



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

November 9, 2017

Mr. Thomas J. Palmisano  
Vice President and Chief Nuclear Officer  
Southern California Edison Company  
San Onofre Nuclear Generating Station  
P.O. Box 128  
San Clemente, CA 92674-0128

**SUBJECT: SAN ONOFRE NUCLEAR GENERATING STATION, UNITS 2 AND 3 -  
ISSUANCE OF AMENDMENTS TO REMOVE THE CYBER SECURITY PLAN  
LICENSE CONDITION (CAC NOS. L53191 AND L53192)**

Dear Mr. Palmisano:

The U.S. Nuclear Regulatory Commission (NRC) has issued the enclosed Amendment No. 235 to Facility Operating License No. NPF-10 and Amendment No. 228 to Facility Operating License No. NPF-15 for the San Onofre Nuclear Generating Station (SONGS), Units 2 and 3, respectively. The amendments delete the Cyber Security Plan from License Condition 2.E for the SONGS Facility Operating Licenses in response to your application dated May 16, 2017 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML17142A315). The Notice of Application for Amendment was published in the *Federal Register* on July 5, 2017 (82 FR 31100).

As discussed in the enclosed safety evaluation, the NRC staff has reviewed the proposed changes and concluded that the licensee's request to remove the existing cyber security license condition from the facility operating licenses is acceptable. The basis for our conclusion is contained in the attached safety evaluation.

Pursuant to Paragraph (c)(12) of Title 10 of the *Code of Federal Regulations* (10 CFR) 51.22, "Criterion for categorical exclusion; identification of licensing and regulatory actions eligible for categorical exclusion or otherwise not requiring environmental review," the Commission has determined that the issuance of this amendment is categorically excluded, and pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared. Approval of this amendment is an administrative change that relates solely to safeguards matters and does not involve any significant construction impacts.

The NRC staff has determined that its documented safety evaluation does not contain Sensitive Security-Related Information (SUNSI) pursuant to 10 CFR 2.390, "Public inspections, exemptions, requests for withholding." In accordance with 10 CFR 2.390 of the NRC's "Agency Rules of Practice and Procedure," a copy of this letter will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records component of ADAMS. ADAMS is accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html>.

T. Palmisano

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A copy of the related Safety Evaluation is provided in Enclosure 3. The Notice of Issuance will be included in the Commission's next biweekly *Federal Register* notice. If you have any questions, please contact me at 301-415-3178, or via e-mail at [marlayna.vaaler@nrc.gov](mailto:marlayna.vaaler@nrc.gov).

Sincerely,

***/RA/***

Marlayna G. Vaaler, Project Manager  
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

Enclosures:

1. Amendment No. 235 to NPF-10
2. Amendment No. 228 to NPF-15
3. Safety Evaluation

cc w/encls: Distribution via Listserv

T. Palmisano

- 2 -

SUBJECT: SAN ONOFRE NUCLEAR GENERATING STATION, UNITS 2 AND 3 -  
ISSUANCE OF AMENDMENTS TO REMOVE THE CYBER SECURITY PLAN  
LICENSE CONDITION (CAC NOS. L53191 AND L53192),  
DATED NOVEMBER 9, 2017

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**ADAMS Accession No. ML17300A042**

\*by memo

\*\*by e-mail

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<b>NAME</b>	MVaaler	CHolston	JBeardsley*	AWase**	BWatson
<b>DATE</b>	10/31/2017	11/2/2017	10/13/2017	11/8/2017	11/9/2017

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

SOUTHERN CALIFORNIA EDISON COMPANY

SAN DIEGO GAS AND ELECTRIC COMPANY

THE CITY OF RIVERSIDE, CALIFORNIA

DOCKET NO. 50-361

SAN ONOFRE NUCLEAR GENERATING STATION, UNIT 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 235  
License No. NPF-10

1. The Nuclear Regulatory Commission (the Commission) has found that:
  - A. The application for amendment by Southern California Edison Company, et al. (SCE or the licensee), dated May 16, 2017, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's regulations set forth in 10 CFR Chapter I;
  - B. The facility will operate in conformity with the application, as supplemented, the provisions of the Act, and the rules and regulations of the Commission;
  - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
  - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
  - E. The issuance of this amendment is in accordance with 10 CFR Part 51, "Environmental Protection Regulations for Domestic Licensing and Related Regulatory Functions," of the Commission's regulations and all applicable requirements have been satisfied.

2. Accordingly, the license is amended by changes to paragraphs 2.C(2) and 2.E of Facility Operating License No. NPF-10, and is hereby amended to read as follows:

2.C(2) Technical Specifications

The Technical Specifications contained in Appendix A and the Environmental Protection Plan contained in Appendix B, as revised through Amendment No. 235, are hereby incorporated in the license. Southern California Edison Company shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

.....

- 2.E SCE shall fully implement and maintain in effect all provisions of the Commission-approved physical security, training and qualification, and safeguards contingency plans including amendments made pursuant to provisions of the Miscellaneous Amendments and Search Requirements revisions to 10 CFR 73.55 (51 FR 27817 and 27822) and to the authority of 10 CFR 50.90 and 10 CFR 50.54(p). The combined set of plans, which contain Safeguards Information protected under 10 CFR 73.21 is entitled: "San Onofre Nuclear Generating Station Security, Training and Qualification, and Safeguards Contingency Plan, Revision 2" submitted by letter dated May 15, 2006.

Pursuant to NRC's Order EA-13-092, dated June 5, 2013, NRC reviewed and approved the license amendment 232 that permitted the security personnel of the licensee to possess and use certain specific firearms, ammunition, and other devices, such as large-capacity ammunition feeding devices, notwithstanding local, State, and certain Federal firearms laws that may prohibit such possession and use.

3. This license amendment is effective as of the date of its issuance and shall be implemented within 60 days of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

*/RA/*

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

Attachment:  
Change to Facility  
Operating License No. NPF-10

Date of Issuance: November 9, 2017

ATTACHMENT TO LICENSE AMENDMENT NO. 235

TO FACILITY OPERATING LICENSE NO. NPF-10

DOCKET NO. 50-361

Replace the following pages of Facility Operating License No. NPF-10 with the attached revised pages. The revised pages are identified by amendment number and contain marginal lines indicating the area of change.

Facility Operating License No NPF-10

REMOVE

INSERT

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- (3) SCE, pursuant to the Act and 10 CFR Part 70, to possess at any time special nuclear material that was used as reactor fuel, in accordance with the limitations for storage, as described in the Final Safety Analysis Report, as supplemented and amended;
- (4) SCE, pursuant to the Act and 10 CFR Parts 30, 40, and 70, to receive, possess, and use at any time any byproduct, source and special nuclear material as sealed sources for reactor instrumentation and radiation monitoring equipment calibration, and as fission detectors in amounts as required; and possess any byproduct, source and special material as sealed neutron sources that was used for reactor startup;
- (5) SCE, pursuant to the Act and 10 CFR Parts 30, 40, and 70 to receive, possess, and use in amounts as required any byproduct, source or special nuclear material without restriction to chemical or physical form, for sample analysis or instrument calibration or associated with radioactive apparatus or components; and
- (6) SCE, pursuant to the Act and 10 CFR Parts 30, 40, and 70, to possess, but not separate, such byproduct and special nuclear materials as may be produced by the operation of San Onofre Nuclear Generating Station, Units 1 and 2 and by the decommissioning of San Onofre Nuclear Generating Station Unit 1.

C. This license shall be deemed to contain and is subject to the conditions specified in the Commission's regulations set forth in 10 CFR Chapter I and is subject to applicable provisions of the Act and to the rules, regulations and orders of the Commission now or hereafter in effect; and is subject to the additional conditions specified or incorporated below:

- (1) Deleted
- (2) Technical Specifications

The Technical Specifications contained in Appendix A and the Environmental Protection Plan contained in Appendix B, as revised through Amendment No. 235, are hereby incorporated in the license. Southern California Edison Company shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

- E. SCE shall fully implement and maintain in effect all provisions of the Commission-approved physical security, training and qualification, and safeguards contingency plans including amendments made pursuant to provisions of the Miscellaneous Amendments and Search Requirements revisions to 10 CFR 73.55 (51 FR 27817 and 27822) and to the authority of 10 CFR 50.90 and 10 CFR 50.54(p). The combined set of plans, which contain Safeguards Information protected under 10 CFR 73.21 is entitled: "San Onofre Nuclear Generating Station Security, Training and Qualification, and Safeguards Contingency Plan, Revision 2," submitted by letter dated May 15, 2006.

Pursuant to NRC's Order EA-13-092, dated June 5, 2013, NRC reviewed and approved the license amendment 232 that permitted the security personnel of the licensee to possess and use certain specific firearms, ammunition, and other devices, such as large-capacity ammunition feeding devices, notwithstanding local, State, and certain Federal firearms laws that may prohibit such possession and use.

- F. This license is subject to the following additional condition for the protection of the environment:

Before engaging in activities that may result in a significant adverse environmental impact that was not evaluated or that is significantly greater than that evaluated in the Final Environmental Statement, SCE shall provide a written notification of such activities to the NRC Office of Nuclear Reactor Regulation and receive written approval from that office before proceeding with such activities.

- G. DELETED

- H. SCE shall notify the Commission, as soon as possible but not later than one hour, of any accident at this facility which could result in an unplanned release of quantities of fission products in excess of allowable limits for normal operation established by the Commission.

- I. SCE shall have and maintain financial protection of such type and in such amounts as the Commission shall require in accordance with Section 170 of the Atomic Energy Act of 1954, as amended, to cover public liability claims.

- J. Deleted

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\*On September 29, 1983, the Safeguards Contingency Plan was made a separate, companion document to the Physical Security Plan pursuant to the authority of 10 CFR 50.54.





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NUCLEAR REGULATORY COMMISSION**  
WASHINGTON, D.C. 20555-0001

SOUTHERN CALIFORNIA EDISON COMPANY

SAN DIEGO GAS AND ELECTRIC COMPANY

THE CITY OF RIVERSIDE, CALIFORNIA

DOCKET NO. 50-362

SAN ONOFRE NUCLEAR GENERATING STATION, UNIT 3

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 228  
License No. NPF-15

1. The Nuclear Regulatory Commission (the Commission) has found that:
  - A. The application for amendment by Southern California Edison Company, et al. (SCE or the licensee), dated May 16, 2017, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's regulations set forth in 10 CFR Chapter I;
  - B. The facility will operate in conformity with the application, as supplemented, the provisions of the Act, and the rules and regulations of the Commission;
  - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
  - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
  - E. The issuance of this amendment is in accordance with 10 CFR Part 51, "Environmental Protection Regulations for Domestic Licensing and Related Regulatory Functions," of the Commission's regulations and all applicable requirements have been satisfied.

2. Accordingly, the license is amended by changes to paragraphs 2.C(2) and 2.E of Facility Operating License No. NPF-15, and is hereby amended to read as follows:

2.C(2) Technical Specifications

The Technical Specifications contained in Appendix A and the Environmental Protection Plan contained in Appendix B, as revised through Amendment No. 228, are hereby incorporated in the license. Southern California Edison Company shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

.....

- 2.E SCE shall fully implement and maintain in effect all provisions of the Commission-approved physical security, training and qualification, and safeguards contingency plans including amendments made pursuant to provisions of the Miscellaneous Amendments and Search Requirements revisions to 10 CFR 73.55 (51 FR 27817 and 27822) and to the authority of 10 CFR 50.90 and 10 CFR 50.54(p). The combined set of plans, which contain Safeguards Information protected under 10 CFR 73.21 is entitled: "San Onofre Nuclear Generating Station Security, Training and Qualification, and Safeguards Contingency Plan, Revision 2" submitted by letter dated May 15, 2006.

Pursuant to NRC's Order EA-13-092, dated June 5, 2013, NRC reviewed and approved the license amendment 225 that permitted the security personnel of the licensee to possess and use certain specific firearms, ammunition, and other devices, such as large-capacity ammunition feeding devices, notwithstanding local, State, and certain Federal firearms laws that may prohibit such possession and use.

3. This license amendment is effective as of the date of its issuance and shall be implemented within 60 days of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

*/RA/*

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

Attachment:  
Change to Facility  
Operating License No. NPF-15

Date of Issuance: November 9, 2017

ATTACHMENT TO LICENSE AMENDMENT NO. 228

TO FACILITY OPERATING LICENSE NO. NPF-15

DOCKET NO. 50-362

Replace the following pages of Facility Operating License No. NPF-15 with the attached revised pages. The revised pages are identified by amendment number and contain marginal lines indicating the area of change.

Facility Operating License No. NPF-15

REMOVE

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- (3) SCE, pursuant to the Act and 10 CFR Part 70, to possess at any time special nuclear material that was used as reactor fuel, in accordance with the limitations for storage, as described in the Final Safety Analysis Report, as supplemented and amended;
  - (4) SCE, pursuant to the Act and 10 CFR Parts 30, 40, and 70, to receive, possess, and use at any time any byproduct, source and special nuclear material as sealed sources for reactor instrumentation and radiation monitoring equipment calibration, and as fission detectors in amounts as required; and possess any byproduct, source and special material as sealed neutron sources that was used for reactor startup;
  - (5) SCE, pursuant to the Act and 10 CFR Parts 30, 40, and 70 to receive, possess, and use in amounts as required any byproduct, source or special nuclear material without restriction to chemical or physical form, for sample analysis or instrument calibration or associated with radioactive apparatus or components; and
  - (6) SCE, pursuant to the Act and 10 CFR Parts 30, 40, and 70, to possess, but not separate, such byproduct and special nuclear materials as may be produced by the operation of San Onofre Nuclear Generating Station, Units 1 and 2 and by the decommissioning of San Onofre Nuclear Generating Station Unit 1.
- C. This license shall be deemed to contain and is subject to the conditions specified in the Commission's regulations set forth in 10 CFR Chapter I and is subject to applicable provisions of the Act and to the rules, regulations and orders of the Commission now or hereafter in effect; and is subject to the additional conditions specified or incorporated below:
- (1) Deleted
  - (2) Technical Specifications

The Technical Specifications contained in Appendix A and the Environmental Protection Plan contained in Appendix B, as revised through Amendment No. 228, are hereby incorporated in the license. Southern California Edison Company shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

Report. These exemptions are authorized by law and will not endanger life or property or the common defense and security and are otherwise in the public interest. Therefore, these exemptions are hereby granted. The facility will operate, to the extent authorized herein, in conformity with the application, as amended, the provisions of the Act, and the regulations of the Commission.

- E. SCE shall fully implement and maintain in effect all provisions of the Commission-approved physical security, training and qualification, and safeguards contingency plans including amendments made pursuant to provisions of the Miscellaneous Amendments and Search Requirements revisions to 10 CFR 73.55 (51 FR 27817 and 27822) and to the authority of 10 CFR 50.90 and 10 CFR 50.54(p). The combined set of plans, which contain Safeguards Information protected under 10 CFR 73.21 is entitled: "San Onofre Nuclear Generating Station Security, Training and Qualification, and Safeguards Contingency Plan, Revision 2," submitted by letter dated May 15, 2006.

Pursuant to NRC's Order EA-13-092, dated June 5, 2013, NRC reviewed and approved the license amendment 225 that permitted the security personnel of the licensee to possess and use certain specific firearms, ammunition, and other devices, such as large-capacity ammunition feeding devices, notwithstanding local, State, and certain Federal firearms laws that may prohibit such possession and use.

- F. This license is subject to the following additional condition for the protection of the environment:

Before engaging in activities that may result in a significant adverse environmental impact that was not evaluated or that is significantly greater than that evaluated in the Final Environmental Statement, SCE shall provide a written notification of such activities to the NRC Office of Nuclear Reactor Regulation and receive written approval from that office before proceeding with such activities.

- G. DELETED

- H. SCE shall notify the Commission, as soon as possible but not later than one hour, of any accident at this facility which could result in an unplanned release of quantities of fission products in excess of allowable limits for normal operation established by the Commission.

- I. SCE shall have and maintain financial protection of such type and in such amounts as the Commission shall require in accordance with Section 170 of the Atomic Energy Act of 1954, as amended, to cover public liability claims.

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\*On September 29, 1983, the Safeguards Contingency Plan was made a separate, companion document to the Physical Security Plan pursuant to the authority of 10 CFR 50.54.



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

SAFETY EVALUATION BY THE OFFICE OF  
NUCLEAR MATERIAL SAFETY AND SAFEGUARDS  
RELATED TO AMENDMENT NO. 235 TO FACILITY OPERATING LICENSE NO. NPF-10  
AND AMENDMENT NO. 228 TO FACILITY OPERATING LICENSE NO. NPF-15  
SOUTHERN CALIFORNIA EDISON COMPANY  
SAN DIEGO GAS AND ELECTRIC COMPANY  
THE CITY OF RIVERSIDE, CALIFORNIA  
SAN ONOFRE NUCLEAR GENERATING STATION, UNITS 2 AND 3  
DOCKET NOS. 50-361 AND 50-362

1.0 INTRODUCTION

By letter dated June 12, 2013 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML131640201), Southern California Edison (SCE, the licensee) submitted a certification to the U.S. Nuclear Regulatory Commission (NRC) indicating its intention to permanently cease power operations at the San Onofre Nuclear Generating Station, Units 2 and 3 (SONGS), as of June 7, 2013, pursuant to Title 10 of the *Code of Federal Regulations* (10 CFR) paragraph 50.82(a)(1)(i). By letters dated June 28, 2013 (ADAMS Accession No. ML13183A391), and July 22, 2013 (ADAMS Accession No. ML13204A304), SCE submitted certifications of permanent removal of fuel from the Unit 3 and Unit 2 reactor vessels as of October 5, 2012, and July 18, 2013, respectively, pursuant to 10 CFR 50.82(a)(1)(ii). Upon docketing of these certifications, and pursuant to 10 CFR 50.82(a)(2), the SONGS Units 2 and 3 facility operating licenses no longer authorize operation of the reactors or emplacement or retention of fuel into the reactor vessels. Spent fuel is currently stored onsite in the spent fuel pools (SFPs) and in the onsite independent spent fuel storage installation (ISFSI).

By application dated May 16, 2017 (ADAMS Accession No. ML17142A315), the licensee requested a change to the facility operating licenses for SONGS, Units 2 and 3, pursuant to 10 CFR 50.90, "Application for amendment of license, construction permit, or early site permit." The proposed change would remove reference to the Cyber Security Plan (CSP) and update the associated License Condition 2.E in the facility operating licenses. This will allow SCE to terminate the SONGS CSP and associated activities at the site. The proposed change is based on the lowered risk profile of SONGS due to the permanently defueled status of the plant and the continued radioactive decay of the remaining spent fuel.

The NRC staff previously reviewed and approved the licensee's CSP for SONGS, Units 2 and 3, in License Amendment Nos. 225 and 218, which were approved by letter dated July 28, 2011 (ADAMS Accession No. ML111960323), concurrently with the incorporation of the CSP into the facilities' licensing bases. License Amendment Nos. 225 and 218 also imposed the existing cyber security license condition which states: "SCE shall fully implement and maintain in effect all provisions of the Commission-approved cyber security plan (CSP), including changes made pursuant to the authority of 10 CFR 50.90 and 10 CFR 50.54(p)."

## 2.0 REGULATORY EVALUATION

The NRC staff considered the following regulatory requirements and guidance during its review of the May 16, 2017, application to eliminate the existing SONGS CSP license conditions:

- The regulations in 10 CFR 73.54, "Protection of digital computer and communication systems and networks," which require that as of November 23, 2009, each licensee currently licensed to operate a nuclear power plant under 10 CFR Part 50 submit a cyber security plan for Commission review and approval.
- SECY-12-0088, "The Nuclear Regulatory Commission Cyber Security Roadmap," which states that "[b]y regulation, dry cask storage in ISFSIs allows spent fuel that has already been cooled in the spent fuel pool for 1 year to be surrounded by inert gas inside a storage cask. Licensees that are subject to 10 CFR 72.212, 'Conditions of General License Issued Under § 72.210,' (i.e., licenses limited to storage of spent fuel in casks) must also comply with specific portions of 10 CFR 73.55, ['Requirements for Physical Protection of Licensed Activities in Nuclear Power Reactors against Radiological Sabotage'] requirements for physical security and the ASM [additional security measure] Orders, but are not subject to the provisions of 10 CFR 73.54, which specifically applies to operating reactors and COL (combined operating license) applicants."

## 3.0 TECHNICAL EVALUATION

### 3.1 Licensee's Requested Change

By License Amendment Nos. 225 (for Unit 2) and 218 (for Unit 3), the NRC staff approved the licensee's CSP and associated implementation schedule, and added a license condition requiring the licensee to fully implement and maintain the Commission-approved CSP, as discussed in the safety evaluation issued concurrently with the amendments. In its subsequent request, dated May 16, 2017, the licensee requested the removal of the existing cyber security license condition from the SONGS facility operating licenses (NPF-10 and NPF-15).

In that request, the licensee stated that following permanent shutdown of SONGS and removal of spent fuel from the reactor, the principal radiological risks are associated with the storage of spent fuel onsite. The licensee asserted that generally, a few months after the reactor has been permanently shutdown, there are no possible design-basis events that could result in a radiological release exceeding the limits established by the U.S. Environmental Protection Agency (EPA) early-phase Protective Action Guides (PAGs) of 1 man-rem at the exclusion area boundary. The licensee noted that a zirconium fire could lead to a significant radiological release, but asserted that it is a highly unlikely, beyond-design-basis accident. The licensee

explained that a zirconium fire involves a major loss of water inventory from the SFP, resulting in a significant heatup of the spent fuel, and culminating in substantial zirconium cladding oxidation and fuel damage. The significance of spent fuel heatup scenarios that might result in a zirconium fire depends on the decay heat of the irradiated fuel stored in the SFP. Therefore, the licensee asserted that the probability of a zirconium fire scenario continues to decrease as a function of the time that the decommissioning reactor has been permanently shutdown.

The licensee further noted that the NRC has applied a threshold for various decommissioning licensing actions of a 10-hour heatup time under adiabatic conditions prior to reaching a clad ignition temperature. The licensee referenced the Draft Regulatory Basis Document for Regulatory Improvements for Power Reactors Transitioning to Decommissioning, dated March 31, 2017 (ADAMS Accession No. ML17047A413), and an NRC statement that until all spent fuel in the SFP is sufficiently decayed such that a spent fuel fire is highly unlikely (i.e., the 10-hour threshold is met), reactor licensees should be required to maintain reasonable assurance that their critical digital assets remain protected against cyber attacks. The draft regulatory basis further states that once spent fuel at a site has sufficiently decayed, there are no applicable design-basis events that could result in an offsite radiological release exceeding the limits established by the EPA PAGs of 1 rem at the exclusion area boundary. In addition, sufficient time would exist to take prompt mitigative actions in response to a postulated zirconium fire accident scenario in the SFP.

The licensee stated that the spent fuel stored in the SONGS, Units 2 and 3, spent fuel pools has been decaying since at least January 2012, and is expected to be transferred to the onsite ISFSI beginning later this year and finishing in 2019. As a result, the licensee asserted that the risk of events related to spent fuel storage has decreased such that maintaining protection of Cyber Security critical digital assets is no longer necessary. The licensee further asserted that, with respect to SONGS, it is no longer a "licensee currently licensed to operate a nuclear power plant," in accordance with 10 CFR 73.54, and therefore the cyber security requirements of that section should no longer apply to SONGS, Units 2 and 3.

As further support, the licensee references its previous request for approval of the Permanently Defueled Emergency Plan (PDEP), in which it provided a justification (1) demonstrating that no design-basis accident could have radiological consequences which exceed EPA PAGs; and (2) that a zirconium fire would be highly unlikely. The zirconium fire likelihood was supported by two analyses. The first analysis demonstrated that greater than 10 hours would be available before stored fuel could reach a peak clad temperature of 900 degrees Celsius in the limiting stored fuel assembly with no water present in the pool and no air cooling. SCE also demonstrated that greater than 10 hours would be available under adiabatic conditions at the time the PDEP was submitted on March 31, 2014 (ADAMS Accession No. ML14092A332).

Based on this information, and given the additional decay time, SCE asserts there is now greater than 31 hours before mitigating action would be required. Additionally, the licensee stated that as part of its approval of the SONGS PDEP (ADAMS Accession No. ML15082A143), the NRC reviewed a summary of these analyses and performed confirmatory calculations and concluded that sufficient time existed to mitigate a spent fuel pool drain down in the adiabatic case. Finally, the licensee asserted that the second analysis showed that as of August 31, 2014, in the case of a complete loss of spent fuel pool water inventory with adequate fuel handling building air exchange with the environment, air cooling of the spent fuel



assemblies would be sufficient to indefinitely keep the fuel within a safe temperature range without fuel cladding damage or offsite radiological release.

### 3.2 NRC Staff Evaluation of Requested Change

The NRC staff evaluated the licensee's application using the regulatory requirements and guidance cited in Section 2.0 of this Safety Evaluation. The Cyber Security Rule, as contained in 10 CFR 73.54, applies to licensees currently licensed to operate a nuclear power plant. The NRC staff has determined that 10 CFR 73.54 does not apply to reactor licensees that have submitted certifications of permanent cessation of operations and permanent removal of fuel under 10 CFR 50.82(a)(1) or 10 CFR 52.110(a)(1), and whose certifications have been docketed by the NRC. Once the NRC has docketed these certifications, the licensee is no longer authorized to operate a nuclear power plant, and the requirements of 10 CFR 73.54 no longer apply.

In June 2013, pursuant to 10 CFR 50.82(a)(1)(i), the licensee certified to the NRC that as of June 7, 2013, operations had ceased at SONGS, Units 2 and 3 (ADAMS Accession No. ML131640201). The licensee later certified, pursuant to 10 CFR 50.82(a)(1)(ii), that all fuel had been removed from the reactor vessels of both units, and committed to maintaining the units in a permanently defueled status (ADAMS Accession Nos. ML13204A304 and ML13183A391 for Unit 2 and Unit 3, respectively). Therefore, pursuant to 10 CFR 50.82(a)(2), SCE's 10 CFR Part 50 licenses do not authorize operation of SONGS or emplacement or retention of fuel into the reactor vessels, and the Cyber Security Rule at 10 CFR 73.54 no longer applies to SONGS.

The licensee determined that the fuel has cooled in the spent fuel pools for a sufficient amount of time such that no design-basis accident could have radiological consequences that exceed the EPA PAGs. The licensee completed analyses supporting the conclusion that a zirconium fire would be highly unlikely, the NRC reviewed these analyses and performed confirmatory calculations using the same inputs, and concluded that sufficient time exists to mitigate a spent fuel pool drain down in the adiabatic case. The NRC staff's review of the licensee's analyses and the associated results are included in a letter to the licensee dated June 4, 2015 (ADAMS Accession No. ML15082A204).

The NRC staff finds that the spent fuel has been in the spent fuel pool for longer than 3 years, which is a sufficient cooling period to mitigate the risk of heatup to clad ignition temperature. The analyses demonstrate that, even with the loss of active systems, significant time is available for compensatory actions. Additionally, even without compensatory actions, on and offsite doses would be within acceptable limits. Therefore, the consequences of a cyber attack on those systems are much lower now than while the plant was operating or the fuel in the spent fuel pool was not as cool. Accordingly, the NRC staff concludes that removal of the cyber security license condition is consistent with maintaining adequate protection of the public health and safety and the common defense and security.

### 3.3 Revision to License Conditions

By letter dated May 16, 2017, the licensee proposed to modify Paragraph 2.E of Facility Operating License Nos. NPF-10 and NPF-15 to remove the license condition requiring the licensee to fully implement and maintain in effect all provisions of the NRC-approved CSP.

The license condition in Paragraph 2.E of Facility Operating License No. NPF-10, for SONGS, Unit 2, is modified to delete the following statement:

SCE shall fully implement and maintain in effect all provisions of the Commission-approved cyber security plan (CSP), including changes made pursuant to the authority of 10 CFR 50.90 and 10 CFR 50.54(p). The SONGS CSP was approved by License Amendment No. 225, as supplemented by changes approved by License Amendments 231 and 234.

The license condition in Paragraph 2.E of Facility Operating License No. NPF-15, for SONGS, Unit 3, is modified to delete the following statement:

SCE shall fully implement and maintain in effect all provisions of the Commission-approved cyber security plan (CSP), including changes made pursuant to the authority of 10 CFR 50.90 and 10 CFR 50.54(p). The SONGS CSP was approved by License Amendment No. 218, as supplemented by changes approved by License Amendments 224 and 227.

### 3.4 Summary of Technical Evaluation

Based on its review of the licensee's submissions, the NRC staff concludes that SCE's request to remove the existing cyber security license conditions from the SONGS Facility Operating Licenses, NPF-10 and NPF-15, is acceptable.

### 4.0 STATE CONSULTATION

In accordance with the Commission's regulations, the California State official was notified by email on October 25, 2017, of the proposed issuance of the amendments. The State official had no comments.

### 5.0 ENVIRONMENTAL CONSIDERATION

The amendments to the SONGS 10 CFR Part 50 facility operating licenses relate solely to safeguards matters and do not involve any significant construction impacts, and relate to modifications to systems used for security and/or materials accountability. The Commission has previously issued a proposed finding that the amendments involve no significant hazards consideration, and there have been no public comments on that finding, which was published in the *Federal Register* on July 5, 2017 (82 FR 31100). Accordingly, the amendments meet the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(12). Pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the issuance of the amendments.

## 6.0 CONCLUSION

The NRC staff has concluded, based on the considerations discussed above, that (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, (2) there is reasonable assurance that such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of the amendment will not be inimical to the common defense and security or to the health and safety of the public.

Principal Contributor: Shyrl Coker, NSIR

Date: November 9, 2017

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