GRENIER & ASSOCIATES, INC.

ENVIRONMENTAL PLANNING • LICENSING & PERMITTING • REGULATORY COMPLIANCE

July 5, 2011 *Compliance Chron Log 2011-033*

Mr. Craig Hoffman
Compliance Project Manager
California Energy Commission
1516 Ninth Street MS-2000
Sacramento, CA 95661

Subject: Rice Solar Energy Project (Docket No. 09-AFC-10C)
Condition of Certification WASTE-3
Construction Waste Management Plan

Dear Craig:

In accordance with the requirements of Condition of Certification WASTE-3, attached for your review and approval is the Construction Waste Management Plan for the Rice Solar Energy Project.

Should you have any questions or require additional information related to this submittal, please contact me at (916) 780-1171.

Sincerely,

Andrea E. Grenier

Andrea E. Grenier
Permitting and Compliance Manager

Attachment

1420 E. Roseville Parkway, Suite 140-377, Roseville, CA 95661
Tel (916) 780-1171 Cell (916) 847-0918 Email andrea@agrenier.com

Report

Construction Waste Management Plan for the Rice Solar Energy Project (09-AFC-10)

Prepared for

SOLARRESERVE

July 2011

CH2MHILL
2485 Natomas Park Drive
Suite 600
Sacramento, CA 95833

Contents

Section **Page**

Acronyms and Abbreviations ..... **v**

1 Introduction **1-1**
1.1 Purpose 1-1
1.2 Project Summary 1-1
1.3 Responsibilities 1-2
1.3.1 Site Manager 1-2
1.3.2 Site Safety and Health Supervisor 1-2
1.3.3 Environmental Professional 1-3
1.3.4 Construction Site Worker 1-3

2 Waste Management Requirements **2-1**
2.1 Construction-generated Nonhazardous Wastes 2-1
2.1.1 Paper, Wood, Glass, and Plastics 2-1
2.1.2 Metal 2-1
2.1.3 Wastewater 2-2
2.1.4 Nonhazardous Waste Management and Disposal 2-2
2.2 Construction-generated Hazardous Waste 2-2
2.2.1 Hazardous Waste Management and Disposal 2-3
2.3 Sanitary Waste 2-7

3 Estimated Quantity and Frequency of Waste Generation **3-1**

4 Waste Minimization and Recycling **4-1**

5 References **5-1**

Tables

1 Solid Waste Disposal Facilities in the Vicinity of the RSEP
2 Types and Quantities of Waste Generated During Construction

Acronyms and Abbreviations

CIWMB	California Integrated Waste Management Board
DTSC	California Department of Toxic Substances Control
EPA	U.S. Environmental Protection Agency
PCB	polychlorinated biphenyl
RSE	Rice Solar Energy, LLC
SAA	satellite accumulation area
SR	State Route
RSEP	Rice Solar Energy Project
Western	Western Area Power Administration
WMP	Waste Management Plan

SECTION 1

Introduction

1.1 Purpose

Rice Solar Energy, LLC (RSE), a wholly owned subsidiary of SolarReserve, LLC, proposes to construct, own, and operate the Rice Solar Energy Project (RSEP). The RSEP will be a concentrating solar power (CSP) facility constructed on a privately owned site located in unincorporated eastern Riverside County, California. The project will have a nominal generating capacity of 150 megawatts (MW), and will be capable of delivering 450,000 megawatt hours (MWh) of renewable energy annually to help meet California's Renewable Portfolio Standard (RPS) energy procurement goals.

This construction waste management plan (WMP), which is required pursuant to Condition of Certification WASTE-03, identifies the expected waste streams and describes the waste management procedures to be used to maximize diversion and reduce the quantity of waste requiring disposal. The WMP specifically addresses the generation and characterization of waste, onsite storage and handling, waste discharge, offsite shipment, and disposal of solid and liquid wastes, including sanitary waste, generated at the project site. The WMP also summarizes the responsibilities of the construction personnel and all contractors and serves as a tool to provide for accountability of material throughout the project activities.

1.2 Project Summary

The RSEP site is a privately owned 1,410-acre parcel located in eastern Riverside County. The site is adjacent to State Route (SR) 62, which parallels a portion of the Arizona-California Railroad and the Colorado River Aqueduct, near the junction of SR 62 and Blythe-Midland Road, and near the sparse remains of the abandoned town of Rice, California. The nearest occupied residence is approximately 15 miles northeast at the rural crossroads community of Vidal Junction, California. The nearest town is Parker, Arizona (population 3,181), approximately 32 miles east. A small permanent residential settlement is located at the Metropolitan Water District of Southern California's Iron Mountain Pumping Plant, approximately 17 miles to the west.

The RSEP design incorporates the following principal elements:

- Heliostat field with up to 17,500 tracking heliostats, each approximately 24 feet tall by 28 feet wide, arranged in a circular array that will reflect and concentrate the sun's energy onto a tower-mounted receiver (The field covers approximately 2,000 acres, which includes the 80-acre power block near its center.)
- A concrete central tower approximately 540 feet tall, upon which is mounted a receiver approximately 100 feet tall topped with a small maintenance crane, for an overall structure height of 653 feet
- A liquid salt storage system featuring insulated "hot" and "cold" salt storage tanks

- A steam turbine generator system rated at 150 MW (net)
- Two onsite water wells to provide water for heliostat washing, steam cycle makeup, and other process uses in an amount not expected to exceed 150 acre-feet per year
- Three lined evaporation ponds of approximately 5 acres each to capture all process wastewater discharge from the project's water treatment system, process blowdown, and stormwater drainage from within equipment areas
- Stormwater drainage features to channelize offsite stormwater flows from upstream of the project site, diverting offsite stormwater around the project site, and rejoining the natural flow channels to the south of the property
- A 10-mile, 230-kilovolt generator tie line that will connect the RSEP with the existing Western Area Power Administration's (Western) Parker-Blythe transmission line. Western will construct and own a new interconnection substation for the project's tie-in to Western's system.

The RSEP will begin construction in September 2011 and take approximately 30 months to construct.

1.3 Responsibilities

1.3.1 Site Manager

The RSEP Site Manager will have overall responsibility for adherence to demolition and construction waste management practices at the RSEP site. The Site Manager will be responsible for implementing, monitoring, and reporting status of waste management practices at the project site. The Site Manager will also be responsible for ensuring that all contractors are in compliance with state and federal regulatory requirements for wastes generated during the demolition and construction activities. This includes nonhazardous wastes, hazardous wastes, and any special wastes destined for recycling (such as used oil, drained used oil filters, used welding rods) generated by the RSEP.

1.3.2 Site Safety and Health Supervisor

The RSEP Site Safety and Health Supervisor will provide daily oversight and management of demolition and construction waste including, but not limited to the following:

- Distributing the WMP and reviewing the plan procedures and locations established for recycling and disposal.
- Conducting audits of all waste storage areas.
- Providing assistance in identifying, classifying, and approximating the quantities of wastes generated.
- Maintaining records of audits, contractor inspections, and waste transport, disposal and recycling activities.
- Training site workers and subcontractors on proper waste management procedures.

1.3.3 Environmental Professional

Pursuant to Condition of Certification WASTE-01, a Registered Professional Engineer or Geologist for the RSEP will be designated and readily available for consultation during soil excavation and grading activities. In the event potentially contaminated soil is unearthed during the project activities as evidenced by discoloration, odor, or other signs, the Registered Professional Engineer or Geologist will be required to inspect the site and determine the need for sampling to confirm the nature and extent of contamination. Depending on the nature of the find, the construction activity may be suspended to protect workers and the public. If the Registered Professional Engineer or Geologist determines that significant remediation is required, the RSEP will contact the Riverside County Department of Environmental Health and California Department Toxic Substances Control (DTSC).

1.3.4 Construction Site Worker

Construction site workers will adhere to and implement waste handling procedures as set forth in this WMP for the duration of the construction and commissioning phases of the project. Workers will be required to properly label, store, and segregate waste until time of disposal. Construction site workers involved in earthmoving activities will be familiar with the following possible indicators of soil contamination:

- Broken or leaking underground pipeline
- Presence of underground storage tank or vault
- Buried trash or debris that may have contained hazardous materials
- Soil staining or discoloration
- Soil odor, particularly with a petroleum or chemical smell
- Other unusual indicators of potential contamination

SECTION 2

Waste Management Requirements

All solid and liquid wastes generated at the project site must be classified as either hazardous or nonhazardous. The majority of the construction wastes will be nonhazardous materials. The RSEP Site Safety and Health Supervisor will oversee the classification of any waste generated at the project site and will provide information to contractors to assist in the identification process. Contractors and their subcontractors are directly responsible for classifying their own wastes prior to storage. Any unexploded ordinance identified during construction work will be handled in accordance to the Unexploded Ordnance Identification, Training and Reporting Plan.

2.1 Construction-generated Nonhazardous Wastes

During construction, the primary waste generated will be solid nonhazardous waste consisting mostly of metals, wood/paper/plastic packing materials, and concrete. All contractors and their subcontractors will be required to implement and maintain "good housekeeping" practices at their work locations and waste storage areas, including providing an adequately sized storage location and appropriate type, size, and number of containers used to store waste generated. Proper waste storage procedures will protect the environment and minimize the exposure of waste to project personnel and the public.

The RSEP Site Safety and Health Supervisor will audit solid waste collection and management areas to ensure that only acceptable wastes are stored for disposal and that sufficient containers are available and maintained in accordance with "good housekeeping" practices. All contractors will use the onsite nonhazardous waste storage locations for disposal of their nonhazardous solid waste streams. These storage areas will be located either adjacent to the point of generation, for temporary storage, or at a dedicated storage area. The following nonhazardous waste streams are expected to be generated during the construction process.

2.1.1 Paper, Wood, Glass, and Plastics

Paper, wood, glass, and plastics will be generated from packing materials, waste lumber, insulation, and empty nonhazardous chemical containers used 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.

2.1.2 Metal

Metals, including steel (from welding/cutting operations, packing materials, and empty nonhazardous chemical containers) and aluminum (from packing materials and electrical wiring), will be generated during construction. Waste will be recycled where practical, and non-recyclable waste will be deposited in a Class III landfill. Onsite, the waste will be placed in dumpsters.

2.1.3 Wastewater

Wastewater generated during construction could include sanitary waste and equipment washdown water. Depending on the chemical quality of these wastewaters, they could be classified as hazardous or nonhazardous. Wastewater would be sampled and, if found hazardous would be disposed of properly. Additional detail regarding stormwater management is provided in the Stormwater Pollution Prevention Plan and Drainage Erosion and Sedimentation Control Plan.

2.1.4 Nonhazardous Waste Management and Disposal

A certified hauler will be used to transport the waste to an approved disposal site. Contractors and their subcontractors must ensure that their solid waste streams meet the criteria established for acceptable waste disposal at a nonhazardous waste landfill.

The primary disposal facility is the County-owned and operated Blythe Sanitary Landfill located in Blythe, approximately 69 miles from the RSEP site. The Blythe Sanitary Landfill has adequate capacity to handle and dispose of solid waste generated by the RSEP facility, as shown in Table 1. The other landfill included in this table, Desert Center Landfill, operates on a limited basis and is an alternative to the Blythe Sanitary Landfill.

TABLE 1
Solid Waste Disposal Facilities in the Vicinity of the RSEP

Landfill/MRF/ Transfer Station	Location	Class	Permitted Capacity[a] (cubic yards)	Permitted Throughput[a] (tons per day)	Remaining Capacity[a] (cubic yards)	Estimated Closure Date	Violation of Minimum State Standards Noted[a]
Desert center Landfill[b]	Desert Center, CA	III	117,032	60	23,246	01/01/2011	No
Blythe Sanitary Landfill	Blythe, CA	III	6, 034,148	400	4,159,388	06/01/2047	No

[a]Based on California Department of Resources Recycling and Recovery (CalRecycle) Solid Waste Information System Database (CalRecycle, 2011)

[b]Landfill still operating on a limited basis (pers. Comm. Carrie King, Riverside Co. WMD, 06/15/11)

2.2 Construction-generated Hazardous Waste

Most of the hazardous waste generated during construction will consist of liquid waste, such as water from flushing and cleaning fluids, passivation fluids, and solvents. Flushing and cleaning waste liquid will be generated as pipes and boilers are cleaned and rinsed. The volume of flushing and cleaning liquid waste generated is estimated to be one to two times the internal volume of the pipes being cleaned. Passivation fluid is generated when high-temperature pipes are treated with either a phosphate or nitrate solution to prepare pipes for use. The quantity of solvent and paint waste is expected to be minimal.

Hazardous solid waste will also be generated during construction and will likely include such wastes as welding materials, batteries, and dried paint. However, minimal quantities are expected to be generated. Hazardous wastes generated during facility construction will

be handled and disposed of in accordance with applicable laws, ordinances, regulations, and standards. Hazardous wastes will be either recycled or disposed of in a licensed Class I disposal facility, as appropriate. Managed and disposed of properly, these wastes will not cause significant environmental or health and safety impacts. Most of the hazardous waste generated during construction, such as turbine cleaning wastes and used oil, can be recycled. The small quantities of hazardous waste that cannot be recycled are not expected to significantly affect the capacity of the Class I disposal facilities in California.

In addition, a few types of wastes may be classified as hazardous if they are intended for disposal in a treatment, storage, and disposal facility. However, as long as the following streams are segregated, the waste can be recycled at an offsite facility:

- Used Oil (uncontaminated)—Waste oil will be generated as a result of motor vehicle and construction equipment maintenance.
- Drained Used Oil Filters—Used oil filters will be drained of all free-flowing liquids to the extent possible and segregated from other wastes in a separate container. "Free-flowing" is defined as a continuous stream when the filter is inverted and not incidental drop-by-drop flow. If required, filters will be punctured and/or crushed to release accumulated oil that does not drain.
- Welding Rods—Welding rods have the potential to be considered either hazardous or nonhazardous waste, depending on the constituents in the rods. For disposal purposes, the contractors and subcontractors will review the material safety data sheets to determine any hazardous constituents. If the welding rods are determined to be nonhazardous, they may be disposed of as solid waste; if determined to be hazardous, the contractors and subcontractors will segregate the welding rod stubs and store them in separate waste containers.
- Lead-core Batteries—Project activities may result in the periodic generation of used batteries from construction vehicles and equipment. Because, in most cases, the battery housings will be intact and will not pose a threat of release of hazardous waste to the environment, the batteries will not be placed in drums or containers but instead stored on pallets within the bermed area of the 90-day storage location.

In accordance with waste-reduction efforts, the contractors and subcontractors will manage these wastes separately from other hazardous wastes.

2.2.1 Hazardous Waste Management and Disposal

Wastes identified as hazardous or potentially hazardous must be segregated and managed separately from other wastes. The RSEP as well as the project contractors will be registered with the U.S. Environmental Protection Agency (EPA) as a hazardous waste generator and will have a hazardous waste identification number for removal and disposal of hazardous wastes. This number for the RSEP will be kept on file at the project site pursuant to Condition of Certification WASTE-05.

Contractors and their subcontractors must also provide the RSEP Site Safety and Health Supervisor with a list of hazardous materials they anticipate generating at the project site. Contractors will be required to review their list quarterly while at the project site. Updates

to the list will be made by the contractors whenever substances are brought to, or waste generated on, the site that were not identified on their initial list. If no changes to the listing are required, the contractor must provide a written quarterly statement of this fact to the RSEP Site Safety and Health Supervisor.

Each contractor will be responsible for the proper identification, containerization, labeling, manifesting, storage, and transport of all hazardous wastes generated in the course of the construction activities at the project site. Construction-generated hazardous wastes will be managed in accordance with all applicable laws and regulations, and management will follow the site-specific procedures summarized in the following sections.

Waste Storage

A 90-day waste storage area will be established and maintained at the project construction site to temporarily store all construction-generated hazardous wastes from the site. The hazardous waste storage area will be located in the temporary storage area. The RSEP Site Safety and Health Supervisor will designate or approve other locations throughout the site to be used as hazardous waste storage areas. These areas are referred to as satellite accumulation areas (SAA).

The RSEP 90-day storage area and the SAAs will be designed and built to meet the following criteria:

- Areas will be clearly delineated with a visible line or tape and a posted sign indicating HAZARDOUS WASTE in capital letters at least 1 inch high.
- Areas will be designated as “No Smoking or Eating Areas.”
- Areas will be elevated off the ground onto a concrete pad (or equivalent) and surrounded with concrete curbing (or equivalent) to form a containment area for spills. Specialized plastic or metal containers or bins, with integral spill containment, can also be used in lieu of constructing a concrete pad.
- Storage areas will be located, as much as possible, away from existing drainage paths to offsite areas.
- The containment area must be designed to hold 10 percent of the volume of all containers or 100 percent of the volume of the largest container (whichever is greater).
- The containment area will be equipped with a manual valve (or equivalent means) to allow for the release of clean, uncontaminated stormwater.
- Storage areas will be covered to minimize the amount of stormwater runoff from the area.
- Storage areas will be designed such that non-compatible wastes are properly separated during storage.
- Storage areas will be designed and maintained with sufficient space between containers to facilitate the required visual inspections.
- For welding rods in particular, containers will be placed in areas around the site where welding is occurring and along the pipeline routes. Once these containers are full, they will be brought back to the project site to be stored in the 90-day storage area.

The RSEP Site Safety and Health Supervisor will review these areas for suitability from both safety and environmental protection standpoints and provide informational assistance upon request.

Container Type and Proper Labeling

RSEP contractors and subcontractors will provide proper containers (for example, covered plastic or metal drums or bins) for the storage of their hazardous wastes. Containers used to store hazardous waste in the 90-day storage area will meet the following criteria:

- Containers will remain closed during storage, except to add or remove waste.
- Containers will be maintained in good condition with no visible defects that could result in leaking or spilling of wastes.
- Containers storing liquid wastes will be leak-proof (for example, with fixed lids). Containers storing non-liquid wastes may have removable tops (for example, drums with removable tops secured with a steel band and gasket).

Each waste container in the 90-day storage area and SAAs will be permanently labeled with proper information and will include the following markings:

- HAZARDOUS WASTE (federal law prohibits improper disposal)
- Name of the waste (for example, waste oil, solvents)
- Type of waste (for example, toxic, ignitable)
- Generator name and address
- Date of waste accumulation (start date of accumulation)
- For used oil and used oil filter storage, containers will be labeled as “Nonhazardous Waste: Drained Used Oil” or “Nonhazardous Waste: Drained Used Oil Filters,” respectively.

Prior to transportation offsite, hazardous waste containers must be labeled with a California hazardous waste label to remain clearly visible at all times. The RSEP Site Safety and Health Supervisor will verify that containers are properly labeled and will also receive and file a copy of the bill of lading used by the transporter. The bill of lading and the container label must include the following information:

- EPA identification number
- EPA waste code (determination based on waste characterization)
- Generator (name, address, and telephone number)
- Transporter (name, address, and telephone number)
- Receiving company (name, address, and telephone number)
- Description and quantity of contents (amount and size of containers)
- Date of transfer

Each contractor will be responsible for monitoring the volume of their hazardous wastes collected in the SAAs. When the volume of waste at an SAA reaches 55 gallons, the waste container must be removed from the site by a licensed transporter or, within 3 days, moved to the 90-day storage area.

The RSEP Site Safety and Health Supervisor (or designee) will conduct an audit of all waste containers in the 90-day storage area at least weekly to monitor the type and volumes of waste contained in the area and to minimize the potential for releases to the environment. The RSEP Site Safety and Health Supervisor will also monitor the accumulation dates and will oversee the manifesting and transport of the wastes prior to the 90-day storage limit. A written record of the type and amount of wastes deposited in the 90-day storage area will be maintained onsite in the project files.

Waste Testing Methods and Classification

The RSEP and contractor-generated hazardous wastes are expected to be known and are not likely to require testing to determine their characteristics. However, wastes of questionable nature will be tested by an appropriate laboratory to ensure correct classification.

If a hazardous waste stream has not been characterized, the waste will be held at the 90-day storage area until required testing is performed. After testing, the hazardous waste will be disposed of at an approved disposal facility. The approved disposal facilities will likely conduct additional testing to confirm characterization of the hazardous waste stream. If necessary, the hauler can carry out tests to determine or confirm waste type as well.

Offsite Transport and Disposal

The RSEP Site Safety and Health Supervisor will oversee the transport and disposal of all hazardous wastes generated at the project site. Federal laws and regulations require the use of licensed transporters and disposal facilities for the management of hazardous waste. In the event that a contractor arranges for the transport and disposal of its own hazardous waste, the RSEP Site Safety and Health Supervisor will require the contractor to provide the following information:

- Documentation of valid permits (including EPA identification numbers)
- Contracts with licensed transporters and disposal companies
- Hazardous waste manifests
- Any audits of the transporter and disposal facility

This documentation will allow the RSEP Site Safety and Health Supervisor to adequately check the status of the contractor's hazardous waste management program, restrictions, and any permit violations. All hazardous waste will be removed and delivered to a treatment, storage, or disposal facility.

According to the DTSC, 61 facilities in California can accept hazardous waste for treatment or recycling (DTSC, 2011). For ultimate disposal, California has the following three hazardous waste (Class I) landfills.

Chemical Waste Management, Inc – Kettleman Hills Landfill. This facility accepts Class I, II, and III waste. Kettleman Hills operates both hazardous and nonhazardous waste landfills at their facility. Currently, the hazardous waste landfill, identified as B-18 Landfill, is permitted for and will accept all hazardous wastes except radioactive, medical, and unexploded ordnance. As of December 2007, the B-18 Landfill had a remaining capacity of 1.5 million cubic yards out of the total 10.7 million cubic yards of capacity (CalRecycle, 2011; CIWMB, 2007). However, an expansion of the B-18 Landfill and a new hazardous waste

landfill at Kettleman Hills (B-20) is currently in the permitting phase (Chemical Waste Management, 2011).

Clean Harbors Buttonwillow Landfill. This Class I landfill is permitted at 14.3 million cubic yards (CalRecycle, 2011; Buoni, 2009) and has approximately 9.2 million cubic yards of remaining capacity as of April 2009 (Buoni, 2009). At the current deposit rate, the landfill is permitted to accept waste until 2040 (CalRecycle, 2011). Buttonwillow has been permitted to accept all hazardous wastes except flammables, polychlorinated biphenyl (PCB) with a concentration greater than 50 parts per million, medical waste, explosives, and radioactive waste with radioactivity greater than 1,800 picocuries (Buoni, 2009). The landfill is permitted for 352,000 cubic yards of hazardous waste annually. It accepts approximately 300,000 cubic yards of hazardous waste per year, which breaks down to approximately 1,000 cubic yards of hazardous waste per day (Atkinson, 2008).

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, medical waste, PCB, dioxins, air- and water-reactive wastes, and strong oxidizers.

Additional Facilities. In addition to hazardous waste landfills, there are numerous offsite commercial liquid hazardous waste treatment and recycling facilities in California. All hazardous waste will be removed and delivered to a treatment, storage, and disposal facility. Used oily rags and oil sorbent will be collected by a permitted oil recycler.

Record Keeping

The RSEP will retain receipts, hazardous waste manifests, and waste analysis records for the disposal of all wastes in the project records for the life of the facility.

2.3 Sanitary Waste

Sanitary waste generated during demolition and construction will be collected through the use of portable toilets and will be regularly emptied by a licensed sanitary waste service for offsite disposal. The contractor handling the sanitary wastes will be identified prior to construction.

SECTION 3

Estimated Quantity and Frequency of Waste Generation

Most of the waste generated during construction will consist of nonhazardous metals, wood/paper/plastic packing materials, waste. Only minimal amounts of hazardous waste are expected to be generated. Small quantities of wastewater may also be generated as a result of soil excavation and removal. Where practical, waste will be segregated and properly managed for recycling. Waste that cannot be recycled will be disposed of in a Class I or III landfill. Table 2 presents the estimated quantities of nonhazardous and hazardous wastes that are likely to be generated during demolition and construction activities at the RSEP project.

TABLE 2
Types and Quantities of Waste Generated During Construction

Construction Waste Type	Estimated Quantity	End Use
Scrap wood, steel, glass, plastic, paper, calcium silicate insulation, mineral wool insulation	120 tons	Recycle/Disposal
Scrap metal	50 tons	Recycle/Disposal
Empty hazardous materials containers	60 containers*	Recycle/Disposal
Spent welding materials	0.6 ton	Disposal
Scrap bags (salt delivery)	35,000 bags, or 10 tons	Recycle/Disposal
Waste oil filters	125 lb per month	Recycle/Disposal
Used and waste lube oil	7,500 gallons	Recycle
Oily rags, oil sorbent excluding lube oil flushes	2,900 lb during construction	Recycle/Disposal
Waste oil	2,000 gallons	Disposal
Solvents, paint, adhesives	110 lb per month	Recycle
Spent lead-acid batteries	6 batteries per year	Recycle
Spent alkaline batteries	100 batteries per month	Recycle/Disposal
Steam turbine cleaning waste	125 gallons before plant startup	Disposal
Sanitary waste	225 gallons per day	Treatment at Wastewater Plant
Fluorescent, mercury vapor lamps	60 lb per year	Recycle/Disposal
Passivating and chemical cleaning fluid waste	125,000 to 250,000 gallons (life of project construction)	Disposal
Hydrotest water	6,000,000 gallons	Discharge/Disposal
Stormwater	5,200,000 gallons per year	Discharge
NO_x emission control scrubbing solution purge	740 gallons per hour (17,760 gallons per day)	Disposal

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

SECTION 4

Waste Minimization and Recycling

Contractors and their subcontractors working on the RSEP will implement and actively practice waste minimization and recycling efforts to reduce the volume and toxicity of all wastes generated during demolition and construction activities. All contractors will incorporate the following waste minimization approaches into daily operational and maintenance routines:

- Segregating useable products from the waste stream for reuse, recycling, or reclamation (for example, plastic, glass, and scrap metal from "trash")
- Selecting nonhazardous alternatives to hazardous substances
- Procuring and storing onsite only the required amount of materials to perform the task

SECTION 5

References

Atkinson, Mark. 2008. Clean Harbors Buttonwillow Landfill. Personal communication with John Putrich/CH2M HILL. August 26.

Buoni, Marianna. 2009. Clean Harbor's Buttonwillow Landfill. Personal communication with Megan Sebra/CH2M HILL. April 2.

CalRecycle. 2011. Solid waste facility search. Solid Waste Information System (SWIS) Database. California Department of Resources Recycling and Recovery. Online at: http://www.calrecycle.ca.gov/SWFacilities/Directory/search.aspx, accessed on April 26.

California Integrated Waste Management Board (CIWMB). 2007. Registration Permit for Chemical Waste Management, Inc. – Kettleman Hills Facility (SWIS 16-AA-0023). December 4.

Chemical Waste Management, Inc. 2011. http://www.kettlemanhillsfacts.com/facility-about/expansion.asp. Accessed March 21.

Department of Toxic Substance Control (DTSC). 2011. *California Commercial Offsite Hazardous Waste Management Facilities*. http://www.envirostor.dtsc.ca.gov/public/commercial_offsite.asp. Accessed March 21.

King, Carrie. 2011. County of Riverside Waste Management Department. Personal communication with Jessica Brandt/CH2M HILL. June 15.