

2.0 LIMITING CONDITIONS FOR OPERATION

2.12 Control Room Systems

Applicability

Applies to the control room air conditioning and filtering systems.

Objective

To limit the environmental conditions in the control room, under normal and post DBA conditions.

Specification

1. If the control room air temperature reaches 105°F, immediate action shall be taken to reduce this temperature and to monitor the temperature within the RPS (AI-31A, B, C, D and E) and ESF (Engineered Safety Features Actuation, AI-30A and B, AI-43A and B) control cabinets. If the temperature within these control cabinets exceeds 120°F and cannot be reduced below 120°F in four hours, the reactor will be placed in hot shutdown within the following six (6) hours.
2. A thermometer must be in the control room at all times.
3. All the areas of the plant which have safety related instrumentation will be observed during hot functional testing to determine local temperatures and monitored during operation if normal plant ventilation is not available.
4. From and after the date that the control room air treatment system is made or found to be inoperable for any reason, reactor operation is permissible only during the succeeding seven days unless such circuit is sooner made operable. If these conditions cannot be met, the reactor shall be placed in cold shutdown condition within 24 hours.

Basis

The reactor protective system panels and the engineered safety features panels were designed for, and the instrumentation was tested at, 120°F. There is a maximum 15°F temperature difference between the inside and outside of the control cabinets. Therefore, if the temperature of the control room exceeds 105°F and if the temperature differential between the inside and outside of the control cabinet cannot be reduced to obtain an inside temperature no greater than 120°F within four hours, the reactor will be shutdown and the conditions corrected to preclude operation of components in an untested environment.

If the control room air treatment system is found to be inoperable, there is no immediate threat to the control room and reactor operation may continue for a limited period of time while repairs are being made. If the system cannot be repaired within seven (7) days, the reactor is shutdown and brought to cold shutdown within 24 hours.

ATTACHMENT B

#### Description of Amendment Request

The proposed amendment would modify Technical Specification 2.12, "Control Room Systems", which applies to control room air conditioning and filtering systems. This proposed amendment does not change the intent of the technical specification. It more accurately directs the application of the technical specification to the equipment it was originally intended to address. As currently written, the temperature limitation applicable to certain safety-related panels, specifically, Reactor Protective System (RPS) and Engineered Safety Features (ESF), is 120°F. This temperature limitation is stated in terms of the temperature in the control room, generally. The components to be protected are housed in enclosed cabinets. Testing performed at Fort Calhoun Station indicates as much as a 15°F differential may exist between the inside and outside of equipment cabinets. This could allow the control room cabinet temperature to exceed the design criteria of various components without requiring action to be taken. This proposed amendment would preclude this possibility by stating the temperature limitation in terms of the components and not the control room, generally.

#### Basis for No Significant Hazards Determination

The proposed change does not involve a significant hazard consideration because operation of Fort Calhoun Station in accordance with this change would not:

1. Involve a significant increase in the probability or consequences of an accident previously evaluated. This change applies the technical specification directly to the components and circuits it is intended to limit, and hence, protect. Previously, the technical specification was applied indirectly, i.e., limiting the temperature of the control room while the components to which it should have been applied could have been subjected to a higher temperature than that intended by the technical specification. Through the proposed application of the technical specification additional assurance is provided that the design temperature limitations of the certain safety-related circuits and components will not be exceeded.
2. Create the possibility of a new or different kind of accident from any previously analyzed. There are no circuit or component changes resulting from this proposed amendment. There are no new system applications or system application changes resulting from this proposed amendment. Hence, there are no new or different kinds of accidents possible due to this proposed amendment. The more direct and specific application of the temperature limitation inherent in technical specification 2.12 does not create the possibility of a new or different kind of accident.

3. Involve a significant reduction in a margin of safety. The acceptance of this proposed amendment would increase the margin of safety by providing additional assurance that the RPS and ESF equipment located in the enclosed control room panels will not operate above their design temperature during power operation. The more stringent application of the temperature limitation helps to guarantee the proper and predictable functioning of solid-state devices in the above mentioned panels. The application of temperature limitation to the components environment directly instead of indirectly (i.e. the control room environment) is a more conservative operating position and therefore will not reduce the margin of safety.

This change resulted from NRC IEN-85-89, "Potential Loss of Solid-State Instrumentation Following Failure of Control Room Cooling". In the subject (IEN-85-89) Notice after a loss of two main control room ventilation units at the McGuire Nuclear Station, numerous alarms were actuated. The cause of the alarms was malfunctioning instrumentation due to the increased temperature in the control room.

Presently, Fort Calhoun Station's Technical Specification 2.12 states "If the control room air temperature reaches 120°F, immediate action shall be taken to reduce this temperature. If the temperature cannot be reduced to below 120°F in four hours, the reactor will be placed in a hot shutdown condition." In addition, the Technical Specification states that the basis for the control room temperature Technical Specification is "The Reactor Protective System (RPS) and the Engineered Safeguards System were designed for, and the instrumentation was tested at 120°F. Therefore, if the temperature of the control room or the RPS instrumentation temperature exceeds 120°F, the reactor will be shutdown and the conditions corrected to preclude failure of components in an interstate environment."

On September 30, 1987 OPPD conducted a Control Room Temperature Test (under Maintenance Order 874288) at Fort Calhoun Station. The results of this test showed that there is a 15°F temperature difference between the control room and control room cabinets. The conclusions from the test were that with this temperature difference the control room temperature should not exceed 105°F in order to ensure that the maximum qualified environment of 120°F for instrumentation in the cabinets is not surpassed.

The proposed changes to Tech. Spec. 2.12 "Control Room Systems" takes these new facts into consideration and the Tech. Spec. wording is changed accordingly. Therefore, based on the above considerations, OPPD has determined that this change does not involve a significant hazards consideration.

BEFORE THE UNITED STATES  
NUCLEAR REGULATORY COMMISSION

In the Matter of )  
Omaha Public Power District )  
(Fort Calhoun Station )  
Unit No. 1) )

Docket No. 50-285

APPLICATION FOR AMENDMENT  
OF  
OPERATING LICENSE

Pursuant to Section 50.90 of the regulations of the U. S. Nuclear Regulatory Commission ("the Commission"), Omaha Public Power District, holder of Facility Operating License No. DPR-40, herewith requests that the Technical Specifications set forth in Appendix A to that License be amended to lower the maximum allowable ambient temperature in the Control Room.

The proposed changes in Technical Specifications are discussed in Attachment A to this Application. A discussion, Justification and no Significant Hazards Consideration Analysis, which demonstrates that the proposed changes do not involve significant hazards considerations, is appended in Attachment B. The proposed changes in specifications would not authorize any change in the types or any increase in the amounts of effluents or a change in the authorized power level of the facility.

WHEREFORE, Applicant respectfully requests that Section 2 of Appendix A to Facility Operating License No. DPR-40 be amended in the form attached hereto as Attachment A.

A copy of this Application, including its attachments, has been submitted to the Director - Nebraska State Division of Radiological Health, as required by 10 CFR 50.91.

OMAHA PUBLIC POWER DISTRICT

By *K. J. Morris*  
Division Manager  
Nuclear Operations

Subscribed and sworn to before me this 20TH day of December, 1989.

*J. T. Gleason*  
Notary Public

