3/4.3.2 ENGINEERED SAFETY FEATURE ACTUATION SYSTEM INSTRUMENTATION

LIMITING CONDITION FOR OPERATION

3.3.2 The Engineered Safety Feature Actuation System (ESFAS) instrumentation channels and bypasses shown in Table 3.3-3 shall be OPERABLE with their trip setpoints set consistent with the values shown in the Trip Setpoint column of Table 3.3-4 and with RESPONSE TIMES as shown in Table 3.3-5.

APPLICABILITY: As shown in Table 3.3-3.*

ACTION:

    a.   With an ESFAS instrumentation channel trip setpoint less conservative than the value shown in the Allowable Values column of Table 3.3-4, declare the channel inoperable and apply the applicable ACTION requirement of Table 3.3-3 until the channel is restored to OPERABLE status with the trip setpoint adjusted consistent with the Trip Setpoint value.

    b.   With an ESFAS instrumentation channel inoperable, take the ACTION shown in Table 3.3-3.

SURVEILLANCE REQUIREMENTS

4.3.2.1 Each ESFAS instrumentation channel shall be demonstrated OPERABLE by the performance of the CHANNEL CHECK, CHANNEL CALIBRATION and CHANNEL FUNCTIONAL TEST operations for the MODES and at the frequencies shown in Table 4.3-2.

4.3.2.2 The logic for the bypasses shall be demonstrated OPERABLE during the at power CHANNEL FUNCTIONAL TEST of channels affected by bypass operation. The total bypass function shall be demonstrated OPERABLE at least once per 18 months during CHANNEL CALIBRATION testing of each channel affected by bypass operation.

4.3.2.3 The ENGINEERED SAFETY FEATURES RESPONSE TIME of each ESFAS function shall be demonstrated to be within the limit at least once per 18 months. Each test shall include at least one channel per function such that all channels are tested at least once every N times 18 months where N is the total number of redundant channels in a specific ESFAS function as shown in the "Total No. of Channels" Column of Table 3.3-3.

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*See Special Test Exception 3.10.5

Table 3.3-5 (Continued)

INITIATING SIGNAL AND FUNCTION	RESPONSE TIME (SEC)

5. Steam Generator Pressure - Low

    a.   MSIS

        (1) Main Steam Isolation (MSIV)   20.9

        (2) Main Feedwater Isolation   10.9

6. Refueling Water Storage Tank - Low

    a.   RAS

        (1) Containment Sump Valves Open   50.7*

        (2) ECCS Miniflow Valves Shut   40.7*

7. 4.16 kv Emergency Bus Undervoltage

    a.   LOV (loss of voltage and degraded voltage)   Figure 3.3-1

8. Steam Generator Level - Low (and No Pressure-Low Trip)

    a.   EFAS

        (1) Auxiliary Feedwater (AC trains)   40.9*

        (2) Auxiliary Feedwater (steam/DC train)   30.9

9. Steam Generator Level - Low (and ΔP - High)

    a.   EFAS

        (1) Auxiliary Feedwater (AC trains)   40.9*

        (2) Auxiliary Feedwater (Steam/DC train)   30.9

10. Control Room Ventilation Airborne Radiation

    a.   CRIS

        (1) Control Room Ventilation - Emergency Mode   Not Applicable

11. Control Room Toxic Gas (Chlorine)

    a.   TGIS

        (1) Control Room Ventilation - Isolation Mode   16 (NOTE 5)

12. Control Room Toxic Gas (Ammonia)

    a.   TGIS

        (1) Control Room Ventilation - Isolation Mode   36 (NOTE 5)

Table 3.3-5 (Continued)

INITIATING SIGNAL AND FUNCTION   RESPONSE TIME (SEC)

13. Control Room Toxic Gas (Butane/Propane)

     a. TGIS

         (1) Control Room Ventilation -
             Isolation Mode   36 (NOTE 5)

14. Control Room Toxic Gas (Carbon Dioxide)

     a. TGIS

         (1) Control Room Ventilation -
             Isolation Mode   36 (NOTE 5)

15. Fuel Handling Building Airborne Radiation

     a. FHIS

         (1) Fuel Handling Building Post-Accident
             Cleanup Filter System   Not Applicable

16. Containment Airborne Radiation

     a. CPIS

         (1) Containment Purge Isolation   2 (NOTE 2)

17. Containment Area Radiation

     a. CPIS

         (1) Containment Purge Isolation   2 (NOTE 2)

NOTES:

1. Response times include movement of valves and attainment of pump or blower discharge pressure as applicable.

* Emergency diesel generator starting delay (10 sec.) and sequence loading delays for SIAS are included.

2. Response time includes emergency diesel generator starting delay (applicable to AC motor operated valves other than containment purge valves), instrumentation and logic response only. Refer to table 3.6-1 for containment isolation valve closure times.

3. All CIAS-Actuated valves except MSIVs and MFIVs.

4. CCW non-critical loop isolation valves 2HV-6212, 2HV-6213, 2HV-6218 and 2HV-6219.

5. Response time includes instrumentation, logic, and isolation damper closure times only.