3.8 Hazards and Hazardous Materials

This section addresses the potential for the proposed Program to indirectly result in impacts related to hazardous conditions. Specific topics discussed below include emissions, handling, and disposal of hazardous materials, as well as wildland fire risk and emergency response plans.

3.8.1 PHYSICAL SETTING

HAZARDOUS MATERIALS AND WASTE

According to 22 California Code of Regulations (CCR) Section 66261.20, the term *hazardous substance* refers to both hazardous materials and hazardous wastes; both are classified according to four properties: toxicity, ignitability, corrosiveness, and reactivity. A hazardous material is defined by 22 CCR Section 66261.10 as a substance or combination of substances that may cause or significantly contribute to an increase in serious, irreversible, or incapacitating illness or may pose a substantial presence or potential hazard to human health or the environment when improperly treated, stored, transported, or disposed of, or otherwise managed.

Public health is potentially at risk whenever hazardous materials are or will be used. It is necessary to differentiate between the hazard of these materials and the acceptability of the risk they pose to human health and the environment. A hazard is any situation that has the potential to cause damage to human health and the environment. The risk to health and public safety is determined by the probability of exposure, and to the inherent toxicity of a material (DTSC 2009).

Factors that can influence health effects when human beings are exposed to hazardous materials include the dose the person is exposed to, the frequency of exposure, the duration of exposure, the exposure pathway (route by which a chemical enters a person's body), and the individual's unique biological susceptibility.

Hazardous wastes are hazardous substances that no longer have practical use, such as materials that have been discarded, discharged, spilled, or contaminated or are being stored until they can be disposed of properly (22 CCR Section 66261.10). Soil that is excavated from a site containing hazardous materials is a hazardous waste if it exceeds specific 22 CCR criteria. While hazardous substances are regulated by multiple agencies, as described under Subsection 3.8.2, Regulatory Setting, below, cleanup requirements of hazardous wastes are determined on a case-by-case basis according to the agency with lead jurisdiction over the project.

HAZARDOUS AND CONTAMINATED SITES

Hazardous materials consist of substances that by their nature, lack of containment, and reactivity have the capability for inflicting harm. Hazardous materials can be toxic, corrosive, flammable, explosive, reactive, an irritant, or a strong sensitizer and include certain infectious agents, radiological materials, oxides, oil, used oil, petroleum products, and industrial solid waste substances. They are used in almost every manufacturing operation and by retailers, service industries, and homeowners. Hazardous material incidents are one of the most common technological threats to public health and the environment. Incidents may occur as the result of natural disasters, human error, or accident. Hazardous material incidents typically take three forms:

- **Fixed facility incidents** – It is reasonably possible to identify and prepare for a fixed site incident, because laws require those facilities to notify state and local authorities about what is being used or produced there.

- **Transportation incidents** – Transportation incidents are more difficult to prepare for because it is impossible to know what materials could be involved until an accident actually happens.
- **Pipeline incidents** – Pipelines carry natural gas and petroleum. Breakages in pipelines carry differing amounts of danger, depending on where and how the break occurs and what is in the pipe.

Areas of Known Hazardous Contamination

Cortese List

The State of California Hazardous Waste and Substances Site List (also known as the Cortese List) is a planning document used by state and local agencies and by private developers to comply with the requirements of the California Environmental Quality Act (CEQA) in providing information about the location of hazardous materials sites. California Government Code Section 65962.5 requires the California Environmental Protection Agency to annually update the Cortese List. The Department of Toxic Substances Control (DTSC) is responsible for preparing a portion of the information that comprises the Cortese List. Other state and local government agencies are required to provide additional hazardous material release information that is part of the complete list.

The DTSC's EnviroStor database provides the department's component of Cortese List data by identifying state response sites, federal Superfund sites, school cleanup sites, and voluntary cleanup sites. The EnviroStor database identifies sites that have known contamination or sites for which further investigation is warranted. It also identifies facilities that are authorized to treat, store, dispose, or transfer hazardous waste. There are 39 open hazardous material sites identified in the County planning areas, as listed in **Table 3.8-1**. In addition to the sites listed in **Table 3.8-1**, there are 32 permitted underground storage tanks in the unincorporated San Luis Obispo County area.

TABLE 3.8-1
OPEN HAZARDOUS MATERIAL SITES IN UNINCORPORATED SAN LUIS OBISPO COUNTY

Site/Facility Name	Site/Facility Type	Status	Address	City
Avila Tank Farm	Cleanup Program Site	Open – Assessment & Interim Remedial Action	10 San Rafael Street	Avila Beach
Avila Beach Pier	Cleanup Program Site	Open – Verification Monitoring	450 Front Street	Avila Beach
Lake Nacimiento Resort UST Release	Lust Cleanup Site	Open – Verification Monitoring	10625 Nacimiento Lake Dr.	Bradley
Lake Nacimiento Resort Pipeline Leak	LUST Cleanup Site	Open – Assessment & Interim Remedial Action	10625 Nacimiento Lake Dr.	Bradley
Private Residence	LUST Cleanup Site	Open – Site Assessment	Private Residence	California Valley
Chevron Station #9-0919	LUST Cleanup Site	Open – Verification Monitoring	2194 Main St	Cambria

Site/Facility Name	Site/Facility Type	Status	Address	City
Cambria General Store	LUST Cleanup Site	Open – Remediation	850 Main St	Cambria
Camp Roberts Solid Waste Site	Land Disposal Site	Open – Operating	Camp Roberts	Camp Roberts
Camp Roberts	Military Base			Camp Roberts
Camp Roberts Old South Landfill and Trench Fills	Land Disposal Site	Open – Closed/ Monitoring	DPW Building 3022	Camp Roberts
Chevron #9-0028	LUST Cleanup Site	Open – Eligible for Closure	12 Ocean Ave N	Cayucos
North Side State Hwy 46 @ Jack Ranch	LUST Cleanup Site	Open – Remediation	Hwy 46	Cholame
Polonio Pass Pipeline	Cleanup Program Site	Open – Site Assessment	Highway 46	Cholame
Cop Pipeline at Highway 46	Cleanup Program Site	Open – Remediation	Highway 46	Cholame
Conoco Phillips RM&R Site# 05136	Cleanup Program Site	Open – Site Assessment	Highway 41 and Highway 46	Cholame
Goodrow Composting Facility	Land Disposal Site	Open – Operating	3730 Calf Canyon Road	Creston
Conoco Philips RM&R Site# 05125	Cleanup Program Site	Open – Assessment & Interim Remedial Action	7330 Webster Rd	Creston
Conoco Philips RM&R Site# 05123	Cleanup Program Site	Open - Assessment & Interim Remedial Action	4615 Hwy 41	Creston
Unocal – Guadalupe Oilfield	Cleanup Program Site	Open – Remediation	2184 Thornberry Rd	Guadalupe
Rosie's Exxon	Lust Cleanup Site	Open – Inactive	995 Los Osos Valley Rd	Los Osos
Nipomo Creek Pipeline, Line 300 (RM&R Site No. 3788)	Cleanup Program Site	Open – Remediation	671 Oakglen Ave	Nipomo
Conoco Phillips Line 300 (RM&R Site No. 5237)	Cleanup Program Site	Open – Site Assessment	Tefft Street	Nipomo
Chevron Station 9-5867	Lust Cleanup Site	Open – Site Assessment	460 West Tefft Street	Nipomo
Bell Craig (former service station)	Lust Cleanup Site	Open – Remediation	1899 Cienega	Oceano
Chevron S/S #9-2565 (former)	LUST Cleanup Site	Open – Eligible for Closure	9540 Castillo Dr	San Simeon
Pipeline – Santa Margarita to Tassajara Creek	Cleanup Program Site	Open – Verification Monitoring	El Camino Real to Tassajara Creek Road	Santa Margarita
Rinconada Mine	Cleanup Program Site	Open – Assessment & Interim Remedial Action	Pozo Road	Santa Margarita

Site/Facility Name	Site/Facility Type	Status	Address	City
Hwy 101S Bridge & Hwy 58W	Cleanup Program Site	Open – Remediation	Southbound Hwy 101 Bridge and Hwy 58 at Santa Margarita Creek	Santa Margarita
California Valley Solar Ranch	Land Disposal Site	Open – Operating	13505 Carrisa Highway	Santa Margarita
Tassajara Creek-Spanish Oaks (Cop Pipeline)	Cleanup Program Site	Open – Verification Monitoring	East bank of Santa Margarita Creek	Santa Margarita
Conocophillips RM&R Site 05109	Cleanup Program Site	Open – Site Assessment	US 101 at CA 58	Santa Margarita
Santa Maria Airport Landfill	Land Disposal Site	Open – Inactive	Foster Rd at Blosser	Santa Maria
Kirkpatrick Property (Unocal portion)	Cleanup Program Site	Open – Verification Monitoring	950 & 1000 East Centre Street	Shandon
Pipeline Hwy 41, South of Shandon Area	Cleanup Program Site	Open – Assessment & Interim Remedial Action	Hwy 41	Shandon
Conoco Phillips Site # 4836	Cleanup Program Site	Open – Site Assessment	260 Peaceful Valley Lane	Shandon
Conoco Phillips Site # 4770	Cleanup Program Site	Open – Site Assessment	8th and Cholame	Shandon
Conoco Phillips Site # 3469	Cleanup Program Site	Open – Site Assessment	Lucy Brown Road	Shandon
Chevron (former BP)	Lust Cleanup Site	Open – Assessment & Interim Remedial Action	701 Las Tablas Rd	Templeton
Chicago Grade Landfill SWDSS	Land Disposal Site	Open – Operating	2290 Homestead Rd	Templeton

Source: SWRCB 2014

In addition to the hazardous materials listed in **Table 3.8-1**, much of unincorporated San Luis Obispo County is used for agriculture production. Historic agricultural use may indicate the presence in soils of agricultural chemicals. Agricultural chemicals used historically in the United States include a number of persistent, bioaccumulative, and toxic chemicals. Other hazardous materials sources in rural areas may include leaking underground petroleum storage tanks and leaking abandoned oil and gas wells. Waste from illegal dumping in rural areas can sometimes include hazardous waste, such as waste from clandestine drug manufacturing. In addition, motor vehicle fuel leaks from off-highway vehicle use can be a source of contaminated surface runoff or soil.

Hazardous Waste Treatment, Storage, and Disposal

The State Water Resources Control Board's (SWRCB) Land Disposal program regulates waste discharge to land for treatment, storage, and disposal in waste management units, which include waste piles, surface impoundments, and landfills. The GeoTracker database identifies two Land Disposal program sites in the Planning Area: the Camp Roberts Solid Waste Site and the Paso Robles Solid Waste Site. Both facilities are open and operating.

Household Hazardous Waste

Hazardous materials, used in many household products (such as drain cleaners, waste oil, cleaning fluids, insecticides, and car batteries), are often improperly disposed of as part of normal household trash. These hazardous materials can interact with other chemicals to create risks to people or cause soil and groundwater contamination. The California Department of Public Health defines household hazardous waste as any substance that is characteristic of one of the following:

- Ignitability – flammable (e.g., lighter fluid, spot and paint removers)
- Corrosivity – eats away materials and can destroy human and animal tissue by chemical action (e.g., oven and toilet bowl cleaners)
- Reactivity – creates an explosion or produces deadly vapors (e.g., bleach mixed with ammonia-based cleaners)
- Toxicity – capable of producing injury, illness, or damage to humans, domestic livestock, or wildlife through ingestion, inhalation, or absorption through any body surface (e.g., rat poison, cleaning fluids, pesticides, bleach)

The San Luis Obispo Integrated Waste Management Authority operates five household hazardous waste dropoff facilities in San Luis Obispo County where residents can bring household hazardous waste (SLO County IWMA 2013). These locations accept all household hazardous wastes except radioactive or explosive wastes. The locations are the Cold Canyon Landfill on State Route (SR) 227, Chicago Grade Landfill on SR 41, Morro Bay/Cayucos Waste Water Plan on Atascadero Road, Nipomo Facility on Southland, and Paso Robles Landfill on SR 46 East. These landfills are available for drop-off from households throughout the county.

Known and Unknown Hazardous Materials in the Unincorporated San Luis Obispo County Area

Asbestos-Containing Building Materials. Structures constructed or remodeled between 1930 and 1981 have the potential to contain asbestos-containing building materials (ACBM). Asbestos is the name given to a number of naturally occurring fibrous minerals with high tensile strength, the ability to be woven, and resistance to heat and most chemicals. Because of these properties, asbestos fibers have been used in a wide range of manufactured goods, including roofing shingles.

When asbestos-containing materials are damaged or disturbed by repair, remodeling, or demolition activities, microscopic fibers become airborne and can be inhaled into the lungs, where they can cause significant health problems. The current federal definition of asbestos is the asbestiform varieties of chrysotile (serpentine), crocidolite (riebeckite), amosite (cummingtonite/grunerite), anthophyllite, tremolite, and actinolite. A distinction is made between building materials that would readily release asbestos fibers when damaged or disturbed and those materials that were unlikely to result in significant fiber release. The terms *friable* and *nonfriable* are used to make this distinction. The US Environmental Protection Agency (EPA) has determined that, if severely damaged, otherwise nonfriable materials can release significant amounts of asbestos fibers. Friable asbestos-containing material (ACM) is defined by the Asbestos National Emission Standards for Hazardous Air Pollutants as any material containing more than 1 percent asbestos that, when dry, can be crumbled, pulverized, or reduced to powder by hand pressure. Friable ACM is also known as regulated asbestos-containing material (RACM). Nonfriable ACM is any material containing more than 1 percent asbestos that, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure. If nonfriable ACM

becomes or is likely to become friable due to the forces expected to act on the materials during renovation or demolition, they become an RACM. Exposure to airborne RACM may result in a potential health risk because persons breathing the air may breathe in asbestos fibers. Continued exposure can increase the amount of fibers that remain in the lung. Fibers embedded in lung tissue over time may cause serious lung diseases including asbestosis, lung cancer, or mesothelioma (EPA 2009).

Disease Vectors. A disease vector is any organism capable of transmitting the causative agent of human disease or capable of producing human discomfort or injury, including mosquitoes, flies, fleas, cockroaches, mites, rats, or fungi. The accumulation of organic waste acts as an attractor for flies, fleas, cockroaches, and rodents and other mammals, which can be carriers of various human diseases. In addition, any depressed areas, ponds, or drainage channels provide areas for the breeding of mosquitoes, which can be carriers of West Nile virus, a potentially fatal disease in humans.

Portions of unincorporated San Luis Obispo County are known to harbor the fungus that causes coccidioidomycosis, commonly known as valley fever. This is a lung disease common in the southwestern United States and northwestern Mexico, caused by the fungus *Coccidioides immitis*, which grows in soils in areas of low rainfall, high summer temperatures, and moderate winter temperatures. These fungal spores become airborne when the soil is disturbed by winds, construction, farming, and other activities. In susceptible people and animals, infection occurs when a spore is inhaled. People working in certain occupations, such as construction, agriculture, and archaeology, have an increased risk of exposure and disease because these jobs result in the disturbance of soils where fungal spores are found. Many domestic and native animals are susceptible to the disease, including dogs, horses, cattle, coyotes, rodents, bats, and snakes. Valley fever infection rates are highest in California from June to November. Most valley fever cases are very mild. It is estimated that 60 percent or more of infected people either have no symptoms or experience flu-like symptoms and never seek medical attention.

Anthrax is a naturally occurring disease of animals (e.g., sheep, goats, and cattle) caused by the bacterium *Bacillus anthracis*. The bacteria live in the soil in many parts of the world and form protective outer coats called spores. Spores are able to withstand harsh or adverse conditions that would normally kill bacteria. Animals can get anthrax by ingesting anthrax spores from the soil. Anthrax in animals occurs worldwide but can be controlled by vaccination of animals (CDC 2009). People may acquire anthrax by contact with infected animals, and the disease in humans is potentially fatal (CDC 2009). During 1984, an anthrax outbreak occurred in the Carrizo Plain that affected 12 general areas (UC Extension 2001). Most outbreaks occur in areas where animals have previously died of anthrax, as the spores remain viable for many years; spores over 35 years old have been able to cause the disease (UC Extension 2001). Often, the outbreaks occur after climatic changes such as heavy rain, flooding, or drought. Climatic changes bring spores to the ground surface and may concentrate the spores in low spots. Working the land may also bring the spores up to the soil surface (UC Extension 2001).

Airport Operations Hazards

Airport-related hazards are generally associated with aircraft accidents, particularly during takeoffs and landings. Other airport operation hazards include incompatible land uses, power transmission lines, wildlife hazards (e.g., bird strikes), and tall structures that penetrate the imaginary surfaces surrounding an airport.

Public Airports

The San Luis Obispo County area has three publicly owned airports:

- San Luis Obispo County Regional Airport, a (CS) Commercial Service facility operated by the County. This airport is located in the San Luis Obispo Planning Area.
- Paso Robles Municipal Airport, a (GA) General Aviation facility operated by the City of Paso Robles. This airport is located in the North County Planning Area.
- Oceano Airport, a (BU) Basic Utility, general aviation facility owned by the County and operated by a concessionaire. This airport is located just west of the South County Planning Area.

Each airport has an Airport Land Use Plan that adopts safety zones surrounding the airport. The size and configuration of the zones are based on the recommendations and guidance provided in the California Airport Land Use Planning Handbook.

Private Airports

San Luis Obispo County also has a number of private airports and airstrips in the unincorporated area. These include the McMillan Airport and Roberts Ahp Heliport at Camp Roberts, Oceano County Airport, Bogdan Airport in Santa Margarita, Blech Ranch Airport in Shandon, Twin Cities Community Hospital Heliport in Templeton, and Bonel Airport in Whiteley Garden.

Wildland Fires

The term *wildfire* refers to fires that usually result from the ignition of dry grass, brush, or timber. Wildfires commonly occur in areas that are characterized by steep, heavily vegetated hillsides, which makes suppression of the fire difficult.

To describe an area where urban development has been located in proximity to open space, or wildland areas, the term *urban/wildland interface* is commonly used. The most common type of urban/wildland interface results when urban development occurs on the fringe of existing urban areas, adjacent to wildland vegetation. Other interface conditions can be created when urban development is intermixed with wildland vegetation or when pockets of wildland vegetation occur inside developed areas. The communities of Cambria and Nipomo are examples of intermixed urban/wildland interface areas (SLO County 1999).

The majority of unincorporated San Luis Obispo County has a moderate to very high fire hazard severity zone according to the California Department of Forestry and Fire Protection (Cal Fire) (2007). Significant wildfires have occurred throughout the county. Between 1931 and 1997, the county experienced 20 wildfires that burned between 10,000 and 107,000 acres (SLO County 1999, Table 3-2). Additionally, the Santa Margarita area and areas west of Nipomo are subject to a high number of smaller fires between 50 to 500 acres in size (SLO County 1999).

Cal Fire functions as the San Luis Obispo County Fire Department (SLOCFD) under a contract with the County of San Luis Obispo. The SLOCFD operates with approximately 180 full-time state employees, supplemented by up to 100 state seasonal firefighters, 300 county paid-call and reserve firefighters, and 120 state inmate firefighters. **Table 3.8-2** lists the fire stations for each planning area.

TABLE 3.8-2
FIRE STATIONS IN UNINCORPORATED SAN LUIS OBISPO COUNTY[1]

Carrizo Planning Area	North County Planning Area	San Luis Obispo Planning Area	South County Planning Area
Carrizo Plain Fire Station	Morro Toro Fire Station Paso Robles Fire Station Heritage Ranch Fire Station Oak Shores Fire Station Las Tablas Fire Station Parkhill Fire Station La Pansa Fire Station Creston Fire Station Shandon Fire Station Meridian Fire Station	San Luis Obispo Fire Station Airport Fire Station Avila Valley Fire Station	Nipomo Fire Station Mesa Fire Station

Source: SLO County 2014b

1. *Cambria Fire Station, Cayucos Fire Station, Los Osos Fire Station, Shell Beach Fire Station, and Pismo Beach Fire Department are located within the Coastal Zone so are not part of the RESP, although support from these fire departments may be provided to areas in the unincorporated county.*

Wildland Fire – Responsibility Areas and Protection

Within San Luis Obispo County, Cal Fire is responsible for wildland fire protection of almost 1.5 million acres. For the purposes of determining areas where wildland fires are likely to occur and determine fire protection responsibility for such areas, the following three definitions have been created and mapped for San Luis Obispo County. This definition is further defined in the California Public Resources Code (Sections 4126 and 4127).

- *Federal Responsibility Areas* (FRA) include lands owned by various federal agencies within the county. Examples of applicable federal agencies include Bureau of Land Management, US Forest Service, Camps San Luis and Roberts, and US Fish and Wildlife Service.

  To assist the federal government in supplementing or providing fire protection on its lands (in addition to its own fire protection services), it has established a cooperative agreement with Cal Fire (California Master Cooperative Wildland Fire Management and Stafford Act Response Agreement).

- *State Responsibility Areas* (SRA). As defined in Public Resources Code Sections 4126 and 4127, the potential wildland fire areas that are not within an FRA are either within a State Responsibility Area (SRA) or a Local Responsibility Area (LRA). To qualify as an SRA, the area typically has the following elements:

  – Lands covered by vegetation (e.g., trees, brush, grass)

  – Lands are used for forage, range, or wildlife habitat

  – Non-federal

  – Unincorporated

  While not uniformly applied, two exceptions would change the SRA to an LRA designation. These include irrigated cropland and areas with higher densities (greater

than 3 structures per acre) over larger areas. For the SRAs, primary wildland fire protection is provided by Cal Fire.

- *Local Responsibility Area* (LRA). As mentioned in the previous paragraph, LRAs have one or more of the following elements:
  - Incorporated cities
  - Unincorporated urbanized areas with a residential density of 3 or more houses per acre (in certain areas with high wildland fire potential, such areas are put into the SRA category)
  - Irrigated cropland areas (in certain areas with high wildland fire potential, such areas are put into the SRA category)

  Incorporated cities typically provide their own fire protection services. For unincorporated areas under this definition, municipal fire protection services are generally provided by Cal Fire through a contract with the County for such services.

At various permitting milestones, Cal Fire identifies project-specific elements to be addressed or included as part of the development. Ultimately, a Fire Safety Plan is typically required and then subsequently checked at the end of construction or improvements to make sure that all identified elements have been adequately addressed. For most areas, Interagency (Mutual Aid) Agreements exist, where nearby fire departments or districts from other jurisdictions will assist the fire agency that has primary responsibility for the subject property.

Expected response times for fire protection services vary with the degree of urbanization. Target response times for urban areas are up to 6 minutes, for suburban areas up to 7 minutes, and for rural areas up to 12 minutes. Response times exceeding 15 minutes for structure fires provide little possibility of saving the structure. An air tanker squadron at Paso Robles Airport is available if needed.

Urban fires are primarily those associated with structures and the activities in and around them. Most urban fires in the county are caused by human activity. Over the years, County development standards have become more stringent to reduce the frequency and severity of such events. Building codes now require firewalls for adjacent structures. Local ordinances often prohibit the use of fire-prone materials, such as shake-shingle roofs. Electrical standards have also changed to reduce fire risk inside structures. Smoke detectors are now commonly required.

In rural areas, the following measures are recommended or required of new structures: building exterior uses as much nonflammable material as possible; adequately sized water tanks to hold a certain amount of water for fire protection; vegetative fuel modification around structures and access roads; driveways having adequate widths for two-way traffic; adequate areas for fire vehicle turnarounds; highly visible addressing; and as applicable, secondary access.

3.8.2 REGULATORY SETTING

FEDERAL

Federal Aviation Administration

Federal Aviation Administration (FAA) regulations establish standards for determining obstructions in navigable airspace, including height limitations on structures taller than 200 feet or within 20,000 feet (approximately 3.8 miles) of an airport (14 Code of Federal Regulations [CFR], Part 77). The FAA requires that it be notified of these types of structures through the filing of

FAA Form 7460 1 (Notice of Proposed Construction or Alteration). Many wind turbines are taller than 200 feet and would trigger filing of FAA Form 7460 1.

Filing a Form 7460 1 allows the FAA to conduct an aeronautical study to ascertain whether the proposed structure would present a hazard to air navigation or could negatively impact the operational procedures of a nearby airport. The FAA then makes its recommendations, determining whether: (1) the proposed structure constitutes a hazard to air navigation; (2) the proposed structure would not constitute a hazard if the structure is marked and/or lit; or (3) the proposed structure is not a hazard even in the absence of marking or lighting.

The FAA also has an Interim Policy, FAA Review of Solar Energy System Projects on Federally Obligated Airports, which requires that a sponsor of a federally obligated airport must request FAA review and approval to depict certain proposed solar installations (e.g., ground-based installations and collocated installations that increase the footprint of the collocated building or structure) on its airport layout plan before construction begins.

STATE

California Environmental Protection Agency and State Water Resources Control Board

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

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

Department of Toxic Substances Control

Within Cal-EPA, the Department of Toxic Substances Control 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. The DTSC often delegates enforcement to local jurisdictions that enter into agreements with the state agency. In addition, the DTSC is frequently involved with the cleanup of abandoned mine sites.

California Occupational Safety and Health Administration

The California Occupational Safety and Health Administration (Cal/OSHA) is the primary agency responsible for worker safety in the handling and use of chemicals in the workplace. Cal/OSHA standards are generally more stringent than federal regulations. The employer is required to monitor worker exposure to listed hazardous substances and notify workers of exposure (8 CCR Sections 337–340). The regulations specify requirements for employee training, availability of safety equipment, accident-prevention programs, and hazardous substance exposure warnings.

California Highway Patrol

A valid Hazardous Materials Transportation License, issued by the California Highway Patrol (CHP), is required by the laws and regulations of California Vehicle Code Section 3200.5 for transportation of either hazardous material shipments, for which the display of placards is required by state regulations, or hazardous material shipments of more than 500 pounds, which would require placards if shipping in greater amounts in the same manner.

The CHP enforces additional requirements on the transportation of explosives, inhalation hazards, and radioactive materials under the authority of the California Vehicle Code. Transportation of explosives generally requires consistency with additional rules and regulations for routing, safe stopping distances, and inspection stops (Title 14, CCR, Chapter 6, Article 1, Sections 1150–1152.10). Inhalation hazards face similarly more restrictive rules and regulations (Title 13, CCR, Chapter 6, Article 2.5, Sections 1157–1157.8). Radioactive materials are strictly restricted to specific safe routes for transportation of such materials.

Business Plan Act

The California Hazardous Materials Release Response Plans and Inventory Law (Business Plan Act) requires preparation of hazardous materials business plans and disclosure of hazardous materials inventories. A business plan includes an inventory of hazardous materials handled, facility floor plans showing where hazardous materials are stored, an emergency response plan, and provisions for employee training in safety and emergency response procedures (California Health and Safety Code, Division 20, Chapter 6.95, Article 1). Statewide, the DTSC has primary regulatory responsibility for management of hazardous materials, with delegation of authority to local jurisdictions that enter into agreements with the State.

Cal-EPA certified local agencies to implement and regulate the state environmental programs within the local agency's jurisdictions, called the Certified Unified Program Agency (CUPA). San Luis Obispo County is a CUPA and has a Hazardous Materials Business Plan Program Eligibility Flowchart used to identify whether a plan is required. The threshold for submitting a hazardous materials business plan is storing, using, or handling hazardous materials at any one time during a calendar year in quantities equal to or greater than 55 gallons of a liquid, 500 pounds of a solid, or 200 cubic feet of a compressed gas at standard temperature and pressure.

California Emergency Response Plan

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

California Office of Emergency Services

In order to protect the public health and safety and the environment, the OES is responsible for establishing and managing statewide standards for business and area plans relating to the handling and release or threatened release of hazardous materials. Basic information on hazardous materials handled, used, stored, or disposed of (including location, type, quantity, and health risks) needs to be available to firefighters, public safety officers, and regulatory agencies. This information also needs to be included in business plans in order to prevent or

mitigate the damage to the health and safety of persons and the environment from the release or threatened release of these materials into the workplace and environment. These regulations are covered under Chapter 6.95 of the California Health and Safety Code Article 1–Hazardous Materials Release Response and Inventory Program (Sections 25500–25520) and Article 2–Hazardous Materials Management (Sections 25531–25543.3). CCR Title 19, Public Safety, Division 2, Office of Emergency Services, Chapter 4–Hazardous Material Release Reporting, Inventory, and Response Plans, Article 4 (Minimum Standards for Business Plans) establishes minimum statewide standards for hazardous materials business plans. These plans must include the following: (1) a hazardous material inventory in accordance with Sections 2729.2–2729.7; (2) emergency response plans and procedures in accordance with Section 2731; and (3) training program information in accordance with Section 2732. Business plans contain basic information on the location, type, quantity, and health risks of hazardous materials stored, used, or disposed of in the state. Each business must prepare a plan if that business uses, handles, or stores a hazardous material or an extremely hazardous material in quantities greater than or equal to the following: 500 pounds of a solid substance, 55 gallons of a liquid, 200 cubic feet of compressed gas, a hazardous compressed gas in any amount, or hazardous waste in any quantity.

Power Line Hazard Reduction (PRC 4292)

Public Resources Code (PRC) Section 4292 requires a 10-foot clearance around any tree branches or ground vegetation at the base of power poles carrying more than 110 kilovolts (kV). The firebreak clearances required by PRC Section 4292 are applicable within an imaginary cylindrical space surrounding each pole or tower on which a switch, fuse, transformer, or lightning arrester is attached as well as each dead-end or corner pole unless such pole or tower is exempt from minimum clearance requirements by provisions of PRC Section 4296.

Power Line Clearance Required (PRC 4293)

PRC Section 4293 provides guidelines for line clearance, including a minimum of 10 feet of vegetation clearance around any conductor operating at 110 kV or higher.

Minimum Clearance Provisions (14 CCR 1254)

With respect to minimum clearance requirements, 14 CCR 1254 presents guidelines pertaining to nonexempt utility poles. The firebreak clearances required by 14 CCR 1254 are applicable within an imaginary cylindrical space surrounding each pole or tower on which a switch, fuse, transformer, or lightning arrester is attached as well as each dead-end or corner pole unless such pole or tower is exempt from the minimum clearance requirements by the provisions of 14 CCR 1255 or PRC Section 4296. The radius of the cylindroid is 10 feet, which is measured horizontally from the outer circumference of the specified pole or tower, with the height equal to the distance from the intersection of the imaginary vertical exterior surface of the cylindroid to an intersection with a horizontal plane passing through the highest point at which a conductor is attached to such pole or tower. Flammable vegetation and materials located wholly or partially within the firebreak space would be treated as follows:

- At ground level: Remove flammable materials, including ground litter, duff, and dead or desiccated vegetation that would propagate fire.
- From 0 to 8 feet above ground level: Remove flammable trash, debris, or other materials, grass, and herbaceous and brush vegetation. All limbs and foliage of living trees would be removed up to a height of 8 feet.

- From 8 feet to the horizontal plane of the highest point at which a conductor is attached: Remove dead, diseased, or dying limbs and foliage from living, sound trees, and remove any dead, diseased, or dying trees in their entirety.

LOCAL

San Luis Obispo County General Plan – Conservation and Open Space Element

The Conservation and Open Space Element (COSE) (adopted in 2010) includes policies to address the risk posed by hazardous materials associated with energy generation, transportation, and storage. It requires that facilities associated with energy or fossil fuel activities be located, constructed, and operated in a manner that does not create a public hazard. The specific actions contained in the COSE include cleanup and restoration protocols for hydrocarbon spills, planning and permitting requirements for some types of energy and fossil fuel facilities, and siting standards for distribution and transmission infrastructure (including pipelines and electricity transmission lines). The COSE also contains policies to reduce the risk of wildfires and to reduce potential conflicts between fire protection needs and sensitive biological resources.

San Luis Obispo County General Plan – Safety Element

The Safety Element (adopted in 1999) contains policies that address the risks posed by hazardous materials. The greatest risk from hazardous materials in the county is from transportation-related accidents, due in large part to the quantity and frequency of hazardous material shipping through the area by means of road, railways, or pipelines. The Safety Element addresses a number of additional hazards relevant to this EIR section, including pesticides, radiation, airports, and naturally occurring sources of radon gas. Many of the policies concerning these hazards include proper hazardous materials training for law enforcement and first responders, educating residents about risks, and frequent monitoring and review of activities that may pose a threat.

San Luis Obispo County Land Use Ordinance – Title 22

The Land Use Ordinance (LUO) contains standards and policies addressing the threat posed by hazards and hazardous materials. These items include reducing the risk posed by geologic hazards, detailing the standards for safe storage and transportation of hazardous materials, and minimizing land use conflicts that may result in hazardous situations.

LUO – Electric-Generating Plants

The Electric Generating Plants section of the LUO (Title 22, Chapter 22.32) includes requirements pertaining to hazards and hazardous materials associated with electricity production. Steam electric generating facilities must provide details about the on-site use and disposal of all hazardous materials and submit a hazardous materials and waste management plan, as described in Title 22, Section 22.32.040. Wind energy conversion systems must include warnings of the risk of electric shock or high voltage, may not cause electromagnetic interference, and must include rotor safety controls, under the provisions of Title 22, Section 22.32.050.

San Luis Obispo County Airport Land Use Plans

There are three Airport Land Use Plans in San Luis Obispo County: the San Luis Obispo County Regional Airport Land Use Plan, the Paso Robles Municipal Airport Land Use Plan, and the Oceano County Airport Land Use Plan. These plans contain measures to ensure that the airports in the county are compatible with surrounding land uses and that the airports and surrounding land uses do not create a risk of hazards to each other.

Camp Roberts Joint Land Use Study

The Camp Roberts Joint Land Use Study (JLUS) is a plan to ensure compatibility between the Camp Roberts National Guard post and surrounding land uses. The strategies in the study seek to minimize potential land use conflicts, primarily by establishing protocols for notification and cooperation between stakeholders. The study does not by itself create additional permitting or development standards, although it does identify issues of potential conflict, such as tall structures near Camp Roberts' flight paths, that could be incorporated into the LUO or other local land use documents.

San Luis Obispo County Hazardous Waste Management Plan

The San Luis Obispo County Hazardous Materials Emergency Response Plan covers hazardous material emergencies associated with the transportation, storage, manufacture and processing, use, and disposal of hazardous materials, with the exception of nuclear emergencies occurring from operation of the Diablo Canyon Power Plant (see San Luis Obispo County/Cities Nuclear Power Emergency Response Plan, below). The plan defines the jurisdiction and responsibilities of local, state, and federal agencies in a hazardous waste emergency and the process for responding to a hazardous waste emergency.

San Luis Obispo County/Cities Nuclear Power Emergency Response Plan

The San Luis Obispo County/Cities Nuclear Power Emergency Response Plan addresses the emergency situation that may result from a release of radioactive material or production of radioactive material in excess of protective actions at the Diablo Canyon Power Plant. The plan outlines the responsible authorities in the event of a radiological emergency, describes the concepts associated with such an emergency, and details the appropriate response and operation procedures. The plan also acts as a component of the County's Emergency Operations Plan (EOP).

San Luis Obispo County Environmental Health Services

In conjunction with other regulatory and planning agencies, Environmental Health provides comments regarding project compliance with appropriate environmental health standards. Staff is responsible for signing off on construction permit conditions.

San Luis Obispo County Office of Emergency Services

The Office of Emergency Services administers the County's Emergency Operations Plan (EOP), which provides guidance, procedures, and County policies pertaining to emergency planning and response. The EOP provides support for the agencies that have the primary responsibility for responding to an emergency incident. The EOP primarily comprises five emergency plans: (1) Earthquake Response Plan; (2) Hazardous Materials Emergency Response Plan; (3) Dam

Failure Evacuation Plan; (4) Nuclear Power Plant Emergency Response Plan; and (5) Storm Emergency Plan.

Summary of Local Regulations and Policies

Table 3.8-3 summarizes regulations and policies from the documents described above, including strategies to avoid land use conflicts that may create an unsafe situation to the risk of exposure to hazardous or potentially hazardous materials and to ensure that buildings and circulation networks are designed to allow access by emergency responders if necessary. The table also identifies where policies or standards only apply to sub-areas or land use designations.

A number of standards that indirectly relate to hazard and hazardous materials may be found in other sections of this EIR.

TABLE 3.8-3
LOCAL POLICIES AND REGULATIONS FOR HAZARDS AND HAZARDOUS MATERIALS

Applicable Plan or Code Section	Summary
Countywide	
Conservation and Open Space Element, Implementation Strategy E 6.7.1	Minimize the risk of public exposure to hazardous materials from cogeneration facilities.
Conservation and Open Space Element, Policy BR 7.1	Site land uses so as to minimize conflicts between activities to reduce fire risk and sensitive biological resources.
Conservation and Open Space Element, Policy E 7.1	Locate, construct, and operate energy, fossil fuel, and related uses in a manner to protect the public from potential hazards and significant environmental impacts.
Safety Element, Implementation Measure S-65	Land uses at the end of active airport runways should be low density, preferably open space or agriculture.
Safety Element, Implementation Measure S-68	Ensure that projects which use, store, or transport hazardous materials take appropriate measures to protect public health and safety.
Safety Element, Implementation Measure S-72	Ensure that pesticide applicators take appropriate measures to protect public health and safety.
Title 16, Chapter 16.10	All developments shall comply with the 2010 California Fire Code and with County amendments pertaining to fire access roads and fire detection/suppression systems.
Title 19, Section 19.80.108.1.5	Buildings with unsafe features may be declared dangerous. Owners may be subject to repair or demolition costs if unsafe conditions are not fixed.
Title 22, Section 22.32.040.A.5	Applications for steam electric generating facilities must describe the toxic and/or hazardous materials to be used on-site, and the plans for controlling, storing, and disposing of these materials.
Title 22, Section 22.32.040.B	Steam electric generating facilities must submit a hazardous material and waste management plan before the delivery and use of any such materials on-site.
Title 22, Section 22.32.050.B.2	Wind energy conversion facilities must include manual and automatic controls to limit the rotational speed of the blade below the design limits of the rotor.

Applicable Plan or Code Section	Summary
Title 22, Section 22.32.050.B.5	All wind turbine towers must contain a sign at the base of the tower warning of high voltage or the risk of electric shock.
Title 22, Section 22.32.050.B.6	Wind energy conversion facilities may not cause disruptive electromagnetic interference.
Title 22, Section 22.50.030.A	All land use permit applications must include a fire safety plan, except for single-family dwellings on existing lots in urban areas with sufficient water flow, agricultural uses that do not involve primary buildings in rural areas, or as waived by the applicable fire safety agency.
Title 22, Section 22.50.030.B	All fire safety plans must describe the nearest fire hydrant or source of water, storage of potentially explosive or flammable material, and access or vegetation fuel (depending on project location).
Carrizo Planning Area	
No additional policies or standards for the Carrizo Planning Area.	
North County Planning Area	
Camp Roberts Joint Land Use Plan, Issue VO-1	Prohibit high man-made or natural structures within the Camp Roberts flight paths.
Paso Robles Municipal Airport Land Use Plan, Objective 4.6.1	Avoid the development of land uses and land use conditions which pose hazards to aircraft in flight.
Paso Robles Municipal Airport Land Use Plan, Policy S-5	In order to demonstrate consistency with the Airport Land Use Plan, other land use planning documents may not allow high-intensity or unusually hazardous land uses within the area under the Airport Land Use Plan's jurisdiction.
San Luis Obispo Planning Area	
San Luis Obispo County Regional Airport Land Use Plan, Objective 4.4.1	Minimize the risk to persons and property on the ground from potential aircraft accidents.
San Luis Obispo County Regional Airport Land Use Plan, Objective 4.5.1	Avoid the development of land uses and land use conditions which pose hazards to aircraft in flight.
San Luis Obispo County Regional Airport Land Use Plan, Policy S-4	San Luis Obispo area: High-intensity or unusually hazardous land uses are not allowed within the area under the Airport Land Use Plan's jurisdiction.
South County Planning Area	
Oceano County Airport Land Use Plan, Air Space Protection Policy Objective	Avoid the development of land uses and land use conditions which pose hazards to aircraft in flight.
San Luis Obispo County Regional Airport Land Use Plan, Objective 4.4.1	Minimize the risk to persons and property on the ground from potential aircraft accidents.
San Luis Obispo County Regional Airport Land Use Plan, Objective 4.5.1	Avoid the development of land uses and land use conditions which pose hazards to aircraft in flight.
San Luis Obispo County Regional Airport Land Use Plan, Policy S-4	South County area: High-intensity or unusually hazardous land uses are not allowed within the area under the Airport Land Use Plan's jurisdiction.

3.8.3 IMPACTS AND MITIGATION MEASURES

THRESHOLDS OF SIGNIFICANCE

A hazards and hazardous materials impact is considered significant if implementation of the RESP would result in any of the following:

1) Create a hazard to the public, workers or the environment through the routine transport, use, or disposal of hazardous materials.

2) Create a hazard to the public, workers or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.

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

4) Be located on, or adjacent to, a site which is included on a list of hazardous material/waste sites compiled pursuant to Government Code Section 65962.5 (Cortese List) and result in an adverse public health condition.

5) Impair implementation of or physically interfere with an adopted emergency response plan or evacuation plan.

6) If within the Airport Review designation or near a private airstrip, result in a safety hazard for people residing or working in the project area.

7) Increase fire hazard risk or expose people or structures to high wildland fire hazard conditions.

Two additional thresholds of significance (Be within a "very high" fire hazard severity zone; Be within an area classified as a "state responsibility" area as defined by Cal Fire) will be addressed as part of Threshold 7 and are not addressed as separate impacts.

PROJECT IMPACTS AND MITIGATION MEASURES

Create a Hazard to the Public or the Environment through the Routine Transport, Use, or Disposal of Hazardous Materials (Threshold 1)

Impact 3-8-1 – Construction Implementation of the proposed Program could create a hazard to the public through the routine transport, use, or disposal of hazardous materials during construction of solar or wind facilities. This impact is considered **less than significant (Class III)**.

The Program would include construction activities that could involve limited transport, use, and disposal of hazardous materials routinely associated with the operation and maintenance of heavy construction equipment or other support vehicles, such as gasoline fuels, asphalt, lubricants, toxic solvents, pesticides, dust palliatives, and herbicides. The use and handling of hazardous materials during construction activities would be required to occur in accordance with applicable federal, state, and local laws.

While the potential exists for these materials to be leaked or accidentally spilled onto the ground or into waterways during construction and create a hazard to the public or the environment, such spills would be anticipated to be minor based on the quantity of such materials typically stored and/or used on a construction site for Tier 1, Tier 2, and Tier 3 projects. If the project were to use or store larger quantities of hazardous materials, it would be subject to the existing San Luis Obispo CUPA hazardous materials business plan requirements, reducing the impact to less than significant.

A business plan includes an inventory of hazardous materials handled, facility floor plans showing where hazardous materials are stored, an emergency response plan, and provisions for employee training in safety and emergency response procedures (California Health and Safety Code, Division 20, Chapter 6.95, Article 1). Statewide, the DTSC has primary regulatory responsibility for management of hazardous materials, with delegation of authority to local jurisdictions that enter into agreements with the State.

Furthermore, all construction sites disturbing more than 50 cubic yards of material or removing more than 1 acre of vegetation would be subject to the County's grading permit requirements (Chapter 22.52 of the County Code), which establish standards to, among other things, prevent contaminants, sediments, and/or pollutants from leaving construction sites. The grading permit requirements set forth standards, including the incorporation of best management practices (BMPs) to control all grading, excavation, and earthwork and would ensure that hazardous or flammable materials used during construction of solar or wind facilities would not create a significant hazard to the public.

In addition, potential impacts related to minor spills would be largely avoided by training construction personnel in the handling and storage of hazardous materials in compliance with OSHA standards, which require construction projects to implement safe hazardous material handling and storage, transfer (e.g., refueling), and maintenance (e.g., oil changes, washing). Renewable energy projects would comply with these laws and guidelines to ensure personnel health and safety. Standard OSHA and Cal/OSHA-required safety training would be conducted prior to construction to educate personnel of potential safety issues.

These existing regulations would ensure that the transport, use, and disposal of hazardous materials during solar or wind facility construction activities would not create a significant hazard to the public or the environment. This impact would be **less than significant (Class III)**.

Impact 3-8-1 – Solar Implementation of the proposed Program could create a hazard to the public through the routine transport, use, or disposal of hazardous materials. This impact is considered **less than significant (Class III)**.

Cadmium telluride (CdTe) may be present in photovoltaic solar panels used for solar energy projects. CdTe is considered toxic if ingested or inhaled via dust particles. The semiconductor layer in cadium telluride (CdTe) photovoltaic (PV) modules is in the environmentally stable form of a compound rather than the leachable form of a metal. The module design results in the encapsulation of the semiconductor material between two sheets of glass, thereby preventing the exposure of CdTe to the environment. Human exposure to CdTe would occur only if a module, sealed in glass, generated flake or dust particles. The potential for CdTe release could only occur from severe pitting of the panel surface. In addition, some high-performance solar photovoltaic cells contain small amounts of selenium and arsenic, which could be emitted if solar cells were broken during construction or decommissioning.

For photovoltaic facilities using high-performance solar cells, special handling of solar panels containing toxic metals would be required to prevent accidental breakage that would also preclude recycling of the solar cell materials at off-site facilities. Any modules that are damaged/broken or found to be defective for any reason (during construction or operations) would be returned to the manufacturing facility for recycling, consistent with California (i.e., retrograde material) and federal requirements, where they would be recycled into new modules or for use in other new products.

As described in the proposed changes to Chapter 22.32, all renewable energy facilities land use permit applications will be required to submit a recycling and disposal plan that would address both construction and operations of the solar electric facility (SEF) project for renewable energy infrastructure, including photovoltaic panels, so that project structures do not pose a risk to human health or the environment. The recycling and disposal plan is required to specify how project components will be disposed of in a manner that will not pose a risk to human health or the environment.

SEF projects that deal with storage, use, and disposal of hazardous materials within all County planning areas would comply with all appropriate federal, state, and local regulations, such as the regulations discussed in Subsection 3.8.2, Regulatory Setting, to ensure safety of the surrounding public and environment. For instance, a business plan which includes an inventory of hazardous materials handled, facility floor plans showing where hazardous materials are stored, an emergency response plan, and provisions for employee training in safety and emergency response procedures (California Health and Safety Code, Division 20, Chapter 6.95, Article 1) would be required for each individual project. These requirements would reduce this impact to **less than significant (Class III)**.

Impact 3-8-1 – Wind

Implementation of the proposed Program could create a hazard to the public through the routine transport, use, or disposal of hazardous materials. This impact is considered **less than significant (Class III)**.

As with solar projects, wind energy projects would require use of small amounts of hazardous materials during construction and operations, which could result in spills or releases.

Construction and decommissioning of wind facilities would generate both solid and minor liquid wastes. Fluids used and drained from turbine drive train components (e.g., lubricating oils, hydraulic fluids, coolants) require disposal. Tower segments, turbine components (emptied of their fluids), and broken concrete would not pose a hazardous materials risk and could be recycled or reused. Miscellaneous materials without salvage value are expected to be nonhazardous and would be sent to permitted disposal facilities.

Because the RESP only streamlines Tier 1 wind energy projects, the amount of hazardous materials used, transported, or disposed of for these projects would be anticipated to be minor. Similarly, the amount of waste produced when decommissioning Tier 1 wind energy conversion systems (WECS) would be minor due to the size of rooftop wind projects. Similar to SEF projects, Tier 2 WECS projects would be required to comply with all appropriate federal, state, and local regulations, such as the regulations discussed in Subsection 3.8.2, Regulatory Setting, to ensure safety of the surrounding public and environment. Because of the size of Tier 1 WECS and the standard requirements for building all WECS projects, this impact would be **less than significant (Class III)**.

Impact 3-8-1 – Policy Changes Implementation of the proposed Program could result in changes to countywide policies that could indirectly create a hazard to the public through the routine transport, use, or disposal of hazardous materials. This impact is considered **less than significant (Class III)**.

Adherence to policy changes proposed under the RESP would ensure streamlined solar and wind projects comply with San Luis Obispo County ordinances and existing regulations. The performance standards contained in the RESP would ensure that projects implemented under the Program would result in **less than significant (Class III)** impacts as demonstrated above.

Create a Hazard to the Public or the Environment Through Reasonably Foreseeable Upset and Accident Conditions Involving the Release of Hazardous Materials into the Environment (Threshold 2)

Impact 3-8-2 – Solar Implementation of the proposed Program could create a hazard to the public through the reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment. This impact is considered **less than significant (Class III)**.

Tier 1, Tier 2, and Tier 3 SEF projects may be streamlined throughout the county within the Renewable Energy (RE) Combining Designation. During the construction phases of certain SEF projects, a hazard to the public or the environment could be created through the disturbance of contaminated property. According to the GeoTracker database (see **Table 3.8-1**), there are currently 39 cleanup sites in the county. In the absence of appropriate precautions and/or cleanup efforts, certain projects may create the potential for exposing construction workers, the public, or the environment to hazardous materials.

Where appropriate, the County would require an investigation of the potential for SEF projects that are located at or in the vicinity of identified hazardous material sites or in areas that contain hazardous materials. Site-specific evaluation would have to include a historical assessment of past uses, and when determined appropriate by the County, soil sampling. In those instances where a specific project site is found to be contaminated by hazardous materials, the site would be required, where appropriate, to be cleaned up to the standards of the appropriate regulatory agency. Appropriate remediation measures to ensure worker safety during construction would be required, where appropriate, prior to the commencement of earth-moving activities, subject to the County's review and approval.

As previously described, SEF projects that deal with the storage, use, and disposal of hazardous materials within all County planning areas would comply with all appropriate federal, state, and local regulations, such as the regulations discussed in Subsection 3.8.2, Regulatory Setting, to ensure the safety of the surrounding public and environment.

Tier 1, 2, and 3 SEF projects could also occur in areas with the valley fever fungus (*Coccidioides immitis)*. Project construction would disturb the soil and cause the fungal spores to potentially become airborne, potentially putting construction personnel and wildlife at risk of contracting valley fever. As discussed in Section 3.3, Air Quality, infection from valley fever during construction can be avoided through the control of construction-generated dust. Construction-generated dust associated with the project would be controlled by adhering to the requirements contained in Section 22.52.160 of the County Code and would ensure that impacts associated with valley fever would be addressed**.** Additionally, other actions can be implemented by project contractors

during construction such as suspending work during period of high winds or dust storms, wetting the soil before disturbing it by heavy equipment or vehicles and wetting soils continuously while digging in order to keep dust levels down, providing vehicles with enclosed, air-conditioned cabs and making sure workers keep the windows closed and equipping cabs with high-efficiency particulate air (HEPA) filters, positioning workers upwind when digging a trench or performing other soil-disturbing tasks, and employing the use of NIOSH-approved respiratory protection with particulate filters rated as N95, N99, N100, P100, or HEPA when exposure to dust is unavoidable.

For these reasons, this impact is considered **less than significant (Class III)**.

Impact 3-8-2 – Wind Implementation of the proposed Program could create a hazard to the public through the reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment. This impact is considered **less than significant (Class III)**.

Construction and operation of Tier 1 WECS would be small in scale and located on existing roofs or structures. They would not result in ground disturbance to areas that may previously have been contaminated but may result in disturbance to roofing shingles that could contain asbestos. Prior to installation of a Tier 1 WECS, studies assessing the structure's roof would be required. Any roofing shingles with asbestos would be identified, and existing regulations, such as 8 CCR Section 339, would require that this hazardous material be addressed prior to any construction, reducing the impact to less than significant.

The transport of Tier 1 WECS would involve minimal hazardous materials and so would be unlikely to result in accidental release of such materials. Any risk of hazard to the public through the reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment would be considered **less than significant (Class III)**.

Impact 3-8-2 – Policy Changes Implementation of the proposed Program could create a hazard to the public through the reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment. This impact is considered **less than significant (Class III)**.

Adherence to existing regulations, as well as to policy changes proposed under the RESP, would ensure that solar and wind projects are required to comply with all appropriate federal, state, and local regulations, such as the regulations discussed in Subsection 3.8.2, Regulatory Setting, to ensure the safety of the surrounding public and environment. The Program would not indirectly create a hazard to the public through the accidental release of hazardous materials. This impact is considered **less than significant (Class III)**.

Emit Hazardous Emissions or Handle Hazardous or Acutely Hazardous Materials, Substances, or Waste Within One-Quarter Mile of an Existing or Proposed School (Threshold 3)

There are 34 elementary, middle, and high schools in San Luis Obispo County. Only one school, Carrisa Plains Elementary, is located in the Carrizo Planning Area. The North County Planning Area has a number of elementary, middle, and high schools, many of which are clustered in the Paso Robles, Templeton, and Atascadero areas. The San Luis Obispo Planning Area has a number of elementary, middle, and high schools, many of which are clustered in or near the city of San Luis Obispo. The South County Planning Area has a number of elementary, middle, and

high schools, many of which are in the western portion of the planning area and most of which are in or near Arroyo Grande. Some of the schools in these planning areas are within or near the RE Combining Designation.

Impact 3-8-3 – Solar Implementation of the proposed Program could result in emitting hazardous materials within one-quarter mile of an existing or proposed school. This impact is considered **less than significant (Class III)**.

Although the exact location of the Tier 1, 2, and 3 SEF projects are unknown, it is possible that some projects would be within one-quarter mile of an existing or proposed school. However, as described above, all renewable energy facilities would comply with all appropriate federal, state, and local regulations, such as the regulations discussed in Subsection 3.8.2, Regulatory Setting, to ensure the safety of the surrounding public and environment. For instance, a business plan which includes an inventory of hazardous materials handled, facility floor plans showing where hazardous materials are stored, an emergency response plan, and provisions for employee training in safety and emergency response procedures (California Health and Safety Code, Division 20, Chapter 6.95, Article 1) would be required for each individual project.

In terms of the potential hazards of CdTe, the CdTe contained in PV modules is in the environmentally stable form of a compound rather than the leachable form of a metal. The module design results in the encapsulation of the semiconductor material between two sheets of glass, thereby preventing the exposure of CdTe to the environment. Furthermore, any modules that are damaged/broken or found to be defective for any reason (during construction or operations) would be returned to the manufacturing facility for recycling, consistent with California (i.e., retrograde material) and federal requirements, where they would be recycled into new modules or for use in other new products.

As described in the proposed changes to Chapter 22.32, all renewable energy facilities land use permit applications will be required to submit a recycling and disposal plan that would address both construction and operations of the SEF project for renewable energy infrastructure, including photovoltaic panels, so that project structures do not pose a risk to human health or the environment. The recycling and disposal plan is required to specify how project components will be disposed of in a manner that will not pose a risk to human health or the environment. Therefore, the risk of emissions of acutely hazardous materials in the vicinity of a school would be less than significant.

Students at nearby schools could be significantly impacted if a spill of motor vehicle fuel or transformer fluid were to occur as a result of transportation of these materials to the site for project construction. However, all construction sites disturbing more than 50 cubic yards of material or removing more than 1 acre of vegetation would be subject to the County's grading permit requirements (Chapter 22.52 of the County Code), which establish standards to, among other things, prevent contaminants, sediments, and/or pollutants from leaving construction sites. The grading permit requirements set forth standards, including the incorporation of best management practices (BMPs) to control all grading, excavation, and earthwork and would ensure that hazardous or flammable materials used during construction of solar or wind facilities would not create a significant hazard to the public.

Potential impacts related to minor spills would be largely avoided by training construction personnel in the handling and storage of hazardous materials in compliance with OSHA standards, which require construction projects to implement safe hazardous material handling and storage, transfer (e.g., refueling), and maintenance (e.g., oil changes, washing).

Renewable energy projects would comply with these laws and guidelines to ensure personnel health and safety. Standard OSHA- and Cal/OSHA-required safety training would be conducted prior to construction to educate personnel of potential safety issues. In addition, the transport of large quantities of hazardous materials is strictly regulated by the CHP (California Vehicle Code Section 3200.5) and the hazardous materials used during project construction would be transported along regulated routes by a licensed transporter and would therefore not pose a significant hazard to students at schools. This impact is considered **less than significant (Class III)**.

Impact 3-8-3 – Wind Implementation of the proposed Program could result in emitting hazardous materials within one-quarter mile of an existing or proposed school. This impact is considered **less than significant (Class III)**.

Construction and operation of Tier 1 WECS could be located within one-quarter mile of existing and proposed schools. Tier 1 WECS would be small in scale and located on existing roofs or structures. Construction of Tier 1 WECS would emit minimal hazardous materials, given the size and type of roof-mounted structures. Any risk of emitting hazard materials within one-quarter mile of an existing or proposed school would be minimal and **less than significant (Class III)**.

Impact 3-8-3 – Policy Changes Implementation of the proposed Program could create a hazard to the public through the reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment. This impact is considered **less than significant (Class III)**.

Adherence to policy changes proposed under the RESP would ensure that solar and wind projects are required to comply with all appropriate federal, state, and local regulations, such as the regulations discussed in Subsection 3.8.2, Regulatory Setting, to ensure the safety of the surrounding public and environment. Any impacts would be reduced to **less than significant (Class III)** levels and so would not indirectly create a hazard to the public through the accidental release of hazardous materials.

Be Located on, or Adjacent to, a Site Which Is Included on a List of Hazardous Material/Waste Sites Compiled Pursuant to Government Code Section 65962.5 (Cortese List) and Result in an Adverse Public Health Condition (Threshold 4)

Impact 3-8-4 – Solar Implementation of the proposed Program could result in an adverse public health condition by being located on or adjacent to a site on the Cortese List. This impact is considered **less than significant (Class III)**.

The Cortese List includes hazardous waste facilities, contaminated drinking water wells, sites listed as having underground storage tank leaks that have discharged into surface water or groundwater, and other sites that have had a known migration of hazardous materials or waste (see **Table 3.8-1**). Many of the sites listed in **Table 3.8-1** are located in incorporated cities and would not be within the Combining Designation overlay.

However, while unlikely, some of the Tier 1, 2, or 3 SEF sites could be within or adjacent to overlay site identified on the Cortese List and could therefore result in potentially adverse public health conditions. Even so, these sites are well regulated per federal and state laws. Where appropriate, the County would require an investigation of the potential for SEF projects to be located at or in

the vicinity of identified hazardous material sites or to be located in areas that contain hazardous materials.

Any future development of solar projects built on sites that are on the Cortese List would be required to comply with all California, federal, and local laws and regulations intended to prevent adverse public health conditions associated with these sites. For instance, lands identified on the Cortese List could be required to be cleaned up to the standards of the appropriate regulatory agency before the site can be developed. Appropriate remediation measures to ensure worker safety during construction would be required, where appropriate, prior to the commencement of earthmoving activities, subject to the County's review and approval. Therefore, this impact is **less than significant (Class III)**.

Impact 3-8-4 – Wind Implementation of the proposed Program could result in an adverse public health condition by being located on or adjacent to a site on the Cortese List. This impact is considered **less than significant (Class III)**.

Construction and operation of Tier 1 WECS would be small in scale and located on existing roofs or structures. While it is unlikely that they would be located on a building that is on the Cortese List, any future development of WECS projects built on sites that are on the Cortese List would be required to comply with all California, federal, and local laws and regulations intended to prevent adverse public health conditions associated with these sites. For instance, lands identified on the Cortese List could be required to be cleaned up to the standards of the appropriate regulatory agency before the site can be developed.. Therefore, this impact is **less than significant (Class III).**

Impact 3-8-4 – Policy Changes Implementation of the proposed Program could result in an adverse public health condition by being located on or adjacent to a site on the Cortese List. This impact is considered **less than significant (Class III)**.

As discussed above, any development of SEF and WECS projects built on sites that are on the Cortese List would be required to comply with all California, federal, and local laws and regulations intended to prevent adverse public health conditions associated with these sites. Therefore, this impact is **less than significant (Class III)**.

Impair Implementation of or Physically Interfere with an Adopted Emergency Response Plan or Evacuation Plan (Threshold 5)

Impact 3-8-5 – Solar The proposed Program could impair implementation of or physically interfere with adopted emergency response plan or evacuation plan. This impact is considered **less than significant (Class III)**.

Response corridors and evacuation routes are roadways that would typically be used by response vehicles or the general public in an emergency situation. These roadways are generally arterials and other major roadways that offer sufficient width for emergency response vehicles. Tier 1, Tier 2, and Tier 3 SEFs would not impair the implementation of plans to access these routes or directly interfere with access to them. Any construction-related traffic generated during the construction of SEFs would be limited in both scope and duration. The projects would be required to identify responsibilities and coordinate emergency responses at the local level in the event of an emergency. Furthermore, the operation of SEFs would not result in a substantial

concentration of people in one area and therefore would not affect existing response plans. Therefore, this impact would be **less than significant (Class III)**.

Impact 3-8-5 – Wind The proposed Program could impair implementation of or physically interfere with adopted emergency response plan or evacuation plan. This impact is considered **less than significant (Class III)**.

Construction and operation of Tier 1 WECS would be small in scale and located on existing roofs or structures. It is unlikely that they would impair implementation of or physically interfere with an adopted emergency response plan or an evacuation plan. Any construction traffic generated during the construction of Tier 1 WECS would be short term in nature, would likely be one or two vehicles, and would not generate interference with an emergency response plan. Therefore, this impact is **less than significant (Class III)**.

Impact 3-8-5 – Policy Changes The proposed Program could impair implementation of or physically interfere with adopted emergency response plan or evacuation plan. This impact is considered **less than significant (Class III)**.

Policy changes proposed under the RESP would not affect response corridors and/or evacuation routes. **Less than significant (Class III)** impacts would occur.

If Within the Airport Review Designation or Near a Private Airstrip, Result in a Safety Hazard for People Residing or Working in the Project Area (Threshold 6)

It is inevitable that some SEF and WECS projects will be in or near an airport review designation or near a private airstrip.

Impact 3-8-6 – Solar The proposed Program could result in a safety hazard for people residing or working in the project area. This impact is considered **less than significant (Class III)**.

Tier 1, Tier 2, or Tier 3 SEFS could be built at adjacent to or near existing airports. Low-flying planes and helicopters could be subject to glare from the reflective surfaces of the solar PV glass panels during daylight hours. Because of the potential footprint of PV arrays, up to 160 acres for Tier 3 SEFs, pilots could potentially experience distracting flashes of reflected light while flying in the immediate vicinity of a solar project. Viewers of such glare instinctually divert their eyes from the source. The duration of exposure would be very short because the glare source would be stationary and the viewer (pilot) would be traveling at a high rate of speed. Glare that is bright enough to temporarily impair vision and cause viewers to look away also occurs from other objects in the built and natural environment (such as lakes, building windows, reflective surfaces on other roadway vehicles).

While such glare would be a new feature in the project area, PV installations at airports typically incorporate anti-reflective coatings in the panels to minimize the effects of glare on aeronautical operations. In addition, existing objectives would prohibit any development within the Paso Robles Municipal Airport and San Luis Obispo County Regional Airport which have conditions that pose hazards to aircraft in flight (see Paso Robles Municipal Airport Land Use Plan, Objective 4.6.1, and San Luis Obispo Municipal Airport Land Use Plan, Objective 4.5.1).

Paso Robles Municipal Airport Land Use Plan Policy S-5 and San Luis Obispo County Regional Airport Land Use Plan Policy S-4 would not allow high-intensity or unusually hazardous land uses within the area under the Airport Land Use Plan's jurisdiction. Further, the Federal Aviation Administration's interim policy would require FAA review of solar energy projects on federally obligated airports, and 14 CFR Part 77 would require notification of any structures within 20,000 feet of an airport. With implementation of the existing rules and regulations regarding airports and private airstrips, impacts that could result in a safety hazard for people residing or working in the project area would be **less than significant (Class III)**.

Impact 3-8-6 – Wind The proposed Program could result in a safety hazard for people residing or working in the project area. This impact is considered **less than significant (Class III)**.

Construction and operation of Tier 1 WECS would be small in scale and located on existing roofs or structures. The height restriction for Tier 1 WECS is 10 feet in areas designated for agriculture, rural, and public facilities land uses, and up to 15 feet in all other land use categories. Because the Tier 1 WECS would be built on existing structures and would be limited in height, impacts within or adjacent to airport and private airstrips would be **less than significant (Class III)**. Additionally, Paso Robles Municipal Airport Land Use Plan Policy S-5 and San Luis Obispo County Regional Airport Land Use Plan Policy S-4 would not allow high-intensity or unusually hazardous land uses within the area under the Airport Land Use Plan's jurisdiction.

Impact 3-8-6 – Policy Changes The proposed Program could result in a safety hazard for people residing or working in the project area. This impact is considered **less than significant (Class III)**.

Adherence to existing policies and other policy changes proposed under the RESP would ensure streamlined solar and wind projects comply with San Luis Obispo County ordinances and applicable General Plan strategies, measures, and policies, including those in the Conservation and Open Space Element. This impact would be **less than significant (Class III)**.

Increase Fire Hazard Risk or Expose People or Structures to High Wildland Fire Hazard Conditions (Threshold 7)

Much of the area within the RE Combining Designation overlays are within Cal Fire State Responsibility Areas (SRA). Within these SRAs Fire Hazard Severity Zones include moderate, high, or very high risk areas. The Combining Designation overlays include 99,604 acres of moderate Fire Hazard Severity Zones within the Combining Designation overlays, 451,067 acres of high Fire Hazard Severity Zones, and 201,553 acres of very high Fire Hazard Severity Zones.

Impact 3-8-7 – Solar Implementation of the proposed Program could increase fire hazard risk or expose people or structures to high wildland fire hazard conditions. This impact is considered **less than significant (Class III)**.

Tier 1, Tier 2, and Tier 3 SEFS could potentially cause a wildfire hazard by igniting a wildfire during construction, operation, or maintenance or by interfering with firefighting operations. This is especially the case in areas that are identified by Cal Fire as high or very high Fire Hazard Severity Zones.

Project construction would involve the use of heavy equipment, welding, and other activities, including personnel smoking, which could cause a wildfire ignition at the site, potentially resulting in a hazard to personnel or to the scattered residences in the vicinity of the solar energy project. In addition, electrical fires from equipment during the operations phase of the project could ignite nearby vegetation. Switching equipment and inverters would be sited on concrete foundations, and inverters would be housed in steel and concrete equipment enclosures, minimizing the risk of electrical sparks that could ignite vegetation during equipment failure. All electrical equipment would be built to industry safety design standards, further reducing the risk of electrical fires at the site. PV array wiring may remain "hot," i.e., carry an electrical charge, after being disconnected during daylight hours. If PV panels are disconnected by trespassers, operations personnel, or during dismantling, live wires could result in a wildfire ignition if they were to come into contact with vegetation. In addition, live wires could pose an electric shock hazard to trespassers or authorized personnel.

Although the characteristics of the Tier 1, Tier 2, and Tier 3 SEF projects present only a moderate fire hazard, during extreme weather conditions, a fire originating at the solar sites could spread out of control and pose a risk to life and property within the RE Combining Designation overlays. Any loss of life or property as a result of an accidental wildfire ignition would be a significant impact. The risk of ignition from project activities could be reduced or eliminated by implementing additional fire safety practices during construction and site operation as required by County Code Chapter 22.50, Fire Safety Plan. Fire safety plans generally are reviewed by the County fire protection agency and include measures to prevent accidental ignition at the site. In addition, LUO Section 22.32.040.A.6 would require electrical safety signage on all arrays in the immediate vicinity of all wiring and all electrical conduits to reduce the risk of electrical shock and fire. Through implementation of these standards and policies, impacts related to wildfire would be **less than significant (Class III)**.

Impact 3-8-7 – Wind Implementation of the proposed Program could increase fire hazard risk or expose people or structures to high wildland fire hazard conditions. This impact is considered **less than significant (Class III)**.

Tier 1 WECS could be located within moderate, high, and very high Fire Hazard Severity Zones. Construction of Tier 1 WECS would be minor and confined to existing structures. The WECS would be required to abide by industry standards, and the risk of increasing wildfire risk is **less than significant (Class III).**

Impact 3-8-7 – Policy Changes The proposed Program could result in a safety hazard for people residing or working in the project area. This impact is considered **less than significant (Class III)**.

Adherence to existing policies and other policy changes proposed under the RESP would ensure streamlined solar and wind projects comply with San Luis Obispo County ordinances and applicable General Plan strategies, measures, and policies, including those in the COSE. This impact would be **less than significant (Class III)**.

CUMULATIVE IMPACTS

Hazardous material impacts are generally site-specific and not cumulative by nature, as impacts generally vary by land use, site characteristics, and site history. This is because hazardous materials and associated spills are located within the project site themselves or would occur during transportation to and from the site.

Tier 1, Tier 2, and Tier 3 SEF projects streamlined by the Program would primarily generate risk of hazardous upset or other hazardous material impacts during construction, with minimal risk of off-site upset of hazardous materials extending beyond the project site boundary during operation, as discussed above. In order for impacts due to hazards and hazardous materials from renewable energy projects streamlined by the RESP to combine with impacts of hazardous materials from other projects, the impacts would need to occur within a short time frame of each other and adjacent to each other.

For example, a hazardous materials spill from a Tier 1, Tier 2, or Tier 3 SEF project would only result in a cumulative impact if another project had a hazardous material spill at the same time in close proximity. Simultaneous hazardous spills are unlikely. Furthermore, the hazardous materials are heavily regulated at the federal, state, and local levels, and all renewable energy facilities subject to a discretionary permit will be required to submit a recycling and disposal plan that would address both construction and operations of the SEF project for renewable energy infrastructure so that project structures do not pose a risk to human health or the environment.

The proposed recycling and disposal plan is required to specify how project components would be disposed of in a manner that would not pose a risk to human health or the environment. In addition, a business plan that includes an inventory of hazardous materials handled, facility floor plans showing where hazardous materials are stored, an emergency response plan, and provisions for employee training in safety and emergency response procedures (California Health and Safety Code, Division 20, Chapter 6.95, Article 1) would be required. Therefore, this impact is less than cumulatively considerable.

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