



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

TOLEDG EDISON COMPANY

AND

THE CLEVELAND ELECTRIC ILLUMINATING COMPANY

DOCKET NO. 50-346

DAVIS-BESSE NUCLEAR POWER STATION, UNIT NO. 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 108  
License No. NPF-3

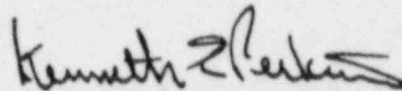
1. The Nuclear Regulatory Commission (the Commission) has found that:
  - A. The application for amendment by the Toledo Edison Company and The Cleveland Electric Illuminating Company (the licensees) dated March 27, 1987, complies with the standards and requirements of the Atomic Energy Act of 1954, 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.
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. NPF-3 is hereby amended to read as follows:

Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No.108 , are hereby incorporated in the license. The Toledo Edison Company shall operate the facility in accordance with the Technical Specifications.

3. This license amendment is effective as of its date of issuance and shall be implemented not later than April 1, 1988 .

FOR THE NUCLEAR REGULATORY COMMISSION



Kenneth E. Perkins, Director  
Project Directorate III-3  
Division of Reactor Projects - III, IV, V  
& Special Projects

Attachment:  
Changes to the Technical  
Specifications

Date of Issuance: March 2, 1988

ATTACHMENT TO LICENSE AMENDMENT NO.108

FACILITY OPERATING LICENSE NO. NPF-3

DOCKET NO. 50-346

Replace the following pages of the Appendix "A" Technical Specifications with the attached pages. The revised pages are identified by Amendment number and contain vertical lines indicating the area of change. The corresponding overleaf page(s) are also provided to maintain document completeness.

Remove

3/4 3-2  
3/4 3-5  
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3/4 3-7  
3/4 3-8

Insert

3/4 3-2  
3/4 3-5  
3/4 3-5a  
3/4 3-7  
3/4 3-8

### 3/4.3 INSTRUMENTATION

#### 3/4.3.1 REACTOR PROTECTION SYSTEM INSTRUMENTATION

##### LIMITING CONDITION FOR OPERATION

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3.3.1.1 As a minimum, the Reactor Protection System instrumentation channels and bypasses of Table 3.3-1 shall be OPERABLE with RESPONSE TIMES as shown in Table 3.3-2.

APPLICABILITY: As shown in Table 3.3-1.

ACTION:

As shown in Table 3.3-1.

##### SURVEILLANCE REQUIREMENTS

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4.3.1.1.1 Each Reactor Protection System instrumentation channel shall be demonstrated OPERABLE by the performance of the CHANNEL CHECK, CHANNEL CALIBRATION and CHANNEL FUNCTIONAL TEST operations during the MODES and at the frequencies shown in Table 4.3-1.

4.3.1.1.2 The total bypass function shall be demonstrated OPERABLE at least once per 18 months during CHANNEL CALIBRATION testing of each channel affected by bypass operation.

4.3.1.1.3 The REACTOR PROTECTION SYSTEM RESPONSE TIME of each reactor trip function shall be demonstrated to be within its limit at least once per 18 months. Each test shall include at least one channel per function such that all channels are tested at least once every N times 18 months where N is the total number of redundant channels in a specific reactor trip function as shown in the "Total No. of Channels" column of Table 3.3-1.

TABLE 3.3-1

## REACTOR PROTECTION SYSTEM INSTRUMENTATION

FUNCTIONAL UNIT	TOTAL NO. OF CHANNELS	CHANNELS TO TRIP	MINIMUM CHANNELS OPERABLE	APPLICABLE MODES	ACTION
1. Manual Reactor Trip	2	1	2	1, 2 and *	1
2. High Flux	4	2	3	1, 2	2#
3. RC High Temperature	4	2	3	1, 2	3#
4. Flux - $\Delta$ Flux - Flow	4	2(a)(b)	3	1, 2	2#
5. RC Low Pressure	4	2(a)	3	1, 2	3#
6. RC High Pressure	4	2	3	1, 2	3#
7. RC Pressure-Temperature	4	2(a)	3	1, 2	3#
8. High Flux/Number of Reactor Coolant Pumps On	4	2(a)(b)	3	1, 2	3#
9. Containment High Pressure	4	2	3	1, 2	3#
10. Intermediate Range, Neutron Flux and Rate	2	0	2(c)	1, 2 and *	4
11. Source Range, Neutron Flux and Rate					
A. Startup	2	0	2	2## and *	5
B. Shutdown	2	0	1	3, 4 and 5	6
12. Control Rod Drive Trip Breakers	2 per trip system	1 per trip system	2 per trip system	1, 2 and *	7#, 9#
13. Reactor Trip Module	2 per trip system	1 per trip system	2 per trip system	1, 2 and *	7#
14. Shutdown Bypass High Pressure	4	2	3	2**, 3** 4**, 5**	6#
15. SCR Relays	2	2	2	1, 2 and *	10#

TABLE 3.3-1 (Continued)

ACTION STATEMENTS (Continued)

- ACTION 5 - With the number of channels OPERABLE one less than required by the Minimum Channels OPERABLE requirement and with the THERMAL POWER level:
- a.  $< 10^{-10}$  amps on the Intermediate Range (IR) instrumentation, restore the inoperable channel to OPERABLE status prior to increasing THERMAL POWER above  $10^{-10}$  amps on the IR instrumentation.
  - b.  $> 10^{-10}$  amps on the IR instrumentation, operation may continue.
- ACTION 6 - With the number of channels OPERABLE one less than required by the Minimum Channels OPERABLE requirement, verify compliance with the SHUTDOWN MARGIN requirements of Specification 3.1.1.1 within one hour and at least once per 12 hours thereafter.
- ACTION 7 - With the number of OPERABLE channels one less than the Total Number of Channels STARTUP and/or POWER OPERATION may proceed provided all of the following conditions are satisfied:
- a. Within 1 hour:
    1. Place the inoperable channel in the tripped condition, or
    2. Remove power supplied to the control rod trip device associated with the inoperative channel.
  - b. One additional channel may be bypassed for up to 2 hours for surveillance testing per Specification 4.3.1.1.1, and the inoperable channel above may be bypassed for up to 30 minutes in any 24 hour period when necessary to test the trip breaker associated with the logic of the channel being tested per Specification 4.3.1.1.1. The inoperable channel above may not be bypassed to test the logic of a channel of the trip system associated with the inoperable channel.
- ACTION 8 - With the number of channels OPERABLE less than required by the Minimum Channels OPERABLE requirement, be in at least HOT STANDBY within 6 hours.

TABLE 3.3-1 (Continued)

ACTION STATEMENTS (Continued)

- ACTION 9 - With one of the Reactor Trip Breaker diverse trip features (undervoltage or shunt trip devices) inoperable, restore it to OPERABLE status in 48 hours or place the breaker in trip in the next hour.
- ACTION 10 - With one or both channels of SCR Relays inoperable, restore the channels to OPERABLE status during the next COLD SHUTDOWN exceeding 24 hours.

TABLE 3.3-2

REACTOR PROTECTION SYSTEM INSTRUMENTATION RESPONSE TIMES

<u>FUNCTIONAL UNIT</u>	<u>RESPONSE TIMES**</u> (seconds)
1. Manual Reactor Trip	Not Applicable
2. High Flux*	$\leq 0.266$
3. RC High Temperature	Not Applicable
4. Flux - $\Delta$ Flux - Flow* - Variable Flow	$\leq 1.77$
- Constant Flow	$\leq 0.266$
5. RC Low Pressure	$\leq 0.341$
6. RC High Pressure	$\leq 0.341$
7. RC Pressure - Temperature - Constant Temperature	Not Applicable
8. High Flux/Number of Reactor Coolant Pumps On*	$\leq 0.451^{***}$
9. Containment High Pressure	Not Applicable

\* Neutron detectors are exempt from response time testing. Response time of the neutron flux signal portion of the channel shall be measured from detector output or input of first electronic component in channel.

\*\* Including sensor (except as noted), RPS instrument delay and the breaker delay.

\*\*\* A 0.24 sec delay time has been assumed for pump contact monitor.



TABLE 4.3-1

## REACTOR PROTECTION SYSTEM INSTRUMENTATION SURVEILLANCE REQUIREMENTS

<u>FUNCTIONAL UNIT</u>	<u>CHANNEL CHECK</u>	<u>CHANNEL CALIBRATION</u>	<u>CHANNEL FUNCTIONAL TEST</u>	<u>MODES IN WHICH SURVEILLANCE REQUIRED</u>
1. Manual Reactor Trip	N.A.	N.A.	S/U(1)	N.A.
2. High Flux	S	D(2), and Q(7)	M	1, 2
3. RC High Temperature	S	R	M	1, 2
4. Flux - $\Delta$ Flux - Flow	S(4)	M(3) and Q(7,8)	M	1, 2
5. RC Low Pressure	S	R	M	1, 2
6. RC High Pressure	S	K	M	1, 2
7. RC Pressure-Temperature	S	R	M	1, 2
8. High Flux/Number of Reactor Coolant Pumps On	S	R	M	1, 2
9. Containment High Pressure	S	R	M	1, 2
10. Intermediate Range, Neutron Flux and Rate	S	R(7)	S/U(5)(1)	1, 2 and*
11. Source Range, Neutron Flux and Rate	S	R(7)	M and S/U(1)(5)	2, 3, 4 and 5
12. Control Rod Drive Trip Breakers	N.A.	N.A.	M(9) and S/U(1)(9)	1, 2 and*
13. Reactor Trip Module Logic	N.A.	N.A.	M	1, 2 and*
14. Shutdown Bypass High Pressure	S	R	M	2**, 3**, 4**, 5**
15. SCR Relays	N.A.	N.A.	R	1,2 and *

TABLE 4.3-1 (Continued)

NOTATION

- (1) - If not performed in previous 7 days.
- (2) - Heat balance only, above 15% of RATED THERMAL POWER.
- (3) - When THERMAL POWER [TP] is above 30% of RATED THERMAL POWER [RTP], compare out-of-core measured AXIAL POWER IMBALANCE [API<sub>o</sub>] to incore measured AXIAL POWER IMBALANCE [API<sub>i</sub>].  
Recalibrate if:  
$$\frac{RTP}{TP} [API_o - API_i] \geq 3.5\%$$
- (4) - AXIAL POWER IMBALANCE and loop flow indications only.
- (5) - Verify at least one decade overlap if not verified in previous 7 days.
- (6) - Each train tested every other month.
- (7) - Neutron detectors may be excluded from CHANNEL CALIBRATION.
- (8) - Flow rate measurement sensors may be excluded from CHANNEL CALIBRATION. However, each flow measurement sensor shall be calibrated at least once per 18 months.
- (9) - The CHANNEL FUNCTIONAL TEST shall independently verify the OPERABILITY of both the undervoltage and shunt trip devices of the Reactor Trip Breakers.
  - \* - With any control rod drive trip breaker closed.
  - \*\* - When Shutdown Bypass is actuated.