CREV System 3.7.4

| ACT | ACTIONS (continued) | | | | | |
|-----------------|--|-------------------|---|----------------------------|--|--|
| С. | Required Action and associated Completion Time of Condition A or B not met in MODE 1, | C.1 <u>AND</u> | Be in MODE 3. | 12 hours | | |
| | 2, or 3. | C.2 | Be in MODE 4. | 36 hours | | |
| D. <u>QR</u> | CREV System inoperable during movement of recently irradiated fuel assemblies in the secondary containment or during OPDRVs. CREV System inoperable due to an inoperable CRE boundary during movement of recently irradiated fuel assemblies in the secondary containment or during OPDRVs. | | Suspend movement of recently irradiated fuel assemblies in the secondary containment. | Immediately Immediately | | |

Dresden 2 and 3

.3.7.4-2

SURVEILLANCE REQUIREMENTS

| <u></u> | | FREQUENCY | |
|---------|---------|--|--|
| SR | 3.7.4.1 | Operate the CREV System for ≥ 10 continuous hours with the heaters operating. | 31 days |
| SR | 3.7.4.2 | Perform required CREV filter testing in accordance with the Ventilation Filter Testing Program (VFTP). | In accordance with the VFTP |
| SR | 3.7.4.3 | Verify the CREV System actuates on a manual initiation signal. | 24 months |
| SR | 3.7.4.4 | 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 |

Dresden 2 and 3

5.5 Programs and Manuals

| 5,5.12 | <u>Prin</u> | ary Containment Leakage Rate Testing Program (continued) |
|--------|-------------|--|
| | ١ | NEI 94-01 - 1995, Section 9.2.3: The first Unit 3 Type A test performed after the July 14, 1994, Type A test shall be performed no later than July 13, 2009. |
| | b. | The peak calculated primary containment internal pressure for the design basis loss of coolant accident, P _a , is 43.9 psig. |
| | ć. | The maximum allowable primary containment leakage rate, L _a , at P ₄ , is 3% of primary containment air weight per day. |
| | d. | Leakage rate acceptance criteria are: |
| | | 1. Primary containment overall leakage rate acceptance criterion is $\leq 1.0 L_a$. During the first unit startup following testing in accordance with this program, the leakage rate acceptance criteria are $\leq 0.60 L_a$ for the combined Type B and Type C tests, and $\leq 0.75 L_a$ for |

- 2. Air lock testing acceptance criteria is the overall air lock leakage rate is $\leq 0.05 L_a$ when tested at $\geq P_a$.
- e. The provisions of SR 3.0.3 are applicable to the Primary Containment Leakage Rate Testing Program.

5.5.13 Battery Monitoring and Maintenance Program

Type A tests.

This Program provides for restoration and maintenance, based on the recommendations of IEEE Standard 450-1995, "IEEE Recommended Practice for Maintenance, Testing, and Replacement of Vented Lead-Acid Batteries for Stationary Applications," including the following:

- a. Actions to restore battery cells with float voltage < 2.13 V, and
- b. Actions to equalize and test battery cells that had been discovered with electrolyte level below the minimum established design limit.

(continued)

Dresden 2 and 3

5.5-12

Programs and Manuals 5.5

5.5 Programs and Manuals

5.5.14 <u>Control Room Envelope Habitability Program</u>

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 (CREV) System, 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 the CREV system, operating at the flow rate required by the VFTP, at a Frequency of 24 months. The results shall be trended and used as part of the 24 month 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

(continued)

Programs and Manuals 5.5

5.5 Programs and Manuals

5.5.14 <u>Control Room Envelope Habitability Program</u> (continued)

inleakage, and measuring CRE pressure and assessing the CRE boundary as required by paragraphs c and d, respectively.

Dresden 2 and 3

3.7 PLANT SYSTEMS

3.7.4 Control Room Emergency Ventilation (CREV) System

LCO 3.7.4

The CREV System shall be OPERABLE.

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

APPLICABILITY: MODES 1, 2, and 3, During movement of recently irradiated fuel assemblies in the secondary containment, During operations with a potential for draining the reactor vessel (OPDRVs).

ACTIONS

| | CONDITION | | REQUIRED ACTION | COMPLETION TIME |
|----|--|------------|--|-----------------|
| Α. | CREV System inoperable in MODE 1, 2, or 3 for reasons other than Condition B. | A.1 | Restore CREV System to OPERABLE status. | 7 days |
| Β. | CREV system inoperable due to inoperable CRE boundary in MODE 1, 2, or 3. | B.1 AND | Initiate action to implement mitigating actions. | Immediately |
| | | В.2 | Verify mitigating actions ensure CRE occupant exposures to radiological, chemical, and smoke hazards will not exceed limits. | 24 hours |
| | | AND | | |
| | | B.3 | Restore CRE boundary to OPERABLE status. | 90 days |

(continued)

Quad Cities 1 and 2

CREV System

i,

ACTIONS (continued)

| | CONDITION | | REQUIRED ACTION | COMPLETION TIME |
|-----------------|--|-------------------|--|-----------------|
| C. | associated Completion Time of Condition A or | C.1 <u>AND</u> | Be in MODE 3. | 12 hours |
| | B not met in MODE 1, 2, or 3. | C.2 | Be in MODE 4. | 36 hours |
| D. <u>OR</u> | D. CREV System inoperable during movement of recently irradiated fuel assemblies in the secondary containment or during OPDRVs. OR CREV System inoperable due to an inoperable | | .0.3 is not applicable. Suspend movement of recently irradiated fuel assemblies in the secondary containment. | Immediately |
| | CRE boundary during movement of recently irradiated fuel assemblies in the secondary containment or during OPDRVs. | D.2 | Initiate action to suspend OPDRVs. | Immediately |

Quad Cities 1 and 2

Amendment No. 238/233

FREQUENCY

 SURVEILLANCE REQUIREMENTS
 SURVEILLANCE
 FREQ

 SR 3.7.4.1
 Operate the CREV System for ≥ 10 continuous
 31 days

 bours with the heaters operating
 31 days

| 51 | 5.7.4.1 | hours with the heaters operating. | |
|----|---------|--|--|
| SR | 3.7.4.2 | Perform required CREV filter testing in accordance with the Ventilation Filter Testing Program (VFTP). | In accordance with the VFTP |
| SR | 3.7.4.3 | Verify the CREV System isolation dampers close on an actual or simulated initiation signal. | 24 months |
| SR | 3.7.4.4 | 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 |

Quad Cities 1 and 2

5.5 Programs and Manuals

Primary Containment Leakage Rate Testing Program (continued) 5.5.12 2. NEI 94-01 - 1995. Section 9.2.3: The first Unit 2 Type A test performed after the May 17, 1993, Type A test shall be performed no later than May 16, 2008. The peak calculated primary containment internal pressure b. for the design basis loss of coolant accident, P₄, is 43.9 psig. ç. The maximum allowable primary containment leakage rate. L. at P_a, is 3% of primary containment air weight per day. d. Leakage rate acceptance criteria are: Primary containment overall leakage rate acceptance 1.

- criterion is ≤ 1.0 La. During the first unit startup following testing in accordance with this program, the leakage rate acceptance criteria are ≤ 0.60 La for the combined Type B and Type C tests, and ≤ 0.75 La for Type A tests.
- Air lock testing acceptance criteria is the overall air lock leakage rate is ≤ 0.05 La when tested at ≥ Pa.
- e. The provisions of SR 3.0.3 are applicable to the Primary Containment Leakage Rate Testing Program.

5.5.13 <u>Control Room Envelope Habitability Program</u>

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 (CREV) System, 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 exposure 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

(continued)

5.5 Programs and Manuals

5.5.13 Control Room Envelope Habitability Program (continued)

maintenance.

- c. Requirements of (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 Section 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 Section 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 of the CREV system, operating at the flow rate required by the VFTP, at a Frequency of 24 months. The results shall be trended and used as part of the 24 month 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 paragraph c and d, respectively.

Quad Cities 1 and 2

3.7 PLANT SYSTEMS

3.7.4 Control Room Emergency Ventilation (CREV) System

LCO 3.7.4 The CREV System shall be OPERABLE.

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

APPLICABILITY: MODES 1, 2, and 3, During movement of recently irradiated fuel assemblies in the secondary containment, During operations with a potential for draining the reactor vessel (OPDRVs).

ACTIONS

| | CONDITION | | REQUIRED ACTION | COMPLETION TIME |
|----|--|-------------------|--|-----------------|
| Α. | CREV System inoperable in MODE 1, 2, or 3 for reasons other than Condition B. | A.1 | Restore CREV System to OPERABLE status. | 7 days |
| Β. | CREV system inoperable due to inoperable CRE boundary in MODE 1, 2, or 3. | B.1 <u>AND</u> | Initiate action to implement mitigating actions. | Immediately |
| | | В.2 | Verify mitigating actions ensure CRE occupant exposures to radiological, chemical, and smoke hazards will not exceed limits. | 24 hours |
| , | • | AND | | |
| | | B.3 | Restore CRE boundary to OPERABLE status. | 90 days |

(continued)

Dresden 2 and 3