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5.5.16 Containment Leakage Rate Testing Program (continued)

- e. The provisions of SR 3.0.3 are applicable to the Containment Leakage Rate Testing Program.
- f. Nothing in these Technical Specifications shall be construed to modify the testing Frequencies required by 10 CFR 50, Appendix J.

5.5.17 Battery Monitoring and Maintenance Program

This Program provides for battery 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," or of the battery manufacturer] 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.

5.5.18 Ventilation Boundary Test Program

A [Ventilation Boundary Test Program (VBTP)] shall be established and implemented to ensure that the boundary of each area of the facility served by a specified ventilation system is maintained such that, with an OPERABLE associated ventilation system train:

- A challenge to the area from a radiological event, hazardous chemical, or fire (e.g., fire byproducts, smoke, halon, etc.) will not prevent designated facility personnel, such as licensed operators and the shift technical advisor, from controlling the reactor from inside the control room boundary (CRB) or at the [[alternate][remote]] shutdown panel, during normal and accident conditions.
- A radiological event will not result in radiological exposure to control room occupants exceeding the limits of 10 CFR Part 50, Appendix A, General Design Criteria 19 (GDC 19), or to members of the public exceeding limits of 10 CFR Part 100 or 10 CFR 50.67, or some fraction thereof.

The VBTP shall control maintenance and testing of boundaries of areas served by CREFS, ECCS PREACS, FBACS, and PREACS.

- a. The VBTP shall establish control room occupant protection requirements that are bounded by the radiological exposure limits of GDC 19 and the limits on personnel exposure to hazardous chemicals, and [fire by-products] as described in [FSAR Chapter 6]. The VBTP shall also establish limits on offsite radiological exposure to members of the public that are bounded by the limits of 10 CFR Part 100 or 10 CFR 50.67, or some fraction thereof.

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- b. The VBTP shall require testing of the CRB (the boundary of the area served by the [CREFS and]) in accordance with [Regulatory Guide 1.197, “Demonstrating Control Room Envelope Integrity at Nuclear Power Reactors”, Revision 0, May 2003.] The VBTP shall also require testing of the boundary of each area served by the [ECCS PREACS, FBACS, and PREACS] in accordance with [SR 3.7.12.4, SR 3.7.13.4, and SR 3.7.14.4,] respectively[, and].
1. The VBTP required testing shall be:
 - (a) Sufficient to establish that each specified ventilation boundary is OPERABLE;
 - (b) Commensurate with the type and degree of modification, repair, or change in operation of a structure, system, or component (SSC) that may have affected a boundary’s OPERABILITY;
 - (c) Conducted using the configuration and alignment of SSCs that result in the greatest consequence to control room occupants, consistent with the assumptions of the facility’s event and accident analyses.
 2. The VBTP required testing shall be performed:
 - (a) For the CRB, at the frequencies stated in SR 3.7.10.4, SR 3.7.10.5, and Regulatory Guide 1.197.
 - (b) For the boundaries of areas served by [ECCS PREACS, FBACS, and PREACS], at the frequencies stated in [SR 3.7.12.4, SR 3.7.13.4, and SR 3.7.14.4,] respectively.
 - (c) For the affected specified ventilation boundary, following any:
 - (1) Change to an SSC that may have affected the boundary’s OPERABILITY, regardless of whether the SSC is internal or external to the boundary;
 - (2) Modification or repair of an SSC that may have changed unfiltered leakage into the control room [or resulted in unfiltered bypass of the [ECCS pump rooms], [penetration rooms], or [fuel building]], or a change in release point from the ECCS PREACS, PREACS, or FBACS ESF units; or

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5.5.18 Ventilation Boundary Test Program (continued)

- (3) Event (radiological, hazardous chemical, or fire) that challenges the boundary, if the resulting conditions lead to a change in an SSC's operating mode, alignment, or response that could result in a new limiting condition.
- c. The VBTP shall maintain and control the configuration, design basis, and licensing basis of the boundaries of the control room, [ECCS pump rooms, the fuel building, and penetration rooms]. It shall also control the preventive and corrective maintenance of these boundaries. The VBTP shall require an approved procedure in writing to govern intermittent opening of a specified ventilation boundary under administrative controls. These controls shall be pre-planned and adequate to ensure quick restoration of the boundary to a condition equivalent to its design condition in the event a need for an OPERABLE boundary arises.
- d. Upon discovery that the boundary of the control room, [an ECCS pump room, the fuel building, or a penetration room] is inoperable, implementation of mitigating actions may be credited to temporarily offset the potential consequences to control room occupants from a radiological, hazardous chemical, or fire event. In addition, upon discovery that the boundary of [an ECCS pump room, the fuel building, or a penetration room] is inoperable, implementation of mitigating actions may be credited to temporarily offset the potential offsite radiological consequences to the public. Mitigating actions that may be credited include the staging of Potassium Iodide (KI) and Self-Contained Breathing Apparatuses (SCBAs) for use by control room occupants, [and] temporary realignment of ventilation systems [, and].
- e. The VBTP required testing of the CRB and the CREFS specified by [SR 3.7.10.4] shall include:
1. Measurements of the differential pressure across the CRB (control room pressure minus external pressure, both measured adjacent to the CRB) at representative locations for each external area adjacent to the CRB. These measurements shall be taken while facility ventilation systems are operating in the alignment identified as limiting for each response of the facility to radiological, chemical, and fire hazards. For each control room ventilation system alignment, concurrent with the differential pressure measurements, the system flow balance, e.g., CREFS makeup, recirculation, and exhaust, shall be measured in accordance with ASME N510 or ASTM E2029-99.
 2. A determination of whether the differential pressure across the CRB and the flow rates of the ventilation system[s] have changed since the ASTM E741 test (SR 3.7.10.5) was last performed.

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- f. The VBTP required testing of the CRB specified by [SR 3.7.10.5] shall be conducted concurrently with [SR 3.7.10.4] and shall include:
 - 1. A demonstration, in accordance with Regulatory Guide 1.197 and ASTM E741, that unfiltered leakage into the control room past the CRB is less than:
 - (a) [150 cfm] when each [CREFS] train is aligned and operating in the [radiological] mode of operation,
 - (b) [300 cfm] when each [CREFS] train is aligned and operating in the [hazardous chemical and fire] mode of operation, and
 - (c) [1000 cfm] when the [normal control room ventilation system] is aligned and operating in the [normal] mode of operation.
 - 2. A demonstration that the measured values of the following items are consistent with the values measured when the ASTM E741 test was last performed:
 - (a) Control room ventilation system flow rates, e.g., makeup, exhaust, recirculation, etc., when measured in accordance with ASME N510 or ASTM E2029-99.
 - (b) [Total] leakage, past the [normal makeup isolation dampers, the normal exhaust dampers, and the], when measured in accordance with ASME N510 or ASTM E2029-99.
 - (c) Differential pressure across the CRB, when measured in accordance with SR 3.7.10.4 and Specification 5.5.18.e.1.
- g. The VBTP shall require an assessment of any change in differential pressure or flow rate, measured in accordance with SR 3.7.10.4 or 3.7.10.5, to determine whether unfiltered leakage into the control room past the CRB may have changed since the ASTM E741 test was last performed.
- h. The VBTP, upon determining that unfiltered leakage into the control room past the CRB has increased, shall require an assessment of the validity of the licensing basis analyses related to control room occupant radiological dose, exposure to hazardous chemicals, and in the event of a fire, the capability to control the reactor from within the control room or the [alternate] shutdown panel.

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5.5.18 Ventilation Boundary Test Program (continued)

1. The VBTP, upon determining that a licensing basis analysis is no longer valid, shall require declaring the CRB, the CREFS train, or both, as appropriate, inoperable.
2. The VBTP, upon declaring the CRB inoperable, shall require an assessment to determine whether, following a design basis radiological, hazardous chemical, or fire event, the measured unfiltered leakage into the control room past the CRB could result in simultaneous loss of reactor control capability from both the control room and the [alternate] shutdown panel. Such a loss of reactor control capability constitutes a failure to meet the control room occupant protection requirements, regardless of any mitigating actions that may be implemented.
- i. The VBTP shall require that testing as specified by [SR 3.7.12.4], [SR 3.7.13.4], and [SR 3.7.14.4], for the [ECCS pump room] boundary and the ECCS PREACS; the [fuel building] boundary and the FBACS; and the [penetration room] boundary and the PREACS], respectively, include demonstrating:
 1. One ECCS PREACS train can maintain [each] ECCS pump room pressure \leq [-0.125] inches water gauge relative to pressure of all external areas adjacent to [the] [each] ECCS pump room boundary during the [post accident] mode of operation at a flow rate of \leq [3000] cfm.
 2. One FBACS train can maintain a fuel building pressure \leq [-0.125] inches water gauge with respect to pressure of all external areas adjacent to the fuel building boundary during the [post accident] mode of operation at a flow rate \leq [20,000] cfm.
 3. One PREACS train can maintain [each] [penetration room] pressure \leq [-0.125] inches water gauge relative to pressure of all external areas adjacent to [the] [each] penetration room boundary during the [post accident] mode of operation at a flow rate of \leq [3000] cfm.
 4. The measured flow rate for each specified ventilation system train comes from the associated area after passing through the associated area's boundary.
 5. The exhaust for each specified ventilation system does not bypass the release location accounted for in the accident analyses.
- j. The VBTP, upon failure to demonstrate any of the criteria of Specification 5.5.18.i are met, shall require declaring the affected boundary, ventilation system train, or both, as appropriate, inoperable.

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5.5.18 Ventilation Boundary Test Program (continued)

- k. The provisions of SR 3.0.2 are applicable to the VBTP required test frequencies.
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