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August 30, 2007
L-07-074

U. S. Nuclear Regulatory Commission
Attention: Document Control Desk
Washington, DC 20555-0001

**Subject: Beaver Valley Power Station, Unit Nos. 1 and 2**
**BV-1 Docket No. 50-334, License No. DPR-66**
**BV-2 Docket No. 50-412, License No. NPF-73**
**Application To Revise Technical Specifications Regarding Control Room Envelope Habitability In Accordance With TSTF-448, Revision 3 (License Amendment Request No. 07-008)**

In accordance with the provisions of 10 CFR 50.90, FirstEnergy Nuclear Operating Company (FENOC) is submitting a request for an amendment to the technical specifications (TS) for Beaver Valley Power Station, Unit Nos. 1 and 2. The proposed amendment would modify TS requirements related to control room envelope habitability in accordance with Technical Specification Task Force Traveler TSTF-448, Revision 3.

FENOC's evaluation of the proposed changes is provided in the enclosure to this transmittal. The enclosure provides a description of the proposed changes, the requested confirmation of applicability, and plant-specific verifications. Attachment 1 of the enclosure provides the existing TS pages marked to show proposed changes. Attachment 2 provides retyped TS pages for information only. Attachment 3 provides existing TS Bases pages marked to show proposed changes and is provided for information only.

FENOC requests approval of the proposed License Amendment by February 29, 2008, with the amendment to be implemented within 120 days.

These changes have been reviewed by the Beaver Valley Power Station review committees. The changes were determined to be safe and do not involve a significant hazard consideration as defined in 10 CFR 50.92 based on the enclosed safety assessment and no significant hazards consideration determination.

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No new regulatory commitments are contained in this submittal. If there are questions, or additional information is required, please contact Mr. Thomas A. Lentz, Manager – FENOC Fleet Licensing, at 330-761-6071.

I declare under penalty of perjury that the foregoing is true and correct. Executed on August 30, 2007.

Sincerely,

Larry K. Freeland for,
Peter P. Sena III

Enclosure:
FENOC Evaluation of the Proposed Change

c: Ms. N. S. Morgan, NRR Project Manager
Mr. D. L. Werkheiser, NRC Senior Resident Inspector
Mr. S. J. Collins, NRC Region I Administrator
Mr. D. J. Allard, Director BRP/DEP
Mr. L. E. Ryan (BRP/DEP)

# ENCLOSURE

## Beaver Valley Power Station, Unit Nos. 1 and 2
## License Amendment Request No. 07-008

## FENOC Evaluation of the Proposed Change

Subject: Application for amendment of Beaver Valley Power Station Unit Nos. 1 and 2 Technical Specifications to modify requirements related to control room envelope habitability consistent with Technical Specification Task Force Traveler TSTF–448, Revision 3.

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Attachments

## 1.0 Description

The proposed amendment would modify technical specification (TS) requirements related to control room envelope habitability in TS 3.7.10, "Control Room Emergency Ventilation System (CREVS)" and TS Section 5.5, "Administrative Controls—Programs and Manuals." The changes are consistent with Nuclear Regulatory Commission (NRC) approved Industry/Technical Specification Task Force (TSTF) Traveler TSTF–448, Revision 3. The availability of this TS improvement was published in the Federal Register on January 17, 2007, as part of the consolidated line item improvement process (CLIIP).

Attachment 1 of this enclosure provides the existing TS pages marked to show proposed changes. Attachment 2 provides retyped TS pages with proposed changes incorporated for information only. Attachment 3 provides existing TS Bases pages marked to show proposed changes and is provided for information only. Technical Specification and Bases pages will be revised and repaginated as necessary to reflect the changes being proposed by this LAR.

## 2.0 Assessment

### *2.1 Applicability of Published Safety Evaluation*

FirstEnergy Nuclear Operating Company (FENOC) has reviewed the safety evaluation dated January 9, 2007, as part of the CLIIP. This review included a review of the NRC staff's evaluation, as well as information provided to support TSTF–448. FENOC has concluded that the justifications presented in the TSTF proposal and the safety evaluation prepared by the NRC staff are applicable to Beaver Valley Power Station (BVPS), Unit Nos. 1 and 2 and justify this amendment for the incorporation of the changes to the BVPS-1 and BVPS-2 TS.

### *2.2 Optional Changes and Variations*

With regard to Section 3 of the model safety evaluation (SE), it has been determined that Evaluation Nos. 1, 4, and 6 are applicable to BVPS.

The term "CREVS" has been substituted for "CREEVS" throughout the amendment request to be consistent with existing plant-specific terminology.

As requested by the NRC's Model Application, Section 2.3 of this LAR (below) proposes a new license condition to clarify when the new surveillance tests must

first be performed following receipt of the amendment. A minor rewording of the proposed License Condition remains consistent with the expected testing frequency. The date of the last BVPS tracer gas test was more than six years ago (May 2001), as discussed in the BVPS response to Generic Letter 2003-01, "Control Room Habitability." The wording of the model license condition as published in the CLIIP notice would have focused on that 2001 test (i.e., it would not have permitted taking credit for a tracer gas test performed between the 2001 test and the date of issuance of the license amendment). Since it may be desirable to perform a test during the period prior to receiving the license amendment, proposed License Condition (a) and (b) are reworded so they simply refer to "the date of the most recent successful tracer gas test," rather than specifying the May 2001 test date that was discussed in the BVPS response to Generic Letter 2003-01. The modifications to (a) and (b) are intended to allow the testing and assessment schedule to commence sooner, while preserving the intent of the model safety evaluation license condition. Proposed License Condition (c) addresses the 18-month differential pressure test, rather than the tracer gas test, but similarly, it is reworded to refer to "the date of the most recent successful pressure measurement test," rather than referring to a specific test performance date.

Consistent with an NRC memorandum dated February 2, 2007 (ADAMS Accession No. ML070330657), the proposed license condition in Section 2.3 of this LAR substitutes a period of 18 months for the 15 month periods described in the model license condition.

The TSTF-448 version of proposed Action B.2 in TS 3.7.10 contains requirements related to smoke "limits." During development of Revision 3 to TSTF-448, it was agreed that smoke requirements were qualitative rather than quantitative, and the concept of smoke limits was therefore deleted from the Section 5.5 Habitability Program, item e. In the NRC meeting minutes that agreed to this change to Section 5.5, it was noted that this was acceptable, because general qualitative requirements for protecting control room envelope (CRE) occupants from smoke challenges are retained in the first paragraph of the proposed TS 5.5 Habitability Program, along with a licensing basis discussion in the proposed "Applicable Safety Analyses" section of TS Bases B 3.7.10, which together adequately address the licensing basis requirements for protecting CRE occupants from smoke (see ADAMS accession number ML061310293, page 2). To be consistent with this concept, the markup of BVPS Required Action B.2 in TS 3.7.10 retains a reference

to limits for radiological hazards, but does not include a reference to limits for smoke.

It should be noted that the reference to limits on inleakage for chemical hazards has not been retained in Required Action B.2 because an evaluation of hazardous chemicals for BVPS does not indicate the need to credit a limit on control room inleakage in order to protect control room occupants. The Applicable Safety Analysis section of the included Bases markup explains that the current BVPS licensing basis for hazardous chemicals does not require a limit on control room inleakage, and therefore, the limit on radiological inleakage is the limiting value for control room inleakage. The reference to limits on inleakage for hazardous chemicals in TS 5.5.14.e has been retained to require the establishment of quantitative limits if licensing basis assumptions are modified in a manner that requires protection of CRE occupants by placing limits on hazardous chemical inleakage.

Proposed TS 3.7.10, Condition E would be supplemented with the phrase "or during movement of fuel assemblies over recently irradiated fuel assemblies." This addition makes the action applicable in a broader scope of conditions than the model, and is needed for consistency with the existing BVPS TS 3.7.10 applicability statement and existing portion of Condition E. The proposed condition maintains consistency with the intent of the model SE, Section 3.3, Evaluation 4.

In order to be consistent with TS 5.5.14.c, the last sentence of TS 5.5.14.d is revised to use the term "periodic" in lieu of "18 month." The model TS indicates that periodic CRE relative pressure measurements shall "be trended and used as part of the 18 month assessment of the CRE boundary." However, the only periodic assessment required by the TSTF-448 model occurs at intervals specified in Regulatory Guide 1.197, "Demonstrating Control Room Envelope Integrity at Nuclear Power Reactors," Section C.1, as specified by TS 5.5.14.c. This substitution resolves the inconsistency between these two requirements in a manner consistent with the published regulatory guidance.

*2.3 License Condition Regarding Initial Performance of New Surveillance and Assessment Requirements*

FENOC proposes the following as a license condition to support implementation of the proposed TS changes:

Upon implementation of Amendment No. [later] adopting TSTF–448, Revision 3, the determination of control room envelope (CRE) unfiltered air inleakage as required by Surveillance Requirement (SR) 3.7.10.4, in accordance with Specification 5.5.14.c(i), the assessment of CRE habitability as required by Specification 5.5.14.c(ii), and the measurement of CRE pressure as required by Specification 5.5.14.d, shall be considered met. Following implementation:

(a) The first performance of SR 3.7.10.4, in accordance with Specification 5.5.14.c(i), shall be within the specified Frequency of 6 years, plus the 18-month allowance of SR 3.0.2, as measured from the date of the most recent successful tracer gas test, or within the next 18 months if the time period since the most recent successful tracer gas test is greater than 6 years.

(b) The first performance of the periodic assessment of CRE habitability, Specification 5.5.14.c(ii), shall be within 3 years, plus the 9-month allowance of SR 3.0.2, as measured from the date of the most recent successful tracer gas test, or within the next 9 months if the time period since the most recent successful tracer gas test is greater than 3 years.

(c) The first performance of the periodic measurement of CRE pressure, Specification 5.5.14.d, shall be within 18 months, plus the 138 days allowed by SR 3.0.2, as measured from the date of the most recent successful pressure measurement test.

## 3.0 Regulatory Analysis

*No Significant Hazards Consideration Determination*

FENOC has reviewed the proposed no significant hazards consideration determination (NSHCD) published in the January 17, 2007, Federal Register as part of the CLIIP. FENOC has concluded that the proposed NSHCD presented in the Federal Register notice is applicable to Beaver Valley Power Station, Unit

Nos. 1 and 2 and is hereby incorporated by reference to satisfy the requirements of 10 CFR 50.91(a).

## 4.0 Environmental Consideration

FENOC has reviewed the environmental consideration included in the model safety evaluation dated January 9, 2007, as part of the CLIIP. FENOC has concluded that the staff's findings presented in that evaluation are applicable to Beaver Valley Power Station, Unit Nos. 1 and 2 and the evaluation is hereby incorporated by reference for this application.

# ATTACHMENT 1

## Beaver Valley Power Station, Unit Nos. 1 and 2
## License Amendment Request No. 07-008

## Proposed Technical Specification Changes

The following are the only affected pages:

3.7.10-1

3.7.10-2

5.5-20

3.7 PLANT SYSTEMS

3.7.10 Control Room Emergency Ventilation System (CREVS)

LCO 3.7.10 Two CREVS trains shall be OPERABLE.

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**- NOTE -**

The control room envelope (CRE) boundary may be opened intermittently under administrative control.

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APPLICABILITY: MODES 1, 2, 3, and 4,
During movement of recently irradiated fuel assemblies,
During movement of fuel assemblies over recently irradiated fuel assemblies.

ACTIONS

| CONDITION | REQUIRED ACTION | COMPLETION TIME |
|---|---|---|
| A. One required CREVS train inoperable for reasons other than Condition B. | A.1 Restore required CREVS train to OPERABLE status. | 7 days |
| B. ~~Two~~ One or more required CREVS trains inoperable due to inoperable CRE ~~control room~~ boundary in MODE 1, 2, 3, or 4. | B.1 Initiate action to implement mitigating actions.<br>AND<br>B.2 Verify mitigating actions ensure CRE occupant radiological exposures will not exceed limits and CRE occupants are protected from chemical and smoke hazards.<br>AND<br>B.3 Restore CRE ~~control room~~ boundary to OPERABLE status. | Immediately<br><br>24 hours<br><br>~~24 hours~~ 90 days |
| C. Required Action and associated Completion Time of Condition A or B not met in MODE 1, 2, 3, or 4. | C.1 Be in MODE 3.<br>AND<br>C.2 Be in MODE 5. | 6 hours<br><br>36 hours |

| | | | |
|---|---|---|---|
| D. Required Action and associated Completion Time of Condition A not met during movement of recently irradiated fuel assemblies or during movement of fuel assemblies over recently irradiated fuel assemblies. | D.1 | Place OPERABLE CREVS train in emergency pressurization mode of operation. | Immediately |
| | OR | | |
| | D.2 | Suspend movement of recently irradiated fuel assemblies and movement of fuel assemblies over recently irradiated fuel assemblies. | Immediately |

ACTIONS (continued)

| CONDITION | REQUIRED ACTION | COMPLETION TIME |
|---|---|---|
| E. Two required CREVS trains inoperable during movement of recently irradiated fuel assemblies or during movement of fuel assemblies over recently irradiated fuel assemblies.<br><br>OR<br><br>One or more required CREVS trains inoperable due to an inoperable CRE boundary during movement of recently irradiated fuel assemblies or during movement of fuel assemblies over recently irradiated fuel assemblies. | E.1 Suspend movement of recently irradiated fuel assemblies and movement of fuel assemblies over recently irradiated fuel assemblies. | Immediately |
| F. Two required CREVS trains inoperable in MODE 1, 2, 3, or 4 for reasons other than Condition B. | F.1 Enter LCO 3.0.3. | Immediately |

SURVEILLANCE REQUIREMENTS

| SURVEILLANCE | | FREQUENCY |
|---|---|---|
| SR 3.7.10.1 | Operate each CREVS train for ≥ 15 minutes with heaters operating. | 31 days |
| SR 3.7.10.2 | Perform required CREVS filter testing in accordance with the Ventilation Filter Testing Program (VFTP). | In accordance with the VFTP |
| SR 3.7.10.3 | Verify each CREVS train actuates on an actual or simulated actuation signal. | 18 months |
| SR 3.7.10.4 | Perform required CRE unfiltered air inleakage testing in accordance with the Control Room Envelope Habitability Program.<br>~~Verify one CREVS train can maintain a positive pressure of ≥ 0.125 inches water gauge in the control room, relative to the outside atmosphere during the pressurization mode of operation at a flow rate of 800 - 1000 cfm.~~ | In accordance with the Control Room Envelope Habitability Program<br>~~18 months on a STAGGERED TEST BASIS~~ |

5.5 Programs and Manuals

5.5.13 Battery Monitoring and Maintenance Program

This Program provides for battery restoration and maintenance, which includes the following:

a. Actions to restore battery cells with float voltage < 2.13 V,

b. Actions to equalize and test battery cells that had been discovered with electrolyte level below the top of the plates, and

c. Actions to verify the remaining cells are ≥ 2.07 V when a cell or cells have been found to be < 2.13 V.

5.5.14 Control Room Envelope Habitability Program

A Control Room Envelope (CRE) Habitability Program shall be established and implemented to ensure that CRE habitability is maintained such that, with an OPERABLE Control Room Emergency Ventilation System (CREVS), CRE occupants can control the reactor safely under normal conditions and maintain it in a safe condition following a radiological event, hazardous chemical release, or a smoke challenge. The program shall ensure that adequate radiation protection is provided to permit access and occupancy of the CRE under design basis accident (DBA) conditions without personnel receiving radiation exposures in excess of 5 rem total effective dose equivalent (TEDE) for the duration of the accident. The program shall include the following elements:

a. The definition of the CRE and the CRE boundary.

b. Requirements for maintaining the CRE boundary in its design condition including configuration control and preventive maintenance.

c. Requirements for (i) determining the unfiltered air inleakage past the CRE boundary into the CRE in accordance with the testing methods and at the Frequencies specified in Sections C.1 and C.2 of Regulatory Guide 1.197, "Demonstrating Control Room Envelope Integrity at Nuclear Power Reactors," Revision 0, May 2003, and (ii) assessing CRE habitability at the Frequencies specified in Sections C.1 and C.2 of Regulatory Guide 1.197, Revision 0.

d. Measurement, at designated locations, of the CRE pressure relative to all external areas adjacent to the CRE boundary during the pressurization mode of operation by one train of the CREVS, operating at the flow rate required by the VFTP, at a Frequency of 18 months on a STAGGERED TEST BASIS. The results shall be trended and used as part of the periodic assessment of the CRE boundary.

e. The quantitative limits on unfiltered air inleakage into the CRE. These limits shall be stated in a manner to allow direct comparison to the unfiltered air inleakage measured by the testing described in paragraph c. The unfiltered air inleakage limit for radiological challenges is the inleakage flow rate assumed in the licensing basis analyses of DBA consequences. Unfiltered air inleakage limits for hazardous chemicals must ensure that exposure of CRE occupants to these hazards will be within the assumptions in the licensing basis.

f. The provisions of SR 3.0.2 are applicable to the Frequencies for assessing CRE habitability, determining CRE unfiltered inleakage, and measuring CRE pressure and assessing the CRE boundary as required by paragraphs c and d, respectively.

# ATTACHMENT 2

## Beaver Valley Power Station, Unit Nos. 1 and 2
## License Amendment Request No. 07-008

## Proposed Retyped Technical Specification Pages

The following retyped pages are provided for information only:

3.7.10-1

3.7.10-2

3.7.10-3 (new)

5.5-20

5.5-21 (new)

3.7 PLANT SYSTEMS

3.7.10 Control Room Emergency Ventilation System (CREVS)

LCO 3.7.10 Two CREVS trains shall be OPERABLE.

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**- NOTE -**

The control room envelope (CRE) boundary may be opened intermittently under administrative control.

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APPLICABILITY: MODES 1, 2, 3, and 4,
During movement of recently irradiated fuel assemblies,
During movement of fuel assemblies over recently irradiated fuel assemblies.

ACTIONS

| CONDITION | REQUIRED ACTION | | COMPLETION TIME |
|---|---|---|---|
| A. One required CREVS train inoperable for reasons other than Condition B. | A.1 | Restore required CREVS train to OPERABLE status. | 7 days |
| B. One or more required CREVS trains inoperable due to inoperable CRE boundary in MODE 1, 2, 3, or 4. | B.1 | Initiate action to implement mitigating actions. | Immediately |
| | AND | | |
| | B.2 | Verify mitigating actions ensure CRE occupant radiological exposures will not exceed limits and CRE occupants are protected from chemical and smoke hazards. | 24 hours |
| | AND | | |
| | B.3 | Restore CRE boundary to OPERABLE status. | 90 days |
| C. Required Action and associated Completion Time of Condition A or B not met in MODE 1, 2, 3, or 4. | C.1 | Be in MODE 3. | 6 hours |
| | AND | | |
| | C.2 | Be in MODE 5. | 36 hours |

ACTIONS (continued)

| CONDITION | REQUIRED ACTION | COMPLETION TIME |
|---|---|---|
| D. Required Action and associated Completion Time of Condition A not met during movement of recently irradiated fuel assemblies or during movement of fuel assemblies over recently irradiated fuel assemblies. | D.1 Place OPERABLE CREVS train in emergency pressurization mode of operation.<br><br>OR<br><br>D.2 Suspend movement of recently irradiated fuel assemblies and movement of fuel assemblies over recently irradiated fuel assemblies. | Immediately<br><br>Immediately |
| E. Two required CREVS trains inoperable during movement of recently irradiated fuel assemblies or during movement of fuel assemblies over recently irradiated fuel assemblies.<br><br>OR<br><br>One or more required CREVS trains inoperable due to an inoperable CRE boundary during movement of recently irradiated fuel assemblies or during movement of fuel assemblies over recently irradiated fuel assemblies. | E.1 Suspend movement of recently irradiated fuel assemblies and movement of fuel assemblies over recently irradiated fuel assemblies. | Immediately |
| F. Two required CREVS trains inoperable in MODE 1, 2, 3, or 4 for reasons other than Condition B. | F.1 Enter LCO 3.0.3. | Immediately |

SURVEILLANCE REQUIREMENTS

| SURVEILLANCE | | FREQUENCY |
|---|---|---|
| SR 3.7.10.1 | Operate each CREVS train for ≥ 15 minutes with heaters operating. | 31 days |
| SR 3.7.10.2 | Perform required CREVS filter testing in accordance with the Ventilation Filter Testing Program (VFTP). | In accordance with the VFTP |
| SR 3.7.10.3 | Verify each CREVS train actuates on an actual or simulated actuation signal. | 18 months |
| SR 3.7.10.4 | Perform required CRE unfiltered air inleakage testing in accordance with the Control Room Envelope Habitability Program. | In accordance with the Control Room Envelope Habitability Program |

5.5 Programs and Manuals

5.5.13 Battery Monitoring and Maintenance Program

This Program provides for battery restoration and maintenance, which includes the following:

a. Actions to restore battery cells with float voltage < 2.13 V,

b. Actions to equalize and test battery cells that had been discovered with electrolyte level below the top of the plates, and

c. Actions to verify the remaining cells are ≥ 2.07 V when a cell or cells have been found to be < 2.13 V.

5.5.14 Control Room Envelope Habitability Program

A Control Room Envelope (CRE) Habitability Program shall be established and implemented to ensure that CRE habitability is maintained such that, with an OPERABLE Control Room Emergency Ventilation System (CREVS), CRE occupants can control the reactor safely under normal conditions and maintain it in a safe condition following a radiological event, hazardous chemical release, or a smoke challenge. The program shall ensure that adequate radiation protection is provided to permit access and occupancy of the CRE under design basis accident (DBA) conditions without personnel receiving radiation exposures in excess of 5 rem total effective dose equivalent (TEDE) for the duration of the accident. The program shall include the following elements:

a. The definition of the CRE and the CRE boundary.

b. Requirements for maintaining the CRE boundary in its design condition including configuration control and preventive maintenance.

c. Requirements for (i) determining the unfiltered air inleakage past the CRE boundary into the CRE in accordance with the testing methods and at the Frequencies specified in Sections C.1 and C.2 of Regulatory Guide 1.197, "Demonstrating Control Room Envelope Integrity at Nuclear Power Reactors," Revision 0, May 2003, and (ii) assessing CRE habitability at the Frequencies specified in Sections C.1 and C.2 of Regulatory Guide 1.197, Revision 0.

d. Measurement, at designated locations, of the CRE pressure relative to all external areas adjacent to the CRE boundary during the pressurization mode of operation by one train of the CREVS, operating at the flow rate required by the VFTP, at a Frequency of 18 months on a STAGGERED TEST BASIS. The results shall be trended and used as part of the periodic assessment of the CRE boundary.

5.5 Programs and Manuals

5.5.14 Control Room Envelope Habitability Program (continued)

e. The quantitative limits on unfiltered air inleakage into the CRE. These limits shall be stated in a manner to allow direct comparison to the unfiltered air inleakage measured by the testing described in paragraph c. The unfiltered air inleakage limit for radiological challenges is the inleakage flow rate assumed in the licensing basis analyses of DBA consequences. Unfiltered air inleakage limits for hazardous chemicals must ensure that exposure of CRE occupants to these hazards will be within the assumptions in the licensing basis.

f. The provisions of SR 3.0.2 are applicable to the Frequencies for assessing CRE habitability, determining CRE unfiltered inleakage, and measuring CRE pressure and assessing the CRE boundary as required by paragraphs c and d, respectively.

## Attachment 3

## Beaver Valley Power Station, Unit Nos. 1 and 2
## License Amendment Request No. 07-008

## Proposed Technical Specification Bases Changes

Technical Specification Bases changes are provided for information only.

The following are the only affected pages:

B 3.7.10-1

B 3.7.10-2

B 3.7.10-3

B 3.7.10-4

B 3.7.10-5

B 3.7.10-6

B 3.7.10-7

B 3.7.10-8

B 3.7.10-9

B 3.7.10-10

B 3.7.10-11

B 3.7 PLANT SYSTEMS

B 3.7.10 Control Room Emergency Ventilation System (CREVS)

BASES

BACKGROUND

The Control Room Emergency Ventilation System (CREVS) provides a protected environment from which ~~operators~~ occupants can control the unit following an uncontrolled release of radioactivity.

BVPS has a common control room ~~pressure~~ envelope (CRE) for Unit 1 and Unit 2. The CREVS consists of pressurization fan subsystems, ~~and~~ the CRE ~~control room~~ isolation subsystems, and a CRE boundary that limits the inleakage of unfiltered air.

The CRE is the area within the confines of the CRE boundary that contains the spaces that control room occupants inhabit to control the unit during normal and accident conditions. This area encompasses the control room, and may encompass other non-critical areas to which frequent personnel access or continuous occupancy is not necessary in the event of an accident. The CRE is protected during normal operation, natural events, and accident conditions. The CRE boundary is the combination of walls, floor, roof, ducting, doors, penetrations and equipment that physically form the CRE. The OPERABILITY of the CRE boundary must be maintained to ensure that the inleakage of unfiltered air into the CRE will not exceed the inleakage assumed in the licensing basis analysis of design basis accident (DBA) consequences to CRE occupants. The CRE and its boundary are defined in the Control Room Envelope Habitability Program.

There are three CREVS pressurization fan subsystems, one (Unit 1) and two (Unit 2). The pressurization fan subsystems draw filtered outside air into the CRE ~~control room~~.

The CRE~~VS control room~~ isolation subsystems isolate the Unit 1 and Unit 2 normal air intake and exhaust penetration flow paths by closing at least one of the two series isolation dampers in each of the four penetration flow paths. Closure of both units' intake and exhaust isolation dampers may be initiated by an isolation signal from either unit. However, the operation of the intake and exhaust dampers at each unit is dependent upon the availability of that unit's power sources. The isolation subsystem of a CREVS train consists of all 4 isolation dampers in that train (2 per unit). Both the Unit 1 and Unit 2 isolation dampers associated with a train are required OPERABLE for an OPERABLE CREVS train. The isolation subsystem is OPERABLE for a unit when the associated Unit 1 and Unit 2 dampers are capable of closing on that unit's required isolation signals or the damper(s) are secured closed.

The CREVS pressurization fan subsystem located on the Unit 1 side of the combined control room consists of one manually started pressurization fan and filter subsystem that provides filtered air to pressurize the CRE ~~control room~~. The Unit 1 pressurization fan subsystem filter consists of a prefilter, an activated charcoal adsorber section for removal of gaseous activity (principally iodines), a high

efficiency particulate air (HEPA) filter, and one of the two 100% capacity Unit 1 fans. Only one of the two Unit 1 fans is required for an OPERABLE CREVS train.

The CREVS pressurization fan subsystems located on the Unit 2 side of the CRE ~~control room~~ consists of two automatically started redundant train related subsystems that draw in outside air through filters to provide filtered air to pressurize the CRE ~~control room~~. Each pressurization fan subsystem filter consists of a moisture separator, a HEPA filter, an activated charcoal adsorber, a second HEPA filter, and a fan. A second bank of HEPA filters follows the adsorber section to collect carbon fines and provide backup in case of failure of the main HEPA filter.

BASES

BACKGROUND (continued)

For both units, ductwork, heaters, valves or dampers, and instrumentation also form part of the system.

Unit 1 can credit any two of the three available CREVS pressurization fan subsystems to meet the LCO requirement for two OPERABLE CREVS trains. However, Unit 2 can only credit the Unit 2 specific pressurization fan subsystems to meet the LCO requirement for two OPERABLE CREVS trains.

The CREVS is an emergency system, parts of which may also operate during normal unit operations in the standby mode of operation. Upon receipt of a CREVS actuating signal(s), normal unfiltered outside air supply and exhaust dampers to the CRE ~~control room~~ are closed and (for Unit 2 only) a pressurization fan subsystem is initiated and the emergency air supply damper in the operating CREVS train is opened to bring in outside air through filters to pressurize the CRE ~~control room envelope~~. The Unit 1 pressurization fan subsystem is manually placed in service if required. The air continues to be recirculated within the CRE ~~control room envelope~~ by the Control Room Emergency Air Cooling System (CREACS) (LCO 3.7.11) both during normal operation and during CREVS operation.

Pressurization of the CRE ~~control room~~ minimizes infiltration of unfiltered air through the CRE boundary from all the surrounding areas adjacent to the CRE boundary ~~of the control room~~. A single CREVS train operating at a flow rate of 800 to 1000 cfm will pressurize the CRE ~~control room~~ to maintain a positive pressure relative to the outside atmosphere. The CREVS operation in maintaining the CRE ~~control room~~ habitable is discussed in UFSAR, Section 9.13 (Unit 1) and Section 9.4 (Unit 2) (Ref. 1).

Redundant CREVS trains are required OPERABLE to ensure the pressurization and filtration function can be accomplished should one train fail. Normally open isolation dampers are arranged in series pairs so that the failure of one damper to shut will not result in a breach of isolation. The CREVS is designed in accordance with Seismic Category I requirements.

~~The control room boundary is the combination of walls, floor, roof, ducting, isolation dampers, doors, penetrations and equipment that physically form the control room envelope. The control room envelope includes the "control room" (i.e., the space that operators inhabit to control the plant for normal and accident conditions) as well as other adjacent areas. The control room is protected for normal operation, natural events, and accident conditions.~~

BACKGROUND (continued)

The CREVS~~, in conjunction with control room design provisions,~~ is designed to maintain a habitable environment in the CRE ~~the control room environment~~ for 30 days of continuous occupancy after a Design Basis Accident (DBA) without exceeding 5 rem total effective dose equivalent (TEDE). This limitation is consistent with the requirements of General Design Criteria 19 of Appendix "A", 10 CFR 50 and 10 CFR 50.67.

The CREVS is automatically actuated by a containment isolation phase B (CIB) signal or a control room area high radiation signal. In addition, the CREVS can be actuated manually. The OPERABILITY requirements for the CREVS instrumentation are specified in LCO 3.3.7, "CREVS Actuation Instrumentation."

~~The CREVS does not have automatic detection and isolation for toxic gas. If toxic gas were identified to be onsite, the control room would be manually isolated by closing all supply and exhaust dampers and verifying that CREVS is not in operation. These actions would minimize air intake into the control room envelope.~~

CREVS does not have automatic detection and isolation for hazardous chemicals or smoke. Refer to Applicable Safety Analyses for a discussion of the design basis of CREVS with regard to these events.

APPLICABLE SAFETY ANALYSES

The CREVS components are arranged in redundant, safety related ventilation trains. The location of most components and ducting within the CRE ~~control room envelope~~ helps to minimize air in leakage and ensures an adequate supply of filtered air to all areas requiring access. The CREVS provides airborne radiological protection for the CRE occupants ~~control room operators~~, as demonstrated by the CRE ~~control room~~ habitability analyses for the most limiting DBAs: loss of coolant accident (LOCA), control rod ejection accident (CREA), and main steam line break (MSLB) accident, presented in the UFSAR, Chapter 14 (Unit 1) and Chapter 15 (Unit 2) (Ref. 2). CRE ~~Control room~~ isolation and operation of CREVS was not credited in other DBAs.

The worst case single active failure of a component of the CREVS, assuming a loss of offsite power, does not impair the ability of the system to perform its design function.

The LOCA accident analysis assumes an automatic isolation of the CRE ~~control room~~ normal ventilation system following a CIB signal and subsequent manual initiation of a CREVS pressurization fan subsystem for filtered makeup and pressurization of the CRE ~~control room~~. Although the CIB signal will automatically start one of the two Unit 2 CREVS pressurization fan subsystems, a 30 minute delay to allow for manual initiation of a CREVS pressurization fan subsystem is specifically assumed in the analysis to permit the use of the Unit 1 CREVS

BASES

APPLICABLE SAFETY ANALYSES (continued)

pressurization fan subsystem which requires manual operator action to place in service (Ref. 3). The CREA and the MSLB accident analyses assume manual initiation of the emergency pressurization mode of operation of CRE ~~control room~~ ventilation (i.e., CRE ~~control room~~ ventilation isolation, filtered makeup and pressurization), within 30 minutes after the accident.

Although the CRE occupant ~~control room~~ dose calculations for the limiting DBAs (i.e., LOCA, CREA, and MSLB) assume that the CRE ~~control room~~ is pressurized in 30 minutes of the accident by manually actuating a pressurization fan subsystem, the specification conservatively requires automatic actuation of a Unit 2 CREVS pressurization fan subsystem.

The current safety analyses do not assume the control room area radiation monitors provide a CREVS actuation signal for any DBA. However, requirements for the automatic initiation of CREVS (both isolation and pressurization fan subsystems) on high radiation are retained in the Technical Specifications in case this automatic function is required to support the assumptions of a fuel handling accident analysis for the movement of recently irradiated fuel (i.e., fuel that has occupied part of a critical reactor core within the previous 100 hours) or the movement of fuel over recently irradiated fuel consistent with the guidance of NUREG-1431 (Ref. 4).

An automatic start time delay is included in the initiation circuitry of the Unit 2 CREVS pressurization fan subsystems. The basis for this time delay includes the following considerations:

1. The delay times prevent loading of the pressurization fans onto the emergency busses until after the emergency diesel generator load sequencing is completed.

2. The pressurization fan delay times are staggered to ensure only one fan will be operating.

3. A pressurization fan is started early to minimize dose to the operators.

4. The delay times are selected such that sufficient time will be available for the manual initiation of a pressurization fan subsystem within 30 minutes after an accident should a pressurization fan fail to start.

BASES

APPLICABLE SAFETY ANALYSES (continued)

An evaluation of all chemical ~~toxic gas~~ hazards from onsite, offsite, and transportation sources has determined that the probability of a hazardous ~~toxic~~ chemical spill resulting in unacceptable exposures was less than NRC design basis criteria. ~~and, hence, is not included in~~ As a result, the plant design basis as described in BVPS Unit 2 UFSAR, Section 2.2.3.1.2 and 6.4.4.2 (Ref. 5) does not postulate any hazardous chemical release events. Therefore, physical provisions for protection against hazardous chemicals are not required and CRE inleakage of hazardous chemicals would be limited by the inleakage rate established for radiological events. If a hazardous chemical release were identified to be onsite, the CRE would be manually isolated to minimize CRE inleakage as a defense in depth measure, by closing all supply and exhaust dampers and verifying that CREVS is not in operation. Technical Specification Amendment No. 233 (Unit 1) and No. 115 (Unit 2) (Ref. 6) removed the control room chlorine detection system. In addition, Amendment No. 257 (Unit 1) and No. 139 (Unit 2) (Ref. 7) which removed the bottled air pressurization system, confirmed that the ability to manually isolate the CRE ~~control room and the availability of self-contained breathing apparatus are~~ is sufficient to ~~address any credible toxic gas or smoke events~~ justify removal of these systems with respect to hazardous chemical events.

In the event of a fire outside the control room, the CRE would be manually isolated to minimize CRE inleakage. If the ability of CRE occupants to remain in the control room is compromised, then remote shutdown locations are available. Therefore, no quantitative limits for CRE inleakage of smoke have been established. Technical Specification Amendment No. 257 (Unit 1) and No. 139 (Unit 2) (Ref. 7) which removed the bottled air pressurization system, confirmed that the ability to manually isolate the CRE in combination with availability of self-contained breathing apparatus is sufficient to justify removal of the system with respect to a smoke event. Therefore, a smoke challenge will not result in the inability of the CRE occupants to control the reactor either from the control room or from the remote shutdown panels.

The CREVS satisfies Criterion 3 of 10 CFR 50.36(c)(2)(ii).

LCO

Two CREVS trains including the associated train related inlet and exhaust isolation dampers are required to be OPERABLE to ensure that at least one train is available ~~assuming~~ if a single active failure disables the other train. A combination of two out of three CREVS pressurization fan subsystems from either Unit 1 or Unit 2 satisfies the LCO requirement for Unit 1. Only the Unit 2 CREVS pressurization fan subsystems may be used to satisfy the LCO requirement for Unit 2.

The OPERABILITY of CREVS ensures that the CRE ~~control room~~ will remain habitable with respect to potential radiation hazards for operations personnel during and following all credible accident conditions. The OPERABILITY of this system ~~in conjunction with control room design provisions~~ is based on limiting the radiation exposure to personnel

occupying the CRE ~~control room~~ to 5 rem TEDE. This limitation is consistent with the requirements of General Design Criteria 19 of Appendix "A", 10 CFR 50 and 10 CFR 50.67. Total system failure, such as from a loss of ~~both~~ all ventilation trains or from an inoperable CRE boundary, could result in exceeding these dose limits in the event of a large radioactive release.

~~The~~ Each CREVS train is considered OPERABLE when the individual components necessary to limit CRE occupant ~~operator~~ exposure are OPERABLE ~~in both trains~~. A CREVS train is OPERABLE when the associated:

a. Fan is OPERABLE (including required automatic start capability for Unit 2 fans),

b. HEPA filters and charcoal adsorbers are not excessively restricting flow, and are capable of performing their filtration functions, and

LCO (continued)

c. *Heater, prefilter (Unit 1), moisture separator (Unit 2), ductwork,* valves, and dampers are OPERABLE (i.e., capable of supporting pressurization of the CRE ~~control room~~ when a CREVS train is actuated). This includes:

1) In MODES 1, 2, 3, and 4, the series normal air intake and exhaust isolation dampers for both units must be OPERABLE and capable of automatic closure on a CIB actuation signal. The series normal air intake and exhaust isolation dampers for both units may also be considered OPERABLE when secured in a closed position with power removed.

2) During fuel assembly movement involving recently irradiated fuel assemblies, the series normal air intake and exhaust isolation dampers for both units must be OPERABLE and capable of automatic initiation by a control room high radiation signal. The series air intake and exhaust isolation dampers for both units may also be considered OPERABLE when secured in a closed position with power removed.

LCO 3.3.7, "CREVS Actuation Instrumentation," contains the OPERABILITY, ACTION, and Surveillance Requirements for the CREVS actuating instrumentation.

~~In addition, the control room boundary must be maintained, including the integrity of the walls, floors, ceilings, ductwork, and access doors in order to maintain the capability of the CREVS to pressurize the control room.~~

In order for the CREVS trains to be considered OPERABLE, the CRE boundary must be maintained such that the CRE occupant dose from a large radioactive release does not exceed the calculated dose in the licensing basis consequence analyses for DBAs, and that CRE occupants are protected from hazardous chemicals and smoke.

The LCO is modified by a Note allowing the CRE ~~control room~~ boundary to be opened intermittently under administrative controls. This Note only applies to openings in the CRE boundary that can be rapidly restored to the design condition, such as doors, hatches, floor plugs, and access panels. For entry and exit through doors, the administrative control of the opening is performed by the person(s) entering or exiting the area. For other openings (hatches, access panels, floor plugs, etc.), these controls should be proceduralized and consist of stationing a dedicated individual at the opening who is in continuous communication with the operators in the CRE ~~control room~~. This individual will have a method to rapidly close the opening and to restore the CRE ~~control room~~ boundary to a condition equivalent to the design condition when a need for CRE ~~control room~~ isolation is indicated. If the above conditions for utilizing the LCO Note cannot be met, then Action B should be entered.

BASES

APPLICABILITY

In MODES 1, 2, 3, 4, and during the movement of recently irradiated fuel assemblies (i.e., fuel that has occupied part of a critical reactor core within the previous 100 hours) and the movement of fuel assemblies over recently irradiated fuel assemblies, the CREVS is required to be OPERABLE to ensure that the CRE will remain habitable ~~control operator exposure~~ during and following a DBA.

In MODES 5 and 6, when no fuel movement involving recently irradiated fuel is taking place, there are no requirements for CREVS OPERABILITY consistent with the safety analyses assumptions applicable in these MODES. A fuel handling accident (FHA) involving non-recently irradiated fuel will result in radiation exposure, to personnel occupying the CRE ~~control room~~, that is within the guideline values specified in 10 CFR 50.67 without any reliance on the requirements of this Specification to limit personnel exposure.

This LCO is applicable during movement of recently irradiated fuel assemblies (i.e., fuel that has occupied part of a critical reactor core within the previous 100 hours) and during movement of fuel assemblies over recently irradiated fuel assemblies. During fuel movement involving recently irradiated fuel there is a potential for a limiting FHA for which the requirements of this Specification may be necessary to limit radiation exposure to personnel occupying the CRE ~~control room~~ to within the requirements of 10 CFR 50.67. Although the movement of recently irradiated fuel is not currently permitted, these requirements are retained in the Technical Specifications in case the CREVS is necessary to support the assumptions of a safety analysis for fuel movement involving recently irradiated fuel, consistent with the guidance of Reference 4.

ACTIONS

A.1

When one required CREVS train is inoperable for reasons other than an inoperable CRE ~~control room~~ boundary (this action includes one or more of the associated train related series isolation dampers inoperable), action must be taken to restore it to OPERABLE status within 7 days. In this Condition, the remaining OPERABLE CREVS train (including the associated train of isolation dampers) is adequate to perform the CRE occupant ~~control room~~ radiation protection function. However, the overall reliability is reduced because a ~~single~~ failure in the OPERABLE CREVS train could result in loss of CREVS function. The 7 day Completion Time is based on the low probability of a DBA occurring during this time, and the ability of the remaining train to provide the required safety function.

BASES

ACTIONS (continued)

B.1, B.2, and B.3

If the unfiltered inleakage of potentially contaminated air past the CRE boundary and into the CRE can result in CRE occupant radiological dose greater than the calculated dose of the licensing basis analyses of DBA consequences (allowed to be up to 5 rem TEDE), or inadequate protection of CRE occupants from hazardous chemicals or smoke, the CRE boundary is inoperable. As discussed in the Applicable Safety Analyses section, the current licensing basis identifies that CRE inleakage limits for hazardous chemicals and smoke are not necessary to protect CRE occupants; therefore, the limit established for radiological events is the limiting value for determining entry into Condition B for an inoperable CRE boundary. Actions must be taken to restore an OPERABLE CRE boundary within 90 days.

During the period that the CRE boundary is considered inoperable, action must be initiated to implement mitigating actions to lessen the effect on CRE occupants from the potential hazards of a radiological or chemical event or a challenge from smoke. Actions must be taken within 24 hours to verify that in the event of a DBA, the mitigating actions will ensure that CRE occupant radiological exposures will not exceed the calculated dose of the licensing basis analyses of DBA consequences, and that the CRE occupants are protected from hazardous chemicals and smoke. These mitigating actions (i.e., actions that are taken to offset the consequences of the inoperable CRE boundary) should be preplanned for implementation upon entry into the condition, regardless of whether entry is intentional or unintentional. The 24 hour Completion Time is reasonable based on the low probability of a DBA occurring during this time period, and the use of mitigating actions. The 90 day Completion Time is reasonable based on the determination that the mitigating actions will ensure protection of CRE occupants within analyzed limits while limiting the probability that CRE occupants will have to implement protective measures that may adversely affect their ability to control the reactor and maintain it in a safe shutdown condition in the event of a DBA. In addition, the 90 day Completion Time is a reasonable time to diagnose, plan and possibly repair, and test most problems with the CRE boundary.

~~If the control room boundary is inoperable, the required CREVS trains may not be able to perform their intended functions. Action must be taken to restore the control room boundary to OPERABLE status. The CREVS functions to pressurize the control room boundary with filtered air to limit the radiological exposure of control room personnel to within the required limits. During the period that the control room boundary is inoperable, appropriate compensatory measures (consistent with the intent of GDC 19) should be utilized to protect control room personnel from potential radiological exposure in excess of the required limits. Preplanned measures should be available to address an inoperable control room boundary for intentional and unintentional entry into this Action.~~

~~Depending on the location and size of the failure which caused the control room boundary to be inoperable, the use of compensatory measures such as temporary closures and readily available respirators may be employed to support control room habitability requirements. Administrative controls should ensure adequate compensatory measures are maintained and that control room personnel are aware of the required measures.~~

~~The 24 hour Completion Time is reasonable based on the low probability of a DBA occurring during this time period, and the required use of compensatory measures. The 24 hour Completion Time is a reasonable time to diagnose, plan and possibly repair, and test most problems with the control room boundary.~~

C.1 and C.2

In MODE 1, 2, 3, or 4, if the inoperable CREVS train or the CRE ~~control room~~ boundary cannot be restored to OPERABLE status within the required Completion Time the unit must be placed in a MODE that minimizes accident risk. To achieve this status, the unit must be placed in at least MODE 3 within 6 hours, and in MODE 5 within 36 hours. The allowed Completion Times are reasonable, based on operating experience, to reach the required unit conditions from full power conditions in an orderly manner and without challenging unit systems.

BASES

ACTIONS (continued)

D.1 and D.2

During fuel movement involving recently irradiated fuel assemblies, if an inoperable CREVS train cannot be restored to OPERABLE status within the required Completion Time, the OPERABLE CREVS train must immediately be placed in the emergency pressurization mode of operation. This action requires the CRE ~~control room~~ ventilation isolation dampers to be closed and the CRE ~~control room~~ to be pressurized by the operating CREVS train. This action ensures that the remaining train is OPERABLE, that no failures preventing automatic actuation will occur, and that any active failure would be readily detected.

An alternative action is to immediately suspend activities that could result in a release of radioactivity that might require isolation of the CRE ~~control room~~. This involves suspending movement of recently irradiated fuel assemblies and suspending movement of fuel assemblies over recently irradiated fuel assemblies. This places the unit in a condition that minimizes the accident risk. This does not preclude the movement of fuel to a safe position.

E.1

During fuel movement involving recently irradiated fuel assemblies, if two required CREVS trains are inoperable or with one or more required CREVS trains inoperable due to an inoperable CRE boundary, action must be taken immediately to suspend activities that could result in a release of radioactivity that might require isolation of the CRE ~~the CREVS function~~. Two inoperable trains also include the conditions of one or more inoperable series isolation dampers in both trains or one or more inoperable series isolation dampers in one train and the opposite CREVS train inoperable. This Action involves suspending movement of recently irradiated fuel assemblies and suspending movement of fuel assemblies over recently irradiated fuel assemblies. This places the unit in a condition that minimizes the accident risk. This Action does not preclude the movement of fuel to a safe position.

F.1

If both required CREVS trains are inoperable in MODES 1, 2, 3, or 4 for reasons other than an inoperable CRE ~~control room~~ boundary (i.e., Condition B) the CREVS may not be capable of performing the intended function and the unit is in a condition outside the accident analyses. Two inoperable trains also include the conditions of one or more inoperable series isolation dampers in both trains or one or more inoperable series isolation dampers in one train and the opposite CREVS train inoperable. In this condition, Specification 3.0.3 must be entered immediately.

BASES

SURVEILLANCE REQUIREMENTS

SR 3.7.10.1

Standby systems should be checked periodically to ensure that they function properly. As the environment and normal operating conditions on this system are not severe, testing each train once every month provides an adequate check of this system. The CREVS fan and filter flow path is operated for ≥ 15 minutes by initiating flow through the HEPA filter and charcoal adsorber train with heaters operating to ensure that they function properly. This Surveillance does not require that the CRE ~~control room~~ be isolated in order to verify fan and filter flow path functionality. The 31 day Frequency is based on the reliability of the equipment and train redundancy ~~availability~~.

SR 3.7.10.2

This SR verifies that the required CREVS testing is performed in accordance with the Ventilation Filter Testing Program (VFTP). The VFTP includes testing the performance of the HEPA filter, charcoal adsorber efficiency, minimum flow rate, and the physical properties of the activated charcoal. Specific test Frequencies and additional information are discussed in detail in the VFTP.

SR 3.7.10.3

This SR verifies that each CREVS train operates as required on an actual or simulated containment isolation phase B actuation signal (only required in MODES 1, 2, 3, and 4) and control room high radiation actuation signal (only required for fuel movement involving recently irradiated fuel). The actuation testing includes verification that each train of series air intake and exhaust isolation dampers for both units close to isolate the CRE ~~control room~~ from the outside atmosphere. In addition, for Unit 2, the automatic start (following a time delay) of each CREVS pressurization fan subsystem supplying air to pressurize the CRE ~~control room~~ through the HEPA filters and charcoal adsorber banks is verified. For Unit 1, an automatic start of the CREVS pressurization fan subsystem is not required since the Unit 1 subsystem is placed in service by manual operator action.

LCO 3.3.7, "CREVS Actuation Instrumentation," contains the OPERABILITY requirements including the Applicability, ACTION, and Surveillance Requirements for the CREVS actuating instrumentation.

The Frequency of [18] months is based on industry operating experience and is consistent with the typical refueling cycle. ~~The Frequency of 18 months is consistent with the testing frequencies specified in Regulatory Guide 1.52 (Ref. 8).~~

BASES

SURVEILLANCE REQUIREMENTS (continued)

SR 3.7.10.4

This SR verifies the OPERABILITY of the CRE boundary by testing for unfiltered air inleakage past the CRE boundary and into the CRE. The details of the testing are specified in the Control Room Envelope Habitability Program.

The CRE is considered habitable when the radiological dose to CRE occupants calculated in the licensing basis analyses of DBA consequences is no more than 5 rem TEDE. This SR verifies that the unfiltered air inleakage into the CRE is no greater than the flow rate assumed in the licensing basis analyses of DBA consequences. When unfiltered air inleakage is greater than the assumed flow rate, Condition B must be entered. Required Action B.3 allows time to restore the CRE boundary to OPERABLE status provided mitigating actions can ensure that the CRE remains within the licensing basis habitability limits for the occupants following an accident. Compensatory measures are discussed in Regulatory Guide 1.196, Section C.2.7.3, (Ref. 8) which endorses, with exceptions, NEI 99-03, Section 8.4 and Appendix F (Ref. 9). These compensatory measures may also be used as mitigating actions as required by Required Action B.2. Temporary analytical methods may also be used as compensatory measures to restore OPERABILITY (Ref. 10). Options for restoring the CRE boundary to OPERABLE status include changing the licensing basis DBA consequence analysis, repairing the CRE boundary, or a combination of these actions. Depending upon the nature of the problem and the corrective action, a full scope inleakage test may not be necessary to establish that the CRE boundary has been restored to OPERABLE status.

~~This Surveillance Requirement verifies the capability of the CREVS to pressurize the control room to ≥ 1/8 inch water gauge relative to the outside atmosphere. The capability to pressurize the control room to a positive pressure is periodically tested to confirm the capability of the CREVS to perform its intended safety function. The CREVS is designed to pressurize the control room to a positive pressure with respect to the outside atmosphere in order to minimize unfiltered inleakage. The CREVS is designed to maintain this positive pressure with one train operating at a makeup flow rate of 800 to 1000 cfm.~~

~~For Unit 1 the requirement to verify each CREVS train 18 months on a staggered basis results in performing the required test with one of the two 100% capacity fans and one train of isolation dampers every 18 months such that both trains of isolation dampers are tested every 36 months. For Unit 2 staggered testing results in performing the required test with one CREVS train every 18 months such that both Unit 2 CREVS trains are tested every 36 months.~~

~~The Frequency of 18 months on a STAGGERED TEST BASIS is consistent with the guidance provided in NUREG-0800 (Ref. 9).~~

REFERENCES

1. UFSAR, Section 9.13 (Unit 1) and Sections 6.4 and 9.4 (Unit 2).
2. UFSAR, Section 14 (Unit 1) and Chapter 15 (Unit 2).
3. UFSAR Table 11.3-7 (Unit 1) and UFSAR Table 15.0-13 (Unit 2).
4. NUREG-1431, Rev. 2, Standard Technical Specifications for Westinghouse Plants.
5. UFSAR, Sections 2.2.3.1.2 and 6.4.4.2 (Unit 2).
6. Amendment No. 233 (Unit 1) and Amendment No. 115 (Unit 2), September 7, 2000.
7. Amendment No. 257 (Unit 1) and Amendment No. 139 (Unit 2), September 10, 2003.
8. Regulatory Guide 1.196 ~~1.52, Rev. 2~~.
9. ~~NUREG-0800, Section 6.4, Rev. 2, July 1981.~~
9. NEI 99-03, "Control Room Habitability Assessment," June 2001.
10. Letter from Eric J. Leeds (NRC) to James W. Davis (NEI) dated January 30, 2004, "NEI Draft White Paper, Use of Generic Letter 91-18 Process and Alternative Source Terms in the Context of Control Room Habitability." (ADAMS Accession No. ML040300694).