4.8 HAZARDS

This section addresses a variety of offshore and onshore project activities that could potentially expose people to hazards or hazardous materials. The potential impacts of the Proposed Project are evaluated, and the need for mitigation is discussed in Section 4.8.4. Alternatives to the Proposed Project are analyzed in Section 4.8.6.

4.8.1 Description of Resource/Environmental Setting

Hazardous substances are defined by State and Federal regulations as substances that must be regulated in order to protect the public health and the environment. Hazardous materials have certain chemical, physical, or infectious properties that cause them to be hazardous. The California Code of Regulations (CCR) Title 22, Chapter 11, Article 2, Section 66261 provides the following definition:

A hazardous material is a substance or combination of substances which, because of its quantity, concentration, or physical, chemical, or infectious characteristics, may either (1) cause, or significantly contribute to, an increase in mortality or an increase in serious irreversible, or incapacitating reversible illness; or (2) pose a substantial present or potential hazard to human health or environment when improperly treated, stored, transported, or disposed of or otherwise managed.

According to Title 22 (Chapter 11, Article 3, CCR), substances having a characteristic of toxicity, ignitability, corrosivity, or reactivity are considered hazardous. Hazardous wastes are hazardous substances that no longer have a practical use, such as material that has been abandoned, discarded, spilled, or contaminated, or which are being stored prior to disposal.

Toxic substances may cause short-term or long-term health effects, ranging from temporary effects to permanent disability or death. Examples of toxic substances include most heavy metals, pesticides, benzene, gasoline, hexane, natural gas, sulfuric acid, lye, explosives, pressurized canisters, and radioactive and biohazardous materials. Soils may also be toxic because of accidental spilling of toxic substances.

Implementation of the Proposed Project would involve onshore and offshore operations involving cement conduit plug installation, concrete structure removal, and installation of mammal barriers. Offshore equipment would include a crane barge, support boat, crane barge tugboat, deck barge, deck barge tugboat, and crew boat. Onshore equipment would consist of a variety of motorized terrestrial vehicles, including support trucks, personnel trucks, and a beach winch.
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4.8.2 Regulatory Setting

Federal, State and local agencies with hazardous materials responsibilities for the project vicinity include the U.S. Nuclear Regulatory Commission (NRC), the U.S. Coast Guard, the California DTSC, the CDFG, the San Diego RWQCB, the County of Orange, and the city of San Clemente. Applicable regulations include the Federal CWA, the Energy Reorganization Act of 1974, the California Hazardous Waste Control Law and Waste Control Regulations, and the Shipboard Oil Pollution Emergency Procedure. Project activities must comply with Federal, State, and local agency regulations and guidelines.

The NRC is an independent agency established by the Energy Reorganization Act of 1974 to regulate civilian use of nuclear materials. The NRC regulates, licenses, and oversees nuclear reactors, materials, and waste and sets requirements for offshore radiological environmental monitoring conducted at SONGS in order to ensure human and environmental health with respect to radiological concerns.

The RWQCB implements the NPDES and issues the wastewater permits for SONGS Unit 1. Along with the NRC, the RWQCB sets requirements in the NPDES Permit for offshore radiological monitoring to meet ocean plan requirements, i.e., protection of beneficial uses.

Offshore monitoring is conducted by sample collection and analysis semiannually for nonmigratory marine animals, kelp, and ocean-bottom sediments, and once a month for ocean water. Monitoring reports are submitted annually to the RWQCB.

The U.S. Coast Guard maintains authority over accidents involving spills of hazardous materials in marine waters within its jurisdiction. Spill containment and cleanup, however, is generally the responsibility of the parties involved.

The City of San Clemente General Plan sets goals and standards for the management of the City’s marine safety. These goals and standards have been established to continue coordinating and providing emergency response for spills, illegal dumping, and other incidents involving hazardous materials and wastes through the San Clemente Fire Department and/or other appropriate public agencies (City of San Clemente 1992).

4.8.3 Significance Criteria

Impacts from hazards and hazardous materials would be considered significant if the proposed project or any of the alternatives would result in the following:
4.8 Hazards

- a risk of release of hazardous substances (including oil or fuel spills from marine vessels);
- a risk of accidental explosion;
- possible interference with an emergency response plan or emergency evacuation plan;
- exposure of people to existing sources of potential hazards; or

4.8.4 Impact Analysis and Mitigation

There would be no long-term hazard and hazardous materials impacts of the Proposed Project. Once the terminal structures and buoys have been removed, all onshore and offshore equipment would be removed, and no marine structures would remain. Potential short-term impacts of the Proposed Project were evaluated in light of the goals of the applicable governmental plans and policies and the significance criteria described above.

Impact HAZ-1: Effects from Hazards and Hazardous Substances

Activities could expose people to potential hazards, including explosion, exposure to hazardous substances, and/or spills from marine vessels (Class III)

Potential spill and explosion sources are limited to leakage or spillage of fuel or lubricants from onshore and marine equipment used during implementation of the Proposed Project. The crane barge, tugboats, and crewboat may all contain fuel or lubrication fluids, and the crane barge and support boat would have motorized equipment operating from their decks. A spill could occur if the hull of a vessel was breached in the area of the tankage or if a vessel sank. However, a collision of a project-related vessel with other vessels in the area is unlikely, and all project-related vessels would be constructed with multiple watertight compartments to isolate flooding and reduce the risk of sinking. Therefore, the risk of spillage due to collision or sinking would be less than significant (Class III).

Preventative Measure for Impact HAZ-1: Effects from Hazards and Hazardous Substances

PM REC-2 would apply to this impact.

Potential onshore spills could result from the use of motorized terrestrial equipment during onshore operations. Sources include leakage of fuel, motor oil, or hydraulic fluid...
4.8 Hazards

during operation, refueling, and equipment maintenance. The Applicant would maintain an onsite spill response team to handle minor onshore spills. The response team would be responsible for reporting, containment, and cleanup of any small spills using onsite equipment and procedures. Minor onshore spills would be contained with appropriate containers and sorbent pads. There are no major spill sources that would result from onshore work, and potential impacts would be less than significant (Class III). No mitigation is required.

Shipborne systems on tugboats, barges, and other floating vessels may discharge hydraulic oils, fuel, lubricants or other contaminants from deck areas overboard. Other potential sources of marine spillage would include deck equipment, including compressors, generators, pumps, and welding machines. Sufficient planning would be required for spill prevention, control, and countermeasures to preempt impacts associated with an accidental release or spill. In order to minimize the potential for unanticipated release of pollutants due to inclement weather or rough sea conditions, the Marine Safety Plan (Appendix F) has been included in the project. One element of the Marine Safety Plan requires the project manager to shut down or not permit any operation when existing or forecast sea states or weather conditions would create unsafe working conditions for personnel or equipment.

In order to ensure that personnel, equipment and procedures are in place to respond to accidental releases, the Oil Spill Response Plan (Appendix G) has been included in the project. With these measures, the impact of indirect discharges from shipboard systems on marine vessels would be less than significant (Class III). No mitigation is required.

Dive operations would be required for disposition activities. Surface supplied air diving techniques would be used; however, divers may be exposed to hazardous substances or vapors if hazardous substances are in the vicinity of the air intake. A Diver’s Safety Plan (Appendix H), meeting U.S. Coast Guard and Occupational Safety and Health Association regulations, has been included in the project. The implementation of the Dive Safety Plan would make the impact less than significant (Class III). No mitigation is required.

The concrete conduits that would be removed during disposition do not contain any lead-based paint or asbestos-containing materials (ACMs). The Proposed Project would not involve the disposal of any spoils materials, sands, or other soil materials. No waste water would be discharged to surface waters or the marine environment as a result of the Proposed Project. Overall, disposition of the Proposed Project would not
expose people to potential hazards or hazardous substances, and there would not be any significant effects (Class III). No mitigation measures are required.

**Impact HAZ-2: Effects on Emergency Response or Evacuation Plans**

Activities could interfere with emergency response or evacuation plans (Class III)

Project activities could interfere with Coast Guard emergency response or evacuation plans if marine vessels associated with project activities posed a navigational hazard to emergency vessels. The offshore location and ready visibility of the marine vessels related to disposition activities make it unlikely that project disposition activities would present a navigational hazard for marine emergency vessels; therefore, impacts to emergency response or evacuation plans would not be significant (Class III).

Preventative Measure for Impact HAZ-2: Effects on Emergency Response or Evacuation Plans

PM REC-2 would apply to this impact.

**Impact HAZ-3: Potential Contamination from Previous Nuclear Power Plant Operations**

The area of the proposed activities could be contaminated with nuclear waste or power generation related waste residue (Class III)

When operational, the cooling water conduits involved the use of a fully self-contained system that had no direct interaction with the SONGS Unit 1 power generation facility. The offshore monitoring program in the marine environment has been in place since SONGS Unit 1 has been operational. During the operation of Unit 1, there were no reported radiation leaks, and the long-term monitoring of the marine environment indicates that no plant or animal contamination has occurred in the receiving waters. Additionally, the RWQCB has issued no notices of violations for operation of SONGS Unit 1 or the cooling water conduits. There has been no contamination of the project site from previous nuclear power plant operations, and disposition activities would not be exposed to any contamination (Class III). No mitigation measures are required.

Table 4.8-1 summarizes the hazards impacts and mitigation/preventative measures.
Table 4.8-1. Summary of Hazards Impacts and Mitigation/Preventative Measures

<table>
<thead>
<tr>
<th>Impact</th>
<th>Mitigation/Preventative Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>HAZ-1: Effects from Hazards and Hazardous Substances</td>
<td>No mitigation required; <strong>PM REC-2</strong>. U.S. Coast Guard Local Notice to Mariners Advisory</td>
</tr>
<tr>
<td>HAZ-2: Effects on Emergency Response or Evacuation Plans</td>
<td>No mitigation required; <strong>PM REC-2</strong>. U.S. Coast Guard Local Notice to Mariners Advisory</td>
</tr>
<tr>
<td>HAZ-3: Potential Contamination from Previous Nuclear Power Plant Operations</td>
<td>No mitigation required.</td>
</tr>
</tbody>
</table>

4.8.5 Alternatives

4.8.5.1 Complete Removal of Conduits Alternative

The Complete Removal of Conduits Alternative, in addition to the removal activities of the Proposed Project, would require the removal of all materials associated with the intake and discharge conduits of SONGS Unit 1. This alternative would be divided into two major activities, onshore work and offshore work, which would be significantly longer in duration (12 months) than the Proposed Project (4 months).

**Impact ALT-HAZ-1: Effects from Hazards and Hazardous Substances**

Activities could expose people to potential hazards, including explosion, exposure to hazardous substances, and/or spills from marine vessels (Class III)

Hazard impacts associated with explosion, exposure to hazardous substances, or marine spills would be the same for this alternative as with the Proposed Project. The risk of spillage due to collision, sinking, or accidental discharge would be less than significant (Class III).

**Preventative Measure for Impact ALT-HAZ-1: Effects from Hazards and Hazardous Substances**

PM REC-2 would apply to this impact.
4.8 Hazards

Impact ALT-HAZ-2: Effects on Emergency Response or Evacuation Plans

Activities could interfere with emergency response or evacuation plans (Class III)

As with the Proposed Project, impacts to emergency response or evacuation plans would not be significant (Class III) for the Complete Removal of Conduits Alternative. No mitigation is required.

Preventative Measure for Impact ALT-HAZ-2: Effects on Emergency Response or Evacuation Plans

PM REC-2 would apply to this impact.

Impact ALT-HAZ-3: Potential Contamination from Previous Nuclear Power Plant Operations

The area of the proposed activities could be contaminated with nuclear waste or power generation related waste residue (Class III)

As discussed in Impact HAZ-3, activities associated with this alternative would not be exposed to any contamination (Class III). No mitigation measures are required.

4.8.5.2 Removal of Nearshore Portions of Conduits Alternative

The Removal of Nearshore Portions of Conduits Alternative would involve a similar scope as the Complete Removal Alternative; however, the conduits would only be removed to a distance of approximately 300 feet (91 m) offshore.

Impact ALT-HAZ-4: Effects from Hazards and Hazardous Substances

Activities could expose people to potential hazards, including explosion, exposure to hazardous substances, and/or spills from marine vessels (Class III)

Hazard impacts associated with explosion, exposure to hazardous substances, or marine spills would be the same for this alternative as with the Proposed Project (Class III). However, the duration of disposition activities would be longer.

Preventative Measures for Impact ALT-HAZ-4: Effects from Hazards and Hazardous Substances

PM REC-2 would apply to this impact.
Impact ALT-HAZ-5: Effects on Emergency Response or Evacuation Plans

Activities could interfere with emergency response or evacuation plans (Class III)

As with the Proposed Project, impacts on emergency response or evacuation plans would not be significant (Class III) for the Removal of Nearshore Portions of Conduits Alternative. No mitigation is required.

Preventative Measure for Impact ALT-HAZ-5: Effects on Emergency Response or Evacuation Plans

PM REC-2 would apply to this impact.

Impact ALT-HAZ-6: Potential Contamination from Previous Nuclear Power Plant Operations

The area of the proposed activities could be contaminated with nuclear waste or power generation related waste residue (Class III)

As discussed in Impact HAZ-3, activities associated with this alternative would not be exposed to any contamination (Class III). No mitigation measures are required.

4.8.5.3 Crush Conduits and Remove Terminal Structures Alternative

The activities associated with this alternative would be similar to those from the Complete Removal Alternative. However, instead of removing the conduits, the crawler crane working from the onshore trestle would crush the conduits in place using a drop chisel-shaft.

Impact ALT-HAZ-7: Effects from Hazards and Hazardous Substances

Activities could expose people to potential hazards, including explosion, exposure to hazardous substances, and/or spills from marine vessels (Class II)

The Crush Conduits and Remove Terminal Structures Alternative would have similar potential effects associated with explosion, exposure to hazardous substances, or spills as the Complete Removal Alternative; however, the duration would be shorter. There would be no significant impacts (Class III) associated with this alternative.

Preventative Measures for Impact ALT-HAZ-7: Effects from Hazards and Hazardous Substances

PM REC-2 would apply to this impact.
4.8 Hazards

Impact ALT-HAZ-8: Effects on Emergency Response or Evacuation Plans

Activities could interfere with emergency response or evacuation plans (Class III)

As with the Proposed Project, this alternative would have no impact on emergency response or evacuation plans (Class III). No mitigation is required.

Preventative Measure for Impact ALT-HAZ-8: Effects on Emergency Response or Evacuation Plans

PM REC-2 would apply to this impact.

Impact ALT-HAZ-9: Potential Contamination from Previous Nuclear Power Plant Operations

The area of the proposed activities could be contaminated with nuclear waste or power generation related waste residue (Class III)

As with the Proposed Project and discussed in Impact HAZ-3, activities associated with this alternative would not be exposed to any contamination (Class III). No mitigation measures are required.

4.8.5.4 Artificial Reef Alternative

This alternative would be similar to the Proposed Project; however, the cut up sections of concrete from the terminal structures would remain permanently on the seafloor. This would create a larger artificial reef around the existing rock riprap, and no concrete debris would be taken to the recycling facility.

Impact ALT-HAZ-10: Effects from Hazards and Hazardous Substances

Activities could expose people to potential hazards, including explosion, exposure to hazardous substances, and/or spills from marine vessels (Class III)

Hazard impacts associated with explosion, exposure to hazardous substances, or marine spills would be the same for this alternative as with the Proposed Project (Class III). No mitigation measures are required.

Preventative Measure for Impact ALT-HAZ-10: Effects from Hazards and Hazardous Substances

PM REC-2 would apply to this impact.
4.8 Hazards

Impact ALT-HAZ-11: Effects on Emergency Response or Evacuation Plans

Activities could interfere with emergency response or evacuation plans (Class III)

The Artificial Reef Alternative would have no impact on emergency response or evacuation plans (Class III).

Preventative Measure for Impact ALT-HAZ-11: Effects on Emergency Response or Evacuation Plans

PM REC-2 would apply to this impact.

Impact ALT-HAZ-12: Potential Contamination from Previous Nuclear Power Plant Operations

The area of the proposed activities could be contaminated with nuclear waste or power generation related waste residue (Class III)

As discussed in Impact HAZ-3, activities associated with this alternative would not be exposed to contamination from nuclear waste or power generation related waste residue. No impact would occur (Class III), and no mitigation is required.

4.8.5.5 No Project Alternative

The No Project Alternative would leave the existing conduits and their associated terminal structures in their current state. There would be no short-term effects associated with the No Project Alternative. Potential long-term effects are discussed below.

Impact ALT-HAZ-13: Effects from Navigational Hazards

Retaining the conduits and terminal structures could create a navigational hazard that would have to be avoided by marine vessels (Class II)

The No Project Alternative would leave the terminal structures and marker buoys in place. Because the buoys are an existing feature that needs to be avoided by marine vessels, no long-term impact from navigational hazards would occur (Class II).

Mitigation Measure for Impact ALT-HAZ-17: Effects from Navigational Hazards

MM REC-ALT-5 would apply to this impact.
4.8.5.6 Cumulative Projects Impact Analysis

None of the cumulative projects discussed in Section 4 would involve offshore construction activities; therefore, the Proposed Project, in conjunction with other known projects, would not contribute to any cumulative marine hazards.

4.8.6 References
