

March 4, 1986

Docket No.: 50-483

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

Dear Mr. Schnell:

Subject: Callaway Plant, Unit 1 - Amendment No.13 to Facility  
Operating License NPF-30

The Commission has issued the enclosed Amendment No.13 to Facility Operating License NPF-30 for the Callaway Plant, Unit 1. The amendment is in response to your application dated November 15, 1985.

The amendment modifies the Technical Specifications to indicate that containment leak rate testing is to be performed at the calculated peak containment internal pressure of 48.1 psig. The amendment is effective as of its date of issuance.

A copy of the related Safety Evaluation is enclosed. Notice of issuance will be included in the Commission's next regular bi-weekly Federal Register Notice.

Sincerely,

Original signed by:  
D. Hood

*for*

B. J. Youngblood, Director  
PWR Project Directorate #4  
Division of PWR Licensing-A, NRR

Enclosures:

1. Amendment No. 13 to License No. NPF-30
2. Safety Evaluation Report

DISTRIBUTION:  
See attached page

cc w/enclosures:  
See next page

*md*  
PWR#4: DPWR-A  
MDuncan:kab  
02/21/86

*RWOP*  
PWR#4: DPWR-A  
PO'Connor  
02/24/86

*BJY*  
PWR#4/DPWR-A  
BJYoungblood  
02/24/86

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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.13  
License No. NPF-30

1. The Nuclear Regulatory Commission (the Commission) has found that:
  - A. The application for amendment by Union Electric Company (the licensee) dated November 15, 1985, 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.

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- 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. NFP-30 is hereby amended to read as follows:

Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 13, 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

Original signed by:  
D. Hood

*fel*

B. J. Youngblood, Director  
PWR Project Directorate #4  
Division of PWR Licensing-A, NRR

Attachment:  
Changes to the Technical  
Specifications

Date of Issuance: March 4, 1986

PWR#4: DPWR-A  
MDuncan:kab  
02/21/86

*PWOC*  
PWR#4: DPWR-A  
PO'Connor  
02/24/86

~~FOB: DPWR-A  
VBenaroya  
02/1/86~~

*Goodland*  
OELD  
RPerlis  
02/25/86

*25H for*  
PWR#4/DPWR-A  
BJYoungblood  
02/24/86

### 3/4.6 CONTAINMENT SYSTEMS

#### 3/4.6.1 PRIMARY CONTAINMENT

##### CONTAINMENT INTEGRITY

##### LIMITING CONDITION FOR OPERATION

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3.6.1.1 Primary CONTAINMENT INTEGRITY shall be maintained.

APPLICABILITY: MODES 1, 2, 3, and 4.

ACTION:

Without primary CONTAINMENT INTEGRITY, restore CONTAINMENT INTEGRITY within 1 hour or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

##### SURVEILLANCE REQUIREMENTS

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4.6.1.1 Primary CONTAINMENT INTEGRITY shall be demonstrated:

- a. At least once per 31 days by verifying that all penetrations\* not capable of being closed by OPERABLE containment automatic isolation valves and required to be closed during accident conditions are closed by valves, blind flanges, or deactivated automatic valves secured in their positions, except as provided in Table 3.6-1 of Specification 3.6.3;
- b. By verifying that each containment air lock is in compliance with the requirements of Specification 3.6.1.3; and
- c. After each closing of each penetration subject to Type B testing, except the containment air locks, if opened following a Type A or B test, by leak rate testing the seal with gas at a pressure not less than  $P_a$ , 48.1 psig, and verifying that when the measured leakage rate for these seals is added to the leakage rates determined pursuant to Specification 4.6.1.2d. for all other Type B and C penetrations, the combined leakage rate is less than  $0.60 L_a$ .

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\* Except valves, blind flanges, and deactivated automatic valves which are located inside the containment and are locked, sealed or otherwise secured in the closed position. These penetrations shall be verified closed during each COLD SHUTDOWN except that such verification need not be performed more often than once per 92 days.

## CONTAINMENT SYSTEMS

### CONTAINMENT LEAKAGE

#### LIMITING CONDITION FOR OPERATION

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3.6.1.2 Containment leakage rates shall be limited to:

- a. An overall integrated leakage rate of less than or equal to  $L_a$ , 0.20% by weight of the containment air per 24 hours at  $P_a$ , 48.1 psig.
- b. A combined leakage rate of less than  $0.60 L_a$ , for all penetrations and valves subject to Type B and C tests, when pressurized to  $P_a$ , 48.1 psig.

APPLICABILITY: MODES 1, 2, 3, and 4.

#### ACTION:

With either the measured overall integrated containment leakage rate exceeding  $0.75 L_a$  or the measured combined leakage rate for all penetrations and valves subject to Types B and C tests exceeding  $0.60 L_a$ , restore the overall integrated leakage rate to less than  $0.75 L_a$  and the combined leakage rate for all penetrations subject to Type B and C tests to less than  $0.60 L_a$  prior to increasing the Reactor Coolant System temperature above 200°F.

#### SURVEILLANCE REQUIREMENTS

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4.6.1.2 The containment leakage rates shall be demonstrated at the following test schedule and shall be determined in conformance with the criteria specified in Appendix J of 10 CFR Part 50 using the methods and provisions of ANSI N45.4-1972:

- a. Three Type A tests (Overall Integrated Containment Leakage Rate) shall be conducted at  $40 \pm 10$  month intervals during shutdown at a pressure not less than  $P_a$ , 48.1 psig, during each 10-year service period. The third test of each set shall be conducted during the shutdown for the 10-year plant inservice inspection;
- b. If any periodic Type A test fails to meet  $0.75 L_a$ , the test schedule for subsequent Type A tests shall be reviewed and approved by the Commission. If two consecutive Type A tests fail to meet  $0.75 L_a$ , a Type A test shall be performed at least every 18 months until two consecutive Type A tests meet  $0.75 L_a$ , at which time the above test schedule may be resumed;

## CONTAINMENT SYSTEMS

### SURVEILLANCE REQUIREMENTS (Continued)

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- c. The accuracy of each Type A test shall be verified by a supplemental test which:
  - 1) Confirms the accuracy of the test by verifying that the supplemental test result,  $L_c$ , minus the sum of the Type A and the superimposed leak,  $L_o$ , is equal to or less than  $0.25 L_a$ ,
  - 2) Has a duration sufficient to establish accurately the change in leakage rate between the Type A test and the supplemental test, and
  - 3) Requires that the rate at which gas is injected into the containment or bled from the containment during the supplemental test is between  $0.75 L_a$  and  $1.25 L_a$ .
- d. Type B and C tests shall be conducted with gas at a pressure not less than  $P_a$ , 48.1 psig, at intervals no greater than 24 months except for tests involving:
  - 1) Air locks, and
  - 2) Purge supply and exhaust isolation valves with resilient material seals.
- e. Air locks shall be tested and demonstrated OPERABLE by the requirements of Specification 4.6.1.3;
- f. Purge supply and exhaust isolation valves with resilient material seals shall be tested and demonstrated OPERABLE by the requirements of Specifications 4.6.1.7.2 and 4.6.1.7.4, as applicable; and
- g. The provisions of Specification 4.0.2 are not applicable.

## CONTAINMENT SYSTEMS

### CONTAINMENT AIR LOCKS

#### LIMITING CONDITION FOR OPERATION

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3.6.1.3 Each containment air lock shall be OPERABLE with:

- a. Both doors closed except when the air lock is being used for normal transit entry and exits through the containment, then at least one air lock door shall be closed, and
- b. An overall air lock leakage rate of less than or equal to  $0.05 L_a$  at  $P_a$ , 48.1 psig.

APPLICABILITY: MODES 1, 2, 3, and 4.

#### ACTION:

- a. With one containment air lock door inoperable:
  1. Maintain at least the OPERABLE air lock door closed and either restore the inoperable air lock door to OPERABLE status within 24 hours or lock the OPERABLE air lock door closed,
  2. Operation may then continue until performance of the next required overall air lock leakage test provided that the OPERABLE air lock door is verified to be locked closed at least once per 31 days,
  3. Otherwise, be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours, and
  4. The provisions of Specification 3.0.4 are not applicable.
- b. With the containment air lock inoperable, except as the result of an inoperable air lock door, maintain at least one air lock door closed; restore the inoperable air lock to OPERABLE status within 24 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

## CONTAINMENT SYSTEMS

### SURVEILLANCE REQUIREMENTS

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4.6.1.3 Each containment air lock shall be demonstrated OPERABLE:

- a. Within 72 hours following each closing, except when the air lock is being used for multiple entries, then at least once per 72 hours, by verifying that the seal leakage is less than  $0.005 L_a$  as determined by precision flow measurements when measured for at least 30 seconds with the volume between the seals at a constant pressure of greater than or equal to 10 psig;
- b. By conducting overall air lock leakage tests at not less than  $P_a$ , 48.1 psig, and verifying the overall air lock leakage rate is within its limit:
  - 1) At least once per 6 months,# and
  - 2) Prior to establishing CONTAINMENT INTEGRITY when maintenance has been performed on the air lock that could affect the air lock sealing capability.\*
- c. At least once per 6 months by verifying that only one door in each air lock can be opened at a time.

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#The provisions of Specification 4.0.2 are not applicable.

\*This represents an exemption to Appendix J, Paragraph III.D.2.(b)(ii), of 10 CFR Part 50.

## CONTAINMENT SYSTEMS

### INTERNAL PRESSURE

#### LIMITING CONDITION FOR OPERATION

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3.6.1.4 Primary containment internal pressure shall be maintained between +1.5 and -0.3 psig.

APPLICABILITY: MODES 1, 2, 3, and 4.

#### ACTION:

With the containment internal pressure outside of the limits above, restore the internal pressure to within the limits within 1 hour or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

#### SURVEILLANCE REQUIREMENTS

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4.6.1.4 The primary containment internal pressure shall be determined to be within the limits at least once per 12 hours.

CONTAINMENT SYSTEMS

CONTAINMENT VENTILATION SYSTEM

LIMITING CONDITION FOR OPERATION

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3.6.1.7 Each containment purge supply and exhaust isolation valve shall be OPERABLE and:

- a. Each 36-inch containment shutdown purge supply and exhaust isolation valve shall be closed and blank flanged, and
- b. The 18-inch containment mini-purge supply and exhaust isolation valve(s) may be open for up to 2000 hours during a calendar year.

APPLICABILITY: MODES 1, 2, 3, and 4.

ACTION:

- a. With a 36-inch containment purge supply and/or exhaust isolation valve open or not blank flanged, close and/or blank flange that valve or isolate the penetration(s) within 4 hours, otherwise be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.
- b. With the 18-inch containment mini-purge supply and/or exhaust isolation valve(s) open for more than 2000 hours during a calendar year, close the open 18-inch valve(s) or isolate the penetration(s) within 4 hours, otherwise be in at least HOT STANDBY within the next 6 hours, and in COLD SHUTDOWN within the following 30 hours.
- c. With a containment purge supply and/or exhaust isolation valve(s) having a measured leakage rate in excess of the limits of Specifications 4.6.1.7.2 and/or 4.6.1.7.4, restore the inoperable valve(s) to OPERABLE status within 24 hours, otherwise be in at least HOT STANDBY within the next 6 hours, and in COLD SHUTDOWN within the following 30 hours.

## CONTAINMENT SYSTEMS

### SURVEILLANCE REQUIREMENTS

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4.6.1.7.1 Each 36-inch containment shutdown purge supply and exhaust isolation valve(s)\* shall be verified blank flanged and closed at least once per 31 days.

4.6.1.7.2 Each 36-inch containment shutdown purge supply and exhaust isolation valve and its associated blank flange shall be leak tested at least once per 24 months and following each reinstallation of the blank flange when pressurized to  $P_a$ , 48.1 psig, and verifying that when the measured leakage rate for these valves and flanges, including stem leakage, is added to the leakage rates determined pursuant to Specification 4.6.1.2d. for all other Type B and C penetrations, the combined leakage rate is less than  $0.60 L_a$ .

4.6.1.7.3 The cumulative time that all 18-inch containment mini-purge supply and exhaust isolation valves have been open during a calendar year shall be determined at least once per 7 days.

4.6.1.7.4 At least once per 3 months each 18-inch containment mini-purge supply and exhaust isolation valve with resilient material seals shall be demonstrated OPERABLE by verifying that the measured leakage rate is less than  $0.05 L_a$  when pressurized to  $P_a$ .

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\*Except valves and flanges which are located inside containment. These valves shall be verified to be closed with their blank flanges installed prior to entry into MODE 4 following each COLD SHUTDOWN.

ATTACHMENT TO LICENSE AMENDMENT NO. 13

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.

<u>Amended Page</u>	<u>Overleaf Page</u>
3/4 6-1	
3/4 6-2	
3/4 6-3	
3/4 6-4	
3/4 6-5	3/4 6-6
3/4 6-12	3/4 6-11



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

SUPPORTING AMENDMENT NO. 13 TO OPERATING LICENSE NO. NPF-30

UNION ELECTRIC COMPANY

CALLAWAY PLANT, UNIT 1

DOCKET NO. 50-483

1.0 INTRODUCTION

By letter dated November 15, 1985, Union Electric Company (the licensee) requested revision to Technical Specifications 4.6.1.1.C, 3.6.1.2.a, 3.6.1.2.b, 4.6.1.2.a, 4.6.1.2.d, 3.6.1.3.b, 4.6.1.3.b and 4.6.1.7 to indicate that containment leak rate testing (Type A, B, C tests per 10 CFR 50, Appendix J) is to be performed at the calculated peak containment internal pressure (Pa) of 48.1 psig. This value for Pa is a result of containment pressure/temperature analyses in the Callaway FSAR (refer to Section 6.2.1.4.3.3 and Table 6.2.1-2).

2.0 EVALUATION

The safety analyses contained in the Callaway FSAR were carried out utilizing a peak calculated containment pressure of 48.1 psig which was the result of the accident analyses presented in FSAR Section 6.2.1.4.3.3 and Table 6.2.1-2.

The value of Pa that was specified in the Callaway Technical Specifications (NUREG-1085, Revision 1) was 48.0 psig which is slightly lower than the analyzed value of 48.1 psig.

The proposed technical specification changes from 48.0 to 48.1 psig would affect the following technical specifications:

1. 4.6.1.1.c
2. 3.6.1.2.a
3. 3.6.1.2.b
4. 4.6.1.2.a
5. 4.6.1.2.d
6. 3.6.1.3.b
7. 4.6.1.3.b
8. 4.6.1.7.2

The staff's review of the above proposed changes indicates that the slight change of calculated peak containment pressure is technically inconsequential and has little effect on the past and future containment leak rate test results, and is, therefore, acceptable.

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### 3.0 ENVIRONMENTAL CONSIDERATION

This amendment involves a change in surveillance requirements. The staff has determined that the amendment involves no significant change in the types or significant increase in the amounts 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 meet 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.

### 4.0 CONCLUSION

The Commission made a proposed determination that the amendment involves no significant hazards consideration which was published in the Federal Register (51 FR 3719) on January 29, 1986, and consulted with the state of Missouri. No public comments were received, and the state of Missouri did not have any comments.

We have 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.

Principal Contributors:

Y. S. Huang, PAEB  
P. O'Connor, PWR#4

Dated: March 4, 1986

March 4, 1986

**DISTRIBUTION**

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