

Joseph H. Plona
Site Vice President

6400 N. Dixie Highway, Newport, MI 48166
Tel: 734.586.5910 Fax: 734.586.4172

DTE Energy



10 CFR 50.55a

April 22, 2010
NRC-10-0033

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's Letter to NRC, "Submittal of the Inservice Testing Program Relief Requests for Pumps and Valves – Third Ten-year Interval," NRC-09-0064, dated November 3, 2009

Subject: Response to Request for Additional Information Regarding Relief Requests PRR-002 and PRR-003 for the Inservice Testing Program Third Ten-Year Interval

In Reference 2, Detroit Edison submitted proposed relief requests for the third ten-year interval of the Inservice Testing Program for Pumps and Valves. In an e-mail from Mr. Mahesh Chawla to Mr. Alan Hassoun dated March 23, 2010, the NRC requested additional information for Relief Requests PRR-002, Relief to Allow Parallel Testing of Core Spray Pumps and PRR-003, Emergency Equipment Cooling Water Pumps Tested Using Pump Curves. This was discussed in a subsequent telephone conversation between NRC staff and Detroit Edison personnel on March 24, 2010. The additional information requested by the NRC staff is enclosed.

There are no new commitments included in this document.

Should you have any questions or require additional information, please contact Mr. Rodney W. Johnson of my staff at (734) 586-5076.

Sincerely,

A handwritten signature in cursive script that reads "Joseph H. Plona".

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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

**Enclosure to
NRC-10-0033**

**Fermi 2 NRC Docket No. 50-341
Operating License No. NPF-43**

**Response to Request for Additional Information (RAI) Regarding
Relief Requests PRR-002, Relief to Allow Parallel Testing of
Core Spray Pumps and PRR-003, Emergency Equipment Cooling
Water Pumps Tested Using Pump Curves for the
Inservice Testing Program Third Ten-Year Interval**

The following is Detroit Edison's response to each NRC request for additional information (RAI):

For Relief Request PRR-002 (Parallel Testing of Core Spray Pumps):

1. Will Group A type testing be performed at nominally full flow conditions of greater than or equal to 6,600 gpm per division?

Response:

Yes, pages 7 and 8 of the enclosure in Reference 2 show the minimum allowed quarterly test flow (2 pumps) is 6600 gpm.

2. Why are the monitoring, analysis, and evaluation requirements of ISTB-6000 limited to Alert and Action Range low criteria only (i.e., Alert and Action Range high criteria are not included)?

Response:

The context cited in Relief Request PRR-002 relates to identification of pump degradation; therefore, only the minimum allowed Differential Pressure (DP) criteria was described. Pages 7 and 8 of the enclosure in Reference 2 show that maximum DP criteria is also imposed.

3. The relief request states that when a reference curve may have been affected by repair, replacement, or routine servicing of a pump, a new reference curve will be determined, or an existing reference curve will be reconfirmed. Is relief therefore being sought from ISTB-3310?

Response:

No, this portion of Relief Request PRR-002 states that Fermi will verify the existing pump curve or establish a new curve following any major maintenance. This is in accordance with the intent of ISTB-3310 and based on the precedent established in Code Case OMN-9 for curve-based criteria.

4. Will the vibration acceptance criteria of Table ISTB-5121-1 still apply and be applied to each pump individually. Will a single value be used over the whole range of the pump curve?

Response:

Yes, individual pump vibration criteria based on ISTB-5121-1 are applicable. Also, a single Alert criteria and a single Required Action criteria will be used over the range of the pump curve. Individual vibration reference values for all four pumps were taken during baseline

testing in 1984. These reference values range from a low of 0.131 to a high of 0.315 and were relatively consistent over the test flow range. As a result, the Code maximum limits of 0.325 Alert and 0.700 Required Action are imposed for all monitoring points on all 4 pumps. The vibration data has remained essentially constant since the initial baseline testing.

5. The relief request states that the first Comprehensive Pump Test (CPT) will be performed on each of the Core Spray pumps no later than February 17, 2013. When will the second CPT be performed?

Response:

The second CPT would be performed 2 years following the first CPT in accordance with ISTB-3400-1 test frequency requirements.

For Relief Request PRR-003 (EECW Pump Testing with Pump Curves):

1. Will testing will be done at substantial flowrates of greater than or equal to 1,550 gpm?

Response:

Yes, pages 16 and 18 of the enclosure in Reference 2 provide the allowable flow ranges for each pump. The ranges of recorded quarterly test flows taken since the pumps were replaced in 2007 are:

Pump P4400C001A:	Lowest flow 1835 gpm	Highest flow 1908 gpm
Pump P4400C001B:	Lowest flow 1670 gpm	Highest flow 1760 gpm

2. Will the vibration acceptance criteria of Table ISTB-5121-1 still apply? Will a single value be used over the whole range of the pump curve?

Response:

Yes, pump vibration criteria based on ISTB-5121-1 are applicable. Also, a single Alert criterion and a single Required Action criterion will be used over the range of the pump curve. Individual reference values for vibration data were recorded at the primary reference flow. The procedural vibration limits are based on ISTB-5121-1 using those reference values. Vibration data recorded at multiple flow points during pre-service testing did not indicate a statistical relationship between flow and vibration values. The intent for EECW is to test at a consistent flow value each quarter similar to normal Group A testing. The curve based criteria sought in Relief Request PRR-003 would be utilized for off-normal system configurations, i.e., large load paths isolated.

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3. Does this relief request apply also to the Comprehensive Pump Test (CPT) required by OM Code, or just the Group A test?

Response:

Relief Request PRR-003 is applicable to the Group A testing. A separate Relief Request, PRR-007, Relief from Comprehensive Pump Testing for Centrifugal Pumps, included in Reference 2, requests relief from CPT for centrifugal pumps including the EECW pumps.