

3.13 WASTE MANAGEMENT

This section presents a discussion of the potential impacts associated with the incremental change of the generation, storage, and disposal of hazardous waste and non-hazardous wastes during the construction and operation of the proposed Larkspur 3 Energy Facility. Hazardous materials management is discussed in Section 3.5 of this Amendment. The following discusses environmental baseline information, waste streams generated during construction and operation of the Project, recommended mitigations measures, and consistency with applicable LORS.

3.13.1 Environmental Baseline

A Phase I Environmental Site Assessment (ESA) was prepared for the existing Larkspur Energy Facility site in accordance with American Society for Testing and Materials (ASTM) Practice E 1527-00 in December, 2000. The Project site was included in the December 2000 Phase I ESA analysis. The objective of the Phase I ESA was to identify Recognized Environmental Conditions (RECs) that may exist on the site. No RECs were identified.

The Project will generate hazardous and non-hazardous wastes during construction and operation of the facility. Section 3.13.2, below, provides a detailed description of the types of wastes anticipated at the site including solid non-hazardous waste, solid hazardous waste, and wastewater.

The proposed temporary construction laydown area is located southeast of the Project site at the southeast corner of the Heinrich Hertz Drive/Airway Road intersection within the City of San Diego. The temporary construction laydown area consists of highly disturbed land zoned for industrial use.

3.13.1.1 Non-Hazardous Solid Waste Disposal

Non-hazardous solid waste currently generated at the existing Larkspur Energy Facility is taken off site for recycling by Filter Recycling and disposed of in Rialto, California, or taken to a Class III landfill. Non-hazardous waste handling from the Project will correspond to the existing facility. Non-hazardous solid waste disposal facilities in the general area of the Project are listed in Table 3.13-1, Waste Recycling/Disposal Facilities. These Class III landfills accept non-hazardous wastes and inert solid wastes, including construction/demolition wastes. Liquid wastes are not accepted by these landfills. Industrial process solid waste is accepted on a case-by-case basis.

3.13.1.2 Hazardous Solid Waste Disposal

Hazardous waste currently generated at the existing Larkspur Energy Facility is taken off site for recycling or disposal by a permitted hazardous waste transporter to a permitted treatment, storage, and disposal facility or Class I landfill. Hazardous waste handling from the Project will correspond to the existing facility. Hazardous solid and liquid waste from the existing Larkspur Energy Facility is picked up by Clean Harbors and disposed of at Aragonite in Utah. There are two Class I landfills located in California currently accepting waste: Clean Harbors' Buttonwillow Landfill in Kern County, and Chemical Waste Management's Kettleman Hills Landfill in Kings County. The permitted, operating, and remaining capacities of these landfills are described in Table 3.13-1.

**TABLE 3.13-1
WASTE RECYCLING/DISPOSAL FACILITIES**

Solid Recycling/Waste Disposal Site	Title 23 Class	Permitted Capacity	Operating Capacity	Remaining Capacity	Estimated Closure Date	Enforcement Action Taken?
Otay Annex Landfill	Class III	42,346,170 cubic yards	1,825,000 tons per year	31,336,116 tons	2027	No
West Miramar Landfill	Class III	21,618,249 cubic yards	1,400,000 tons per year	13,835,679 tons	2011	No
Sycamore Landfill	Class III	24,000,000 cubic yards	909,996 tons per year	17,280,000 tons	2017	No
Thermal Remediation Solutions (Solids Recycling) 1211 West Gladstone Avenue Azusa, CA 91702	Class III	200,000 tons per year	2,000 tons per day	Not applicable	Not applicable	No
American Remedial Technologies (Solids Recycling) 2680 Seminole Avenue Lynwood, CA 90262	Class III	200,000 tons per year	19,900 tons per month	Not applicable	Not applicable	One notice of violation pertaining to odor in Year 2000
TPS Technologies, Inc. (Soil Recycling) 12328 Hibiscus Avenue Adelanto, CA 92301	Not applicable	Not applicable	350,000 tons per year	Not applicable	Not applicable	No
Chemical Waste Management Kettleman Hills Landfill (Solids Disposal) 36251 Old Skyline Road Kettleman City, CA 93239	Class I	10.7 million cubic yards per year	200,000 cubic yards per year	6-7 million cubic yards	2037 – 2038	No
Clean Harbors Buttonwillow Landfill (Solids Disposal) Lokern Road Kern County, CA	Class I	13.25 million cubic yards per year	130,000 – 150,000 cubic yards per year	10.9 million cubic yards	2068 – 2078	No
TPS Technologies, Inc. (Soil Recycling) 12328 Hibiscus Avenue Adelanto, CA 92301	Not Applicable	Not applicable	350,000 tons per year	Not applicable	Not applicable	No outstanding previous violations

**TABLE 3.13-1
WASTE RECYCLING/DISPOSAL FACILITIES
(CONTINUED)**

Solid Recycling/Waste Disposal Site	Title 23 Class	Permitted Capacity	Operating Capacity	Remaining Capacity	Estimated Closure Date	Enforcement Action Taken?
Liquid Recycling/Waste Disposal Site						
DeMenno/Kerdoon (Liquids Recycling) 2000 North Alameda Street Compton, CA 90222	Not applicable	84.1 million gallons per year of oily water and 123 million gallons per year of waste oil	Approximately 30 million gallons per year	Not applicable	Not applicable	No outstanding previous violations

3.13.1.3 Hazardous and Non-hazardous Liquids and Non-effluent Wastewater Streams

Liquid wastes are not accepted by all landfills. Only one wastewater treatment and recycling facility in California accepts Resource Conservation and Recovery Act (RCRA) hazardous, non-RCRA hazardous, and non-hazardous wastewater: the DeMenno/Kerdoon facility located in Compton, California (listed in Table 3.13-1). Non-hazardous liquid waste at the existing Larkspur Energy Facility is picked up by Clean Harbors and disposed of at the DeMenno/Kerdoon facility in Compton, California. Project waste disposal services will remain unchanged.

3.13.2 Environmental Consequences

Waste management impacts from a project are determined by utilizing the significance criteria summarized as follows:

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

3.13.2.1 Construction

3.13.2.1.1 Non-hazardous Solid Waste

The Project is anticipated to generate wastes typical for construction of a natural gas-fueled combustion turbine power generation facility. Solid waste generated from construction activities may include paper, wood, glass, plastics from packing material, waste lumber, insulation, scrap metal, concrete, and empty non-hazardous containers. These wastes will be segregated, where practical, for recycling. Non-recyclable wastes will be placed in covered dumpsters and removed on a regular basis by a certified waste handling contractor for disposal at a Class III landfill.

Non-hazardous and/or hazardous wastes are not expected to be encountered at the proposed temporary construction laydown area. If impacted soils are discovered during construction activities, they will be characterized and disposed of in accordance with all applicable LORS.

3.13.2.1.2 Hazardous Waste

Small quantities of hazardous wastes will likely be generated during Project construction. These wastes include substances such as waste paint, spent construction solvents, waste cleaners, waste oil, oily rags, waste batteries, and spent welding materials. Hazardous wastes generated during Project construction will be handled and disposed of in accordance with all applicable LORS. Hazardous wastes will be recycled or disposed of at a licensed Class I disposal facility, as appropriate. If managed and disposed of properly, these wastes will not cause significant environmental or health and safety impacts. Most of the hazardous waste, such as turbine-cleaning wastes, and used oil generated during construction, can be recycled. Therefore, hazardous wastes generated during construction of the Project are not expected to significantly impact available Class I landfill capacity.

3.13.2.1.3 Wastewater

Wastewater generated during construction of the Project will include sanitary wastes, equipment wash water, and stormwater runoff. Construction-related wastewater will be managed in accordance with all appropriate LORS. Wastewater is discussed in greater detail in Section 3.10, Soil and Water Resources.

3.13.2.2 *Operations and Maintenance*

3.13.2.2.1 Non-hazardous Solid Waste

The existing Larkspur Energy Facility produces maintenance and facility wastes typical of power generation operations. The following types of non-hazardous solid waste are currently generated: paper, wood, plastic, cardboard, deactivated equipment and parts, defective or broken electrical materials, empty non-hazardous containers, and other miscellaneous solid wastes including typical refuse generated by facility workers.

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

3.13.2.2.2 Hazardous Wastes

Hazardous wastes currently generated at the existing Larkspur Energy Facility include spent catalyst from the SCR, used oils from equipment maintenance, waste equipment wash water, and oil-contaminated materials such as spent oil filters, rags, or other cleanup materials. Spent catalyst is returned to the manufacturer for metals reclamation and/or disposal. Used oil generated will be recycled, and oil or heavy-metal-contaminated materials (e.g., filters) requiring disposal will be disposed of in a Class I waste disposal facility. Other occasional waste streams include alkaline or acid-cleaning solutions used during chemical cleaning of the CTG.

Hazardous wastes generated from the Project are anticipated to be similar to wastes generated from the existing Larkspur Energy Facility. However, the Project will include an oxidation catalyst system. The spent oxidation catalyst will be recycled to the manufacturer.

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

Hazardous wastes generated during operation of the Project as an increment to the existing Larkspur Energy Facility are not expected to significantly impact available landfill capacity.

3.13.2.2.3 Wastewater

Industrial wastewater at the existing Larkspur Energy Facility consists of cooling tower blowdown, RO reject, and oil-water separator effluent.

Circulating (or cooling) water system blowdown consists of potable makeup water and other recovered process wastewater sources that have been concentrated by evaporative losses in the cooling tower, and residues of the chemicals added to the circulating water. These chemicals control scaling and biological growth in the cooling tower and corrosion of the circulating water piping and heat exchanger tubes. Cooling water treatment requires the addition of a pH control agent (acid), a mineral scale dispersant (polyacrylate polymer), corrosion inhibitors (phosphate based), and biocide (sodium hydroxide or equivalent). A portion of this concentrated water is removed from the cooling tower via the blowdown to prevent the mineral scale formation on heat transfer surfaces.

Area drains are located near mechanical equipment where it is determined that oil could mix with rainwater or other water sources. Wastewater from all facility drains, including the RO reject water, cooling tower overflow/blowdown, and water from the oil-water separator effluent are discharged to the City sewer system. The oil wastewater from the oil-water separator and wash wastewater are shipped off site as hazardous waste and recycled. Oily wastewater from the gas compressor drain tanks that contain concentrations of benzene is disposed of as a hazardous waste in accordance with all applicable LORS. Area drains for the Project will also be routed through the oil-water separator and discharged to the City sewer system. Any oily hazardous waste will also be disposed of in accordance with all applicable LORS.

Stormwater from the existing Larkspur Energy Facility is currently directed by site grading to the southeast corner of the site. There are no storm drains at the existing facility, and the site is not connected to the municipal storm sewer system. Stormwater currently drains by sheet flow to a riprap dissipater pad draining to the undeveloped parcel to the southeast. Stormwater from the site and the surrounding area flows through a series of dry creeks into the Tijuana River, which eventually flows to the Pacific Ocean. Stormwater from the Project will follow the same route as the existing Larkspur Energy Facility.

The domestic waste system collects discharge from sinks, toilets, and other sanitary facilities and discharges to a City sewer connection.

The Project will increase the amount of wastewater generated and stormwater runoff. Increases in wastewater will be minimal (see more details in Section 3.10 including Table 3.10-4). The additional wastewater and stormwater generated during operation of the Project, as an increment to the existing Larkspur Energy Facility, is not expected to have a significant impact.

3.13.3 Mitigation Measures

3.13.3.1 Construction

- **WM-1** Prior to the initiation of Project construction, construction workers will receive hazardous waste-related training, focusing on the recognition of potentially hazardous building materials and subsurface soil contamination and contingency procedures to be followed to protect worker safety and the public.
- **WM-2** A detailed waste management plan for all waste generated during construction will be prepared at least 60 days prior to rough grading to assure proper storage, labeling, packaging, recordkeeping, manifesting, waste minimization principles, and disposal of all hazardous materials and waste. The waste management plan will include:
 - A description of each hazardous waste stream.
 - Handling, storage, transport, treatment, and disposal procedures for each waste.
 - Preparedness, prevention, contingency, and emergency procedures.
 - Personnel training.
- **WM-3** All hazardous wastes will be stored on site for fewer than 90 days (or other accumulation periods as allowed by 22 CCR, Section 66262.34 for hazardous waste generators) and will be managed in accordance with all state and federal hazardous waste generator requirements. Hazardous wastes, as well as hazardous materials that are spilled or otherwise become unsuitable for use, will be stored in an appropriately segregated hazardous waste storage area surrounded by a containment structure to control leaks and spills. The containment area will be constructed according to local codes and requirements. The hazardous waste storage areas will be inspected and maintained at least weekly, as required.
- **WM-4** Hazardous wastes will be collected in appropriate containers by the construction contractor and removed from the Project site by a licensed hazardous waste hauler and disposed of at a licensed hazardous waste facility. Hazardous wastes are transported off site using a hazardous waste manifest. Copies of manifest reports, waste analysis, exception reports, destruction certifications, etc., will be kept on site and accessible for inspection for a period of 3 years. Land disposal restriction notices/certificates will be kept on site and accessible for inspection for a period of 5 years.
- **WM-5** Construction employees will have been trained in hazardous materials handling as required by OSHA, Hazard Communication Standard. Additionally, employees will be trained in hazardous waste procedures, spill contingencies, and waste minimization procedures in accordance with CCR Title 22. Hazardous waste training includes the following subjects:

- Hazardous waste characteristics
 - Use and management of containers
 - Waste packing
 - Marking and labeling
 - Accumulation/storage areas
 - Inspections
 - Emergency equipment preparedness and prevention
 - Contingency plan
 - Emergency response procedures
 - Spill response and containment
 - Hazardous waste manifesting and transportation requirements
 - Waste minimization practices
- **WM-6** Procedures to minimize hazardous waste generation will be established; such as:
 - Employees will be trained in procedures to reduce the volume of hazardous wastes generated at the Project site
 - The procurement of hazardous materials will be controlled to minimize surplus materials on site and to prevent unused materials from becoming out of date.
 - Non-hazardous materials will be used in lieu of hazardous materials whenever possible.
 - Hazardous materials will be reused whenever possible.
 - Hazardous wastes will be recycled whenever possible.

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

3.13.3.2 Project Operation and Maintenance

Implementation of the procedures for handling operation-related non-hazardous, and hazardous wastes, currently implemented at the existing Larkspur Energy Facility will mitigate Project operation-related impacts to a less-than-significant level. No further mitigation is proposed.

3.13.4 Consistency with LORS

Construction and operation of the Project will be in accordance with all applicable LORS pertaining to waste management as described below.

TABLE 3.13-2
LORS APPLICABLE TO WASTE MANAGEMENT

LORS	Applicability
Federal	
RCRA Subtitle C and D, 42 USC §§ 6901 to 6992k, and Section 6.12.2.1.	Regulate non-hazardous and hazardous wastes. Laws implemented by the state
40 CFR 260, <i>et seq.</i>	Implementing regulations for RCRA Subtitle C law. Implemented by EPA by delegating to the state
Federal Clean Water Act, 33 USC § 1251 <i>et seq.</i>	Regulates wastewater discharges to surface waters of the U.S. The NPDES program is administered at the state level
State	
California Integrated Waste Management Act, Public Resources Code § 40000 <i>et seq.</i>	Implements RCRA regulations for non-hazardous waste
Porter-Cologne Water Quality Control Act of 1998, Water Code § 13000 <i>et seq.</i>	Regulates wastewater discharges to surface and groundwater of California. NPDES program implemented by SWRCB
22 CCR § 66262.34	Regulates accumulation periods for hazardous waste generators. Typically hazardous waste cannot be stored on site for more than 90 days
California Hazardous Waste Control Law, California Health and Safety Code § 25100 <i>et seq.</i>	Regulates hazardous waste handling and storage. Implemented by the County of San Diego DEH, HMD
Local	
The County of San Diego DEH HMD	Regulates enforcement responsibility for the implementation of Title 23, Division 3, Chapters 16 and 18 of the CCR, as it relates to hazardous material storage and petroleum UST cleanup
The County of San Diego DEH HMD	Regulates hazardous waste generator permitting, and hazardous waste handling and storage
The City of San Diego Solid Waste LEA	Will ensure all new development complies with applicable provisions of County Integrated Solid Waste Management Plan

Notes:

CFR = Code of Federal Regulations
 DEH = Department of Environmental Health
 EPA = U.S. Environmental Protection Agency
 HMD = Hazardous Materials Division
 LEA = Local Enforcement Agency
 NPDES = National Pollutant Discharge Elimination System
 RCRA = Resource Conservation and Recovery Act
 SWRCB = State Water Resource Control Board
 USC = U.S. Code
 UST = underground storage tank

3.13.4.1 Federal

The RCRA, 42 USC, Section 6901 to 6992k, provides the basic framework for federal regulation of non-hazardous and hazardous waste. RCRA's Subtitle D establishes state responsibility for regulating non-hazardous wastes, while Subtitle C controls the generation, transportation, storage and disposal of hazardous waste through a comprehensive "cradle to grave" system of hazardous waste management techniques and requirements. The EPA is responsible for implementing the law, and the implementing regulations are set forth in 40 CFR 260, *et seq.* The law allows EPA to delegate the administration of the RCRA programs to the various states provided that the state programs meet the federal requirements. California's program was authorized by EPA on August 1, 1992, and California EPA's DTSC is responsible for administering the program.

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

3.13.4.2 State

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

Wastewater is regulated under California's Porter-Cologne Water Quality Control Act, which established a statewide system for water pollution control, Water Code, Section 13000 *et seq.* The State Water Resources Control Board (SWRCB) and the nine Regional Water Quality Control Boards (RWQCB) are the principal agencies responsible for control of water quality and issuing permits under the NPDES program.

Accumulation of hazardous waste on site is regulated under the CCR, Section 66262.34. Hazardous waste cannot be stored on site for more than 90 days, so any hazardous waste stored on site at the facility would have to be appropriately transferred within that time period.

As stated previously, RCRA allows states to develop their own programs to regulate hazardous waste. California has developed its own program by passage of the California Hazardous Waste Control Law, California Health and Safety Code, §25100 *et seq.* It should be noted that California's Hazardous Waste Control Law includes non-RCRA hazardous wastes. In addition, the law specifies two hazardous waste criteria (Soluble Threshold Limit Concentration and Total Threshold Limit Concentration) that are not required under RCRA. Primary authority for the statewide administration and enforcement of California's

Hazardous Waste Control Law rests with the DTSC. However, the County of San Diego DEH HMD implements hazardous waste regulations.

3.13.4.3 Local

For hazardous waste, the designated Certified Unified Program Agency (CUPA) for the existing Larkspur Energy Facility site is the County of San Diego DEH HMD. They have delegated authority to administer state and federal programs. The County of San Diego DEH HMD regulates the storage of hazardous materials in USTs and cleanup of petroleum releases from USTs under Ordinance No. 617.4. The County of San Diego DEH HMD, as well as the City of San Diego Fire Department, will be contacted in the event of a release of hazardous wastes or materials to the environment. The County of San Diego DEH HMD assumes enforcement responsibility for the implementation of Title 23 of the CCR and regulates the generation and storage of hazardous waste for the existing Larkspur Energy Facility area.

The Project will comply with all CUPA requirements (which includes federal and state regulations) pertaining to hazardous waste management.

3.13.5 References Cited

Barclays Law Publishers. ND. Barclays Official California Code of Regulations.

California Energy Commission, 2001. Larkspur Energy Facility Conditions of Certification. Located at http://www.energy.ca.gov/sitingcases/peakers/larkspur/documents/01_Larkspur_SA.PDF

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

Meredith/Boli & Associates, Inc. 2000. Environmental Site Assessment , Property located at Airway Road and Heinrich Hertz Drive, San Diego, California.

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

Wildflower Energy, Application for Certification Pursuant to the 21-Day Emergency Permitting Process Larkspur Energy Facility San Diego, California, March 7, 2001.

3.13.6 Conditions of Certification

This Amendment does not require changes to the conditions identified in the 2001 AFC Conditions of Certification (CEC 2001).