JUNE 7 1979

DISTRIBUTION:
Ocket File
ORB#4 Rdg
NRR Rdg

ACRS (16) CMiles RDiggs HDenton TERA

Docket No. 50-346

NRC POR VStello DEisenhut BGrimes

RVollmer

L PDR

JRBuchanan Gray File +5

Mr. Lowell E. Roe Vice President, Facilities Development Toledo Edison Company Edison Plaza 300 Madison Avenue Toledo, Ohio 43642 TJCarter
WRussell
RIngram
Vissing, G
RRE OELD
I&E (5)
BJones (4)
BScharf (10)

BK BHarless DBrinkman

Dear Mr. Roe:

The Commission has issued the enclosed Amendment No. 16 to Facility Operatings License No. NPF-3 for the Davis-Besse Nuclear Power Station, Unit No. 1. The amendment consists of changes to the Technical Specifications in response to your application dated October 23, 1978.

The amendment changes the Technical Specifications concerning the Reactor Core Safety Limit Curve, the Reactor Protection System Instrumentation Trip Setpoints and the maximum Reactor Coolant Hot Leg Temperature for departure from nucleate boiling margin. This amendment also makes minor editorial corrections to Technical Specification Figure 2.1-2 and Table 5.7-1.

As a result of the Three Mile Island Nuclear Incident of March 28, 1979, we have a general review of B&W reactors underway which may result in changes in criteria for analysis of transients. Such changes in criteria could result in different Technical Specification requirements. Appropriate action will be taken as may be required to implement any needed Technical Specification changes resulting from this review. Also on May 17, 1979, the Commission issued and Order confirming your commitment to keep the facility shutdown until certain modifications and changes to procedures are implemented to decrease the likelihood of occurrence of an event similar to the Three Mile Island Incident. The Order requires that Davis-Besse Nuclear Power Station, Unit No. I be maintained in a shutdown condition until satisfactory completion of the items in the Order have been confirmed by the Director, Office of Nuclear Reactor Regulation. Therefore, upon issuance of this amendment, operation of the facility can be commenced only after confirmation of completion of the items in the Order.

Copies of the Safety Evaluation and the Notice of Issuance are also enclosed.

Sincerely,

Original signed by Robert W. Reid

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

Enclosures:

- 1. Amendment No. 16
- 2. Safety Evaluation
- 3. Notice

cc w/enclosures: See next page

*See previous yellow for concurrence

OFFICE OR ORB#4:DOR. ORB#4:DOR C-ORB#4:DOR STSG AD BAPDOR OELD MASU RIngram DATE 5/31/79 5/5/79 5/3/79 5/3/79 5/3/79 6/06/79

🛣 U.S. GOVERNMENT PRINTING OFFICE

Docket No. 50-346

Mr. Lowell E. Roe Vice President, Facilities Development Toledo Edison Company Edison Plaza 300 Madison Avenue Toledo. Ohio 43652

Dear Mr. Roe:

DISTRIBUTION . Docket File ORB#4 Rda NRR Rda L PDR NRC PDR VStello DEisenhut **BGrimes RVollmer TJCarter** WRussell RIngram GVissing 0ELD I&E (50) BJones (4) BScharf (10) DBrinkman **BHarless**

ACRS (16)

CMiles

RDiggs

TERA

HDenton

JRBucha**a**an

Grav File

XXtra (5)

The Commission has issued the enclosed Amendment No. to Facility Operating License No. 196-3 for the Davis-Besse Nuclear Power Station, Unit No. 1. The amendment consists of changes to the Technical Specifications in response to your application dated October 23, 1978,

The amendment changes the Technical Specifications concerning the Reactor Core Safety Limit Curve, the Reactor Protection System Instrumentation Trip Setpoints and the maximum Reactor Coolant Hot Leg Temperature for departure from nucleate boiling margin. This amendment also makes minor editorial corrections to Technical Specification Figure 2.1-2 and Table 5.7-1.

Copies of the Safety Evaluation and the Notice of Issuance are also enclosed.

Sincerely,

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

Enclosures:

- 1. Amendment No.
- 2. Safety Evaluation
- 3. Notice

cc w/enclosures: See next page

| OFFICE→ | ORB#4:DOR/\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\ | OIB#4700R GV/Vsing | C-OBB#A: POR | SISG | AD-E&P:DOR B. Grimes | OELD |
|---------|--|-----------------------|------------------|------------------|-------------------------|----------------|
| DATE | 9 /\ ¹ /79 | 5/vW 79 | \$ 123/79 | \$/23/ 79 | 5 / | 5 / /79 |



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

June 7, 1979

Docket No. 50-346

Mr. Lowell E. Roe Vice President, Facilities Development Toledo Edison Company Edison Plaza 300 Madison Avenue Toledo, Ohio 43642

Dear Mr. Roe:

The Commission has issued the enclosed Amendment No. 16 to Facility Operating License No. NPF-3 for the Davis-Besse Nuclear Power Station, Unit No. 1. The amendment consists of changes to the Technical Specifications in response to your application dated October 23, 1978.

The amendment changes the Technical Specifications concerning the Reactor Core Safety Limit Curve, the Reactor Protection System Instrumentation Trip Setpoints and the maximum Reactor Coolant Hot Leg Temperature for departure from nucleate boiling margin. This amendment also makes minor editorial corrections to Technical Specification Figure 2.1-2 and Table 5.7-1.

As a result of the Three Mile Island Nuclear Incident of March 28, 1979, we have a general review of B&W reactors underway which may result in changes in criteria for analysis of transients. Such changes in criteria could result in different Technical Specification requirements. Appropriate action will be taken as may be required to implement any needed Technical Specification changes resulting from this review. Also on May 17, 1979, the Commission issued an Order confirming your commitment to keep the facility shutdown until certain modifications and changes to procedures are implemented to decrease the likelihood of occurrence of an event similar to the Three Mile Island Incident. The Order requires that Davis-Besse Nuclear Power Station, Unit No. 1 be maintained in a shutdown condition until satisfactory completion of the items in the Order have been confirmed by the Director, Office of Nuclear Reactor Regulation. Therefore, upon issuance of this amendment, operation of the facility can be commenced only after confirmation of completion of the items in the Order.

Copies of the Safety Evaluation and the Notice of Issuance are also enclosed.

Sincerely,

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

Enclosures:

- 1. Amendment No. 16
- 2. Safety Evaluation
- 3. Notice

cc w/enclosures: See next page

Toledo Edison Company

cc w/enclosure(s):

Mr. Donald H. Hauser, Esq. The Cleveland Electric Illuminating Company P. O. Box 5000 Cleveland, Ohio 44101

Gerald Charnoff, Esq. Shaw, Pittman, Potts and Trowbridge 1800 M Street, N.W. Washington, D.C. 20036

Leslie Henry, Esq. Fuller, Seney, Henry and Hodge 300 Madison Avenue Toledo, Ohio 43604

Mr. Robert B. Borsum
Babcock & Wilcox
Nuclear Power Generation Division
Suite 420, 7735 Old Georgetown Road
Bethesda, Maryland 20014

Ida Rupp Public Library 310 Madison Street Port Clinton, Ohio 43452

President, Board of County Commissioners of Ottawa County Port Clinton, Ohio 43452

Attorney General Department of Attorney General 30 East Broad Street Columbus, Ohio 43215

Harold Kahn, Staff Scientist Power Siting Commission 361 East Broad Street Columbus, Ohio 43216 Director, Technical Assessment
Division
Office of Radiation Programs
(AW-459)
U. S. Environmental Protection Agency
Crystal Mall #2
Arlington, Virginia 20460

U. S. Environmental Protection Agency Federal Activities Branch Region V Office ATTN: EIS COORDINATOR 230 South Dearborn Street Chicago, Illinois 60604

cc w/enclosure(s) and incoming dtd.: 10/23/78

Ohio Department of Health ATTN: Director of Health 450 East Town Street Columbus, Ohio 43216



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.16 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 October 23, 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.

- 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:
 - (2) <u>Technical Specifications</u>

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 16, 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 the date of its issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

Robert W. Reid, Chief

Operating Reactors Branch #4
Division of Operating Reactors

Attachment: Changes to the Technical Specifications

Date of Issuance: June 7, 1979

ATTACHMENT TO LICENSE AMENDMENT NO. 16

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.

| Page | <u>s</u> |
|---|-----------------------|
| 2-3 2-5 2-7 2-8 8 2-5 3/4 2 3/4 4 | 3 3 2-14 1-1 |

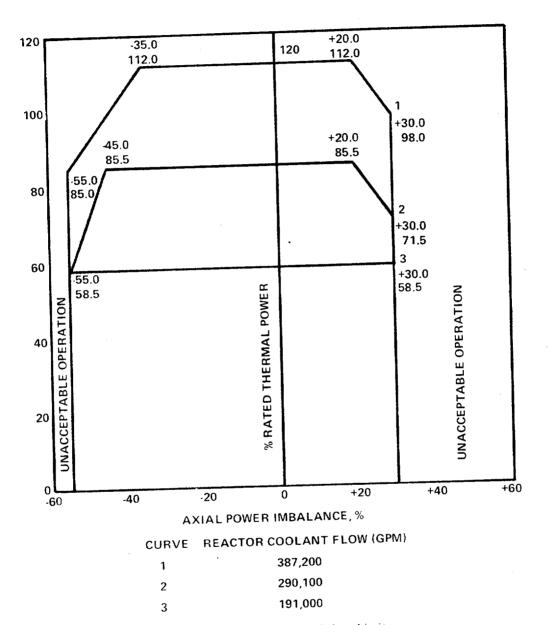


Figure 2.1-2 Reactor Core Safety Limit

SAFETY LIMITS AND LIMITING SAFETY SYSTEM SETTINGS

2.2 LIMITING SAFETY SYSTEM SETTINGS

REACTOR PROTECTION SYSTEM SETPOINTS

2.2.1 The Reactor Protection System instrumentation setpoints shall be set consistent with the Trip Setpoint values shown in Table 2.2-1.

APPLICABILITY: As shown for each channel in Table 3.3-1.

ACTION:

With a Reactor Protection System instrumentation setpoint less conservative than the value shown in the Allowable Values column of Table 2.2-1, declare the channel inoperable and apply the applicable ACTION statement requirement of Specification 3.3.1.1 until the channel is restored to OPERABLE status with its trip setpoint adjusted consistent with the Trip Setpoint value.

TABLE 2.2-1

REACTOR PROTECTION SYSTEM INSTRUMENTATION TRIP SETPOINTS

| , | FUNCTIONAL UNIT | | TRIP SETPOINT | ALLOWABLE VALUES |
|--|-----------------|--|--|--|
| Λ Υ Π | 1. | Manual Reactor Trip | Not Applicable | Not Applicable |
| E T | 2. | High Flux | \leq 105.5% of RATED THERMAL POWER with four pumps operating | \leq 105.6% of RATED THERMAL POWER with four pumps operating# |
| 1 | | | < 78.3% of RATED THERMAL POWER with three pumps operating | <pre>< 78.4% of RATED THERMAL POWER with three pumps operating#</pre> |
| | | | \leq 50.6% of RATED THERMAL POWER with one pump operating in each loop | <pre></pre> |
| | 3. | RC High Temperature | ≤ 619°F | < 619.08°F [#] |
| о ! л | 4. | Flux - Δ Flux-Flow ⁽¹⁾ | Trip Setpoint not to exceed the limit line of Figure 2.2-1. | Allowable Values not to exceed # the limit line of Figure 2.2-2. |
| | 5. | RC Low Pressure ⁽¹⁾ | <u>></u> 1985 psig | ≥ 1984.0 psig* ≥ 1976.5 psig** |
| | 6. | RC High Pressure | < 2355 psig | ≤ 2356.0 psig* ≤ 2363.5 psig** |
| | 7. | RC Pressure-Temperature ⁽¹⁾ | ≥ (16.25 T _{out} °F - 7873) psig | <pre> > (16.25 T_{out} °F - 7873.64) psig[#]</pre> |
| | | | | |

TABLE 2.2-1

REACTOR PROTECTION SYSTEM INSTRUMENTATION TRIP SETPOINTS

| FUN | CTIONAL UNIT | TRIP SETPOINT | ALLOWABLE VALUES |
|-----|---|---|--|
| 8. | High Flux/Number of Reactor Coolant Pumps On (1) | <pre>< 55.0% of RATED THERMAL POWER with one pump operating in each loop</pre> | <pre>< 55.28% of RATED THERMAL POWER with one pump operating in each loop#</pre> |
| | | < 0.0% of RATED THERMAL POWER with two pumps operating in one loop and no pumps operating in the other loop | \leq 0.28% of RATED THERMAL POWER with two pumps operating in one loop and no pump operating in the other loop |
| | | $\leq 0.0\%$ of RATED THERMAL POWER with no pumps operating or only one pump operating | < 0.28% of RATED THERMAL POWER with no pumps operating or only one pump operating# |
| 9. | Containment Pressure High | < 4 psig | < 4 psig [#] |

(1)Trip may be manually bypassed when RCS pressure \leq 1820 psig by actuating Shutdown Bypass provided that:

a.

The High Flux Trip Setpoint is \leq 5% of RATED THERMAL POWER The Shutdown Bypass High Pressure Trip Setpoint of \leq 1820 psig is imposed, and The Shutdown Bypass is removed when RCS Pressure > 1820 psig.

^{*}Allowable Value for CHANNEL FUNCTIONAL TEST

Allowable Value for CHANNEL CALIBRATION

 $^{^{\#}}$ Allowable Value for CHANNEL FUNCTIONAL TEST and CHANNEL CALIBRATION

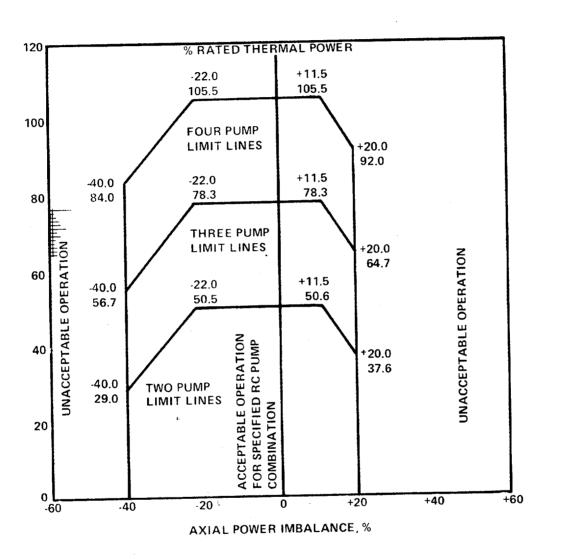


Figure 2.2-1 Trip Setpoint for Flux-AFlux-Flow

...

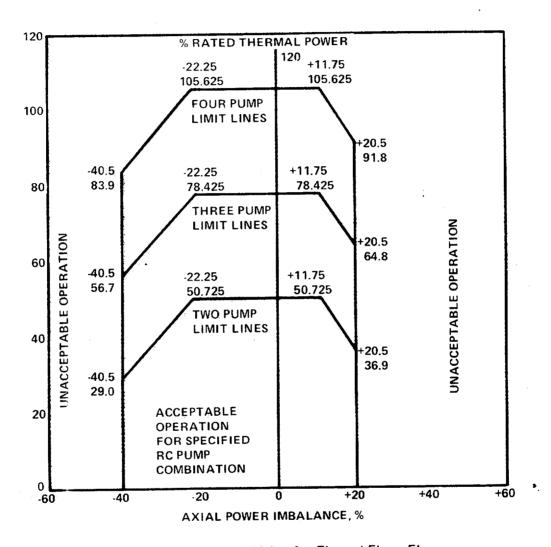


Figure 2.2-2 Allowable Value for Flux-AFlux-Flow

LIMITING SAFETY SYSTEM SETTINGS

BASES

RC High Temperature

The RC High Temperature trip \leq 619°F prevents the reactor outlet temperature from exceeding the design limits and acts as a backup trip for all power excursion transients.

Flux - Δ Flux-Flow

The power level trip setpoint produced by the reactor coolant system flow is based on a flux-to-flow ratio which has been established to accommodate flow decreasing transients from high power where protection is not provided by the High Flux/Number of Reactor Coolant Pumps On Trips.

The power level trip setpoint produced by the power-to-flow ratio provides both high power level and low flow protection in the event the reactor power level increases or the reactor coolant flow rate decreases. The power level setpoint produced by the power-to-flow ratio provides overpower DNB protection for all modes of pump operation. For every flow rate there is a maximum permissible power level, and for every power level there is a minimum permissible low flow rate. Typical power level and low flow rate combinations for the pump situations of Table 2.2-1 are as follows:

- 1. Trip would occur when four reactor coolant pumps are operating if power is 105.5% and reactor flow rate is 100%, or flow rate is 94.6% and power level is 100%.
- 2. Trip would occur when three reactor coolant pumps are operating if power is 78.3% and reactor flow rate is 74.7%, or flow rate is 70.9% and power is 75%.
- 3. Trip would occur when one reactor coolant pump is operating in each loop (total of two pumps operating) if the power is 50.6% and reactor flow rate is 49.0% or flow rate is 46.3% and the power level is 49.0%.

For safety calculations the maximum calibration and instrumentation errors for the power level were used.

LIMITING SAFETY SYSTEM SETTINGS

BASES

The AXIAL POWER IMBALANCE boundaries are established in order to prevent reactor thermal limits from being exceeded. These thermal limits are either power peaking kw/ft limits or DNBR limits. The AXIAL POWER IMBALANCE reduces the power level trip produced by a flux-to-flow ratio such that the boundaries of Figure 2.2-1 are produced.

RC Pressure - Low, High and Pressure Temperature

The High and Low trips are provided to limit the pressure range in which reactor operation is permitted.

During a slow reactivity insertion startup accident from low power or a slow reactivity insertion from high power, the RC High Pressure setpoint is reached before the High Flux Trip Setpoint. The trip setpoint for RC High Pressure, 2355 psig, has been established to maintain the system pressure below the safety limit, 2750 psig, for any design transient. The RC High Pressure trip is backed up by the pressurizer code safety valves for RCS over pressure protection, and is therefore set lower than the set pressure for these valves, 2435 psig. The RC High Pressure trip also backs up the High Flux trip.

The RC Low Pressure, 1985 psig, and RC Pressure-Temperature (13.01 T °F-5973) psig, Trip Setpoints have been established to maintain the DNB ratio greater than or equal to 1.32 for those design accidents that result in a pressure reduction. It also prevents reactor operation at pressures below the valid range of DNB correlation limits, protecting against DNB.

High Flu</Number of Reactor Coolant Pumps On

In conjunction with the Flux - Δ Flux-Flow trip the High Flux/Number of Reactor Coolant Pumps On trip prevents the minimum core DNBR from decreasing below 1.32 by tripping the reactor due to the loss of reactor coolant pump(s). The pump monitors also restrict the power level for the number of pumps in operation.

POWER DISTRIBUTION LIMITS

DNB PARAMETERS

LIMITING CONDITION FOR OPERATION

- 3.2.5 The following DNB related parameters shall be maintained within the limits shown on Table 3.2-1:
 - a. Reactor Coolant Hot Leg Temperature.
 - b. Reactor Coolant Pressure
 - c. Reactor Coolant Flow Rate

APPLICABILITY: MODE 1.

ACTION:

With any of the above parameters exceeding its limit, restore the parameter to within its limit within 2 hours or reduce THERMAL POWER to less than 5% of RATED THERMAL POWER within the next 4 hours.

SURVEILLANCE REQUIREMENTS

- 4.2.5.1 Each of the parameters of Table 3.2-1 shall be verified to be within their limits at least once per 12 hours.
- 4.2.5.2 The Reactor Coolant System total flow rate shall be determined to be within its limit by measurement at least once per 18 months.

TABLE 3.2-1

DNB MARGIN

LIMITS

| Parameter | Four Reactor Coolant Pumps Operating | Three Reactor Coolant Pumps Operating | One Reactor Coolant Pump Operating in Each Loop |
|--|--|---|---|
| Reactor Coolant Hot Leg Temperature T _H °F | <u><</u> 610 | < 610 ⁽¹⁾ | <u><</u> 610 |
| Reactor Coolant Pressure, psig. (2) | ≥ 2062.7 | ≥ 2058.7 ⁽¹⁾ | <u>></u> 2091.4 |
| Reactor Coolant Flow Rate, gpm ⁽³⁾ | <u>></u> 3 96, 880 | <u>></u> 297,340 | <u>></u> 195,760 |

⁽¹⁾ Applicable to the loop with 2 Reactor Coolant Pumps Operating.

⁽²⁾ Limit not applicable during either a THERMAL POWER ramp increase in excess of 5% of RATED THERMAL POWER per minute or a THERMAL POWER step increase of greater than 10% of RATED THERMAL POWER.

⁽³⁾These flows include a flow rate uncertainty of 2.5%.

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-ΔFlux-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
 - Flux-ΔFlux-Flow

^{*}See Special Test Exception 3.10.3.

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. 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 decay heat removal pump switching operations, 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.

TABLE 5.7-1

COMPONENT CYCLIC OR TRANSIENT LIMITS

| Component or System | | Cycle or Transient Limit | Design Cycle or Transient |
|---------------------|---------------------------------|---|--------------------------------|
| 1. | Reactor Coolant System | 240 Heatup and Cooldown Cycles | 70°F to 557°F 557°F to 70°F |
| 2. | Reactor Coolant System | <pre>160 Step Load Reduction Cycles (Resulting from turbine trip)</pre> | 100% to 8% RTP* |
| 3. | Reactor Coolant System | 150 Step Load Reduction Cycles (Resulting from electrical load rejection) | 100% to 8% RTP* |
| 4. | Reactor Coolant System | 40 Reactor Trip Cycles (Resulting from loss of electric power to all RC pumps) | Reactor Trip |
| 5. | Reactor Coolant Systen | <pre>160 Reactor Trip Cycles (Resulting from turbine trip without automatic control action)</pre> | Reactor Trip |
| 6. | Reactor Coolant System | 40 Reactor Trip Cycles (Resulting from rod withdrawal accident) | Reactor Trip |
| 7. | Once Through Steam Generator | 88 Reactor Trip Cycles (Resulting from complete loss of all main feed- water) | Reactor Trip |
| 8. | Once Through Steam Generator | 40 Reactor Trip Cycles (Resulting from loss of station power) | Reactor Trip |
| 9. | Once Through Steam Generator | 20 Reactor Trip Cycles (Resulting from loss of feedwater to one steam generator) | Reactor Trip |

^{*}RATED THERMAL POWER

TABLE 5.7-1 (Continued)

| Component or System | | Cycle or Transient Limit | Design Cycle or Transient |
|---------------------|---------------------------------|---|-----------------------------------|
| 10. | Once Through Steam Generator | 10 Reactor Trip Cycles (Resulting from stuck open turbine bypass valve) | Reactor Trip |
| 11. | Reactor Coolant System | 40 Rapid Depressurization | 2200 psig to 300 psig in one hour |
| 12. | Reactor Coolant System | 20 Change of Flow Cycles | Loss of one or more RC pumps |
| 13. | Reactor Coolant System | 20 Hydrostatic Test | Pressurized to > 3125 psig |
| 14. | Once Through Steam Generator | 35 Hydrostatic Tests | Pressurized to > 1312.5 psig |
| 15. | Reactor Coolant System | 40 Test Transients | High Pressure Injection Test |
| 16. | Reactor Coolant System | 240 Test Transients | Core Flooding Check Valve Test |



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION SUPPORTING AMENDMENT NO. 16 TO FACILITY OPERATING LICENSE NO. NPF-3 THE TOLEDO EDISON COMPANY

AND

THE CLEVELAND ELECTRIC ILLUMINATING COMPANY

DAVIS-BESSE NUCLEAR POWER STATION, UNIT NO. 1

DOCKET NO. 50-346

Introduction

By letter dated October 23, 1978, the Toledo Edison Company (TECO or the licensee) requested an amendment to Facility Operating License No. NPF-3 for the Davis-Besse Nuclear Power Station, Unit No. 1 (Davis-Besse 1). The amendment would change the Technical Specifications (TS) concerning the Reactor Core Safety Limit (RCSL) curve, the Reactor Protection System Instrumentation Trip Setpoints (RPSITS), and the maximum Reactor Coolant Hot Leg Temperature for Departure from Nucleate Boiling (DNB) margin. The proposed TS changes are a result of a corrected analysis of the Loss of Flow Accident (LOFA) transient which applies to the as-measured one Reactor Coolant Pump Coastdown curve.

Background

The present TS concerning the RCSL curve, the RPSITS and the maximum Reactor Coolant Hot Leg Temperature for DNB margin resulted from the LOFA analysis using the Babcock and Wilcox (B&W) RADAR code, an NRCacceptable code for the LOFA transient. In that analysis, the licensee applied a designed one RCP coastdown curve which is not as steep as the actual measured one RCP coastdown curve. The analysis was made to support the changes required as a result of the removal of the Burnable Poison Rod Assemblies (BPRAs), and all but two of the Orifice Rod Assemblies (ORAs)(Amendment No. 11 dated June 16, 1978). After the BPRAs and ORAs were removed, the licensee discovered an error in the B&W analysis of the LOFA transient. The error concerned the use of the asdesigned one RCP coastdown curve instead of the as-measured one RCP coastdown curve. The licensee reported this by letter dated July 28, 1978, and took administrative actions to reduce the setpoints for the Reactor Protection System and apply more conservative operating limits. The proposed amendment would implement these new setpoints for the Reactor Protection System and the more conservative operating limits into the TS.

7908090684

Evaluation

We have reviewed the licensee's submittal. We find the proposed changes to the TS to be more conservative than the present TS and find that the proposed changes preserve the DNB ratio (DNBR) margin for the loss of flow transient. We conclude that the proposed changes to the TS provide no decrease in the safety margin and are therefore acceptable.

Environmental Consideration

We have determined that the amendment does not authorize a change in effluent types or total amounts nor an increase in power level and will not result in any significant environmental impact. Having made this determination, we have further concluded that the amendment involves an action which is insignificant from the standpoint of environmental impact and, pursuant to 10 CFR \$51.5(d)(4), that an environmental impact statement, or negative declaration and environmental impact appraisal need not be prepared in connection with the issuance of this amendment.

Conclusion

We have concluded, based on the considerations discussed above, that:
(1) because the amendment does not involve a significant increase in
the probability or consequences of accidents previously considered
and does not involve a significant decrease in a safety margin, the
amendment does not involve a significant hazards consideration, (2)
there is reasonable assurance that the health and safety of the public
will not be endangered by operation in the proposed manner, and (3)
will not be endangered by operation in the proposed manner, and (3)
such activities will be conducted in compliance with the Commission's
regulations and the issuance of this amendment will not be inimical
to the common defense and security or to the health and safety of
the public.

Dated: June 7, 1979

UNITED STATES NUCLEAR REGULATORY COMMISSION

DOCKET NO. 50-346

THE TOLEDO EDISON COMPANY

AND

THE CLEVELAND ELECTRIC ILLUMINATING COMPANY

NOTICE OF ISSUANCE OF AMENDMENT TO FACILITY OPERATING LICENSE

The U. S. Nuclear Regulatory Commission (the Commission) has issued Amendment No. 16 to Facility Operating License No. NPF-3, issued to The Toledo Edison Company and The Cleveland Electric Illuminating Company (the licensees), which revised Technical Specifications for operation of the Davis-Besse Nuclear Power Station, Unit No. 1 (the facility) located in Ottawa County, Ohio. The amendment is effective as of its date of issuance.

The amendment changes the Technical Specifications concerning the Reactor Core Safety Limit Curve, the Reactor Protection System Instrumentation Trip Setpoints and the maximum Reactor Coolant Hot Leg Temperature for departure from nucleate boiling margin. This amendment also makes minor editorial corrections to Technical Specifications Figure 2.1-2 and Table 5.7-1.

The application for the amendment complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations. The Commission has made appropriate findings as required by the Act and the Commission's rules and regulations in 10 CFR Chapter I, which are set forth in the license amendment. Prior

public notice of this amendment was not required since the amendment does not involve a significant hazards consideration..

The Commission has determined that the issuance of this amendment will not result in any significant environmental impact and that pursuant to 10 CFR \$51.5(d)(4) an environmental impact statement or negative declaration and environmental impact appraisal need not be prepared in connection with issuance of this amendment.

For further details with respect to this action, see (1) the application for amendment dated October 23, 1978, (2) Amendment No. 16 to License No. NPF-3, and (3) the Commission's related Safety Evaluation. All of these items are available for public inspection at the Commission's Public Document Room, 1717 H Street, N.W., Washington, D. C., and at the Ida Rupp Public Library, 310 Madison Street, Port Clinton, Ohio.

A copy of items (2) and (3) may be obtained upon request addressed to the U. S. Nuclear Regulatory Commission, Washington, D. C. 20555, Attention: Director, Division of Operating Reactors.

Dated at Bethesda, Maryland, this 7th day of June 1979.

FOR THE NUCLEAR REGULATORY COMMISSION

Robert W. Reid, Chief

Operating Reactors Branch #4
Division of Operating Reactors