

June 22, 1999

Distribution w/encls:

|               |                   |
|---------------|-------------------|
| Docket File   | GHill (2)         |
| PUBLIC        | WBeckner          |
| PD3-2 Reading | ACRS              |
| EGA1          | OGC               |
| GGrant, RIII  | CThomas/AMendiola |

Mr. Guy G. Campbell  
 Vice President - Nuclear  
 FirstEnergy Nuclear Operating Company  
 Davis-Besse Nuclear Power Station  
 5501 North State Route 2  
 Oak Harbor, OH 43449-9760

SUBJECT: DAVIS-BESSE NUCLEAR POWER STATION, UNIT NO. 1 - ISSUANCE OF  
 AMENDMENT RE: SHIELD BUILDING INTEGRITY (TAC NO. MA3953)

Dear Mr. Campbell:

The Commission has issued the enclosed Amendment No233 to Facility Operating License No. NPF-3 for the Davis-Besse Nuclear Power Station, Unit No. 1. The amendment revises the Technical Specifications (TSs) in response to your application dated October 27, 1998, as revised by your letter of March 19, 1999.

This amendment relocates a TS surveillance requirement from TS Section 3/4.6.5.1, "Shield Building - Emergency Ventilation System" to TS Section 3/4.6.5.2, "Shield Building Integrity." Administrative and bases changes have also been made.

A copy of the Safety Evaluation is also enclosed. Notice of issuance will be included in the Commission's next biweekly Federal Register notice.

Sincerely,

Original signed by

Stewart N. Bailey, Project Manager, Section 2  
 Project Directorate III  
 Division of Licensing Project Management  
 Office of Nuclear Reactor Regulation

9906280216 990622  
 PDR ADOCK 05000346  
 P PDR

Docket No. 50-346

- Enclosures: 1. Amendment No. 233 to License No. NPF-3  
 2. Safety Evaluation

**NRC FILE CENTER COPY**

cc w/encls: See next page

DOCUMENT NAME: G:\DAVISBES\AMD3953.AMD \*See previous concurrence

To receive a copy of this document, indicate in the box: "C" = Copy without enclosures "E" = Copy with enclosures "N" = No copy

|        |           |    |         |    |         |  |           |  |         |  |           |  |
|--------|-----------|----|---------|----|---------|--|-----------|--|---------|--|-----------|--|
| OFFICE | PD32-LA   | E  | PD32-PM | 6  | SPLB-BC |  | TSB-BC    |  | OGC     |  | SC-LPD3   |  |
| NAME   | EBarnhill | EB | SBailey | SB | TMarsh* |  | WBeckner* |  | SHom*   |  | AMendiola |  |
| DATE   | 6/17/99   |    | 6/17/99 |    | 2/11/99 |  | 5/04/99   |  | 5/10/99 |  | 6/18/99   |  |

OFFICIAL RECORD COPY

Handwritten notes: //, DFOI, CFI

Mr. Guy G. Campbell  
FirstEnergy Nuclear Operating Company

Davis-Besse Nuclear Power Station, Unit 1

cc:

Mary E. O'Reilly  
FirstEnergy  
76 South Main Street  
Akron, OH 44308

Robert E. Owen, Chief  
Bureau of Radiological Health  
Service  
Ohio Department of Health  
P.O. Box 118  
Columbus, OH 43266-0118

James L. Freels  
Manager - Regulatory Affairs  
FirstEnergy Nuclear Operating Company  
Davis-Besse Nuclear Power Station  
5501 North State - Route 2  
Oak Harbor, OH 43449-9760

James R. Williams, Chief of Staff  
Ohio Emergency Management Agency  
2855 West Dublin Granville Road  
Columbus, OH 43235-2206

Jay E. Silberg, Esq.  
Shaw, Pittman, Potts  
and Trowbridge  
2300 N Street, NW.  
Washington, DC 20037

Donna Owens, Director  
Ohio Department of Commerce  
Division of Industrial Compliance  
Bureau of Operations & Maintenance  
6606 Tussing Road  
P.O. Box 4009  
Reynoldsburg, OH 43068-9009

Regional Administrator  
U.S. Nuclear Regulatory Commission  
801 Warrenville Road  
Lisle, IL 60523-4351

Ohio Environmental Protection Agency  
DERR--Compliance Unit  
ATTN: Zack A. Clayton  
P.O. Box 1049  
Columbus, OH 43266-0149

Robert B. Borsum  
Babcock & Wilcox  
Nuclear Power Generation Division  
1700 Rockville Pike, Suite 525  
Rockville, MD 20852

State of Ohio  
Public Utilities Commission  
180 East Broad Street  
Columbus, OH 43266-0573

Resident Inspector  
U.S. Nuclear Regulatory Commission  
5503 North State Route 2  
Oak Harbor, OH 43449

Attorney General  
Department of Attorney  
30 East Broad Street  
Columbus, OH 43216

James H. Lash, Plant Manager  
FirstEnergy Nuclear Operating Company  
Davis-Besse Nuclear Power Station  
5501 North State Route 2  
Oak Harbor, OH 43449-9760

President, Board of County  
Commissioners of Ottawa County  
Port Clinton, OH 43252



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

FIRSTENERGY NUCLEAR OPERATING COMPANY

DOCKET NO. 50-346

DAVIS-BESSE NUCLEAR POWER STATION, UNIT NO. 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No.233  
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 on the date of application; FirstEnergy Nuclear Operating Company became the sole licensed operator on January 1, 1999) dated October 27, 1998, as revised by letter of March 19, 1999, 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:

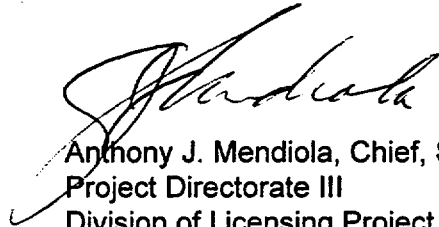
9906280265 990622  
PDR ADOCK 05000346  
P PDR

(2) Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No.233 , are hereby incorporated in the license. FENOC 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 120 days after issuance.

FOR THE U.S. NUCLEAR REGULATORY COMMISSION



Anthony J. Mendiola, Chief, Section 2  
Project Directorate III  
Division of Licensing Project Management  
Office of Nuclear Reactor Regulation

Attachment: Changes to the Technical  
Specifications

Date of issuance: June 22, 1999

ATTACHMENT TO LICENSE AMENDMENT NO. 233

FACILITY OPERATING LICENSE NO. NPF-3

DOCKET NO. 50-346

Replace the following pages of the Appendix A Technical Specifications with the attached revised pages. The revised pages are identified by amendment number and contain marginal lines indicating the areas of change.

Remove

I  
1-5  
3/4 6-29  
3/4 6-30  
3/4 6-31  
3/4 6-33  
B 3/4 6-4  
B 3/4 6-5

Insert

I  
1-5  
3/4 6-29  
3/4 6-30  
3/4 6-31  
3/4 6-33  
B 3/4 6-4  
B 3/4 6-5

INDEX

DEFINITIONS

---

| <u>SECTION</u>   | <u>PAGE</u> |
|--|-------------|
| <u>1.0 DEFINITIONS</u>   |             |
| DEFINED TERMS .....  | 1-1         |
| THERMAL POWER .....  | 1-1         |
| RATED THERMAL POWER .....                                      | 1-1         |
| OPERATIONAL MODE .....   | 1-1         |
| ACTION .....   | 1-1         |
| OPERABLE - OPERABILITY .....                                   | 1-1         |
| REPORTABLE EVENT .....   | 1-2         |
| CONTAINMENT INTEGRITY .....                                    | 1-2         |
| CHANNEL CALIBRATION .....                                      | 1-2         |
| CHANNEL CHECK .....  | 1-2         |
| CHANNEL FUNCTIONAL TEST .....                                  | 1-3         |
| CORE ALTERATION .....  | 1-3         |
| SHUTDOWN MARGIN .....  | 1-3         |
| IDENTIFIED LEAKAGE .....                                       | 1-3         |
| UNIDENTIFIED LEAKAGE .....                                     | 1-4         |
| PRESSURE BOUNDARY LEAKAGE .....                                | 1-4         |
| CONTROLLED LEAKAGE .....                                       | 1-4         |
| QUADRANT POWER TILT .....                                      | 1-4         |
| DOSE EQUIVALENT I-131 .....                                    | 1-4         |
| E-AVERAGE DISINTEGRATION ENERGY .....                          | 1-4         |
| STAGGERED TEST BASIS .....                                     | 1-5         |
| FREQUENCY NOTATION .....                                       | 1-5         |
| AXIAL POWER IMBALANCE .....                                    | 1-5         |
| DELETED .....  |             |
| REACTOR PROTECTION SYSTEM RESPONSE TIME .....                  | 1-5         |
| SAFETY FEATURE RESPONSE TIME .....                             | 1-6         |
| PHYSICS TESTS .....  | 1-6         |
| STEAM AND FEEDWATER RUPTURE CONTROL SYSTEM RESPONSE TIME ..... | 1-6         |
| PROCESS CONTROL PROGRAM .....                                  | 1-6a        |

## DEFINITIONS

---

per disintegration (in MeV) for isotopes, other than iodines, with half lives greater than 15 minutes, making up at least 95% of the total non-iodine activity in the coolant.

### STAGGERED TEST BASIS

1.21 A STAGGERED TEST BASIS shall consist of:

- a. A test schedule for n systems, subsystems, trains or designated components obtained by dividing the specified test interval into n equal subintervals,
- b. The testing of one system, subsystem, train or designated components at the beginning of each subinterval.

### FREQUENCY NOTATION

1.22 The FREQUENCY NOTATION specified for the performance of Surveillance Requirements shall correspond to the intervals defined in Table 1.2.

### AXIAL POWER IMBALANCE

1.23 AXIAL POWER IMBALANCE shall be the THERMAL POWER in the top half of the core expressed as a percentage of RATED THERMAL POWER minus the THERMAL POWER in the bottom half of the core expressed as a percentage of RATED THERMAL POWER.

1.24 DELETED

### REACTOR PROTECTION SYSTEM RESPONSE TIME

1.25 The REACTOR PROTECTION SYSTEM RESPONSE TIME shall be that time interval from when the monitored parameter exceeds its trip setpoint at the channel sensor until power interruption at the control rod drive breakers.

## CONTAINMENT SYSTEMS

### SURVEILLANCE REQUIREMENTS (Continued)

1. Verifying that the cleanup system satisfies the in-place penetration and bypass leakage testing acceptance criteria of less than 1% and uses the test procedure guidance in Regulatory Positions C.5.a, C.5.c and C.5.d of Regulatory Guide 1.52, Revision 2, March 1978, and the system flow rate is 8,000 cfm  $\pm$  10%;
  2. Verifying, within 31 days after removal, that a laboratory analysis of a representative carbon sample obtained in accordance with Regulatory Position C.6.b of Regulatory Guide 1.52, Revision 2, March 1978, meets the laboratory testing criteria of Regulatory Position C.6.a\* of Regulatory Guide 1.52, Revision 2, March 1978, for a methyl iodide penetration of less than 1%; and
  3. Verifying a system flow rate of 8,000 cfm  $\pm$  10% during system operation when tested in accordance with ANSI N510-1980.
- c. After every 720 hours of charcoal adsorber operation by verifying, within 31 days after removal, that a laboratory analysis of a representative carbon sample obtained in accordance with Regulatory Position C.6.b of Regulatory Guide 1.52, Revision 2, March 1978, meets the laboratory testing criteria of Regulatory Position C.6.a\* of Regulatory Guide 1.52, Revision 2, March 1978, for a methyl iodide penetration of less than 1%.
- d. At least once each REFUELING INTERVAL by:
1. Verifying that the pressure drop across the combined HEPA filters and charcoal adsorber banks is less than 6 inches Water Gauge while operating the system at a flow rate of 8,000 cfm  $\pm$  10%;
  2. Verifying that the system starts automatically on any containment isolation test signal; and
  3. Verifying that the filter cooling bypass valves can be manually opened.
- \* The test is performed in accordance with ASTM D 3803-1979 with the following conditions: 1) equilibrate for 16 hours at 30°C/70% relative humidity (RH), 2) challenge for 2 hours at 30°C/70% RH, 3) elution for 2 hours at 30°C/70% RH.



## CONTAINMENT SYSTEMS

### SURVEILLANCE REQUIREMENTS (Continued)

#### 4. Deleted

- e. After each complete or partial replacement of a HEPA filter bank, by verifying that the cleanup system satisfies the in-place penetration and bypass leakage testing acceptance criteria of less than 1% in accordance with ANSI N510-1980 for a DOP test aerosol while operating the system at a flow rate of 8000 cfm  $\pm$  10%.
- f. After each complete or partial replacement of a charcoal adsorber bank, by verifying that the cleanup system satisfies the in-place penetration and bypass leakage testing acceptance criteria of less than 1% in accordance with ANSI N510-1980 for a halogenated hydrocarbon refrigerant test gas while operating the system at a flow rate of 8000 cfm  $\pm$  10%.

## CONTAINMENT SYSTEMS

### SHIELD BUILDING INTEGRITY

#### LIMITING CONDITION FOR OPERATION

---

3.6.5.2 Shield building integrity shall be maintained.

APPLICABILITY: MODES 1, 2, 3 and 4

#### ACTION:

Without shield building integrity, restore shield building integrity within 24 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

#### SURVEILLANCE REQUIREMENTS

---

4.6.5.2.1 Shield building integrity shall be demonstrated at least once per 31 days by verifying that airtight doors and the blowout panels listed in Table 4.6-1 are closed except when the airtight doors are being used for normal transit entry and exit.

4.6.5.2.2 Shield building integrity shall be demonstrated at least once per REFUELING INTERVAL by verifying that each Emergency Ventilation System train produces a negative pressure of greater than or equal to 0.25 inches Water Gauge in the annulus within 4 seconds after the fan attains a flow rate of 8000 cfm  $\pm$  10%. This test is to be performed with the flow path established prior to starting the EVS fan, and the other dampers associated with the negative pressure boundary closed.

TABLE 4.6-1  
ACCESS OPENINGS REQUIRED TO BE CLOSED  
TO ENSURE SHIELD BUILDING INTEGRITY

I. AIR TIGHT DOORS

| <u>DOOR NO.</u> | <u>DESCRIPTION</u>  | <u>ELEVATION</u> |
|-----------------|---|------------------|
| 100             | Access Door from the No. 1 ECCS Pump Room (Room 105) to Pipe Tunnel 101   | 545'             |
| 104A            | Access Door from Stair AB-3 to the No. 1 ECCS Pump Room (Room 105)  | 555'             |
| 105             | Access Door from Passage 110A to the area above the Decay Heat Coolers  | 555'             |
| 107             | Access Door from the No. 2 ECCS Pump Room (Room 115) to the Miscellaneous Waste Monitor Tank and Pump Room (Room 114) | 555'             |
| 108             | Access Door from the No. 2 ECCS Pump Room (Room 115) to the Detergent Waste Drain Tank and Pump Room (Room 125)       | 555'             |
| 201-A           | Access Door from Corridor 209 to the No. 1 Mechanical Penetration Room (Room 208)                                     | 565'             |
| 204             | Access Door from Passage 227 to the Makeup Pump Room (Room 225)   | 565'             |
| 205             | Access Door from Passage 227 to the No. 2 Mechanical Penetration Room (Room 236)                                      | 565'             |
| 307             | Access Door from Corridor 304 to the No. 3 Mechanical Penetration Room (Room 303)                                     | 585'             |
| 308             | Access Door from Corridor 304 to the No. 4 Mechanical Penetration Room (Room 314)                                     | 585'             |

II. BLOWOUT PANELS

| <u>TOTAL NO.</u> | <u>LOCATION</u>                              | <u>ELEVATION</u> |
|------------------|--|------------------|
| 1                | No. 2 Mechanical Penetration Room (Room 236) | 565'             |
| 6                | No. 3 Mechanical Penetration Room (Room 303) | 585'             |
| 6                | No. 4 Mechanical Penetration Room (Room 314) | 585'             |

## CONTAINMENT SYSTEMS

### BASES

---

#### 3/4.6.4 COMBUSTIBLE GAS CONTROL

The OPERABILITY of the Hydrogen Analyzers, Containment Hydrogen Dilution System, and Hydrogen Purge System ensures that this equipment will be available to maintain the maximum hydrogen concentration within the containment vessel at or below three volume percent following a LOCA.

The two redundant Hydrogen Analyzers determine the content of hydrogen within the containment vessel. The Hydrogen Analyzers, although they have their OPERABILITY requirements in this Specification, are considered part of the post-accident monitoring instrumentation of Specification 3/4.3.3.6, Post-Accident Monitoring Instrumentation.

The Containment Hydrogen Dilution (CHD) System consists of two full capacity, redundant, rotary, positive displacement type blowers to supply air to the containment. The CHD System controls the hydrogen concentration by the addition of air to the containment vessel, resulting in a pressurization of the containment and suppression of the hydrogen volume fraction.

The Containment Hydrogen Purge System Filter Unit functions in conjunction with the CHD System and is designed to release air from the containment atmosphere through a HEPA filter and charcoal filter prior to discharge to the station vent.

As a backup to the CHD System and the Containment Hydrogen Purge System, the capability to install an external hydrogen recombination system has been provided.

#### 3/4.6.5 SHIELD BUILDING

##### 3/4.6.5.1 EMERGENCY VENTILATION SYSTEM

The OPERABILITY of the emergency ventilation systems ensures that containment vessel leakage occurring during LOCA conditions into the annulus will be filtered through the HEPA filters and charcoal adsorber trains prior to discharge to the atmosphere. This requirement is necessary to meet the assumptions used in the safety analyses and limit the site boundary radiation doses to within the limits of 10 CFR 100 during LOCA conditions. The proper functioning of the EVS fans, dampers, filters, adsorbers, etc., as a system is verified by the ability of each train to produce the required system flow rate.

## CONTAINMENT SYSTEMS

### BASES

#### 3/4.6.5.2 SHIELD BUILDING INTEGRITY

Shield building integrity ensures that the release of radioactive material from the containment vessel will be restricted to those leakage paths and associated leak rates assumed in the safety analysis. The closure of the airtight doors and blowout panels listed in Table 4.6-1 ensure that the Emergency Ventilation System (EVS) can provide a negative pressure between 0.25 and 1.5 inches Water Gauge within the annulus between the shield building and containment vessel and within the interconnecting mechanical penetration rooms after a loss-of-coolant accident (LOCA). This restriction, in conjunction with the operation of the EVS, will limit the site boundary radiation doses to within the limits of 10 CFR 100 during accident conditions.

In the event shield building integrity, including the capability of the EVS to provide a negative pressure of greater than or equal to 0.25 inches Water Gauge, is not maintained, shield building integrity must be restored within 24 hours. Twenty-four hours is a reasonable completion time considering the limited leakage design of the containment and the low probability of a Design Basis Accident occurring during this time period.

#### 3/4.6.5.3 SHIELD BUILDING STRUCTURAL INTEGRITY

Deleted



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION  
RELATED TO AMENDMENT NO. <sup>233</sup> TO FACILITY OPERATING LICENSE NO. NPF-3

FIRSTENERGY NUCLEAR OPERATING COMPANY

DAVIS-BESSE NUCLEAR POWER STATION, UNIT NO. 1

DOCKET NO. 50-346

1.0 INTRODUCTION

By letter dated October 27, 1998, Toledo Edison Company, Centerior Service Company, and The Cleveland Electric Illuminating Company (the licensees at the time of the submittal), submitted a request for changes to the Davis-Besse Nuclear Power Station, Unit No. 1, Technical Specifications (TSs). FirstEnergy Nuclear Operating Company (FENOC) became the sole licensed operator on January 1, 1999.

The proposed amendment would relocate a TS surveillance requirement (SR) from TS Section 3/4.6.5.1, "Shield Building - Emergency Ventilation System" to TS Section 3/4.6.5.2, "Shield Building Integrity." Administrative and bases changes would also be made.

By letter dated March 19, 1999, the licensee revised the application, making a minor change that did not affect the staff's proposed determination of no significant hazards considerations. This revision to the application deleted a clarification statement that had been proposed in the initial application, but had been found to be unnecessary.

2.0 BACKGROUND

The shield building is discussed in the Davis-Besse Updated Safety Analysis Report (USAR), Section 3.8.2.2, "Design of Seismic Class I and II Structures - Shield Building," Section 6.2.1, "Containment Systems - Containment Vessel Functional Design," Section 12.2.2.1, "Ventilation - Shield Building and Penetration Rooms," and Section 15.4.6, "Class 3 - Design Basis Accidents - Major Rupture of Pipes Containing Reactor Coolant Up To and Including Double-Ended Rupture of the Largest Pipe in the Reactor Coolant System (Loss-of-Coolant Accident)." The emergency ventilation system (EVS) is discussed in USAR Section 6.2.3, "Containment Systems - Containment Vessel Air Purification and Cleanup System," in addition to Sections 12.2.2.1 and 15.4.6.

As stated in the USAR, the shield building encloses the containment vessel, the personnel access openings, the equipment hatch, and the portion of all penetrations that are associated

with primary containment. This building provides for biological shielding, controlled release of the annulus atmosphere under accident conditions, and environmental protection of the containment vessel.

The EVS is intended for use in an accident situation to provide a negative pressure in the annulus between the shield building and the containment vessel, the penetration rooms, and the emergency core cooling system equipment rooms, and to reduce airborne fission product leakage to the environment by filtration prior to release of air through the station vent.

The EVS has two redundant, independent subsystems, each capable of meeting the functional requirement. A single failure of an active component in either subsystem does not affect the functional capability of the other subsystem. Each subsystem includes prefilters, high-efficiency particulate air (HEPA) filters and charcoal adsorbers to remove airborne particles and methyl iodide as well as elemental iodine contaminants resulting from a loss-of-coolant accident.

During normal operation, the EVS is in standby mode. An SFAS (safety features actuation system) signal actuates the fans, and control room instrumentation monitors the operation. The fans can be operated on emergency diesel generator power.

### 3.0 EVALUATION

Currently, if shield building integrity is not adequate, both trains of EVS must be declared inoperable, so that TS 3.0.3 must be entered, which requires the initiation of a plant shutdown within 1 hour. The licensee is proposing to relocate the portion of the EVS TS addressing negative pressure capability to the shield building integrity TS. The principal effect of this relocation would be the extension of the time to initiate a plant shutdown (due to a loss of negative pressure capability) from 1 hour to 24 hours.

Each proposed change is discussed below.

#### 3.1 TS Index

The licensee proposes to delete the definitions index item "Shield Building Integrity." This is an administrative change consistent with the change discussed in Section 3.2. Therefore, it is acceptable.

#### 3.2 TS Definitions

The licensee proposes to delete the "Shield Building Integrity" definition, which reads:

##### 1.24 SHIELD BUILDING INTEGRITY shall exist when:

- a. The airtight doors and blowout panels listed in Table 4.6-1 are closed except the airtight doors may be used for normal transit entry and exit.
- b. The emergency ventilation system is OPERABLE.

- c. The sealing mechanism associated with each penetration (e.g., welds, bellows or O-rings) is OPERABLE.

The text of TS 1.24.a is also included in Shield Building Integrity TS SR 4.6.5.2. Therefore, the deletion of TS 1.24.a is acceptable.

TS 1.24.b states that Shield Building Integrity requires the EVS to be operable. The licensee proposes to remove this dependency. As currently written, to satisfy Definition 1.24.b, only one train of EVS needs to be operable (TS 3.6.5.1 allows 7 days to restore one inoperable EVS train or initiate a shutdown). If both trains of EVS are inoperable, then TS 3.0.3 must be entered, which requires the initiation of a plant shutdown within 1 hour. This 1 hour to initiate shutdown is more restrictive than the 24 hours allowed in TS 3.6.5.2 for loss of shield building integrity (due to both trains of EVS being inoperable as stated in TS Definition 1.24.b). Hence, TS Definition 1.24.b is not needed and its removal is acceptable.

The text of TS 1.24.c is also included in Containment Integrity TS 1.8.e, which refers to the same penetrations as Shield Building Integrity TS 1.24.c. If a sealing mechanism is not operable, then Containment Integrity TS 3.6.1.1 requires a plant shutdown to be initiated within 1 hour. Since this is more restrictive than Shield Building Integrity TS 3.6.5.2 (which requires the initiation of a plant shutdown within 24 hours), and since both are applicable in Modes 1, 2, 3 and 4 only, TS 1.24.c is not necessary. Therefore, its deletion is acceptable.

Since the term "SHIELD BUILDING INTEGRITY" is only referred to in the shield building integrity TS and since the removal of each subpart of the definition is acceptable, the deletion of this definition is acceptable.

### 3.3 TS 4.6.5.1, "Containment Systems - Shield Building - Surveillance Requirements"

TS 4.6.5.1.d.4 currently reads:

4. Verifying that each system produces a negative pressure of greater than or equal to 0.25 inches Water Gauge in the annulus within 4 seconds after the fan attains a flow rate of 8000 cfm  $\pm$ 10%. This test is to be performed with the flow path established prior to starting the EVS fan, and the other dampers associated with the negative pressure boundary closed.

The licensee proposes to move this TS from the EVS surveillance requirements to TS 4.6.5.2 as part of the shield building integrity surveillance requirements. EVS TS 3.6.5.1 requires that two independent EVSs be operable. Currently, without shield building integrity, both trains of EVS would have to be declared inoperable due to the loss of the capability to produce an acceptable negative pressure. TS 3.0.3 would then be entered, requiring a plant shutdown to be initiated within 1 hour.



With a loss of shield building integrity, TS 3.6.5.2 allows 24 hours to restore integrity or immediately initiate a shutdown. Therefore, the proposed move of TS 4.6.5.1.d.4 has the effect of increasing the allowed restoration time from 1 hour to 24 hours, during which time the plant would be without shield building integrity though the EVS would still be considered operable since the negative pressure criteria would no longer be applicable.

Maintaining shield building integrity ensures that the release of radioactive material from the primary containment atmosphere is restricted to those leakage paths and associated leakage rates assumed in the accident analysis. The staff has determined that increasing the restoration time from 1 hour to 24 hours still provides a reasonable completion time considering the limited leakage design of the containment and the low probability of a design basis accident during this time period. Therefore, moving TS 4.6.5.1.d.4 from the EVS surveillance requirements to the shield building integrity surveillance requirements is acceptable.

The licensee also proposes to delete the word "and" from TS 4.6.5.1.d.3 and insert "and" into TS 4.6.5.1.d.2. This is an administrative change only and is therefore acceptable.

3.4 TS 3.6.5.2, "Containment Systems - Shield Building Integrity - Limiting Condition for Operation"

TS 3.6.5.2 currently reads:

3.6.5.2 SHIELD BUILDING INTEGRITY shall be maintained.

APPLICABILITY: MODES 1, 2, 3 and 4

ACTION:

Without SHIELD BUILDING INTEGRITY, restore SHIELD BUILDING INTEGRITY within 24 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

The licensee proposes to change "SHIELD BUILDING INTEGRITY" to "shield building integrity." Since this is consistent with the removal of the shield building integrity definition discussed in Section 3.2, this is an administrative change only and is acceptable.

3.5 TS 4.6.5.2, "Containment Systems - Shield Building Integrity - Surveillance Requirements"

The licensee proposes to change "SHIELD BUILDING INTEGRITY" to "Shield building integrity" in TS 4.6.5.2, and renumber the current requirement TS 4.6.5.2.1. These are administrative changes consistent with other approved changes and are therefore acceptable.

The licensee proposes to add TS 4.6.5.2.2, which will read:

4.6.5.2.2 Shield building integrity shall be demonstrated at least once per REFUELING INTERVAL by verifying that each Emergency Ventilation System train produces a

negative pressure of greater than or equal to 0.25 inches Water Gauge in the annulus within 4 seconds after the fan attains a flow rate of 8000 cfm  $\pm$  10%. This test is to be performed with the flow path established prior to starting the EVS fan, and the other dampers associated with the negative pressure boundary closed.

This addition was addressed in Section 3.3 where the staff accepted the move of this TS from the EVS surveillance requirements to TS 4.6.5.2.2 as part of the shield building integrity surveillance requirements. Hence, this new TS is acceptable.

The licensee also proposes changes to some of the language at the beginning of this TS (to be consistent with the remainder of the shield building integrity specifications) without altering the content. Therefore, these language changes are administrative only and are acceptable.

3.6 TS Table 4.6-1, "Access Openings Required to be Closed to Ensure Shield Building Integrity"

The description of air tight door no. 307 currently reads:

Access Door from Corridor 304 to the No. 3 Mechanical Penetration Room (Room 308)

The licensee proposes to change the description to reference Room 303 (from Room 308), consistent with plant construction. This is an administrative change only and is acceptable.

3.7 TS Bases 3/4.6.5.1, "Emergency Ventilation System"

The licensee proposes to add the following text to this bases:

The proper functioning of the EVS fans, dampers, filters, adsorbers, etc., as a system is verified by the ability of each train to produce the required system flow rate.

This provides clarification that EVS operability does not depend on the ability to provide an acceptable negative pressure, consistent with the other changes already reviewed. Therefore, this addition is acceptable.

3.8 TS Bases 3/4.6.5.2, "Shield Building Integrity"

The licensee proposes to change "SHIELD BUILDING INTEGRITY" to "shield building integrity." This is an administrative change only and is acceptable.

The licensee also proposes to insert the following text:

In the event shield building integrity, including the capability of the EVS to provide a negative pressure of greater than or equal to 0.25 inches Water Gauge, is not maintained, shield building integrity must be restored within 24 hours. Twenty-four hours

is a reasonable completion time considering the limited leakage design of the containment and the low probability of a Design Basis Accident occurring during this time period.

This addition provides clarifying information consistent with the proposed TS changes and is therefore acceptable.

#### 4.0 STATE CONSULTATION

In accordance with the Commission's regulations, the Ohio State official was notified of the proposed issuance of the amendment. The State official had no comments.

#### 5.0 ENVIRONMENTAL CONSIDERATION

This amendment changes a requirement with respect to installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20 or changes a surveillance requirement. The staff has determined that the amendment involves no significant increase in the amounts, and no significant change in the types, of any effluent that may be released offsite, and that there is no significant increase in individual or cumulative occupational radiation exposure. The Commission has previously issued a proposed finding that the amendment involves no significant hazards consideration, and there has been no public comment on such finding (63 FR 64125). Accordingly, the amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the issuance of the amendment.

#### 6.0 CONCLUSION

The staff has concluded, based on the considerations discussed above, that: (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner; (2) such activities will be conducted in compliance with the Commission's regulations; and (3) the issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public.

Principal Contributor: A. Hansen

Date: June 22, 1999