UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

July 6, 2010

Mr. Jack M. Davis
Senior Vice President and Chief Nuclear Officer
Detroit Edison Company
Fermi 2 – 210 NOC
6400 North Dixie Highway
Newport, MI 48166

SUBJECT: FERMI 2 - EVALUATION OF RELIEF REQUEST NOS: PRR-002, PRR-003, AND PRR-006 FOR THE THIRD 10-YEAR INTERVAL INSERVICE PROGRAM (TAC NOS. ME2548, ME2549, ME2551)

Dear Mr. Davis:

By letter dated November 3, 2009, DTE Energy (the licensee) submitted eleven requests for relief from certain requirements of the American Society of Mechanical Engineers (ASME) Code for Operation and Maintenance of Nuclear Power Plants (OM Code) at Fermi 2 for the third 10-year Inservice Testing (IST) Program interval. On January 7, 2010, the NRC requested the licensee to submit additional information to support relief request PRR-006. By letter dated February 19, 2010, the licensee submitted this additional information. On March 23, 2010, the NRC requested the licensee to submit additional information to support relief requests PRR-002 and PRR-003. By letter dated April 22, 2010, the licensee submitted this additional information.

Specifically, pursuant to *Title 10 of the Code of Federal Regulations* (10 CFR) 50.55a(a)(3)(i), in PRR-002 (in part), PRR-003, and PRR-006 the licensee requested to use these alternatives on the basis that the alternatives provide an acceptable level of quality and safety. Pursuant to 10 CFR 50.55a(a)(3)(ii), in PRR-002 (in part) the licensee requested to use this alternative on the basis that complying with the specified requirements would result in hardship or unusual difficulty without a compensating increase in the level of quality and safety.

The NRC staff has completed its review of the subject requests for authorization of these alternatives. As documented in the enclosed Safety Evaluation, the NRC staff concludes that the proposed alternatives are justified and that they provide an acceptable level of quality and safety. The analysis and evaluation that the licensee has performed provides reasonable assurance of operational readiness.

Therefore, the NRC staff authorizes alternative request PRR-006 at Fermi 2 for the third 10-year IST program interval, which began on February 17, 2010 and ends on February 16, 2020. The NRC staff grants relief for request PRR-002 at Fermi 2 for the period which began February 17, 2010 (i.e., commencement of the Fermi 2 third 10-year IST program interval) and ends three years later (February 17, 2013), except for the use of reference curves as described in alternative testing requirement 1.

The use of reference curves may continue until February 17, 2014. The NRC staff grants relief for request PRR-003 at Fermi 2 for the third 10-year IST program interval, which began on February 17, 2010 and ends on February 16, 2020. All other ASME OM Code requirements for which relief was not specifically requested and approved remain applicable.

Sincerely,

Peter S. Tam for

Robert J. Pascarelli, Branch Chief
Plant Licensing Branch III-1
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket No. 50-341

Enclosure: Safety Evaluation

cc w/encl: Distribution via ListServ

UNITED STATES
NUCLEAR REGULATORY COMMISSION
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SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELIEF REQUEST NUMBERS PRR-002, PRR-003, AND PRR-006

FOR THE THIRD 10-YEAR INTERVAL INSERVICE TESTING PROGRAM

DTE ENERGY

FERMI 2

DOCKET NO. 50-341

1.0 INTRODUCTION

By letter dated November 3, 2009 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML093140302), DTE Energy (the licensee) submitted eleven requests for relief from certain requirements of the American Society of Mechanical Engineers (ASME) Code for Operation and Maintenance of Nuclear Power Plants (OM Code) at Fermi 2 for the third 10-year Inservice Testing (IST) Program interval. This safety evaluation addresses licensee relief request numbers PRR-002, PRR-003, and PRR-006. On January 7, 2010, (ADAMS Accession No. ML101760333) the NRC requested the licensee to submit additional information to support relief request PRR-006. By letter dated February 19, 2010, (ADAMS Accession No. ML100540147), the licensee submitted this additional information. On March 23, 2010, (ADAMS Accession No. ML100830407), the NRC requested the licensee to submit additional information to support relief requests PRR-002 and PRR-003. By letter dated April 22, 2010, (ADAMS Accession No. ML101120958), the licensee submitted this additional information.

Specifically, pursuant to *Title 10 of the Code of Federal Regulations* (10 CFR) 50.55a(a)(3)(i), in PRR-002 (in part), PRR-003, and PRR-006 the licensee requested to use these alternatives on the basis that the alternatives provide an acceptable level of quality and safety. Pursuant to 10 CFR 50.55a(a)(3)(ii), in PRR-002 (in part) the licensee requested to use this alternative on the basis that complying with the specified requirements would result in hardship or unusual difficulty without a compensating increase in the level of quality and safety.

2.0 REGULATORY EVALUATION

The *Code of Federal Regulations* (CFR), 10 CFR 50.55a(f), requires that IST of certain ASME Code Class 1, 2, and 3 pumps and valves be performed in accordance with the specified ASME Code incorporated by reference in the regulations. Exceptions are allowed where alternatives have been authorized or relief has been requested by the licensee and granted by the

Commission pursuant to paragraphs (a)(3)(i), (a)(3)(ii), or (f)(6)(i) of 10 CFR 50.55a. Pursuant to 10 CFR 50.55a the Commission is authorized to approve alternatives and to grant relief from ASME Code requirements upon making necessary findings. In accordance with 10 CFR 50.55a(f)(4)(ii), licensees are required to comply with the requirements of the latest edition and addenda of the ASME Code incorporated by reference in the regulations twelve months prior to the start of each 120-month IST program interval. In accordance with 10 CFR 50.55a(f)(4)(iv), IST of pumps and valves may meet the requirements set forth in subsequent editions and addenda that are incorporated by reference in 10 CFR 50.55a(b), subject to NRC approval. Portions of editions or addenda may be used provided that all related requirements of the respective editions and addenda are met.

In proposing alternatives or requesting relief, the licensee must demonstrate that: (1) the proposed alternatives provide an acceptable level of quality and safety; (2) compliance would result in hardship or unusual difficulty without a compensating increase in the level of quality and safety; or (3) conformance is impractical due to limitations of design, geometry, and materials of construction for the facility. NRC guidance contained in Generic Letter (GL) 89-04, "Guidance on Developing Acceptable Inservice Testing Programs," provides alternatives to ASME Code requirements which are acceptable. Further guidance is given in GL 89-04, Supplement 1, and NUREG-1482, Revision 1, "Guidance for Inservice Testing at Nuclear Power Plants."

The "Code of Record" for the Fermi 2, third 10-year IST program interval is the ASME OM Code, 2004 Edition (no Addenda), as required by 10 CFR 50.55a(f)(4)(ii). The Fermi 2, third 10-year IST program interval that began on February 17, 2010 and ends on February 16, 2020.

The NRC staff's findings with respect to granting relief and/or approving alternatives associated with Fermi 2 relief requests PRR-002, PRR-003, and PRR-006 are as follows:

3.0 TECHNICAL EVALUATION

3.1 RELIEF REQUEST PRR-002

3.1.1 Licensee's Relief Request and Proposed Alternative

The Core Spray System (CSS) protects the reactor core in the event of a large break Loss Of Coolant Accident if the Feedwater, Control Rod Drive, Reactor Core Isolation Cooling, High Pressure Coolant Injection, or Residual Heat Removal (RHR) systems are unable to maintain reactor water level. The system consists of two independent 100 percent capacity divisions, each containing two parallel pumps. Each pump is capable of providing 50 percent of the required flow for that division. Both pumps in a division are required to be operable in order for the division to be considered operable (Pumps A and C comprise Division 1; pumps B and D comprise Division 2).

The current design of the test line for each division will permit full flow testing of two pumps simultaneously as required by Technical Specification Surveillance Requirement (SR) 3.5.1.8. However, it is impractical to test the pumps of a given division individually, as required by the ASME OM Code, since the test lines and test valves are sized for two-pump testing. The test line flow control valves are throttled approximately 13 percent open (Division 1) or 9 percent open (Division 2) to control two-pump test flow. The existing flow control valves are not capable

of throttling low enough (less than 5 percent open) to accommodate single pump operation without experiencing unstable operation, cavitation, and severe vibration. Significant damage to the test line valves occurred during attempts to throttle for single pump operation during plant initial startup testing.

Further, due to the oversized test lines and test valves, it is impractical to throttle to a fixed reference value during two pump testing. The flow control valves are opened to a point in their travel in which small changes in valve position result in large changes in flow rate. Thus, it presents an unnecessary challenge to both the equipment and the plant operators to attempt to return to a specific fixed reference value at each pump test.

A modification plan is currently being finalized in which several reducing orifices will be installed in each test line. This modification will allow for individual pump testing as well as provide enhanced throttling capability allowing for standard pump testing with fixed reference values. The test line modification will be performed during the Fermi 2 Refueling Outage 15 which is scheduled to start on March 30, 2012 and end on April 30, 2012.

In the interim, the licensee has requested relief for core spray pumps E2101C001A, E2101C001B, E2101C001C, and E2101C001D from the requirements of the following three ASME OM Code paragraphs:

- Relief is requested from ASME OM Code ISTB, *Inservice Testing of Pumps*, in order to perform quarterly testing of both core spray pumps in each division simultaneously in parallel. That is, both pumps are to be run together and treated as a single component rather than being tested individually. This relief is requested for the period beginning February 17, 2010 (i.e., commencement of the Fermi 2 third 10-year IST program interval) and ending three years later (February 17, 2013).

- Relief is requested from ASME OM Code ISTB-5121, *Group A Test Procedure*, in order to utilize a flow reference curve, rather than a single fixed reference value for flow. This relief is requested for the period beginning February 17, 2010 (i.e., commencement of the Fermi 2 third 10-year IST program interval) and ending four years later (February 17, 2014).

- Relief is requested from ASME OM Code ISTB-3400, *Frequency of Inservice Test*, in order to delay the first performance of the biennial Comprehensive Pump Test (CPT) required for each core spray pump. Specifically, it is requested that the due date of February 17, 2012 for the performance of the first CPT on these pumps (i.e., two years after commencement of the Fermi 2 third 10-year IST program interval) be extended by one year to February 17, 2013.

In their original relief request and by supplemental information submitted on April 22, 2010, the licensee has proposed the following alternative testing:

1. Quarterly Group A type testing will be performed for both core spray pumps in each Division in parallel. Hydraulic acceptance criteria will be based on flow reference curves rather than reference points. Reference curves will be established for each division.

2. Group A type testing will be performed at nominally full flow conditions of greater than or equal to 6,600 gallons per minute (gpm) per division.

3. The following Group A hydraulic acceptance criteria will be used in order to enhance the ability to detect degradation of a single pump:

   Acceptable ΔP Range - 0.94 to 1.06 ΔPr
   Alert ΔP Range - 0.92 to < 0.94 ΔPr
   Required Action ΔP Range - Low < 0.92 ΔPr and High > 1.06 ΔPr

   (Where ΔPr equals the differential pressure reference value)

   These acceptance criteria are more stringent than those otherwise specified in Table ISTB-5121-1.

4. The monitoring, analysis, and evaluation requirements of ISTB-6000 will apply using the modified hydraulic acceptance criteria above (Performance trending of the core spray pumps will include normalization of the ΔP data to a fixed reference value to eliminate scatter within the ΔP data caused by test flow values above or below a nominal fixed reference flow to provide the ability to detect degradation).

5. 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.

6. The vibration acceptance criteria of Table ISTB-5121-1 are applicable and will be applied to each pump individually. A single Alert criterion and a single Required Action criterion 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 in./sec to a high of 0.315 in./sec and were relatively consistent over the test flow range. As a result, the Code maximum limits of 0.325 in./sec. Alert and 0.700 in./sec. Required Action will be used for all monitoring points on all four pumps.

7. The first CPT will be performed on each of the core spray pumps no later than February 17, 2013. The second CPT will be performed 2 years following the first CPT in accordance with ISTB-3400-1 test frequency requirements.

3.1.2 NRC Staff Evaluation

The CSS at Fermi 2 is a unique design which includes two divisions with two pumps in each division. If one of the two pumps in either division is declared inoperable, then that division is inoperable. There are no functions of the CSS for single pump operation in either division. The CSS also includes a test line that is used to test both pumps in each division simultaneously while the plant is at power. Both pumps are required to operate in order to achieve the TS flow rate specified in SR 3.5.1.8 of at least 6350 gpm at a system head corresponding to a reactor pressure of $\geq$ 100 pounds per square inch gauge (psig).

The ASME OM Code generally requires in Section ISTB that pumps must be tested individually to detect a deviation in hydraulic and mechanical performance at points of operation readily duplicated during subsequent tests. These points of operation, referred to as reference values, are the baseline points from which the acceptance criteria are established. When maintenance on a pump has the potential to affect an individual reference value or a set of reference values,

new reference values must be established. If the deviation in hydraulic performance of an individual centrifugal pump falls within the required action range, the pump is declared inoperable until the cause of the deviation is determined and the condition is corrected.

The design of the CSS at Fermi 2 is such that each train is capable of being tested at substantial flow conditions, but it is impractical to test each pump in the train individually because the test flow loop (specifically, the flow control valve) is sized to test both pumps simultaneously. In order to test a pump individually, the flow control valve would be open less than 5 percent of valve stem travel. Operation at this valve setting would be accompanied by unstable operation, cavitation, severe vibration, and possible system damage. Operation of the core spray pumps individually for testing is, therefore, impractical within the limitations of the current system design.

The ASME OM Code test procedure in Section ISTB-5121 requires that pumps must be throttled to a specific hydraulic reference point (either flow or differential pressure) for testing. Because of the design of the test line and the sizing of the flow control valve, small changes in valve position result in large changes in flow rate presenting a challenge to both the equipment and the plant operators to throttle to a specific reference point. It is, therefore, impractical within the limitations of the current system design to obtain a repeatable reference value in accordance with OM Code requirements.

ASME OM Code Section ISTB-3400 requires that the core spray pumps be tested (1) quarterly per the Group A test procedure, and (2) biennially per the CPT procedure. Procedurally, the CPT is essentially the same as the Group A test except that the CPT seeks to identify relatively smaller changes in hydraulic performance than the Group A test through the use of higher precision in the differential pressure measurement. However, testing the core spray pumps in parallel (i.e., measuring the combined hydraulic performance of both pumps) has the potential to mask small performance changes in either pump individually, thus defeating the intent of the CPT. Performance of the CPT is, therefore, impractical within the limitations of the current system design.

The future CSS test line modification will allow for individual pump testing as well as provide enhanced throttling capability allowing for standard pump testing with fixed reference values. This modification, when complete, should eliminate the impracticalities discussed above and should, therefore, obviate the need for relief from these ASME OM Code requirements.

In the interim and pursuant to 10 CFR 50.55a(f)(6)(i), the requested relief from ASME OM Code requirements is granted and alternatives as discussed above are authorized. These alternatives are authorized for the period that began February 17, 2010 (i.e., commencement of the Fermi 2 third 10-year IST program interval) and ending three years later (February 17, 2013), except for the use of reference curves as described in alternative testing requirement 1 above. The use of reference curves may continue until February 17, 2014 to allow some additional time to assess system flow throttling capability following completion of the modification.

3.1.3 Conclusion

As set forth above, the NRC staff determined that it is impractical for the licensee to comply with certain requirements of the ASME OM Code for core spray pump testing, and the alternative

testing specified provides reasonable assurance that the core spray pumps will remain operationally ready.

Granting relief pursuant to 10 CFR 50.55a(f)(6)(i) is authorized by law and will not endanger life or property or the common defense and security, and is otherwise in the public interest giving due consideration to the burden upon the licensee that could result if the requirements were imposed on the facility.

3.2 Relief Request PRR-003

3.2.1 Licensee's Relief Request and Proposed Alternative

The design of the Emergency Equipment Cooling Water (EECW) system provides essentially a fixed flow resistance with only coarse ability to adjust flow rates by either isolating individual cooling load paths or by throttling with the manual pump discharge gate valve. Isolating cooling paths may require the system to be inoperable for extended periods of time. Depending on which flow path(s) is isolated (and which flow path(s) may already be isolated due to other plant conditions), it is impractical to establish a specific reference flow value. The ability to control flow using the discharge gate valve is also impractical due to its design as a shutoff valve (rather than as a throttling valve). This makes it difficult to establish a specific reference flow value using this method.

Relief is requested from ASME OM Code ISTB-3300, *Reference Values*, and ISTB-5121, *Group A Test Procedure*, for EECW pumps P4400C001A and P4400C001B, in order to utilize a flow reference curve, as needed, rather than a single fixed reference flow value. This relief is requested for the entire Fermi 2 third 10-year IST program interval that began February 17, 2010 and ends February 16, 2020.

In their original relief request and by supplemental information submitted on April 22, 2010, the licensee has proposed the following alternative testing:

1. Quarterly Group A testing of the EECW pumps will be performed in accordance with ISTB-5121(c) at reference conditions established by the licensee.

2. If it is impractical due to system conditions to achieve the reference flow condition for the ISTB-5121(c) test, hydraulic acceptance criteria will be based on a flow reference curve. Reference curves will be established for each pump.

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

4. The following hydraulic acceptance criteria will be used in order to enhance the ability to detect degradation. These acceptance criteria are more stringent than those otherwise specified in Table ISTB-5121-1.

Acceptable ΔP Range	0.91 to 1.06 ΔPr
Required Action ΔP Range	Low < 0.91 ΔPr and High > 1.06 ΔPr

(Where ΔPr equals the differential pressure reference value)

5. The monitoring, analysis, and evaluation requirements of ISTB-6000 will apply using the modified hydraulic acceptance criteria shown above. (Performance trending will utilize a normalization process wherein ΔP data will be normalized to the reference flow value to allow for a low scatter time-based trend analysis to provide the ability to detect pump degradation).

6. 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.

7. The vibration acceptance criteria of Table ISTB-5121-1 are applicable and will be applied. 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).

3.2.2 NRC Staff Evaluation

ASME OM Code ISTB-5121, *Group A Test Procedure*, requires that pump tests be conducted with the pump operating at a specified reference point. The licensee has demonstrated that due to the system design it is impractical to establish a repeatable reference value at each test and has requested relief from this requirement.

Pursuant to 10 CFR 50.55a(f)(6)(i), the requested relief from the ASME OM Code ISTB-5121 requirement to throttle to a specified reference point is granted and alternatives as discussed above are authorized. These alternatives are authorized for the EECW pumps for the entire Fermi 2 third 10-year IST program interval.

3.2.3 Conclusion

As set forth above, the NRC staff determined that it is impractical for the licensee to comply with certain requirements of the ASME OM Code for EECW Pump testing, and the alternative testing specified provides reasonable assurance that the EECW Pumps remain operationally ready.

Granting relief pursuant to 10 CFR 50.55a(f)(6)(i) is authorized by law and will not endanger life or property or the common defense and security, and is otherwise in the public interest giving due consideration to the burden upon the licensee that could result if the requirements were imposed on the facility.

3.3 Relief Request PRR-006

3.3.1 Licensee's Relief Request and Proposed Alternative

The licensee is requesting relief from the requirements of ASME OM Code, 2004 Edition, Paragraph ISTB-3510(a), which states that instrument accuracy shall be within the limits of Table ISTB-3510-1. This table specifies the pressure instrument accuracy for a comprehensive pump test to be ± 0.5 percent. Paragraph ISTB-3510(a) also states that for digital instruments, the required accuracy is over the calibrated range and for a combination of instruments, the

required accuracy is loop accuracy. This relief request is for the Residual Heat Removal Service Water (RHRSW) Pumps, the Emergency Equipment Service Water (EESW) Pumps, and the Emergency Diesel Generator Service Water (EDGSW) Pumps. The purpose of these service water pumps is to maintain cooling flow from the Ultimate Heat Sink to the RHR Heat Exchangers, the EECW Heat Exchangers and various heat exchangers on each Emergency Diesel Generator.

The Licensee states:

> Due to the design of these pumps (vertical line shaft), the suction pressure (INLPR) [inlet pressure] is determined using measurement of RHR Reservoir level and correlation to suction lift pressure. The instrumentation for level measurement of the RHR Reservoir is calibrated to ± 0.73% at full scale (± 0.22 ft @ 30 ft). [T]he instrument calibration is verified at cardinal points of 6, 12, 18, 24, and 30 feet. A query of the IST database showed that over the past ten years the lowest recorded suction pressure for any of the service water pumps was 4.7 psi and the highest was 5.5 psi. This equates to a range of reservoir level of 26.8 feet to 28.6 feet. [T]he degree of error for this instrument is lowest at the maximum reading (30 feet) and higher at lower readings. The cardinal point of 24 feet is bounding in the lower direction for all the recorded surveillance data. The accuracy at that cardinal point is ± 0.92% (± 0.22 ft @ 24 ft.). For the nominal pressure reading of 5.3 psi this equates to a maximum possible error of 5.3 x .0092 = 0.049 psi. For the comprehensive test of these pumps, the Code required accuracy for pressure is 0.5%, or 0.027 psi at a measured INLPR of 5.3 psi. The difference between the permanently installed instrument accuracy and the Code required 0.5% accuracy amounts to 0.022 psi. Temporary digital instrumentation is used to measure the discharge pressure (DISPR) of these pumps. The accuracy of the DISPR measurements is 0.5% of reading or better. For a bounding low DISPR reading of 32 psi the error would be 32 x .005 = 0.16 psi.
>
> The differential pressure parameter is affected primarily by the accuracy of the discharge pressure of the pumps. The suction lift pressure derived from the RHR reservoir level has lower impact on the overall calculation of pump differential pressure. Using the installed 0.92% level instrument induces a maximum additional error of 0.022 psi. This is well within the 0.1 psi readability expectation for Operations when documenting the discharge pressure.

3.3.2 NRC Staff Evaluation

The licensee requests relief from the instrument accuracy requirements of ISTB-3510(a) and Table ISTB 3510-1 for the RHR reservoir level instrument that is used for various service water pump testing. Specifically, the Code requires pressure instruments to have an accuracy of ±0.5 percent for comprehensive and preservice tests. RHRSW, EESW and EDGSW pumps are tested using the installed RHR reservoir level instrument to calculate pump suction pressure and a temporary digital instrument to measure pump discharge pressure. Both of these measurements are used to calculate pump differential pressure.

The RHR reservoir level is detected and indicated by a combination of instruments, transmitter, power supply, and indicator/recorder, and is required by ISTB-3510(a) to meet the accuracy requirements as a loop measurement. As stated above, the loop accuracy of the level

instrument is ± 0.22 ft which is 0.92 percent. Using the licensee's provided nominal suction pressure reading of 5.3 psi, the error is ±0.049 psi. The discharge pressure for each affected pump is measured using a temporary digital instrument with an accuracy of ±0.5 percent. Using a bounding low pump discharge pressure of 32 psi, the error is ±0.16 psi. The combined error resulting from calculating the pump differential pressure is 0.16 psi + 0.049 psi = 0.209 psi. If the RHR reservoir instrument met the Code required accuracy of ±0.5 percent, the reading error would be ±0.027 psi. The resulting combined error would be 0.16 psi + 0.027 psi = 0.187 psi. The difference of 0.022 psi is considered insignificant when monitoring for degradation. The existing accuracy is equivalent to the 1.5 percent minimum accuracy allowed by the combination of instrument full scale range and accuracy as specified in the ASME OM code for comprehensive pump testing. This accuracy provides adequate assurance of operability.

3.3.3 Summary

Based on the above evaluation, the NRC staff concludes that the licensee's proposed alternative to the ASME OM Code comprehensive pump testing requirements for the RHRSW, EESW and EDGSW Pumps are authorized pursuant to 10 CFR 50.55a(a)(3)(i), on the basis that the alternative provides an acceptable level of quality and safety. The licensee's proposed alternative provides reasonable assurance of the operational readiness of the pumps. This alternative is authorized for the third 10-year IST program interval.

4.0 Conclusion

As set forth above, the NRC staff determines that for relief requests PRR-002 and PRR-003 the proposed testing provides reasonable assurance that the pumps are operationally ready, and for proposed alternative PRR-006 provides an acceptable level of quality and safety. Accordingly, the NRC staff concludes that the licensee has adequately addressed all of the regulatory requirements set forth in 10 CFR 50.55a(f)(6)(i) for relief requests PRR-002 and PRR-003 and 10 CFR 50.55a(a)(3)(i) for alternative request PRR-006, and is in compliance with the ASME OM Code's requirements. Therefore, the NRC staff authorizes alternative request PRR-006 at Fermi 2 for the third 10-year IST program interval, which began on February 17, 2010 and ends on February 16, 2020. The NRC staff grants relief for request PRR-002 at Fermi 2 for the period that began February 17, 2010 (i.e., commencement of the Fermi 2 third 10-year IST program interval) and ends three years later (February 17, 2013), except for the use of reference curves as described in alternative testing requirement 1. The use of reference curves may continue until February 17, 2014. The NRC staff grants relief for request PRR-003 at Fermi 2 for the third 10-year IST program interval, which began on February 17, 2010 and ends on February 16, 2020. All other ASME OM Code requirements for which relief was not specifically requested and approved remain applicable.

Principal Contributors:

J. Billerback – PRR-002, PRR-003
L. Russell – PRR-006

Dated: July 6, 2010

The use of reference curves may continue until February 17, 2014. The NRC staff grants relief for request PRR-003 at Fermi 2 for the third 10-year IST program interval, which began on February 17, 2010 and ends on February 16, 2020. All other ASME OM Code requirements for which relief was not specifically requested and approved remain applicable.

Sincerely,

/RA/ Peter Tam for

Robert J. Pascarelli, Branch Chief
Plant Licensing Branch III-1
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket No. 50-341

Enclosure: Safety Evaluation

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