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## **APPLICANT’S SUPPLEMENTAL RESPONSE TO DATA REQUEST 16 AND 26: ADDITIONAL INFORMATION REGARDING WASTE MANAGEMENT**

In this section of Applicant’s Supplemental Response to CEC Staff Data Request 16 and 26, Applicant describes the changes to the Waste Management section that will result from the changes to the Project Description relating to the removal of Unit 3. Per staff’s request, Applicant uses a strike-out/underline format to identify changes to the Waste Management section of the Application for Certification that will result from the changes to the Project Description.

The Waste Management sub-sections that have been modified are listed in the table of contents below. If there has been no change to a Waste Management sub-section relating to Applicant’s Supplemental Response to Data Request 16 and 26, the section is labeled “no changes” in the table of contents below.

# TABLE OF CONTENTS

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|          |   |                          |
|----------|---|--------------------------|
| 5.14     | Waste Management.....   | 5.14-1                   |
| 5.14.1   | Introduction <a href="#">(Please refer to the updated Project Description in Section 2.1.1)</a> ..... | 5.14-1                   |
| 5.14.2   | Laws, Ordinances, Regulations, and Standards <a href="#">(no changes)</a> .....                       | 5.14-1                   |
| 5.14.2.1 | Federal.....  | 5.14-1                   |
| 5.14.2.2 | State <a href="#">(no changes)</a> .....  | <del>5.14-1</del> 5.14-2 |
| 5.14.2.3 | Local <a href="#">(no changes)</a> .....  | <del>5.14-1</del> 5.14-2 |
| 5.14.3   | Affected Environment <a href="#">(no changes)</a> .....   | <del>5.14-1</del> 5.14-2 |
| 5.14.4   | Environmental Analysis.....   | <del>5.14-1</del> 5.14-2 |
| 5.14.4.1 | Construction <a href="#">(no changes)</a> .....   | 5.14-2                   |
| 5.14.4.2 | Operations and Maintenance .....  | 5.14-2                   |
| 5.14.4.3 | Abandonment and Closure <a href="#">(no changes)</a> .....  | 5.14-5                   |
| 5.14.5   | Cumulative Effects <a href="#">(no changes)</a> .....   | 5.14-5                   |
| 5.14.6   | Mitigation Measures <a href="#">(no changes)</a> .....  | 5.14-5                   |
| 5.14.7   | Involved Agencies and Agency Contacts <a href="#">(no changes)</a> .....                              | 5.14-5                   |
| 5.14.8   | Permits Required and Permit Schedule <a href="#">(no changes)</a> .....                               | 5.14-5                   |
| 5.14.9   | References <a href="#">(no changes)</a> .....   | <del>5.14-5</del> 5.14-6 |



### Tables

|              |   |
|--------------|---|
| Table 5.14-1 | Laws, Ordinances, Regulations, and Standards (LORS) <a href="#">(no changes)</a>          |
| Table 5.14-2 | Waste Recycling/Disposal Facilities <a href="#">(no changes)</a>                          |
| Table 5.14-3 | Summary of Construction Waste Streams and Management Methods <a href="#">(no changes)</a> |
| Table 5.14-4 | Operating Waste Streams and Management Methods  |
| Table 5.14-5 | Agency Contacts <a href="#">(no changes)</a>  |
| Table 5.14-6 | Applicable Permits <a href="#">(no changes)</a>   |

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## 5.14 WASTE MANAGEMENT

### 5.14.1 Introduction ([Please refer to the updated Project Description in Section 2.1.1](#))

### 5.14.2 Laws, Ordinances, Regulations, and Standards

#### 5.14.2.1 Federal

##### *National Environmental Policy Act of 1969*

The NEPA establishes a public, interdisciplinary framework for Federal agencies reviewing projects under their jurisdiction to consider environmental impacts. NEPA's basic policy is to assure that all branches of government give proper consideration to the environment prior to undertaking any major federal action that significantly affects the environment.

The BLM, as lead Federal agency for the Project, is responsible for preparation of an Environmental Impact Statement (EIS) in compliance with NEPA to evaluate the environmental impacts of the portions of the Rio Mesa SEGF on federal lands. ~~Only the Rio Mesa Solar III plant and the~~ [The Project](#) gen-tie line, [upgraded Bradshaw Trail access road, and construction/emergency backup power supply line](#) are located on [public](#) lands administered and managed by the BLM. NEPA compliance is required for these portions of the Project through preparation of a Draft and Final EIS. [The Applicant anticipates that BLM may consider RMS 1 and 2 as a connected action under NEPA.](#) BLM is also responsible for Native American consultation, including government to government consultation [regarding project facilities located on BLM land.](#)

The President's Council on Environmental Quality (CEQ) developed guidelines and procedures to assist Federal agencies with NEPA procedures so that environmental justice concerns are effectively identified and addressed. This includes guidelines for public participation, alternatives, and mitigation.

*[The Resource Conservation and Recovery Act, 42 United States Code \(USC\), §§6901 to 6992k \(no changes\)](#)*

*[Title 49 CFR, Parts 172 and 173 \(no changes\)](#)*

*[The Clean Water Act of 1971, 33 USC, §§1251 et seq. \(no changes\)](#)*

5.14.2.2 State [\(no changes\)](#)

5.14.2.3 Local [\(no changes\)](#)

5.14.3 Affected Environment [\(no changes\)](#)

5.14.4 Environmental Analysis

The analysis of impacts related to waste management from the Project is based on CEQA Appendix G Guidelines. Significance is criteria summarized as follows:

- Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste needs.
- Comply with federal, state and local statutes and regulations related to solid waste.

#### 5.14.4.1 Construction (no changes)

#### 5.14.4.2 Operations and Maintenance

Operation of the facility will generate wastes resulting from processes, routine facility maintenance, and office activities typical of solar powered operations. The operating waste streams and management methods are summarized in Table 5.14-4 and are described in more detail in the following sections. The types of waste and their estimated quantities are shown in Table 5.14-4.

#### *Non-hazardous Solid Waste*

The Project will produce maintenance and plant wastes typical of solar power generation operations. Paper, wood, plastic, cardboard, empty nonhazardous containers, reverse osmosis membranes, demineralization units sewage sludge, evaporation pond sludge, cartridge filters, and other miscellaneous solid wastes, including the typical refuse generated by workers, are examples of non-hazardous solid waste expected to be generated.

Non-hazardous waste material will be segregated and recycled to the extent practical, and a certified waste-handling contractor will remove the remainder on a regular basis for disposal at a Class III landfill. Non-hazardous waste generated during operational phases at the project site is not expected to significantly impact already available landfill capacity. The Project will comply with federal, state and local statutes and regulations related to solid waste. Impacts associated with non-hazardous waste management during the operations phase would not be significant.

**Table 5.14-4  
Operating Waste Streams and Management Methods**

| Waste Stream   | Waste Classification   | Anticipated Amount <sup>1</sup>                      | Treatment   |
|--|------------------------|--|---|
| Paper, wood, plastic, cardboard, and empty non-hazardous container   | Non-hazardous          | 400-300 lbs per week                                 | Weekly collection for recycling and/or disposal at a Class III Landfill |
| Empty hazardous material containers                                  | Hazardous              | Varies, based on chemical usage                      | Recondition or recycle  |
| Lubricating oil (Steam Turbine lubricating system)                   | Hazardous <sup>2</sup> | 3,000 gallons per Steam Turbine oil flush event      | Hazardous waste disposal facility or recycle                            |
| Lubricating oil filters (Steam Turbine oil system)                   | Hazardous              | 5,000 lbs per year per Steam Turbine                 | Hazardous waste disposal facility or recycle                            |
| Lubricating oil (Boiler feedwater pump and turbine drive oil system) | Hazardous              | 1,500 gallons per turbine drive lube oil flush event | Hazardous waste disposal facility or recycle                            |

**Table 5.14-4  
Operating Waste Streams and Management Methods**

| Waste Stream   | Waste Classification | Anticipated Amount <sup>1</sup>                                    | Treatment   |
|--|----------------------|--|---|
| Lubricating oil filters (boiler feedwater pump and turbine drive oil system) | Hazardous            | 2,500 lbs per year per turbine drive                               | Hazardous waste disposal facility or recycle                            |
| Lubricating oil (miscellaneous equipment oil flushes)                        | Hazardous            | 1,000 gallons per year per plant                                   | Hazardous waste disposal facility or recycle                            |
| Solvents, paints and adhesives   | Hazardous            | <del>180-120</del> lbs per month                                   | Hazardous waste disposal facility or recycle                            |
| Reverse Osmosis Membranes  | Non-hazardous        | As needed  | Recycled by water treatment manufacturer                                |
| Demineralization Units and Condensate Polisher                               | Non-hazardous        | Vessels changed out weekly per plant                               | Recycled by water treatment manufacturer                                |
| Oily rags  | Hazardous            | 900 lbs per year per plant, 400 lbs per year for common area       | Hazardous waste disposal facility or recycled by certified oil recycler |
| Oily absorbent   | Hazardous            | 600 lbs per year per plant, 200 lbs per year for common area       | Hazardous waste disposal facility or recycled by certified oil recycler |
| Oil-water separator waste  | Hazardous            | <del>200-150</del> gallons per year                                | Hazardous waste disposal facility or recycled by certified oil recycler |
| Mirror wash machine oil filters  | Hazardous            | 1, <del>500-000</del> lbs per year                                 | Hazardous waste disposal facility or recycled by certified oil recycler |
| Mirror wash machine oils   | Hazardous            | 2 gallons per oil change or 800 gallons per year per plant         | Hazardous waste disposal facility or recycled by certified oil recycler |
| Sewage sludge  | Non-hazardous        | 200 gallons per day per plant, 200 gallons per day for common area | Disposal offsite to sewage treatment facility                           |
| Evaporation pond sludge  | Non-hazardous        | Varies, pond emptied as needed                                     | Disposal offsite at landfill  |
| Cartidge Filters   | Non-hazardous        | Varies, vessels changed out weekly per plant                       | Disposal offsite at landfill  |

Source: Bechtel Power Corporation, 2011.

Notes:

<sup>1</sup> All numbers are estimates.

<sup>2</sup> Under California Regulations.

lbs = pounds.



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## *Liquid Wastes*

A raw water treatment plant will be located in the common area to clean raw well water for use by the Project. The treatment plant will be designed to remove impurities and make the water suitable for use in process production and mirror washing. Reject waste produced from the reverse osmosis process in the raw water treatment system will be captured in the wastewater collection tank and treated by the wastewater treatment (WWT) system located in a common area. Wastewater treatment systems will also be located at each plant.

The WWT system will consist of either a thermal distillation system with mechanical vapor compression or ion exchange. Distillate collected from the WWT plant will be recycled for reuse. Concentrate from the WWT systems will be disposed of in two evaporation ponds in the common area and allowed to evaporate. Each pond will be lined with a high-density polyethylene (HDPE) liner to prevent infiltration of process water into the subsoil below. Provisions for avian protection netting will be determined, depending upon local jurisdiction and agency requirements and applicable LORS. When needed, pond sludge will be removed from site by an outside contractor. General plant drains will collect containment area washdown, sample drains, and drainage from plant equipment. Water from these areas will be collected in a system of floor drains, hub drains, sumps, and piping and routed to the wastewater collection tank. Drains that potentially could contain oil or grease will first be routed through an oil and water separator. Similarly, drains in the common area are located in the water treatment building. These drains will be collected and routed to a sump and pumped back to the wastewater collection tank. Any of these drains that could potentially contain oil or grease will be administratively controlled via operational procedures.

Permeate from the raw water treatment system in the common area will be used as the feed water for the power cycle makeup treatment system in each plant. The power cycle make-up treatment system will be a self-contained skid mounted mixed bed (cation/anion) ion exchanger with off-site regeneration. There will be no liquid waste from the power cycle makeup water treatment equipment.

Boiler blowdown will consist of boiler water discharged from SRSG to maintain the water chemistry within acceptable ranges. Boiler blowdown from the SRSG will be routed to the SRSG flash tank. Flash steam from the flash tank will be recovered back into the steam cycle via the deaerator. Condensate from the flash tank will be further flashed to atmosphere and the remaining water cooled and recovered in the treated water storage tank. As an alternative, blowdown may be discharged to the wastewater collection tank for treatment.

Blowdown from the night-time preservation, and startup/~~and~~ auxiliary boilers will be collected in blowdown tanks and recovered in the treated water storage tank. As an alternative, blowdown may be discharged to the wastewater collection tank for treatment.

Each plant and the common area will include a septic system for sewage disposal and for potable and domestic water streams. Sewage generated from these systems will be collected and discharged to individual on-site septic tank and leach field. When needed, sewage sludge will be removed from the site by a sanitary service.

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*Hazardous Wastes* [\(no changes\)](#)

5.14.4.3 *Abandonment and Closure* [\(no changes\)](#)

5.14.5 Cumulative Effects [\(no changes\)](#)

5.14.6 Mitigation Measures [\(no changes\)](#)

5.14.7 Involved Agencies and Agency Contacts [\(no changes\)](#)

5.14.8 Permits Required and Permit Schedule [\(no changes\)](#)

5.14.9 References [\(no changes\)](#)