



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

TOLEDO EDISON COMPANY  
CENTERIOR SERVICE 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. 153  
License No. NPF-3

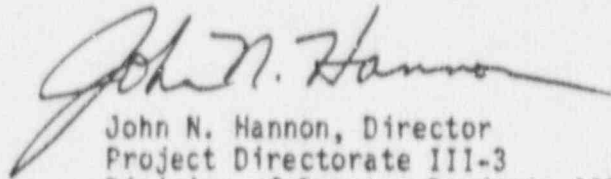
1. The Nuclear Regulatory Commission (the Commission) has found that:
  - A. The application for amendment by the Toledo Edison Company, Centerior Service Company and The Cleveland Electric Illuminating Company (the licensees) dated March 4, 1988 as supplemented by letters dated May 4 and December 6, 1988 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:

(a) Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 153, 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 45 days after issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



John N. Hannon, Director  
Project Directorate III-3  
Division of Reactor Projects III/IV/V  
Office of Nuclear Reactor Regulation

Attachment: Changes to the Technical  
Specifications

Date of issuance: February 8, 1991

ATTACHMENT TO LICENSE AMENDMENT NO. 153

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 pages are also provided to maintain document completeness.

<u>Remove</u>	<u>Insert</u>
3/4 7-1	3/4 7-1
3/4 7-2	3/4 7-2
3/4 7-3	3/4 7-3
B 3/4 7-1a	B 3/4 7-1a
-	B 3/4 7-1b

### 3/4.7 PLANT SYSTEMS

#### 3/4.7.1 TURBINE CYCLE

##### SAFETY VALVES

##### LIMITING CONDITION FOR OPERATION

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3.7.1.1 All main steam line code safety valves shall be OPERABLE.

APPLICABILITY: MODES 1, 2 and 3.

ACTION:

With one or more main steam line code safety valves inoperable,

- a. operation in MODES 1, 2 and 3 may proceed provided that, within 4 hours, either
  1. the inoperable valve is restored to OPERABLE status, or
  2. a) the High Flux Trip Setpoint is reduced per Equation 3.7-1 below, and
    - b) there are a minimum of two OPERABLE safety valves per steam generator, at least one with a setpoint not greater than 1050 psig ( $\pm 1\%$ )\*, and
    - c) no OPERABLE safety valve has a setpoint greater than 1100 psig ( $\pm 1\%$ )\*;  
otherwise
- b. be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 12 hours.
- c. The provisions of Specification 3.0.4 are not applicable.

Equation 3.7-1:  $SP = \frac{Y}{Z} \times W$

where,

- SP = Reduced High Flux Trip Setpoint (Not to exceed W)
- W = High Flux Trip Setpoint for four pump operation as specified in Table 2.2-1
- Y = Total OPERABLE relieving capacity per steam generator based on a summation of individual OPERABLE safety valve relief capacities per steam generator in lbs/hr
- Z = Required relieving capacity per steam generator of 6,585,600 lbs/hr

##### SURVEILLANCE REQUIREMENTS

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4.7.1.1 No additional Surveillance Requirements other than those required by Specification 4.0.5, are applicable for the main steam line code safety valves.

\*The lift setting pressure shall correspond to ambient conditions of the valve at nominal operating temperature and pressure.

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## PLANT SYSTEMS

### AUXILIARY FEEDWATER SYSTEM

#### LIMITING CONDITION FOR OPERATION

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3.7.1.2 Two independent steam generator auxiliary feedwater pumps and associated flow paths shall be OPERABLE.

APPLICABILITY: MODES 1, 2, and 3.

#### ACTION:

- a. With one Auxiliary Feedwater System inoperable, restore the inoperable system to OPERABLE status within 72 hours or be in HOT SHUTDOWN within the next 12 hours.
- b. With any Auxiliary Feed Pump Turbine Inlet Steam Pressure Interlocks inoperable, restore the inoperable interlocks to OPERABLE status within 7 days or be in HOT SHUTDOWN within the next 12 hours.

#### SURVEILLANCE REQUIREMENTS

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4.7.1.2.1 Each Auxiliary Feedwater System shall be demonstrated OPERABLE:

- a. At least once per 31 days on a STAGGERED TEST BASIS by:
  1. Verifying that each steam turbine driven pump develops a differential pressure of  $\geq 1070$  psid on recirculation flow when the secondary steam supply pressure is greater than 800 psia, as measured on PI SP 12B for pump 1-1 and PI SP 12A for pump 1-2. The provisions of Specification 4.0.4 are not applicable for entry into Mode 3.
  2. Verifying that each valve (power operated or automatic) in the flow path is in its correct position.
  3. Verifying that all manual valves in the auxiliary feedwater pump suction and discharge lines that affect the system's capacity to deliver water to the steam generator are locked in their proper position.
  4. Verifying that valves CW 196, CW 197, FW 32, FW 91 and FW 106 are closed.
- b. At least once per 18 months by:
  1. Verifying that each automatic valve in the flow path actuates to its correct position on an auxiliary feedwater actuation test signal.
  2. Verifying that each pump starts automatically upon receipt of an auxiliary feedwater actuation test signal. The provisions of Specification 4.0.4 are not applicable for entry into MODE 3.

## 3/4.7 PLANT SYSTEMS

### BASES

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#### 3/4.7.1 TURBINE CYCLE

##### 3/4.7.1.1 SAFETY VALVES

The OPERABILITY of the main steam line code safety valves ensures that the secondary system pressure will be limited to within 110% of its design pressure of 1050 psig during the most severe anticipated system operational transient. The maximum relieving capacity is associated with a turbine trip from 100% RATED THERMAL POWER coincident with an assumed loss of condenser heat sink (i.e., no steam bypass to the condenser).

The safety valve set pressures and relieving capacities are in accordance with Section III of ASME Boiler and Pressure Vessel Code, 1971 Edition. The Code requires the following:

1. At least two pressure-relief valves are required to provide relieving capacity for steam systems.
2. The capacity of the smallest pressure-relief valve shall not be less than 50 percent of that of the largest pressure-relief device.
3. The set pressure of one of the pressure-relief devices shall not be greater than the maximum allowable working pressure of the system at design temperature.
4. Total rated relieving capacity of the pressure-relief devices shall prevent a rise of more than 10 percent above system design pressure at design temperature under any pressure transients anticipated to arise.

These requirements are, respectively, met as follows:

1. Nine safety valves are installed per steam generator.
2. The relief capacity of two of the nine safety valves per steam generator is 583,574 lbs/hr each, and the capacity of the remaining seven is 845,759 lbs/hr each.
3. A minimum of two OPERABLE safety valves per steam generator, with a combined total relief capacity of at least 1,167,148 lbs/hr, one with a setpoint not greater than 1050 psig (+/-1%), and one with a setpoint not greater than 1100 psig (+/-1%).
4. The total relieving capacity of all safety valves on both main steam lines is 14,175,000 lbs/hr which is 120 percent of the total secondary system flow of 11,760,000 lbs/hr at 100 percent of RATED THERMAL POWER. A maximum safety valve setpoint pressure of 1100 psig (+/-1%) assures main steam system pressure remains below 110 percent, or 1155 psig.



3/4.7 PLANT SYSTEMS

BASES

3/4.7.1.1 SAFETY VALVES (Continued)

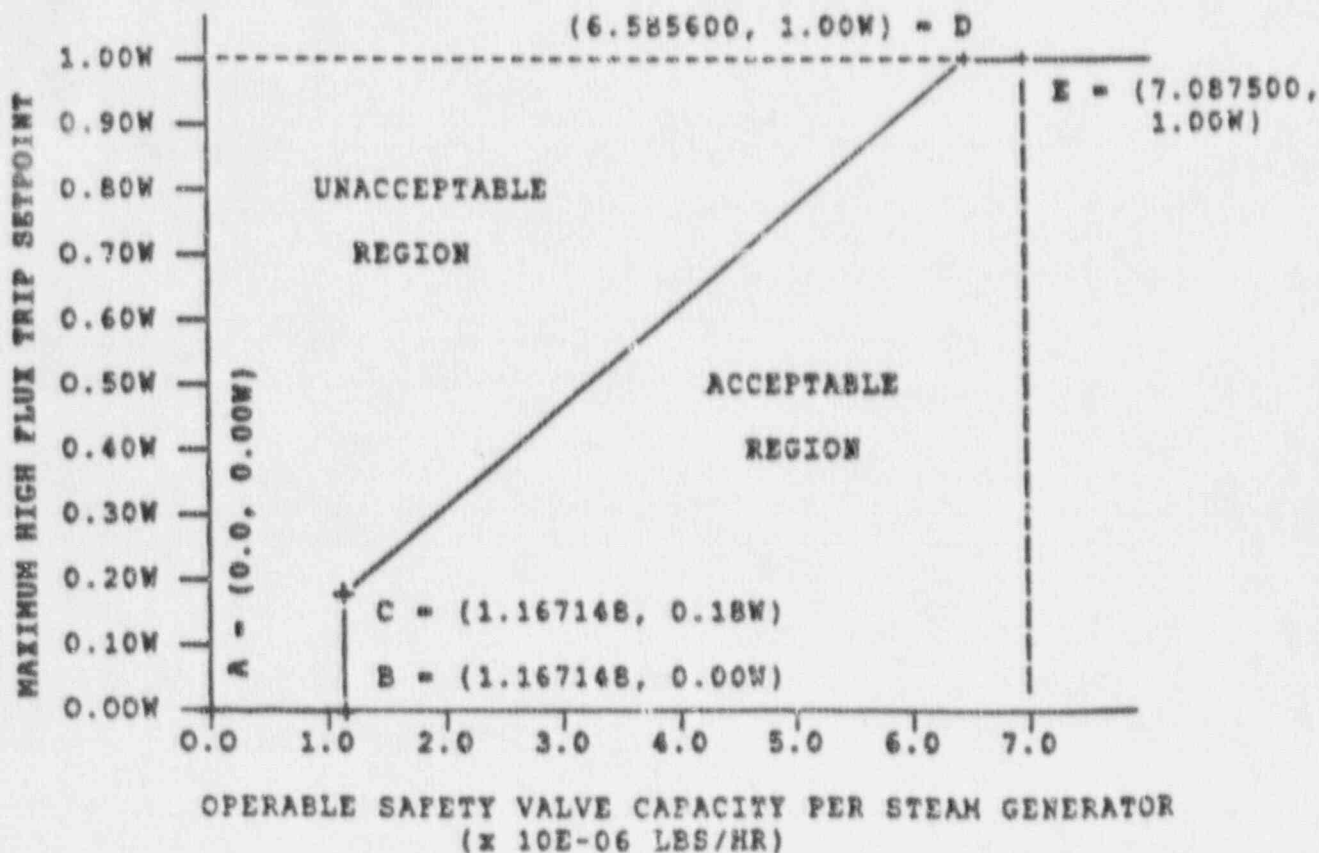
STARTUP and/or POWER OPERATION is allowable with safety valves inoperable within the limitations of the ACTION requirements on the basis of the reduction in secondary system steam flow and THERMAL POWER required by the reduced reactor trip settings of the High Flux channels. The reactor trip setpoint reductions are derived on the following bases:

$$SP = \frac{Y}{Z} \times W$$

where:

- SP = Reduced High Flux Trip Setpoint (Not to exceed W)
- W = High Flux Trip Setpoint for four pump operation as specified in Table 2.2-1
- Y = Total OPERABLE relieving capacity per steam generator based on a summation of individual safety valve relief capacities per steam generator in lbs/hr
- Z = Required relieving capacity per steam generator of 6,585,600 lbs/hr

This equation is graphically represented below. Operation is restricted to the area below and to the right of line A.



### 3/4.7 PLANT SYSTEMS

#### BASES

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#### 3/4.7.1.2 AUXILIARY FEEDWATER SYSTEMS

The OPERABILITY of the Auxiliary Feedwater Systems ensures that the Reactor Coolant System can be cooled down to less than 280°F from normal operating conditions in the event of a total loss of offsite power. The OPERABILITY of the Auxiliary Feed Pump Turbine Inlet Steam Pressure Interlocks is required only for high energy line break concerns and does not affect Auxiliary Feedwater System OPERABILITY.

Each steam driven auxiliary feedwater pump is capable of delivering a total feedwater flow of 600 gpm at a pressure of 1050 psig to the entrance of the steam generators. This capacity is sufficient to ensure that adequate feedwater flow is available to remove decay heat and reduce the Reactor Coolant System temperature to less than 280°F where the Decay Heat Removal System may be placed in operation.