

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

OMAHA PUBLIC POWER DISTRICT

DOCKET NO. 50-285

FORT CALHOUN STATION, UNIT NO. 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 80 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 March 9, 1984, 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.

8407240147 8407 PDR ADOCK 05000

- Accordingly, Facility Operating License No. DPR-40 is 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. 80, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. This license amendment is effective as of the date of its issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

Derating Peactors Branch #3 Division of Licensing

Attachment: Changes to the Technical Specifications

Date of Issuance: July 9, 1984

ATTACHMENT TO LICENSE AMENDMENT NO. 80

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 Pages	Insert Pages
1 111	i iii
3-20d 5-21	2-165 3-20d 5-21

TECHNICAL SPECIFICATIONS

TABLE OF CONTENTS

Page

DEFI	NITION	IS		. 1
1.0	SAFET	Y LIMITS	AND LIMITING SAFETY SYSTEM	. 1-1
	1.1	Safety Safety	Limits - Reactor Core Limit, Reactor Coolant System Pressure	. 1-1 . 1-4
	1.5	System.	y safety system settings, Reactor Protective	. 1-6
2.0	LIMIT	ING COND	ITIONS FOR OPERATION	. 2-0
		2.0.1	General Requirements	. 2-0
	2.1	Reactor	Coolant System	. 2-1
		2.1.1 2.1.2 2.1.3 2.1.4 2.1.5	Operable Components Heatup and Cooldown Rate Reactor Coolant Radioactivity Reactor Coolant System Leakage Limits Maximum Reactor Coolant Oxygen and Halogens	2-1 2-3 2-8 2-11
		2.1.6 2.1.7 2.1.8	Concentrations Pressurizer and Steam System Safety Valves Pressurizer Operability Reactor Coolant System Vents	2-13 2-15 2-16a 2-16b
	2.2 2.3 2.4 2.5 2.6 2.7 2.8 2.9 2.10	Chemica Emergen Contain Steam a Contain Electri Refueli Radioac Reactor	1 and Volume Control System cy Core Cooling System ment Cooling nd Feedwater Systems cal System ng Operations tive Materials Release	. 2-17 . 2-20 . 2-24 . 2-28 . 2-30 . 2-32 . 2-37 . 2-40 . 2-48
		2.10.1 2.10.2 2.10.3 2.10.4	Minimum Conditions for Criticality Reactivity Control System and Core Physics Parameter Limits In-Core Instrumentation Power Distribution Limits	. 2-48 . 2-50 . 2-54 . 2-56
	2.11 2.12 2.13 2.14 2.15 2.16 2.17 2.18 2.19	Contain Control Nuclear Enginee Instrum Instrum River L Miscell Shock S Fire Pr	ment Building and Fuel Storage Building Crane Room Systems Detector Cooling System red Safety Features System Initiation • entation Settings entation and Control Systems evel aneous Radioactive Material Sources uppressors (Snubbers)	2-58 2-59 2-60 2-61 2-65 2-71 2-72 2-73

Amendment No. \$2, \$8, 52, 54, 57, 67, 80 i

TABLE OF CONTENTS (Cont'd)

									raye
5.9	Reporti	ng Requiremer	nts						5-10
	5.9.1 5.9.2 5.9.3 5.9.4	Routine Repo Reportable O Special Repo Unique Repor	orts Occurrences orts rting Requir	rements			••••		5-10 5-12 5-15 5-15
5.10 5.11 5.12 5.13 5.14 5.15 5.16	Records Radiati Environ Seconda Systems Iodine Samplin	Retention on Protection mental Qualif ry Water Chem Integrity Monitoring og and Analysi	n Program . fications . nistry is of Plant	Effluents					5-18 5-19 5-20 5-20 5-21 5-21 5-21 5-21
INTER	IM SPECI	AL TECHNICAL	SPECIFICAT	IONS					6-1
6.1 6.2 6.3 6.4	Limits Use of Auxilia Operati Strings	on Reactor Co a Spent Fuel my Feedwater on With Less Operable	Shipping Ca Automatic 1 Than 75% of	Operation ask Initiation f Incore De	Setpoint				6-1 6-1 6-1
	5.9 5.10 5.11 5.12 5.13 5.14 5.15 5.16 INTER 6.1 6.2 6.3 6.4	 5.9 Reporti 5.9.1 5.9.2 5.9.3 5.9.4 5.10 Records 5.11 Radiati 5.12 Environ 5.13 Seconda 5.14 Systems 5.15 Iodine 5.15 Iodine 5.16 Samplin INTERIM SPECH 6.1 Limits 6.2 Use of 6.3 Auxilia 6.4 Operati Strings	 5.9 Reporting Requirement 5.9.1 Routine Report 5.9.2 Reportable 0 5.9.3 Special Report 5.9.4 Unique Report 5.10 Records Retention 5.11 Radiation Protection 5.12 Environmental Quality 5.13 Secondary Water Chem 5.14 Systems Integrity 5.15 Iodine Monitoring 5.16 Sampling and Analyst INTERIM SPECIAL TECHNICAL 6.1 Limits on Reactor Condition 6.2 Use of a Spent Fuel 6.3 Auxiliary Feedwater 6.4 Operation With Less Strings Operable 	 5.9 Reporting Requirements 5.9.1 Routine Reports 5.9.2 Reportable Occurrences 5.9.3 Special Reports 5.9.4 Unique Reporting Requires 5.10 Records Retention 5.11 Radiation Protection Program 5.12 Environmental Qualifications 5.13 Secondary Water Chemistry 5.14 Systems Integrity 5.15 Iodine Monitoring 5.16 Sampling and Analysis of Plant INTERIM SPECIAL TECHNICAL SPECIFICATION 6.1 Limits on Reactor Coolant Pump 6.2 Use of a Spent Fuel Shipping Ca 6.3 Auxiliary Feedwater Automatic 1 6.4 Operation With Less Than 75% of Strings Operable 	 5.9 Reporting Requirements	 5.9 Reporting Requirements 5.9.1 Routine Reports 5.9.2 Reportable Occurrences 5.9.3 Special Reports 5.9.4 Unique Reporting Requirements 5.10 Records Retention 5.11 Radiation Protection Program 5.12 Environmental Qualifications 5.13 Secondary Water Chemistry 5.14 Systems Integrity 5.15 Iodine Monitoring 5.16 Sampling and Analysis of Plant Effluents INTERIM SPECIAL TECHNICAL SPECIFICATIONS 6.1 Limits on Reactor Coolant Pump Operation 6.2 Use of a Spent Fuel Shipping Cask 6.3 Auxiliary Feedwater Automatic Initiation Setpoint 6.4 Operation With Less Than 75% of Incore Detector Strings Operable 	 5.9 Reporting Requirements	 5.9 Reporting Requirements	5.9 Reporting Requirements - 5.9.1 Routine Reports - 5.9.2 Peportable Occurrences - 5.9.3 Special Reports - 5.9.4 Unique Reporting Requirements - 5.10 Records Retention - 5.11 Radiation Protection Program - 5.12 Environmental Qualifications - 5.13 Secondary Water Chemistry - 5.14 Systems Integrity - 5.15 Iodine Monitoring - 5.16 Sampling and Analysis of Plant Effluents - INTERIM SPECIAL TECHNICAL SPECIFICATIONS - 6.1 Limits on Reactor Coolant Pump Operation - 6.2 Use of a Spent Fuel Shipping Cask - 6.3 Auxiliary Feedwater Automatic Initiation Setpoint - 6.4 Operation With Less Than 75% of Incore Detector - Strings Operable - - -

Amendment No. 32, 34, 43, 84, 88, 87, 73, 80

111

- 2.0 LIMITING CONDITIONS FOR OPERATION
- 2.1 Reactor Coolant System (Continued)
- 2.1.8 Reactor Coolant System Vents

Applicability

Applies to the status of the reactor coolant gas vent system. This specification is applicable while in modes 1, 2, or 3.

Objective

To ensure capability of venting non-condensible gases from the reactor coolant system, the following gas vent system requirements must be met:

- At least one reactor coolant system vent path consisting of at least two valves in series powered from emergency buses shall be OPERABLE and closed at each of the following locations:
 - a. Reactor vessel head.
 - b. Pressurizer steam space.
- (2) With one of the above reactor coolant system vent paths inoperable, startup and/or power operation may continue provided power is removed from the valve actuators of all the inoperable valves; restore the inoperable vent path to OPERABLE status within 30 days or be in HOT STANDBY within 12 hours and in COLD SHUTDOWN within the following 30 hours.
- (3) With both of the above reactor coolant system vent paths inoperable, maintain the inoperable vent path closed with power removed from the valve actuators of all the inoperable valves in the inoperable vent paths and restore at least one of the vent paths to OPERABLE status within 72 hours or be in HOT STANDBY within 12 hours and in COLD SHUTDOWN within the following 30 hours.

Basis

The purpose of this specification is to ensure a method and system is available to remove steam and/or non-condensible gases from the reactor coolant system, which may inhibit core cooling_during natural circulation. The Power Operated Relief Valves are not to be considered a vent path for the purpose of this specification.

	T	A	B	L	E		3	-	5	
ĺ	C	0	n	t	i	n	u	e	d)

Amendment No. 41, 34, 60, 13, 77, 80

3-20d

 10c. (Continued) 4. Automatic and/or manual initiation of the system shall be demonstrated and teast once per plant operative cycle. 11. Containment Cooling and Indine Removal Fuscable 12. Diesel Generator Under- Voltage Relays 13. Motor Operated Safety Injection Loop Valve Motor Starters (RU- 311, 314, 317, 320, 327, 337, 331, 333, 312, 315, 318, 321) 14. Pressurizer Heaters Verify control circuits operation for post-accident heater use. 15. Spent Fuel Pool Region I Racks 16. Reactor Coolant Gas Vent System 17. Verify all manual isolation valves in each vent path through at least one complete cycle of full travel from the control of position indicating lights. 18. Verify flow through the reactor 19. During each refueling outage. 10. During each refueling outage. 10. During each refueling outage. 11. Spent Fuel Pool Region I Racks 12. Cycle each automatic valve in the vent path through at least one complete cycle of full travel from the control room. Verification of valve cycling may be determined by observation of position indicating lights. 19. Verify flow through the reactor 10. Verify flow through the reactor 11. Verify flow through the reactor 12. Cycle each refueling outage. 13. Verify flow through the reactor 14. Pressurizer Meater 15. Spent Fuel Pool Region I Racks 16. Reactor Coolant Gas Vent System 17. Spent Fuel Pool Region I Noter the start-up. 18. Spent Fuel Pool Region I Racks 19. Verify flow through the reactor 10. Verify flow through the reactor 11. Verify flow through the reactor 12. Spent Fuel Pool Region I Racks 13. Verify flow through the reactor 14. Spent Fuel Pool Region I Racks 15. Reactor Coolant Gas Verify flow through the reactor 15. Spent Fuel Pool Region I Racks 16			Test	Frequency	USAR Section Reference
 Containment Cooling and Lodine Removal Fuseable Linked Dampers Deesel Generator Under- Voltage Relays Test a spare fuseable link. Diesel Generator Under- Voltage Relays Motor Operated Safety Injection Loop Valve Motor Starters (HCV- 311, 314, 317, 320, 327, 329, 331, 333, 312, 315, 318, 321) Verify the contractor pickup value at <85% of 460 V. Verify control circuits operation for post-accident heater use. Spent Fuel Pool Region I Racks Verify all manual isolation valves in each vent path are in the open position. Verify all manual isolation valves in each vent path are in the open position. Cycle each automatic valve in the vent path through at least one complete cycle of full travel from the control rom. Verification of valve cycling may be determined by observation of position indicating lights. Verify flow through the reactor During each refueling outage. 	10c.	(Continued)	 Automatic and/or manual initiation of the system shall be demonstrated 	At least once per plant operation cycle.	
Linked Dampers 2. Test a spare fuseable link. after. 12. Diesel Generator Under- Voltage Relays Calibrate During each refueling outage. 8.4.3 13. Notor Operated Safety Injection Loop Valve Motor Starters (HCV- 311, 314, 317, 320, 327, 325, 331, 333, 312, 315, 316, 321) Verify the contactor pickup value at ≤852 of 460 V. During each refueling outage. 8.4.3 14. Pressurizer Heaters Verify control circuits operation for post-accident heater use. During each refueling outage. During each refueling outage. 15. Spent Fuel Pool Region I Racks Test neutron poison samples for dimensional change, hardness change, and neutron attenuation change. Intervals of 1, 2, 4, 7, 11, 15, 20, and 25 years after installation. 16. Reactor Coolant Gas Vent System . Verify all manual isolation valves in each vent path are in the open position. During each refueling outage. 2. Cycle each automatic valve in the vent path through at least one complete cycle of full travel from the control room. Verification of valve cycling may be determined by observation of position indicating lights. During each refueling outage. 3. Verify flow through the reactor During each refueling outage.	11.	Containment Cooling and Iodine Removal Fuseable	1. Demonstrate damper action.	1 year, 2 years, 5 years, and every 5 years there-	9.10
 12. Diesel Generator Under- Voltage Relays 13. Motor Operated Safety Injection Loop Valve Motor Starters (RCV- 311, 314, 317, 320, 327, 329, 331, 333, 312, 315, 318, 321) 14. Pressurizer Heaters 15. Spent Fuel Pool Region I Racks 16. Reactor Coolant Gas Vent System 17. Cycle each automatic valve in the vent path through at least one complete cycle of full travel from the control room. Verification of value cycling may be determined by observation of position indicating lights. 18. Verify flow through the reactor 19. Verify flow through the reactor 10. Verify flow through the reactor 10. Verify flow through the reactor 11. Verify flow through the reactor 12. Cycle with through the reactor 13. Verify flow through the reactor 14. Pressurizer Heaters 15. Spent Fuel Pool Region I Racks 15. Spent Fuel Pool Region I Racks 16. Reactor Coolant Gas Vent System 17. Cycle each automatic valve in the vent path through at least one complete cycle of full travel from the control room. Verification of value cycling may be determined by observation of position indicating 16. Verify flow through the reactor 17. Cycle with through the reactor 18. Verify flow through the reactor 19. Verify flow through the reactor 19. Verify flow through the reactor 10. Verify flow through the reactor 10. Verify flow through the reactor 11. Verify flow through the reactor 12. Verify flow through the reactor 13. Verify flow through the reactor 14. Verify flow through the reactor 15. Verify flow through the reactor 16. Present Coolant Gas 17. Verify flow through the reactor 18. Verify flow through the reactor 19. Verify flow through the reactor 19. Verify flow through the reactor 10. Verify flow through the reactor 10. Ve		Linked Dampers	2. Test a spare fuseable link.	after.	
 Motor Operated Safety Injection Loop Valve Motor Starters (HCV- 311, 314, 317, 320, 327, 329, 331, 333, 312, 315, 318, 321) Pressurizer Heaters Verify control circuits operation for post-accident heater use. Spent Fuel Pool Region I Racks Test neutron poison samples for dimensional change, hardness change, and neutron attenuation change. Nerify all manual isolation valves in each vent path are in the open position. Cycle each automatic valve in the vent path through at least one complete cycle of full travel from the control room. Verification of yobservation of position indicating lights. Verify flow through the reactor During each refueling outage. 	12.	Diesel Generator Under- Voltage Relays	Calibrate	During each refueling outage.	8.4.3
 14. Pressurizer Heaters Verify control circuits operation for post-accident heater use. 15. Spent Fuel Pool Region I Racks Test neutron poison samples for dimensional change, hardness change, and neutron attenuation change. 16. Reactor Coolant Gas Vent System 1. Verify all manual isolation valves in each vent path are in the open position. 2. Cycle each automatic valve in the vent path through at least one complete cycle of full travel from the control room. Verification of valve cycling may be determined by observation of position indicating lights. 3. Verify flow through the reactor During each refueling outage. 	13.	Motor Operated Safety Injection Loop Valve Motor Starters (HCV- 311, 314, 317, 320, 327, 329, 331, 333, 312, 315, 318, 321)	Verify the contactor pickup value at <85% of 460 V.	During each refueling outage.	
 15. Spent Fuel Pool Region I Racks 15. Spent Fuel Pool Region I Racks 16. Reactor Coolant Gas Vent System 10. Verify all manual isolation valves in each vent path are in the open position. 11. Verify all manual isolation valves in each vent path are in the open position. 12. Cycle each automatic valve in the vent path through at least one complete cycle of full travel from the control room. Verification of valve cycling may be determined by observation of position indicating lights. 13. Verify flow through the reactor 14. Test neutron poison samples for dimensional change, hardness change, and neutron attenuation change. 15. Reactor Coolant Gas Verify flow through the reactor 16. Reactor Coolant Gas Intervals of 1, 2, 4, 7, 11, 15, 20, and 25 years after installation. 16. During each refueling outage. 17. During each refueling outage. 	14.	Pressurizer Heaters	Verify control circuits operation for post-accident heater use.	During each refueling outage.	
 16. Reactor Coolant Gas Vent System Verify all manual isolation valves in each vent path are in the open position. 1. Verify all manual isolation valves in each vent path are in the open position. 2. Cycle each automatic valve in the vent path through at least one complete cycle of full travel from the control room. Verification of valve cycling may be determined by observation of position indicating lights. 3. Verify flow through the reactor 	15.	Spent Fuel Pool Region I Racks	Test neutron poison samples for dimensional change, hardness change, and neutron attenuation change.	Intervals of 1, 2, 4, 7, 11, 15, 20, and 25 years after installation.	
 Cycle each automatic valve in the vent path through at least one complete cycle of full travel from the control room. Verification of valve cycling may be determined by observation of position indicating lights. Verify flow through the reactor 	16.	Reactor Coolant Gas Vent System	 Verify all manual isolation values in each vent path are in the open position. 	During each refueling outag just prior to plant start-u	e up.
3. Verify flow through the reactor During each refueling outage.			 Cycle each automatic valve in the vent path through at least one complete cycle of full travel from the control room. Verification of valve cycling may be determined by observation of position indicating lights. 	During each refueling outag	e.
			3. Verify flow through the reactor	During each refueling outag	;e.

1. 4.7

5.0 ADMINISTRATIVE CONTROLS

5.14 Systems Integrity

A program to reduce leakage from systems outside containment that would or could contain highly radioactive fluids during a serious transient or accident to as low as practical levels shall be implemented. This program shall include the following:

- Provisions establishing preventive maintenance and periodic visual inspection requirements, and
- Integrated leak test requirements for each system at a frequency not to exceed refueling cycle intervals.

5.15 Iodine Monitoring

A program which will ensure the capability to accurately determine the airborne iodine concentration in vital areas under accident conditions shall be implemented. This program shall include the following:

- 1. Training of personnel,
- 2. Procedures for monitoring, and
- 3. Provisions for maintenance of sampling and analysis equipment.

5.16 Sampling and Analysis of Plant Effluents

A program which will ensure the capability to obtain and analyze radioactive iodines and particulates in plant gaseous effluents under accident conditions shall be implemented. The program shall include the following:

1. Training of personnel.

2. Procedures for sampling and analysis, and

3. Provisions for maintenance of sampling and analysis equipment.