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10 CFR 50.90

December 11, 2000
5928-00-20381

U. S. Nuclear Regulatory Commission
Attention: Document Control Desk
Washington, DC 20555

Dear Sir or Madam:

SUBJECT: THREE MILE ISLAND NUCLEAR STATION, UNIT 1
OPERATING LICENSE NO. DPR-50
DOCKET NO. 50-289
LICENSE CHANGE APPLICATION (LCA) NO. 287, TRANSMITTAL OF CORRECTED CAMERA READY TECHNICAL SPECIFICATION PAGES

Our letter dated November 16, 2000 transmitted camera ready pages to support NRC issuance of an amendment approving TMI Unit 1 License Change Application (LCA) No. 287. The purpose of this letter is to correct several minor errors that were found in that letter.

Please contact Bob Knight of TMI Licensing at (717) 948-8554 if you have any questions regarding this submittal.

Very truly yours,

George B Rombold III

G. B. Rombold
Manager, TMI Unit 1 Licensing

GBR/mrk

Enclosure: TMI Unit 1 Technical Specifications Revised Pages for License Change Application (LCA) No. 287

cc: USNRC Regional Administrator, Region I
USNRC TMI Senior Resident Inspector
USNRC TMI Unit 1 Senior Project Manager
File No. 97062

A001

Enclosure 1

TMI Unit 1 Technical Specification Revised Pages for LCA No. 287

LIST OF FIGURES

3.3 EMERGENCY CORE COOLING, REACTOR BUILDING EMERGENCY COOLING AND REACTOR BUILDING SPRAY SYSTEMS

Applicability
Applies to the operating status of the emergency core cooling, reactor building emergency cooling, and reactor building spray systems.

Objective
To define the conditions necessary to assure immediate availability of the emergency core cooling, reactor building emergency cooling and reactor building spray systems.

Specification

3.3.1 The reactor shall not be made critical unless the following conditions are met:

3.3.1.1 Injection Systems

a. The borated water storage tank **(BWST)** shall contain a minimum of 350,000 gallons of water having a minimum concentration of 2,500 ppm boron at a temperature not less than 40°F. If the boron concentration or water temperature is not within limits, restore the BWST to OPERABLE within 8 hrs. If the BWST volume is not within limits, restore the BWST to OPERABLE within one hour. Specification 3.0.1 applies.

b. Two **Makeup and Purification (MU)/High Pressure Injection (HPI)** pumps are **OPERABLE** in the engineered safeguards mode powered from independent essential buses. Specification 3.0.1 applies.

c. Two decay heat removal pumps are **OPERABLE**. Specification 3.0.1 applies.

d. Two decay heat removal coolers and their cooling water supplies are **OPERABLE**. (See Specification 3.3.1.4) Specification 3.0.1 applies.

e. Two BWST level instrument channels are **OPERABLE**.

f. The two reactor building sump isolation valves (DH-V-6A/B) shall be remote-manually **OPERABLE**. Specification 3.0.1 applies

g. MU Tank (MUT) pressure and level shall be maintained within the Unrestricted Operating Region of Figure 3.3-1.

1) With MUT conditions outside of the Unrestricted Operating Region of Figure 3.3-1, restore MUT pressure and level to within the Unrestricted Operating Region within 72 hrs. Specification 3.0.1 applies.

2) Operation with MUT conditions within the Prohibited Region of Figure 3.3-1 is prohibited. Specification 3.0.1 applies.

3.3.1.2 Core Flooding System

a. Two core flooding tanks **(CFTs)** each containing 940 $\pm$30 ft^3 of borated water at 600 $\pm$25 psig shall be available. Specification 3.0.1 applies.

3.3 EMERGENCY CORE COOLING, REACTOR BUILDING EMERGENCY COOLING AND REACTOR BUILDING SPRAY SYSTEMS (Contd.)

b. **CFT** boron concentration shall not be less than 2,270 ppm boron. Specification 3.3.2.1 applies.

c. The electrically operated discharge valves from the **CFT** will be assured open by administrative control and position indication lamps on the engineered safeguards status panel. Respective breakers for these valves shall be open and conspicuously marked. A one hour time clock is provided to open the valve and remove power to the valve. Specification 3.0.1 applies.

d. DELETED

e. **CFT** vent valves CF-V-3A and CF-V-3B shall be closed and the breakers to the CFT vent valve motor operators shall be tagged open, except when adjusting core flood tank level and/or pressure. Specification 3.0.1 applies.

3.3.1.3 Reactor Building Spray System and Reactor Building Emergency Cooling System

The following components must be OPERABLE:

a. Two reactor building spray pumps and their associated spray nozzles headers and two reactor building emergency cooling fans and associated cooling units (one in each train). Specification 3.0.1 applies.

b. The sodium hydroxide (NaOH) tank shall be maintained at 8 ft. $\pm$6 inches lower than the BWST level as measured by the BWST/NaOH tank differential pressure indicator. The NaOH tank concentration shall be 10.0 $\pm$.5 weight percent (%). Specification 3.3.2.1 applies.

c. All manual valves in the discharge lines of the **NaOH** tank shall be locked open. Specification 3.3.2.1 applies.

3.3.1.4 Cooling Water Systems - Specification 3.0.1 applies.

a. Two nuclear service closed cycle cooling water pumps must be OPERABLE.

b. Two nuclear service river water pumps must be OPERABLE.

c. Two decay heat closed cycle cooling water pumps must be OPERABLE.

d. Two decay heat river water pumps must be OPERABLE.

e. Two reactor building emergency cooling river water pumps must be OPERABLE.

3.3.1.5 Engineered Safeguards Valves and Interlocks Associated with the Systems in Specifications 3.3.1.1, 3.3.1.2, 3.3.1.3, 3.3.1.4 are OPERABLE. Specification 3.0.1 applies.

Bases (Contd.)

between 8.0 and 11.0 of the solution sprayed within containment after a design basis accident. The minimum pH of 8.0 assures that iodine will remain in solution while the maximum pH of 11.0 minimizes the potential for caustic damage to mechanical systems and components. Redundant heaters maintain the borated water supply at a temperature greater than 40°F.

Maintaining MUT pressure and level within the limits of Fig 3.3-1 ensures that MUT gas will not be drawn into the pumps for any design basis accident. Preventing gas entrainment of the pumps is not dependent upon operator actions after the event occurs. The plant operating limits (alarms and procedures) will include margins to account for instrument error.

The post-accident reactor building emergency cooling may be accomplished by three emergency cooling units, by two spray systems, or by a combination of one emergency cooling unit and one spray system. The specified requirements assure that the required post-accident components are available.

The iodine removal function of the reactor building spray system requires one spray pump and sodium hydroxide tank contents.

The spray system utilities common suction lines with the decay heat removal system. If a single train of equipment is removed from either system, the other train must be assured to be operable in each system.

When the reactor is critical, maintenance is allowed per Specification 3.3.2 and 3.3.3 provided requirements in Specification 3.3.4 are met which assure operability of the duplicate components. The specified maintenance times are a maximum. Operability of the specified components shall be based on the satisfactory completion of surveillance and inservice testing and inspection required by Technical Specification 4.2 and 4.5.

The allowable maintenance period of up to 72 hours may be utilized if the operability of equipment redundant to that removed from service is verified based on the results of surveillance and inservice testing and inspection required by Technical Specification 4.2 and 4.5.

In the event that the need for emergency core cooling should occur, operation of one makeup pump, one decay heat removal pump, and both core flood tanks will protect the core. In the event of a reactor coolant system rupture their operation will limit the peak clad temperature to less than 2,200 °F and the metal-water reaction to that representing less than 1 percent of the clad.

Two nuclear service river water pumps and two nuclear service closed cycle cooling pumps are required for normal operation. The normal operating requirements are greater than the emergency requirements following a loss-of-coolant.

REFERENCES

(1) UFSAR, Section 6.1 - "Emergency Core Cooling System"

(2) UFSAR, Section 14.2.2.3 - "Large Break LOCA"

TABLE 4.1-1 (Continued)

CHANNEL DESCRIPTION	CHECK	TEST	CALIBRATE	REMARKS
27. Makeup Tank **Instrument Channels:**				
a Level	D(1)	NA	**R**	(1) When Makeup and Purification System is in operation.
b. Pressure	**D(1)**	**NA**	**R**	
28. Radiation Monitoring Systems*				
a. RM-G6 (FH Bridge #1 Aux)	W(1)(2)	M(2)	Q(2)	(1) Using the installed check source when background is less than twice the expected increase in cpm which would result from the check source alone. Background readings greater than this value are sufficient in themselves to show that the monitor is functioning.
b. RM-G7 (FH Bridge #2 Main)	W(1)(2)	M(2)	Q(2)	
c. RM-G9 (FH Bridge-FH Bldg)	W(1)(3)	M(3)	E(3)	
d. RM-A2P (RB Atmosphere particulate)	W(1)(4)	M(4)	E(4)	
e. RM-A2I (RB Atmosphere iodine)	W(1)(4)	M(4)	Q(4)	(2) RM-G6 and RM-G7 operability requirements are given in T.S. 3.8.1. Surveillances are required to be current only when handling irradiated fuel.
f. RM-A2G (RB Atmosphere gas)	W(1)(4)	M(4)	E(4)	
				(3) RM-G9 operability requirements are given in T.S. 3.8.1.
				(4) RM-A2 operability requirements are given in T.S. 3.1.6.8
29. High and Low Pressure Injection Systems: Flow Channels	N/A	N/A	**R**	

* Includes only monitors indicated under this item. Other T.S. required radiation monitors are included in specifications 3.5.5.2, 4.1.3, Table 3.5-1 item C.3.f, and Table 4.1-1 item 19e.

Amendment Nos. ~~24, 78, 100, 156, 164, 175, 197, 212~~ ~~Corrected by letter dated July 8, 1999~~