UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

September 5, 2018

Ms. Cynthia Herzog
Senior Environmental Scientist
California State Lands Commission
100 Howe Avenue, Suite 100-South
Sacramento, CA 95825

SUBJECT: ADDITIONAL INFORMATION REGARDING THE CALIFORNIA STATE LANDS COMMISSION RESPONSE TO THE CITY OF LAGUNA BEACH ENVIRONMENTAL REVIEW PUBLIC SCOPING COMMENTS FOR THE SAN ONOFRE NUCLEAR GENERATING STATION, UNITS 2 AND 3, DECOMMISSIONING PROJECT

Dear Ms. Herzog:

Thank you for the opportunity to review the Draft Environmental Impact Report (EIR) prepared by the California State Lands Commission (CSLC) in regard to the San Onofre Nuclear Generating Station, Units 2 and 3 (SONGS), Decommissioning Project, which was released on June 27, 2018. The operator of SONGS, Southern California Edison (SCE), holds facility operating licenses from the U.S. Nuclear Regulatory Commission (NRC). As noted in your correspondence, the CSLC, as the lead agency under the California Environmental Quality Act (CEQA), has determined that an EIR is required for the SONGS decommissioning project, and is currently soliciting feedback on the Draft EIR. While I understand that the public comment period on the Draft EIR closed on August 28, 2018, I hope that this additional information from the NRC staff will be useful to the CSLC as you move forward with the CEQA process.

In Appendix C of the Draft EIR, the CSLC has dispositioned public scoping comments received as a result of the Notice of Preparation issued on June 12, 2016, regarding the scope and content of the EIR for the SONGS decommissioning project. One of the comment letters, dated August 12, 2016, was received from the City of Laguna Beach, California (the City) and addressed to both the CSLC and the NRC. This letter included numerous comments on the ongoing decommissioning activities at SONGS, and made several requests of the CSLC and the NRC with respect to environmental oversight during this process.

In order to facilitate your ongoing review and finalization of the Draft EIR for the SONGS decommissioning project, in the attachment to this letter, the NRC staff has provided some additional information in support of your disposition of the City's comments. The City's letter, as well as other publicly available documents referenced in the attachment, can be found in the NRC's document repository at Agencywide Documents Access and Management System (ADAMS). You may obtain publicly available documents online in the ADAMS Public Documents collection at http://www.nrc.gov/reading-rm/adams.html. To begin the search, select "ADAMS Public Documents" and then select "Begin Web-based ADAMS Search."

If you have any additional questions or clarifications regarding the information provided in the attachment to this letter, please contact the SONGS decommissioning project manager, Marlayna Vaaler, at 301-415-3178, or via email at marlayna.vaaler@nrc.gov.

Sincerely,

/RA/

Bruce A. Watson, CHP, Chief
Reactor Decommissioning Branch
Division of Decommissioning, Uranium Recovery,
and Waste Programs
Office of Nuclear Material Safety and Safeguards

Docket Nos. 50-361 and 50-362

Attachment: Supplemental Information Regarding the CSLC Responses to the City of Laguna Beach's Comments on the Scope and Content of the EIR for the SONGS Decommissioning Project

cc: electronic Distribution via Listserv

Additional hard copies to:

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Supplemental Information Regarding the CSLC Responses to the City of Laguna Beach's Comments on the Scope and Content of the EIR for the SONGS Decommissioning Project

CSLC Responses to Comments from the City of Laguna Beach (City)

In Appendix C of the Draft EIR for the SONGS decommissioning project, the CSLC has identified the City's August 12, 2016, letter as "Comment Set 7" and has identified seven specific comments within the letter. The CSLC has designated these seven comments from the City's letter as #7-1 to #7-7. The NRC staff appreciates the CSLC's specific responses to comments #7-1 to #7-7 and concurs with them. In addition, the NRC staff recommends that the CLSC comment responses be further supplemented as follows:

1. Role of the NRC

The NRC's mission is set forth in its organic statutory authority, the Atomic Energy Act of 1954, as amended (AEA).[1] Under the AEA, the NRC is charged with regulating the civilian use of radioactive material. Thus, the NRC's regulatory program concerns protecting human health and property from the dangers of radioactivity that could potentially arise from such civilian use, and for ensuring the physical security of radioactive material under the ownership or control of its licensees. The NRC accomplishes its mission through a comprehensive radiation protection program for both members of the public and occupational workers (e.g., workers at a nuclear power plant). The NRC regulates its licensees through regulation, license terms and conditions, and through a robust inspection and enforcement program.[2] The NRC also provides extensive guidance documents to assist its licensees with regulatory compliance. The construction and operation of a nuclear power plant, and the associated use and possession of radioactive material at the plant requires a facility operating license from the NRC.[3]

Once licensed, the NRC is responsible for ensuring that a nuclear power plant licensee meets the applicable NRC radiation protection requirements, including those set forth in the NRC's 10 CFR Part 20 and 50 regulations, and maintains the required level of physical security and emergency preparedness for the licensed site and the radioactive material under its control. The NRC, however, is not responsible for operating the plant; nor does the NRC own or otherwise control the radioactive material on site. Likewise, the NRC does not hold any real property interest in the licensed site itself; nor does it have any land management authority over the site. In addition, the NRC has no role in the ultimate disposition or use of the site after the facility operating license is terminated.

The regulation of non-radioactive material or non-radioactive pollutants at a nuclear power plant is also outside the scope of the NRC's regulatory authority. Further, the NRC only has regulatory authority over those portions of a nuclear power plant that contain or process radioactive material or have a role in the nuclear fission (electricity generating) process, such as the buildings housing the reactor vessel, the spent fuel pool, and the control room. Other than

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1 42 [United States Code] U.S.C. §§ 2011 *et seq*.

2 The NRC's general radiation protection regulations, applicable to all licensees, are set in Title 10 of the *Code of Federal Regulations* (10 CFR) Part 20, "Standards for Protection Against Radiation." The NRC's regulations concerning the licensing of nuclear power plants like SONGS, including decommissioning, are set forth in 10 CFR Part 50, "Domestic Licensing of Production and Utilization Facilities."

3 42 U.S.C. § 2133.

ensuring that the licensee meets the requisite physical security requirements for the facility, or those requirements concerning the transport of radioactive material into and out of the licensed facility, the NRC does not have regulatory authority over the licensee's visitor center, administrative office spaces, cafeteria, roads, parking lots, daycare centers, and other buildings and structures that have no role in either holding, storing, or processing radioactive material.

In this regard, the NRC is not the only regulator of a nuclear power plant facility; several other federal, state, and local agencies typically have regulatory or permitting roles. For example, the licensee must meet the requirements of the Clean Water Act, requiring the licensee to obtain a National Pollutant Discharge Elimination System (NPDES) permit from either the United States Environmental Protection Agency (EPA), or if delegated by the EPA, the appropriate state agency. To the extent there are wetlands on the licensed site, the licensee must obtain the appropriate permit from the United States Army Corps of Engineers. The licensee must satisfy the requirements of all applicable state and local health, safety, and environmental protection laws—those laws are implemented and enforced by the applicable state agencies. Finally, the licensee must satisfy all local or municipal zoning ordinances.

Role of the NRC During Decommissioning and License Termination

In terms of decommissioning, the nuclear power plant licensee must first certify to the NRC that it has permanently stopped operating (i.e., stopped generating electricity by nuclear fission) and that it has removed all nuclear fuel from the reactor vessel.[4] The decommissioning process usually lasts several years, possibly decades, and under the applicable NRC regulation, can take up to sixty years.[5] At the end of the decommissioning process, the licensee will seek to terminate its operating license. The NRC will terminate the license if the licensee demonstrates that it has reduced the residual radioactivity at the licensed site to acceptable levels, i.e., those set forth in Subpart E, "Radiological Criteria for License Termination," of 10 CFR Part 20, "Standards for Protection Against Radiation." SCE has informed the NRC that it intends to pursue license termination in accordance with 10 CFR 20.1402, "Radiological criteria for unrestricted use."[6] Section 20.1402 states, in part,

> A site will be considered acceptable for unrestricted use if the residual radioactivity that is distinguishable from background radiation results in a [total effective dose equivalent][7] to an average member of the critical group[8] that does not exceed 25 mrem (0.25 mSv) per year, including that from groundwater

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4 10 CFR 50.82(a)(1)(i)-(ii).

5 10 CFR 50.82(a)(3).

6 As explained in item 3 below, SCE will continue to operate one small portion of its current licensed site, the independent spent fuel storage installation (ISFSI), indefinitely. Thus, the SCE operating license will, in effect, be reduced to the area of the ISFSI upon successful completion of the decommissioning process for the remainder of the licensed site.

7 "Total effective dose equivalent" or TEDE, is defined as "the sum of the effective dose equivalent (for external exposures) and the committed effective dose equivalent (for internal exposures)." 10 CFR 20.1003. The terms "effective dose equivalent" and "committed effective dose equivalent" are also defined in 10 CFR 20.1003, which is the definitions section for 10 CFR Part 20.

8 "Critical group" is defined as "group of individuals reasonably expected to receive the greatest exposure to residual radioactivity for any applicable set of circumstances." 10 CFR 20.1003.

> sources of drinking water, and the residual radioactivity has been reduced to levels that are as low as reasonably achievable (ALARA).[9]

Thus, whether the licensee has demonstrated to the NRC that it has reduced the site's level of residual radioactivity to the standard specified in 10 CFR 20.1402[10] *is the only factor* that the NRC considers in determining whether the license can be terminated.[11]

Ensuring that the licensee safely meets the regulatory level of residual radioactivity for license termination is the goal of decommissioning. In this regard, "decommissioning" itself is the process by which the licensee reduces the site's residual radioactivity to the regulatory level by removing or otherwise mitigating on-site radiological contamination.[12] Thus, the presence of non-radioactive contaminants on the site (e.g., PCBs, asbestos, lead-based paint), and the remediation or mitigation of such non-radiological hazards, are beyond the scope of the NRC's regulatory authority. Similarly, whether the licensee dismantles and demolishes the facility's buildings and structures, or chooses to leave them standing as part of the decommissioning process, is not within the NRC's purview. The NRC's regulatory objective is that the licensee meets all applicable NRC public and occupational radiological safety requirements throughout the decommissioning process, and that at the completion of that process the licensee is able to demonstrate the requisite level of residual radioactivity.

2. Environmental Impacts of Decommissioning have been Previously Analyzed and are Not Significant

In its August 12, 2016, letter, the City asserts that the NRC must analyze the site-specific radiological safety concerns associated with the SONGS decommissioning project in a site-specific NEPA document, and that the agency's generic NEPA decommissioning analyses are not sufficient. The analyses conducted by the NRC in support of the decommissioning of nuclear power reactors are set forth in the "Final Generic Environmental Impact Statement on Decommissioning of Nuclear Facilities," NUREG-0586 (1988), as supplemented and updated by the "Generic Environmental Impact Statement on Decommissioning of Nuclear Facilities," NUREG-0586, Supplement 1 (2002) (collectively, the Decommissioning GEIS).[13] As explained below, the NRC disagrees with these assertions.

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9 10 CFR 20.1402 (alteration added). The term ALARA is defined in 10 CFR 20.1003 and the NRC's ALARA requirements are generally defined in 10 CFR 20.1101, "Radiation protection programs."

10 The NRC defines "residual radioactivity" as "radioactivity in structures, materials, soils, groundwater, and other media at a site resulting from activities under the licensee's control. This includes radioactivity from all licensed and unlicensed sources used by the licensee, but excludes background radiation. It also includes radioactive materials remaining at the site as a result of routine or accidental releases of radioactive material at the site and previous burials at the site, even if those burials were made in accordance with the provisions of 10 CFR part 20." 10 CFR 20.1402.

11 As explained in item 3 below, the SCE operating license will be reduced to the area of the ISFSI and will remain in effect, indefinitely, for the ISFSI only. The NRC will apply the 10 CFR 20.1402 residual radioactivity standard in determining whether the SONGS licensed site, except for the ISFSI, can be released for unrestricted use (i.e., released from the NRC license and hence, from NRC regulatory authority).

12 The NRC defines the term "decommission" as "to remove a facility or site safely from service and reduce residual radioactivity to a level that permits—(1) Release of the property for unrestricted use and termination of the license; or (2) Release of the property under restricted conditions and termination of the license." 10 CFR 50.2, "Definitions."

13 The "GEIS is considered 'generic' in that it evaluates impacts from decommissioning activities common to a number of nuclear power facilities." NUREG-0586, Supp. 1, at xi, n. (a); available at ADAMS Accession No. ML023500395.

1996 Decommissioning Rulemaking

In the preamble to the 1996 rulemaking that promulgated the NRC's current nuclear power plant decommissioning regulation (10 CFR 50.82, "Termination of license"), the NRC described its finding that nuclear power plants undergoing decommissioning present much lower radiological safety risks than operating nuclear power plants, primarily because nuclear fission is no longer occurring in the reactor vessel and all nuclear fuel assemblies have been permanently removed from the reactor vessel and placed into the facility's spent fuel pool.[14] Specifically, the NRC found that "the activities performed by the licensee during decommissioning do not have a significant potential to impact public health and safety and [therefore] require considerably less oversight by the NRC than during power operations."[15]

Additionally, the systems and processes required to safely maintain a decommissioning plant are much simpler than those required to run an operating plant.[16] For example, unlike an operating plant, a decommissioning plant will not draw in large quantities of cooling water, which after being run through the plant systems and processed as needed, is then released back into the environment. The gaseous and liquid radioactive effluents of a decommissioning plant, to the extent that there are any, will also be far more limited than those of an operating plant. The NRC determined that any environmental impacts were expected to be "minor" and that "[a]ny site impact should be bounded by the impacts evaluated by previous applicable GEISs as well as any site-specific [environmental impact statement (EIS)]."[17]

NRC's NEPA Compliance

The NRC fulfills its NEPA obligations with respect to the decommissioning of nuclear power plants through a combination of generic and site-specific environmental analyses. The NRC prepares a site-specific EIS to support construction and operation of the plant.[18] Subsequent to the issuance of the SONGS operating licenses in 1982, the NRC performed additional environmental reviews to support its decisions regarding the approval or disapproval of specific license amendment or exemption requests. The NRC documented these reviews in accordance with NEPA; specifically, the NRC staff would prepare an environmental assessment (EA) with a finding of no significant impact (FONSI).[19] In addition to the analyses set forth in these site-

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14 61 FR 39278, "Decommissioning of Nuclear Power Reactors," (July 29, 1996) at 39278-79. After several years in the spent fuel pool, spent fuel assemblies are typically removed from the pool and placed into "dry" storage in an ISFSI located on the site. SCE expects to transfer all spent fuel assemblies currently in the SONGS spent fuel pools to the onsite ISFSI by the end of 2018.

15 *Id*., at 39279 (alteration added).

16 *Id*.

17 *Id*., at 39283 (alteration added).

18 The results of the environmental reviews are typically provided as a "NUREG" document for each facility; NUREG-0490, "Final Environmental Statement related to the operation of San Onofre Nuclear Generating Station, Units 2 and 3", dated April 1981 (ADAMS Accession No. ML18239A414), is the EIS supporting the NRC's decision to issue the operating licenses for the SONGS, Units 2 and 3, facilities.

19 *E.g.*, 61 FR 50513 (September 26, 1996) (EA/FONSI for amendments of operating licenses to allow an increase in fuel enrichment); 66 FR 32964 (June 19, 2001) (EA/FONSI for amendments of operating licenses to allow SCE to increase its maximum reactor core power level for both Units 2 and 3); 80 FR 21271 (April 17, 2015) (EA/FONSI for issuance of an exemption from emergency planning requirements due to SONGS being in a decommissioning status).

specific NEPA documents, some of which may remain applicable through the decommissioning process,[20] the decommissioning of SONGS is covered by the Decommissioning GEIS.

The Decommissioning GEIS is a comprehensive generic EIS that covers the potential environmental impacts likely to arise during decommissioning.[21] The NRC's prior operational experience served as the basis for the 1988 Decommissioning GEIS, and was supplemented with additional experience in conducting decommissioning during the 2002 update of the Decommissioning GEIS. The NRC has found that most potential environmental impacts resulting from decommissioning are common to all nuclear power plants and therefore, can be analyzed generically. Additionally, for all environmental impacts dispositioned generically, the NRC has found that decommissioning activities will have only "small" impacts (i.e., impacts that are not significant under NEPA). Therefore, decommissioning is not a "major Federal action" under NEPA.[22] In short, the NRC considers decommissioning activities to present such low safety and environmental risks that the only licensee decommissioning action triggering a required NRC decision (and as such, triggering a site-specific NEPA review) under 10 CFR 50.82 is the submission of a license termination plan (LTP), which the licensee is required to submit at least two years before the expected license termination date.[23] Thus, if a licensee does not submit any other license amendment or exemption requests during decommissioning, the only site-specific NRC NEPA review will be the one conducted for the LTP.

Since the Decommissioning GEIS was supplemented and updated in 2002, the NRC's operational experience has continued to show that the extensive, detailed analyses set forth in the Decommissioning GEIS will bound or account for most reasonably foreseeable, potential environmental impacts that may arise at any decommissioning plant, including SONGS.[24] As long as the licensee's decommissioning activities remain within the scope of the Decommissioning GEIS's analyses, or applicable site-specific NEPA analyses conducted in support of previous licensing actions, those activities will be "bounded" and the potential impacts will be considered to be previously analyzed and not significant for NEPA purposes.

The review of those potential site-specific decommissioning environmental impacts (i.e., those not dispositioned generically in the Decommissioning GEIS) are first addressed in the

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20 For example, the June 2001 EA/FONSI analyzed the increase to water temperature resulting from the proposed increase of the maximum reactor core power level. The temperature increase would impact the cooling water discharged into the Pacific Ocean. As the increase in water temperature was within the limit on differential temperature allowed by the California Regional Water Quality Control Board, the increase was not found to be a significant environmental impact. As a decommissioning plant does not need water to cool its reactor, this EA/FONSI bounds any impacts to water temperature (at least with respect to temperature increases) arising from the SONGS decommissioning process, and complements the findings in the Decommissioning GEIS.

21 In adjudicating a challenge to the NRC's use of generic NEPA analyses, the United States Supreme Court held that "[t]he generic method chosen by the agency is clearly an appropriate method of conducting the hard look required by NEPA." *Baltimore Gas and Electric Co., v. Natural Resources Defense Council*, 462 U.S. 87, 101 (1983).

22 Council on Environmental Quality (CEQ) regulations define the terms "Major Federal action" and "Significantly." 40 CFR 1508.18 and 1508.27. The NRC has adopted these CEQ definitions. 10 CFR 51.14(b).

23 10 CFR 50.82(a)(9) (LTP requirements); 10 CFR 50.82(a)(10) (NRC approval requirements). During its review of the LTP, the NRC will prepare a safety evaluation and an EA, and if approved, the NRC will incorporate the LTP into the operating license via a license amendment.

24 As of August 2018, the NRC has overseen the successful decommissioning of ten nuclear reactor units and is currently overseeing the decommissioning of twenty reactor units (several nuclear power plants, such as SONGS, have more than one reactor unit).

construction and operation EIS (in the case of SONGS, NUREG-0490, referenced above).[25] Additionally, such site-specific impacts would have been analyzed in the EA/FONSIs for license amendment or exemption requests during the plant's operation, such as those referenced above. Finally, during decommissioning, these site-specific impacts will be analyzed by the NRC staff in the appropriate NEPA document (most likely an EA but if necessary, an EIS) in the event the licensee submits a license amendment or exemption request, or after the licensee submits the license amendment request to approve the LTP.[26]

10 CFR 50.82

The NRC's NEPA compliance is supported by the requirements of 10 CFR 50.82. Section 50.82 prohibits a licensee from performing any decommissioning activity that would "result in significant environmental impacts not previously reviewed."[27] This provision was added by the 1996 rule "[t]o account for site-specific situations that may occur outside these environmental impact considerations;" the intent of this provision was to prohibit decommissioning activities that could result in significant environmental impacts not previously reviewed.[28]

The licensee is also required to submit to the NRC a post-shutdown decommissioning activities report (PSDAR), which is one of the regulatory prerequisites that must be satisfied before a licensee may begin decommissioning.[29] The NRC does not approve or disapprove the PSDAR; the submission of a PSDAR is a licensee reporting requirement. As such, the submission of the PSDAR does not result in an agency action. As there is no agency action, there is no requirement to perform a NEPA analysis on the licensee's PSDAR submission. The licensee, however, must include in the PSDAR "a discussion that provides the reasons for concluding that the environmental impacts associated with site-specific decommissioning activities will be bounded by appropriate previously issued environmental impact statements."[30] Although not approved, the NRC staff will still review the PSDAR and to extent that the NRC has concerns with the PSDAR's environmental compliance discussion or other required portions of the PSDAR, the NRC staff may request additional information from the licensee. Further, 10 CFR 50.82 requires a licensee to inform the NRC and affected States, in writing, before "performing any decommissioning activity inconsistent with, or making any significant schedule change from, those actions and schedules described in the PSDAR."[31]

Thus, if the licensee wishes to perform a decommissioning activity that would result in a significant impact not previously reviewed, the licensee would be required to submit a license

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25 *E.g.*, NUREG-0490, § 5.2, "Impacts on Land Use," § 5.4.1, "Environmental Impacts/Terrestrial Environment," § 5.4.2, "Environmental Impacts/Impacts on the Aquatic Environment," § 5.5.2, "Radiological impacts on biota other than man," § 9.4, "Decommissioning," and Appendix D, "Cultural Resources."

26 Any site-specific NEPA analysis prepared during decommissioning will rely on the Decommissioning GEIS' analyses for the generically dispositioned issues. In this regard, the site-specific NEPA analysis "tiers" off the Decommissioning GEIS. 40 CFR 1502.20 and 1508.28 (CEQ regulations); 10 CFR Part 51, Appendix A, 1(b) (adopted by NRC).

27 10 CFR 50.82(a)(6)(ii).

28 61 FR, at 39283.

29 10 CFR 50.82(a)(4)(i). Prior to the 1996 rule, licensees were required to submit a decommissioning plan, which was subject to NRC approval. The 1996 rule replaced the decommissioning plan with the PSDAR. 61 FR at 39279 ("A major change from the current rule is that power reactor licensees would no longer be required to have an approved decommissioning plan before being permitted to perform major decommissioning activities").

30 10 CFR 50.82(a)(4)(i).

31 10 CFR 50.82(a)(7).

amendment request or an exemption request. The NRC would then analyze the proposed action and prepare the necessary site-specific NEPA analysis. If the licensee wishes to perform a decommissioning activity that is otherwise inconsistent with the PSDAR, the licensee would be required to notify the NRC and affected States in writing before taking any action. The NRC and affected States would then have the opportunity to review the proposed action and request additional information from the licensee before the action is taken.

Preparation of a Joint EIR/Environmental Impact Statement (EIS)

In its August 12, 2016, letter, the City asserts that the NRC and the CSLC should prepare a joint EIR. In response, the NRC staff does not agree that it should prepare a joint EIR/EIS with CSLC (nor does the NRC need to prepare a "stand-alone" EIS). According to the draft EIR, the jurisdiction of the CSLC is "seaward of the ordinary high-water mark."[32] The proposed CSLC action concerns the disposition of submerged lands leased to SCE and the City of Riverside, California,[33] and the improvements thereon, namely, the SONGS, Units 2 and 3, offshore intake and discharge conduits and associated appurtenances, navigational and environmental monitoring buoys, and riprap along shore seaward of the ordinary high-water mark.[34]

Whether these improvements should remain in place indefinitely or be partially or wholly removed is a question that is not within the NRC's regulatory authority. As with any part of the NRC-licensed SCE site, the NRC's regulatory objective is that SCE be able to demonstrate that it has met the 10 CFR 20.1402 level of residual radioactivity at the conclusion of the decommissioning process.

SONGS PSDAR

In its August 12, 2016, letter, the City states that it disagrees with the conclusion reached by SCE in its PSDAR, submitted in September 2014 (ADAMS Accession No. ML14269A033). In its PSDAR, SCE stated that "[b]ased on current plans, no decommissioning activities unique to the site have been identified and no activities or environmental impacts outside the bounds considered in the GEIS have been identified."[35]

By letter dated August 20, 2015 (ADAMS Accession No. ML15204A383), the NRC acknowledged receipt of SCE's PSDAR, documented the review, and summarized comments received during the PSDAR public meeting held near the SONGS site in October 2014. In its August 20, 2015, letter, the NRC staff stated:

> [SCE] compared the SONGS, Units 2 and 3, facility to the reference facility in NUREG-0586 and found that the SONGS, Units 2 and 3, environmental impacts were bounded by the analysis provided in NUREG-0586. After reviewing [SCE's] comparison, the NRC staff finds that the potential environmental impacts associated with SONGS, Units 2 and 3, decommissioning activities are bounded by the previously issued GEIS and its [supplement], are described consistent

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32 CSLC, "Draft Environmental Impact Report for the San Onofre Nuclear Generating Station (SONGS) Units 2 & 3 Decommissioning Project," State Clearinghouse No. 2016071025, CSLC EIR No. 784 (June 2018) at ES-3.

33 The City of Riverside is not an NRC licensee and the NRC has no regulatory authority over the City of Riverside.

34 *Id.*, at ES-1.

35 SCE, PSDAR (September 23, 2014) at 8.

with the guidance in RG 1.185,[36] and meet the requirements of 10 CFR 50.82(a)(4)(i).[37]

The City has provided no information that any of the potential environmental impacts that may result from the planned decommissioning activities, as described in SCE's September 2014 PSDAR, are beyond the scope of the Decommissioning GEIS and other previously prepared NRC site-specific NEPA documents or are, in any other way, significant. In response to the City's assertion that the NRC must analyze the site-specific radiological safety issues, presumably in an EIS, the analyses provided in the Decommissioning GEIS are sufficient and bound any reasonably foreseeable impact.

Major Decommissioning Activities; NRC Oversight During Decommissioning

The NRC makes a distinction between an environmental issue, which is analyzed under NEPA, and a safety issue, for which the NRC is responsible under the AEA. Safety issues are analyzed in NRC safety reports, such as a nuclear power plant's final safety analysis report or FSAR, which is part of the plant's licensing basis, and is updated on a regular basis. Any changes that may impact the safety of the plant are evaluated by the NRC staff as part of the safety evaluation reports that accompany licensee requests for the approval of a license amendment or exemption request, or are otherwise reviewed by the NRC staff as part of the licensee reporting and NRC inspection processes. As a "safety" agency, the NRC handles safety issues as they arise on an ongoing and operational basis.

A licensee is prohibited from engaging in "major decommissioning activities" until ninety days after the submission of the PSDAR, provided that the licensee has submitted its 10 CFR 50.82(a)(1)(i)-(ii) certifications that it has permanently ceased operations and has removed all fuel assemblies from the reactor vessel.[38] Once the post-PSDAR ninety day period has run and the requisite certifications have been submitted to the NRC, the licensee may begin major decommissioning activities. The licensee does not need prior NRC approval to conduct such major decommissioning activities, provided that the licensee's activities remain within a certain defined scope, as prescribed by 10 CFR 50.59, "Changes, tests and experiments."[39]

During the decommissioning process, the NRC maintains comprehensive regulatory oversight over the plant. The licensee remains subject to the terms and conditions of its license, and as such, remains subject to NRC inspection and enforcement. As described in Inspection Manual Chapter (IMC) 2561, "Decommissioning Power Reactor Inspection Program" (ADAMS Accession No. ML17348A400), the NRC staff will engage in regular on-site inspections that

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[36] Regulatory Guide (RG) 1.185, "Standard Format and Content for Post-Shutdown Decommissioning Activities Report," Revision 1 (June 2013) (ADAMS Accession No. ML13140A038). RG 1.185 is an NRC guidance document developed to assist licensees in complying with the PSDAR requirements.

[37] NRC, Letter to T.J. Palmisano, Vice President and Chief Nuclear Officer, SCE (August 20, 2015), at 5.

[38] The term "major decommissioning activity" means, "for a nuclear power reactor facility, any activity that results in permanent removal of major radioactive components, permanently modifies the structure of the containment, or results in dismantling components for shipment containing greater than class C waste in accordance with § 61.55 of this chapter." 10 CFR 50.2.

[39] Section 50.59 provides parameters by which a licensee may make certain changes to the facility without prior NRC approval. If the licensee's intended action will exceed the 10 CFR 50.59 parameters, the licensee must seek NRC approval before taking the action, typically in the form of a license amendment or exemption request. The NRC will then conduct a site-specific safety and environmental analysis (NEPA) prior to approving or disapproving the licensee's proposed action.

emphasize radiological controls and management, procedure compliance, spent fuel pool operation, and the safety review program. Many activities that occur during decommissioning are routine and occur frequently in operating plants. These include decontamination of surfaces and components, surveys for radioactive contamination, waste packaging and disposal, and other activities. During active decommissioning periods, NRC inspectors may be at the facility 2 or 3 weeks of the month in order to observe ongoing activities. During a long-term storage period, inspectors would be present to conduct inspections at least once a year in accordance with the decommissioning reactor inspection program outlined in IMC 2561.

The NRC has also issued several regulatory guidance documents for nuclear power plant decommissioning, including Regulatory Guide (RG) 1.184, "Decommissioning of Nuclear Power Reactors," Revision 1 (October 2013; ADAMS Accession No. ML13144A840); RG 1.185, "Standard Format and Content for Post-Shutdown Decommissioning Activities Report," Revision 1 (June 2013; ADAMS Accession No. ML13140A038)); and RG 4.21, "Minimization of Contamination and Radioactive Waste Generation: Life-Cycle Planning" (June 2008; ADAMS Accession No. ML080500187). The guidance is directed toward NRC licensees and provides suggested procedures and methodologies to meet the applicable NRC regulatory requirements during decommissioning. Although compliance with guidance is not required, licensees have an incentive to follow the procedures and methodologies set forth in the guidance documents as NRC practice is to presume that compliance with the guidance means that the licensee is in compliance with the applicable NRC regulation upon which the guidance is based (e.g., 10 CFR 50.82 and 10 CFR 20.1402).

Finally, the NRC's regular contact with the licensee during decommissioning, through its on-site inspection program and otherwise, allow the NRC and licensee to address, on a site-specific basis, any radiation related safety concern that may arise during the process. Based upon its operating experience, the NRC has determined that all expected and reasonably foreseeable safety issues for SONGS are bounded by the Decommissioning GEIS, the current SONGS licensing basis (e.g., the FSAR and NRC staff safety evaluations associated with various licensing actions), and can be appropriately controlled through the existing safety programs.

3. SONGS Independent Spent Fuel Storage Installation; Seismic Concerns

The City's August 12, 2016, letter raises concerns about the radiological safety impacts of spent fuel storage casks, specifically in regard to "storing spent fuel in a seismically active marine environment."[40] As explained below, the NRC staff has determined that the storage of spent fuel, in storage casks, at SONGS meets all applicable NRC safety criteria.

Reduction of SONGS License to the ISFSI

The NRC issued to SCE the SONGS operating licenses in accordance with its regulations in 10 CFR Part 50, "Domestic Licensing of Production and Utilization Facilities." As a Part 50 license holder, SCE holds a general license to install and operate an "independent spent fuel

[40] City of Laguna Beach, Letter to C. Herzog, Senior Environmental Scientist, CSLC and M. Vaaler, Project Manager, NRC (August 12, 2016), at 3, n. 8.

storage installation" or ISFSI, on the SONGS site.[41] An ISFSI consists of a large concrete structure to safely store the spent fuel. The spent fuel assemblies are contained in the storage casks that are placed on or within the concrete structure of the ISFSI; the casks can consist of one or more cask designs, all of which must have been approved by the NRC.[42] The storage casks are passive systems; they are designed with one purpose, to safely store spent fuel. In addition to the concrete structure and storage casks, an ISFSI is typically fenced or otherwise secured as it is required to be located in a restricted access area.

The SONGS ISFSI is not included in the scope of the current SONGS decommissioning project and in all likelihood, will not be included in the LTP when submitted to the NRC. Thus, the aim of the current decommissioning process is to satisfy the requirements of 10 CFR 20.1402 for all areas of SONGS except the ISFSI. After the NRC approves the SONGS LTP, and SCE has completed the current decommissioning process and demonstrated its compliance with 10 CFR 20.1402, the NRC will amend SCE's Part 50 facility operating license such that the license will be reduced to an area that only encompasses the ISFSI facility. At that point, the only remaining licensee activities that are permitted and regulated by the NRC are those related to spent fuel storage and the eventual decommissioning of the ISFSI itself, once the spent fuel has been permanently removed from the ISFSI.[43]

ISFSI Design and Operation

During the period of ISFSI operation, the SONGS ISFSI will continue to be governed by the NRC's general license regulations for ISFSIs in Subpart K, "General License for Storage of Spent Fuel at Power Reactor Sites," of 10 CFR Part 72, ""Licensing Requirements for the Independent Storage of Spent Nuclear Fuel, High-Level Radioactive Waste, and Reactor-Related Greater than Class C Waste." The NRC's regulations in 10 CFR Part 72 provide requirements for the safe design and operation of ISFSIs. Any operational conditions, required actions, monitoring or surveillance requirements, or other technical specifications that are needed for safe operation of the casks located at a general license ISFSI are included in the certificate of compliance that the NRC issues to the cask manufacturer. Section 72.212 requires licensees to comply with the terms, conditions, and specifications of the cask certificate.[44] In particular, the licensee must perform written evaluations before use of a given cask system that demonstrate that

> [c]ask storage pads and areas have been designed to adequately support the static and dynamic loads of the stored casks, considering potential amplification of earthquakes through soil-structure interaction, and soil liquefaction potential or other soil instability due to vibratory ground motion.[45]

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41 Under the applicable NRC regulations in 10 CFR Part 72, ""Licensing Requirements for the Independent Storage of Spent Nuclear Fuel, High-Level Radioactive Waste, and Reactor-Related Greater than Class C Waste," the general ISFSI license is incident to the Part 50 license. The applicable regulation, 10 CFR 72.210, "General license issued," states that "[a] general license is hereby issued for the storage of spent fuel in an independent spent fuel storage installation at power reactor sites to persons authorized to possess or operate nuclear power reactors under 10 CFR part 50 or 10 CFR part 52." The conditions of the general ISFSI license are set forth in 10 CFR 72.212, "Conditions of general license issued under § 72.210."

42 10 CFR 72.212(b)(2)-(3); 10 CFR 72.214, "List of approved spent fuel storage casks."

43 As a general license ISFSI, the SONGS ISFSI will be decommissioned in accordance with 10 CFR 50.82.

44 10 CFR 72.212(b)(3).

45 10 CFR 72.212(b)(5)(ii) (alteration added).

Such written evaluations are subject to NRC inspection.

NRC regulations also require general ISFSI licensees to conduct radiation monitoring to ensure compliance with the NRC requirements for radiation dose limits for the public and ISFSI workers.[46] The NRC maintains oversight of ISFSIs, and the agency staff routinely inspects the site operations to ensure continued compliance with all applicable regulatory requirements, including the conditions and specifications of the applicable cask certificates.

In addition, the NRC requires aging management programs for spent fuel storage casks as storage operations continue into a renewed storage term.[47] Aging management programs include monitoring and inspections of both the ISFSI support structure and storage casks to detect any degradation, and corrective actions (such as further inspections, repairs or replacement of components, and other mitigation measures) to ensure that the ISFSI continues to meet the NRC's requirements for safe spent fuel storage. Licensees assess the effectiveness of these programs on an ongoing basis to determine if they need to be adjusted to address unexpected degradation, or degradation that may be occurring at a greater rate than was initially assumed. The NRC's oversight of ISFSIs includes inspection of a licensee's aging management activities.

Operating experience from the ISFSIs currently in operation is continually assessed by the licensees and the NRC to determine if new information, knowledge, and experience warrant any changes to licensed spent fuel storage operations. If a potential environmental impact (e.g., increased seismic activity) that could adversely affect the safe operation of the ISFSI is identified, the NRC will determine if the licensee will need to reevaluate its analyses and associated spent fuel storage operations to address the identified change.

Seismic Issues

In its development of the 2002 update to the Decommissioning GEIS, the NRC staff considered various site-specific issues at SONGS, including seismic risks. A draft was made available for public comment and one SONGS-specific comment was received. The comment stated,

> SONGS is located in a highly active seismic zone, where seismic activity is speculated by some geological experts to generate quakes up to 7.6 Magnitude on the Richter Scale (by new evidence of local off-shore blind thrust faults, which cause a greater extent of groundshaking and acceleration than the manner in which quakes are traditionally studied). SONGS was only designed and constructed to withstand a maximum quake of 7.0 Magnitude. SONGS is located in an area immediately on the southern California coastline, with most facilities elevated only to a level of 20 ft. above mean sea level. These facilities are highly exposed and vulnerable to effects of rising sea levels, and tsunamis, and are insufficiently protected.[48]

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[46] 10 CFR 72.104, "Criteria for radioactive materials in effluents and direct radiation from an ISFSI or [monitored retrieval storage] MRS;" 10 CFR 72.106, "Controlled area of an ISFSI or MRS." Both sections 72.104 and 72.106 are made applicable to general ISFSI licenses by operation of paragraph (c) of 10 CFR 72.13, "Applicability."

[47] 10 CFR 72.240, "Conditions for spent fuel storage cask renewal."

[48] Decommissioning GEIS, NUREG-0586, App. O (2002) at O-124.

In response, the NRC replied,

> NRC staff recognizes that there is wide variability among nuclear power plants. However, based on the results of our analysis, the impacts resulting from decommissioning are similar regardless of plant characteristics, including site-specific information from San Onofre. The NRC established an envelope of environmental impacts resulting from decommissioning activities, identified those activities that can be bounded by a generic evaluation, and identified those that require a site-specific analysis. The NRC concentrated the environmental analysis on those activities with the greatest likelihood of having an environmental impact. Even for those impacts that have been determined to be generic, a licensee is required to do a site-specific analysis [in the PSDAR] to determine whether the impacts fall within the generic envelope. If they are outside of the bounds of the generic envelope, the licensee must seek approval from the NRC.[49]

The NRC is aware of no information, and the City has not provided any, that would invalidate the NRC's environmental and safety analyses, as set forth in the Decommissioning GEIS with respect to seismic activity or any other issue.

[49] *Id.*, at O-124 to O-125.

SUBJECT: ADDITIONAL INFORMATION REGARDING THE CALIFORNIA STATE LANDS COMMISSION RESPONSE TO THE CITY OF LAGUNA BEACH ENVIRONMENTAL REVIEW PUBLIC SCOPING COMMENTS FOR THE SAN ONOFRE NUCLEAR GENERATING STATION, UNITS 2 AND 3, DECOMMISSIONING PROJECT dated September 5, 2018

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