

5.14 WASTE MANAGEMENT

This section presents a discussion of potential impacts from non-hazardous and hazardous waste material generation associated with the PEF Expansion project. The environmental consequences of developing the PEF Expansion are also discussed, along with the Applicant's proposal to apply the applicable Conditions of Certification for the existing PEF to the PEF Expansion.

The PEF Expansion consists of a 160 MW natural gas-fired, simple cycle. The additional Expansion area will comprise of approximately two acres, located entirely within the existing PEF 31-acre site boundary. The PEF expansion requires no modification to the existing PEF offsite linear facilities (e.g., electric transmission line, fuel gas supply line, or water supply line). The PEF Expansion will use the existing PEF administration and control, warehouse and shop, and water treatment buildings. Site access and onsite roadways are common with the existing PEF. Figure 3.1-1 of this application depicts the new facilities required for the PEF Expansion project within the footprint of the existing PEF.

5.14.1 Affected Environment

The capacity of available disposal facilities for solid and liquid non-hazardous and hazardous wastes that will be generated by the PEF Expansion project remains essentially unchanged, except as noted below, from 99-AFC-7. Section 5.14 of 99-AFC-7 is included for reference as part of Attachment M of this application. A description of the wastes generated by the construction and operation of the facility is presented in Sections 3.4.9 and 3.4.10, summarized in Tables 3.4.9-1 and 3.4.9-2 of this application, and discussed further in the following subsections.

5.14.1.1 Liquid Waste

Process wastewater will be treated in an onsite zero liquid discharge (ZLD) system. This system is described in Section 3.4.8 of this application.

5.14.1.2 Hazardous Waste Disposal

There are three major Class I landfills in California. The location and capacity of each of these landfills is described in Section 5.14 of 99-AFC-7, included for reference as Attachment M to this application.

URS Greiner Woodward Clyde conducted a Phase I Environmental Site Assessment (ESA) for the Pastoria Power Project in April 1999, using methods prescribed by the American

Society for Testing and Materials (ASTM). The Phase I ESA was provided to the CEC as part of the 99-AFC-7 process. URS Corporation prepared a new Phase I ESA for the PEF in February 2005. A copy of this February 2005 Phase I ESA will be submitted to the CEC under separate cover. The Phase I ESA indicated that contaminated soil is not expected to be present on the existing PEF project site. Since the two-acre PEF Expansion area is within the 31-acre existing PEF site, no new contaminated soil is expected to be present on the PEF site. The 1999 Phase I ESA identified petroleum hydrocarbon-impacted soil associated with oil-field operations located approximately one mile north of the power plant site may be present in surface and subsurface soil located adjacent to the fuel gas supply pipeline, however, the fuel gas supply pipeline was re-routed by CEC license amendment in 2004 and these areas were avoided.

5.14.2 Environmental Consequences

The analysis of impacts related to waste management from the PEF Expansion project is consistent with the analysis contained in Section 5.14 of 99-AFC-7 included for reference as Attachment M.

The following sections describe the wastes that are expected to be generated during the construction and operation of the PEF Expansion. Section 5.14 of 99-AFC-7 application includes a discussion of waste disposal that is applicable to the PEF Expansion.

5.14.2.1 Non-Hazardous Solid Waste

5.14.2.1.1 Construction. The types of wastes generated during construction include debris and other materials requiring removal during site grading and excavation including excess concrete, lumber, scrap metal, insulation, packaging, and empty non-hazardous containers (see Table 3.4.9-1 of this application).

5.14.2.1.2 Operation. Non-hazardous solid wastes generated during operation of the generating plant will include routine maintenance solid waste, office waste, CTG used air filters, and oily rags (see Table 3.4.9-2 of this application).

It is anticipated that disposal of solid waste from the PEF Expansion, as well as the existing PEF, will represent only a nominal (less than 0.01 percent) increase relative to current disposal volume at the Bena Sanitary Landfill, and a negligible increase as compared to the combined current disposal volumes at the landfills in the vicinity of the generating plant site. (Table 5.14-1 of this application updates the landfill capacities from 99-AFC-7.) These increases will not significantly alter available landfill capacity and can be considered insignificant.

**TABLE 5.14-1
NON-HAZARDOUS SOLID WASTE DISPOSAL SITES**

| Disposal Site Name | Location in Kern County | Current Annual Usage¹ (tons) | Remaining Capacity² (tons) | Anticipated Year of Closure⁽²⁾ | Approximate Distance from Site (miles) |
|---------------------------|---|--|--|--|---|
| Arvin | 1 mile south of Bear Mountain Boulevard on Wheeler Ridge Road | N/A | N/A | Closed in 2001 | 25 |
| Bena (Phase IIA) | 1 mile east on Bena Road off Tower Line Road at Highway 58 | 540,000 | 31,180,000 | 2033 | 45 |
| Taft | 1 mile north of Highway 119 on Elk Hills Road | 32,850 | 3,778,000 | 2120 | 50 |
| Shafter-Wasco | 1 mile north of Lerdo Highway on Scofield Avenue | 140,000 | 4,118,000 | 2027 | 60 |
| Lost Hills | 1 mile north of Highway 46 on Holloway Road | N/A | N/A | Closed until 2022 | 70 |
| Total | | 712,900 | 34,960,000* | -- | -- |

¹ Source: 2004 Capacity Study (dated January 1, 2004) provided by Brian Klatt, Kern County Waste Management Department.

² Source: CEC Staff Supplemental Testimony, Pastoria Energy Facility (99-AFC-7), dated September 7, 2000, referencing information provided by Brian Klatt of Kern County Waste Management Department on March 2005.

* Total remaining capacity excluding Arvin and Lost Hills.

5.14.2.2 Wastewater

5.14.2.2.1 Construction. Wastewater generated during construction is not expected to change from the existing PEF (refer to Section 5.14 of 99-AFC-7, included for reference as Attachment M of this application).

5.14.2.2.2 Operation. The wastewater collection system remains unchanged from the existing PEF.

The anticipated process wastewater characteristics are shown in Tables 3.4.8-4 and 3.4.8-5 of this application.

Process wastewater will be treated in an onsite zero discharge system. This will reduce the plant demand for raw water supply. The zero discharge system will generate approximately two to four cubic yards per day of non-hazardous salt cake, which will be disposed of at an offsite Class III Landfill if classified as non-hazardous, or at an offsite Class I or II facility if classified as a “designated waste.” The quantity of salt cake that will be generated has not increased from the quantity estimated in 99-AFC-7.

5.14.2.3 Hazardous Wastes

5.14.2.3.1 Generating Plant Site Preparation. Hazardous wastes expected to be generated during site preparation for the PEF Expansion are the same as these wastes expected for the existing PEF.

5.14.2.3.2 Construction. Small quantities of hazardous wastes and used oil will likely be generated over the course of construction of the PEF Expansion. These may include waste paint, spent solvents, spent welding materials, and spent batteries (see Table 3.4.9-1 of this application). A discussion of construction-related hazardous materials generation for the existing PEF is included in Section 5.14 of 99-AFC-7, included for reference as Attachment M of this application.

5.14.2.3.3 Operation. A description of the hazardous wastes to be generated during operations is presented in Section 3.4.9, summarized in Table 3.4.9-2 of this application, and described in more detail in Section 5.14 of 99-AFC-7, included for reference in Attachment M of this application.

The hazardous waste quantities generated by the PEF Expansion, and the existing PEF combined, will be minimal and the facility will likely be classified as a Small Quantity Generator. The used oil expected to be generated by the existing PEF and the PEF Expansion will be transported by a licensed transporter to an existing oil petroleum recycling facility in

California, which has an estimated capacity of 187,263 tons per year (California Department of Toxic Substances Control [DTSC], 1994). Hazardous waste capacity assurance documents for California have not been prepared since 1993 because DTSC and EPA believe that the hazardous waste treatment capacity in the State is more than sufficient for hazardous wastes generated within the state (Radimsky, 1998). Hazardous waste generated during operation of the generating plant will not have significant impacts upon available hazardous waste treatment and disposal capacity.

5.14.2.4 Cumulative Impacts

Based on information regarding waste disposal and recycling options, and capacity in California and Kern County included in Section 5.14 of 99-AFC-7, included for reference as Attachment M, the additional non-hazardous solid waste, wastewater, and hazardous waste expected to be generated by the PEF Expansion and the existing PEF will not significantly impact available landfill, hazardous waste treatment, or wastewater discharge capacity.

5.14.3 Mitigation Measures

Solid wastes generated from the PEF Expansion will be minimal and will not require further mitigation beyond that which is described in Section 5.14 of 99-AFC-7 (Attachment M of this application). The Applicant proposes to apply the applicable Conditions of Certification for the existing PEF to the PEF Expansion. These conditions are included for reference in Section 9.0 of this application. With the implementation of these Conditions of Certification, no significant unavoidable adverse impacts from waste management are anticipated to occur from construction or operation of the PEF Expansion.

5.14.4 LORS Compliance

The PEF Expansion will comply with all applicable LORS related to waste management. A complete list of the applicable LORS for waste management is included in Section 7.0 LORS of this application.

5.14.5 References

Only updated references are provided in this section. Refer to Attachment M of this application for the list of references from 99-AFC-7.

Kern County Waste Management Department. 2004 Capacity Study (dated January 1, 2004)

Klatt, B. 2005. Kern County Department of Waste Management. Personal communication with D. Handman (URS).