

Throughout this Application, all references to Federal Power, Federal Power Avenal, LLC, and Federal Power Avenal refer to Avenal Power Center, LLC.

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6.14 WASTE MANAGEMENT

Procedures and facilities for the management of wastes at the Project are described in this section. The types and amounts of operational waste streams will qualify as less than significant, in part because of the following beneficial aspects of the Project related to waste management:

- Practices, procedures and facilities for recycling, handling and disposal of wastes in compliance with all LORS, will be used in the Project.
- Waste minimization will be integrated into the Project.

The Project will have the following programs to address the management of wastes and hazardous materials:

- Designated waste storage locations.
- Emergency response procedures.
- Employee training requirements.
- Hazard recognition.
- Fire control procedures.
- Hazard communications training.
- Personal protection equipment training.
- Release reporting requirements.

These programs will assure plant employees and the public that wastes are managed carefully, and that no significant impacts are caused by these wastes.

Based on a Phase I Environmental Site Assessment (ESA) conducted for the Site, the Site has been used to farm potatoes, cotton, barley, melons and onions since 1951 when the land was cleared of native vegetation. The Phase I ESA concludes that there is no evidence of existing or historic contamination on or adjacent to the Site (Appendix 6.14-1).

The California Environmental Protection Agency (Cal-EPA), Department of Toxic Substances Control (DTSC) and the California State Water Resources Control Board (SWRCB) share the responsibility of classifying and regulating wastes in California. Wastes are classified according to regulations set forth in the California Code of Regulations (CCR) Titles 22 and 23. The classifications used by the DTSC reflect its mandate to protect public health and the environment, while classifications established by the SWRCB are designed to protect the beneficial uses of water.

Nonhazardous waste does not contain soluble pollutants in concentrations that would degrade water quality. Nonhazardous wastes may be disposed of at Class III waste disposal facilities.

According to the SWRCB, nonhazardous wastes are further divided into solid wastes that contain substantial quantities of degradable material (i.e., common municipal solid waste) and inert wastes, which do not contain degradable materials. Nonhazardous solid waste disposal is regulated by the California Integrated Waste Management Board (CIWMB) and the Local Enforcement Agency (LEA) for Kings County.

Hazardous waste is defined as any waste with a hazardous nature that exceeds criteria for toxicity, corrosivity, ignitability or reactivity as established by DTSC. Hazardous waste also includes specific listed wastes as identified in CCR, Title 22, Section 66261. Most hazardous wastes may be disposed of only at Class I waste disposal sites approved by DTSC. Certain hazardous wastes, classified as restricted hazardous wastes, are banned entirely from land disposal because they pose a high threat to public health and the environment. Land disposal restrictions are provided in CCR, Title 22, Section 66268.

Designated wastes are either: (1) a hazardous waste for which the generator has been granted a variance by the DTSC; or (2) a nonhazardous waste which contains pollutants that could be released into the environment in concentrations that could degrade water quality. Designated waste may be disposed of only at Class I or Class II waste disposal facilities.

The discussion of waste management begins with existing conditions of the Project site which, as farmland, contains no waste. Section 6.14.2 discusses the impacts associated with the waste management aspects of Project construction and operation. Because impacts will be less than significant, the Project requires no mitigation (Section 6.14.3) and causes no significant unavoidable adverse impacts (Section 6.14.4). Compliance with applicable LORS is discussed in Section 6.14.5.

6.14.1 EXISTING CONDITIONS

The Project is located in the City of Avenal, Kings County, California. The Site is east of Interstate 5 and surrounded by open farmland.

6.14.1.1 Phase I Environmental Site Assessment

A Phase I ESA was conducted at the Site to identify the presence or likely presence of hazardous substances or petroleum products in the onsite soil, ground water or surface water related to an

existing or historic release. The Phase I ESA was conducted in accordance with American Society for Testing and Materials (ASTM) standard designation E1527-05, Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process.

The Phase I ESA concluded that there is no evidence of contamination or other recognized environmental condition on or adjacent to the Site. A copy of the report is provided as Appendix 6.14-1.

6.14.1.2 Waste Disposal

Table 6.14-1 describes three Class III waste disposal sites in the vicinity of the Project, each of which is capable of accepting the amount of nonhazardous solid waste that will be generated during project construction and operation. Municipal solid waste generated at the plant will be routinely separated according to recyclable (e.g., glass, aluminum, paper) and nonrecyclable fractions to minimize the quantity of waste disposed offsite.

The three following major Class I hazardous waste landfills, each with a minimum of 20 years capacity, are located in California:

- The Buttonwillow facility of Clean Harbors, Inc. in Kern County has a permitted capacity of 13 million cubic yards. It had approximately 95 percent of its capacity (12 million cubic yards) remaining as of 2007 (Buoni, 2007). It is estimated it can receive waste until after 2030. The United States Environmental Protection Agency (EPA) identification number for this facility is CAD980675276.
- The Chemical Waste Management, Inc. (CWMI) Kettleman Hills facility in Kings County has a permitted capacity of 10.7-million cubic yards, with about 12 percent (1.2-million cubic yards) remaining as of 2007. It is estimated that Kettleman Hills will be able to receive hazardous waste in the existing facility (B18) for the next 2.4 years. The EPA identification number for this facility is CAT000646117. Permitting is underway to expand B18 capacity by approximately 5 million cubic yards in 2008, and to construct a new approximately 15 million cubic yard facility (B20) for use when the expanded capacity of B18 is reached. With planned expansions it is estimated that Kettleman Hills will be able to receive hazardous waste for the next 35 years (Henry, 2007).

- The Westmorland facility of Clean Harbors, Inc. in Imperial County has a permitted disposal capacity of 5-million cubic yards. It had about 45 percent of its capacity (2.5-million cubic yards) remaining as of 2007 (Buoni, 2007). At present rates of disposal, it is estimated it can receive waste until approximately 2050. The EPA identification number for this facility is CAD000633164.

Oily debris also may be disposed at the Class II Forward Landfill located near Manteca, California (San Joaquin County). This landfill has capacity anticipated to last until approximately Year 2050 (CIWMB, 2001).

Several waste oil haulers and recyclers are available to serve locations in Kings County. Examples include:

- Evergreen Environmental Services, Newark, California
- San Joaquin Filter Recycling, Fresno, California
- Safety-Kleen Systems, Inc., Fresno, California
- Asbury Environmental, Compton, California

The following hazardous waste transporters may be used to transport hazardous waste from the Project:

- | | |
|------------------------------------|----------------------|
| • Evergreen Environmental Services | EPA No. CAD980695761 |
| • Safety-Kleen Corp. | EPA No. ILD984908202 |

The following treatment, storage or disposal facilities may be utilized for hazardous waste generated by the Project:

- | | |
|---|----------------------|
| • Chemical Waste Management, Inc.
Kettleman City, California 93239 | EPA No. CAT000646117 |
| • Clean Harbors
Wilmington, California 90744 | EPA No. CAD044429835 |
| • Evergreen Environmental Services
Santa Maria, California 93454 | EPA No. CAD982446858 |
| • Romic Environmental Technologies, Corp.
East Palo Alto, California 94303 | EPA No. CAD009452657 |
| • Safety-Kleen Corp.
Reedley, California 93654 | EPA No. CAD093459485 |
| • Safety-Kleen Corp.
El Monte, California 91731 | EPA No. CAT000613893 |

TABLE 6.14-1

SUMMARY INFORMATION⁽¹⁾
CLASS III WASTE DISPOSAL SITES
IN THE VICINITY OF THE PROJECT

CHARACTERISTICS	CITY OF AVENAL ⁽²⁾	COALINGA ⁽³⁾ DISPOSAL SITE	KETTLEMAN HILLS ⁽⁴⁾ FACILITY
Location	201 N. Hydril Road, Avenal	1 mile east of Hwy. 198 and Alcade on Lost Hills	1 mile north of SR 41, 9 miles southeast of Avenal
Current Annual Disposal Rate (tons per year) ⁽⁵⁾	314,000	12,950	130,000
Permitted Daily Disposal Rate (tons per day)	6,000	200	2,000
Actual Daily Disposal Rate (tons per day)	1,800	37	500
Remaining Capacity (million cubic yards)	26	1.9	17.8
Anticipated Year of Closure ⁽⁶⁾	2050	2050	2045
Approximate Distance From Site (miles)	2	16	9
Subject to Agency Enforcement Actions	No	No	No

(1) Information derived from California Integrated Waste Management Board Landfill Tonnage Report (2006) and Solid Waste Information System (SWIS) database (2006), then confirmed by individuals at the disposal facilities.

(2) Vossmer, 2007.

(3) Miller, 2006.

(4) Henry, 2007.

(5) Assumed 350 operating days per year.

(6) Anticipated date of closure varies, as landfill use depends on a number of variables, including population growth, waste-to-soil ratio, compaction, recycling, economic conditions, weather.

6.14.2 IMPACTS

Significance criteria are based on California Environmental Quality Act (CEQA) Guidelines, Appendix G, Environmental Checklist Form and performance standards or thresholds adopted by responsible agencies. A significant impact may result if:

- Construction or operation results in waste materials being introduced into the environment in violation of federal, state or local waste management and disposal regulations.

- Construction or operation results in the generation of waste materials in excess of the receiving capacity of applicable disposal facilities.

Potential impacts are discussed in the following sections as they may relate to Project construction, operation and maintenance.

6.14.2.1 Construction Waste

Construction of the Project will generate wastes. A summary of estimated construction waste streams and estimated quantities is provided in Table 6.14-2. Project construction wastes will be collected, stored and hauled from the Site following requirements of the City of Avenal Sanitation and Health Ordinance, 22 CCR requirements for hazardous waste, and other applicable LORS.

Nonhazardous Construction Waste

Table 6.14-2 identifies estimated construction waste streams in terms of hazardous or nonhazardous classifications pursuant to 22 CCR Division 4.5, and composition, estimated annual generation rate, estimated frequency of generation, total amount generated, and expected onsite and offsite management methods. These wastes will be similar to those generated by industrial construction projects in general. Management of construction wastes in accordance with LORS will be required of each contractor through contract provisions. There will also be contract provisions to implement waste minimization and to promote recycling. Nonhazardous solid wastes generated during construction will be collected in roll-off dumpsters designed for this purpose. Separation of recyclable wastes will be accomplished either offsite through contract with the commercial waste hauler's waste management contract provisions, or onsite by providing separate dumpsters for recyclable materials such as scrap wood, cardboard and plastic. Onsite management practices include properly containerizing waste and recyclable materials to prevent spreading, windblowing or attraction of wildlife, and housekeeping of work areas. Pickup of nonhazardous waste and recyclable materials from the Site will occur frequently enough to prevent unnecessary accumulation of waste onsite, typically on a weekly basis. As shown in Table 6.14-2, for the duration of Project construction, an estimated total of 600 tons of waste is expected to be disposed of at Class III landfills. Based on an average density of 0.5 tons per cubic yard in-place at a landfill, this represents approximately 1,200 cubic yards, which is negligible compared to the approximately 46 million cubic yards of available disposal capacity of the Class III landfills identified in Table 6.14-1. Therefore, it will not have a significant impact on existing waste disposal capacities.

During Project construction, some nonhazardous liquid wastes will be generated, mainly wastewater from sanitary waste and pipe hydrotesting. Construction-related sanitary wastes will be collected in portable self-contained chemical toilets. They will be pumped periodically and transported by licensed hauler to a sanitary wastewater treatment facility. Hydrotesting water will be generated during a one-time event prior to start-up. The water will be stored in portable tanks and tested, and evaporated in the storm water basin once testing confirms that the water is not impacted. If testing shows the water is not suitable for evaporation in the storm water basin, it will be hauled offsite to a licensed water treatment facility.

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TABLE 6.14-2
ESTIMATED CONSTRUCTION WASTE STREAMS
AND MANAGEMENT

PHYSICAL STATE	ORIGIN	COMPOSITION	FREQUENCY OF GENERATION	ANNUAL AMOUNT	TOTAL AMOUNT	WASTE MANAGEMENT METHOD	
						Onsite	Offsite
Nonhazardous Wastes							
Solid	Construction waste and domestic waste from construction workers	Plastic, paper, trash, construction debris, household-type waste (nonrecyclable)	Ongoing (5 tons/week)	250 tons	600 tons	Store in containers for routine hauling	Dispose at Class III landfill
		Scrap wood, steel, glass, plastic, paper, construction debris (Recyclable)	Ongoing (15 tons/week)	750 tons	1,700 tons	Store in containers for routine hauling	Recycle
Liquid	Portable chemical toilets	Sanitary waste	Ongoing (300 gal/day)	75,000 gallons	170,000 gallons	Weekly pumping to tanker truck by licensed contractors	Discharge by contractor to sanitary sewer and municipal sewage treatment plant
	Hydrotesting	Water	One-time: Prior to initial startup	Not Applicable	300,000 gallons	Sample. If suitable chemistry, route to retention basin.	If chemistry is not suitable for onsite evaporation/infiltration, then haul offsite to a licensed water treatment facility.
	Precommissioning HRSG Cleaning	Water wash solution containing 1.0% to 1.28% detergent, water flush, and water rinse.	One-time: Prior to initial startup	Not Applicable	1,250 tons ⁽³⁾	Temporary storage in tanks. Sample.	Haul to licensed nonhazardous wastewater treatment facility.
Hazardous or Universal Wastes							
Solids	Steel Working	Spent welding materials	Ongoing (200 lbs/month)	2,400 lbs	5,400 lbs	Containerize and store < 90 days	Class I landfill disposal

PHYSICAL STATE	ORIGIN	COMPOSITION	FREQUENCY OF GENERATION	ANNUAL AMOUNT	TOTAL AMOUNT	WASTE MANAGEMENT METHOD	
						Onsite	Offsite
Solids (Cont'd)	Mechanical Equipment	Waste oil filters	Periodic (200 lbs/month)	2,400 lbs	5,400 lbs	Containerize and store < 90 days	Recycle
	Construction and Facility Lighting	Fluorescent, mercury vapor lamps	Infrequent	30 items	70 items	Containerize and store for <1 year ⁽²⁾	Recycle
	General Construction Activities	Oily rags	Periodic (150 lbs/month)	1,800 lbs	4,000 lbs	Containerize and store < 90 days	Recycle
	General Construction Activities	Oil absorbent	Periodic (100 lbs month)	1,200 lbs	2,700 lbs	Containerize and store < 90 days	Class I landfill
	Materials Use	Empty hazardous material containers	Periodic (200 lbs/week)	2,400 lbs	5,400 lbs	Containerize and store < 90 days	Class I landfill
	Construction Equipment	Spent lead acid/alkaline heavy duty batteries	Infrequent	0.5 ton	1 ton	Properly store to prevent leakage and protect from weather for <1 year ⁽²⁾	Recycle
Liquids	Turbine Lube Oil Flushes	Lube oil	Periodic	Not Applicable	1,100 gallons	Containerize and store for <90 days	Recycle
	Mechanical Equipment	Used oil	Periodic	250 gallons	500 gallons	Containerize and store for <90 days	Recycle
	General Construction Activities	Solvents, paint, adhesives	Periodic	2,000 gallons	4,500 gallons	Store for <90 days for offsite transport and recycling or transport	Recycle or dispose at TSDF

(1) EDTA = ethylenediaminetetraacetic acid.

(2) Universal waste type can be stored for up to 1 year by a small quantity handler.

(3) Includes 60,000 gallons of detergent solution, 30,000 gallons for water flush, and 60,000 gallons for water rinse per HRSG. This assumes only one rinse cycle. On rare occasions, a second rinse is required.

Hazardous and Potentially Hazardous Construction Waste

As used in this AFC, the term hazardous waste includes universal wastes and recyclable materials managed in accordance with 22 CCR Division 4.5 requirements. The types of hazardous wastes generated by Project construction are summarized in Table 6.14-2. As part of its contract specifications for construction contractors, Federal Power will require that hazardous waste be handled and disposed in accordance with applicable LORS including, but not limited to, 22 CCR Division 4.5 requirements for waste segregation, storage, handling, labeling, shipping, recycling and recordkeeping. Most of the hazardous wastes that will be generated by construction will be recyclable materials such as used oil, oil filters, spent lamps, and used batteries. As shown in Table 6.14-2, the total amount of construction wastes to be disposed of at Class I landfills is 13,500 pounds (6.75 tons). This amount is negligible compared to the more than 15 million cubic yards of available disposal capacity at the Class I landfills identified in Section 6.14.1.2. Therefore, it will not have a significant impact on existing waste disposal capacities.

Waste Hauling

Truck trips generated for waste hauling during construction are included in the construction traffic analysis provided in Section 6.11 - Traffic and Transportation.

6.14.2.2 Operational Waste

Operation of the Project will generate wastes. A summary of estimated operations waste streams and estimated quantities is provided in Table 6.14-3. Project waste management will occur in accordance with applicable LORS and good housekeeping practices will be implemented for all waste streams. Project operations wastes will be collected, stored and hauled from the Site following requirements of the City of Avenal Sanitation and Health Ordinance, 22 CCR Division 4.5 requirements for hazardous waste, and other applicable LORS.

Nonhazardous Operational Waste

Table 6.14-3 identifies estimated operations waste streams in terms of hazardous or nonhazardous classifications pursuant to 22 CCR Division 4.5, and composition, estimated annual generation rate, estimated frequency of generation, total amount generated, and expected onsite and offsite management methods.

The Project will contract with a licensed commercial waste hauling service for weekly collection of paper, plastic, trash, garbage and other office and administrative wastes that are similar to

house-hold type waste. Federal Power will encourage waste minimization through recycling and other means, and recyclable materials will be stored in separate containers from non-recyclable trash and garbage.

The Project will generate three primary non-hazardous waste streams that will be disposed of at a Class III landfill:

- Non-recyclable office-type waste such as trash, garbage and other household-type waste that will be collected weekly by a commercial hauling service.
- Combustion turbine air filters that will be generated in “batches” generally once every three years. Air filter change-out will be a scheduled event and a roll-off dumpster will be ordered from a commercial waste hauler and provided onsite before the event occurs. The roll-off will be scheduled for pickup promptly upon completion of work.
- Salt cake from the ZLDF crystallizer will be generated on an ongoing basis and will be collected in a bin designed for this purpose. The salt cake will be hauled offsite on a routine basis (e.g., monthly or quarterly). The salt cake will be non-hazardous and will be analyzed at the onset of operations to document its nonhazardous classification.

As shown in Table 6.14-3, the total amount of operations wastes expected to be disposed of at Class III landfills is approximately 300 tons. Based on an average density of 0.5 tons per cubic yard in-place at a landfill, this represents approximately 600 cubic yards, which is negligible compared to the approximately 46 million cubic yards of available disposal capacity of the Class III landfills identified in Table 6.14-1. Therefore, it will not have a significant impact on existing waste disposal capacities.

A water collection system will provided for the collection, treatment and recycle of wastewater within the plant. Process blow down, plant drains and clarified water from the oil/water separator will be recycled using the ZLDF. Sanitary waste will be directed to an onsite septic tank and leach field system.

Hazardous Operational Waste

During the normal course of Project operation and maintenance, hazardous materials will be used and those materials that are not consumed will be hazardous waste that will need to be properly managed and treated or disposed of in accordance with 22 CCR Division 4.5 and other relevant LORS. Table 6.14-3 describes the primary hazardous wastes that will be generated by facility operations.

The Project will have the following plans related to management of hazardous wastes:

- A combined Business Plan/Contingency Plan to satisfy requirements of 19 CCR, Division 2, Chapter 4, Article 4 and 22 CCR Division 4.5. This combined Business Plan/Contingency Plan will address required aspects of all hazardous wastes routinely generated at the Site.
- A training plan addressing training requirements for hazardous waste pursuant to 22 CCR 265.16 for hazardous waste.
- Spill Prevention Control and Countermeasure Plan pursuant to 40 CFR 112 that will address petroleum-based hazardous wastes.
- A Stormwater Pollution Prevention Plan that will include a Best Management Practices Plan for preventing storm water from being impacted by waste materials.

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**TABLE 6.14-3
OPERATIONAL WASTE STREAMS**

PHYSICAL STATE	ORIGIN	COMPOSITION	FREQUENCY OF GENERATION	ANNUAL AMOUNT ⁽¹⁾	TOTAL AMOUNT ⁽²⁾	WASTE MANAGEMENT METHOD	
						Onsite	Offsite
Nonhazardous Waste							
Solid	Office Waste	Paper , glass, plastic, aluminum cans, household-type waste (recyclable)	Ongoing	2.5 tons	75 tons	Store in containers for routine hauling	Recycle
	Office Waste	Trash, garbage, household-type waste (non-recyclable)	Ongoing	2.5 tons	75 tons	Store in containers for routine hauling	Class III landfill
	Combustion Turbine Air Inlets	Used air filters	Every 3 years [2,100 filters (2 tons) per event]	Not Applicable	20 tons	Collect in roll-off dumpster for offsite transport	Class III landfill
	ZLD Crystallizer	Salt cake	Ongoing	7 tons ⁽³⁾	210 tons	Collect in roll-off dumpster for offsite transport	Class III landfill
	Air emissions control equipment	Spent CO oxidation catalyst (Platinum group)	Every 3 years (4.5 tons per event)	Not Applicable	45 tons	Transport offsite upon removal from equipment	Return to vendor
Liquid	Sanitary facilities	Sanitary wastewater plus potable water drains	Ongoing (0.9 gpm)	470,000 gal	14 million gal	Septic tank and leach field	None
Hazardous Waste							
Solids	Routine operations and maintenance	Non-RCRA and RCRA hazardous waste solids and recyclable materials including batteries, petroleum wastes, oily rags	Periodic	5 tons	150 tons	Store in containers for <180 days	Recycle

PHYSICAL STATE	ORIGIN	COMPOSITION	FREQUENCY OF GENERATION	ANNUAL AMOUNT ⁽¹⁾	TOTAL AMOUNT ⁽²⁾	WASTE MANAGEMENT METHOD	
						Onsite	Offsite
Solids (Cont'd)	Routine operations and maintenance	Non-RCRA and RCRA hazardous waste solids including waste paint and empty containers	Periodic	5 tons	150 tons	Store in containers for <180 days	Class I landfill
	Site lighting, computer equipment, and battery powered equipment	Universal waste including, fluorescent, mercury vapor lamps, cathode ray tubes and other electronic equipment, and small batteries	Periodic	1 ton	30 tons	Store in containers for <1 year	Recycle
	Air emissions control equipment	Spent SCR catalyst (heavy metals)	Every 6 years (50 tons per event)	Not Applicable	250 tons	Transport offsite upon removal from equipment	Return to vendor
	HRSO Salt Removal	Inorganic salt solids (primarily ammonium bisulfite)	Approximately every 5 years	Approximately 3 tons	18 tons	Collect in 55 gallon drums ⁽⁴⁾	Class I landfill
Liquids	Equipment maintenance	Used crankcase oil and hydraulic oil	Infrequent (once per year average)	300 gallons	9,000 gallons	Store in containers for <180 days	Recycle
	Oil/water separator	Water with hydrocarbons (Waste oil reclaimed from oily water separator system)	Annual	800 gallons	24,000 gal	Remove from o/w separator with vacuum truck and haul offsite, or store in containers for <180 days	Recycle
	Equipment wash	CTG Washwater	2 consecutive offline washes twice per year (2,000 gal/wash)	16,000 gal ⁽⁵⁾	480,000 gal	Sample. Store hazardous portion <90 days	If hazardous dispose at TSDF

(1) Quantity will vary from year to year.

(2) Estimated total for 30 years of operation.

(3) Based average ambient conditions and 80% capacity factor for 8,000 operating hours per year including 2,000 hours with duct firing.

(4) Each 55 gallon drum holds approximately 300 lbs.

(5) Based on approximately 8,000 gallons of wastewater per year per gas turbine.

These management plans will include detailed measures to prevent and respond to discharges, spills, leaks or other incidents involving hazardous materials. These measures will include training of employees who handle hazardous materials, hazardous and nonhazardous wastes, and processes that generate these wastes. Also included in these plans will be periodic inspections and passive containment designs to capture accidental spills before they can enter the environment.

Hazardous wastes generated by operations will be stored in designated locations at the plant. These wastes will be stored for less than 180 days prior to offsite disposal, in accordance provisions of 22 CCR 262.34. All management of hazardous waste including, but not limited to, segregation, storage, handling, labeling, shipping, inspections, training and recordkeeping will be in accordance with CCR Title 22 requirements.

Multiple hazardous waste disposal sites have been identified that can accept the specific hazardous waste streams that will be produced. As shown in Table 6.14-3, the total amount of operational wastes estimated to be disposed of at Class I landfills is 168 tons. This amount is negligible compared to the more than 15 million cubic yards of available disposal capacity at the Class I landfills identified in Section 6.14.1.2. Therefore, it will not have a significant impact on existing waste disposal capacities.

Waste Hauling

Truck trips generated for waste hauling during operations are included in the construction traffic analysis provided in Section 6.11 - Traffic and Transportation.

Waste Minimization

Federal Power will work to reduce the volume of waste generated by power plant operations.

Applicable waste minimization methods that will be used include:

- Administrative controls (e.g., training, inventory control, employee incentive programs, corporate/management commitment).
- Recycling of wastes wherever practical.
- Preferential use of nonhazardous products over hazardous products wherever practical.

The effectiveness of source reduction approaches employed for Project waste streams will be periodically evaluated to refine and improve the overall source reduction program.

6.14.2.3 Cumulative Impacts

Other projects with the potential for cumulative impacts are described in Section 6.1.4. The Panoche Energy Center and the Starwood Power-Midway Peaking Project are electric generation projects and, if constructed, will generate many similar waste streams as the Avenal Energy Project, in quantities that are also small compared to the capacity of existing waste management facilities. In addition, these facilities are located far enough away to have additional landfill options.

The Great Valley Ethanol Project, if constructed, will not generate large quantities of waste. The project will implement waste minimization, recycling and other measures to comply with waste management regulations. The existing landfill in Kettleman City is expected to be adequate for disposal of wastes from the Great Valley Ethanol Project (City of Hanford, 2007).

Considering the negligible impact that the Avenal Energy project will have on existing landfill capacity, and expected similar negligible impacts of other projects identified in Section 6.1.4, current available landfill capacities are adequate. Therefore, the cumulative impact will be less than significant.

6.14.2.4 Project Design Features

The following are design and/or operational features that have been incorporated into the Project to avoid potentially significant environmental impacts:

- Construction
 - Hazardous wastes generated during Project construction will be managed by the construction contractors according to applicable regulatory requirements (e.g., Resource Conservation and Recovery Act [RCRA] regulations and the California Hazardous Waste Control Act) and construction contract specification provisions designed to assure such compliance. This management of hazardous waste may, as necessary, include storage in designated satellite accumulation areas maintained by the construction contractor.
 - Nonhazardous waste generated during Project construction also will be the responsibility of the construction contractors, as required by contract provisions. Management of these wastes will include waste minimization, proper storage and handling, recycling and general good housekeeping practices.
 - Construction waste will be picked up and disposed frequently to avoid unnecessary accumulation of waste onsite.

- Operation and Maintenance
 - The Project will minimize generation of nonhazardous liquid waste through use of a ZLDF.
 - The Project will implement waste minimization programs including recycling and other practical measures.

6.14.3 MITIGATION MEASURES

Based on the above analysis of impacts and the design and operational features incorporated into the Project, no mitigation measures will be required.

6.14.4 SIGNIFICANT UNAVOIDABLE ADVERSE IMPACTS

No significant unavoidable adverse impacts are anticipated due to Project construction, operation or maintenance.

6.14.5 LAWS, ORDINANCES, REGULATIONS AND STANDARDS (LORS)

A summary of applicable LORS pertaining to waste management practices is provided in Table 6.14-4. The Project will be constructed and operated in compliance with all LORS applicable to treatment, storage and disposal of hazardous and nonhazardous wastes. Table 6.14-4 summarizes how the Project will comply with regulations applicable to waste management. A septic system permit will be required for sanitary waste management. The septic system permit will be issued by the City of Avenal. Review of design documents by the City of Avenal is included in the permitting schedule in Section 3.0. Federal Power will obtain a hazardous waste generator number in compliance with RCRA. Agencies with enforcement authority over the Project are listed in Table 6.14-5 along with contact information.

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TABLE 6.14-4

WASTE MANAGEMENT LORS AND COMPLIANCE

JURIS-DICTION	LORS/AUTHORITY	ADMINISTERING AGENCY ⁽¹⁾	REQUIREMENTS/ COMPLIANCE	APPROACH TO COMPLIANCE	AFC SECTION
Federal	RCRA; 42 USC §6901 et seq.; 40 CFR Parts 260-272.	EPA Region 9; Cal-EPA, Department of Toxic Substances Control (DTSC).	Sets forth minimum federal requirements for management of hazardous wastes.	The Project will manage hazardous waste in accordance with 22 CCR Division 4.5, which is at least as stringent or more stringent than federal regulations.	Sections 6.14.2.1, 6.14.2.2 Pages 6.14-6 to 6.14-15
	CERCLA ("Superfund"), 42 USC §9601 et seq.; 40 CFR Part 302, as amended by SARA; 40 CFR Part 302, (SARA Title III); 42 USC §11001 et seq.; 40 CFR Parts 350, 355, 370.	EPA Region 9; Kings County Environmental Health Department.	CERCLA - Release notification requirements; SARA Title III - reporting requirements for storage, handling, or production of significant quantities of hazardous or acutely hazardous waste.	The Project will keep records and prepare reports on reportable releases and emissions to land, water, and the atmosphere. The Project will submit a Hazardous Materials Business Plan under 19 CCR Division 2, Chapter 4, Article 4 that will fulfill Sara Title III requirements.	Sections 6.14.2.1, 6.14.2.2 Pages 6.14-6 to 6.14-15
	49 CFR Parts 172, 173, 179.	Department of Transportation; California Highway Patrol.	Meet standards for labels, placards, and markings on hazardous waste shipments.	Hazardous waste containers and shipping vehicles will be managed in accordance with 22 CCR Division 4.5 requirements, which includes labeling according to these DOT regulations.	Sections 6.14.2.1, 6.14.2.2 Pages 6.14-6 to 6.14-15
State	California Porter-Cologne Water Quality Control Act; California Water Code §13260-13269; 23 CCR §2510 Article 9 et seq.	San Joaquin RWQCB.	Waste discharge requirements for solid waste discharges to land.	The Project will manage wastes with measures designed, in part, to assure disposal only at properly licensed facilities.	Sections 6.14.2.1, 6.14.2.2 Pages 6.14-6 to 6.14-15
	14 CCR §17200 et seq.	California Integrated Waste Management Board.	Sets forth minimum standards for solid waste handling and disposal.	The Project will manage wastes with measures designed, in part, to assure disposal only at properly licensed facilities.	Section 6.14.2.2 Pages 6.14-10 to 6.14-15

JURIS-DICTION	LORS/AUTHORITY	ADMINISTERING AGENCY ⁽¹⁾	REQUIREMENTS/ COMPLIANCE	APPROACH TO COMPLIANCE	AFC SECTION
	Hazardous Waste Control Act of 1972, as amended; California Health & Safety Code §25100 et seq.; 22 CCR 66001 et seq.	Cal EPA (DTSC); Kings County Environmental Health Department	Sets forth minimum State standards for management of hazardous wastes.	The Project will manage hazardous waste in accordance with these requirements.	Sections 6.14.2.1, 6.14.2.2 Pages 6.14-6 to 6.14-15
Local	City of Avenal Zoning Ordinance. 9.79.03 I	Avenal Public Works Department	Allowing the disposal of any liquid or solid waste in a manner that will constitute a health or fire hazard, or will degrade the appearance of the property is prohibited.	The Project will manage wastes with measures designed, in part, to assure disposal only at properly licensed facilities.	Sections 6.14.2.1, 6.14.2.2 Pages 6.14-6 to 6.14-15
	City of Avenal Sanitation and Health Ordinance Title 6, Chapter 2	City of Avenal	Sets forth minimum standards for management of non-hazardous waste.	The Project will manage wastes with measures designed, in part to assure compliance with these requirements.	Sections 6.14.2.1, 6.14.2.2 Pages 6.14-6 to 6.14-15
Industry	Uniform Plumbing Code	City of Avenal	Design for septic tank and leach field.	The sanitary system plumbing, septic tank and leach field will be designed and constructed in accordance with this code.	Appendix 2-1

(1) NOTE: Pursuant to CCR Title 20, Appendix B(i)(1)(B). Each agency with jurisdiction to issue applicable permits 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.

TABLE 6.14-5

**ADMINISTRATIVE AGENCY CONTACTS
FOR WASTE MANAGEMENT**

AGENCY AND CONTACTS	AUTHORITY
Kings County Department of Public Health Division of Environmental Health Services 330 Campus Drive Hanford, CA 93230 (559) 584-1411, Ext. 2625 (559) 584-6040 Fax Keith Winkler Director	Hazardous waste management Certified Unified Program Agency (CUPA).
State of California California Environmental Protection Agency Department of Toxic Substances Control 1001 I Street Sacramento, CA 95812-0806 (916) 322-3501 Watson Gin Deputy Director	State agency responsible for hazardous waste compliance.

6.14.6 REFERENCES

Buoni, Maryanna, Customer Service, Clean Harbors, Inc. (Buttonwillow and Westmoreland), Personal communication. October 2007.

City of Hanford. Draft Environmental Impact Report for the Great Valley Ethanol Project, SCH# 2007051088. September, 2007.

Miller, M. Coalinga Disposal Site (559) 262-4259. Personal Communication. September 2006.

Henry, R. Kettleman Hills Facility (559) 386-9711. Personal Communication. October 2007.

U.S. Environmental Protection Agency (USEPA). *Compilation of Air Pollutant Emission Factors, Volume I: Stationary Point and Area Sources*, Fourth Edition, PB 86-124906, Part 2 of 2, Appendix A - Miscellaneous Data. 1985.

Vossmer, P. Avenal Landfill (559) 386-5844. Personal Communication. October 2007.