

August 7, 2001

Mr. Garry L. Randolph
Vice President and Chief Nuclear Officer
Union Electric Company
Post Office Box 620
Fulton, MO 65251

SUBJECT: CALLAWAY PLANT, UNIT 1 - ISSUANCE OF AMENDMENT RE: REACTOR
COOLANT PUMP SEAL INJECTION FLOW (TAC NO. MB2083)

Dear Mr. Randolph:

The Commission has issued the enclosed Amendment No. 146 to Facility Operating License No. NPF-30 for the Callaway Plant, Unit 1. The amendment consists of changes to the Technical Specifications (TS) in response to your application dated May 30, 2001 (ULNRC-04481).

The amendment removes the phrase "and the charging flow control valve full open" from Limiting Condition for Operation 3.5.5, Required Action A.1, and Surveillance Requirement 3.5.5.1 for the reactor coolant pump seal injection flow.

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

Sincerely,

/RA/

Jack Donohew, Senior Project Manager, Section 2
Project Directorate IV
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Docket No. 50-483

Enclosures: 1. Amendment No. 146 to NPF-30
2. Safety Evaluation

cc w/encls: See next page

August 7, 2001

Mr. Garry L. Randolph
Vice President and Chief Nuclear Officer
Union Electric Company
Post Office Box 620
Fulton, MO 65251

SUBJECT: CALLAWAY PLANT, UNIT 1 - ISSUANCE OF AMENDMENT RE: REACTOR
COOLANT PUMP SEAL INJECTION FLOW (TAC NO. MB2083)

Dear Mr. Randolph:

The Commission has issued the enclosed Amendment No. 146 to Facility Operating License No. NPF-30 for the Callaway Plant, Unit 1. The amendment consists of changes to the Technical Specifications (TS) in response to your application dated May 30, 2001 (ULNRC-04481).

The amendment removes the phrase "and the charging flow control valve full open" from Limiting Condition for Operation 3.5.5, Required Action A.1, and Surveillance Requirement 3.5.5.1 for the reactor coolant pump seal injection flow.

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

Sincerely,

/RA/

Jack Donohew, Senior Project Manager, Section 2
Project Directorate IV
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Docket No. 50-483

Enclosures: 1. Amendment No. 146 to NPF-30
2. Safety Evaluation

cc w/encls: See next page

DISTRIBUTION:

PUBLIC
PDIV-2 Reading
RidsNrrDlpmLpdiv (SRichards)DBujol, RIV
RidsNrrPMJDonohew
RidsNrrLAEPeyton
RidsOgcRp
RidsACRSACNWMailCenter
JWermiel
WBeckner

GHill (2)

WBeckner

LHurley, RIV

WJohnson, RIV

TS Pages ML012250360 NRR-100

ACCESSION NO.: ML011700434

PKG: ML012260534

NRR-058

OFFICE	PDIV-2/PM	PDIV-2/LA	SRXB/BC	TSB/BC	OGC	PDIV-2/SC
NAME	JDonohew:sp	EPeyton	JWermiel	WBeckner	NLO SHom	SDembek
DATE	7/6/2001	7/5/01	7/8/01	7/10/01	7/13/01	8/2/01

C:\Program Files\Adobe\Acrobat 4.0\PDF Output\AMD-MB2083-SealinjectionFlo~.wpd

OFFICIAL RECORD COPY

Callaway Plant, Unit 1

cc:

Professional Nuclear
Consulting, Inc.
19041 Raines Drive
Derwood, MD 20855

John O'Neill, Esq.
Shaw, Pittman, Potts & Trowbridge
2300 N. Street, N.W.
Washington, D.C. 20037

Mr. Mark A. Reidmeyer, Regional
Regulatory Affairs Supervisor
Regulatory Affairs
AmerenUE
Post Office Box 620
Fulton, MO 65251

U.S. Nuclear Regulatory Commission
Resident Inspector Office
8201 NRC Road
Steedman, MO 65077-1302

Mr. J. V. Laux, Manager
Quality Assurance
AmerenUE
Post Office Box 620
Fulton, MO 65251

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

Regional Administrator, Region IV
U.S. Nuclear Regulatory Commission
Harris Tower & Pavilion
611 Ryan Plaza Drive, Suite 400
Arlington, TX 76011-8064

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

Mr. Otto L. Maynard
President and Chief Executive Officer
Wolf Creek Nuclear Operating Corporation
Post Office Box 411
Burlington, KA 66839

Mr. Dan I. Bolef, President
Kay Drey, Representative
Board of Directors Coalition
for the Environment
6267 Delmar Boulevard
University City, MO 63130

Mr. Lee Fritz
Presiding Commissioner
Callaway County Court House
10 East Fifth Street
Fulton, MO 65151

Mr. David E. Shafer
Superintendent Licensing
Regulatory Affairs
AmerenUE
Post Office Box 66149, MC 470
St. Louis, MO 63166-6149

Mr. John D. Blosser, Manager
Regulatory Affairs
AmerenUE
P.O. Box 620
Fulton, MO 65251

Mr. Gary McNutt, Director
Section for Environmental Public Health
P. O. Box 570
Jefferson City, Missouri 65102-0570

UNION ELECTRIC COMPANY

CALLAWAY PLANT, UNIT 1

DOCKET NO. 50-483

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 146
License No. NPF-30

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Union Electric Company (UE, the licensee) dated May 30, 2001, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act) and the Commission's 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. 146 and the Environmental Protection Plan contained in Appendix B, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

3. This amendment is effective as of its date of issuance and shall be implemented within 60 days from the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

/RA/

Stephen Dembek, Chief, Section 2
Project Directorate IV
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Attachment: Changes to the Technical
Specifications

Date of Issuance: August 7, 2001

ATTACHMENT TO LICENSE AMENDMENT NO. 146

FACILITY OPERATING LICENSE NO. NPF-30

DOCKET NO. 50-483

Replace the following pages of the Appendix A Technical Specifications with the attached revised pages. The revised pages are identified by amendment number and contain vertical lines indicating the areas of change.

REMOVE

3.5-10

3.5-11

INSERT

3.5-10

3.5-11

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO AMENDMENT NO. 146 TO FACILITY OPERATING LICENSE NO. NPF-30

UNION ELECTRIC COMPANY

CALLAWAY PLANT, UNIT 1

DOCKET NO. 50-483

1.0 INTRODUCTION

By application dated May 30, 2001, Union Electric Company (the licensee) requested changes to the Technical Specifications (TSs, Appendix A to Facility Operating License No. NPF-30) for the Callaway Plant, Unit 1 (Callaway). The proposed amendment would remove the phrase "and the charging flow control valve full open" from Limiting Condition for Operation (LCO) 3.5.5, Required Action A.1, and Surveillance Requirement 3.5.5.1 for the reactor coolant pump (RCP) seal injection flow.

2.0 EVALUATION

Seal injection flow to the four RCPs is provided from the centrifugal charging pumps (CCPs) from the charging header through the seal injection flow path, which is composed of piping and valves, including the charging pump header and the seal injection throttle valves. The CCPs provide high pressure water to the charging header, which is for injection into the reactor coolant system (RCS) and RCP seal injection flow. The seal injection flow is to protect the integrity of the RCP seals and prevent any of the seals from becoming a break in the RCS. Although RCP seal injection flow is not isolated by a safety injection signal in a loss-of-coolant accident (LOCA), this flow is assumed not to enter the RCS and provide water makeup to the RCS in a LOCA.

The charging flow control valve in TS 3.5.5 controls the difference in pressure between the RCS and the charging header. The seal injection throttle valves in TS 3.5.5 vary the flow from the charging header to the RCP seals.

The LCO of TS 3.5.5, "Seal Injection Flow," states that "Reactor coolant pump seal injection flow to each RCP seal shall be 7.5 ± 0.5 gpm with a 105 (+5, -2) psi differential between the charging header and RCS pressure and the charging flow control valve full open." The intent of the LCO is to ensure that CCP flow to each RCP through the seal injection line is high enough to protect the integrity of the RCP seals and low enough to ensure that there is sufficient CCP flow into the RCS in a LOCA.

The licensee proposes to delete the requirement that the flow control valve must be fully open in TS 3.5.5. The licensee states that the differential pressure between the charging pump header and the RCS cannot be met with the flow control valve fully open, as was shown in testing during Refueling Outage No. 11. TS 3.5.5 was added to the TSs in Amendment No. 133, issued May 28, 1999. The licensee states in its application that prior to the implementation of Amendment No. 133, the conversion of the TSs to the improved TSs, the TSs for Callaway did not have a technical specification on the RCP seal injection flow. The performance of the surveillance of the RCP seal injection flow was to meet the flow and differential pressure values in the current TS 3.5.5, but was conducted by throttling the charging flow control valve to set up the differential pressure between the charging header and the RCS. The licensee stated further that it did not recognize at the time the amendment was approved that specifying the differential pressure between the charging header and RCS made specifying the position of the charging flow control valve unnecessary.

The CCP flow to the RCP seals is controlled by the flow resistance of the piping and valves from the seal injection flow path. The proper hydraulic flow resistance should be that which provides the flow rate required by TS 3.5.5 (i.e., the 7.5 ± 0.5 gpm) for the differential pressure specified in the LCO (i.e., the 105 (+5, -2) psi). The hydraulic flow resistance is set up by varying the position of the seal injection throttle valves until a flow rate of 7.5 ± 0.5 gpm for each RCP is established for the differential pressure of 105 (+5, -2) psi between the charging header and the RCS. The purpose of the charging flow control valve is to vary the differential pressure between the charging header and the RCS until the differential required by TS 3.5.5 is met. Because the position of the charging flow control valve controls the pressure between the charging header and the RCS, one can specify one or the other, but not both. The seal injection flow for the differential pressure is a better description of the seal injection flow path resistance than the seal injection flow and the position of the charging flow control valve.

Because the required seal injection flow to each RCP seal and the differential pressure between the charging header and RCS in the LCO are not being changed by the proposed amendment and because it is necessary to vary the position of the charging flow control to have the required differential pressure of 105 (+5, -2) psi, the staff concludes that the proposed deletion of the requirement to have the charging flow control valve fully open from LCO 3.5.5, Required Action A.1, and SR 3.5.5.1 is acceptable.

The licensee also identified changes to the Bases for TS 3.5.5 for the proposed amendment in its application. The staff reviewed these changes and has no disagreement with them.

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 replied that the State had no objections to the amendment.

4.0 ENVIRONMENTAL CONSIDERATION

The amendment changes 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 and changes a surveillance requirement. The NRC 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 the amendment involves no significant hazards consideration and there has been no public comment on such finding (66 FR 34289). Accordingly, the 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 Commission 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: Jack Donohew

Date: August 7, 2001