia.

5.7.7 References

American Conference of Governmental Industrial Hygienists, 2008. Threshold Limit Values (TLV) for Chemical Substances and Physical Agents and Biological Exposure Indices.

CCR (California Code of Regulations), ND. Title 8. "General Industry Safety Orders, Construction Safety Orders, and High Voltage Electrical Safety Orders."

Cal/OSHA (California Department of Industrial Relations, Division of Occupational Safety and Health) Title 8 CCR, Division 1, Chapter 4 Division of Industrial Safety, Subchapter 4 Construction Safety Orders, and Subchapter 7 General Industry Safety Orders, Group 2 Safe Practices and Personal Protection – Article 7, Misc. Safe Practices, and Group 4 General Mobile Equipment and Auxiliaries – Article 29, Industrial Railroads.

Cal/OSHA (California Department of Industrial Relations, Division of Occupational Safety and Health) Title 8 CCR, Division 1, Chapter 4 Division of Industrial Safety, Subchapter 4 Construction Safety Orders, and Subchapter 7 General Industry Safety Orders.

CFR (Code of Federal Regulations) Title 6 Part 27 Chemical Facility Anti-Terrorism Standards.

CFR (Code of Federal Regulations). Title 29 Part 1910. " Occupational Safety and Health Standards."

CFR (Code of Federal Regulations), ND. Title 29 Part 1926. "Safety and Health Regulations for Construction."

CFR (Code of Federal Regulations). Title 49 Part 172. "Department of Transportation."

HECA (Hydrogen Energy California) Project Team, 2008. Field work and observations.

NFPA (National Fire Protection Association), 2006. *A Compilation of NFPA Codes, Standards, Recommended Practices and Guides*. Quincy, Massachusetts.

National Institute for Occupational Safety and Health, 1978. Health Hazard Evaluation Report, U.S. Army Corps of Engineers, Ozark Power Plant, Ozark, Kansas.

National Institute for Occupational Safety and Health, 1983. Health Hazard Evaluation Report, Grand Gulf Nuclear Power Plant, Port Gibson, Mississippi. HETA-83-132-1508.

National Institute for Occupational Safety and Health, 1985. Health Hazard Evaluation Report, Niagara Mohawk Power Corporation, Lycoming, New York. HETA-85-493-1786.

National Institute for Occupational Safety and Health, 1986. Health Hazard Evaluation Report, City of Ames Municipal Power Plant, Ames, Iowa. HETA-86-422-1891.

National Institute for Occupational Safety and Health, 1992. Health Hazard Evaluation Report, U.S. Army Corps of Engineers, Ozark Power Plant, Ozark, Kansas. HETA-92-0243-2377.

National Safety Council, 1997. Accident Prevention Manual. Chapter 11, Fire Protection. pp. 261-318.

Table 5.7-1
Potential Worker Hazards during
Facility Construction, Commissioning and Operation

Activity	Potential Hazard
Facility Construction and Commissioning	
All	Heat stress, slips/trip/falls, insects, small biting animals/insects, poison plants, severe weather, earthquake
Materials Handling, heavy equipment	Slips/trips/falls, musculoskeletal injury, crushing hazards, load hazards
Elevated Work	Slips/trips/falls, objects falling from above
Welding	Flash burns, explosion, thermal burns, toxic welding fumes
Excavations	Excavation/trench wall collapse, spoil movement, oxygen deficiency, buildup of toxic gases, fumes, vapors, dusts or mists, wet exposures, crushing hazards, confined spaces, potentially contaminated soil/waste
Cement/Forms/Steel Work	Slips/trips/falls, protruding objects, caustics, punctures, and lacerations
Equipment Operation	Noise, vehicle accidents, load hazards, induced current
Cranes, suspended loads	Dropped loads, tipping cranes, caught between hazards
Transmission Line/ Transformer Station	Slips/trips/falls, electrocution, arc-flash burns
Painting	Paint solvents, paint vapors, chemical burns, fire/explosion, slips/trips/falls
Abrasive Blasting	Dust, flying particles, pressure vessels, noise
Powered Hand Tools	Noise, dust, flying particles, cuts, amputation, crushing, spark
Fueling	Fire, explosion, environmental contamination
Chemical Delivery/Off-loading	Release, exposure
Steam	Burn
Confined Space Entry	Entrapment, hazardous atmosphere/internal temperature
Lockout/Tagout	Released energy
Electrical	Shock, burn
Pneumatic	Face/eye exposure
Hydraulic	Burn, face/skin/eye exposure
Railroad Yard/Rail Car Offloading	Dust, slips/trips/falls, foot, body/material storage/rail car clearances
Truck Delivery/Offloading	Dust, slips/trips/falls, foot, body/material storage/clearances
Facility Operations	
Materials Handling	Slips/trips/falls, musculoskeletal injury, crushing hazards, load hazards
Generation Enclosure	High voltage
Operations Building	High voltage, repetitive trauma

Table 5.7-2
Potential Worker Hazards during
Facility Construction, Commissioning and Operation (Continued)

Activity	Potential Hazard
Cooling Unit	Slips/trips/falls, noise, wet exposure, chemical exposure, rotating equipment
CO_2 Vent	Displacement of oxygen in the breathing zone
Transformer	Electrocution, flash burns
Battery Rooms	Chemical splashes, burns, reactions, gases, vapors, fumes
Gas Compressor	Fire, noise, temperature, rotating equipment, pressure
Compressed Gas Storage	Fire, explosion
Chemical Delivery, Off-loading and Storage	Chemical splashes, burns, reactions, gases, vapors, fumes
Machinery, General	Noise, temperature extremes, rotating equipment, pinch points, sharp edges, electrocution
Equipment Operation	Noise, vehicle accidents, load hazards, induced current, rotating equipment
Steam	Burn
Confined Space Entry	Entrapment, hazardous atmosphere
Lockout/Tagout	Released energy
Electrical	Shock, burn
Pneumatic	Face/eye exposure
Hydraulic	Burn, face/skin/eye exposure

Source: HECA Project.

Table 5.7-3
Worker and Contractor Training Programs

Training Course	Project Phase	Target Workers
Site Safety Orientation	C, O, and M	All
Injury and Illness Prevention Plan	C, O, and M	All
Project Emergency Action Plan	C, O, and M	All
Heavy Equipment Safety Plan	C, O, and M	Those working on or near heavy equipment
Compressed Gas and Pressurized Systems Safety	C, O, and M	Those working with or near compressed gas or pressurized systems
Thermal Stress (Heat/Cold)	C, O, and M	All
Forklift Operation	C, O, and M	Workers operating forklifts and working in close proximity to forklifts
Trenching and Excavation Safety/Use of Cal/OSHA Excavation Permits	C, O, and M	Workers involved in trenching and excavation activities
Fall Protection Program	C, O, and M	Workers required to wear fall protection
Hot Work	C, O, and M	Workers who may be required to perform hot work
Flammable and Combustible Liquids/Gases	C, O, and M	Workers who will handle flammable or combustible material
Scaffold Safety Program	C, O, and M	Workers who erect scaffolding
Hoisting and Rigging Safety Program	C, O, and M	Workers who conduct or oversee hoisting or rigging operations
Platform Lift Safety	C, O, and M	Workers who operate aerial platform or scissor lift
National Commission for the Certification of Crane Operators	C, O, and M	Workers who operate small and large telescoping cranes
Hazardous Energy Control	C, O, and M	Workers performing lockout/tagout
Electrical Safety	C, O, and M	Workers who work on or in close proximity to live electrical systems
Confined Space Entry Permit Program	C, O, and M	Workers who perform or supervise confined space work
Hand, Power and Powder Actuated Tool Safety	C, O, and M	All
Housekeeping Policy and Program	C, O, and M	All
Hearing Conservation	C, O, and M	All
Safe Lifting	C, O, and M	All
Vehicle Safety	C, O, and M	All
Hazard Communication	C, O, and M	All

Table 5.7-4
Worker and Contractor Training Programs (Continued)

Training Course	Project Phase	Target Workers
First Line Break	C, O, and M	Workers involved with maintenance or line breaking activities
Personal Protective Equipment and Respiratory Protection Program	C, O, and M	Workers who are required to wear PPE and/or respiratory protective equipment
Fire Prevention Program	C, O, and M	All
Process Safety Information and Management Procedures	O, and M	All
Process Hazard Analysis	O, and M	All
Equipment Integrity	O, and M	All
Management of Change	O, and M	All
Employee Participation	O, and M	All
DOT HazMat	C, O, and M	Workers required to handle, store, and prepare for shipment, hazardous material/waste
First Aid/CPR/AED	C, O, and M	All
Root Cause	O and M	Staff management and selected workers
HAZWOPER	O and M	Workers assigned to handle and store hazardous material/waste
Railroad Yard Vehicle Traffic Control	C, O and M	Workers working in and around the railroad yard

Source: HECA Project.
Notes:
AED = automated external defibrillator
C = Construction/Commissioning
Cal/OSHA = California Department of Industrial Relations, Division of Occupational Safety and Health
CPR = cardiopulmonary resuscitation
DOT = U.S. Department of Transportation
HazMat = hazardous materials
HAZWOPER = Hazardous Waste Operations and Emergency Response
M = Maintenance
O = Operations
PPE = personal protective equipment

Table 5.7-3
Basic Protective Equipment Guide

Body Area	Hazards	Recommended Protection
Eyes/Face	Low-velocity flying particles	Safety glasses with side shields
	High-velocity chips and sparks	Impact goggles or safety glasses with full face shield
	Corrosive liquid splash during transfer	Splash-proof goggles and face shield
	Breaking into an acid storage system	Acid hood
	Welding – injurious light rays	Welding hood with appropriate filter lenses
Head/Ears	General wear, overhead rigging, material handling, maintenance, and general construction processes	Hard hat
	High noise level	Ear plugs and/or muff
Respiratory System	Low-hazard inert dusts	Dust mask
	Low concentration solvent vapors	Cartridge-type organic vapor respirator
	Acid mists	Cartridge-type acid mist respirator
	High-concentration dusts or vapors	Air-line respirator or self-contained breathing apparatus
	Oxygen deficiencies or gases	Self-contained breathing apparatus
Hands and Arms	Handling rough or sharp objects	Leather gloves
	Handling hot objects	Insulated gloves
	Using solvents or other hazardous chemicals	Chemical-resistant synthetic gloves
Feet and Legs	General wear for light handling Handling heavy objects	Safety-toe shoes Metatarsal safety shoes
	Using brush hooks or scythes	Shin guards
	Working with corrosive liquids	Chemical-resistant safety-toe boots
	Underground work	Safety-toe synthetic boots
Trunk and Full Body	Hot or corrosive liquids	Synthetic apron
	Struck-by	High-visibility vest
	Punctures, impact, or cuts	Canvas or leather kickback apron or metal mesh apron
	Arc-flash, burns	Full body arc-flash PPE
	Breaking acid containers	Full body chemical-resistant coveralls
Fall Protection/ Rescue	Working from elevated structure or platform without standard railings	Full-body harness and lanyard
	Vessel entry	Harness and lifeline or wristlets and lifeline
	Suspended scaffolds	Lifeline, full-body harness/lanyard

Source: HECA Project.
Note:
PPE = personal protective equipment

Table 5.7-4
Location of Potential Worker Hazards at the Project
(Operational Phase)

Location	Slips, Trips and Falls	Powered Industrial Trucks	Acid[1]	Flammable Material/ Explosive dust	Hazardous Material	High Voltage	Noise[2]	Pressure Vessel	Gas Cylinders	Moving Equip-ment	High Temp.
Chemical Manufacturing Storage Areas/Tanks	X	X	X	X	X				X		
Control Room	X		X			X					
Cooling Units	X		X				X				
CO_2 Vent					X						
Feedstock Storage/Conveyors	X	X		X			X			X	
Gasification	X		X	X			X	X			X
Maintenance Shop/Warehouse	X	X		X	X		X		X	X	
Power Blocks	X		X	X	X	X	X	X	X	X	X
Switchyards	X				X	X					
Stacks	X								X		
Water Treatment Plant	X		X		X		X			X	
Battery Rooms	X		X		X						
Railroad Yard/Rail Car Offloading	X			X							
Delivery Truck Offloading	X			X							

Source: HECA Project.
Notes:
[1] Acid: Areas containing acids (sulfuric acid in batteries or sulfuric acid and hydrochloric acid for pH control).
[2] Noise: Area requiring noise protection.
CO_2 = carbon dioxide

Table 5.7-5
Sample Emergency Action/Emergency Response Plan Outline

Section Number	Description
1.0	**Introduction**
1.1	Purpose
1.2	Scope
2.0	**Responsibilities**
2.1	Incident Command System
	Emergency Response Coordinator
	Emergency Evacuation Coordinator
	Alternate
	Safety Coordinator
2.2	Position Description Assignments
	Construction/Facility Manager
	Construction/Facility Supervisor
	Operators
	Health and Safety Manager
	Security
3.0	**Response and Notification Plan (Points of Contact)**
3.1	Supervisor/Emergency Coordinator
3.2	Health and Safety Manager
4.0	**Response Procedures**
4.1	Evacuation Routes and Procedures
4.2	Accidents Involving Serious Injury and/or Death
4.3	Fire
4.4	Hazardous Waste or Chemical Spills
4.5	Earthquake
4.6	Bomb Threat
4.7	Emergency Plant Shutdown and Critical Operations
4.8	Site Security
4.9	Emergency Medical Treatment and First Aid
4.10	Decontamination
4.11	Documentation and Recordkeeping
4.12	News Media
4.13	Emergency Notification List

Table 5.7-5
Sample Emergency Action/Emergency Response Plan Outline
(Continued)

Section Number	Description
4.14	Emergency Telephone Numbers List
5.0	**Reference Procedures**
5.1	Evacuation Plan
5.2	Emergency Equipment Locations
5.3	Fire Extinguisher/Systems Locations
5.4	Security
5.5	Accident Reporting and Investigation
5.6	Lockout/Tagout
5.7	Hazard Communication
5.8	Spill Containment and Reporting
5.9	First Aid and Medical Response
5.10	Respiratory Protection
5.11	Personal Protective Equipment
5.12	Sanitation
5.13	Work Site Inspections

Source: HECA Project.

Table 5.7-6
Summary of LORS—Worker Safety

LORS	Applicability	Conformance (Section)
Federal		
Occupational Health and Safety Act of 1970, 29 USC 651 *et seq.*; 29 CFR 1910 *et seq.*; and 29 CFR 1926 *et seq.*	Worker health and safety standards for general industry and the construction industry	5.7
Department of Labor, Safety and Health Regulations for Construction Promulgated Under § 333 of the Contract Work Hours and Safety Standards Act, 40 USC 327 *et seq.*	Worker health and safety standards for construction activities; requirements addressed by CCR Title 8, General Construction Safety Orders	5.7
National Fire Protection Association	Standards necessary to establish a reasonable level of safety and property protection from the hazards created by fire and explosion	5.7
State		
CCR, Title 8	Requirements for a safe and hazard-free working environment; categories of requirements include General Industry Safety Orders, General Construction Safety Orders, Electrical Safety Orders, Industrial Railroads	5.7
California Clean Air Act, California Health and Safety Code 39650 *et seq.*	Requirements for best available control technology to minimize exposure limits to toxic air pollutants and possible risk assessments for carcinogen pollutants	5.1 and 5.6
California Public Resources § 25523(a); 20 CCR § 1752, 1752.5, 2300.2309, and Division 2, Chapter 5, Article 1, Appendix B, Part (I), CEC California Health and Safety Code § 25500 to 25541; 19 CCR §§ 2720-2734	Requirements for estimating emissions for listed air toxic pollutants and submitting inventory to air district for major sources of criteria air pollutants; follow-up from air district may require a health risk assessment	5.1 and 5.6
Local		
Kern County Zoning Ordinance, Title 19 of the Kern County Ordinance Code	Provide required setbacks	5.11
Kern County Environmental Health Services Department	Oversees administration of state hazardous materials programs including Hazardous Materials Business Plans, Risk Management Plans, and Uniform Fire Code	5.7.4

Source: HECA Project.
Notes:
CCR = California Code of Regulations
CEC = California Energy Commission
CFR = Code of Federal Regulations
LORS = laws, ordinances, regulations, and standards
USC = United States Code

Table 5.7-7
Agency Contacts

Agency/Address	Telephone	Title
California Occupational Safety and Health Administration District Office 6150 Van Nuys Boulevard, Suite 405 Van Nuys, CA 91401	818-901-5403 818-901-5578 (fax)	Trenching and Excavation Permit Permit to erect fixed tower crane Erection and dismantle scaffolds, false work, or vertical shoring systems Elevator and material lift permits Site Construction Safety Plans Injury and Illness Prevention Program
Kern County Environmental Health Services Department – Hazardous Materials Management Specialist	661-862-8700	Hazardous Materials Business Plans and Risk Management Plans
Kern County Fire Department – Station 26, Buttonwillow	661-764-5225	Construction Fire Protection and Prevention Plan Operational Fire Protection and Prevention Plan

Source: Cal/OSHA; Kern County Environmental Health Services Department.

Table 5.7-8
Applicable Permits/Plans

Permit/Approval Required	Schedule
Federal	
Process Safety Management	30 days prior to production/storage of ammonia
State	
Permit for Construction Activities – includes a copy of the Construction Injury and Illness Prevention Plan and Code of Safe Practices	60 days prior to construction activities
Tower Crane Permit	60 days prior to erecting a tower crane
Permit to Operate Pressure Vessels	60 days prior to pressurizing vessels
Elevator and Material Lift Permits	60 days prior to operating lifts
Local (Kern County)	
Risk Management Plan (RMP)	30 days prior to ammonia production and storage
Hazardous Materials Business Plan (HMBP)	30 days prior to hazardous materials storage at the site

Source: CFR and Cal/OSHA; Kern County Environmental Health Services Department.