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DTE Energy

GL 2008-01

January 22, 2010
NRC-10-0005

U. S. Nuclear Regulatory Commission
Attention: Document Control Desk
Washington, D C 20555-0001

References: 1) Fermi 2
NRC Docket No. 50-341
NRC License No. NPF-43

2) Detroit Edison Letter to NRC, "Fermi 2 Nine-Month Response to NRC Generic Letter 2008-01, Managing Gas Accumulation in Emergency Core Cooling, Decay Heat Removal, and Containment Spray Systems," NRC-08-0064, dated October 14, 2008

3) Detroit Edison Letter to NRC, "Supplement to Fermi 2 Nine-Month Response to NRC Generic Letter 2008-01, "Managing Gas Accumulation in Emergency Core Cooling, Decay Heat Removal, and Containment Spray Systems," NRC-09-0045, dated July 29, 2009

4) NRC Request for Additional Information, Fermi Nuclear Power Plant, Unit 2 – Request For Additional Information Regarding Generic Letter 2008-01(TAC No. MD7827), dated December 11, 2009

Subject: Response to the NRC Request for Additional Information Regarding Generic Letter 2008-01

The Nuclear Regulatory Commission (NRC) issued Generic Letter (GL) 2008-01 to request that each licensee evaluate the licensing basis, design, testing, and corrective action programs for the Emergency Core Cooling Systems (ECCS), Decay Heat Removal (DHR) systems, and Containment Spray systems, to ensure that gas accumulation is maintained less than the amount that challenges operability of these systems, and that appropriate action is taken when conditions adverse to quality are identified. GL 2008-01 requested each licensee to submit a written response in accordance with 10 CFR 50.54(f). In References 2 and 3, Detroit Edison provided the requested response to GL 2008-01.

In Reference 4, the NRC requested additional information regarding the responses provided by Detroit Edison. The Enclosure to this letter provides the additional information requested in Reference 4.

Should you have any questions regarding this submittal, please contact Mr. Rodney W. Johnson, Manager, Nuclear Licensing at (734) 586-5076.

Sincerely,

Joseph H. Plona

Enclosure

cc: NRC Project Manager
NRC Resident Office
Reactor Projects Chief, Branch 4, Region III
Regional Administrator, Region III
Supervisor, Electric Operators,
Michigan Public Service Commission

I, Joseph H. Plona, do hereby affirm that the foregoing statements are based on facts and circumstances which are true and accurate to the best of my knowledge and belief.

Joseph H. Plona
Site Vice President, Nuclear Generation

On this 20nd day of January, 2010 before me personally appeared Joseph H. Plona, being first duly sworn and says that he executed the foregoing as his free act and deed.

County of Monroe, MI
My Commission expires
4/4/13

Angela R. Scheare
Notary Public

Enclosure to
NRC-10-0005

Request for Additional Information to NRC Generic Letter 2008-01

RAI #1: Describe how, when found during the performance of routine surveillance and ultrasonic testing, void volumes are determined or quantified.

Response:

During routine surveillances, the vented flow stream is monitored to determine whether any void is present. If a void is detected, the system will be completely vented in order to remove the void volume and the condition will be entered in the Corrective Action Program (CAP). The CAP process will collect sufficient detail regarding the source of the voiding to determine the proper corrective action.

As stated in Reference 2 and 3, a design drawing review and pipe slope measurement effort identified 13 locations that were susceptible for trapped air. If any of the 13 susceptible locations are drained for maintenance, a post maintenance fill and vent will be performed. This will be followed by an Ultrasonic Test (UT) examination to determine if a void exists at the suspect location.

The void volume will be determined by calculating the void cross sectional area (using the arc measurement obtained at the maximum width from the UT exam) and then multiplying the cross sectional area by the pipe horizontal length. System pressure at the time of the UT measurement of the void profile is considered during evaluation of potential effects.

RAI #2: Discuss what provisions are in place to assure that gas was removed, and not transported to a high point that was previously found to be void-free, following the performance of venting procedures.

Response:

As part of the Generic Letter (GL) investigation, elevational one-line drawings were created from isometric drawings for systems of concern showing each divisional subsystem piping and valves in relation to building elevation. A review was conducted of the system operating procedure for the method of filling and venting each system. This review compared the system operating procedures fill and vent sequence to the one-line drawings. The procedures were confirmed to direct venting from lower to higher elevation in the systems. Therefore, when these systems are filled and vented, voids are assured to be transported to the system high point and removed.

RAI #3: Please clarify whether all voids found will be quantified and recorded as a part of the Condition Assessment Resolution Document (CARD) entry process that is followed when voids are found during routine surveillance, and, if any found voiding is not entered as a CARD, why it would be excluded.

Response:

As provided in the response to RAI #1, Fermi 2 procedures require that a CARD be written to record the event when a void is found. The CARD investigation will collect sufficient detail and supportive evidence regarding the source of the voiding to determine necessary corrective actions.

The following procedures are performed on a 31 day frequency for the High Pressure Coolant Injection (HPCI), Core Spray (CSS), and Residual Heat Removal (RHR) systems.

- 24.202.03, HPCI System Piping Filled and Valve Position Verification
- 24.203.01, CSS Discharge Piping Filled and Valve Position Verification
- 24.204.02, RHR Valve Lineup and System Filled Verification

Each one of these procedures contains the quoted statement below in the Precautions and Limitations section:

"The vented flow stream shall be monitored for indications that there may be a void in the piping being vented. Indications that there may be a void in the piping would be no initial flow when the vent valve is cracked open, an interruption in the flow stream, or chugging of the flow stream. Turbulent churning flow through a cracked open vent valve is not considered an indication that there may be a void in the piping. Any venting operation which indicates the system was not filled (i.e., contained voids) shall be reported to the Shift Manager (SM) and a CARD written so the cause can be investigated and corrected."

As stated above, if a void is found, it will be documented in the CARD. A CARD solution team leader is assigned, a corrective action plan developed (including a review of internal and external Operating Experience), and the plan is executed to determine the cause and correct the condition. The investigation will collect sufficient detail and supportive evidence regarding the source of the voiding to determine necessary corrective actions.

RAI #4: Provide a brief discussion of any training that is planned in response to GL 2008-01.

Response:

Training on the Institute of Nuclear Power Operations (INPO) SOER 97-01 "Potential Loss of High Pressure Injection and Charging Capability from Gas Intrusion" and SER 2-05 "Gas Intrusion in Safety Systems," which address concerns with gas intrusion, is provided to Operations personnel during initial and continuing training. The continuing training periodicity is once per cycle. Continuing training on the SOER, SER, and GL 2008-01 was provided to engineering personnel in 2009.

Detroit Edison is an active participant in the Nuclear Energy Institute (NEI) Gas Accumulation Team (GAT), which is currently coordinating the development of generic training modules for gas accumulation and management with INPO. These training modules will provide a basic

overview of the issues and also target the Engineering, Operations and Maintenance disciplines. When these training modules are completed and become available to the industry, Detroit Edison plans to evaluate these modules for implementation at Fermi 2. The schedule for such planned training will be determined following the release of INPO products. This is being tracked in the station's CAP.