

February 28, 2007

Mr. R. T. Ridenoure
Vice President - Chief Nuclear Officer
Omaha Public Power District
Fort Calhoun Station FC-2-4 Adm.
Post Office Box 550
Fort Calhoun, NE 68023-0550

SUBJECT: FORT CALHOUN STATION, UNIT NO. 1 - ISSUANCE OF AMENDMENT RE:
RELOCATION OF TECHNICAL SPECIFICATION 2.22, "TOXIC GAS
MONITORS," AND TECHNICAL SPECIFICATION TABLE 3-3, ITEM 29, TO
THE UPDATED SAFETY ANALYSIS REPORT (TAC NO. MD3668)

Dear Mr. Ridenoure:

The U.S. Nuclear Regulatory Commission (the Commission) has issued the enclosed Amendment No. 248 to Renewed Facility Operating License No. DPR-40 for the Fort Calhoun Station, Unit No. 1 (FCS). The amendment consists of changes to the Technical Specifications (TSs) in response to your application dated November 13, 2006.

The amendment relocates the requirements of TS 2.22, "Toxic Gas Monitors," and TS Table 3-3, Item 29, to the FCS Updated Safety Analysis Report.

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/

Alan B. Wang, Project Manager
Plant Licensing Branch IV
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket No. 50-285

Enclosures: 1. Amendment No. 248 to DPR-40
2. Safety Evaluation

cc w/encls: See next page

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OMAHA PUBLIC POWER DISTRICT

DOCKET NO. 50-285

FORT CALHOUN STATION, UNIT NO. 1

AMENDMENT TO RENEWED FACILITY OPERATING LICENSE

Amendment No. 248
License No. DPR-40

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by the Omaha Public Power District (the licensee), dated November 13, 2006, 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 license 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. DPR-40.
3. The license amendment is effective as of its date of issuance and shall be implemented within 120 days of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

/RA/

David Terao, Chief
Plant Licensing Branch IV
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Attachment: Changes to the Facility
Operating License and
Technical Specifications

Date of Issuance: February 28, 2007

ATTACHMENT TO LICENSE AMENDMENT NO. 248
RENEWED FACILITY OPERATING LICENSE NO. DPR-40
DOCKET NO. 50-285

Replace page 3 of the Facility Operating License No. DPR-40 with the attached revised page 3.

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

TOC - Page 2
TOC - Page 4
TOC - Page 7
2.22 - Page 1
2.22 - Page 2
3.1 - Page 19

INSERT

TOC - Page 2
TOC - Page 4
TOC - Page 7
2.22 - Page 1

3.1 - Page 19

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 248 TO RENEWED FACILITY

OPERATING LICENSE NO. DPR-40

OMAHA PUBLIC POWER DISTRICT

FORT CALHOUN STATION, UNIT NO. 1

DOCKET NO. 50-285

1.0 INTRODUCTION

By application dated November 13, 2006 (Agencywide Documents Access and Management System Accession No. ML063170210), Omaha Public Power District requested changes to the Technical Specifications (Appendix A to Renewed Facility Operating License No. DPR-40) for the Fort Calhoun Station, Unit No. 1 (FCS).

The proposed amendment would relocate the requirements of Technical Specification (TS) 2.22, "Toxic Gas Monitors," and TS Table 3-3, Item 29, to the FCS Updated Safety Analysis Report (USAR).

2.0 REGULATORY EVALUATION

The U.S. Nuclear Regulatory Commission (NRC) staff finds that the licensee in Section 4.0 of its submittal identified the applicable regulatory requirements. The regulatory requirements on which the NRC staff based its acceptance are:

- Amendment No. 201 implemented on January 25, 2002, allowed the current accident source term used in the design-basis radiological analyses for control room habitability to be replaced with an alternative source term (AST) pursuant to Section 50.67 of Title 10 of the *Code of Federal Regulations* (10 CFR), "Accident Source Term." Holders of operating licenses using an alternative source term under Section 50.67 shall meet the requirements of 10 CFR Part 50, Appendix A, General Design Criteria (GDC) 19, except with regard to control room access and occupancy, adequate radiation protection shall be provided to ensure that radiation exposures shall not exceed 0.05 sievert (Sv) (5 rem) total effective dose equivalent as defined in Section 50.2 for the duration of the accident.
- NRC staff positions regarding the relationship of the chlorine detection systems to the GDC appear in NUREG-0800, "Standard Review Plan for the Review of Safety Analysis Reports for Nuclear Power Plants," (SRP); Regulatory Guide

(RG) 1.78, "Evaluating the Habitability of a Nuclear Power Plant Control Room During a Postulated Hazardous Chemical Release"; and RG 1.95, "Protection of Nuclear Power Plant Control Room Operators Against an Accidental Chlorine Release."

- Paragraph 50.36(c)(3) of 10 CFR states that surveillance requirements are requirements relating to test, calibration, or inspection to assure that the necessary quality of systems and components is maintained, that facility operation will be within safety limits, and that the limiting conditions for operation (LCOs) will be met. Paragraph 50.36(c)(2)(ii) of 10 CFR states that a TS LCO of a nuclear reactor must be established for each item meeting one or more of the following criteria:
 - Criterion 1 – Installed instrumentation that is used to detect and indicate in the control room, a significant abnormal degradation of the reactor coolant pressure boundary.
 - Criterion 2 – A process variable, design feature, or operating restriction that is an initial condition of a design-basis accident or transient analysis that either assumes the failure of or presents a challenge to the integrity of a fission product barrier.
 - Criterion 3 – A structure, system, or component that is part of the primary success path and which functions or actuates to mitigate a design-basis accident or transient that either assumes the failure of or presents a challenge to the integrity of a fission product barrier.
 - Criterion 4 – A structure, system, or component which operating experience or probabilistic risk assessment has shown to be significant to public health and safety.

3.0 TECHNICAL EVALUATION

The amendment proposes to relocate the requirements of TS 2.22, "Toxic Gas Monitors," and TS Table 3-3, Item 29, to the FCS USAR. The NRC staff has reviewed the licensee's regulatory and technical analyses in support of its proposed license amendment, which are described in Sections 5.0 and 6.0 of the licensee's submittal. The detailed evaluation below will support the conclusion 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.

Generic Letter (GL) 95-10, "Relocation of Selected Technical Specifications Requirements Related to Instrumentation," states that chlorine detection systems ensure that sufficient capability is available to promptly detect and initiate protective action to isolate the control room in the event of an accidental chlorine release. Some plants may also have systems to detect other toxic gases that have the potential to hamper plant operation in the case of their

accidental release from onsite or offsite sources. This discussion of the typical chlorine detection systems also applies to the relocation of TSs related to other toxic gas detection systems. The NRC staff's position regarding the relationship of the chlorine detection systems to the GDC appear in NUREG-0800, Regulatory Guide 1.78, and RG 1.95.

GL 95-10 further states that chlorine detection systems may serve an important role in protecting control room personnel from internal or external hazards related to toxic gases. However, the release of chlorine or other hazardous chemicals is not part of an initial condition of a design-basis accident or transient analysis that assumes a failure of or presents a challenge to the integrity of a fission product barrier. Since the release of toxic gases is not assumed to initiate or occur simultaneously with design-basis accidents or transients involving challenges to fission product barriers, the chlorine detection system is not part of a success path for the mitigation of those accidents or transients. The NRC staff has, therefore, concluded that requirements for this system do not meet the 10 CFR 50.36 criteria and need not be included in the TSs and licensees may propose to relocate the chlorine detection system requirements to the USAR and control changes to those provisions in accordance with 10 CFR 50.59.

GL 95-10 addresses the relocation of selected TS requirements related to instrumentation as a result of applying the 10 CFR 50.36 criteria. On reviewing typical TSs for nuclear power reactors, the NRC staff determined that, in accordance with the 10 CFR 50.36 criteria, several specifications did not warrant inclusion in the TSs. The NRC staff also concluded that the instrumentation addressed by these specifications are not related to dominant contributors to plant risk. The Chlorine Detection System TS is among the candidates for relocation to licensee-controlled documents. GL 95-10 also specified that the discussion of the typical chlorine detection systems also applied to the relocation of TSs related to other toxic gas detection systems. The GL indicated that licensees could request a license amendment to relocate selected instrumentation requirements of this type from the TS to licensee-controlled documents or programs.

Based on GL 95-10, the licensee has proposed an amendment to relocate the requirements of TS 2.22, "Toxic Gas Monitors," and TS Table 3-3, Item 29, to the FCS USAR. Paragraph 50.36(c)(2)(ii) of 10 CFR states that a TS LCO of a nuclear reactor must be established for each item meeting one or more of the four criteria as noted in Section 2.0, "Regulatory Evaluation." The NRC staff has reviewed the TSs against the 4 criteria noted in 10 CFR 50.36(c)(2)(ii) and concludes the following:

Criterion 1 - The toxic gas monitors are not installed instrumentation that is used to detect degradation of the reactor coolant pressure boundary. This system is not installed for, or capable of, detecting reactor coolant leakage. It is used to automatically initiate shutdown and isolation of the Control Room Ventilation System in the event of an accidental release offsite of toxic gas. This system does not meet Criterion 1 of 10 CFR 50.36(c)(2)(ii) for inclusion in the TSs.

Criterion 2 - The toxic gas monitors are not a process variable, design feature, or operating restriction that is an initial condition of a design-basis accident or transient analysis that either assumes the failure of or presents a challenge to the integrity of a

fission product barrier. This system does not meet Criterion 2 of 10 CFR 50.36(c)(2)(ii) for inclusion in the TSs.

Criterion 3 - The toxic gas monitors are not components that are part of the primary success path and they do not provide a function or actuation in order to mitigate the consequences of a design-basis accident or transient. The Control Room Ventilation System will continue to be required by TS Table 3-3, Item 10, to have operable dampers for the design-basis accident mode. However, the toxic gas monitors do not meet Criterion 3 of 10 CFR 50.36(c)(2)(ii) for inclusion in the TSs.

Criterion 4 - The toxic gas monitors have not been shown to be significant to the public health and safety by either operational experience or a probabilistic safety assessment. This system does not meet Criterion 4 of 10 CFR 50.36(c)(2)(ii) for inclusion in the TSs.

The NRC staff has concluded that the design-basis accident analyses do not assume operation of the toxic gas monitors. Therefore, as discussed above, this system does not meet the screening criteria set forth in 10 CFR 50.36(c)(2)(ii) for inclusion in the TS, and the requirements can be relocated to the USAR. Relocation of the requirements of TS 2.22, "Toxic Gas Monitors," and TS Table 3-3, Item 29, to the USAR in conjunction with existing USAR information will continue to ensure that redundant toxic gas monitors, which are used for continuous measurement of the fresh air to the control room, are operational. Any future changes to these requirements will be evaluated under 10 CFR 50.59. Based on the above, the NRC staff concludes that the proposed TS change is, therefore, acceptable. In addition, the proposed TS is consistent with the guidance in GL 95-10 for relocation of TS requirements related to instrumentation.

4.0 STATE CONSULTATION

In accordance with the Commission's regulations, the Nebraska State official was notified of the proposed issuance of the amendment. The State official had no comments.

5.0 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. 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 (71 FR 75996; published on December 19, 2006). 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.

6.0 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: A. Wang

Date: February 28, 2007

Ft. Calhoun Station, Unit 1

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April 2006