



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

June 7, 1979

In reply refer to:
NTFTM
790607-04

MEMORANDUM FOR: Task Group Leaders
NRC/TMI Special Inquiry Group

FROM: William Parler, Leader, Task Group One

SUBJECT: IE INSPECTION REPORTS, TMI-2

Task Group One has completed a detailed review of the IE inspections reports for TMI Unit 2 for the period August 1977 through February 1979. These reports contain numerous notations of problems identified by the licensee and the inspectors, tests observed or reviewed by the inspector, and general observations by the inspectors concerning the design and operation of the plant. It is our hope that some of these observations made by the IE inspectors might shed some light on your efforts to define the causes of the events that lead up to and compounded the TMI accident. Unfortunately, most of the discussions in the inspection reports are quite brief. Therefore, during our interviews of the inspectors, we will try to expand on the information that is relevant and see if the inspectors possess related information that might be relevant. In order to limit our review to a manageable number of issues, and to insure that we elicit the information that you require to support your investigation, we have reviewed the inspection reports to identify those issues that we believe have any possibility of being relevant to the TMI accident (summary enclosed).

We request that you review the enclosed list of IE inspection report items and tell us which items are relevant to your tasks. We are particularly concerned about the specific information that you require in addition to what is already noted in Enclosure 1. We request that you provide your responses no later than June 15, 1979. If you have any questions concerning this matter please contact Fred Hebdon.

If this summary proves to be of value we will provide similar surveys of the remaining inspection reports for TMI-2, the inspection reports for TMI-1 and Oconee, and the LERs for TMI-1 and 2.


William Parler, Leader
Task Group One

Enclosure
Inspection Report Summary



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cc: E. K. Cornell
R. C. DeYoung
F. Hebdon
W. Lanning
T. Cox
D. Gamble
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TERA Corp.

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ENCLOSURE 1

Aug. 11, 1977 50-320/77-26-05 Conte

The inspector noted that some errors identified in procedures by the inspector should have been identified and corrected by the licensee's review and approval program. The inspector also expressed concern that approved procedures not reviewed during the inspection would exhibit similar problems.

Aug. 11, 1977 50-320/77-26-13 Conte

The licensee intended to use Preventive Maintenance Check Sheets. The inspector commented that the check sheet had no provisions requiring an operational test prior to returning the system to service.

Aug. 4, 1977 50-320/77-28 Rebelowski

The inspector noted that the licensee had completed the testing of the pressurizer coded relief valves. The test documented three consecutive lifts within the acceptable criteria of $2450 \pm 1\%$ psig. This resolves item 320/77-19-01.

Aug. 4, 1977 50-320/77-28-06 Rebelowski

The licensee stated that a possible design deficiency relating to the design of the reactor coolant pump seals and their cooling water supply. The seals were not designed to accept the transient associated with station blackout.

Aug. 15, 1977 50-320/77-31 Plumlee

The inspector noted that the respiratory protection program was acceptable except that employees were not specifically evaluated as to their physical and psychological fitness for work requiring the use of respiratory protection equipment. The licensee acknowledged the deficiency, however, the inspector did not classify this as an Unresolved Item.

Sept. 21, 1977 50-320/77-32 Kellogg

The inspector witness the test of the 2B Emergency Feedwater Pump Functional Test. No inadequacies were identified.

Sept. 21, 1977 50-320/77-32 Kellogg

The inspector noted that the licensee had experienced problems with the RCPs. RCP-2A dropped off the line after start, probably due to a phase overload. RCP-2B developed an oil leak. The inspector reviewed accumulated data for the RCPs. No additional problems/deficiencies were noted.

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Sept. 29, 1977 50-320/77-34 Kellogg

During testing of Main Steam safety relief valves, one valve remained open for an extended period of time. The inspector noted that the licensee action to reseal the valve was timely. The inspector also noted that 8 of the 12 valves tested failed to meet acceptance criteria. Setpoint adjustment and retest was planned but there was no follow-up by the inspector.

Jan. 16, 1978 50-320/77-42 Kellogg

The inspector reviewed the Generator Trip Test procedure. The procedure controls the response after a generator loss of load from full power. This information was used to verify adequate NSSS design and control system performance. No inadequacies were noted.

Feb. 27, 1978 50-320/78-07 Kellogg

Resolution of 320/76-00-02 and 320/76-09-01

The inspector reviewed a test that demonstrated the response times of the Engineered Safety Systems to be within the times required by the proposed facility technical specifications.

Feb. 27, 1978 50-320/78-07 Kellogg

Partial Resolution of 320/77-40-02

The volute seals on all four RCPs were replaced and tested. Testing at normal temperature and pressure remains.

Feb. 27, 1978 50-320/78-07 Kellogg

The inspector verified that there are plant procedures that provide alternate methods for accomplishing an orderly plant shutdown and cooldown in case of loss of normal coolant supply system. No deficiencies were noted.

Feb. 27, 1978 50-320/78-07-03 Kellogg

The inspector noted that testing associated with the Feedwater Latching System was incomplete.

Feb. 27, 1978 50-320/78-07-05 Kellogg

The licensee noted deficiencies associated with control room status board position indications for various safeguard related components.

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Feb. 27, 1978 50-320/78-08 Bares

The inspector reviewed the environmental monitoring program and concluded that the licensee could implement the required radiological environmental monitoring program for Unit 2.

Mar. 7, 1978 50-320/78-09 Kellogg

Resolution of Unresolved Item 320/77-24-01 Adequacy of Station Emergency Plan. The inspector reviewed the Station Emergency Plan and implementing procedures to verify that adequate preparedness would be implemented by the plan and procedures. The inspector concluded that the plan covered all aspects of emergency planning.

Mar. 29, 1978 50-320/78-10 Markowski

The inspector found some incorrectly stored out-of-calibration torque wrenches. He notes "This finding constitutes one example of an item of non-compliance with the requirements of 10 CFR 50 Appendix B, Criterion V and the licensee's administrative procedures."

Mar. 30, 1979 50-320/78-12 Narrow

Includes a report of an investigation of an allegation by a welder that he had been required to install an anchor plate without proper procedures. The alleged stated that this was a single, isolated instance. The allegation was substantiated. The support plate was for the core flood tank.

Apr. 24, 1978 50-320/78-15 Haverkamp

The inspector reviewed the emergency safeguards actuation which occurred on March 29, 1978. Due to a loss of power to the 2-1V Bus, a reactor trip occurred and the pressurizer electromagnetic relief valve opened. One result of the event was position indication (solenoid energized) in the control room.

May 31, 1978 50-320/78-17 Haverkamp

The inspector reviewed MEC letter to NRC:NRR dated May 5, 1978 which included results of B&W's most recent calculation concerning a small break LOCA at TMI. The inspector discussed the LOCA response actions with selected operators and verified their understanding and knowledge of the procedures. Extensive procedural changes had been made as a result of the B&W analysis.

August 24, 1978 50-320/78-24 Haverkamp

The main steam line safety relief valves were determined to have excessive blowdown characteristics.

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Aug. 24, 1978 50-320/78-24 Haverkamp

The inspector reviewed LER 78-26/36 dated May 2, 1978. RCS wide range pressure transmitter failed due to moisture induced short circuit in the transmitter terminal box.

Aug 24, 1978 50-320/78-24 Haverkamp

The inspector reviewed LER 78-27/1T dated May 2, 1978 concerning an error in the small break LOCA safety analysis.

Sept. 21, 1978 50-320/78-28 Haverkamp

The inspector reviewed Updated LER 78-33/1T dated July 31, 1978 concerning a reactor trip followed by RCS depressurization and NaOH injection due to a steam generator safety valve not properly reseating.

Nov. 8, 1978 50-320/78-32 Haverkamp

Resolution of Noncompliance 320/78-26-01 concerning failure to update emergency procedures. The inspector noted that quarterly surveillance of emergency monitoring kits now includes verification that the information book in each kit has up-to-date procedures.

Nov 30, 1978 50-320/78-33 Haverkamp

The inspector reviewed the report of an emergency safeguards actuation which occurred on November 7, 1978. While at 92% power, a heater drain tank low level alarm ultimately resulted in a loss of 1B feedwater pump. This eventually led to a reactor trip and a safety injection. During the transient the pressurizer level decreased below zero.

Jan. 9, 1979 50-320/78-36 Haverkamp

The inspector expressed concern over the apparent degradation in proper radiation protection control during the preceding weekend. The inspector noted that the conditions resulted from a combination of inadequate training and insufficient designation of responsibilities.

Jan. 9, 1979 50-320/78-36 Haverkamp

The inspector noted several examples of improperly or inadequately completed operating procedures. Most of them were cases of not initialing a step as being completed. However, in one case the inspector noted that a valve lineup had not been fully completed.

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Jan. 12, 1979 50-320/78-39 Bettenhausen

The inspector witnessed the generator trip test. The generator trip was followed by a turbine overspeed trip and a runback in reactor power to 15%. The inspector noted that the following test parameters could not be ascertained to meet acceptance criteria on the basis of preliminary raw data:

- RCS pressure at which the pressurizer spray valve opens or shuts
- RCS pressure at which the pressurizer electromagnetic relief valve opens or shuts
- Reactor power runback rate
- Main steam safety valve lift pressure

Not items of non-compliance were noted.

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