

TABLE 4.3-7ACCIDENT MONITORING INSTRUMENTATION SURVEILLANCE REQUIREMENTS

<u>INSTRUMENT</u>	<u>CHANNEL CHECK</u>	<u>CHANNEL CALIBRATION</u>
1. Containment Pressure	M	R
2. Reactor Coolant Outlet Temperature - T_{HOT} (Wide Range)	M	R
3. Reactor Coolant Inlet Temperature - T_{COLD} (Wide Range)	M	R
4. Reactor Coolant Pressure - Wide Range	M	R
5. Pressurizer Water Level	M	R
6. Steam Line Pressure	M	R
7. Steam Generator Water Level - Narrow Range	M	R
8. Refueling Water Storage Tank Water Level	M	R
9. Auxiliary Feedwater Flow Rate	M	R
10. Reactor Coolant System Subcooling Margin Monitor	M	R
11. PORV Position Indicator	M	R **
12. PORV Block Valve Position Indicator	M	R * -
13. Pressurizer Safety Valve Position Indicator	M	R
14. Containment Sump Water Level (Wide Range)	M	R

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TABLE 4.3-7 (Continued)
ACCIDENT MONITORING INSTRUMENTATION SURVEILLANCE REQUIREMENTS

<u>INSTRUMENT</u> (Continued)	<u>CHANNEL CHECK</u>	<u>CHANNEL CALIBRATION</u>
15. In Core Thermocouples	M	R
16. Unit Vent - High-High Range Area Monitor (EMF-54)	M	R
17. Steam Relief Valve Exhaust Radiation Monitor (1EMF-26, 27, 28 and 29 and 2EMF-10, 11, 12 and 13)	M	R
18. Containment Area - High Range Radiation Monitor (EMF-53 A&B)	M	R*,**
19. Reactor Vessel Water Level	M	R
20. Reactor Coolant Radiation Level (EMF-48)	M	R

*CHANNEL CALIBRATION may consist of an electronic calibration of the channel, not including the detector, for range decades above 10R/h and a one point calibration check of the detector below 10R/h with an installed or portable gamma source.

** This surveillance need not be performed until prior to entering HOT STANDBY following The Unit 1 first refueling (this applies to Unit 1 only).

INSTRUMENTATION

LOOSE-PART DETECTION SYSTEM

LIMITING CONDITION FOR OPERATION

3.3.3.9 The Loose-Part Detection System shall be OPERABLE.

APPLICABILITY: MODES 1 and 2.

ACTION:

- a. With one or more Loose-Part Detection System channels inoperable for more than 30 days, prepare and submit a Special Report to the Commission pursuant to Specification 6.9.2 within the next 10 days outlining the cause of the malfunction and the plans for restoring the channel(s) to OPERABLE status.
- b. The provisions of Specifications 3.0.3 and 3.0.4 are not applicable.

SURVEILLANCE REQUIREMENTS

4.3.3.9 Each channel of the Loose-Part Detection Systems shall be demonstrated OPERABLE by performance of:

- a. A CHANNEL CHECK at least once per 24 hours,
- b. An ANALOG CHANNEL OPERATIONAL TEST except for verification of Setpoint at least once per 31 days, and
- c. A CHANNEL CALIBRATION at least once per 18 months.*

* This surveillance need not be performed until prior to entering STARTUP following the Unit 1 first refueling (This applies to Unit 1 only).

INSTRUMENTATION

3/4.3.4 TURBINE OVERSPEED PROTECTION

LIMITING CONDITION FOR OPERATION

3.3.4 At least one Turbine Overspeed Protection System shall be OPERABLE.

APPLICABILITY: MODES 1, 2, and 3.

ACTION:

- a. With one stop valve or one control valve per high pressure turbine steam line inoperable and/or with one intermediate stop valve or one intercept valve per low pressure turbine steam line inoperable, restore the inoperable valve(s) to OPERABLE status within 72 hours, or close at least one valve in the affected steam line(s) or isolate the turbine from the steam supply within the next 6 hours.
- b. With the above required Turbine Overspeed Protection System otherwise inoperable, within 6 hours isolate the turbine from the steam supply.

SURVEILLANCE REQUIREMENTS

4.3.4.1 The provisions of Specification 4.0.4 are not applicable.

4.3.4.2 The above required Turbine Overspeed Protection System shall be demonstrated OPERABLE:

- a. At least once per 7 days while in MODE 1 and while in MODE 2 with the turbine operating, by cycling each of the following valves through at least one complete cycle from the running position:
 - 1) Four high pressure turbine stop valves,
 - 2) Six low pressure turbine intermediate stop valves, and
 - 3) Six low pressure turbine intercept valves.
- b. At least once per 31 days while in MODE 1 and while in MODE 2 with the turbine operating, by direct observation of the movement of each of the above valves and the four high pressure turbine control valves, through one complete cycle from the running position,
- c. At least once per 18 months by performance of a CHANNEL CALIBRATION on the Turbine Overspeed Protection Systems*, and
- d. At least once per 40 months by disassembling at least one of each of the above valves (including the four high pressure turbine control valves) and performing a visual and surface inspection of valve seats, disks and stems and verifying no unacceptable flaws or corrosion.

* This surveillance need not be performed until prior to entering HOT STANDBY following the Unit 1 first refueling (this applies to Unit 1 only).

REACTOR COOLANT SYSTEM

3/4.4.6 REACTOR COOLANT SYSTEM LEAKAGE

LEAKAGE DETECTION SYSTEMS

LIMITING CONDITION FOR OPERATION

3.4.6.1 The following Reactor Coolant System Leakage Detection Systems shall be OPERABLE:

- a. The Containment Atmosphere Gaseous Radioactivity Monitoring System,
- b. The Containment Floor and Equipment Sump Level and Flow Monitoring Subsystem, and
- c. Either the Containment Ventilation Unit Condensate Drain Tank Level Monitoring Subsystem or the Containment Atmosphere Particulate Radioactivity Monitoring System.

APPLICABILITY: MODES 1, 2, 3, and 4.

ACTION:

With only two of the above required Leakage Detection Systems OPERABLE, operation may continue for up to 30 days provided grab samples of the containment atmosphere are obtained and analyzed at least once per 24 hours when the required Gaseous or Particulate Radioactivity Monitoring System is inoperable; otherwise, be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

SURVEILLANCE REQUIREMENTS

4.4.6.1 The Leakage Detection Systems shall be demonstrated OPERABLE by:

- a. Containment Atmosphere Gaseous and Particulate Monitoring System-performance of CHANNEL CHECK, CHANNEL CALIBRATION, and ANALOG CHANNEL OPERATIONAL TEST at the frequencies specified in Table 4.3-3,
- b. Containment Floor and Equipment Sump Level and Flow Monitoring Subsystem-performance of CHANNEL CALIBRATION at least once per 18 months*, and
- c. Containment Ventilation Unit Condensate Drain Tank Level Monitoring Subsystem-performance of CHANNEL CALIBRATION at least once per 18 months.

* This surveillance need not be performed until prior to entering HOT SHUTDOWN following the Unit 1 first refueling (this applies to Unit 1 only).

CONTAINMENT SYSTEMS

SURVEILLANCE REQUIREMENTS (Continued)

- a. Three Type A tests (Overall Integrated Containment Leakage Rate) shall be conducted at 40 ± 10 month intervals during shutdown at either P_a , 14.68 psig, or (Unit 1) at P_t , 7.34 psig, during each 10-year service period. The third test of each set shall be conducted during the shutdown for the 10-year plant inservice inspection;
- b. If any periodic Type A test fails to meet either $0.75 L_a$ or (Unit 1) $0.75 L_t$, the test schedule for subsequent Type A tests shall be reviewed and approved by the Commission. If two consecutive Type A tests fail to meet either $0.75 L_a$ or (Unit 1) $0.75 L_t$, a Type A test shall be performed at least every 18 months until two consecutive Type A tests meet either $0.75 L_a$ or (Unit 1) $0.75 L_t$ at which time the above test schedule may be resumed;
- c. The accuracy of each Type A test shall be verified by a supplemental test which:
 - 1) Confirms the accuracy of the test by verifying that the supplemental test result, L_c , minus the sum of the Type A and the superimposed leak, L_o , is equal to or less than $0.25 L_a$ or (Unit 1) $0.25 L_t$;
 - 2) Has a duration sufficient to establish accurately the change in leakage rate between the Type A test and the supplemental test;
 - 3) Requires that the rate at which gas is injected into the containment or bled from the containment during the supplemental test is between $0.75 L_a$ and $1.25 L_a$ or (Unit 1) $0.75 L_t$ and $1.25 L_t$.
- d. Type B and C tests shall be conducted with gas at a pressure not less than P_a , 14.68 psig, at intervals no greater than 24 months* except for tests involving:
 - 1) Air locks,
 - 2) Purge supply and exhaust isolation valves with resilient material seals, and
 - 3) Dual-ply bellows assemblies on containment penetrations between the containment building and the annulus.
- e. The combined bypass leakage rate shall be determined to be less than $0.07 L_a$ by applicable Type B and C tests at least once per 24 months except for penetrations which are not individually testable; penetrations not individually testable shall be determined to have no detectable leakage when tested with soap bubbles while the containment is pressurized to P_a , 14.68 psig, or (Unit 1) P_t , 7.34 psig, during each Type A test;

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* This surveillance need not be performed for those penetrations identified in Table 3.6-1a until prior to entering HOT SHUTDOWN following the Unit 1 first refueling (This applies to Unit 1 only).

Table 3.6-1a

Unit one penetrations (all are test type C) that need not be tested until prior to entering HOT SHUTDOWN following the Unit One first refueling.

<u>PENETRATION NUMBER</u>	<u>SERVICE</u>	<u>RELEASE LOCATION</u>
M230	Nuclear Service Water from Reactor Coolant Pump and Lower Containment Ventilation Units.	Auxiliary Building
M215	Breathing Air	Auxiliary Building
M219	Station Air	Auxiliary Building
M358	Refueling Water Pump Suction	Auxiliary Building
M356	Equipment Decontamination Line	Auxiliary Building
M345	Recycle Holdup Tank from Reactor Coolant Drain Tank (Valve IWL806 only)	Auxiliary Building
M204	Containment Air Addition	Auxiliary Building
M259	Reactor Makeup Water Flush Header	Auxiliary Building
E101-450	Electrical penetrations for various equipment	Auxiliary Building
M374	Containment Floor Sump and Incore Instrumentation Sump Pump Discharge	Auxiliary Building

PLANT SYSTEMS

SURVEILLANCE REQUIREMENTS (Continued)

1.7.13.5 The Steam Turbine Driven Auxiliary Feedwater Pump and associated components shall be demonstrated OPERABLE at least once per 18 months by verifying that the system functions as designed from the Standby Shutdown System.

4.7.13.6 Each Standby Shutdown System instrumentation device shall be demonstrated OPERABLE by performance of a CHANNEL CHECK at least once per 31 days and a CHANNEL CALIBRATION at least once per 18 months*

* The CHANNEL CALIBRATION requirement of this surveillance need not be performed for evel transmitter 1CFLT5632 until prior to entering HOT STANDBY following the Unit 1 first refueling (this applies to Unit 1 only).

ELECTRICAL POWER SYSTEMS

SURVEILLANCE REQUIREMENTS (Continued)

- 1) By verifying in accordance with the tests specified in ASTM-D975-81 prior to addition to the storage tanks that the sample has:
 - a) An API Gravity of within 0.3 degrees at 60°F, or a specific gravity of within 0.0016 at 60/60°F, when compared to the supplier's certificate, or an absolute specific gravity at 60/60°F of greater than or equal to 0.83 but less than or equal to 0.89, or an API gravity of greater than or equal to 27 degrees but less than or equal to 39 degrees;
 - b) A kinematic viscosity at 40°C of greater than or equal to 1.9 centistokes, but less than or equal to 4.1 centistokes (alternatively, Saybolt viscosity, SUS at 100°F of greater than or equal to 32.6, but less than or equal to 40.1), if gravity was not determined by comparison with the supplier's certification;
 - c) A flash point equal to or greater than 125°F; and
 - d) A clear and bright appearance with proper color when tested in accordance with ASTM-D4176-82.
- 2) By verifying within 30 days of obtaining the sample that the other properties specified in Table 1 of ASTM-D975-81 are met when tested in accordance with ASTM-D975-81 except that the analysis for sulfur may be performed in accordance with ASTM-D1552-79 or ASTM-D2622-82.
- f. At least once every 31 days by obtaining a sample of fuel oil in accordance with ASTM-D2276-78, and verifying that total particulate contamination is less than 10 mg/liter when checked in accordance with ASTM-D2276-78, Method A;
- g. At least once per 18 months, during shutdown, by:
 - 1) Subjecting the diesel to an inspection in accordance with procedures prepared in conjunction with its manufacturer's recommendations for this class of standby service,*
 - 2) Verifying the generator capability to reject a load of greater than or equal to 825 kW while maintaining voltage at 4160 ± 420 volts and frequency at 60 ± 1.2 Hz;
 - 3) Verifying the generator capability to reject a load of greater than or equal to 5600 kW but less than or equal to 5750 kW without tripping. The generator speed shall not exceed 500 rpm during and following the load rejection;
 - 4) Simulating a loss-of-offsite power by itself, and:
 - a) Verifying deenergization of the emergency busses and load shedding from the emergency busses, and

*This surveillance need not be performed until prior to entering HOT SHUTDOWN following the Unit 1 first refueling (this applies to unit 1 only).

ELECTRICAL POWER SYSTEMS

3/4.8.4 ELECTRICAL EQUIPMENT PROTECTIVE DEVICES

CONTAINMENT PENETRATION CONDUCTOR OVERCURRENT PROTECTIVE DEVICES

LIMITING CONDITION FOR OPERATION

3.8.4 All containment penetration conductor overcurrent protective devices given in Tables 3.8-1a and 3.8-1b shall be OPERABLE.

APPLICABILITY: MODES 1, 2, 3, and 4.

ACTION:

With one or more of the containment penetration conductor overcurrent protective device(s) given in Tables 3.8-1a and 3.8-1b inoperable:

- a. Restore the protective device(s) to OPERABLE status or de-energize the circuit(s) by tripping the associated backup circuit breaker or racking out or removing the inoperable circuit breaker within 72 hours, declare the affected system or component inoperable, and verify the backup circuit breaker to be tripped or the inoperable circuit breaker racked out or removed at least once per 7 days thereafter; the provisions of Specification 3.0.4 are not applicable to overcurrent devices in circuits which have their backup circuit breakers tripped, their inoperable circuit breakers racked out, or removed, or
- b. Be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

SURVEILLANCE REQUIREMENTS

4.8.4 All containment penetration conductor overcurrent protective devices given in Tables 3.8-1a and 3.8-1b shall be demonstrated OPERABLE:

- a. At least once per 18 months:
 - 1) By verifying that the medium voltage (4-15 kV) circuit breakers are OPERABLE by selecting, on a rotating basis, at least 10% of the circuit breakers of each voltage level, and performing the following:
 - a) A CHANNEL CALIBRATION of the associated protective relays,
 - b) An integrated protective system functional test which includes simulated automatic actuation of the system and verifying that each relay and associated circuit breakers function as designed, and

* This surveillance need not be performed until prior to entering HOT SHUTDOWN following the Unit 1 first refueling (this applies to Unit 1 only).