



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

NEBRASKA PUBLIC POWER DISTRICT

DOCKET NO. 50-298

COOPER NUCLEAR STATION

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 171  
License No. DPR-46

1. The Nuclear Regulatory Commission (the Commission) has found that:
  - A. The application for amendment by Nebraska Public Power District (the licensee) dated June 15, 1995, 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.

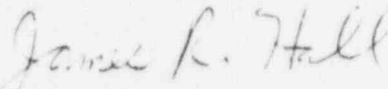
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment and Paragraph 2.C.(2) of Facility Operating License No. DPR-46 is hereby amended to read as follows:

2. Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 171, 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.

FOR THE NUCLEAR REGULATORY COMMISSION



James R. Hall, Senior Project Manager  
Project Directorate IV-1  
Division of Reactor Projects III/IV  
Office of Nuclear Reactor Regulation

Attachment: Changes to the Technical  
Specifications

Date of Issuance: September 7, 1995

ATTACHMENT TO LICENSE AMENDMENT NO. 171

FACILITY OPERATING LICENSE NO. DPR-46

DOCKET NO. 50-298

Replace the following pages of the Appendix A Technical Specifications with the enclosed pages. The revised pages are identified by Amendment number and contain vertical lines indicating the area of change.

REMOVE PAGES

2  
70  
72  
73  
74  
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90

INSERT PAGES

2  
70  
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- F. Functional Test - A functional test is the manual operation or initiation of a system, subsystem or component to verify that it functions within design tolerances (e.g. the manual start of a core spray pump to verify that it runs and that it pumps the required volume of water).
- F.A Gaseous Radwaste Treatment System - A GASEOUS RADWASTE TREATMENT SYSTEM is any system designed and installed to reduce radioactive gaseous effluents by collecting primary coolant system offgases from the primary system and providing for delay or holdup for the purpose of reducing the total radioactivity prior to release to the environment.
- G. Hot Standby Condition - Hot standby condition means operation with coolant temperature greater than 212°F, system pressure less than 1000 psig, and the mode switch in "Startup/Hot Standby".
- H. Immediate - Immediate means that the required action will be initiated as soon as practicable considering the safe operation of the unit and the importance of the required action.
- I. Instrumentation
1. Instrument Functional Test - Analog instrument functional test means the injection of a simulated signal into the instrument as close to the sensor as practical to verify the proper instrument channel response, alarm and/or initiating action. Bistable channels - the injection of a simulated signal into the sensor to verify OPERABILITY including alarm and/or trip functions.
  2. Instrument Calibration - An instrument calibration means the adjustment, as necessary, of an instrument signal output so that it corresponds, within acceptable range, and accuracy, to a known value(s) of the parameter which the instrument monitors. Calibration shall encompass the entire instrument including sensor, alarm/or trip functions and shall include the functional test. The calibration may be performed by any series of sequential, overlapping or total channel steps such that the entire channel is calibrated. Calibration of instrument channels with resistance temperature detector (RTD) or thermocouple sensors shall consist of verification of operability of the sensing element, and normal calibration, of the remaining adjustable devices in the channel.
  3. Instrument Channel - An instrument channel means an arrangement of a sensor and auxiliary equipment required to generate and transmit a signal related to the plant parameter monitored by that instrument channel.
  4. Instrument Check - An instrument check is the qualitative determination of acceptable operability by observation of instrument behavior during operation. This determination shall include, where possible, comparison of the instrument with other independent instruments measuring the same variable.
  5. Logic System Functional Test - A LOGIC FUNCTIONAL TEST shall be a test of all logic components (i.e., all relays and contacts, trip units, solid state logic elements, etc.) of a logic circuit, from as close to the sensor as practicable up to, but not including the actuated device, to verify OPERABILITY. The LOGIC SYSTEM FUNCTIONAL TEST may be performed by means of any series of sequential, overlapping, or total system steps so that the entire logic system is tested.
  6. Protective Action - An action initiated by the protection system when a limiting safety system setting is reached. A protective action can be at a channel or system level.
  7. Protective Function - A system protective action which results from the protective action of the channels monitoring a particular plant condition.

COOPER NUCLEAR STATION  
TABLE 4.2.B (Page 1)  
CORE SPRAY SYSTEM TEST & CALIBRATION FREQUENCIES

Item	Item I.D. No.	Functional Test Freq.	Calibration Freq.	Instrument Check
<u>Instrument</u>				
1. Reactor Low Water Level	NBI-LIS-72, A,B,C, & D	Once/Month (1)	Once/3 Months	Once/Day
2. Reactor Low Pressure	NBI-PS-52, A1,A2,C1, & C2 NBI-PIS-52, B & D	Once/Month (1)	Once/3 Months	None
3. Drywell High Pressure	PC-PS-101, A,B,C, & D	Once/Month (1)	Once/3 Months	None
4. Core Spray Pump Disch. Press.	CS-PS-44, A & B CS-PS-37, A & B	Once/Month (1) Once/Month (1)	Once/3 Months Once/3 Months	None None
5. Core Spray Pump Time Delay	CS-TDR - K16, A & B	Once/Month (1)	Once/Oper. Cycle (4)	None
6. Emergency Bus Low Volt Relay	27X1 - 1F & 1G 27X2 - 1F & 1G	Once/Oper. Cycle Once/Oper. Cycle	N.A. N.A.	None None
7. Pump Disch. Line Low Press.	CM-PS-73, A & B	Once/3 Months	Once/3 Months	None
<u>Logic (4) (6)</u>				
1. Logic Power Monitor		Once/18 Months	N.A.	N.A.
2. Core Spray Initiation		Once/18 Months	N.A.	N.A.
3. Pump & Valve (Signal Override) Control		Once/18 Months	N.A.	N.A.

COOPER NUCLEAR STATION  
 TABLE 4.2.B (Page 3)  
 RHR SYSTEM TEST & CALIBRATION FREQUENCIES

Item	Item I.D. No.	Functional Test Freq.	Calibration Freq.	Instrument Check
<u>Logic (4) (6)</u>				
1. Logic Bus Power Monitor		Once/18 Months	N.A.	N.A.
2. RHR Initiation		Once/18 Months	N.A.	N.A.
3. RHR Pump & Valve Control		Once/18 Months	N.A.	N.A.

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TABLE 4.2.B (Page 4)  
HPCI TEST & CALIBRATION FREQUENCIES

Item	Item I.D. No.	Functional Test Freq.	Calibration Freq.	Instrument Check
1. Reactor Low Water Level	NBI-LIS-72, A, B, C, & D, #3	Once/Month (1)	Once/3 Months	Once/Day
2. Reactor High Water Level	NBI-LIS-101, (B & D #2)	Once/Month (1)	Once/3 Months	Once/Day
3. High Drywell Pressure	PC-PS-101 A, B, C, & D	(7)	(7)	None
4. HPCI Turbine High Exhaust Press.	HPCI-PS-97 A & B	Once/Month (1)	Once/3 Months	None
5. HPCI Pump Low Suction Press.	HPCI-PS-84-1	Once/Month (1)	Once/3 Months	None
6. HPCI Pump Low Discharge Flow	HPCI-FS-78	Once/Month (1)	Once/3 Months	None
7. HPCI Low Steam Supply Press.	HPCI-PS-68, A, B, C, & D	Once/Month (1)	Once/3 Months	None
8. HPCI Steam Line High ΔP	HPCI-dPIS-76	Once/Month (1)	Once/3 Months	None
	HPCI-dPIS-77	Once/Month (1)	Once/3 Months	None
9. HPCI Steam Line Space High Temp.	HPCI-TS-101, A, B, C, & D 102, 103, 104, HPCI-TS-125, 126, 127, 128 RHR-TS-150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161	Once/Month (1)	Once/Oper. Cycle	None
10. Emergency Cond. Stg. Tk. Low Level	HPCI-LS-74 A & B HPCI-LS-75 A & B	Once/Month (1) Once/Month (1)	Once/3 Months Once/3 Months	None None
11. Suppression Chamber High Water Level	HPCI-LS-91 A & B	Once/Month (1)	Once/3 Months	None
12. HPCI Gland Seal Cond. Hotwell Level	HPCI-LS-356 B HPCI-LS-356 A	Once/Month (1) Once/Month (1)	Once/3 Months Once/3 Months	None None
13. HPCI Control Oil Pressure Low	HPCI-PS-2787-H HPCI-PS-2787-L	Once/Month (1) Once/Month (1)	Once/3 Months Once/3 Months	None None
14. Turbine Condition Supr. Alarm Actuation Timer	HPCI-TDR-K14	Once/Month (1)	Once/Oper. Cycle	None
15. Pump Disch. Line Low Press.	CM-PS-268	Once/3 Months	Once/3 Months	None
16. HPCI Turbine Stop Valve Mon.	HPCI-LMS-4	Once/Month	N.A.	None
17. Sup. Chamber HPCI Suction Vlv.	HPCI-LMS-2	Once/Month	N.A.	None
18. HPCI Steam Line High ΔP Actuation Timer	HPCI-TDR-K33, HPCI-TDR-K43	Once/Month Once/Month	Once/Oper. Cycle Once/Oper. Cycle	None None
<u>Logic (4)(6)</u>				
1. Logic Bus Power Monitor		Once/18 Months	N.A.	
2. HPCI Initiation		Once/18 Months	N.A.	
3. HPCI Turbine Trip		Once/18 Months	N.A.	



COOPER NUCLEAR STATION  
TABLE 4.2.B (Page 5)  
HPCI TEST & CALIBRATION FREQUENCIES

Item	Item I.D. No.	Functional Test Freq.	Calibration Freq.	Instrument Check
4. HPCI Auto Isolation		Once/18 Months	N.A.	
5. HPCI Aux. Oil Pump and HPCI Gland Steam Exhauster		Once/18 Months	N.A.	



COOPER NUCLEAR STATION  
TABLE 4.2.B (Page 6)  
RCIC TEST & CALIBRATION FREQUENCIES

Item	Item I.D. No.	Functional Test Freq.	Calibration Freq.	Instrument Check
<u>Instrument Channels</u>				
1. Reactor High Water Level	NBI-LIS-101 A & C, #2	Once/Month (1)	Once/3 Months	Once/Day
2. Reactor Low Water Level	10A - K79 A & B 10A-K80 A & B	Once/Month (1)	N.A.	Once/Day
3. RCIC High Turbine Exhaust Press.	RCIC-PS-72, A & B	Once/Month (1)	Once/3 Months	None
4. RCIC Low Pump Suction Press.	RCIC-PS-67-1	Once/Month (1)	Once/3 Months	None
5. RCIC Steam Line Space Excess Temp.	RCIC-TS-79, A,B,C, & D	Once/Month (1)	Once/Oper. Cycle	None
	RCIC-TS-80, A,B,C, & D	Once/Month (1)	Once/Oper. Cycle	None
	RCIC-TS-81, A,B,C, & D	Once/Month (1)	Once/Oper. Cycle	None
	RCIC-TS-82, A,B,C, & D	Once/Month (1)	Once/Oper. Cycle	None
6. RCIC Steam Line High ΔP	RCIC-dPIS-83	Once/Month (1)	Once/3 Months	None
	RCIC-dPIS-84	Once/Month (1)	Once/3 Months	None
7. RCIC Steam Supply Press. Low	RCIC-PS-87, A,B,C, & D	Once/Month (1)	Once/3 Months	None
8. RCIC Low Pump Disch. Flow	RCIC-FIS-57	Once/Month (1)	Once/3 Months	None
9. Pump Disch. Line Low Pressure	CM-PS-269	Once/3 Months	Once/3 Months	None
10. RCIC Turbine Conditional Supv. Alarm Timer	RCIC-TDR - K9	Once/Month (1)	Once/Oper. Cycle	None
11. RCIC Steam Line High ΔP Actuation Timer	RCIC-TDR-K-12	Once/Month	Once/Oper. Cycle	None
	RCIC-TDR-K-32	Once/Month	Once/Oper. Cycle	None
<u>Logic Systems (4)(6)</u>				
1. Logic Bus Power Monitor		Once/18 Months	N.A.	
2. RCIC Initiation		Once/18 Months	N.A.	
3. Turbine Trip		Once/18 Months	N.A.	
4. RCIC Automatic Isolation		Once/18 Months	N.A.	

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 TABLE 4.2.B (Page 7)  
 ADS SYSTEM AND LOW-LCW SET TEST & CALIBRATION FREQUENCIES

Item	Item I.D. No.	Functional Test Freq.	Instrument Calibration Freq.	Check
<u>Instruments</u>				
1. ADS Inhibit Switch	MS-SW-S3A & B	Once/Month (1)	N.A.	None
2. Reactor Low Water Level	NBI-LIS-83, A & B	Once/Morth (1)	Once/3 Months	Once/Day
	NBI-LIS-72, A,B,C, & D	Once/Month (1)	Once/3 Months	Once/Day
3. ADS Timer	MS-TDR-K5 A & B	Once/Month (1)	Once/Oper. Cycle	None
4. Low-Low Set (LLS)	NBI-PS-51, A,B,C, & D	Once/Month (1)	Once/Oper. Cycle	None
<u>Logic (4)(6)</u>				
1. ADS Control Power Monitor		Once/18 Months	N.A.	
2. ADS Actuation		Once/18 Months	N.A.	
3. Low-Low Set Logic		Once/18 Months	N.A.	

#### 4.2 BASES (cont'd.)

The best test procedure of all those examined is to perfectly stagger the tests. That is, if the test interval is four months, test one or the other channel every two months. This is shown in Curve No. 5. The difference between Cases 4 and 5 is negligible. There may be other arguments, however, that more strongly support the perfectly staggered tests, including reductions in human error.

The conclusions to be drawn are these:

1. A 1 out of n system may be treated the same as a single channel in terms of choosing a test interval and
2. more than one channel should not be bypassed for testing at any one time.

The bases for the radiation monitors are contained in the section denoted Environmental/Radiological Effluents.

The LOGIC SYSTEM FUNCTIONAL TEST for the Core and Containment Cooling systems demonstrate the OPERABILITY of the required initiation logic for a specific channel. The 18 month frequency is based on the need to perform this surveillance under the conditions that apply during a plant outage and the potential for an unplanned transient if the surveillance were performed with the reactor at power. Operating experience has shown that these components reliably pass the surveillance when performed at the 18 month frequency.