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APPLICANT'S SUPPLEMENTAL RESPONSE TO DATA REQUEST 16 AND 26: ADDITIONAL INFORMATION REGARDING HAZARDOUS MATERIALS HANDLING

In this section of Applicant's Supplemental Response to CEC Staff Data Request 16 and 26, Applicant describes the changes to the Hazardous Materials Handling 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 Hazardous Materials Handling section of the Application for Certification that will result from the changes to the Project Description.

The Hazardous Materials Handling sub-sections that have been modified are listed in the table of contents below. If there has been no change to a Hazardous Materials Handling 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

Tables

5.5 HAZARDOUS MATERIALS HANDLING

5.5.1 Introduction (Please refer to the updated Project Description in Section 2.1.1)

5.5.2 Laws, Ordinances, Regulations, and Standards

5.5.2.1 Federal

National Environmental Policy Act of 1969

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 T~~t~~he Rio Mesa Solar III plant and the~~Portions of the Project gen-tie line, upgraded Bradshaw Trail access road, and 33 kV 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.

Superfund Amendments and Reauthorization Act of 1968, Title III §§ 302, 304, 311 and 313 (no changes)

Clean Air Act of 1990, 42 U.S.C. 7401-7671 (no changes)

CAA Risk Management Plan, 42 USC § 112(r) (no changes)

Clean Water Act, 33 U.S.C. §§ 26 et seq (no changes)

Chemical Facility Anti-Terrorism Standards, 6 CFR 27 (no changes)

United States Department of Transportation Regulations, 49 CFR 171-177 (no changes)

Pipeline Safety Laws, 49 USC §§ 6010 et. seq. and 49 CFR 190-192 (no changes)

5.5.2.2 State (no changes)

5.5.2.3 Local (no changes)

5.5.2.4 Industry Standards (no changes)

5.5.3 Affected Environment (no changes)

5.5.4 Environmental Analysis (no changes)

5.5.4.1 Construction Phase

The hazardous materials to be used during Project construction include diesel fuel, oil, lubricants, and compressed gasses. No acutely hazardous materials would be used or stored on site during construction. A summary of the hazardous materials to be used and stored during construction is provided in Table 5.5-1 and Table 5.5-2. These tables identify, respectively, the hazardous materials to be used during construction based on the Title 22 CCR characteristics criteria and based on the properties of the substances themselves.

Table 5.5-1
Hazardous Materials Usage and Storage During Construction Based on Title 22 Hazard Characterization

Material	Hazard Characteristics[1]	Purpose	Storage Location	Maximum Stored	Storage Type
Acetylene	Ignitability	Welding	Hazardous Material Storage Area	~~25~~17,~~0~~500 ft^3	Cylinder
Diesel Fuel	Ignitability	Emergency generator & mobile equipment	Hazardous Material Storage Area	9,500 gal	Tank

Table 5.5-1
Hazardous Materials Usage and Storage During Construction Based on Title 22 Hazard Characterization

Material	Hazard Characteristics[1]	Purpose	Storage Location	Maximum Stored	Storage Type
Oxygen – Gaseous	Ignitability	Welding operation	Hazardous Material Storage Area	~~80~~56,000 ft^3	Cylinder
Paint, solvents, adhesives, cleaners, sealants, lubricants	Toxicity	Construction maintenance, Painting,	Hazardous Material Storage Area	500 gal	Can/Small containers
~~Sodium Hydroxide~~	~~Corrosivity~~	~~Spill neutralization~~	~~Hazardous Material Storage Area~~	~~150 gal~~	~~Carboy~~

Source: BrightSource Engineers and Bechtel Power Engineers, 2011
Notes:
[1] Hazardous characteristics identified per Title 22 California Code of Regulations § 66261.20 et seq. for hazardous wastes
gal = gallons (s)
ft^3 = cubic feet

Table 5.5-2
Hazardous Materials Usage and Storage During Construction Based on Material Properties

Material	Hazard Characteristics[1]	Purpose	Storage Location	Maximum Stored	Storage Type
Hydraulic Oil	Mildly toxic	Miscellaneous equipment control oil	Within equipment	1,000 gal	Construction Equipment
Lubricating Oil	Mildly toxic	Lubricating equipment parts	Hazardous Material Storage Area	~~22~~15,~~04~~00 gal	Drums and equipment

Source: BrightSource Engineers and Bechtel Power Engineers, 2011
Notes:
[1] Hazardous characteristics based on material properties and potential health hazards provided by those properties
gal = gallons (s)
ft^3 = cubic feet

In general, construction contractors will utilize fuels, lubricating oils, compressed gases, and solvents and cleaners during construction of the Rio Mesa SEGF. The construction contractor will be responsible for verifying that the use, storage, and handling of these materials are in compliance with applicable federal, state, and local LORS, including licensing, personnel training, accumulation limits, disposal, reporting requirements, and recordkeeping.

The following site services will also be provided, either under a separate contract or through incorporation into individual construction subcontracts for Rio Mesa SEGF:

- environmental health and safety training;

- site security;
- site first aid;
- furnishing and servicing of sanitary facilities;
- trash collection and disposal; and
- disposal of hazardous materials and waste in accordance with local, state, and federal regulations.

Small quantities of fuel oil and grease may leak from construction equipment during construction activities. Such materials generally have a low relative risk to human health and the environment. If there is a large spill, the spill area will be bermed or controlled as quickly as is practical to minimize the footprint of the spill. Potentially contaminated soil and materials produced during cleanup of a spill will be placed into drums for off-site disposal as a hazardous waste at a permitted hazardous waste transfer, storage, and disposal facility. If a spill or leak into the environment involves hazardous materials equal to or greater than the specific reportable quantity, federal, state, and local reporting requirements will be adhered to during cleanup activities. In particular, the Riverside County DEH, HMMD will be notified. The Riverside County Fire Department (RCFD) will be called in the event of a fire or injury. Contractors will be expected to implement best management practices (BMPs) consistent with hazardous materials storage, handling, emergency spill response, and reporting specified in the HMBP. The Project will not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials, will not create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment will not omit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school and is not included on a list of hazardous materials sites compiled pursuant to Government Code § 65962.5. The Project would not impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan. Impacts associated with the use of hazardous materials during the construction phase would not be significant.

5.5.4.2 Operations Phase

The hazardous materials to be used or stored on site during operation of the facility are listed in Table 5.5-3, and Table 5.5-4. These two tables list the materials to be used during regular project operation that can be characterized as hazardous based on Title 22 criteria and based on the properties of the materials, respectively.

Table 5.5-3
Hazardous Materials Usage and Storage During Operation Based on Title 22 Hazard Characterization

Material	Hazard Characteristics[1]	Purpose	Storage Location	Maximum Stored[2]	Storage Type
Nalco Elimin-OX (Oxygen scavenger)	Ignitability	Oxygen scavenger for boiler chemistry control	Power Block: Containers near power tower	~~1,800~~1,600 gal	~~300~~400 gallon totes

Table 5.5-3
Hazardous Materials Usage and Storage During Operation Based on Title 22 Hazard Characterization

Material	Hazard Characteristics[1]	Purpose	Storage Location	Maximum Stored[2]	Storage Type
Aqueous Ammonia (19% concentration)	Reactivity, toxicity	pH control for boiler chemistry	Power Block: Containers near power tower	1,~~800~~600 gal	~~300~~400 gallon totes
Sulfuric Acid 93% (66° Baumé)	Corrosivity, reactivity, toxicity	pH control	Power Block and Common Area: Containers located in ~~w~~Water ~~t~~Treatment ~~b~~Building	2,~~700~~400 gal	~~300~~400 gallon totes
Sulfuric Acid (Batteries)	Corrosivity, reactivity, toxicity	Electrical power	Power Block: Contained within the main electrical room and the power tower Common Area: Contained within main electrical room	~~14~~12,000 gal	Batteries
Sodium Hydroxide (50% concentration)	Corrosivity, reactivity, toxicity	pH control	Power Block and Common Area: Containers located within Water Treatment Building~~near wet-surface air cooler (WSAC) and WWTS~~ Common Area: Containers in Water Treatment Building	2,400 gal	~~3~~400 gallon totes
Diesel Fuel (No. 2)	Ignitability	Emergency generator	Power Block: Near fire pump, beneath emergency diesel generator, and adjacent to the mirror wash machines water filling station Common Area: beneath emergency diesel generator and near fire pump	4~~6~~0,000 gal	Aboveground storage tanks and in equipment
Paint, solvents, adhesives, cleaners, sealants, lubricants	Toxicity	Equipment Maintenance,	Power Block: Maintenance Shop	500 gal	1 gal and 5 gal containers

Table 5.5-3
Hazardous Materials Usage and Storage During Operation Based on Title 22 Hazard Characterization

Material	Hazard Characteristics[1]	Purpose	Storage Location	Maximum Stored[2]	Storage Type

Source: BrightSource Engineers, 2011
Notes:
1 Hazardous characteristics identified per Title 22, California Code of Regulations, § 66261.20 et seq., for hazardous wastes
2 All numbers are approximate. Assumes two totes could be required per chemical and location. Operational volumes are expected to vary but not exceed maximum stored.
gal = gallons (s)
WSAC = Wet-Surface Air Cooler
WWTS = Wastewater Treatment System

Table 5.5-4
Hazardous Materials Usage and Storage during Operation Based on Material Properties

Material	Hazard Characteristics[1]	Purpose	Storage Location	Maximum Stored[2]	Storage Type
Cleaning Chemicals and Detergents	Toxicity, irritant	Periodic cleaning of steam turbine	Power Block: Maintenance shop	3,000 gal	Misc. Manufacturer's containers
Nalco 5200M (Anti-scalant	Irritant, mildly toxic	Wastewater treatment anti-scalant	Power Block and Common Area: Containers located in ~~near WWTS~~ ~~Common Area: Containers in~~ Water Treatment Building	~~12,5~~4001,600 gal	~~3~~400 gallon totes
Nalco 3DT-187 (Corrosion Inhibitor)	Irritant, mildly toxic	Wet-Surface Air Cooler (WSAC) Corrosion inhibitor	Power Block: Containers located ~~near WSAC~~ ~~Common Area: Containers~~ in Water Treatment Building ~~(storage)~~	~~2,~~1,600 gal	~~3~~400 gallon totes
Nalco 73801WR (Dispersant)	Irritant, mildly toxic	WSAC Dispersant	Power Block: Containers ~~near WSAC~~ Located in ~~Common Area: Containers in~~ Water Treatment Building ~~(storage)~~	~~2~~,1,600 gal	~~3~~400 gallon tote

Table 5.5-4
Hazardous Materials Usage and Storage during Operation Based on Material Properties

Material	Hazard Characteristics[1]	Purpose	Storage Location	Maximum Stored[2]	Storage Type
Nalco TRAC107 (Corrosion Inhibitor)	Irritant, mildly toxic	Closed cooling water Corrosion Inhibitor	Power Block: ~~Contained within CCW system~~ ~~Common Area:~~ Containers located in ~~w~~Water ~~t~~Treatment ~~b~~Building ~~(storage)~~	500 gal	55 gal drums
Avista Vitec (Scale Inhibitor)	Irritant, mildly toxic	Reverse osmosis scale inhibitor	Common Area: ~~c~~Containers located in Water Treatment Building	~~9~~800 gal	~~3~~400 gallon totes
Sodium Bisulfite	Irritant, mildly toxic	Dechlorination	Common Area: ~~c~~Containers located in Water Treatment Building	~~9~~800 gal	~~3~~400 gallon totes
Nalco 7468 (Anti-foaming agent)	Irritant, mildly toxic	Wastewater treatment system anti-foaming agent	Power Block and Common Area: Containers ~~near WWTS~~ ~~Common Area: Containers~~ located in Water Treatment Building	~~1~~2,~~5~~400 gal	~~3~~400 gallon totes
Lubricating Oil	Mildly toxic	Miscellaneous equipment lubrication	Power Block: Contained within equipment, drums during replacement Common Area: Contained within equipment, spare capacity stored in Maintenance shop	~~30,000~~22,000 gal	Contained within equipment and misc. drums during replacement
Mineral Transformer Insulating Oil	Mildly toxic	Provides overheating and insulation protection for transformers	Power Block: Contained within transformers Common Area: Contained within transformers	112,000 gal	Transformers
Hydraulic Oil	Mildly toxic	Miscellaneous equipment control oil	Power Block: Contained within equipment, drums during replacement Common Area; Contained within equipment, spare capacity stored in Warehouse	6,000 gal	Contained within equipment and misc. drums during replacement

Table 5.5-4
Hazardous Materials Usage and Storage during Operation Based on Material Properties

Material	Hazard Characteristics[1]	Purpose	Storage Location	Maximum Stored[2]	Storage Type
Sodium Hypochlorite 12% (trade) solution	Irritant, Corrosivity, reactivity	Biocide	Power Block and Common Area: Containers located in ~~w~~Water ~~t~~Treatment ~~b~~Building ~~Common Area: Potable water treatment area~~	2,400 gal	~~3~~400 gallon totes

Source: BrightSource Engineers, 2011.
Notes:
1 Hazardous characteristics based on material properties and potential health hazards provided by those properties
2 All numbers are approximate. ~~A~~Typically assumes two totes could be required per chemical and location. Operational volumes are expected to vary but not to exceed maximum stored.
cf = cubic feet
gal = gallons (s)
WSAC = Wet-Surface Air Cooler
WWTS = Wastewater Treatment System

Fire and Explosion Risks (no changes)

Acutely Hazardous Materials/Regulated Substances (no changes)

Other Hazardous Materials (no changes)

Material Safety Data Sheets (no changes)

Transportation of Hazardous Materials (no changes)

Site Security (no changes)

5.5.4.3 Abandonment / Closure (no changes)

5.5.5 Cumulative Effects (no changes)

5.5.6 Mitigation Measures (no changes)

5.5.7 Involved Agencies and Agency Contacts (no changes)

5.5.8 Permits Required and Permit Schedule (no changes)

5.5.9 References (no changes)