

## 5.13 WASTE MANAGEMENT

This section addresses the potential impacts of non-hazardous and hazardous waste generated by the Palomar Energy Project.

### 5.13.1 Affected Environment

The Resource Conservation and Recovery Act (42 U.S.C §6901 et seq.) (RCRA), which was signed into law in October 1976, sets forth standards for the management of solid (Subtitle D) and hazardous (Subtitle C) wastes. RCRA allows the EPA to delegate its administration to the various states if and when a state program is shown to be at least equivalent to the federal requirements. California received RCRA authorization on August 1, 1992. California Code of Regulations (CCR) Title 22, §66260 et seq. contains the RCRA-equivalent regulations governing hazardous waste management in California. In addition, the California Health and Safety Code, §25100 et seq. identifies California-specific requirements for the identification and management of non-RCRA hazardous wastes. CCR Title 14, Section 17020 et seq., sets forth the minimum standards for the management of solid wastes, as well as enforcement and administration provisions for solid waste storage and disposal. Wastes discharged to land also are regulated by the Porter-Cologne Water Quality Control Act.

The California Environmental Protection Agency (CalEPA) is responsible for classifying and regulating wastes in California. The Department of Toxic Substances Control (DTSC), one of the departments within CalEPA, regulates management of hazardous wastes. The Integrated Waste Management Board (IWMB) and State Water Resources Control Board (SWRCB), also member agencies of CalEPA, share responsibilities for regulating non-hazardous wastes. In addition, the County of San Diego Department of Environmental Health is the Certified Unified Permitting Authority (CUPA) and has enforcement responsibility for the solid waste landfills located within San Diego County.

A solid waste is a hazardous waste if it has not been exempted from regulation as a hazardous waste and exhibits any of the four characteristics of a hazardous waste: ignitability, corrosivity, reactivity, or toxicity; or it has been specifically listed in the regulations. All other wastes are solid (non-hazardous) wastes. Most hazardous wastes must be disposed of only at a Class I waste management facility. These facilities are permitted by the, Department of Toxic Substances Control (DTSC) and the State Water Resources Control Board (SWRCB). 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.

Non-hazardous wastes may be disposed of at Class II (industrial) or Class III (municipal) waste disposal facilities. A special category of non-hazardous wastes are “designated wastes,” which are either: 1) a hazardous waste for which the generator has been granted a variance by the DTSC; or 2) a non-hazardous waste which contains pollutants that could be released into the environment in concentrations that could cause degradation of water quality. Designated

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wastes, which are regulated by the SWRCB, may only be disposed of at Class I or Class II waste disposal facilities.

The following sections identify and discuss the available capacity of nearby disposal facilities for non-hazardous and hazardous wastes to be generated by the Palomar Energy Project. Specific wastes generated by the construction and operation of the Palomar facility are presented in Section 2.4.7 and discussed further in the following subsections.

#### 5.13.1.1 Non-Hazardous Solid Waste Disposal Sites (Class III)

Table 5.13-1 lists existing non-hazardous solid waste disposal (Class III) facilities within San Diego County that will accept non-hazardous wastes generated by the project. The six Class III landfills listed in Table 5.13-1 accept non-hazardous wastes and inert solid wastes, including construction/demolition waste. Liquid wastes are not accepted by any of the six landfills listed. No significant enforcement actions or violations against these facilities have been identified (Mohr, 2001 and Prince, 2001).

**Table 5.13-1 Non-Hazardous Solid Waste Disposal Sites (Class III)**

Landfill Disposal Site Name	Location	Peak Throughput (tons/day)	Remaining Capacity (cubic yards)	Anticipated Year of Closure	Approximate Distance from Project Site (miles)
Borrego Landfill	2449 Palm Canyon Road, Borrego Springs	50	426,000	2013	50
Otay Sanitary Landfill	1700 Maxwell Road, Chula Vista	5,000	44,000,000	2027	40
Ramona Landfill	20630 Pamo Road, Ramona	295	690,000	2006	15
Sycamore Sanitary Landfill	8514 Mast Blvd., San Diego	3,300	23,500,000	2017	20
West Miramar Sanitary Landfill	5180 Convoy St., San Diego	8,000	23,000,000	2011/2012	20
<b>TOTAL</b>		<b>16,645</b>	<b>91,616,000</b>		

Source: IWMB, 2001

In addition to the existing Class III landfills in San Diego County, a new municipal solid waste landfill is in the process of being permitted. The proposed Gregory Canyon Landfill,

which will accept non-hazardous solid wastes and inert wastes, will be located in northern San Diego County, approximately two miles southwest of the community of Pala and approximately 25 miles from the Palomar site. The landfill has been designed to accommodate one million tons of solid waste annually, with an estimated site life of approximately 30 years (San Diego County, 2000).

### 5.13.1.2 Hazardous Waste Disposal Sites (Class I)

There are three major active hazardous waste (Class I) landfills in California. These three landfills are:

- Safety-Kleen Buttonwillow Inc. (Kern County) located on Lokern Road between State Highways 33 and 58 is a treatment, storage and disposal facility that accepts Class I solid wastes and Class II solid and liquid wastes. The permitted capacity of this landfill is 13 million cubic yards with an estimated 40 years of operational life remaining (Hicks, 2001). The EPA Identification Number for this facility is CAD980675276.
- Chemical Waste Management Landfill located in Kettleman Hills (Kings County) on State Highway 41 approximately two miles west of Interstate 5. The Class I portion of this landfill has approximately 8.0 million cubic yards remaining capacity of a total permitted capacity of 10.7 million cubic yards. The remaining life of this landfill is approximately 30 years (DTSC, 2001). The EPA Identification Number for this facility is CAD000646117.
- Safety-Kleen Westmorland Inc. located at 5295 S. Garvey Road in Westmorland (Imperial County). The estimated remaining permitted capacity of this landfill is two million cubic yards with an operational life of 50 years (Yadvich, 1998). The EPA Identification Number for this facility is CAD000633164.

Hazardous waste can also be transported to permitted facilities outside of California. The nearest out-of-state hazardous waste landfills are U.S. Ecology, Inc. located in Beatty, Nevada and USPCI, Inc. located in Murray, Utah.

### 5.13.1.3 Phase I Environmental Site Assessment

A Phase I Environmental Site Assessment (Phase I ESA) has been conducted for the ERTC industrial park, including the Palomar site (see Appendix H). The Phase I ESA was conducted using methods prescribed by the American Society for Testing and Materials (ASTM). The report concluded that no “recognized environmental conditions” exist at the subject site. As the northern portion of the site was in agricultural use from approximately 1958 to 1995, it is likely that pesticides were applied in this portion of the Palomar site. However, based on conversations with a Licensed Agricultural Advisor with Van Waters and Rogers, pesticides applied to food crops over the past forty years are not persistent in the environment longer than a maximum of approximately six months (Young, 2001). Since the

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site has not been in agricultural production for approximately six years, it is extremely unlikely that pesticides would be present at the site by this time.

The primary earthmoving activities at the Palomar site will be accomplished as part of development of the planned industrial park within which the power plant site is located. This earthmoving work will be accomplished before Palomar project construction gets underway.

### 5.13.2 Environmental Impacts

The analysis of environmental impacts related to waste management issues from the Palomar project is based on the following criteria:

- Onsite disposal of non-hazardous liquid wastes must be in compliance with acceptable safe practices and not cause adverse impacts on local groundwater supplies.
- Offsite treatment or disposal of non-hazardous solid wastes must not significantly impact available landfill, recycling or treatment program capacities.
- Offsite disposal of hazardous wastes must not significantly impact available Class I landfill capacity.
- The facility must comply with all applicable laws regarding management of non-hazardous and hazardous wastes.

The following sections describe the types of waste that are expected to be generated during the construction and operation of the project, and how non-hazardous solid waste and hazardous wastes will be disposed.

#### 5.13.2.1 Non-Hazardous Solid Waste Disposal

##### Construction

Up to 600 tons of non-hazardous solid waste will be generated during construction of the Palomar project. The types of wastes generated during construction may include excess concrete, lumber, demolition debris, scrap metal, insulation, packaging and empty non-hazardous chemical containers. Paper, wood, glass, and plastic waste will be generated from packing materials. Non-recyclable wastes will be placed in a covered dumpster and removed on a regular basis by a certified waste handling contractor for disposal at a Class III landfill.

Waste metal generated during construction may include steel from welding/cutting operations, packing materials, and empty non-hazardous chemical containers. Aluminum wastes from packing materials and electrical wiring waste may also be generated. Metal wastes will be separated, where practical, for salvaging/recycling. Non-recyclable metal waste will be disposed of at a Class III landfill.

The Palomar Energy Project will be developed on a 20-acre site within the planned 186-acre ERTC industrial park. As stated earlier, rough grading of the Palomar site will be conducted as part of the overall industrial park project. Material that is removed as part of power plant

construction that is unsuitable for reuse on the site will be disposed of offsite in accordance with the applicable LORS.

### **Operations**

Non-hazardous solid wastes generated during Palomar project operations will include solid waste from routine maintenance, office waste and oily rags. Oily rags will be laundered on a regular basis by an offsite industrial cleaning service. Office paper, newsprint, aluminum cans, plastic, and glass containers and other non-hazardous solid waste material will be recycled to the extent practical. The remaining solid wastes will be removed on a regular basis by a permitted waste hauler for disposal at a Class III landfill.

Approximately 100 tons of solid waste will be generated from the operating facility on an annual basis. It is anticipated that disposal of solid waste from the project will represent only a minimal increase (a small fraction of one percent) relative to current disposal quantities at the local Class III landfills. Given the estimated remaining capacities of the six landfills in the vicinity of the Palomar site (see Table 5.13-1), the quantities of non-hazardous solid waste from the project will not adversely impact available Class III landfill capacity and can be considered insignificant.

Wastewater will be generated by the power generating activities. See Section 5.4 for a discussion of wastewater management at the Palomar site.

### **5.13.2.2 Hazardous Waste Disposal**

#### **Construction**

Small quantities of used oil and miscellaneous hazardous wastes likely will be generated over the course of construction. The miscellaneous hazardous wastes may include waste paint, spent solvents, and spent welding materials. Hazardous wastes generated during construction will be handled and disposed of in accordance with applicable LORS. Hazardous wastes will be either recycled by or disposed of in a permitted hazardous waste treatment or disposal facility. Managed and disposed of properly, these wastes will not cause significant environmental or health and safety impacts.

The Palomar facility will be considered the generator of used oil and miscellaneous hazardous waste produced during facility construction and will be ultimately responsible for compliance with applicable federal and state regulations regarding hazardous waste, including licensing, personnel training, accumulation limits, reporting requirements, and record keeping. Hazardous waste will be collected in hazardous waste accumulation containers near the point of generation. The accumulation containers, once full, will be hauled to the construction contractor's 90-day hazardous waste accumulation area and will be disposed of by a licensed hazardous waste disposal service.

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### Operation

A description of the hazardous wastes to be generated during operations is summarized as follows:

- **Oily Wastes:** Approximately 1,300 gallons per year of used crankcase oil and hydraulic oil will be generated. Used oil will be stored and maintained in a secured hazardous waste accumulation area within secondary containment. Used oil and other oily wastes will be recycled whenever possible. Used oil and recovered oil from the oil/water separator will be recycled by a licensed oil recycler. Oil absorbent (used to contain small spills) will be generated as a normal part of maintenance activities. These wastes will be collected near the point of generation in a hazardous waste accumulation container. The oil absorbent will be collected and disposed of in a permitted Class I landfill.
- **SCR Catalyst:** Spent catalyst containing heavy metals (approximately 70,000 pounds every three to five years) will be returned to the manufacturer for metals reclamation and/or disposal.
- **Cleaning Solutions:** Periodic turbine washing and chemical cleaning of the HRSGs will be conducted by a licensed contractor. Typically, turbine washwater effluent will be temporarily stored onsite in portable tanks. The effluent will be tested to determine its characteristics (i.e., hazardous or non-hazardous) and disposed of offsite by the licensed chemical cleaning contractor at a permitted offsite treatment or disposal facility depending on test results. HRSG cleaning solutions will be collected by the contractor and disposed offsite.

The quantities of hazardous waste generated by the Palomar facility are expected to be minimal. An estimated 1,300 gallons per year (approximately five tons) of used oil is expected to be generated by the plant and will be transported to existing oil petroleum recycling facilities in California, which have an estimated capacity of approximately 187,000 tons per year (DTSC, 1993). Hazardous waste capacity assurance documents for California have not been prepared since 1993, because the 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 power plant will not have significant impacts upon available hazardous waste treatment and disposal capacity.

#### 5.13.3 Mitigation Measures

Non-hazardous solid wastes generated from Palomar Energy Project operations will be minimal and will require no further mitigation. Non-hazardous solid wastes will either be recycled (paper, glass, metals, etc.) or disposed of at a nearby Class III landfill. Generation of wastewater at the Palomar facility will be minimized by adherence to standard water conservation and good housekeeping practices.

Even though significant adverse impacts related to waste management are not expected, the following mitigation measures will be implemented:

- WM-1.** Prior to starting construction, the applicant will contact the DTSC and request issuance of an EPA Identification Number as a hazardous waste generator. A Unified Program Facility/Health Permit which covers hazardous waste and hazardous materials activities is also required from the Certified Unified Program Agency (CUPA).
- WM-2.** Wastes identified as hazardous will be stored onsite for no more than 90 days (or other accumulation periods as allowed by CCR Title 22 § 66262.34 for hazardous waste generators) and will be managed in accordance with federal and state hazardous waste generator requirements. Hazardous wastes will be stored within secondary containment in an appropriately segregated hazardous waste accumulation area. The containment area will be sized to hold a volume equal to the largest tank (or container) plus an additional 10 percent to account for precipitation. The hazardous waste accumulation areas will be visually inspected and maintained on a weekly basis.
- WM-3.** A State-licensed hazardous waste hauler will periodically collect hazardous wastes and transport the wastes to a permitted hazardous waste facility for disposal or treatment. Hazardous waste shipments will be documented using hazardous waste manifests and filed within 30 days of the date of shipment with the California Department of Health Services. Copies of manifests, reports, waste analysis, exception reports, land ban restriction notices/certifications, destruction certifications, etc., will be kept onsite and accessible for site inspection for at least three years.
- WM-4.** Hazardous waste spill control and management procedures will be included in a site spill contingency plan to be developed for the facility prior to commercial operation.
- WM-5.** Appropriate facility employees will receive emergency response training as required by the OSHA Hazard Communication Standard 29 CFR 1910.120. Additionally, employees will be trained in hazardous waste procedures and spill contingencies in accordance with Title 22 CCR §66262.
- WM-6.** Procedures to minimize hazardous waste generation will be established. Employees will be trained in procedures to reduce the volume of hazardous waste generated at the plant. The procurement of hazardous materials will be controlled to minimize surplus materials onsite and to prevent unused materials from becoming out of date. Non-hazardous materials will be used in lieu of hazardous materials whenever practical. Hazardous materials will be reused and hazardous wastes will be recycled whenever practical.

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### **5.13.4 Significant Unavoidable Adverse Impacts**

Implementation of the mitigation measures described above will reduce or eliminate Palomar project impacts relative to waste management. No significant unavoidable adverse impacts are anticipated from project construction or operation.

### **5.13.5 Cumulative Impacts**

This analysis included two small (<50 MW) gas fired turbine power plant projects under development in Escondido near the Palomar site, and the ERTC industrial park within which the Palomar site is located. One of the small power plant projects (CalPeak) is located adjacent to the northern boundary of the Palomar site. The other small power plant (RAMCO) is under construction about 0.5-mile northwest of the Palomar site. Both of these projects will be in operation well before the beginning of Palomar project construction.

The Palomar project site is within Planning Area 1 of eight planning areas of the overall ERTC industrial park. Construction activities in other areas of the ERTC industrial park are expected to overlap with power plant construction. The combined quantities of non-hazardous solid waste during construction activities that overlap in time would not significantly affect the capacity of available landfill, or hazardous waste treatment and disposal capacity.

Non-hazardous solid waste or hazardous waste generated by the Palomar project during operations will not significantly impact available landfill or hazardous waste treatment and disposal capacity. Combined, the Palomar project, the two small nearby power plants, and the overall industrial park would not be expected to produce more than 10,000 tons of solid waste per year. This is a small fraction of one percent of the current annual waste disposed of in San Diego County landfills. The cumulative waste disposal needs over the lives of these projects would not cause or contribute to significant cumulative impacts to the remaining capacity of the non-hazardous waste disposal sites in San Diego County. Likewise, hazardous waste volumes generated by the various cumulative projects would not significantly affect available hazardous waste treatment or disposal capacity.

### **5.13.6 LORS Compliance**

Design, construction and operation of the Palomar Energy Project will be conducted in accordance with LORS pertinent to waste management issues. The applicable LORS are discussed in Section 6.4.13.

### **5.13.7 Involved Agencies and Agency Contacts**

Contacts for agencies directly involved with waste management-related regulatory requirements for the Palomar Energy Project are presented in Table 5.13-2.

**Table 5.13-2 Involved Agencies and Agency Contacts**

<b>Agency/Address</b>	<b>Contact/Telephone</b>	<b>Permits/Reason for Involvement</b>
County of San Diego – Land Use & Environment Group, Department of Environmental Health, Hazardous Materials Division 1255 Imperial Ave. San Diego, CA 92101	Hazardous Materials Duty Specialist (619) 338-2222	Assistance with waste management and hazardous materials facilities and similar information.
Department of Toxic Substances Control 400 P Street P.O. Box 806 Sacramento, CA 95812	EPA ID Center (916) 324-1781	Application for EPA Identification Number.

**5.13.8 Permits Required and Permit Schedule**

Permits required and permit schedules for matters dealing with Palomar Energy Project hazardous waste are provided in Table 5.13-3.

**Table 5.13-3 Permits Required and Permit Schedule**

<b>Permit/Approval Required</b>	<b>Schedule</b>
Obtain EPA ID No. and Register as a Hazardous Waste Generator	30 days prior to start of operations.
Unified Program Facility/Health Permit Application	30 days prior to start of operations.

**5.13.9 References**

Department of Toxic Substances Control. 2001. California Commercial Offsite Hazardous Waste Management Facilities. February 2001.

Mohr, N. June 2001. Personal communication (discussion with V. Holloway). San Diego Landfill System. General Manager.

Hicks, M. June 2001. Personal Communication (discussion with J. Breese). Safety Kleen. Customer Service Manager.

Prince, B. June 2001. Personal communication (discussion with V. Holloway). City of San Diego. Solid Waste Local Enforcement Agency. Solid Waste Inspector.

Radimsky, J. 1998. Personal communication (discussion with G. Cronk, Foster Wheeler Environmental). California Department of Toxic Substances Control.

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San Diego County. 2000. Revised Partial Draft EIR for the Proposed Gregory Canyon Landfill. May 25, 2000.

State of California Department of Toxic Substances Control (DTSC). 1993. Phase I Capacity Assurance Submittal to the United States Environmental Protection Agency. May 16, 1994.

Yadvish, A. 1998. Personal communication (discussion with G. Cronk of Foster Wheeler Environmental). Safety Kleen.

Young, Lawrence. November 2001. Personal communication (discussion with S. Head). Licensed Agricultural Advisor, Van Waters and Rogers, Inc.