Omaha Public Power District

444 South 16th Street Mall
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December 12, 2007
LIC-07-0104

U.S. Nuclear Regulatory Commission
Attn: Document Control Desk
Mail Station: P1-137
Washington, DC 20555-0001

References:
1. Docket No. 50-285
2. Letter from OPPD (D. J. Bannister) to NRC (Document Control Desk), License Amendment Request (LAR), *Modification of Surveillance Requirements for Emergency Mode (Remotely Operated) Dampers in Containment Air Cooling and Filtering System*, dated October 19, 2007 (LIC-07-0092)
3. Letter from OPPD (D. J. Bannister) to NRC (Document Control Desk) Fort Calhoun Station Unit No. 1 License Amendment Request (LAR), *Modification of the Containment Spray System Actuation Logic*, dated July 30, 2007 (LIC-07-0052) ML072480667
4. Regulatory Guide 1.97, Revision 2, *Instrumentation for Light-Water-Cooled Nuclear Power Plants to Assess Plant and Environs Conditions During and Following an Accident*
5. Letter from OPPD (R. L. Andrews) to NRC (D. E. Sells), *Conformance to Regulatory Guide 1.97, Revision 2,* dated October 21, 1986 (LIC-86-532)

SUBJECT: Revision to Technical Evaluation of Fort Calhoun Station, Unit No. 1 License Amendment Request (LAR) "Modification of Surveillance Requirements for Emergency Mode (Remotely Operated) Dampers in Containment Air Cooling and Filtering System"

In the Reference 2 License Amendment Request (LAR), Omaha Public Power District (OPPD) proposed modification of Technical Specification surveillance requirements for the containment air cooling and filtering system (CACFS) dampers at Fort Calhoun Station. Upon further review, OPPD has determined that this LAR should have discussed an OPPD regulatory commitment made in Reference 5 associated with Regulatory Guide (RG) 1.97 (Reference 4).

Accordingly, attached is a revised technical evaluation to supersede the evaluation provided in Attachment 1 of Reference 2. The description of the CACFS dampers was revised to clarify the number of damper assemblies affected by the LAR and the manner in which their position (open/closed) is currently indicated in the control room. OPPD has also incorporated discussion of the commitment made in Reference 5, which is to monitor emergency ventilation damper position in accordance with RG 1.97.

OPPD is deleting this commitment because the modification will place the CACFS dampers into their post-accident positions permanently and hold them there using qualified components. The dampers will be verified to be in those positions each refueling outage. Damper position indication will still be provided in the control room but, since the dampers cannot change state, the display will be considered for information only. Damper position indication will therefore not serve a safety related purpose following the modification. Sections 3.2, 4.1.1, and 4.3 (Significant Hazards Consideration) of the technical evaluation provided by Reference 2 were revised to delete wording that implied the damper position indication would be consistent with RG 1.97.

The NRC Project Manager has also asked for clarification on crediting of the CACFS for controlling containment pressure following a loss-of-coolant accident (LOCA) and a main steam line break (MSLB) accident. Therefore, Section 4.1.2 of the technical evaluation was revised to note that the CACFS is currently credited only for the MSLB accident. As noted in Reference 3, OPPD has requested NRC permission to credit the CACFS for a LOCA as well, in lieu of the containment spray (CS) system.

Revision bars in the right margin of the attachment denote the location of revised text. There are no changes to the Technical Specification or Updated Safety Analysis Report Appendix G pages submitted by Reference 2, and thus those pages are not being resubmitted.

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

This letter deletes a previous regulatory commitment, and contains no new regulatory commitments.

If you should have any questions regarding this submittal or require additional information, please contact Mr. Thomas C. Matthews at 402-533-6938.

I declare under penalty of perjury that the foregoing is true and correct. (Executed on December 12, 2007)

D. J. Bannister
Site Director

DJB/MLE/mle

Attachment: OPPD's Evaluation of the Proposed Change (Revised)

c: Director of Consumer Health Services, Department of Regulation and Licensure, Nebraska Health and Human Services, State of Nebraska

Omaha Public Power District's Evaluation of the Proposed Change
For
Modification of Surveillance Requirements for Emergency Mode (Remotely Operated) Dampers in Containment Air Cooling and Filtering System

(REVISED)

1.0 SUMMARY DESCRIPTION

This license amendment request (LAR) proposes to amend Renewed Operating License No. DPR-40 for Fort Calhoun Station (FCS), Unit No. 1 by modifying Technical Specification (TS) 3.6(3), *Containment Recirculating Air Cooling and Filtering System*. OPPD has determined that emergency mode (remotely operated) dampers in the containment air cooling and filtering system (CACFS) can be maintained in their accident positions permanently in all plant operating modes. The CACFS will operate in filtered air mode to preclude the buildup of background radiation in containment.

OPPD proposes to modify TS 3.6(3)a to delete the surveillance requirement (SR) testing the CACFS emergency mode (remotely operated) dampers each refueling outage and replace it with a SR to verify that they are in their accident positions. OPPD also proposes to delete the SR of TS 3.6(3)b to exercise the remotely operated (emergency mode) dampers at intervals not to exceed 3 months. Finally, OPPD proposes to revise Updated Safety Analysis Report (USAR), Appendix G, Criterion 64, *Testing of Air Cleanup Systems*, which currently indicates that these dampers are active components and that the filters are normally bypassed.

Following NRC approval of the proposed changes, a plant modification will be installed during the 2008 refueling outage (RFO) to place the dampers into their accident positions permanently.

2.0 DETAILED DESCRIPTION

The proposed changes are necessary because of problems encountered during the 2006 RFO with the operation and positioning of these dampers while undergoing TS 3.6(3)a surveillance testing. An operability justification (Safety Analysis for Operability 06-004) is in place documenting the failure to meet the SRs of TS 3.6(3)a and TS 3.6(3)b. These dampers are being maintained in their accident positions; therefore, the CACFS, which is operating in filtered air mode is operable. These dampers referred to in TS 3.6(3) as "emergency mode" or "remotely operated" are the CACFS face and bypass dampers. The accident positions for the face dampers are open and the bypass dampers are closed to allow airflow through the CACFS high efficiency particulate air (HEPA) and charcoal filters.

These dampers were originally designed to allow the HEPA and charcoal filters to be bypassed during normal plant operation, and automatically

aligned by a ventilation isolation actuation signal (VIAS) to their accident positions. However, OPPD has operated the system with the face and bypass dampers aligned to draw air through the filters (i.e., the accident mode of operation) continuously in all plant operating modes. This method of operation decreases airborne particulates in containment to preclude the buildup of background radiation. TS 3.6(3)e requires differential pressure testing of the HEPA and charcoal filter banks and has shown that operating the system in this alignment over long periods does not jeopardize filter performance.

The proposed TS changes are as follows:

TS 3.6(3)a will be revised to delete the SR to test the emergency mode (remotely operated) dampers and replace it with a SR to verify the dampers are in their accident positions. Following that change, TS 3.6(3)a will read as follows:

a. *The emergency mode dampers will be verified to be in their accident positions and the automatic valve, fan, and fusible link automatic damper operation will be checked for operability during each refueling outage.*

TS 3.6(3)b will be revised to delete the SR to exercise the remotely operated (emergency mode) dampers and following that change will read as follows:

b. *Each fan required to function during accident conditions will be exercised at intervals not to exceed three months.*

OPPD also proposes to revise USAR, Appendix G, Criterion 64, "Testing of Air Cleanup Systems" to show that the face dampers (louvers) are open, and the bypass dampers (bypass louvers) are closed. Since this causes the CACFS to operate in filtered air mode, OPPD must revise Criterion 64 as it currently indicates that the filters are normally bypassed. The revised response to Criterion 64 requires NRC approval.

In summary, with the face and bypass dampers aligned in their accident positions permanently, these dampers become passive components and the CACFS operates only in filtered air mode. Therefore, OPPD proposes to delete SRs that currently require testing (TS 3.6(3)a) and exercising (TS 3.6(3)b) the face and bypass dampers. OPPD proposes to revise TS 3.6(3)a to verify that the face and bypass dampers are in their accident positions each refueling outage. OPPD also proposes to revise the response to USAR Appendix G, Criterion 64 to show that these dampers

are maintained in their accident positions and delete the statement indicating that the filters are normally bypassed.

These proposed changes will resolve the current operability justification, preclude future problems associated with operating these dampers, and clarify that the CACFS is operated in filtered air mode, which is acceptable for both normal and accident conditions.

3.0 TECHNICAL EVALUATION

3.1 Containment Air Cooling and Filtering System (CACFS) Description

The design basis function of the CACFS is discussed in Section 6.4 (Reference 6.1) of the FCS USAR. The CACFS consists of four air handling units, each with its own fan, a common plenum discharge system and instrumentation and controls. There are two types of units: 1) two containment air cooling and filtering (CACF) units with filtering capacity; and 2) two containment air cooling (CAC) units with no filtering capacity. Each train of the two-train CACFS consists of one CACF unit and one CAC unit. The arrangement of the equipment is shown in USAR Figure 6.4-1. Each of the two CACF units is comprised of the following components (listed in order of flow sequence): inlet face dampers, baffle type moisture separators, media type mist eliminators, HEPA filters, charcoal filters and cooling coils, all contained in a single housing. Dampers between the charcoal filters and the cooling coils allow the filter banks to be bypassed during normal (i.e., non-accident) operation. The filter banks of each unit are split in two parallel and separate trains. The common exhaust flows from each train are drawn through coil banks by axial, air-over-motor fans and discharged into a plenum. Backdraft dampers are installed in the duct sections downstream of the fans. The CAC units are similar in design to the CACF but do not include mist eliminators, face and bypass dampers, HEPA filters, and charcoal filters.

The design function of the CACFS is to limit the leakage of airborne activity from containment in the event of a loss-of-coolant accident (LOCA) by removing heat released to the containment atmosphere to the extent necessary to initially maintain the structure below its design pressure and then reduce the pressure to near atmospheric. This maintains containment leakage within design limits.

The CACFS also prevents the accumulation of hydrogen pockets by maintaining a continuous flow throughout the containment. The minimum number of air changes in restricted areas of the containment is one per hour. This provides adequate mixing and sweeping of hydrogen. A lesser

number of air changes are permitted in open top cells where hydrogen will not tend to accumulate.

The system also functions during normal plant operation, outside the context of engineered safeguards, to cool the containment atmosphere and provide any air filtration that may be required prior to personnel access.

Presently, OPPD credits the CACFS only in the containment pressure analysis (USAR 14.16) for the main steam line break (MSLB) design basis accident (DBA).

3.2 Face and Bypass Damper Description

These dampers on the CACF units direct air through the HEPA and charcoal filters after a DBA. The dampers are of multi-blade construction with galvanized steel blades, neoprene seals, and fail-safe air piston operators that work against a spring. There are 32 filtered inlet (face) damper assemblies and 2 bypass inlet (bypass) damper assemblies on each CACF unit. A solenoid valve supplies control air pressure to the piston operators located on each damper assembly. The solenoid valve is designed such that an electrical failure removes control air pressure. As a result, on loss of control air pressure or control signal, the dampers assume their post-accident filtration position; the face dampers open and the bypass dampers close. One face damper operator and one bypass damper operator on each CACF unit are equipped with limit switches to provide indication to the control room operators, via indicating lights, the Qualified Safety Parameter Display System (QSPDS), and the emergency response facilities (ERF) plant computer as to whether these dampers are in their normal or accident positions.

Currently, TS 3.6(3)a requires these dampers be checked for operability each refueling outage while TS 3.6(3)b requires them to be exercised at intervals not to exceed three months. The modification will permanently remove control air to the piston operators causing the valve springs to set the dampers to their post-accident filtration positions. In addition, the modification will remove the ventilation isolation actuation signal currently provided to these dampers. Since the dampers will become passive components not required to change position, the requirements of TS 3.6(3)a and TS 3.6(3)b to test and exercise them respectively can be eliminated. TS 3.6(3)a will be revised to require verification that the dampers are in their accident position each refueling outage.

3.3 CACF Filter Performance

Currently, the function of the CACF HEPA and charcoal filters is to pass sufficient airflow to support post-accident containment heat removal. These filters also remove radioactivity from the containment atmosphere, but currently, that function is not credited in the USAR accident analyses. TS 3.6(3) requires visual inspection of these filters and testing to confirm that the differential pressure drop across the combined HEPA and charcoal adsorber banks is less than 6 inches of water at design flow.

OPPD operates the CACFS aligned with continuous airflow through the HEPA and charcoal filters. There are no TS or other operating restrictions that require the system to be operated in the bypass mode for any length of time during a plant operating cycle. TS 3.6(3)c requires the air filtering circuit to be operated at least 10 hours every month but does not limit the length of operation. Historically, TS 3.6(3)e surveillance testing performed each operating cycle has shown that the measured differential pressure drop across the combined HEPA and charcoal adsorber banks has remained below the acceptance limit of 6 inches of water. Therefore, the proposed changes to TS 3.6(3)a, TS 3.6(3)b, and USAR Appendix G, Criterion 64 do not conflict with current TS or other operating restrictions. The HEPA and charcoal filters will remain capable of performing their design function during both normal operations and accident conditions.

3.4 USAR Accident Analyses

See Section 4.1.2 for a discussion of the impact on USAR accident analyses.

3.5 Risk Information

The proposed amendment does not involve application or use of risk informed decisions.

3.6 Conclusion

The proposed changes to TS 3.6(3)a, TS 3.6(3)b, and USAR, Appendix G, Criterion 64 eliminate the CACFS bypass mode of operation. During all plant operating modes, the CACFS will be operated in filtered air mode with the dampers placed into their accident positions permanently. Based on plant operating and surveillance testing experience, the HEPA and charcoal filters will remain capable of performing their design function during both normal operations and accident conditions.

4.0 REGULATORY EVALUATION

4.1 Applicable Regulatory Requirements/Criteria

4.1.1 Regulations

General Design Criteria

FCS was licensed for construction prior to May 21, 1971, and at that time committed to the draft General Design Criteria (GDC). The draft GDC are contained in Appendix G of the FCS USAR. The draft GDC applicable to this LAR are as follows:

Criterion 10 – *Containment.* FCS Criterion 10 states that the containment structure shall be designed to sustain the initial effects of gross equipment failures, such as a large coolant boundary break, without loss of required integrity and, together with other engineered safety features as may be necessary, to retain for as long as the situation requires the functional capability to protect the public.

This LAR does not affect compliance with FCS Design Criterion 10, as no changes to the design of the containment structure are proposed.

Criterion 37 – *Engineered Safety Features Basis for Design.* FCS Criterion 37 states that engineered safety features shall be provided in the facility to back up the safety provided by the core design, the reactor coolant pressure boundary, and their protection systems. As a minimum, such engineered safety features shall be designed to cope with any size reactor coolant pressure boundary break up to and including the circumferential rupture of any pipe in that boundary assuming unobstructed discharge from both ends.

The proposed changes comply with FCS Design Criterion 37. There will no longer be a need to exercise the face and bypass dampers. These dampers will be placed into their post-accident filtration positions permanently and verified to be in those positions each refueling outage. Thus, the proposed changes do not adversely affect the ability of engineered safety features to cope with a DBA.

Criterion 38 – *Reliability and Testability of Engineered Safety Features.*

FCS Criterion 38 states that all engineered safety features shall be designed to provide high functional reliability and ready testability. In determining the suitability of a facility for a proposed site, the degree of reliance upon and acceptance of the inherent and engineered safety afforded by the systems, including engineered safety features, will be influenced by the known and the demonstrated performance capability and reliability of the systems, and by the extent to which the operability of such systems can be tested and inspected where appropriate during the life of the plant.

The proposed changes comply with FCS Criterion 38. The reliability of the face and bypass dampers is assured as they will be placed into their post-accident filtration positions permanently. Since the dampers will no longer be required to change position, there will no longer be a need to exercise them. Each refueling outage, these dampers will be verified to be in their accident positions. Therefore, the CACFS remains highly reliable and testable.

Criterion 41 – *Engineered Safety Features Performance Capability.* FCS Criterion 41 states that engineered safety features such as emergency core cooling and containment heat removal systems shall provide sufficient performance capability to accommodate partial loss of installed capacity and still fulfill the required safety function. As a minimum, each engineered safety feature shall provide this required safety function assuming a failure of a single active component.

The changes proposed by this LAR do not affect the ability of the CACFS to comply with Criterion 41. Failure of a single active component in the CACFS is compensated for by a redundant component. With the face and bypass dampers aligned in their accident positions permanently, these dampers become passive components and are not required to change position.

Criterion 42 – *Engineered Safety Features Components Capability.* FCS Criterion 42 states that engineered safety features shall be designed so that the capability of each component and system to perform its required function is not impaired by the effects of a loss-of-coolant accident.

The proposed changes comply with Criterion 42. Placing the face and bypass dampers into their post-accident filtration positions permanently negates the need to check or exercise them. Each refueling outage, the dampers will be verified to be in their accident

positions. The HEPA and charcoal filters remain capable of removing fission products generated by a LOCA.

Criterion 43 – *Accident Aggravation Prevention.* FCS Criterion 43 states that engineered safety features shall be designed so that any action of the engineered safety features which might accentuate the adverse after-effects of the loss of normal cooling is avoided.

The proposed changes comply with Criterion 43. A portion of the containment air recirculation and cooling system is operating at all times. Placing the face and bypass dampers into their post-accident filtration positions permanently negates the need to check or exercise them. Each refueling outage, the dampers will be verified to be in their accident positions. Thus, the proposed changes have no adverse effects on the loss of normal cooling.

Criterion 52 – Containment Heat Removal Systems. FCS Criterion 52 states that where active heat removal systems are needed under accident conditions to prevent exceeding containment design pressure, at least two systems, preferably of different principles, each with full capacity, shall be provided.

The proposed changes comply with Criterion 52. The face and bypass dampers will be in their accident positions permanently. One, two or three CACF/CAC units will continue to operate during reactor operation. The other unit(s) will continue to start automatically on an accident signal. In the event of loss of outside power, the CACFS will receive power from the emergency diesel generators. The CACFS remains highly reliable.

Criterion 58 – *Inspection of Containment Pressure-Reducing Systems.* FCS Criterion 58 states that design provisions shall be made to facilitate the periodic physical inspection of all important components of the containment pressure-reducing systems, such as pumps, valves, spray nozzles, torus, and sumps.

The proposed changes comply with Criterion 58. The CACFS remains capable of inspections during normal operation.

Criterion 59 – *Testing of Containment Pressure-Reducing Systems.* FCS Criterion 59 states that the containment pressure reducing systems shall be designed so that active components, such as pumps and valves, can be tested periodically for operability and required functional performance.

The proposed changes comply with Criterion 59. The dampers will be placed into their post-accident filtration positions permanently. Since the dampers will no longer be active components, there will no longer be a need to check or exercise them. Each refueling outage, the dampers will be verified to be in their accident positions. Active CACFS components will still be tested periodically for operability and functional performance.

Criterion 61 – *Testing of Operations Sequence of Containment Pressure-Reducing Systems.* FCS Criterion 61 states that a capability shall be provided to test under conditions as close to the design as practical the full operational sequence that would bring the containment pressure-reducing systems into action, including the transfer to alternate power sources.

The proposed changes comply with Criterion 61. The dampers will remain in their post-accident filtration position permanently, which does not affect the ability to test the operational sequence of the CACFS.

Criterion 62 – *Inspection of Air Clean-Up Systems.* FCS Criterion 62 states that design provisions shall be made to facilitate physical inspection of all critical parts of containment air cleanup systems, such as ducts, filters, fans, and dampers.

The proposed changes comply with Criterion 62. Placing the dampers into their post-accident filtration positions permanently still allows physical inspection of all critical parts of the CACFS. Each refueling outage, the dampers will be verified to be in their accident positions.

Criterion 63 – *Testing of Air Cleanup Systems Components.* FCS Criterion 63 states that design provisions shall be made so that active components of the air cleanup systems, such as fans and dampers, can be tested periodically for operability and required functional performance.

The proposed changes comply with Criterion 63. The dampers will be placed into their post-accident filtration positions permanently. Since the dampers will no longer be active components, there will no longer be a need to check or exercise them. Each refueling outage, the dampers will be verified to be in their accident positions. The SR to exercise the CACFS fans at intervals not to exceed 3 months is unchanged.

Criterion 64 – *Testing of Air Cleanup Systems.* FCS Criterion 64 states that a capability shall be provided for in situ periodic testing and surveillance of the air cleanup systems to ensure (a) filter bypass paths have not developed and (b) filter and trapping materials have not deteriorated beyond acceptable limits.

The response to Criterion 64 is revised to change the term "louvers" and "bypass louvers" to "face dampers" and "bypass dampers" respectively for consistency with the FCS Technical Specifications and USAR Section 6.4.1. The response to Criterion 64 is revised to note that the face dampers are open and the bypass dampers are closed, which requires deletion of the statement "The filters will normally be bypassed."

These changes are justified based on FCS operating experience and are supported by surveillance test results. OPPD has operated the system with the face and bypass dampers aligned to draw air through the filters (i.e., the accident mode of operation) continuously in all plant operating modes. This method of operation helps prevent a buildup of airborne particulates in containment. Currently, TS 3.6(3)e requires differential pressure testing of the combined HEPA and charcoal filter banks at least once per plant operating cycle.

Results have shown that operating the system in filtered air mode for long periods does not jeopardize filter performance. Thus, based on operating experience supported by surveillance test results, the CACFS can be operated in filtered air mode during normal operations and remain capable of responding to a DBA LOCA. The revised response to Criterion 64 requires NRC approval.

Criterion 65 – *Testing of Operational Sequence of Air Cleanup System.* FCS Criterion 65 states that a capability shall be provided to test under conditions as close to design as practical the full operational sequence that would bring the air cleanup systems into action, including the transfer to alternate power sources and the design airflow delivery capability.

The proposed changes comply with Criterion 65. The CACFS has one or more fan units in service at all times during normal operations. Placing the dampers into their accident positions permanently has no affect on the functional capability of idle fan cooler units or the ability to transfer to alternate power sources.

Design airflow delivery capability will continue to be tested each refueling outage.

4.1.2 Design Basis (USAR)

Currently, the USAR Section 14.15 (Reference 6.2) analysis for a LOCA at full power does not credit operation of the CACFS for containment heat removal or for control of radiological releases.

For a LOCA during shutdown cooling, USAR Section 14.15.7.1 explains that at any time after the safety injection tanks are isolated, the reactor coolant system pressure is 400 psia or less, and the total stress in any component will be less than the total stress at the design pressure. Therefore, the possibility of a LOCA during shutdown cooling becomes even more remote than while at power.

The CACFS can be used to reduce the high containment building pressure and to remove decay heat from the building if it becomes necessary to stop shutdown cooling. The capacity of the CACFS will be in excess of that required since the energy release will be far less than for a LOCA at full power; thus, no spray system backup should be required. Diesels will also be started to provide power to buses 1A3 and 1A4 if off-site power is lost during the accident.

The CACFS will continue to function as described in the USAR and its cooling capacity is unaffected by the proposed changes.

The containment pressure analysis of USAR Section 14.16 (Reference 6.3) is performed to determine peak pressure due to a LOCA or an MSLB inside containment. For these DBAs, the containment spray (CS) system and/or the CACFS will maintain containment pressure below the design limit. Currently, USAR Section 14.16 takes credit only for the containment spray (CS) system in response to a LOCA while both the CACFS and the CS system are credited in response to an MSLB.

To resolve Generic Safety Issue 191, OPPD has proposed a LOCA water management strategy (Reference 6.5) to control containment pressure using the CACFS instead of the CS system. Following NRC approval of Reference 6.5, USAR Section 14.16 will be revised to credit the CACFS instead of the CS system for containment pressure control in response to a LOCA. Both the CS system and the CACFS will continue to be credited for containment pressure control following an MSLB.

The CACFS dampers will be held in their accident positions with qualified components and therefore, the proposed changes allow the CACFS to be credited for containment pressure reduction for either DBA. Justification for crediting the CACFS instead of the CS system for containment pressure control following a LOCA is contained in Reference 6.5. The changes proposed by this LAR are separate and distinct from the changes proposed by Reference 6.5 as these changes pertain only to the positioning of the CACFS dampers.

4.1.3 Approved Methodologies

OPPD committed to monitor the position of the emergency ventilation dampers (i.e., the CACFS face and bypass dampers) as part of Regulatory Guide (RG) 1.97 compliance (Reference 6.4). Monitoring is achieved via damper operator mounted limit switches, which provide OPEN/CLOSED indication on the QSPDS displays located in the control room.

RG 1.97 classifies this indication as a Category 2, Type D variable, which is defined as *those variables that provide information to indicate the operation of individual safety systems and other systems important to safety. These variables are to help the operator make appropriate decisions in using the individual systems important to safety in mitigating the consequences of an accident.*

The modification will cause the CACFS face and bypass dampers to be held in their post-accident filtration positions permanently using qualified components and the dampers will be verified to be in that position each refueling outage. Thus, control room operators will no longer need to rely on QSPDS to verify the position of these dampers.

Although QSPDS and the ERF plant computer will still indicate damper position following the modification, the indication will be considered for information only, which does not meet the intent of the RG 1.97 commitment. Thus, OPPD is deleting its RG 1.97 commitment to monitor emergency ventilation damper position. With the dampers placed into their post-accident filtration positions permanently, this commitment is no longer necessary.

4.2 Precedent

No precedent has been identified for a TS amendment associated with permanently aligning remotely operated containment air cooling and filtering system dampers in their accident positions.

4.3 Significant Hazards Consideration

The Omaha Public Power District (OPPD) has evaluated whether or not a significant hazards consideration is involved with the proposed amendment 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 containment air cooling and filtering system (CACFS) is not an initiator of any accident previously evaluated at the Fort Calhoun Station (FCS). The CACFS is an accident mitigation system. The current licensing basis function of the CACFS is to limit the containment pressure rise by providing a means for cooling the containment following a main steam line break (MSLB) design basis accident (DBA).

The CACFS face and bypass dampers will be aligned to their accident positions permanently causing the CACFS to operate in filtered air mode. Surveillance testing has shown that operating the system in this alignment over long periods does not jeopardize filter performance. Over the lifetime of the plant, the differential pressures measured across the combined high efficiency particulate air (HEPA) and charcoal filter banks have met test acceptance criteria.

With the dampers aligned to their accident positions permanently, the removal of TS requirements to check and exercise the dampers does not adversely affect the function of the CACFS. Each refueling outage, the dampers will be verified to be in their accident positions.

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 CACFS was designed to remove heat released to the containment atmosphere during a DBA to the extent necessary to maintain the containment structure below its design pressure. The face and bypass dampers will be aligned in their accident positions permanently, and the air supply, power, and ventilation isolation actuation signal to these dampers will be removed. Thus, the dampers will no longer have an active function and will not be required to change position under accident conditions.

Each refueling outage, the dampers will be verified to be in their accident positions. The CACFS will continue to operate as before except that filter bypass mode will be unavailable. Surveillance testing has shown that the filters are capable of long-term operation in filtered air mode without degrading their ability to respond to a DBA loss-of-coolant accident (LOCA).

No credible new failure mechanisms, malfunctions, or accident initiators not previously considered in the design and licensing basis are created and none of the initial condition assumptions of any accident evaluated in the safety analysis are impacted.

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 containment building and associated penetrations are designed to withstand an internal pressure of 60 psig at 305°F, including all thermal loads resulting from the temperature associated with this pressure, with a leakage rate of 0.1 percent by weight or less of the contained volume per 24 hours. The CACFS is credited for maintaining containment pressure and temperatures within design limits. The air coolers are also credited for limiting peak containment pressure for an MSLB.

The CACFS consists of two redundant trains, each train with one air cooling and filtering unit and one air cooling unit, for a total of four cooling units. In accordance with analyses completed for replacement of the FCS steam generators in 2006, operation of the CACFS will continue to be credited in the MSLB containment pressure analysis. The CACFS face and bypass dampers will be aligned to their accident positions permanently. Therefore, TS surveillance requirements to periodically check and exercise these dampers are unnecessary. Each refueling outage, the dampers will be verified to be in their accident positions.

The containment heat removal licensing basis is not adversely affected by the proposed changes. The ability to maintain design limits for containment peak pressure and temperature, as well as long-term containment pressure and temperature, is preserved.

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 Conclusions

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 has determined that the proposed amendment would 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. However, 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 USAR Section 6.4, *Containment Air Cooling and Filtering System*
6.2 USAR Section 14.15, *Loss-of-Coolant Accident*
6.3 USAR Section 14.16, *Containment Pressure Analysis*
6.4 Letter from OPPD (R. L. Andrews) to NRC (D. E. Sells), *Conformance to Regulatory Guide 1.97, Revision 2,* dated October 21, 1986 (LIC-86-532)
6.5 Letter from OPPD (D. J. Bannister) to NRC (Document Control Desk) Fort Calhoun Station Unit No. 1 License Amendment Request (LAR), *Modification of the Containment Spray System Actuation Logic*, dated July 30, 2007 (LIC-07-0052) ML072480667