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Sent: Friday, February 05, 2010 2:27 PM
To: Alan I Hassoun
Cc: Bedi, Gurjendra; Wolfgang, Robert; Sydnor, Christopher; McMurtray, Anthony; Pascarelli, Robert
Subject: FERMI 2 - Relief Requests - IST Program - Request for Additional Information - PRR-004, PRR-005, PRR-007, and PRR-010 - ME2552, ME2553, ME2554, ME2559

By letter dated November 3, 2009, Detroit Edison, the licensee, submitted relief requests PRR-004, PRR-005, PRR-007, and PRR-010 for the Inservice Testing Program for Fermi 2. In order to complete the evaluation of the above RRs, the NRC staff has requested additional information. Please arrange a teleconference to discuss the following information with the NRC staff:

RAI-PRR-004-01

Relief Request PRR-004 provides vibration data (Figures 1 thru 6) on pages 27 thru 32 of 79. ISTB-3540 provides the physical location on a pump for vibration measurements. Relief Request Figure 17 shows the vibration monitoring points on the RHR motor/pump assembly, but these points do not show their physical location clearly. Please describe the physical location of points, EA1, EA2, EA3, EC1, and EC2 as required by ISTB-3540 for vibration measurements.

RAI-PRR-004-02

Please confirm that vibration data shown on Figures 1 thru 6 are measured as peak and inch/second.

RAI-PRR-004-03

During the Fermi 2 Second 10-year IST interval, the licensee requested and NRC staff authorized relief to change the "Alert" range from 0.325 in/sec thru 0.7 in/sec to 0.4 in/sec. thru 0.7 in/sec for EA1, EA2 and EA3 points. Whereas for the Fermi 2 third 10-year IST interval, the licensee is requesting relief to change the "Alert" range from 0.325 in/sec thru 0.7 in/sec to 0.415 in/sec thru 0.7 in/sec for all five points (EA1, EA2, EA3, EC1, and EC2). Please explain and justify that (1) the new increased vibration level (Alert Range from 0.4 in/sec to 0.415 in/sec) is not a sign of degradation of RHR pumps; and (2) the new Alert Range requested for all the EA1, EA2, EA3, EC1, and EC2 points instead of EA1, EA2, and EA3 points is not a sign of degradation of the RHR pumps.

RAI-PRR-004-04

During the Fermi 2 Second 10-year IST interval, the relief was only authorized for RHR pumps B and C. For the Fermi third 10-year IST interval, the relief is being requested for all the RHR pumps A, B, C, and D. Please justify that the increased vibration measurement requested for all RHR pumps A, B, C, and D instead of only B and C is not a sign of pump degradation.

RAI-PRR-005-01

In Pump Relief Request PRR-005, the licensee is requesting relief for various pumps at Fermi 2. The ASME OM Code acceptance criteria of vibration for various pumps are different for various types of pumps, as specified in various Tables ISTB-5121-1, ISTB-5221-1, ISTB-5321-1, and ISTB-5321-2. The various pumps are (1) centrifugal pumps (except vertical line shaft centrifugal pumps); (2) vertical line shaft centrifugal pumps; (3) positive displacement pumps (except reciprocating); and (4) reciprocating positive displacement pumps. Therefore, please provide the following information related to each pump listed in PRR-005.

- (1) Type of pump;
- (2) Description of pump;
- (3) Pump Categories: Group A or B based on its function as defined in ISTB; and
- (4) Pump operating speed (rpm), because pump operating speed is a critical component in the vibration acceptance criteria.

RAI-PRR-005-02

Relief Request PRR-005 lists all the applicable pumps on page 47 thru 48 and provides measured reference vibration values at points EA1, EA2, EA3, EC1, and EC2. (1) Please describe the physical location of these points, and (2) Please confirm that pumps' vibration values provided are based on historical data.

RAI-PRR-005-03

Relief Request PRR-005 establishes a vibration reference value (V_r) of 0.04 in/sec (Fermi selected value) for smooth running pumps. The relief request lists all of the pumps with V_r above and below values of 0.04 in/sec. For a smooth-running pump, the measured vibration values at all points (EA1, EA2, EA3, EC1, and EC2) must be less or equal to established reference value V_r . Therefore, please explain how all of the pumps included in PRR-05 are defined as smooth-running pumps since many have vibration values greater than 0.04 in/sec.

RAI-PRR-005-04

Please confirm that the Preventive and Predictive Maintenance Program for the specified pumps at Fermi 2 includes such items as bearing temperature trending, oil sampling and analysis, and thermographic analysis including with enhanced vibration monitoring.

RAI PRR-007-01

Please provide the current classification (Group A or Group B) for each of the pumps associated with this relief request.

RAI PRR-007-02

In order to use the modified Group A test for pumps currently classified as Group B, the Group B pumps must be re-classified as Group A pumps. If any of the pumps associated with this relief request are currently classified as Group B, please confirm that you reclassifying them as Group A pumps.

RAI PRR-007-03

It is not clear what flow rate is being used for the design flow rate stated in ISTB-3300(e)(1) for the pumps. If the design accident flow rate is being used, then some of the pump quarterly test flow rates are outside of the $\pm 20\%$ band allowed in ISTB-3300-(e)(1). Please provide the design flow rates for each pump.

RAI PRR-007-04

The table in Section 8 of the relief request has indications for footnotes 1, 2, and 4. These footnotes do not appear in the relief request package. Please provide these footnotes.

RAI PRR-007-05

Please verify that vibration monitoring will be performed as part of the quarterly testing.

RAI PRR-010-01

Please confirm that the pumps will be re-classified as Group A pumps.

RAI PRR-010-02

Please provide the equipment number for each SLC pump and each Fuel Oil Transfer pump