ENCLOSURE 2

PLANT HATCH - UNITS 1, 2
NRC DOCKETS 50-321, 50-366
OPERATING LICENSES DPR-57, NPF-5
REQUEST FOR ADDITIONAL INFORMATION:
SUPPRESSION POOL TEMPERATURE MONITORING

PAGE CHANGE INSTRUCTIONS

UNIT 1

Remove Page	Insert Page
3.7-29	3.7-29
-	3.7-29a
-	3.7-29b

UNIT 2

Remove Page	Insert Page
B 3/4 6-4	B 3/4 6-4
-	B 3/4 6-4a
-	B 3/4 6-4b

3.7.A.1. Pressure Suppression Chamber (Continued)

Experimental data indicate that excessive steam condensing loads can be avoided if the peak temperature of the pressure suppression pool is maintained below 160°F during any period of relief valve operation with sonic conditions at the discharge exit. Specifications have been placed on the envelope of reactor operating conditions so that the reactor can be depressurized in a timely manner to avoid the regime of potentially high pressure suppression chamber loadings.

In addition to the limits on temperature of the suppression chamber pool water, operating procedures define that action to be taken in the event a relief valve inadvertently opens or sticks open. As a minimum this action shall include: (1) use of all available means to close the valve, (2) initiate suppression pool water cooling heat exchangers, (3) initiate reactor shutdown, and (4) if other relief valves are used to depressurize the reactor, their discharge shall be separated from that of the stuck-open relief valve to assure mixing and uniformity of energy insertion to the pool.

Because of the large volume and thermal capacity of the suppression pool, the volume and temperature normally changes very slowly and monitoring these parameters daily is sufficient to establish any temperature trends. By requiring the suppression pool temperature to be continually monitored and frequently logged during periods of significant heat addition, the temperature trends will be closely followed so that appropriate action can be taken. The requirement for an external visual examination following any event where potentially high loadings could occur provides assurance that no significant damage was encountered. Particular attention should be focused on structural discontinuities in the vicinity of the relief valve discharge since these are expected to be the points of highest stress.

The average (or bulk) suppression pool temperature limits specified in paragraphs 3.7.A.1 and 4.7.A.1 are normally monitored using a weighted average of 15 temperature sensors. Four sensors, T48-N009A through N009D, are located in the lower half of the suppression pool and 11 sensors, T48-N301 through N311, are located in the upper half of the suppression pool. The 4 lower sensors are averaged and the 11 upper sensors are averaged. The bulk suppression pool temperature is the average of the upper and lower average temperature. Should more than two of the 300 series sensors be determined inoperable when the suppression chamber is required, a preplanned alternate method of determining average temperature may be used. The table below illustrates the correction factor (if any) to be added to the operable N009 series elements in this condition. These correction factors for plant conditions (a), (b), and (c) were developed from a detailed review of Plant Hatch suppression pool temperature data.

Plant Condition (See Notes)		Correction Factor (°F) to Operable N009A-D Elements
(a)	Normal Operation; Torus Cooling not Operating (Note 1); No HPCI Testing (Note 2); No Leaking SRV(s) (Note 3)	5
(b)	Normal Operation; With or without Torus Cooling Operating; HPCI Testing; With or without Leaking SRV(s)	(Note 4)
(c)	Normal Operation; Torus Cooling Operating; No HPCI Testing; With or without Leaking SRV(s)	0
(d)	Abnormal Operation; With or without Torus Cooling Operating; Significant Heat Addition to Suppression Pool	N009 Elements if SPDS Inoperable

Notes:

(1) Torus cooling is at least one loop of RHR in pool cooling or torus spray mode.

(2) The Technical Specification limit for this condition is 105°F.

(3) A leaking SRV is defined as an SRV experiencing significant steam leakage past the seat. All the steam is not condensed in the SRV discharge line and, therefore, results in steam expulsion into pool.

(4) Without upper pool temperature indication, HPCI testing time should be limited to assure the bulk pool temperature does not exceed 105°F. Pool temperature data should still be recorded each 5 minutes as instructed by Technical Specifications, but the run time should be administratively controlled by the following:

Max Run Time in Minutes = $(105 - T_{initial}) \times 2$,

where $T_{initial}$ is the pool temperature taken prior to the test with torus cooling operating. This equation assumes a 30°F/hour rise in bulk pool temperature.

(This page intentionally left blank)

DEPRESSURIZATION SYSTEMS (Continued)

Experimental data indicates that excessive steam condensing loads can be avoided if the peak temperature of the suppression pool is maintained below 160°F during any period of relief valve operation with sonic conditions at the discharge exit. Specifications have been placed on the envelope of reactor operating conditions so that the reactor can be depressurized in a timely manner to avoid the regime of potentially high suppression chamber loadings.

Because of the large volume and thermal capacity of the suppression pool, the volume and temperature normally changes very slowly and monitoring these parameters daily is sufficient to establish any temperature trends. By requiring the suppression pool temperature to be frequently logged during periods of significant heat addition, the temperature trends will be closely followed so that appropriate action can be taken. The requirement for an external visual examination following any event where potentially high loadings could occur provides assurance that no significant damage was encountered. Particular attention should be focused on structural discontinuities in the vicinity of the relief valve discharge since these are expected to be the points of highest stress.

In addition to the limits on temperature of the suppression chamber pool water, operating procedures define the action to be taken in the event a safety/relief valve inadvertently opens or sticks open. As a minimum, this action shall include: (1) use of all available means to close the valve, (2) initiate suppression pool water cooling, (3) initiate reactor shutdown, and (4) if other safety/relief valves are used to depressurize the reactor, their discharge shall be separated from that of the stuck-open safety/relief valve to assure mixing and uniformity of energy insertion to the pool.

The average (or bulk) suppression pool temperature limits specified in paragraphs 3.6.2.1 and 4.6.2.1 are normally monitored using a weighted average of 15 temperature sensors. Four sensors, 2T48-N009A through N009D, are located in the lower half of the suppression pool and 11 sensors, 2T48-N301 through N311, are located in the upper half of the suppression pool. The 4 lower sensors are averaged and the 11 upper sensors are averaged. The bulk suppression pool temperature is the average of the upper and lower average temperature. Should more than two of the 300 series sensors be determined inoperable while in Conditions 1, 2, or 3, a pre-planned alternate method of determining average temperature may be used. The table below illustrates the correction factor (if any) to be added to the operable N009 series elements in this condition. These correction factors for plant conditions (a), (b), and (c) were developed from a detailed review of Plant Hatch suppression pool temperature data.

Plant Condition (See Notes)		Correction Factor (°F) to Operable N009A-D Elements
(a)	Normal Operation; Torus Cooling not Operating (Note 1); No HPCI Testing (Note 2); No Leaking SRV(s) (Note 3)	5
(b)	Normal Operation; With or without Torus Cooling Operating; HPCI Testing; With or without Leaking SRV(s)	(Note 4)
(c)	Normal Operation; Torus Cooling Operating; No HPCI Testing; With or without Leaking SRV(s)	0
(d)	Abnormal Operation; With or without Torus Cooling Operating; Significant Heat Addition to Suppression Pool	N009 Elements if SPDS Inoperable

Notes:

1. Torus cooling is at least one loop of RHR in pool cooling or torus spray mode.

2. The Technical Specification limit for this condition is 105°F.

3. A leaking SRV is defined as an SRV experiencing significant steam leakage past the seat. All the steam is not condensed in the SRV discharge line and, therefore, results in steam expulsion into pool.

4. Without upper pool temperature indication, HPCI testing time should be limited to assure the bulk pool temperature does not exceed 105°F. Pool temperature data should still be recorded each 5 minutes as instructed by Technical Specifications, but the run time should be administratively controlled by the following:

   Max Run Time in Minutes = $(105 - T_{initial}) \times 2$,

   where $T_{initial}$ is the pool temperature taken prior to the test with torus cooling operating. This equation assumes a 30°F/hour rise in bulk pool temperature.

3/4.6.3 PRIMARY CONTAINMENT ISOLATION VALVES

The OPERABILITY of the primary containment isolation valves ensures that the primary containment atmosphere will be isolated from the outside environment in the event of a release of radioactive material to the primary containment atmosphere or pressurization of the containment. Primary containment isolation within the time limits specified ensures that the release of radioactive material to the environment will be consistent with the assumptions used in the analyses for a LOCA. Only one closed valve in each penetration line is required to maintain the integrity of the containment.