# 4.0 REVISED PAGES TO THE DRAFT EIR

In accordance with section 15132 of the State CEQA Guidelines, this section presents the changes that were made to the Draft EIR to clarify or amplify its text in response to comments. Such changes are insignificant as the term is used in section 15088.5(b) of the State CEQA Guidelines in that no new potentially significant impacts are identified, and the effectiveness of identified mitigation is not reduced.

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These meetings will be held in the San Clemente Community Center in San Clemente, California. At the conclusion of the public review period, a Final EIR will be completed in response to public and agency comments. The Final EIR will be used by the CSLC in determining whether to approve the Proposed Project.

### 1.3.2 Public Comment on the Draft EIR

Nine letters of comment were submitted and two speakers provided comments at the public meeting on March 31, 2005. Issues raised are addressed in Section 4 of this finalizing addendum.~~To be provided at the conclusion of the public review period.~~

## 1.4 PERMITS, APPROVALS, AND REGULATORY REQUIREMENTS

In addition to the proposed Agreement with CSLC, the Proposed Project would require the following permits and approvals from reviewing authorities and regulatory agencies:

- Coastal Development Permit from the CCC;
- Anchoring Permit from the U.S. Coast Guard;
- Section 404 and Section 10 Permits from the USACE;
- Section 401 Water Quality Certification from the RWQCB;
- Section 7 Consultation with the USFWS;
- Consultation with the NOAA under the Marine Mammal Protection Act; and
- Agreement with MCB Camp Pendleton to place concrete plugs in the onshore portions of the conduits.

## 1.5 CONSISTENCY WITH REGIONAL AND LOCAL PLANS

The Proposed Project would involve the disposition of two existing offshore cooling water conduits that were installed in the mid-1960s in accordance with Easement Agreement PRC 3193.1. The disposition is intended to be in accordance with Paragraph 14 of the Agreement, which calls for the removal of structures erected by the Lessee. The CSLC will determine whether to approve the proposed disposition in conformance with PRC 3193.1. No regional or local plans address the conduits or the disposition Agreement.

# 2.0 PROJECT DESCRIPTION

## 2.1 ENVIRONMENTAL SETTING

### 2.1.1 Geographic Setting

The SONGS Unit 1 site is located in southern California, approximately 60 miles (97 km) south of Los Angeles, 50 miles (80 km) north of San Diego, and 5 miles (8 km) south of downtown San Clemente (Figure 2-1). SONGS Unit 1 is immediately west of Interstate 5 (I-5) in a coastal setting adjacent to the Pacific Ocean on the northern portion of MCB Camp Pendleton. The onshore Unit 1 power plant includes an 11-acre parcel developed by the Applicant under an easement granted by the Department of the Navy~~a lease with MCB Camp Pendleton~~. The Applicant has a separate Agreement with the CSLC (PRC 3193.1) for a 7.5-acre (3-ha) area in the nearshore and offshore areas for a 100-foot-wide (30.5-m) right-of-way easement that extends southwest from the mean lower low water (MLLW) line at the SONGS Unit 1 site to approximately 3,200 feet (975 m) offshore (see Figure 2-2).

Including Units 2 and 3, the SONGS power plant and related electrical transmission lines are prominent features in the coastal setting of MCB Camp Pendleton. However, the offshore cooling water conduits that are the subject of this EIR are buried beneath the seafloor and are not visible in the coastal environment from either the shoreline or the ocean surface. The only project features visible in the local setting are the buoys at the ocean surface that mark the location of each of the terminal structures at the end of the two offshore conduits.

### 2.1.2 Historic Setting

Many commercial electric power plants have been previously built in California. These facilities were constructed near the Pacific Ocean in proximity to the large volume of ocean water used for cooling. The power plants used oil and/or natural gas to heat water into the steam that drove their turbine-generators, and ocean water was utilized to condense the used steam back into a liquid phase for reuse in the plant. The steam water used in these power plants was self-contained and did not mix with the ocean cooling water.

While in operation, the nuclear-powered SONGS Unit 1 power plant also used a self-contained cooling steam-water system that did not mix with ocean water. The power plant pumped cool ocean water from the offshore intake conduit into a large heat exchanger, where the steam used to turn the turbine-generator was condensed back into a liquid phase for recirculation through the plant. Spent cooling water was discharged through the second offshore conduit.

### 2.3.6 Materials Processing and Recycling

Materials removed from the site would be barged to the Port of Long Beach for recycling and disposal. Once the deck barge has reached port, the deck load from the barge would be placed on dry ground, and a hydraulic backhoe would reduce the concrete to rubble for transport to a commercial recycler. All recycling and disposal activities would be conducted at an approved site within existing permit conditions; recycling and disposal activities are therefore not considered to be a part of the Proposed Project and are not addressed in this EIR.

### 2.3.7 Marine Safety

The Marine Safety Plan (MSP) has been developed to support the proposed project operations. The primary concerns addressed in the MSP are personnel, environmental, and vessel safety. One important element of the MSP is the Critical Operations and Curtailment Plan (COCP), which 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. The MSP is included in this EIR as Appendix F.

### 2.3.8 Oil Spill Response Plan

The Oil Spill Response Plan is part of the project WEP, and it specifies procedures and protocols that would be utilized in the event of an onshore or offshore oil spill resulting from proposed project activities. The *Oil Spill Response Plan* is included in this EIR as Appendix G.

### 2.3.9 Diver's Safety Plan

The Diver's Safety Plan will be part of the project WEP, and it will specify techniques, equipment, and procedures to be used for each underwater operation. The Diver's Safety Plan will include an evacuation plan for injured divers. The plan specifies that all diving operations will comply with U.S. Coast Guard and OSHA safety regulations for commercial diving operations. The *Diver's Safety Plan* is included in this EIR as Appendix H.

### 2.3.10 Conduit Plugs

The CSLC lease extends offshore from the MLLW line; the portion of the easement that extends to the east above MLLW is leased by the Applicant from MCB Camp Pendleton.

This onshore portion of the conduits would be plugged with concrete from MLLW to the existing tsunami gates, inland from the existing seawall. Installation of the concrete plug would be accomplished from the SONGS Unit 1 site through existing manholes on the plant site (Figure 2-9). A plug would be installed by divers, and concrete would be pumped into a series of fabric forms within the conduits to fill the conduits and prevent any future use or failure of the conduits beneath the beach. Installation of the conduit plugs would require a crew of 12 workers, including divers. Project work on this onshore section of the conduits, east of the MLLW line, would only require approval from MCB Camp Pendleton, since it is outside of the jurisdiction of the CSLC.

### 2.3.11 Potential Future Reuse of Conduits

Under the Proposed Project, the conduits would remain in place and could be used for any future project that could utilize the ocean water intake and discharge structures. During scoping for this EIR, both the Water Authority and MWD indicated that they are considering the feasibility of a regional seawater desalination facility at MCB Camp Pendleton. Such a regional facility would supplement the water supplies of the Water Authority and the MWD, and the fresh water produced at the desalination facility could serve both water districts as well as MCB Camp Pendleton. The Base commented during scoping and during the public review period for the Draft EIR that it was aware of the consideration being given to a desalination facility at MCB Camp Pendleton, and it supported the Proposed Project or a less environmentally damaging alternative that would retain ~~and the retention of~~ the offshore conduits in place.

Although there are no specific plans for a regional desalination facility at this time, the existing intake and discharge conduits may be suitable for such a potential future use. This EIR, however, does not evaluate a future reuse of the offshore conduits in the impact analysis, since such a proposal is speculative and is not a reasonably foreseeable project at this time.

### 2.3.12 Lease Termination

The purpose of the Proposed Project is to terminate the existing Lease Agreement and replace it with a Lease Termination/Abandonment Agreement in which the Applicant would remain responsible for the abandoned conduit structures.

## 2.4 DISPOSITION SCHEDULE

Once the CSLC has certified the Final EIR and approved the Proposed Project, the disposition schedule would depend on the time required for: (1) the CCC to issue a Coastal Development Permit; (2) permitting by other agencies; (3) National

is determined to be adverse, but less than significant (Class III). An action that provides an improvement to an environmental issue area in comparison to the baseline information is recognized as a beneficial impact (Class IV).

**Formulation of Mitigation Measures and Mitigation Monitoring Program**

When significant impacts are identified, feasible mitigation measures are formulated to eliminate or reduce the intensity of the impacts and focus on the protection of sensitive resources. The effectiveness of a mitigation measure is subsequently determined by evaluating the impact remaining after its application. Those impacts meeting or exceeding the impact significance criteria after mitigation are considered residual impacts that remain significant (Class I). Implementation of more than one mitigation measure may be needed to reduce an impact below a level of significance. The mitigation measures recommended in this document are identified in the impact assessment sections and presented in a Mitigation Monitoring Program (MMP). The MMP is provided in Section 6.

If any mitigation measures become incorporated as part of a project's design, they are no longer considered mitigation measures under the CEQA. If they eliminate or reduce a potentially significant impact to a level below the significance criteria, they eliminate the potential for that significant impact since the "measure" is now a component of the action. Such measures incorporated into the project design have the same status as any "applicant proposed measures." The CSLC's practice is to include all measures to eliminate or reduce the environmental impacts of a Proposed Project, whether Applicant proposed or recommended mitigation, in the MMP.

**Cumulative Projects**

According to section 15355 of the State CEQA Guidelines, cumulative impacts refer to:

> "Two or more individual effects which, when considered together are considerable or which compound or increase other environmental effects.
>
> (a) The individual effects may be changes resulting from a single project or a number of separate projects.
>
> (b) The cumulative impact from several projects is the change in the environment which results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects. Cumulative impacts can result from individually

minor but collectively significant projects taking place over a period of time.

~~The individual effects may be changes resulting from a single project or a number of separate projects. The cumulative impact from several projects is the change in the environment that~~ which ~~results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable~~ probable ~~future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time."~~

Section 15130(a) of the State CEQA Guidelines states that:

"An EIR shall discuss cumulative impacts of a project when the project's incremental effect is cumulatively considerable.... Where a lead agency is examining a project with an incremental effect that is not "cumulatively considerable," a lead agency need not consider that effect significant, but shall briefly describe its basis for concluding that the incremental effect is not cumulatively considerable~~...~~.

(1) As defined in Section 15355, a cumulative impact consists of an impact which is created as a result of the combination of the project evaluated in the EIR together with other projects causing related impacts. An EIR should not discuss impacts which do not result in part from the project evaluated in the EIR.

(2) When the combined cumulative impact associated with the project's incremental effect and the effects of other projects is not significant, the EIR shall briefly indicate why the cumulative impact is not significant and is not discussed in further detail in the EIR.~~...~~ A lead agency shall identify facts and analysis supporting the lead agency's conclusion that the cumulative impact is less than significant.

(3) An EIR may determine that a project's contribution to a significant cumulative impact will be rendered less than cumulatively considerable and thus is not significant. A project's contribution is less than cumulatively considerable if the project is required to implement or fund its fair share of a mitigation measure or measures designed to alleviate the cumulative impact.~~...~~ The lead agency shall identify facts and analysis supporting its conclusion that the contribution will be rendered less than

cumulatively considerable." ~~An EIR may determine that a project's contribution to a significant cumulative impact is de minimis and thus is not significant. A de minimis contribution means that the environmental conditions would essentially be the same whether or not the Proposed Project is implemented."~~

According to section 15130 (b) (1)~~(A)~~ of the State CEQA Guidelines, The following elements are necessary to an adequate discussion of significant cumulative impacts: Either:

(A) ~~a~~A list of past, present, and probable future projects producing related or cumulative impacts, or

(B) A summary of projections contained in an adopted general plan or other related ~~adopted~~ planning document or in a prior environmental document which has been adopted or certified, which described or evaluated regional or areawide conditions contributing to the cumulative impact. Any such planning document shall be referenced and made available to the public at a location specified by the lead agency.

~~environmental document which described or evaluated regional conditions contributing to the cumulative impact~~

(B) ~~may be used as the basis of the cumulative impacts analysis.~~

A number of cumulative projects have been identified in the project vicinity; however, none of these projects would result in effects in the ocean environment in the vicinity of the Proposed Project. The cumulative projects identified for this EIR are described below.

Ongoing decommissioning of SONGS Unit 1 is a long-term, multi-year effort that is restricted to the land portions of the power plant. Likewise, the proposed new steam generators at SONGS Units 2 and 3 would be confined to the existing power plant site. Other small-scale construction and decommissioning projects are likely to occur at the power plant during project implementation; however, none of these projects would occur offshore during the proposed decommissioning activities.

The land surrounding the SONGS facility is occupied by MCB Camp Pendleton. A number of projects have been recently completed or are proposed at MCB Camp Pendleton, including the following:

- Field Placement of advanced amphibious assault vehicle (AAAV) at MCB Camp Pendleton;
- Reconstruction of Infantry Squad Battle Course (P-633);
- Reorientation of Range 409 and Addition of Armor/Anti-Armor Tracking Range (P-634);
- New Marine Corps Reserve Center, 41 Area Las Flores (P-516);
- Drainage Improvements and Navigation Aids, MCAS Camp Pendleton;
- Ammunition Handling Pad and Access Road (P-218);
- Santa Margarita River Flood Control (P-010);
- Basilone Bridge Replacement (P-030);
- Sewage Effluent Compliance Project - Las Pulgas and San Mateo Basins;
- Sewage Effluent Compliance Project (P-527B) - Lower Santa Margarita Basin;
- Northern Power Distribution System (P-046);
- Las Pulgas Landfill Permitted Disposal Area Expansion and Leachate Collection and Recovery System Installation;
- San Onofre Landfill Permitted Disposal Area Expansion and Leachate Collection and Recovery System Installation; and
- Close Combat Battle Course (P-613).

In addition to the above projects at MCB Camp Pendleton, a new tertiary wastewater treatment plant is also proposed to serve the Base. Four active treatment plants located on the Base would be consolidated into a single tertiary treatment plant. The four active plants and one inactive plant would be demolished once the new plant was constructed. The new tertiary treatment plant would be constructed approximately 10 miles south of SONGS, near one of the existing treatment plants to be demolished. That proposed action would dispose of excess tertiary-treated water via an ocean outfall.

An Environmental Impact Statement/Environmental Impact Report (EIS/EIR) is currently being prepared for the proposed Foothill South Tollroad extension project. This project would extend Highway 241 from its current terminus in Irvine to I-5 near San Clemente. If the controversial freeway extension were approved, construction would occur in 2006 at the earliest and would be completed in approximately 2 years. One of the alternatives would directly impact San Onofre State Beach and would connect with I-5 at Basilone Road. If this alternative were selected, it would be initiated after the completion of the much smaller disposition project which will be completed in 2006.

Other small-scale development projects may occur in the residential communities to the north of the power plant during the decommissioning project. However, these projects would occur several miles from the site and would not directly affect the SONGS facility or outfall structure.

Other cumulative projects that could affect the decommissioning project include port development activities at the Port of Long Beach. Several development projects (including dockside improvements) could potentially occur in 2006. In addition, the Port of Long Beach is currently evaluating several large-scale port expansion projects. It is uncertain if any of these projects would occur in 2006 during the proposed decommissioning project.

The original construction and operation of SONGS units 2 and 3 was the subject of an EIS prepared by the NRC titled, Final Environmental Impact Statement related to the proposed San Onofre Nuclear Generating Station, Units 2, and 3, dated March 1973 and a subsequent Final Environmental Impact Statement published by the NRC in April 1981. Units 2 and 3 have been operating for more than 21 years. Accordingly, the impacts associated with their ongoing operation are accounted for in the environmental baseline existing at the time of the release of the NOP, on June 17, 2004, more than 20 years after Units 2 and 3 started operating. The ongoing operations of Units 2 and 3 are most appropriately considered as part of the existing environmental baseline rather than in the cumulative impact analysis.

The decommissioning activities at SONGS Unit 1 are ongoing and are scheduled to conclude in 2008. Although certain onshore activities continue in the decommissioning of Unit 1, that “project” is, for purposes of the environmental and regulatory processes, complete. The impacts identified in the environmental document and associated mitigation constitute changes in the environmental baseline that occurred prior to and were present when the Notice of Preparation was issued. Section 15126.2 (a) of the State CEQA Guidelines provides, in part, “In assessing the impact of a proposed project on the environment, the lead agency should normally limit its examination to changes in

the existing physical conditions in the affected area as they exist at the time the notice of preparation is published…" The DEIR appropriately bases its analysis on an environmental baseline that reflects current information and the entirety of activities associated with the decommissioning of SONGS Unit 1 that remain.

Each issue area in Section 4 addresses the cumulative impact scenario, the focus of which is to identify the potential impacts of the Proposed Project that might not be significant when considered alone, but could contribute to a significant impact when viewed in conjunction with the other projects.

**Impacts of Alternatives**

Section 3 provides a list and description that identify alternatives to the Proposed Project. Each issue area in Section 4 presents the impact analysis for each alternative scenario. A summary of the collective impacts of each alternative in comparison with the impacts of the Proposed Project is included within the Executive Summary Section of this EIR.

**Table 4.1-1. Scientific and Common Names of Fish Species Collected in Trawl Samples in the Vicinity of SONGS**

| Scientific Name | Common Name |
|---|---|
| *Amphistichus argenteus* | barred surfperch |
| *Anchoa compressa* | deep bodied anchovy |
| *Citharichthys stigmaeus* | speckled sanddab |
| *Citharichthys xanthostigma* | longfin sanddab |
| *Cymatogaster aggregata* | shiner ~~surf~~perch |
| *Embiotoca jacksoni* | black ~~surf~~perch |
| *Engraulis mordax* | northern anchovy |
| *Genyonemus lineatus* | white croaker |
| *Hyperprosopon argenteum* | walleye surfperch |
| *Hypsopsetta guttulata* | diamond turbot |
| *Menticirrhus undulatus* | California corbina |
| *Paralabrax clathratus* | kelp bass |
| *Paralabrax nebulifer* | barred sand bass |
| *Paralichthys californicus* | California halibut |
| *Pleuronichthys ritteri* | spotted turbot |
| *Pleuronichthys verticalis* | hornyhead turbot |
| *Rhinobatus productus* | shovelnose guitarfish |
| *Roncador stearnsii* | spotfin ~~black~~ croaker |
| *Sardinops sagax* | pacific sardine |
| *Scorpaenichthys marmoratus* | California scorpionfish |
| *Seriphus politus* | queenfish |
| *Syngnathus* spp. | pipefish |
| *Synodus lucioceps* | California lizardfish |
| *Xystreurys liolepis* | fantail sole |

**Table 4.1-2. Relative Abundance of Species by Habitat Type Observed Subtidally along the Conduit Corridor (from SCE 2003)**

| Group / Species | Habitat Type | | |
|---|---|---|---|
| | Hard Bottom | | Soft |
| | Man-Made | Cobble | Bottom |
| **Flowering Plants** | | | |
| *Phyllospadix torreyi* | none | uncommon | none |
| **Brown Algae** | | | |
| *Dicyota* spp. | common | common | none |
| *Egregia menziesii* | uncommon | uncommon | none |

| Group / Species | Habitat Type | | |
|---|---|---|---|
| | Hard Bottom | | Soft |
| | Man-Made | Cobble | Bottom |
| *Pododesmus* spp. | common | none | none |
| *Pseudochama exogyra* | common | uncommon | none |
| *Pteria sterna* | uncommon | uncommon | none |
| *Pteropurpura festiva* | common | common | none |
| *Tegula* spp. | common | common | none |
| *Zonaria spadicea* | uncommon | uncommon | none |
| **Echinoderms** | | | |
| *Astropectin* spp. | none | none | common |
| *Pisaster brevispinus* | none | none | uncommon |
| *Pisaster giganteus* | uncommon | uncommon | none |
| *Strongylocentrotus franciscanus* | common | uncommon | none |
| *Strongylocentrotus purpuratus* | common | uncommon | none |
| *Parastichopus* spp. | uncommon | uncommon | none |
| **Crustaceans** | | | |
| *Balanus* spp. | common | common | none |
| *Isocheles pilosus* | none | none | common |
| *Loxorhynchus giganteus* | uncommon | uncommon | none |
| Majidae | none | uncommon | common |
| *Panulirus interruptus* | common | common | uncommon |
| **Tunicates** | | | |
| *Aplidium* spp. | common | common | none |
| *Cystodytes* spp. | common | common | none |
| *Didemnum* spp. | common | uncommon | none |
| *Tridemnum* spp. | common | uncommon | none |
| **Fish** | | | |
| *Amphisticus argenteus* | uncommon | uncommon | none |
| *Chromis punctipinnis* | common | uncommon | none |
| *Embiotoca jacksoni* | common | common | none |
| *Gibbonsia elegans* | common | common | none |
| *Halichores semicinctus* | common | common | none |
| *Hypsypops rubicundus* | common | uncommon | none |
| *Micrometrus minimus* | uncommon | uncommon | none |
| *Oxyjulis californicus* | common | common | none |
| *Paralabrax clathratus* | uncommon | uncommon | none |
| *Paralabrax nebulifer* | common | common | none |
| *Paralichthys californicus* | none | uncommon | none |
| *Pleuronichthys* spp. | none | uncommon | none |

resulted from heavy fishing on their predators, particularly California sheephead (*Semicossyphus pulcher*) and spiny lobster (CSLC 1998). During a major El Niño from 1957 to 1959, stress on kelp forests was intensified. In the 1960s, kelp forest restoration efforts were initiated at sites where kelp forests had previously flourished (CSLC 1998). In addition, improved sewage disposal practices and a growing fishery for red sea urchins relieved some of the stress on kelp forests.

Aerial photography has aided in monitoring kelp forests in the SCB (North et al. 1993). Twenty kelp beds along the Orange County and San Diego County coast have been surveyed from 1967 to present. Results of these surveys indicated that kelp forests are highly dynamic systems with substantial year-to-year variation in size (CSLC 1998). Major storms and El Niño conditions have generally caused the greatest reduction in kelp bed canopies (Tegner and Dayton 1987, 1991; North et al. 1993; Tegner et al. 1997). However, the surveys showed no general increase or decrease in kelp forest coverage.

Studies of the subtidal hard bottom habitat offshore of San Onofre have been conducted since 1963. The San Onofre Kelp Forest (SOK) is located in the vicinity of the project area, just offshore and downcoast of the SONGS Unit 3 diffusers (Figure 4.1-3). Less persistent kelp beds are sometimes present offshore of the SONGS Unit 1 intake conduit, upcoast of the Unit 2 diffusers. Analysis of giant kelp plant densities since 1978 from stations located throughout SOK indicate that this kelp forest is spatially and temporally variable, as different areas of SOK showed different recruitment periods and different periods of peak plant densities (SCE 2004).

**Characteristic Biota**

A wide variety of algae, fish, and invertebrates were observed during a survey conducted at the intake and discharge terminal structures and manhole risers (SCE 2003). Riprap was present around each structure and provides additional habitat for marine organisms. A few giant kelp, feather boa kelp (*Egregia menziesii*), and a variety of small red and brown upright and encrusting algae were also observed (Table 4.1-2). A few conspicuous mollusks were also observed such as the giant turban (*Megastraea*), chestnut cowry (*Zonaria spadicea*), dog whelk (*Kelletia kelletii*), blue spotted octopus (*Octopus bimaculatus*), turban snails (*Tegula* sp.), and the festive snail (*Pteropurpura festiva*). No white, black pink, green, or red abalone (*Haliotis* sp.) were observed during the survey. Echinoderms, such as purple and red sea urchins (*Strongylocentrotus purpuratus* and *S. franciscanus*) and seastars (*Pisaster* spp.), were present. Also observed were lobsters (*Panulirus interruptus*) and a diverse assemblage of fishes (Table 4.1-2).

## Marine Mammals, Birds, and Turtles

This section provides a description of the general biology of mammal, bird, and turtle species that are likely to occur within and near the project area. The section begins with a discussion of the marine mammals found in the SCB and includes a brief description of the species that may be affected by project activities. Next is a discussion of the bird species that are likely to occur in the area, followed by a description of avian use of kelp forests in California. Finally, there is a short section on sensitive turtle species that have the potential to occur in the project area.

The study area for marine mammals, birds, and turtles encompasses the marine waters from Los Angeles to San Diego because this area includes all probable transit routes for construction and support vessels. Detailed discussion will focus on species that would likely occur within the project vicinity, as those species would more likely be influenced by project activities.

### Marine Mammals

Several species of marine mammals occur in nearshore waters of the SCB. California sea lions (*Zalophus californiaenus*) and harbor seals (*Phoca vitulina*) are found in these waters (U.S. Navy 1997a, 1997b). Bottlenose dolphins (*Tursiops truncatus*) and common dolphins (*Delphinus delphis*) occur in the surfzone and offshore waters. Risso's dolphins (*Grampus griseus*) and Pacific whitesided dolphins (*Lagenorhynchus obliquidens*) occur seasonally in the SCB. In addition, California gray whales (*Eschrichtius robustus*) migrate seasonally through the SCB. December through February, the gray whales migrate south to places in Baja Mexico, and from February through May, they migrate north to Alaskan waters.

#### Status and Trends of Marine Mammals

All marine mammals are protected by the Federal Marine Mammal Protection Act of 1972 (MMPA). The MMPA prohibits the intentional taking, import, or export of marine mammals without a permit. Several of the species that occur within the SCB are also protected under the Federal Endangered Species Act of 1973 (ESA). A species that is listed as threatened or endangered under the ESA is categorized as depleted under the MMPA. Unintentional take of a depleted species is allowed by permit only if the activity is determined to have a negligible impact. Intentional take of a depleted species is only allowed under a scientific research permit.

None of the four species most likely to occur within the project area are currently listed as threatened or endangered or as depleted under the MMPA. The gray whale, which

The Pacific harbor seal forages alone or in small groups close to shore in relatively shallow coastal waters (less than 650 feet [200 m]). They prey on benthic and epibenthic fish and have been observed foraging in kelp forests, particularly if this habitat is located near coastal haul-out sites (Foster and Schiel 1985). Harbor seals have been observed in the kelp beds within the project area.

*Bottlenose Dolphin*

The bottlenose dolphin occurs in the eastern north Pacific Ocean from the equator north to central California (Dailey et al. 1993). Two distinct populations occur in the SCB, one coastal and one offshore. The coastal form generally inhabits waters within 0.6 mile (1 km) of the shore and would be most likely to occur within the project area. This species is known to form small resident groups that occupy distinctive home ranges, with little overlap between groups (Dailey et al. 1993). Bottlenose dolphins remain within the SCB year-round, with seasonal shifts in population size and distribution between Orange County and Ensenada, Mexico. The coastal population was estimated to have 240 bottlenose dolphins in 1983 by NMFS (Dailey et al. 1993). There has not been a comprehensive study of the feeding habits of bottlenose dolphins in the SCB; however, it is believed that they feed opportunistically on a wide variety of fishes, cephalopods, and crustaceans (Dailey et al. 1993).

*Gray Whale*

Two distinct populations of gray whales occur in the North Pacific Ocean, a western and an eastern stock. The eastern stock occurs along the eastern Pacific coastline and is known as the California gray whale. In June 1994, the eastern pacific population was removed from the Federal Endangered Species List, due to recovery of population numbers to near the estimated sustainable population size.

The California gray whale migrates through the SCB twice each year, traveling between its feeding grounds in Alaska and its breeding grounds in Baja California. The southern migration through the SCB occurs from December through February, with pregnant females moving through the area first. The northward migration begins in February and lasts through May, peaking in March (Dailey et al. 1993). Solitary animals generally lead the northbound migration with cow-calf pairs following 1 to 2 months later (Foster and Schiel 1985). Gray whales migrate within 125 miles (200 km) of the shoreline and many are sighted within 9 miles (15 km) of shore (Dailey et al. 1993). On the northbound migration, cow-calf pairs are believed to more closely follow the shoreline rather than the offshore route (Foster and Schiel 1985; Dailey et al. 1993). Gray whales have been observed within the project area.

invasive species in California has caused considerable alarm. The resulting press coverage of the issue led to discovery of a second infestation of *Caulerpa taxifolia* in Huntington Harbor in Orange County (about 75 miles [121 km] north of the Carlsbad occurrence). Efforts are underway to eradicate *Caulerpa taxifolia* from California and control its spread before the infestation reaches the magnitude seen in the Mediterranean. *Caulerpa taxifolia* is a green alga native to tropical waters that typically grows to small size and in limited patches. In the late 1970s this species attracted attention as a fast-growing and decorative aquarium species that became popular in the saltwater aquarium trade.

This alga poses a substantial threat to marine ecosystems in southern California, particularly to the extensive eelgrass meadows and other benthic environments that make coastal waters such a rich and productive environment for fish and birds (NMFS 2001). The eelgrass beds and other coastal resources that could be directly impacted by an invasion of *Caulerpa* are part of a food web that is critical to the survival of numerous native marine species. *Caulerpa taxifolia* has not been found outside of bays and/or estuaries in southern California, and ~~should not be a major concern to the construction activities. *Caulerpa* was~~ not observed at the project area during dive surveys conducted in 2003 (SCE 2003). However, provisions have been established for California nearshore coastal waters from Morro Bay to the U.S./Mexican border for any disturbing activity, e.g., bulkhead repair, pile driving, dredging, placement of navigation aids, etc. All project alternatives, with the exception of the No Project Alternative, would require that a "Surveillance Level" *Caulerpa* survey be conducted prior to project activities, which entails systematic sub-sampling of at least 20 percent of the project footprint (NOAA Fisheries/CDFG 2003).

Undaria pinnatifida

*Undaria pinnatifida* is a golden brown kelp native to the Japan Sea. It has been introduced in Australia, New Zealand, and Europe and has now spread to the California coastline. It has most recently been found in the Santa Barbara harbor. In Japan it is known as wakame and is extensively cultivated as a fresh and dried food plant. However, it has the potential to become a major pest in our coastal waters. *Undaria* grows to between 3 to 7 feet (1 and 2 m) tall and is found in sheltered harbor waters on rocks, breakwaters, and marine debris from the low-tide mark to 50 feet (15 m). A mature plant has a distinctive, spiraled (frilly), spore-producing structure at its base. It also has an obvious central stem to 4 inches (10 cm) wide that extends for the length of the plant. The blade may be up to 3.1 feet (1 m) wide and extends from the tip of the plant for half the length of the plant. *Undaria* was not observed at the project area during dive surveys conducted in 2003 (SCE 2003).

## Existing Habitat Conditions

The habitat in the vicinity of the SONGS Unit 1 intake and discharge conduits includes intertidal and subtidal sandy substrate, and hard bottom subtidal substrate, e.g., bedrock, riprap, on top of or immediately adjacent to the discharge conduits. Project actions that could impact fish habitat include: (1) changes in substrata, (2) impacts on vegetation (food) habitat, and (3) impacts on water quality. The following provides a summary of the FMP species and where they might be expected relative to the project location.

## Biological Descriptions for Groundfish and Coastal Pelagic Species

### Northern Anchovy

Northern anchovy range from British Columbia to the Gulf of California. Larvae and juvenile individuals are abundant in nearshore and estuarine areas while adults dominate the oceanic populations. The species is not migratory but does move inshore-offshore and along the shore on a seasonal basis. Spawning occurs throughout the year depending upon location. In southern California, spawning occurs between January and May. Larvae feed on planktonic organisms such as copepod eggs and nauplii, dinoflagellates, rotifers, ciliates, and foraminifers. Juveniles and adults generally eat phytoplankton, planktonic crustaceans, and fish larvae. Northern anchovy are very abundant in the California current and provide food for a wide variety of fish, birds, and marine mammals. They are considered an indicator of environmental stress due to their response to low dissolved oxygen and water-soluble fractions of crude oil (Emmett et al. 1991).

### Pacific Sardine

Pacific sardine is a wide-ranging species found throughout the Atlantic Ocean and Pacific Ocean. This pelagic species, commonly found offshore, exhibits seasonal migration. Older adults travel from Baja California and southern California spawning areas to feeding grounds in the northern Pacific coastal waters. Juveniles remain in the nearshore waters of southern California. Sardines can be the most abundant species in nearshore waters. Spawning occurs year-round with a peak from April to August in southern California. Sardines feed on both phytoplankton and zooplankton. Numerous fishes, birds, and marine mammals consume adult sardines, while larvae are eaten by planktivores (NMFS 1998).

The following is a brief summary of the abalone species that occur in southern California and may be affected by the Project.

Black Abalone

Black abalone (*Haliotis cracherodii*) usually inhabit surf-battered rocks and crevices from the intertidal zone to shallow subtidal zone down to 20 ft (6 m). It is a long-lived species, attaining an age of 25 years or more. Now a rare species, the black abalone was abundant in California until the mid-1980's. It once occurred in such high concentrations that individuals were observed stacked on top of one another. Density studies conducted at the Channel Islands indicate significant declines attributed to Withering Syndrome. In the vicinity of Point Conception, Santa Barbara County, black abalone populations exhibited mortalities of 39 to 97 percent (CDFG 2001). In 1998, the NMFS added black abalone to the candidate species list for possible listing under the federal ESA.

Green Abalone

Green abalone (*Haliotis fulgens*) prefer shallow water from the low tide zone down to 25 feet (8 m). They are opportunistic drift algae feeders, and eat a variety of drift algae, but prefer red algae. Green abalone may occupy a particular site, called a home site or scar, and abalone larger than one inch seldom leave their home scar to forage, relying solely on drift algae. Smaller individuals actively forage but return to their home scar in the day. Now rare, the green abalone was once a common species in southern California.

Pink Abalone

Pink abalone (*Haliotis corrugata*) occur in a depth range from the lower intertidal zone to almost 200 feet (60 meters), but most are found from 20 to 80 feet (6 to 24 m). It has the broadest distribution of the southern California abalones. In the early 1950's, pink abalone comprised the largest segment of the abalone fishery, about 75 percent (CDFG 2001). By the early 1980's, the commercial pink abalone fishery had expanded throughout its range and the landings dwindled to virtually nothing. Surveys at San Clemente, Santa Catalina, and Santa Barbara Islands in 1996 and 1997 indicated that there were few abalone remaining.

Red Abalone

Red abalone (*Haliotis rufescens*) is the largest abalone in the world and is associated with rocky kelp habitat ranging from the intertidal to the shallow subtidal depths. In

**Impact BIO-1. Effect on Essential Fish Habitat**

**Project activities could impact groundfish and pelagic Essential Fish Habitat by disturbing existing habitat from anchoring, excavation, and sedimentation (Class II).**

Hard bottom habitat provides substrate for surfgrass, kelp, and other algae, and is Essential Fish Habitat for numerous managed fish species, including various life stages, i.e., larvae, juveniles. A detailed bathymetric and geophysical survey was conducted to identify sandy and hard bottom substrate, with the results used to prepare an anchor plan. The anchoring plan was designed to minimize or eliminate impacts to sensitive marine habitats, i.e., hard bottom substrate (Appendix D). The crane barge will be moored by three or four-point anchorages. Anchor wires will attach the anchor to winches fastened to the deck of the crane barge. A soft line will be attached to the crown of each anchor and connected to floating buoys to deploy and recover the anchor with minimal disturbance of the bottom. An anchor zone is designated in the anchor plan and consists of a 50-foot-diameter (15-m) circle where an anchor may be placed. In addition, a diving survey will be conducted prior to anchor deployment to verify that there would be no impacts to hard bottom substrate, and proposed anchorages will be moved as necessary.

Anchoring activities would disturb existing soft bottom habitats; however, no long-term significant impacts would occur, with recovery expected within several months. Groundfish species and pelagic species such as northern anchovy and Pacific sardine that are transient to the project area would be able to move away from disposition activities and return after completion. Due to the highly mobile nature of the fishes in the project area and the avoidance of sensitive hard bottom substrate, impacts to groundfish and pelagic Essential Fish Habitat from anchoring would be less than significant as these impacts would be localized and/or transient (Class III).

Impacts to groundfish and pelagic Essential Fish Habitat from excavation and sedimentation would occur by reducing foraging habitat, increasing turbidity, and decreasing water quality (Class II). Water quality impacts from project-induced turbidity and sedimentation would be significant and are discussed in Section 4.3. Mitigation measures to reduce turbidity and water quality impacts to less than significant levels are also discussed in Section 4.3. ~~The removal of the vertical structures would also result in a minor long-term net loss of habitat.~~ Due to the highly mobile nature of the groundfishes and pelagic fishes in the project area, these impacts would be localized and/or transient and less than significant (Class III).

threatened or endangered, and they are generally considered to be opportunistic and would rapidly recolonize disturbed areas. Therefore, project related impacts on soft bottom habitats would be less than significant (Class III).

Mitigation Measures for Impact BIO-2: Effects on Biologically Significant Habitats

MM WAT-1a through 1d would apply to this impact.

**Impact BIO-3. Effect on Biological Communities Associated with the Seafloor Beyond the Footprint of the Offshore Conduits**

**Proposed activities could result in indirect impacts to sensitive habitat beyond the footprint of the Proposed Project (Class II).**

Rocky intertidal habitat is present approximately 0.25 miles (400 m) upcoast of SONGS, San Onofre kelp forest is located approximately 0.5 miles (0.8 km) offshore of the project area, and hard bottom substrate that supports surfgrass and giant kelp is located on the perimeter of the project footprint, both upcoast and downcoast of SONGS. Similar to BIO-2, activities may have indirect effects by increasing turbidity and sedimentation beyond the project footprint. This may lead to impacts from reduced productivity and burial of habitat (Class II). However, mitigation measures discussed in Section 4.3 would reduce potential turbidity and sedimentation impacts to less than significant levels.

Mitigation Measures for Impact BIO-3: Effects on Biologically Sensitive Habitats Beyond the Footprint of the Offshore Conduits

MM WAT-1a through 1d would apply to this impact.

**Impact BIO-4. Threatened, Endangered, or Species of Concern**

**No impacts to habitat or populations of a rare, threatened, endangered, or species of concern are anticipated (Class III).**

No federally or State listed fish, plant or invertebrate species ~~(marine mammals, sea turtles, and sea birds are discussed below)~~ are present in the project area, and therefore impacts to threatened or endangered species would not be significant (Class III). No mitigation is required.

California grunion are considered a species of interest due to their unique spawning behavior and concern regarding loss of suitable spawning habitat. For the Proposed Project, the onshore conduits are reportedly buried under 13 to 30 feet (4 to 9 m) of cover, beginning at the existing seawall and terminating at the MLLW, a distance of

The proposed activities may cause any marine mammal present in the project area to leave the area. There are extensive alternative foraging areas adjacent to the project area, and the marine mammals can be expected to return to the area upon completion of the project. Therefore, the Proposed Project is expected to have less than significant impacts on marine mammals (Class III). No mitigation is required.

Marine Birds

The special-status marine birds most likely to occur in the vicinity of the project area include brown pelican, double-crested cormorant, western snowy plover, California gull, elegant tern, and occasionally, California least tern and common loon. All of these species feed on fish and may occasionally utilize the project area for foraging. No breeding colonies for any of the above listed species exist in the project area. Project activities may prevent several of the avian species from foraging in the project area by affecting the distribution of prey species; however, given the relatively small affected area, many other areas would be available that would provide high quality foraging habitat. In addition, vessels, e.g., derrick barge, tugboat, etc., may serve as roosting habitat during periods of inactivity for several species such as the brown pelican and double-crested cormorant, which may expose these birds to lubricants, oil, or other chemicals on the surface of the vessel. The construction schedule calls for a 24-hour operation of generators and 12-hour workdays on the barge, which would reduce the likelihood of birds loafing or roosting on the barge. The Oil Spill Response Plan (Appendix G) identifies potential spill sources, spill prevention and cleanup procedures, onsite spill response team and equipment, and notification procedures, which would further minimize the potential impacts to birds from exposure to petroleum sources. Therefore, the disturbance to marine birds would be less than significant impact (Class III). No mitigation is required.

Sea Turtles

Since sightings of sea turtles are extremely rare in southern California, it is unlikely that they would be affected by project activities. Therefore, impacts on sea turtles from the Proposed Project would be less than significant (Class III). No mitigation is required.

Exposure to contaminants that could cause acute toxicity or bioaccumulation to marine mammals, sea turtles, and sea birds would be avoided by implementation of the *Oil Spill Response Plan* (Appendix G) as part of the Proposed Project design (Class III). No mitigation is required.

Table 4.1-3 summarizes the marine biology mitigation measures.

### 4.1.7.2 Removal of Nearshore Portion of Conduits Alternative

Similar to the onshore portion of the Complete Removal Alternative, this alternative would essentially involve the same scope of work, and impacts within the shoreline and nearshore area would be identical. Therefore, inshore hard bottom habitat that supports surfgrass and kelp would be buried or damaged. Sensitive hard bottom substrate and other man-made habitat located offshore would not be altered from existing conditions as the terminal structures and associated riprap would be left in place. However, ~~I~~if the subalternative that removes all vertical structures consistent with the Proposed Project were adopted, this alternative would be similar to the Proposed Project ~~in terms of man-made habitat loss~~; there would be a minor long-term net loss of under this alternative (Class III). No mitigation is required.

**Impact BIO-ALT-6. Effect on Essential Fish Habitat**

**The Nearshore Removal Alternative could impact groundfish and pelagic Essential Fish Habitat by disturbing existing habitat (Class I).**

This alternative, like the Complete Removal Alternative, would temporarily impact juvenile and adult fishes. There would be burial of surfgrass habitat and hard bottom substrate along the nearshore conduit footprint. This would be considered a significant impact due to the long-term net loss of essential fish habitat (Class I). There are no mitigation measures for habitat loss that would reduce this impact to a less than significant level; however, the following mitigation measures would lessen the turbidity and sedimentation impacts.

Mitigation Measures for Impact BIO-ALT-1: Effects on Essential Fish Habitat

MM WAT-1a through 1d would apply to this impact.

**Impact BIO-ALT-7. Effect on Biologically Significant Habitats**

**The Nearshore Removal Alternative could directly impact biologically significant habitats such as surfgrass beds by damaging the substrate, and increasing turbidity and sedimentation (Class I).**

As discussed in BIO-ALT-6, this alternative would damage existing surfgrass beds and bury hard bottom substrate, which would be considered a significant impact. There are no mitigation measures for habitat loss that would reduce this impact to a less than significant level (Class I); however, the following mitigation measures would lessen the turbidity and sedimentation impacts.

Similar to impacts discussed in Section 4.1.5, impacts from conduit crushing would not be significant (Class III). No mitigation is required.

#### 4.1.7.4 Artificial Reef Alternative

The Artificial Reef Alternative would involve only dismantling the terminal structures down to the seafloor and placing a mammal barrier over the opening. The concrete sections would be placed adjacent to the existing rock riprap, creating a larger artificial reef, or the concrete sections could be removed and placed at another reef area in nearby coastal waters.

**Impact BIO-ALT-16. Effect on Essential Fish Habitat**

**Artificial reef construction would have short-term impacts on Essential Fish Habitat associated with dismantling of terminal structures but would provide long-term benefits by increasing habitat (Class IV).**

The Artificial Reef Alternative, like the Proposed Project, would temporarily impact juvenile and adult fishes due to anchoring and dismantling of the vertical structures, but fish populations would not be affected by increased turbidity or sedimentation from excavation. Due to the highly mobile nature of the fishes in the project area, impacts to groundfish and pelagic Essential Fish Habitat would be less than significant as these impacts would be localized and/or transient. The long-term benefit would include the creation of additional hard bottom habitat that would provide refuge and spawning habitat (Class IV).

**Impact BIO-ALT-17. Effect on Biologically Significant Habitats**

**The Artificial Reef Alternative would have no direct or indirect impacts to biologically significant habitats but would provide additional hard bottom substrate for colonization (Class IV).**

As described in BIO-1, anchoring activities would not impact sensitive hard bottom substrates, and no excavation that would lead to increased turbidity or sedimentation would be required for the Artificial Reef Alternative. Since the concrete sections would be placed on sandy bottom habitat that supports a less diverse assemblage of nonsensitive species, short-term impacts to these species are anticipated but are not considered significant. Within a short period of time, recovery would occur in the soft bottom habitat, and the concrete sections would be expected to support a diverse assemblage of marine organisms (Class IV).

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- the beneficial uses of individual water bodies to be protected;
- water quality standards, commonly known as water quality objectives, for both surface water and groundwater; and
- actions necessary to maintain these standards such that non-point and point-source pollution in California waters is controlled.

To protect the beneficial uses of State waters, the Basin Plan requirements are incorporated into the State NPDES program described below.

California NPDES Permit Programs

In many states, the U.S. Environmental Protection Agency (EPA) has delegated administration of the NPDES permit program to the state water quality control authority. Therefore, in California, the SWRCB and the RWQCBs administer the NPDES permit program. Currently, discharges from construction, industrial, and municipal activities are regulated under the NPDES program, all of which are described further below.

Similar to that prescribed by the Ocean Plan, under the NPDES permit program described above, SCE complies with a number of environmental permit requirements for SONGS that serve to monitor, document, and mitigate potential impacts from:

- thermal discharge;
- water chemistry alterations;
- turbidity and light transmittance;
- sediment chemistry degradation or characterization changes by solids deposition or redistribution;
- pelagic and benthic habitat quality; and
- radioactivity.

California Coastal Act

The California Coastal Act defines the "coastal zone" and establishes land use control for the zone. The proposed project is largely within the coastal zone and a Coastal Development Permit will be required for any project configuration approved by the California Coastal Commission. The California Coastal Act, section 30233(a), states "The diking, filling, or dredging of open coastal waters, wetlands, estuaries, and lakes shall be permitted in accordance with other applicable provisions of this division, where there is no feasible less environmentally damaging alternative, and where feasible mitigation measures have been provided to minimize adverse environmental effects."

**Local**

The California NPDES program provides for localized control over potential water quality impacts from SONGS through the regulatory oversight of the San Diego RWQCB. The San Diego RWQCB is responsible for NPDES compliance and the management of water resources and quality within the San Onofre HA.

## Existing Air Quality

Attainment Status

*South Coast Air Basin*

The Orange County portion of the SCAB is currently classified as a Federal and State nonattainment area for $O_3$, $PM_{10}$, and $PM_{2.5}$ and a Federal nonattainment area for CO. Orange County is classified as a State attainment area for CO. Specific $O_3$ nonattainment designations are "extreme" for the 1-hour $O_3$ standard and severe-17 for the 8-hour $O_3$ standard. The SCAB currently meets the Federal and State standards for $NO_2$, $SO_2$, and Pb and is classified as an attainment area for these pollutants (EPA 2004d).

On December 17, 2004, the EPA issued the initial designations for the $PM_{2.5}$ standard, and the SCAB is classified as nonattainment. States with nonattainment areas must submit plans by early 2008 that outline how they will meet the $PM_{2.5}$ standards. They are expected to attain clean air as soon as possible and not later than 2010. The EPA can grant one 5-year extension, to 2015, for areas with more severe problems (EPA 2004f).

*San Diego Air Basin*

The SDAB currently meets the Federal standards for all criteria pollutants except $O_3$ ~~and $PM_{2.5}$~~ and meets State standards for all criteria pollutants except $O_3$, $PM_{10}$, and $PM_{2.5}$. The SDAB completed 3 years within the Federal 1-hour $O_3$ standard on November 15, 2001, becoming eligible for redesignation as an attainment area. Formal redesignation by the EPA as an $O_3$ attainment area occurred on July 28, 2003, and a maintenance plan was approved. On April 15, 2004, the EPA issued the initial designations for the 8-hour $O_3$ standard, and the SDAB is classified as "basic" nonattainment. Basic is the least severe of the six degrees of $O_3$ nonattainment. The SDAPCD must submit an air quality plan to the EPA in 2007; the plan must demonstrate how the 8-hour $O_3$ standard will be attained by 2009 (SDAPCD 2004b). The SDAB is currently classified as a State "serious" $O_3$ nonattainment area and a State nonattainment area for $PM_{10}$. The SDAB currently falls under a Federal "maintenance plan" for CO, following a 1998 redesignation as a CO attainment area.

~~On December 17, 2004, the EPA issued the initial designations for the $PM_{2.5}$ standard, and the SDAB is classified as nonattainment. States with nonattainment areas must submit plans by early 2008 that outline how they will meet the $PM_{2.5}$ standards. They are expected to attain clean air as soon as possible and not later than 2010. The EPA~~

~~can grant one 5-year extension, to 2015, for areas with more severe problems (EPA 2004f).~~

Ambient Air Quality Monitoring

As the primary sources of air emissions would be located in the SDAB (only the towing of the barges would occur within the SCAB), it is appropriate to use a monitoring station in the SDAB to characterize the existing air quality in the project area. Ambient air pollutant concentrations in the SDAB are measured at 10 air quality monitoring stations operated by the SDAPCD. The closest SDAPCD air quality monitoring station in the SDAB is the MCB Camp Pendleton monitoring station, located at 21441 West B St., Camp Pendleton, approximately 14 miles (23 km) southeast of the Proposed Project area. The station only monitors $O_3$ and $NO_2$. No other monitoring stations in the SDAB or SCAB are located near enough to the Proposed Project area to be used to characterize other criteria pollutants. Table 4.5-2 summarizes the excesses of standards and the highest pollutant levels recorded at this station for the years 1999 to 2003.

### 4.5.3 Significance Criteria

Criteria to determine the significance of air quality impacts are based on Federal, State, and local air pollution standards and regulations. The SCAQMD has established air pollution thresholds under the CEQA against which a proposed project can be evaluated and which assist lead agencies in determining whether a proposed project would produce significant air quality impacts. The SDAPCD does not have CEQA thresholds, Separate impact criteria have been established for both short-term construction and long-term operations. Impacts on air quality would be considered significant if project emissions, or emissions of any alternative: (1) would exceed thresholds used to determine the significance of proposed emissions for the purpose of the CEQA review, or (2) would cause an increase in ambient pollutant levels above national or State ambient air quality standards. The following summarizes the CEQA thresholds applicable to each affected air jurisdiction.

**South Coast Air Quality Management District**

Due to the short-term nature of the Proposed Project's activities, project emissions that would occur within the SCAB project region would be compared to the following SCAQMD construction emission thresholds (Table 4.5-3): (1) daily emissions of 75 pounds of reactive organic compounds (ROC), 100 pounds of $NO_x$, 150 pounds of

**Impact TRA-ALT-1: Effects on Ground Transportation in the Project Area**

**Activities could create short-term impacts to ground transportation in the project area (Class I)**

The Complete Removal of Conduits Alternative would generate traffic from workers accessing the onshore work site during the 12-month period (Figure 3.3-1). Additionally, large trucks transporting equipment and material would access the onshore area via Surf Beach. Large trucks would also utilize the Surf Beach access road to transport sections of the conduit removed from the nearshore area by the crane. The truck trips and commute trips would not have an adverse effect on LOS at local intersections, street segments, or on I-5. However, truck-related traffic would create traffic safety hazards to existing conditions at Surf Beach. The presence of large, slow-moving trucks in the Surf Beach parking lot would represent a safety hazard for families enjoying the beach environment. The 12-month disposition period would adversely affect the peak summer period for beach use. As discussed in Section 4.4.5.1, it would not be feasible to suspend beach construction activities during the peak summer period in order to avoid traffic impacts on beach users. Therefore, the short-term ground transportation impact during the summer season would be significant and unavoidable (Class I).

**Impact TRA -ALT-2: Effects on Waterborne Navigation Safety**

**Activities could create a short-term hazard to waterborne navigation (Class III)**

The effects on waterborne navigation safety would be the same as with the Proposed Project, except that the duration of the disposition effects would be extended for an additional 8 ~~9~~ months.

Preventative Measure for Impact TRA -ALT-2: Effects on Waterborne Navigation Safety

PM REC-2 would apply to this impact.

**Impact TRA -ALT-3: Effects from Construction Traffic in the Oceanside and Dana Point Harbor Areas**

**Activities could disrupt ground traffic that would delay short-term normal movements (Class III)**

As for the Proposed Project, the slight increase in local traffic to and from Oceanside or Dana Point harbors would not have a significant effect on the local roadway systems

Based on Table 6.8 of the BGI report, and assuming that the final project specifications would include the release of dredged materials ~~sediment from a closed cap dredge bucket~~ as close to the seafloor as possible, it is estimated that the horizontal extent of the sediment plume created by the dredging will range from 10 to 50 feet (3 to 15 m) from point of placement. The prevalent longshore current would carry most of the sediment plume in the direction of the dredged area.

Overall, the sedimentation effects during dredging would be potentially significant (Class II).

Mitigation Measures for Impact GEO-1: Sedimentation Effects

MM WAT-1-a, WAT-1b, WAT-1c, and WAT-1d would apply to this impact.

**Impact GEO-2: Effects on Beaches**

**Removal terminal structures and manhole risers could lead to a loss of material available for beach replenishment or cause pieces of concrete to break off during disposition and move onto the beach from wave action or ocean currents (Class III)**

The oceanographic processes that affect beach width and sand deposition would not be adversely affected as a result of the proposed disposition project. Although there may be a relatively small short-term and minor loss of material available for beach replenishment, middle to long-term effects on the volume of material available for beaches would not be significantly affected by the abandonment of the conduits. Once the conduits have been filled, the abandoned, below-seafloor structures would not affect longshore current velocity or direction, and would have no impact on sand disposition on the beach (Class III). No mitigation is required.

The concrete materials removed from the terminal structures and manhole risers would be substantial in size. Review of the engineering study (BGI 2003) indicates that removal of the terminal structures and manhole risers would not result in a significant amount of smaller pieces of material that would break off as the concrete sections are removed. The methods of removal of the terminal structure and manhole risers, as described in the *Seafloor Debris Removal Plan* (Appendix E) would preclude any significant concrete debris of any significant size being left on the seafloor (Class III). No mitigation is required. There is no realistic potential that the concrete materials removed from the terminal structures or manhole risers would move onto the beach from wave action or ocean currents during periods of storm surge.

### 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:

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.

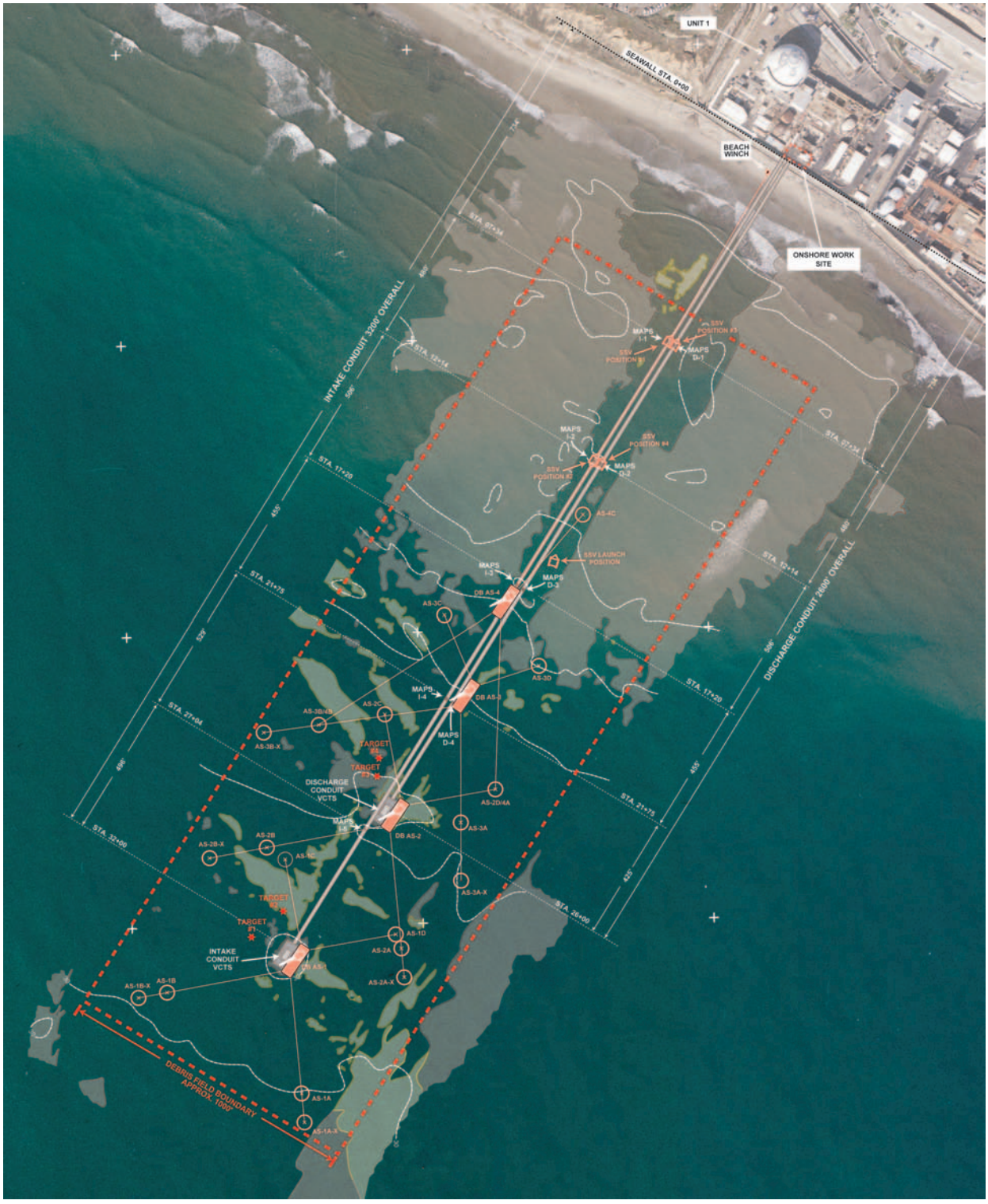
**Impact HAZ-3: Potential Contamination from Previous Nuclear Power Plant Operations**

**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, all effluent releases from the facility were conducted in accordance with NRC requirements and were well below regulatory limits. Long-term monitoring indicates that there have been no impacts to the environment attributable to the facility. Additionally, the NRC has issued no notices of violations asociated with effluent releases from Unit 1 or with the use of the cooling water conduits. ~~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.

The following figure has been added to Appendix D, Anchoring Plan.




**Anchoring Plan**