



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

OMAHA PUBLIC POWER DISTRICT

DOCKET NO. 50-285

FORT CALHOUN STATION, UNIT NO. 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 176  
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 May 17, 1996, 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.

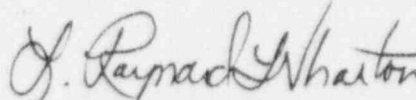
2. Accordingly, Facility Operating License No. DPR-40 is hereby amended to approve the relocation of certain Technical Specification requirements to licensee-controlled documents, as described in the licensee's application dated May 17, 1996, and reviewed in the staff's safety evaluation dated September 27, 1996. This license is also hereby amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 3.B of Facility Operating License No. DPR-40 is hereby amended to read as follows:

B. Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 176, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. The license amendment is effective as of its date of issuance. Implementation shall include the relocation of Technical Specification requirements to the appropriate licensee-controlled document as identified in the licensee's dated May 17, 1996, and reviewed in the staff's safety evaluation dated September 27, 1996.

FOR THE NUCLEAR REGULATORY COMMISSION



L. Raynard Wharton, Project Manager  
Project Directorate IV-2  
Division of Reactor Projects - III/IV  
Office of Nuclear Reactor Regulation

Attachment: Changes to the Technical  
Specifications

Date of Issuance: September 27, 1996

ATTACHMENT TO LICENSE AMENDMENT NO. 176

FACILITY OPERATING LICENSE NO. DPR-40

DOCKET NO. 50-285

Revise Appendix "A" Technical Specifications as indicated below. The revised pages are identified by amendment number and contain vertical lines indicating the area of change.

REMOVE

ii  
v  
vii  
2-72  
2-73  
2-74  
3-21  
3-76  
3-77  
3-78  
3-79  
3-79a  
3-79b  
3-79c  
5-19

INSERT

ii  
v  
vii  
2-72  
--  
--  
3-21  
3-76  
--  
--  
--  
--  
--  
--  
5-19

## TABLE OF CONTENTS (Continued)

	<b>Page</b>
2.12 Control Room Systems .....	2-59
2.13 Nuclear Detector Cooling System .....	2-60
2.14 Engineered Safety Features System Initiation Instrumentation Settings .....	2-61
2.15 Instrumentation and Control Systems .....	2-65
2.16 River Level .....	2-71
2.17 Miscellaneous Radioactive Material Sources .....	2-72
2.18 DELETED	
2.19 DELETED	
2.20 Steam Generator Coolant Radioactivity .....	2-96
2.21 Post-Accident Monitoring Instrumentation .....	2-97
2.22 Toxic Gas Monitors .....	2-99
 3.0 SURVEILLANCE REQUIREMENTS .....	 3-0a
3.1 Instrumentation and Control .....	3-1
3.2 Equipment and Sampling Tests .....	3-17
3.3 Reactor Coolant System and Other Components Subject to ASME XI Boiler and Pressure Vessel Code Inspection and Testing Surveillance .....	3-21
3.4 Reactor Coolant System Integrity Testing .....	3-36
3.5 Containment Test .....	3-37
3.6 Safety Injection and Containment Cooling Systems Tests .....	3-54
3.7 Emergency Power System Periodic Tests .....	3-58
3.8 Main Steam Isolation Valves .....	3-61
3.9 Auxiliary Feedwater System .....	3-62
3.10 Reactor Core Parameters .....	3-63
3.11 DELETED .....	3-64
3.12 Radioactive Waste Disposal System .....	3-69
3.13 Radioactive Material Sources Surveillance .....	3-76
3.14 DELETED	
3.15 DELETED	
3.16 Residual Heat Removal System Integrity Testing .....	3-84
3.17 Steam Generator Tubes .....	3-86
 4.0 DESIGN FEATURES .....	 4-1
4.1 Site .....	4-1
4.2 Containment Design Features .....	4-1
4.2.1 Containment Structure .....	4-1
4.2.2 Penetrations .....	4-1
4.2.3 Containment Structure Cooling Systems .....	4-2

## TECHNICAL SPECIFICATIONS - TABLES

### TABLE OF CONTENTS

<u>TABLE</u>	<u>DESCRIPTION</u>	<u>PAGE</u>
3-3	Minimum Frequencies for Checks, Calibrations, and Testing of Miscellaneous Instrumentation and Controls . . . . .	3-13
	. . . . .	3-14
	. . . . .	3-15
	. . . . .	3-16
	. . . . .	3-16a
	. . . . .	3-16b
	. . . . .	3-16c
3-3a	Minimum Frequency for Checks, Calibrations and Functional Testing of Alternate Shutdown Panels (AI-185 and AI-214) and Emergency Auxiliary Feedwater Panel (AI-179) Instrumentation and Control Circuits . . . . .	3-16d
	. . . . .	3-16e
3-4	Minimum Frequencies for Sampling Tests . . . . .	3-18
	. . . . .	3-19
3-5	Minimum Frequencies for Equipment Tests . . . . .	3-20
	. . . . .	3-20a
	. . . . .	3-20b
	. . . . .	3-20c
	. . . . .	3-20d
3-6	Reactor Coolant Pump Surveillance . . . . .	3-27
3-13	Steam Generator Tube Inspection . . . . .	3-90
5.2-1	Minimum Shift Crew Composition . . . . .	5-2

TECHNICAL SPECIFICATIONS - TABLES

TABLE OF CONTENTS (ALPHABETICAL ORDER)

Continued

<u>TABLE</u>	<u>DESCRIPTION</u>	<u>PAGE</u>
3-5	Minimum Frequencies for Equipment Tests . . . . .	3-20
	. . . . .	3-20a
	. . . . .	3-20b
	. . . . .	3-20c
	. . . . .	3-20d
3-4	Minimum Frequencies for Sampling Tests . . . . .	3-18
	. . . . .	3-19
5.2-1	Minimum Shift Crew Composition . . . . .	5-2
2-10	Post-Accident Monitoring Instrumentation Operating Limits . . . . .	2-98
	. . . . .	2-98a
	. . . . .	2-98b
2-9	RCS Pressure Isolation Valves . . . . .	2-2d
3-6	Reactor Coolant Pump Surveillance . . . . .	3-27
1-1	RPS LSSS . . . . .	1-10
	. . . . .	1-10a
3-13	Steam Generator Tube Inspection . . . . .	3-90
2-11	Toxic Gas Monitoring Operating Limits . . . . .	2-100

## 2.0 LIMITING CONDITIONS FOR OPERATION

### 2.17 MISCELLANEOUS RADIOACTIVE MATERIAL SOURCES

#### Applicability

Applies to byproduct, source, and special nuclear radioactive material sources.

#### Objective

To assure that leakage from byproduct, source, and special nuclear radioactive material sources does not exceed allowable limits.

#### Specifications

Radioactive sources shall be leak tested for contamination. The leakage test shall be capable of detecting the presence of 0.005 microcurie of radioactive material on the test sample. If the test reveals the presence of 0.005 microcurie or more of removable contamination, it shall immediately be withdrawn from use, decontaminated, and repaired, or be disposed of in accordance with Commission regulations. Those quantities of byproduct material that exceed the quantities listed in 10 CFR Part 30, Section 30.71, Schedule B are to be leak tested in accordance with the schedule shown in Surveillance Requirements. All other sources (including alpha emitters) containing greater than 0.1 microcurie are also to be leak tested in accordance with the Surveillance Requirements.

#### Basis

Ingestion or inhalation of source material may give rise to total body or organ irradiation. This specification assures that leakage from radioactive material sources does not exceed allowable limits. In the unlikely event that those quantities of radioactive byproduct materials of interest to this specification which are exempt from leakage testing are ingested or inhaled, they represent less than one maximum permissible body burden for total body irradiation. The limits for all other sources (including alpha emitters) are based upon 10 CFR Part 70, Section 70.39(c) limits for plutonium.



### 3.0 SURVEILLANCE REQUIREMENTS

#### 3.3 Reactor Coolant System and Other Components Subject to ASME XI Boiler & Pressure Vessel Code Inspection and Testing Surveillance

##### Applicability

Applies to in-service surveillance of primary system components and other components subject to inspection and testing according to ASME XI Boiler & Pressure Vessel Code.

##### Objective

To ensure the integrity of the reactor coolant system and other components subject to inspection and testing according to ASME XI Boiler & Pressure Vessel Code.

##### Specifications

- (1) Surveillance of the ASME Code Class 1, 2 and 3 systems, except the steam generator tubes inspection, should be covered by ASME XI Boiler & Pressure Vessel Code.
  - a. In-service inspection of ASME Code Class 1, Class 2, and Class 3 components, including applicable supports, and in-service testing of ASME Code Class 1, Class 2, and Class 3 pumps and valves shall be performed in accordance with Section XI of the ASME Boiler and Pressure Vessel Code, as required by 10 CFR Part 50, Section 50.55a(g), except where specific written relief has been granted by the Commission pursuant to 10 CFR Part 50, Section 50.55a (g)(6)(i).
  - b. Surveillance of the reactor coolant pump flywheels shall be performed as indicated in Table 3-6.
  - c. A surveillance program to monitor radiation-induced changes in the mechanical and impact properties of the reactor vessel materials shall be maintained in accordance with 10 CFR Part 50 Appendix H.<sup>(1)</sup>
- (2) Surveillance of Reactor Coolant System Pressure Isolation Valves
  - a. Periodic leakage testing\* on each valve listed in Table 2-9 shall be accomplished prior to entering the power operation mode every time the plant is placed in the cold shutdown

\* To satisfy ALARA requirements, leakage may be measured indirectly (as from the performance of pressure indicators) if accomplished in accordance with approved procedures and supported by computations showing that the method is capable of demonstrating valve compliance with the leakage criteria.



### 3.0 SURVEILLANCE REQUIREMENTS

#### 3.13 RADIOACTIVE MATERIAL SOURCES SURVEILLANCE

##### Applicability

Applies to leakage testing of byproduct, source, and special nuclear radioactive material sources.

##### Objective

To assure that leakage from byproduct, source, and special nuclear radioactive material sources does not exceed allowable limits.

##### Specification

Tests for leakage and/or contamination shall be performed by the licensee or by other persons specifically authorized by the NRC or an agreement State, as follows:

1. Each sealed source, except startup sources subject to core flux, containing radioactive material, other than Hydrogen 3, with a half-life greater than thirty days and in any form other than gas shall be tested for leakage and/or contamination at intervals of six months.
2. The periodic leak test required does not apply to sealed sources that are stored and not being used. The sources excepted from this test shall be tested for leakage prior to any use or transfer to another user unless they have been leak tested within six months prior to the date of use or transfer. In the absence of a certificate from a transferor indicating that a test has been made within six months prior to the transfer, sealed sources shall not be put into use until tested.
3. Startup sources shall be leak tested prior to and following any repair or maintenance and before being subjected to core flux.

## 5.0

### ADMINISTRATIVE CONTROLS

#### 5.10.2

The following records shall be retained for the duration of the Facility Operating License:

- a. Records of drawing changes reflecting facility design modifications made to systems and equipment described in the Final Safety Analysis Report.
- b. Records of new and irradiated fuel inventory, fuel transfers and assembly burnup histories.
- c. Records of facility radiation and contamination surveys.
- d. Records of radiation exposure for all individuals entering radiation control areas.
- e. Records of gaseous and liquid radioactive material released to the environs.
- f. Records of transient or operational cycles for those facility components designed for a limited number of transients or cycles.
- g. Records of training and qualification for current members of the plant staff.
- h. Records of in-service inspections performed pursuant to these Technical Specifications.
- i. Records of Quality Assurance activities required by the QA Manual.
- j. Records of reviews performed for changes made to procedures or equipment or reviews of tests and experiments pursuant to 10 CFR 50.59.
- k. Records of meetings of the Plant Review Committee and the Safety Audit and Review Committee.
- l. Records of Environmental Qualification of Electric Equipment pursuant to 10 CFR 50.49.
- m. Records of the service lives of all hydraulic and mechanical snubbers, including the date at which the service life commences and associated installation and maintenance records.
- n. Records of analyses required by the Radiological Environmental Monitoring Program.
- o. Records of reviews performed for changes made to the Offsite Dose Calculation Manual and the Process Control Program.

#### 5.10.3

A complete record of the analysis employed in the selection of any fuel assembly to be placed in Region 2 of the spent fuel racks will be retained as long as that assembly remains in Region 2 (reference Technical Specifications 2.8 and 4.4).

#### 5.11

##### Radiation Protection Program

Procedures for personnel radiation protection shall be prepared consistent with the requirements of 10 CFR Part 20 and shall be approved, maintained and adhered to for all operations involving personnel radiation exposure.