

4.8 HAZARDS AND HAZARDOUS MATERIALS

Information contained in this section is summarized from the *Phase I Environmental Site Assessment (Phase I ESA) Report Ferrell Solar Farm (May 2013)*, *Phase I ESA Report Rockwood Solar Farm (May 2013)*, *Phase I ESA Report Iris Solar Farm (May 2013)*, and *Phase I ESA Report for Lyons Solar Farm (May 2013)*, all prepared by GS Lyon Consultants, Inc. (GS Lyon). The Phase I ESAs prepared for the project sites were used to assess the potential hazards and hazardous materials found on-site or adjacent to the project sites. These documents are included in Appendix H of this Draft Environmental Impact Report (EIR). A Reflectivity Analysis was prepared to address potential glare (glint) impacts relative to roadway traffic by Aztec Engineering, (December 2013), included in Appendix B. This section addresses potential hazards and hazardous materials for construction and operational impacts.

4.8.1 Environmental Setting

The project area is located in a historical agricultural area of Imperial County. Agricultural operations include the use of aboveground storage tanks (ASTs) and underground storage tanks (USTs) for fuel storage, transmission facilities, intricate canal systems, the confluence of major surface arteries and rail systems, and the use of fertilizers and herbicides. Although a hazardous material accident can occur almost anywhere, particular regions are more vulnerable. The potential for an accident is increased in regions near major arterial roadways or railways that transport hazardous materials and in regions with agricultural or industrial facilities that use, store, handle, or dispose of hazardous material.

Historical Review

Environmental Data Research, Inc. (EDR) was contracted by GS Lyon to complete a database search of federal, state, local, and tribal environmental records containing information regarding hazardous materials occurrences on or within a one-mile radius of the project sites. Included in the EDR report were historical topographic maps, historical aerial photographs, historical telephone, and city directories. The historical data was reviewed to evaluate potentially adverse environmental conditions resulting from previous ownership, and land uses associated with the project sites. Additionally, state and federal regulatory lists containing information regarding hazardous materials on or within a one-mile radius (buffer zone) of the project sites were reviewed. Results of the background review are presented in the Phase I ESAs prepared by GS Lyon (Appendix H).

According to the historic aerial photographs (1949, 1972, and 1984), the project sites have been used for agricultural purposes prior to 1949. Building structures in the project area are primary farm residences and associated buildings to support the agriculture operations. Building structures are located on APN 052-180-042 (FSF), APN 059-050-001 (FSF), and APN 059-050-002 (ISF). In addition, building structures are located adjacent to APN 052-050-001 and APN 052-180-042 (FSF), APN 052-180-040 and APN 052-180-048 (RSF), and APN 052-180-058 (LSF). The historic building structures location onsite and adjacent to the four project sites were constructed prior to 1949. According to the historic aerials, the historic building configurations are consistent with the current building configurations.

A review of the historic telephone directories (years 1941, 1955, 1965, 1974, 1994, and 2004) for Imperial County, which included the City of Calexico businesses, was conducted. No service stations, chemical or petroleum manufacturers or distributors, or automotive repair facilities were noted at or in the immediate vicinity of the project sites and off-site transmission area.

The Sanborn fire maps did not cover the project sites. Telephone directories for Imperial County published in 1941, 1955, 1965, 1974, 1994, and 2004 were reviewed. No service stations, chemical manufacturers, petroleum manufacturers, distributors, or automotive repair facilities were noted within or adjacent to the project sites and off-site transmission area. No additional information was obtained from the historical topographic maps.

Site Reconnaissance

A visual site reconnaissance was conducted within the project area by GS Lyon on May 8, 2013. The reconnaissance included observations of surface conditions at each of the project sites and of adjoining properties to the extent that they were visible from public access areas. Additionally, the reconnaissance also included site observations for the presence of polychlorinated biphenyls (PCBs) and/or asbestos containing materials (ACMs), indications of surface or subsurface hydrocarbon or pesticide contamination, the presence of on-site groundwater wells, pits or sumps, wastewater discharge practices, and surface water drainage patterns.

4.8.1.1 Regulatory Setting

This section identifies and summarizes federal, state, and local laws, policies, and regulations that are applicable to the projects.

4.8.1.1.1 Federal

Comprehensive Environmental Response, Compensation, and Liability Act

The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), commonly known as Superfund, was enacted by Congress on December 11, 1980. This law created a tax on the chemical and petroleum industries and provided broad federal authority to respond directly to releases or threatened releases of hazardous substances that may endanger public health or the environment. Over 5 years, \$1.6 billion was collected and the tax went to a trust fund for cleaning up abandoned or uncontrolled hazardous waste sites. CERCLA established prohibitions and requirements concerning closed and abandoned hazardous waste sites; provided for liability of persons responsible for releases of hazardous waste at these sites; and established a trust fund to provide for cleanup when no responsible party could be identified.

Emergency Planning Community Right-to-Know Act of 1986 (42 USC 11001 et seq.)

The Emergency Planning Community Right-to-Know Act (EPCRA) was included under the Superfund Amendments and Reauthorization Act (SARA) law and is commonly referred to as SARA Title III. EPCRA was passed in response to concerns regarding the environmental and safety hazards posed by the storage and handling of toxic chemicals. These concerns were triggered by the disaster in Bhopal, India, in which more than 2,000 people suffered death or serious injury from the accidental release of methyl isocyanate. To reduce the likelihood of such a disaster in the U.S., Congress imposed requirements on both states and regulated facilities. EPCRA establishes requirements for federal, state, and local governments, Indian Tribes, and industry regarding emergency planning and “Community Right-to-Know” reporting on hazardous and toxic chemicals. SARA Title III requires states and local emergency planning groups to develop community emergency response plans for protection from a list of Extremely Hazardous Substances (40 CFR 355). The Community Right-to-Know provisions help increase the public’s knowledge and access to information on chemicals at individual facilities, their uses, and releases into the environment. In California, SARA Title III is implemented through the California Accidental Release Prevention (CalARP).

Federal Insecticide, Fungicide and Rodenticide Act

The objective of Federal Insecticide, Fungicide and Rodenticide Act (FIFRA) is to provide federal control of pesticide distribution, sale, and use. All pesticides used in the United States must be registered (licensed) by EPA. Registration assures that pesticides will be properly labeled and that, if used in accordance with specifications, they will not cause unreasonable harm to the environment. Use of each registered pesticide must be consistent with use directions contained on the label or labeling.

Federal Water Pollution Control Act (Clean Water Act)

The objective of the Federal Water Pollution Control Act, commonly referred to as the Clean Water Act (CWA), is to restore and maintain the chemical, physical, and biological integrity of the nation's waters by preventing point and nonpoint pollution sources, providing assistance to publicly owned treatment works for the improvement of wastewater treatment, and maintaining the integrity of wetlands. The Oil Spill Prevention, Control, and Countermeasures (SPCC) Program of the CWA specifically seeks to prevent oil discharges from reaching waters of the United States or adjoining shorelines. Further, farms are subject to the SPCC rule if they:

- Store, transfer, use, or consume oil or oil products, and
- Could reasonably be expected to discharge oil to waters of the United States or adjoining shorelines. Farms that meet these criteria are subject to the SPCC rule if they meet at least one of the following capacity thresholds:
 - Aboveground oil storage capacity greater than 1,320 gallons, or
 - Completely buried oil storage capacity greater than 42,000 gallons.

However, the following are exemptions to the SPCC rule:

- Completely buried storage tanks subject to all the technical requirements of the underground storage tank regulations.
- Containers with a storage capacity less than 55 gallons of oil.
- Wastewater treatment facilities.
- Permanently closed containers.
- Motive power containers (e.g., automotive or truck fuel tanks).

Hazardous Materials Transport Act – Code of Federal Regulations

The Hazardous Materials Transportation Act was published in 1975. Its primary objective is to provide adequate protection against the risks to life and property inherent in the transportation of hazardous material in commerce by improving the regulatory and enforcement authority of the Secretary of Transportation. A hazardous material, as defined by the Secretary of Transportation is, any “particular quantity or form” of a material that “may pose an unreasonable risk to health and safety or property.” (EPA 2011)

Occupational Safety and Health Administration

Occupational Safety and Health Administration’s (OSHA) mission is to ensure the safety and health of America's workers by setting and enforcing standards; providing training, outreach, and education; establishing partnerships; and encouraging continual improvement in workplace safety and health. OSHA standards are listed in 29 CFR Part 1910.

The OSHA Process Safety Management of Highly Hazardous Chemicals (29 CFR Part 110.119) is intended to prevent or minimize the consequences of a catastrophic release of toxic, reactive, flammable, or explosive highly hazardous chemicals by regulating their use, storage, manufacturing, and handling. The standard intends to accomplish its goal by requiring a comprehensive management program integrating technologies, procedures, and management practices.

Resource Conservation and Recovery Act

The goal of the Federal Resource Conservation and Recovery Act (RCRA), a federal statute passed in 1976, is the protection of human health and the environment, the reduction of waste, the conservation of

energy and natural resources, and the elimination of the generation of hazardous waste as expeditiously as possible. The Hazardous and Solid Waste Amendments (HSWA) of 1984 significantly expanded the scope of RCRA by adding new corrective action requirements, land disposal restrictions, and technical requirements. The corresponding regulations in 40 CFR 260-299 provide the general framework for managing hazardous waste, including requirements for entities that generate, store, transport, treat, and dispose of hazardous waste.

4.8.1.1.2 State

California Department of Conservation, Division of Oil, Gas, and Geothermal Resources

The Division of Oil, Gas, and Geothermal Resources (DOGGR) was formed in 1915 to address the needs of the state, local governments, and industry by regulating statewide oil and gas activities with uniform laws and regulations. The Division supervises the drilling, operation, maintenance, and plugging and abandonment of onshore and offshore oil, gas, and geothermal wells, preventing damage to: (1) life, health, property, and natural resources; (2) underground and surface waters suitable for irrigation or domestic use; and (3) oil, gas, and geothermal reservoirs. The Division's programs include: well permitting and testing; safety inspections; oversight of production and injection projects; environmental lease inspections; idle-well testing; inspecting oilfield tanks, pipelines, and sumps; hazardous and orphan well plugging and abandonment contracts; and subsidence monitoring.

California Department of Toxic Substances Control

Each year, Californians generate two million tons of hazardous waste. One hundred thousand privately- and publicly-owned facilities generate one or more of the 800-plus wastes considered hazardous under California law. Properly handling these wastes avoids threats to public health and degradation of the environment.

The Department of Toxic Substances Control (DTSC) regulates hazardous waste, cleans-up existing contamination, and looks for ways to reduce the hazardous waste produced in California. Approximately 1,000 scientists, engineers, and specialized support staff make sure that companies and individuals handle, transport, store, treat, dispose of, and clean-up hazardous wastes appropriately. Through these measures, DTSC contributes to greater safety for all Californians, and less hazardous waste reaches the environment.

On January 1, 2003, the Registered Environmental Assessor (REA) program joined DTSC. The REA program certifies environmental experts and specialists as being qualified to perform a number of environmental assessment activities. Those activities include private site management, Phase I Environmental Site Assessments, risk assessment and more.

California Division of Occupational Safety and Health

The California Division of Occupational Safety and Health (Cal-OSHA) protects workers and the public from safety hazards through its Cal-OSHA programs and provides consultative assistance to employers. Cal-OSHA issues permits, provides employee training workshops, conducts inspections of facilities, investigates health and safety complaints, and develops and enforces employer health and safety policies and procedures.

California Environmental Protection Agency

The California Environmental Protection Agency (Cal-EPA) and the State Water Resources Control Board (SWRCB) establish rules governing the use of hazardous materials and the management of hazardous waste. Applicable state and local laws include the following:

- Public Safety/Fire Regulations/Building Codes
- Hazardous Waste Control Law
- Hazardous Substances Information and Training Act
- Air Toxics Hot Spots and Emissions Inventory Law
- Underground Storage of Hazardous Substances Act
- Porter-Cologne Water Quality Control Act

Within Cal-EPA, DTSC has primary regulatory responsibility, with delegation of enforcement to local jurisdictions that enter into agreements with the state agency, for the management of hazardous materials and the generation, transport, and disposal of hazardous waste under the authority of the Hazardous Waste Control Law.

California Emergency Response Plan

California has developed an Emergency Response Plan to coordinate emergency services provided by federal, state, and local government and private agencies. Response to hazardous materials incidents is one part of this plan. The plan is managed by the State Office of Emergency Services, which coordinates the responses of other agencies including Cal-EPA, the California Highway Patrol, the California Department of Fish and Wildlife, the Regional Water Quality Control Board (RWQCB), Imperial County Sheriff's Department, Imperial County Fire Department (ICFD), and the City of Imperial Police Department.

4.8.1.1.3 Local

Imperial County General Plan

The Seismic and Public Safety Element identifies goals and policies that will minimize the risks associated with natural and human-made hazards, and specify the land use planning procedures that should be implemented to avoid hazardous situations. The purpose of the Seismic and Public Safety Element is directly concerned with reducing the loss of life, injury, and property damage that might result from disaster or accident. In addition, the Element specifies land use planning procedures that should be implemented to avoid hazardous situations. The policies listed in the Seismic and Public Safety Element are not applicable to the proposed project, as they address human occupancy development. The proposed project is a solar project and does not propose residential uses.

Imperial County Public Health Department

Hazardous Materials and Medical Waste Management

DTSC was appointed the Certified Unified Program Agency (CUPA) for Imperial County in January 2005. The Unified Program is the consolidation of six state environmental programs into one program under the authority of a Certified Unified Program Agency. The CUPA inspects businesses or facilities that handle or store hazardous materials; generate hazardous waste; own or operate ASTs or USTs; and comply with the CalARP Program. The CUPA Program is instrumental in accomplishing this goal through education, community and industry outreach, inspections and enforcement.

4.8.1.2 Existing Conditions

Iris Cluster (FSF, RSF, ISF, AND LSF)

The project sites are composed of several agricultural fields encompassing approximately 4,4221,400 total acres that have been previously used or are currently in crop production. The farm buildings in the area are assumed to contain typical farm shop that may include the following activities: farm equipment with the necessary oils and gasoline; changing engine oil; and storing pesticides, herbicides, gasoline, and oil.

Industrial Areas

Frontier Agricultural Services and Johnson Brothers private airstrip is located on 204 Weed Road, approximately 0.50 mile southeast of the APN 059-050-003 (ISF) that includes a maintenance yard that utilizes pesticides and herbicides, and has gasoline ASTs. This private airstrip is used for crop dusting services which include the routine dispersal of fungicides or insecticides on growing crops. No previous industrial uses were identified in the historical review.

Drainage Features

Drainage features have been observed within the project area. Specifically, the Greeson Wash is located at the south boundary of APN 052-180-053 (LSF). Greeson Wash is part of a man made canal system located within the IID service area. While irrigation water for agricultural purposes is conveyed into the Valley by way of the All-American Canal, the area contains more than 1,400 miles of surface drains that collect surface and subsurface discharge waters from the Valley's agricultural fields. This irrigation system conveys water to the Salton Sea, either directly, or through the New River and Alamo River (Imperial Irrigation District 2005). Additionally, the New River is located approximately 0.04 miles north of the northernmost boundary for 052-180-042 (FSF) (Figure 3.0-2, Project Description).

4.8.1.2.1 Existing Environmental Hazards

Underground and Aboveground Storage Tanks, Drums, or Containers

No USTs were observed within the project sites during the site reconnaissance conducted by GS Lyon. Two ASTs were noted on the FSF project site on the south side of the Corda residence/farm shop, located within a concrete fuel containment area.

Surface Staining

No hydrocarbon stains, drums or oil containers were noted during the site reconnaissance. The project sites have the potential for hydrocarbon due to the machinery use associated with the agricultural land uses. In addition, hydrocarbons can migrate from on-road mobile sources and non-road mobile sources. Typical non-road mobile sources of hydrocarbon are primarily gasoline equipment or diesel equipment. Hydrocarbons are a precursor to ground-level ozone, a serious air pollutant. A key component of smog, ground-level ozone is formed by reactions involving hydrocarbons and nitrogen oxides in the presence of sunlight.

Sewer/Water

The FSF site has septic systems (septic tanks and leach fields) associated with two mobile homes. The ISF site has septic systems associated with two mobile homes and an abandoned labor camp. Irrigation water is supplied by IID via gravity flow canals for the agricultural fields. No sewer and potable water service are currently provided to the project study areas.

Irrigation Drain Water Quality

At the request of IID, United States Geologic Survey (USGS) performed a "one-time" water quality study of the 27 irrigation drains throughout Imperial Valley during the summer of 1994 and results indicated that the drains sampled contained less than the regulatory limits of arsenic, selenium, and nitrites for drinking water (Lyons 2013).

Groundwater and Wells

No evidence of groundwater, oil, or gas wells were observed within or adjacent to the project sites during the site reconnaissance conducted by GS Lyon in 2013. GIS Data obtained from the DOGGR website identified five abandoned geothermal wells located within or adjacent to the boundaries of the project sites. In addition, one oil well (in production) is located off-site, south of SR-98 and Ferrell Road. No other oil or gas wells were identified within or adjacent to the project sites. The location of the identified geothermal wells is presented in Figure 4.8-1 Oil, Gas, and Geothermal Wells.

Electromagnetic Fields

Electric and magnetic fields (EMF) are areas of energy that surround any electrical device. Power lines, electrical wiring, computers, televisions, hair dryers, household appliances and everything else that uses electricity are sources of EMF. The magnetic field is not blocked by buildings so outdoor sources like power lines can add to the EMF inside your home. However, the field decreases rapidly with distance so that most homes are too far from high voltage lines to matter.

Any potential health risk associated with EMF is considered low, as there are no sensitive uses in the immediate proximity to the sites. The California Department of Health Services (DHS), California Electric and Magnetic Fields Program provides information regarding known possible health effects from EMF created by the use of electricity. DHS references the National EMF Research and Public Information Dissemination Program, established by Congress as part the Energy Policy Act of 1992, which has published its findings concluding evidence of the risk of cancer from EMF around power lines is weak. The report recognizes that EMF exposure "cannot be recognized as entirely safe" but "believes that the probability that EMF exposure is truly a health hazard is currently small" with "marginal scientific support that exposure to this agent is causing any degree of harm. Furthermore, in a recent California Public Utilities Commission (CPUC) issued Decision D.06-01-042, the CPUC stated "at this time we are unable to determine whether there is a significant scientifically verifiable relationship between EMF exposure and negative health consequences."

Pursuant to California Environmental Quality Act (CEQA) Guideline 15145 "If, after a thorough investigation, a lead agency finds that a particular impact is too speculative for evaluation, the lead agency should note its conclusion and terminate discussion of the impact." Because there are no conclusive studies on EMF impacts, it is too speculative to evaluate further in this EIR.

4.8.1.2.3 Hazardous Building Materials and Pesticides

Hazardous building materials and pesticides are associated with any older buildings due to their age and the agricultural land uses. There are a total of three residences located within the project sites and nine located adjacent to the project sites as shown in Figure 4.3-1, Residence Locations. The Corda residence and farm shop are located within the boundaries of the FSF project site, and contain two ASTs within a concrete fuel containment area. Additionally, the Kubler Shop is located within the FSF project site at the location of the proposed substation. The ISF project site contains an abandoned labor camp with a propane tank, an AST, and two newer mobile homes located onsite. An abandoned cattle feed yard is located north of the ISF project site on Kubler Road. GS Lyon identified the Corda residence and farm shop and the abandoned labor camp as possible sources of contaminants associated with asbestos and/or lead due to their age (pre-1949). Subsequent discussion focuses on the potential impacts associated with these identified structures.

Asbestos

Asbestos is the name given to a number of naturally occurring, fibrous silicate minerals mined for their useful properties, such as thermal insulation, chemical and thermal stability, and high tensile strength. Asbestos is made up of microscopic bundles of fibers that may become airborne when asbestos-containing materials are damaged or disturbed. When these fibers get into the air they may be inhaled into the lungs, where they can cause significant health problems. The Cal-OSHA defines asbestos

containing materials as any material that contains 0.1 percent asbestos by weight. Asbestos is commonly found in old buildings built between the 1940s and the mid-1970s.

Buildings on agricultural establishments and agribusinesses may contain asbestos or ACMs. Used for insulation and as a fire retardant, asbestos and ACMs can be found in a variety of building construction materials, including pipe and furnace insulation materials, asbestos shingles, millboard, textured paint and other coating materials, and floor tiles. Asbestos may also be found in vehicle brakes. Buildings built in the 1960s are more likely to have asbestos-containing sprayed- or troweled-on friable materials than other buildings (EPA 2012). Given the age of the older buildings as identified by GS Lyon, it is likely the buildings contain asbestos.

Pesticides and Herbicides

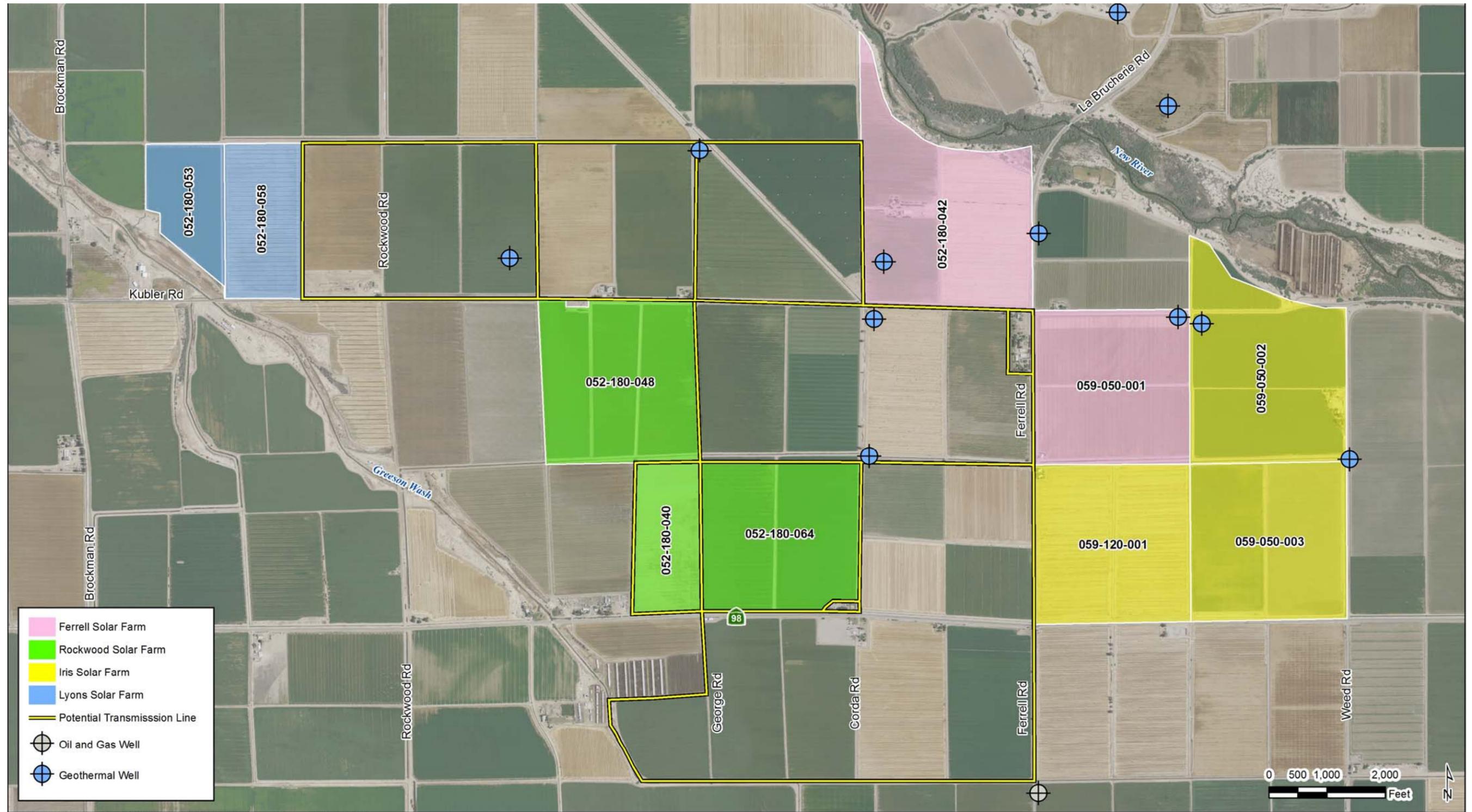
Dichlorodiphenyltrichloroethane/Dichlorodiphenyldichloroethylene (DDT/DDE) and Dichlorodiphenyldichloroethane (DDD) (a degradation byproduct of DDT) was developed as the first of the modern synthetic insecticides in the 1940s. It was initially used with great effect to combat malaria, typhus, and the other insect-borne human diseases among both military and civilian populations and for insect control in crop and livestock production, institutions, homes, and gardens. DDT's quick success as a pesticide and broad use in the United States and other countries led to the development of resistance by many insect pest species (EPA 2012). Initially, DDT was regulated by the US Department of Agriculture from the late 1950s to the 1960s. The EPA was formed in 1970 and subsequent regulatory responsibility of DDT was transferred over. Although the EPA issued a cancellation order in 1972 for DDT, due to its ability to accumulate in fatty tissue and its persistence in the environment, residues of concern from historical use still remain (EPA 2012). DDT and its byproducts bind strongly to soils and as a result, can remain in some soils for a long time, potentially hundreds of years. The length of time that DDT will last in soil depends on many factors including temperature, type of soil, and moisture content of soil. DDT persists for a much shorter time in tropical environments where chemical evaporation and microorganism degradation are accelerated. Additionally, DDT will persist for a much shorter length of time in areas where soils are routinely flooded or are moist than where soils are arid (Agency for Toxic Substances and Disease Registry 2002). Because DDT binds to soils, there's a potential for it to enter into lakes and rivers through runoff. However, although DDT or its breakdown products are still present in some air, water, and soil samples, levels in most air and water samples are presently so low that exposure is of little concern.

The project sites have been used for and are currently in agricultural production. The predominant agriculture cultivated within the project sites primarily consist of alfalfa, barley, and/or Bermuda grass in any given year. Row and vegetable crops are also prominent in the project sites. Consequently, there is a potential for the project sites to contain hazards related to pesticide and herbicide use from aerial and/or ground application. The ISF project site contains an abandoned labor camp, and the FSF project site contains a residence with a farm shop that could have been utilized for pesticide and herbicide storage. Although many agricultural fields are burned after crop removal (wheat stubble, asparagus, etc.) pesticide residue can still be found in soils. In addition, pesticides and herbicides can migrate via surface run-off. According to the Phase I ESA, these insecticides may be present in the soils within the project sites, the concentrations of DDT/DDE and DDD levels are well below (25 to 50 percent) regulatory action levels.

Lead

Lead is a highly toxic metal that was used until the late 1970s in a number of products, most notably paint. Lead may cause a range of health effects, from behavioral problems and learning disabilities to seizures and death. Primary sources of lead exposure are deteriorating lead-based paint, lead-contaminated dust, and lead-contaminated soil. Lead contamination can also come from cars built prior to the early 1980s.

Figure 4.8-1. Oil, Gas, and Geothermal Wells



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Lead-based paint on an agricultural establishment or agribusiness farm will typically be found on interiors and exteriors of buildings constructed before 1978. During renovation and demolition, paint removal has the potential to impact human health and the environment as fibers, dust, and paint chips are released. Paint chips and dust can cause indoor air contamination during renovation and soil contamination from demolition or improper disposal (EPA 2012). Given the age of the older buildings (pre 1949), the Corda residence and farm shop on the FSF project site, and the abandoned labor camp buildings located on the ISF project site have the potential to contain lead based paint.

Polychlorinated Biphenyls

Polychlorinated biphenyls (PCBs) were manufactured from 1932 until the manufacture of the product was banned in 1978. Because of its versatility (non-flammability, chemical stability, high boiling point, and electrical insulation properties), PCBs were used in various industrial and commercial applications: electrical, heat transfer, and hydraulic equipment; as plasticizers in paints, plastics, and rubber products; in pigments, dyes, and carbonless copy paper; and many other industrial applications (EPA 2012). Although no longer used in the US, there is the potential for PCBs to be found electrical transformers manufactured before 1979.

Pole-mounted transformers were noted within the project sites ; however, no evidence of leakage from the transformers within the boundaries of the project sites was observed by GS Lyon. Additionally, IID (the power provider for the area) maintains a test-and-replace policy for PCB-containing transformers.

4.8.1.2.4 Environmental Database Research

Environmental Data Research (EDR) was contracted by GS Lyon to complete a database search of federal, state, local, and tribal environmental records containing information regarding hazardous materials occurrences on or within a one-mile radius of the project sites in April 2013¹. The Kubler farms is located adjacent to the project area and the Kubler shop is located within the FSF project site. The identified sites within a one-mile radius of the project sites are listed below and are illustrated in Figure 4.8-2, Database Sites Listed within the Project Area.

1. Kubler Farms, 420 West Kubler Road (Map Code 1). This site is located adjacent to the FSF project site. The ISF Phase I ESA listed the site with an AST. No demolition or construction deeper than two feet is anticipated in this area; therefore, this site is not considered a recognized environmental concern (REC).
2. Kubler Shop, 595 Ferrell Road (Map Code 2). This site is located within the FSF project site. The ISF Phase I ESA listed this site with a Historic UST, and Certified Unified Program Agency (CUPA). This site has the potential for an UST. Due to the lack of agency documentation that the UST was removed it is undetermined if the tanks were removed. Considering the timeframe (1960s), there is a potential that the tanks were left in place and were not removed. This site is the potential location of the FSF substation site. This site has the potential to have USTs and potential ground contamination; therefore, this site is considered a REC.
3. Frontier Agricultural Service (Map Code 3), 304 Weed Road. This site is located 0.5 mile southeast of the ISF. Listings include Historic UST, and CUPA. This site is not located within or adjacent to the project sites; therefore, this site is not a REC.
4. Studer's Dairy Site (Map Code 4), 876 West State Highway 98, located 0.037 mile west of the RSF project site. Listings include Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) No Further Remedial Action Planned (NFRAP), and Historic Cortese. This site was not identified in the Phase 1 ESA site reconnaissance or identified as a REC. This site is located southeast of the RSF project site and would not be impacted by the project. In addition, the groundwater flows in a southeast direction toward the Greeson Wash, away from the project site.

¹ Considering the rural nature of this area, the addresses for mapping in the EDR reports can be unreliable.

4.8.1.2.2 Airport Land Use Compatibility Plan

The eastern border of the project area is located approximately 2.5 miles west of the Calexico International Airport. According to the Imperial County Airport Land Use Compatibility Plan (ALUCP) for Calexico International Airport, no portion of the project area (project sites and off-site transmission area) is located within the Calexico Airport land use capability zones (Imperial County, ALUCP 1996). No individual airport policies specific to the Calexico International Airport have been adopted in conjunction with the ALUCP.

The projects would require the use of transmission towers of up to 140 feet in height. Imperial County has established a maximum height of 120 feet for structures: "Non-residential structures and commercial communication towers shall not exceed 120 feet in height, and shall meet the Airport Land Use Compatibility Plan requirements." Although the project is not located within the Calexico ALUCP, a variance application would be required to be approved by the County of Imperial. If the variance is approved, the new towers would be built to a height of 140 feet. Section 4.10, Land Use Planning provides a more detailed discussion regarding the project study area's proximity to the ALUCP and the required height variance.

Frontier Agricultural Services and Johnson Brothers private airstrip is located approximately 0.5 mile southeast of the APN 059-050-003 (ISF). This private airstrip operates a crop dusting service for the surrounding agricultural land use.

4.8.2 Impacts and Mitigation Measures

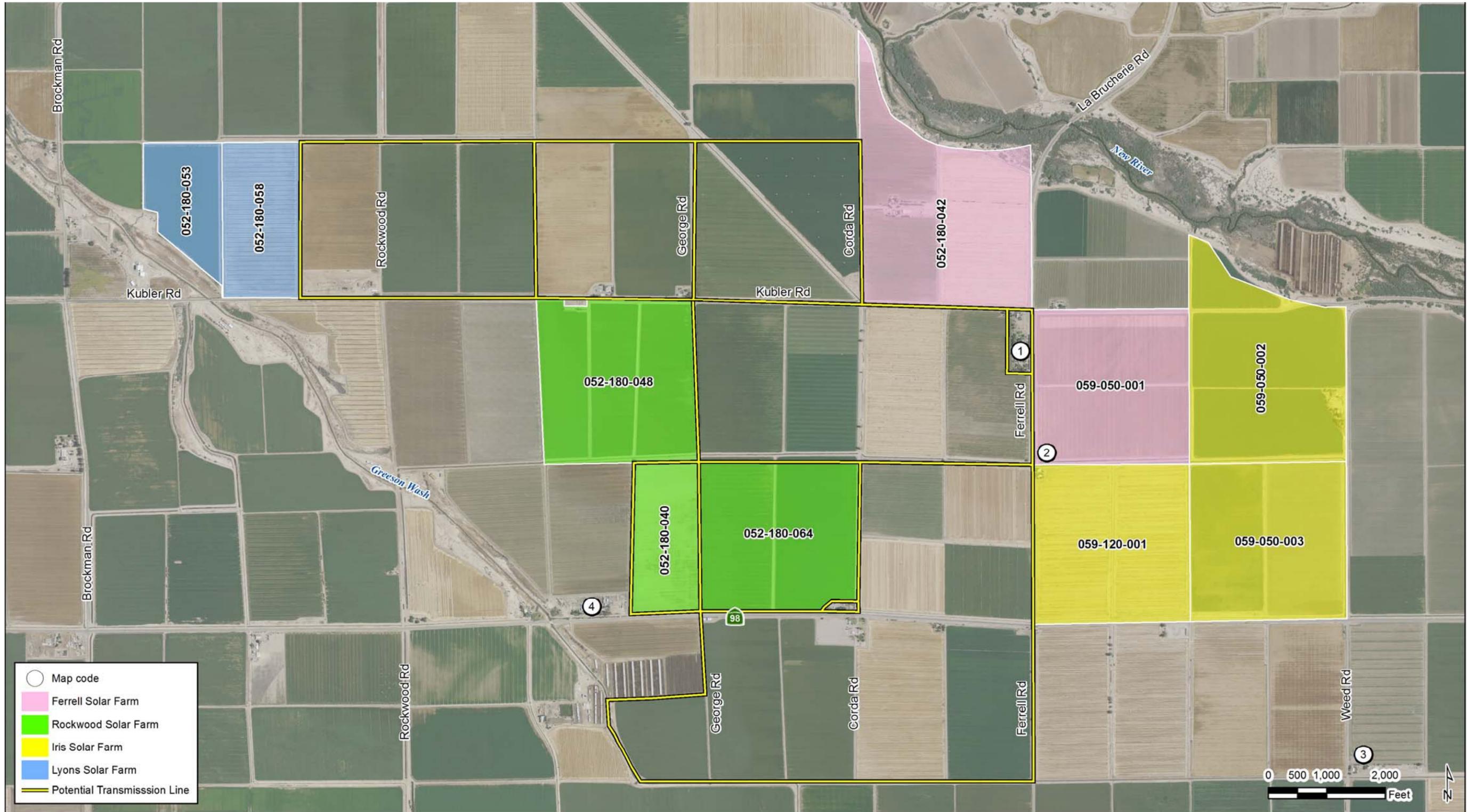
This section presents the significance criteria used for considering project-related impacts related to hazards and hazardous materials, the methodology employed for the evaluation, and mitigation requirements, if necessary.

4.8.2.1 Thresholds of Significance

Consistent with the CEQA Guidelines and the professional judgment of the County's staff and environmental consultants, the projects would result in a significant impact on the environment if it would:

- Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials;
- Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment;
- Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school;
- Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would create a significant hazard to the public or the environment;
- For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, result in a safety hazard for people residing or working in the project area;
- For a project within the vicinity of a private airstrip, result in a safety hazard for people residing or working in the project area;
- Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan; and
- Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands.

Figure 4.8-2. Database Sites Listed within the Project Area



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4.8.2.2 Methodology

This analysis evaluates the potential for the projects, as described in Chapter 3, Project Description to result in significant impacts related to hazards and hazardous materials on or within the one-mile buffer zone of the project sites. This analysis considers whether these conditions would result in an exceedance of one or more of the applied significance criteria as identified above.

As indicated in the environmental setting, four separate Phase I ESAs have been prepared for the FSF, RSF, ISF, and LSF project sites, including a one-mile buffer surrounding each site. The Phase I ESAs are included as Appendix H of this EIR. The analysis prepared for this section also relied on information contained on the EPA's website pertaining to potential hazardous materials that may be found on-site. The information obtained from these sources was reviewed and summarized to present the existing conditions, in addition to identifying potential environmental impacts, based on the significance criteria presented above. Impacts associated with hazards and hazardous materials that could result from project construction and operational activities were evaluated qualitatively based on site conditions; expected construction practices; materials, locations, duration of project construction, and related activities. Conceptual site plans for the projects were also used to evaluate potential impacts. These conceptual exhibits are provided in Section 3.0, Project Description (see Figures 3.0-6 through 3.0-9).

4.8.2.3 Impact Analysis

Impact 4.8-1 Possible Risk to the Public or Environment through Routine Transport, Use, or Disposal of Hazardous Materials.

The projects would not result in a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.

Iris Cluster (FSF, RSF, ISF, and LSF) and Transmission Line

Although considered minimal, it is anticipated that the projects will generate the following materials during construction, operation, and long term maintenance: insulating oil (used for electrical equipment; lubricating oil (used for maintenance vehicles); various solvents/detergents (equipment cleaning); and gasoline (used for maintenance vehicles). These materials have the potential to be released into the environment as a result of natural hazard (i.e., earthquake) related events, or due to human error. However, all materials contained on-site will be stored in appropriate containers (not to exceed a 55-gallon drum) protected from environmental conditions, including rain, wind, and direct heat and physical hazards such as vehicle traffic and sources of heat and impact. In addition, if the on-site storage of hazardous materials necessitate, at any time during construction and/or operations and long term maintenance, quantities in excess of 55-gallons, a Hazardous Material Management Program (HMMP) would be required. The HMMP developed for the projects will include, at a minimum, procedures for:

- Hazardous materials handling, use and storage;
- Emergency response;
- Spill control and prevention;
- Employee training; and
- Record keeping and reporting.

Additionally, hazardous material storage and management will be conducted in accordance with requirements set forth by the ICFD, Imperial County Office of Emergency Services, DTSC, and CUPA for storage and handling of hazardous materials. Further, construction activities would occur according to OSHA regulatory requirements; therefore, it is not anticipated that the construction activities for the proposed projects would release hazardous emissions or result in the handling of hazardous or acutely hazardous materials, substances, or waste. This could include the release of hazardous emissions, materials, substances, or wastes during operational activities. With the implementation of an HMMP and adherence to requirements set forth by the ICFD, Imperial County Office of Emergency Services, DTSC, OSHA regulatory requirements and CUPA would reduce the impact to a level of **less than significant**.

Mitigation Measure(s)

No mitigation measures are required.

IMPACT *Possible Risk to the Public or Environment through Release of Hazardous Materials.*
4.8-2 *The project may result in an accidental release of hazardous materials into the environment from project-related activities.*

Iris Cluster (FSF, RSF, ISF, and LSF) and Transmission Line

Pesticides/Fertilizers

The project study areas have been used in the past and present for agricultural purposes. Typical agricultural practices in the Imperial Valley consist of aerial and ground application of pesticides and the application of chemical fertilizers to both ground and irrigation water. According to the professional opinion of GS Lyons, although these insecticides may be present in the soils within the project study areas, the concentrations of DDT/DDE and DDD levels are well below (25 to 50 percent) regulatory action levels. The FIFRA provides federal control of pesticide distribution, sale, and use. All pesticides used in the United States must be registered (licensed) by the EPA. Registration assures that pesticides will be properly labeled and that, if used in accordance with specifications, they will not cause unreasonable harm to the environment. Use of each registered pesticide must be consistent with use directions contained on the label or labeling. The construction phase, operations and long term maintenance of the facility would not result in additional application of pesticides or fertilizers. Therefore, a **less than significant** impact has been identified for this issue area.

Hazardous Materials

The Phase I ESA identified that the Corda residence and farm shop located within the FSF project site contain two ASTs that are located within a concrete fuel containment area. These ASTs will not be removed as part of the construction of the project and therefore, this site is not considered a REC.

Although the FSF Phase I ESA report did not identify any on site RECs for the FSF project site, the ISF Phase I ESA identified the Kubler Shop, which is adjacent to the ISF project site but within the FSF project site, with a historic UST from the 1960s (see Map Code 2). As a general practice during that timeframe, USTs were abandoned onsite. The FSF or ISF Phase I ESAs did not identify any evidence or absence of UST during the site reconnaissance. In addition, no interviews were conducted with the land owners to confirm if the tanks had been removed. Site specific mapping in regulatory documentation or previous Phase I ESAs would serve to confirm the absence or presence of USTs. Due to the lack of regulatory files to confirm that the USTs at the Kubler Shop have not been removed, this is considered a data gap that alters the ranking or REC classification of the site. Considering the age of the tank (if present), there is potential for onsite soil contamination during ground disturbance and construction of the FSF substation; therefore, a **potential impact** has been identified for this issue area. The potential impact is considered **significant**.

Lead and Asbestos

Given the age of the older buildings at the Corda residence and farm shop within the FSF project site, and the abandoned labor camp buildings within the ISF project site, there is a potential for unknown hazardous materials (lead and asbestos) to be encountered during site preparation or construction activities. It is undetermined whether or not buildings will be demolished as part of the project; therefore, potential impacts related to the release of lead and/or asbestos would be considered a **significant impact**.

Oil, Gas, and Geothermal Wells

As discussed, according to the GIS mapping obtained from DOGGR, there are five abandoned geothermal wells located within or adjacent to the project site. In addition, one oil well (in production) is located south of SR-98 and Ferrell Road; however, no oil or gas wells were identified within or adjacent to the project site. It is not anticipated that project construction will require the removal of the identified abandoned wells; however, this will be determined during final engineering. Hazards associated with the potential exposure of the wells or alteration of the abandonment plugs is considered a **potential impact** in the absence of mitigation. The potential impact is considered **significant**.

Mitigation Measure(s)

The following mitigation measures are required for the FSF and ISF:

- 4.8-2a Phase II Environmental Site Assessment.** A Phase II ESA (drilling, sampling, and analytical program) shall be completed if the FSF substation is to be constructed in the area of the Kubler Shop. This ESA will assist to determine if the previous USTs are still onsite and if soil contamination exists.
- 4.8-2b Hazardous Materials Discovery.** All construction contractor(s) shall be instructed to immediately stop all subsurface construction activities in the event that petroleum is discovered, an odor is identified, or significantly stained soil is visible during construction. Contractors shall be instructed to follow all applicable regulations regarding discovery and response for hazardous materials encountered during the construction process.
- 4.8-2c Lead and Asbestos.** Prior to the demolition of any buildings, the contractor shall conduct testing to determine if lead and/or asbestos are present. Testing will help to identify the proper removal procedures to follow per state and local guidelines.
- 4.8-2d Well Abandonment.** Prior to issuance of a grading permit, the project applicant shall submit evidence demonstrating that the locations of all known wells on-site have been reviewed by the DOGGR and that all well abandonment requirements, including gas leakage testing, have been completed according to DOGGR specifications, including construction Project Site Review and Well Abandonment Procedures.

Significance After Mitigation

With the implementation of Mitigation Measures 4.8-2a through 4.8-2d, potential impacts related to the release of hazardous materials would be reduced to a level of **less than significant**.

IMPACT 4.8-3 Hazardous Emissions or Hazardous Materials Substances, or Waste within ¼ mile of an Existing or Proposed School.

The projects would not pose a risk to nearby (within ¼ mile) schools or proposed school facilities.

Iris Cluster (FSF, RSF, ISF, and LSF) and Transmission Line

The project sites and off-site transmission area are not located within ¼ mile of any existing or proposed schools. Therefore, **no significant impact** is identified for this issue area.

Mitigation Measure(s)

No mitigation measures are required.

IMPACT *Projects Located on a Site Included on a List of Hazardous Materials Sites Compiled Pursuant to Government Code Section 65962.5.*
4.8-4

The projects are not located on a site included on a list of hazardous materials sites pursuant to Government Code Section 65962.5.

Iris Cluster (FSF, RSF, ISF, and LSF) and Transmission Line

The project sites are not identified in the EDR report as a hazardous materials site pursuant to Government Code Section 65962.5 and as a result, **no significant impact** has been identified for this issue area.

Mitigation Measure(s)

No mitigation measures are required.

IMPACT *Possible Safety Hazard to the Public Residing or Working Within an Airport Land Use Plan or Within Two Miles of a Public Airport or Public Use Airport.*
4.8-5

The projects are not located within an airport land use plan or within two miles of a public airport.

Iris Cluster (FSF, RSF, ISF, and LSF) and Transmission Line

The nearest public airport is the Calexico International Airport, located approximately 2.5 miles east of the ISF. The FSF, RSF, ISF, and LSF, as well as the off-site transmission area are not located within the Calexico International Airport Land Use Plan, nor are they located within a “sphere of influence” for Calexico International Airport. The Federal Aviation Administration, Notice Criteria Tool and the Department of Defense Preliminary Screening Tool was utilized to determine if proposed project factors, such as height, proximity to an airport or military operations, glare, or emitted frequencies would require coordination with the FAA compliance with CFR Title14 Part 77.9. The project components are not anticipated to have any impacts related to weather surveillance radar, long-range radar, or military operations.

Chapter 4.10, Land Use and Planning addresses site adjacency considerations with the Calexico International Airport ALUCP as well as the height variance required for the route of the proposed transmission towers (proposed up to 140 feet in height). The sites are not physically located within any of the influence zones within the ALUCP. The County’s land use review process will allow for the opportunity to review the proposed projects to determine consistency with the ALUCP, including the variance application for the transmission tower height. On August 13, the Imperial County Airport Land Use Commission reviewed the project and determined that the project is consistent with the ALUCP. Therefore, this impact is considered **less than significant**.

Mitigation Measure(s)

No mitigation measures are required.

IMPACT *Possible Safety Hazard to the Public Residing or Working Within Proximity to a Private Airstrip.*
4.8-6

The projects proximity to a private airstrip would not create safety hazards.

Iris Cluster (FSF, RSF, ISF, and LSF) and Transmission Line

Frontier Agricultural Services and Johnson Brothers private airstrip is located approximately 0.50 mile southeast of the APN 059-050-003 (ISF). This private airstrip operates a crop dusting service for the surrounding agricultural land use. The project features overhead 230 kilovolt transmission lines, lighting, and the use of cranes during construction and maintenance that are not expected to result in conflicts

with commercial aerial application operations associated with farming in the area, especially with the presence of nearby solar farms approved or currently proposed in the immediate vicinity of the proposed projects. Considering the agricultural land use of the property and the surrounding parcels are in the process of solar development, the agricultural crop dusting will be reduced in the immediate area. This impact is considered **less than significant**.

Mitigation Measure(s)

No mitigation measures are required.

IMPACT *Possible Impediment to Emergency Plans.*
4.8-7 *The projects would not interfere with an adopted emergency response plan or emergency evacuation plan.*

Iris Cluster (FSF, RSF, ISF, and LSF) and Transmission Line

The Imperial County Draft Operational Area Emergency Operations Plan (July 2007) does not identify specific emergency roadway routes as part of their emergency operations plan (EOP). The City of Calexico General Plan, Section 8.0 Safety Element, identifies the major evacuation routes as SR 11, SR 98, and Interstate 8. The projects are not expected to impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan. The project applicant will be required, through the conditions of approval, to prepare a street improvement plan for the projects that will include emergency access points and safe vehicular travel. In addition, local building codes would be followed to minimize flood, seismic, and fire hazard. Therefore, a **less than significant** impact is identified for this issue area.

Mitigation Measure(s)

No mitigation measures are required.

IMPACT *Possible Risk to People or Structures Caused by Wildland Fires.*
4.8-8 *The project sites are not located in an area susceptible to wildland fires.*

Iris Cluster (FSF, RSF, ISF, and LSF) and Transmission Line

According to the Draft Cal Fire Hazard Severity Zones in Imperial County Land Responsibility Area Map (2007), the project area is located within a local responsibility area, which are identified as an “unzoned” or “moderate” risk area for wildland fires. The City of Calexico General Plan Section 8.0 Safety Element, states the City has a low risk of damage from wildfires due to a lack of fuel. Chapter 4.12, Public Services, addresses the proposed projects’ increased need for fire protection services and project design features proposed to reduce the risk of fire. Because the proposed projects are not located in proximity to a wildland fire hazard area, a **less than significant impact** is identified.

Mitigation Measure(s)

No mitigation measures are required.

4.8.3 Decommissioning/Restoration and Residual Impacts

Decommissioning/Restoration

During decommissioning and restoration of the project sites, the applicant or its successor in interest would be responsible for the removal, recycling, and/or disposal of all solar arrays, inverters, transformers and other structures on each of the project sites. The project applicant anticipates using the best available recycling measures at the time of decommissioning. Any potentially hazardous materials located on the site would be disposed of, and/or remediated as required by Mitigation Measure 4.8-1 prior to

4.8 Hazards and Hazardous Materials

construction of the solar facilities. The operation of the solar facilities would not generate hazardous wastes and therefore, implementation of applicable regulations and mitigation measures identified for construction and operations would ensure restoration of the project sites to agricultural uses during the decommissioning process in a manner that would be **less than significant**. Furthermore, decommissioning/restoration activities would not result in a potential impact associated with ALUCP consistency (structures would be removed and agricultural uses could be restored), wildfires (the project study areas are not susceptible to wildfires), or impediment to an emergency plan (agricultural uses do not conflict with emergency plans).

Residual

With implementation of applicable mitigation measures, impacts related to the transportation of hazardous materials, abandoned wells, and impacts associated with height exceedance of the transmission towers would be reduced to levels **less than significant**. Based on these circumstances, the proposed projects would not result in residual significant and unmitigable impacts related to hazards and hazardous materials.