

1 **4.8 HAZARDS**

2 This section addresses a variety of offshore and onshore project activities that could
3 potentially expose people to hazards or hazardous materials. The potential impacts of
4 the Proposed Project are evaluated, and the need for mitigation is discussed in Section
5 4.8.4. Alternatives to the Proposed Project are analyzed in Section 4.8.6.

6 **4.8.1 Description of Resource/Environmental Setting**

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

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

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

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

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

1 **4.8.2 Regulatory Setting**

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

10 The NRC is an independent agency established by the Energy Reorganization Act of
11 1974 to regulate civilian use of nuclear materials. The NRC regulates, licenses, and
12 oversees nuclear reactors, materials, and waste and sets requirements for offshore
13 radiological environmental monitoring conducted at SONGS in order to ensure human
14 and environmental health with respect to radiological concerns.

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

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

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

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

30 **4.8.3 Significance Criteria**

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

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

7 **4.8.4 Impact Analysis and Mitigation**

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

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

15 **Activities could expose people to potential hazards, including explosion,** 16 **exposure to hazardous substances, and/or spills from marine vessels (Class III)**

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

27 Preventative Measure for Impact HAZ-1: Effects from Hazards and Hazardous 28 Substances

29 PM REC-2 would apply to this impact.

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

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

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

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

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

31 The concrete conduits that would be removed during disposition do not contain any
32 lead-based paint or asbestos-containing materials (ACMs). The Proposed Project
33 would not involve the disposal of any spoils materials, sands, or other soil materials. No
34 waste water would be discharged to surface waters or the marine environment as a
35 result of the Proposed Project. Overall, disposition of the Proposed Project would not

1 expose people to potential hazards or hazardous substances, and there would not be
2 any significant effects (Class III). No mitigation measures are required.

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

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

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

11 Preventative Measure for Impact HAZ-2: Effects on Emergency Response or 12 Evacuation Plans

13 PM REC-2 would apply to this impact.

14 **Impact HAZ-3: Potential Contamination from Previous Nuclear Power Plant** 15 **Operations**

16 **The area of the proposed activities could be contaminated with nuclear waste or** 17 **power generation related waste residue (Class III)**

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

28 Table 4.8-1 summarizes the hazards impacts and mitigation/preventative measures.

1 **Table 4.8-1. Summary of Hazards Impacts and Mitigation/Preventative Measures**

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

2

3 **4.8.5 Alternatives**

4 **4.8.5.1 Complete Removal of Conduits Alternative**

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

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

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

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

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

19 PM REC-2 would apply to this impact.

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

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

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

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

8 PM REC-2 would apply to this impact.

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

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

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

15 **4.8.5.2 Removal of Nearshore Portions of Conduits Alternative**

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

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

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

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

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

27 PM REC-2 would apply to this impact.

1 Impact ALT-HAZ-5: Effects on Emergency Response or Evacuation Plans**2 Activities could interfere with emergency response or evacuation plans (Class III)**

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

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

8 PM REC-2 would apply to this impact.

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

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

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

15 4.8.5.3 Crush Conduits and Remove Terminal Structures Alternative

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

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

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

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

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

29 PM REC-2 would apply to this impact.

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

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

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

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

7 PM REC-2 would apply to this impact.

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

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

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

15 **4.8.5.4 Artificial Reef Alternative**

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

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

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

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

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

28 PM REC-2 would apply to this impact.

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

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

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

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

7 PM REC-2 would apply to this impact.

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

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

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

15 **4.8.5.5 No Project Alternative**

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

20 **Impact ALT-HAZ-13: Effects from Navigational Hazards**

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

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

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

27 MM REC-ALT-5 would apply to this impact.

1 **4.8.5.6 Cumulative Projects Impact Analysis**

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

5 **4.8.6 References**

6 City of San Clemente. 1992. General Plan.

7 Southern California Edison. 2004. Work Execution Plan SONGS 1 Intake and
8 Discharge Conduit Dispositioning Project. December.

9