

5.14 Waste Management

This section evaluates the potential effects on human health and the environment from nonhazardous and hazardous waste generated at the Chula Vista Energy Upgrade Project (CVEUP). Section 5.14.1 describes project site investigations and the waste and waste streams that would be generated by the project. Section 5.14.2 describes the project's environmental consequences in terms of waste and waste disposal sites. Section 5.14.3 discusses potential cumulative impacts. Section 5.14.4 describes mitigation measures. Section 5.14.5 presents laws, ordinances, regulations and standards (LORS) that apply to the generated waste. Section 5.14.6 describes agencies that have jurisdiction over the generated waste and specifies who to contact in those agencies. Section 5.14.7 describes permits required for generated waste and a schedule for obtaining those permits, and Section 5.14.8 provides the references used to prepare this section.

5.14.1 Affected Environment

This section discusses the condition of the CVEUP site, in terms of the potential need to remove or otherwise treat contaminated soil or groundwater at the site, and discusses the various nonhazardous and hazardous waste streams for CVEUP construction and operation.

5.14.1.1 Site Investigations

Investigations of the project site that have been undertaken to determine whether or not contamination is present that will require removal or remediation have included a Phase I Environmental Site Assessment and soil sampling.

5.14.1.1.1 Phase I Environmental Site Assessment

A Phase I Environmental Site Assessment was conducted by Advantage Environmental Consultants, LLC in 2006 in accordance with ASTM Standard E 1527-05, Standard Practice for Environmental Site Assessments. According to Advantage Environmental Consultants, the 3.82-acre parcel is currently owned by John and Carole Marquez and leased by MMC Energy, Inc. Historical aerial photos taken between 1953 and 1980 show that the site remained vacant and undeveloped during this time. Between 1980 and 1990, the site was developed as a salvage yard, and continued in that use until 2000, when the site was developed into the existing Chula Vista Power Plant. Per the Environmental Site Assessment, the facility is not identified on any of the federal and state environmental databases, but does appear on the San Diego County Department of Environmental Health (DEH) database a hazardous waste generator. The facility produces hazardous wastes such as oil, glycol coolant, oil filters, oily rags and used batteries.

The Environmental Site Assessment report, dated November 21, 2006, concluded that stained or suspect soil was not observed at the site. Due to the nature of the historical activities at the site, however, the possibility exists that contaminated soil may be found during grading or construction activities for the CVEUP facility. The Environmental Site Assessment report recommended that if stained or suspect soil is encountered it should be evaluated by a qualified environmental consultant and handled in accordance with applicable laws and regulations. In addition, soil exported from the site should be analyzed

for petroleum hydrocarbons and lead prior to leaving the site. A copy of the Environmental Site Assessment report is included in Appendix 5.14A.

5.14.1.2 Project Waste Generation

Wastewater, solid nonhazardous waste, and liquid and solid hazardous waste will be generated at the CVEUP site during facility construction and operation.

5.14.1.2.1 Construction Phase

During construction, the primary waste generated will be solid nonhazardous waste. However, some nonhazardous liquid waste and hazardous waste (solid and liquid) will also be generated. All of the hazardous wastes will be generated at the plant site. The types of waste and their estimated quantities are described below. Typical wastes generated during construction and demolition are identified in Table 5.14-1.

TABLE 5.14-1
Potential Wastes Generated during the Construction and Demolition Phase of CVEUP

Waste	Origin	Composition	Estimated Quantity	Classification	Disposal
Scrap wood, steel, glass, plastic, paper, calcium silicate insulation, mineral wool insulation	Construction waste	Normal refuse	35 tons	Nonhazardous	Recycle and/or dispose of in a Class II or III landfill
Scrap Metals	Construction	Parts, wire, containers	5 tons	Nonhazardous	Recycle and/or dispose of in a Class III landfill
Waste oil filters	Construction equipment and vehicles	Solids	1,000 lb.	Nonhazardous	Recycle at a permitted treatment, storage, and disposal facility (TSDF)
Waste oil	Equipment, vehicles	Hydrocarbons	200 gallons	Non- Resource Conservation and Recovery Act (RCRA) Hazardous Liquid	Dispose at a permitted TSDF
Sanitary waste	Portable toilet holding tanks	Water	10,000 gallons	Nonhazardous Liquid	Remove by contracted sanitary service
Passivating and chemical cleaning fluid waste	Pipe cleaning and flushing	Water	50,000 gallons	Hazardous or nonhazardous liquid	Sample and characterize – if clean, dispose of in sanitary sewer; otherwise, manage appropriately offsite
Hydrotest water	Testing equipment and piping integrity	Water	300,000 gallons	Hazardous or nonhazardous liquid	Sample and characterize – if clean, dispose of in storm drain; otherwise, manage appropriately offsite

TABLE 5.14-1
Potential Wastes Generated during the Construction and Demolition Phase of CVEUP

Waste	Origin	Composition	Estimated Quantity	Classification	Disposal
Empty hazardous material containers	Construction	Drums, containers, totes	50 each	Hazardous and nonhazardous solids	Containers <5 gallons will be disposed as normal refuse. Containers >5 gallons will be returned to vendors for recycling or reconditioning.
Spent welding materials	Construction	Solid	2000 lb.	Hazardous	Disposal at a Class I landfill
Used and waste lube oil	Combustion turbine and steam turbine lube oil flushes	Hydrocarbons	2000 gallons	Hazardous	Recycle at a permitted TSDF
Oily rags, oil sorbent excluding lube oil flushes	Cleanup of small spills	Hydrocarbons	500 lb.	Hazardous	Recycle or dispose at a permitted TSDF
Solvents, paint, adhesives	Maintenance	Hydrocarbons	250 lb.	Hazardous	Recycle at a permitted TSDF
Spent alkaline batteries	Equipment	Metals	50 lb.	Universal Waste solids	Recycle or dispose offsite at an Universal Waste Destination Facility
Fluorescent, mercury vapor lamps	Lighting	Metals and PCBs	20 lb.	Universal Waste solids	Recycle or dispose offsite at an Universal Waste Destination Facility
Concrete from demolition	Demolition	Existing foundations	150 cubic yards	Nonhazardous	Recycle and/or dispose of in Class III Landfill
Metal from demolition	Demolition	Rebar, support steel	10 tons	Nonhazardous	Recycle and/or dispose of in a Class III landfill

Containers include <5-gallon containers and 55-gallon drums or totes

PCB = polychlorinated biphenyl

Nonhazardous Solid Waste

Listed below are nonhazardous waste streams that could potentially be generated from construction of the generating facility and the electric transmission line.

Paper, Wood, Glass, and Plastics—Approximately 15 tons of paper, wood, glass, and plastics will be generated from packing materials, waste lumber, insulation, and empty nonhazardous chemical containers during project construction. These wastes will be recycled where practical. Waste that cannot be recycled will be disposed of weekly in a Class III landfill. Onsite, the waste will be placed in dumpsters.

Concrete—Approximately 60 tons of excess concrete will be generated during construction and demolition of the existing facility. Waste concrete will be disposed of weekly in a Class III landfill or at clean fill sites, if available, or will be recycled and disposed of at a construction and demolition site.

Metal—Approximately 5 tons of metal, including steel from welding/cutting operations, packing materials, and empty nonhazardous chemical containers, and aluminum waste from packing materials and electrical wiring will be generated during construction. Waste will be recycled where practical and nonrecyclable waste will be deposited in a Class III landfill.

Wastewater

Wastewater generated during construction will include sanitary waste, stormwater runoff, equipment washdown water, and water from excavation dewatering during construction (if dewatering is required). Depending on the chemical quality of these wastewaters, they could be classified as hazardous or nonhazardous. As discussed in a later section, the waste waters would be sampled and if they are hazardous would be disposed of. Methods for disposing of nonhazardous wastewaters are identified in Section 5.14.1.2.3.

Hazardous Waste

Most of the hazardous waste generated during construction will consist of liquid waste, such as water from excavation dewatering (if it contains contaminants), flushing and cleaning fluids, passivating fluid (to prepare pipes for use), and solvents. Some hazardous solid waste, such as welding materials and dried paint, may also be generated during construction.

Flushing and cleaning waste liquid will be generated as pipes are cleaned and flushed. The volume of flushing and cleaning liquid waste generated is estimated to be one to two times the internal volume of the pipes cleaned. The quantity of welding, solvent, and paint waste is expected to be minimal. Wastewaters generated during construction could also be considered hazardous, if demonstrated so by sampling. Methods for recycling and disposal of hazardous wastes during construction are described in a later section.

The construction contractor will be considered the generator of hazardous construction waste and will be responsible for proper handling of hazardous waste in compliance with all applicable federal, state, and local laws and regulations. This responsibility will include licensing, personnel training, accumulation limits and times, and reporting and recordkeeping. The hazardous waste will be collected in satellite accumulation containers near the points of generation. It will be moved daily to the contractor's 90-day hazardous waste storage area located at the site construction laydown area. The waste will be removed from the site by a certified hazardous waste collection company and delivered to an authorized hazardous waste management facility, before expiration of the 90-day storage limit.

5.14.1.2.2 Demolition Phase

The following subsections describe the type and estimated amounts of wastes that will be generated from the demolition of the existing MMC Chula Vista Power Plant.

Nonhazardous Waste

The nonhazardous waste generated as part of the existing MMC Chula Vista Power Plant site demolition will include:

- Mixed nonhazardous wastes, including debris that has wood, metal, or other nonhazardous material attached to it in a manner that is not economical for separation for recycling purposes.

- Plastics from cleaned piping, equipment, and utilities that have been classified as nonhazardous.
- Electrical equipment that has been classified as nonhazardous and cannot be salvaged.
- Duct work or other ventilation material that is determined to be non-recyclable and that has been classified as nonhazardous.
- General waste that has been classified as nonhazardous.

All nonhazardous material will be stockpiled near the active work area in a location that is easily accessible. The waste will be stored in a manner that will not allow surface water to move through the waste and into nearby areas. A Stormwater Pollution Prevention Plan (SWPPP) will be prepared for the management of stormwater during construction and demolition activities, as described in Section 5.15.

Hazardous Waste

Hazardous waste generated as part of the MMC Chula Vista Power Plant demolition will include:

- Electrical equipment that has been classified as hazardous and cannot be salvaged.
- Used oils removed from equipment
- Various universal wastes (e.g., fluorescent light tubes)
- Lead-acid storage batteries

The waste will be stored in containers (drums, roll-off boxes, etc.) pending characterization for waste profiling. The SWPPP will address the engineering controls that will be required for management of stormwater during demolition activities. A Construction Waste Management Plan will be prepared to describe procedures that will be used during demolition and construction activities.

Equipment for Re-Sale

As part of the MMC Chula Vista Power Plant demolition, equipment that is determined to have a salvage value will be stored at a central location and prospective buyers will be allowed to purchase it. An attempt will be made prior to removal to sell the equipment so it can be loaded for transport immediately after removal to avoid handling the equipment multiple times. If the equipment cannot be sold, it will be either recycled (when applicable) or disposed of as a nonhazardous or hazardous waste.

The types of equipment that may be salvaged include:

- Turbines
- Generators
- Transformers
- Computer Control equipment
- Motors
- Electrical Switchgear and Panels

Recyclable Material

It is estimated that 150 cubic yards of recyclable concrete will be generated from removal of the existing foundations and that 10 tons of metal will also be recyclable. The metal consists of fencing, tanks, support beams, piping, miscellaneous building materials, equipment, and components. Additionally, plastic, electrical components, and other miscellaneous materials

will be recycled when practical. A waste minimization program will be established to recycle and reuse as much of the demolition materials as economically and practically possible.

5.14.1.2.3 Operation Phase

During CVEUP facility operation, the primary waste generated will be nonhazardous solid waste. However, varying quantities of both solid and liquid hazardous waste will also be generated periodically. The types of wastes and their estimated quantities are discussed below.

Nonhazardous Solid Waste

The CVEUP will produce facility wastes, typical of power generation facility operations and maintenance activities. These will include rags, turbine air filters, broken and rusted metal and machine parts, defective or broken electrical materials, empty containers, the typical refuse generated by workers and small office operations, and other miscellaneous solid wastes. In addition, the facility will generate trailer-mounted deionization water treatment units, which will be shipped back to the vendor for regeneration and reuse. The quantity of all solid nonhazardous waste generated is estimated to be about 26 cubic yards per year (approximately 39 tons per year). Large metal parts will be recycled.

Nonhazardous Wastewater

Water balance diagrams, provided in Figures 2.1-6a and 2.1-6b, illustrate the expected liquid waste streams and flow rates for the CVEUP. The wastewater collection system will collect sanitary wastewater from sinks, toilets, and other sanitary facilities to be discharged to City of Chula Vista's sanitary sewer system.

General facility drainage will consist of area washdown, sample drains, equipment leakage, and drainage from facility equipment areas. Water from these areas will be collected in a system of floor drains, hub drains, sumps, and piping, and will be routed to the facility's concrete-lined wastewater sump. Water from this sump will be sampled and analyzed at an approved lab. If contamination is present, the water will be trucked offsite for disposal at an approved wastewater disposal facility. If sampling results show no contamination, the water will be discharged to the City of Chula Vista's sanitary sewer system.

Hazardous Waste

Hazardous waste generated will include waste lubricating oil, used oil filters from turbine equipment, spent catalyst, and chemical cleaning wastes. The catalyst units will contain heavy metals that are considered hazardous. Chemical cleaning wastes, consisting of alkaline and acidic cleaning solutions, will be generated from periodic cleaning of the piping. These wastes may contain high concentrations of heavy metals and will be collected for offsite disposal.

The chemical feed area drains will collect spillage, tank overflows, effluent from maintenance operations, and liquid from area washdowns. Water collected will be sampled and, if it is not contaminated, will be released to the City of Chula Vista's sanitary sewer system. The quantity of this effluent is expected to be minimal.

Wastes that potentially will be generated during operations at the facility are summarized in Table 5.14-2.

TABLE 5.14-2
Potential Wastes Generated at the CVEUP Facility

Waste	Origin	Composition	Estimated Quantity	Classification	Disposal
Lubricating oil	Small leaks and spills from the gas-turbine lubricating-oil system	Hydrocarbons	~ 55 gallons/yr	Hazardous	Cleaned up using sorbent and rags—disposed of by certified oil recycler
Lubricating oil filters	Gas-turbine lubricating-oil system	Paper, metal, and hydrocarbons	~300 lbs/yr	Hazardous	Recycled or disposed of by certified oil recycler
SCR catalyst units	SCR system (warranty is 3 years—use tends to be 3 to 5 years)	Metal and heavy metals, including vanadium	360 lb every 3 to 5 yrs	Hazardous	Recycled by SCR manufacturer or disposed of in Class I landfill
CO catalyst units	CO catalyst (use tends to be 3 to 5 years)	Metal and heavy metals, including vanadium	360 lb every 3 to 5 yrs	Hazardous	Recycled by manufacturer
Oily rags	Maintenance, wipe-down of equipment, etc.	Hydrocarbons, cloth	260 lb/yr (~600 rags/yr)	Hazardous	Recycled or disposed of by certified oil recycler
Oil sorbents	Cleanup of small spills	Hydrocarbons	~100 lb/yr	Hazardous	Recycled or disposed of by certified oil recycler
Deionization Trailer unit	Water treatment Process	Metal and resins	1 Trailer/4 months of operation	Nonhazardous	Recycled by water treatment manufacturer

5.14.2 Environmental Consequences

5.14.2.1 Significance Criteria

The project could have a significant effect on the environment in terms of waste management if it would do the following (CEQA Guidelines Section 15002(g), Appendix G):

- Be located on a site which is included on a list of hazardous materials sites (Cortese List) compiled pursuant to Government Code Section 65962.5 and, as a result, would create a significant hazard to the public or the environment
- Have solid waste disposal needs beyond the capacity of appropriate landfills to accommodate them

The risks or hazards posed by the transportation of hazardous materials, including hazardous wastes, are described and analyzed in Section 5.5, Hazardous Materials Handling.

5.14.2.2 Cortese List

An examination of the California Department of Toxic Substances Control (DTSC) Hazardous Waste and Substances Site List (Cortese List) shows none of the 23 sites currently on the list for San Diego County that compiled pursuant to Government Code Section 65962.5 are located within the city limits of Chula Vista (DTSC, 2007a). Therefore, the CVEUP site is not located on a Cortese-listed site.

5.14.2.3 Solid Waste Disposal

Nonhazardous solid waste (often referred to as solid waste, municipal solid waste, or garbage) will be recycled or deposited in a Class III landfill. Hazardous wastes, both solid and liquid, will be delivered to a permitted offsite treatment, storage, and disposal (TSD) facility for treatment or recycling, or will be deposited in a permitted Class I landfill. The following sections describe the waste disposal sites feasible for disposal of CVEUP wastes.

5.14.2.3.1 Nonhazardous Waste

Approximately 455 tons of solid waste will be generated during construction and demolition of the CVEUP, and solid waste will continue to be generated during operation of the project. Other solid wastes will be recycled to the extent possible, and what cannot be recycled will be disposed of at a permitted landfill as discussed below.

It is anticipated that all excavated soil will be used onsite for grading and leveling purposes. In the event that some of the excavated soil will not be reused onsite, classification of the soil for disposal would be made on the basis of sampling completed once the soil is excavated and stockpiled. Soil that is determined to be nonhazardous on the basis of the sampling conducted could be suitable for reuse at a construction site or disposal at a regional disposal facility, depending on the chemical quality.

Allied Waste Industries, Inc. is the sole solid waste franchise to provide solid waste collection services for the City of Chula Vista and for commercial and industrial facilities in the project area. The primary disposal facility is the Otay Landfill in Chula Vista, approximately 5 miles from the CVEUP site. The Otay Landfill has adequate capacity to handle and dispose of solid waste generated by the CVEUP facility, as shown in Table 5.14-3. Either of the other two landfills included in Table 5.14-3 are likely alternatives to the Otay Landfill.

According to the California Integrated Waste Management Board (CIWMB), Otay Landfill has a total capacity of 62.38 million cubic yards of refuse and the estimated remaining capacity as of November 30, 2006 was 33.07 million cubic yards. According to the CIWMB, there are no open enforcement actions against Otay Landfill (CIWMB, 2007a).

Because adequate landfill capacity exists, disposal of solid nonhazardous waste will not be a constraint on CVEUP development.

TABLE 5.14-3
Solid Waste Disposal Facilities in the Vicinity of the CVEUP Project

Landfill/MRF/ Transfer Station	Location	Class	Permitted Capacity* (Cubic Yards)	Remaining Capacity* (Cubic Yards)	Permitted Throughput* (Tons per Day)	Estimated Closure Date*	Violation of Minimum State Standards Noted*
Otay Landfill	Chula Vista, CA	III	62,377,974	33,070,879	5,830	4/30/2021	Yes (3/07)
West Miramar Sanitary Landfill	San Diego, CA	III	56,466,700	13,687,454	8,000	12/31/2011	No
Sycamore Sanitary Landfill	San Diego, CA	III	48,124,462	47,388,428	3,965	12/31/2031	Yes (5/07)

* Based on California Integrated Waste Management Board (CIWMB) Solid Waste Information System Database (CIWMB, 2007a).

5.14.2.3.2 Hazardous Waste

Hazardous waste generated at the CVEUP facility will be stored at the facility for less than 90 days. The waste will then be transported to a TSD facility by a permitted hazardous waste transporter. These facilities vary considerably in what they can do with the hazardous waste they receive. Some can only store waste, some can treat the waste to recover usable products, and others can dispose of the waste by incineration, deep-well injection, or landfilling. (Incineration and deep-well injection of these materials are not permitted in California.)

According to DTSC, there are 61 facilities in California that can accept hazardous waste for treatment and recycling (DTSC, 2007b). For ultimate disposal, California has the three hazardous waste (Class I) landfills (described below). The closest commercial hazardous waste disposal facility is the Clean Harbors Buttonwillow Landfill in Kern County.

Clean Harbors Buttonwillow Landfill

This landfill is permitted at 14.3 million cubic yards (CIWMB, 2007a and Buoni, 2007) and has approximately 9.2 million cubic yards of remaining capacity as of February 2006 (Buoni, 2007). At the current deposit rate, the landfill is permitted to accept waste until 2040 (CIWMB, 2007a). Buttonwillow has been permitted to accept all hazardous wastes except flammables, PCBs with a concentration greater than 50 parts per million, medical waste, explosives, and radioactive waste with radioactivity greater than 1,800 picocuries (Buoni, 2007).

Clean Harbors Westmoreland Landfill

This facility is not currently open and accepting waste because the Buttonwillow facility can accommodate the current hazardous waste generation rate. The facility is, however, available in reserve and could be reopened if necessary. The landfill's conditional use permit prohibits the acceptance of some types of waste, including radioactive (except geothermal) waste, flammables, biological hazard waste (medical), PCB, dioxins, air- and water-reactive wastes, and strong oxidizers.

Waste Management Kettleman Hills Landfill

This facility accepts Class I and II waste. The B-18 Landfill is permitted for and will accept all hazardous wastes except radioactive, medical, and unexploded ordinance; this landfill has permitted capacity of 10 million cubic yards with a remaining capacity of approximately 2.6 million cubic yards as of June 2007 (Luibel, 2007). The life expectancy remaining for Landfill B-18 is about 3 years, however expansion of the facility is anticipated (Luibel, 2007). Expansion of the facility would change the closure date to 2036 (Yarbrough, 2005).

Additional Facilities

In addition to hazardous waste landfills, there are numerous offsite commercial liquid hazardous waste treatment and recycling facilities in California. Some of the closest facilities include US Filter Recovery Services and D/K Environmental in the city of Vernon; Safety Kleen Corp., Clean Harbors, Exide Inc. and Pacific Resource Recovery Services in Los Angeles; Rho-Chem Corp. in Inglewood; Phibro-Tech, Inc. in Santa Fe Springs; and Crosby and Overton in Long Beach (DTSC, 2007b).

5.14.2.4 Waste Disposal Summary

The CVEUP facility will generate nonhazardous solid waste that will add to the total waste generated in San Diego County and in California. However, there is adequate recycling and landfill capacity in California to recycle and dispose of the waste generated by CVEUP. It is estimated that CVEUP will generate approximately 455 tons of solid waste during construction (including approximately 3 tons of solid hazardous waste) and about 40 tons a year from operations (including approximately 1 ton of solid hazardous waste). Considering that 3,844,533 tons of solid waste were landfilled in San Diego County in the year 2006, CVEUP's contribution will likely represent less than one percent of the county's total waste generation (CIWMB 2007b). Therefore, the impact of the project on solid waste recycling and disposal capacity will not be significant.

Hazardous waste generated will consist of waste oil, filters, SCR and oxidation catalysts, and fluids used to clean piping. The waste oil, catalysts, and the deionization trailer unit will be recycled. Hazardous waste treatment and disposal capacity in California is more than adequate. Therefore, the effect of CVEUP on hazardous waste recycling, treatment, and disposal capability will not be significant.

5.14.3 Cumulative Effects

A cumulative impact refers to a proposed project's incremental effect together with other closely related past, present, and reasonably foreseeable future projects whose impacts may compound or increase the incremental effect of the proposed project (Pub. Resources Code § 21083; Cal. Code Regs., tit. 14, §§ 15064(h), 15065(c), 15130, and 15355).

Applications for 26 proposed projects have been filed in the City of Chula Vista. These are mostly residential development projects, with some commercial developments, and one warehouse development and one manufacturing development. One of these projects, a proposed sewing manufacturing and wholesale sales business, is located within 1,000 feet of the CVEUP.

The quantities of nonhazardous and hazardous wastes that would be generated during construction and operation of the CVEUP, furthermore, would be relatively low, at an

estimated 60 tons of solid waste during construction and approximately 39 tons per year during operation. Recycling efforts would be prioritized wherever practical, and capacity is available in a variety of treatment and disposal facilities. There is currently sufficient landfill capacity available in the project area. Therefore, these added waste quantities generated by the CVEUP would not result in significant cumulative waste management impacts.

5.14.4 Mitigation and Waste Management Methods

The handling and management of waste generated by CVEUP will follow the hierarchical approach of source reduction, recycling, treatment, and disposal. The first priority will be to reduce the quantity of waste generated through pollution prevention methods (e.g., high-efficiency cleaning methods). The next level of waste management will involve reusing or recycling wastes (e.g., used oil recycling). For wastes that cannot be recycled, treatment will be used, if possible, to make the waste nonhazardous (e.g., neutralization). Finally, offsite disposal will be used to dispose of residual wastes that cannot be reused, recycled, or treated.

The following sections present methods for managing both nonhazardous and hazardous waste generated by CVEUP.

5.14.4.1 Construction and Demolition Phase

Handling requirements and mitigation measures for the handling of wastes during construction and demolition are described in the following sections.

5.14.4.1.1 Nonhazardous Wastes

Nonhazardous solid waste generated during construction will be collected in onsite dumpsters and picked up periodically by Allied Waste Industries, Inc. The waste will then be taken to the Otay Landfill or another local landfill. Recyclable materials can be segregated and transported by construction contractors or other private haulers to an area recycling facility. Allied Waste Industries, Inc. provides drop boxes or debris boxes for large quantities of recyclables.

Wastewater generated during construction will include sanitary waste and could include excavation dewatering water, equipment washwater, and stormwater runoff. Sanitary waste will be collected in portable, self-contained toilets. Excavation dewatering water will be contained in portable tanks and sampled prior to disposal offsite. Equipment washwater will be contained at designated wash areas and will be disposed of offsite. Stormwater runoff will be managed in accordance with a stormwater management permit, which will be obtained prior to the start of construction. The generation of nonhazardous wastewater will be minimized through water conservation and reuse measures.

5.14.4.1.2 Hazardous Wastes

Most of the hazardous waste generated during construction will consist of liquid waste, such as excavation dewatering water, flushing and cleaning fluids, passivating fluids, and solvents. Some solid waste, in the form of welding materials and dried paint, may also be generated. Nonhazardous materials will be used whenever possible to minimize the quantity of hazardous waste generated. The construction contractor will be the generator of hazardous construction waste and will be responsible for proper handling in compliance with all applicable federal, state, and local laws and regulations, including licensing, training of

personnel, accumulation limits and times, and reporting and recordkeeping. The hazardous waste will be collected in satellite accumulation containers near the points of generation. This waste will be moved daily to the contractor's 90-day hazardous waste storage area, located at the plant construction laydown area. The waste will be delivered to an authorized hazardous waste management facility, before expiration of the 90-day storage limit.

5.14.4.2 Operation Phase

Handling requirements and mitigation measures for the handling of wastes during operation are described in the following sections.

5.14.4.2.1 Nonhazardous Wastes

Wastewater from facility sinks, toilets, and showers will be disposed of using the City of Chula Vista's sanitary sewer system.

Nonhazardous solid waste or refuse will be collected and deposited in a local landfill. Whenever practical, recycling will be implemented throughout the facility to minimize the quantity of nonhazardous waste that must be disposed of in a landfill.

5.14.4.2.2 Hazardous Wastes

To avoid the potential effects on human health and the environment from handling and disposing of hazardous wastes, procedures will be developed to ensure proper labeling, storage, packaging, recordkeeping, and disposal of all hazardous wastes. The following general procedures will be employed:

- The CVEUP will be classified as a hazardous waste generator and will obtain a site-specific U.S. Environmental Protection Agency identification number that will be used to manifest hazardous waste from the CVEUP facility. Hazardous waste from the CVEUP facility will be stored onsite for less than 90 days before offsite disposal, treatment, or recycling.
- Hazardous wastes will be accumulated at the generating facility according to the California Code of Regulations Title 22 requirements for satellite accumulation.
- Hazardous wastes will be stored in appropriately segregated storage areas surrounded by berms to contain leaks and spills. The bermed areas will be sized to hold the full contents of the largest single container and, if not roofed, sized for an additional 20 percent to allow for rainfall. These areas will be inspected daily.
- Hazardous wastes will be collected by a licensed hazardous waste hauler, using a hazardous waste manifest. Wastes will only be shipped to authorized hazardous waste management facilities. Biannual hazardous waste generator reports will be prepared and submitted to the DTSC. Copies of manifests, reports, waste analyses, and other documents will be kept onsite and will remain accessible for inspection for at least 3 years.
- Employees will be trained in hazardous waste procedures, spill contingencies, and waste minimization.
- Procedures will be developed to reduce the quantity of hazardous waste generated. Nonhazardous materials will be used instead of hazardous materials whenever practical, and wastes will be recycled whenever practical.

Specifically, hazardous waste handling will include the following practices. Handling of hazardous wastes in this way will minimize the quantity of waste deposited to landfills:

- Waste lubricating oil will be recovered and recycled by a waste oil recycling contractor, such as Evergreen Oil, Inc.
- Spent oil filters and oily rags will be recycled.
- Spent SCR and oxidation catalysts will be recycled by the supplier, if possible, or disposed of in a Class I landfill.
- Spent deionization water trailer units will be recycled by the supplier, if possible, or disposed of in a Class I landfill.

5.14.4.3 Facility Closure

When CVEUP is closed, both nonhazardous and hazardous wastes must be handled properly. Closure can be temporary or permanent. Temporary closure would be for a period of time greater than the time required for normal maintenance, including overhaul or replacement of the combustion turbines. Causes for temporary closure could be a disruption in the supply of natural gas, flooding of the site, or damage to the plant from earthquake, fire, storm, or other natural causes. Permanent closure would consist of a cessation in operations with no intent to restart operations and could result from the age of the plant, damage to the plant beyond repair, economic conditions, or other unforeseen reasons. Handling of wastes for these two types of closure are discussed below.

5.14.4.3.1 Temporary Closure

For a temporary closure, where there is no release of hazardous materials, facility security will be deployed on a 24-hour basis, and the CEC will be notified. Depending on the length of shutdown necessary, a contingency plan for the temporary cessation of operations will be implemented. This plan will be prepared as described in the plant closure section. The plan will be developed to ensure conformance with all applicable LORS and the protection of public health and safety and the environment. The plan, depending on the expected duration of the shutdown, could include draining all chemicals from storage tanks and other equipment and the safe shutdown of all equipment. All wastes will be disposed of according to applicable LORS, as discussed in Section 5.14.5.

Where the temporary closure is in response to facility damage, or where there is a release or threatened release of hazardous waste or materials into the environment, procedures will be followed as set forth in a risk management plan. Procedures include methods to control releases, notification of applicable authorities and the public, emergency response, and training for generating facility personnel in responding to and controlling releases of hazardous materials and hazardous waste. Once the immediate problem of hazardous waste and materials release is contained and cleaned up, temporary closure will proceed as described for a closure where there is no release of hazardous materials or waste.

5.14.4.3.2 Permanent Closure

The planned life of the generation facility is 30 years, although operation could be longer. When the facility is permanently closed, the handling of nonhazardous and hazardous waste and hazardous materials will be part of a general closure plan that will attempt to

maximize the recycling of facility components. Unused chemicals will be sold back to the suppliers or other purchasers or users. All equipment containing chemicals will be drained and shut down to protect public health and safety and the environment. All nonhazardous wastes will be collected and disposed of in appropriate landfills or waste-collection facilities. All hazardous wastes will be disposed of according to applicable LORS. The site will be secured 24 hours per day during the CVEUP decommissioning activities.

5.14.4.3.3 Monitoring

Because the environmental impacts caused by construction and operation of the facility are expected to be minimal, extensive monitoring programs will not be required. Generated waste, both nonhazardous and hazardous, will be monitored during project construction and operation in accordance with the monitoring and reporting requirements mandated by the regulatory permits to be obtained for construction and operation.

5.14.5 Laws, Ordinances, Regulations, and Standards

Nonhazardous and hazardous waste handling at CVEUP will be governed by federal, state, and local laws. Applicable laws and regulations address proper waste handling, storage, and disposal practices to protect the environment from contamination and to protect facility workers and the surrounding community from exposure to nonhazardous and hazardous waste. Table 5.14-4 presents a summary of the LORS applicable to waste handling at the CVEUP facility.

TABLE 5.14-4
Laws, Ordinances, Regulations, and Standards Applicable to CVEUP Waste Management

LORS	Requirements/Applicability	Administering Agency	AFC Section Explaining Conformance
Federal			
RCRA Subtitle D	Regulates design and operation of solid waste landfills. CVEUP solid waste will be collected and disposed of by a collection company in conformance with Subtitle D.	CIWMB	Sections 5.14.5.1, 5.14.4.1, 5.14.4.2.1, 5.14.1.2.2
RCRA Subtitle C	Controls storage, treatment, and disposal of hazardous waste. Hazardous waste will be handled by contractors in conformance with Subtitle C.	DTSC	Sections 5.14.5.1, 5.14.4.1.2, 5.14.4.2.2, 5.14.1.2.2
Clean Water Act (CWA)	Controls discharge of wastewater to the surface waters of the U.S. Industrial and sanitary wastewater will be discharged to the City of Chula Vista's sewer system.	Regional Water Quality Control Board	Sections 5.14.5.1, 5.14.4.1.1, 5.14.4.2.1
State			
California Integrated Waste Management Act	Controls solid waste collectors, recyclers, and depositors. CVEUP solid waste will be collected and disposed of by a collection company in conformance with the CIWMA.	CIWMB	Sections 5.14.5.2, 5.14.4.1, 5.14.4.2.1, 5.14.1.2.2

TABLE 5.14-4
Laws, Ordinances, Regulations, and Standards Applicable to CVEUP Waste Management

LORS	Requirements/Applicability	Administering Agency	AFC Section Explaining Conformance
Hazardous Waste Control Law (HWCL)	Controls storage, treatment, and disposal of hazardous waste. Hazardous waste will be handled by contractors in conformance with the HWCL.	DTSC	Sections 5.14.5.2, 5.14.4.1.2, 5.14.4.2.2, 5.14.1.2.2
Porter-Cologne Water Quality Control Act	Controls discharge of wastewater to surface waters and groundwaters of California. Industrial and sanitary wastewater will be discharged to the City of Chula Vista's sanitary sewer system.	Regional Water Quality Control Board	Sections 5.14.5.2, 5.14.4.1.1, 5.14.4.2.1
California Fire Code	Controls storage of hazardous materials and wastes and the use and storage of flammable/combustible liquids. Wastes will be accumulated and stored in accordance with Fire Code requirements. Permits for storage containers will be obtained, as needed, from the City of Chula Vista Fire Department.	City of Chula Vista Fire Department	Section 5.14.7, 5.14.5.4, 5.14.4.2.2
Local			
City of Chula Vista General Plan, Policies EE.17.1; 17.2; 19.1; 19.2; 20.1; 20.2; and 20.3	Provides guidance for remediation of contaminated sites and for siting and management of facilities that store, collect, treat, dispose or transfer hazardous waste. CVEUP will comply with the City's Hazardous Materials and Waste requirements as detailed in Chapter 9, Section 3.4 of the General Plan.	San Diego County Department of Environmental Health, Hazardous Material Division	Sections 5.14.7, 5.14.5.3, 5.14.4.2.2
San Diego County Integrated Waste Management Plan	Provides guidance for local management of solid waste and household hazardous waste (incorporates the County's Source Reduction and Recycling Elements, which detail means of reducing commercial and industrial sources of solid waste). Waste will be recycled in a manner consistent with applicable LORS	San Diego County Solid Waste Management Program	Section 5.14.6, 5.14.5.3, 5.14.4.1.2
San Diego County Department of Environmental Health, Hazardous Material Division (HMD) various programs	HMD is the Certified Unified Program Agency (CUPA) for San Diego County that regulates and conducts inspections of businesses that handle hazardous materials, hazardous wastes, and/or have underground storage tanks. HMD programs include assistance with oversight on property re-development (i.e., brownfields); and voluntary or private oversight cleanup assistance. CVEUP will comply with HMD requirements concerning storage and handling of hazardous materials and wastes and will also cooperate with HMD on resolution of environmental issues at the site.	San Diego County Department of Environmental Health, Hazardous Material Division	Section 5.14.6, 5.14.7, 5.14.5.3, 5.14.4.2.2

5.14.5.1 Federal LORS

The USEPA regulates wastewater under the CWA. The federal statute that controls both nonhazardous and hazardous waste is the RCRA 42 USC 6901, et seq. RCRA's implementing regulations are found at 40 CFR 260, et seq. Subtitle D assigns responsibility for the regulation of nonhazardous waste to the states; federal involvement is limited to establishing minimum criteria that prescribe the best practicable controls and monitoring requirements for solid waste disposal facilities. Subtitle C controls the generation, transportation, treatment, storage, and disposal of hazardous waste through a comprehensive "cradle-to-grave" system of hazardous waste management techniques and requirements. It applies to all states and to all hazardous waste generators (above certain levels of waste produced). CVEUP will conform to this law in its generation, storage, transport, and disposal of any hazardous waste generated at the facility. The USEPA has delegated its authority for implementing the law to the State of California.

5.14.5.2 State LORS

Wastewater is regulated by the State and Regional Water Quality Control Boards under the Porter-Cologne Water Quality Control Act. Nonhazardous solid waste is regulated by the CIWMA of 1989, found in Public Resources Code Section 40000, et seq. This law provides an integrated statewide system of solid waste management by coordinating state and local efforts in source reduction, recycling, and land disposal safety. Counties are required to submit Integrated Waste Management Plans to the state. This law directly affects San Diego County and the solid waste hauler and disposer that will collect CVEUP solid waste. It also affects CVEUP to the extent that hazardous wastes are not to be disposed of along with solid waste.

RCRA allows states to develop their own programs to regulate hazardous waste. The programs must be at least as stringent as RCRA. California has developed its own program in the California HWCL (Health and Safety Code Section 25100, et seq.). Because California has elected to develop its own program, the HWCL performs essentially the same regulatory functions as RCRA and is the law that will regulate hazardous waste at CVEUP. However, the HWCL includes hazardous wastes that are not classified as hazardous waste under RCRA. Because hazardous wastes will be generated at the CVEUP facility during construction and operation, the HWCL will require the Applicant to adhere to storage, recordkeeping, reporting, and training requirements for these wastes.

5.14.5.3 Local LORS

The San Diego County Solid Waste Management Program is certified by the CIWMB as the Local Enforcement Agency for solid waste facilities in San Diego County and will be responsible for administering and enforcing the CIWMA for solid, nonhazardous waste for the CVEUP.

For hazardous waste, local regulation consists primarily of the administration and enforcement of the HWCL. San Diego County Department of Environmental Health HMD is the local entity responsible for inspecting hazardous waste generators and reviewing their procedures for storage, treatment, and disposal of hazardous wastes and for environmental contamination issues and site re-development (i.e., brownfields development)

The City of Chula Vista manages waste generation, recycling, and disposal programs through their Office of Conservation and Environment. In this regard, the City provides assistance to businesses in achieving their overall goal of maximizing recycling and minimizing waste that gets landfilled. The City of Chula Vista General Plan (2005) also provides guidance for remediation of contaminated sites and for siting and management of facilities that store, collect, treat, dispose or transfer hazardous waste.

For emergency spills, San Diego County Fire Department has a countywide Hazardous Materials (HazMat) Team consisting of firefighters who have completed formal training in Hazardous Materials Incident Response. The HazMat Team will identify the type and source of the hazardous material, oversee evacuation of people, and confine the spilled material, if possible. Cleanup of the material is the responsibility of the facility causing the spill. For hazardous materials incidents, the HIRT, a joint San Diego City and County program, will respond with resources from both San Diego City (Station No. 44 located at 10011 Black Mountain Road, San Diego), and San Diego County (1255 Imperial Ave. San Diego) would respond. Station No. 44 is approximately 21 miles from the project site. The county resources at Imperial Ave are approximately 15 miles away.

5.14.5.4 Codes

The design, engineering, and construction of hazardous waste storage and handling systems will be in accordance with all applicable codes and standards, including:

- The Uniform Fire Code
- The Uniform Building Code
- The Uniform Plumbing Code
- California Building Code
- California Fire Code
- City of Chula Vista Municipal Code

5.14.6 Involved Agencies and Agency Contacts

Several agencies, including USEPA at the federal level, and the DTSC and California Environmental Protection Agency at the state level, regulate nonhazardous and hazardous waste and will be involved in the regulation of the waste generated by the CVEUP project. The regulations, however, are administered and enforced primarily through the San Diego County Department of Environmental Health HMD, which is the designated CUPA. The persons to contact for nonhazardous and hazardous waste management are listed in Table 5.14-5.

TABLE 5.14-5
Agency Contacts for CVEUP Waste Management

Issue	Agency	Contact
Nonhazardous Waste		
Solid Waste and Recycling	City of Chula Vista General Services Department Environmental Services Division Public Works Facility 1800 Maxwell Road Chula Vista, CA 91911 (619) 397-6221 Email: lfrance@ci.chula-vista.ca.us	Lynn France, Conservation Manager
Hazardous Waste		
Hazardous Waste Compliance and Inspections	San Diego County Department of Environmental Health, Hazardous Materials Division P.O. Box 129261 San Diego, CA 92112-9261 (619) 338-2231 Email: joan.swanson@sdcounty.ca.gov	Joan Swanson, Hazardous Materials Duty Specialist

5.14.7 Permits Required and Permit Schedule

The temporary storage of hazardous wastes at the CVEUP will be included in the Hazardous Materials Business Plan submitted to the San Diego County Department of Environmental Health HMD as described in Section 5.5, Hazardous Materials. In addition, the Department of Environmental Health requires the permit listed in Table 5.14-6.

TABLE 5.14-6
Permits Required and Permit Schedule for CVEUP Waste Management

Permit	Agency Contact	Schedule
Unified Program Facility Permit	San Diego County Department of Environmental Health Hazardous Materials Division P.O. Box 129261 San Diego, CA 92112-9261 (619) 338-2231	Before storing regulated hazardous materials or wastes at the site.

5.14.8 References

Advantage. 2006. Phase I Environmental Site Assessment. Advantage Environmental Consultants, LLC. November 21.

Buoni, Marianna. 2007. Clean Harbor's Buttonwillow Landfill. Personal communication with John Putrich/CH2M HILL. June 11.

California Integrated Waste Management Board (CIWMB). 2007a. Solid Waste Information System (SWIS) Database.

California Integrated Waste Management Board (CIWMB). 2007b. *2006 Landfill Summary Tonnage Report*. <http://www.ciwmb.ca.gov/Landfills/Tonnages/>. June 26.

City of San Diego. 2005. City of San Diego General Plan. July.

Department of Toxic Substance Control (DTSC). 2007a. DTSC's Hazardous Waste and Substances Site List (Cortese List), San Diego County, July 2.
http://www.dtsc.ca.gov/SiteCleanup/Cortese_List.cfm

Department of Toxic Substance Control (DTSC). 2007b. *California Commercial Offsite Hazardous Waste Management Facilities*. March 12.

Luibel, Helen. 2007. Waste Management Inc., Kettleman Hills Facility. Personal communication with John Putrich/CH2M HILL. June.

Yarbrough, T. 2005. Waste Management Kettleman Hills. Personal communication with Sarah Madams/CH2M HILL. March 8 and August 30.