



10 CFR 50.90
10 CFR 50.91(a)

LIC-19-0010
May 20, 2019

U.S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, DC 20555-0001

Fort Calhoun Station, Unit No. 1
Renewed Facility License No. DPR-40
NRC Docket No. 50-285

Fort Calhoun Station
Independent Spent Fuel Storage Installation
NRC Docket No. 72-054

Subject: License Amendment Request (LAR) 19-03; Revised Fort Calhoun Station License in Support of the Revised Response to Orders for Interim Safeguards and Security Compensatory Measures and Implementation of Additional Security Measures Associated with Access Authorization

References:

1. OPPD Letter (M. Fisher) to USNRC (Document Control Desk) – “Revised Response to Orders for Interim Safeguards and Security Compensatory Measures and Implementation of Additional Security Measures Associated with Access Authorization for Fort Calhoun Station”, dated November 9, 2004 and Relaxation Request, dated February 28, 2019 (LIC-19-0003)

In accordance with the provisions of 10 CFR Part 50.90, the Omaha Public Power District (OPPDP), is submitting a request for an amendment to the 10 CFR Part 50 License for Fort Calhoun Station (FCS), Unit No. 1. The proposed amendment would revise the 10 CFR Part 50 License to reflect the requirements associated with the security changes for the Independent Spent Fuel Storage Installation (ISFSI) only configuration, consistent with the permanent removal of all spent fuel from the Spent Fuel Pool (SFP) (Reference 1).

Pursuant to 10 CFR 50.91(a)(1), OPPD has performed an evaluation associated with Reference 1. The evaluation has concluded the associated amendments present no significant hazards consideration under the standards set forth in 10 CFR 50.92(c), and accordingly, a finding of “no significant hazards consideration” is justified.

The enclosure contain a description of the proposed changes, the supporting technical analyses, and the significant hazards consideration determination. The Enclosure's attachments provide the existing 10 CFR Part 50 License marked-up to show the proposed changes and provides retyped (clean) pages with the changes proposed by this letter and denoted by revision bars in the margin. The proposed changes have been reviewed and approved by the FCS Plant Operations Review Committee (PORC).

In accordance with 10 CFR Part 50.91, a copy of this application is being provided to the designated State of Nebraska official.

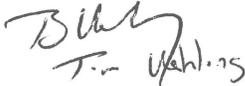
There are no regulatory commitments contained within this letter.

OPPD requests approval of the proposed license amendment by March 31, 2020. Once approved, the amendment will be implemented within ninety (90) days following FCS's submittal of written notification to the NRC that all spent nuclear fuel assemblies have been transferred out of the SFP and placed in dry storage within the ISFSI.

If you have any questions regarding this transmittal, please contact Mr. Bradley H. Blome – Director – Licensing & Regulatory Assurance at (402) 533-6041.

I declare under penalty of perjury that the foregoing is true and correct. Executed on May 20, 2019.

Respectfully,



Mary J. Fisher
Vice President Energy Production and Nuclear Decommissioning

for

MJF/cac

Enclosure 1: OPPD's Evaluation of Proposed Change

- c: S. A. Morris, NRC Regional Administrator, Region IV
- M. C. Layton, NRC Director, Division of Spent Fuel Management
- J. D. Parrott, NRC Senior Project Manager
- C. D. Steely, NRC Health Physicist, Region IV
- Director of Consumer Health Services, Department of Regulation and Licensure,
Nebraska Health and Human Services, State of Nebraska

OPPD's Evaluation of the Proposed Change

License Amendment Request (LAR) 19-03; Revised Fort Calhoun Station License in Support of the Revised Response to Orders for Interim Safeguards and Security Compensatory Measures and Implementation of Additional Security Measures Associated with Access Authorization

- 1.0 SUMMARY DESCRIPTION
- 2.0 DETAILED DESCRIPTION
- 3.0 TECHNICAL EVALUATION
- 4.0 REGULATORY EVALUATION
 - 4.1 Applicable Regulatory Requirements/Criteria
 - 4.2 Precedent
 - 4.3 No Significant Hazards Consideration
 - 4.4 Conclusion
- 5.0 ENVIRONMENTAL CONSIDERATION
- 6.0 REFERENCES

Attachments:

- 1. Mark-up of 10 CFR Part 50 License
- 2. "Clean" 10 CFR Part 50 License

1.0 Summary Description

In accordance with the provisions of 10 CFR 50.4 and § 50.90, Omaha Public Power District (OPPD) is requesting an amendment to the Fort Calhoun Station (FCS) Facility License (FL), License Condition 3.C, Security and Safeguards Contingency Plans. The proposed amendment request is in support of the approval of a new Fort Calhoun Station Security Plan, Training and Qualification Plan, and Safeguards Contingency Plan (the Plan).

2.0 Detailed Description

OPPD provided the NRC a certification of permanent removal of the fuel of the FCS reactor vessel on November 13, 2016 (Reference 1). Therefore, pursuant to 10 CFR 50.82(a)(2), the 10 CFR 50 license for FCS no longer authorizes operation of the reactor or replacement or retention of fuel into the reactor vessel. Currently, spent fuel is stored in the spent fuel pool (SFP) and Independent Spent Fuel Storage Installation (ISFSI). The Post-Shutdown Decommissioning Activities Report (PSDAR) (Reference 2) documented OPPD's expectation that all spent fuel would be completely transferred to the ISFSI by the end of 2022. OPPD awarded contracts in the first quarter of 2018 which expedited transferring all spent fuel to the ISFSI by the middle of 2020.

The current Security Plan, Training and Qualification Plan, and Safeguards Contingency Plan (existing Security Plan) at FCS contains requirements that provide appropriate protection for the safe storage of spent fuel in the SFP as well as the ISFSI. As such, the existing Security Plan provides a level of protection in excess of that required after all the spent fuel is transferred to the ISFSI. The proposed Plan reflects the future site configuration where all the remaining spent fuel has been moved to ISFSI and that there is no requirement to return the spent fuel to the SFP. Transfer of fuel from the SFP to the ISFSI supports the decommissioning of FCS which involves the eventual dismantlement of the SFP and other remaining plant structures. Therefore, the proposed Plan will supersede the existing Security Plan after the remaining spent fuel in the SFP has been moved to the ISFSI.

Pending Licensing Actions under NRC Review

There are other pending license actions currently under NRC review that complement and support the changes proposed by this amendment request.

For clarity, the "redline" and "clean" License and TS pages included in the Attachment, reflect the changes proposed by these pending actions as grey highlighted text at the time of this submittal:

LIC-18-0003 - LAR 18-01, Revised Fort Calhoun Station Permanently Defueled Technical Specifications to Align to Those Requirements for Permanent Removal of Spent Fuel from Spent Fuel Pool (Reference 4).

License Condition Change(s):

The proposed amendment would modify the FCS License Condition 3.C, Security and Safeguards Contingency Plans, by referencing 10 CFR 72.212(b)(9), removing requirements for 10 CFR 73.55. Additionally, the Plans title which contain Safeguards Information protected under 10 CFR 73.21 will be updated accordingly.

3.0 Technical Evaluation

The Plan addresses the protection of material on site that is licensed by the FCS Facility License. The protection of material subject to the requirements of 10 CFR 37, "Physical Protection of Category 1 and Category 2 Qualities of Radioactive Material," is addressed in a separate Plan. FCS has a general license ISFSI with security requirements in 10 CFR 72.212(b)(9). These security requirements also provide an appropriate level of protection for other special nuclear material on site. The Plan reflects the configuration of FCS with the remaining spent fuel in the SFP moved to the ISFSI and no requirement to return spent fuel to the SFP. The security function for the ISFSI are to detect threats, assess those threats, and call for assistances from the local law enforcement agency (LLEA).

10 CFR 72.212(b)(9) requires licensees to comply with 10 CFR 73.55, with six (6) additional conditions and exceptions. Therefore, the Plan was based on the NRC endorsed template for Operational Nuclear Plants, NEI 03-12, Revision 7, and modified to incorporate the seven (7) additional conditions and exceptions. In additional, other requirements are not applicable for an ISFSI such as certain sections of the design basis threat, cyber security, target sets, 10 CFR 26, and portions of the insider mitigation program, and therefore are not included in the Plan. Programmatic assumptions used to develop the Plan are discussed in Enclosure 5- "FCS Programmatic Assumptions for ISFSI Only Site" on disk submitted in Reference 3.

Pursuant to 10 CFR 73.55(r), seven (7) alternative measures have been incorporated in to the Plan. These alternative measures address the replacement of the Secondary Alarm Station (SAS) with an off-site Security Remote Monitoring Station (SRMS), illumination, searches, vital areas, suspension of security measures, and owner controlled area monitoring. Evaluation of these alternative measures were provided in Enclosure 1- "Alternative Measures 1-7" of Reference 3.

FCS has taken a methodical approach to integrating 10 CFR 72.212(b)(9) requirements with various other Code of Federal Regulation requirements. The Plan complies with these requirements except where alternative measures have been requested. The Plan protects against the design basis threat of radiological sabotage and ensures the health and safety of public.

4.0 Regulatory Evaluation

4.1 Applicable Regulatory Requirement/Criteria

In accordance with the provisions of 10 CFR 50.4 and § 50.90, OPPD is requesting an amendment to FCS FL, License Condition 3.C, Security and Safeguards Contingency

Plans. The revised "Response to Orders of Interim Safeguards and Security Compensatory Measures and Implementation of Additional Security Measure associated with Access Authorization for Fort Calhoun Station dated 9 November, 2004 and Relaxation Request" was submitted in a separate letter (Reference 3).

4.1.1 10 CFR Part 50.82, Termination of License

10 CFR Part 50.82(a)(2) states "Upon docketing of the certifications for permanent cessation of operations and permanent removal of fuel from the reactor vessel, or when a final legally effective order to permanently cease operations has come into effect, the 10 CFR Part 50 license no longer authorizes operation of the reactor or emplacement or retention of fuel into the reactor vessel."

4.1.2 10 CFR Part 72.212, Conditions of general license issued under §72.210

10 CFR Part 72.212(b)(9) states " Protect the spent fuel against the design basis threat of radiological sabotage in accordance with the same provisions and requirements as are set forth in the licensee's physical security plan pursuant to §73.55 of this chapter with the following additional conditions and exceptions."

4.2 Precedent

4.2.1 Several plants currently in the decommissioning process, including Kewaunee (Reference 5) (ML17052A591), Vermont Yankee (Reference 6) (ML18165A423), and San Onofre Units 2 and 3 (Reference 7) (ML17311A364) have revised their PDTs to that reflect the change to the Physical Security Plan and the requirements for ISFSI only configuration.

4.3 Significance Hazards Consideration

The Plan addresses the protection of material on site that is licensed by the FCS FL. The protection of material subject to the requirements of 10 CFR 37, "Physical Protection of Category 1 and Category 2 Quantities of Radioactive Material," is addressed in a separate plan. The Plan reflects the configuration of FCS after all of the spent nuclear fuel is stored at the ISFSI. The 10 CFR Part 50 license for FCS no longer authorizes operation of the reactor or emplacement or retention of fuel into the reactor vessel. FCS has evaluated the proposed amendment to determine if a significant hazards consideration is involved by focusing on the three standards set forth in 10 CFR 50.92, "Issuance of Amendment," as further discussed below:

4.3.1 The proposed Change does not involve a significant increase in the probability or consequences of an accident previously evaluated.

The irradiated fuel at FCS is currently stored in the SFP and at the ISFSI. In this condition, the number of credible accidents/transients is significantly smaller than for a plant authorized to operate the reactor or emplace or retain fuel in the reactor vessel. Accidents/transients that are no longer applicable in a

permanently defueled condition has been deleted from the FCS Safety Analysis Report, as updated (DSAR) Chapter 14. One of the remaining DSAR Chapter 14 accidents is the Fuel Handling Accident (FHA). However, as previously discussed, the Plan reflects the future site configuration where all the remaining spent fuel in the SFP has been moved to the ISFSI and there are no requirements to return spent fuel to the SFP. The FHA will no longer be credible after all fuel has been removed from the SFP.

The casks are maintained in accordance with the provisions of the general license for the FCS ISFSI, utilizing the TN Americas LLC, 32 PT Dry Shield Canister (DSC), Certificate of Compliance (CoC) No. 72-1004, and in accordance with the associated NUH-003 Updated Final Safety Analysis Report for the Standardized NUHOMS® Horizontal Modular Storage System for Irradiated Nuclear Fuel (UFSAR). The 32PT DSC consists of spent nuclear fuel (SNF) residing within a fuel basket structure contained within the sealed metallic canister. The Horizontal Storage Module 202 System (HSM-202) receives and contains the sealed DSC for long term storage, and provides gamma and neutron shielding, ventilation passages, missile protection, and protection against natural phenomena and accidents for the DSC. The NUH-003 UFSAR, Section 8.2, Accident Analysis, provides the evaluation of accidents for the 32PT and HSM-202 System which satisfies the minimum acceptance criteria. In which accident conditions are analyzed to demonstrate that the requirements of 10 CFR 72.122 are met and that adequate safety margins exist for the NUHOMS® system design.

The 32PT DSC and HSM-202 System provides the spent nuclear fuel and radioactive material in storage with confinement, radiation shielding, criticality and passive heat removal, independent of other facility SSCs.

The proposed amendment has no effect on the capability of any facility systems, structures, and components SSC to perform its design function. The modifications associated with these changes do not significantly affect the ability of the DSC and HSM to perform their functions as described in the NUH-003 UFSAR. Hence, the proposed amendment has no effect on the ability of the Cask System to perform its design function nor would it increase the likelihood of an accident previously evaluated. The proposed amendment would not increase the likelihood of the malfunction of any plant SSC. Therefore, the proposed amendment does not involve a significant increase in the probability or consequences of a previously evaluated accident.

4.3.2 The proposed change does not create the possibility of a new or different kind of accident from any accident previously evaluated.

The proposed amendment does not involve major physical alterations of any facility SSCs or Cask System components required to mitigate or prevent any accident previously evaluated, and does not have a significant effect on the capability of any facility SSC or Cask System component to perform its design functions. Minor modifications are associated with this proposed amendment

(e.g. Vehicle Barrier System (VBS) relocation, wiring changes in security equipment, the addition of telecommunications equipment, and software changes to the security computer system.) The proposed license amendment would not physically change any SSCs involved in the mitigation of any postulated accident. Thus, no new initiators or precursors of new or different kind of accident are created. Furthermore, the proposed amendment does not create the possibility of a new failure mode associated with any equipment failures. The credible events for the ISFSI remain unchanged.

Therefore, the proposed changes do not create the possibility of new or different kind of accident from any previously evaluated.

4.3.3 The proposed change does not involve a significant reduction in a margin of safety.

Because the 10 CFR Part 50 license for FCS no longer authorizes operation of the reaction or emplacement or retention of fuel into the reactor vessel, as specified in 10 CFR 50.82(a)(2), the occurrence of postulated accidents associated with reactor operation is no longer credible. The modifications associated with the proposed amendment include lighting, intruder detection systems, protected area boundary fencing, access control system, telecommunications equipment, VBS relocation, and a central alarm station (CAS). The proposed amendment does not involve a significant change in any facility SSCs or Cask System component's design, configuration, or operation. Therefore, the modifications associated with this proposed amendment do not significantly affect the capability or manner in which facility SSCs or Cask System components perform their safety functions or the safety.

Therefore, the proposed amendment does not involve a significant reduction in a margin of safety.

Based on the above, FCS concludes that the proposed amendment presents no significant hazards consideration under the standards set forth in 10 CFR 50.92(c), and, accordingly, a finding of "no significant hazards consideration" is justified.

5.0 Environmental Consideration

FCS has evaluated this proposed license amendment against the criteria for identification of licensing and regulatory actions requiring environmental assessment in accordance with 10 CFR 51.21. FCS has determined that this proposed license amendment meets the criteria for a categorical exclusion set forth in 10 CFR 51.22(c)(12). The proposed amendment is being submitted under the provisions of 10 CFR Part 50 for approval of a safeguards plan and changes to the FCS FL, and in accordance with 10 CFR Part 72. Activities associated with the proposed amendment do not involve any significant construction impacts, and are consistent with

a reduction in the security area that focuses primarily on the storage of spent fuel, described in NUREG-0586, "Generic Environmental Impact Statement on Decommissioning of Nuclear Facilities," as a general activity expected to occur during decommissioning. The proposed amendment is confined to (i) organizational and procedural matters; (ii) modifications to systems used for security; and (iii) administrative changes. The modifications associated with the proposed amendment include lighting, intruder detection systems, protected area boundary fencing, access control system, telecommunications equipment, VBS relocation, and a CAS, which are for security of the facility in the ISFSI configuration. The proposed amendment addresses security organizational changes, and describes procedural and other administrative changes.

Therefore, pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the proposed amendment.

6.0 **Reference**

1. OPPD Letter (T. Burke) to USNRC (Document Control Desk) – “Certifications of Permanent Cessation of Power Operations and Permanent Removal of Fuel from the Reactor Vessel,” dated November 13, 2016 (LIC-16-0074) (ML16319A254)
2. Letter USNRC (J. Kim) to OPPD (M. Fisher) – “Fort Calhoun Station, Unit No. 1, Post-Shutdown Decommissioning Activities Report”, dated March 23, 2017 (LIC-17-0033) (CAC No. 9536) (ML18011A687)
3. OPPD Letter (M. Fisher) to USNRC (Document Control Desk) – “Revised Response to Orders for Interim Safeguards and Security Compensatory Measures and Implementation of Additional Security Measures Associated with Access Authorization for Fort Calhoun Station dated 9 November, 2004 and Relaxation Request,” dated February 28, 2019. (LIC-19-0003) (ML19065A055)
4. OPPD Letter (M. Fisher) to USNRC (Document Control Desk) - License Amendment Request (LAR) 18-01; Revised Fort Calhoun Station Permanently Defueled Technical Specifications to Align to Those Requirements for Permanent Removal of Spent Fuel from Spent Fuel Pool, dated September 28, 2018. (LIC-18-0003) (ML18275A323)
5. Letter USNRC (T. Carter) to Dominion Energy Kewaunee – “Safety Evaluation for the Proposed Revision to Kewaunee Power Station Request for Approval of the KPS Physical Security Plan and Revised Answers to NRC Order for Additional Security Measures and Fingerprinting for Unescorted Access for Certain Spent Fuel Storage – LAR-261 (CAC Nos. L53093 and L53094),” dated May 9, 2017. (ML17052A591)
6. Letter USNRC (J. Parrott) to Vermont Yankee NPS – “Vermont Yankee Nuclear Power Station – Issuance of Amendment to Change the Physical Security Plan to Reflect An ISFSI-Only Configuration,” dated July 25, 2018. (ML18165A423)
7. Letter USNRC (M. Vaaler) to SONGS (T. Palmisano) – San Onofre Nuclear Generating Station, Units 1, 2, and 3 – issuance of amendments to change the physical security plan to reflect an ISFSI-ONLY configuration (CAC NOS. L53163, L53164, and L53165), dated April 23, 2018. (ML17311A364)

LIC-19-0010
Enclosure 1

Attachment 1

Mark-up of 10 CFR Part 50 License

Mark up of Existing License Condition 3.C.

3.C. Security and Safeguards Contingency Plans

The Omaha Public Power District 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)~~ **10 CFR 72.212(b)(9)** and to the authority of 10 CFR 50.90 and 10 CFR 50.54(p). The plans, which contain Safeguards Information protected under 10 CFR 73.21, are entitled: "Fort Calhoun Station Security Plan, Training and Qualification Plan, Safeguards Contingency Plan," submitted by letter dated, ~~##### #,#####~~ **##### #,#####** ~~May 19,~~ **2006**.

LIC-19-0010
Enclosure 1

Attachment 2

“Clean” 10 CFR Part 50 License

- (4) 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 when associated with radioactive apparatus or components;
 - (5) Pursuant to the Act and 10 CFR Parts 30 and 70, to possess, but not separate, such byproduct and special nuclear materials as may be produced by operation of the facility.
3. This renewed license shall be deemed to contain and is subject to the conditions specified in the following Commission regulations in 10 CFR Chapter 1: Part 20, Section 30.34 of Part 30, Section 40.41 of Part 40, Section 50.54 and 50.59 of Part 50, and Section 70.32 of Part 70; and is subject to all 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:

A. DELETED

B. Technical Specifications

The Permanently Defueled Technical Specifications contained in Appendix A, as revised through Amendment No. ###, are hereby incorporated in the license ~~replaced with the Permanently Defueled Technical Specifications (PDTS)~~. Omaha Public Power District shall maintain the facility in accordance with the Permanently Defueled Technical Specifications.

C. Security and Safeguards Contingency Plans

The Omaha Public Power District 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 10 CFR 72.212(b)(9) and to the authority of 10 CFR 50.90 and 10 CFR 50.54(p). The plans, which contain Safeguards Information protected under 10 CFR 73.21, are entitled: "Fort Calhoun Station Security Plan, Training and Qualification Plan, Safeguards Contingency Plan," submitted by letter dated, ##### ##, #####.