

April 27, 1993

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. 79 TO FACILITY OPERATING LICENSE NO. NPF-30
(TAC NO. M85919)

The Commission has issued the enclosed Amendment No. 79 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 March 5, 1993.

The amendment revises Technical Specification (TS) Surveillance Requirement 4.7.8.d to allow a one-time schedule extension of the snubber transient event inspection.

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,

Original signed by L. Raynard Wharton

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

Enclosures:

1. Amendment No. 79 to License No. NPF-30
2. Safety Evaluation

cc w/enclosures:

See next page

LA:PDIII-3:DRPW
MRushbrook
4/9/93

PM:PDIII-3:DRPW
LRWharton/lrw/bj
4/9/93

OGC

4/16/93

PD:PDIII-3:DRPW
JHannon
4/23/93

DOCUMENT NAME: g:\callaway\CAL85919.AMD

*on condition of
signed after 4-25-93*

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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

April 27, 1993

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Mr. Donald F. Schnell
Senior Vice President - Nuclear
Union Electric Company
Post Office Box 149
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Sincerely,

A handwritten signature in cursive script that reads "E. Raynard Wharton".

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

Enclosures:

1. Amendment No. 79 to
License No. NPF-30
2. Safety Evaluation

cc w/enclosures:
See next page

Mr. D. F. Schnell
Union Electric Company

Callaway Plant
Unit No. 1

cc:

Cermak Fletcher Associates
18225 Flower Hill Way #A
Gaithersburg, Maryland 20879-5334

Gerald Charnoff, Esq.
Thomas A. Baxter, Esq.
Shaw, Pittman, Potts & Trowbridge
2300 N. Street, N.W.
Washington, D.C. 20037

Mr. S. E. Sampson
Supervising Engineer,
Site Licensing
Union Electric Company
Post Office Box 620
Fulton, Missouri 65251

U.S. Nuclear Regulatory Commission
Resident Inspectors Office
RR#1
Steedman, Missouri 65077

Mr. Alan C. Passwater, Manager
Licensing and Fuels
Union Electric Company
Post Office Box 149
St. Louis, Missouri 63166

Manager - Electric Department
Missouri Public Service Commission
301 W. High
Post Office Box 360
Jefferson City, Missouri 65102

Regional Administrator
U.S. NRC, Region III
799 Roosevelt Road
Glen Ellyn, Illinois 60137

Mr. Ronald A. Kucera, Deputy Director
Department of Natural Resources
P.O. Box 176
Jefferson City, Missouri 65102

Mr. Bart D. Withers
President and Chief
Executive Officer
Wolf Creek Nuclear Operating
Corporation
P.O. Box 411
Burlington, Kansas 66839

Mr. Dan I. Bolef, President
Kay Drey, Representative
Board of Directors Coalition
for the Environment
6267 Delmar Boulevard
University City, Missouri 65130



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

UNION ELECTRIC COMPANY

CALLAWAY PLANT, UNIT 1

DOCKET NO. 50-483

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 79
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 March 5, 1993, 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:

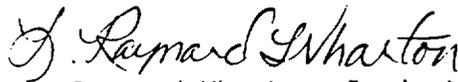
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(2) Technical Specifications and Environmental Protection Plan

The Technical Specifications contained in Appendix A, as revised through Amendment No. 79 , 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. The Technical Specifications are to be implemented within 30 days from the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



L. Raynard Wharton, Project Manager
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: April 27, 1993

ATTACHMENT TO LICENSE AMENDMENT NO. 79

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. Corresponding overleaf page is provided to maintain document completeness.

REMOVE

3/4 7-20

INSERT

3/4 7-20

PLANT SYSTEMS

SURVEILLANCE REQUIREMENTS (Continued)

c. Visual Inspection Acceptance Criteria

Visual inspections shall verify that (1) there are no visible indications of damage or impaired OPERABILITY, (2) attachments to the foundation or supporting structure are functional, and (3) fasteners for the attachment of the snubber to the component and to the snubber anchorage are functional. Snubbers which appear inoperable as a result of visual inspections shall be classified as unacceptable and may be reclassified acceptable for the purpose of establishing the next visual inspection interval, provided that: (1) the cause of the rejection is clearly established and remedied for that particular snubber and for other snubbers irrespective of type that may be generically susceptible; and (2) the affected snubber is functionally tested in the as-found condition and determined OPERABLE per Specification 4.7.8f. All snubbers found connected to an inoperable common hydraulic fluid reservoir shall be counted as unacceptable for determining the next inspection interval. A review and evaluation shall be performed and documented to determine system operability with an unacceptable snubber. If operability cannot be justified, the system shall be declared inoperable and the ACTION requirements shall be met.

d. Transient Event Inspection*

An inspection shall be performed of all hydraulic and mechanical snubbers attached to sections of systems that have experienced unexpected, potentially damaging transients as determined from a review of operational data and a visual inspection of the systems within 6 months following such an event. In addition to satisfying the visual inspection acceptance criteria, freedom-of-motion of mechanical snubbers shall be verified using at least one of the following: (1) manually induced snubber movement; or (2) evaluation of in-place snubber piston setting; or (3) stroking the mechanical snubber through its full range of travel.

* The surveillance of the alternate charging line portion of the Chemical and Volume Control System may be extended until prior to startup following the next entry into Mode 3 or November 1, 1993, whichever occurs first.



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 79 TO FACILITY OPERATING LICENSE NO. NPF-30

UNION ELECTRIC COMPANY

CALLAWAY PLANT, UNIT 1

DOCKET NO. 50-483

1.0 INTRODUCTION

By application for license amendment dated March 5, 1993, Union Electric Company (the licensee) requested changes to the Technical Specification (TS) Surveillance Requirement 4.7.8.d. The amendment would allow a one-time schedule extension of the snubber surveillance requirement for a transient event inspection, for the Callaway Plant, Unit 1. The change was requested in response to an event that occurred at Callaway involving a water hammer in the Chemical and Volume Control System (CVCS) alternate charging line.

The CVCS charging system performs several non-accident functions. These include: maintaining the water inventory in the Reactor Coolant System (RCS), providing Reactor Coolant Pump (RCP) seal injection, controlling RCS chemistry conditions, activity levels and boric acid concentration, and providing a means of filling and pressure testing the RCS. The charging line system is divided into two subsystems, seal injection and charging line. The seal injection subsystem diverts a portion of the CVCS charging flow to the RCP seals. The charging line subsystem is divided into the normal charging line and the alternate charging line. The normal charging line discharges into the RCS loop one cold leg and is the normal, at power flow path of charging flow into the RCS. The alternate charging line discharges into the RCS loop four cold leg and is used when there is a malfunction of the normal charging line isolation valve.

During a routine monthly containment entry, the alternate charging line isolation valve BGHV8147 was found to have a packing leak. A work authorization to tighten the packing gland was generated and completed. On October 30, 1992, a water hammer occurred in the line when the valve was stroked open for post-maintenance testing. Subsequent root cause evaluation determined that steam void formation in the alternate charging line was due to depressurization caused by the leakage from the isolation valve. When the valve was stroked, the void collapsed and caused the water hammer.

As a result of the water hammer, a transient event was declared and TS 4.7.8.d Transient Event Inspection was entered. TS 4.7.8.d requires a physical inspection to be performed within six months of the transient. Since TS 4.7.8.d was entered on October 30, 1992, the inspection of all snubbers installed on the alternate charging line would have to be performed by

April 30, 1993. A large portion of this line is within the biological shield in containment, and is inaccessible while the plant is at power. Therefore, the licensee has requested to extend the surveillance time requirement for these snubbers until November 1, 1993 (during the next refueling outage) or the next entry into Mode 3, whichever occurs first.

2.0 EVALUATION

As a basis for this request, the licensee provided an evaluation of a previous water hammer event which occurred during the fourth refueling outage at Callaway. The event occurred in the alternate charging line during refilling of the RCS. During the subsequent inspection, the pair of snubbers which make up hanger BG21-R005 was found to be damaged. No other damage to the piping components was observed. The piping system was re-analyzed with the failed snubber and shown to be within ASME code allowable limits. The licensee concluded that if snubber failure were to occur, it would occur to these same snubbers. As additional justification for the request, the licensee noted that Wolf Creek Generating Station experienced a water hammer event estimated to be of similar magnitude in their alternate charging line. The same snubbers were found to be damaged. No other piping components were damaged and the system was able to perform its intended function. Wolf Creek is a Standard Nuclear Unit Power Plant System and is nearly identical in design to Callaway.

Hanger BG21-R005 is mounted as an axial restraint to the alternate charging line. Since transient forces act predominantly in the axial direction, BG21-R005 will be the first restraint to experience the impact loading. Were BG21-R005 to fail, subsequent movement will allow forces to be transmitted to rigid supports BG21-C006 and BG21-C007. These supports exhibited no damage during the previous water hammer events at Callaway and Wolf Creek.

During an Engineered Safety Features actuation, the alternate charging line is isolated by two motor operated containment isolation valves. Consequently, the use of the alternate charging line is not required in any Final Safety Analysis Report Chapter 15 analyses. Therefore, the alternate charging line is not required for the safe shutdown of the plant nor to mitigate the consequences of postulated accidents.

Based on the staff evaluation above, the staff concludes that the proposed Technical Specification modification concerning the one-time schedule extension for the snubber transient event inspection for snubbers on the alternate charging line is 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 CONSIDERATION

This amendment changes requirements with respect to installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20 or changes surveillance requirements. 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 (58 FR 16247). 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, (2) such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public.

Principal Contributors: H. Rathbun
L. R. Wharton

Date: April 27, 1993