TOLEDO EDISON

JAMES S. GRANT
Vice President
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(419) 259-5232

May 4, 1979

Docket No. 50-346

License No. NPF-3

Serial No. 1-65

Mr. James G. Keppler
Regional Director, Region III
Office of Inspection and Enforcement
U. S. Nuclear Regulatory Commission
799 Roosevelt Road
Glen Ellyn, Illinois 60137

Dear Mr. Keppler:

IE Bulletin 79-05B requested that we review certain items related to the nuclear incident at Three Mile Island Unit 2. Enclosed are responses to items 1,2,4 and 6 of this Bulletin.

Yours very truly,

J. S. Grant/RDC

JSG:TJM

Enclosure

cc:
U. S. Nuclear Regulatory Commission
Office of Inspection and Enforcement
Division of Reactor Operations Inspections
Washington, D. C. 20555

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Item 1

Develop procedures and train operation personnel on methods of establishing and maintaining natural circulation. The procedures and training must include means of monitoring heat removal efficiency by available plant instrumentation. The procedures must also contain a method of assuring that the primary coolant system is subcooled by at least 50°F before natural circulation is initiated.

In the event that these instructions incorporate anticipatory filling of the OTSG prior to securing the reactor coolant pumps, a detailed analysis should be done to provide guidance as to the expected system response. The instructions should include the following precautions:

a. Maintain pressurizer level sufficient to prevent loss of level indication in the pressurizer;

b. Assure availability of adequate capacity of pressurizer heaters for pressure control and maintain primary system pressure to satisfy the subcooling criterion for natural circulation;

c. Maintain pressure - temperature envelope within Appendix G limits for vessel integrity.

Procedures and training shall also be provided to maintain core cooling in the event both main feedwater and auxiliary feedwater are lost while in the natural circulation core cooling mode.

Response

Toledo Edison Company (TECo), in conjunction with Babcock & Wilcox (B&W), is currently developing procedures for controlled transition into and maintenance of natural circulation.

Davis-Besse Nuclear Power Station Unit 1 is currently shutdown and will implement these procedures prior to Mode 3 operation. All shift operators will be trained in any procedure changes associated with this item.

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Item 2

Modify the actions required in Item 4a and 4b of IE Bulletin 79-05A to take into account vessel integrity considerations.

"4. Review the action directed by the operating procedures and training instructions to ensure that:

a. Operators do not override automatic actions of engineered safety features, unless continued operation of engineered safety features will result in unsafe plant conditions. For example, if continued operation of engineered safety features would threaten reactor vessel integrity then the HPI should be secured (as noted in b(2) below).

b. Operating procedures currently, or are revised to, specify that if the high pressure injection (HPI) system has been automatically actuated because of low pressure condition, it must remain in operation until either:

(1) Both low pressure injection (LPI) pumps are in operation and flowing at a rate in excess of 1000 gpm each and the situation has been stable for 20 minutes, or

(2) The HPI System has been in operation for 20 minutes, and all hot and cold leg temperatures are at least 50 degrees below the saturation temperature for the existing RCS pressure. If 50 degrees subcooling cannot be maintained after HPI cutoff, the HPI shall be reactivated. The degree of subcooling beyond 50 degrees F and the length of time HPI is in operation shall be limited by the pressure/temperature considerations for the vessel integrity."

Response

The Toledo Edison responses to Item 4a and 4b of IE Bulletin 79-05A submitted April 11, 1979 (Serial No. 1-56) are being reviewed in light of the modification above. To date one additional item has been identified as a component which can be manipulated by the operator. This is:

Component Cooling Water (CCW) Valve to Makeup Pump - The CCW to Makeup Pump valve may be overridden to the open position when RCS pressure is greater than 400 psig given no seismic event occurred and there has not been a loss of off-site power.

Prior to Mode 3 operation the appropriate procedural changes shall be made and the operators instructed in their implementation.

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Item 4

Provide procedures and training to operating personnel for a prompt manual trip of the reactor for transients that result in a pressure increase in the reactor coolant system. These transients include:

a. Loss of main feedwater

b. Turbine trip

c. Main Steam isolation Valve closure

d. Loss of off-site power

e. Low OTSG level

f. Low pressurizer level

Response

A hard wired reactor trip on the loss of main feedwater and on a turbine trip will be installed prior to Mode 3 operation. Procedures will be prepared and the operators will be instructed to manually trip the reactor on the closure of the main steam line isolation valve, on low steam generator levels, and on low pressurizer levels prior to Mode 3 operation. Procedures will be prepared and the operators will be trained to confirm that the reactor has automatically tripped upon a total loss of off-site power which has forced the Emergency Diesel Generators to start. However, if the main turbine-generator is isolated from the 345 KV transmission system and it is supplying the unit's house power (including reactor coolant pumps), then the reactor will not be manually tripped. If the reactor were tripped under this condition, the main turbine generator would also be tripped which would result in an unnecessary momentary loss of AC power, which would force the Emergency Diesel Generators to start. Also, this tripping would cause the loss of forced reactor coolant circulation.

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Item 6

The actions required in item 12 of IE Bulletin 79-05A are modified as follows:

> Review your prompt reporting procedures for NRC notification to assure that NRC is notified within one hour of the time the reactor is not in a controlled or expected condition of operation. Further, at that time an open continuous communication channel shall be established and maintained with NRC.

Response

Prior to Mode 3 operation Toledo Edison will review its prompt reporting procedures for NRC notification. Reporting requirements will be established to assure the NRC is notified within one hour of the time it has been determined the reactor is not in a controlled or expected condition of operation. The procedures will require that Toledo Edison establish and maintain an open and continuous communication channel when the reactor is not in a controlled or expected condition of operation.

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