

3. Environmental Checklist and Analysis

<input type="checkbox"/>	Aesthetics	<input type="checkbox"/>	Agricultural Resources	<input type="checkbox"/>	Air Quality
<input checked="" type="checkbox"/>	Biological Resources	<input type="checkbox"/>	Cultural and Paleontological Resources	<input type="checkbox"/>	Geology and Soils
<input type="checkbox"/>	Greenhouse Gas Emissions	<input checked="" type="checkbox"/>	Hazards and Hazardous Materials	<input checked="" type="checkbox"/>	Hydrology and Water Quality
<input type="checkbox"/>	Land Use and Planning	<input type="checkbox"/>	Mineral Resources	<input type="checkbox"/>	Noise
<input type="checkbox"/>	Population and Housing	<input type="checkbox"/>	Public Services	<input checked="" type="checkbox"/>	Recreation
<input type="checkbox"/>	Transportation/Traffic	<input type="checkbox"/>	Utilities and Service Systems	<input checked="" type="checkbox"/>	Mandatory Findings of Significance

1 **3.2 AGENCY DETERMINATION**

I find that the proposed Project COULD NOT have a significant effect on the environment, and A NEGATIVE DECLARATION will be prepared.

I find that although the proposed Project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the Project have been made that will avoid or reduce any potential significant effects to a less than significant level. A MITIGATED NEGATIVE DECLARATION will be prepared.

I find that the proposed Project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

Signature

Date

Cynthia Herzog, Environmental Scientist
 Division of Environmental Planning and Management
 California State Lands Commission

Printed Name/Title

1 **3.3 ENVIRONMENTAL CHECKLIST**

2

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less than Significant Impact with Mitigation	Less than Significant Impact	No Impact
3.3.1 AESTHETICS. Would the project:				
a) Have a substantial adverse effect on a scenic vista?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a State scenic highway?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

3 **ENVIRONMENTAL SETTING**

4 The Project site is located approximately 3,200 feet offshore from publically accessible
 5 coastal areas that include the beach fronting SONGS, San Onofre State Beach north
 6 and south of the SONGS beach, and coastal bluffs that also are a part of the State
 7 Beach. The beach and bluffs in this area are popular destinations for locals and tourists,
 8 in part for their expansive views of the Pacific Ocean. In addition to the nearby expanse
 9 of beach, publically accessible areas near the site include the San Onofre Bluffs
 10 campgrounds down the coast and trails adjacent to the Trestles Wetland Natural
 11 Preserve up the coast, both of which are part of San Onofre State Beach. Drivers and
 12 passengers on northbound and southbound I-5 also have views of the Project site.
 13 Beyond these areas, public views of the Project are limited because most of the
 14 surrounding land is part of MCB Camp Pendleton, which is off-limits to the public.
 15 Recreational ocean boaters would also have views of the Project site. There are no
 16 residential views of the Project site. Views from the public areas described above are
 17 focused toward the vast expanse of the Pacific Ocean, which is a valued scenic
 18 resource when viewed from these areas.

19
 20 The Project site, which has marker buoys located on the water surface at each of the
 21 POIS sites, is visible to recreational boaters and distantly visible from most of the beach
 22 in the site vicinity. Under existing conditions, the Project site manifests itself as a small

1 patch of water indistinguishable from the surrounding ocean. The POISs for Units 2 and
2 3 are not visible because they are located approximately 8 feet below the water surface
3 at lower low tide.

4
5 **IMPACT DISCUSSION**

6 **a) Have a substantial adverse effect on a scenic vista?**

7 **No Impact.** The Project would have no long-term visual impact because the permanent
8 components would remain underwater and invisible from land and sea. Visible elements
9 during the operational phase would be limited to the presence of crew boats used to
10 provide diver access and equipment delivery to the site during infrequent maintenance.
11 This would have no visual impact because boats are regular features of the visual
12 environment in this area.

13
14 The Project's visual impact during the construction phase would be limited to the
15 presence of tugboats, barges, and crew boats used to stage construction equipment
16 and materials and provide diver access to the site. This would include a crane barge, a
17 barge for tremie grout installation, an LOED delivery barge, and tugboats delivering
18 barges to the site. One or more barges would be anchored at each POIS site for the
19 duration of the respective LOED installation process, or approximately 4 weeks for each
20 location. Construction activity on the POIS would occur underwater and would not be
21 visible from shore. Because boats are regularly visible in the area, the temporary
22 presence of a barge approximately 0.6 mile offshore would not compromise scenic
23 vistas of the surrounding ocean from the beach and bluffs. Therefore, no impact would
24 occur.

25
26 **b) Substantially damage scenic resources, including, but not limited to trees,
27 rock outcroppings, and historic buildings within a State scenic highway?**

28 **No Impact.** I-5 in the Project area is not designated as a scenic highway, but is listed as
29 eligible for designation by the State. The Project would not damage any visual
30 resources, and no impact would occur. The Project-related construction vessel and
31 barges would be temporarily visible from I-5, but this would have no visual impact
32 because boats are frequent features of the visual environment from these viewpoints.

33
34 **c) Substantially degrade the existing visual character or quality of the site and
35 its surroundings?**

36 **No Impact.** See the discussion of Section 3.3.1a above. The temporary presence of
37 barges and tugboats would not degrade the visual character or quality of the site
38 because boats are frequent features of the visual environment and the site represents a

1 small part of the vast expanse of the Pacific Ocean visible from surrounding areas.
2 Therefore, there would be no impact.

3 **d) Create a new source of substantial light or glare, which would adversely**
4 **affect day or nighttime views in the area?**

5 **No Impact.** The Project would not feature any permanent light sources and—because
6 all Project components would be installed underwater—there would be no potential for
7 the Project to create any new source of glare. Project construction would occur during
8 the day, and no nighttime lighting would be required beyond the nautical safety lighting
9 attached to the barge. Therefore, no impact would occur.
10

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less than Significant Impact with Mitigation	Less than Significant Impact	No Impact
3.3.2 AGRICULTURAL AND FORESTRY RESOURCES. In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the State's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board.				
Would the project:				
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Result in the loss of forest land or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Involve other changes in the existing environment, which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less than Significant Impact with Mitigation	Less than Significant Impact	No Impact
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1

2 **ENVIRONMENTAL SETTING**

3 The Project is located offshore in an area that is not used for aquatic agriculture. No
 4 onshore agricultural or timber uses are located in the Project vicinity.

5

6 **DISCUSSION**

7 **a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide**
 8 **Importance (Farmland), as shown on the maps prepared pursuant to the**
 9 **Farmland Mapping and Monitoring Program of the California Resources**
 10 **Agency, to non-agricultural use?**

11 **No Impact.** The Project is located offshore in an area that is not used for aquatic
 12 agriculture. No onshore agricultural uses are located in the Project vicinity. Onshore
 13 areas near the Project are designated Urban and Built-Up Land and Other Land in the
 14 California Department of Conservation’s Farmland Mapping and Monitoring Program
 15 map. Therefore, there would be no impact.

16 **b) Conflict with existing zoning for agricultural use, or a Williamson Act**
 17 **contract?**

18 **No Impact.** No agriculturally zoned land or Williamson Act contracted land is located in
 19 the vicinity of the site; therefore, there would be no impact.

20 **c) Conflict with existing zoning for, or cause rezoning of, forest land (as**
 21 **defined in Public Resources Code section 12220[g]), timberland (as defined**
 22 **by Public Resources Code section 4526), or timberland zoned Timberland**
 23 **Production (as defined by Government Code section 51104[g])?**

24 **No Impact.** No forest lands or timberlands are located in the vicinity of the site;
 25 therefore, there would be no impact.

26

27 **d) Result in the loss of forest land or conversion of forest land to non-forest**
 28 **use?**

29 **No Impact.** No forest lands are located in the vicinity of the site; therefore, there would
 30 be no impact.

1
2 **e) Involve other changes in the existing environment which, due to their**
3 **location or nature, could result in conversion of Farmland to non-**
4 **agricultural use or conversion of forest land to non-forest use?**

5 **No Impact.** As described in Section 3.3.2a, land surrounding the proposed Project is
6 not in agricultural production. Farmland nearest to the Project includes Prime Farmland
7 and Farmland of Statewide Importance located along Christianitos Creek, approximately
8 2 miles northwest of the site on land within MCB Camp Pendleton. This Farmland is not
9 in active production, is used by MCB Camp Pendleton for training and operations, and
10 is on the opposite side of I-5, which would prevent any construction-related traffic or
11 other Project activities from having any effect on agricultural use of this land. Therefore,
12 there would be no impact.

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less than Significant Impact with Mitigation	Less than Significant Impact	No Impact
3.3.3 AIR QUALITY.				
Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied on to make the following determinations.				
Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or State ambient air quality standard (including releasing emissions, which exceed quantitative thresholds for ozone precursors)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Create objectionable odors affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

1 ENVIRONMENTAL SETTING

2 The Project is located in the northwest corner of San Diego County (County) just south
3 of the city of San Clemente. This Project site is part of the San Diego Air Basin (SDAB).
4 An air basin's boundary is typically established to include areas with similar natural
5 parameters (e.g., climate, meteorology, and topography). Air quality within a region is
6 affected by the rate and location of pollutant emissions and how those pollutant
7 emissions are influenced by natural parameters. Atmospheric conditions such as wind
8 speed, wind direction, and air temperature gradients, along with local topography, can
9 help disperse pollutants or stagnant pollutant emissions. Therefore, these factors
10 provide the link between air pollutant emissions and air quality experienced by the
11 inhabitants of a region. This section provides background discussions of the natural
12 factors (e.g., climate, meteorology, topography) and air quality pollutants applicable to
13 the SDAB.
14

1 The California Air Resources Board (CARB) and U.S. Environmental Protection Agency
2 (EPA) currently focus on the following air pollutants as indicators of ambient air quality:
3 ozone, carbon monoxide (CO), nitrogen dioxide (NO₂), sulfur dioxide (SO₂), particulate
4 matter (PM), and lead. Because these are the most prevalent air pollutants known to be
5 deleterious to human health and extensive health-effects criteria documents are
6 available, they are commonly referred to as “criteria air pollutants.”

7
8 EPA has established primary and secondary national ambient air quality standards
9 (NAAQS) for the following criteria air pollutants: ozone, CO, NO₂, SO₂, respirable
10 particulate matter (PM₁₀), fine particulate matter (PM_{2.5}), and lead. The primary
11 standards protect the public health of the most sensitive populations (e.g., children,
12 elderly, and asthmatics) and the secondary standards protect public welfare (e.g.,
13 visibility, vegetation damage). In addition to the NAAQS, CARB has established
14 California ambient air quality standards (CAAQS) for sulfates, hydrogen sulfide, vinyl
15 chloride, visibility-reducing particulate matter, and the above-mentioned criteria air
16 pollutants. In most cases the CAAQS are more stringent than the NAAQS. Differences
17 in the standards are generally explained by the health-effects studies considered during
18 the standard-setting process and the interpretation of the studies. In addition, the
19 CAAQS incorporate an additional margin of safety to protect sensitive receptors,
20 particularly children and infants (CARB 2009a).

21
22 In the County, SDAPCD is the agency responsible for protecting the public health and
23 welfare through the administration of federal and State air quality laws and policies.
24 Included in SDAPCD’s tasks are the monitoring of air pollution, the preparation of the
25 County’s portion of the State Implementation Plan (SIP), and the promulgation of rules
26 and regulations. The SIP includes strategies and tactics to be used to attain and
27 maintain acceptable air quality in the County; this list of strategies is called the San
28 Diego Regional Air Quality Strategy (RAQS). The rules and regulations include
29 procedures and requirements to control the emission of pollutants and prevent
30 significant adverse impacts.

31 32 **SIGNIFICANCE CRITERIA**

33 The criteria for determining the significance of impacts for this analysis are based on the
34 environmental checklist in Appendix G of the State CEQA Guidelines. The Project
35 would result in a significant impact on air quality if implementation of the Project would:

- 36 • Conflict with or obstruct implementation of the applicable air quality plan,
- 37 • Violate any air quality standard or contribute substantially to an existing or
38 projected air quality violation,
- 39 • Result in a cumulatively considerable net increase of any criteria pollutant for
40 which the project region is nonattainment under an applicable NAAQS or CAAQS

- 1 (including releasing emissions that exceed quantitative thresholds for ozone
2 precursors),
- 3 • Expose sensitive receptors to substantial pollutant concentrations, or
 - 4 • Create objectionable odors affected a substantial number of people.

5

6 **THRESHOLDS OF SIGNIFICANCE**

7

8 As stated in Appendix G, the significance thresholds established by the applicable air
9 quality management district may be relied on to make the above determinations.
10 SDAPCD has not established screening level thresholds of significance for regional
11 pollutant emissions from development projects. For the Project, the lead agency, CSLC,
12 recommended that the Santa Barbara County Air Pollution Control District's
13 (SBCAPCD) thresholds of significance be used to evaluate the Project's air quality
14 emissions. Thus, a comparison was made between the most accurate estimate of
15 Project emissions and SBCAPCD's thresholds of significance. Pursuant to the guidance
16 of CSLC, the Project's air emissions are evaluated using SBCAPCD's Environmental
17 Review Guidelines and Scope and Content of Air Quality Section Guidelines
18 (SBCAPCD 2011). According to SBAPCD's Environmental Review Guidelines, an air
19 quality impact is considered significant if implementation of the Project would result in
20 operational emissions that exceed:

- 21 • 240 lb/day of Reactive Organic Compounds (ROC),
- 22 • 240 lb/day of nitrogen oxides (NO_x),
- 23 • 80 lb/day of PM₁₀,
- 24 • 25 lb/day of ROC from motor vehicle trips only,
- 25 • 25 lb/day of NO_x from motor vehicle trips only,
- 26 • any CAAQS or NAAQS,
- 27 • the SBCAPCD's health risk public notification threshold of 10 excess cancer
28 cases in a million for cancer risk and a Hazard Index of more than 1.0 for non-
29 cancer risk.

30

31 SBCAPCD does not currently have quantitative thresholds of significance in place for
32 short-term or construction emissions; however, SBCAPCD uses 25 tons per year for
33 ROC or NO_x as a guideline for determining the significance of construction impacts
34 (SBCAPCD 2011).

1 **ANALYSIS METHODOLOGY**

2 Short-term construction-generated emissions of criteria air pollutants and ozone
3 precursors were assessed in accordance with methods recommended by SBCAPCD.
4 Because SBCAPCD thresholds of significance are used to determine significance,
5 modeling was conducted consistent with guidance from SBCAPCD (2011). Construction
6 activities occurring on land, such as assembling the LOED or construction activities that
7 would involve typical construction equipment (e.g., generator, loader, mixer), were
8 quantified using URBEMIS2007 Version 9.2.4 (Rimpo and Associates 2008).

9
10 Construction information, such as construction schedule, duration of activities, and types
11 of equipment to be used, was provided by the Applicant and is based on reasonable
12 assumptions and/or default assumptions contained in URBEMIS2007, which were used
13 to quantify construction emissions. URBEMIS also allows the user to select the
14 geographical area closest to the Project where construction emissions would occur in
15 order to be as accurate as possible to the actual air basins in which the Project is located.

16
17 Because URBEMIS does not include SDAB or San Diego County, this analysis uses the
18 next closest air district, which is the South Coast Air Quality Management District
19 (SCAQMD). SCAQMD's jurisdiction (in Orange County) is just three miles north of the
20 Project site. Therefore, SCAQMD provides a reasonable surrogate to model
21 construction emissions. The modeling outputs and assumptions are provided in
22 Appendix A.

23
24 In addition to construction equipment-related activities, the Project would also involve
25 transport of the LOED and other construction materials to the Project site (i.e., POISs at
26 Units 2 and 3). Transport of construction materials to the Project site would be
27 performed using barges and tugboats. For construction activities for each LOED (i.e.,
28 Units 2 and 3), tugboats would be used to transport the LOED, batch plant, and other
29 construction materials to the Project site. It is assumed that one tugboat would be used
30 for each of the three barges required for construction activities. Barges and tugboats
31 were assumed to anchor once reaching the Project site and would not idle throughout
32 construction activities.

33
34 Emission factors for barge material delivery were obtained from the EPA's Analysis of
35 Commercial Marine Vessels Emissions and Fuel Consumption Data report (EPA 2000).
36 Assumptions to develop emission factors using the EPA's report were obtained through
37 communications with the Applicant. Assumptions used represent a conservative
38 estimate of barge operations. Potential trip distances for barge delivery were also
39 provided by the Applicant.

40

1 **DISCUSSION**

2 **a) Conflict with or obstruct implementation of the applicable air quality plan?**

3 **Less than Significant Impact.** Although SBCAPCD thresholds are used to determine
4 significance of the Project's emissions, as discussed in Section 3.3.4(b), the Project is
5 located in San Diego County. Therefore, the applicable air quality plan would be
6 developed by the SDAPCD. San Diego County is currently designated as a
7 nonattainment area for State and federal 8-hour ozone standards and for the State PM₁₀
8 and PM_{2.5} standards. The County is attainment or unclassified for all other State and
9 federal standards. Therefore, SDAPCD has prepared the RAQS Revision 2009 to
10 address control measures to reduce ozone precursors and help the region achieve
11 attainment of the State 8-hour ozone standard and demonstrate a sustained 5 percent
12 average annual reduction in ozone precursor emissions (SDACPD 2009). With respect
13 to the federal standard, SDAPCD has prepared the Eight-Hour Ozone Attainment Plan
14 for San Diego County to achieve attainment of the federal 8-hour standard (SDAPCD
15 2007).

16
17 SDAPCD's ozone attainment plans focus on reducing ozone precursor from stationary
18 and areawide sources. The main sources of ozone precursors include industrial facilities
19 (e.g., factories, power plants, manufacturing facilities), gas stations, dry cleaners, and
20 residential water heaters and furnaces, among others. The Project would include short-
21 term construction emissions that would include ozone precursors; however, long-term
22 operational activities would require infrequent maintenance activities that would
23 generate nominal emissions. Therefore, the Project would not generate stationary and
24 areawide emissions that would be anticipated to conflict with or obstruct implementation
25 of SDAPCD's air quality plans.

26
27 In addition to reducing the emission sources described above, the region's
28 transportation plan must conform with or demonstrate that it does not hinder the
29 region's chances of attaining the standards. Proposed projects that result in an increase
30 in population or employment growth beyond that identified in the local plans may result
31 in an increase in vehicle miles traveled (VMT), leading to an increase in mobile source
32 emissions, which may conflict with SDAPCD's air quality planning efforts. The Project
33 would primarily consist of short-term and temporary construction activities. Long-term
34 operational emissions would involve nominal VMT and would not increase the
35 population of the region.

36
37 Thus, implementation of the Project would not conflict with or obstruct implementation of
38 the applicable air quality plan. This impact is considered less than significant.
39

b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?

Less than Significant Impact. Construction emissions are described as “short-term” or temporary in duration and have the potential to represent a significant impact with respect to air quality. Fugitive dust emissions are potentially a substantial source of air quality emissions for projects that involve large earthmoving or grading operations; however, the Project does not include any soil disturbance activities. Therefore, fugitive dust is not a concern for the Project. Rather, a majority of the Project’s construction-related emissions would occur from heavy-duty construction equipment and tugboat exhaust emissions. Construction exhaust would emit temporary ROC, NO_x, PM₁₀, and PM_{2.5} emissions during assembly of the LOED, transport of construction materials to the Project site, and finally installation of the LOED. To a lesser extent, construction activities would also require construction worker trips to the Project site. Table 3.3-1 presents the proposed Project’s annual construction emissions.

**Table 3.3-1
Summary of Construction Emissions for the Large Organism Exclusion Device**

Construction Emissions Scenario	Pollutants (tons/year)			
	ROC	NO _x	PM ₁₀	PM _{2.5}
Annual Construction Emissions	0.07	2.07	0.06	0.06
Applicable Threshold (tons/year)	25	25	-	-

Notes: ROC = reactive organic compounds; NO_x = oxides of nitrogen; PM₁₀ = particulate matter with aerodynamic diameter less than 10 microns; PM_{2.5} = particulate matter with aerodynamic diameter less than 2.5 microns; LOED = large organism exclusion device.

Source: AECOM 2012

As shown above in Table 3.3-1, the annual construction emissions would not exceed any of the SBAPCD’s thresholds of significance.

Project operations would only require minor maintenance activities as needed to remove marine biofouling (approximately every 18 months). Maintenance would likely involve two divers and one compressor for a period of up to 3 days. However, vehicle trips would occur less than once per year and are not anticipated to generate substantial or significant air quality emissions. Therefore, long-term operational and maintenance activities would not likely generate emissions that exceed SBCAPCD’s daily thresholds of significance. Thus, this impact would be less than significant.

c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or State ambient air quality standard (including releasing emissions, which exceed quantitative thresholds for ozone precursors)?

1 **Less than Significant Impact.** As discussed in Analysis Methodology, the Project
2 would result in infrequent and nominal long-term operational ozone precursors (ROC
3 and NO_x) and PM₁₀ emissions that are highly unlikely to result in or contribute
4 substantially to an air quality violation. In addition, the temporary and short-term
5 construction emissions as presented in Table 3.3-1 would not exceed the SBCAPCD
6 thresholds of significance. Therefore, pursuant to the SBCAPCD guidance, the Project
7 would not exceed the long-term thresholds of significance and would not result in a
8 cumulatively considerable contribution to regional air quality. Following construction of
9 the Project, temporary maintenance of the LOED would be required but would involve
10 minor air compressor usage for divers approximately every 18 months and would
11 unlikely exceed the daily threshold. Thus, this impact would be considered less than
12 significant.

13

14 **d) Expose sensitive receptors to substantial pollutant concentrations?**

15

16 **Less than Significant Impact.** The Project would be located approximately 3,200 feet
17 offshore from SONGS. Therefore, no sensitive land uses are located within proximity of
18 the LOED installation and construction site. The only receptors in the Project vicinity
19 would include the construction workers. A portion of construction activities (i.e.,
20 assembly of LOED) would occur at the Port of Los Angeles. However, assembly of the
21 LOED would last approximately 1 week and would not be an equipment-intensive
22 process as shown in Appendix A's "Landside LOED Assembly." Therefore, construction
23 activities occurring at any port would be temporary, short-term, and likely to result in
24 only nominal emissions. Furthermore, total construction activities for each LOED would
25 last approximately 6 weeks for a total of 12 weeks of actual construction activities.

26

27 The CARB identified particulate exhaust emissions from diesel-fueled engines (diesel
28 PM) as a toxic air contaminant in 1998. Diesel PM emissions would be generated from
29 heavy-duty construction equipment at the selected port and at the Project site. In
30 addition, diesel PM emissions would be generated by the tugboats and auxiliary
31 engines used to transport construction materials. The dose to which the receptors are
32 exposed is the primary factor used to determine health risk. Dose is a function of the
33 concentration of a substance or substances in the environment and the extent of
34 exposure that person has with the substance. Dose is positively correlated with time,
35 meaning that a longer exposure period would result in a higher exposure level for the
36 maximally exposed individual. Thus, the risks estimated for a maximally exposed
37 individual are higher if a fixed exposure occurs over a longer period of time.

38

39 According to the Office of Environmental Health Hazard Assessment (OEHHA), health
40 risk assessments to determine the exposure of sensitive receptors to toxic emissions
41 should be based on a 70-year exposure period; however, such assessments should be
42 limited to the period/duration of activities associated with the Project (Salinas, pers.

1 comm., 2004). Thus, the duration of the proposed construction activities would
2 constitute less than 0.5 percent of the total exposure period. Furthermore, the large
3 buffer distance (i.e., at least 3,200 feet) from any potential receptors, dispersive nature
4 of diesel PM, and highly dispersive nature of marine meteorology would ensure that the
5 Project's construction activities would not expose sensitive receptors to substantial
6 diesel PM concentrations. Lastly, the long-term operations associated with the Project
7 would occur less than once a year and would not require intensive use of heavy-duty
8 construction equipment; therefore, the Project is not anticipated to cause any toxic air
9 contaminant (TAC) emission impacts. As a result, exposure of sensitive receptors to
10 substantial toxic air emissions is considered less than significant.

11
12 **e) Create objectionable odors affecting a substantial number of people?**

13
14 **Less than Significant Impact.** The occurrence and severity of odor impacts depend on
15 numerous factors, including the nature, frequency, and intensity of the source; wind
16 speed and direction; and the presence of sensitive receptors. Although offensive odors
17 rarely cause any physical harm, they still can be very unpleasant, leading to
18 considerable distress and often generating citizen complaints to local governments and
19 regulatory agencies. Odor impacts are typically associated with industrial facilities such
20 as wastewater treatment plants, manufacturing facilities, landfills, and rendering plants.
21 However, under certain conditions diesel exhaust emissions could cause an odor
22 impact to sensitive receptors. Typically, this occurs when sensitive receptors are located
23 nearby and construction activities generate continuous emissions of diesel exhaust
24 without intermissions. However, due to the distance (i.e., at least 3,200 feet) between
25 proposed construction activities and potential sensitive receptors and the short-term and
26 intermittent nature of construction activities, it is not anticipated that the Project's
27 construction emissions would generate a significant odor impact. In addition, as
28 discussed above, operational maintenance activities would be low intensity and occur
29 infrequently. Thus, the Project would not generate a significant odor impact from
30 construction or operational activities. This impact would be considered less than
31 significant.

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less than Significant Impact with Mitigation	Less than Significant Impact	No Impact
3.3.4 BIOLOGICAL RESOURCES.				
Would the project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or State habitat conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

1 **ENVIRONMENTAL SETTING**

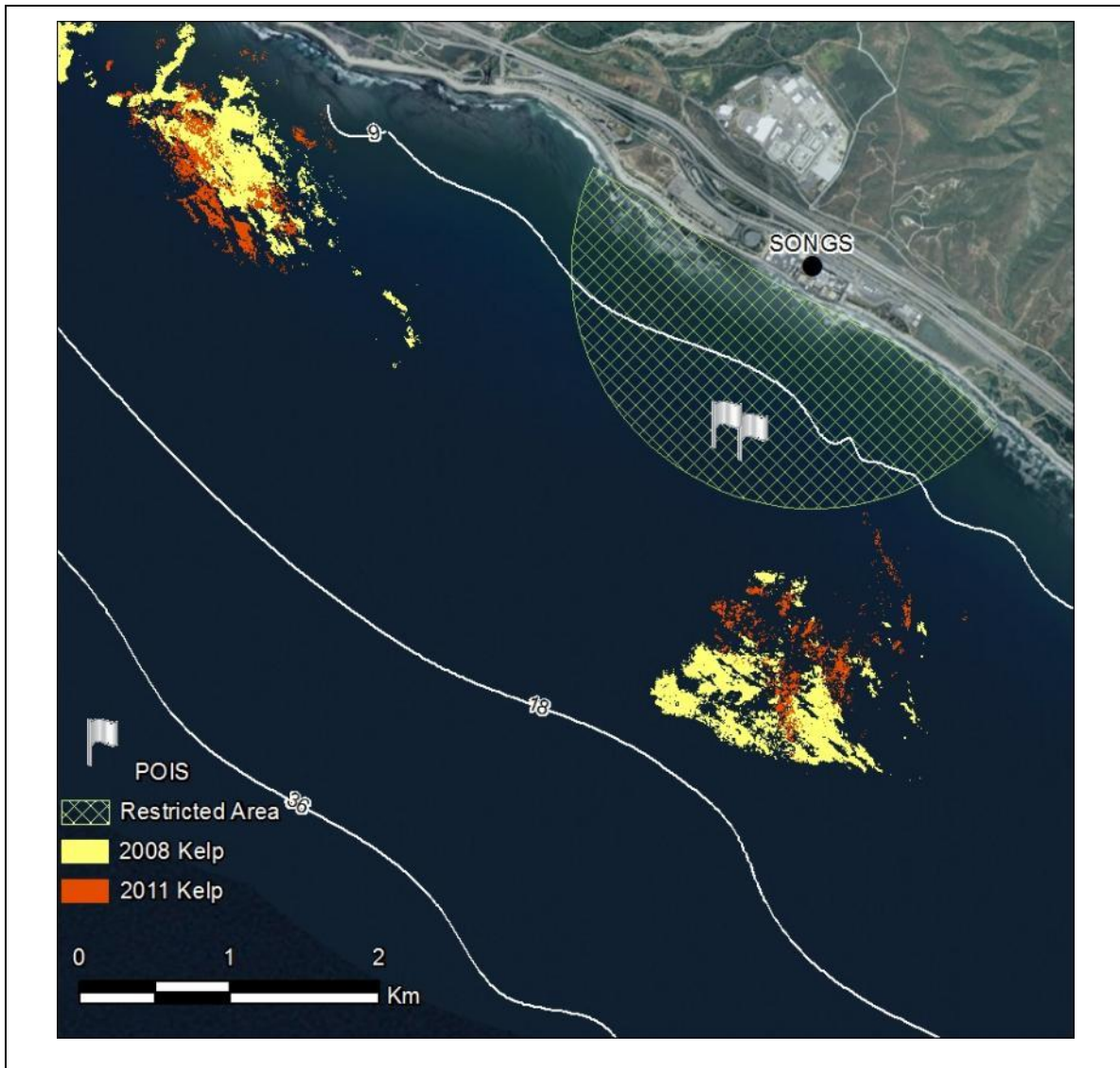
2

3 The SONGS annual environmental monitoring program, supplemented by focused
 4 short-term studies conducted by SONGS and others, provides a substantial volume of

3. Environmental Checklist and Analysis

1 baseline environmental information on the oceanography, benthic biota, and general
2 marine ecology of the area relevant to the LOED installation. Additional information
3 available from commercial and recreational fishing databases supplements the
4 monitoring data and is documented in Appendix B unless otherwise noted.

5
6 The SONGS Units 2 and 3 POISs are 642 feet apart and positioned on the seafloor
7 southeast of San Mateo Point nominally along the 30-foot mean lower-low water (MLLW)
8 isobaths. The intakes are approximately 2,300 feet northwest of the San Onofre Kelp
9 (SOK) and 7,300 feet southeast of the San Mateo Point Kelp (Figure 3.3.4-1).



10
11 **Figure 3.3.4-1. POIS and Restricted Area Relative to Areal Coverage of San Onofre Kelp**
12 **and San Mateo Point Kelp (Isobaths are depicted in meters)**
13

1 During years with average to above-average kelp canopy in the SOK, a portion of the
2 kelp bed extends northwest of the POISs, essentially placing the discharge diffusers in
3 the middle of a discontinuous SOK. Each kelp forest is anchored to rock reefs that vary
4 from boulders to cobblestone reefs. Soft, sandy-bottom habitat is interspersed among
5 the reefs (North and Jones 1991). Sedimentary shifts are common, likely predicated on
6 the wave direction and intensity, resulting in hard, rocky substrates alternating between
7 being exposed and buried by sand.

8
9 The seafloor slopes up to a cobblestone beach abutted by the SONGS seawall. Greater
10 extents of sandy beach are found at San Onofre State Beach to the northwest and
11 offshore MCB Camp Pendleton to the southeast. The continental shelf is narrow along
12 this portion of the California coastline with 2,000-foot depths available less than 9 miles
13 offshore. This brings both soft- and hard-bottom, deep water habitat closer to shore than
14 in other areas of southern California. Both POISs lie within a restricted access zone
15 extending in a 1-nautical-mile arc centered on SONGS. No vessel transit, anchoring,
16 fishing, diving, etc. is allowed in the area without prior authorization from the U.S. Coast
17 Guard, San Diego.

18
19 Fishes offshore SONGS are representative of the diverse habitats available in the
20 surrounding environment. Since 2000, the dominant species include queenfish
21 (*Seriphus politus*), white croaker (*Genyonemus lineatus*), northern anchovy (*Engraulis*
22 *mordax*), Pacific sardine (*Sardinops sagax*), slough anchovy (*Anchoa delicatissima*),
23 walleye surfperch (*Hyperprosopon argenteum*), salema (*Xenistius californiensis*), and
24 yellowfin croaker (*Umbrina roncador*).

25
26 Less information is readily available on invertebrates, but demersal (bottom and near
27 bottom) trawl surveys are routinely dominated by blackspotted bay shrimp (*Crangon*
28 *nigromaculata*). California spiny lobsters (*Panulirus interruptus*) have also been
29 commonly taken. Subtidal surveys in the nearby kelp forests routinely record three
30 species of sea urchin common to the shallow waters of the Southern California Bight:
31 red (*Strongylocentrotus franciscanus*), purple (*S. purpuratus*), and white (*Lytechinus*
32 *anamesus*). Bat star (*Patiria miniata*) and giant-spined sea star (*Pisaster giganteus*) are
33 also commonly observed. As noted previously, giant kelp and other macroalgae are
34 common in the area surrounding the SONGS POISs.

35
36 Seagrasses (*Phyllospadix* sp.) grow near the Unit 1 intake and outfall, in addition to a
37 small patch near the Unit 3 POIS.

38
39 Commercial divers with video cameras mounted on their helmets, in communication
40 with a shipboard biologist, collected sediments and conducted transect surveys on 24–
41 25 July 2012 in the immediate vicinity of the POISs where impacts, if any, are most
42 likely to occur. Few fishes were observed during these dives. Invertebrates were more

1 commonly observed, including three California spiny lobsters, one sheep crab
2 (*Loxorhynchus grandis*), and several sand dollars (*Dendraster* sp.). Habitat was
3 dominated by soft-bottom sediments with occasional rocky outcroppings distributed over
4 the stone blanket surrounding each POIS. These rocky outcroppings were often
5 inhabited with colonial invertebrates, algae, seagrass, California spiny lobsters, or some
6 combination thereof. Biogenic habitat (e.g., giant kelp, seagrass, etc.) was present in
7 the area, but in very low densities with no clear presence of associated macrofauna
8 such as fish (Quast 1968a, b).

9
10 Giant kelp stands in the area were typically populated by less than 5 stipes, while only
11 one small area of seagrass was observed. The area extent of each was not measured
12 during the dive, but estimations derived from the video suggest less than 11 square feet
13 in each observance. Significantly larger expanses of both biogenic habitat occur in
14 proximity, but outside of the expected area affected by LOED installation and operation.

15
16 Marine mammals have been documented during quarterly monitoring surveys
17 conducted offshore of SONGS, in addition to the cataloging of all marine mammals and
18 sea turtles entrapped into the cooling water system. Monitoring surveys and entrapment
19 records both commonly record California sea lions (*Zalophus californianus*
20 *californianus*) from February through June, with substantially fewer sea lions observed
21 during the remaining months of the year. Harbor seals (*Phoca vitulina richardsi*) are also
22 entrapped most commonly during the spring months. No other marine mammals are
23 entrapped but various dolphins and whales are observed during surveys offshore
24 SONGS in varying frequencies, most commonly during winter. Common dolphin
25 (*Delphinus delphis*) is the most commonly observed marine mammal offshore of
26 SONGS. Gray whales (*Eschrichtius robustus*) and blue whales (*Balaenoptera*
27 *musculus*) have been observed in the last 4 years. Four sea turtle species could occur
28 in the waters offshore SONGS, including loggerhead (*Caretta caretta*), green (*Chelonia*
29 *mydas*), leatherback (*Dermochelys coriacea*), and Olive ridley (*Lepidochelys olivacea*)
30 sea turtles. All four species have been infrequently entrained at SONGS, but no clear
31 seasonal pattern is evident.

32 33 **Special-Status Species**

34
35 A complete Essential Fish Habitat Assessment reviewing federally managed, fished
36 species is provided in Chapter 5 (MBC 2012) of Appendix B .

37
38 Fishes – Many rockfish species are considered depleted by federal and State agencies,
39 with some receiving area closures (e.g., cowcod [*Sebastes levis*]). Preferred depth
40 considerations generally preclude cowcod from occurring in the POIS area, but
41 bocaccio (*S. paucispinis*) young of the year are commonly taken during impingement
42 surveys at SONGS. Tidewater goby (*Eucyclogobius newberryi*) is federally listed as

1 endangered and historically occurred in the Santa Margarita River, but the species is
2 now considered extirpated from the area (Moyle 2002). Tidewater goby has not been
3 taken during surveys at SONGS in the last decade. Various salmon species that are
4 presently federally listed as threatened or endangered have occurred in the SONGS
5 area, but their occurrence has been rare and none have been reported since 2006.
6 Garibaldi (*Hypsypops rubicundus*) is a nest-building marine fish that also serves as the
7 California State marine fish and is protected from all harvest. Common in the area
8 offshore of SONGS, no individuals or nests were observed near the POISs during the
9 diver surveys. Harvest of giant sea bass (*Stereolepis gigas*) is prohibited with the
10 exception of incidental take by gill net fisheries operating outside of State waters.
11 Commonly occurring during SONGS' fish return surveys, its populations are increasing
12 in the area, but none were observed near the POISs during the diver surveys.

13
14 Blue whale – The blue whale is a federally listed endangered species with populations
15 reduced by historic commercial whaling. Circumglobal in distribution, blue whales
16 commonly occur well offshore of the California coast, but come inshore when conditions
17 warrant, typically in pursuit of prey. An individual was recently observed on 15 August
18 2011 offshore of SONGS during an environmental monitoring survey. Occurrence of this
19 species in the Project area is nonetheless uncommon.

20
21 Southern Sea Otter – The southern sea otter (*Enhydra lutris nereis*) is a federally
22 threatened species that is rare south of Point Conception. In January 2012, an
23 individual was observed offshore of SONGS during an environmental monitoring survey.
24 Hunted to near extinction in prior centuries, southern sea otter populations are currently
25 expanding with several sightings in Southern California since fall 2011. Due to the lack
26 of foraging habitat, occurrence of this species in the Project area is uncommon.

27
28 Loggerhead sea turtle – The loggerhead sea turtle is federally listed as threatened due
29 to: commercial harvest of eggs, subadults and adults, predation, lack of comprehensive
30 and consistent protective regulations, and incidental take in fisheries (Conant et al.
31 2009). No clear seasonal pattern has been demonstrated in their occurrence near the
32 Project area, likely due to their small population size.

33
34 Green sea turtle – federally listed as endangered, the green sea turtle occurs
35 throughout the world in tropical and subtropical waters. Reasons for this decline include
36 harvesting of eggs, juveniles and adults, incidental capture by fisheries, loss of habitat,
37 and disease. In the eastern North Pacific, green turtles have been sighted from Baja
38 California to southern Alaska, but most commonly occur from San Diego and south
39 (NMFS 2011). They rarely have been observed in the open ocean. Historically, green
40 sea turtles have been the most commonly entrapped turtle species at SONGS.

41

1 Leatherback turtle – The leatherback turtle is listed as endangered throughout its range
2 (NMFS 2011). Reportedly the largest of the marine turtles with the most extensive range
3 of any living reptile, leatherbacks have been reported circumglobally from latitude 71°N
4 to 47°S in the pelagic Pacific and in all other major pelagic oceans. Their lives are spent
5 entirely in pelagic waters, foraging in temperate waters except when they return to
6 tropical beaches to nest. They are highly migratory, and exploit convergence zones and
7 upwelling regions in the open ocean, along continental margins, and in archipelagic
8 waters. Leatherbacks feed on cnidarians (siphonophores and jellyfishes) and tunicates
9 (salps and pyrosomas). Aerial surveys conducted from 1999–2001 recorded
10 leatherbacks foraging off central California in late summer and fall, coinciding with warm
11 water temperatures and reduced upwelling. Leatherbacks have been commonly
12 observed off Point Reyes, south of Point Arena, in the Gulf of the Farallones, and in
13 Monterey Bay, all considered to be “upwelling shadows,” where prey organisms were
14 retained in the upper water column due to relaxation of upwelling. No leatherback sea
15 turtles have been entrapped at SONGS since 2006.

16
17 Olive ridley sea turtle – Olive ridley sea turtles are listed as threatened, although
18 breeding populations along the Pacific coast of Mexico are presently listed as
19 endangered (NMFS 2011). Today, they are distributed globally in tropical and
20 subtropical regions of the Atlantic, Pacific, and Indian Oceans. Southern California was
21 considered the normal northern range limit in the eastern Pacific, although some olive
22 ridley sea turtles have ventured as far north as the Gulf of Alaska. Current information
23 for the eastern Pacific reports that nesting occurs along beaches in Mexico and Central
24 America, with a few turtles nesting as far north as southern Baja California. Numbers of
25 nesting females increased in Mexico, potentially due to heightened nest and egg
26 protection efforts. However, in Central America, allowable harvesting, poaching,
27 predation, disease, and fisheries interactions have resulted in declines. One olive ridley
28 sea turtle was entrapped at SONGS in 2009.

29
30 **DISCUSSION**

31
32 **a) Have a substantial adverse effect, either directly or through habitat**
33 **modifications, on any species identified as a candidate, sensitive, or special**
34 **status species in local or regional plans, policies, or regulations, or by the**
35 **California Department of Fish and Game or U.S. Fish and Wildlife Service?**

36
37 California sea lions are the most common marine mammal species expected to occur in
38 the area whose movements may be temporarily altered during installation of the
39 LOEDs. Listed species that are most likely to occur are limited to sea turtles and
40 whales, including the blue whale. Potential temporary impacts include inadvertent
41 vessel collision with listed species or acoustic effects during the LOED installation
42 process. However, sound levels from the surface vessels are not anticipated to exceed

1 thresholds developed by the NMFS (180 decibels root mean square [180 dBRMS] injury
2 threshold for cetaceans and 190 dBRMS for pinnipeds).

3
4 A marine mammal monitoring and protection plan (Appendix C) has been developed to
5 ensure the protection of listed species during the transit, installation, and operation of
6 the LOEDs and construction vessels. No listed fishes, invertebrates, or birds are
7 expected to be adversely impacted by the Project. Operation of the LOEDs would not
8 result in negative impacts to listed species. Rather, the LOEDs are expected to result in
9 greater protection for marine mammals and sea turtles.

10
11 **Less than Significant Impact with Mitigation.** A less than significant impact with
12 mitigation is expected for those protected species that could occur offshore during
13 construction and operation of the Project. Although the operation of the LOEDs would
14 offer a net benefit to marine resources through a reduction of marine species take, the
15 following mitigation measure (MM) would avoid significant impacts to biological
16 resources due to construction and installation activities:

17
18 **MM BIO-1: Marine Mammal Monitoring and Protection Plan (MMMPP).** The
19 Contractor will execute the MMMPP to ensure the protection of marine mammals
20 likely to occur in the area during vessel transit to and from the Project site as well
21 as during installation of the Large Organism Exclusion Devices (LOEDs). Any
22 changes to the MMMPP shall be submitted to the CSLC staff for approval at least
23 2 weeks before Project mobilization. Specific measures in the MMMPP include:

- 24
- 25 • A training session shall be conducted by a National Marine Fisheries Service
26 (NMFS)-approved marine mammal monitor with all vessel crews to review
27 the purpose and need for this MMMPP.
 - 28 • All crews shall be notified of the need to evade, to the extent safely possible,
29 crossing the path of migrating whales.
 - 30 • Vessels shall maintain a distance of no closer than 1,000 feet from migrating
31 whales during transits to and from the Project site.
 - 32 • In the event a whale approaches to within 1,000 feet of the vessel in a
33 manner outside of the vessel captain's control, all forward propulsion should
34 be stopped, if safe to do so, until the animal has moved away.
 - 35 • In the event a whale strike occurs, the vessel captain must notify the U.S.
36 Coast Guard immediately and provide information on a "Injured Marine
37 Mammal and Ship Strike Report log." Subsequent notifications must be
38 made to NMFS and Southern California Edison (SCE).

39 The NMFS-approved marine mammal monitor shall observe for the presence of
40 marine mammals within the Project area. The monitor shall notify the on-site
41 construction foreman and initiate a cease-work order in the event a marine

1 mammal approaches within 200 feet of the Primary Offshore Intake Structure
2 (POIS) where the installations are underway. Marine mammals that are seaward
3 of the construction barge or that may surface near the barge to investigate shall
4 be closely observed. The monitors shall have the discretion to continue
5 operations if he/she determines that the mammal is headed away from the activity
6 zone. Mammals attempting to haul out on the barge or on other equipment shall
7 be chased away using approved methods from the NMFS and subject to NMFS
8 approval. All sightings shall be documented in a monitor logbook with a date-
9 stamped photograph taken of the animal, if possible. Any unique markings the
10 animal possesses shall be catalogued, such as tags, scars, and/or discolorations.

11
12 **b) Have a substantial adverse effect on any riparian habitat or other sensitive**
13 **natural community identified in local or regional plans, policies, regulations**
14 **or by the California Department of Fish and Game or U.S. Fish and Wildlife**
15 **Service?**

16
17 **Less than Significant Impact with Mitigation.** Located approximately 2,300 feet from
18 the proposed installation areas, the nearest giant kelp bed (SOK) is not likely to be
19 affected by the LOED installation. Seagrass was noted at several locations growing on
20 cobble surrounding the now inactive SONGS Unit 1 intake and discharge conduits
21 (MBC 2003) and is likewise not likely to be affected. Small, widely distributed areas
22 (less than approximately 11 square feet, each) of kelp and seagrass occur much closer
23 (less than 33 feet) and could be affected by reduced water clarity and/or could be
24 smothered by settling sediments. Seagrass and kelp occurrences near the POISs could
25 not be mapped during July 2012 dive surveys to derive exact aerial measurements.
26 However, areas of sensitive habitat likely to be impacted are a small fraction of each
27 habitat type available in the immediate area. Disturbance to these areas will not result in
28 corresponding population-level effects to those local communities using these habitats
29 due to the availability of replacement habitat within approximately 1 mile.

30
31 After the installation of the LOEDs, the high-relief, hard substrate of the structures will
32 likely be recolonized from local seed sources. Thus, installation and operation of the
33 LOEDs on each POIS would result in a less than significant impact with mitigation on
34 local sensitive communities (giant kelp and seagrass).

35
36 **MM BIO-2: Turbidity Monitoring Plan.** A Turbidity Monitoring Plan shall be
37 implemented during Project dredging and construction activities to monitor any
38 effects to water clarity in the immediate areas of Large Organism Exclusion
39 Device (LOED) installation. The Plan shall be submitted to the California State
40 Lands Commission staff for approval, in consultation with the Regional Water
41 Quality Control Board, at least 2 weeks before Project mobilization and shall
42 include, at a minimum, the following elements:

- Details on how Southern California Edison will continually evaluate construction-related turbidity relative to natural (background) turbidity occurring in unaffected areas during dredging and construction activities;
- Requirements for a qualified observer to record turbidity from a suitable vantage point during each day of dredging and construction; and specific adaptive management activities and/or corrective action measures should monitoring indicate unacceptable turbidity levels above ambient conditions.

c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

No Impact. No impact to wetlands will occur from this Project. The Project occurs in the marine waters of the Pacific Ocean offshore of southern California. No federally protected wetlands occur within a 1.2-mile radius of the Project site.

d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

Less than Significant Impact. Relatively few truly migratory fish species are found in the nearshore southern California waters where the LOEDs will be installed. However, installation and operation of the LOEDs are not likely to interfere with any resident or migratory fish or wildlife. The operation of the LOEDs would be completely passive and would be designed to reduce the entrainment of larger fishes that may migrate past the intake locations. Thus, impacts would be less than significant.

e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

No Impact. The Project would not conflict with any local policies or ordinances designed to protect natural resources. No impact would occur.

f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or State habitat conservation plan?

No Impact. No habitat or natural community conservation plan, or similar plan, has been established for the area where the LOEDs are proposed to be installed and

3. Environmental Checklist and Analysis

- 1 operated. The transit by the construction support vessels will not impact any
- 2 conservation plans. No impact would occur.

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less than Significant Impact with Mitigation	Less than Significant Impact	No Impact
3.3.5 CULTURAL AND PALEONTOLOGICAL RESOURCES. Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource as defined in State CEQA Guidelines § 15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to State CEQA Guidelines § 15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

1 **ENVIRONMENTAL SETTING**

2 No known historical or archaeological resources are located in the Project vicinity. A
 3 records search and literature review incorporated into CSLC's Environmental Impact
 4 Report for the Disposition of Offshore Cooling Water Conduits, SONGS Unit 1 Project in
 5 2005 returned no records of documented resources in the SONGS offshore area,
 6 including shipwrecks.

7

8 **DISCUSSION**

9

10 **a) Cause a substantial adverse change in the significance of a historical**
 11 **resource as defined in State CEQA Guidelines § 15064.5?**

12

13 **No Impact.** There are no known historical resources in the Project area. The installation
 14 area is composed of soft substrate that has drifted and gathered on top of a man-made
 15 rock bed and no potential exists for the presence of historical resources in this area.
 16 The Project does not entail any excavation of the natural seafloor. The Project involves
 17 placing anchors for the barges near the construction site. Anchor locations would be
 18 carefully selected by divers so as to place them on unobstructed soft substrate. In the
 19 extremely unlikely event that an unknown shipwreck or other historical resource is
 20 encountered in the anchor area, the divers would elect to avoid these resources.
 21 Therefore, no impact would occur.

22

1 **b) Cause a substantial adverse change in the significance of an**
2 **archaeological resource pursuant to State CEQA Guidelines § 15064.5?**
3

4 **No Impact.** No known archaeological resources are located in the Project area. In the
5 unlikely event that such resources are discovered during anchoring, no impact would
6 occur for the same reasons Stated above in response 3.3.5a.
7

8 **c) Directly or indirectly destroy a unique paleontological resource or site or**
9 **unique geologic feature?**
10

11 **No Impact.** No known paleontological resources or unique geologic features are
12 located in the Project area. In the unlikely event that such resources are discovered
13 during anchoring, no impact would occur for the same reasons Stated above in
14 response 3.3.5a.
15

16 **d) Disturb any human remains, including those interred outside of formal**
17 **cemeteries?**
18

19 **No Impact.** In the unlikely event that human remains are encountered during the
20 Project, the Project divers would halt construction and contact the San Diego County
21 Coroner, pursuant to Section 7050.5(b) of the California Health and Safety Code and
22 the remains would be managed in full compliance with all respective State laws.
23 Therefore, no impact would occur.

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less than Significant Impact with Mitigation	Less than Significant Impact	No Impact
3.3.6 GEOLOGY AND SOILS. Would the project:				
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
ii) Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
iii) Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
iv) Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Be located on expansive soil, creating substantial risks to life or property?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

1 **ENVIRONMENTAL SETTING**

2
3 The Project site is located off of the southern California coast on the ocean floor within
4 the Peninsular Ranges Province. Northwesterly trending mountain ranges and valleys,
5 in general, characterize this Geomorphic Province. Differential uplift resulting from
6 faulting has occurred along the eastern margin of the province and along the
7 San Jacinto and Elsinore fault zones (Ehlig 1977). The subject site is located within the
8 southwesterly portion of the province, which extends from the Los Angeles basin
9 southwesterly into Mexico.

10
11 The existing offshore conduits and POISs are situated on the San Onofre shelf portion
12 of the California continental borderland. The San Onofre shelf between Dana Point and
13 Oceanside is about 3 to 5 miles wide and extends seaward to about 295 feet in depth.
14 The buildings at SONGS are underlain by Miocene-age marine bedrock capped by
15 Pleistocene-age marine and nonmarine sediments (terrace deposits).

16
17 The San Onofre and Santa Margarita mountains, part of the Peninsular Range, are
18 located inland from the site and trend northwesterly to end at the San Juan Creek
19 drainage, which enters the ocean at Dana Point. Broad Pleistocene marine terraces are
20 well developed along this section of the coast and, in the area of SONGS, separate the
21 San Onofre Mountains from the beach.

22
23 The coastal plain is terminated at the beach by a line of relatively straight coastal bluffs
24 which have been eroded at the toe and cut by sea wave erosion. According to existing
25 documentation, most of the bedrock underlying the Project area and exposed along the
26 seafloor in the Project vicinity is the San Mateo Formation, which consists of a non-
27 cemented to slightly cemented, relatively friable, San Onofre sandstone. The
28 San Onofre sandstone is predominantly dense and forms near-vertical slopes in coastal
29 bluff exposures.

30
31 The seafloor surrounding the POIS is generally unvegetated and is composed of loose
32 sands and gravels. Over time, these surrounding sediments have migrated onto the
33 stone blanket of the POIS, and a recent POIS inspection by MBC has shown an
34 average depth of sediment (i.e., mainly sand) accumulation to be 21 inches across the
35 stone blanket.

36
37 Offshore of the POIS, between Dana Point and Oceanside, are dune-like, elongated
38 deposits of fine sands that extend perpendicular to the shore. The elongated sand
39 dunes tend to be stable in volume and coverage, but their position and configuration
40 change over time as they migrate southward, driven by the predominantly southerly
41 longshore current.

42

1 **Earthquake Faults**

2

3 Several active and recently active faults are located in the region. The Cristianitos Fault
4 is the only major fault in the Project vicinity; however, this fault has not shown
5 displacement since the formation of the lowest marine terrace. The nearest segment of
6 the Cristianitos Fault Zone occurs about 3 miles east of the Project area.

7

8 The Newport-Inglewood-Rose Canyon Fault Zone is located about 3 to 5 miles west of
9 the Project area and contains numerous recently active segments. The most recent
10 earthquakes on that fault zone occurred in 1933 near Newport Beach, approximately 25
11 miles northwest of the Project area, and measured up to 7.8 on the Richter Scale
12 (Jennings 1994).

13 **Beaches**

14

15 The onshore areas adjacent to the Project site include the beaches along MCB Camp
16 Pendleton. The beach berms in this area typically range from 9.5 feet to 13 feet above
17 mean sea level. The amount of sand available to the beach, and hence the size of the
18 beach, generally varies with the season as winter storm and surf conditions tend to
19 remove sand to offshore bars, diminishing the width of a beach. Unless intercepted by
20 subterranean canyons, these materials are returned to restore the beach during
21 summer months. Man-made structures such as jetties and harbor structures can
22 interfere with this natural process.

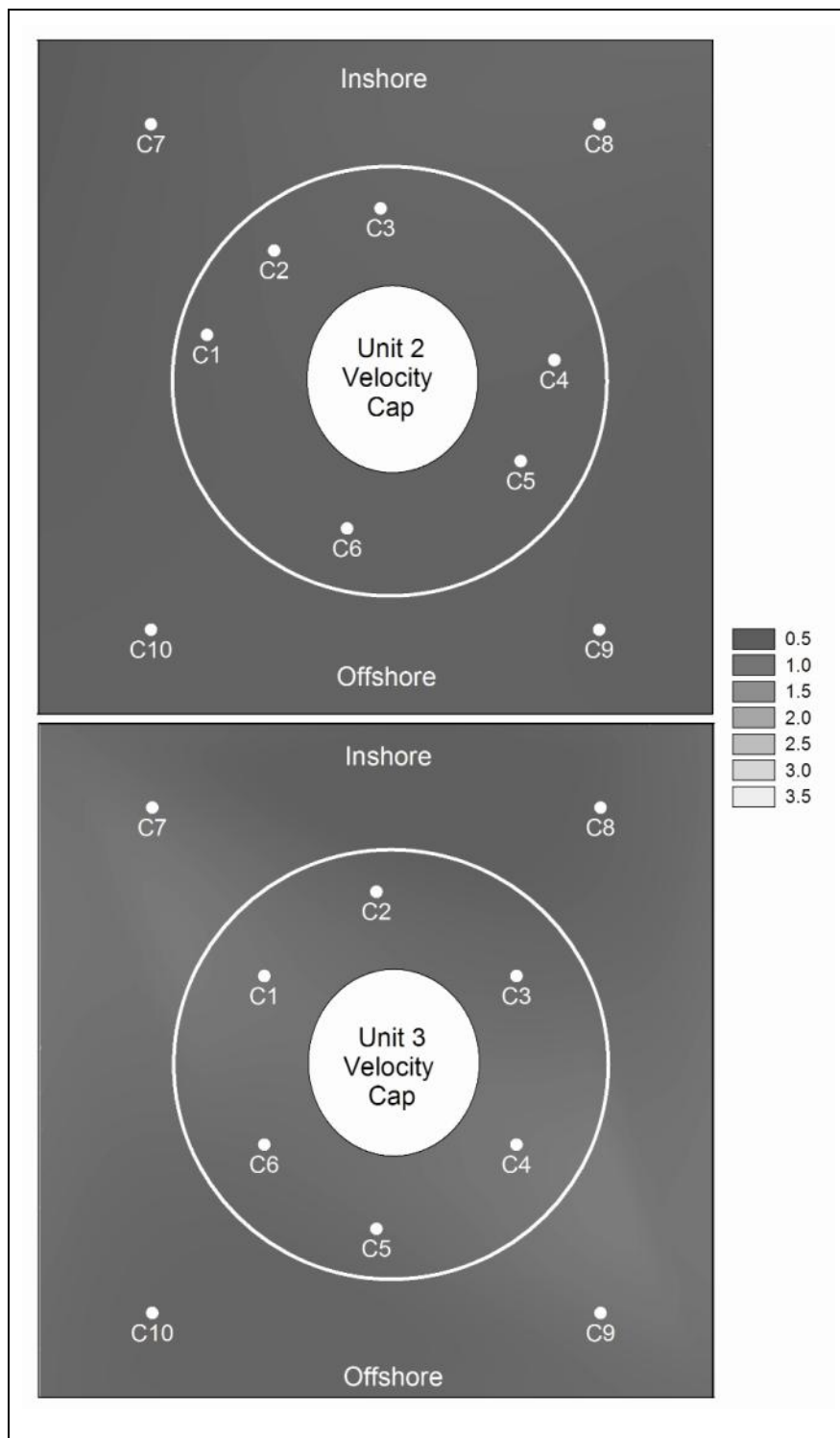
23

24 **Marine Sediment**

25

26 Recent sediment analyses were conducted in the CSLC easement surrounding each
27 POIS (MBC 2012). Marine sediments in the Project area are comprised predominantly
28 (>98 percent on average) by medium sand with lesser contributions of fines (clay and
29 silt, combined; <2 percent) and gravel (<1 percent). Minimal differences in median grain
30 size were observed among the stations sampled (Figure 3.3.6-1). In the Unit 2
31 easement, sediment median grain size averaged 0.6 mm with a range of 0.5 to 0.8 mm
32 (Table 3.3.6-1). Sediments in the Unit 3 easement averaged 0.8 mm and ranged from
33 0.5 to 1.1 mm. Higher gravel content was observed in the sediments surrounding the
34 Unit 3 POIS.

35



1
2
3
4

Figure 3.3.6-1. Contour plot depicting median grain size (mm) of sediments collected at each station around each POIS.

1
2
3

Table 3.3.6-1
Sediment grain size characteristics around both POISs.

Station	% Gravel	% Sand	% Fines	D ₅₀	C _u	C _c
Unit 2						
C1	0.0	98.6	1.4	0.6	2.2	1.1
C2	0.1	98.8	1.1	0.6	2.2	1.1
C3	0.1	98.8	1.1	0.7	5.3	2.3
C4	0.0	98.8	1.2	0.6	4.7	2.1
C5	0.0	98.7	1.3	0.6	4.7	1.9
C6	0.4	98.5	1.1	0.6	4.6	2.3
C7	0.0	98.5	1.5	0.5	3.9	1.2
C8	0.3	98.4	1.3	0.8	6.6	1.9
C9	0.0	98.9	1.1	0.6	2.2	1.1
C10	0.0	98.9	1.1	0.6	4.7	2.2
POIS Mean	0.1	98.7	1.2	0.6	4.0	1.8
SC Mean	0.1	98.7	1.3	0.6	4.4	1.6
Unit 3						
C1	0.0	99.0	1.0	1.0	2.7	1.0
C2	0.0	98.4	1.6	0.5	4.1	1.1
C3	0.1	98.2	1.7	0.7	7.3	0.7
C4	0.4	98.7	0.9	1.1	2.8	1.0
C5	0.0	99.0	1.0	0.7	5.2	2.3
C6	0.6	98.2	1.2	0.7	6.2	1.8
C7	0.1	98.5	1.4	0.8	7.0	1.8
C8	0.1	98.9	1.0	0.8	6.6	2.1
C9	6.8	91.9	1.3	0.8	7.5	1.8
C10	2.0	96.7	1.3	0.7	6.3	2.1
POIS Mean	0.2	98.6	1.2	0.8	4.7	1.3
SC Mean	2.3	96.5	1.3	0.8	6.9	2.0
D50 = Median grain size (mm)						
Cu = Uniformity coefficient						
Cc = Coefficient of curvature						
POIS = Primary Offshore Intake Structure						
SC = Sidecast destination						

1 **Currents and Sediment Movement**

2
3 The longshore currents in the Project vicinity tend to be consistent with the prevailing
4 wind direction. The result is a southward-flowing current along the shoreline and
5 environment that predominates in every season, with the strongest southerly flow
6 occurring in the summer months (Daly et al. 1993). These currents, along with large
7 storm waves, are the primary forces that suspend and transport sediments (Cacchione
8 et al. 1987; Wiberg and Smith 1983; Cacchione and Drake 1982).

9
10 Surface current velocities have been estimated in the Project area at approximately 0.3
11 to 0.4 knots, with current velocities near the seafloor estimated at 0.2 knots. The depth-
12 averaged mean annual current velocity is estimated at 0.22 knots (BGI 2003). In
13 general, the current velocities involved with the longshore current are sufficient only to
14 suspend and transport small-sized sediment, i.e., coarse sand size and smaller, in any
15 substantial volume.

16
17 The volume of sediment available to form beaches and available within the area of the
18 conduits for conduit infill material can vary from year to year. According to Kuhn and
19 Shepard (1984), the predominant longshore current since at least 1950 has been from
20 north to south. During the 1980s, the net longshore drift had been virtually balanced
21 (Seymore 1980–1982). Kuhn and Shepard (1984) reported observations that, during
22 particularly stormy years, the beaches in the coastal area that includes the Project site
23 were markedly widened. It was concluded that, during years of unusually stormy
24 seasons, the available sediment was increased in proportion to the observable erosion
25 of bluffs and canyons, as well as material generated by coastal bluff landslides.

26
27 Seabed sediments in the Project area are typically medium-grained sands with a mean
28 grain size of 0.02 – 0.03 inches (MBC 2012). The character of the ocean bottom is the
29 result of both natural processes and man-induced changes. The major natural sources of
30 sediment in the Project area include, from north to south, San Juan Creek, San Onofre
31 Creek, San Mateo Creek, Santa Margarita River, San Luis Rey River, and San Dieguito
32 River, as well as material eroded from the adjacent coastal bluffs. A limited amount of
33 fine sediment in the vicinity is transported shoreward from deep ocean sources.

34
35 Additional sources of sediment in the Project vicinity include the construction of the
36 seawalls and berms at SONGS; the railroad tracks at the base of the coastal bluff north
37 of SONGS; the addition of artificial beach fill to the beach and littoral system; the
38 construction of the berms/fortifications along the railroad tracks and at the base of
39 coastal bluffs; and the construction of Dana Point Harbor and Oceanside Harbor, north
40 and south of the Project site, respectively.

1 **DISCUSSION**

2
3 **a) Expose people or structures to potential substantial adverse effects,**
4 **including the risk of loss, injury or death involving:**

5
6 **i) Rupture of a known earthquake fault, as delineated on the most recent**
7 **Alquist-Priolo Earthquake Fault Zoning Map issued by the State**
8 **Geologist for the area or based on other substantial evidence of a**
9 **known fault? Refer to Division of Mines and Geology Special**
10 **Publication 42.**

11
12 **No Impact.** The Project is not anticipated to rupture a known earthquake fault within the
13 Alquist-Priolo Earthquake Fault Zone, as established by the State Geologist.
14 Additionally, a review of available reports revealed no active fault trace through or near
15 the Project area.

16
17 **ii) Strong seismic ground shaking?**

18
19 **No Impact.** The Project objective is to design and place a LOED around each existing
20 POIS to exclude and protect large marine organisms from entering or being drawn into
21 the POIS. The process of placing the LOEDs around each POIS and their passive
22 operational characteristics would not be expected to result in any impacts related to
23 strong seismic ground shaking. The LOEDs would be designed to tolerate seismic
24 activity and would not cause a significant environmental impact if damaged by
25 earthquake. Thus, no impacts are anticipated to occur as a result of seismic ground
26 shaking.

27
28 **iii) Seismic-related ground failure, including liquefaction?**

29
30 **No Impact.** Project construction would not entail any activity that would cause seismic-
31 related ground failure, including liquefaction. Therefore, no impact would occur.

32
33 **iv) Landslides?**

34
35 **No Impact.** Project construction would not entail any activity that would cause seismic-
36 related ground failure, including landslides. Therefore, no impact would occur.

37
38 **b) Result in substantial soil erosion or the loss of topsoil?**

39
40 **Less than Significant Impact with Mitigation.** Project construction would not entail
41 any activity that would cause above-ground soil erosion or loss of topsoil. Additionally,
42 temporary buildup of sediment generated from the removal of accumulated sediment on

1 top of the stone blanket would be removed and sidecast to ensure proper placement of
2 the LOED structures, prior to construction and/or foundation installation. The Contractor
3 would be directed to contain the sidecast materials within the CSLC 140-foot by 140-
4 foot easements that currently encompass each existing POIS at Units 2 and 3, and
5 along the 40-foot easement around each of the discharge conduits seaward from each
6 POIS (and if necessary, on the 70-foot-wide easement over the intake and outfall
7 conduits landward from each POIS), in addition to the minimal extent of sediment
8 anticipated to be generated. This impact would be less than significant.

9
10 Additionally, marine sediments (largely of medium sand) excavated from the overlying
11 the stone blanket and sidecast within the CSLC easement area would have highly
12 similar sediment composition to that in the sidecast footprint. The Project area is along
13 an exposed portion of the Southern California Bight that receives variable wave energy,
14 in addition to a predominantly southeast-flowing longshore current. Suspended
15 sediments excavated from the stone blankets would likely be redistributed by these
16 same oceanographic features.

17
18 Once installed, the LOEDs would create microturbulence cells within their confines that
19 would allow suspended sediments to settle and fill in. Sediments from within the LOEDs
20 would require periodic excavation on a yet-to-be determined schedule. Sidecasting of
21 these maintenance-dredged sediments would result in a similar less-than-significant
22 impact as the initial installation, as they will likely be locally sourced and therefore
23 similar in composition to the surrounding sediment that would receive the sidecast.
24 Impacts would be less than significant to marine sediments as a result of the installation
25 and operation of the LOEDs.

26
27 Multiple seabed disruptions from vessel anchoring during dredging and LOED
28 installation activities would result in potential impacts. Support vessels, barges, would
29 require anchoring needs and multiple mooring arrangements in multiple-point
30 anchorages would be expected. Implementation of the Anchoring Plan (GEO-1) would
31 ensure that this impact is less than significant

32
33 **MM GEO-1: Anchoring Plan.** Southern California Edison shall submit a Final
34 Anchoring Plan to California State Lands Commission staff for review and
35 approval, in consultation with the U.S. Coast Guard, U.S. Army Corps of
36 Engineers and the National Marine Fisheries Service, at least 2 weeks prior to
37 commencement of dredging and installation activities and shall implement the
38 Plan during all anchoring activities. The Anchoring Plan shall include, at a
39 minimum, the following elements:

- 40
- A list all of the vessels that will anchor during the Project and the number and
41 size of anchors to be set;

- Maps showing the anchoring sites identified during pre-construction surveys to ensure that all anchors shall avoid any rocky habitat, kelp beds, and impacts to recreational and commercial boaters;
- Descriptions of navigation equipment that would be used to ensure anchors are accurately set and of the anchor handling procedures that would be followed to prevent or minimize anchor dragging; and,
- Requirement to be included in appropriate contracts for the Project that contractors shall, whenever feasible, use appropriate installation techniques and procedures described in the Anchoring Plan that will minimize or avoid environmental impacts such as turbidity and anchor scarring.

c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?

No Impact. According to existing documentation, most of the bedrock underlying the Project area and exposed along the seafloor of the existing intake structures and two discharge conduits is the San Mateo Formation, which consists of a non-cemented to slightly cemented, relatively friable, semi- to well-consolidated, arkosic marine sandstone (San Onofre Sandstone). As discussed above, each LOED would be attached to a tremie grout/concrete footing foundation cemented to the rock blanket around each POIS and would not be expected to result in any impacts related to on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse. Thus, no impact would occur.

d) Be located on expansive soil, creating substantial risks to life or property?

No Impact. The seafloor consists of more than 90 percent sand cover, generally 5 to 10 feet in thickness (SCE 1997a), and the Project would consist of foundation installation and placement of a LOED around each existing POIS at Units 2 and 3. The foundation would be adequately constructed to hold each LOED in place and would be composed of four large precast concrete post foundation panels (refer to Section 2.3, Description of Project, for additional discussion). The Project would not result in any structural development that could adversely affect expansive soil, creating substantial risks to life or property. Thus, no impact would occur.

e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?

3. Environmental Checklist and Analysis

- 1 **No Impact.** The Project would not require the use of septic tanks or alternative waste
- 2 water disposal systems. Therefore, no impact related to the use of septic tanks or other
- 3 wastewater disposal systems would result.

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less than Significant Impact with Mitigation	Less than Significant Impact	No Impact
3.3.7 GREENHOUSE GAS EMISSIONS.				
Would the project:				
a) Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing GHG emissions?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

1 **ENVIRONMENTAL SETTING**

2 Refer to Section 3.3.3, Air Quality, for a description of the relevant environmental
3 setting.

4 **DISCUSSION**

5 **a) Generate greenhouse gas emissions, either directly or indirectly, that may**
6 **have a significant impact on the environment?**

7 **Less than Significant Impact.** Implementation of the Project would generate
8 construction-related GHG emissions. Construction-related GHG emissions would
9 comprise a majority of the Project’s GHG emissions; however, construction emissions
10 would cease following buildout of the Project. Operations and maintenance activities
11 associated with the Project are anticipated to be infrequent and nominal in emissions
12 intensity. Project operations would only require minor maintenance activities
13 approximately every 18 months. Maintenance would involve two divers and one
14 compressor for a period of up to 3 days. These activities would not constitute a
15 substantial source of GHG emissions. Considering this information, operational GHG
16 emissions are considered to be less than significant. Hence, this analysis will focus on
17 the Project’s construction emissions.

18
19 During construction of the Project, GHG emissions would be generated from sources
20 such as heavy-duty construction equipment and tugboats bringing construction
21 materials to the Project site. Construction activities were calculated using a combination
22 of URBEMIS2007 and EPA research to determine a total construction emissions of 165
23 metric tons of carbon dioxide equivalent. Table 3.3.7-1 shows the total GHG emissions
24 associated with construction activities for Units 2 and 3 LOEDs.

Table 3.3.7-1
Summary of Construction Emissions for Units 2 and 3 LOEDs

Construction Scenario/Emissions Source	Emissions (MT CO ₂ e)
Total Construction Emissions (Units 2 and 3 LOED Construction)	165

Notes: LOED = large organism exclusion device; MT CO₂e = metric tons of carbon dioxide equivalent;
yr = year

Source: AECOM 2012

As shown in Table 3.3.7-1, the total GHG emissions of 165 MT CO₂e would occur from Project construction (i.e., installation of the LOEDs for Units 2 and 3). The stationary source threshold proposed by SBCAPCD is 10,000 MT CO₂e per year. In the absence of an established threshold for non-stationary sources, the SBCAPCD threshold is used for the purposes of this analysis even though the Project is not a stationary source. Project The Project's GHG emissions would not exceed the proposed threshold. Therefore, this impact would be considered less than significant.

b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

No impact. Although implementation of the Project would cause construction-related GHG emissions, the intent, purpose, and function of the Project aligns with the goals and assumptions of the AB 32 Scoping Plan to maintain current levels of nuclear electricity generation. The AB 32 Scoping Plan's Statewide Analysis also evaluates and tries to minimize how implementation of AB 32 Scoping Plan measures would impact a variety of environmental resources including native species and biological resources. Pursuant to both of these goals, installing the two LOEDs would protect large marine organisms, while allowing the continued operation of a non-GHG emitting electricity generation source.

The Project would construct and install two LOEDs to prevent large organisms from being caught in the SONGS water intake structures. The intake structures are part of the SONGS cooling system, which is an essential function to the plant's continued safe operations. For any nuclear electricity generation plant, it is imperative to cool the nuclear reactor and other equipment to maintain safe and optimal operating conditions. The cooling system and intake structure are imperative to not only maintain (non-GHG emitting) electricity generation, but also for the safety of the plant and the region. The design of the LOED is intended to avoid kelp loading that would potentially compromise the cooling system. Therefore, the Project would not have a negative impact on daily operations at SONGS. Therefore the Project would protect biological resources while maintaining the function of non-GHG emitting electricity sources.

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less than Significant Impact with Mitigation	Less than Significant Impact	No Impact
3.3.8 HAZARDS AND HAZARDOUS MATERIALS.				
Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

1 **ENVIRONMENTAL SETTING**

2
3 Information was extracted from the Final EIR for the Disposition of Offshore Cooling
4 Water Conduits SONGS Unit 1 that was prepared for CSLC in 2005. This section
5 addresses a variety of offshore and onshore Project activities that could potentially
6 expose people to hazards or hazardous materials. Hazardous substances are defined
7 by State and federal regulations as substances that must be regulated in order to
8 protect the public health and the environment. Hazardous materials have certain
9 chemical, physical, or infectious properties that cause them to be hazardous. California
10 Code of Regulations (CCR) Title 22, section 66261 provides the following definition:

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

17
18 According to Title 22 (Chapter 11, Article 3, CCR), substances having a characteristic of
19 toxicity, ignitability, corrosivity, or reactivity are considered hazardous. Hazardous
20 wastes are hazardous substances that no longer have a practical use, such as material
21 that has been abandoned, discarded, spilled, or contaminated, or which is being stored
22 prior to disposal.

23
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
30 Implementation of the Project would involve minimal onshore operations as each LOED
31 would be prefabricated in sections at an inland facility and transported to the coastal
32 contractor facility, which is expected to be located at the Port of Los Angeles. The
33 individual components of each stainless-steel LOED structure would be installed in a
34 seafloor location that is associated with natural sediments that are not known to be
35 associated with pollutants or contaminated substances that would meet the definition of
36 a hazardous material.

37
38 **DISCUSSION**

39
40 **a) Create a significant hazard to the public or the environment through the**
41 **routine transport, use, or disposal of hazardous materials?**
42

1 **Less than Significant Impact.** The barge crane, material delivery vessels, tug boats,
2 and crew shuttle boats may all contain fuel or lubrication fluids, and the crane barge and
3 support boats would have motorized equipment operating from their decks. A spill could
4 occur if the hull of a vessel was breached in the area of the tank or if a vessel sank.
5 However, a collision of a Project-related vessel with other vessels in the area is unlikely
6 as all work would be done in the daylight hours. Additionally, all Project-related vessels
7 would be constructed with multiple watertight compartments to isolate flooding and
8 reduce the risk of sinking and spillage. Therefore, the risk of spillage due to collision or
9 sinking would be less than significant.

10
11 **b) Create a significant hazard to the public or the environment through**
12 **reasonably foreseeable upset and accident conditions involving the release**
13 **of hazardous materials into the environment?**
14

15 **Less than Significant Impact with Mitigation.** Potential onshore spills could result
16 from the use of motorized terrestrial equipment during the prefabrication of the LOEDs
17 at the Port of Los Angeles. Sources include leakage of fuel, motor oil, or hydraulic fluid
18 during operation, refueling, and equipment maintenance. Standard spill control would be
19 anticipated at such industrial-type facilities through the implementation of an on-site spill
20 plan, which would prescribe proper response to contain and cleanup any small spills
21 using on-site equipment. Minor onshore spills would be contained with appropriate
22 containers and sorbent pads. No major spill sources would result from onshore work,
23 and potential impacts would be less than significant.

24
25 The barge crane, materials delivery vessels, and other support vessels may discharge
26 hydraulic oils, fuel, lubricants, or other contaminants from deck areas overboard. Other
27 potential sources of marine spillage would include deck equipment such as
28 compressors, generators, pumps, and welding machines.

29
30 To ensure that personnel, equipment, and procedures are in place to respond to
31 accidental releases, the Contractor will closely monitor weather conditions during
32 construction as well as implement a Spill Response Plan, as described below. In
33 addition, if the Contractor determines that existing or forecast sea states or weather
34 conditions would create unsafe working conditions for personnel or equipment, the
35 Contractor will cease work. With these measures in place, the impact of accidental
36 discharges from shipboard systems on marine vessels would be less than significant.

37
38 Dive operations would be required to assist in placing the LOEDs. Surface-supplied air
39 diving techniques would be used; however, divers could be exposed to hazardous
40 substances or vapors if they are in the vicinity of the air intake. A Diver Safety Plan,
41 meeting U.S. Coast Guard and Occupational Safety and Health Association regulations,

1 shall be prepared for the Project to ensure safety for all divers. Implementation of the
2 Diver Safety Plan would ensure that this impact is less than significant.

3
4 Additionally, installation of the foundation and LOEDs, and the associated sediment
5 removal during construction would disturb ocean bottom silt and sediment and affect the
6 open water environment, although the Project would not introduce any new potentially
7 hazardous spoils materials, sands, or other soil materials to the Project area. Medium
8 sand dominates both intake areas. The data suggest sediments in the easements
9 surrounding each POIS are relatively homogenous (MBC 2012). Therefore, little, if any,
10 effect of sidecasting the sediments excavated from the stone blanket surrounding each
11 POIS would result. These impacts would be considered less than significant.

12
13 Lastly , areas near each POIS surveyed by divers during both the sediment collection
14 and dedicated transects recorded minimal biological resources. Few fish or
15 invertebrates were observed in the area within the LOED footprint. Some algae,
16 including giant kelp, and seagrass were found near each POIS, but their occurrence
17 was irregular and infrequent. Small areas of seagrass (covering a small rocky
18 outcropping) and small aggregations of giant kelp would be impacted by the installation
19 of the LOEDs. Again, little, if any, effect of sidecasting the sediments excavated from
20 the stone blanket surrounding each POIS would result. These impacts would be
21 considered less that significant.

22
23 **MM HAZ-1: Inclement Weather Condition.** Southern California Edison's
24 Contractor shall tie-down or provide secondary containment for any deck
25 equipment that may discharge contaminants in order to minimize the potential for
26 unanticipated release of pollutants due to inclement weather or rough sea
27 conditions. In addition, the Contractor shall monitor weather conditions and shall
28 cease work if the Contractor determines that existing or forecast sea states or
29 weather conditions would create unsafe working conditions for personnel or
30 equipment.

31
32 **MM HAZ-2: Spill Response Plan.** Southern California Edison's (SCE's)
33 Contractor shall prepare a Spill Response Plan that presents the procedures and
34 protocols to be used in the event of an onshore or offshore oil spill resulting from
35 the activities associated with the construction and installation of the proposed
36 Large Organism Exclusion Devices. Project vessels shall have a shipboard Spill
37 Prevention and Response Plan and all necessary equipment to implement said
38 Plan on board. Before Project mobilization, SCE shall submit the Plan to the
39 Office of Oil Spill Prevention and Response for review and approval, and
40 verification of that approval will be provided to the California State Lands
41 Commission a minimum of 2 weeks prior to installation operations and, at a
42 minimum, include the following elements:

- Discussion of potential spill sources of hydrocarbons are limited to leakage or spillage of fuel or lubricants from onshore and marine equipment used during dispositioning operations;
- Description of Oil Spill Response Team and equipment;
- Description of the notification process; and
- Description of Marine Spill Scenarios and Response Procedures.

MM HAZ-3: Diver Safety Plan. The Contractor shall prepare and submit to California State Lands Commission staff at least 2 weeks prior to Project mobilization a Diver Safety Plan that provides, at a minimum, the following elements:

- A description of the diving techniques and equipment that will be used to support the underwater work activities;
- A description of the procedures that will be used to perform each underwater operation;
- A description of the job safety analysis tool that will be used to prepare for each day's diving operations;
- An evacuation plan for evacuating injured divers;
- A contact list for local emergency services organizations and facilities; and
- Incorporation of the Associated Pacific Constructors, Inc.'s Health, Safety, and Environment Plan and U.S. Coast Guard and Occupational Safety and Health Administration safety regulations.

c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

No Impact. The Project would not affect existing or proposed schools in any way. Thus, no impacts would occur.

d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?

No Impact. No Government Code section 65962.5-compiled hazardous materials or waste sites are at or near the offshore Project location. Thus, no impacts would occur.

e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?

1 **No Impact.** The Project is not located within an airport land use plan or within 2 miles of
2 a public airport or public use airport. Additionally, the Project does not include any
3 structures or features that would affect air traffic patterns or introduce new safety
4 hazards related to air traffic. Thus, no impacts would occur.

5
6 **f) For a project within the vicinity of a private airstrip, would the project result**
7 **in a safety hazard for people residing or working in the project area?**

8 **No Impact.** The Project is not located within the vicinity of a private airstrip. Additionally,
9 the Project does not include any structures or features that would affect air traffic
10 patterns or introduce new safety hazards related to air traffic. Thus, no impacts would
11 occur.

12
13 **g) Impair implementation of or physically interfere with an adopted**
14 **emergency response plan or emergency evacuation plan?**

15 **No Impact.** Construction activities would occur for approximately 12 weeks for both
16 LOED installations; however, the construction schedule may exceed three months in
17 duration. Three tugboats would be used during the mobilization and demobilization
18 efforts, with one remaining at the Project site for both Units 2 and 3 LOED installations.
19 The other two would return to the Port of Los Angeles and head back to the Project site
20 for the demobilization efforts. This would not generate a substantial increase in marine
21 traffic. The Project site is located approximately 0.5 to 1 mile offshore, and marine
22 vessels would be highly visible throughout the duration of construction activities, making
23 it highly unlikely that construction activities would present a navigational hazard for
24 marine emergency vessels. Thus, no impacts to emergency response or evacuation
25 plans would occur. Additionally, the Project would not affect the established emergency
26 evacuation procedures at SONGS.

27
28 **h) Expose people or structures to a significant risk of loss, injury or death**
29 **involving wildland fires, including where wildlands are adjacent to**
30 **urbanized areas or where residences are intermixed with wildlands?**

31 **No Impact.** Most Project-related construction activities would occur offshore at the
32 POIS locations, and onshore construction activities to assemble the LOED structures
33 would occur at the Port of Los Angeles in disturbed areas with no vegetation that would
34 contribute to the potential for wildfire hazard impacts. Thus, no impacts would occur.

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less than Significant Impact with Mitigation	Less than Significant Impact	No Impact
3.3.9 HYDROLOGY AND WATER QUALITY.				
Would the project:				
a) Violate any water quality standards or waste discharge requirements?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)? Result in a potentially significant adverse impact on groundwater quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner, which would result in substantial erosion or siltation on- or off-site?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site, or place structures within a 100-year flood hazard area which would impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Create or contribute runoff water, which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

1 **ENVIRONMENTAL SETTING**

2 The Project site is located offshore in the Pacific Ocean, approximately 3,200 feet from
3 the coast in a water depth of approximately 30 feet. The section of Pacific Coast in the
4 Project vicinity is not listed as a CWA Section 303(d) water body by the San Diego
5 RWQCB. Water temperature, salinity, dissolved oxygen, pH, and light transmission (a
6 surrogate for turbidity) have been routinely measured offshore SONGS for years. Of
7 these parameters, light transmission is most likely to be affected during Project
8 construction. Turbidity in the Project area has been reviewed and analyzed by MBC for
9 this Project, with results included in Appendix B.

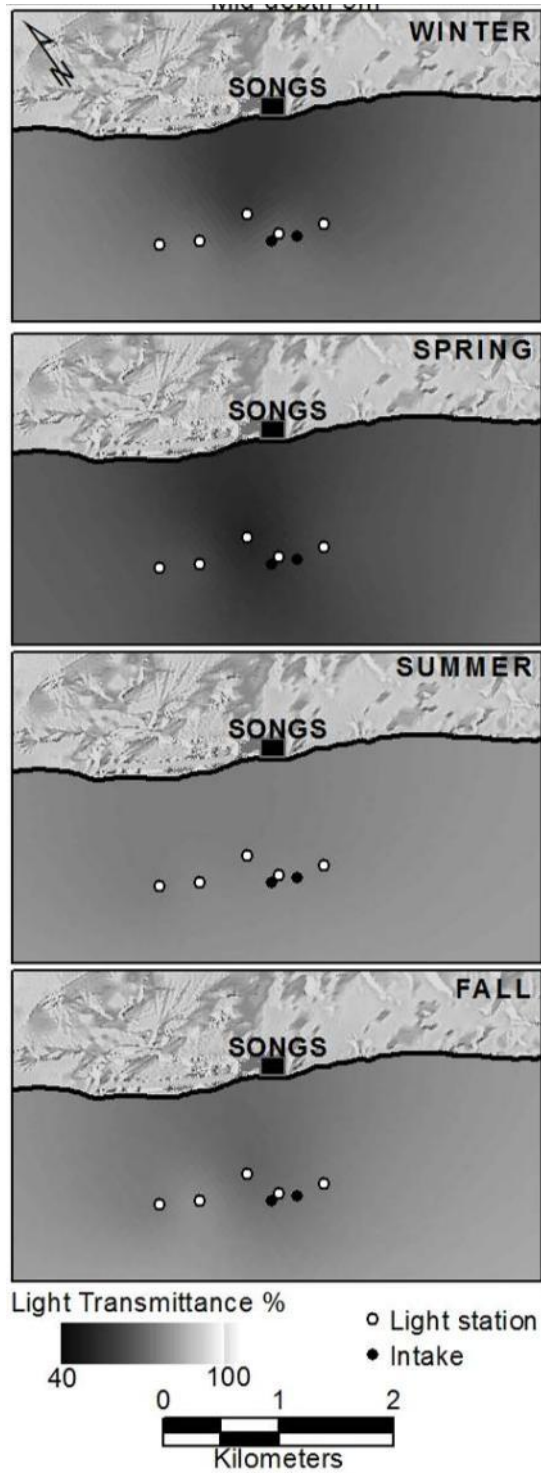
10
11 The Project area is along an exposed portion of the Southern California Bight that
12 receives variable wave energy, in addition to a predominantly southeast-flowing
13 longshore current. Under existing conditions, sediments occurring at the Project site are
14 picked up in the water by wave and current action and suspended in the water around
15 the POIS, creating varying turbid conditions. The coastal waters surrounding the
16 SONGS POISs are seasonally turbid, as shown in Figure 3.3.9-1.

17
18 Light transmittance due to increased turbidity is reduced in winter and spring especially
19 near the POISs due in part to the occurrence of the southern California storm season
20 creating greater wave action and discharge from local rivers. During summer and fall,
21 light transmittance increases as the waters become more stratified with a seasonal
22 thermocline impeding the distribution of turbid waters to the surface.

23
24 Water temperatures outside the zone of initial dilution surrounding the SONGS
25 discharge diffusers are typically at or near ambient levels. Ambient temperatures
26 fluctuate seasonally and interannually dependent on a variety of oceanographic
27 processes, including strength of the northwest-flowing California Countercurrent
28 (Davidson Current) and coastal upwelling. Winter water temperatures are typically the
29 lowest, with annual peaks occurring in late summer/early fall. Warm-water years during
30 strong El Niños or heightened strength of the Davidson Current can reach 21°C, or
31 greater, in the summer while cool-water years can peak at 18°C, or less, in the summer.
32 Dissolved oxygen, salinity, and pH fluctuate similarly as described for water
33 temperature.

34
35 **DISCUSSION**

- 36 **a) Result in an increase in pollutant discharges to receiving waters (including**
37 **impaired water bodies pursuant to the Clean Water Act Section 303(d) list),**
38 **result in significant alteration of receiving water quality during or following**
39 **construction, or violate any water quality standards or waste discharge**
40 **requirements?**



1
2
3
4

Figure 3.3.9-1. Light transmission (% Transmittance) at 16 Feet Deep Offshore of SONGS, 2003-2010.

1 **Less than Significant Impact with Mitigation.** The section of Pacific Coast in the
2 Project vicinity is not listed as a CWA Section 303(d) water body by the RWQCB. The
3 Project would result in temporary increases in turbidity in the surrounding waters due to
4 removal of sediments that have accumulated on the top of the stone blankets prior to
5 installation of the respective LOEDs and from other sediment disturbance. No impact to
6 water temperature, salinity, dissolved oxygen, and pH are likely to result from the
7 installation and operation of the LOEDs.

8
9 Based on the season during which the installation occurs, the increase could range from
10 imperceptible in winter, due to elevated ambient turbidity, to elevated but quickly
11 dispersed during the summer. The Project will require a permit from the San Diego
12 RWQCB pursuant to CWA Section 401. A Turbidity Monitoring Plan has been prepared
13 and will be submitted to the RWQCB for the agency's review, revision, and approval
14 prior to commencement of the Project (see mitigation measure BIO-2). This plan will be
15 implemented during Project construction to monitor the dispersion of any plume of
16 elevated turbidity generated by the installation, with escalating monitoring components
17 should the plume extend beyond 2,600 feet or greater for two consecutive days. With
18 the implementation of the Turbidity Monitoring Plan and its components, this impact
19 would be less than significant.

20
21 The chief concern with increases in turbidity in the marine environment is the effect on
22 light-sensitive resources. The Project site is located more than 2,300 feet from the
23 nearest light-sensitive resource, the San Onofre Kelp forest. The dominant southeast-
24 flowing longshore current would likely dissipate the increased turbidity to near-ambient
25 levels before any turbid water reaches the kelp forest.

26
27 Aside from these construction-period impacts, periodic maintenance of the LOEDs will
28 likely involve hydroblasting marine growth from the LOED elements to restore maximum
29 through-screen flow and redistribution of sediments that are likely to accumulate within
30 the LOED. Both activities are likely to result in less than significant temporary impacts to
31 water quality, specifically turbidity. The Turbidity Monitoring Plan will be executed during
32 each maintenance activity.

33 A similar near-shore construction project recently completed off the El Segundo
34 Generating Station resulted in no impacts to turbidity, water temperature, salinity,
35 dissolved oxygen, or pH, and generated no increase in total suspended solids within
36 1,000 feet of the construction site (MBC 2011a). All provisions of the Section 401 Water
37 Quality Certification issued for the project were met. Sediments off SONGS are much
38 coarser (≥ 98 percent sand) than is found offshore of El Segundo Generating Station
39 (≤ 98 percent sand; MBC 2011b), suggesting any suspended sediments would settle
40 relatively quickly. Impacts would be less than significant with implementation of
41 mitigation measure BIO-2.

1 **b) Substantially deplete groundwater supplies or interfere substantially with**
2 **groundwater recharge such that there would be a net deficit in aquifer**
3 **volume or a lowering of the local groundwater table level (e.g., the**
4 **production rate of pre-existing nearby wells would drop to a level which**
5 **would not support existing land uses or planned uses for which permits**
6 **have been granted)? Result in a potentially significant adverse impact on**
7 **groundwater quality?**

8 **No Impact.** The Project is located offshore and would have no contact with or effect on
9 groundwater. Therefore, no impact would occur.

10 **c) Substantially alter the existing drainage pattern of the site or area,**
11 **including through the alteration of the course of a stream or river, in a**
12 **manner, which would result in substantial erosion or siltation on- or off-**
13 **site?**

14 **No Impact.** The Project is located offshore and would have no contact with streams,
15 rivers, or any other drainage feature. Therefore no impact would occur.

16 **d) Substantially alter the existing drainage pattern of the site or area,**
17 **including through the alteration of the course of a stream or river,**
18 **substantially increase the rate or amount of surface runoff in a manner**
19 **which would result in flooding on- or off-site, or place structures within a**
20 **100-year flood hazard area which would impede or redirect flood flows?**

21 **No Impact.** The Project is located offshore and would have no contact with streams,
22 rivers, or any other drainage feature. Therefore no impact would occur.

23 **e) Expose people or structures to a significant risk of loss, injury or death**
24 **involving flooding, including flooding as a result of the failure of a levee or**
25 **dam?**

26 **No Impact.** The Project is located offshore and would not place any structures or
27 people in a flood-risk area. Therefore no impact would occur.

28 **f) Create or contribute runoff water, which would exceed the capacity of**
29 **existing or planned stormwater drainage systems or provide substantial**
30 **additional sources of polluted runoff?**

31 **Less than Significant Impact.** The Project would not create or contribute any runoff
32 water or have any effect on storm-water drainage. All support vessels involved with the
33 installation and subsequent maintenance of the LOEDs will maintain best management
34 practices, such as secondary containment during any vessel refueling, to ensure no
35 polluted runoff occurs. Contractors chosen to support these activities will be required to
36 comply with applicable NPDES regulations and other local provisions. Therefore, this
37 impact would be less than significant.

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less than Significant Impact with Mitigation	Less than Significant Impact	No Impact
3.3.10 LAND USE AND PLANNING. Would the project:				
a) Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

1 **ENVIRONMENTAL SETTING**

2 The Project is located offshore in submerged seafloor that is under the land use
 3 jurisdiction of CSLC. CSLC has land use authority over “sovereign lands” of the State,
 4 which, in the coastal environment, are those between the mean high tide line to 3
 5 nautical miles offshore. SCE leases lands for their submerged facilities from CSLC.

6
 7 The onshore portion of SONGS includes two operating reactor units located on the
 8 coastal bluffs and a headquarters complex located north of the site, across I-5. Non-
 9 SCE uses surrounding the site include San Onofre State Beach, portions of which are
 10 located north and south of the onshore component of SONGS, and MCB Camp
 11 Pendleton. On-base uses near the site include residential developments approximately
 12 1.25 miles northwest of the site and a commercial development just off I-5,
 13 approximately 1.5 miles northwest of the site. The southern reaches of the city of San
 14 Clemente are located approximately 2.5 miles northwest of the Project site, just across
 15 the boundary of San Diego County and Orange County.

16
 17 **DISCUSSION**

18 **a) Physically divide an established community?**

19 **No Impact.** The Project is located offshore of an unpopulated area, with the nearest
 20 community comprising on-base residential development more than a mile to the north.

1 All Project features would be installed beneath the ocean surface. Therefore, no
2 potential exists to divide an established community and no impact would occur.

3 **b) Conflict with any applicable land use plan, policy, or regulation of an**
4 **agency with jurisdiction over the project (including, but not limited to the**
5 **general plan, specific plan, local coastal program, or zoning ordinance)**
6 **adopted for the purpose of avoiding or mitigating an environmental effect?**

7 **No Impact.** The Project would not alter land use at the Project site, because it entails
8 installing new equipment on top of existing facilities. The equipment would be installed
9 within SCE's established easement area leased from CSLC and no new right-of-way
10 acquisition would be required for the Project. No zone change is required, and the
11 Project would not conflict with any CSLC applicable land use plans. Because no land-
12 side aspect applies to the Project, the Project does not require any land-based
13 approvals. Therefore, no impact would occur.

14 **c) Conflict with any applicable habitat conservation plan or natural**
15 **community conservation plan?**

16 **No Impact.** The Project is not in an area covered by a habitat conservation plan or
17 natural community conservation plan. Therefore, no impact would occur.
18

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less than Significant Impact with Mitigation	Less than Significant Impact	No Impact
3.3.11 MINERAL RESOURCES. Would the project:				
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the State?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

1 **ENVIRONMENTAL SETTING**

2 The Project site is located in an offshore area that currently houses existing intake
3 infrastructure for SONGS and is not used for mineral extraction.

4

5 **DISCUSSION**

6 **a) Result in the loss of availability of a known mineral resource that would be**
7 **of value to the region and the residents of the State?**

8 **No Impact.** The Project does not entail mineral extraction. The Project area is not used
9 for mineral extraction and would have no bearing on prospective future mineral
10 extraction because it would be located on top of existing SONGS infrastructure.
11 Therefore, no impact would occur.

12 **b) Result in the loss of availability of a locally important mineral resource**
13 **recovery site delineated on a local general plan, specific plan or other land**
14 **use plan?**

15 **No Impact.** The Project area is not mapped as a mineral resource recovery site;
16 therefore, no impact would occur.

17

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less than Significant Impact with Mitigation	Less than Significant Impact	No Impact
3.3.12 NOISE. Would the project result in:				
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

1 **ENVIRONMENTAL SETTING**

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Noise in shallow water environments such as the Project site consists of a mixture of sources, including noise from ships on the surface, wind action on the water, and, in some cases, biological noise from vocalizing species. Noise is not generated by the Units 2 and 3 intake system features in the Project area; no other sources of stationary noise are present in the vicinity.

1 **DISCUSSION**

2
3 **a) Exposure of persons to or generation of noise levels in excess of**
4 **standards established in the local general plan or noise ordinance, or**
5 **applicable standards of other agencies?**
6

7 **Less than Significant Impact.** No plans or noise ordinances are pertinent to
8 underwater noise in the Project area. No human receptors of underwater noise are
9 present at the Project site, with the possible exception of occasional divers exploring the
10 vicinity of the site or working on the Project facilities. The noise receptors most relevant
11 to this Project would be marine life, particularly marine mammals that depend on sound
12 to navigate, feed, and socialize.

13
14 The MMPA makes it illegal to harass marine mammals, including through acoustical
15 harassment, and the National Oceanic and Atmospheric Administration (NOAA) can
16 issue either incidental take authorizations or incidental harassment authorizations (IHA)
17 for projects that would have a negative effect on protected marine mammals. IHAs are
18 common for seismic testing programs and large-scale construction projects with
19 elements such as blasting, air-gun operation, or pile driving. NOAA is currently in the
20 process of developing acoustic guidelines for assessing impacts on marine mammals
21 protected under the MMPA. At the time of publication, the guidelines were undergoing
22 internal review, and NOAA had not published any underwater noise thresholds.

23
24 Project construction does not entail operating equipment that would generate significant
25 levels of underwater noise that would result in harassment of marine mammals. Noise
26 would be generated by the barge and tug boat engines from the surface of the water as
27 the materials and equipment are delivered to the site and the on-barge equipment
28 descends materials into the water for installation. This noise would be audible beneath
29 the water and would attenuate as distance from the source increases. The metal LOED
30 structures would be attached to bolts that are precast in the concrete foundation pieces,
31 which would minimize the underwater work required for installation. No underwater
32 blasting, pile driving, or operation of air guns would occur. Due to the minimal extent of
33 noise-generating activities, the Project would not harass marine mammals, and this
34 impact would be less than significant.

35
36 However, implementation of a Marine Monitoring and Protection Plan to ensure the
37 protection of marine mammals likely to occur in the area during installation of the
38 LOEDs is a required mitigation measure in Section 3.3.4, Biological Resources.

1 **b) Exposure of persons to or generation of excessive groundborne vibration**
2 **or groundborne noise levels?**

3
4 **No Impact.** Project construction would not entail any activity that would cause
5 underwater vibration. Therefore, no impact would occur.

6
7 **c) A substantial permanent increase in ambient noise levels in the project**
8 **vicinity above levels existing without the project?**

9
10 **Less than Significant Impact.** The Project would not introduce any permanent noise
11 source. Long-term noise generation would be limited to boat activity on the water
12 surface to deliver maintenance workers to the site. This maintenance would be
13 infrequent and would not result in significant noise levels, either underwater or on the
14 surface. Therefore, this impact would be less than significant.

15
16 **d) A substantial temporary or periodic increase in ambient noise levels in the**
17 **project vicinity above levels existing without the project?**

18
19 **Less than Significant Impact.** See the response to 3.3.12a above.

20
21 **e) For a project located within an airport land use plan or, where such a plan**
22 **has not been adopted, within two miles of a public airport or public use**
23 **airport, would the project expose people residing or working in the project**
24 **area to excessive noise levels?**

25
26 **No Impact.** The Project is not located within an airport land use plan or within 2 miles of
27 a public airport or public use airport. Therefore, no impact would occur.

28
29 **f) For a project within the vicinity of a private airstrip, would the project**
30 **expose people residing or working in the project area to excessive noise**
31 **levels?**

32
33 **No Impact.** The Project is not located within the vicinity of a private airstrip. Therefore,
34 no impact would occur.

35

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less than Significant Impact with Mitigation	Less than Significant Impact	No Impact
3.3.13 POPULATION AND HOUSING. Would the project:				
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of road or other infrastructure)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

1 **ENVIRONMENTAL SETTING**

2 The Project site is located offshore of an unpopulated area. Housing nearest to the site
 3 is an on-base residential development approximately 1.5 miles to the north. Residential
 4 development in the city of San Clemente is located approximately 3 miles northwest of
 5 the site.

6
 7 **DISCUSSION**

8 **a) Induce substantial population growth in an area, either directly (for**
 9 **example, by proposing new homes and businesses) or indirectly (for**
 10 **example, through extension of road or other infrastructure)?**

11 **No Impact.** The Project would not directly induce growth because it would not construct
 12 new housing or businesses. The Project would not indirectly induce growth because it
 13 would not entail any increase in generation capacity at SONGS or create infrastructure
 14 that would have any effect on development; therefore, no impact would occur.

15
 16 **b) Displace substantial numbers of existing housing, necessitating the**
 17 **construction of replacement housing elsewhere?**

18 **No Impact.** The Project would not affect existing housing in any way; therefore, no
 19 impact would occur.

20

- 1 c) **Displace substantial numbers of people, necessitating the construction of**
2 **replacement housing elsewhere?**
- 3 **No Impact.** The Project would not displace any people; therefore, no impact would
4 occur.

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less than Significant Impact with Mitigation	Less than Significant Impact	No Impact
3.3.14 PUBLIC SERVICES. Would the project:				
a) Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any public services:				
Fire protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

1 **DISCUSSION**

2 **a) Result in substantial adverse physical impacts associated with the**
 3 **provision of new or physically altered governmental facilities, need for new**
 4 **or physically altered governmental facilities, the construction of which**
 5 **could cause significant environmental impacts, in order to maintain**
 6 **acceptable service ratios, response times or other performance objectives**
 7 **for any public services:**

8 **Fire Protection**

9 **Less than Significant Impact.** Project construction activities are unlikely to require fire
 10 services because the majority of the activities involve in-water construction. The tug
 11 boats and construction barges would be equipped with fire-suppression materials to
 12 handle small fires on board. In the unlikely event of a major fire on the tugs and barges,
 13 fire-response services may be required. This unlikely and small-scale demand would
 14 not require new or physically altered government facilities and would not result in a
 15 significant impact to local fire suppression services. Therefore, this impact would be less
 16 than significant.

1 **Police Protection**

2

3 **No Impact.** Project construction and operation would not entail the types of increased
4 activity or increased human presence that would increase demand for police protection.
5 Therefore, no impact would occur.

6

7 **Schools**

8

9 **No Impact.** The Project would not generate student enrollment and would not affect
10 schools in any other way. Therefore, no impact would occur.

11

12 **Parks**

13

14 **No Impact.** The Project would not result in increased activity at San Onofre State
15 Beach and would not create demand for any other park services. Therefore, no impact
16 would occur.

17

18 **Other Public Facilities**

19

20 **Less than Significant Impact.** Project construction and ongoing maintenance entail
21 the use of highly skilled divers trained in underwater operations and safety. In the
22 unlikely event of diver injury during construction and maintenance, the Project may
23 require emergency-response services from lifeguards stationed at San Onofre State
24 Beach. This minimal demand would not require new or physically altered facilities and
25 would not result in a significant impact to lifeguard staff or infrastructure. Therefore, this
26 impact would be less than significant.

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less than Significant Impact with Mitigation	Less than Significant Impact	No Impact
3.3.15 RECREATION. Would the project:				
a) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities, which have an adverse physical effect on the environment?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

1 **ENVIRONMENTAL SETTING**

2 Southern California residents derive enjoyment from active and passive recreational use
 3 of the natural and semi-natural areas in the coastal environment. The mild climate and
 4 the attractions of the ocean and environs draw many people to the coast in the Project
 5 vicinity.

6
 7 Generally, the land uses along the coastline are public beaches, marinas, and/or
 8 harbors. MCB Camp Pendleton has 18 miles of coastline and prohibits public access to
 9 the beach. Inland from the immediate coastline, the land use pattern is typically mixed
 10 with residential and supporting commercial uses (city of San Clemente 1992).

11
 12 **Recreation Facilities**

13
 14 A wide variety of public facilities are available for recreation in the Project vicinity. Those
 15 facilities nearest to the shore have the potential to be affected by the proposed activities
 16 and are discussed below (including recreational and commercial fishing).

17
 18 **California State Parks**

19
 20 The California State Park system includes two coastal State beaches that are located in
 21 the Project vicinity: San Clemente State Beach to the north, and San Onofre State
 22 Beach on either side of SONGS Units 2 and 3. These parks are managed by the
 23 California Department of Parks and Recreation for their ecological and recreational
 24 values. The uses at San Onofre State Beach are primarily swimming, surfing, and
 25 camping. The most popular uses of San Clemente State Beach include swimming,

1 hiking, camping, and surfing. San Onofre is discussed below due to its proximity to the
2 Project.

3
4 San Onofre State Beach: San Onofre State Beach features 3.5 miles of sandy beaches
5 on over 3,000 acres of land. Access is provided via a beach access road, a 1.5-mile
6 trail, and six 0.25-mile-long trails cut into the bluff above the beach. The park includes a
7 marshy area where San Mateo Creek meets the shoreline and Trestles Beach.
8 San Onofre State Beach is composed of four subunits. The four subunits are open year-
9 round and from north to south include San Mateo Campground, Trestles Beach and
10 San Mateo Wetlands Natural Preserve, San Onofre Surf Beach, and San Onofre Bluffs
11 Campground.

12 13 **MCB Camp Pendleton**

14
15 MCB Camp Pendleton is a classified military base, and admittance is restricted. A
16 number of recreation facilities on MCB Camp Pendleton are restricted for use by active
17 duty and retired military personnel and their dependents. Del Mar Boat Basin and the
18 beach surf zone are located within these restricted areas. The 18 miles of MCB Camp
19 Pendleton shoreline have four color designations: Green Beach, Red Beach, White
20 Beach, and Blue Beach. Green Beach, adjacent to San Onofre State Beach, has
21 cottages and campsites available for rent by active military and retired personnel. Del
22 Mar Boat Basin contains the Del Mar Marina Aquatics Office, the Santa Margarita
23 Sailing Clubhouse, and a sportfishing dock.

24
25 Offshore areas at MCB Camp Pendleton are open to commercial fishing and
26 recreational boating when not in use for military operations. Red Beach is also
27 available, when not in military training use, to permit holders during weekends and
28 holidays. San Onofre State Beach is located entirely within the geographic boundary of
29 MCB Camp Pendleton and is leased from the base by California Department of Parks
30 and Recreation (Southwest Division Naval Facilities Engineering Command 2001).

31 32 **Harbors**

33
34 Many offshore recreationists who use the offshore area in the Project vicinity, including
35 boaters, fishermen, sailors, and SCUBA divers, access the area from nearby harbors.
36 Harbors provide boat ramps and storage slips, fuel, and tourist information, which are
37 important to the offshore recreation in the area. Aside from the Del Mar Boat Basin,
38 discussed above, the closest harbors in the Project vicinity are Oceanside Harbor
39 approximately 15 miles to the south and Dana Point Harbor approximately 10 miles to
40 the northwest.

41

1 The Ports of Long Beach and Los Angeles, located approximately 50 miles north of the
2 Project area, or the Port of San Diego, located approximately 65 miles south of the
3 Project area, would be used to construct the LOEDs for each POIS at Units 2 and 3.

4 **Recreational Activities**

5
6 Most recreational activities along the shore are water oriented. The California Coastal
7 Act States that coastal areas suited for water-oriented recreational activities should be
8 protected for such uses, including the following:

- 9 • coast-dependent recreation – Activities that require a coastal location,
10 e.g., ocean swimming, surfing, SCUBA diving, fishing, boating, beach activities,
11 and nature study
- 12 • coast-related recreation – Coastal activities that also occur inland,
13 e.g., picnicking, bicycling, walking, jogging, and camping

14
15 Common recreational activities in the Project vicinity include ocean uses such as
16 boating, diving, fishing, surfing, sea kayaking, swimming, and beach/sand activities
17 such as frisbee-playing and jogging. Other coast-related recreational activities in the
18 area include camping, picnicking, walking, and scenic and wildlife observation. Families
19 and individuals in the area often spend the day or the weekend at the beach engaged in
20 the beach activities including surfing, scuba diving, boating, and recreational fishing.

21 22 **Recreational and Commercial Fisheries**

23
24 Recreational and commercial fishing are marine activities enjoyed in the Project area.
25 While not an environmental issue included in the State CEQA Guidelines Appendix G
26 checklist, its importance to the area warrants consideration.

27
28 Fisheries were reviewed and evaluated with respect to the LOED installation and
29 operation (MBC 2012). Both POISs are within a 1-nautical-mile restricted access zone
30 centered on SONGS. Entry into the zone requires prior authorization of the U.S. Coast
31 Guard, San Diego. Nevertheless, recreational anglers have been observed near the
32 POISs. The SONGS POISs and diffusers lie within the California Department of Fish
33 and Game fishing block 756. Of the 12 regional blocks reviewed, block 756 received the
34 highest angler effort and was the site where the largest number of fish was caught by
35 the Commercial Passenger Fishing Vessel fleet. Commercial finfish harvest was
36 minimal in block 756 while the more valuable invertebrate fisheries, especially California
37 spiny lobster and market squid, generated more value. Seafood products harvested
38 from block 756 ranked second in total monetary value in the 12 blocks analyzed, largely
39 due to the invertebrate fisheries.

40

1 **DISCUSSION**

2
3 **a) Increase the use of existing neighborhood and regional parks or other**
4 **recreational facilities such that substantial physical deterioration of the**
5 **facility would occur or be accelerated?**

6 **No Impact.** The Project would not result in increased activity at San Onofre State
7 Beach or other existing regional, State, or neighborhood parks in the area, nor would it
8 create demand for any other park services.

9
10 **b) Does the project include recreational facilities or require the construction**
11 **or expansion of recreational facilities, which have an adverse physical**
12 **effect on the environment?**

13
14 **No Impact.** The Project would not include construction of recreational facilities or require
15 construction or expansion of recreational facilities. Thus, no impacts would occur.

16
17 **Recreational and Commercial Fisheries**

18
19 **Less than Significant Impact with Mitigation.** The installation and operation of each
20 LOED will occur within the restricted access area and therefore will not infringe upon
21 legitimate fishing activities in the area. However, during both phases of installation of
22 the LOEDs, three barges would be anchored between a half-mile offshore at any given
23 time for approximately 6 weeks. Despite the restricted access, fishing activities have
24 been observed in the area and will likely continue to occur. During the LOED
25 installations, fishing activities will be impacted by the presence of the construction
26 support vessels, but this impact would be considered temporary. In addition, this could
27 have a temporary impact to mariners using the area for recreational purposes.

28
29 This impact can be reduced to a less than significant level through the issuance, by the
30 U.S. Coast Guard (USCG), of a Local Notice to Mariners (LNM). The USCG issues
31 LNMs on a monthly basis with weekly supplements categorized by District Boundaries.
32 As of April 1, 2004, LNMs are available online only. These advisories contain
33 information on the locations, times, and details of activities that may pose hazards to
34 mariners (i.e., barges, buoys, etc.). The following mitigation measure is recommended:

35
36 **REC-1: Coast Guard Advisory.** Prior to any dredging or installation activities, Southern
37 California Edison shall provide the U.S. Coast Guard (USCG) with Project details—
38 including information on Project locations, times, and other details of activities that may
39 pose hazards to mariners (i.e., barges, buoys, etc.)—so that the USCG can include
40 such information in the Local Notice to Mariners to advise boaters that could pass near
41 the area of the activity in order to avoid potential hazards.

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less than Significant Impact with Mitigation	Less than Significant Impact	No Impact
3.3.16 TRANSPORTATION/TRAFFIC.				
Would the project:				
a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Substantially increase hazards due to design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

1 ENVIRONMENTAL SETTING

2 Existing traffic in the Project vicinity is limited to occasional boat trips related to
 3 commercial and recreational fishing, recreational boating, and law enforcement. Both
 4 POIS lie within a restricted access zone extending in a 1-nautical-mile arc centered at
 5 the onshore SONGS facility. No vessel transit, anchoring, fishing, diving, etc. is allowed
 6 in the area without prior authorization from the U.S. Coast Guard, San Diego. The
 7 intake structures are currently marked with marker buoys to announce their presence to

1 mariners. The site is located in the nearshore open ocean and is not located in a
2 shipping lane.

3

4 **DISCUSSION**

5 **a) Conflict with an applicable plan, ordinance, or policy establishing**
6 **measures of effectiveness for the performance of the circulation system?**

7 **No Impact.** The Project is located offshore in a location where there are no applicable
8 plans, ordinances, or policies related to boat travel. Moreover, the Project would not
9 generate any permanent land-side or aquatic traffic. Permanent boat traffic related to
10 the Project would be limited to infrequent maintenance trips to the facilities, which
11 already occur for the intake structures under existing conditions. Construction activity
12 would entail tug boat trips to deliver barges to and from the site, daily boat trips to
13 shuttle workers between the shore and the barges, plus potential additional trips to
14 deliver equipment and supplies. These additional trips would have no effect on existing
15 boat traffic. Therefore, no impact would occur.

16 **b) Conflict with an applicable congestion management program, including but**
17 **not limited to level-of-service standards and travel demand measures, or**
18 **other standards established by the county congestion management agency**
19 **for designated roads or highways?**

20 **No Impact.** The Project is located offshore in a location where there is no applicable
21 congestion management program or other standards related to boat travel. Therefore,
22 no impact would occur.

23 **c) Result in a change in air traffic patterns, including either an increase in**
24 **traffic levels or a change in location that results in substantial safety risks?**

25 **No Impact.** There are no components of Project construction or operation that would
26 generate or affect air traffic. Therefore, no impact would occur.

27 **d) Substantially increase hazards due to a design feature (e.g., sharp curves**
28 **or dangerous intersections) or incompatible uses (e.g., farm equipment)?**

29 **Less than Significant Impact.** The existing velocity caps sit approximately 8 feet below
30 the ocean surface during low water conditions and are marked with marker buoys to
31 indicate their presence to mariners. The proposed LOED structures would extend 1 foot
32 above the top of the respective velocity caps, approximately 7 feet below the ocean
33 surface, and would extend to a larger area. As under existing conditions, marker buoys
34 would indicate the presence of the structure and limit any additional hazard to
35 navigation caused by the reduced depth to the present structure and the structure's
36 expanded area. Due to the minimal increase in navigation hazard and the continued
37 presence of marker buoys, this impact is less than significant.

1 **e) Result in inadequate emergency access?**

2 **No Impact.** The Project is located in the open ocean and would not impede vessel
3 movement in the ocean during construction and operation such that emergency access
4 would be affected. Therefore, no impact would occur.

5 **f) Conflict with adopted policies, plans, or programs supporting alternative**
6 **transportation (e.g., bus turnouts, bicycle racks)?**

7 **No Impact.** The Project is located in the open ocean where alternative transportation
8 modes do not exist; therefore, no impact would occur.

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less than Significant Impact with Mitigation	Less than Significant Impact	No Impact
3.3.17 UTILITIES AND SERVICE SYSTEMS.				
Would the project:				
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Result in a determination by the wastewater treatment provider, which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Comply with federal, State, and local statutes and regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

1 **ENVIRONMENTAL SETTING**

2 **DISCUSSION**

3 **a) Exceed wastewater treatment requirements of the applicable Regional**
4 **Water Quality Control Board?**

5 **No Impact.** The Project does not entail the construction of any new housing or other
6 types of development that would generate wastewater. Therefore, no impact would
7 occur.

8 **b) Require or result in the construction of new water or wastewater treatment**
9 **facilities or expansion of existing facilities, the construction of which could**
10 **cause significant environmental effects?**

11 **No Impact.** The Project does not entail the construction of any new housing or other
12 types of development that would create water demand or generate wastewater.
13 Therefore, no impact would occur.

14 **c) Require or result in the construction of new storm water drainage facilities**
15 **or expansion of existing facilities, the construction of which could cause**
16 **significant environmental effects?**

17 **No Impact.** The Project does not entail or require construction of storm water drainage
18 facilities. Therefore, no impact would occur.

19
20 **d) Have sufficient water supplies available to serve the project from existing**
21 **entitlements and resources, or are new or expanded entitlements needed?**

22 **Less than Significant Impact.** The Project would not generate water demand on a
23 long-term basis. Construction-period water demand would be limited to the minor
24 amount of water needed for assembling materials and workers' personal use, which
25 would come from local municipal systems. This minor amount of water use would not
26 require new entitlements or expansion of existing entitlements, and this impact would be
27 less than significant.

28
29 **e) Result in a determination by the wastewater treatment provider, which**
30 **serves or may serve the project that it has adequate capacity to serve the**
31 **project's projected demand in addition to the provider's existing**
32 **commitments?**

33 **No Impact.** The Project does not entail the construction of any new housing or other
34 types of development that would create water demand or generate wastewater.
35 Therefore, no impact would occur.

1 **f) Be served by a landfill with sufficient permitted capacity to accommodate**
2 **the project's solid waste disposal needs?**

3 **No Impact.** Project construction would generate a minor amount of solid waste related
4 to assembling materials and workers' incidental food and paper products, all of which
5 would be disposed of at a proper waste management facility. The extremely small
6 amount of solid waste generated during proposed LOED installation and operation
7 would not adversely affect the waste disposal capacity or recycling capabilities of local
8 facilities located in the Project area. The Project would not be a long-term source of
9 solid waste. Therefore, no impact would occur.

10 **g) Comply with federal, State, and local statutes and regulations related to**
11 **solid waste?**

12 **No Impact.** See the response to 3.3.17f above.

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less than Significant Impact with Mitigation	Less than Significant Impact	No Impact
3.3.18 MANDATORY FINDINGS OF SIGNIFICANCE.				
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Does the project have impacts that are individually limited, but cumulatively considerable? (“Cumulatively considerable” means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current project, and the effects of probable future projects.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Does the project have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

1 **DISCUSSION**

- 2 a) **Does the project have the potential to degrade the quality of the**
 3 **environment, substantially reduce the habitat of a fish or wildlife species,**
 4 **cause a fish or wildlife population to drop below self-sustaining levels,**
 5 **threaten to eliminate a plant or animal community, reduce the number or**
 6 **restrict the range of a rare or endangered plant or animal or eliminate**
 7 **important examples of the major periods of California history or**
 8 **prehistory?**

1 **Less than Significant Impact with Mitigation.** All of the Project’s potential
2 environmental effects with respect to environmental quality are discussed above in prior
3 sections of this document. As stated above, all potentially significant impacts associated
4 with the Project would be reduced to a less than significant level with incorporation of
5 mitigation measures. In general, the environmental impacts associated with the
6 proposed installation of the LOEDs at SONGS will have a net beneficial impact to
7 marine resources.

8 **b) Does the project have impacts that are individually limited, but**
9 **cumulatively considerable? (“Cumulatively considerable” means that the**
10 **incremental effects of a project are considerable when viewed in**
11 **connection with the effects of past projects, the effects of other current**
12 **project, and the effects of probable future projects.)**

13 **No Impact.** Three prospective projects have been identified in the vicinity of the Project
14 site and have been considered for their potential to result in cumulative impacts to which
15 the Project could contribute. The first cumulative project is the SONGS Unit 1 Conduits
16 Dispositioning project, which entails deconstructing parts of the Unit 1 intake and
17 discharge conduits. Offshore work for this project is expected to commence in spring
18 2013.

19
20 The second cumulative project is the SONGS Security Upgrade project, which entails
21 constructing an onshore prefabricated steel barrier wall around the plant site and
22 parking areas that would be 20 feet high and 8 feet wide. Construction of this project is
23 anticipated to begin in fall (September/October) 2012 and be completed in December
24 2012.

25
26 The third cumulative project is the SONGS Seawall Riprap Improvement project, which
27 entails repairing the existing riprap revetment running along the length of the SONGS
28 seawall. Construction is anticipated sometime in 2013. None of the long-term impacts
29 associated with LOED operation and maintenance would have any bearing on these
30 cumulative projects or their impacts, due to the nature and location of the projects.
31 Accordingly, concern for cumulative impacts would be limited to construction overlap.

32
33 Based on the construction timeframes Stated above, only one of the projects—the
34 SONGS Security Upgrade—has the potential to overlap in construction schedule with
35 the Project. The Security Upgrade project is located onshore, whereas the Project
36 would be located offshore. Therefore, no physical overlap or other conflict would result
37 between these two projects, and cumulative impacts would occur.

38
39 **c) Does the project have environmental effects, which will cause substantial**
40 **adverse effects on human beings, either directly or indirectly?**

1 **No Impact.** As discussed in applicable sections of this IS/MND, the Project would not
2 cause any substantial adverse environmental effects on humans. The Project entails a
3 small-scale offshore construction Project that would not result in significant impacts
4 related to aesthetics, air quality, cultural resources, geology and soils, hazards and
5 hazardous materials, hydrology and water quality, noise, transportation/traffic, or utilities
6 and service systems.