Technical Specification Change Request No. 39
The Licensee requests that the attached changed pages be substituted for the existing pages in the Technical Specifications.
Due to the numerous proposed changes contained in this request, each change has been assigned its own subparagraph number for the purpose of maintaining consistency throughout this submittal.

| Subparagraph No. | Subject | Affected Pages Appendix A |
|---|---|---|
| 1 | Boron Injection - Delete requirement for an operable makeup pump. | 3.1-1 |
| 2 | Neutron Monitoring Instrumentation - Add requirement for an additional detector. | 3.3-2 |
| 3 | Radiation Monitoring Instrumentation - Delete requirement for radioactive iodine monitor. | 3.3-4 |
| 4 | Safety Valves - Delete. | 3.4-1, B 3/4 4-1 |
| 5 | Containment Integrity - Delete Superseded Language. | 3.6-1, B 3/4 6-1 |
| 6 | Containment Air Locks - Reduce Overall Air Lock Leakage Rate Test Pressure. | 3.6-1 |
| 7 | Containment Purge Exhaust System - Establish Technical Specification Requirements. | 3.6-2, B 3/4 6-2 |
| 8 | MDHR System - Delete reference to Long Term "B" cooling. | 3.7-2 |
| 9 | Fire Suppression Systems - Clarify occupational exposure considerations. | 3.7-8 |
| 10 | Electrical Power Systems - Change diesel generator test frequency. | 3.8-2 |
| 11 | Accident Generated Water - Combine EPICOR II processed water and Reactor Building sump water into one section | 3.9-2, B 3/4 9.1, B 3/4 9-2 |
| 12 | Tables - Shift to Recovery Operators Plan | 3.3-4, 3.3-5, 3.3-6, 3.3-7, 3.3-8, 3.3-9, 3.3-10, 3.3-11, 3.7-8, 3.7-9, 3.8-4 |

In addition to the changed pages noted above page 3.7-1, 3.7-2, 3.7-3 and 3.7-4 have been reset with no changes in content other than that noted in item 8 above.

DOC. ID: 0687X

Reason for Change

1. Based on current plant conditions, (i.e. low temperature and pressure) the need to maintain a makeup pump as a means for injecting borated cooling water into the Reactor Coolant System is no longer required, therefore, the need to maintain these pumps operable can be deleted from the Technical Specifications. In conjunction with this change the Reactor Coolant System Pressure/Temperature limits are being lowered to ensure the decay heat pumps will be capable of injecting borated water into the Reactor Coolant System.

2. This change is being requested to reflect the improved status of neutron monitoring instrumentation at TMI-2. Additionally, it will provide another source of information to the operator for monitoring core conditions.

3. A radioactive iodine monitor is no longer required in the fuel storage pool area because the short-lived iodine radioisotope (I-131) measured by this monitor has decayed to less than detectable quantities. This monitor was originally installed to detect leakage from spent fuel in the fuel pool area and was useful shortly after the accident, when water containing radioactive iodine was stored in the fuel pool area. Additionally other monitors that were previously addressed only in the Recovery Operations Plan have been included in the Limiting Condition for Operation.

4. Reactor Coolant System pressure is required by Technical Specification 3.4.9 to be maintained at a pressure less than 600 psig and is presently depressurized and vented to atmosphere, therefore, the additional requirement for a pressurizer code safety valve set at 2435 psig $\pm$ 1% is not needed.

5. With the purging of the containment in July 1980, the need for this requirement was superseded and therefore it can be deleted.

6. The present overall air lock leakage rate test pressure of 56.2 psig is inconsistent with the maximum internal pressure of 2 psig specified in section 5.2.2 of the TMI-2 Technical Specifications. Additionally, the differential pressure switch proposed for use in the personnel air locks, in order to reduce operational problems with the air locks, has a maximum pressure rating less than 56.2 psig and therefore, this proposed Technical Specification change is needed prior to installing the proposed differential pressure switch.

7. A Technical Specification with accompanying Limiting Conditions for Operations is being added for the Containment Purge Exhaust System. This system presently is used prior to and during reactor building entries to reduce airborne contamination levels in the reactor containment building. The reason for this addition is to provide operational requirements for the Containment Purge Exhaust System to

ensure it is operating effectively when it is in service. It should be noted that the applicability for this specification is limited to During Purge Operations as this is the only time the system would have a direct affect on public health and safety.

8. Amendment of Order dated April 1, 1982 deleted the need to maintain Long Term "B" Steam Generator Cooling System (LTB), however, this parenthetical reference to LTB was inadvertently overlooked when this change was processed and should be deleted.

9. As discussed in item No. 12, this table is being moved to the Recovery Operations Plan. Additionally, a note is being added to the table to indicate which fire hose stations are presently inaccessible per occupational exposure considerations.

10. The testing frequency for the diesel generators specified in Table 3.8-1 of the Technical Specifications is excessive and could cause adverse effects on the long-term reliability of the diesels.

11. Sections 3.9.13 and 3.9.14 have been combined into one new section. This change is requested because processing of the Reactor Building sump water and Reactor Coolant System water has been approved by the NRC, as required in Section 3.9.14, and therefore the only constraint remaining is NRC approval of the discharge of the water identified by both sections. Additionally the name for this water has been changed to Accident Generated Water with a definition for Accident Generated Water being added to the definition section of the Technical Specifications. This change will delete the redundant requirements imposed by Sections 3.9.13 and 3.9.14.

12. In general, the tables in Section 3 of the Technical Specifications have been moved to the Recovery Operations Plan and combined, where applicable, with the tables presently in the Recovery Operations Plan. This will prevent the two documents from having different lists of required instruments/equipment for the same specification.

Safety Evaluation Justifying Change

1. The Makeup and Purification System is designed to maintain reactor coolant inventory and to control boron concentration of the Reactor Coolant System during normal operation. In the present mode of operation with reactor cooling being maintained by "loss to ambient" cooling and temperature procedurally controlled to less than 210°F (highest operable incore thermocouple) and reactor system pressure maintained at less than 110 psig there is no longer a need to maintain a high pressure injection system operable. In conjunction with this change, the pressure and temperature limits for the reactor coolant system are being lowered to 210°F and 150 psig to be consistent with the operating characteristics of the Decay Heat Removal Pumps and the plant operating procedures.

2. This change enhances plant safety in that it provides a second indication of source range neutrons, thus providing the operator with more information regarding core conditions.

3. The radioactive iodine (I-131) monitor in the fuel pool storage area is no longer required because I-131 is no longer present in measurable quantities at TMI-2. I-131 is produced as a result of nuclear fission during reactor operation and has an 8.05 day half life. As the reactor has been shutdown since the March 28, 1979 accident, I-131 generation has ceased, and the I-131 present at the time of the accident has decayed more than 100 half lives and is no longer detectable. Therefore it is no longer necessary to monitor for radioactive iodine. Additionally other monitors which were previously addressed only in the Recovery Operations Plan have been included in the Limiting Condition for Operation with an appropriate action statement.

4. The pressurizer code safety valve is provided to protect the Reactor Coolant System (RCS) from overpressurization. However, under current plant conditions with the RCS depressurized and vented to atmosphere, this protection is no longer needed.

   When the RCS is closed and repressurized the following justification allows the elimination of the pressurizer code safety valves. Specifically, there are basically two modes by which reactor coolant system pressure can be increased. The first mode is by heatup of the reactor coolant, however, reactor cooling has been maintained by "loss to ambient" cooling since January 1981. Since that time, the decay heat generated by the core has decreased from approximately 95 KW to 36 KW and will continue to do so. Thus, "loss to ambient" cooling has proven itself as an effective means of decay heat removal, and there is reasonable assurance that "loss of ambient" cooling will continue to be an effective means of reactor cooling. Therefore there is no potential for overpressurization of the Reactor Coolant System from this source.

   The other mode whereby the Reactor Coolant System could be overpressurized is an injection from a high pressure source. The potential sources presently available for increasing Reactor Coolant System pressure are the Standby Reactor Pressure Control (SPC) System, the Decay Heat Removal pump or the makeup pump.

   The nitrogen supply pressure to the SPC System is controlled by the Recovery Operations Plan to between 225 and 400 psig, therefore, this system is not a source of RCS overpressurization.

   The Decay Heat Removal System is designed to remove decay heat from the core and sensible heat from the Reactor Coolant System during the latter stages of cooldown. It is not designed to operate at full Reactor Coolant System pressure. Thus, even in the event of actuation of a Decay Heat Removal pump, Reactor Coolant System pressure will not increase above the shutoff head at the Decay Heat Removal pump which is approximatley 185 psig - which is well below the setpoint of the pressurizer code safety valve.

The Makeup and Purification System is designed to maintain reactor coolant inventory and to control the boron concentration of the Reactor Coolant System during normal operation. Therefore, the makeup pump is designed to provide makeup to the Reactor Coolant System at high pressure. The shutoff head of the makeup pump is approximately 2700 psig which is greater than the setpoint for the pressurizer code safety valve, but less than the design pressure of the Reactor Coolant System. However, in order to prevent the potential for exceeding the setpoint of the pressurizer code safety valve, a note has been added to Technical Specification 3.4.9 Pressure/Temperature Limits to the effect that the makeup pumps will be made inoperable by racking out their electrical power supply circuit breakers.

Additionally, although the Technical Specification requirement for the pressurizer code safety valve has been deleted, the valve will still physically be in place and available in the extremely unlikely event that it is needed.

5. This change is administrative in nature as it deletes a superseded requirement and therefore no safety evaluation is required.

6. As discussed in GPU letter LL2-81-0191 dated December 4, 1981 and the NRC Amendment of Order dated April 7, 1982 an analysis has been performed which evaluated peak containment pressure under accident conditions which was independently verified by the NRC staff. Based on these evaluations the design pressure for containment was reduced to 2 psig with a commitment to design penetration modification to withstand 5 psig. Therefore, reducing the overall airlock leakage rate test pressure to 6.5 psig is consistent with the above listed precedents.

7. The addition of this Technical Specification enhances safety in that it provides specific criteria for the operation of this system. These criteria as stated in the attached Technical Specification and amplified in Recovery Operations Plan Change Request No. 19 are developed from system design data and are consistent with the proposed requirements for the Fuel Handling Building and Auxiliary Building Air Cleanup System.

8. The change which deleted Long Term "B" Steam Generator Cooling was approved by an Amendment to Order dated April 1, 1982. Therefore this change is administrative in nature and no safety evaluation is required.

9. This change is administrative in nature in that it reflects which hose stations are not accessible due to occupational exposure considerations and thus cannot be verified to be operable per the Recovery Operations Plan Surveillance Procedure. These hose stations will be returned to operable status when occupational exposure considerations allow access to them.

10. When one source of electrical power is no longer available, assurance is needed that at least one diesel generator will provide emergency power if required. If the lost source is a diesel generator, assurance is needed that the other diesel is not going to be lost, therefore the action presently required for the initial diesel operability check is maintained. This will demonstrate that at least one electrical division can be energized by the remaining diesel. The time required to perform this initial start-up test has been extended to twelve (12) hours to allow additional time for inspection of the diesel generator.

    In the case of one offsite power source being inoperable and the diesels having been successfully tested within a seven day period, there would be little additional assurance gained through immediate test starts of the diesel generators, especially as a diesel failure is not involved. However, if it has been longer than seven days since the diesels have been tested, the diesel will be started within 12 hours.

    Once the two concerns discussed above have been resolved initially, there is little additional reliability assurance to be gained from increasing the frequency of periodic testing throughout the duration of the action statement. This has been determined in consideration of the adverse effects that could arise from testing more frequently.

11. This change is administrative in nature in that it combines two existing sections into one. In addition, it provides a definition for Accident Generated Water which was contained in the settlement of the City of Lancaster v. United States Nuclear Regulatory Commission, Civil Action No. 79-1368 before the U.S. District Court for the District of Columbia date Feb. 27, 1980 on the same subject.

12. This change is administrative in nature and does not affect safety because it only combines the tables for related surveillances into one document. Changes made to specific tables are discussed separately.

Amendment Class

The licensee has determined that because the amendment request involves several unrelated Class III safety concerns it represents a Class IV License Amendment (per 10CFR 170.22). Therefore, enclosed please find a check in the amount of $12,300.

## 3.1 WATER INJECTION COOLING AND REACTIVITY CONTROL SYSTEMS

### 3.1.1 BORATION CONTROL

BORON INJECTION

3.1.1.1 At least two systems capable of injecting borated cooling water into the Reactor Coolant System shall be OPERABLE* with:

a. One system comprised of:

1. One OPERABLE decay heat removal pump.
2. An OPERABLE flow path from the BWST. The BWST shall contain at least 130,000 gallons of borated water at a minimum temperature of 50°F and at a boron concentration of between 3000 and 4500 ppm.

b. The second system comprised of the Standby Reactor Coolant System Pressure Control System.

APPLICABILITY: When fuel is in the reactor pressure vessel.

ACTION:

With one of the above required systems inoperable, restore the inoperable system to OPERABLE status within 72 hours.

BORON CONCENTRATION

3.1.1.2 The reactor coolant shall be maintained at a boron concentration of between 3000 and 4500 ppm and at a temperature above 50°F.

APPLICABILITY: When fuel is in the reactor pressure vessel.

ACTION

None except as provied in Specification 3.0.3.

*Both systems shall be considered OPERABLE when aligned per procedures approved pursuant to Specification 6.8.2.

TABLE 3.3-1

NEUTRON MONITORING INSTRUMENTATION

| FUNCTIONAL UNIT | TOTAL NO. OF CHANNELS | CHANNELS TO TRIP | MINIMUM CHANNELS OPERABLE |
|---|---|---|---|
| 1. Intermediate Range, Neutron Flux and Rate | 1 | 0 | 1 |
| 2. Source Range, Neutron Flux and Rate | 2 | 0 | 2 |

TABLE 3.3-3

ENGINEERED SAFETY FEATURE ACTUATION SYSTEM INSTRUMENTATION

| FUNCTIONAL UNIT | TOTAL NO. OF CHANNELS | CHANNELS TO TRIP | MINIMUM CHANNELS OPERABLE | ACTION |
|---|---|---|---|---|
| 1. LOSS OF POWER | | | | |
| a. 4.16 kv Emergency Bus Undervoltage (Loss of Voltage) | | | | |
| 1. Emergency Bus #2-1E and 2-2E | 2/Bus | 2/Bus | 2/Bus | 10 |
| 2. Emergency Bus #2-3E and 2-4E | 2/Bus | 1/Bus | 2/Bus | 11 |

ACTION 10 - With the number of OPERABLE channels one less than the Total Number of Channels, place the inoperable channel in the tripped condition within 4 hours.

ACTION 11 - None except as provided in Specification 3.0.3.

## 3.3.3 MONITORING INSTRUMENTATION

### RADIATION MONITORING INSTRUMENTATION

3.3.3.1 The radiation monitors listed in Table 4.3-3 of the Recovery Operations Plan shall be OPERABLE.

APPLICABILITY: With liquid radioactive waste in a monitored area.

ACTION: With any of the required instrumentation listed in Table 4.3-3 inoperable, suspend operations involving movement of radioactive wastes in the affected area and restore the inoperable equipment to OPERABLE status within 48 hours and provide a portable Constant Air Monitor, if applicable.

### SEISMIC INSTRUMENTATION

3.3.3.3 The seismic monitoring instrumentation shown in Table 4.3-4 of the Recovery Operations Plan shall be OPERABLE.

APPLICABILITY: At all times.

ACTION:

With one or more seismic monitoring instruments 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 instrument(s) to OPERABLE status.

### METEOROLOGICAL INSTRUMENTATION

3.3.3.4 The meteorological monitoring instrumentation channels shown in Table 4.3-5 of the Recovery Operations Plan shall be OPERABLE.

APPLICABILITY: At all times.

ACTION:

With any of the above required meteorological monitoring channels inoperable, restore the inoperable channel(s) to OPERABLE status within 8 hours.

## TABLE 3.3-7

## SEISMIC MONITORING INSTRUMENTATION

Transferred to Table 4.3-4 of the Recovery Operations Plan.

## TABLE 3.3-8

## METEOROLOGICAL MONITORING INSTRUMENTATION

Transferred to Table 4.3-5 of the Recovery Operations Plan.

REMOTE SHUTDOWN INSTRUMENTATION

3.3.3.5 The remote shutdown monitoring instrumentation channels shown in Table 4.3-6 of the Recovery Operations Plan shall be OPERABLE with readouts displayed external to the control room.

APPLICABILITY: RECOVERY MODE.

ACTION:

With the number of OPERABLE remote shutdown monitoring channels less than required by Table 4.3-6 of the Recovery Operations Plan, notify the NRC within 24 hours and restore the inoperable channel to OPERABLE status within 30 days.

POST-ACCIDENT INSTRUMENTATION

3.3.3.6 The post-accident monitoring instrumentation channels shown in table 4.3-10 of the Recovery Operations Plan shall be OPERABLE.

APPLICABILITY: RECOVERY MODE.

ACTION:

With the number of operable post-accident monitoring channels less than required by Table 4.3-10 of the Recovery Operations Plan, restore the inoperable channel(s) to OPERABLE status within 8 hours.

CHLORINE DETECTION SYSTEMS

3.3.3.7 Two chlorine detection systems, with their alarm/trip setpoints adjusted to actuate at a chlorine concentration of less than or equal to 5 ppm, shall be OPERABLE:

a. One at the air intake tunnel, and

b. One at the control room air supply duct.

APPLICABILITY: RECOVERY MODE

ACTION

With one or more chlorine detection systems inoperable, within 1 hour initiate and maintain operation of the control room emergency ventilation system in the recirculation mode of operation; restore the inoperable detection system to OPERABLE status within 30 days.

TABLE 3.3-9

REMOTE SHUTDOWN MONITORING INSTRUMENTATION

Transferred to Table 4.3-6 on the Recovery Operations Plan.

TABLE 3.3-10

POST-ACCIDENT MONITORING INSTRUMENTATION

Transferred to Table 4.3-10 of the Recovery Operations Plan.

## TABLE 3.3-11

## FIRE DETECTION INSTRUMENTS

Transferred to Table 4.3-11 of the Recovery Operations Plan.

FIRE DETECTION

3.3.3.8 As a minimum, the fire detection instrumentation for each fire detection zone shown in Table 4.3-11 of the Recovery Operations Plan shall be OPERABLE.

APPLICABILITY: At all times

ACTION:

With the number of OPERABLE fire detection instruments less than required by Table 4.3-11, of the Recovery Operations Plan insure that an alternate instrument with the same coverage is OPERABLE, or;

1. Within 1 hour, establish a fire watch patrol, except in areas inaccessible due to occupational exposure considerations, to inspect the zone with the inoperable instrument(s) at least once per hour, and

2. Restore the inoperable instrument(s) to OPERABLE status within 14 days or, in lieu of any other report required by Specification 6.9.1, prepare and submit a Special Report to the Commission pursuant to Specification 6.9.2 within the next 30 days outlining the cause of the malfunction and the plans for restoring the instrument(s) to OPERABLE status.

## 3.4 REACTOR COOLANT SYSTEM

### REACTOR COOLANT LOOPS

3.4.1 The Reactor Coolant System shall be operated in accordance with procedures approved pursuant to Specification 6.8.2.

APPLICABILITY: RECOVERY MODE

ACTION:

None except as provided in Specification 3.0.3.

### SAFETY VALVES

3.4.3 Deleted

### 3.4.9 PRESSURE/TEMPERATURE LIMITS

### REACTOR COOLANT SYSTEM

3.4.9.1 The Reactor Coolant System shall be maintained as a $T_{avg}$ of less than 280°F and at a pressure of less than 600 psig.*

APPLICABILITY: When fuel is in the reactor pressure vessel.

ACTION:

With the Reactor Coolant System pressure exceeding 600 psig, immediately reduce the Reactor Coolant System pressure to within its limit.

*All makeup pumps shall be made inoperable by racking out their electrical power supply circuit breakers.

## 3.6 CONTAINMENT SYSTEMS

### 3.6.1 PRIMARY CONTAINMENT

#### CONTAINMENT INTEGRITY

3.6.1.1 Primary CONTAINMENT INTEGRITY shall be maintained and all containment penetrations, including at least two OPERABLE containment isolation valves or a double barrier in each penetration, shall be closed when not required open per procedures approved pursuant to Specification 6.8.2.

APPLICABILITY: RECOVERY MODE

ACTION:

With one containment isolation valve per containment penetration open or inoperable, maintain the affected penetration(s) closed with either:

a. At least one deactivated automatic valve secured in the isolation position, or

b. At least one closed manual valve, or a blind flange.

#### CONTAINMENT AIR LOCKS

3.6.1.3 Each containment air lock shall be OPERABLE with:

a. Both doors closed except when the air lock is being used for transit entry and exit through the containment, then at least one air lock door shall be closed unless otherwise specified per procedures approved pursuant to specification 6.8.2.

b. An overall air lock leakage rate of less than or equal to 0.05 $L_a$ at $P_a$, 6.5 psig. (Per occupational exposure considerations)

APPLICABILITY: RECOVERY MODE

ACTION:

With an air lock inoperable, maintain at least one door closed and restore the air lock to OPERABLE status within 24 hours.

#### INTERNAL PRESSURE

3.6.1.4 Primary containment pressure shall be maintained between 0 psig and the minimum allowable pressure as determined from Figure 3.6-1.

APPLICABILITY: RECOVERY MODE

ACTION:

With the containment internal pressure outside the above limits, restore the internal pressure to within the limits within 1 hour.

AIR TEMPERATURE

3.6.1.5 Primary containment average air temperature shall not exceed 130°F.

APPLICABILITY: RECOVERY MODE

ACTION:

With the containment average air temperature greater than 130°F, reduce the average air temperature to within the limit within 24 hours.

3.6.3 CONTAINMENT PURGE EXHAUST SYSTEM

3.6.3.1 One train of the Containment Purge Exhaust System shall be OPERABLE.

APPLICABILITY: DURING PURGE OPERATIONS

ACTION:

With no containment purge exhaust train OPERABLE, suspend all purging of the Reactor Containment Building until at least one train is restored to OPERABLE status.

3.6.4 COMBUSTIBLE GAS CONTROL

HYDROGEN ANALYZERS

3.6.4.1 One gas partitioner shall be OPERABLE.

APPLICABILITY: RECOVERY MODE

ACTION:

With the gas partitioner inoperable, restore the inoperable instrument to OPERABLE status within 7 days.

HYDROGEN PURGE CLEANUP SYSTEM

3.6.4.3 Deleted.

## 3.7 PLANT SYSTEMS

### 3.7.1 FEEDWATER SYSTEM

Deleted by Amendment of Order dated April 1, 1982.

### 3.7.2 SECONDARY SERVICES CLOSED COOLING WATER SYSTEM

Deleted by Amendment of Order dated April 1, 1982.

### 3.7.3 CLOSED CYCLE COOLING WATER SYSTEM

#### NUCLEAR SERVICES CLOSED CYCLE COOLING SYSTEM

3.7.3.1 At least two independent nuclear services closed cycle cooling water pumps and heat exchangers and the associated flow path shall be OPERABLE with each pump capable of being powered from separate emergency busses.

APPLICABILITY: RECOVERY MODE

ACTION:

With only one nuclear services closed cycle cooling water pump or only one nuclear services heat exchanger OPERABLE, restore the inoperable pump or heat exchanger to OPERABLE status within 72 hours.

#### DECAY HEAT CLOSED COOLING WATER SYSTEM

3.7.3.2 At least one decay heat closed cooling water loop shall be OPERABLE.

APPLICABILITY: RECOVERY MODE

ACTION:

With no decay heat closed cooling water loop OPERABLE, restore the inoperable loop to OPERABLE status within 24 hours.

#### MINI DECAY HEAT REMOVAL SYSTEM

3.7.3.3 Two mini decay heat removal pumps and heat exchangers and the associated flow path shall be OPERABLE.

APPLICABILITY: When fuel is in the reactor pressure vessel.

ACTION:

a. With one mini decay heat removal pump and/or heat exchanger inoperable, restore the inoperable pump and/or heat exchanger to OPERABLE status within 72 hours.

b. With two mini decay heat removal pumps and/or heat exchangers or the associated flow path inoperable, restore at least one pump and heat exchanger and the associated flow path to OPERABLE status within 24 hours or within the next 48 hours make a backup cooling system ("Loss to Ambient") OPERABLE.

3.7.4 NUCLEAR SERVICE RIVER WATER SYSTEM

3.7.4.1 Two independent nuclear service river water loops shall be OPERABLE.

APPLICABILITY: RECOVERY MODE

ACTION:

With one nuclear service river water loop inoperable, restore the inoperable loop to OPERABLE status within 72 hours.

3.7.6 FLOOD PROTECTION

3.7.6.1 Flood protection shall be provided for all safety related systems, components and structures when the water level of the Susquehanna River exceeds 301 feet Mean Sea Level USGS datum, at the river water intake structure of Three Mile Island Nuclear Station, Unit 1.

APPLICABILITY: At all times.

ACTION:

a. With the water level at the Unit 1 Intake Structure approaching 301 ft. Mean Sea Level USGS datum:

1. Initiate patrol and inspection of the dikes surrounding the site for signs of deterioration such as undermining or excessive seepage.

2. Inform the Director Site Operations and as directed by him:

a) Prepare all flood panels and door seals for installation,

b) Check all building floor drains and pumps to ensure proper operation,

c) Commence daily soundings of the Intake Screen House Floor,

d) Check all water tight doors to ensure proper operation,

e) Fill all outdoor storage tanks to inhibit flotation, and

f) Arrange for alternate supplies of diesel fuel oil and ensure fuel storage tanks are filled.

b. With the water level at the Unit 1 Intake Structure exceeding 301 ft. and approaching 302 ft. Mean Sea Level USGS datum:

1. Ensure all door seals and flood panels are installed an all water tight doors are closed within 2 hours.

2. Inform the Director Site Operations.

3.7.7 CONTROL ROOM EMERGENCY AIR CLEANUP SYSTEM

3.7.7.1 The control room ventilation and emergency air cleanup system shall be OPERABLE with:

a. Two control room supply fans and associated cooling coils,

b. Two control room bypass fans,

c. One charcoal adsorber and HEPA filter train, and

d. Two isolation dampers in the outside air intake duct.

e. The control room air inlet radiation monitor OPERABLE.

APPLICABILITY: RECOVERY MODE

ACTION:

a. With one control room supply fan or its associated cooling coil inoperable, restore the inoperable fan and/or cooling coil to OPERABLE status within 7 days.

b. With one control room bypass fan inoperable restore the inoperable fan to OPERABLE status within 7 days.

c. With the filter train inoperable, restore the filter train to OPERABLE status within 24 hours.

d. With one isolation damper in the outside air intake duct inoperable, restore the inoperable damper to OPERABLE status or close the duct within 4 hours by use of at least one isolation damper secured in the closed position.

e. With the control room air inlent radiation monitor inoperable, restore it to OPERABLE status or place the control room emergency air cleanup system in the recirculation mode of operation within 4 hours.

DELETED

HALON SYSTEM

3.7.10.3 The following Halon systems shall be OPERABLE with the storage tanks having at least 95% of full charge weight and 90% of full charge pressure (corrected to 70°F).

a. Cable Room and Transformer Room - Control Building 305' elevation.

b. Air Intake Tunnel (4 Zones)

APPLICABILITY: At all times.

ACTION:

With one or more of the above required Halon systems inoperable, establish a roving (at least once per hour) fire watch* with backup fire suppression equipment for the unprotected area(s) within 1 hour; restore the system to OPERABLE status within 14 days or, in lieu of any other report required by Specification 6.9.1, prepare and submit a Special Report to the Commission pursuant to Specification 6.9.2 within the next 30 days outlining the action taken, the cause of the inoperability and the plans and schedule for restoring the system to OPERABLE status.

FIRE HOSE STATIONS

3.7.10.4 The fire hose stations listed in Table 4.7-4 of the Recovery Operations Plan shall be OPERABLE:

APPLICABILITY: At all times.

ACTION:

With one or more of the fire hose stations shown in Table 4.7-4 of the Recovery Operations Plan inoperable, route an additional equivalent capacity fire hose to the unprotected area(s) except areas inaccessible due to occupational exposure considerations, from an OPERABLE hose station within 1 hour.

*Except in the air intake tunnel where a fire watch is not required.

TABLE 3.7-4

FIRE HOSE STATIONS

Transferred to Table 4.7-4 of the Recovery Operations Plan.

TABLE 3.8-1

TESTING FREQUENCY MATRIX

| Inoperable Component | | Component Testing Frequencies | | | |
|---|---|---|---|---|---|
| | | $a_1$ | $a_2$ | $b_1$ | $b_2$ |
| | $a_1$ | | * | ** | ** |
| | $a_2$ | * | | ** | ** |
| | $b_1$ | * | * | | * |
| | $b_2$ | * | * | * | |

Key:

$a_1$ Offsite power circuit No. 1
$a_2$ Offsite power circuit No. 2
$b_1$ Class 1E diesel generator (Red)
$b_2$ Class 1E diesel generator (Green)

*Within 12 hours
**Within 12 hours unless the diesel generator has been demonstrated OPERABLE per Surveillance Requirement 4.8.1.1.2 within the previous 7 days, then demonstration of diesel generator operability is not required.

3.8.2 ONSITE POWER DISTRIBUTION SYSTEMS

A.C. DISTRIBUTION

3.8.2.1 The A.C. electrical busses listed in Section 4.8.2.1 of the Recovery Operations Plan shall be OPERABLE and energized with tie breakers open (unless closed in accordance with procedures approved pursuant to Specification 6.8.2) between redundant busses:

APPLICABILITY: RECOVERY MODE.

ACTION:

With less than the above complement of A.C. busses OPERABLE, restore the inoperable bus to OPERABLE status within 8 hours.

D.C. DISTRIBUTION

3.8.2.3 The following D.C. bus trains shall be energized and OPERABLE with tie breakers between bus trains open (unless closed in accordance with approved procedures):

TRAIN "A" consisting of 250/125-volt D.C. bus 2-1DC, 250/125-volt D.C. battery bank A and a full capacity charger.

TRAIN "B" consisting of 250/125-volt D.C. bus 2-2DC, 250/125-volt D.C. battery bank B, and a full capacity charger.

APPLICABILITY: RECOVERY MODE.

ACTION:

a. With one 250/125-volt D.C. bus inoperable, restore the inoperable bus to OPERABLE status within 2 hours.

b. With one 250/125-volt D.C. battery and/or its charger inoperable, restore the inoperable battery and/or charger to OPERABLE status within 2 hours.

ACCIDENT GENERATED WATER

3.9.13 Discharge of accident generated water shall be prohibited until approved by the NRC. Accident generated water shall be discharged in accordance with procedures approved pursuant to Specification 6.8.2.

APPLICABILITY: At all times.

ACTION:

None except as provided in Specification 3.0.3.

REACTOR BUILDING SUMP WATER

3.9.14 Deleted

## 3/4.4 REACTOR COOLANT SYSTEM

## BASES

### 3/4.4.1 REACTOR COOLANT LOOPS

Several alternative methods are available for removal of reactor decay heat. These methods include use of the Mini Decay Heat Removal System, the "Loss to Ambient" cooling mode, and operation of the Reactor Coolant System in the natural circulation mode with heat rejection via the long term "B" steam generator cooling mode. Any one of these cooling methods provides adequate cooling of the reactor and each method is available for decay heat removal. Procedures have been prepared and approved for use of these various cooling methods.

### 3/4.4.3 SAFETY VALVES

Deleted.

### 3/4.4.9 PRESSURE/TEMPERATURE LIMIT

The RCS pressure and temperature will be controlled in accordance with approved procedures to prevent a nonductile failure of the RCS while at the same time permitting the RCS pressure to be maintained at a sufficiently high value to permit operation of the reactor coolant pumps.

Reactor coolant chemistry surveillance requirements are included in the Recovery Operations Plan. These requirements provide assurance that localized corrosion or pitting in crevice areas, which could tend to promote stress corrosion cracking in heat affected zones of welds in stainless steel piping or components, will not occur.

## 3/4.6 CONTAINMENT SYSTEMS

## BASES

### 3/4.6.1. PRIMARY CONTAINMENT

#### 3/4.6.1.1 CONTAINMENT INTEGRITY

Primary CONTAINMENT INTEGRITY must be maintained to ensure that the radioactive materials which were released to the containment atmosphere during the March 28, 1979 incident will not be released to the atmosphere.

#### 3/4.6.1.3 CONTAINMENT AIR LOCKS

The containment air locks must be maintained OPERABLE to provide CONTAINMENT INTEGRITY. These air locks will be used during future entries into the containment to ensure that the containment atmosphere will not be released to the environs. The preferred method for ensuring that radioactive materials are not released during these entries is to maintain at least one door closed at all times; however, to permit the passage of long items into the reactor building, both doors may be open simultaneously in accordance with procedures approved pursuant to Specification 6.8.2

#### 3/4.6.1.4 INTERNAL PRESSURE

The negative pressure limit provides assurance that the containment will not exceed its design negative pressure differential. The positive pressure limit provides assurance that leakage from the containment will be limited for dose consideration.

## 3/4.6 CONTAINMENT SYSTEMS

## BASES

### 3/4.6.1.5 AIR TEMPERATURE

The average air temperature of the containment atmosphere is currently being maintained well below the 130°F limit. The action will maximize the service life of the instrumentation and equipment installed in the containment. Continued OPERABILITY of these items is required to continue monitoring and mitigating the March 28, 1979 incident.

### 3/4.6.3 CONTAINMENT PURGE EXHAUST SYSTEM

The operability requirements for the containment Purge Exhaust System ensure that during containment purge operations all radioactive particulate material will be filtered through the HEPA filters prior to release to the atmosphere.

### 3/4.6.4 COMBUSTIBLE GAS CONTROL

The gas partitioner is provided to analyze the hydrogen concentration in the containment atmosphere so that actions can be initiated to reduce the hydrogen concentration if it approaches its flammable limit. If excessive hydrogen concentrations are detected, appropriate actions will be initiated to reduce the hydrogen concentration to a safe level.

The hydrogen purge cleanup system will be used to filter the containment atmosphere through HEPA filters if purging of the containment is approved. This filtering action will ensure that releases of radioactive materials in gaseous effluents from the containment will be minimized.

## 3/4.9 RADIOACTIVE WASTE STORAGE

## BASES

### 3/4.9.12 FUEL HANDLING BUILDING/AUXILIARY BUILDING AIR CLEANUP SYSTEMS

The requirements for the fuel handling/auxiliary building air cleanup systems to be operating or OPERABLE ensure that all radioactive material released from the liquid radioactive wastes being stored in the new radwaste storage tanks which have been installed in the spent fuel storage pool or elsewhere in the auxiliary building will be filtered through the HEPA filters prior to release to the atmosphere.

### 3/4.9.13 ACCIDENT GENERATED WATER

These specifications are provided to ensure compliance with the Commission's Statement of May 25, 1979, and the Commission's Statement of Policy and Notice of Intent to Prepare a Programmatic Environmental Impact Statement of November 21, 1979, which prohibit these actions pending evaluation of the environmental impacts of such actions. The PEIS issued in March 1981 deferred a decision on the ultimate disposal of processed water. Further Commission action is necessary prior to release of Accident Generated Water.

However, the Commission has recognized that there may be emergency situations, not at this time forseen, which could require rapid action. In these situations, the Commission has indicated its intention to consult with CEQ to the extent practicable.

Accident Generated Water, as defined in the settlement of the City of Lancaster litigation, is:

(a) Water that existed in the TMI-2 auxiliary, fuel handling, and containment buildings including the primary system as of October 16, 1979, with the exception of water which as a result of decontamination operations becomes commingled with non-accident-generated water such that the commingled water has a tritium content of 0.025 μCi/ml or less before processing;

(b) Water that has a total activity of greater than one μCi/ml prior to processing except where such water is originally non-accident water and becomes contaminated by use in cleanup;

(c) Water that contains greater than 0.025 μCi/ml of tritium before processing.

The agreement also established requirements for NRC notification of appropriate public authorities in the event a release occurred or was contemplated.

3/4.9.14 DELETED