SECTION 4.10

HAZARDS AND HAZARDOUS MATERIALS

This section describes federal, state and local regulations applicable to hazards and hazardous materials. It also describes the environmental setting with regard to potential hazards on the project site and potential hazards created as a result of implementing the proposed project. A Phase I Environmental Site Assessment was prepared for the solar generation facility site. However, the BLM has not identified any hazards or hazardous materials (nor provided any reports in this regard) on lands within the proposed right-of-way (ROW) for the Gen-tie Line alignment through BLM land.

This section describes potential exposure to hazardous materials and/or creation of hazards that could result from implementation of the proposed Campo Verde Solar Project. It focuses on hazardous materials and hazards requiring remediation or mechanisms to prevent accidental release. Measures are identified to reduce or avoid adverse impacts anticipated from construction, operation, and decommissioning of the proposed project. A discussion of cumulative impacts related to hazards and hazardous materials is also included in this section.

Various other hazards associated with the project, such as exposure to electromagnetic fields, interference with radio-frequency communications, hazardous shocks, fire hazards (non-wildland/operational), and valley fever are briefly discussed. These hazards are acknowledged as potential areas of concern, but no criteria are available for purposes of evaluation or comparison.

This analysis does not address the potential exposure of workers to hazardous materials used at the proposed project site. Employers must inform employees of hazards associated with their work and provide those employees with special protective equipment and training to reduce the potential for health impacts from the handling of hazardous materials. Health risks associated with exposure to diesel particulate matter are discussed in Section 4.4, Air Quality.

Seismic hazards, flood hazards and exposure to noise are discussed in Section 4.6, Geology and Soils, Section 4.8, Noise and Section 4.11, Hydrology and Water Quality.

4.10.1 REGULATORY FRAMEWORK

A. FEDERAL

Resource Conservation and Recovery Act of 1976 (42 USC 6901 et seq.)

The Resource Conservation and Recovery Act (RCRA) grants authority to the Environmental Protection Agency (EPA) to control hazardous waste from start to finish. This covers the production, transportation, treatment, storage, and disposal of hazardous waste. The RCRA also sets forth a framework for the management of non-hazardous solid waste. The 1986 amendments to the RCRA enabled the EPA to address environmental problems that could result from underground tanks storing petroleum and other hazardous substances. The project site currently contains a few items that are considered potentially hazardous. Small quantities of hazardous materials will be used and stored on-site during operations and maintenance of the project.

Federal Water Pollution Control Act (Clean Water Act)

The Federal Water Pollution Control Act, better known as the Clean Water Act, is a comprehensive statute focused on restoring and maintaining the chemical, physical and biological integrity of the nation's waters. Originally enacted in 1948, the Act was amended numerous times until it was reorganized and expanded in 1972. It continues to be amended almost on an annual basis.

Primary authority for the implementation and enforcement of the Clean Water Act rests with the U.S. Environmental Protection Agency (EPA). The Act authorizes water quality programs, requires federal

effluent limitations and state water quality standards, requires permits for the discharge of pollutants into navigable waters, provides enforcement mechanisms, and authorizes funding for wastewater treatment works construction grants and state revolving loan programs, as well as funding to states and tribes for their water quality programs. Provisions have also been added to address water quality problems in specific regions and specific waterways. The project would be subject to the General Permit for Discharges of Storm Water Associated with Construction Activity (NPDES No. CAS000002) (Construction General Permit Order 2010-2014-DWQ, effective February 14, 2011 during construction. Operation of the project would be covered under Industrial Storm Water General Permit Order 97-03-DWQ (General Industrial Permit) - NPDES permit (No. CAS000001).

Occupational Safety and Health Act (OSHA)

Congress passed the Occupational Safety and Health Act (OSHA) to assure safe and healthful working conditions for working men and women. OSHA authorized enforcement of the standards developed under the Act and by assisted States in its efforts to assure safe and healthful working conditions. OSHA also provides for research, information, education, and training in the field of occupational safety and health. The project would be subject to OSHA requirements during construction, operations and maintenance and decommissioning.

Title 14, Part 77 of the Code of Federal Regulation, "Objects Affecting the Navigable Air Space"

Part 77 of the Code of Federal Regulation establishes standards and notification requirements for objects affecting navigable airspace. Part 77 describes the criteria used to determine the need for a Federal Aviation Administration (FAA) "Notice of Proposed Construction or Alteration" in cases of potential obstruction hazards. Notification allows the FAA to identify potential aeronautical hazards in advance, thus preventing or minimizing the adverse impacts to the safe and efficient use of navigable airspace. Any construction or alteration that is more than 200 feet above ground level (AGL) would be subject to review associated with Part 77. The proposed project includes towers to support the gen-tie Line which could exceed 120-feet, but would not exceed 145 feet in height. No structure (including gen-tie structures) between the solar generation facility site and the point of interconnection at Imperial Valley Substation would be more than 200 feet AGL.

FAA Advisory Circular No. 70/7460-1G

FAA Advisory Circular No. 70/7460-1G, "Proposed Construction and/or Alteration of Objects that May Affect the Navigation Space" addresses the need to file the "Notice of Proposed Construction or Alteration" form (Form 7640) with the FAA in cases of potential for an obstruction hazard. The proposed project includes towers to support the gen-tie Line which could exceed 120-feet, but would not exceed 145 feet in height.

The Applicant used the FAA Notice Criteria Tool (FAA Tool) to determine if it was necessary to notify the FAA regarding height of the proposed towers. The Tool indicated that notice is not required for the gen-tie structures. The results of the FAA Tool are provided on the attached CD of Technical Appendices as **Appendix H** of this EIR. The project will submit FAA Form 7460–1, "Notice of Proposed Construction or Alteration" for portions of the overhead collector and transmission system that would cross public roads and water ways.

The Department of Defense (DoD) Preliminary Screening Tool provides a preliminary review of potential impacts to Long-Range and Weather Radar(s), Military Training Route(s) and Special Airspace(s) prior to official Obstruction Evaluation / Airport Airspace Analysis filing. This tool produces a map relating the

structure to the DoD/Department of Health Services (DHS) and National Oceanic and Atmospheric Administration (NOAA) resources. The use of this tool provides a first level of feedback and single points of contact within the DoD/DHS and NOAA to discuss impacts/mitigation efforts on the military training mission and NEXRAD Weather Radars. This tool was used to determine whether the proposed project would cause any be potential impacts to military airspace.

The results from this screening tool show that the proposed gen-tie on BLM land would not have potential impacts to military airspace (ENValue, 2012, p. 4).

Title 47, CFR, section 15.2524, Federal Communications Commission (FCC)

Title 47, CFR, Section 15.2524, Federal Communications Commission (FCC) prohibits operation of devices that can interfere with radio-frequency communication. As part of the design and construction process for the project, the Applicant will limit the conductor surface electric gradient in accordance with the Institute of Electrical and Electronic Engineers Radio Noise Design Guide.

B. STATE

Title 22 of the California Code of Regulations

Hazardous Materials Defined

A material is considered hazardous if it appears on a list of hazardous materials prepared by a federal, state, or local agency, or if it has characteristics defined as hazardous by such an agency. According to Title 22, Section 66260.10, of the California Code of Regulations (CCR), a hazardous material is defined as:

> *…A substance or combination of substances which because of its quantity, concentration, or physical, chemical or infectious characteristics, may either (1) cause, or significantly contribute to an increase in mortality or an increase in serious irreversible, or incapacitating reversible, illness; or, (2) pose a substantial present or potential hazard to human health or environment when improperly treated, stored, transported or disposed of or otherwise managed*.

Chemical and physical properties that cause a substance to be considered hazardous include the properties of toxicity, ignitability, corrosivity, and reactivity (Title 22, Sections 66261.20 through 66261.24). Factors that influence the health effects of exposure to hazardous materials include dosage, frequency, the exposure pathway, and individual susceptibility. The proposed project would require use of small amounts of hazardous materials (such as diesel fuel, oil and grease for heavy equipment) during construction, operation and maintenance and decommissioning.

California Environmental Protection Agency

The California Environmental Protection Agency (Cal EPA) and the State Water Resources Control Board 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

Small quantities of hazardous materials will be used and stored on-site for miscellaneous, general maintenance activities that would be subject to state and local laws.

Department of Toxic Substances Control

The Department of Toxic Substances Control (DTSC) has primary regulatory responsibility for the management of hazardous materials and the generation, transport, and disposal of hazardous waste under the authority of the Hazardous Waste Control Law (HWCL). Enforcement is delegated to local jurisdictions that enter into agreements with DTSC.

California's Secretary of Environmental Protection established a unified hazardous waste and hazardous materials management regulatory program as required by Health and Safety Code Chapter 6.11. The unified program consolidates, coordinates, and makes consistent portions of the following six existing programs:

- Hazardous Waste Generations and Hazardous Waste On-site Treatment
- Underground Storage Tanks
- Hazardous Material Release Response Plans and Inventories
- California Accidental Release Prevention Program
- Aboveground Storage Tanks (spill control and countermeasure plan only)
- Uniform Fire Code Hazardous Material Management Plans and Inventories

The statute requires all counties to apply to the Cal EPA Secretary for the certification of a local unified program agency. Qualified cities are also permitted to apply for certification. The local Certified Unified Program Agency (CUPA) is required to consolidate, coordinate, and make consistent the administrative requirements, permits, fee structures, and inspection and enforcement activities for these six program elements within the county. Most CUPAs have been established as a function of a local environmental health or fire department.

The Office of the State Fire Marshal participates in all levels of the CUPA program including regulatory oversight, CUPA certifications, evaluations of the approved CUPAs, training, and education. The DTSC serves as the CUPA in Imperial County.

Small quantities of hazardous materials will be transported to and from the project site and used and stored on-site for miscellaneous, general operations and maintenance activities.

California Public Utilities Commission (CPUC), General Order 95 (GO-95), "Rules for Overhead Electric Line Construction"

GO-95 governs clearance requirements to prevent hazardous shocks, grounding techniques to minimize nuisance shocks, and maintenance and inspection requirements. These standards ensure that the appropriate clearances would be reliably maintained between the gen-tie and crossings existing electric line installations. The proposed project will be designed to National Electric Safety Code (NESC) standards. However if the project were to cross GO-95 jurisdictional facilities, then GO95 would apply. A Report of Facility Information (RFI) has been submitted to IID requesting clearances.

California Public Utilities Commission, General Order 52 (GO-52)

GO-52 governs the construction and operation of power and communications lines to prevent or mitigate interference resulting from such lines.

California Public Utilities Commission, General Order 131-D, "Rules for Planning and Construction of Electric Generation Line and Substation Facilities in California"

GO-131-D specifies application and noticing requirements for new line construction including electromagnetic field (EMF) reduction. The proposed project would be subject to this order.

Title 8, California Code of Regulations (CCR) section 2700 et seq. "High Voltage Safety Orders"

Title 8 of the California Code of Regulations specifies requirements and minimum standards for safety when installing, operating, working around, and maintaining electrical installations and equipment. The proposed project would be subject to Title 8.

National Electrical Safety Code

The National Electrical Safety Code specifies grounding procedures to limit nuisance shocks and specifies minimum conductor ground clearances. The proposed project would be subject to this code and would be designed with a grounding system providing an adequate path-to-ground to permit the dissipation of current created by lightning and ground faults.

14 California Code of Regulations (CCR), Sections 1250 – 1258, "Fire Prevention Standards for Electric Utilities"

14 CCR provides specific exemptions from electric pole and tower firebreak. 14 CCR also provides conductor clearance standards and specifies when and where standards apply. These standards address hazards that could be caused by sparks from conductors of overhead lines, or that could result from direct contact between the line and combustible objects. The proposed project would be subject to these standards.

C. LOCAL

County of Imperial General Plan

Both natural and man-made hazards are addressed in the County of Imperial General Plan. The Seismic and Public Safety Element also contains a set of goals and objectives for land use planning and safety, emergency preparedness, and the control of hazardous materials. The goals and objectives, together with the implementation programs and policies provide direction for development.

Table 4.10-1 analyzes the consistency of the project with the applicable goal and objectives relating to public safety in the County of Imperial General Plan. While this EIR analyzes the project's consistency with the General Plan pursuant to CEQA Guidelines Section 151250, the Imperial County Board of Supervisors ultimately determines consistency with the General Plan.

TABLE 4.10-1
IMPERIAL COUNTY GENERAL PLAN CONSISTENCY ANALYSIS

General Plan Policies	Consistent with General Plan?	Analysis
Public Safety Policies		
Control Hazardous Materials		
Goal 3: Protect the public from exposure to hazardous materials and wastes.	Yes	The County has adopted an Emergency Operations Plan and a Fire Prevention and Explosives Ordinance to protect the public from exposure to hazardous materials wastes. The proposed project does not involve exposure of the public to hazardous materials and wastes. Prior to using or storing hazardous materials on the project site, the Applicant will prepare a Hazardous Material Management Plan or other similar plans, as applicable. Thus, the proposed project is consistent with this goal.
Objective 3.1 Discourage the transporting of hazardous materials/waste near or through residential areas and critical facilities.	Yes	The proposed project site does not contain any residential uses or critical facilities such as a hospital or fire station. However, the Westside Elementary School is located at 2294 West Vaughn Road, and a residential complex is east of the Westside School. Large quantities of hazardous materials are not required as part of construction, operations and maintenance, or decommissioning of the proposed project. Therefore, the proposed project is consistent with this objective.
Objective 3.2 Minimize the possibility of hazardous materials/waste spills.	Yes	As noted under the analysis for Goal 3, prior to using or storing hazardous materials on the project site, the Applicant will prepare a Hazardous Material Management Plan or other similar plans, as applicable for the proposed project. In addition, special precautions would be implemented to avoid accidental spills during refueling of equipment at the time of construction (refer to Table 2.0-4 and Table 2.0-5, in Chapter 2.0). Therefore, the proposed project is consistent with this objective.
Objective 3.3 Discourage incompatible development adjacent to sites and facilities for the	Yes	The project site is surrounded by agricultural and desert lands. The proposed project is compatible with surrounding uses and the

TABLE 4.10-1
IMPERIAL COUNTY GENERAL PLAN CONSISTENCY ANALYSIS

General Plan Policies	Consistent with General Plan?	Analysis
production, storage, disposal, and transport of hazardous materials/waste as identified in the County General Plan and other regulations.		project site is not adjacent to any hazardous facilities. Therefore, the proposed project is consistent with this objective.

Imperial County Airport Land Use Compatibility Plan

The Imperial County Airport Land Use Compatibility Plan (ALUCP) sets forth the criteria and policies which the Imperial County Airport Land Use Commission (ALUC) uses assessing the compatibility between the principal airports in Imperial County and proposed land use development in the areas surrounding them. The Plan primarily deals with review of local general plans, specific plans, zoning ordinances and other land use documents covering broad geographic areas. Certain individual land use development proposals also may be reviewed by the Commission as provided in the policies identified in the Plan. The ALUC does not have authority over existing incompatible land uses or the operation of any airport. The project is subject to review by the ALUC to determine compatibility of the project with the ALUCP.

Imperial County Office of Emergency Services – Emergency Operations Plan

The Imperial County Fire Department (ICFD) is the local Office of Emergency Services in Imperial County. The County Fire Chief is the OES Coordinator. An Assistant OES Coordinator maintains the OES program for the County of Imperial. ICFD acts as the lead agency for the Imperial County Operational Area (OA) and provides leadership in all phases of developing the emergency management organization, including public education, training, EOC operations, interagency coordination, and plan development (Imperial County OES, 2007).

The Imperial County Operational Area Emergency Operations Plan (EOP) provides a comprehensive, single source of guidance and procedures for the County to prepare for and respond to significant or catastrophic natural, environmental, or conflict-related risks that produce situations requiring coordinated response. It further provides guidance regarding management concepts relating to response and abatement of various emergency situations, identifies organizational structures and relationships, and describes responsibilities and functions necessary to protect life and property. The EOP is consistent with the requirements of the Standardized Emergency Management System (SEMS) as defined in Government Code Section 8607(a) and the U.S. Department of Homeland Security National Incident Management System (NIMS) for managing response to multi-agency and multi-jurisdictional emergencies. SEMS/NIMS incorporates the use of the Incident Command System (ICS), mutual aid, the operational area concept, and multi/interagency coordination (Imperial County OES, 2007). The project site is in Zone 1-B of Fire/Emergency Management/Staging and Shelter Zones in the EOP (Imperial County OES, 2007, p. 73).

County of Imperial Fire Prevention and Explosives Ordinance

The County of Imperial Fire Prevention and Explosives Ordinance, Section 53101-53300, contains provisions for the purpose of prescribing regulations governing conditions hazardous to life and property from fire or explosion. Such measures in this Ordinance include the following:

- Storage of flammable materials
- Storage of radioactive materials
- Permit required for sale and use of fireworks
- Abatement of weeds and other vegetation

Weed and vegetation control would be enforced as part of operations and maintenance of the proposed project.

4.10.2 ENVIRONMENTAL SETTING

A. SOLAR GENERATION FACILITY

The solar generation facility site of the proposed project is located on approximately 1,990 gross acres of privately-owned, undeveloped and agricultural lands in Imperial County. The proposed project site is approximately 7 miles southwest of the community of El Centro, California. The project site is located generally south of Interstate I-8 (I-8), west of Drew Road, and north and east of the Westside Main Canal (refer to Figure 2.0-1 and Figure 2.0-2 in Chapter 2.0).

Phase I Environmental Site Assessment

Information contained in this section is summarized from the *Phase I Environmental Site Assessment for the First Solar Project Sagebrush Site, Imperial County, California* (ESA) (URS, 2011) and a letter regarding "URS Responses to Ericsson-Grant, Inc. Comments on the First Solar Phase I ESA for the Sagebrush Project Site in Imperial County, CA" (Ray, 2011). These documents are provided on the attached CD of Technical Appendices as **Appendix H** of this EIR.

The purpose of the Phase I ESA is to determine if any recognized or potential environmental conditions are present on the solar generation facility site. The American Society for Testing and Materials (ASTM) defines "recognized environmental conditions" as "any hazardous substance or petroleum product under conditions that indicate an existing, past, or material threat of release into the structures, ground, groundwater, or surface water at the subject site."

The Phase I ESA included results of a site reconnaissance to identify current conditions of the solar generation facility site and adjoining properties, a review of various readily available federal, state, and local government agency records, and review of available historical site and site vicinity information.

Background Review

Reviews of historic topographic maps (1947-1979), historic aerial photographs (1954-2009), and previous environmental investigations were performed to evaluate potentially adverse environmental conditions resulting from prior ownership and uses of the parcels. All historic maps and photographs indicate that the site was undeveloped agriculture with varying degrees of canals, laterals and drainages over the years (URS, 2011, p. 2-9 and 2-10).

Additionally, state and federal regulatory lists containing information regarding hazardous materials on or within a 1-mile radius of the project site were reviewed. Results from the background review conducted by Environmental Data Resources, Inc. (EDR) are presented in the Phase I ESA prepared by URS (**Appendix H** of this EIR).

No reported environmental liens or activity and use limitations were found associated with the property (URS, 2011, p. 2-11).

Site Reconnaissance

On June 23, 2011, URS conducted a reconnaissance of the solar generation facility site. The reconnaissance consisted of the observation and documentation of existing site conditions and the nature of the neighboring property development within approximately 0.5 mile of the solar generation facility.

The property was accessed by public roads and farm roads around the perimeter and bisecting the property. The residences and properties adjacent to the site that are not part of the project were not included in the site reconnaissance and entry of these structures was not completed. Additionally, the properties consisting of active irrigation canals owned by the Imperial Irrigation District (IID) are not part of the property and were not included in the site reconnaissance.

Site Conditions

The property consists of 28 parcels of land owned by 6 property owners (**Table 4.10-2**). At the time of the site reconnaissance, the property was observed to be approximately 1,990 acres of primarily undeveloped agricultural land. The majority of the site is irrigated by a series of soil and concrete lined canals. These irrigation canals are owned and maintained by the IID include the Westside Main Canal, a northwest-southeast oriented feature along the southern side of the solar generation facility site. The Westside Main Canal serves the minor Fern Canal, the Fig Canal, and the Wormwood Canal. Smaller laterals and irrigation ditches are used to deliver irrigation water to the crop fields. A series of gravity flow drainage canals also exist within the site to collect drainage from the agriculture land. The irrigation and drainage canals, allowed through property easements and are maintained by the IID, are not included in the acreage of project site. These features would remain in place and continue to function after the solar generation facility is developed.

TABLE 4.10-2
SUMMARY OF POTENTIAL ENVIRONMENTAL HAZARDS

APN	Conditions
Imperial Property APNs 051-300-25, 051-300-29, 051-300-30, 051-270-27, 051-290-38, 051-270-47, 051-270-37, 051-330-05, 051-350-05, 051-330-15, 051-330-20, 051-360-03, 051-360-01, 051-360-02, and 051-360-18	The Imperial property was observed to be primarily agricultural land located along the west, south, and central portions of the overall project site. No structures were observed within these parcels. One well owned by Chevron was identified on the southwest corner of APN 051-350-05. A borrow area was observed on the northern edge of APN 051-330-15. One Aboveground Storage Tank (AST) was observed at the southeast corner of APN 051-360-03. One 500-gallon plastic AST containing sulfuric acid was observed on the southeast corner of APN 051-360-02.

TABLE 4.10-2
SUMMARY OF POTENTIAL ENVIRONMENTAL HAZARDS

APN	Conditions
Fitzurka Property APNs 051-310-49, 051-310-50, 051-310-56, 051-310-57, 051-310-59, 051-360-04, and 051-310-40	The Fitzurka Property was observed to be primarily agricultural land along the northeast and southeast portions of the overall project site. No structures were observed within these parcels. 500-gallon plastic ASTs containing sulfuric were observed at the following locations: the southwest corner of APN 51-310-50; the southern edge of APN 051-360-04**;** the southeast corner of 051-310-40; on northwest side of APN 051-310-40; at the northeast corner of APN 051-310-40; and on the northeast side of APN 051-310-40. Two approximately 1,000-gallon plastic trailer-mounted ASTs containing ammonium nitrate solution were observed on northeast corner of APN 051-310-40. Evidence of an apparent grass fire was observed in the northeast corner of APN 051-310-56. A memorial was observed on the northwestern edge of APN 051-310-40.
McVey Property APN 051-360-32	The McVey Property was observed to be primarily agricultural land in the southeast portion of the overall project site. No structures were observed within this parcel. 500-gallon plastic ASTs containing sulfuric acid were observed on the east central side of APN 051-360-32. Four approximately 1,000-gallon steel trailer-mounted ASTs containing anhydrous ammonia were observed on the east-central side of APN 051-360-32.
Tierra Property APNs 051-330-19	The Tierra Property was observed to be primarily agricultural land along the southern portion of the overall project site. A borrow area was observed on the northern edge of APNs 051-330-19.
Kuhn Property APN 051-310-27	The Kuhn Property was observed to be primarily agricultural land located in the central portion of the overall project site. No structures were observed within this parcel.
IID Property APNs 051-310-58 and 051-310-60	The IID Property was observed to be primarily agricultural irrigation canals along the northwest portions of the overall project site. No structures were observed within these parcels.

Source: URS, 2011.

Hazardous Substances

Various features on the project site have potential to contain hazardous substances or potential contamination. Each is briefly described below based on details provided in the ESA (URS, 2011).

Storage Tanks

Several ASTs were observed on the property for storage of agricultural-related chemicals. These ASTs were located adjacent to irrigation canals and appear to be used to add agriculture fertilizers directly into the irrigation canals for eventual soil treatment during irrigation/flooding of fields.

Eight approximately 500-gallon plastic ASTs containing sulfuric acid were observed throughout the project site at the following locations:

- 1 AST on east central side of APN 051-360-32
- 1 AST on northwest side of APN 051-310-40
- 1 AST at southeast corner of APN 051-310-40
- 1 AST at northeast corner of APN 051-310-40
- 1 AST on northeast side of APN 051-310-40
- 1 AST on southern edge of APN 051-360-04
- 1 AST on at southwest corner of APN 051-310-50

Two approximately 1,000-gallon plastic trailer-mounted ASTs containing ammonium nitrate solution were observed at the northeast corner of APN 051-310-40.

Eight approximately 1,000-gallon steel trailer-mounted ASTs containing anhydrous ammonia were observed at the following locations:

- 4 ASTs on east-central side of APN 051-360-32
- 1 AST at southeast corner of APN 051-360-03
- 1 AST at southeast corner of APN 051-360-02

Polychlorinated Biphenyls, Lubrication Oil, and Mercury

Electrical transformers, hydraulic equipment, capacitors, and similar equipment may contain polychlorinated biphenyls (PCBs) as operating or dielectric insulating fluids within the units. The Federal Toxic Substances Control Act generally prohibited the domestic manufacture of PCB after 1976; therefore, there is a potential for the dielectric fluid in electrical and hydraulic equipment manufactured prior to that date to contain PCBs.

Electricity transmission lines and three electrical transformers were observed on the property along the improved roads. Leaks or stains were not observed beneath the transformers.

Other equipment, such as capacitors, that may contain PCBs, were not observed on the property during the site reconnaissance. Two electric motors were located adjacent to IID canal associated with apparent pumps for water piping distribution. Motors contain hydraulic oil or other fluids. Leaks or stains were not observed beneath the motors.

Mercury was used in the mining industry to separate precious metals from crushed ore. In addition, mercury is used in analog timers and data loggers that are common in oil field production and other industrial operations. Based on the site reconnaissance, conditions for the use of mercury were not evident.

Waste Disposal

No waste disposal activities were observed on the property during the site reconnaissance.

Dumping

Three empty bags of Trigluralin 10G Herbicide were observed on the property. There was no apparent powder or chemical observed beneath or adjacent to the bags.

Pits, Ponds, Lagoons, Septic Systems, Cisterns, Sumps, Drains, and Clarifiers

Irrigation of the solar generation facility site is provided by irrigation canals operated by the IID. The larger canals (e.g. Westside Main Canal) serve smaller canals managed through flood gate systems to deliver irrigation water to the crop fields. A series of gravity flow drainage canals also exist within the site to collect drainage from agriculture land.

A portion of Fig Lagoon is on the northern portion of APN 051-300-05. No evidence of pits, ponds, septic systems, cisterns, sumps, drains, and/or clarifiers was observed at the property during the reconnaissance.

Pesticide Use

The California Department of Pesticide Regulation (DPR) Licensing and Certification Program database was reviewed for licenses and/or certificates for pesticide applicators that use or supervise the use of restricted pesticides. The property owner was not listed in the DPR database.

Plastic ASTs containing agricultural chemicals were observed on the property. Based on the historical agricultural use of the property, chemical retention in surface and subsurface soils could be of concern. Most agricultural chemicals degrade rapidly in the presence of ultraviolet light from the sun and most newer-formulated chemicals have lower retention time especially at the lower application concentrations directed by regulatory agencies. Based on the historical agricultural use of the property, there is the potential for residual pesticide concentrations in the surface and subsurface soils (URS, 2011, p. 2-5).

Staining and Discolored Soil

Stained soil was observed adjacent the ASTs in two locations:

- 1 AST on the southern edge of APN 051-360-04
- 4 ASTs on the east central side of APN 051-360-32.

Wood treatment appeared to be dripping from the base of two utility poles at the northeast corner of APN 051-360-02 causing soil staining at the base of these poles. No other staining or discolored soil was observed during the site reconnaissance.

Stressed Vegetation

Evidence of an apparent grass fire was observed in an area approximately 30 feet long and 5 feet wide on the top of an existing canal in the northeast corner of APN 051-310-56. No debris was observed and there was no indication of burning to dispose of material. Fire extinguishing material or chemicals were not apparent. No additional stressed vegetation was observed during the site reconnaissance.

On-site Wells

Monitoring wells, water wells, or oil wells were not observed on the property. The California Division of Oil, Gas, and Geothermal Resources (DOGGR) database was reviewed to evaluate oil and gas exploration in the vicinity of the property. One abandoned geothermal temperature observation well was identified on the DOGGR database. Chevron U.S.A., Inc. Well C-283 (API 02590354) is on the southwest corner of the property on APN 051-350-05. The well was reported to have been drilled in 1980 and abandoned in 1981. The well was 6-inches in diameter and 487-feet deep and was used to insert temperature instrumentation for logging temperatures to determine geothermal gradient. Approval for the well was granted by DOGGR on November 28, 1980 and well abandonment was approved on February 24, 1982. The well was reported to have been abandoned with a cement surface plug within the upper 10 feet below the ground surface.

Asbestos

The use of asbestos was primarily discontinued after the late 1970s. No structures that would contain asbestos were observed during the site reconnaissance.

Lead-based Paint

Concern for lead-based paint (LBP) is primarily related to older structures. No structures were identified that would contain LBP, however, equipment and canal lift gates observed on the property may contain LBP. Additionally, three wood framed shade structures were identified in the ESA. These structures appeared unpainted, but might have historically contained paint that had deteriorated or peeled. Only one of the three structures was located on a parcel within the project site:

- 1 horse shade structure at southwest corner of APN 051-310-26

Radon

A USEPA survey by state and county of indoor radon concentrations indicated the radon zone level for Imperial County is 3. Zone 3 areas are predicted to have an indoor radon screening potential of less than 2.0 picocuries per liter of air (pCi/l). The USEPA action level for radon is 4.0 pCi/l. Further assessment for radon appears unwarranted based on regional background levels.

Other Concerns

A borrow area was observed on the northern edge of APNs 051-330-19 and 051-330-15. This area appeared to have been cut down approximately 4 to 5 feet from adjacent grades. This borrow area was likely the source for the canal berm just north of the parcels. The history or methods of grading are not known.

A memorial consisting of a headstone, concrete footing, wooden cross, and other memorial material was observed onsite on the northwestern edge of APN 051-310-40. It is not known if there is anything buried associated with this memorial.

Other concerns such as unusual odors or chemical containers and drums (aside from the AST's discussed above) were not identified during the site reconnaissance.

Airport Land Use Compatibility Plan/Military Airspace

Following construction, the presence of a transmission line could affect air traffic and present safety hazards at nearby airports. The proposed gen-tie and is not located within the airport compatibility zones associated with any of the public airports in Imperial County. The closest public airport is the U.S.

Naval Air Facility at El Centro (NAF/EC) military airport located approximately 5.5 to 6.5 miles north of the gen-tie. The project is over 10.5 miles west of the Calexico International Airport. Therefore, no impact to aviation safety would occur.

Emergency Plans

The County of Imperial has adopted the "Imperial County Operational Area - Emergency Operations Plan," which addresses the County's planned response to extraordinary emergency situations associated with natural disasters, technological incidents, and nuclear defense operations. The plan identifies certain open space areas and public buildings to serve as emergency shelters when residents must be relocated. No portion of the proposed project site is designated as an emergency shelter area on the Fire/Emergency Management/Staging and Shelter Zone Map (Imperial County Office of Emergency Services, 2007).

Fire Hazard / Smoke

The potential for a major fire in the unincorporated areas of the County is generally low. According to the Imperial County Natural Hazard Disclosure (Fire) Map prepared by the California Department of Forestry and Fire Protection (CDF, 2000), the project site is not located in an area characterized as either: (1) a wildland area that may contain substantial forest fire risk and hazard; or (2) very high fire hazard severity zone. The closest wildland area prone to forest fire is located is approximately 20 miles west of the project site.

Valley Fever

Valley Fever is an illness caused by a fungus (*Coccidioides immitis* and *C. posadasii*) that grows in soils under certain conditions. Favorable conditions for the Valley Fever fungus include low rainfall, high summer temperatures, and moderate winter temperatures. Soils within the Imperial Valley, including the project site, fit the profile to harbor Valley Fever spores. When soils are disturbed by the wind or other activities such as construction and farming, Valley Fever fungal spores become airborne. The spores present a potential health hazard when inhaled. Individuals in occupations such as construction, agriculture, and archaeology have a higher risk of exposure due to working in areas of disturbed soils which may have the Valley Fever fungus. Infection risk is highest in California during a six month period from June to November. Animals are also susceptible to the disease. In extreme cases, the disease can be fatal, though the majority of Valley Fever cases are very mild with over 60 percent or more of infected people having no symptoms or flu-like symptoms (BLM, 2010a). Imperial County has a relatively low Valley Fever incidence rate of 0.1 to 5 cases for every 100,000 people (CDPH, 2009).

B. GEN-TIE

The ESA (URS, 2011) did not include the portion of the gen-tie to be located on lands under the jurisdiction of the BLM. This portion of the project is undergoing separate environmental analysis under NEPA. Construction of the proposed gen-tie would occur over a 2 to 6 month period. During the construction phase, small amounts of hazardous materials such as fuels and lubricants would be used on the ROW. To ensure worker health and safety and avoid impacts to the environment, storage of hazardous materials will be allowed on the ROW and fueling or maintenance of construction equipment will not be conducted on the ROW unless emergency repair is necessary. The HMMP and Emergency Evacuation and Response Plan developed for the project would include directions for workers responding during an emergency on the ROW.

4.10.3 IMPACTS AND MITIGATION MEASURES

A. STANDARDS OF SIGNIFICANCE

The impact analysis provided below is based on the following State CEQA Guidelines, as listed in Appendix G. The project would result in a significant impact to hazards and hazardous materials if it would result in any of the following:

a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

b) 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?

c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

d) 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 it create a significant hazard to the public or the environment?

e) 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, would the project result in a safety hazard for people residing or working in the project area?

f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?

g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

h) 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?

B. ISSUES SCOPED OUT AS PART OF THE INITIAL STUDY

Several criteria were eliminated from further evaluation as part of the Initial Study. Criterion “d” was eliminated because the project site is not listed as a hazardous materials site pursuant to Government Code, Section 65962.5. Therefore, this issue is not discussed further.

Criteria “e” and “f” were eliminated because the project site is not located within two miles of a public airport or a private airstrip. Therefore, this issue is not discussed further.

As identified in the Seismic and Public Safety Element of the County of Imperial General Plan, the "Imperial County Emergency Plan" addressed Imperial County's planned response to extraordinary emergency situations associated with natural disasters, technological incidents, and nuclear defense operations. The proposed circulation plan for the project site will be required to provide emergency access points and safe vehicular travel. In addition, local building codes would be followed to minimize flood, seismic, and fire hazard. Thus, the proposed project would not impair the implementation or physically interfere with any adopted emergency response plans or emergency evacuation plans. No impact is identified for this issue area and Criterion “g” is eliminated from further discussion.

Criterion "h" was eliminated because the project site is not characterized as an area of urban/wildland interface. According to the Imperial County Natural Hazard Disclosure (Fire) Map prepared by the California Department of Forestry and Fire Protection (2000) the project site does not fall into an area characterized as either: (1) a wildland area that may contain substantial forest fire risk and hazard; or (2) very high fire hazard severity zone. Thus, the project site would not expose people or structures to significant risk of loss injury or death involvinq wildland fire. No impact is identified for this issue area and it is not discussed further.

C. Issues of Concern with No Applicable Criteria

Several hazards of potential concern to the public with no corresponding criteria are briefly discussed below. These hazards are acknowledged and discussed to the extent that they would result from the proposed project.

Electromagnetic Fields

Potential impacts from the proposed project to public health for residents of Imperial County with respect to electromagnetic fields are briefly acknowledged here. Both electric and magnetic fields occur together whenever electricity flows (BLM/CEC, 2010). Electric voltage (electric field) and electric current (magnetic field) from the proposed gen-tie would create the potential for electromagnetic field (EMF) exposure. The available evidence as evaluated by the California Public Utilities Commission and other regulatory agencies has not established that such fields pose a significant health hazard to exposed humans (BLM/CEC, 2010). To date, there are no health-based federal regulations or industry codes specifying environmental limits on the strengths of fields from power lines. Likewise, the State has not adopted any specific limits or regulation on EMF levels related to electric power facilities (BLM/CEC, 2010).

The potential for the gen-tie on BLM land to impact human health is minimal because it would be located within Utility Corridor N of the California Desert Conservation Plan. Currently, there are three high voltage transmission lines located in Utility Corridor N (Sempra, Intergen, and SDG&E). No residential uses are allowed within this corridor. In addition to the 230-kV gen-tie, the project also includes a 1,000 Volt (V) Direct Current (DC) collection system comprised of underground cabling and combiner boxes. Based on the undeveloped and unpopulated nature of the setting for the project overall (gen-tie and solar energy site), long-term exposure to EMFs generated by the gen-tie are not expected and no impact would occur.

When the gen-tie is brought on-line and starts to transmit electricity, EMFs would be generated in proximity to the line. Currently, there is no agreement among scientists regarding the potential health risk related to EMFs. However, in response to a situation of scientific uncertainty and possible public concerns regarding EMF, an EMF Management Plan would be developed that specifies, where needed and feasible, measures to reduce exposure from the gen-tie. The EMF Management Plan will be prepared when the final gen-tie line design is completed. The BLM is responsible for review and approval of the EMF Management Plan.

Interference with Radio-Frequency Communications

Gen-tie related radio-frequency interference is one of the indirect effects of project operation. Interference may be produced by the physical interactions of line electric fields. Such interference is due to the radio noise produced by the action of the electric fields on the surface of the energized conductor. The process involved is known as "corona discharge" (also discussed in Section 4.8, Noise), but is referred to as "spark gap electric discharge" when it occurs within gaps between the conductor

and insulators or metal fittings (BLM/CEC, 2010). When generated, spark gap electric discharge manifests itself as perceivable interference with radio or television signal reception or interference with other forms of radio communication. The level of interference depends on factors such as line voltage, distance from the line to the receiving device, orientation of the antenna, signal level, line configuration and weather conditions. As a result, maximum interference levels are not specified as design criteria for modern transmission lines. The level of any such interference usually depends on the magnitude of the electric fields involved and the distance from the line. The potential for such impacts is minimized by reducing the line electric fields and locating the line away from inhabited areas. The proposed gen-tie is proposed within CDCA Corridor N in an unpopulated portion of the county.

The proposed gen-tie would be built and maintained in keeping with all applicable standards and regulations, including those prescribed by the California Public Utilities Commission (CPUC) and State of California Rules for Overhead Electric Line Construction, General Order No. 95 (GO-95). The potential for spark gap electric discharge interference is usually of concern for lines 345-kV or above, not for 230-kV lines. Since the proposed gen-tie would be located in rural and uninhabited desert open space, no impacts to radio-frequency interference would occur.

Hazardous Shocks

Hazardous shocks are those that could result from direct or indirect contact between an individual and an energized line. No design-specific federal regulations have been established to prevent hazardous shocks from overhead power lines (BLM/CEC, 2010). Safety is assured within the industry from compliance with the requirements specifying the minimum national safe operating clearances applicable in areas where the line might be accessible to the public. The proposed gen-tie would be located in rural and uninhabited desert open space making it highly unlikely that the public would come in contact with the line. Moreover, the Gen-tie Line would be located in a designated utility corridor (Corridor N) within the California Desert Conservation Area (CDCA). The Applicant has indicated that the project would be designed, constructed, and operated to exceed the requirements of GO-95.

Lightning protection at the substation will be designed in accordance with the requirements of American National Standards Institute (ANSI)/Institute of Electrical and Electronics Engineers (IEEE) 998 using a combination of lightning masts and static wire. The lightning shielding system will include self-supporting galvanized steel masts strategically located in the substation connected by overhead shield wire. Station lightning protection will use overhead transmission shield wire. For ground faults, the substation grounding system will be designed according to ANSI/IEEE Standard 80 and National Electrical Safety Code (NESC) C2 Section 9.

The PV solar energy field would have a ground system connecting all components. The transformer arrester would be connected to Power Conversion Station (PCS) ground grid loop with 4/0 conductor and four grounding copper rods 10’ x ¾”. The PCS Inverters would also be connected to the same ground grid loop. A medium voltage step-up transformer would be mounted on the PCS metal framed skid connected to ground. The PCS enclosure/shelter would have a ground resistance of less than 5 ohms. Each transformer has distribution class surge arresters (Metal Oxide Arrester [MOV] type) for each primary phase which are connected to the same ground as the skid. Grounding protection for overhead collection systems would be provided at the first pole of PVCS’s as well as shield wires. Each DC power combiner box has a surge protective device installed to protect against lightning surges on the DC arrays. Therefore, no impacts associated with hazardous shocks are anticipated to occur.

Fire Hazard (Non-Wildland/Operational)

Standard fire prevention and suppression measures would be implemented for the proposed project. Fire suppression for the approximately 3,000 square foot O&M building will be provided via a 10,000 gallon fire water tank installed in a location near the building that meets ICFD spacing requirements. The Applicant will prepare a Fire Management Plan with details regarding placement of hydrants, fire extinguishers, etc. which will be prepared in accordance with ICFD and submitted prior to construction. The O&M Building does not require fire sprinklers based on its size and use (Cable, 2012).

Valley Fever

Construction of the proposed project would occur in an area favorable to the growth of Valley Fever, a fungus (*Coccidioides immitis*) that grows in soils in areas of low rainfall, high summer temperatures, and moderate winter temperatures. Project construction would disturb the soil and cause the fungal spores to become airborne, potentially putting construction personnel and wildlife at risk of contracting Valley Fever. However, Imperial County is not considered to have a high incidence of Valley Fever (BLM, 2011). While the potential exposure of workers to Valley Fever spores could occur during construction, implementation of MM 4.4.1a, MM 4.4.1b, and MM 4.4.1c identified to reduce PM_{10} in Section 4.4, Air Quality would be effective in reducing airborne dust. Implementation of these mitigation measures, as well as a dust control plan as required by the Imperial County Air Pollution Control District, would minimize the spread of fungal spores thereby reducing potential for contracting Valley Fever during construction. No impacts associated with exposure to Valley Fever would occur during operations and maintenance as the applicant intends to apply a dust palliative to suppress fugitive dust during the operational phase of the project.

D. METHODOLOGY

The analysis of hazardous materials is twofold: those potentially existing on the site and those that would be used as part of project construction, operations and maintenance, and decommissioning.

Potential existing hazards were assessed based on information contained in the *Phase I Environmental Site Assessment for the First Solar Project Sagebrush Site, Imperial County, California* (ESA) (URS, 2011) and a letter regarding "URS Responses to Ericsson-Grant, Inc. Comments on the First Solar Phase I ESA for the Sagebrush Project Site in Imperial County, CA" (Ray, 2011). These documents are provided on the attached CD of Technical Appendices as **Appendix H** of this EIR.

Some hazardous materials would be used on a short-term basis during construction and decommissioning. Others would be stored on-site for use during operations and maintenance. Therefore, this analysis was conducted by examining the choice and amount of chemicals to be used, the manner in which the Applicant would use the chemicals, the manner by which they would be transported to the facility, and the way in which the Applicant plans to store the materials on site.

E. PROJECT IMPACTS AND MITIGATION MEASURES

Hazardous Materials Transport, Use, Disposal and Accidental Release

Impact 4.10.1 The proposed project could create a significant hazard to the public or the environment through the transport, use, or disposal of hazardous materials. This is considered a l**ess than significant impact**.

Transport

Some hazardous materials would be required during construction, operations and maintenance, and decommissioning of the proposed project. These include diesel fuel, oil and grease for heavy equipment as well as paints and solvents. Large quantities of these materials are not anticipated to be necessary but would require transport to the project site. All hazardous materials (such as diesel fuel, oil and grease for heavy equipment) transported to the site during construction would occur in compliance with Department of Toxic Substances Control (DTSC) regulations. Therefore, likelihood of an accidental release during transport or residual contamination following accidental release is not anticipated and impacts are considered **less than significant**.

Likewise, all hazardous materials (such as diesel fuel, oil and grease for heavy equipment) used on and transported to the gen-tie right-of-way during construction would occur in compliance with applicable regulations. Thus, less than significant impacts are anticipated in association with use, transport, and disposal of hazardous materials during construction of the proposed project.

Use and Storage

A variety of hazardous materials would be used during construction of the proposed project. However, no acutely toxic hazardous materials would be used and none of the materials are anticipated to pose a significant potential for off-site impacts such as contamination through a large release of chemicals. The Applicant has identified mitigation measures that address handling of hazardous materials in a manner which would avoid potential for spills (refer to Table 2.0-4 in Chapter 2.0). Therefore, potential for accident conditions involving the release of hazardous materials used or stored during construction is considered a **less than significant**.

The solar generation facility would require use of some hazardous materials during construction, operations and maintenance, and decommissioning. Limited quantities of hazardous materials would be stored or used on site. These include diesel, gasoline, motor oil and hydraulic fluids and lube oils for vehicles and equipment, and mineral oil for the substation transformers and PCS switchgear. Spill containment and clean-up kits will be kept on site during construction and maintained during the operation of the project. The project will also be required to comply with State laws and County Ordinance restrictions, which regulate and control hazardous materials handled on-site.

Disposal

During construction, typical construction wastes such as wood, concrete, and miscellaneous packaging materials as well as some broken PV modules would be generated. Construction wastes will be disposed of in accordance with local, State and federal regulations, and recycling will be used to the greatest extent possible. Left-over or spent materials such as used oil filters, used batteries, used hydraulic fluid, oils, and grease would be generated during project construction. Any spent or surplus hazardous wastes would be transported off-site for disposal according to applicable State and County restrictions and laws governing the disposal of hazardous waste. Detailed information about the use, storage and disposal of hazardous materials would be provided in the Health and Safety Plan that would be developed by the construction contractor (refer to Table 2.0-4 in Chapter 2.0).

Any PV modules damaged or broken during construction will be returned to First Solar's manufacturing facility in Ohio where they would be recycled into new modules or for use in other new products. At end-of-life, First Solar PV modules would be classified as California-only hazardous waste but can still be collected and recycled under First Solar's Module Collection and Recycling Program, which implements applicable California and Federal hazardous waste requirements.

Mitigation Measures

None required.

Significance After Mitigation

Not applicable.

Hazard Through Upset/Release of Hazardous Materials

Impact 4.10.2 The proposed project site contained some residual hazardous materials, pesticide residue and several other features that could be considered hazardous. Therefore, this impact is considered **potentially significant**.

Herbicides/Pesticides

The project site has historically been farmed and is currently in agricultural production. The ESA noted three empty bags of Trigluralin 10G Herbicide on the solar generation facility site. While these were not identified as Recognized Environmental Conditions (RECs) in the ESA (URS, 2011, p. 5-1), proper removal would be required prior to commencing construction.

Likewise, the ESA did not identify the use of pesticides as an REC as no mixing or storage of large quantities of pesticides was identified during the site reconnaissance or during the review of historical data and/or regulatory databases (Ray, 2011). Based on the historical agricultural use of the property, the ESA acknowledged that there is the potential for residual pesticide concentrations in the surface and subsurface soils (URS, 2011, p. 2-5). However, the ESA did not recognize this as a REC. While chemical retention in surface and subsurface soils could be of concern, the majority of agricultural chemicals degrade rapidly in the presence of ultraviolet light from the sun. Further, most newer-formulated chemicals have lower retention time especially at the lower application concentrations directed by regulatory agencies. No soil remediation was recommended.

The application of herbicides and pesticides of the site would have been controlled by the applicators as directed by the Federal Insecticide, Fungicide, and Rodenticide Act ("FIFRA") in accordance with manufacturer prescribed and labeled instructions. Therefore, the potential presence of low concentrations of agricultural chemicals on the project site is not anticipated to be at hazardous levels. Also, the proposed project would not contain a residential or commercial component that would result in long term exposure people to potential pesticides/herbicides. Therefore, no direct impact (exposure during construction) or indirect impact (exposure following construction during operations and maintenance) would occur relative to pesticide residue in association with construction of the proposed project.

The potential for air dispersion of pesticide residues in dust during grading activities would be minimized by the fugitive dust control plan implemented by the Applicant in accordance with Imperial County Air Pollution Control District (ICAPCD) requirements. The mitigation measures taken to minimize dust would also reduce any associated air dispersal of pesticide residues (refer to mitigation measure Air Quality sections). This would result in much less dust than typical agricultural operations where dust is not controlled. Therefore, impacts associated with exposure to pesticide residue during construction are considered **less than significant**.

ASTs

The ESA identified multiple ASTs containing agricultural chemicals (sulfuric acid, ammonium nitrate solution, and anhydrous ammonia) located throughout the solar generation facility site. While none of

the ASTs were identified as Recognized Environmental Conditions (RECs) in the ESA (URS, 2011, p. 5-1), proper removal would be required prior to commencing construction.

Polychlorinated Biphenyls

Electricity transmission lines and three electrical transformers observed on the property could potentially contain PCBs in dielectric fluid if manufactured prior to 1976. The date of this equipment is unknown.

Stained Soil

Stained soil was observed adjacent to one AST located on the southern edge of APN 051-360-04 and four ASTs located on the east central side of APN 051-360-32.

Minor staining associated with dripped wood treatment was observed at the base of two utility poles at the northeast corner of APN 051-360-02. The dripped material appeared tar like (i.e., limited mobility), and was limited to the base of the poles. The ESA did not identify the soils staining as an REC requiring further assessment or remediation. However, this soil will require removal prior to commencing construction.

Lead-Based Paint

Three wood framed shade structures appeared unpainted, but might have historically contained paint that had deteriorated or peeled. The potential presence of lead-based paint on these structures was identified as an REC. Nevertheless, suspect lead-based paint should be evaluated if structures are to be removed.

Geothermal Well

Chevron U.S.A., Inc. Well C-283 (API 02590354) is on the southwest corner of the property on APN 051-350-05. The well was reported to have been drilled in 1980 and abandoned in 1981. The well was 6-inches in diameter and 487-feet deep and was used to insert temperature instrumentation for logging temperatures to determine geothermal gradient. Approval for the well was granted by DOGGR on November 28, 1980 and well abandonment was approved on February 24, 1982. The well was reported to have been abandoned with a cement surface plug within the upper 10 feet below the ground surface (URS, 2011, p. 2-6).

Mitigation Measures

MM 4.10.2a Empty herbicide bags and any trash or debris shall be removed from the property according to applicable regulations prior to commencing earthmoving activities.

Timing/Implementation: *Prior to issuance of a grading permit.*
Enforcement/Monitoring: *Imperial County Agricultural Commissioner; Imperial County Health Department, Environmental Health and Consumer Protection Services; CUPA County of Imperial.*

MM 4.10.2b ASTs containing sulfuric acid, ammonium nitrate solution, and anhydrous ammonia shall be removed from the following locations and wherever else present on the project site prior to commencing earth moving activities: east central side of APN 051-360-32; northwest and northeast side, southeast corner and northeast corner of APN 051-310-40; southern edge of APN 051-360-04; southwest corner of APN 051-310-50; northeast

corner of APN 051-310-40; east-central side of APN 051-360-32; southeast corner of APN 051-360-03; and the southeast corner of APN 051-360-02.

Timing/Implementation: *Prior to issuance of a grading permit.*
Enforcement/Monitoring: *Imperial County Agricultural Commissioner; Imperial County Health Department, Environmental Health and Consumer Protection Services; CUPA County of Imperial.*

MM 4.10.2c If on-site the transformers are found to contain PCBs, the owner and responsible party for the transformers shall be required to handle and dispose of the waste dielectric fluid according to applicable regulations.

Timing/Implementation: *Prior to issuance of a grading permit.*
Enforcement/Monitoring: *Imperial Irrigation District; Imperial County Health Department, Environmental Health and Consumer Protection Services; CUPA County of Imperial.*

MM 4.10.2d Utility poles, associated base and stained soil adjacent to ASTs shall be removed and disposed of in an approved manner by the owner/utility prior to commencing earthmoving activities. The locations include material located in the northeast corner of APN 051-360-02, stained soil on the southern edge of APN 051-360-04 and the east central side of APN 051-360-32.

Timing/Implementation: *Prior to issuance of a grading permit.*
Enforcement/Monitoring: *Imperial Irrigation District; Imperial County Health Department, Environmental Health and Consumer Protection Services; CUPA County of Imperial.*

MM 4.10.2e Suspect LBP shall be evaluated by a California Certified Lead Inspector/Assessor prior if structures are to be removed. As applicable, confirmed LBP shall be handled by a licensed LBP contractor and disposed of according to appropriate regulations.

Timing/Implementation: *Prior to issuance of grading permit.*
Enforcement/Monitoring: *Imperial County Health Department, Environmental Health and Consumer Protection Services; CUPA County of Imperial.*

Significance After Mitigation

Implementation of MM 4.10.2a and MM 4.10.2b would reduce residual hazards on the project site from prior agricultural activities. MM 4.10.2c, MM 4.10.2d, and MM 4.10.2e would address and remove potential hazards associated with potential presence of PCBs, stained soil and lead-based paint. Following the implementation of these mitigation measures, all potential upsets or release of hazardous materials would be reduced to **less than significant**.

Emit Hazardous Emissions

Impact 4.10.3 The proposed project is located within a quarter mile of an existing school. The project would use limited amounts of hazardous materials on occasion that would be handled in accordance with all applicable regulations and standards. Therefore, impacts associated with emitting hazardous materials within one-quarter mile of a school are considered **less than significant**.

The proposed project site is located within one-quarter mile of Westside Elementary School. However, the only hazardous materials that would be used by the project within one-quarter mile of the school would be the fuels used by equipment during construction and herbicides for weed control during both construction and operation. In both cases, the level of hazard exposure at the school would be similar to what is currently occurring in association with farming operations currently conducted on the same lands. No acutely hazardous materials would be used as part of construction or operation of the proposed project.

As previously mentioned, fuels would be transported to the site in compliance with Department of Toxic Substances Control (DTSC) regulations. All herbicides use would be in accordance with all recommended application procedures as identified on product labels as well as in cooperation with the County Agricultural Commissioner for application on County lands. Therefore, impacts associated with exposure to hazardous emissions within a quarter mile of a school are considered **less than significant**.

Mitigation Measures

None required.

Significance After Mitigation

Not applicable.

4.10.4 CUMULATIVE SETTING, IMPACTS AND MITIGATION MEASURES

A. CUMULATIVE SETTING

The geographic scope of the cumulative setting for hazards and hazardous materials is a one-mile radius around the project site. One mile is the standard American Society of Testing and Materials (ASTM) standard search distance for hazardous materials. This geographic scope encompasses an area larger than the project site and provides a reasonable context wherein cumulative projects in the vicinity of the proposed project could affect hazards and hazardous materials. Based on Table 3.0-1 (Approved, Proposed and Reasonably Foreseeable Large-Scale Projects in the Vicinity of the Campo Verde Solar Project) in Chapter 3.0, Introduction to the Analysis and Assumptions Used, there is one other project from the list of cumulative projects within the geographic scope.

B. CUMULATIVE IMPACTS AND MITIGATION MEASURES

Cumulative Hazards and Hazardous Materials Impact

Impact 4.10.4 The proposed project, in combination with other reasonably foreseeable projects in the vicinity of the project site, would increase the density of development in the area, thus potentially increasing the potential for the presence hazards and use of hazardous materials. However, this is considered to be a **less than cumulatively considerable impact**.

There are 23 cumulative projects that are not within a one-mile radius of the project site and are considered outside of the geographic scope for the consideration of cumulative effects from hazardous materials sites. The proposed project and one other cumulative project, Silverleaf Solar, could contribute to cumulative adverse effects from hazards and hazardous materials. Therefore, the potential exists for additional hazardous materials to be transported, used and generated in association with increased development in the vicinity of the proposed project site. Both the proposed project and the Silverleaf Solar project would both involve the storage, use, disposal, and transport of hazardous materials to varying degrees during construction and operation. Accidental release of hazardous

materials can be mitigated to less than significant levels through compliance with various Federal, state, and local laws, regulations, and policies regarding transport and use of hazardous materials. It is reasonable to expect that the proposed project and the Silverleaf Solar project would implement and comply with these existing hazardous materials laws, regulations, and policies. Additionally, the proposed project includes measures to avoid spills. Based on the nature of the proposed project as a solar generation facility, it would not result in the generation or transport of substantial quantities of hazardous materials or present the potential for release of hazardous materials. Therefore, these two projects would not cause a cumulative impact, and the projects would result in a less than cumulatively considerable contribution to a cumulative impact related to use or routine transport of hazardous materials.

Existing on-site hazards are localized and site specific. Potential impacts are not expected to combine with similar impacts of past, present, or reasonably foreseeable projects. Mitigation measures have been developed to minimize the impacts of the proposed action and one cumulative project during construction, operations and maintenance, and decommissioning to the extent feasible. Project-specific mitigation measures have been developed for the proposed project based on the Phase I ESA (MM 4.10.2a and MM 4.10.2b would reduce residual hazards on the project site from prior agricultural activities; MM 4.10.2c, MM 4.10.2d, and MM 4.10.2e would address and remove potential hazards associated with potential presence of PCBs, stained soil and lead-based paint). It is anticipated that the Silverleaf Solar project will be required to implement similar mitigation measures. Following implementation of these measures, project impacts to hazards and hazardous materials would be less than significant. Therefore, the project's contribution to cumulative hazardous materials impacts is **considered less than cumulatively considerable**.

Mitigation Measures

None required.

Significance After Mitigation

Not applicable.