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LIC-16-0092

10 CFR 50.90

September 28, 2016

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

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

**Subject: License Amendment Request (LAR) 16-03; Revised Fort Calhoun Station Technical Specifications to align staffing requirements to those required for decommissioning.**

References:

1. Letter from OPPD (T. Burke) to USNRC (Document Control Desk), "Certification of Permanent Cessation of Power Operations," dated June 24, 2016 (LIC-16-0043)(ML16176A213)
2. Letter from OPPD (T. Burke) to USNRC (Document Control Desk), "Certification of Permanent Cessation of Power Operations," dated August 25, 2016 (LIC-16-0067)(ML16242A127)
3. Letter from OPPD (Shane Marik) to USNRC (Document Control Desk), "Request for Approval of Certified Fuel Handler Training Program," dated July 7, 2016 (LIC-16-0049)(ML16190A208)

In accordance with the provisions of 10 CFR 50.90, the Omaha Public Power District (OPPD), is submitting a request for an amendment to the Technical Specification (TS) for Fort Calhoun Station (FCS), Unit No. 1.

Once certifications for permanent cessation of operations and permanent removal of fuel from the reactor vessel have been submitted to the NRC in accordance with 10 CFR 50.82(a)(1)(i) and (ii), per 10 CFR 50.82(a)(2), the 10 CFR Part 50 license no longer will permit operation of the reactor or placement of fuel in the reactor vessel. The basis for the proposed amendment is that certain license conditions and administrative controls may be revised or removed to reflect the permanently defueled condition. The proposed amendment would modify the TS to make those administrative changes.

The enclosure contains a description of the proposed changes, the supporting technical analyses, and the significant hazards consideration determination. Attachment 1 of the enclosure provides the existing TS page marked-up to show the proposed changes. Attachment 2 of the enclosure provides retyped (clean) pages with the changes proposed by Attachment 1

and denoted by revision bars in the margin. The proposed changes have been reviewed and approved by the FCS Plant Operations Review Committee (PORC).

OPPD requests approval of the proposed license amendment by July 07, 2017, with the amendment to be implemented within 90 days of issuance.

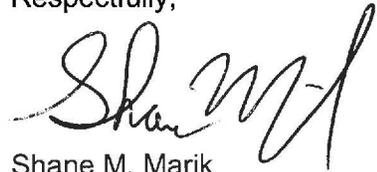
In accordance with 10 CFR 50.91, a copy of this application, with attachments, is being provided to the designated State of Nebraska official.

There are no regulatory commitments contained within this letter.

If you should have any questions regarding this submittal or require additional information, please contact Mr. Bradley H. Blome at (402) 533-7270.

I declare under penalty of perjury that the foregoing is true and correct. Executed on September 28, 2016.

Respectfully,

A handwritten signature in black ink, appearing to read "Shane M. Marik". The signature is fluid and cursive, with the first name "Shane" written in a larger, more prominent script than the last name "Marik".

Shane M. Marik  
Site Vice President and CNO

SMM/DMP

Enclosure: OPPD's Evaluation of the Proposed Change

- c: K. M. Kennedy, NRC Regional Administrator, Region IV
- C. F. Lyon, NRC Senior Project Manager
- S. M. Schneider, NRC Senior Resident Inspector
- 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) 16-03; Application to Revised Technical Specifications for Administrative Changes**

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Attachments: 1. Mark-up of Technical Specification Pages  
2. "Clean" Technical Specification Pages

## 1.0 SUMMARY DESCRIPTION

The Omaha Public Power District (OPPD) hereby requests an amendment to Fort Calhoun Station, Unit No. 1 Renewed Facility Operating License No. DPR-40 to implement a change to the Technical Specifications to revise staffing requirements to reflect decommissioning.

## 2.0 DETAILED DESCRIPTION

The proposed change is requested as a result of OPPD's formally-stated intention to permanently cease power operation at FCS on or before October 24, 2016 and to transfer all fuel in the reactor to the Spent Fuel Pool (SFP) soon thereafter. With the reactor in a permanently defueled condition, there will be no need to maintain the operating staffing requirements.

The proposed amendment would modify Technical Specifications (TS) to make administrative changes. The section is updated to reflect decommissioning staff requirements.

A change to the definitions section will be made to include Certified Fuel Handler (CFH) and Non-Certified Operator (NCO).

The responsibility for overall unit safe operation in section 5.2.1(b) is changed from an operating plant focus to reflect the post-decommissioning requirements associated with activities affecting the safety of nuclear fuel.

Section 5.2.1(d) is being changed to reflect the language best used to describe activities that remain for a decommissioning plant. This section is associated with Training, Quality Assurance (QA), and Health Physics ability to perform their required functions.

Changes to sections 5.2.2(a) and 5.2.2(b) include the plant staff section that will be revised to reflect the remaining responsibilities once the fuel is placed in the SFP and Independent Spent Fuel Storage Installation (ISFSI). Included in this change is the removal of individual titles including "licensed operator, unlicensed operator, and technicians".

Section 5.2.2(b) is also being changed to reflect the requirement that will require a person qualified in radiation protection procedures to be available during fuel handling operation or movement over storage racks to ensure their availability. The statement associated with "fuel in the reactor" is no longer applicable once the letter to permanently remove fuel from the reactor vessel is submitted and is being removed.

The Shift Manager (SM), being qualified as a CFH, will replace the requirements for a Senior Reactor Operator (SRO) in section 5.2.2(c). This change reflects the requirement to ensure control of fuel movement. This change also removes reference to fuel movement in the core, which will no longer be allowed.

Section 5.2.2(e) will be deleted. The SRO and Licensed Operator (LO) will no longer be required and are being replaced by the CFH. With the plant in decommissioning under 10 CFR 50.82(a)(1)(i) and (ii) and 10 CFR 50.82(a)(2), LOs are no longer required.

Facility staffing qualifications in section 5.3.1 will change with the removal of LO and SRO requirements. The Shift Technical Advisor (STA) position is also being removed since it is not required for defueled plants.

A new section 5.3.2 is added to reflect the new training requirements to support and maintain the CFH qualification.

Table 5.2-1, Minimum Shift Crew Composition is changed to reflect minimum staffing requirements that describe the needed personnel. The table removes the titles of Senior Operator License, Operator License, Non-Licensed Operator and STA and replaces them with the CFH and NCO. These changes reflect the minimum staffing requirements associated with the plant in a defueled condition.

Notes associated with Table 5.2-1 are being revised including:

- (i) "Core alterations" is deleted, since fuel will no longer be allowed in the reactor vessel, and the title for the Senior Operator License will change to CFH
- (ii) Minimum crew staff is changed to reflect required staffing numbers to support a decommissioning plant
- (iii) The required staffing requirements maintained in the control room to allow CFH or NCO to be present
- (iv) The NCO position can be filled with a CFH and the deletion of the requirement for an individual to be present "at the controls". The CFH will have commensurate knowledge of the NCO.

The staff approval of temporary procedures in section 5.8.2(b) is being changed to reflect the qualification requirements of the plant staff. Specifically the SRO License is being replaced by the CFH qualification.

### **3.0 TECHNICAL EVALUATION**

Once FCS power operations have ceased and the reactor is permanently defueled, LOs and SROs will no longer be required to support plant operating activities. Consequently, there will be no need to maintain qualification programs for LOs and SROs as they currently exist. OPPD intends to replace the LO qualification program with a CFH certification program as stated in Reference 6.3. Similarly, the existing Equipment Operator (EO) qualification program will be replaced with a NCO program. Other existing requirements for LO qualification will be addressed in separate licensing actions including:

- A letter supporting training requirement changes to reflect the revised station organization, which will be implemented once FCS is permanently defueled.
- A formal revision to the Emergency Plan (EP) reflecting the intent to change LO qualification to that of a CFH.
- An exemption request to permit suspension of certain security measures during severe weather conditions. Specifically, during severe weather conditions that may occur at FCS, 10 CFR 73.55(p)(1)(i) and 10 CFR 73.55(p)(1)(ii) require that the suspension of security measures be approved by a licensed senior operator, before taking this action.

Requesting an exemption from these requirements to allow either a Licensed Senior Operator or a CFH to approve the suspension of security measures would be proposed.

- Staffing requirements associated with training and qualification of the Fire Brigade will be revised in accordance with NFPA 805.

On June 16, 2016, OPPD's Board of Directors voted to permanently cease operation of FCS by December 31, 2016. The intention to permanently shutdown FCS was communicated to the NRC in Reference 6.1. On August 25, 2016 the letter providing the date of the permanent cessation of power operation was provided in Reference 6.2. After both the certification of permanent cessation of power operations and of permanent removal of fuel from the reactor vessel for FCS are submitted, the 10 CFR 50 license no longer will authorize reactor operation or placement or retention of fuel in the reactor vessel. As a result, Licensed Reactor Operators will no longer be required to support plant operating activities. Instead, approval of a CFH training and retraining program is needed to facilitate activities associated with decommissioning and irradiated fuel handling management. Approval of a proposed CFH training program is being pursued by means of a separate licensing activity, specifically in Reference 6.3. The current Combined Equipment Operator (CEO) training program, including the Equipment Operator Nuclear –Auxiliary (EONA) program which is a requirement of NFPA 805, will be replaced by a NCO program.

After approval of the proposed FCS CFH training program, OPPD will have an alternate qualification process for training operators to perform required duties in a manner that more accurately aligns with the needs of the plant in a permanently defueled condition. The development of a NCO training program will address the qualification needs corresponding to current CEO training program except that it will focus only on the operation of plant systems required for maintaining the SFP in a safe condition. The training programs will ensure that operators are qualified to maintain the plant in a safe condition under normal and abnormal conditions, which includes postulated fires.

As stated above, the CFH and NCO training and retraining programs are intended to provide a qualification process that will more accurately reflect the needs of a defueled plant while continuing to ensure that operators have the knowledge required to maintain the plant in a safe condition. The CFH and NCO training programs will ensure that the qualifications of personnel are commensurate with the tasks to be performed and the plant conditions requiring response, including that of postulated fires in safety significant fire areas. 10 CFR 50.120, "Training and qualification of nuclear power plant personnel," requires training programs to be established, implemented, maintained, and derived using the SAT process as defined in 10 CFR 55.4. The requirements of 10 CFR 50.120 apply to holders of operating licenses issued under 10 CFR 50. After permanent cessation of operation and certification of fuel removal, the FCS license will no longer authorize operation of the reactor. However, the CFH and NCO training and retraining program at FCS will align with the provisions of 10 CFR 50.120 and 10 CFR 55.4 for use of a SAT.

The training programs will provide adequate confidence that appropriate training of personnel performing CFH and NCO duties is conducted in a manner commensurate with the level of hazard at the facility in order to ensure the facility is maintained in a safe condition. The program will also ensure that the Fire Advisor and/or Fire Brigade Leader and at least two other fire brigade members will have commensurate knowledge of plant systems for their position to assess the potential safety consequences of a fire and advise control room personnel.

Section DEFINITIONS change basis:

Definitions for CFH and NCO will be added to ensure understanding of the requirements associated with this qualification is available.

Section 5.2.1(b) and 5.2.1(c) change basis:

To reflect the change in safety concerns from an operating plant to a permanently defueled plant, the responsibility for control of activities necessary for the safe operation and maintenance of the plant is changed to the responsibility for safe storage and maintenance of the nuclear fuel.

The terms "safe storage and maintenance of nuclear fuel" and "safe management of nuclear fuel" are considered analogous to "nuclear safety" for a plant that will be in the permanently defueled condition. Proposed changes to replace "nuclear safety" with one of these analogues serves to narrow the focus of nuclear safety concerns to the nuclear fuel.

Section 5.2.1(d) change basis:

Changes to this section provides more consistent terminology reflecting the post defueled condition. This section identifies that organizational positions are established that are responsible for the safety of the nuclear plant. This section is changed to require positions be established that are responsible for the safe handling and storage of nuclear fuel. This change removes the implication that FCS can return to operation once the certifications required by 10 CFR 50.82(a) (1) are submitted to the NRC.

Section 5.2.2(a) 5.2.2(c) and Table 5.2-1 change basis:

Since power operation can never occur again at FCS once the certifications required by 10 CFR 50.82(a)(1) are submitted to the NRC, the minimum requirement is changed to a minimum crew compliment of one (1) Certified Fuel Handler and one (1) Non-Certified Operator. This reflects the reduced number of systems, compared to an operating reactor, required to provide and support SFP cooling and monitor SFP parameters, such as pool level and temperature, while still maintaining the ability to ensure spent fuel handling operations are carried out in a safe manner. Moreover, the spectrum of credible accidents and operational events, and the quantity and complexity of activities required for safety has been greatly reduced from that of an operating plant. The SM will be qualified as a CFH in accordance with new paragraph 5.2.2(c). In this position, this individual will retain command and control responsibility for operational decisions, supervision of fuel activates, and will be responsible for the functions required for event reporting and emergency response.

The control room will remain the physical center of the command function. However, since control of activities may be performed either remotely from the control room or locally in the plant, the location of the command center is functionally where the CFH is located. Remaining activities that could be performed from the control room that have the potential to affect forced cooling of spent nuclear fuel include starting and stopping cooling water pumps, as well as changing the electrical power distribution system alignment. Indications and/or alarms are also received in the control room that would be indicative of SFP abnormalities. The CFH is responsible for directing response to those abnormalities, from either the control room or local to the SFP, in accordance with applicable response procedures. All spent fuel handling activities are performed locally at the SFP. The FCS CEO training program for the non-licensed operators will be revised to include the training provisions associated with the NCO position. This program will include qualification on conducting rounds to detect actual or potential problems that could hamper the facility including those located within the control room. For any conditions, incidents,

or events that occur when only the NCO is in the control room alone and are not within the scope of qualifications that are possessed by the NCO, the CFH will be immediately contacted for direction by phone, radio, and/or plant page system. This philosophy is deemed acceptable because the necessity to render immediate actions to protect the health and safety of the public is not challenged.

Table 5.2-1 (i) note change basis:

The change to the note reflects the removal of the requirement for the SRO qualification once FCS has submitted the letters implementing 10 CFR 50.82(a)(1)(i) and (ii) and 10 CFR 50.82(a)(2) to the NRC. The title and the supervisory requirements for core alterations will be revised to reflect the decommissioning plant staff requirements and location of fuel.

Table 5.2-1 (ii) note change basis:

Changes to this section will remove the number associated with the minimum personnel requirements. This will provide clarification for personnel consistent with the number of operators required in the table. It is consistent with the present requirements associated with the defueled condition. The note will continue to limit the time in which a position is not maintained and does not change the limitations associated with the present time period associated with this absence.

Table 5.2-1 (iii) note change basis:

The requirement for continual staffing of the control room is predicated with monitoring and control of systems important to reactor safety. Equipment associated with control and monitoring of the SFP will become the main focus of the operations staff once all fuel is removed from the reactor vessel. Once all the fuel is removed from the SFP, no event, system, or equipment would require continual monitoring or control from the control room.

Table 5.2-1 (iv) note change basis:

The addition of a note providing equivalent training requirements to the table is provided to clarify the ability of a higher level qualified person in filling the listed position title. The qualification of the CFH under the requirements of the SAT process will also include all the training requirements of the NCO. Therefore, the CFH qualification can replace the NCO with no gap in knowledge.

The requirement for multiple personnel being "at the controls" in the control room is deleted to reflect the location of indication and controls of remaining plant equipment necessary for the safe storage of spent fuel is no longer specifically located in the "at the controls" location as described in Updated Safety Analysis Report (USAR) 7.6 and USAR Figure 7.6-1. The operation and indication of this equipment is located in remote locations in the control room, in the auxiliary building control panel, and locally at the SFP cooling pumps and SFP. The "at the controls" panels no longer provide control of reactivity or supports the ability to locally monitor equipment associated with the fuel. Therefore, the requirement for the "at the controls", which was based on core reactivity and equipment control, is no longer applicable.

Section 5.2.2 (b) change basis:

This requirement is being revised because once the fuel is certified to be permanently removed from the reactor in accordance with 10 CFR 50.82(a)(1)(ii), FCS will be prohibited by 10 CFR 50.82(a)(2) from placing fuel back into the reactor vessel. Therefore, the requirement associated with the reactor will no longer be applicable.

This section is being revised with a requirement for an individual qualified in Radiation Protection Procedures to be present on-site during the movement of fuel and during the movement of loads over fuel. The possibility of an event requiring Radiation Protection (RP) is greatly reduced once the fuel is located in the SFP and ISFSI. The requirement for the individual to be onsite during fuel movement and work above the fuel satisfies their availability during postulated events.

Section 5.2.2 (c):

This section is being revised to reflect the qualification requirements for fuel movement Shift Manager it removes the requirement for the supervision of fuel handling to have an SRO. The substitution for the CFH for the SRO and the removal of core alterations are consistent with the requirements once the certifications required by 10 CFR 50.82(a)(1) have been submitted, the requirements of 10 CFR 50.54(m) will no longer be applicable because the FCS Part 50 license no longer will authorize operation of the reactor or placement or retention of fuel in the reactor vessel. It also does not require the maintenance of licensed personnel.

Section 5.2.2 (d): No change

Section 5.2.2 (e) change basis:

Once the certifications required by 10 CFR 50.82(a)(1) have been submitted, the requirements of 10 CFR 50.54(m) will no longer be applicable because the FCS Part 50 license no longer will authorize operation of the reactor or placement or retention of fuel in the reactor vessel. These certifications also obviate the need for the operators' licenses specified in 10 CFR 55. Therefore, there is no longer a need for operations management staff to hold a SRO license. Replacing this with a requirement in TS 5.2.2 (c) that the Shift Manger shall be a CFH ensures that the senior individual on shift is appropriately trained and qualified, in accordance with the NRC-approved CFH training program, to supervise shift activities and fuel movement.

The FCS management structure will not require positions above the SM to be a CFH or attend equivalent training. FCS has determined that once the plant is permanently shutdown and defueled, the time available to mitigate credible events is expected to be greater than that for current design basis events. As such, management oversight of the plant can be performed by individuals meeting the applicable requirements of ANSI/ANS N18.1-1971 and need not be qualified as a CFH.

Section 5.3.1 change basis:

This paragraph is changed to remove the requirements for the STA since that position is only required for a plant authorized for power operations. Once the certifications required by 10 CFR 50.82(a)(1) have been submitted, the requirements of this specification for the revised position will no longer be applicable because the FCS Part 50 license no longer will authorize operation of the reactor or placement or retention of fuel in the reactor vessel. This paragraph is changed to reflect the requirement to no longer have a SRO, STA, and LO qualification program. This reflects the reduced requirement for control room personnel training and qualification for a plant authorized for nuclear fuel storage only. The requirement for qualification under ANSI N18.1-1971 for other staff members, including the NCO remain the same. The requirements for the Manager-Radiation Protection (MRP) remains unchanged under Regulatory Guide 1.8, Revision 3. The addition of the NCO to the section provides clarification of the training requirements associated with this position. This position's requirements for training will follow Regulatory Guide 1.8, Revision 3.

Section 5.3.2 change basis:

The new qualification program is being added to this section. FCS has submitted a CFH training program for NRC approval in Reference 6.3. The training and qualification for the CFH and NCO will be determined in accordance with the SAT as defined in 10 CFR 55.4. This process ensures that the CFH and NCO will be qualified to perform the functions necessary to monitor and ensure safe storage of fuel. The SAT process requires (1) systematic analysis of the jobs to be performed, (2) learning objectives derived from the analysis which describe desired performance after training, (3) training design and implementation based on the learning objectives, (4) evaluation of trainee mastery of the objectives during training, and (5) evaluation and revision of the training based on the performance of trained personnel in the job setting. There will be a sufficient number of individuals qualified as CFH to staff the plant twenty-four hours a day, seven days a week. Additional on-shift staffing will be provided to satisfy applicable security, fire protection, and emergency preparedness requirements.

Section 5.8.2(b) change Basis:

Once the CFH qualification program (Reference 6.3) is approved, the CFH's plant knowledge and supervisory aspects in review of temporary procedures will be maintained under the CFH qualification. The need for a SRO License is being replaced by the CFH program, since the requirement for the SRO qualification is removed with the permanent removal of fuel from the reactor vessel and the permanent ceasing of operations.

## 4.0 REGULATORY EVALUATION

### 4.1 Applicable Regulatory Requirements/Criteria

- 4.1.1 10 CFR 50.82(a)(1) requires that when a licensee has determined to permanently cease operations the licensee shall, within 30 days, submit a written certification to the NRC, consistent with the requirements of 10 CFR 50.4(b)(8), and once fuel has been permanently removed from the reactor vessel, the licensee shall submit a written certification to the NRC that meets the requirements of 10 CFR 50.4(b)(9). On June 24, 2016, Omaha Public Power District announced that Fort Calhoun Station would be permanently shut down at the end of the current operating cycle in Reference 6.1. OPPD provided formal notification of the intention to permanently cease power operations of FCS. The exact date to perform the plant shutdown was determined to be October 24, 2016, as provided in Reference 6.2. FCS recognizes that approval of these proposed changes is contingent upon the submittal of the certifications required by 10 CFR 50.82(a)(1).
- 4.1.2 10 CFR 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."

- 4.1.3 10 CFR 50.36 establishes the requirements for Technical Specifications. 50.36(c)(5), Administrative Controls, identifies that an Administrative Controls section shall be included in the Technical Specifications and shall include provisions relating to organization and management, procedures, recordkeeping, review and audit, and reporting necessary to assure operation of the facility in a safe manner. This amendment request is proposing changes to the Administrative Controls section consistent with the pending decommissioning status of the plant. This request applies the principles identified in 50.36(c)(6), Decommissioning, for a facility which has submitted certifications required by 50.82(a)(1) and proposes changes to the Administrative Controls appropriate for the FCS permanently defueled condition. As 10 CFR 50.36(c)(6) states, this type of change should be considered on a case-by-case basis.
- 4.1.4 10 CFR 50.54(m) establishes the requirements for having Reactor Operators and Senior Reactor Operators licensed in accordance with Part 55 based on plant conditions. Based on the impending permanent cessation of operation for FCS, the requirements of this section will no longer apply once the certifications required by 10 CFR 50.82(a)(1) have been submitted to the NRC and it will be permissible to remove those positions from the Technical Specifications.

## 4.2 Precedent

- 4.2.1 Several plants currently in the decommissioning process, including Kewaunee, Crystal River, and Vermont Yankee, have revised the administrative section of TS to reflect the requirements for defueled administrative controls.

## 4.3 No Significant Hazards Consideration

The Omaha Public Power District (OPPD) has evaluated whether or not a significant hazards consideration is involved with the proposed amendment(s) by focusing on the three standards set forth in 10 CFR 50.92, "Issuance of amendment," as discussed below:

### 1. Does the proposed amendment involve a significant increase in the probability or consequences of an accident previously evaluated?

Response: No.

The proposed changes only impact administrative requirements associated with staff qualification, staff titles, personnel staffing levels, and clarification of systems used during decommissioning. The proposed changes do not involve a significant increase in the probability or consequences of an accident previously evaluated because: 1) the proposed amendment does not represent a change to any system design, 2) the proposed amendment does not alter, degrade, or prevent action described or assumed in any accident in the USAR from being performed, 3) the

proposed amendment does not alter any assumptions previously made in evaluating radiological consequences, and 5) the proposed amendment does not affect the integrity of any fission product barrier. No safety related equipment is affected by the proposed change.

Therefore, the proposed changes do not involve a significant increase in the probability or consequences of an accident previously evaluated.

**2. Does the proposed amendment create the possibility of a new or different kind of accident from any accident previously evaluated?**

Response: No.

The proposed changes do not alter the physical design, safety limits, or safety analysis assumptions associated with the operation of the plant. Hence, the proposed changes do not introduce any new accident initiators, nor do these changes reduce or adversely affect the capabilities of any plant structure or system in the performance of their safety function.

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

**3. Does the proposed amendment involve a significant reduction in a margin of safety?**

Response: No.

The proposed changes do not alter the manner in which safety limits or limiting safety system settings are determined. The safety analysis acceptance criteria are not affected by these proposed changes. Further, the proposed changes do not change the design function of any equipment assumed to operate in the event of an accident.

Therefore, the proposed changes do not involve a significant reduction in a margin of safety.

Based on the above, OPPD 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.

**4.4 Conclusion**

In conclusion, based on the considerations discussed above, (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, (2) 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.

## **5.0 ENVIRONMENTAL CONSIDERATION**

A review of the proposed amendment has determined that the proposed changes would not change a requirement with respect to installation or use of a facility component located within the restricted area, as defined in 10 CFR 20, or would change an inspection or surveillance requirement. The proposed amendment does not involve (i) a significant hazards consideration, (ii) a significant change in the types or significant increase in the amounts of any effluent that may be released offsite, or (iii) a significant increase in individual or cumulative occupational radiation exposure.

Accordingly, the proposed amendment meets the eligibility criterion for categorical exclusion set forth in 10 CFR 51.22 (c)(9). 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 REFERENCES**

- 6.1. Letter from OPPD (T. Burke) to USNRC (Document Control Desk) - "Certification of Permanent Cessation of Power Operations," dated June 24, 2016 (LIC-16-0043) (ML16176A213)
- 6.2. Letter from OPPD (T. Burke) to USNRC (Document Control Desk), "Certification of Permanent Cessation of Power Operations," dated August 25, 2016 (LIC-16-0067)(ML16242A127)
- 6.3. Letter from OPPD (Shane Marik) to USNRC (Document Control Desk), "Request for Approval of Certified Fuel Handler Training Program," dated July 7, 2016 (LIC-16-0049) (ML16190A208)

**ATTACHMENT 1**

**Fort Calhoun Station, Unit No. 1  
Renewed Facility Operating License No. DPR-40**

**Mark-up of Definitions and Section 5.0, Administrative Controls**

[Word-processor mark-ups using “redline/strikeout” feature for “new text/deleted text”  
respectively]

## TECHNICAL SPECIFICATIONS

### **DEFINITIONS**

#### **Certified Fuel Handler (CFH)**

A **CERTIFIED FUEL HANDLER** is an individual who complies with provisions of the CFH training program required by TS 5.3.2.

#### **Core Alteration**

The movement or manipulation of fuel, sources, reactivity control components, or other components affecting reactivity within the reactor pressure vessel with the vessel head removed and fuel in the vessel. Suspension of CORE ALTERATION shall not preclude completion of movement of a component to a safe, conservative position.

#### **Equivalent Full Power Day (EFPD)**

The time interval during power operation when the heat generated by the reactor is equivalent to reactor operation at 100% of rated power for 24 hours.

#### **Non-Certified Operator (NCO)**

A **NON-CERTIFIED OPERATOR** is an individual who complies with the provisions of the NCO training program required by T.S. 5.3.1.

#### **Shutdown Margin**

Shutdown Margin shall be the amount of reactivity by which:

- (1) the reactor is subcritical; or
- (2) the instantaneous amount of reactivity by which the reactor would be subcritical from its present condition assuming:
  - a. All known trippable full length control element assemblies (shutdown and regulating) are fully inserted except for the single assembly of highest reactivity worth which is assumed to be fully withdrawn, and
  - b. No change in non trippable control element assembly position.

#### **Axial Shape Index**

The external AXIAL SHAPE INDEX (YE) is the power level detected by the lower excore nuclear instrument detectors (L) less the power level detected by the upper excore nuclear instrument

## TECHNICAL SPECIFICATIONS

detectors (U) divided by the sum of these power levels. The internal AXIAL SHAPE INDEX (YI) used for the trip and pre-trip signals in the reactor protection system is the above value (YE) modified by the shape annealing factor, SAF, and a constant, B, to determine the true core axial power distribution for that channel.

$$Y_E = \frac{L-U}{L+U}$$

$$Y_I = \text{SAF} \times Y_E + B$$

Definitions - Page 6 Amendment No. ~~19,32,109,188~~, ###

## TECHNICAL SPECIFICATIONS

### ADMINISTRATIVE CONTROLS

#### 5.1 Responsibility

5.1.1 The plant manager shall be responsible for overall facility operation and shall delegate in writing the succession to this responsibility during his absence.

#### 5.2 Organization

5.2.1 Onsite and offsite organizations shall be established for unit operation and corporate management, respectively. The onsite and offsite organizations shall include the positions for activities affecting the safety of the nuclear ~~power~~ **fuel** plant.

- a. Lines of authority, responsibility, and communication shall be established and defined for the highest management levels through intermediate levels to and including all operating organization positions. These relationships shall be documented and updated, as appropriate, in the form of organizational charts, functional descriptions of departmental responsibilities and relationships, and job descriptions for key personnel positions, or in equivalent forms of documentation. These requirements shall be documented in the USAR.
- b. The plant manager shall be responsible for overall unit safe operation and shall have control over those onsite activities necessary for safe **storage** ~~operation~~ and maintenance of the **nuclear fuel** plant.
- c. The corporate officer with responsibility for overall **management of plant** ~~plant~~ nuclear **safety fuel** shall take any measures needed to ensure acceptable performance of the staff in operating, maintaining, and providing technical support to the plant to ensure **safe management of nuclear fuel safety**.
- d. The individuals who train the operating staff and those who carry out health physics and quality assurance functions may report to the appropriate onsite manager; however, they shall have sufficient organizational freedom to ensure their **ability to perform their assigned functions** ~~independence from operating pressures~~.

#### 5.2.2 Plant Staff

The plant staff organization shall be as described in Chapter 12 of the USAR and shall function as follows:

- a. The minimum number and type of ~~licensed and unlicensed operating~~ personnel required onsite for each shift shall be as shown in Table 5.2-1.

## TECHNICAL SPECIFICATIONS

### 5.0 ADMINISTRATIVE CONTROLS

#### 5.2 Organization (Continued)

- b. An **individual** Operator or Technician qualified in Radiation Protection Procedures shall be onsite ~~when fuel is in the reactor~~ **during fuel handling operations or movement over storage racks containing fuel.**
- c. **The Shift Manager shall be a CERTIFIED FUEL HANDLER.** ~~All core alterations shall be directly supervised by either a licensed Senior Reactor Operator or Senior Reactor Operator limited to fuel handling who has no other concurrent responsibilities during the operation.~~
- d. Fire protection program responsibilities are assigned to those positions and/or groups designated by asterisks in USAR 12.1-1 through 12.1-4 according to the procedures specified in Section 5.8 of the Technical Specifications.
- e. **DELETED** ~~The Manager - Shift Operations, the Shift Managers, and the Unit Supervisors shall hold a senior reactor operator license. The Licensed Operators shall hold a reactor operator license.~~

#### 5.3 Facility Staff Qualification

5.3.1 Each member of the plant staff shall meet or exceed the minimum qualifications of ANSI N18.1-1971 for comparable positions, with the exception of the Manager - Radiation Protection (MRP) ~~and the Shift Technical Advisor (STA), the senior reactor operator licensees, and the reactor operator licensees,~~ who shall meet the requirements set forth in Regulatory Guide 1.8, Revision 3, dated May 2000, entitled "Qualification and Training of Personnel for Nuclear Power Plants."

5.3.2 **An NRC approved training and retraining program for the CERTIFIED FUEL HANDLER shall be maintained.**

TECHNICAL SPECIFICATIONS

TABLE 5.2-1

MINIMUM SHIFT CREW COMPOSITION <sup>(ii, iii)</sup>

<u>License Category</u>	<u>Minimum Core Staffing Alteration</u>	<u>Cold Shutdown or Refueling Shutdown</u>	<u>Operating or Hot Shutdown Modes</u>
<b>Certified Fuel Handler</b> Senior Operator License	1 <sup>(i)</sup>	1	2 <sup>(iii)</sup>
Operator License	2	1	2 <sup>(iv)</sup>
Non-Licensed Certified Operator	1 <sup>(iv)</sup> (As required)	1	2
Shift Technical Adviser	None	None	1

- (i) This includes the individual with **CERTIFIED FUEL HANDLER** qualification Senior Operator License supervising **fuel handling operations** Core Alterations.
- (ii) Shift crew composition may be one less than the minimum requirements for a period of time not to exceed 2 hours in order to accommodate unexpected absence of on-duty shift crew members provided immediate action is taken to restore the shift crew composition to within the minimum requirements of Table 5.2-1. This provision does not permit any shift crew position to be unmanned upon shift change due to an oncoming shift crewmember being late or absent.
- (iii) At least one of these individuals must be in the control room at all times **when fuel is in the Spent Fuel Pool**.
- (iv) **The NON-CERTIFIED OPERATOR position may be filled by a CERTIFIED FUEL HANDLER.**

~~At least one of these individuals (or the second senior licensed operator, if both senior licensed operators are in the control room) must be present at the controls at all times.~~

## TECHNICAL SPECIFICATIONS

### 5.0 ADMINISTRATIVE CONTROLS

5.7 Not used.

### 5.8 Procedures

5.8.1 Written procedures and administrative policies shall be established, implemented and maintained covering the following activities:

- a. The applicable procedures recommended in Regulatory Guide 1.33, Revision 2, Appendix A, 1978;
- b. The emergency operating procedures required to implement the requirements of NUREG-0737 and to NUREG-0737, Supplement 1, as stated in Generic Letter 82-33;
- c. Fire Protection Program implementation; and
- d. All programs specified in Specification 5.11 through 5.24.

5.8.2 Temporary changes to procedures of 5.8.1 above may be made provided:

- a. The intent of the original procedure is not altered.
- b. The change is approved by two members of the plant supervisory staff, at least one of whom is qualified as a **CERTIFIED FUEL HANDLER** holds a Senior Reactor Operator's License.

LIC-16-0092  
Enclosure, Attachment 2

## **ATTACHMENT 2**

**Fort Calhoun Station, Unit No. 1  
Renewed Facility Operating License No. DPR-40**

**Revised Definitions and Section 5.0, Administrative Controls**

## TECHNICAL SPECIFICATIONS

### **DEFINITIONS**

#### **Certified Fuel Handler (CFH)**

A CERTIFIED FUEL HANDLER is an individual who complies with provisions of the CERTIFIED FUEL HANDLER training program required by TS 5.3.2.

#### **Core Alteration**

The movement or manipulation of fuel, sources, reactivity control components, or other components affecting reactivity within the reactor pressure vessel with the vessel head removed and fuel in the vessel. Suspension of CORE ALTERATION shall not preclude completion of movement of a component to a safe, conservative position.

#### **Equivalent Full Power Day (EFPD)**

The time interval during power operation when the heat generated by the reactor is equivalent to reactor operation at 100% of rated power for 24 hours.

#### **Non-Certified Operator (NCO)**

A NON-CERTIFIED OPERATOR is an individual who complies with the provisions of the NCO training program required by T.S. 5.3.1.

#### **Shutdown Margin**

Shutdown Margin shall be the amount of reactivity by which:

- (1) the reactor is subcritical; or
- (2) the instantaneous amount of reactivity by which the reactor would be subcritical from its present condition assuming:
  - a. All known trippable full length control element assemblies (shutdown and regulating) are fully inserted except for the single assembly of highest reactivity worth which is assumed to be fully withdrawn, and
  - b. No change in non trippable control element assembly position.

## TECHNICAL SPECIFICATIONS

### 5.0 ADMINISTRATIVE CONTROLS

#### 5.1 Responsibility

5.1.1 The plant manager shall be responsible for overall facility operation and shall delegate in writing the succession to this responsibility during his absence.

#### 5.2 Organization

5.2.1 Onsite and offsite organizations shall be established for unit operation and corporate management, respectively. The onsite and offsite organizations shall include the positions for activities affecting the safety of the nuclear fuel.

- a. Lines of authority, responsibility, and communication shall be established and defined for the highest management levels through intermediate levels to and including all operating organization positions. These relationships shall be documented and updated, as appropriate, in the form of organizational charts, functional descriptions of departmental responsibilities and relationships, and job descriptions for key personnel positions, or in equivalent forms of documentation. These requirements shall be documented in the USAR.
- b. The plant manager shall be responsible for overall unit safe operation and shall have control over those onsite activities necessary for safe storage and maintenance of the nuclear fuel.
- c. The corporate officer with responsibility for overall management of nuclear fuel shall take any measures needed to ensure acceptable performance of the staff in operating, maintaining, and providing technical support to the plant to ensure safe management of nuclear fuel.
- d. The individuals who train the operating staff and those who carry out health physics and quality assurance functions may report to the appropriate onsite manager; however, they shall have sufficient organizational freedom to ensure their ability to perform their assigned functions.

#### 5.2.2 Plant Staff

The plant staff organization shall be as described in Chapter 12 of the USAR and shall function as follows:

- a. The minimum number and type of personnel required onsite for each shift shall be as shown in Table 5.2-1.

## TECHNICAL SPECIFICATIONS

### 5.0 ADMINISTRATIVE CONTROLS

#### 5.2 Organization (Continued)

- b. An individual qualified in Radiation Protection Procedures shall be onsite during fuel handling operations or movement over storage racks containing fuel.
- c. The Shift Manager shall be a CERTIFIED FUEL HANDLER.
- d. Fire protection program responsibilities are assigned to those positions and/or groups designated by asterisks in USAR 12.1-1 through 12.1-4 according to the procedures specified in Section 5.8 of the Technical Specifications.
- e. DELETED

#### 5.3 Facility Staff Qualification

- 5.3.1 Each member of the plant staff shall meet or exceed the minimum qualifications of ANSI N18.1-1971 for comparable positions, with the exception of the Manager - Radiation Protection (MRP), who shall meet the requirements set forth in Regulatory Guide 1.8, Revision 3, dated May 2000, entitled "Qualification and Training of Personnel for Nuclear Power Plants."
- 5.3.2 An NRC approved training and retraining program for the CERTIFIED FUEL HANDLER shall be maintained.

TABLE 5.2-1

MINIMUM SHIFT CREW COMPOSITION <sup>(ii, iii)</sup>

<u>License Category</u>	<u>Minimum Staffing</u>
Certified Fuel Handler	1 <sup>(i)</sup>
Non-Certified Operator	1 <sup>(iv)</sup>

- (i) This includes the individual with CERTIFIED FUEL HANDLER qualification supervising fuel handling operations.
- (ii) Shift crew composition may be less than the minimum requirements for a period of time not to exceed 2 hours in order to accommodate unexpected absence of on-duty shift crew members provided immediate action is taken to restore the shift crew composition to within the minimum requirements of Table 5.2-1. This provision does not permit any shift crew position to be unmanned upon shift change due to an oncoming shift crewmember being late or absent.
- (iii) At least one of these individuals must be in the control room at all times when fuel is in the Spent Fuel Pool.
- (iv) The NON-CERTIFIED OPERATOR-position may be filled by a CERTIFIED FUEL HANDLER.

5.0 **ADMINISTRATIVE CONTROLS**

5.7 Not used.

5.8 **Procedures**

5.8.1 Written procedures and administrative policies shall be established, implemented and maintained covering the following activities:

- a. The applicable procedures recommended in Regulatory Guide 1.33, Revision 2, Appendix A, 1978;
- b. The emergency operating procedures required to implement the requirements of NUREG 0737 and to NUREG 0737, Supplement 1, as stated in Generic Letter 82 33;
- c. Fire Protection Program implementation; and
- d. All programs specified in Specification 5.11 through 5.24.

5.8.2 Temporary changes to procedures of 5.8.1 above may be made provided:

- a. The intent of the original procedure is not altered.
- b. The change is approved by two members of the plant supervisory staff, at least one of whom is qualified as a CERTIFIED FUEL HANDLER.