



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

THE TOLEDO 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. 28
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 20, 1978, 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, Facility Operating License No. NPF-3 is hereby amended as indicated below and by changes to the Technical Specifications as indicated in the attachment to this license amendment:

A. Revise paragraph 2.C.(2) to read as follows:

Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 28, are hereby incorporated in the license. The Toledo Edison Company shall operate the facility in accordance with the Technical Specifications.

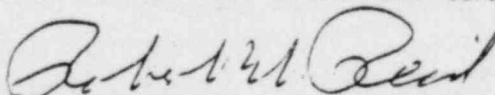
B. Replace paragraph 2.C.(3)(d) with the following:

Prior to operation beyond five Effective Full Power Years, the Toledo Edison Company shall provide to the NRC a reanalysis and proposed modifications, as necessary, to ensure continued means of protection against low temperature reactor coolant system overpressure events.

C. Delete paragraph 2.C.(3)(j).

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

FOR THE NUCLEAR REGULATORY COMMISSION



Robert W. Reid, Chief
Operating Reactors Branch #4
Division of Licensing

Attachment:
Changes to the Technical
Specifications

Date of Issuance: July 25, 1980

ATTACHMENT TO LICENSE AMENDMENT NO. 28

FACILITY OPERATING LICENSE NO. NPF-3

DOCKET NO. 50-346

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

Pages

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3/4 3-12

3/4 3-13

3/4 3-22

3/4 4-2

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TABLE 3.3-3 (Continued)

TABLE NOTATION

- * Trip function may be bypassed in this MODE with RCS pressure below 1800 psig. Bypass shall be automatically removed when RCS pressure exceeds 1800 psig.
- ** Trip function may be bypassed in this MODE with RCS pressure below 600 psig. Bypass shall be automatically removed when RCS pressure exceeds 600 psig.
- *** One must be in SFAS Channels #1 or #3, the other must be in Channels #2 or #4.
- # The provisions of Specification 3.0.4 are not applicable.

ACTION STATEMENTS

- ACTION 9 - With the number of OPERABLE functional units one less than the Total Number of Units operation may proceed provided both of the following conditions are satisfied:
 - a. The inoperable functional unit is placed in the tripped condition within one hour.
 - b. The Minimum Units OPERABLE requirement is met; however, one additional functional unit may be bypassed for up to 2 hours for surveillance testing per Specification 4.3.2.1.1.
- ACTION 10 - With any component in the Output Logic inoperable, trip the associated components within one hour or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.
- ACTION 11 - With the number of OPERABLE Units one less than the Total Number of Units, restore the inoperable functional unit to OPERABLE status within 48 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.
- ACTION 12 -
 - a. With less than the Minimum Units OPERABLE and reactor coolant pressure > 438 psig, both Decay Heat Isolation Valves (DH11 and DH12) shall be verified closed.
 - b. With Less than the Minimum Units OPERABLE and reactor coolant pressure < 438 psig operation may continue; however, the functional unit shall be OPERABLE prior to increasing reactor coolant pressure above 438 psig.
- ACTION 13 - With less than the Minimum Units OPERABLE and reactor coolant pressure < 438 psig, operation may continue; however, the functional unit shall be OPERABLE prior to increasing reactor coolant pressure above 438 psig, or the inoperable functional unit shall be placed in the tripped state.

TABLE 3.3-3

SAFETY FEATURES ACTUATION SYSTEM INSTRUMENTATION

<u>FUNCTIONAL UNIT</u>	<u>TOTAL NO. OF UNITS</u>	<u>UNITS TO TRIP</u>	<u>MINIMUM UNITS OPERABLE</u>	<u>APPLICABLE MODES</u>	<u>ACTION</u>
3. MANUAL ACTUATION					
a. SFAS (except Containment Spray and Emergency Sump Recirculation)	2	2	2	ALL MODES	11
b. Containment Spray	2	2	2	1, 2, 3, 4	11
4. SEQUENCE LOGIC CHANNELS	4	2***	4	1, 2, 3, 4	9#
5. INTERLOCK CHANNELS					
a. Decay Heat Isolation Valve	1	1	1	1, 2, 3, 4, 5	12#
b. Pressurizer Heaters	2	2	2	3,4,5	13#

DAVIS-BESSE, UNIT 1

3/4 3-11

Amendment No. 28

TABLE 3.3-5

SAFETY FEATURES SYSTEM RESPONSE TIMES

<u>INITIATING SIGNAL AND FUNCTION</u>	<u>RESPONSE TIME IN SECONDS</u>
1. Manual	
a. Fans	
1. Emergency Vent Fan	NA
2. Containment Cooler Fan	NA
b. HV & AC Isolation Valves	
1. ECCS Room	NA
2. Emergency Ventilation	NA
3. Containment Air Sample	NA
4. Containment Purge	NA
5. Penetration Room Purge	NA
c. Control Room HV & AC Units	NA
d. High Pressure Injection	
1. High Pressure Injection Pumps	NA
2. High Pressure Injection Valves	NA
e. Component Cooling Water	
1. Component Cooling Water Pumps	NA
2. Component Cooling Aux. Equip. Inlet Valves	NA
3. Component Cooling to Air Compressor Valves	NA
f. Service Water System	
1. Service Water Pumps	NA
2. Service Water From Component Cooling Heat Exchanger Isolation Valves	NA
g. Containment Spray Isolation Valves	NA
h. Emergency Diesel Generator	NA
i. Containment Isolation Valves	
1. Vacuum Relief	NA
2. Normal Sump	NA
3. RCS Letdown Delay Coil Outlet	NA
4. RCS Letdown High Temperature	NA

TABLE 3.3-4

SAFETY FEATURES ACTUATION SYSTEM INSTRUMENTATION TRIP SETPOINTS

<u>FUNCTIONAL UNIT</u>	<u>TRIP SETPOINT</u>	<u>ALLOWABLE VALUES</u>
<u>INSTRUMENT STRINGS</u>		
a. Containment Radiation	< 2 x Background at RATED THERMAL POWER	< 2 x Background at RATED THERMAL POWER [#]
b. Containment Pressure - High	≤ 18.4 psia	≤ 18.52 psia [#]
c. Containment Pressure - High-High	≤ 38.4 psia	≤ 38.52 psia [#]
d. RCS Pressure - Low	≥ 1620.75 psig	≥ 1615.75 psig [#]
e. RCS Pressure - Low-Low	≥ 420.75 psig	≥ 415.75 psig [#]
f. BWST Level	≥ 49.5 and ≤ 55.0 in. H ₂ O	≥ 48.3 and ≤ 56.7 in. H ₂ O [#]
<u>SEQUENCE LOGIC CHANNELS</u>		
a. Essential Bus Feeder Breaker Trip (90%)	≥ 3744 volts for 7 ± 1.5 sec	≥ 3558 volts for 7 ± 1.5 sec [#]
b. Diesel Generator Start, Load Shed on Essential Bus (59%)	≥ 2071 and ≤ 2450 volts for 0.5 ± 0.1 sec	≥ 2071 and ≤ 2450 volts for 0.5 ± 0.1 sec [#]
<u>INTERLOCK CHANNELS</u>		
a. Decay Heat Isolation Valve and Pressurizer Heater	< 438 psig	< 443 psig ^{#*}

[#] Allowable Value for CHANNEL FUNCTIONAL TEST and CHANNEL CALIBRATION.

* Referenced to the centerline of DH11 and DH12

TABLE 4.3-2

SAFETY FEATURES ACTUATION 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>
5. INTERLOCK CHANNELS				
a. Decay Heat Isolation Valve	S	R	**	1, 2, 3, 4, 5
b. Pressurizer Heater	S	R	**	3,4,5

**See Specification 4.5.2.d.1

TABLE NOTATION

- (1) Manual actuation switches shall be tested at least once per 18 months during shutdown. All other circuitry associated with manual safeguards actuation shall receive a CHANNEL FUNCTIONAL TEST at least once per 31 days.
- (2) The CHANNEL FUNCTIONAL TEST shall include exercising the transmitter by applying either vacuum or pressure to the appropriate side of the transmitter.

TABLE 4.3-2

SAFETY FEATURES ACTUATION SYSTEM INSTRUMENTATION SURVEILLANCE REQUIREMENTS

FUNCTIONAL UNIT	CHANNEL CHECK	CHANNEL CALIBRATION	CHANNEL FUNCTIONAL TEST	MODES IN WHICH SURVEILLANCE REQUIRED
1. INSTRUMENT STRINGS				
a. Containment Radiation - High	S	R	M	ALL MODES
b. Containment Pressure - High	S	R	M(2)	1, 2, 3
c. Containment Pressure - High-High	S	R	M(2)	1, 2, 3
d. RCS Pressure - Low	S	R	M	1, 2, 3
e. RCS Pressure - Low-Low	S	R	M	1, 2, 3
f. BWST Level - Low	S	R	M	1, 2, 3
2. OUTPUT LOGIC				
a. Incident Level #1: Containment Isolation	S	R	M	ALL MODES
b. Incident Level #2: High Pressure Injection and Starting Diesel Generators	S	R	M	1, 2, 3, 4
c. Incident Level #3: Low Pressure Injection	S	R	M	1, 2, 3, 4
d. Incident Level #4: Containment Spray	S	R	M	1, 2, 3, 4
e. Incident Level #5: Containment Sump Recirculation	S	R	M	1, 2, 3, 4
3. MANUAL ACTUATION				
a. SFAS (Except Containment Spray and Emergency Sump Recirculation)	NA	NA	M(1)	ALL MODES
b. Containment Spray	NA	NA	M(1)	1, 2, 3
4. SEQUENCE LOGIC CHANNELS	S	NA	M	1, 2, 3, 4

REACTOR COOLANT SYSTEM

LIMITING CONDITION FOR OPERATION (Continued)

MODES 3, 4 and 5:

- a. Operation may proceed provided at least one reactor coolant loop is in operation with an associated reactor coolant pump or decay heat removal pump.*
- b. Not more than one decay heat removal pump may be operated with the sole suction path through DH-11 and DH-12 unless the control power has been removed from the DH-11 and DH-12 valve operators, or manual valves DH-21 and DH-23 are opened.
- c. The provisions of Specifications 3.0.3 and 3.0.4 are not applicable.

*All reactor coolant pumps and decay heat removal train pumps may be de-energized for up to 1 hour to accommodate surveillance testing & pre-operational testing, provided no operations are permitted which could cause dilution of the reactor coolant system boron concentration.

SURVEILLANCE REQUIREMENTS

4.4.1 The Reactor Protective Instrumentation channels specified in the applicable ACTION statement above shall be verified to have had their trip setpoints changed to the values specified in Specification 2.2.1 for the applicable number of reactor coolant pumps operating either:

- a. Within 4 hours after switching to a different pump combination if the switch is made while operating, or
- b. Prior to reactor criticality if the switch is made while shutdown.

3/4.4 REACTOR COOLANT SYSTEM

REACTOR COOLANT LOOPS

LIMITING CONDITION FOR OPERATION

3.4.1 Both reactor coolant loops and both reactor coolant pumps in each loop shall be in operation.

APPLICABILITY: As noted below, but excluding MODE 6.*

ACTION:

MODES 1 and 2:

- a. With one reactor coolant pump not in operation, STARTUP and POWER OPERATION may be initiated and may proceed provided THERMAL POWER is restricted to less than 78.3% of RATED THERMAL POWER and within 4 hours the setpoints for the following trips have been reduced to the values specified in Specification 2.2.1 for operation with three reactor coolant pumps operating:
 1. High Flux
 2. Flux- Δ Flux-Flow

- b. With one reactor coolant pump in each loop not in operation, STARTUP and POWER OPERATION may be initiated and may proceed provided THERMAL POWER is restricted to less than 50.6% of RATED THERMAL POWER and within 4 hours the setpoints for the following trips have been reduced to the values specified in Specification 2.2.1 for operation with one reactor coolant pump operating in each loop:
 1. High Flux
 2. Flux- Δ Flux-Flow

*See Special Test Exception 3.10.3.

EMERGENCY CORE COOLING SYSTEMS

SURVEILLANCE REQUIREMENTS

- b. At least once per 31 days by verifying that the ECCS piping is full of water by venting the ECCS pump casings and discharge piping high points.
- c. By a visual inspection which verifies that no loose debris (rags, trash, clothing, etc.) is present in the containment which could be transported to the containment emergency sump and cause restriction of the pump suction during LOCA conditions. This visual inspection shall be performed:
 1. For all accessible areas of the containment prior to establishing CONTAINMENT INTEGRITY, and
 2. Of the areas affected within containment at the completion of each containment entry when CONTAINMENT INTEGRITY is established.
- d. At least once per 18 months by:
 1. Verifying that the interlocks:
 - a) Close DH-11 and DH-12 and deenergize the pressurizer heaters, if either DH-11 or DH-12 is open and a simulated reactor coolant system pressure which is greater than the trip setpoint (<438 psig) is applied.
 - b) Prevent the opening of DH-11 and DH-12 when a simulated or actual reactor coolant system pressure which is greater than the trip setpoint (<438 psig) is applied.
 2. A visual inspection of the containment emergency sump which verifies that the subsystem suction inlets are not restricted by debris and that the sump components (trash racks, screens, etc.) show no evidence of structural distress or corrosion.
 3. Verifying a total leak rate \leq 20 gallons per hour for the LPI system at:
 - a) Normal operating pressure or hydrostatic test pressure of \geq 150 psig for those parts of the system downstream of the pump suction isolation valve, and
 - b) \geq 45 psig for the piping from the containment emergency sump isolation valve to the pump suction isolation valve.
 4. Verifying that a minimum of 72 cubic feet of solid granular trisodium phosphate dodecahydrate (TSP) is contained within the TSP storage baskets.

EMERGENCY CORE COOLING SYSTEMS

ECCS SUBSYSTEMS - $T_{avg} > 280^{\circ}\text{F}$

LIMITING CONDITION FOR OPERATION

3.5.2 Two independent ECCS subsystems shall be OPERABLE with each subsystem comprised of:

- a. One OPERABLE high pressure injection (HPI) pump,
- b. One OPERABLE low pressure injection (LPI) pump,
- c. One OPERABLE decay heat cooler, and
- d. An OPERABLE flow path capable of taking suction from the borated water storage tank (BWST) on a safety injection signal and automatically transferring suction to the containment sump on a borated water storage tank low level signal during the recirculation phase of operation.

APPLICABILITY: MODES 1, 2 and 3.

ACTION:

- a. With one ECCS subsystem inoperable, restore the inoperable subsystem to OPERABLE status within 72 hours or be in HOT SHUTDOWN within the next 12 hours.
- b. In the event the ECCS is actuated and injects water into the Reactor Coolant System, a Special Report shall be prepared and submitted to the Commission pursuant to Specification 6.9.2 within 90 days describing the circumstances of the actuation and the total accumulated actuation cycles to date.

SURVEILLANCE REQUIREMENTS

4.5.2 Each ECCS subsystem shall be demonstrated OPERABLE:

- a. At least once per 31 days by verifying that each valve (manual, power operated or automatic) in the flow path that is not locked, sealed or otherwise secured in position, is in its correct position.