

The containment cooling function is provided by two independent systems: (1) fan-coolers and (2) containment spray. During normal power operation, the five fan-coolers are required to remove heat lost from equipment and piping within containment at design conditions (with a cooling water temperature of 95°F)⁽¹²⁾. In the event of a Design Basis Accident, sufficient cooling to reduce containment pressure at a rate consistent with limiting offsite doses to acceptable values is provided by three fan-cooler units and one spray pump. These constitute the minimum safeguards and are capable of being operated on emergency power with one diesel generator inoperable.

The iodine removal function is provided by two independent operating trains of the containment spray system. In the event of a Design Basis Accident, one containment spray pump provides sufficient flow to remove air borne elemental and particulate iodine at a rate consistent with limiting offsite doses to acceptable values.

Adequate power for operation of the redundant containment heat removal systems (i.e., five fan-cooler units or two containment spray pumps) is assured by the availability of offsite power or operation of all emergency diesel generators.

The operability of the recirculation fluid pH control system ensures that there is sufficient trisodium phosphate (TSP) available in containment to guarantee a sump pH ≥ 7.0 during the recirculation phase of a postulated LOCA. This pH level is required to reduce the potential for chloride induced stress corrosion of austenitic stainless steel and assure the retention of iodine in the recirculating fluid. The specified amounts of TSP will result in a recirculation fluid pH between 7.0 and 9.5.

One of the five fan cooler units is permitted to be inoperable during power operation. This is an abnormal operating situation, in that the normal plant operating procedures require that an inoperable fan-cooler be repaired as soon as practical.

However, because of the difficulty of gaining access to make repairs, it is important on occasion to be able to operate temporarily without at least one fan-cooler. Compensation for this mode of operation is provided by the high degree of redundancy of containment cooling systems during a Design Basis Accident.

The Component Cooling System is different from the system discussed above in that the pumps are so located in the Auxiliary Building as to be accessible for repair after a loss-of-coolant accident⁽⁶⁾. During the recirculation phase following a loss-of-coolant accident, only one of the three component cooling pumps is required for minimum safeguards⁽⁷⁾. With two operable component cooling pumps, 100% redundancy will be provided. A total of three operable component cooling pumps will provide 200% redundancy. The 14 day out of service period for the third component cooling pump is allowed since this is the 200% redundant pump.

Table 3.6-1

Non-Automatic Containment Isolation Valves Open Continuously
Or Intermittently for Plant Operation

3418	851A	SWN-44-5-A or B ⁽¹⁾	1814B
3419	850A	SWN-51-5 ⁽¹⁾	1814C
		SWN-44-1-A or B ⁽¹⁾	
4136	851B	SWN-51-1 ⁽¹⁾	5018
			5019
744	850B	SWN-44-2-A or B ⁽¹⁾	5020
		SWN-51-2 ⁽¹⁾	
888A	859A	SWN-44-3-A or B ⁽¹⁾	5021
888B	859C	SWN-51-3 ⁽¹⁾	5022
958			5023
959	3416	SWN-44-4-A or B ⁽¹⁾	5024
990D	3417	SWN-51-4 ⁽¹⁾	5025
1870	5459	SWN-71-5-A or B ⁽¹⁾	E-2
743	753H	SWN-71-1-A or B ⁽¹⁾	E-1
732	753G	SWN-71-2-A or B ⁽¹⁾	E-3
885A	SWN-41-5-A or B ⁽¹⁾	SWN-71-3-A or B ⁽¹⁾	E-5
885B	SWN-42-5	SWN-71-4-A or B ⁽¹⁾	MW-17
			MW-17-1
205	SWN-43-5	SA-24	85C
226	SWN-41-1-A or B ⁽¹⁾	SA-24-1	85D
227	SWN-42-1	PCV-1111-1	95C
250A	SWN-43-1	PCV-1111-2	95D
4925	SWN-41-2-A or B ⁽¹⁾	580A	IIP-500
250B	SWN-42-2	580B	IIP-501
4926	SWN-43-2	UH-43	IIP-502
250C	SWN-41-3-A or B ⁽¹⁾	UH-44	IIP-503
4927	SWN-42-3		IIP-504
250D	SWN-43-3		IIP-505
4928	SWN-41-4-A or B ⁽¹⁾	1814A	IIP-506
869A	SWN-42-4		IIP-507
878A	SWN-43-4		
869B			

(1) Either A or B valve(s) may serve as the required containment isolation valve(s) for the SWN-41, SWN-44 and SWN-71 series. Designation of the B valves(s) in the SWN-44 series requires the codesignation of the SWN-51 valve(s) associated with the penetration(s) as an additional required containment isolation valves(s).

refueling crane for this event must be equal to or greater than the maximum load to be assumed by the refueling crane during the refueling operation. A thorough visual inspection of the refueling crane shall be made after the dead-load test and prior to fuel handling.

6. The fuel storage building charcoal filtration system must be operating whenever spent fuel movement is taking place within the spent fuel storage areas unless the spent fuel has had a continuous 35-day decay period.
 7. Radiation levels in the spent fuel storage area shall be monitored continuously whenever spent fuel movement is taking place in that area.
 8. The equipment door, or a closure plate that restricts direct air flow from the containment, shall be properly installed. In addition, at least one isolation valve shall be operable or locked closed in each line penetrating the containment and which provides a direct path from containment atmosphere to the outside.
 9. Radiation levels in containment shall be monitored continuously.
 10. During alteration of the core (including fuel loading or transfer), a person holding a senior operator license or a senior operator license limited to fuel handling shall be present to directly supervise the activity and, during this time, this person shall not be assigned other duties.
 11. The minimum water level above the top of the reactor pressure vessel flange shall be at least 23 feet (El. 92'0") whenever movement of spent fuel is taking place inside the containment.
 12. If any of the conditions specified above cannot be met, suspend all operations under this specification (3.8.B). Suspension of operations shall not preclude completion of movement of the above components to a safe conservative position.
- C. The following conditions are applicable to the spent fuel pit any time it contains irradiated fuel:
1. The spent fuel cask shall not be moved over any region of the spent fuel pit until the cask handling system has been reviewed by the Nuclear Regulatory Commission and found to be acceptable. Furthermore, any load in excess of the nominal weight of a spent fuel storage rack and associated handling tool shall

Table 4.1-1

Minimum Frequencies for Checks, Calibrations and
Tests of Instrument Channels

Channel Description	Check	Calibrate	Test	Remarks
8.a 6.9 kV Voltage	N.A.	R##	Q	
8.b 6.9 kV Frequency	N.A.	R##	Q (1) R# (2)	1) Underfrequency relay actuation only. 2) The full test including RCP breaker trip upon underfrequency relay actuation and reactor trip logic relay actuation upon tripping of the RCP breaker.
9. Analog Rod Position	S	R#	M	
10. Rod Position Bank Counters	S	N.A.	N.A.	With analog rod position
11. Steam Generator Level	S	R#	Q	Calibration of transmitters extended on a one time basis to 37 months.
12. Charging Flow	N.A.	R#	N.A.	
13. Residual Heat Removal Pump Flow	N.A.	R##	N.A.	Calibration of transmitters extended on a one time basis to 37 months.
14. Boric Acid Tank Level	W	R#	N.A.	
15. Refueling Water Storage Tank Level	W	Q	N.A.	
16. DELETED				
17. Volume Control Tank Level	N.A.	R##	N.A.	
18a. Containment Pressure	D	R#	Q	Wide Range
18b. Containment Pressure	S	R#	Q	Narrow Range

Table 4.4-1

Containment Isolation Valves

Valve No.	System ⁽¹⁾	Test Fluid ⁽²⁾	Minimum Test Pressure (PSIG)
4399	Sample Return to Cont. Sump.	Water ⁽⁴⁾	52
5132	" " "	Water ⁽⁴⁾	52
IIP-500	22 S.G. Level	Gas	47
IIP-501	" " "	Gas	47
IIP-502	21 S.G. Level	Gas	47
IIP-503	" " "	Gas	47
IIP-504	Pressurizer Level	Gas	47
IIP-505	" "	Gas	47
IIP-506	Pressurizer Pressure	Gas	47
IIP-507	" "	Gas	47

Notes:

1. System in which valve is located.
2. Gas test fluid indicates either nitrogen or air as test medium.
3. Testable only when at cold shutdown.
4. Isolation Valve Seal Water System.
5. Sealed by Residual Heat Removal System fluid.
6. Sealed by Service Water System. Either A or B valve(s) may serve as the required containment isolation valve(s) for the SWN-41, SWN-44 and SWN-71 series. Designation of the B valve(s) in the SWN-44 series requires the codesignation of the SWN-51 valve(s) associated with the penetration(s) as an additional required containment isolation valve(s).
7. Sealed by Weld Channel and Penetration Pressurization System.

4.19 METEOROLOGICAL MONITORING SYSTEM

Applicability

This specification applies to the surveillance requirements for the meteorological monitoring system.

Objective

To verify operability of the meteorological monitoring system such that adequate measurement and documentation of meteorological conditions at the site can be effected.

Specifications

- A. Each meteorological monitoring instrumentation channel shall be demonstrated operable by performance of the surveillance testing required by Table 4.19-1.
- B. Meteorological data shall be summarized and reported as required for inclusion in the Annual Radioactive Effluent Release Report pursuant to Specification 6.9.1.6.

Basis

This specification assures the operability of the meteorological monitoring instrumentation and the collection of meteorological data at the plant site. This data is used for estimating potential radiation doses to the public resulting from routine or accidental releases of radioactive materials to the atmosphere. A meteorological data collection program, as described in this specification, is necessary to meet the requirements of 10 CFR 50.36a (a) (2), Appendix E to 10 CFR 50 and 10 CFR 51.

6.11 RADIATION PROTECTION PROGRAM

Procedures for personnel radiation protection shall be prepared consistent with the requirements of 10 CFR Part 20 and shall be approved, maintained and adhered to for all operations involving personnel radiation exposure.

6.12 HIGH RADIATION AREA

6.12.1 As an acceptable alternative to the "control device" or "alarm signal" required by 10 CFR 20.203(c)(2):

- a. Each High Radiation Area in which the intensity of radiation is greater than 100 mrem/hr but less than 1000 mrem/hr shall be barricaded and conspicuously posted as a High Radiation Area and entrance thereto shall be controlled by issuance of a Radiation Work Permit and any individual or group of individuals permitted to enter such areas shall be provided with a radiation monitoring device which continuously indicates the radiation dose rate in the area.
- b. Each High Radiation Area in which the intensity of radiation is greater than 1000 mrem/hr shall be subject to the provisions of Specification 6.12.1(a) above, and in addition locked doors shall be provided to prevent unauthorized entry to such areas and the keys shall be maintained under the administrative control of the Radiation Protection Manager and/or the Shift Manager on duty.

6.13 ENVIRONMENTAL QUALIFICATION

6.13.1 By no later than June 30, 1982 all safety-related electrical equipment in the facility shall be qualified in accordance with the provisions of Division of Operating Reactors "Guidelines for Evaluating Environmental Qualification of Class IE Electrical Equipment in Operating Reactors" (DOR Guidelines), or NUREG-0588 "Interim Staff Position on Environmental Qualification of Safety-Related Electrical Equipment," December 1979. Copies of these documents are attached to Order for Modification of License No. DPR-26 dated October 24, 1980.

6.13.2 By no later than December 1, 1980, complete and auditable records must be available and maintained at a central location which describe the environmental qualification method used for all safety-related electrical equipment in sufficient detail to document the degree of compliance with the DOR Guidelines or NUREG-0588. Thereafter, such records should be updated and maintained current as equipment is replaced, further tested, or otherwise further qualified.

6.14 PROCESS CONTROL PROGRAM (PCP)

6.14.1 Licensee initiated changes to the PCP:

1. Shall be submitted to the Commission in the Annual Radioactive Effluent Release Report for the period in which the change(s) was made. This submittal shall contain:
 - a. sufficiently detailed information to totally support the rationale for the change without benefit of additional or supplemental information,
 - b. a determination that the change did not reduce the overall conformance of the solidified waste product to existing criteria for solid wastes, and
 - c. documentation of the fact that the change has been reviewed and found acceptable by the SNSC.
2. Shall become effective upon review and acceptance by the SNSC.

6.15 OFFSITE DOSE CALCULATION MANUAL (ODCM)

6.15.1 The ODCM shall be approved by the Commission prior to implementation.

6.15.2 Licensee initiated changes to the ODCM:

1. Shall be submitted to the Commission in the Semiannual Radioactive Effluent Release Report for the period in which the change(s) was made effective. This submittal shall contain:
 - ā. sufficiently detailed information to totally support the rationale for the change without benefit of additional or supplemental information. Information submitted should consist of those pages of the ODCM to be changed with each page numbered and provided with an approval and date box, together with appropriate analyses or evaluation justifying the change(s),
 - b. a determination that the change will not reduce the accuracy or reliability of dose calculations or setpoint determinations, and
 - c. documentation of the fact the change has been revised and found acceptable by the SNSC.