

8.13 Waste Management

This section evaluates the potential effects on human health and the environment from nonhazardous and hazardous waste generated at the South Bay Replacement Project (SBRP). The handling and management of waste generated by SBRP 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 the reuse or recycle of wastes (e.g., used oil recycling). For wastes that cannot be recycled, treatment will be used, if possible, to make the waste non-hazardous (e.g., neutralization). Finally, offsite disposal will be used to dispose of residual wastes that cannot be reused, recycled, or treated.

The SBRP project consists of three phases:

- **The Construction Phase** – The first phase is the demolition of existing structures and foundations associated with the former Liquefied Natural Gas (LNG) Facility, preparation of construction lay down areas, and the construction of the SBRP. Initial operations of SBRP will include an interim interconnection to the San Diego Gas & Electric Company (SDG&E) transmission system through a new 230-kilovolt ampere (kVA) substation on approximately 0.6 acre (interconnecting to SDG&E's planned new 230-kilovolt [kV] transmission line) and an underground interconnection to the existing SDG&E South Bay 138/69 kV substation.¹
- **The Demolition Phase** – The second phase of Project construction activities will occur after the SBRP achieves commercial operation. The construction activity during this phase will be the demolition of the existing South Bay Power Plant (SBPP) facilities, excluding SDG&E's existing South Bay Substation which will remain in service until the new substation is constructed.
- **The New Substation Phase** – The final phase of the Project will involve the construction of the SDG&E substation on approximately 6.5 acres south of and adjacent to the SBRP site. This construction will be performed after the start up of the SBRP and demolition of SBPP. After the new SDG&E substation construction is completed and operational, and the SBRP generator leads are attached to the new facilities, SDG&E could then initiate demolition activities on the South Bay Substation, located north of the SBRP Project site. These demolition activities, however, are not part of the scope of this Application for Certification (AFC). They are part of a separate project of unknown timing and scope.

The reason there are two interconnect steps is to ensure that interconnection can be secured by the proposed on-line date of SBRP (2010). Also, SDG&E holds certain obligations associated with a new substation as part of its MOU with the City of Chula Vista, but these obligations occur *after* the demolition of the South Bay Power Plant (SBPP).

¹ SDG&E was granted a Certificate of Public Convenience and Necessity (CPCN) for the Otay Mesa Power Purchase Agreement (OMPPA) Transmission Project. The CPCN is for the construction of two new 230-kV electric transmission circuits to connect SDG&E's Miguel Substation with both the Sycamore Canyon Substation and the Old Town Substation in San Diego County. The circuit to the Old Town Substation is planned to pass within approximately 100 feet of the proposed SBRP. This project is under construction. The SBRP interconnection plan is based in part on interconnecting to this circuit.

Subsection 8.13.1 presents laws, ordinances, regulations, and standards (LORS) that apply to the SBRP-generated waste. Subsection 8.13.2 describes the current condition of the proposed site, and Subsection 8.13.3 describes the waste and waste streams that are expected to be generated by the project. Subsection 8.13.4 describes potential waste disposal sites for nonhazardous and hazardous waste, and Subsection 8.13.5 describes methods that will be employed to manage the generated waste and mitigate its impacts on the environment. Subsection 8.13.6 discusses cumulative impacts, and Subsection 8.13.7 describes waste monitoring. Subsection 8.13.8 describes agencies that have jurisdiction over the generated waste and persons to contact in those agencies. Subsection 8.13.9 describes permits required for waste generated and a schedule for obtaining those permits, and Subsection 8.13.10 provides the references used to prepare this subsection.

8.13.1 Laws, Ordinances, Regulations, and Standards

Nonhazardous and hazardous waste handling at SBRP 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 protect facility workers and the surrounding community from exposure to nonhazardous and hazardous waste. The LORS applicable to waste handling at the SBRP facility are summarized in Table 8.13-1.

TABLE 8.13-1
Laws, Ordinances, Regulations, and Standards Applicable to SBRP Waste Management

LORS	Purpose	Applicability (AFC Section Explaining Conformance)
Federal		
Resource Conservation and Recovery Act (RCRA) Subtitle D	Regulates design and operation of solid waste landfills	SBRP solid waste will be collected and disposed of by a collection company in conformance with Subtitle D (Subsections 8.13.5.1, 8.13.6, 8.13.2.1).
RCRA Subtitle C	Controls storage, treatment, and disposal of hazardous waste.	Hazardous waste will be handled by contractors in conformance with Subtitle C (Subsection 8.13.6).
Clean Water Act (CWA)	Controls discharge of wastewater to the surface waters of the U.S.	SBRP will discharge plant and sanitary wastewater to the City of Chula Vista's sanitary sewer (Subsections 8.13.4, 8.13.8, and 8.14).
State		
California Integrated Waste Management Act (CIWMA)	Controls solid waste collectors, recyclers, and depositors.	SBRP solid waste will be collected and disposed of by a collection company in conformance with the CIWMA (Subsections 8.13.5.1, 8.13.6.1 and 8.13.6).
CA 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 (Subsections 8.13.6.1 and 8.13.6.2).
Porter-Cologne Water Quality Control Act	Controls discharge of wastewater to the surface and ground waters of California.	SBRP will discharge industrial and sanitary wastewater to the City of Chula Vista's sanitary sewer (Subsections 8.13.4, 8.13.8 and 8.14).

TABLE 8.13-1

Laws, Ordinances, Regulations, and Standards Applicable to SBRP Waste Management

LORS	Purpose	Applicability (AFC Section Explaining Conformance)
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 (Subsection 8.13.10).
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.	SBRP will comply with the City's Hazardous Materials and Waste requirements as detailed in Chapter 9, Section 3.4 of the General Plan (Subsection 8.13.1.3)
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 (Subsection 8.13.1.3)
San Diego County Department of Environmental Health, Hazardous Material Division (HMD) various programs	HMD is the 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.	SBRP 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. (Subsection 8.13.1.3)
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act	
SARA	Superfund Amendments and Reauthorization Act	
RMP	Risk Management Plan	
TPQ	Threshold Planning Quantity	
HMBP	Hazardous Materials Business Plan	
CAA	Clean Air Act	
CUPA	Certified Unified Program Agency	
EHS	Extremely hazardous substance.	
SERC	State emergency response commission	
LEPC	Local emergency planning committee.	

8.13.1.1 Federal

Wastewater is regulated by the U.S. Environmental Protection Agency (USEPA) under the Clean Water Act (CWA). Plant industrial and sanitary wastewater will be discharged to the City of Chula Vista's sanitary sewer system (see Subsection 8.14).

The federal statute that controls both nonhazardous and hazardous waste is the Resource Conservation and Recovery Act (RCRA), 42 USC 6901, et seq. RCRA's implementing regulations for hazardous waste are found at 40 CFR 260, et seq. and for nonhazardous waste at 40 CFR 239 et seq. Subtitle D of RCRA makes the regulation of nonhazardous waste the responsibility of 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 generators of hazardous waste (above certain levels of waste produced). SBRP will comply with 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.

8.13.1.2 State

Nonhazardous solid waste is regulated by the California Integrated Waste Management Act (CIWMA) of 1989, found in Public Resources Code (PRC) 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 SBRP solid waste. It also affects SBRP to the extent that hazardous wastes are not to be disposed of with solid waste.

Wastewater is regulated by the State Water Resources Control Board and Regional Water Quality Control Boards under the Porter-Cologne Water Quality Control Act. Sanitary and plant wastewater will be discharged to the City of Chula Vista’s sanitary sewer (see Subsection 8.14). Storm water will be managed as described in Subsection 8.14.

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 Hazardous Waste Control Law (HWCL) (Health and Safety Code Section 25100, et seq.). The HWCL performs essentially the same regulatory functions as RCRA and is the law that will regulate hazardous waste at SBRP, since California has elected to develop its own program. However, the HWCL includes hazardous wastes that are not classified as hazardous waste under RCRA. Since hazardous wastes will be generated at the SBRP facility during construction and operation, the HWCL will require the Applicant to adhere to storage, recordkeeping, reporting, and training requirements for these wastes.

8.13.1.3 Local

Among the local LORS discussed in this section are certain ordinances, plans or policies of the City of Chula Vista. For informational purposes, this section reviews compliance of the Project with such requirements even though the Applicant understands that they are not applicable to the Project as a matter of law. (See Section 8.4 – Land Use for a discussion of this issue.) The analysis of City LORS in this section is informational and does not address the jurisdictional issues which is discussed in Section 8.4 – Land Use.

The San Diego County Solid Waste Management Program is certified by the California Integrated Waste Management Board (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 SBRP.

For hazardous waste, local regulation consists primarily of the administration and enforcement of the HWCL. San Diego County Department of Environmental Health

Hazardous Material Division (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 (Haz Mat) Team consisting of firefighters who have completed formal training in Hazardous Materials Incident Response. The Haz Mat 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. The nearest Haz Mat team is located at San Diego County Fire Department Station No. 44, located at 10011 Black Mountain Road, San Diego, approximately 21.3 miles from the project site.

8.13.1.4 Codes

Among the local LORS discussed in this section are certain ordinances, plans or policies of the City of Chula Vista. For informational purposes, this section reviews compliance of the Project with such requirements even though the Applicant understands that they are not applicable to the Project as a matter of law. (See Section 8.4 for a discussion of this issue.) The analysis of City LORS in this section is informational and does not address the jurisdictional issues discussed in Section 8.4.

The SBRP design, engineering, and construction of waste storage and handling systems will be in accordance with all applicable codes and standards detailed on the web site for the City of Chula Vista Department of Planning and Building, Building Division, required as of October 1, 2005, including:

- 2001 Edition of the California Building Code
- 2001 Edition if the California Plumbing Code
- 2004 Edition if the California Electrical Code
- 2001 Edition if the California Mechanical Code
- 2001 Edition if the California Fire Code
- 2005 Edition if the California Energy Code
- 2000 Edition of the Urban-Wildland Interface Code
- 1997 Edition of the Uniform Code for Abatement of Dangerous Buildings

8.13.2 Environmental Condition of Site

This section discusses the condition of the SBRP project site, in terms of the potential need to remove or otherwise treat contaminated soil or groundwater at the site. The SBRP includes site preparation and construction of the SBRP on 12.9 acres of the 33-acre former LNG site,

the construction of the relocated SDG&E substation on 6.5 acres of the 33-acre site and demolition of the existing SBPP site and associated facilities.

8.13.2.1 Site Investigations

8.13.2.1.1 Proposed SBRP Site

The SBRP and relocated SDG&E substation will be constructed on 12.9 acres and 6.5 acres, respectively, of the 33-acre former LNG site. While the former above-ground LNG storage tanks were removed from the site in 1989, the remaining tank foundations and spill containment berms will be removed as part of the SBRP construction and demolition activities. Investigations of the former LNG site that have been undertaken to determine whether or not contamination is present that could warrant removal or remediation have included a Phase I Environmental Site Assessment (see Appendix 8.13A). Based on the Phase I site assessment, there is no evidence of soil and groundwater contamination beneath the former LNG site upon which the SBRP will be constructed (DE&S, 2001).

While no evidence was uncovered that would indicate a potential for contaminated soil or groundwater beneath the SBRP site, it is possible that contaminated soils could be encountered during demolition of the former LNG facilities in preparation for the SBRP construction. The Phase I Environmental Site Assessment for the former LNG site recommended that an environmental professional be present during excavation and grading activities to inspect for the presence of any previously undisclosed environmental conditions.

8.13.2.1.2 Existing SBPP Site

Previous Phase I and Phase II Environmental Site Assessments for the existing 115-acre SBPP site indicate that there is a potential for varying levels of heavy metals, petroleum hydrocarbons, and PCBs in the subsurface soils and groundwater (Fluor Daniel GTI, 1998 a, b (see Appendix 8.13A)). Any remediation of the existing SBPP site to address such known soil contamination is the responsibility of SDG&E and is not a part of the demolition phase of the SBRP project. The remediation measures to be undertaken by or on the behalf of SDG&E for such known soil contamination will be under the direct oversight of the California Department of Toxic Substances Control (DTSC) as the lead agency for remediation of the existing SBPP site.

After initial Phase II sampling and analysis of 14 different investigation areas at the SBPP site, data were integrated with a Baseline Human Risk Assessment (BHRA) and five specific recognized environmental conditions were identified, as follows (Fluor Daniel GTI, 1998b):

- I. Jet Fuel Tank Area – Free-phase fuel hydrocarbons in groundwater and soil contamination with hydrocarbons. The free-phase hydrocarbons were expected to require remediation.
- II. First Generation Surface Impoundments – Metal and hydrocarbon contamination in soil was identified. Modeling results indicated a potential for metals migration to groundwater. The Phase II report recommended evaluating approaches for remediating metals and hydrocarbons.
- III. UST Area – The benzene concentration in groundwater in a monitoring well near the USTs exceeded the RWQCB criteria. The Phase II report recommended evaluating approaches for remediating benzene in groundwater.

- IV. TCE and DCE in groundwater – A plume of dissolved TCE and DCE was identified in the eastern part of the SBPP site at levels exceeding the RWQCB Basin Plan groundwater action levels. The Phase II report recommended identifying the source of the TCE contamination and evaluating approaches for remediating TCE and DCE in groundwater.
- V. East Loop – Identified soil contamination from a fuel release in an area south of the SBPP, known as the East Loop. While impacted soils were excavated, subsequent borings identified localized remnant soil hydrocarbon contamination. The Phase II report recommended evaluating approaches for remediating soil hydrocarbon contaminants.

The Phase II Environmental Site Assessment for the SBPP site also concluded that off-site sources were not contributing to soil or groundwater contamination at the SBPP site. It was also acknowledged that several locations at the SBPP site could not be accessed because they were beneath existing structures such as the power plant buildings, tanks, and piping (Fluor Daniel GTI, 1998 b).

8.13.3 Project Waste Generation

Wastewater, solid nonhazardous waste, and liquid and solid hazardous waste will be generated at the SBRP site during facility construction and operation, and during demolition and site preparation prior to construction. Solid nonhazardous waste will also be generated during the construction of the electric transmission line, the natural gas supply line, the potable water supply line, and the sewer line.

8.13.3.1 Construction Phase

During construction of SBRP, the primary waste generated will be solid nonhazardous waste. However, some nonhazardous liquid waste and hazardous waste (solid and liquid) will also be generated. Most of the hazardous wastes will be generated at the SBRP plant site, but a small quantity of hazardous waste will be generated during construction of the electric transmission line, natural gas supply line, potable water line, and the wastewater sewer line. The types of waste and their estimated quantities are described below.

8.13.3.1.1 Nonhazardous Solid Waste

Listed below are nonhazardous waste streams that could potentially be generated from construction of the generating facility, the electric transmission line, and other supply/disposal lines.

Paper, Wood, Glass, Plastics, and Concrete

Paper, wood, glass, and plastics will be generated from packing materials, waste lumber, insulation, and empty nonhazardous chemical containers. Approximately 8,000 pounds of these wastes will be generated on a monthly basis 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.

Metal

Metal will include steel from welding/cutting operations, packing materials, and empty nonhazardous chemical containers. Aluminum waste will be generated from packing

materials and electrical wiring. Approximately 14 tons of waste metal (based on 1,000 lbs. per month during the 28-month construction schedule) will be generated during construction. Waste will be recycled where practical and nonrecyclable waste will be deposited in a Class III landfill.

8.13.3.1.2 Nonhazardous Wastewater

Nonhazardous wastewater will be generated, including sanitary wastewater, equipment washwater, stormwater runoff, and wastewater from pressure testing the gas supply line. Sanitary waste will be collected in portable, self-contained toilets. Equipment washwater will be contained at specifically designated wash areas and disposed of offsite. Stormwater runoff will be managed in accordance with the contractor-developed stormwater pollution prevention plan (SWPPP) that will be approved by the appropriate agencies prior to the start of construction.

The gas supply pipeline hydrostatic test water will be filtered to collect any sediment and welding fragments. The water will be collected, tested, and disposed of by the pipeline contractor, as described in Section 6.0, Natural Gas Supply.

8.13.3.1.3 Hazardous Waste

Most of the hazardous waste generated during construction will consist of liquid waste, such as 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.

Flushing and cleaning waste liquid will be generated when pipes and boilers are cleaned and flushed. Passivating fluid waste is generated when high temperature pipes are treated with either a phosphate or nitrate solution. The volume of flushing and cleaning and passivating 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.

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, including 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 one of the site's construction laydown areas. The waste will be removed from the site by a certified hazardous waste collection company and delivered to an authorized hazardous waste management facility, prior to expiration of the 90-day storage limit. Table 8.13-2 lists wastes expected to be generated during the construction phase at the SBRP facility.

TABLE 8.13-2
Wastes Generated during the Construction Phase at the SBRP Facility

Waste	Origin	Composition	Estimated Quantity	Classification	Disposal
Scrap wood, glass, plastic, paper, calcium silicate insulation, mineral wool insulation		Normal refuse	8,000 lbs/mo (dumpster)	Non-hazardous	Recycle and/or dispose of in a Class II or III landfill
Scrap Metals		Parts, containers	1,000 lbs/mo	Non-hazardous	Recycle and/or dispose of in a Class III landfill
Empty liquid material containers		Drums, containers, totes	100 containers*	Non-hazardous 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, i.e. welding rods		Solid	100 lbs/mo	Non-hazardous	Recycle with vendors or Dispose at a Class I landfill if hazardous
Waste oil filters	Construction equipment and vehicles	Solids	100 lbs/mo	Non-hazardous	Recycle at a permitted TSDF
Used and waste lube oil	CT and ST lube oil flushes	Hydrocarbons	200 drums (life of project construction)	Hazardous	Recycle at a permitted TSDF
Oily rags, oil sorbent excluding lube oil flushes	Cleanup of small spills	Hydrocarbons	Two 55-gal drums/mo	Hazardous	Recycle or dispose at a permitted TSDF
Solvents, paint, adhesives	Maintenance		180 lbs/mo	Hazardous	Recycle at a permitted TSDF
Spent lead acid batteries	Construction equipment, trucks.	Heavy metals	5 batteries per year	Hazardous	Store no more than 10 batteries (up to 1-year) – recycle offsite.
Spent alkaline batteries	Equipment	Metals	10 batteries per month	Universal Waste solids	Recycle or dispose offsite at an Universal Waste Destination Facility
Steam turbine cleaning waste	Pre-boiler piping	Corrosive cleaning chemicals	200 gallons before plant startup	Hazardous or non-hazardous liquid	Dispose at a permitted TSDF
Waste oil	Equipment, vehicles	Hydrocarbons	50 gal/mo	Non-RCRA Hazardous Liquid	Dispose at a permitted TSDF

TABLE 8.13-2
Wastes Generated during the Construction Phase at the SBRP Facility

Waste	Origin	Composition	Estimated Quantity	Classification	Disposal
Sanitary waste	Portable toilet holding tanks		500 gal/day	Non-Hazardous Liquid	Remove by contracted sanitary service
Stormwater	Rainfall	Water	2 acre-feet (from 10-yr storm event)	Non-Hazardous Liquid	Discharge to stormwater drain
Fluorescent, mercury vapor lamps	Lighting	Metals and PCBs	500 lbs/yr	Universal Waste solids	Recycle or dispose offsite at an Universal Waste Destination Facility
Passivating and chemical cleaning fluid waste	Pipe cleaning and flushing		600,000 gal (life of project construction)	Hazardous or non-hazardous 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 (life of project construction)	Hazardous or non-hazardous liquid	Sample and characterize – if clean, dispose of in storm drain; otherwise, manage appropriately offsite

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

8.13.3.2 Demolition Phase

The following subsections describe the type and estimated amounts of wastes that will be generated from the demolition of the existing SBPP sites.

8.13.3.2.1 Non-Hazardous Waste

The non-hazardous waste generated as part of the existing SBPP site demolition will include:

- Wood from buildings classified as a non-hazardous and non-recyclable waste.
- Mixed nonhazardous wastes including debris that has wood, metal, or other non-hazardous 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 non-hazardous.
- Electrical equipment that have been classified as non-hazardous and cannot be salvaged.
- Duct work or other ventilation material that is determined to be non-recyclable and that has been classified as non-hazardous.
- General waste that has been classified as non-hazardous.

There will be approximately 6,000 cubic yards (cy) of non-hazardous waste generated. All non-hazardous material will be stockpiled in the vicinity of 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 Storm Water Pollution Prevention Plan (SWPPP) will be prepared for the management of storm water during construction and demolition activities, as described in Subsection 8.14. Appendix 8.14A presents a copy of a draft Construction Drainage Erosion and Sediment Control Plan / SWPPP. The SWPPP will address the engineering controls that will be required for management of non-hazardous waste.

8.13.3.2.2 Hazardous Waste

Hazardous waste generated as part of the SBPP demolition will include:

- Electrical equipment that has been classified as hazardous and cannot be salvaged.
- Asbestos-containing building materials
- Refractory materials which may contain heavy metals
- Lead based paint
- Trench sludge which may contain metals or PCBs from the feedwater system or cooling water chemical treatment
- Used oils removed from equipment
- Various universal wastes (e.g., fluorescent light tubes)

There will be approximately 8,000 cy of asbestos, 1 cy of lead-based paint, and 1,000 cy of refractory hazardous waste generated. 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 storm water during demolition activities. A Construction Waste Management Plan will be prepared to describe procedures that will be used during demolition and construction activities.

8.13.3.2.3 Equipment for Re-Sale

As part of the SBPP 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 non-hazardous or hazardous waste.

The types of equipment that may be salvaged include:

- | | |
|----------------|---------------------|
| • Tanks | • Control Equipment |
| • Pumps | • Motors |
| • Turbines | • Furnaces |
| • Generators | • Boilers |
| • Transformers | |

8.13.3.2.4 Recyclable Material

It is estimated that 60,000 cy (120,000 tons) of concrete will be reused onsite as backfill and 12,000 cy (23,000 tons) of metal recycled. The metal consists of fencing, tanks, support beams, piping, miscellaneous building materials, equipment, and components.

Additionally, wood including railroad ties, plastic, electrical components, and other miscellaneous materials will be recycled when practical.

There will be approximately 1,500 railroad ties to be recycled including 200 from the former LNG site and 1,300 from the SBPP site. A waste minimization program will be established to recycle and reuse as much of the demolition materials as economically and practically possible.

8.13.3.3 Operation Phase

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

8.13.3.3.1 Nonhazardous Solid Waste

The majority of nonhazardous waste will be wastewater discharged to the sewer. The SBRP facility will also produce maintenance and generating facility wastes typical of power generation operations. 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. The quantity generated is estimated to be about 65 tons per year. Large metal parts will be recycled.

8.13.3.3.2 Nonhazardous Wastewater

Water balance diagrams, provided in Figures 2.2-6a through 2.2-6b, illustrate the expected wastewater streams and flow rates for the SBRP generating facility. As described in Section 8.14, Water Resources, the wastewater collection system will collect sanitary wastewater from sinks, toilets, and other sanitary facilities and discharge the wastewater to the City's sanitary sewer, which will convey the wastewater to the City of San Diego's wastewater treatment facilities. New sewer line connections will be installed to connect the SBRP site to the existing City of Chula Vista sewer line. The City of Chula Vista has provided a "will serve" letter to the project Applicant for the discharge of wastewater to the City's sewer system (see Appendix 8.14C).

Plant Drains-Oil/Water Separator

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 routed to the facility wastewater collection system. Drains that could contain oil or grease will first be routed through an oil/water separator. Water from the plant wastewater collection system will be discharged to a wastewater storage tank and then to the sanitary sewer. Wastewater from combustion turbine water washes will be collected in a holding tank. If cleaning chemicals were not used during the water wash procedure, the wastewater will be discharged to the oil/water separator. Wastewater containing cleaning chemicals will be trucked offsite for disposal at an approved wastewater disposal facility.

8.13.3.3.3 Hazardous Waste

Hazardous waste generated will include waste lubricating oil, used oil filters, spent SCR and oxidation catalysts, and chemical cleaning wastes. The catalyst units will contain heavy metals that are considered hazardous. Chemical cleaning wastes will be generated from the

periodic cleaning of the HRSGs and associated piping. They will consist of alkaline and acidic cleaning solutions used during chemical cleaning of the HRSG boiler system turbine wash and HRSG fireside washwaters. These wastes generally 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. After testing, water collected from the chemical storage areas will be directed to the oil/water separator if clean or, if not, it will be containerized and shipped offsite for disposal. The quantity of this effluent is expected to be minimal.

Hazardous wastes that will be generated at the facility are summarized in Table 8.13-3.

TABLE 8.13-3
Hazardous Wastes Generated at the SBRP Facility During Operation

Waste	Origin	Composition	Estimated Quantity	Classification	Disposal
Lubricating oil/oil sorbents	Small leaks and spills from the gas turbine lubricating oil system	Hydrocarbons	500 lb/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	1,000 lb/yr	Hazardous	Recycled by certified oil recycler
Laboratory analysis waste	Water treatment	Waste reagents/laboratory chemicals	50 gals/yr	Hazardous	Recycled by certified recycler
SCR catalyst units	SCR system (Warranty is 3 years-use tends to be 3 to 5 years)	Metal and heavy metals, including vanadium	60 to 70 tons every 3 to 5 yrs	Hazardous	Recycled by SCR manufacturer or disposed of in Class I landfill
CO catalyst units	HRSG (Use tends to be 3 to 5 years)	Metal and heavy metals, including vanadium	6 to 7 tons every 3 to 5 yrs	Hazardous	Recycled by manufacturer
Oily rags	Maintenance, wipe down of equipment, etc.	Hydrocarbons, cloth	300 lb/yr (~800 rags/yr)	Hazardous	Recycled by certified oil recycler
Chemical feed area drainage	Spillage, tank overflow, area washdown water	Water with water treatment chemicals	Minimal	May be hazardous if corrosive	Discharged to sewer if nonhazardous; shipped offsite for disposal if hazardous

8.13.4 Waste Disposal Sites

Nonhazardous solid waste (often referred to as solid waste, municipal solid waste [MSW], 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 deposited in a permitted Class I landfill. The following subsections describe the waste disposal sites feasible for disposal of SBRP wastes.

8.13.4.1 Nonhazardous Waste

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 site area. The primary disposal facility is the Otay Landfill in Chula Vista, approximately 5 miles from the SBRP site. The Otay Landfill has adequate capacity to handle and dispose of solid waste generated by the SBRP facility, as shown in Table 8.13-4. Either of the other two landfills included in Table 8.13-4 are likely alternatives to the Otay Landfill.

TABLE 8.13-4
Solid Waste Disposal Facilities in the Vicinity of the SBRP Project

Landfill/MRF/ Transfer Station	Location	Class	Permitted Capacity (cubic yards) ^a	Remaining Capacity (cubic yards) [*]	Permitted Throughput (tons per day) [*]	Estimated Closure Date [*]	Enforcement Action Taken [*]
Otay Landfill	Chula Vista, CA	III	59,857,19 9	41,152,377	5,000	12/31/202 7	Yes, compliance in 3/06
West Miramar Sanitary Landfill	San Diego, CA	III	35,200,00 0	23,194,883	8,000	12/31/201 1	No
Sycamore Sanitary Landfill	San Diego, CA	III	27,947,23 4	23,769,035	3,300	1/1/2016	Yes, compliance pending

* Based on CIWMB Solid Waste Information System Database (CIWMB, 2006).

According to the CIWMB, Otay Landfill has a total capacity of 59.86 million cubic yards of refuse and the estimated remaining capacity as of September 30, 2002 was 41.15 million cubic yards. The CIWMB indicates that the active Solid Waste Facility Permit expires in 2013. According to the CIWMB, there are no open enforcement actions against Otay Landfill (CIWMB, 2006).

8.13.4.2 Hazardous Waste

Hazardous waste generated at SBRP will be stored at that facility for less than 90 days. The waste will then be transported by a licensed hazardous waste transporter to a permitting hazardous waste treatment, storage or disposal (TSD) facility. These facilities vary considerably in what they are permitted to 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. (Note that incineration and deep-well injection are not permitted in California.)

According to DTSC, there are 64 facilities in California that can accept hazardous waste for treatment and recycling (DTSC, 2005). 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.

8.13.4.2.1 Clean Harbors' Buttonwillow Landfill in Kern County

This landfill is permitted at 14.3 million cubic yards (CIWMB, 2006) and has approximately 9.2 million cubic yards of remaining space as of February 2006 (Bouie, 2006). Buttonwillow has been permitted to accept all hazardous wastes except flammables, PCBs with a concentration greater than 50 ppm, medical waste, explosives, and radioactive waste with radioactivity greater than 20,000 picocuries (Buoni, 2005).

8.13.4.2.2 Clean Harbors' Westmorland Landfill in Imperial County

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. Even if opened, the landfill's conditional use permit (CUP) 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.

8.13.4.2.3 Waste Management's Kettleman Hills Landfill in Kings County

This facility accepts Class I, II (designated), and III waste. The Class I landfill is permitted for and will accept all hazardous wastes except radioactive, medical, and unexploded ordinance (UXO); this landfill has permitted capacity of 10.7 million cubic yards with a remaining capacity of 6 million cubic yards as of February 2006 (Yarbrough, 2006). According to Chemical Waste Management, the landfill will be open for at least another 20 years, though they could permit additional capacity, if necessary. The Class I and II waste disposal facility has a planned closure date of 2036 (Yarbrough, 2006). It is permitted to accept up to 8,000 tons per day of solid waste and contaminated soil (CIWMB, 2006).

8.13.4.2.4 Additional Commercial Hazardous Waste Treatment and Recycling 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 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, 2005).

8.13.5 Waste Management Methods and Mitigation

As stated at the beginning of this section, the handling and management of waste generated by SBRP will follow the hierarchical approach of source reduction, recycling, treatment, and disposal. The following subsections present methods for managing both nonhazardous and hazardous waste generated by SBRP.

8.13.5.1 Construction Phase

Nonhazardous solid waste generated during construction will be collected in onsite dumpsters and picked up periodically by one or more of the City of Chula Vista franchised disposal services. 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.

Wastewater generated during construction will include sanitary waste and could include equipment washwater and stormwater runoff. Sanitary waste will be collected in portable,

self-contained toilets. Equipment washwater will be contained at designated wash areas and will be disposed of offsite. Stormwater runoff will be managed in accordance with the San Diego Unified Port District's (Port's) model Standard Urban Storm Water Mitigation Plan (SUSMP) and state and federal NPDES requirements, as described in subsection 8.14, Water Resources. The generation of nonhazardous wastewater will be minimized through water conservation and reuse measures.

Most of the hazardous waste generated during construction will consist of liquid waste, such as 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 one of the SBRP's construction laydown areas. The waste will be delivered to an authorized hazardous waste management facility, prior to the expiration of the 90-day storage limit.

8.13.5.2 Operation Phase

The primary waste generated during the operation phase will be nonhazardous wastewater. Other nonhazardous solid waste will also be generated, as well as varying quantities of liquid and solid hazardous waste. Handling and mitigation of these wastes is described in the following subsections.

8.13.5.2.1 Nonhazardous Wastes

Wastewater from facility sinks and toilets will be discharged to the sanitary sewer. Nonhazardous plant wastewater will also be discharged to the sanitary sewer.

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

8.13.5.2.2 Hazardous Wastes

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

- SBRP will be classified as a hazardous waste generator. Prior to facility startup, application will be made to Cal-EPA for a USEPA identification number.
- Hazardous wastes will not be stored onsite for more than 90 days and will be accumulated according to CCR Title 22 requirements.
- 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 permitted hazardous waste management facilities. Biannual hazardous waste generator reports will be prepared and submitted to DTSC. Copies of manifests, reports, waste analyses, and other documents will be kept onsite and 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 possible, and wastes will be recycled whenever possible.

Specifically, hazardous waste handling will include the following procedures to minimize the quantity of waste deposited to landfills.

- Waste lubricating oil will be recovered and recycled by a waste oil recycling contractor. 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.
- Chemical cleaning wastes will consist of alkaline and acid cleaning solutions used during pre-operational chemical cleaning of the boiler system of the HRSGs, acid cleaning solutions used for chemical cleaning of the HRSG after the unit is put into service, and turbine wash and HRSG fireside washwaters. These wastes, which are subject to high metal concentrations, will be stored temporarily onsite in portable tanks and disposed of offsite, in accordance with applicable regulatory requirements. Disposal may consist of offsite treatment, recovery of metals, and/or landfilling.

8.13.5.3 Facility Closure

As discussed in Section 4.0 – Facility Closure, when SBRP is closed at the end of its operating life cycle, 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 be due to 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.

8.13.5.3.1 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 prior to SBRP startup. 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 Subsection 8.13.2.

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 Hazardous Materials Business Plan (HMBP) or Risk Management Plan (RMP). The HMBP and RMP are described in Section 8.12. 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.

8.13.5.3.2 Permanent Closure

The planned life of the generation facility is a minimum of at 30 years, though 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 facility closure plan that will attempt to maximize the recycling of all facility components (see Section 4.0). Unused chemicals will be sold back to the suppliers or other purchasers or users. Equipment will be drained of chemicals and shut down to protect public health and safety and the environment. Nonhazardous wastes will be collected and disposed of in appropriate landfills or waste collection facilities. Hazardous wastes will be disposed of according with applicable LORS in effect at the time. The site will be secured 24 hours per day during the SBRP decommissioning activities.

8.13.6 Cumulative Impacts

The SBRP facility will generate nonhazardous solid waste that will add to the total waste generated in San Diego County and in California. Almost all the nonhazardous waste will be wastewater that will be disposed of through the City of Chula Vista sanitary sewer. However, it is estimated that SBRP will generate approximately 600 tons of solid waste during construction (including approximately 75 tons of hazardous waste) and about 80 tons a year from operations (including approximately 15 tons of hazardous waste). Demolition of the existing SBPP site will produce approximately 143,000 tons of recyclable materials such as concrete and metal. The concrete will be reused as backfill at the SBPP site. In addition, demolition activities will generate several thousand tons of asbestos, lead-based paint and refractory materials. However, this will be a one-time activity and does not represent an annual increase in the amount of waste to be generated in the San Diego area on a permanent basis. There is adequate recycling and landfill capacity in California to recycle and dispose of the waste generated by SBRP. Therefore, the impact of the project on solid waste recycling and disposal capacity is not significant.

Hazardous waste generated during operation will consist of waste oil, filters, SCR and oxidation catalysts, and fluids used to clean the HRSGs and piping. The waste oil and catalysts will be recycled or disposed of off site. Cleaning and flushing fluids will be removed and disposed of offsite. Cleaning and flushing will occur only periodically. Hazardous waste treatment and disposal capacity in California is more than adequate.

Therefore, the effect of SBRP on hazardous waste recycling, treatment, and disposal capability is not significant.

8.13.7 Monitoring

Because the environmental impacts caused by wastes generated during construction and operation of the facility are expected to be insignificant, 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.

8.13.8 Involved Agencies

Several agencies, including USEPA at the federal level, and the DTSC and Cal EPA at the state level, regulate nonhazardous and hazardous waste and will be involved in the regulation of the waste generated by the SBRP project. The regulations, however, are administered and enforced primarily through the San Diego County Department of Environmental Health, Hazardous Materials Division, which is the designated CUPA. The persons to contact for nonhazardous and hazardous waste management are listed in Table 8.13-5.

TABLE 8.13-5
Agency Contacts for SBRP Waste Management

Topic	Agency	Address	Contact	Title	Telephone
Nonhazardous Waste					
Solid Waste and Recycling	City of Chula Vista Office of City Manager, Special Operations Division	276 Fourth Avenue Chula Vista, CA 91910	Lynn France	Conservation Manager	(619) 397-6221
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	Joan Swanson	Hazardous Materials Duty Specialist	(619) 338-2231

8.13.9 Permits Required and Permit Schedule.

The temporary storage of hazardous wastes at the SBRP will be included in the HMBP submitted to the San Diego County Department of Environmental Health, Hazardous Materials Division as described in Subsection 8.12, Hazardous Materials. In addition, the Department of Environmental Health requires the permits listed in Table 8.13-6.

TABLE 8.13-6
Permits Required and Permit Schedule for SBRP Waste Management

Permit	Applicability	Schedule for Permit
Unified Program Facility Permit	San Diego County Code of Regulatory Ordinances requires that businesses obtain a permit if they use, generate, or store hazardous materials or wastes or have underground storage tanks	Before storing regulated hazardous materials or wastes at the site.

8.13.10 References

- Bouie, M. 2006. Clean Harbor's Buttonwillow Landfill. Personal communication. February 16.
- Buoni, M. 2005. Clean Harbor's Buttonwillow Landfill. Personal communication. March 8.
- City of Chula Vista. 2005. General Plan, Environmental Element (Chapter 9), Hazardous Materials and Waste (Subsection 3.4). December. Revised September, 2005.
- California Integrated Waste Management Board (CIWMB). 2006. Solid Waste Information System (SWIS) Database. May 25.
- Department of Toxic Substance Control (DTSC). 2005. "California Commercial Offsite Hazardous Waste Management Facilities." November 8.
- Duke Engineering & Services (DE&S). 2001. Environmental Assessment Report for the Port of San Diego Former Liquefied Natural Gas Facility, Bay Boulevard, Chula Vista, California. August 8.
- Fluor Daniel GTI. 1998a. Phase I Environmental Site Assessment, South Bay Power Plant, 990 Bay Boulevard, Chula Vista, California. June 3.
- Fluor Daniel GTI. 1998b. Phase II Environmental Site Assessment, South Bay Power Plant, 990 Bay Boulevard, Chula Vista, California. July.
- San Diego Regional Water Quality Control Board (RWQCB). 2003. Section 303(d) Impaired Waterbodies List. Last updated, September 23.
- San Diego County Department of Public Works (DPW). 2005. "San Diego County Integrated Waste Management Plan, Countywide Summary Plan and Siting Element". Approved by CIWMB on September 20-21.
- Yarbrough, T. 2006. Waste Management Kettleman Hills. Personal communication. February 14.