

ATTACHMENT B: ENVIRONMENTAL AND LAND USE ISSUES

This page intentionally left blank

ATTACHMENT B: ENVIRONMENTAL AND LAND USE ISSUES

1.1 CONSISTENCY WITH APPLICABLE POLICIES OF THE CALIFORNIA COASTAL ACT

The Project Site is located within the California Coastal Zone, and as such, must conform to applicable policies in Chapter 3 of the California Coastal Act (CCA).

The *California Coastal Commission Staff Report for Application File Number E-00-014* (California Coastal Commission, October 11, 2000) (Staff Report 2000) for the 2001 Coastal Development Permit (CDP) authorizing construction of the San Onofre Nuclear Generating Station (SONGS) Units 2 and 3 Temporary Independent Spent Fuel Storage Installation (ISFSI) (2001 ISFSI CDP) contains an analysis of the geologic issues associated with the proposed development including the following: seismic safety (including ground shaking, fault rupture, liquefaction, and tsunami runup), bearing capacity of the foundation elements, safety from coastal bluff retreat and shoreline erosion, and stability of slopes adjacent to the proposed development. The Staff Report concluded that, as proposed, the ISFSI would minimize risk to life and property and would not contribute significantly to erosion, geologic instability, or destruction of the site or surrounding area. In addition, because the development would take place on an existing, industrial site, the Staff Report found that potential impacts to the visual character of the proposed project site and impacts to nearby environmentally sensitive habitat areas (ESHAs) would be avoided. Furthermore, the Staff Report found that because the ISFSI would be developed entirely within the boundaries of the SONGS Site, recreation on and public access to the adjacent San Onofre State Beach would not be impacted as a result of project implementation. The Staff Report also concluded that construction of the ISFSI would have less than significant impacts related to marine resources and water quality with adherence to Standard Conditions 1 and 2, which required disposal of construction debris and monitoring of sediment and soils in an onsite sump during construction of the ISFSI. Potential noise and air quality impacts were also determined to be less than significant given that impacts would only occur during construction of the ISFSI.

The 2001 ISFSI CDP, which authorized construction and operation of the existing ISFSI, is in full force and effect. An amendment to the 2001 ISFSI CDP must find that the changes to the project continue to fully mitigate all identified impacts. The sections below update the analyses contained in the Staff Report, and demonstrate that the amended project would continue to be consistent with applicable provisions of the CCA, and with the underlying original permit approving the existing onsite ISFSI.

The following section summarizes some key environmental and land use policies contained in the CCA that are applicable to the Proposed Project and its site. The SONGS Site has been thoroughly analyzed by different state and federal agencies via various permitting (e.g., existing ISFSI). This attachment summarizes the findings of the following technical reports (included as Attachment E):

- *Final Safety Analysis Report on the HI-STORM UMAX Canister Storage System (FSAR)* (Holtec International, July 11, 2014) prepared for the United States Nuclear Regulatory Commission (NRC)
- *Environmental Report on the HI-STORM UMAX MPC Based Storage System* (Environmental Report) (Holtec International, December 17, 2014)
- *California Coastal Commission Staff Report for Application File Number E-00-014* (California Coastal Commission, October, 11, 2000)
- *San Onofre 2 & 3 FSAR Updated, Section 2.5 Geology, Seismology and Geotechnical Engineering* (Southern California Edison, SCE, Revision 25)
- *Final Report Geotechnical Investigation of Alternate Independent Spent Fuel Storage Installation* (Southern California Edison, EPE&C Geotechnical Group, November 1995);
- *California Coastal Commission Draft Sea-Level Rise Policy Guidance Public Review Draft* (October 14, 2013).
- *Southern California Edison's Evaluation of California Energy Commission AB 1632 Report Recommendations*, (February 2011)

The studies and materials listed above are incorporated herein by reference.

1.1.1 Geologic Hazards

Section 30253, Minimization of Adverse Impacts. This section of the CCA states the following related to geologic hazards:

New development shall do all of the following:

- (a) *Minimize risks to life and property in areas of high geologic, flood, and fire hazard.*
- (b) *Assure stability and structural integrity, and neither create nor contribute significantly to erosion, geologic instability, or destruction of the site or surrounding area or in any way require the construction of protective devices that would substantially alter natural landforms along bluffs and cliffs.*

Geologic Setting. The Project Site is located on the San Onofre Bluffs, which are located within the northwest portion of the SONGS Site. The Project Site is underlain by the San Mateo Formation. Previous geologic testing on the Project Site found that the San Mateo Formation extends at least 900 feet (ft) below ground surface (bgs) at the site (Staff Report 2000). Due to previous disturbance on the Project Site, the upper 10 to 20 ft of San Mateo Formation on the entire SONGS site has been removed during grading activities.

Seismic Hazards. The Project Site is located in northern San Diego County, within the seismically active region of Southern California. The inactive Cristianos Fault, located south (approximately 1 mile [mi] south) and east of the SONGS Site, is the closest fault to the Project Site. An additional four minor faults have been identified east of the Project Site; however, none of these faults have shown evidence of movement during the last 2 million years. Additionally, the SONGS Site is located approximately 5 mi from the Newport-Inglewood-Rose Canyon Fault (an offshore fault), 24 mi from the Elsinore Fault, 45 mi from the San Jacinto Fault, and 58 mi from the San Andreas Fault, all of

which are considered active faults. Other offshore faults located further away from the project vicinity, including the Coronado Bank Fault Zone, the San Diego Trough Fault Zone, the Thirty-Mile Bank Fault, and the Oceanside Thrust are also considered active (Staff Report 2000). Despite its relative proximity to the aforementioned active faults, the Project Site and the surrounding area have historically been seismically inactive as compared to much of the Southern California region, which is likely attributed to the site's distance from the San Andreas Fault (approximately 58 mi).

In "SCE's Evaluation of the California Energy Commission AB 1632 Report Recommendations", SCE updated the relevant portion of the SONGS probabilistic seismic hazard analysis (PSHA) in 2010 using the most recent seismic data available. The results from the SONGS 2010 PSHA are comparable to the SONGS 1995 PSHA, indicating that the assessment of the SONGS seismic hazard risk has not changed and the results stated above continue to be valid.

Ground Shaking. The Project Site is in a region with a "low" ground shaking potential, which equates to a 10 percent chance of exceeding approximately 0.3 peak ground acceleration (PGA/g) in 50 years (Staff Report 2000). Previous geologic studies prepared as part of the licensing permit applications for Units 2 and 3 found that the Newport-Inglewood-Rose Canyon Fault, centered on the portion of the fault nearest to the SONGS Site, has the greatest potential to impact the SONGS Site. Nevertheless, seismicity in the vicinity of the Project Site has been relatively minimal as compared to other areas within the Southern California Region. The FSAR for Units 2 and 3 (2009) defines a Design Basis Earthquake (DBE), used synonymously with Safe Shutdown Earthquake (SSE), with a PGA of 0.67g, and an Operating Basis Earthquake (OBE) with a PGA of 0.33g. EPE&C (1995) associates a return period of approximately 3300 years to the SSE. In developing the design basis for the ISFSI, the design specification conservatively used accelerations of 1.5g horizontal (in two directions) and 1.0g vertical which exceed the FSAR values noted above.

Conclusion.

The potential geological hazards have been evaluated and determined not to significantly impact the stability and structural integrity of the Proposed Project. As part of the FSAR prepared for the HI-STORM UMAX, a DBE analysis was prepared in accordance with 10 Code of Federal Regulations (CFR) 72, which requires that the Safety Related Systems, Structures and Components (SSCs) important to safety be designed to withstand the effect of natural phenomena including earthquakes. Accordingly, the HI-STORM UMAX FSAR analyzes a DBE, as well as a Most Severe Earthquake (MSE). The use of the HI-STORM UMAX generic license, under Certificate of Compliance (CoC) 72-1040, requires the [applicant's site](#) to show that [the site's](#) DBE is within the FSAR analyzed earthquake. For the SONGS Site, including the Project Site, the MSE bounds the site conditions. Results of the analysis in the HI-STORM UMAX FSAR indicated that the proposed ISFSI could withstand an MSE of 2.121g net horizontal (SRSS combination) and 1.0g vertical, or an MSE of 1.5g horizontal (in two directions) and 1.0g vertical. For comparative purposes, the existing aboveground ISFSI on the Project Site has been certified to withstand an MSE of 1.5g horizontal (in two directions) and 1.0g vertical. As previously stated, the estimated seismic potential on the Project Site is a 10 percent chance of exceeding approximately 0.3g in 50 years. As such, the Proposed Project would exhibit a greater safety margin against an earthquake than the identified seismic potential that could impact the site.

The proposed ISFSI expansion is modeled and designed to withstand potential impacts during a seismic event due to the vertical placement of the multi-purpose containers (MPCs) and its underground placement. As described further in Attachment A, Project Description, the Proposed Project has been designed to ensure that the MPCs would be placed in the ISFSI in a vertical position and would be restrained by a set of radial guides attached to the Baseplate and Divider Shell. Consequently, in addition to aiding during the insertion of a MPC into the Cavity Enclosure Container (CEC), these radial guides would limit the lateral movement of the free-standing MPCs and protect against excessive inertial loads during seismic events. Therefore, based on the DBE analysis prepared for the HI-STORM UMAX system, the Proposed Project would be able to withstand impacts related to seismic hazards and ground shaking.

Liquefaction. Liquefaction is a phenomenon that can occur during ground shaking when loosely consolidated soils are saturated with water. As previously stated, the Project Site is underlain by dense sands from the San Mateo Formation. Although the ground water on the SONGS Site is shallow (2.1 ft above mean sea level [amsl]), testing on the SONGS Site has indicated that liquefaction during earthquake activities is not likely to occur (Staff Report 2000). Further, liquefaction in soils as dense as those found on the SONGS Site, including those found on the Project Site, has not previously been documented and is more likely to occur in loose sands.

Conclusion.

The potential for liquefaction has been evaluated and determined not likely to occur, posing no impact to the stability and structural integrity of the Proposed Project. As described in the Environmental Report, the HI-STORM UMAX has been designed to withstand impacts related to liquefaction resulting from an earthquake. As previously stated, the potential for liquefaction during an earthquake on the Project Site is not likely to occur due to the presence of dense soils from the San Mateo Formation on the Project Site.

Slope Stability. The Project Site (as measured by the existing FSMs) is located approximately 105 ft south of a cut slope that is 70 ft high and 170 ft west of a lower cut slope, conformed mostly from Terrace Deposits (Staff Report 2000). Previous modeling prepared to determine the stability of these slopes indicated that if these slopes were to fail, soil would travel a maximum distance of 91 ft and therefore, not affect the Project Site. In addition, northwest and southeast of the Project Site at the San Onofre State Beach, several active landslides have occurred at the coastal bluffs. Although there is active landsliding in the Monterey Formation southeast of the site, the Project Site is underlain by Terrace Deposits and by the San Mateo Formation, which consists of dense sandstones not generally considered to be susceptible to landsliding.

Conclusion.

The potential for landslides has been evaluated and determined not to significantly impact to the stability and structural integrity of the Proposed Project. As previously stated, the SONGS Site, including the Project Site, is underlain by Terrace Soils and by the San Mateo Formation, which consists of dense sandstones not generally considered to be susceptible to landsliding. Modeling prepared for the existing ISFSI on the Project Site indicated that if slopes 105 ft northwest of the SONGS Site were to fail, soil would travel a maximum distance of 91 ft. Therefore, due to the

dense sandstone on the Project Site and the site's location more than 14 ft further than the maximum distance that soil would travel on the SONGS Site in the event of slope failure, impacts related to slope stability would be less than significant.

Tsunamis. Several previous studies have been conducted to estimate the potential runup that would occur on the SONGS Site during a tsunami event. Several of the most recent studies were summarized in the San Onofre 2 and 3 Final Safety Evaluation Report (SCE Revision 25) and the Safety Evaluation Report prepared by the NRC at the time of licensing hearings for SONGS 2 and 3 (USNRC 1981). Both local- and distant- sourced tsunamis were considered; the locally-sourced tsunami (resulting from a magnitude 7.5 earthquake occurring along the Newport-Inglewood-Rose Canyon Fault system, approximately 5 mi offshore) was determined to produce the highest tsunami wave runup and specifically modeled by Dr. Basil Wilson, consultant for SCE, at the time of the original licensing review. This study determined that vertical ground movement associated with this earthquake would be 7.1 ft, which would result in a tsunami of 7.6 ft and a maximum "still" water level of 15.6 Mean Low Lower Water (MLLW). In its review, the NRC generally agreed with this model, arriving at a maximum still water level of 15.83 ft MLLW (Staff Report 2000).

The "Tsunami Inundation Map for Emergency Planning," which was published June 1, 2009, for southern California's coastline in southern Orange County and northern San Diego County was prepared jointly by the State of California Office of Emergency Services, the California Geologic Survey, the University of Southern California Tsunami Research Center, and the National Oceanic and Atmospheric Administration. The tsunami inundation elevation (shown as a red line on the map) was created by the State of California to identify a "credible upper bound" to potential inundation at any location along the coastline. It was created by combining an ensemble of source events affecting the region, as summarized on Table 1 on the map. The red line shows a potential maximum tsunami inundation elevation of 17 to 20 feet (ft) above mean sea level (msl), or an equivalent elevation of 19.9 to 22.9 ft MLLW for the North Industrial Area if protection by the seawall is excluded (SCE, 2011). This water level is 15 to 12 ft below the proposed pad grade elevation¹ of approximately 34.9 ft MLLW or 32 ft amsl. Further, with the existing sea wall, which will be maintained so long as the ISFSIs are on the Project Site, the Project Site would not be inundated from a tsunami.

As described further in the Environmental Report prepared for the HI-STORM UMAX system, the Proposed Project has been designed to withstand impacts associated with inundation, ground water intrusion, and flooding. Referring to Figure 7, Key Constituents of a HI-STORM UMAX System, specifically, each Cavity Enclosure Container (CEC) consists of an underground steel structure, sealed to ensure there would be no below grade penetrations or openings that would allow for the ingress of any groundwater. Additionally, the ISFSI pad itself would serve as an impervious barrier of reinforced concrete that would further prevent water intrusion into the CEC. The MPC (which is a welded, completely closed container where the spent fuel is contained) is itself contained within the Vertical Ventilated Modules (VVM). Under no circumstances, would there be any water intrusion into the MPC. The aboveground air passages on the VVMs, which provide an air cooling flow path, are located above the top of the grade, providing further protection from water intrusion. If any water intrusion associated with on-site runup during a tsunami entered the above ground air passages, it

¹ As is described in Attachment A, the pad grade elevation is the elevation of the berm which covers the top of the HI-STORM UMAX system.

would only enter into the cavity space between the CEC and the MPC. Again, it could not enter into the MPC given the steel cased enclosure.

Conclusion.

The potential for inundation from a tsunami has been evaluated and determined not to significantly impact to the stability and structural integrity of the Proposed Project. While results of available studies indicate that the Project Site is susceptible to inundation from a tsunami, if the existing seawall is not present, the seawall will be present as long as the ISFSI is in place and would therefore protect the Project Site from inundation for the predicted maximum tsunami event. Further, the HI-STORM UMAX system has been designed to withstand impacts associated with inundation, ground water intrusion, and flooding. Although there is no study that would indicate that site inundation would reach the level of the aboveground air passages (located above the top of grade), water intrusion into the cavity space between the CEC and the MPC would not adversely affect the MPCs because the MPCs are welded, completely closed steel container which would not allow for the intrusion of any water.

Coastal Erosion and Bluff Retreat. The SONGS Site, including the Project Site, is located on both the Monterey and San Mateo Formations. Previous testing has indicated that soils on the site within the Monterey Formation are susceptible to landsliding; however, due to the presence of dense sandstone within the San Mateo Formation on the Project Site, the Proposed Project is not considered to be susceptible to bluff erosion (Staff Report 2000). Additionally, it should be noted that bluff erosion on the SONGS Site, specifically in areas underlain by the Monterey Formation, has been slowed due to the presence of a seawall that has protected the SONGS site from coastal erosion over the last 38 years and because natural and artificial cliff exposures have been sprayed with gunite.¹

Conclusion.

The Proposed Project would not result in any potentially significant impacts associated with coastal erosion or bluff retreat. As previously stated, bluff erosion has been slowed at the SONGS Site in areas underlain by the Monterey Formation due to the fact that the natural and artificial cliff exposures have been sprayed with gunite. In addition, the Project Site is located within a currently developed industrial area that has been protected by a seawall and from coastal erosion over the last 38 years and the seawall will remain in place as long as the ISFSIs are present on the site. Additionally, it should be noted that previous modeling on the Project Site indicated that the existing seawall is not necessary to prevent coastal erosion on the site. Therefore, given the presence of the seawall, the use of gunite on natural and artificial cliff exposures on the SONGS Site, and the fact that the Project Site is underlain by the San Mateo Formation, the Proposed Project is not anticipated to either contribute to coastal erosion and bluff retreat or be jeopardized by impacts related to coastal erosion and bluff retreat.

¹ Gunite is a building material consisting of a mixture of sand, cement, and water.

1.1.2 Visual Resources

Section 30251, Scenic and Visual Qualities. This section of the CCA states the following related to visual resources:

The scenic and visual qualities of coastal areas shall be considered and protected as a resource of public importance. Permitted development shall be sited and designed to protect views to and along the ocean and scenic coastal areas, to minimize the alteration of natural land forms, to be visually compatible with the character of surrounding areas, and, where feasible, to restore and enhance visual quality in visually degraded areas. New development in highly scenic areas such as those designated in the California Coastline Preservation and Recreation Plan prepared by the Department of Parks and Recreation and by local government shall be subordinate to the character of its setting.

The SONGS Site is partially visible from Old Pacific Coast Highway and Interstate 5 (I-5). The Project Site is surrounded and enclosed by bluffs and a 15 ft seawall. Views of the Project Site from the bluffs and San Onofre State Beach are therefore obstructed.

Conclusion.

The San Onofre State Beach and Camp Pendleton are both identified as landscape and recreation resources in the California Coastline Preservation and Recreation Plan (August 1971). However, the Proposed Project would not have a potentially significant impact on views to and along the ocean and scenic coastal areas nor will it visually degrade the area. The Proposed Project would be developed within the North Industrial Area (NIA) of the existing SONGS Site, which itself is developed with industrial uses associated with the existing SONGS nuclear power plant facility. The proposed ISFSI would be subterranean and would mostly be constructed below grade; however, at peak height, portions of the ISFSI would be approximately 12.25 ft above the existing grade. The area above existing grade will be covered in an earthen berm. The Proposed Project also includes an aboveground security building that would be approximately 26 ft in height, a new fence, and associated lighting and security equipment. All components of the Proposed Project would be similar to existing structures and facilities on the Project Site and on the SONGS Site as a whole, and as such, would not visually alter the area in any potentially significant way. The Proposed Project would also be visually shielded by bluffs present on the northwestern portion of the SONGS site and the approximately 15 ft seawall on the southern boundary of the site. Therefore, the Proposed Project would not be visible from any publicly accessible coastal area. Similarly, construction equipment associated with the Proposed Project would be shielded from any coastal area accessible to the public. Therefore, consistent with the CCA, the Proposed Project would not significantly alter the visual character of either the San Onofre State Beach or Camp Pendleton, would not have a potentially significant impact on views to and along the ocean and scenic coastal areas, and would not visually degrade the Project Site.

1.1.3 Public Access and Recreation

Section 30211, Development Not to Interfere with Access. This section of the CCA states the following related to public access and recreation:

Development shall not interfere with the public's right of access to the sea where acquired through use or legislative authorization, including, but not limited to, the use of dry sand and rocky coastal beaches to the first line of terrestrial vegetation.

Section 30212(a), New Development Projects. This section of the CCA states the following related to public access and recreation:

Public access from the nearest public roadway to the shoreline and along the coast shall be provided in new development projects except where: (1) it is inconsistent with public safety, military security needs, or the protection of fragile coastal resources, (2) adequate access exists nearby, or, (3) agriculture would be adversely affected. Dedicated accessway shall not be required to be opened to public use until a public agency or private association agrees to accept responsibility for maintenance and liability of the accessway.

Section 30221, Oceanfront Land, Protection for Recreational Use and Development. This section of the CCA states the following related to public access and recreation:

Oceanfront land suitable for recreational use shall be protected for recreational use and development unless present and foreseeable future demand for public or commercial recreational activities that could be accommodated on the property is already adequately provided for in the area.

Section 30252, Maintenance and Enhancement of Public Access. This section of the CCA states the following related to public access and recreation:

The location and amount of new development should maintain and enhance public access to the coast by (1) facilitating the provision or extension of transit service, (2) providing commercial facilities within or adjoining residential development or in other areas that will minimize the use of coastal access roads, (3) providing nonautomobile circulation within the development, (4) providing adequate parking facilities or providing substitute means of serving the development with public transportation, (5) assuring the potential for public transit for high intensity uses such as high-rise office buildings, and (6) assuring that the recreational needs of new residents will not overload nearby coastal recreation areas by correlating the amount of development with local park acquisition and development plans with the provision of onsite recreational facilities to serve the new development.

Implementation of the Proposed Project would occur on the Project Site within the boundaries of the existing SONGS Site. The San Onofre State Beach provides the nearest access to coastal waters and recreation activities west and south of the Project Site. Public access to these beach areas is currently provided via well-developed paths and roads in close proximity to the northwestern and southwestern SONGS Site. Further, there is an existing pedestrian pathway bordering the western and southwestern boundary of the SONGS Site. There is no public access to these beaches from or through the SONGS Site. Finally, per NRC regulations, public access to the SONGS Site is strictly prohibited by an existing fence surrounding the site and is regulated by an on-site security force maintained by SCE.

Conclusion.

The Proposed Project would not result in any potentially significant impact to public access to the coast or to recreational uses. It would not include construction in the San Onofre State Beach area nor would it impact any of the public access routes to the beach. Therefore, the Proposed Project would not obstruct or inhibit public access to the San Onofre State Beach, and no new public access ways would be warranted as a result of project implementation. Construction of the Proposed Project would require a number of trucks traveling to and from the Project Site, and it is possible that construction activities could result in brief time delays for visitors traveling to San Onofre State Beach from I-5 or Old Pacific Coast Highway. This would not be a significant impact, however, given the brevity of the delay and the temporary nature of the construction activities.

1.1.4 Marine Resources, Water Quality, and Environmentally Sensitive Habitat Areas

Section 30230, Marine Resources, Maintenance. This section of the CCA states the following related to marine resources:

Marine resources shall be maintained, enhanced, and where feasible, restored. Special protection shall be given to areas and species of special biological or economic significance. Uses of the marine environment shall be carried out in a manner that will sustain the biological productivity of coastal waters and that will maintain healthy populations of all species of marine organisms adequate for long-term commercial, recreational, scientific, and educational purposes.

Section 30231, Biological Productivity, Water Quality. This section of the CCA states the following related to water quality:

The biological productivity and the quality of coastal waters, streams, wetlands, estuaries, and lakes appropriate to maintain optimum populations of marine organisms and for the protection of human health shall be maintained and, where feasible, restored through, among other means, minimizing adverse effects of waste water discharges and entrainment, controlling runoff, preventing depletion of ground water supplies and substantial interference with surface waterflow, encouraging waste water reclamation, maintaining natural vegetation buffer areas that protect riparian habitats, and minimizing alteration of natural streams.

The Project Site is located within the SONGS Site, which itself, is adjacent to San Onofre State Beach and the Pacific Ocean. Existing facilities on the SONGS Site are regulated under existing industrial National Pollutant Discharge Elimination System (NPDES) permits, issued by the California Regional Water Quality Control Board, San Diego Region, which currently serve to minimize impacts to nearby marine and biological resources. Construction of the Proposed Project will comply with SCE's storm water management plan, utilizing best management practices to ensure no discharges would exceed the specific NPDES permit limits. The NPDES establishes specific parameters to regulate low volume waste streams, as well as combined discharges. Monthly, quarterly, semi-annual and offshore sampling is required and results are reported to the San Diego Regional Water Quality Control Board. Typical analyses include, but are not limited to, pH concentration, total suspended solids, toxicity, turbidity, chlorine, hydrazine, water flows and temperature.

Conclusion.

Operation of the Proposed Project would not result in any potentially significant impacts to the biological productivity or quality of waters. Project operation would not result in any liquid discharges. Potential impacts to water quality associated with construction of the Proposed Project will be reduced to a less than significant level through the implementation of best management practices (BMPs) as set forth in **Applicant Proposed Measure 1**.

As part of Proposed Project construction, the existing on-site sump and drainage lines would be relocated outside of the existing fence surrounding the perimeter of the on-site ISFSIs to the eastern area of the Project Site at the same elevation. Although the on-site sump would be relocated, the point of discharge would remain the same. Similar to the existing ISFSI, the Proposed Project would comply with measures regulating the disposal of construction debris on the Project Site to reduce impacts related to the runoff of such debris during precipitation events. Specifically, SCE proposes to adhere to **Applicant Proposed Measure 2**, which requires the disposal of construction debris generated on the Project Site to an off-site facility and cover or contain any debris or material left on the site that could potentially lead to increased sedimentation in receiving waters during precipitation events. In addition, SCE would also adhere to **Applicant Proposed Measure 3**, which requires the monitoring and removal of sediment and other material collected in an on-site sump to ensure that such material does not interfere with the proper functioning of the sump. The proper functioning of the on-site sump is critical to ensure on-site sediment does not contribute to sediment loading and turbidity in receiving waters.

Applicant Proposed Measure 1:

Best Management Practices. During construction activities, the Applicant shall adhere to Best Management Practices (BMPs) per San Onofre Nuclear Generating Station (SONGS)/Southern California Edison (SCE) procedures. Such BMPs shall be depicted on construction drawings and shall be in place prior to the commencement of construction activities. Applicable examples of the BMPs include the following:

- Vehicle leaks, equipment leaks, drum leaks, and fuel spills shall be swept and cleaned with a spill kit to minimize the buildup of organic compounds and grease.
- Oil-water separation will be located at each discharge point to capture oil and grease prior to discharge to the beach.
- Temporary staging equipment (onsite for less than 30 days) shall be stored in bermed hazardous materials/waste storage areas, on pallets or in temporary spill containers, drip pans or buckets. Such areas shall be visually inspected for sheen prior to discharge through valves.
- On site trash containers shall be covered with a lid or roof to prevent debris from spilling or overflowing.

Applicant Proposed Measure 2:

Construction Debris. During construction activities, the Applicant shall dispose of construction debris at an appropriate off-site facility and shall cover or contain debris and material left on site that could lead to potential sedimentation in receiving waters during precipitation events. During project construction activities, the Applicant shall look for opportunities to repurpose construction debris, as feasible.

Applicant Proposed Measure 3:

Sediment and Material On-Site. During construction activities, the Applicant shall remove all sediment or material that could potentially interfere with the proper functioning of the on-site sump.

Section 30240, Environmentally Sensitive Habitat Areas, Adjacent Developments. This section of the CCA states the following related to ESHAs:

(a) Environmentally sensitive habitat areas shall be protected against any significant disruption of habitat values, and only uses dependent on those resources shall be allowed within those areas.

(b) Development in areas adjacent to environmentally sensitive habitat areas and parks and recreation areas shall be sited and designed to prevent impacts which would significantly degrade those areas, and shall be compatible with the continuance of those habitat and recreation areas.

The Project Site has previously been developed with Unit 1 of the SONGS facility and the existing ISFSI. Consequently, the Project Site does not contain any biological resources due to previous extensive on-site disturbance. Although there are no on-site biological resources, existing ESHAs are located northwest and southeast of the Project Site. Previous biological studies found that these ESHAs contains gnatcatcher habitat.

Conclusion.

The Proposed Project will not have a potentially significant impact on the ESHAs located near the Project Site. The new lighting on the Project Site would be consistent with the existing ISFSI pad and the lighting currently in place for the existing SONGS facilities. Similarly, due to the nature of the Proposed Project being an underground dry storage system, project-related noise increases would be less than the operational noise of existing SONGS facilities and would be less than the 60 A-weighted decibels (dBA) threshold established by the United States Fish and Wildlife Service to assess impacts to the gnatcatcher species. Furthermore, noise and light emitted from the Proposed Project would be shielded by the existing bluffs surrounding the Project Site on its northern and northwestern boundaries and by the seawall present to the south of the Project Site.

1.1.5 Air Quality

Section 30253, Minimization of Adverse Impacts. This section of the CCA states the following related to air quality:

New development shall do all of the following:

(c) Be consistent with requirements imposed by an air pollution control district or the State Air Resources Board as to each particular development.

The San Diego Air Pollution Control District (SDAPCD) has not adopted thresholds for determining air emissions significance. As such, the County of San Diego (County) thresholds for determining air emissions significance, as established in the *Guidelines for Determining Significance and Report Format and Content Requirements – Air Quality* (Air Quality Guidelines, March 2007), are utilized in this analysis. The County standards were set at a level that protects public health with an adequate margin of safety (United States Environmental Protection Agency [U.S. EPA]); therefore, the emission thresholds established in the County Guidelines are regarded as conservative and would overstate an individual project's contribution to health risks.

Conclusion.

The Proposed Project would not result in significant air pollutant emissions. Project construction is anticipated to result in air quality emissions during operation and use of construction equipment. Table B-1, Project Construction Emissions (lbs/day), shows the significance thresholds that have been established by the County and compares the Proposed Project’s construction-related emissions to these thresholds. If construction-related emissions exceed any of the emission thresholds, the Proposed Project would be considered to have a significant air quality impact. Conversely, a project with daily emission rates, risk values, or concentrations below these thresholds is generally considered to have a less than significant impact air quality.

Table B-1: Project Construction Emissions (lbs/day)

Project Phases	CO	NO_x	ROG	Total PM₁₀	Total PM_{2.5}
Site Prep	108.5	184.0	9.7	86.3	22.4
Construction	95.3	129.0	6.8	86.0	22.1
Site Completion	78.0	131.3	6.9	84.7	21.0
Maximum (lbs/day)	108.5	184.0	9.7	86.3	22.4
County Thresholds (lbs/day)	550	250	75	100	55
Exceeds Threshold?	No	No	No	No	No

Source: LSA Associates, Inc. (December 2014). The California Air Resources Board-EMFAC2011 model was utilized to calculate on-road emissions and Environmental Protection Agency Tier 2 rates were utilized to calculate off-road emissions.

- CO = carbon monoxide
- County = County of San Diego
- lbs/day = pounds per day
- NO_x = oxides of nitrogen
- PM₁₀ = particulate matter less than 10 microns in size
- PM_{2.5} = particulate matter less than 2.5 microns in size
- ROGs = reactive organic gases

Conclusion.

The Proposed Project would not result in any significant air quality impacts. Operation of the Proposed Project will not result in emission and as illustrated by Table B-1, Proposed Project construction activities would not exceed any air quality emissions thresholds established by San Diego County.

1.1.6 Greenhouse Gases/Climate Change

The following discussion was not included in the 2001 ISFSI CDP, but has been included in this CDP Amendment application to ensure consistency with updates to the CCA, which require an analysis of potential impacts related to greenhouse gas (GHG) emissions and climate change.

Section 30253, Minimization of Adverse Impacts. This section of the CCA states the following related to GHG emissions/ global climate change (GCC):

- (d) *Minimize energy consumption and vehicle miles traveled.*

Greenhouse Gases/Global Climate Change. GCC is the observed increase in the average temperature of the Earth's atmosphere and oceans along with other significant changes in climate (such as precipitation or wind) that last for an extended period of time. The prevailing scientific opinion on climate change is that the majority of warming observed within the last 50 years is attributable to anthropogenic activities. Specifically, increased amounts of carbon dioxide and other GHG emissions are the primary causes of the anthropogenic component of warming. Examples of changes to the global climate system occurring as a result of warming include, but are not limited to, higher sea levels, drier or wetter weather, changes in salinity, changes in wind patterns, heat waves, extreme cold, and increased intensity of tropical cyclones.

Project construction activities would result in 649.55 metric tons of total carbon dioxide equivalent (CO₂e) emissions, which would be less than San Diego County's established emission threshold of 2,500 metric tons of CO₂e per year.

Conclusion.

The Proposed Project is not anticipated to result in a significant impact related to GHG emissions and GCC. Given the nature of the Proposed Project being an underground spent fuel storage facility, operation of the Proposed Project is not anticipated to result in operational GHG emissions. Therefore, the Proposed Project would not generate significant GHG emissions that would contribute to GCC.

1.1.7 Sea Level Rise

Although there is no specific section of the CCA related to Sea Level Rise (SLR), the CCC requires CDPs or CDP Amendments to include an evaluation of the potential impacts associated with SLR on all projects within the Coastal Zone. To assist in addressing the impacts of SLR, the CCC has drafted a Sea-Level Rise Policy Guidance (October 14, 2013) policy document. This document is one component of a larger State effort to respond to impacts associated with GCC. Among other things, the Sea-Level Rise Policy Guidance document provides step-by-step guidelines for analyzing SLR impacts on projects located within the coastal zone that require a CDP. It is the stated goal of the CCC that these steps be utilized to minimize development risk and avoid impacts to coastal resources resulting from SLR that could arise over the life of a project.

These steps are outlined as follows:

1. Establish the projected SLR range for the proposed project.
2. Determine how impacts from SLR may constrain the project site.
3. Determine how the project may impact coastal resources, considering the influence of future SLR upon the landscape.
4. Identify project design alternatives to both avoid impacts to coastal resources and minimize risks to the project.
5. Finalize project design and submit CDP application.

The following discussion estimates impacts from the projected SLR on the Proposed Project.

The FSAR prepared for the HI-STORM UMAX VVM states that the estimated design life, which equates to the minimum duration the Proposed Project can be expected to perform its function, is 60 years. However, in order to assume a worst-case analysis with respect to SLR, the Proposed Project's service life (100 years¹), which assumes the maximum length of time the Proposed Project can be expected to perform its function, was utilized for this analysis. The Proposed Project's service life utilized in this analysis is also congruent with the furthest horizon year of 100 years, as established in the Sea-Level Rise Policy Guidance document, for analyzing impacts related to SLR. Further, the Sea-Level Rise Policy Guidance projections regarding potential impacts of SLR on the Project Site does not take into account the presence of the existing seawall along the southern boundary of the Project Site and therefore, overstate the potential impact given that the existing seawall or a similar replacement structure will be maintained for the life of the Proposed Project. According to Appendix A of the Sea-Level Rise Policy Guidance document, SLR projections for coastal areas south of Cape Mendocino are as follows: 4 to 30 centimeters (cm)/1.6 to 12 inches (in) between 2000 and 2030, 12 to 61 cm/5 to 24 in between 2000 and 2050, and 42 to 167 cm/16.5 to 66 in between 2000 and 2100. The Proposed Project is anticipated to be completed by the end of 2016 (see Attachment A, Project Description) with a corresponding project opening year of 2017. For the purposes of the mathematical model assuming a service life of 100 years, the Proposed Project is anticipated to remain on site until 2117, at which point the sea-level is anticipated to have risen by approximately 16.5 to 66 in.

However, due to the relatively long service life of the Proposed Project, a more site-specific SLR analysis was prepared for the Proposed Project in accordance with the guidelines set forth in Appendix B of the Sea-Level Rise Policy Guidance document. The steps for analyzing SLR in Appendix B are outlined as follows:

1. Determine the appropriate planning horizon or expected project life.
2. Determine the regional sea level projections for planning horizon or expected project life.
3. Modify regional SLR projects for local vertical land motion.
4. Project tidal elevations and future inundation.
5. Determine water level changes from surge, El Niños, Pacific Decadal Oscillation (PDO), etc.
6. Estimate beach, bluff, and dune change from erosion.
7. Determine potential flooding, wave impacts, and runup.
8. Examine potential flooding from extreme events.
9. Repeat as necessary.

The following supplemental SLR evaluation has been provided based on the guidance provided by the CCC. For projects expected to open during or close to the years 2030, 2050, or 2100, the CCC provides guidance on projecting SLR using linear interpolation. However, because the Proposed

¹ The Sea-Level Rise Policy Guidance provides standards for calculating sea-level rise for the expected life of a structure, which normally are evaluated using 50, 75, or 100 horizon years. Therefore, the furthest horizon year of 100 years was used for purposes of evaluating impacts from a conservative, worst-case scenario.

Project is anticipated to have a maximum service life of 100 years, which equates to 2117 following completion of the project, the following analysis is based on a series of quadratic equations established by the CCC, which provide for a more accurate evaluation of the projected SLR for specific years other than 2030, 2050, and 2100.

1. Determine the appropriate planning horizon or expected project life.

As previously stated, the estimated service life for the Proposed Project is based on a worst-case assumption. Therefore, the 100-year planning horizon was selected for this project.

2. Determine the regional sea level projections for planning horizon or expected project life.

Appendix B of the Sea-Level Rise Policy Guidance document provides quadratic equations that can be utilized to project SLR for years other than 2030, 2050, and 2100. For purposes of this analysis, and consistency with the guidelines set forth in the Sea-Level Rise Policy Guidance document, SLR projections have been calculated for the 30-, 50-, 75-, and 100-year time spans over the life of the proposed project.

The following equation was utilized in each scenario, where “t” represents the number of years after 2000.

$$\begin{aligned} \text{Upper Range-Sea Level Change (cm)} &= 0.0093t^2 + 0.745t \\ \text{Lower Range- Sea Level Change (cm)} &= 0.0038t^2 + 0.039t \end{aligned}$$

30 years 2017 + 30 = 2047

$$\begin{aligned} \text{Upper Range-Sea Level Change (cm)} &= 0.0093t^2 + 0.745t \\ \Rightarrow \text{Upper Range-Sea Level Change (cm)} &= 0.0093 * (47)^2 + 0.745 * (47) \\ \Rightarrow \text{Upper Range-Sea Level Change (cm)} &= 0.0093 * (2,209) + 0.745 * (47) \\ \Rightarrow \text{Upper Range-Sea Level Change (cm)} &= 20.54 + 35.02 \\ \Rightarrow \text{Upper Range-Sea Level Change (cm)} &= \mathbf{55.56 \text{ cm (1.82 ft)}} \end{aligned}$$

$$\begin{aligned} \text{Lower Range- Sea Level Change (cm)} &= 0.0038t^2 + 0.039t \\ \Rightarrow \text{Lower Range- Sea Level Change (cm)} &= 0.0038 * (47)^2 + 0.039 * (47) \\ \Rightarrow \text{Lower Range- Sea Level Change (cm)} &= 0.0038 * (2,209) + 0.039 * (47) \\ \Rightarrow \text{Lower Range- Sea Level Change (cm)} &= 8.39 + 1.83 \\ \Rightarrow \text{Lower Range- Sea Level Change (cm)} &= \mathbf{10.22 \text{ cm (0.34 ft)}} \end{aligned}$$

50 years 2017 + 50 = 2067

$$\begin{aligned} \text{Upper Range - Sea Level Change (cm)} &= 0.0093t^2 + 0.745t \\ \Rightarrow \text{Upper Range - Sea Level Change (cm)} &= 0.0093 * (67)^2 + 0.745 * (67) \\ \Rightarrow \text{Upper Range - Sea Level Change (cm)} &= 0.0093 * (4,489) + 0.745 * (67) \\ \Rightarrow \text{Upper Range - Sea Level Change (cm)} &= 41.75 + 49.92 \\ \Rightarrow \text{Upper Range - Sea Level Change (cm)} &= \mathbf{91.67 \text{ cm (3.01 ft)}} \end{aligned}$$

$$\begin{aligned} \text{Lower Range - Sea Level Change (cm)} &= 0.0038t^2 + 0.039t \\ \Rightarrow \text{Lower Range - Sea Level Change (cm)} &= 0.0038 * (67)^2 + 0.039 * (67) \end{aligned}$$

- ⇒ Lower Range - Sea Level Change (cm) = $0.0038 * (4,489) + 0.039 * (67)$
- ⇒ Lower Range - Sea Level Change (cm) = $17.06 + 2.61$
- ⇒ Lower Range - Sea Level Change (cm) = **19.67 cm (0.65 ft)**

75 years $2017 + 75 = 2092$

- Upper Range - Sea Level Change (cm) = $0.0093t^2 + 0.745t$
- ⇒ Upper Range - Sea Level Change (cm) = $0.0093 * (92)^2 + 0.745 * (92)$
 - ⇒ Upper Range - Sea Level Change (cm) = $0.0093 * (8,464) + 0.745 * (92)$
 - ⇒ Upper Range - Sea Level Change (cm) = $78.72 + 68.54$
 - ⇒ Upper Range - Sea Level Change (cm) = **147.26 cm (4.83 ft)**

- Lower Range - Sea Level Change (cm) = $0.0038t^2 + 0.039t$
- ⇒ Lower Range - Sea Level Change (cm) = $0.0038 * (92)^2 + 0.039 * (92)$
 - ⇒ Lower Range - Sea Level Change (cm) = $0.0038 * (8,464) + 0.039 * (92)$
 - ⇒ Lower Range - Sea Level Change (cm) = $32.16 + 3.59$
 - ⇒ Lower Range - Sea Level Change (cm) = **35.75 cm (1.17 ft)**

100 years $2017 + 100 = 2117$

- Upper Range - Sea Level Change (cm) = $0.0093t^2 + 0.745t$
- ⇒ Upper Range - Sea Level Change (cm) = $0.0093 * (117)^2 + 0.745 * (117)$
 - ⇒ Upper Range - Sea Level Change (cm) = $0.0093 * (13,689) + 0.745 * (117)$
 - ⇒ Upper Range - Sea Level Change (cm) = $127.31 + 87.17$
 - ⇒ Upper Range - Sea Level Change (cm) = **214.48 cm (7.04 ft)**

- Lower Range - Sea Level Change (cm) = $0.0038t^2 + 0.039t$
- ⇒ Lower Range - Sea Level Change (cm) = $0.0038 * (117)^2 + 0.039 * 117$
 - ⇒ Lower Range - Sea Level Change (cm) = $0.0038 * (13,689) + 0.039 * 117$
 - ⇒ Lower Range - Sea Level Change (cm) = $52.02 + 4.56$
 - ⇒ Lower Range - Sea Level Change (cm) = **56.58 cm (1.86 ft)**

3. Modify regional SLR projects for local vertical land motion.

As stated in the Sea-Level Rise Policy Guidance document, Step 3 of this analysis is required for those projects in the vicinity of Humboldt Bay and the Eel River estuary. For all projects outside of these areas, this step can be skipped. Therefore, due to location of the project site in northern San Diego County, the values calculated in Step 2 would not need to be modified.

4. Project tidal elevations and future inundation.

The following equations are utilized to calculate the Current and Future Water Elevations:

Current Water Elevation (Mean Higher High Water, Relative to NAVD88, National Oceanographic and Atmospheric Administration [NOAA] Tide Station, 9410396, Oceanside Harbor, California) = 19.37 ft.¹

Future Water Elevation = Current Water Elevation + Projected Sea-Level Rise

Future Higher High Tide Water Elevation = Current Water Elevation + Projected SLR (30 year)

⇒ Future Water Elevation = 19.37 ft + 1.82 ft = **21.19 ft**

Future Higher High Tide Water Elevation = Current Water Elevation + Projected SLR (50 year)

⇒ Future Water Elevation = 19.37 ft + 3.01 ft = **22.38 ft**

Future Higher High Tide Water Elevation = Current Water Elevation + Projected SLR (75 year)

⇒ Future Water Elevation = 19.37 ft + 4.83 ft = **24.20 ft**

Future Higher High Tide Water Elevation = Current Water Elevation + Projected SLR (100 year)

⇒ Future Water Elevation = 19.37 ft + 7.04 ft = **26.41 ft**

Refer to Figure 11, Sea Level Rise Flood Risk, for an illustration of SLR in the year 2117 (100 year horizon).

5. Determine water level changes from surge, El Niños, PDOs, etc.

There is insufficient information to predict temporary changes in local water level caused by oceanographic phenomena such as El Niños and PDOs. However, short-periods of fluctuation in the sea level may exceed 20 cm (7.9 in), and storm-driven heights exceeding 3.28 ft.²

As discussed above and described further in the Environmental Report prepared for the HI-STORM UMAX system, the Proposed Project has been designed to withstand impacts associated with inundation, ground water intrusion, and flooding. Therefore, water level changes and flooding during an El Nino or PDO event would not adversely impact the Proposed Project.

6. Estimate beach, bluff, and dune change from erosion.

¹ Tides and Currents, Datums for 9410396, Oceanside Harbor, California. Website: <http://tidesandcurrents.noaa.gov/datums.html?id=9410396> (accessed November 11, 2014).

² National Research Council, Sea-Level Rise for the Coasts of California, Oregon, and Washington: Past, Present, and Future, 2012.

Because the Project Site is located on the San Mateo Formation, which consists of dense sand and bedrock, it is not generally susceptible to erosion. Furthermore, the Project Site is protected by a seawall on the southern boundary of the SONGS site (refer to Figure 10, Existing Seawall) that has protected the SONGS Site from erosion for the last 38 years. Therefore, the Project Site is not anticipated to be significantly impacted from erosion in the future SLR horizon years.

7. Determine potential flooding, wave impacts, and runup.

It should be noted that while the Sea-Level Rise Policy Guidance document recommends the analysis of flooding, wave impacts, and runup resulting from wind or storm surge, the region of Southern California has not historically been impacted by wind or storm surge as compared to other areas within the United States, particularly the East Coast and the Gulf of Mexico. Rather, rainfall has presented the most significant threat to coastal projects due to its potential to cause extensive flood damage.¹ However, for purposes of analyzing potential flooding on the site, a storm surge of 1 ft was utilized, consistent with the storm surge used to analyze flooding on the site during a tsunami event. In addition, a wave runup of 8.8 ft² was assumed for the calculations below, consistent with previous tsunami analyses prepared for the SONGS site.

The following equations are utilized to calculate potential flooding, wave, impacts, and runup on the project site:

$$\text{Future Flooding} = \text{Future Higher High Tide} + \text{Surge} + \text{Forcing} + \text{Wave Runup}$$

$$\text{Surge} + \text{Forcing} = 1 \text{ ft}$$

$$\text{Wave Runup} = 8.8 \text{ ft}$$

$$\text{Future Flooding (30 year)} = 21.19 \text{ ft} + 1 \text{ ft} + 8.8 \text{ ft} = \underline{\underline{30.99 \text{ ft}}}$$

$$\text{Future Flooding (50 year)} = 22.38 \text{ ft} + 1 \text{ ft} + 8.8 \text{ ft} = \underline{\underline{32.18 \text{ ft}}}$$

$$\text{Future Flooding (75 year)} = 24.20 \text{ ft} + 1 \text{ ft} + 8.8 \text{ ft} = \underline{\underline{34.00 \text{ ft}}}$$

$$\text{Future Flooding (100 year)} = 26.41 \text{ ft} + 1 \text{ ft} + 8.8 \text{ ft} = \underline{\underline{36.21 \text{ ft}}}$$

8. Examine potential flooding from extreme events.

¹ Final North Coast Corridor, Public Works Plan/Transportation and Resource Enhancement Program, Appendix D, San Diego Region Coastal Sea Level Rise Analysis, November 2013.

² California Coastal Commission, Application No. E-00-014, October 11, 2000.

Based on Tsunami mapping prepared by the State of California, portions of the Project Site are located within a Tsunami Inundation Area.¹ Consequently, the potential for flooding on the Project Site during extreme events, such as a tsunami, currently exists and would be expected to increase in likelihood and severity over time, particularly near the 75-year and 100-year SLR horizon years.

As discussed above and described further in the Environmental Report prepared for the HI-STORM UMAX system, the Proposed Project has been designed to withstand impacts associated with inundation, ground water intrusion, and flooding. Consequently, the potential flooding on the Project Site during extreme events, such as a tsunami, would not adversely impact the Proposed Project.

9. Repeat as necessary.

Based on the analysis presented above in Steps 1 through 8, it is not necessary to repeat these steps.

Conclusion.

The Proposed Project will not result in potentially significant impacts as a result of SLR. Although it is evident based on the results from Steps 1 through 8 that the Project Site would be subject to flooding in the later SLR horizon years, particularly 75 years and 100 years after project implementation, there are a number of contributing factors that would minimize SLR and its associated flooding impacts on the Proposed Project to a less than significant level. First, the analyses above do not factor in the presence of the existing approximately 15 ft high seawall along the southern boundary of the property. The seawall or some similar structure will remain in place so long as the ISFSIs are located on the Project Site. This sea wall will likely prevent sea water encroaching on the ISFSI in all but the most extreme events (See Figure 12). Second, as described in detail above, the Proposed Project is a sealed, welded container that would prevent the intrusion of water during flooding events and has also been designed to withstand impacts in the unlikely event of water intrusion in the storage system. Should SLR result in an elevated ground water table which intersects the subterranean portion of the ISFSI, no impact would occur because the facility has been designed so that water cannot intrude into the sealed canisters.

1.1.8 Land Resources/Development

Section 30244, Archaeological or Paleontological Resources. *Where development would adversely impact archaeological or paleontological resources as identified by the State Historic Preservation Officer, reasonable mitigation measures shall be required.*

Previous research on the Project Site has found that the San Mateo bedrock underlying the Project Site has previously yielded a series of marine and non-marine deposits, including mollusk fossils

¹ California Emergency Management Agency, California Geological Survey, University of Southern California; Tsunami Inundation Map for Emergency Planning, San Onofre Bluff Quadrangle, June 1, 2009.

dating back 80,000 to 180,000 years ago (Staff Report 2000). The formations are too old to contain any archaeological resources. The upper 10 to 20 ft of the San Mateo Formation on the Project Site has been previously removed during extensive on-site ground disturbance associated with the Project Site's prior development with Unit 1. The excavation associated with the Proposed Project will all occur in disturbed soils.

Conclusion.

The Proposed Project will not result in any potentially significant impacts to archaeological or paleontological resources because the ground disturbing activities and excavations will all occur on previously disturbed soils.

Section 30250, Location, Existing Developed Area.

(a) New residential, commercial, or industrial development, except as otherwise provided in this division, shall be located within, contiguous with, or in close proximity to, existing developed areas able to accommodate it or, where such areas are not able to accommodate it, in other areas with adequate public services and where it will not have significant adverse effects, either individually or cumulatively, on coastal resources. In addition, land divisions, other than leases for agricultural uses, outside existing developed areas shall be permitted only where 50 percent of the usable parcels in the area have been developed and the created parcels would be no smaller than the average size of surrounding parcels.

(b) Where feasible, new hazardous industrial development shall be located away from existing developed areas.

(c) Visitor-serving facilities that cannot feasibly be located in existing developed areas shall be located in existing isolated developments or at selected points of attraction for visitors.

Section 30260, Location or Expansion. *Coastal-dependent industrial facilities shall be encouraged to locate or expand within existing sites and shall be permitted reasonable long-term growth where consistent with this division. However, where new or expanded coastal-dependent industrial facilities cannot feasibly be accommodated consistent with other policies of this division, they may nonetheless be permitted in accordance with this section and Sections 30261 and 30262 if (1) alternative locations are infeasible or more environmentally damaging; (2) to do otherwise would adversely affect the public welfare; and (3) adverse environmental effects are mitigated to the maximum extent feasible.*

The Proposed Project will be within the current boundaries of the SONGS Site, and will not result in the expansion of the industrial complex. The Proposed Project would involve the construction of a new underground ISFSI on the Project Site, where there is currently an ISFSI.

Conclusion.

The Proposed Project is consistent with this policy as it would result in an expansion of existing coastal-dependent activities on the SONGS site and would not result in significant environmental impacts nor impede or interfere with public access to the coast.

REFERENCES

California Coastal Commission, *California Coastal Commission Draft Sea-Level Rise Policy Guidance Public Review Draft*, October 14, 2013.

California Coastal Commission, *California Coastal Commission Staff Report for Application File Number E-00-014*, October, 11, 2000.

Holtec International, *Environmental Report on the HI-STORM UMAX MPC Based Storage System*, December 17, 2014

Holtec International, *Final Safety Analysis Report on the HI-STORM UMAX Canister Storage System*, July 11, 2014.

Southern California Edison & EPE&C Geotechnical Group, *Final Report Geotechnical Investigation of Alternate Independent Spent Fuel Storage Installation*, November 1995.

Southern California Edison, *San Onofre 2 & 3 FSAR Updated, Section 2.5 Geology, Seismology and Geotechnical Engineering*, Revision 25.

Southern California Edison, *Southern California Edison's Evaluation of California Energy Commission AB 1632 Report Recommendations*, February 2011.

This page intentionally left blank