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 12 hours after reactor steam pressure and flow are adequate to perform the test.

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 hours after reactor steam pressure ~~is~~ and Flow are 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 $\geq$ 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 $\geq$ 140 psig on decreasing pressure and an alarm setpoint $\geq$ 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~~ and Flow are adequate to perform the test.

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. with adequate steam pressure and flow

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.

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 ± 2% may be used, for up to 30 days, when the installed system is INOPERABLE.

REQUEST FOR AMENDMENT TO TECHNICAL SPECIFICATIONS 3/4.3.7.5, 3/4.4.2, AND 3/4.5.1 FOR MAIN STEAM RELIEF VALVE POSITION INDICATION - SUPPLEMENTAL INFORMATION

A. DESCRIPTION OF PROPOSED CHANGES

In accordance with 10CFR50.90, the following changes are being proposed:

1) Technical Specification 3/4.4.2, "Safety/Relief Valves," and Technical Specification 3/4.5.1, "Emergency Core Cooling Systems," would be revised to identify that the 12-hour time limitation for performing the safety relief valve (SRV) position indicator surveillance testing starts when plant steam pressure and flow are adequate to perform the test. Notes 4.4.2.b "**" and 4.5.1.e.3.b"*" would be revised by changing the current wording:

"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"

to

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

2) A note is added to the channel calibration requirements for the Safety/Relief Valve Position Indicators (acoustic monitor, valve stem position, and tailpipe temperature instrument channels) identified in Table 4.3.7.5-1, "Accident Monitoring Instrumentation." This note qualifies SRV position indicator applicability and surveillance requirements, including the exception provided by Technical Specification 4.0.4, by stating:

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

In addition, the Bases for Technical Specification 3/4.4.2 is being revised to clearly identify that plant conditions adequate to perform the testing include having sufficient steam flow as well as adequate reactor pressure.

Attachment 1 contains the proposed changes as reflected on the marked-up copies of pages from the WNP-2 Technical Specifications and Technical Specification Bases.

B. DISCUSSION

Technical Specification 3/4.4.2, "Safety/Relief Valves," and 3/4.5.1, "Emergency Core Cooling System," contain tests required to be performed during plant startup for operability verification prior to entry into Operational Conditions 1, 2, and 3.

General startup activities and pertinent required startup testing is described below:

1) Technical Specification 3/4.3.7.5 (Table 3.3.7.5-1) requires either the SRV acoustic monitors or valve stem position indicators (VPI) be operable prior to entry into Operational Condition 1 or 2. (With approval of this request, this testing will be included with the item 3 testing below.)

2) Following entry into Operational Condition 2 and achievement of reactor criticality, reactor operation enters the heatup phase and reactor coolant temperature and pressure increase. This evolution includes placing portions of the balance of plant systems in service.

3) Technical Specification 4.4.2, requires SRV position indicator testing within 12 hours after reaching adequate steam pressure to perform the test. Technical Specification 4.5.1.e.3.b requires manual opening of the Automatic Depressurization System (ADS) valves (SRVs) within 12 hours after reaching adequate steam pressure to perform the test.

4) Reactor power is increased. At 10-12% power, plant conditions are adequate to perform SRV setpoint, ADS SRV function, and SRV position indicator (acoustic monitor and VPI) surveillance testing.

5) Following successful completion of the above tests, reactor power is increased to approximately 18%, the main turbine is loaded, and plant startup continues.

Opening of SRVs can result in a reactor pressure transient which initially introduces negative reactivity, and subsequent SRV closure can result in the introduction of positive reactivity (through steam void collapse). Two conditions must be met before a stroke test of the SRVs can be safely performed: (1) adequate reactor pressure must exist to protect the SRV from damage when stroking, and (2) sufficient steam flow must exist such that the turbine bypass valves maintain pressure control (do not fully close) when an SRV is opened. The latter is required because a slow depressurization of the reactor vessel will occur if the turbine bypass valves fully shut in an attempt to control pressure when an SRV is opened. This slow depressurization/cooldown, combined with the subsequent SRV closure, can result in a pressure and reactor power spike and reactor scram.

SRV testing cannot be performed until the required steam flow and pressure conditions are achieved. A review of recent plant startup data shows 10%-12% power, when plant conditions are adequate for SRV testing, is achieved approximately 48 hours after reaching 950 psig.

The SRVs must also be stroked to complete the Technical Specification surveillance requirements for the associated acoustic monitors and VPI. Specifically, necessary acoustic monitor gain adjustments are performed under adequate steam flow conditions for each SRV.

The proposed change will not modify the surveillance requirements for completion of testing within 12 hours. The sole intent of the proposed change is to clarify the point when the 12-hour clock begins to provide assurance that adequate steam pressure, including adequate steam flow to safely perform testing, exists prior to commencing such testing.

Prior to entry into Operational Condition 3, the Supply System performs surveillance testing to ensure that the SRVs, the ADS function of the SRVs, and the SRV position indication will function on demand. Testing is performed prior to startup to ensure plant safety and to limit economic impact since failure of these components to meet the surveillance requirements could result in plant shutdown and cooldown to effect repairs. The conditions that ensure plant safety for the limited period of time prior to verification of Technical Specification operability include:

1. At least four SRVs are required to be operable for the safety mode function prior to entry into Operational Condition 1, 2, or 3. WNP-2 meets this requirement.

2. The ADS logic is surveilled from the sensing devices (pressure and level switches), up to and including the relay contacts that actuate the SRV solenoid valves. This testing is performed prior to plant startup.

3. After SRV maintenance that involves disconnecting the solenoid, the solenoid valves are post maintenance tested prior to plant startup to verify that the solenoids stroke (an audible click is heard). This testing provides a high level of confidence that the solenoids will function on demand.

4. The SRVs are tested during the power reduction for the refueling outage. The testing is performed to satisfy ASME Code setpoint testing requirements. This testing is not required, but is normally performed to verify SRV safety mode setpoints to support plant startup, and to identify SRVs that require setpoint adjustment.

5. There are three methods of opening the SRVs: 1) mechanically via steam pressure (safety mode); 2) pneumatically via either of two (the "A" or "B" solenoid) redundant solenoids for each of the seven ADS SRVs; or 3) pneumatically via one solenoid (the "C" solenoid) for each of the 18 SRVs. Methods 2 and 3 are available to the operators in the control room. Control of three of the SRVs is available at the Remote Shutdown Panel. Control of an additional three SRVs is available at the Alternate Remote Shutdown Panel.

6. Supply System calculations have determined that the maximum number of SRVs required for successful ADS operation is five. This calculation was based on the decay heat load present after an extended run at 100% power. The decay heat load present prior to ADS functional testing as permitted by the requested changes would be significantly lower than this. The decay heat is lower based on: 1) the installation of new fuel during the refueling outage; 2) the significant reduction of decay heat that occurs during the 30 days or longer of refueling outage time; and 3) the proportionately lower decay heat generated by a short period of operation at $\leq 10\%$ power versus 100% power.

7. The High Pressure Core Spray (HPCS) and Reactor Core Isolation Cooling (RCIC) systems are required to be operable prior to entry into Operational Conditions 1, 2, or 3 for HPCS and prior to exceeding 150 psig reactor pressure for RCIC. Thus, both systems are verified operable shortly before exceeding 950 psig. This provides a high level of confidence that they are operable and will be available if needed.

Therefore, additional time for operator response and alternate systems are available compared to the assumptions made in the accident analyses. The proposed time period prior to operability verification is short. Should the 12 hour time limit expire prior to the completion of required testing, the equipment that has not been surveilled will be declared inoperable and the required actions taken.

C. Bases for No Significant Hazards Consideration

The Supply System has evaluated the proposed changes against the above standards as required by 10CFR50.91(a) and concluded that the change does not:

(1) Involve a significant increase in the probability or consequences of any accident previously evaluated.

The potential delay in confirming safety relief valve (SRV), SRV position indication (acoustic monitor, valve stem position indicators, and tailpipe temperature instruments), and ADS operability during plant startup should not result in any change to the expected satisfactory completion of the required surveillance tests. Surveillance testing that is conducted during the plant shutdown sequence, and during shutdown, provides reasonable assurance that the SRVs will function when required. Under the proposed change, plant test conditions would not be different than in the past since testing was not begun until adequate pressure for the duration of the test was achieved.

Therefore, this change does not involve a significant increase in the probability or consequences of any accident previously evaluated.

(2) Create the possibility of a new or different kind of accident from any accident previously evaluated.

The proposed changes do not involve a design change nor do they involve changes outside the scope of the existing test requirements. No new failure modes are introduced as a result of the proposed changes. The acoustic monitors merely provide indication that an SRV is open. They do not provide an actuation signal. Alternate mechanisms of SRV position indication exist, i.e., reactor water level changes, reactor pressure changes, main turbine bypass valve position, SRV tail pipe temperature, suppression pool level, and suppression pool temperature. The time delay prior to operability verification will not affect Technical Specification requirements.

Therefore, the proposed changes do not create the possibility of a new or different kind of accident from any accident previously evaluated.

(3) Involve a significant reduction in a margin of safety.

The proposed changes have no impact on the operability or performance requirements of the SRVs, including the ADS function, as they do not change the lift setpoints or minimum number of valves required to be operable. The effect of delaying the starting point of the time clock is not expected to affect completion of the required tests. ADS/SRV position indication availability will not be significantly affected by the proposed change since the additional 48 hours per refueling cycle of not verifying SRV, SRV position indication, and ADS SRV operability occurs at low power with the High Pressure Core Spray and Reactor Core Isolation Cooling systems available. Additionally, there is a high probability that the SRVs would perform their intended function if required even though they have not been declared operable.

Therefore, the proposed changes do not involve a significant reduction in a margin of safety.

Based on this review, the Supply System has determined that the three standards of 50.92(c) are satisfied. Accordingly, the Supply System has determined that this amendment request involves no significant hazards consideration.

D. ENVIRONMENTAL CONSIDERATIONS

The proposed changes do not involve a significant hazards consideration, or significantly increase the amounts or change the types of effluents that may be released off-site, nor do they significantly increase individual or cumulative occupational radiation exposures. Based on the foregoing, WNP-2 concludes the proposed changes meet the criteria given in 10CFR51.22(c)(9) for a categorical exclusion from the requirement for an Environmental Impact Statement.