

## D.6 Hazardous Materials

### D.6.1 Environmental Setting for the Proposed Project

This section provides information on the environmental and safety hazards associated with non-radioactive hazardous materials used, stored, and generated during the transport and installation of the replacement steam generators at SONGS, as well as the dismantling, staging, and offsite transport and disposal of the original steam generators. It should be noted that the NRC has sole jurisdiction over the regulation of radioactive hazards, safety issues, and radioactive waste handling and storage. Radiation hazards and nuclear safety, including the possession, handling, storage, and transportation of radioactive materials are discussed in Section D.12, System and Transportation Safety.

#### Definition of Hazardous Materials

Materials classified as hazardous by the federal government and State of California are commonly used by industrial activity and would be a concern during RSG transport, staging, and installation, and the removal, staging, and disposal of the OSGs. The term hazardous material is defined by California Health and Safety Code Section (H&SC) 25501(n) and (o) as:

Any material that, because of its quantity, concentration, or physical or chemical characteristics, poses a significant present or potential hazard to human health and safety or to the environment if released into the workplace or the environment. "Hazardous materials" include, but are not limited to, hazardous substances, hazardous wastes, and any material which a handler or the administering agency has a reasonable basis for believing that it would be injurious to the health and safety of persons or harmful to the environment if release into the workplace or the environment.

Fuels, oils, lubricants, adhesives, cleansers, pressurized and containerized gases such as breathing air, nitrogen, and helium, are all considered hazardous materials. The most common examples of the types of materials and wastes considered hazardous are hazardous chemicals defined by four characteristics; toxicity, ignitability, corrosivity, and reactivity. The characteristics of toxicity, ignitability, corrosivity, and reactivity are defined in Title 22 CCR §66261.20-66261.24 and are summarized below:

**Toxic Substances.** Toxic substances may cause short-term or long-lasting health effects, ranging from temporary effects to permanent disability, or even death. For example, such substances can cause disorientation, acute allergic reactions, asphyxiation, skin irritation, or other adverse health effects if human exposure exceeds certain levels. The level depends on the substances involved and is chemical-specific. Carcinogens (substances that can cause cancer) are a special class of toxic substances. Examples of toxic substances include benzene (a component of gasoline and a suspected carcinogen) and methylene chloride (a common laboratory solvent and a suspected carcinogen).

**Ignitable Substances.** Ignitable substances are hazardous because of their ability to burn. Gasoline, hexane, and natural gas are examples of ignitable substances.

**Corrosive Materials.** Corrosive materials can cause severe burns. Corrosives include strong acids and bases such as sodium hydroxide (lye) or sulfuric acid (battery acid).

**Reactive Materials.** Reactive materials may cause explosions or generate toxic gases. Explosives, pure sodium or potassium metals (which react violently with water), and cyanides are examples of reactive materials.

Hazardous materials concerns are related to the potential for fires, explosions, or the accidental exposure, acute inhalation or dermal contact with a hazardous material in the event of an unauthorized release. An unauthorized release is defined as:

- Unauthorized disposal or release means any disposal of a hazardous waste or substance which is in violation of the provisions of Chapter 6.5 (commencing with Section 25100) of Division 20 of the California Health and Safety Code (H&SC), any unauthorized release within the meaning of H&SC Section 25281, which includes any spill or overflow, or any release of a hazardous waste or substance which is not a release authorized or permitted within the meaning of H&SC Section 25326.
- Under H&SC Section 25320, a “release” is any spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping, or disposing into the environment.
- A “release” does not include (as in H&SC Section 25321): (a) any release that results in exposure to persons solely within a workplace, with respect to a claim those exposed persons may assert against their employer; (b) emissions from the engine exhaust of a motor vehicle, rolling stock, aircraft, vessel, or pipeline pumping station engine; (c) release of source, byproduct, or special nuclear material from a nuclear incident, as those terms are defined in the Atomic Energy Act of 1954 (42 U.S.C. Sec. 2011, et seq.), if such release is subject to requirements with respect to financial protection established by the Nuclear Regulatory Commission under Section 2210 of Title 42 of the United States Code or, for the purposes of Section 104 of the federal act (42 U.S.C. Sec. 9604) or any other response action, any release of source byproduct, or special nuclear material from any processing site designated under Section 7912(a)(1) or 7942 (a) of Title 42 of the United States Code, which sections are a part of the Uranium Mill Tailings Radiation Control Act of 1978; and (d) the normal application of fertilizer, plant growth regulants, and pesticides.

## Classification of Hazardous Materials

Hazardous material categories associated with routine operation of SONGS include nine classifications. The classifications are provided in Table D.6-1 with examples, uses, and potential hazards associated.

**Table D.6-1. SONGS Hazardous Materials Summary**

Substance	Examples	Typical Use(s)	Hazard(s)
Solvents	Alcohol, ether, toluene, hexane, trichloroethylene	Lab chemicals, paint removers, and degreasers	Flammable, some explosive; toxic; damage to skin and respiratory tract; systemic damage to liver, kidneys nervous system, etc.
Oxidizers	Boric, chromic, permanganic, and sulfuric acids, silver nitrate, potassium dichlorate, ammonium persulfate	Lab chemicals	Stimulates combustion of organic materials
Compressed Gases	Methane, oxygen, and nitrogen	Labs, welding, and maintenance	Flammable, some explosive (with potential for propellant effect) and some toxic
Corrosives	Boric, chromic, dipicolinic, oxalic, permanganic, and sulfuric acids, sodium hydroxide, and ammonium hydroxide	Lab chemicals, cleaning agents, paints, and paint thinners, freon	Dermal contact (damage to skin, eyes and respiratory tract); some react to produce fire, explosion, or toxic fumes

**Table D.6-1. SONGS Hazardous Materials Summary**

<b>Substance</b>	<b>Examples</b>	<b>Typical Use(s)</b>	<b>Hazard(s)</b>
Reactives	Lithium hydroxide, alkyl metals (sodium, potassium), and hydrides	pH balancing, batteries	Explosive (with or without detonation); toxic fumes; explodes with exposure to water
Toxics	Metals, chlorinated hydrocarbons (solvents)	Lab chemicals, biocides, pesticides, dyes, and paints	Potential for acute or chronic systemic damage or death, cancer, infertility, birth defects
Radioactivity	Radionuclides (radioisotopes), Uranium	Reactor	Potential for acute or chronic systemic damage, cancer, infertility, birth defects
Fuels	Gasoline, diesel, and waste oil, lubricants	Vehicles, generators, machinery	Flammable, explosive; toxic; dermal contact (damage to skin, eyes, and respiratory tract)

Source: Leonard, 2002; SCE, 2002a and 2002b; DEH, 2004b.

## Regional Overview

The setting for the Proposed Project includes the Del Mar Boat Basin, shore areas of MCBCP, and the SONGS site. Routine operations at SONGS and activities on MCBCP involve hazardous material storage and use. Existing conditions affected by historic activities includes the potential for soil or groundwater contamination by hazardous substances. Potential sources of hazardous materials include leaking tanks, surface runoff from contaminated sites, and migration of contaminated groundwater plumes. Information on the existing conditions is tracked by regulatory agencies in a range of databases.

A database search of available regulatory environmental records was conducted by Environmental Data Resources, Inc. (EDR, 2004). The EDR report meets the government records search requirements of the Standard Practice for Environmental Site Assessments, E 1527-00, of the American Society for Testing and Materials (ASTM). The search was conducted to identify sites listed in regulatory files as those that:

- Produce and/or store hazardous materials
- Generate hazardous waste
- Have had incidents or spills involving significant quantities of hazardous materials
- Have documented contaminated groundwater or leaking storage tanks
- Could cause other potential cumulative impacts.

The regulatory agencies that oversee hazardous materials management are described in more detail in Section D.6.2 below. Table D.6-2 provides a summary of the EDR database search results by agency, program, or specific database. The database search results show that one location within a one-mile radius is listed in the California Hazardous Material Incident Report System (CHMIRS) for a historic hazardous material incident, and there is also a location within one-half-mile that is included in the Leaking Underground Storage Tank Incident Reports listing (LUST). These are discussed further below.

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**Table D.6-2. SONGS Site Identification Database Search Results**

Database	Source Agency	Search Dist. (miles)	Target Property (SONGS)	Number of Facilities (miles)			
				<1/8	1/8-1/4	1/4-1/2	1/2-1
<b>Facilities Located within One Mile of SONGS – Database Listings</b>							
<b>CERCLIS</b> – Comprehensive Environmental Response, Compensation, and Liability Information System contains data on potential hazardous waste sites that have been reported to the USEPA, by states, municipalities, private companies and private persons	USEPA	0.5	No	0	0	0	—
<b>CERCLIS-NFRAP</b> – CERCLIS No further remedial action planned	USEPA	0.25	No	0	0	—	—
<b>CONSENT</b> – Superfund Consent Decrees. Major legal settlements that establish responsibility and standards for cleanup at NPL sites	USEPA	1.00	No	0	0	0	0
<b>CORRACTS</b> – Identifies hazardous waste handlers with RCRA corrective action reports	USEPA	1.00	No	0	0	0	0
<b>Delisted NPL</b> – Delisted NPL sites	USEPA	1.00	No	0	0	0	0
<b>ERNS</b> – Emergency Response Notification System records and stores information on reported releases of oil and hazardous substances	USEPA /NTIS <sup>1</sup>	TP <sup>2</sup>	No	—	—	—	—
<b>FINDS</b> – The Facility Index System contains both facility information and pointers to other sources that contain more detail	USEPA	TP	Yes	—	—	—	—
<b>FTTS</b> – The Facility Tracking System tracks administrative cases and pesticide enforcement actions and compliance activities related to FIFRA, TSCA and EPCRA	USEPA	TP	No	—	—	—	—
<b>HMIRS</b> – Hazardous Materials Information Reporting System contains hazardous material spill incidents reported to DOT	DOT	TP	No	—	—	—	—
<b>MINES</b> – Mines Master Index File	MS&HA <sup>3</sup>	0.25	No	0	0	—	—
<b>MLTS</b> – The Material License Tracking System contains a list of all facilities that possess or use radioactive materials and which are subject to NRC licensing requirements	NRC	TP	No	—	—	—	—
<b>NPL</b> – The National Priority List sites is a subset of CERCLIS and identifies sites for priority cleanup under the Superfund Program.	USEPA	1.00	No	0	0	0	0
<b>NPL liens</b> – The USEPA has the authority to file liens against real property in order to recover remedial action expenditures or when the property owner receives notification of potential liability. USEPA compiles a listing of Superfund Liens	USEPA	TP	No	—	—	—	—
<b>PADS</b> – PCB Activity Database System. Identifies generators, transporters, commercial storers and/or brokers and disposers of PCB's who are required to notify USEPA	USEPA	TP	No	—	—	—	—
<b>Proposed NPL</b> – Proposed National Priority List sites	USEPA	1.00	No	0	0	0	0
<b>RAATS</b> – RCRA Administrative Action Tracking System. RAATS contains records based on enforcement actions issued under RCRA pertaining to major violators and includes administrative and civil actions brought by the USEPA	USEPA	TP	No	—	—	—	—
<b>RCRIS (TSD, SQG &amp; LQG)</b> – Resource Conservation and Recovery Information System includes selective information on sites, which generate, transport, store, treat and/or dispose of hazardous waste as defined by RCRA	USEPA /NTIS	0.25 – 0.50	Yes	0	0	0	—
<b>ROD</b> – Record of Decision mandate a permanent Remedy at an NPL site containing technical and health information to aid in the cleanup	USEPA	1.00	No	0	0	0	0
<b>TRIS</b> – Toxic Chemical Release Inventory System. TRIS identifies facilities, which release toxic chemicals to the air, water and land in reportable quantities under SARA Title III Section 313	USEPA	TP	No	—	—	—	—
<b>TSCA</b> – Toxic Substances Control Act. TSCA identifies manufacturers and importers of chemical substances included on TSCA chemical substance inventory list	USEPA	TP	No	—	—	—	—

**Table D.6-2. SONGS Site Identification Database Search Results**

Database	Source Agency	Search Dist. (miles)	Target Property (SONGS)	Number of Facilities (miles)			
				<1/8	1/8-1/4	1/4-1/2	1/2-1
<b>Target Property and Surrounding Sites – Summary of State/Local Database Listings</b>							
<b>AST</b> - Aboveground Petroleum Storage Tank Facilities	SWRCB	TP	No	—	—	—	—
<b>AWP</b> – Annual Work Plan Sites. Known Hazardous Waste Sites	Cal EPA	1.0	No	0	0	0	0
<b>CA BOND EXP. PLAN</b> – Bond Expenditure Plan. Site-specific expenditure plan for the appropriation of Hazardous Substance Cleanup Bond Act funds	DHS	1.0	No	0	0	0	0
<b>CA FID UST</b> - The California Facilities Information Database for Underground Storage Tanks contains historic listing of active and inactive storage tank locations	Cal EPA	0.25	No	0	0	—	—
<b>CAL-SITES</b> – Calsite database contains potential or confirmed hazardous substance release properties	DTSC	1.00	No	0	0	0	0
<b>CA WDS</b> – Sites that have been issued waste discharge requirements	SWRCB	TP	No	—	—	—	—
<b>CA SLIC</b> – California Spills, Leaks, Investigations and Cleanup Program identifies active toxic site investigations	RWQCB	0.50	No	0	0	0	—
<b>CLEANERS</b> – Cleaner Facilities. A list of drycleaner related facilities that have EPA ID numbers	DTSC	0.25	No	0	0	—	—
<b>CORTESE</b> – This database identifies public drinking wells with detectable levels of contamination, hazardous substance sites selected for remedial action, sites with know toxic material identified through the abandoned site assessment program, sites with USTs having a reportable release and all solid waste disposal facilities from which there is known migration	Cal EPA	1.00	No	0	0	0	0
<b>CHMIRS</b> – California Hazardous Material Incident Report System contains information on reported hazardous material incidents	OES	1.00	No	0	0	0	1
<b>DEED</b> – List of Deed Restrictions. The use of recorded land use restrictions is one of the methods the DTSC uses to protect the public from unsafe exposure to hazardous waste	DTSC	TP	No	—	—	—	—
<b>HAZNET</b> – Hazardous Waste Information System. The data is extracted from the copies of hazardous waste manifests received each year by the DTSC	Cal EPA	0.25	No	0	0	—	—
<b>HIST UST</b> – The Hazardous Substance Container Database is a historic listing of UST sites	SWRCB	0.25	No	0	0	—	—
<b>LUST</b> – The Leaking Underground Storage Tank Incident Reports contain an inventory of reported leaking underground storage tank incidents	SWRCB	0.50	No	0	0	1	—
<b>NOTIFY 65</b> – Proposition 65 Records	SWRCB	1.00	No	0	0	0	0
<b>TOXIC PITS</b> – The Toxic Pits Cleanup Act Sites database identifies sites suspected of containing hazardous substances where cleanup has not yet been completed	SWRCB	1.00	No	0	0	0	0
<b>SWF/LF (SWIS)</b> – Solid waste information system. Lists active, closed, and inactive landfills that failed to meet RCRA Section 4004 criteria for solid waste landfills or disposal sites	CIWMB <sup>4</sup>	0.5	No	0	0	0	—
<b>UST</b> – Active UST Facilities	SWRCB	0.25	No	0	0	—	—
<b>WMUDS/SWAT</b> – The Water Management Unit Database/Soils and Water Assessment Tool used by SWRCB and RWQCB for program tracking and inventory of waste management units	SWRCB	0.50	No	0	0	0	—
<b>San Diego Co. HMMD</b> – List includes site and permit information, inspection dates, violation received, hazardous wastes generated, etc. in San Diego County	HMMD	TP	No	—	—	—	—
<b>Coal Gas</b> – Existence and location of Coal Gas sites	Cal EPA	1.00	No	0	0	0	0

Source: EDR, 2004.

<sup>1</sup> NTIS: National Technical Information Service

<sup>2</sup> TP: Target Property; SONGS facility is a target property in the database

<sup>3</sup> MS&HA: Mine Safety and Health Administration

<sup>4</sup> CIWMB: California Integrated Waste Management Board

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The results of the database search for evidence of historic incidents, spills, or contamination at SONGS reveal past records of releases or violations at the site. Table D.6 3 summarizes EDR database listings for SONGS. The databases show that the recorded releases are between 15 and 20 years old. In summary, there are no known active hazardous material sites within one mile of the SONGS site. However, there are sites of historic incidents and incidents of leaking underground storage tanks (in Table D.6 3) within the SONGS site.

**Table D.6-3. SONGS Regulatory Environmental Database Listings**

Database	EPA ID No.	State/Local ID No.	Notes
FINDS	1000685999	NA	Facility information and pointers to other sources that contain more detail are available
RCRIS-LQG	CAD983629650	NA	No violations found. Last Biennial Report was done in 1999
LUST	NA	S102436399	Within SONGS site. Facility ID #9UT2560. During subsurface monitoring, a gasoline leak was discovered. Discovered and released on 3/1/1986. Closed 3/31/1986. Soil only affected. Signed off, remedial action completed or deemed unnecessary. Facility ID #9UT2559. During tank closure, a gasoline leak was discovered. Tank closed. Discovered on 12/2/1985. Released on 12/9/1985. Closed 3/31/1986. Soil only affected. Signed off, remedial action completed or deemed unnecessary.
CHMIRS	NA	S100278807	Within San Onofre State Beach. 2 gallons of liquid Alkyl Dimethyl Oxide released on 4/30/1988 causing ground contamination. Extent of release – Code 6

Source: EDR, 2004.

Although Tables D.6-2 and D.6-3 show that there are historically contaminated sites within the SONGS facility and the neighboring San Onofre State Park, substantial excavation of near-surface soil and ground-water dewatering would not be part of the Proposed Project. Therefore, based on the EDR findings, the likelihood of existing hazardous materials sites affecting any aspect of the proposed steam generator replacement project would be limited.

## D.6.2 Applicable Regulations, Plans, and Standards

Hazardous materials are subject to numerous statutory laws, regulations, and best management practices at all levels of government. Applicable federal, state, and local regulations, plans, standards, and policies are provided in this section. Organizations with applicable and relevant hazardous materials regulations and/or functions are described in this section.

The following is a listing of the primary federal, State, and local agencies and departments that regulate, manage, or respond to spills or accidents related to hazardous materials.

Federal agencies with hazardous materials oversight:

- Department of Defense (DOD)
  - Commander, Marine Corps Base Camp Pendleton (MCBCP)
  - MCBCP Fire Department/Detachment
- Department of Energy (DOE)
- Nuclear Regulatory Commission (NRC)
- Occupational Safety and Health Administration (OSHA or Fed-OSHA)
- U.S. Coast Guard (USCG)

- U.S. Department of Transportation (DOT) Office of Hazardous Material Safety
- U.S. Army Corps of Engineers (USACE)
- U.S. Environmental Protection Agency (USEPA)
- U.S. Fish and Wildlife Service (USFWS)

State agencies with hazardous materials oversight:

- California Coastal Commission (CCC)
- California Department of Fish and Game (CDFG)
- California Department of Health Services (DHS)
- California Department of Transportation (Caltrans)
- California Environmental Protection Agency (Cal-EPA)
- California Integrated Waste Management Board (CIWMB)
- California Occupational Safety and Health (Cal-OSHA)
- California Office of Environmental Health and Hazard Analysis (OEHHA)
- Department of Toxic Substances Control (DTSC)
- State Water Resources Control Board (SWRCB); Regional Water Quality Control Board (RWQCB), Region 9 – San Diego

Local agencies with hazardous materials oversight:

- County of San Diego Department of Environmental Health (DEH) – Site Assessment and Mitigation Division, and Hazardous Material Division (HMD)
- County of San Diego Fire Department
- San Diego Air Pollution Control District (SDAPCD)
- San Diego County Office of Disaster Preparedness

A summary of the most pertinent regulations is provided in the following subsections. Not all regulations associated with the organizations listed above are provided.

## Federal and State Standards

### Federal

Federal hazardous material laws and regulations apply to any hazardous substances used or stored during the project. Hazardous waste laws apply to hazardous waste generated by project activities during the time the project is active. The following federal laws are applicable to the project, but should not be considered comprehensive. Refer also to the SONGS Spill Contingency Plan (SCE, 2002b) for a listing of specific federal and state regulations.

#### ***Hazardous Waste Handling Requirements***

**Resource Conservation and Recovery Act (RCRA) and associated Hazardous and Solid Waste Amendments (HSWA), 40 CFR 260.** Implementation of RCRA resulted in the creation of a major federal hazardous waste regulatory program that is administered by the USEPA. Under RCRA, the USEPA

regulates the generation, transportation, treatment, storage, and disposal of hazardous waste. RCRA was amended by the Hazardous and Solid Waste Act (HSWA), which affirmed and extended the concept of regulating hazardous wastes from generation through disposal. HSWA specifically prohibits the use of certain techniques for the disposal of some hazardous wastes. Under RCRA, individual states may implement their own hazardous waste programs instead of RCRA, as long as the state program is at least as stringent as the federal RCRA requirements. USEPA approved California's program to implement federal hazardous waste regulations on August 1, 1992.

### ***Asbestos and Lead***

**National Emissions Standards for Hazardous Air Pollutants (NESHAP), 40 CFR 61 Subpart M.** Under Subpart M, an asbestos containing materials (ACM) survey must be performed prior to renovation or demolition activities. Notification of the lead agency (San Diego County Air Pollution Control District) is required 14 days prior to the start of work (disturbance of ACM). Additional federal and state-level asbestos requirements related to OSHA standards in 29 CFR 1926.1101 are covered by the Asbestos Construction Standard, Title 8, CCR Section 1529, which is described separately below.

**Worker Protection Rule, 40 CFR 763 Subpart G and 29 CFR 1910.1001.** Provides worker protection measures through engineering controls, worker training, labeling, respiratory protection, waste management and sets the permissible exposure level (PEL) for asbestos. The definition of ACM is also provided in these regulations.

### ***Emergency Planning***

**Emergency Planning and Community Right-to-Know Act (EPCRA).** Under EPCRA, or Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA), the USEPA requires local agencies to regulate the storage and handling of hazardous materials and requires development of a plan to mitigate the release of hazardous materials. Businesses that handle any of the specified hazardous materials must submit to emergency planning and response agencies, an inventory of the hazardous materials, an emergency response plan, and an employee training program. The business plans must provide a description of the types of hazardous materials/waste on-site and the location of these materials. The information in the business plan can then be used in the event of an emergency to determine the appropriate response action, the need for public notification, and the need for evacuation.

### ***Hazardous Materials Management Planning***

**Section 112(r) of the Clean Air Act Amendments of 1990, 40 CFR 68.** The USEPA requires facilities that handle listed regulated substances to develop Risk Management and Prevention Programs (RMPPs) to prevent accidental releases of these substances. Stationary sources with more than a threshold quantity of a regulated substance shall be evaluated to determine the potential for and impacts of accidental releases from that covered process. Under certain conditions, the owner or operator of a stationary source may be required to develop and submit an RMPP. RMPPs consist of three main elements: a hazard assessment that includes off-site consequences analyses and a five-year accident history, a prevention program, and an emergency response program. RMPPs for existing facilities were required to be submitted in 1999 and must be updated every 5 years.

### ***National Contingency Plan Requirements***

**Spill Prevention Control and Countermeasures Plans (SPCCP), 40 CFR 112.3 and 112.7.** Facilities that store large volumes of hazardous materials are required to have a Spill Prevention Containment and Countermeasures Plan per the requirements of 40 CFR 112. The SPCCP is designed to prevent spills



from on-site facilities and includes requirements for secondary containment, provides emergency response procedures, establishes training requirements, and so forth.

### ***Hazardous Materials Transportation***

**The Hazardous Materials Transportation Act (HMTA), 49 CFR 171 Subchapter C.** The U.S. Department of Transportation (DOT), Federal Highway Administration, and the Federal Railroad Administration regulate transportation of hazardous materials at the federal level. The HMTA requires that carriers report accidental releases of hazardous materials to DOT at the earliest practical moment. Other incidents which must be reported include deaths, injuries requiring hospitalization, and property damage exceeding \$50,000.

### ***Worker Health and Safety***

**Occupational Safety and Health Act, 29 CFR et seq.** Under the authority of the Occupational Safety and Health Act of 1970, the U.S. Occupational Safety and Health Administration (OSHA) has adopted numerous regulations pertaining to worker safety (29 CFR). These regulations set standards for safe workplaces and work practices, including the reporting of accidents and occupational injuries. Some OSHA regulations contain standards relating to hazardous materials handling, including workplace conditions, employee protection requirements, first aid, and fire protection, as well as material handling and storage. Relevant, but not all inclusive citations are summarized below.

**Hazard Communication, 29 CFR 1910.1200.** The purpose of the OSHA Hazard Communication law is to ensure that the hazards of all chemicals produced or imported are evaluated, and that information concerning any potential hazards is transmitted to employers and employees. This transmittal of information is to be accomplished by means of comprehensive hazard communication programs, which are to include container labeling and other forms of warning, material safety data sheets, and employee training.

**Process Safety Management (PSM), 29 CFR 1910.119.** Under this section, facilities which use, store, manufacture, handle, process, or move hazardous materials are required to:

- Conduct employee safety training;
- Have an inventory of safety equipment relevant to potential hazards;
- Have knowledge on use of the safety equipment;
- Prepare an illness prevention program;
- Provide hazardous substance exposure warnings;
- Prepare an emergency response plan, and
- Prepare a fire prevention plan.

In addition, 29 CFR 1910.119, Process Safety Management (PSM) of Highly Hazardous Chemicals, specifically requires prevention program elements to protect workers at facilities that have toxic, flammable, reactive or explosive materials. Prevention program elements are aimed at preventing or minimizing the consequences of catastrophic releases of chemicals and include process hazard analyses, formal training programs for employees and contractors, investigation of equipment mechanical integrity, and an emergency response plan.

## **State of California**

State hazardous material and waste laws and regulations that apply to hazardous substances used or stored at SONGS are listed below. Summaries of these regulations are then provided in the paragraphs following.

### ***California Health and Safety Code***

- Division 20, Chapter 6.5, §25100-25249, Hazardous Waste Control
- Division 20, Chapter 6.95, §255500, et seq., Hazardous Materials Management Plan and Community Right-to-Know. See San Diego County Department of Environmental Health (DEH) Hazardous Materials Division (HMD) under “Local Ordinances and Policies” below.
- Proposition 65 Compliance, H&SC §25249.5 et seq.
- H&SC §§25340-25392, Carpenter-Presley-Tanner Hazardous Substance Account Act
- H&SC §§25531-25541, Risk Management and Prevention Program

### ***California Water Code***

- Division 7, Water Quality (Porter-Cologne Water Quality Control Act)

### ***California Code of Regulations (CCR)***

- Title 8, §1529, Asbestos Construction Standard
- Title 8, §1532.1, Lead Construction Standard
- Title 8, §5189, Accidental Release Plan (ARP)
- Title 8, §5192, Accidental Release Plan (ARP)
- Title 19, §2729, Employee Training Program
- Title 22, Division 4, Chapter 30, Hazardous Wastes
- Title 22, Division 4.5, §§66260-67786, Hazardous Waste Requirements
- Title 22, §66265.50-.56, Contingency/Emergency Response Plan

### ***Hazardous Waste Control Law***

The Hazardous Waste Control Law (HWCL) is administered by the California Environmental Protection Agency, Department of Toxic Substances Control (DTSC). DTSC has adopted extensive regulations governing the generation, transportation, and disposal of hazardous wastes. These regulations impose cradle-to-grave requirements for handling hazardous wastes in a manner that protects human health and the environment. The HWCL regulations establish requirements for identifying, packaging, and labeling hazardous wastes. They prescribe management practices for hazardous wastes; establish permit requirements for hazardous waste treatment, storage, disposal, and transportation; and identify hazardous wastes that cannot be disposed of in landfills. Hazardous waste is tracked from the point of generation to the point of disposal or treatment using hazardous waste manifests. The manifests list a description of the waste, its intended destination, and regulatory information about the waste.

### ***Hazardous Materials Management Planning***

The Office of Emergency Services (OES) coordinates overall state agency response to major disasters in support of local government. The office is responsible for assuring the state's readiness to respond to and recover from natural, manmade, and war-caused emergencies, and for assisting local governments in their emergency preparedness, response, and recovery efforts. During major emergencies, OES may call upon all state agencies to help provide support. Due to their expertise, the California National Guard, Highway Patrol (CHP), Department of Forestry and Fire Protection, Conservation Corps, Department of Social Services, and the Caltrans are the agencies most often asked to respond and assist in emergency response activities.

**Hazardous Materials Release Response Plans and Inventory Act.** The California Accidental Release Prevention (CalARP) Program, Title 19 CCR Title Division 2, Chapter 4.5) and H&SC Chapter 6.95, Article 2 requires facilities that handle listed regulated substances are required to develop Accidental Release Plans (ARP). An RMPP and ARP can be submitted as the same document to the USEPA and State of California (see description of RMPP components in federal section above). The ARP should be updated to reflect newly constructed facilities at SONGS based on the quantity of hazardous materials stored.

### ***Hazardous Materials Transportation in California***

California regulates the transportation of hazardous waste originating or passing through the State in Title 13 CCR. The California Highway Patrol and Caltrans have primary responsibility for enforcing federal and State regulations and responding to hazardous materials transportation emergencies. The CHP enforces materials and hazardous waste labeling and packing regulations that prevent leakage and spills of material in transit and provide detailed information to cleanup crews in the event of an incident. Vehicle and equipment inspection, shipment preparation, container identification, and shipping documentation are all part of the responsibility of the CHP. The CHP conducts regular inspections of licensed transporters to assure regulatory compliance. Caltrans has emergency chemical spill identification teams at locations throughout the State.

Hazardous waste must be regularly removed from generating sites by licensed hazardous waste transporters. Transported materials must be accompanied by hazardous waste manifests.

### ***Hazardous Material Worker Safety, California Occupational Safety and Health Act***

The California Occupational Safety and Health Administration (Cal/OSHA) is responsible for assuring worker safety in the handling and use of chemicals in the workplace. Cal/OSHA assumes primary responsibility for developing and enforcing workplace safety regulations in Title 8 CCR. Cal/OSHA hazardous materials regulations include requirements for safety training, availability of safety equipment, hazardous substance exposure warnings, and emergency action and fire prevention plan preparation.

Cal/OSHA also enforces hazard communication program regulations which contain training and information requirements, including procedures for identifying and labeling hazardous substances. The hazard communication program also requires that Material Safety Data Sheets (MSDS) be available to employees and that employee information and training programs be documented.

***Asbestos and Lead***

Asbestos-containing construction materials (ACCM) are defined by Cal/OSHA as any internal building component containing greater than 0.1 percent asbestos. This is more stringent than federal definitions of asbestos-containing materials (ACM), which contains asbestos in concentrations greater than 1 percent. ACM applies to all building components, including exterior materials and roofing. Lead-containing paint (LCP) is defined as paint containing 0.006 milligrams per kilogram (mg/kg) lead by weight. Lead-based paint (LBP) is defined as paint containing 0.05 mg/kg lead by weight. Asbestos and lead hazards associated with SONGS operations are subject to these rules. Existing ACM and LBP surveys cannot identify all materials, especially in or on internal building components. Compliance with 29 CFR 1926.1101, 40 CFR 61 Subpart M, and San Diego APCD Rule 341, and similar State laws listed below, requires sampling of suspect or presumed ACM before it is disturbed, if it is in a quantity of more than 260 linear feet on pipes, or 160 square feet on other facility components, or 35 cubic feet. Cal/OSHA requires registered asbestos abatement contractors to remove ACCM in quantities greater than 100 square feet.

**The Asbestos Construction Standard, Title 8 CCR Section 1529.** The Cal/OSHA asbestos standard for construction activities applies to all asbestos work where ACCM may be disturbed in quantities provided above.

The Asbestos Construction Standard regulates asbestos exposure in all construction work as defined in Title 8 CCR Section 1502 including but not limited to the following:

- Demolition or salvage of structures where asbestos is present;
- Removal or encapsulation of materials containing asbestos;
- Construction, alteration, repair, maintenance, or renovation of structures, substrates, or portions thereof, that contain asbestos;
- Installation of products containing asbestos;
- Asbestos spill/emergency cleanup;
- Transportation, disposal, storage, containment of and housekeeping activities involving asbestos or products containing asbestos, on the site or location at which construction activities are performed;
- Excavation which may involve exposure to asbestos as a natural constituent which is not related to asbestos mining and milling activities;
- Routine facility maintenance; and
- Erection of new electric transmission and distribution lines and equipment, and alteration, conversion and improvement of the existing transmission and distribution lines and equipment.

**Cal/OSHA Lead Construction Standard, Title 8 CCR Section 1532.1.** The Lead Construction Standard applies to all construction work where an employee may be occupationally exposed to lead. The standard applies to any construction activity that may release dust or fumes included but not limited to manual scraping, manual sanding, heat gun applications, power tool cleaning rivet busting abrasive blasting, welding, cutting, or torch burning of lead based coatings. Unless otherwise determined by approved testing methods, all paints and other surface coatings are assumed to contain lead at prescribed concentrations, depending on the application date of the paint or coating.

All construction work excluded from coverage in the general industry standard for lead by Section 5198(a)(2) is covered by this standard. Construction work is defined as work for construction, alteration and/or repair, including painting and decorating. It includes but is not limited to the following:

- Demolition or salvage of structures where lead or materials containing lead are present;
- Removal or encapsulation of materials containing lead;
- New construction, alteration, repair, or renovation of structures, substrates, or portions thereof, that contain lead, or materials containing lead;
- Installation of products containing lead;
- Lead contamination/emergency cleanup;
- Transportation, disposal, storage, or containment of lead or materials containing lead on the site or location at which construction activities are performed, and
- Maintenance operations associated with the construction activities.

## Local Ordinances and Policies

### ***San Diego County Department of Environmental Health – Hazardous Materials Division***

The use and storage of hazardous materials at SONGS is regulated by the Hazardous Materials Division (HMD) of the County Department of Environmental Health (DEH). The HMD is the local Certified Unified Program Agency and the administering agency for the Hazardous Materials Release Response Plans and Inventory Program. To comply with HSC Chapter 6.95, SONGS must detail the operating and storage procedures involving acutely hazardous materials (AHM) in a Hazardous Materials Management Plan (HMMP). The HMMP contains a hazard assessment of AHM stored and used at SONGS, including a discussion of the consequences of the release of AHM into the environment. The HMMP also contains best management practices for the storage and use of AHM. The primary goal of the HMMP is to protect public health and environment by promoting the safe storage, use, and disposal of hazardous materials.

The HMD is responsible for yearly inspections, issuing notices of violation, reinspections, and maintaining a database inventory of the following:

- Chemicals stored and used at SONGS. The chemical inventory lists one of four hazard categories for each chemical entry. The four hazard categories are:
  1. Fire
  2. Acute
  3. Pressure Release
  4. Radioactive
- Types and quantities of hazardous waste generated.
- Underground storage tank (UST) system details, including active or removed status per San Diego County Code, Title 6, Division 8, Chapter 10, Underground Storage of Hazardous Substances.
- Site assessment records from investigation and remediation of documented unauthorized releases of hazardous materials or waste into the environment.

There are no online DEH records of unauthorized releases at SONGS.

***San Diego County APCD, Standard for Demolition and Renovation (Asbestos) Rule 341.145***

Rule 341.145 implements NESHAPs for renovation or demolition of facilities with regulated ACM (RACM). Under this rule, “renovation” means removal of any load-bearing building component. The rule requires notification of APCD using the SDAPCD Notification of Demolition and Renovation Form and payment of a fee at least 14 days prior to start of work. The form and rule can be found online (CARB, 2004). Expedited notifications are usually permitted if previously unknown ACM is identified within internal building components.

## **D.6.3 Environmental Impacts and Mitigation Measures for the Proposed Project**

### **D.6.3.1 Definition and Use of Significance Criteria**

According to Appendix G of the CEQA Guidelines, a project would normally be considered to have a significant health or safety effect if it would:

- Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials;
- 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;
- Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school; or
- Be located on a site which is included on a list of hazardous materials sites compiled pursuant to California Health and Safety Code Section 65962.5 and, as a result, would create a significant hazard to the public or the environment.

Additionally, the CPUC normally considers an impact from hazardous materials to be significant and require addition mitigation if project construction would:

- Result in soil contamination, including flammable or toxic gases, at levels exceeding federal State, or local hazardous waste limits established by 40 CFR Part 261 and Title 22 CCR 66261.21, 66261.22, 66261.23, and 66261.24;
- Result in mobilization of contaminants currently existing in the soil, creating potential pathways of exposure to humans or other sensitive receptors that would result in exposure to contaminants at levels that would be expected to be harmful; or
- Result in the presence of contaminated soils or groundwater within the project area, and as a result, expose workers and or the public to contaminated or hazardous materials during transmission line construction activities, at levels in excess of those permitted by California Occupational Safety and Health Administration (Cal-OSHA) in CCR Title B and in the Federal Occupational Safety and Health Administration (OSHA) in Title 29 CFR Part 1910.

### **Applicant-Proposed Measures**

SCE has proposed to include the following measures as part of the Proposed Project (SCE, 2004b):

- **Haz-1:** To minimize potential impacts on workers, the work areas will be decontaminated as necessary before work begins. Additionally, temporary lead shielding will be installed in the work areas as appropriate. To install the RSGs, pipes need to be welded to the RSG. To minimize the radiation dose to workers, the inside of each primary system pipe will be decontaminated and where possible, machine welding will be used. As with all tasks in radiation areas at SONGS 2 & 3, employees trained specifically in radiation protection practices will monitor work activities to ensure personnel radiation exposure is minimized. SONGS health and safety procedures will be followed.

### D.6.3.2 Replacement Steam Generator Transport

Replacement steam generator transport would involve short-term use of heavy equipment that requires hazardous materials (i.e., fuels, petroleum, oil, and lubricants) for routine operation. Table D.6-4 provides a summary of transportation equipment required for the steam generator transport phase of the project, including proposed use, the number of each type of equipment to be used, and associated hazardous materials.

The Applicant has committed to implement procedures previously established at SONGS to minimize the potential for accidental release of hazardous materials. Existing programs at SONGS include emergency response procedures, employee training requirements, hazard recognition training, fire control procedures, hazard communications training, personal protection equipment training, and release reporting requirements. Employee training at SONGS would include both initial and refresher training for safe handling of hazardous materials. As part of the SONGS permit under the National Pollutant Discharge Elimination System (NPDES) program (SCE, 2002a), the Spill Contingency Plan (SCE, 2002b) and Best Management Practices (BMP) Plan would also be implemented. While on MCBCP property, the MCBCP SPCCP would be implemented as well. It is expected that the contractor for the offloading and transport activities would also obtain, review, and maintain copies of the SONGS environmental procedures and comply with the procedures and policies. Along the proposed Beach and Road Route, additional care must be exercised due to the nature of the environment and proximity to sensitive receptors.

Table D.6-4 provides a summary of transportation equipment required for the steam generator transport phase of the project, including proposed use, the number of each type of equipment to be used, and associated hazardous materials.

**Table D.6-4. Hazardous Materials Associated with Proposed Transportation Equipment**

Equipment Description	Proposed Use	Number Proposed	Associated Hazardous Material(s)
Tugboats and barge	Prime movers, maneuvering	2	POL
Trucks, diesel	Hauling replacement tires, utility equipment, mechanical repair equipment	5	POL
Tractor transporters, diesel	Prime movers, equipment transport	6	POL
Crane and lifts, diesel	Loading and offloading	3	POL
Trucks, highbed, and lowboys, gasoline/diesel	Shuttling gear, utility	8	POL
Light tower, portable, diesel	Portable lighting system	4	POL
Light truck, gasoline	Traffic control	6	POL
Bucket trucks, gasoline	Boat basin, minor utility work	3	POL

Notes: POL: Petroleum, oil, lubricants

Source: SCE, 2004a, and Attachment to Response 57, May 17, 2004.

**Impact H-1: Heavy equipment fuel, oil, or hydraulic line leak or rupture could cause hazardous materials release**

During transportation of the replacement steam generators, hazardous materials such as vehicle fuels, oils, and other vehicle maintenance fluids would be stored and used onsite and along the route. Fuel, oil, or hydraulic lines may leak or rupture causing hazardous materials to spill on to the ground. Spills of hazardous materials during transport activities could potentially cause soil or groundwater contamination. This potentially significant impact would be reduced to a less than significant level with implementation of Mitigation Measures H-1a and H-1b (Class II).

***Mitigation Measures for Impact H-1, Heavy equipment fuel, oil, or hydraulic line leak or rupture could cause hazardous materials release***

**H-1a Implement SONGS and/or MCBCP spill response procedures.** In the event of a fuel, oil, or hydraulic line leak or rupture, collect spilled fluid with absorbent materials. Prevent or stop spill from spreading to the environment. In the event that a spill reaches bare soil, excavate impacted soil and dispose with absorbent materials. A copy of the SONGS Spill Contingency Plan shall remain with the contractor at all times. While on MCBCP, a copy of the MCBCP Spill Prevention, Control, and Countermeasures Plan (SPCCP) shall remain with the contractor.

In addition, SCE shall develop and implement a worker environmental training program that communicates to all appropriate personnel location-specific environmental concerns and appropriate work practices, including spill prevention and response measures, as well as site-specific physical conditions to lessen the impact of potential spills (i.e., identification of flow paths to sensitive resources). A copy of this plan shall be submitted for CPUC approval prior to commencement of RSG transport activities.

**H-1b Conduct routine inspections and maintenance of transporter.** All transporter vehicles shall be inspected at the beginning of each work day, ~~during any stop of 15 minutes or longer,~~ and at the end of each work shift. While in transport, continual visual inspections shall be conducted by the crew. If any leaks are observed during transport, appropriate action shall be taken to stop the leak prior to the continuance of transport. Any necessary spill response shall be conducted according to Mitigation Measure H-1a. Temporary drip pans shall be used to containing identified slow leaking equipment (for example, dripping oil or hydraulic line). Small leaks shall be repaired at the next scheduled stop after discovery. Large leaks shall be repaired immediately, and the ground shall be protected by 20 mil high density polyethylene (HDPE) or similar barrier until repairs are complete. Routine maintenance or repairs shall be conducted on appropriate containment systems, and all fluids removed from vehicles shall be collected and manifested.

**Impact H-2: Heavy equipment maintenance could cause hazardous materials release**

Use of solvents and cleaners, or replacement of used waste oils and lubricants during routine maintenance or unscheduled repairs may impair the environment or adversely affect human health and safety if proper use and disposal procedures are not followed. An unauthorized release of a significant quantity of hazardous materials or waste may adversely impact the environment over time. This potentially significant impact would be reduced to a less than significant level through the implementation of Mitigation Measure H-2a (Class II).



***Mitigation Measure for Impact H-2, Heavy equipment maintenance could cause hazardous materials release***

**H-2a Properly handle maintenance waste.** Routine maintenance or unscheduled repairs shall be conducted on appropriate containment systems, and all fluids removed from vehicles or used for cleaning shall be properly contained, labeled, and manifested, according to the SONGS Spill Contingency Plan, or the MCBCP Spill Prevention, Control, and Countermeasures Plan while on MCBCP. All hazardous waste shall be properly disposed of in accordance with federal and State regulations, and local ordinances. In addition, the worker environmental training program discussed in Mitigation Measure H-1a shall include discussion of material handling, storage, and disposal procedures per applicable regulations and designed to ensure hazardous materials are handled and contained safely.

### **D.6.3.3 Staging and Preparation**

Development of temporary facilities would involve use of heavy-duty construction equipment within the owner controlled area (OCA) and at the Mesa. Although the locations for temporary structures and facilities have not yet been determined, all would be on previously developed and/or disturbed areas. Operating construction equipment involves routine use and storage of hazardous materials such as vehicle fuels, oils, and other vehicle maintenance fluids. As with the transport activities described above, spills of hazardous materials during staging and preparation activities could potentially cause soil or groundwater contamination (Impact H-1 and H-2). Spill response procedures and proper handling of hazardous waste (Mitigation Measures H-1a, H-1b, and H-2a) would ensure that these potential impacts are less than significant (Class II).

Excavation would be limited to minor trenching for installation of utilities to the proposed staging facility and other temporary facilities including warehouse, training, and office spaces. There are historically contaminated sites within a one-mile radius of SONGS. If excavation and/or construction dewatering encounters previously unknown hazardous materials contamination of soil or groundwater, appropriate action, including regulatory notification, would need to be undertaken immediately.

**Impact H-3: Previously unknown contaminated soil/groundwater could be encountered during construction**

Excavation and/or construction dewatering during facilities construction for staging or preparation of the RSGs may encounter previously unknown hazardous materials contamination of soil or groundwater. Contamination may be inadvertently released to un-impacted areas and/or create a health risk for construction workers. This potentially significant impact would be reduced to a less than significant levels through implementation of Mitigation Measure H-3a (Class II).

***Mitigation Measures for Impact H-3, Previously unknown contaminated soil/groundwater could be encountered during construction***

**H-3a Stop work and notify appropriate project personnel and regulators.** If impacted soil and/or groundwater is encountered during excavation and/or groundwater dewatering, work shall stop immediately. Impacted soil shall be placed on 20-mil high-density polyethylene (HDPE) and covered. The construction superintendent, designated SCE and CPUC personnel, and applicable regulatory agencies shall be notified immediately. Contingency planning for such an event shall be conducted prior to start of work. The nature and extent of contamination shall be identified through soil and/or water testing, and appropriate remedial action proposed and approved by the CPUC prior to disturbing additional material.

### **D.6.3.4 Original Steam Generator Removal, Staging, and Disposal**

#### **Prepare for and Create Containment Opening**

During construction activities related to preparation and creation of the containment opening, hazardous materials and waste may be generated or encountered. Spills or improper use and disposal of solvents, cleaners, or replacement of used waste oils and lubricants during routine maintenance or unscheduled repairs may impair the environment or adversely affect human health and safety if proper use and disposal procedures are not followed. As with the RSG transport and staging activities described above, spills of hazardous materials during OSG removal and disposal activities could potentially cause soil or groundwater contamination (Impact H-1 and H-2). Spill response procedures and proper handling of hazardous waste (Mitigation Measures H-1a, H-1b, and H-2a) would ensure that these potential impacts are less than significant (Class II).

Asbestos-containing construction materials (ACCM), asbestos-containing materials (ACM), lead-containing paint (LCP), and lead-based paint (LBP) hazards may be encountered during dismantling activities associated with creating the containment opening and removing the OSGs. Existing ACM and LBP surveys cannot identify all materials, especially in or on internal building components. Compliance with 29 CFR 1926.1101, 40 CFR 61 Subpart M (NESHAPs), SDAPCD Rule 341.145, and other state laws requires sampling of suspect or presumed ACM before it is disturbed. Cal/OSHA requires registered asbestos abatement contractors to remove ACCM.

#### **Impact H-4: Previously unknown asbestos or lead could be encountered**

Asbestos and lead hazards may be encountered while creating the containment opening and during OSG removal. Existing asbestos and lead surveys cannot identify all asbestos- or lead-containing materials, especially in or on internal building components. During containment opening and OSG removal, previously unknown ACM, ACCM and/or LCP hazards may be encountered. Compliance with federal regulation to survey prior to demolition or renovation activities (NESHAPs, discussed above, Section D.6.2) would ensure that this impact would be less than significant (Class III).

#### **Original Steam Generator Disposal**

During activities related to OSG removal, staging, and disposal, hazardous materials and waste may be generated or encountered. Spills or improper use and disposal of solvents, cleaners, or replacement of used waste oils and lubricants during routine maintenance or unscheduled repairs may impair the environment or adversely affect human health and safety if proper use and disposal procedures are not followed. As with the construction activities described for staging and preparation above, spills could potentially cause soil or groundwater contamination (Impact H-1 and H-2). Transport of the OSG to the offsite disposal facility would involve similar hazardous materials impacts as expected during RSG transport (Impact H-1). Spill response procedures and proper handling of hazardous waste (Mitigation Measures H-1a, H-1b, and H-2a) would ensure that these potential impacts are less than significant (Class II).

Radioactive hazards related to OSG packaging and transport for disposal are described in Section D.12, System and Transportation Safety.

### **D.6.3.5 Steam Generator Installation and Return to Service**

During activities related to steam generator installation, hazardous materials and waste may be generated. Spills or improper use and disposal of solvents, cleaners, or replacement of used waste oils and lubricants during routine maintenance or unscheduled repairs may impair the environment or adversely affect human health and safety if proper use and disposal procedures are not followed. As with the construction activities described for the Proposed Project, spills could potentially cause soil or groundwater contamination (Impact H-1 and H-2), and proper spill response procedures (Mitigation Measures H-1a, H-1b, and H-2a) would need to be implemented to ensure that these impacts are less than significant (Class II).

There would be no permanent change in the levels of hazardous materials use or waste generation at SONGS as a result of the Proposed Project or the return to service. Except for the quantities of waste generated over the short-term duration of the Proposed Project, the Proposed Project would cause no permanent change when compared to the existing environmental setting.

## **D.6.4 Environmental Impacts and Mitigation Measures for the Alternatives**

### **D.6.4.1 Transportation Route Alternatives**

During transport along any alternative route (either the I-5/Old Highway 101 Route or MCBCP Inland Route), hazardous materials and waste may be generated. Spills or improper use and disposal of solvents, cleaners, or replacement of used waste oils and lubricants during routine maintenance or unscheduled repairs may impair the environment or adversely affect human health and safety if proper use and disposal procedures are not followed. Heavy construction equipment or the transporter may leak or lines may rupture causing fuel, oil, or hydraulic fluids to spill on to the ground (Impact H-1). This impact would be similar to that of the Proposed Project. The potential for spills of solvents and cleaners or used waste oils and lubricants during routine maintenance or unscheduled repairs would also be similar to those of the Proposed Project (Impact H-2). Spill response procedures, proper handling of hazardous waste, and proper maintenance of heavy duty transporters (Mitigation Measures H-1a, H-1b, and H-2a) would ensure that these potential impacts would be reduced to a less than significant level (Class II).

### **D.6.4.2 OSG Disposal Alternative**

#### **OSG Onsite Storage Alternative**

Onsite storage of the OSGs would involve construction of an OSG Storage Facility. The construction activities would likely occur on previously disturbed areas of the SONGS site, similar to construction of the temporary facilities for staging and preparation (Impacts H-1 and H-2). Spills would be minimized through spill prevention measures, which would be applicable to the construction activities. Applicant-proposed mitigation identified above and mitigation for spill response procedures and proper handling of hazardous waste (Mitigation Measures H-1a, H-1b, and H-2a) would also help to avoid hazardous materials impacts, resulting in less than significant impacts (Class II).

Also as with the construction needed under the Proposed Project, excavation related to OSG Storage Facility construction for the foundation or utilities could encounter previously unknown contaminated soil or groundwater (Impact H-3). Implementing previously identified measures (Mitigation Measure H-3a) would ensure this impact is reduced to a less than significant level (Class II).

### **D.6.5 Environmental Impacts of the No Project Alternative**

Discontinuing operations at SONGS would decrease the risk for potential spills, leaks, ruptures, or otherwise release of hazardous materials that could cause soil or water contamination and would eliminate the continuation of hazardous materials generation at SONGS. However, replacement power generation and transmission facilities and related construction activities would likely occur. It is anticipated that environmental and safety concerns are likely to preclude the addition of new nuclear, hydroelectric, and coal and oil-fired generation as replacement for SONGS. Construction and operation of new natural gas-fired power plants or renewable resources (such as wind power) and transmission lines may be necessary, however, their locations and development schedules cannot be predicted. New power facilities and related construction activities would need to comply with federal, State, and local requirements for hazardous materials management, which would include strategies to minimize potential impacts.

## D.6.6 Mitigation Monitoring, Compliance, and Reporting Table

Mitigation Measures H-1a, H-1b, and H-2a would reduce potential environmental impacts resulting from the project-related use of facilities located at MCBCP to a less than significant level. Implementation of these mitigation measures on the Base, however, would require prior approval by the Base Commanding General and would be subject to review under the federal National Environmental Policy Act (NEPA).

Table D.6-5 shows the mitigation monitoring, compliance, and reporting program for Hazardous Materials.

**Table D.6-5. Mitigation Monitoring Program – Hazardous Materials**

<b>IMPACT H-1</b>	<b>Heavy equipment fuel, oil, or hydraulic line leak or rupture could cause hazardous materials release (Class II)</b>
<b>MITIGATION MEASURE</b>	<b>H-1a: Implement SONGS and/or MCBCP spill response procedures.</b> In the event of a fuel, oil, or hydraulic line leak or rupture, collect spilled fluid with absorbent materials. Prevent or stop spill from spreading to the environment. In the event that a spill reaches bare soil, excavate impacted soil and dispose with absorbent materials. A copy of the SONGS Spill Contingency Plan shall remain with the contractor at all times. While on MCBCP, a copy of the MCBCP Spill Prevention, Control, and Countermeasures Plan (SPCCP) shall remain with the contractor. In addition, SCE shall develop and implement a worker environmental training program that communicates to all appropriate personnel location-specific environmental concerns and appropriate work practices, including spill prevention and response measures, as well as site-specific physical conditions to lessen the impact of potential spills (i.e., identification of flow paths to sensitive resources). A copy of this plan shall be submitted for CPUC approval prior to commencement of RSG transport activities.
<b>Location</b>	Transport routes, staging areas, construction sites, and disposal area(s)
<b>Monitoring / Reporting Action</b>	Per SONGS Spill Contingency Plan and/or MCBCP SPCCP report to RWQCB
<b>Effectiveness Criteria</b>	Continuous monitoring
<b>Responsible Agency</b>	CPUC, <u>MCBCP</u>
<b>Timing</b>	During all steam generator replacement activities
<b>MITIGATION MEASURE</b>	<b>H-1b: Conduct routine inspections and maintenance of transporter.</b> All transporter vehicles shall be inspected at the beginning of each work day, <del>during any stop of 15 minutes or longer,</del> and at the end of each work shift. <u>While in transport, continual visual inspections shall be conducted by the crew. If any leaks are observed during transport, appropriate action shall be taken to stop the leak prior to the continuance of transport. Any necessary spill response shall be conducted according to Mitigation Measure H-1a. Temporary drip pans shall be used to containing identified slow-leaking equipment (for example, dripping oil or hydraulic line). Small leaks shall be repaired at the next scheduled stop after discovery. Large leaks shall be repaired immediately, and the ground shall be protected by 20-mil high-density polyethylene (HDPE) or similar barrier until repairs are complete. Routine maintenance or repairs shall be conducted on appropriate containment systems, and all fluids removed from vehicles shall be collected and manifested.</u>
<b>Location</b>	Transport routes
<b>Monitoring / Reporting Action</b>	Per SONGS Spill Contingency Plan and/or MCBCP SPCCP report to RWQCB
<b>Effectiveness Criteria</b>	Continuous monitoring
<b>Responsible Agency</b>	CPUC, <u>MCBCP</u>
<b>Timing</b>	During transport of steam generators

**Table D.6-5. Mitigation Monitoring Program – Hazardous Materials**

<b>IMPACT H-2</b>	<b>Heavy equipment maintenance could cause hazardous materials release (Class II)</b>
<b>MITIGATION MEASURE</b>	<b>H-2a: Properly handle maintenance waste.</b> Routine maintenance or unscheduled repairs shall be conducted on appropriate containment systems, and all fluids removed from vehicles or used for cleaning shall be properly contained, labeled, and manifested, according to the SONGS Spill Contingency Plan, or the MCBCP Spill Prevention, Control, and Countermeasures Plan while on MCBCP. All hazardous waste shall be properly disposed of in accordance with federal and State regulations, and local ordinances. In addition, the worker environmental training program discussed in Mitigation Measure H-1a shall include discussion of material handling, storage, and disposal procedures per applicable regulations and designed to ensure hazardous materials are handled and contained safely.
<b>Location</b>	Transport routes, staging areas, construction sites, and storage or disposal area(s)
<b>Monitoring / Reporting Action</b>	Per SONGS Spill Contingency Plan and/or MCBCP SPCCP
<b>Effectiveness Criteria</b>	Continuous monitoring
<b>Responsible Agency</b>	CPUC, <a href="#">MCBCP</a>
<b>Timing</b>	During all steam generator replacement activities
<b>IMPACT H-3</b>	<b>Previously unknown contaminated soil/groundwater could be encountered during construction (Class II)</b>
<b>MITIGATION MEASURE</b>	<b>H-3a: Stop work and notify appropriate project personnel and regulators.</b> If impacted soil and/or groundwater is encountered during excavation and/or groundwater dewatering, work shall stop immediately. Impacted soil shall be placed on 20-mil high-density polyethylene (HDPE) and covered. The construction superintendent, designated SCE and CPUC personnel, and applicable regulatory agencies shall be notified immediately. Contingency planning for such an event shall be conducted prior to start of work. The nature and extent of contamination shall be identified through soil and/or water testing, and appropriate remedial action proposed and approved by the CPUC prior to disturbing additional material.
<b>Location</b>	Proposed construction areas requiring excavation and/or groundwater dewatering
<b>Monitoring / Reporting Action</b>	Monitor excavated soil and/or pumped groundwater for potential impacts from previous and unknown unauthorized releases of hazardous materials. If encountered, stop work and notify superintendent, SONGS project manager, and CPUC.
<b>Effectiveness Criteria</b>	HAZWOPER 24-hour supervisor training for the construction foreman and continuous monitoring
<b>Responsible Agency</b>	CPUC
<b>Timing</b>	During construction excavation and/or dewatering

## D.6.7 References

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