3.5 Hazards and Hazardous Materials

3.5.1 Introduction

This section describes the environmental setting of the Project area in regard to potential hazards and hazardous materials at the Project site. Phase I Environmental Site Assessments (ESAs) were prepared during the 2011 FEIR and can be found in Appendix H. These include the following:

- *Phase I ESA Report Centinela Solar Energy North of State Highway 98 Near Brockman Road, Calexico, California* (GS Lyon, 2010a)
- *Phase I ESA Report Centinela Solar Energy Site #2 North of State Highway 98 Near Brockman Road, Calexico, California* (2010b)
- *Phase I ESA Report West-Gro and Dessert Ranch Southwest of State Hwy 98 and Brockman Road Calexico, California* (2011a)
- *Phase I ESA Report Brundy Property Southwest of State Hwy 98 and Westside Main Canal West of Calexico, California* (2011b)

This section also describes federal, state, and local regulations applicable to hazards and hazardous materials. Lastly, this section analyzes the potential hazards associated with the construction and operation of the proposed Project as well as potential cumulative impacts of the Project. The assessments were based on the information and guidelines provided in CEQA. Mitigation measures are recommended, as necessary, to reduce significant impacts related to hazardous and hazardous materials.

This section does not discuss seismic or flooding hazards. See Section 3.6 and 4.6 of the 2011 FEIR for a discussion of seismic hazards. See Section 3.11 and 4.11 of the 2011 FEIR for a discussion of flooding risks.

3.5.2 Environmental Setting

The following sections describe the existing environmental setting of the Project area in regard to hazards and hazardous materials.

3.5.2.1 Project Location

The Project is located within the boundary of the existing CSE facility south of SR-98 and east of the Westside Main Channel. The Project footprint is immediately east of the existing SDG&E Drew Switchyard. The CSE facility is located in a rural, unpopulated area with agriculture to the north and east, the Yuha desert to the west, and the United States – Mexico border to the south. Previously, the CSE facility site had been actively farmed since the 1940s and was subject to pesticide use. The CSE facility footprint includes irrigation canals, ditches, and public roads.

3.5.2.2 Environmental Site Assessment

Phase I ESAs were prepared for the existing CSE facility, which encompass the Project site. The following sections include a summary of the findings in the following reports: *Phase I ESA Report Centinela Solar Energy North of State Highway 98 Near Brockman Road, Calexico, California* (GS Lyon, 2010a); *Phase I ESA Report Centinela Solar Energy Site #2 North of State Highway 98 Near Brockman Road, Calexico, California* (2010b); *Phase I ESA Report West-Gro and Dessert Ranch Southwest of State Hwy 98 and Brockman Road Calexico, California* (2011a); and *Phase I ESA Report Brundy Property Southwest of State Hwy 98 and Westside Main Canal West of Calexico, California* (2011b) and a letter "*Response to Phase 1 ESA Comments Centinela Solar Energy Solar Energy Facility Imperial County, California*" (Lyon, 2011). These reports investigated the CSE facility footprint to determine if any recognized or potential environmental conditions were present on the site. "Recognized environmental conditions" are defined by the American Society for Testing and Materials (ASTM) 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 reports completed for the Phase I ESAs include current conditions of the CSE footprint and adjoining properties; a review of readily available Federal, state, and local government agency records; and a review of readily available historical information for the site and adjacent areas.

Background Review

The 2011 FEIR contained reviews of historic topographic maps, historic aerial photography, historic Sanborn Fire Insurance maps, and historic telephone and Polk City directories that evaluated potentially adverse environmental conditions based on previous land ownership and uses. Federal and state regulatory lists with hazardous material information were reviewed within 1 mile of the CSE facility footprint. The results were presented in the Phase I ESAs prepared by GS Lyon Consultants, Inc.

No environmental liens were identified associated with the parcels located southwest of SR-98 and Brockman Road (Assessor's Parcel Numbers [APN] 052-190-007, 052-190-008, 052-190-009, and 052-190-010) (GS Lyon, 2011a, p.3). No environmental liens were identified for parcels located north of SR-98, east of Brockman Road, and north of Kubler Road, to the east and west of Pulliam Road (APNs 052-170-019, 052-180-033, 052-180-032, and 052-170-058) (GS Lyon, 2010b). Oil and gas exploration leases from the early 1980s were identified on parcels located southwest of SR-98 and the Westside Main Canal (APN 052-190-001, 052-190-002, and 052-190-006) (GS Lyon, 2011b, p. 3). Title documents were not provided for the portion of the CSE facility footprint located northwest of Brockman Road and SR-98

(APNs 052-170-076, 052-170-036, 052-170-077, 052-170-034, 052-170-078, 052-170-035, 052-170-074, 0052-430-009, 052-170-052, 052-170-050, 052-170-068 and 052-170-018 (GS Lyon, 2010a, p. 4)).

Site Reconnaissance

Five field visits took place during site reconnaissance for the 23 parcels that comprise the CSE facility footprint as well as the private property portion of the Gen-tie line east of the CSE facility. The Project is located within the site reconnaissance area for the 2011 FEIR. These site visits took place in April 2010, October 2010, December 2010, and January 2011. Visual observations of surficial conditions were conducted during site visits. Field crews also evaluated properties for the presence of polychlorinated biphenyls (PCBs) and/or asbestos containing materials (ACMs), indications of surface or subsurface hydrocarbon or pesticide contamination, onsite groundwater wells, pits or sumps, wastewater discharge practices, and surface water drainage patterns (GS Lyon, 2010a, 2010b, 2011a, and 2011b). Properties within the CSE footprint and adjacent to the footprint were assessed for the presence of surface staining and/or stressed vegetation; drums, aboveground storage tanks, and containers; evidence of waste disposal; fill material; transformers; vents, air stacks, and odors; underground storage tanks; wells; alterations in vegetation; pits, ponds, and lagoons; and presence of pesticides. The findings of the site visit are summarized in the following sections. None of the locations identified in the following sections are on the Project site.

Surface Staining and/or Stressed Vegetation

The site reconnaissance identified an area in the southeast corner of parcel 052-170-018 where vehicles are serviced that was extensively stained with what appeared to be hydrocarbon (oil) (GS Lyn, 2010a). This site is located approximately 1.6 miles north-northwest from the Project site. The stain was dark in color and had a motor oil smell. Motor oil residues were found in oil change containers on the parcel as well. No further testing was necessary based on the site reconnaissance findings (Lyon, 2011).

Drums, Aboveground Storage Tanks, and Containers

The 2011 FEIR included an investigation of drums, aboveground storage tanks, and containers within the CSE footprint. Two large aboveground steel fuel storage tanks within a concrete containment area were located on parcel 052-170-034, approximately 2 miles northwest from the Project site (GS Lyon, 2010a). This area is also near the Brockman homestead house and farm equipment yard on the east side of Brockman Road, which was outside the CSE footprint. Parcel 052-170-018 contained several 55-gallon drums partially filled with an unknown substation, though to be gasoline or motor oil (GS Lyon, 2010a). Parcel 052-170-058 contained a propane tank (GS Lyon, 2010b).

Underground Storage Tanks

The CSE footprint background review and site reconnaissance found no indication of underground storage tanks (USTs) within the parcels researched (GS Lyon, 2010a, 2010b, 2011a, and 2011b).

Trash and Debris

Parcel 052-170-058, located approximately 1.6 miles northwest from the Project site, had household debris and tires along its eastern boundary (GS Lyon, 2010b). Parcel 052-170-018, located 1.5 miles northwest from the Project site, contains illegal solid waste around a vehicle service area (GS Lyon, 2010a). Observations identified items such as a water heater, computer monitor, oil stained carpet, and used motor oil cans with oil residue. No further testing for hydrocarbons (oil) was necessary based on the site reconnaissance findings (Lyon, 2011).

Fill Material

The Phase I ESAs for the 2011 FEIR documented no evidence of fill material within the parcels researched (GS Lyon, 2010a, 2010b, 2011a, and 2011b).

Transformers

Transformers were identified in the site reconnaissance area and observed for leakage of PCB contamination. No evidence of leakage was noted at pole mounted transformers. IID had tested all transformers in the Imperial Valley for PCBs previously and replaced any that contained PCBs (GS Lyons, 2010a). No evidence of PCB contamination was noted associated with the replaced transformers.

Six transformers were identified during site reconnaissance. Parcels 052-190-007, 052-190-008, 052-190-009, and 052-190-010 contain IID-owned tile drainage sumps and require two electrical transformers on power poles. (GS Lyon, 2011a). Three transformers were located on parcel 052-170-018, located 1.5 miles northwest from the Project site (GS Lyon, 2010a). Another transformer was located at a residence on parcel 052-170-074, (GS Lyon, 2010a). No transformers were noted on parcels 052-170-019, 052-170-028, 052-180-032, 052-180-033, 052-190-001, 052-190-002, and 052-190-006 (GS Lyon, 2010b and 2011b).

Vents, Air Stacks, and Odors

No vents, air stacks or odors were observed during the 2011 FEIR site reconnaissance of the CSE footprint and adjoining areas.

Groundwater and Wells

Groundwater was encountered during soil borings for the CSE project at depths ranging from 14 feet to 24 feet below ground surface and could rise to as high as 8 feet below ground surface (Landmark, 2011). No evidence of groundwater was noted during the site reconnaissance. No exploratory oil or gas wells were identified in the area, though oil and gas exploration leases from the early 1980s were identified as part of title reports for parcels 052-190-001, 052-190-002 and 052-190-006 (GS Lyon, 2011b). These parcels are located south of SR-98, west of the Project site.

Alterations in Vegetation

No evidence of recent alternations in vegetation were documented as part of the Phase I ESAs for the 2011 FEIR. The CSE footprint was comprised of agricultural fields at the time. The CSE footprint has since been cleared and a solar array was installed. The Project footprint was cleared during the construction of the CSE.

Pits, Ponds, and Lagoons

No pits, ponds, or lagoons were noted during site reconnaissance. Parcel 052-170-058 had a septic system with a leach field (GS Lyon, 2010b).

Pesticides and Herbicides

The CSE footprint is in previously farmed areas which had aerial and ground application of pesticides and application chemical fertilizers to fields and irrigation water (GS Lyon, 2010a, 2010b, 2011a, 2011b). Historically, tile drainage systems under the agricultural fields removed excess water, soluble salts, and compounds during irrigation. A 1994 water quality study showed that arsenic, selenium, and nitrates were below regulatory limits for drinking water (GS Lyon, 2010a, 2010b, 2011a, 2011b). GS Lyon conducted field tests on agricultural lands in Imperial County. Pesticide residuals were typically at 25 to 50 percent of the regulatory action levels. No evidence of atypical regulatory action pesticide residues, pesticide spills, or other agricultural chemical spills were observed in the site reconnaissance area. No site-specific testing was recommended (GS Lyon, 2011).

Environmental Database Search

A review of data in the Environmental Data Reports (EDR) identified no sites within a 1-mile search radius of the CSE facility. No parcels in the site reconnaissance area were listed in the EDR databases searched during the Phase I ESA (GS Lyon, 2010a, 2010b, 2011a, and 2011b).

3.5.2.3 Emergency Plans

Imperial County adopted the "Imperial County Operational Area – Emergency Operations Plan" which includes planned responses to extraordinary emergency situations and includes emergency shelter areas for residents. No emergency shelter areas were located within the CSE footprint on the Fire/Emergency Management/Staging and Shelter Zone Map (Imperial County Office of Emergency Services, 2007).

3.5.2.4 Fire Hazard/Smoke

According to Imperial County fire hazard severity zone (FHSZ) maps, the Project site is located in a moderate fire hazard severity zone (Cal Fire, 2007). The CSE facility is a mix of moderate and non-wildland/non-urban severity zones. The closest high severity zone is located approximately 17 miles west of the Project site. The closest very high severity zone is located approximately 26 miles west of the Project site.

The Project will be designed and built to the latest safety standards with multiple redundant forms of protection against electrical faults and fire events at every level of the system. The Project will meet the latest standards from UL and National Fire Protection Association (NFPA) (UL-9540A) which includes a destructive test for battery racks that determines that a fire at one location will not propagate to any neighboring batteries. The Project will also be required to have an Emergency Response Plan (ERP) acceptable to County Fire, as a standard condition of the approval of the CUP. The ERP will address potential emergencies including chemical releases, fires, and injuries. The ERP will describe emergency response equipment and equipment locations, evacuation routes, procedures for reporting to local emergency response agencies, responsibilities for emergency response, and other required actions to be taken in the event of an emergency. Employee response to an emergency will be limited to an immediate response to minimize the risk of escalation of the accident or injury. Employees will be trained to respond to fires, spills, earthquakes, and injuries. A first aid facility with adequate first-aid supplies and personnel qualified in first aid treatment will be onsite. The Applicant will work with the fire marshal to design the Project in compliance with all local codes and standards. An automatic smoke and fire detection and alarm system coupled with water-based suppression system and/or clean-agent based suppression system will be designed for a worst-case failure.

The Project will also include redundant safety features including electrical fuses and overcharge protection. Each battery cell bank will be continuously monitored for voltage, temperature, and current. If a battery is found to have irregular behavior, it will be disconnected from the system by an automated control system and inspected before being returned to operation. Each battery pack has hundreds of safety measurement points, which means there are thousands of safety measurement points in the system overall.

Each of these points will alert the operations and maintenance organization if there is a deviation from normal operating conditions. In addition, each battery zone will have high voltage DC isolation switches to separate the zones into low voltage blocks safe for maintenance. A hierarchical fusing system with protection at the zone, rack, module, and individual cell level will be used, which provides system safety even in the event that the software control system is not functional. Cells are designed to clear in the proper order in over-current and/or short circuit situations, which prevents uncontrolled discharge of stored energy.

In comparison to battery fires in electric vehicles, the technology proposed for the Project has several differences that reduce the risk of fires. The Project will be stationary, whereas electric vehicle battery fires often occur as the result of a crash where the battery is crushed or penetrated in a way that bypasses safety mechanisms. The batteries and modules proposed for the Project will also have automotive grade anti-crush and anti-penetration safety technologies built into their design, which are designed to disable the battery cell if the housing is damaged due to improper handling or other types of accidents.

3.5.2.5 Valley Fever

Soils in Imperial County may be favorable for the fungus (*Coccidioides immitis* and *C. posadasii*) that causes Valley Fever. Low rainfall, high summer temperatures, and moderate winter temperatures create favorable conditions for the fungus which grows in soil. Ground disturbance can cause Valley Fever spores to become airborne, causing a potential health hazard if inhaled. Valley Fever risk is highest in California from June to November, especially for individuals working in fields such as construction, agriculture, and archaeology. Imperial County has a relatively low Valley Fever incidence rate of 0.1 to 5 cases for every 100,000 people (CDPH, 2009). Valley Fever can be fatal, though most cases are very mild.

3.5.2.6 All-American Canal

The salinity of All-American Canal, which convey s water to the agricultural areas of Imperial and Coachella Valleys, varies from 737 ppm (1.00 ton per acre-foot of water) to 958 ppm (1.3 tons per acre-foot of water) (Imperial County, 1993). Salinity control projects in the Colorado River basin minimize increase in water salinity, which allows the All-American Canal water to be suitable for agricultural use. The canal water is considered freshwater.

3.5.2.7 Alamo River

The Alamo River has a total dissolved solids (TDS) concentration of 2,000 to 4,000 ppm (Imperial County, 1003). The brackish river flows into Imperial County from Mexico to the Salton Sea, carrying

agricultural water from fields in Mexico. Field erosion and dredging activities have contributed to siltation in the river. Primary pollutants in the Alamo River include pesticides from agriculture. Potential development near the International Border may increase pollution of the river.

3.5.2.8 New River

The New River flows into Imperial County from Mexico to the Salton Sea, carrying a significantly high waste load. The brackish river is used intensively for irrigation in Mexico and also receives contaminants from the municipal wastewater of Mexicali (Imperial County, 1993). Contaminant load varies with season due to late winter planting and irrigation and a fallow fall season. The New River receives drainage from agricultural land in Imperial Valley which increases the flow.

3.5.2.9 Salton Sea

High evaporation rates and inflow of drainage waters with high salinity has contributed to a gradual increase in salinity in the Salton Sea. Approximately five million tons of salt per year are carried into the waterbody. The Salton Sea is considered saline and has no outlet. It is located in a fault-controlled sub-sea level basin. The increasing salinity and associated selenium buildup are the primary water quality concerns for the sea.

The Colorado River brings water into Imperial Valley via canals, and selenium concentrations increase due to evaporation and evapotranspiration that occurs during farming. Water from the Colorado River enters the Salton Sea and contains approximately one to two parts per billion (ppb) of selenium (Imperial County, 1993). The New and Alamo Rivers, which convey water into the Salton Sea, have approximately 7 to 8 ppb of selenium when they reach the sea. Selenium is bioaccumulated in organisms, which means small organisms take up the element and are eaten by larger organisms.

3.5.3 Regulatory Setting

The relevant regulatory framework, as it applies hazards and hazardous materials associated with the Project, is summarized below.

3.5.3.1 Federal Plans, Policies, Regulations, and Laws

The following sections describe applicable Federal plans, policies, regulations, and laws associated with the Project.

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

The Resource Conservation and Recovery Act (RCRA) established a Federal regulatory program for hazardous substances and is administered by EPA. Under RCRA, EPA regulates the generation,

transportation, treatment, storage, and disposal of hazardous substances. Under the Hazardous and Solid Waste Amendments of 1984 (HSWA), certain techniques for the disposal of various hazardous substances are prohibited. The Federal Emergency Planning and Community Right to Know Act of 1986 imposes hazardous materials planning requirements to help protect local communities in the event of accidental release. The DTSC has obtained primacy from the EPA to enforce solid waste and hazardous waste management standards.

The Federal government requires owners and operators of a facility to complete and submit an emergency and hazardous chemical inventory form annually if the facility has a minimum of 500 pounds (or approximately 55 gallons) or applicable Federal threshold quantities for extremely hazardous substances listed in 40 CFR Part 355. Facilities provide their hazardous materials inventories on a Tier II form. Tier II forms require basic facility identification information (including the North American Industry Classification System code), employee contact information for both emergencies and non-emergencies, and information about chemicals stored or used at the facility.

Federal Water Pollution Control Act (Clean Water Act)

The CWA provides guidance for the restoration and maintenance of the chemical, physical, and biological integrity of the nation's waters (33 U.S.C. 1251-1376). Section 404 of the CWA establishes a permit program administered by the USACE regulating the discharge of dredged or fill material into waters of the U.S. (including wetlands). Implementing regulations by USACE are found at 33 CFR Parts 320-332. The Section 404 (b)(1) Guidelines were developed by the EPA in conjunction with USACE (40 CFR Part 230), allowing the discharge of dredged or fill material for non-water dependent uses into special aquatic sites only if no practicable alternative exists that would have less adverse impacts.

Occupational Safety and Health Act (OSHA)

The Occupational Safety and Health Administration's (OSHA) mission is to assure 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 staff establishes and enforces protective standards and reaches out to employers and employees through technical assistance and consultation programs. OSHA standards are listed in 29 CFR 1910. The Project would be subject to OSHA requirements during construction, operations and maintenance, and decommissioning.

State Plans, Policies, Regulations, and Laws

The following sections describe applicable state plans, policies, regulations, and laws associated with the Project.

Title 22 of the California Code of Regulations (CCR)

A waste is considered a hazardous waste according to Title 22, Chapter 11 of the California Code of Regulations (CCR) if it is not excluded from classification as a waste or hazardous waste under Health and Safety Code section 25143.2(b) or 25143.2(d) or section 66261.4, and if it meets any of the criteria in § 66261.3 Section 2. Hazardous materials and hazardous wastes are classified according to four properties: toxicity, ignitability, corrosiveness, and reactivity.

Health and Safety Code Section 25501 as applied in Chapter 6.95 of Division 20 of the Health and Safety Code defines a hazardous material as a material "that, because of its quantity, concentration, or physical or chemical characteristics, poses a significant present or potential hazard to human health or safety or to the environment if released into the workplace or environment…"

California Environmental Protection Agency

The California Environmental Protection Agency (Cal EPA) and the State Water Resources Control Board (SWRCB) have established regulations regarding the use and control of hazardous materials. Applicable state and local regulations under the purview of Cal EPA and the SWRCB include:

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

Department of Toxic Substances Control

The mission of the California Department of Toxic Substances Control (DTSC) is to "protect California's people and environment from harmful effects of toxic substances by restoring contaminated resources, enforcing hazardous waste laws, reducing hazardous waste generation, and encouraging the manufacture of chemically safer products." The DTSC has the primary responsibility for the management and control of the generation, transport, and disposal of hazardous wastes under the Hazardous Waste Control Law

(California Health and Safety Code, Division 20, Chapter 6.5). Local jurisdictions enter into agreements with DTSC to enforce regulations.

California Health and Safety Code Chapter 6.11 describes the unified hazardous waste and hazardous materials management regulatory program. The program consolidates six existing programs:

- Hazardous Waste Generations and Hazardous Waste Onsite 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

These six programs are coordinated and made consistent by a local Certified Unified Program Agency (CUPA), which is often a function of a local environmental health or fire department. All counties and certain qualified cities apply for certification as a local CUPA. The CUPA consolidates, coordinates, and unifies the abovementioned programs. The Office of the State Fire Marshal assists with regulatory oversight, CUPA certification, evaluations of approved CUPAs, training, and education. The DTSC is the CUPA for Imperial County.

Title 8, California CCR Section 2700 et seq. "High Voltage Safety Orders"

The Project will require work near the Drew Switchyard and associated electric transmission lines. Due to this, the Project would be subject to Title 8 of the CCR, which describes the requirements and minimum standards for safety when installing, operating, working around, and maintaining electrical installations and equipment.

14 CCR, Sections 1250 – 1258, "Fire Prevention Standards for Electric Utilities"

14 CCR § 1250 – 1258, Article 4, provides specific exemptions from electric pole and tower firebreak clearance standards, and electric conductor clearance standards. It also specifies when and where the standards apply. The standards describe requirements to address potential fire hazards associated with electric utilities.

3.5.3.2 Regional and Local Plans, Policies, Regulations, and Laws

Imperial County General Plan

Table 3.5-1 analyzes the consistency of the Project with the applicable policies related to hazards in the Imperial County General Plan pursuant to CEQA Guidelines Section 15125(d). The Imperial County Board of Supervisors determines consistency with the General Plan.

Table 3.5-1: Imperial County General Plan Consistency Analysis

General Plan Policies	Consistency with General Plan	Analysis
Public Safety Policy *Control hazardous materials, Goal 3:* Protect the public from exposure to hazardous materials and wastes.	Consistent	Imperial County has implemented an Emergency Operations Plan and a Fire Prevention and Explosive Ordinance designed to protect the public from exposure to hazardous materials and wastes. The Project will not exposure the public to hazardous materials and wastes. The CSE project Environmental Protection Plan will be updated to incorporate any hazardous materials associated with the Project prior to using or storing hazardous materials at the Project site.
Objective 3.1: Discourage the transporting of hazardous materials/waste near or through residential areas and critical facilities.	Consistent	The Project is located within the existing CSE facility which does not contain any residences or critical facilities such as a hospital or fire station. The Project will not require large quantities of hazardous materials during construction, operation, maintenance, or decommissioning.
Objective 3.2: Minimize the possibility of hazardous materials/waste spills.	Consistent	The CSE project Environmental Protection Plan will be updated to incorporate any hazardous materials associated with the Project prior to using or storing hazardous materials at the Project site. Best management practices (BMPs) would be implemented at the Project site to minimize the risk of hazardous material/waste spills during Project construction, operation, and decommissioning activities.

General Plan Policies	Consistency with General Plan	Analysis
Objective 3.3: Discourage incompatible development adjacent to sites and facilities for the production, storage, disposal, and transport of hazardous materials/waste as identified in the County General Plan and other regulations.	Consistent	The Project will be located entirely within the existing CSE facility property. The Project is compatible with this existing land use and the Project site is not adjacent to any hazardous sites or facilities.

Imperial County Office of Emergency Services – Emergency Operations Plan

The Imperial County Office of Emergency Services (OES) provides emergency management services for Imperial County including the seven cities/towns in the county as well as special districts. The OES coordinates emergency operations and develops plans for emergency preparedness, response, recovery and mitigation to natural/man-made disasters, and technological disasters. The Imperial County Fire Department (ICFD) is the local OES and is the lead agency for the Imperial County Operational Area (OA), in which the ICFD develops emergency management plans, conducts public education, establishes EOC operations, and participates in interagency coordination (Imperial County, 2007). The OES serves as a liaison between the state and local government political subdivisions (California Emergency Services Act, Chapter 7, Division 1, Title 2).

Imperial County has developed an OA Emergency Operations Plan (EOP) which describes coordinated guidance and procedures to prepare for and respond to emergency risks. The EOP is consistent with the requirements of the Standardized Emergency Management System (SEMS), which is required by California Government Code Section 8607(a). All local government agencies are required to use SEMS when responding to multi-jurisdictional or multi-agency emergencies to be eligible for state reimbursement of response-related personnel costs. The EOP is also consistent with the requirements of the U.S. Department of Homeland Security National Incident Management System (NIMS), which is a national standardized methodology to incident management and response.

County of Imperial Fire Prevention and Explosives Ordinance

Imperial County has a Fire Prevention and Explosives Ordinance (Section 53101-53300), which provides regulations related to fire or explosion risks. The ordinance includes regulations related to the storage of flammable materials and radioactive materials; fireworks permits; and abatement standards for weeds and other vegetation.

3.5.4 Environmental Consequences

The following sections describe the thresholds of significance used in the analysis of hazards and hazardous materials, analysis methodology, and issues scoped out of this SEIR.

3.5.4.1 Thresholds of Significance

The Project would result in a significant impact related to hazards or hazardous materials if it were to:

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 or excessive noise for people residing or working in the project area
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires

3.5.4.2 Analysis Methodology

Analysis of hazardous wastes and materials focused on information contained in the Phase I ESAs prepared for the CSE facility. The reports were the Phase I ESA Report Centinela Solar Energy North of State Highway 98 Near Brockman Road, Calexico, California (GS Lyon, 2010a); Phase I ESA Report Centinela Solar Energy Site #2 North of State Highway 98 Near Brockman Road, Calexico, California (GS Lyon, 2010b); Phase I ESA Report West-Gro and Dessert Ranch Southwest of State Hwy 98 and Brockman Road (GS Lyon, 2011a), Phase I ESA Report Brundy Property Southwest of State Hwy 98 and Westside Main Canal West of Calexico, California (GS Lyon, 2011b) and a letter “Response to Phase 1 ESA Comments Centinela Solar Energy Solar Energy Facility Imperial County, California” (Lyon, 2011).

The Project would require the short-term use of some hazardous materials during construction and decommissioning, and hazardous materials would be stored onsite for use during operations and maintenance. The analysis reviews the types and amounts of materials to be used for the Project as well as the use, transport, and disposal of those materials onsite.

3.5.4.3 Issues Scoped Out

CEQA Appendix G Environmental Checklist Form criterion "c" was scoped out because there are no schools within one-quarter mile of the Project site. The Project is a BESS located within the existing CSE facility boundary that involves the storage of electricity. Project-related infrastructure will not emit hazardous materials or involve handling hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school. The nature of a BESS facility does not emit hazardous emissions. In the event there had been, the Project will not adversely affect the schools due to hazardous emissions. Therefore, no impact is anticipated; as such, this issue was not evaluated in this SEIR.

CEQA Appendix G Environmental Checklist Form criterion "d" was scoped out. An agency database record search for listings of records of hazardous substance related properties was conducted and did not reveal any listed sites within two miles of the Project site. Based on the information available from the agency database record search, the Project will not be located on or near a State of California listed hazardous materials site as identified in Government Code Section 65962.5, and a result, will not create a significant hazard to the public or the environment. As such, this issue was not evaluated in this SEIR.

CEQA Appendix G Environmental Checklist Form criterion "e" was scoped out because the overall existing CSE facility, in which the proposed Project will be located, is approximately nine miles south of the Naval Air Facility, El Centro and approximately 7.5 miles west of the Calexico International Airport. The Project will not impact the airspace protection surfaces (Federal Aviation Administration (FAA) Part 77 surfaces) or safety zones associated with the Naval Air Facility or Calexico International Airport. Therefore, the Project will not result in any safety hazard for people residing or working in the Project area. As such, this issue was not evaluated in this SEIR.

CEQA Appendix G Environmental Checklist Form criterion "f" was scoped out because the Project will be required to have an ERP acceptable to County Fire, as a standard condition of the approval of the CUP. The ERP will address potential emergencies including chemical releases, fires, and injuries. The ERP will describe emergency response equipment and equipment locations, evacuation routes, procedures for reporting to local emergency response agencies, responsibilities for emergency response, and other

required actions to be taken in the event of an emergency. Employee response to an emergency will be limited to an immediate response to minimize the risk of escalation of the accident or injury. Employees will be trained to respond to fires, spills, earthquakes, and injuries. A first aid facility with adequate first-aid supplies and personnel qualified in first aid treatment will be onsite. As such, this issue was not evaluated in this SEIR.

CEQA Appendix G Environmental Checklist Form criterion "g" was scoped out because the Project site is not near wildlands or adjacent to urbanized areas; as such, there would be no impact. As such, this issue was not evaluated in this SEIR.

3.5.5 Project Impacts

The following subsections evaluate the significance of various potential Project impacts with respect to the criteria outlined above.

Impact 3.5-1: Would the project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

Construction, Operational, and Decommissioning Impacts

The Project will involve the transport, use, and disposal of small quantities hazardous materials in association with construction; operation and maintenance; and decommissioning. These materials include gasoline, diesel fuel, oils and lubricants for operation and maintenance of heavy equipment during construction, paints, welding materials, and solvents. All of these various materials would be transported and handled in compliance with DTSC regulations and in accordance with all applicable federal and state laws and County Ordinance restrictions, which regulate, and control hazardous materials handled on-site. An accidental release during transport or residual contamination following accidental release is not anticipated during transport, use, and disposal of these materials. All waste, including trash and litter, garbage, and other solid waste will be removed to a disposal facility authorized to accept such materials. Commercial garbage collection and hauling will be contracted to remove waste and recyclable materials. During construction, typical construction wastes such as wood, concrete, and miscellaneous packaging materials will be generated. Construction wastes will be disposed of in accordance with local, state and federal regulations, and recycling will be used to the greatest reasonable extent.

No highly toxic hazardous materials are anticipated to be used and none of the Project materials are anticipated to pose a significant potential for off-site impacts such as contamination through a

large release of chemicals. During construction, operation and decommissioning phases, the Project site would have spill containment and clean-up kits on-site. Fire risk factors would be mitigated through Project design and fire prevention feature, as previously described.

The batteries used for the Project would not release any hazardous material to the surrounding environment during operation. The batteries will be transported/shipped in compliance with all applicable federal, state and local regulations addressing hazardous materials transport. The batteries are also recyclable and will be recycled at a facility approved by the battery supplier.

The design life of the Project is 25 years. At the end of battery life, battery modules will be removed from the racks and packaged for return transportation to the manufacturer or their approved Recycling Partner(s) for dismantling, material processing, and recovery. The recycling process takes place entirely off-site and is anticipated to recover approximately 95% of the material in a battery. The steps involve dismantling of the modules, smelting, and metal separation processes. Metals including copper and aluminum and metal alloys are recovered from the process. Hazardous chemicals are collected from the process. 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. This protocol would also apply to any used or spent hazardous materials requiring disposal during operation. Slag can be reused in construction or as aggregate for concrete.

Therefore, impacts associated with accidental release during hazardous materials transport, use, and disposal are anticipated to be less than significant.

Mitigation Measures

None required.

Significance After Mitigation

Not applicable.

Impact 3.5-2: Would the project 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?

Construction Impacts

The Project site was historically farmed but is now part of the existing CSE facility. The Phase I ESAs prepared for the CSE facility project found that pesticide residues on farmland in Imperial

County were typically at 25 to 50 percent of regulatory action levels (Lyon, 2011). During construction, ground disturbing activities have the potential to disperse pesticide residuals. Dust generation would be addressed through ICAPD regulations mandated to reduce dust during construction. As described in Section 3.1, with respect to PM_{10}, the ICAPCD implements Regulation VIII – Fugitive Dust Rules, to control these emissions and ultimately lead the basin into compliance with air standards, consistent with the AQAP. Within Regulation VIII are Rules 800 through 806, which address construction and earthmoving activities, bulk materials, carry-out and track-out, open areas, paved and unpaved roads, and conservation management practices. Best Available Control Measures to reduce fugitive dust during construction and earthmoving activities include but are not limited to:

- Phasing of work in order to minimize disturbed surface area
- Application of water or chemical stabilizers to disturbed soils
- Construction and maintenance of wind barriers
- Use of a track-out control device or wash down system at access points to paved roads

Compliance with Regulation VIII is mandatory on all construction sites, regardless of size. Compliance for a project includes: (1) the development of a dust control plan for the construction and operational phase; and (2) notification to the air district is required 10 days prior to the commencement of any construction activity. Herbicides and pesticides may be used to control vegetation during construction. These products would be used in accordance with manufacturer prescribed and labeled instructions as authorized by the Federal Insecticide, Fungicide, and Rodenticide Act. Also, BMPs would be implemented that will include a weed control plan which will be developed and approved by the County Agricultural Commissioner prior to herbicide application. Therefore, impacts associated with hazard through upset/release of hazardous materials resulting from exposure to pesticide residue and herbicides during construction, operation and decommissioning are considered less than significant.

The Project site was cleared during the construction of the CSE facility. Though no Recognized Environmental Conditions (RECs) were identified at the site or on the surrounding parcels in the Phase I ESAs, there is a potential for the discovery of unidentified hazards during construction. Mitigation Measure HM-1 describes procedures for managing unidentified hazards and reduce potential impacts related to unidentified hazards during construction to less than significant levels.

Hazardous materials such as diesel fuel, oil, and grease for heavy equipment will be transported, used, and potentially stored at the Project site during construction. These activities will comply with DTSC regulations regarding the transport, use, storage, and disposal of such materials. The Project will also be subject to all local (County Ordinance), state and federal laws pertaining to the use of hazardous materials onsite during construction. No acutely toxic hazardous material use is anticipated and the materials to be used do not pose a significant potential for impacts to the public and/or environment through a large release of chemicals. The Project will be designed and BMPs would be implemented to minimize the potential for leaks and spills of hazardous materials during construction. These BMPs would include instructions for proper handling and disposal of materials including prohibiting hazardous materials from being drained onto the ground or into nearby drainages. All construction waste would be required to be transferred to a disposal facility authorized to accept such materials. As such, accident conditions as part of use and storage during construction, operation and decommissioning of the Project would be less than significant.

Operational Impacts

During operation, herbicides and pesticides may be used to control vegetation. These products would be used in accordance with manufacturer prescribed and labeled instructions as authorized by the Federal Insecticide, Fungicide, and Rodenticide Act. Small quantities of hazardous materials would be transported, used, and stored onsite for maintenance activities. The Project will be subject to all local, state, and Federal laws pertaining to the use of hazardous materials onsite. The Project will be required to submit a complete list of all hazardous materials to be used onsite and transport methods to minimize safety risks and prevent possible environmental contamination or worker exposure. The proposed Project does not require on-site staffing which would expose personnel long-term to potential pesticides/herbicides. Therefore, no direct impact during construction/decommissioning phases or indirect impact during operations and maintenance would occur with respect to pesticide residue.

The Hazardous Materials Management Plan (HMMP) developed for the CSE facility will be updated and applicable to the Project site and describes the use and storage methods for hazardous materials at the facility. Design features and BMPs for the Project would minimize spill and leak risks associated with use, handling, and storage of hazardous materials at the Project site by requiring that hazardous materials and hazardous wastes be handled in accordance with applicable regulations. Any hazardous waste would be required to be transfer to a disposal facility authorized to accept such materials. Onsite employees will be trained to identify and handle hazardous materials and hazardous wastes.

The impacts associated with the reasonably foreseeable upset and accident conditions involving an accidental release of hazardous materials into the environment during operation are considered potentially significant unless mitigation is incorporated. Mitigation Measure HM-1 is provided below.

Measures would be taken to reduce the risk of potential lithium-ion battery fire at the site. As previously indicated, any potential fire risk that the traditional lithium-ion cells have will most likely be caused by over-charging or through short circuit due to age. This risk will be mitigated through monitoring and a fire suppression system that includes water and or a suppression agent (eg FM-200, Novatech) with smoke detectors, control panel, alarm, piping and nozzles. The fire protection system will be designed by a certified fire protection engineer and installed by a fire protection system contractor licensed in California and in accordance with all relevant building and fire codes in effect in the County at the time of building permit submission.

The fire protection plan is anticipated to include a combination of prevention, suppression, and isolation methods and materials. The general approach to fire mitigation at the proposed Project site would be prevention of an incident, followed by attempts to isolate and control the incident to the immediately affected equipment, then to suppress any fire with a clean agent so as to reduce damage to uninvolved equipment. Finally, as necessary, fire mitigation could also include manually suppression using water spray or mist. The Project will comply with all applicable fire codes, standards from UL (safety organization), and the National Fire Protection Association (UL-9540A).

During the design review and permitting process, the Applicant will work closely with the Imperial County Fire Marshal to ensure that the design is compliant with all local codes and standards. An automatic smoke and fire detection and alarm system coupled with water-based suppression system and/or clean-agent based suppression system will be designed for a worst-case failure.

The proposed Project will be designed and built to the latest safety standards with multiple redundant forms of protection against electrical faults and fire events at every level of the system. Each cell and module will have redundant safety features including electrical fuses and overcharge protection. Every battery cell bank will be monitored for voltage, temperature, and current, and an automated control system will disconnect any battery with irregular behavior, which will be inspected before it will be returned to operation. Safety measurement points

throughout each battery pack and within the system as a whole would alert the operations and maintenance organization if there is a deviation from normal operating conditions. The battery modules will include high voltage DC isolation switches for separating each battery zone into low voltage blocks safe for maintenance. A hierarchical fusing system with protection at the zone, rack, module, and individual sell level will be used, offering system safety even if the software control system is not functional. These cells are designed to clear in the proper order under over-current and/or short circuit situations, preventing uncontrolled discharge of stored energy.

Supplemental to the proposed Project fire safety features previously described and in alignment to other similar projects within Imperial County, the following California Fire Code (2016) requirements would apply and be implemented as part of the Project. Project compliance with these requirements would reduce impacts associated with hazard through upset/release of hazardous materials resulting from risk of fire during operation to less than significant. The applicable requirements are as follows:

503.1 Where required. *Fire apparatus access roads shall be provided and maintained in accordance with sections 503.1.1 through 503.1.3.*

> ***503.1.1 Buildings and facilities.*** *Approved fire apparatus access roads shall be provided for every facility, building or portion of a building hereafter constructed or moved into or within the jurisdiction. The fire apparatus access road shall comply with the requirements of this section and shall extend to within 150 feet (45 720 mm) of all portions of the facility and all portions of the exterior walls of the first story of the building as measured by an approved route around the exterior of the building or facility.*

503.2.1 Dimensions. *Fire apparatus access roads shall have an unobstructed width of not less than 20 feet (6096 mm), exclusive of shoulders, except for approved security gates in accordance with Section 503.6, and an unobstructed vertical clearance of not less than 13 feet 6 inches (4115 mm).*

503.2.3 Surface. *Fire apparatus access roads shall be designed and maintained to support the imposed loads of fire apparatus and shall be surfaced so as to provide all-weather driving capabilities.*

608.7 Signage. *Signs shall comply with Sections 608.7.1 and 608.7.2.*

> ***608.7.1 Equipment room and building signage.*** *Doors into electrical equipment rooms or buildings containing stationary battery systems shall be provided with approved signs. The signs shall state that:*
>
> 1. *The room contains energized battery systems.*
> 2. *The room contains energized electrical circuits.*
> 3. *The battery electrolyte solutions, where present, are corrosive liquids*

> ***608.7.2 Cabinet signage.*** *Cabinets shall have exterior labels that identify the manufacturer and model number of the system and electrical rating (voltage and current)*

of the contained battery system. There shall be signs within the cabinet that indicate the relevant electrical, chemical and fire hazards.

***608.8 Seismic protection**. The battery systems shall be seismically braced in accordance with the California Building Code.*

***608.9 Smoke detection.** An approved automatic smoke detection system shall be installed in accordance with Section 907.2 in rooms containing stationary battery systems.*

***906.1 Where required.** Portable fire extinguishers shall be installed in all of the following locations:*

1. In new and existing Group A, B, E, F, H, I, L, M, R-1, R-2, R-2.1, R-3.1, R-4 and S occupancies.
6. Special-hazard areas, including but not limited to laboratories, computer rooms and generator rooms, where required by the fire code official.

***907.2 Where required**—new buildings and structures. An approved fire alarm system installed in accordance with the provisions of this code and NFPA 72 shall be provided in new buildings and structures in accordance with Sections 907.2.1 through 907.2.23 and provide occupant notification in accordance with Section 907.5, unless other requirements are provided by another section of this code.*

***907.2.23 Battery rooms.** An automatic smoke detection system shall be installed in areas containing stationary storage battery systems with a liquid capacity of more than 50 gallons (189 L).*

***903.1 General.** Automatic sprinkler systems shall comply with this section*

***903.1.1 Alternative protection.** Alternative automatic fire-extinguishing systems complying with Section 904 shall be permitted instead of automatic sprinkler protection where recognized by the applicable standard and approved by the fire code official.*

***903.2 Where required.** Approved automatic sprinkler systems in new buildings and structures shall be provided in the locations described in Sections 903.2.1 through 903.2.12*

***903.2.9 Group S-1.** An automatic sprinkler system shall be provided throughout all buildings containing a Group S-1 occupancy where one of the following conditions exists:*

1. A Group S-1 fire area exceeds 12,000 square feet (1115 m2).

***904.1 General.** Automatic fire-extinguishing systems, other than automatic sprinkler systems, shall be designed, installed, inspected, tested and maintained in accordance with the provisions of this section and the applicable referenced standards.*

904.2 Where permitted*. Automatic fire-extinguishing systems installed as an alternative to the required automatic sprinkler systems of Section 903 shall be approved by the fire code official.*

Decommissioning Impacts

During decommissioning, BMPs would be implemented to reduce impacts associated with hazardous material transport, use, storage, and disposal similar to those implemented during construction, operations, and maintenance. The Project will be subject to all local, state, and Federal laws pertaining to the use of hazardous materials onsite during decommissioning. After decommissioning activities are complete, risks related to hazardous materials and/or waste would cease.

Mitigation Measures

MM HM-1: If during grading or excavation work, the contractor observes visual or olfactory evidence of contamination or if soil contamination is otherwise suspected, work near the excavation site shall be terminated, the work area cordoned off, and appropriate health and safety procedures implemented for the location by the contractor's Health & Safety Officer. Samples shall be collected by an Occupational Safety and Health Administration-trained individual with a minimum of 40-hours hazardous material site worker training. Laboratory data from suspected contaminated material shall be reviewed by the contractor's Health and Safety Officer. If the sample testing determines that contamination is not present, work may proceed at the site. However, if contamination is detected above regulatory limits, the Imperial County Public Health Department shall be notified. All actions related to encountering unanticipated hazardous materials at the site shall be documented and submitted to the Imperial County Public Health Department for County lands.

Significance After Mitigation

Less than significant.