TABLE 4.3.7.5-1

ACCIDENT MONITORING INSTRUMENTATION SURVEILLANCE REQUIREMENTS

INSTRUMENT		CHANNEL CHECK	CHANNEL CALIBRATION	APPLICABLE OPERATIONAL CONDITIONS
1.	Reactor Vessel Pressure	M	R	1, 2
2.	Reactor Vessel Water Level	M	R	1, 2
3.	Suppression Chamber Water Level	M	R	1, 2
4.	Suppression Chamber Water Temperature	M	R	1, 2
5.	Suppression Chamber Air Temperature	M	R	1, 2
6.	Primary Containment Pressure	M	R	1, 2
7.	Drywell Air Temperature	M	R	1, 2
8.	Drywell Oxygen Concentration	M	R	1, 2
9.	Drywell Hydrogen Concentration	M	Q	1, 2
10.	Safety/Relief Valve Position Indicators*	M	R #	1, 2
11.	Suppression Chamber Pressure	M	R	1, 2
12.	Condensate Storage Tank Level	M	R	1, 2
13.	Main Steam Line Isolation Valve Leakage Control System Pressure	M	R	1, 2
14.	Neutron Flux:			
	APRM	M	R	1, 2
	IRM	M	R	1, 2
	SRM	M	R	1, 2
15.	RCIC Flow	M	R	1, 2
16.	HPCS Flow	M	R	1, 2
17.	LPCS Flow	M	R	1, 2

*This includes acoustic monitor, valve stem position, and tailpipe temperature instrument channels.

The provisions of Specification 4.0.4 are not applicable provided the surveillance is performed within 24 hours after reactor steam pressure is adequate to perform the test.

CONTROLLED COPY

3/4.4.2 SAFETY/RELIEF VALVES

LIMITING CONDITION FOR OPERATION

ACTION: (Continued)

valve(s) within 2 minutes or if suppression pool average water temperature is 110°F or greater, place the reactor mode switch in the Shutdown position.

c. With both the acoustic monitor and valve stem position indicator for one or more safety/relief valve(s) inoperable, restore either the acoustic monitor or valve stem position indicator to OPERABLE status within 7 days or be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.

SURVEILLANCE REQUIREMENTS

4.4.2 The position indicators for each safety/relief valve shall be demonstrated OPERABLE by performance of a:

a. CHANNEL CHECK at least once per 31 days, and a

b. CHANNEL CALIBRATION at least once per 18 months.**

**The provisions of Specification 4.0.4 are not applicable provided the surveillance is performed within ~~12~~ 24 hours after reactor steam pressure is adequate to perform the test.

SURVEILLANCE REQUIREMENTS (Continued)

e. For the ADS by:

1. At least once per 31 days by verifying that the accumulator backup compressed gas system pressure in each bottle is ≥ 2200 psig.

2. At least once per 31 days, performing a CHANNEL FUNCTIONAL TEST of the accumulator backup compressed gas system low pressure alarm system.

3. At least once per 18 months:

a) Performing a system functional test which includes simulated automatic actuation of the system throughout its emergency operating sequence, but excluding actual valve actuation.

b) Manually opening each ADS valve when the reactor steam dome pressure is greater than or equal to 100 psig* and observing that either:

1) The control valve or bypass valve position responds accordingly, or

2) There is a corresponding change in the measured steam flow.

c) Performing a CHANNEL CALIBRATION of the accumulator backup compressed gas system low pressure alarm system and verifying an initiation setpoint of ≥ 140 psig on decreasing pressure and an alarm setpoint ≥ 135 psig on decreasing pressure.

d) Verifying the nitrogen capacity in at least two accumulator bottles per division within the backup compressed gas system.

*The provisions of Specification 4.0.4 are not applicable provided the surveillance is performed within 12 hours after reactor steam pressure is adequate to perform the test.

L-24

MONITORING INSTRUMENTATION (Continued)

3/4.3.7.2 SEISMIC MONITORING INSTRUMENTATION

The OPERABILITY of the seismic monitoring instrumentation ensures that sufficient capability is available to promptly determine the magnitude of a seismic event and evaluate the response of those features important to safety. This capability is required to permit comparison of the measured response to that used in the design basis for the unit. This instrumentation is consistent with the recommendations of Regulatory Guide 1.12, "Instrumentation for Earthquakes," April 1974.

3/4.3.7.3 METEOROLOGICAL MONITORING INSTRUMENTATION

The OPERABILITY of the meteorological monitoring instrumentation ensures that sufficient meteorological data are available for estimating potential radiation doses to the public as a result of routine or accidental release of radioactive materials to the atmosphere. This capability is required to evaluate the need for initiating protective measures to protect the health and safety of the public. This instrumentation is consistent with the recommendations of Regulatory Guide 1.23, "Onsite Meteorological Programs," February, 1972.

3/4.3.7.4 REMOTE SHUTDOWN MONITORING INSTRUMENTATION

The OPERABILITY of the remote shutdown monitoring instrumentation ensures that sufficient capability is available to permit shutdown and maintenance of HOT SHUTDOWN of the unit from locations outside of the control room. This capability is required in the event control room habitability is lost and is consistent with General Design Criterion 19 of Appendix A to 10 CFR Part 50.

3/4.3.7.5 ACCIDENT MONITORING INSTRUMENTATION

The OPERABILITY of the accident monitoring instrumentation ensures that sufficient information is available on selected plant parameters to monitor and assess important variables following an accident. This capability is consistent with the recommendations of Regulatory Guide 1.97, "Instrumentation for Light Water Cooled Nuclear Power Plants to Assess Plant Conditions During and Following an Accident," December 1975 and NUREG-0737, "Clarification of TMI Action Plan Requirements," November 1980. Insert A

3/4.3.7.6 SOURCE RANGE MONITORS

The source range monitors provide the operator with information of the status of the neutron level in the core at very low power levels during startup and shutdown. At these power levels, reactivity additions shall not be made without this flux level information available to the operator. When the intermediate range monitors are on scale, adequate information is available without the SRMs and they can be retracted.

3/4.3.7.7 TRAVERSING IN-CORE PROBE SYSTEM

The OPERABILITY of the traversing in-core probe system with the specified minimum complement of equipment ensures that the measurements obtained from use of this equipment accurately represent the spatial neutron flux distribution of the reactor core.

INSERT A

The Surveillance Requirement for Safety/Relief Valve Position Indication allows an exception to Surveillance 4.0.4, until 24 hours after reactor steam pressure is adequate to perform the test. To be able to maintain reactor pressure and power control when opening a Safety/Relief valve, reactor power must be $\geq$ 10% Rated Thermal Power.

3/4.4.2 SAFETY/RELIEF VALVES (Continued)

the dual purpose safety/relief valves in their ASME Code qualified mode (spring lift) of safety operation.

The overpressure protection system must accommodate the most severe pressurization transient. There are two major transients that represent the most severe abnormal operational transient resulting in a nuclear system pressure rise. The evaluation of these events with the final plant configuration has shown that the MSIV closure is slightly more severe when credit is taken only for indirect derived scrams; i.e., a flux scram. Utilizing this worse case transient as the design basis event, a minimum of 12 safety/relief valves are required to assure peak reactor pressure remains within the Code limit of 110% of design pressure.

Testing of safety/relief valves is normally performed at lower power. It is desirable to allow an increased number of valves to be out of service during testing. Therefore, an evaluation of the MSIV closure without direct scram was performed at 25% of RATED THERMAL POWER assuming only 4 safety/relief valves were operable. The results of this evaluation demonstrate that any 4 safety/relief valves have sufficient flow capacity to assure that the peak reactor pressure remains well below the code limit of 110% of design pressure. Insert B

TMI Action Plan Item II.D.3, "Direct Indication of Relief and Safety Valve Position," states that reactor coolant system relief and safety valves shall be provided with a positive indication in the control room derived from a reliable valve-position detection device or a reliable indication of flow in the discharge pipe. Each WNP-2 SRV has both a valve stem position indication device and an acoustic monitor flow detection device which independently meet the requirements of Item II.D.3. Hence failure of one device does not impact compliance to II.D.3 and entry into Limiting Condition for Operation action statement 3.4.2.c is required only for inoperability of both devices associated with a specific SRV.

Demonstration of the safety/relief valve lift settings will be performed in accordance with the provisions of Specification 4.0.5.

3/4.4.3 REACTOR COOLANT SYSTEM LEAKAGE

3/4.4.3.1 LEAKAGE DETECTION SYSTEMS

The RCS leakage detection systems required by this specification are provided to monitor and detect leakage from the reactor coolant pressure boundary. These detection systems are consistent with the recommendations of Regulatory Guide 1.45, "Reactor Coolant Pressure Boundary Leakage Detection Systems," May 1973.

The primary containment sump flow monitoring system monitors the UNIDENTIFIED LEAKAGE collected in the floor drain sump with a sensitivity such that 1 gpm change within 1 hour can be measured. Alternatively, other methods for measuring flow to the sump which are capable of detecting a change in UNIDENTIFIED LEAKAGE of 1 gpm within 1 hour with an accuracy of $\pm$ 2% may be used, for up to 30 days, when the installed system is INOPERABLE.

INSERT B

The Surveillance Requirement for Safety/Relief Valves allows an exception to Surveillance 4.0.4, until 24 hours after reactor steam pressure is adequate to perform the test. To be able to maintain reactor pressure and power control when opening a Safety/Relief valve, reactor power must be $\geq$ 10% Rated Thermal Power.

ECCS - OPERATING and SHUTDOWN (Continued)

The capacity of the system is selected to provide the required core cooling. The HPCS pump is designed to deliver greater than or equal to 516/1550/6350 gpm at differential pressures of 1160/1130/200 psig. Initially, water from the condensate storage tank is used instead of injecting water from the suppression pool into the reactor, but no credit is taken in the safety analyses for the condensate storage tank water.

With the HPCS system inoperable, adequate core cooling is assured by the OPERABILITY of the redundant and diversified automatic depressurization system and both the LPCS and LPCI systems. In addition, the reactor core isolation cooling (RCIC) system, a system for which no credit is taken in the safety analysis, will automatically provide makeup at reactor operating pressures on a reactor low water level condition. The HPCS out-of-service period of 14 days is based on the demonstrated OPERABILITY of redundant and diversified low pressure core cooling systems.

The surveillance requirements provide adequate assurance that the HPCS system will be OPERABLE when required. Although all active components are testable and full flow can be demonstrated by recirculation through a test loop during reactor operation, a complete functional test with reactor vessel injection requires reactor shutdown. The pump discharge piping is maintained full to prevent water hammer damage and to provide cooling at the earliest moment.

Upon failure of the HPCS system to function properly after a small break loss-of-coolant accident, the automatic depressurization system (ADS) automatically causes selected safety/relief valves to open, depressurizing the reactor so that flow from the low pressure core cooling systems can enter the core in time to limit fuel cladding temperature to less than 2200°F. ADS is conservatively required to be OPERABLE whenever reactor vessel pressure exceeds 100 psig. This pressure is substantially below that for which the low pressure core cooling systems can provide adequate core cooling for events requiring ADS. Insert C

ADS automatically controls seven selected safety/relief valves although the safety analysis only takes credit for six valves. It is therefore appropriate to permit one valve to be out-of-service for up to 14 days without materially reducing system reliability.

3/4.5.3 SUPPRESSION CHAMBER

The suppression chamber is required to be OPERABLE as part of the ECCS to ensure that a sufficient supply of water is available to the HPCS, LPCS, and LPCI systems in the event of a LOCA. This limit on suppression chamber minimum water volume ensures that sufficient water is available to permit recirculation cooling flow to the core. The OPERABILITY of the suppression chamber in OPERATIONAL CONDITION 1, 2, or 3 is required by Specification 3.6.2.1.

INSERT C

The Surveillance Requirement for ADS allows an exception to Surveillance 4.0.4, until 24 hours after reactor steam pressure is adequate to perform the test. To be able to maintain reactor pressure and power control when opening a Safety/Relief valve, reactor power must be $\geq$ 10% Rated Thermal Power.