January 5, 1990

Docket No. 50-483

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

Dear Mr. Schnell:

SUBJECT: AMENDMENT NO. 49 TO FACILITY OPERATING LICENSE NO. NPF-30 (TAC NO. 74191)

The Commission has issued the enclosed Amendment No. 49 to Facility Operating License No. NPF-30 for the Callaway Plant, Unit 1. This amendment revises the Technical Specifications in response to your application dated August 2, 1989.

The amendment revises Technical Specification 3/4.3.3, Radiation Montoring for Plant Opertions, by increasing the permitted period of inoperability for one channel of the control room air intake monitors and fuel building atmosphere monitors from 1 to 72 hours.

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,

Thomas W. Alexion, Project Manager
Project Directorate III-3
Division of Reactor Projects - III, IV, V and Special Projects
Office of Nuclear Reactor Regulation

Enclosures:
1. Amendment No. 49 to License No. NPF-30
2. Safety Evaluation

cc w/enclosures:
See next page

Office:	LA/PDIII-3	PM/PDIII-3	PRPB	PD/PDIII-3
Surname:	PKreutzer	TAlexion/mw	LCunningham	for JHannon
Date:	12/1/89 1/3/90	12/5/89 1/5/90	12/8/89	12/13/89 1/5/89

OGC ok SECY for issuance
R Bachmann
12/21/89

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JM 12/7/89

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OGC ok SECY for issuance
R. Bachmann
12/21/89

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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. 49
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 August 2, 1989, 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:

(2) Technical Specifications and Environmental Protection Plan

The Technical Specifications contained in Appendix A, as revised through Amendment No. 49, 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 the date of its issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

John N. Hannon

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

Attachment:
Changes to the Technical Specifications

Date of Issuance: January 5, 1990

ATTACHMENT TO LICENSE AMENDMENT NO. 49

OPERATING LICENSE NO. NPF-30

DOCKET NO. 50-483

Revise Appendix A Technical Specifications by removing the page identified below and inserting the enclosed page. The revised page is identified by the captioned amendment number and contains marginal lines indicating the area of change. The corresponding overleaf page is provided to maintain document completeness.

REMOVE	INSERT
3/4 3-40	3/4 3-40

TABLE 3.3-6

RADIATION MONITORING INSTRUMENTATION FOR PLANT OPERATIONS

FUNCTIONAL UNIT	CHANNELS TO TRIP/ALARM	MINIMUM CHANNELS OPERABLE	APPLICABLE MODES	ALARM/TRIP SETPOINT	ACTION
1. Containment					
a. Gaseous Radioactivity-RCS Leakage Detection (GT-RE-31 & 32)	N.A.	1	1, 2, 3, 4	N.A.	29
b. Particulate Radioactivity-RCS Leakage Detection (GT-RE-31 & 32)	N.A.	1	1, 2, 3, 4	N.A.	29
2. Fuel Building					
a. Fuel Building Exhaust-Gaseous Radioactivity-High (GG-RE-27 & 28)	1	2	**	##	30
b. Criticality-High Radiation Level					
1) Spent Fuel Pool (SD-RE-37 or 38)	1	1	*	≤ 15 mR/h	28
2) New Fuel Pool (SD-RE-35 or 36)	1	1	*	≤ 15 mR/h	28
3. Control Room					
Air Intake-Gaseous Radioactivity-High (GK-RE-04 & 05)	1	2	All	#	27

TABLE 3.3-6 (Continued)

TABLE NOTATIONS

*With fuel in the respective fuel storage pool.

**With irradiated fuel in the fuel storage areas or fuel building.

#Trip Setpoint concentration value ($\mu Ci/cm^3$) is to be established such that the actual submersion dose rate would not exceed 2 mR/h in the control room.

##Trip Setpoint concentration value ($\mu Ci/cm^3$) is to be established such that the actual submersion dose rate would not exceed 4 mR/h in the fuel building.

ACTION STATEMENTS

ACTION 26 - Deleted.

ACTION 27 - With the number of OPERABLE channels one less than the Minimum Channels OPERABLE requirement, isolate the Control Room Emergency Ventilation System and initiate operation of the Control Room Emergency Ventilation System in the recirculation mode within 72 hours, or with no OPERABLE channels within 1 hour.

ACTION 28 - With less than the Minimum Channels OPERABLE requirement, operation may continue for up to 30 days provided an appropriate portable continuous monitor with the same Alarm Setpoint is provided in the fuel area. Restore the inoperable monitors to OPERABLE status within 30 days or suspend all operations involving fuel movement in the fuel building.

ACTION 29 - Must satisfy the ACTION requirement for Specification 3.4.6.1.

ACTION 30 - With the number of OPERABLE channels one less than the Minimum Channels OPERABLE requirement, isolate the Fuel Building Ventilation System and initiate operation of the Emergency Exhaust System to maintain the fuel building at a negative pressure within 72 hours, or with no OPERABLE channels within 1 hour.

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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO AMENDMENT NO. 49 TO FACILITY OPERATING LICENSE NO. NPF-30

UNION ELECTRIC COMPANY
CALLAWAY PLANT, UNIT 1
DOCKET NO. STN 50-483

1.0 INTRODUCTION

By letter dated August 2, 1989, Union Electric Company (the licensee) proposed revisions to Technical Specification 3/4.3.3, Radiation Monitoring for Plant Operations. The revisions would increase the permitted period of inoperability for one channel of the control room air intake monitors (GK RE-04 and 05) and the fuel building atmosphere monitors (GG RE-27 and 28) from 1 hour to 72 hours.

2.0 DISCUSSION

As described in the Callaway Final Safety Analysis Report (FSAR), the control room ventilation radioactivity monitors continuously monitor the supply air of the normal heating, ventilation, and air conditioning (HVAC) system for particulate, iodine, and gaseous radioactivity to provide protection for the control room operators in the event of high airborne radioactivity in the control room HVAC supply duct. Upon detection of high radiation levels in the system the monitors automatically place the control room ventilation system in the emergency mode of operation.

The fuel building ventilation exhaust radioactivity monitors continuously monitor for particulate, iodine, and gaseous radioactivity in the fuel building ventilation exhaust system for the protection of the workers in the fuel building. In the event of a fuel handling accident, the monitors initiate isolation of the fuel building and operation of the emergency exhaust system.

3.0 EVALUATION

Anytime either of the systems is placed in its emergency mode, a pressure gradient is created across the doors to these areas. This results in two areas of concern; a personnel hazard to people who have to open and pass through these doors, and added wear and tear on these doors which may cause premature failure. Additionally, unnecessary running of the ventilation systems may cause premature wear. Increasing the time that these radiation monitors can be out of service will allow radiation monitor repair or service to be completed and have the monitors placed back in service without unnecessarily starting emergency ventilation equipment.

Radiation monitors GK RE-04 and 05 provide an isolation signal to the Control Room Emergency Ventilation System, when incoming outside air increases to a specified radiation level. Either monitor will send an isolation signal to both safety trains of the Control Room Emergency Ventilation System. Technical Specifications presently require that, if either GK RE-04 or 05 becomes inoperable for more than 1 hour, the control room is isolated from the outside by placing the Control Room Emergency Ventilation System in service. If the ventilation system is left in its normal line-up after taking one radiation monitor out of service, the redundant radiation monitor remains operable and capable of supplying an isolation signal should radiation levels in the incoming air increase to the specified setpoint. The additional allowed outage time (from 1 to 72 hours) with one radiation monitor out of service or inoperable is insignificant when compared to the probability of an event which requires actuation, coincident with a failure of the remaining operable detector. Additionally, Technical Specification 3.7.6, which concerns the Control Room Emergency Ventilation System, allows one of its two safety trains to be out of service for 7 days.

In view of the above and the insignificant decrease in automatic emergency system actuation capability, the staff concludes that this change is acceptable. The staff notes that with two radiation monitors out of service or inoperable, both the present and proposed Technical Specifications require isolation of the Control Room Emergency Ventilation System and initiation of Control Room Emergency Ventilation System operation in the recirculation mode within 1 hour.

Radiation Monitors GG RE-27 and 28 present a similar situation. These monitors provide a Fuel Building Isolation Signal to the Fuel Building Ventilation System and start the Emergency Exhaust System. The Emergency Exhaust System creates a small negative pressure in the fuel building, by directing all exhausting air through two sets of redundant HEPA and charcoal filters. Technical Specifications presently require that the Emergency Exhaust System be started and the normal ventilation system secured if one of these two redundant radiation monitors becomes inoperable for more than 1 hour. If the Fuel Building Ventilation System is left in its normal line-up after either GG RE-27 or 28 becomes inoperable, the remaining operable redundant radiation monitor will be available to provide the required Fuel Building Isolation Signal when radiation levels in the fuel building increase to a specified setpoint. The additional allowed outage time (from 1 to 72 hours) with one radiation monitor out of service or inoperable is insignificant when compared to the probability of an event which requires actuation, coincident with a failure of the remaining operable detector. Additionally, Technical Specification 3.7.7, which concerns the Emergency Exhaust System, allows one of its two safety trains to be out of service for 7 days. Also, during fuel movement, health physics personnel are present with portable radiation monitors.

In view of the above and the insignificant decrease in automatic emergency system actuation capability, the staff concludes that this change is also acceptable. The staff notes that with two radiation monitors out of service or inoperable, both the present and proposed Technical Specifications require isolation of the Fuel Building Ventilation System and initiation of Emergency Exhaust System operation within 1 hour.

Based on the above discussions, the staff finds that lengthening the allowed outage time to 72 hours for radiation monitors GK RE-04 or 05 and for GG RE-27 or 28 is acceptable.

4.0 ENVIRONMENTAL CONSIDERATION

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 or a change to a 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 issued 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.

6.0 ACKNOWLEDGEMENT

Principal Contributor: T. Alexion, PDIII-3

Dated: January 5, 1990