

June 18, 1992

Docket No.: 50-483

Mr. Donald F. Schnell  
Senior Vice President - Nuclear  
Union Electric Company  
Post Office Box 149  
St. Louis, Missouri 63166

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Dear Mr. Schnell:

SUBJECT: AMENDMENT NO. 70 TO FACILITY OPERATING LICENSE NO. NPF-30  
(TAC NO. M82626)

The Commission has issued the enclosed Amendment No.70 to Facility Operating License No. NPF-30 for the Callaway Plant, Unit 1. This amendment revises the Technical Specifications (TS) in response to your application dated December 6, 1991 as supplemented by letter dated June 16, 1992.

The amendment revises TS 3/4.7.12, Table 3.7-4 and associated Bases, "Area Temperature Monitoring," to increase the maximum temperature limit from 101°F to 106°F for the Electrical Penetration Rooms. The proposed change is consistent with the intent of the TS because the absolute maximum temperature limit for the Electrical Penetration Rooms is maintained at 131°F.

A copy of the Safety Evaluation is also enclosed. The notice of issuance will be included in the Commission's next biweekly Federal Register notice.

Sincerely,

/s/

L. Raynard Wharton, Project Manager  
Project Directorate III-3  
Division of Reactor Projects III/IV/V  
Office of Nuclear Reactor Regulation

Enclosure:

1. Amendment No.70 to License No. NPF-30
2. Safety Evaluation

\*See Previous Concurrence

cc: See next page

LA/PD33 <i>[Signature]</i>	PM/PD33	*SPLB/DST/NRR	PD/PD33 <i>[Signature]</i>	*OGC
PKreutzer	RWharton/tg <i>[Signature]</i>	CMcCracken	JHannon	JHull <i>[Signature]</i>
06/17/92	06/17/92	06/12/92	06/17/92	06/15/92 <i>[Signature]</i>

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*[Signature]*

Mr. D. F. Schnell  
Union Electric Company

Callaway Plant  
Unit No. 1

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UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D.C. 20555

UNION ELECTRIC COMPANY

CALLAWAY PLANT, UNIT 1

DOCKET NO. 50-483

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 70  
License No. NPF-30

1. The Nuclear Regulatory Commission (the Commission) has found that:
  - A. The application for amendment filed by Union Electric Company (UE, the licensee) dated December 6, 1991, as supplemented by letter dated June 16, 1992, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;
  - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
  - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
  - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
  - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C.(2) of Facility Operating License No. NPF-30 is hereby amended to read as follows:

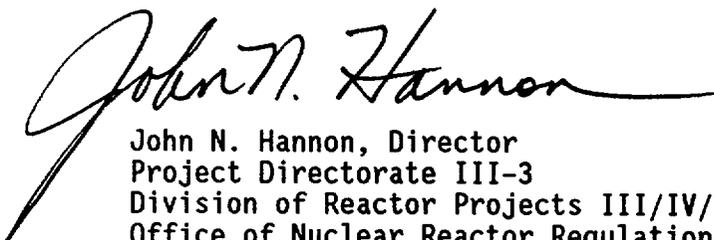
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(2) Technical Specifications and Environmental Protection Plan

The Technical Specifications contained in Appendix A, as revised through Amendment No. 70 , and the Environmental Protection Plan contained in Appendix B, both of which are attached hereto, are hereby incorporated into the license. UE shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

3. This license amendment is effective as of its date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



John N. Hannon, Director  
Project Directorate III-3  
Division of Reactor Projects III/IV/V  
Office of Nuclear Reactor Regulation

Attachment:  
Changes to the Technical  
Specifications

Date of issuance: June 18, 1992

ATTACHMENT TO LICENSE AMENDMENT NO. 70

OPERATING LICENSE NO. NPF-30

DOCKET NO. 50-483

Revise Appendix A Technical Specifications by removing the pages identified below and inserting the enclosed pages. The revised pages are identified by the captioned amendment number and contain marginal lines indicating the area of change. Corresponding overleaf pages are provided to maintain document completeness.

REMOVE

3/4 7-37  
3/4 7-38  
B 3/4 7-8

INSERT

3/4 7-37  
3/4 7-38  
B 3/4 7-8

## PLANT SYSTEMS

### BASES

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#### SEALED SOURCE CONTAMINATION (Continued)

Sealed sources are classified into three groups according to their use, with Surveillance Requirements commensurate with the probability of damage to a source in that group. Those sources which are frequently handled are required to be tested more often than those which are not. Sealed sources which are continuously enclosed within a shielded mechanism (i.e., sealed sources within radiation monitoring or boron measuring devices) are considered to be stored and need not be tested unless they are removed from the shielded mechanism.

3/4.7.10 Deleted

3/4.7.11 Deleted

## PLANT SYSTEMS

### BASES

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#### 3/4.7.12 AREA TEMPERATURE MONITORING

The area temperature limitations ensure that safety-related equipment will not be subjected to temperatures in excess of their environmental qualification temperatures. Exposure to excessive temperatures may degrade equipment and can cause a loss of its OPERABILITY. The temperature limits include an allowance for instrument error of  $\pm 3^{\circ}\text{F}$ , except for Electrical Penetration Rooms A and B. These rooms have an alarm at  $\leq 103^{\circ}\text{F}$  with a maximum room temperature of  $106^{\circ}\text{F}$ .

## PLANT SYSTEMS

### 3/4.8.12 AREA TEMPERATURE MONITORING

#### LIMITING CONDITION FOR OPERATION

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3.7.12 The temperature limit of each area given in Table 3.7-4 shall not be exceeded for more than 8 hours or by more than 30°F (25°F for Electrical Penetration Rooms A and B).

APPLICABILITY: Whenever the equipment in an affected area is required to be OPERABLE.

#### ACTION:

- a. With one or more areas exceeding the temperature limit(s) shown in Table 3.7-4 for more than 8 hours, prepare and submit to the Commission within 30 days, pursuant to Specification 6.9.2, a Special Report that provides a record of the cumulative time and the amount by which the temperature in the affected area(s) exceeded the limit(s) and an analysis to demonstrate the continued OPERABILITY of the affected equipment. The provisions of Specifications 3.0.3 and 3.0.4 are not applicable.
- b. With one or more areas exceeding the temperature limit(s) shown in Table 3.7-4 by more than 30°F (25°F for Electrical Penetration Rooms A and B), prepare and submit a Special Report as required by ACTION a. above and within 4 hours either restore the area(s) to within the temperature limit(s) or declare the equipment in the affected area(s) inoperable.

#### SURVEILLANCE REQUIREMENTS

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4.7.12 The temperature in each of the areas shown in Table 3.7-4 shall be determined to be within its limit at least once per 12 hours.

TABLE 3.7-4

AREA TEMPERATURE MONITORING

	<u>AREA</u>	<u>MAXIMUM TEMPERATURE LIMIT (°F)</u>
1.	ESW Pump Room A	119
2.	ESW Pump Room B	119
3.	Auxiliary Feedwater Pump Room A	119
4.	Auxiliary Feedwater Pump Room B	119
5.	Turbine-Driven Auxiliary Feedwater Pump Room	147
6.	ESF Switchgear Room I	87
7.	ESF Switchgear Room II	87
8.	RHR Pump Room A	119
9.	RHR Pump Room B	119
10.	CTMT Spray Pump Room A	119
11.	CTMT Spray Pump Room B	119
12.	Safety Injection Pump Room A	119
13.	Safety Injection Pump Room B	119
14.	Centrifugal Charging Pump Room A	119
15.	Centrifugal Charging Pump Room B	119
16.	Electrical Penetration Room A	106
17.	Electrical Penetration Room B	106
18.	Component Cooling Water Room A	119
19.	Component Cooling Water Room B	119
20.	Diesel Generator Room A	119
21.	Diesel Generator Room B	119
22.	Control Room	84



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D.C. 20555

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION  
RELATED TO AMENDMENT NO. 70 TO FACILITY OPERATING LICENSE NO. NPF-30

UNION ELECTRIC COMPANY

CALLAWAY PLANT, UNIT 1

DOCKET NO. 50-483

1.0 INTRODUCTION

In a letter dated December 6, 1991, Union Electric Company (the licensee) requested a revision to Technical Specification (TS) 3/4.7.12 and associated Bases for Callaway, Unit 1. The proposed change would increase the maximum room temperature for the Electrical Penetration Rooms from 101°F to 106°F. The area temperature limitations have been determined to ensure that safety-related equipment will not be subjected to temperatures which could cause environmental degradation or reduce equipment qualified life. By letter dated June 16, 1992, the licensee forwarded the re-evaluated qualified lives for the Electrical Penetration Room components. This supplemental information did not change the initial proposed no significant hazards consideration determination.

2.0 EVALUATION

The proposed change to Technical Specification 3/4.7.12, Action Statement b, will maintain the absolute maximum temperature limit for the Electrical Penetrations Rooms at 131°F (106°F + 25°F). The modification to Technical Specification Table 3.7-4 will allow a maximum temperature limit of 106°F for the Electrical Penetration Rooms. The revision to Bases Section 3/4.7.12 is editorial in nature and provides additional information on this change.

The maximum room temperatures for the electrical penetration rooms were established to ensure that safety-related equipment is maintained within temperatures that will not affect their environmental qualifications. The temperature limits in Table 3.7-4 were originally derived by assuming the rooms would be at their maximum normal temperatures at the start of a Design Basis Accident (DBA). An allowance of  $\pm 3^\circ\text{F}$  was then applied to account for any instrument errors. Therefore, the current maximum normal Electrical Penetration Room temperature of 104°F was reduced by 3°F (for conservatism) and listed in Table 3.7-4 as 101°F. An alarm setpoint at 97°F was established to ensure that the Technical Specification limit is never exceeded.

The licensee stated that, during the summer months, the temperature of the Electrical Penetration Rooms can exceed the alarm setpoint. When this occurs,

plant personnel are sent to the area to monitor temperature with highly accurate hand held instruments. If the temperature approaches the Technical Specification limit of 101°F, the Electrical Penetration Room doors are opened and temporary fans are installed to reduce the temperature of the rooms. Additional personnel are also required to monitor the room temperature and close the doors, if necessary.

The licensee proposes to change the TS by raising the maximum temperature for the Electrical Penetration Rooms to 106°F. This change will alleviate the possible Technical Specification compliance concern and allow the licensee to better allocate plant resources. The alarm setpoint, as described in the Bases section, would be 103°F. If this alarm setpoint is reached, room temperature would be monitored, doors could be opened and temporary fans used to reduce the temperature in the Electrical Penetration Room prior to exceeding the 106°F limit.

The licensee has performed a calculation to support this change. This calculation indicates that raising the normal maximum temperature of the Electrical Penetration Rooms to 106°F will have a negligible effect on the surrounding rooms. The increased heat loads are insignificant (less than a 2% increase). This calculation also shows that there is no impact on DBA temperatures. The Electrical Penetration Rooms are assumed to reach a post-accident temperature of 106°F. The higher initial start temperature will only increase the post-accident cooling loads by 0.2%, which is again negligible.

The Electrical Penetration Rooms are considered a harsh environment for radiation only. This is because, following an accident, temperature remains less than 110°F (mild environment upper temperature limit) and pressure and humidity are unchanged. The qualified life for the equipment in these rooms is based on the room temperature being maintained continuously at the maximum normal temperature of 104°F. Exceeding 104°F for short durations during the summer months does not impact the penetration room equipment environmental qualification because the qualified lives are based on a continuous temperature of 104°F throughout the year. The licensee has re-evaluated the qualified life of the affected components, based on 106°F continuous temperature, using the Arrhenius equation. The qualified life for the affected components will be decreased by 11 months (0.9 years), as a result of the two degree temperature change.

The staff has reviewed the above proposed change to the TS and concludes that the original intent of the TS has been maintained. The increased heat loads in the Electrical Penetration Rooms have a negligible effect on the surrounding rooms and no impact on equipment environmental qualification. Therefore, the staff finds that the proposed TS changes are acceptable.

### 3.0 STATE CONSULTATION

In accordance with the Commission's regulations, the Missouri State official was notified of the proposed issuance of the amendment. The State official had no comments.

### 4.0 ENVIRONMENTAL CONSIDERATIONS

This amendment involves a change to a requirement with respect to the installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20. The staff has determined that the amendment involves no significant increase in the amounts, and no significant change in the types, of any effluent that may be released offsite and that there is no significant increase in individual or cumulative occupational radiation exposure. The Commission has previously issued a proposed finding that this amendment involves no significant hazards consideration and there has been no public comment on such finding (57 FR 7817). Accordingly, this amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the issuance of the amendment.

### 5.0 CONCLUSION

The staff has concluded, based on the considerations discussed above, that: (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.

Principal Contributor: L. Raynard Wharton

Date: June 18, 1992