

**5.14 WASTE MANAGEMENT**

This section presents a discussion of potential impacts from the generation, storage, and disposal of hazardous and non-hazardous wastes from the proposed SJS 1&2 and associated ancillary systems. The discussion in this section includes the waste streams generated during the Project construction and operation, the applicable waste disposal sites to be used by the facility, proposed waste mitigation methods to minimize impacts to the environment, and applicable LORS.

**5.14.1 Affected Environment****5.14.1.1 Plant Site**

The Project includes the construction, operation and maintenance of two 53.4 MW net solar hybrid power stations and ancillary systems.

The Project site is located on West Jayne Avenue; approximately 6 miles east of Coalinga and approximately 3 miles west of Interstate 5, in an agricultural area of Fresno County, California. The Project site will be situated on one section of land, approximately 640 acres.

The Project site is located in an area zoned for agricultural uses as specified in the Fresno County General Land Use Plan. Surrounding land uses include agricultural fields to the north, agricultural lands to the south, the Gujarral Hills Oil Field to the east, and the Coalinga State Hospital to the west.

The two components of each Plant are the solar field and the biomass facilities. Each solar field has the heat-generating capacity to fully load its respective turbine to produce the net 53.4 MW. Each biomass facility will be used to maximize the turbine's energy output during shoulder solar hours (as the sun rises and sets) and will operate at night to produce up to 40 MW of energy.

The solar field design will use parabolic solar collectors to concentrate the sun's radiant energy on HCEs that contain a circulating HTF. Hot HTF is then conveyed to heat exchangers to produce steam in a conventional reboiler for expansion in a reheat steam turbine generator.

The biomass facility will use fluidized bed combustion technology to burn orchard waste and municipal greenwaste. The biomass component will run up to 24 hours a day in winter months when solar intensity is less. During summer, the biomass plant will start up as the sun approaches the horizon, run all night, then ramp down as the sun rises the next day. Incorporating the biomass facility in this manner increases the power plant's total energy output and maximizes turbine use. The biomass combustion process will produce ash equal to approximately 5% of the biomass consumed.

Ancillary facilities will include buildings and facilities for assembly, maintenance and operations, as well as the gathering lines required to transmit electricity from the field to the substation.

A Phase I ESA of the proposed SJS 1&2 site has been prepared in accordance with American Society for Testing and Materials (ASTM) Practice E 1527-05. The objective of the Phase I Environmental Site Assessment was to identify recognized environmental conditions (RECs) that may exist on the SJS 1&2 site. No RECs were identified in connection with current or historical operations at the subject property.

Based on the historical use of the property for oil development, there is the potential for subsurface soils to be impacted with petroleum hydrocarbons. Limited oil staining was observed on the soil near onsite diesel storage ASTs. The Phase I ESA is included as Appendix M-1.

As described in more detail in Section 5.14.2, Environmental Consequences, the SJS 1&2 will generate hazardous and non-hazardous wastes typical of a solar hybrid power plant during the Project construction and operational phases.

#### ***5.14.1.2 Non-Hazardous Solid Waste Disposal***

Non-hazardous solid waste disposal facilities (Class III landfills) in the general area of the Project site are listed in Table 5.14-1, Waste Recycling/Disposal Facilities. These facilities accept non-hazardous wastes and inert solid wastes, including construction/demolition wastes. Liquid wastes are not accepted by these landfills. Industrial process solid waste is accepted on a case-by-case basis.

**Table 5.14-1  
Waste Recycling/Disposal Facilities**

Waste Disposal Site	Title 23 Class	Permitted Throughput	Permitted Capacity	Remaining Capacity	Estimated Closure Date	Enforcement Action Taken?
<b>Solid Recycling</b>						
Coalinga Disposal Site 30825 Lost Hills Road Coalinga, CA 93210	Class III	200 tons per day	3.3 million cubic yards per year	1.9 million cubic yards	2029	No
City of Clovis Landfill 15679 Auberry Road Fresno, CA 93626	Class III	600 tons per day	7.8 million cubic yards	2.1 million cubic yards	2047	No
American Avenue Disposal Site 18950 West American Avenue Tranquility, CA 93668	Class III	2,200 tons per day	32.7 million cubic yards	29.4 million cubic yards	2031	No
American Remedial Technologies (Solids Recycling) 2680 Seminole Avenue Lynwood, CA 90262	Not Applicable	25 thousand tons per month	300 thousand tons per year	Not applicable	Not applicable	No
TPS Technologies, Inc. (Soil Recycling) 12328 Hibiscus Avenue Adelanto, CA 92301	Not Applicable	Not applicable	350,000 tons per year	Not applicable	Not applicable	No
Thermal Remediation Solutions (Solids Recycling) 1211 West Gladstone Avenue Azusa, CA 91702	Class III	200,000 tons per year	2,000 tons per day	Not applicable	Not applicable	No

**Table 5.14-1  
Waste Recycling/Disposal Facilities  
(Continued)**

Waste Disposal Site	Title 23 Class	Permitted Throughput	Permitted Capacity	Remaining Capacity	Estimated Closure Date	Enforcement Action Taken?
Chemical Waste Management Kettleman Hills Landfill (Solids Waste Facility) 36251 Old Skyline Road Kettleman City, CA 93239	Class I	8 thousand tons per day	10.7 million cubic yards	6 million cubic yards	Not Available	No
Clean Harbors Buttonwillow Landfill (Solid Waste Facility) Lokern Road Kern County, CA	Class I	10.48 thousand tons per day	14.29 million cubic yards	Not available	2040	No
<b>Liquid Recycling</b>						
DeMenno/Kerdoon (Liquids Recycling) 2000 North Alameda Street Compton, CA 90222	Not applicable	84.1 million gallons per year of oily water and 123 million gallons per year of waste oil	Approximately 30 million gallons per year	Not applicable	Not applicable	No

Source: CIWMB Solid Waste Inventory System Database, 2008.

Several California soil treatment and soil recycling facilities accept hydrocarbon-impacted soil that is classified by the generator as a non-hazardous waste per the Resource Conservation and Recovery Act (RCRA) and Title 22 of the CCR. Acceptable levels for treatment or recycling are established by the individual facilities. These facilities are summarized in Table 5.14-1.

#### ***5.14.1.3 Hazardous Solid Waste Disposal***

Hazardous waste generated at the Project site will be taken off site for recycling or disposal by a permitted hazardous waste transporter to a permitted treatment, storage, and disposal facility or Class I landfill. Two Class I landfills are located in California: Clean Harbors Buttonwillow Landfill in Kern County and Chemical Waste Management's Kettleman Hills Landfill in Kings County. The permitted, operating, and remaining capacities of these landfills are described in Table 5.14-1, Waste Recycling/Disposal Facilities. Hazardous waste generated during the SJS 1&2 construction and operation phases is not expected to significantly impact available landfill capacity.

#### ***5.14.1.4 Hazardous and Non-Hazardous Wastewater (Non-effluent Waste Streams)***

As listed in Table 5.14-1, Waste Recycling/Disposal Facilities, one California wastewater treatment and recycling facility may accept RCRA hazardous, non-RCRA hazardous, and non-hazardous wastewater. The DeMenno/Kerdoon facility is located in Compton, California.

### **5.14.2 Environmental Consequences**

The analysis of impacts related to waste management from the SJS 1&2 is based on significance criteria summarized in the bulleted items below.

- Non-hazardous solid wastes must not significantly alter available landfill, recycling, or treatment program capacities.
- Non-hazardous liquid wastes must not cause a publicly owned treatment system to violate any applicable waste discharge requirements.
- Hazardous solid wastes must not significantly alter available Class I landfill capacity.
- The facility must comply with all applicable laws regarding the handling of hazardous wastes.
- Also, according to the CEQA Appendix G guidelines, a Project has a significant impact when it:
  - Breaches standards relating to solid waste or litter control;
  - Creates a potential public health hazard or involves materials that pose a hazard; and
  - Results in a need for new systems or substantial alterations to waste disposal facilities.

The following sections describe the wastes that are expected to be generated during construction and operation of the SJS 1&2 and how non-hazardous solid waste, wastewater, and hazardous solid and liquid wastes will be disposed.

## 5.14.2.1 Construction

## Plant Construction

The SJS 1&2 site will generate wastes typical for the construction of a solar hybrid power generation plant. Table 5.14-2, Summary of Construction Waste Streams and Management Methods, summarizes the anticipated waste streams generated during construction, along with appropriate management methods for treatment or disposal.

**Table 5.14-2  
Summary of Construction Waste Streams  
and Management Methods<sup>1</sup>**

Waste Stream and Classification	Origin and Composition	Estimated Amount	Estimated Frequency of Generation	Onsite Treatment	Waste Management Method
Construction Waste – Non-hazardous	Scrap wood, steel, glass, plastic, paper	39 cubic yards per week	Intermittent	None	Dispose to Landfill.
Construction Waste – Hazardous	Empty hazardous material containers	1.3 cubic yards per week	Intermittent	Store for <90 days	Return to vendor or dispose to hazardous waste disposal facility.
Construction Waste – Hazardous	Solvents, used oils, paint, oily rags, adhesives	176 gallons	Every 90 days	Store for <90 days	Dispose to hazardous waste disposal facility or recycle.
Spent Batteries – Hazardous	Lead acid, alkaline type	40 in 4 years	Intermittent	Store for <90 days	Dispose to recycling facility.
Stormwater from construction area – Non-hazardous	Surface runoff (e.g., water, inert material, dirt and concrete particles)	13.2 gallons per day	Intermittent	None	Water will percolate into onsite soils.
Sanitary Waste – Non-hazardous	Portable chemical toilets; sanitary waste	20 gallons per day	Periodically pumped to tanker truck by licensed contractors	None	Ship to sanitary water treatment plant.
Pipeline Pressure Testing – Non-hazardous	Raw water from raw water storage	237,755 gallons	Four times at end of field construction	None	Return to Raw Water Tank.

Source: Project Description

Note:

<sup>1</sup>All numbers are estimates.

**Non-hazardous Waste** – Inert solid wastes resulting from construction activities may include recyclable items such as paper, cardboard, solid concrete and block, metals, wire, glass, types 1 to 4 plastics, drywall, wood and lubricating oils. Non-recyclable items include insulation, other plastics, food waste,

roofing materials, vinyl flooring and base, carpeting, paint containers, packing materials, and other construction wastes. Management of these wastes will be the responsibility of the construction contractor(s). Typical management practices required for contractor waste include recycling when possible, proper storage of waste and debris to prevent wind dispersion, and weekly pickup of wastes with disposal at an approved Class III landfill.

**Hazardous Waste** – Small quantities of hazardous wastes will likely be generated over the course of construction. These wastes may include waste paint, spent construction solvents, waste cleaners, waste oil, oily rags, waste batteries, and spent welding materials. Hazardous wastes generated during facility construction and operation will be handled and disposed of in accordance with applicable LORS. Hazardous wastes will be either recycled or disposed of, as appropriate, in a licensed Class I disposal facility. When managed and disposed of properly, these wastes will not cause significant environmental or health and safety impacts. Most of the hazardous waste generated during construction, such as used oil, can be recycled. The small quantities of hazardous waste that cannot be recycled are not expected to significantly impact the capacity of the Class I landfills in California.

**Wastewater** – Wastewater generated during construction of the new plant will include sanitary wastes, equipment wash water, and storm water runoff. Construction-related wastewater will be managed according to appropriate LORS.

#### *5.14.2.2 Operations and Maintenance*

##### *Plant Operations*

Facility operation will generate wastes resulting from processes, routine facility maintenance, and office activities typical of solar hybrid power generation operations. The operation waste streams and management methods are summarized in Table 5.14-3, Summary of Operation Waste Streams and Management Methods, and are described in more detail in the following text. Non-hazardous wastes generated during facility operation will be recycled to the greatest extent practical, and the remainder of the wastes will be regularly removed by a certified waste-handling contractor.

**Table 5.14-3  
Summary of Operation Waste Streams and Management Methods<sup>1</sup>**

Waste Stream and Classification	Origin and Composition	Estimated Amount	Estimated Frequency of Generation	Onsite Treatment	Waste Management Method
Used Hydraulic Fluid, Oils and Grease, Oily Filters – Hazardous, recyclable	STG and other users of hydraulic actuators and lubricants	5.3 gallons for each plant  10.6 gallons total	Per day	Store <90 days	Dispose to authorized waste recycle facility.
Spent batteries – Hazardous, recyclable	Lead Acid, Alkaline	5/year, 400/year for each plant  Total 10/year 800/year	Intermittent	Store <90 days	Dispose to authorized waste recycle facility.
Oily Rags – Non-hazardous	STG and other users of hydraulic actuators and lubricants	55 gallons from each plant 110 gallons total	Per month	Store <90 days	Launder at authorized facility.
Oily Absorbent – Hazardous	STG and other users of hydraulic actuators and lubricants	55 gallons from each plant 110 gallons total	Per month	Store <90 days	Dispose to authorized waste disposal facility.
Waste Oil/Sludge – Hazardous, recyclable	Oil/water separator	500 gallons from each plant 1000 gallons total	Intermittent	Store <90 days	Dispose to authorized waste recycle facility.
Fly Ash	Biomass Combustion	10,000 – 25,000 tons from each plant 20,000 - 50,000 tons total	Per year	Collected in ash storage vessels	Reuse, sellable or characterize and dispose at a non-hazardous landfill.

Source: Project Description

<sup>1</sup>All numbers are estimates.

Notes:

STG = Steam Turbine Generator

Inert solid wastes generated at the facility during operation will be predominantly office wastes and routine maintenance wastes, such as scrap metal, wood and plastic from surplus and deactivated equipment and parts. Scrap materials such as paper, packing materials, glass, metals, and plastics will be

segregated and managed for recycling. Non-recyclable inert wastes will be stored in covered trash bins in accordance with local ordinances and picked up by an authorized local trash hauler on a regular basis for transport to and disposal in a suitable landfill.

### *Non-hazardous Solid Waste*

SJS 1&2 will produce maintenance and plant wastes typical of solar hybrid power generation operations. The following types of non-hazardous solid waste may be generated: paper, wood, plastic, cardboard, deactivated equipment and parts, defective or broken electrical materials, empty non-hazardous containers, and other miscellaneous solid wastes, including typical refuse generated by workers.

Office paper, newsprint, aluminum cans, wood, insulation, yard debris, concrete, gravel, scrap metal, cardboard, glass, plastic containers, and other non-hazardous waste materials will be segregated and recycled to the extent practical, and the remainder will be regularly removed by a certified waste-handling contractor for disposal at a Class III landfill.

The Project will burn a combination of locally available biomass fuels. Following, is the anticipated mix of fuels for the Project:

- 50% Agricultural Wood Waste comprising primarily wastes collected during clearing or pruning of local orchards. These wood wastes largely comprise almond trees, walnut trees and citrus trees, and will include some leafy material as well as a small amount of unremoved dirt arising from the collection process.
- 50% Municipal Green Wastes comprising primarily clippings and collected wood materials from local municipalities.

The fluidized bed combustion process will include blending limestone with fresh fuel in the combustor. Limestone is added primarily to absorb SO<sub>2</sub> and trace amounts of chlorides that might be present in the fuel, and also provides many beneficial characteristics to the ash.

Fly ash will be collected using a combination of mechanical collectors and bag houses. All ash will be accumulated in ash storage vessels, and then loaded on trucks for removal.

The ash produced from burning biomass has several uses other than acid-scrubbing in the gasification process. It will contain several beneficial nutrients (10% P<sub>2</sub>O<sub>5</sub>, 12% K<sub>2</sub>O, 13.5% Ca, and 5% Mg) and may have use as a soil amendment or fertilizer for agricultural crops. Typically, ash generated by existing biomass facilities in California is sold into the marketplace for a variety of purposes, including supplements for the manufacture of aggregate and concrete, soil mineral supplements and bedding material for livestock pens. All of the ash produced from the facility is anticipated to be marketable for these purposes.

If the ash is characterized as non-hazardous or hazardous waste, it will be disposed of in accordance with applicable LORS in either a Class I or Class III Landfill, respectively.

### *Liquid Wastes*

Industrial wastewater will consist of solar thermal system blowdown, solar thermal washdown, air-cooled condenser washdown, and oil/water separator effluent. Industrial wastewater will be routed to the Water Treatment System.

Area drains will be located near mechanical equipment where it is determined that oil could mix with rainwater or other water sources. Water collected by these drains will go to the oil/water separator, which separates out any oil before the effluent goes to the sewer line. Oil-contaminated fluid will be pumped out by a vacuum truck on an as-needed basis and disposed of at a facility specifically qualified to handle such waste.

Hazardous containments will not have drains but will be pumped out by vacuum pump if hazardous materials are present. Rainwater will be pumped to the storm drain system after first confirming that no hazardous materials are present.

The plant site will consist of paved roads, paved parking areas, and graveled areas. Stormwater will be diverted from the paved surfaces to the solar field for evaporation/soil absorption.

Sanitary waste will be discharged into a sanitary leach field, and will be designed to meet RWQCB guidelines.

### *Hazardous Waste*

Hazardous waste generated will include used oils from equipment maintenance and oil-contaminated materials, such as spent rags, or other cleanup materials. Used oil generated will be recycled. Hazardous waste that can not be recycled will be disposed of in a Class I waste disposal facility. Table 5.14-3, Summary of Operation Waste Streams and Management Methods, summarizes the hazardous waste to be generated during plant operation.

Hazardous wastes will be collected by a licensed hazardous waste hauler and disposed of at a licensed hazardous waste facility. Hazardous wastes will be transported off site using a hazardous waste manifest. Copies of manifest reports, waste analysis, exception reports, destruction certifications, etc., will be kept on site and made accessible for inspection for 3 years. Land disposal restriction notices/certificates will be kept on site and accessible for inspection for 5 years.

The amount of contaminated soil that may result from HTF spills or leaks should not exceed 20 cubic yards in a 3-month period. A 2-acre parcel of land in the SJS 1&2 common area will be used for temporary storage of contaminated soil until it is transported off site. The maximum spill that would occur would result from a rupture of one of the expansion vessels. The potential impact has been minimized by designing a containment pit under the vessels of sufficient size to hold the spill. Shutoff valves are also located on the end of every Solar Collector row to isolate HCE breakage or leaks. Major HTF flow lines will all have isolation valves in strategic locations.

### *5.14.2.3 Abandonment/Closure*

Premature closure or unexpected cessation of plant operations will be outlined in the facility's closure plan. The plan will outline steps to secure hazardous and non-hazardous materials and wastes. Such steps will be consistent with BMPs and the Hazardous Materials Business Plan (HMBP) and will be undertaken in accordance with applicable LORS. The plan will include the monitoring of vessels and receptacles of hazardous material and wastes, safe cessation of processes using hazardous materials or hazardous wastes, and inspection of secondary containment structures.

Planned permanent closure impacts will be incorporated into the facility closure plan and evaluated at the end of the facility's economic operation. The facility closure plan will document non-hazardous and hazardous waste management practices, including the inventory, management, and disposal of hazardous materials and wastes, and permanent closure of permitted hazardous materials and waste storage units.

### **5.14.3 Cumulative Impacts**

The Class I and Class III landfills and soil and water recycling facilities in the Project site area have adequate recycling and disposal capacities for SJS 1&2. Therefore, cumulative impacts from the Project site and other projects in the region are not expected to be significant.

### **5.14.4 Mitigation measures**

#### *5.14.4.1 Construction*

##### *WM-1*

Before initiating the Project construction phase, construction employees will receive hazardous waste-related training that will focus on the recognition and proper handling of subsurface soil contamination and contingency procedures to be followed to protect worker safety and the public.

##### *WM-2*

A detailed waste management plan for waste generated during construction will be prepared at least 60 days before rough grading to ensure proper storage, labeling, packaging, recordkeeping, manifesting, waste minimization principles, and disposal of hazardous materials and waste. A waste management plan will also be prepared for operation of the Project. The waste management plan will include the following elements:

- A description of each hazardous waste stream;
- Waste classification procedures;
- Waste container and label requirements;
- Accumulation, handling, transport, treatment, and disposal procedures for each waste;
- Waste minimization procedures;

- Preparedness, prevention, contingency, and emergency procedures; and
- Personnel training.

***WM-3***

Hazardous wastes will be accumulated on site for fewer than 90 days (or other accumulation periods, as allowed by 22 CCR Section 66262.34 for hazardous waste generators) and will be managed in accordance with state and federal hazardous waste generator requirements. Hazardous wastes, together with hazardous materials that are spilled or otherwise become unsuitable for use, will be stored in an appropriately segregated hazardous waste storage area surrounded by a containment structure to control leaks and spills. The containment area will be constructed in accordance with local codes and requirements. Hazardous waste containers and labels will be maintained according to applicable regulations. The hazardous waste storage areas will be inspected and maintained weekly, as required.

***WM-4***

Hazardous wastes will be collected by a licensed hazardous waste hauler and disposed of at a hazardous waste facility. Hazardous wastes will be transported off site using a hazardous waste manifest. Copies of manifest reports, waste analysis, exception reports, destruction certifications, etc., will be kept on site and accessible for inspection for 3 years. Land disposal restriction notices/certificates will be kept on site and accessible for inspection for 5 years.

***WM-5***

Spill control and management procedures will be included in the emergency response procedures developed before operation of the proposed SJS 1&2 site. Spill control and management procedures are intended to avoid accidental mixing of incompatible chemicals and spills during transfer of chemicals, and will include the containment, collection, and treatment systems. The spill response procedures are discussed further in Section 5.15, Hazardous Materials Handling.

***WM-6***

Facility employees will receive hazardous materials training as required by the Occupational Safety and Health Administration, Hazard Communication Standard. Also, employees will be trained in hazardous waste procedures, spill contingencies, and waste minimization procedures in accordance with 22 CCR. Hazardous waste training will include the following subjects:

- Hazardous waste characteristics;
- Use and management of containers;
- Waste packing;
- Marking and labeling;
- Accumulation/storage areas;
- Inspections;

- Emergency equipment preparedness and prevention;
- Contingency plan;
- Emergency response procedures;
- Spill response and containment;
- Hazardous waste manifesting and transportation requirements; and
- Waste minimization practices.

### *WM-7*

Procedures to minimize hazardous waste generation will be established. Employees will be trained in procedures to reduce the volume of hazardous wastes generated at the SJS 1&2 facility. Procurement of hazardous materials will be controlled to minimize surplus materials on site and to prevent unused materials from becoming “off-spec.” Non-hazardous materials will be used in lieu of hazardous materials whenever possible. Hazardous materials will be reused whenever possible. Hazardous wastes will be recycled whenever possible.

Implementation of these waste management procedures for handling construction-related debris and hazardous wastes, where encountered, will mitigate construction-related impacts to a less than significant level. No further mitigation is proposed.

#### *5.14.4.2 Operations and Maintenance Phase Mitigation*

##### *Plant Site*

The Applicant will update the waste management procedures for construction (WM-1 through WM-7) of the site and implement them for operations at the SJS 1&2 facility. In addition, the Applicant will develop and implement procedures and requirements as outlined in the HMBP. These procedures and programs will minimize potential plant operations-related impacts

#### *5.14.4.3 Monitoring Program*

Environmental impacts arising from waste management issues caused by construction and operation of the SJS 1&2 facility are expected to be minimal. Therefore, extensive monitoring programs are not required. Monitoring of generated waste volumes and characteristics during SJS 1&2 construction and operation will be conducted in accordance with monitoring and reporting requirements in the appropriate permits that will be obtained for construction and operation.

#### **5.14.5 LORS Compliance**

##### *5.14.5.1 Federal*

RCRA (42 USC Sections 6901 to 6992k) provides the basic framework for federal regulation of non-hazardous and hazardous waste. RCRA’s Subtitle D establishes state responsibility for regulating non-

hazardous wastes, and Subtitle C controls the generation, transportation, storage, and disposal of hazardous waste through a comprehensive “cradle to grave” system of hazardous waste management techniques and requirements. The U.S. EPA is responsible for implementing the law, and the implementing regulations are set forth in 40 CFR Section 260, *et seq.* The law allows USEPA to delegate the administration of the RCRA programs to the various states provided that the state programs meet the federal requirements. California’s program was authorized by USEPA on August 1, 1992, and the California Department of Toxic Substances Control (DTSC) is responsible for administering the program.

The CWA (33 USC, Section 1251 *et seq.*) provides the regulatory framework for managing the discharge of wastewater to surface waters of the U.S. EPA has nationwide authority to implement the CWA, but states may be authorized to administer various aspects of the NPDES, as well as pretreatment programs. California is authorized under the CWA to administer the NPDES program, implement publicly owned treatment works’ pretreatment programs, oversee federal facilities, and issue general permits.

#### 5.14.5.2 State

Non-hazardous solid waste is regulated by the California Integrated Waste Management Act (Public Resources Code, Section 40000 *et seq.*). The law provides a solid waste management system to reduce, recycle, and reuse solid waste generated in the state to the maximum extent feasible in an efficient and cost-effective manner to conserve natural resources, to protect the environment, and to improve landfill safety. Local agencies are required to develop and establish recycling programs, reduce paper waste, purchase recycled products, and implement integrated waste management programs that conform to the state’s requirements. The FCDCH Environmental Health Division has the authority to ensure the proper storage and disposal of solid waste in Fresno County.

Wastewater is regulated under California’s Porter-Cologne Water Quality Control Act, which established a statewide system for water pollution control (Water Code, Section 13000 *et seq.*). The SWRCB and the nine RWQCBs are the principal agencies responsible for control of water quality and issuing permits under the NPDES program. The Central Valley RWQCB has authority over the Project.

Onsite accumulation of hazardous waste is regulated under CCR Section 66262.34. Hazardous waste cannot be stored on site for more than 90 days, so any hazardous waste stored on site at the SJS 1&2 site would have to be appropriately transferred within that period.

As stated previously, RCRA allows states to develop their own programs to regulate hazardous waste. California has developed its own program by passage of the California Hazardous Waste Control Law (California Health and Safety Code, Section 25100 *et seq.*). It should be noted that California’s Hazardous Waste Control Law includes non-RCRA hazardous wastes. Also, the law specifies two hazardous waste criteria (the soluble threshold limit concentration and the total threshold limit concentration) that are not required under RCRA. Primary authority for the statewide administration and enforcement of California’s Hazardous Waste Control Law rests with the DTSC. The DTSC provides regulatory functions covering those entities that generate hazardous waste.

### 5.14.5.3 Local

For hazardous waste, the designated Certified Unified Program Agency (CUPA) for the Project area is the FCDCH, Environmental Health Division. This agency has delegated authority to administer state and federal programs. CUPA also regulates the storage of hazardous materials in underground storage tanks and cleanup of petroleum releases from underground storage tanks. The FCDCH, Environmental Health Division will be contacted in the event of a release of hazardous wastes or materials to the environment. The FCDCH, Environmental Health Division assumes enforcement responsibility for the implementation of 23 CCR and regulates the generation and storage of hazardous waste for the Project area.

The LORS applicable to the handling of non-hazardous and hazardous waste at the Project site are summarized in Table 5.14-4, Summary of LORS – Waste Management.

**Table 5.14-4  
Summary of LORS – Waste Management**

LORS	Requirements	Conformance Section	Administering Agency	Agency Contact
<b>Federal Jurisdiction</b>				
RCRA Subtitle C and D, 42 USC §§ 6901 to 6992k, and Section 6.12.2.1.	Regulate non-hazardous and hazardous wastes. Laws implemented by the state.	Section 5.14.5.1	DTSC	DTSC Duty Officer Clovis Field Office (559) 297-3901
40 CFR 260, <i>et seq.</i>	Implementing regulations for RCRA Subtitle C law. Implemented by USEPA by delegating to the state.	Section 5.14.5.1	DTSC	DTSC Duty Officer Clovis Field Office (559) 297-3901
Federal Clean Water Act, 33 USC § 1251 <i>et seq.</i>	Regulates wastewater discharges to surface waters of the U.S. The NPDES program is administered at the state level.	Section 5.14.5.1	Central Valley RWQCB	General Information 559-455-6543
<b>State Jurisdiction</b>				
California Integrated Waste Management Act, Public Resources Code § 40000 <i>et seq.</i>	Implements RCRA regulations for non-hazardous waste.	Section 5.14.5.2	Fresno County Department of Community Health (FCDCH), Environmental Health Division	FCDCH Solid Waste Division 559-455-3357
Porter-Cologne Water Quality Control Act of 1998, Water Code § 13000 <i>et seq.</i>	Regulates wastewater discharges to surface and groundwater of California. NPDES program implemented by SWRCB.	Section 5.14.5.2	Central Valley RWQCB	General Information 559-455-6543
22 CCR § 66262.34	Regulates accumulation periods for hazardous waste generators. Typically hazardous waste cannot be stored on site for more than 90 days.	Section 5.14.5.2	DTSC	DTSC Duty Officer Clovis Field Office (559) 297-3901

**Table 5.14-4  
Summary of LORS – Waste Management  
(Continued)**

LORS	Requirements	Conformance Section	Administering Agency	Agency Contact
California Hazardous Waste Control Law, California Health and Safety Code § 25100 <i>et seq.</i>	Regulates hazardous waste handling and storage.	Section 5.14.5.2	DTSC	DTSC Duty Officer Clovis Field Office (559) 297-3901
<b>Local Jurisdiction</b>				
FCDCH, Environmental Health Division	Regulates enforcement responsibility for the implementation of Title 23, Division 3, Chapters 16 and 18 of the CCR, as it relates to hazardous material storage and petroleum UST cleanup.	Section 5.14.5.3	FCDCH, Environmental Health Division, CUPA	559-455-3217
FCDCH, Environmental Health Division	Regulates hazardous waste generator permitting, and hazardous waste handling and storage.	Section 5.14.5.3	FCDCH, Environmental Health Division, CUPA	559-455-3217
Fresno County General Plan Public Facilities Element	Will ensure all new development complies with applicable provisions of County Integrated Solid Waste Management Plan.	Section 5.14.5.3	Fresno County Department of Public Works and Planning	559-262-4078

Source: California Department of Toxic Substances Control, 2008; Cal/EPA, 2008; Central Valley Regional WQCB, 2008; Fresno County Department of Public Works and Planning, 2008; Fresno County FCDCH, Environmental Health Division, 2008.

Notes:

CCR	=	California Code of Regulations
CFR	=	Code of Federal Regulations
CUPA	=	Certified Unified Program Agency
DTSC	=	Department of Toxic Substances Control
FCDCH	=	Fresno County Department of Community Health
LORS	=	laws, ordinances, regulations, and standards
NPDES	=	National Pollutant Discharge Elimination System
RCRA	=	Resource Conservation and Recovery Act of 1976
RWQCB	=	Regional Water Quality Control Board
SWRCB	=	State Water Resources Control Board
U.S.	=	United States
USC	=	United States Code
USEPA	=	United States Environmental Protection Agency
UST	=	underground storage tank

#### 5.14.5.4 Agency Contacts

Agencies with jurisdiction to issue applicable permits or enforce LORS related to waste management are shown in Table 5.14-5, Agency Contact List for LORS.

**Table 5.14-5  
Agency Contact List for LORS**

Agency	Contact	Address	Telephone
DTSC	Noel Lavery DTSC Duty Officer Clovis Field Office	1515 Tollhouse Road Clovis, CA 93611	(916) 255-3618 (559) 297-3901
FCDCH, Environmental Health Division, CUPA	Gustavo Gomez or Hazardous Materials Specialist On Call	1221 Fulton Mall Fresno, California 93775	559-445-3271
FCDCH, Environmental Health Division, CUPA	Solid Waste Specialist On Call	1221 Fulton Mall Fresno, California 93775	559-445-3271
Regional Water Quality Control Board, Central Valley Region	Dale Harvey	1685 E. Street Fresno, California 93706	559-455-5116 559-455-6190

Source: Department of Toxic Substances Control, 2008; Cal/EPA, 2008; Central Valley Region RWQCB, 2008; FCDCH, Environmental Health Division, 2008.

Notes:

CUPA = Certified Unified Program Agency  
 DTSC = Department of Toxic Substances Control  
 FCDCH = Fresno County Department of Community Health  
 LORS = laws, ordinances, regulations, and standards

#### 5.14.5.5 *Applicable Permits*

The Project will apply for a USEPA hazardous waste generator identification number from the DTSC and a hazardous waste generator permit from the FCDCH, Environmental Health Division, CUPA.

Also, the Applicant will be required to develop an HMBP and for the FCDCH, Environmental Health Division, CUPA.

A summary of applicable permits is presented in Table 5.14-6, Applicable Permits.

**Table 5.14-6  
Applicable Permits**

Responsible Agency	Permit/Approval	Schedule
DTSC	EPA Hazardous Waste Generator Identification Number	30 days before generation of hazardous waste
FCDCH, Environmental Health Division, CUPA	Hazardous Waste Generator Program Permit	30 days before generation of hazardous waste.
FCDCH, Environmental Health Division, CUPA	Hazardous Materials Business Plan	30 days before the storage and use of hazardous materials

Source: California Department of Toxic Substances Control, 2008; FCDCH, Environmental Health Division, 2008.

Notes:

CUPA = Certified Unified Program Agency  
 DTSC = Department of Toxic Substances Control  
 FCDCH = Fresno County Department of Community Health

**5.14.6 References**

Barclays Law Publishers. No date. Barclays Official California Code of Regulations.

California Department of Toxic Substances Control. 2008. Information downloaded from:  
<http://www.dtsc.ca.gov>. April.

California Environmental Protection Agency (Cal/EPA), Central Valley Regional Water Quality Control Board (RWQCB). 2008. Information downloaded from:  
<http://www.waterboards.ca.gov/centralvalley/>. June.

California Integrated Waste Management Board (CIWMB). 2008. Information downloaded from:  
<http://www.ciwmb.ca.gov/SWIS>. June.

California Stormwater Quality Association. 2004. "Stormwater Best Management Practice Handbook, Industrial and Commercial."

California Stormwater Quality Association. 2004. Stormwater Best Management Practice Handbook, Industrial and Commercial.

Fresno County Department of Community Health (FCDCH), Environmental Health Division. 2008. Information downloaded from:  
<http://www.fresnohumanservices.org/CommunityHealth/EnvironmentalHealth/CUPA/>;  
<http://www.fresnohumanservices.org/CommunityHealth/EnvironmentalHealth/SolidWaste/>. June.

Fresno County Department of Public Works and Planning. 2008. Information downloaded from:  
<http://www.co.fresno.ca.us>. June.

Office of the Federal Register. 1997. Code of Federal Regulations, Title 40, Parts 260 to 265, Revised July 1.

URS. 2008. Phase I Site Assessment for Bethel 7&8, Site, Coalinga, California.

Adequacy Issue: Adequate \_\_\_\_\_ Inadequate \_\_\_\_\_ **DATA ADEQUACY WORKSHEET** Revision No. 0 Date \_\_\_\_\_  
 Technical Area: Waste Management Project: San Joaquin Solar 1&2 Technical Staff: \_\_\_\_\_  
 Project Manager: \_\_\_\_\_ Docket: \_\_\_\_\_ Technical Senior: \_\_\_\_\_

SITING REGULATIONS	INFORMATION	AFC PAGE NUMBER AND SECTION NUMBER	ADEQUATE YES OR NO	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS
Appendix B (b) (1) (C)	A detailed description of the design, construction and operation of the facilities, specifically including the power generation, cooling, water supply and treatment, waste handling and control, pollution control, fuel handling, and safety, emergency and auxiliary systems, and fuel types and fuel use scenarios; and	Section 5.14.1.1 and 5.14.1.2		
Appendix B (e) (1)	A discussion of how facility closure will be accomplished in the event of premature or unexpected cessation of operations.	Section 5.14.2.3		
Appendix B (g) (1)	...provide a discussion of the existing site conditions, the expected direct, indirect and cumulative impacts due to the construction, operation and maintenance of the project, the measures proposed to mitigate adverse environmental impacts of the project, the effectiveness of the proposed measures, and any monitoring plans proposed to verify the effectiveness of the mitigation.	Section 5.14.2, 5.14.3, and 5.14.4		
Appendix B (g) (12) (A)	A Phase I Environmental Site Assessment (ESA) for the proposed Project Site using methods prescribed by the American Society for Testing and Materials (ASTM) document entitled "Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process" (Designation: E 1527-93, May 1993), which is incorporated by reference in its entirety; or an equivalent method agreed upon by the applicant and the CEC Staff that provides similar documentation of the potential level and extent of site contamination. The Phase I ESA shall have been completed no earlier than one year prior to the filing of the AFC.	Section 5.15.1.1 Appendix M-1		

Adequacy Issue: Adequate \_\_\_\_\_ Inadequate \_\_\_\_\_ **DATA ADEQUACY WORKSHEET** Revision No. 0 Date \_\_\_\_\_  
 Technical Area: **Waste Management** Project: San Joaquin Solar 1&2 Technical Staff: \_\_\_\_\_  
 Project Manager: \_\_\_\_\_ Docket: \_\_\_\_\_ Technical Senior: \_\_\_\_\_

SITING REGULATIONS	INFORMATION	AFC PAGE NUMBER AND SECTION NUMBER	ADEQUATE YES OR NO	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS
Appendix B (g) (12) (B)	A description of each waste stream estimated to be generated during project construction and operation, including origin, hazardous or nonhazardous classification pursuant to Title 22, California Code of Regulations, § 66261.20 <i>et seq.</i> , chemical composition, estimated annual weight or volume generated, and estimated frequency of generation.	Section 5.14.2.1, 5.14.2.2 Table 5.14-2, and 5.14-3		
Appendix B (g) (12) (C)	A description of all waste disposal sites which may feasibly be used for disposal of project wastes. For each site, include the name, location, classification under Title 23, California Code of Regulations, § 2530 <i>et seq.</i> , the daily or annual permitted capacity, daily or annual amounts of waste currently being accepted, the estimated closure date and remaining capacity, and a description of any enforcement action taken by local or state agencies due to waste disposal activities at the site.	Section 5.14.1.3, 5.14.1.4 Table 5.14-1		
Appendix B (g) (12) (D)	A description of management methods for each waste stream, including methods used to minimize waste generation, length of on- and off-site waste storage, re-use and recycling opportunities, waste treatment methods used, and use of contractors for treatment.	Section 5.14.2.1, and 5.14.2.2 Table 5.14-2 and 5.14-3		
Appendix B (h) (1) (B)	A discussion of any measures proposed to improve adverse site conditions.	Section 5.14.4		
Appendix B (h) (1) (D) (v)	The waste disposal system and on-site disposal sites;	Section 5.14.2.1 and 5.14.2.2		
Appendix B (i) (1) (A)	Tables which identify laws, regulations, ordinances, standards, adopted local, regional, state, and federal land use plans, leases, and permits applicable to the proposed project, and a discussion of the applicability of, and conformance with each. The table or matrix shall explicitly reference pages in the application wherein conformance, with each law or standard during both construction and operation of the facility is discussed; and	Section 5.14.5 Table 5.14-4		

Adequacy Issue: Adequate \_\_\_\_\_ Inadequate \_\_\_\_\_ **DATA ADEQUACY WORKSHEET** Revision No. 0 Date \_\_\_\_\_  
 Technical Area: **Waste Management** Project: San Joaquin Solar 1&2 Technical Staff: \_\_\_\_\_  
 Project Manager: \_\_\_\_\_ Docket: \_\_\_\_\_ Technical Senior: \_\_\_\_\_

SITING REGULATIONS	INFORMATION	AFC PAGE NUMBER AND SECTION NUMBER	ADEQUATE YES OR NO	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS
Appendix B (i) (1) (B)	Tables which identify each agency with jurisdiction to issue applicable permits, leases, and approvals or to enforce identified laws, regulations, standards, and adopted local, regional, state and federal land use plans, and agencies which would have permit approval or enforcement authority, but for the exclusive authority of the commission to certify sites and related facilities.	Section 5.14.5.4 Table 5.15-5		
Appendix B (i) (2)	The name, title, phone number, address (required), and email address (if known), of an official who was contacted within each agency, and also provide the name of the official who will serve as a contact person for Commission staff.	Table 5.14-5 Table 5.14-4		
Appendix B (i) (3)	A schedule indicating when permits outside the authority of the commission will be obtained and the steps the applicant has taken or plans to take to obtain such permits.	Section 5.14.5.5 Table 5.14-6		

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