January 13, 1988

Docket No. 50-483

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

Dear Mr. Schnell:

The Commission has issued the enclosed Amendment No. 30 to Facility Operating License No. NPF-30 for the Callaway Plant, Unit 1. This amendment is in response to your application dated February 19, 1987, as supplemented by letter dated October 30, 1987.

The amendment revises the License and Technical Specifications in order to remove certain fire protection requirements from the Technical Specifications and place them in plant procedures under the control of the plant's on-site review committee, and place them in the Final Safety Analysis Report.

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/

Thomas W. Alexion, Project Manager
Project Directorate III-3
Division of Reactor Projects

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

cc w/enclosures:
See next page

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1/13/88

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

UNION ELECTRIC COMPANY

CALLAWAY PLANT, UNIT 1

DOCKET NO. STN 50-483

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 30
License No. NPF-30

1. The Nuclear Regulatory Commission (the Commission) has found that:

   A. The application for amendment filed by Union Electric Company (the licensee) dated February 19, 1987, as supplemented by letter dated October 30, 1987, 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, Facility Operating License No. NPF-30 is amended as follows:

   (A) Change the Technical Specifications as indicated in the attachment to this license amendment, and amend paragraph 2.C.(2) to read as follows:

(2) Technical Specifications and Environmental Protection Plan

The Technical Specifications contained in Appendix A, as revised through Amendment No. 30, 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.

(B) Amend paragraphs 2.C.(5)(c) and (d) to read as follows:

(c) The licensee shall implement and maintain in effect all provisions of the approved fire protection program as described in the SNUPPS Final Safety Analysis Report for the facility through Revision 15, the Callaway site addendum through Revision 8, and as approved in the SER through Supplement 4, subject to provision d below.

(d) The licensee may make changes to the approved fire protection program without prior approval of the Commission only if those changes would not adversely affect the ability to achieve and maintain safe shutdown in the event of a fire.

(C) Delete paragraph 2.C.(5)(e).

3. This license amendment is effective upon issuance and shall be implemented upon the licensee's completion of the necessary procedural changes. The licensee will notify the Commission in writing when the necessary procedural changes have been completed.

FOR THE NUCLEAR REGULATORY COMMISSION

Kenneth E. Perkins, Director
Project Directorate III-3
Division of Reactor Projects

Attachment:
Changes to the Technical
Specifications

Date of Issuance: January 13, 1988

ATTACHMENT TO LICENSE AMENDMENT NO. 30

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 | INSERT |
|---|---|
| VI | VI |
| X | X |
| XVI | XVI |
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| 3/4 3-58 | -- |
| 3/4 3-59 | -- |
| 3/4 3-60 | -- |
| 3/4 3-61 | 3/4 3-57 through 3/4 3-61 |
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| 3/4 7-33 | -- |
| 3/4 7-34 | -- |
| 3/4 7-35 | -- |
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INSTRUMENTATION

LOOSE-PART DETECTION SYSTEM

LIMITING CONDITION FOR OPERATION

3.3.3.8 The Loose-Part Detection System shall be OPERABLE.

APPLICABILITY: MODES 1 and 2.

ACTION:

a. With one or more Loose-Part Detection System channels inoperable for more than 30 days, prepare and submit a Special Report to the Commission pursuant to Specification 6.9.2 within the next 10 days outlining the cause of the malfunction and the plans for restoring the channel(s) to OPERABLE status.

b. The provisions of Specifications 3.0.3 and 3.0.4 are not applicable.

SURVEILLANCE REQUIREMENTS

4.3.3.8 Each channel of the Loose-Part Detection System shall be demonstrated OPERABLE by performance of:

a. A CHANNEL CHECK at least once per 24 hours,

b. An ANALOG CHANNEL OPERATIONAL TEST except for verification of Setpoint at least once per 31 days, and

c. A CHANNEL CALIBRATION at least once per 18 months.

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3/4.3.3.8 LOOSE-PART DETECTION SYSTEM

The OPERABILITY of the loose-part detection instrumentation ensures that sufficient capability is available to detect loose metallic parts in the Reactor Coolant System and avoid or mitigate damage to Reactor Coolant System components. The allowable out-of-service times and Surveillance Requirements are consistent with the recommendations of Regulatory Guide 1.133, "Loose-Part Detection Program for the Primary System of Light-Water-Cooled Reactors," May 1981.

3/4.3.3.9 RADIOACTIVE LIQUID EFFLUENT MONITORING INSTRUMENTATION

The radioactive liquid effluent instrumentation is provided to monitor and control, as applicable, the releases of radioactive materials in liquid effluents during actual or potential releases of liquid effluents. The Alarm/Trip Setpoints for these instruments shall be calculated and adjusted in accordance with the methodology and parameters in the ODCM to ensure that the alarm/trip will occur prior to exceeding the limits of 10 CFR Part 20. The OPERABILITY and use of this instrumentation is consistent with the requirements of General Design Criteria 60, 63, and 64 of Appendix A to 10 CFR Part 50.

3/4.3.3.10 RADIOACTIVE GASEOUS EFFLUENT MONITORING INSTRUMENTATION

The radioactive gaseous effluent instrumentation is provided to monitor and control, as applicable, the releases of radioactive materials in gaseous effluents during actual or potential releases of gaseous effluents. The Alarm/Trip Setpoints for these instruments shall be calculated and adjusted in accordance with the methodology and parameters in the ODCM to ensure that the alarm/trip will occur prior to exceeding the limits of 10 CFR Part 20. This instrumentation also includes provisions for monitoring (and controlling) the concentrations of potentially explosive gas mixtures in the WASTE GAS HOLDUP SYSTEM. The OPERABILITY and use of this instrumentation is consistent with the requirements of General Design Criteria 60, 63, and 64 of Appendix A to 10 CFR Part 50. The sensitivity of any noble gas activity monitor used to show compliance with the gaseous effluent release requirements of Specification 3.11.2.2 shall be such that concentrations as low as $1 \times 10^{-6}$ $\mu$Ci/cc are measurable.

3/4.3.4 TURBINE OVERSPEED PROTECTION

This specification is provided to ensure that the turbine overspeed protection instrumentation and the turbine speed control valves are OPERABLE and will protect the turbine from excessive overspeed. Although the orientation of the turbine is such that the number of potentially damaging missiles which could impact and damage safety-related components, equipment, or structures is minimal, protection from excessive turbine overspeed is required.

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

## 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 ±3°F.

RESPONSIBILITIES (Continued)

m. Review of Unit operations to detect potential hazards to nuclear safety;

n. Investigations or analysis of special subjects as requested by the Chairman of the NSRB;

o. Review of Unit Turbine Overspeed Protection Reliability Program and revisions thereto; and

p. Review of the Fire Protection Program and submitting recommended changes to the NSRB.

6.5.1.7 The ORC shall:

a. Recommend in writing to the Manager, Callaway Plant approval or disapproval of items considered under Specifications 6.5.1.6a. through e., i., j., k., l., o., and p. above:

b. Render determinations in writing with regard to whether or not each item considered under Specifications 6.5.1.6b. through e., and m., above, constitutes an unreviewed safety question; and

c. Provide written notification within 24 hours to the Vice President-Nuclear and the Nuclear Safety Review Board of disagreement between the ORC and the Manager, Callaway Plant; however, the Manager, Callaway Plant shall have responsibility for resolution of such disagreements pursuant to Specification 6.1.1 above.

RECORDS

6.5.1.8 The ORC shall maintain written minutes of each ORC meeting that, at a minimum, document the results of all ORC activities performed under the responsibility provisions of these Technical Specifications. Copies shall be provided to the Vice President-Nuclear and the Nuclear Safety Review Board.

6.5.2 NUCLEAR SAFETY REVIEW BOARD (NSRB)

FUNCTION

6.5.2.1 The NSRB shall function to provide independent review and audit of designated activities in the areas of:

a. Nuclear power plant operations,

b. Nuclear engineering,

c. Chemistry and radiochemistry;

d. Metallurgy,

e. Instrumentation and control,

f. Radiological safety,

g. Mechanical and electrical engineering, and

h. Quality assurance practices.

The NSRB shall report to and advise the Vice President-Nuclear on those areas of responsibility stated in Specifications 6.5.2.8 and 6.5.2.9.

COMPOSITION

6.5.2.2 The NSRB shall be composed of at least the following members:

| | |
|---|---|
| Chairman: | General Manager, Engineering (Nuclear) |
| Member: | Manager, Nuclear Engineering |
| Member: | Manager, Nuclear Safety and Emergency Preparedness |
| Member | Manager, Quality Assurance |
| Member: | General Manager, Nuclear Operations |
| Member: | Supervising Engineer, Nuclear Fuels |

Additional members and Vice Chairmen may be appointed by the Chairman.

ALTERNATES

6.5.2.3 All alternate members shall be appointed in writing by the NSRB Chairman to serve on a temporary basis; however, no more than two alternates shall participate as voting members in NSRB activities at any one time.

CONSULTANTS

6.5.2.4 Consultants shall be utilized as determined by the NSRB Chairman to provide expert advice to the NSRB.

MEETING FREQUENCY

6.5.2.5 The NSRB shall meet at least once per calendar quarter during the initial year of unit operation following fuel loading and at least once per 6 months thereafter.

QUALIFICATIONS

6.5.2.6 The NSRB members shall hold a Bachelor's degree in an engineering or physical science field, or equivalent experience, and a minimum of 5 years of technical experience of which a minimum of 3 years shall be in one or more of the disciplines of Specification 6.5.2.1.

QUORUM

6.5.2.7 The quorum of the NSRB necessary for the performance of the NSRB review and audit functions of these Technical Specifications shall consist of the Chairman or his designated alternate and at least two-thirds of the NSRB members including alternates. No more than a minority of the quorum shall have line responsibility for operation of the unit. For the purpose of a quorum, those considered to have line responsibility will include the General Manager, Nuclear Operations, and personnel reporting to the General Manager, Nuclear Operations.

SAFETY LIMIT VIOLATION (Continued)

c. The Safety Limit Violation Report shall be submitted to the Commission, the NSRB and the Vice President-Nuclear within 14 days of the violation; and

d. Critical operation of the unit shall not be resumed until authorized by the Commission.

6.8 PROCEDURES AND PROGRAMS

6.8.1 Written procedures shall be established, implemented, and maintained covering the activities referenced below:

a. The applicable procedures recommended in Appendix A of Regulatory Guide 1.33, Revision 2, February 1978;

b. The emergency operating procedures required to implement the requirements of NUREG-0737 and Supplement 1 to NUREG-0737 as stated in Section 7.1 of Generic Letter No. 82-33;

c. Plant Security Plan implementation;

d. Radiological Emergency Response Plan implementation;

e. PROCESS CONTROL PROGRAM implementation;

f. OFFSITE DOSE CALCULATION MANUAL implementation;

g. Quality Assurance Program implementation for effluent and environmental monitoring;

h. Turbine Overspeed Protection Reliability Program; and

i. Fire Protection Program implementation.

6.8.2 Each procedure and administrative policy of Specification 6.8.1 above, and changes thereto, including temporary changes shall be reviewed prior to implementation as set forth in Specification 6.5 above.

6.8.3 The plant Administrative Procedures and changes thereto shall be reviewed in accordance with Specification 6.5.1.6 and approved in accordance with Specification 6.5.3.1. The associated implementing procedures and changes thereto shall be reviewed and approved in accordance with Specification 6.5.3.1.

6.8.4 The following programs shall be established, implemented and maintained:

a. Reactor Coolant Sources Outside Containment

A program to reduce leakage from those portions of systems outside containment that could contain highly radioactive fluids during a serious transient or accident to as low as practical levels. The systems include the recirculation portion of the Containment Spray System, Safety Injection System, Chemical and Volume Control System, and RHR System. The program shall include the following:

1) Preventive maintenance and periodic visual inspection requirements, and

PROCEDURES AND PROGRAMS (Continued)

2) Integrated leak test requirements for each system at refueling cycle intervals or less.

b. In-Plant Radiation Monitoring

A program which will ensure the capability to accurately determine the airborne iodine concentration in vital areas under accident conditions. This program shall include the following:

1) Training of personnel,

2) Procedures for monitoring, and

3) Provisions for maintenance of sampling and analysis equipment.

c. Secondary Water Chemistry

A program for monitoring of secondary water chemistry to inhibit steam generator tube degradation. This program shall include:

1) Identification of a sampling schedule for the critical variables and control points for these variables,

2) Identification of the procedures used to measure the values of the critical variables,

3) Identification of process sampling points, which shall include monitoring the discharge of the condensate pumps for evidence of condenser in-leakage,

4) Procedures for the recording and management of data,

5) Procedures defining corrective action for all off-control point chemistry conditions, and

6) A procedure identifying: (a) the authority responsible for the interpretation of the data, and (b) the sequence and timing of administrative events required to initiate corrective action.

d. Post-accident Sampling

A program which will ensure the capability to obtain and analyze reactor coolant, radioactive iodines and particulates in plant gaseous effluents, and containment atmosphere samples under accident conditions. The program shall include the following:

1) Training of personnel,

2) Procedures for sampling and analysis, and

3) Provisions for maintenance of sampling and analysis equipment.

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

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

UNION ELECTRIC COMPANY
CALLAWAY PLANT
DOCKET NO. 50-483

## 1.0 INTRODUCTION

In Generic Letter 86-10, the staff recommended that licensees incorporate the approved fire protection program into the Final Safety Evaluation Report (FSAR). This program includes the fire protection and post-fire safe shutdown systems necessary to satisfy staff guidelines and requirements, administrative and technical controls and procedures, the fire brigade and fire protection technical staff, and other plant features described in the FSAR and staff safety evaluation reports.

Upon completion of this effort, including the certification required by 10 CFR 50.71(e)(2), licensees may then apply for an amendment to the operating license to substitute the standard fire protection license condition delineated in the generic letter. At the same time, licensees may request an amendment to delete the fire protection-related technical specifications which would be considered unnecessary.

By letter dated February 19, 1987, Union Electric Company (the licensee) submitted a request to revise the Callaway technical specifications and amend the operating license in accordance with the above-referenced staff guidance. The information in these submittals included proposed FSAR revisions. The staff reviewed this information and identified a number of questions/concerns with the licensee's proposals. By letter dated October 30, 1987, the licensee responded to those questions/concerns. The staff's evaluation of this information is as follows:

## 2.0 DISCUSSION

The licensee proposed to delete the following fire protection Technical Specifications:

| | |
|---|---|
| 3.3.3.7. | Fire Detection Instrumentation, |
| 3.7.10.1. | Fire Suppression Water System, |
| 3.7.10.2. | Spray and/or Sprinkler Systems, |
| 3.7.10.3. | Halon Systems, |
| 3.7.10.4. | Fire Hose Stations, |
| 3.7.11. | Fire Barrier Penetrations. |

The following fire protection Technical Specifications will remain as is:

| | |
|---|---|
| 3.3.3.5. | Remote Shutdown Instrumentation |
| 6.2.2.e. | Site Fire Brigade |
| 6.5.2.8.e. and f. | Fire Protection Audits |

The licensee also proposed to revise Technical Specifications 6.5.1.6 and 6.5.1.7, On-Site Review Committee (ORC)/Plant Safety Review Committee (PSRC) responsibilities to provide specific reference to the requirement to review the plant fire protection program and submit recommended changes to the Nuclear Safety Review Committee. Technical Specification 6.8.1, Written Procedure Requirements, is revised to include the Fire Protection Program implementation.

In addition, although not specifically included in the Technical Specifications, the licensee committed in the October 30, 1987 letter to report significant degradations of fire protection features in accordance with the criteria contained in 10 CFR 50.72, 10 CFR 50.73 and 10 CFR Part 21.

## 3.0 EVALUATION

The staff had several concerns with the licensee's proposals, which necessitated additional written clarification. The first was that in removing certain technical specifications and relying upon the Fire Protection Program and procedures, the operating restrictions and surveillances for the fire protection features would be changed so as to be less conservative than either the original plant technical specifications or the Standard Technical Specifications. However, the information submitted in support of the amendment affirms that the operating restrictions and surveillances added to the Fire Protection Program and procedures are equivalent to those which were in the technical specifications. On this basis, the staff's concern has been resolved.

The staff was also concerned that all of the fire protection features which are necessary to satisfy staff fire protection guidelines and requirements and which were encompassed by the original technical specifications would not be adequately surveilled. While it was initially clear that the licensee intended to surveil features protecting safe-shutdown systems, it was not clear that all of the technical specification operating restrictions and surveillances for the relocated fire protection features would be included in the Fire Protection Program and procedures. The licensee responded that their commitments to surveil all fire protection features required to satisfy Appendix A to BTP APCSB 9.5-1 and Appendix R to 10 CFR Part 50 are not being changed in conjunction with the removal of certain fire protection technical specifications. The scope of fire protection features to be surveilled has not been reduced. On this basis, the staff's concern has been resolved.

The staff was also concerned that surveillance of all post-fire, safe shutdown and alternate shutdown systems would not be conducted as stipulated in Generic Letter 81-12. The licensee responded that the existing technical specifications are comprehensive with regard to post-fire shutdown systems and will remain unchanged. On this basis, the staff's concern is resolved.

The licensee had originally proposed to delete the shutdown requirement of Specification 3.7.10.1 Action b. The staff's position is that the loss of the normal fire protection water supply and the inability to establish a back-up fire suppression water system within 24 hours warrant plant shutdown. The licensee responded that the requirements of Specification 3.7.10.1 Action b. will be added to the FSAR with commitment that no modifications to these requirements will be made without prior approval from NRC. The staff considers this response to be acceptable.

The staff was concerned that significant degradations of fire protection would not be reported to the staff. The licensee committed to report such degradations as described in the Discussion section above. The staff is currently reviewing the need for additional guidance and requirements concerning the reporting of fire protection deficiencies.

Finally, the staff was concerned that the entire fire protection program would not be included in the FSAR. The FSAR presently contains information such as the fire hazards analysis, responses to staff questions, fire protection commitments, comparisons of plant design to Appendix A to BTP APCSB, and the methodology for assuring conformance with Appendix R to 10 CFR Part 50, Sections III.G, III.J., III.L. and III.O. The staff evaluated this information and found it acceptable as documented in the SER and in Supplements Nos. 3 and 4. The licensee has revised the FSAR to incorporate the fire protection feature operating restrictions and surveillances which have been removed from the technical specifications. This conforms with the guidance issued in Generic Letter 86-10 and therefore is acceptable.

Based on the above evaluation, the staff concludes that the licensee's proposed amendment conforms with the guidance issued in Generic Letter 86-10. The staff has also verified that the updated FSAR contains the complete Callaway Fire Protection Program.

## 4.0 ENVIRONMENTAL CONSIDERATION

This amendment involves a change in the installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20 or changes an inspection or surveillance requirement. The staff has determined that the amendment involves no significant increase in the amounts, and no significant change in the types, of any effluents that may be released offsite, and that there is no significant increase in individual or cumulative occupational radiation exposure. The Commission has previously published a proposed finding that this amendment involves no significant hazards consideration and there has been no public comment on such finding. 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 this 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; and (2) such activities will be conducted in compliance with the Commission's regulations and the issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public.

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Dated: January 13, 1988