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Omaha Public Power District

10 CFR 50.90
10 CFR 50.82

LIC-22-0001
January 13, 2022

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

Subject: Response to Fort Calhoun Station, Unit No. 1 – Acceptance Review Of License Amendment Request To Add License Condition To Include License Termination Plan Requirements – Request For Supplemental Information (EPID L-2021-LIT-0000) ML21350A026.

References:

1. Letter from OPPD (M. Fisher) to USNRC (Document Control Desk), "License Amendment Request (LAR) 21-01; Revised Fort Calhoun Station License to Add License Condition 3.D to include License Termination Plan Requirements," dated August 3, 2021 (LIC-21-0005) (ML21271A178)
2. Letter from USNRC to OPPD, "Fort Calhoun Station, Unit No. 1 – Acceptance Review Of License Amendment Request To Add License Condition To Include License Termination Plan Requirements – Request For Supplemental Information (EPID L-2021-LIT-0000)," date December 16, 2021 (ML21350A026)
3. Letter from OPPD (T. Burke) to USNRC (Document Control Desk), "Certification of Permanent Removal of Fuel from the Reactor", dated November 13, 2016 (LIC-16-0074) (ML16319A254)
4. Letter from OPPD (M. Fisher) to USNRC (Document Control Desk), "Fort Calhoun Station, Unit No. 1, Post-Shutdown Decommissioning Activities Report", dated March 30, 2017 (LIC-17-0033) (ML17089A759)
5. Letter from OPPD (M. Fisher) to USNRC (Document Control Desk), "Fort Calhoun Station Irradiated Fuel Management Plan", dated March 31, 2017 (LIC-17-0031) (ML17093A594)

By letter dated August 3, 2021 (Reference 1), The Omaha Public Power District (OPPD) proposed 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 for control of the License Termination Plan (LTP) by adding License Condition 3.D.

By letter on November 13, 2016 (Reference 3), FCS provided certification of the permanent removal of fuel from the Reactor Vessel to the NRC in accordance with 10 CFR Part 50.82(a)(1)(i) and (ii). On March 30, 2017 (Reference 4), FCS submitted the Post-Shutdown Decommissioning Activities Report (PSDAR) and on March 31, 2017(Reference 5), FCS submitted an updated Irradiated Fuel Management Plan (IFMP).

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On December 16, 2021 (Reference 2), the NRC provided OPPD with Requests for Supplemental Information (RSI) regarding the proposed changes. Attachment 1 of this letter provides the responses to the RSI. Additionally, a DVD with the requested documents is also being included as an enclosure.

There are no regulatory commitments contained within this letter.

If you should have any questions regarding this submittal or require additional information, please contact Mrs. Andrea K. Barker –Regulatory Assurance and Emergency Planning Manager at (531) 226-6051.

Respectfully,

DocuSigned by:
Timothy Uehling
60[illegible]

Timothy Uehling,
Senior Director - Decommissioning

TSU/akb/cac

Attachment 1: Response to Request for Supplemental Information

Enclosure 1: Reference Disc of Requested Documents

c: S.A. Morris, NRC Regional Administrator, Region IV
S. Helton, NRC Director, Division of Fuel Management
J. D. Parrot, 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

ATTACHMENT 1

RESPONSE TO REQUEST FOR SUPPLEMENTAL INFORMATION REGARDING

THE FORT CALHOUN STATION

REQUEST TO ADD LICENSE CONDITION TO INCLUDE LICENSE TERMINATION PLAN REQUIREMENTS

1. *Document Request – LTP Chapter 6, Reference 1*

   Chapter 6, Reference 1 is cited as the source of summary information in the LTP for numerical modeling intended to provide support for concentration results from RESRAD-ONSITE for the Basement Fill Model. However, Reference 1 of Chapter 6 - Haley & Aldrich, "Hydrogeological Conceptual Site Model, Revision 4, Fort Calhoun Station, Blair, NE," 2021, was not a document included in the LTP submittal. Revision 2 of Reference 1 is specifically listed in the text of early parts of Chapter 6 and was December 16, 2021 included in the LTP submittal. Revision 2 contains a brief description of the conceptual site model along with summaries and data from field tests but does not contain any information on the numerical modeling performed using the interface, Groundwater Vistas, for MODFLOW, MODPATH, and MT3DMS. A more complete description of the numerical modeling than provided in the LTP is needed for NRC staff to better understand the bounds and bases of the RESRAD-ONSITE results for the Basement Fill Model.

   RSI-1 OPPD response:

   Reference 1 to Chapter 6 of the LTP, which provides a comprehensive description of the numeric modeling utilized in the LTP, is included on the enclosed DVD in support of the FCS LTP. The document, "*Hydrogeological Conceptual Site Model, Revision 5, Fort Calhoun Station, Blair, NE,*" has been revised to include the information the NRC has requested and is now Revision 5. The information is contained in Appendix F of the document. The revision did not result in a change to the LTP.

2. *Document Request – LTP Chapter 6, Reference 6*

   Multiple similarly titled reports on radionuclides of concern are cited in the LTP, with an explanation provided on pages 6-9. Some of these documents were also cited in Chapters 2 and 5. Chapter 6 Reference 6, Omaha Public Power District, "FC-18-002, Potential Radionuclides of Concern During the Decommissioning of Fort Calhoun Nuclear Station," was not a document provided in the submittal. However, two other, more recent, documents were provided along with the LTP submittal:

   Chapter 6, Reference 7: Omaha Public Power District, "FC-20-007, Fort Calhoun Station Potential Radionuclides of Concern."

   Chapter 6, Reference 8: Radiation Safety and Control Services, "FC-21-043, Radionuclides of Concern in Support of the Fort Calhoun License Termination Plan," 2021.

Please provide Reference 6 for Chapter 6 or provide an explanation that the information in the latest report contains all the attributed information in the LTP (e.g., details on the suite of radionuclides for the initial sampling for decommissioning in Reference 6 are also included in Reference 8).

RSI 2 OPPD Response:

Reference 6 to chapter 6, "*FC-18-002, Potential Radionuclides of Concern During the Decommissioning of Fort Calhoun Nuclear Station,*" is included on the enclosed DVD in support of the LTP. This document was the initial development of Radionuclides of Concern (ROC) in support of our partial site release in 2019. The other two documents mentioned in RSI #2 are similarly titled. FC-20-007 was developed to include additional ROC to those identified in FC-18-002. The information in the latest report, FC-21-043, is the final list of ROC using data from site characterization and it reflects removal of insignificant contributors. It contains all the attributed information in the LTP. FC-21-043 also provided the basis for DCGL development, as well as other inputs into the LTP. The ROC referenced in the LTP are the final suite of nuclides to be used in the LTP, and the previous documents do not change the LTP in any way.

3. *Clarification on Updated or Revised Documents*

As noted in the above specific examples, multiple revisions of, or similarly titled, reports are cited in the LTP. Clarification is requested on if there are other revisions or updates of referenced documents that the later revisions or updates contain cumulative information from the earlier reports, or only new information.

RSI 3 OPPD Response:

Revisions to the site specific documents referenced in the LTP are cumulative. This is aligned with the interim discussions FCS personnel and the NRC have had relating to this topic. The information contained in the LTP is consistent with the latest version of the similarly titled reports.

4. *Data File Request – Subsurface Transport Modeling*

Please provide the input file sets used in Groundwater Vistas modeling to support results from RESRAD-ONSITE modeling for the Basement Backfill Model.

RSI 4 OPPD Response:

The input files for Groundwater Vistas modeling are being sent via the agreed upon electronic method.

5. *Data Request – Hydrologic Conditions*

NRC staff requests any historical groundwater level data and river stage measurements from the site that would reflect groundwater elevations near the river. Measurements of groundwater levels from June 2020 are stated in the LTP (pages 6-12) to be reflective of historical conditions at the site. The basis is stated to be the steady river stage levels typically between 10 and 15 feet over the past decade based on measurement stations

upstream (Decatur) and downstream (Omaha) of the site. The groundwater levels at the site are also stated to be in intimate hydraulic connection with the river (e.g., LTP Section 1.3.6). The hydrologic conditions at the site are used to support the representative and conservative groundwater levels and gradients used in RESRAD-ONSITE model. In addition, hydrologic conditions at the site may impact decommissioning activities (e.g.., excavations, scans, and sampling) thus making the range of conditions expected at the site (e.g., seasonal) a concern given past flooding at the site and concurrent increases in groundwater levels with rising river stages.

RSI 5 OPPD Response:

The requested historical groundwater level data and river stage measurements are included on the enclosed DVD in support of the LTP.