



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

July 20, 2019

Mr. Paul Fessler
Senior Vice President and
Chief Nuclear Officer
DTE Electric Company
Fermi 2 – 260 TAC
6400 North Dixie Highway
Newport, MI 48166

SUBJECT: FERMI 2 - PROPOSED ALTERNATIVE FROM THE REQUIREMENTS OF THE
ASME BPV CODE REGARDING THE INSERVICE EXAMINATION OF CLASS 1
COMPONENTS (EPID L-2019-LLR-0022)

Dear Mr. Fessler:

By letter dated February 28, 2019, (Agencywide Documents Access and Management System (ADAMS) Accession No. ML19059A327), as supplemented by letter dated June 11, 2019 (ADAMS Accession No. ML19162A314), DTE Energy Company (the licensee) proposed five alternatives to the requirements of the American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel (BPV) Code. One of those proposed alternatives, RR-A-39, pertains to inservice inspection (ISI) requirements for Class 1 components (i.e., vessel interior, interior attachments within beltline region, interior attachments beyond beltline region, and core support structure) for Fermi 2. Of the five requests in the letter, RR-A40 was issued on June 13, 2019 (ADAMS Accession No. ML19143A219), RR- A41 was issued on June 26, 2019 (ADAMS Accession No. ML19169A315), RR-A37 was issued on August 19, 2019 (ADAMS Accession No. ML19183A472) and RR-A36 was withdrawn by the licensee on April 16, 2019 (ADAMS Accession No. ML19169A315).

Specifically, pursuant to Title 10 of the *Code of Federal Regulations* (10 CFR), paragraph 50.55a(z)(1), the licensee requested to use certain Boiling Water Reactor Vessel and Internals Project inspection and evaluation guidelines on the basis that the alternative provides an acceptable level of quality and safety.

The U.S. Nuclear Regulatory Commission (NRC) staff reviewed the subject request and concludes, as set forth in the enclosed safety evaluation, that the proposed alternative provides an acceptable level of quality and safety. Accordingly, the NRC staff concludes that the licensee has adequately addressed all the regulatory requirements set forth in 10 CFR 50.55a(z)(1). Therefore, the NRC staff authorizes the proposed alternative at Fermi 2 for the fourth 10-year ISI interval beginning on May 2, 2019, and ending on December 31, 2029.

All other requirements of the ASME BPV Code, Section XI, for which an alternative has not been specifically requested remain applicable, including third-party review by the Authorized Nuclear Inservice Inspector.

If you have any questions, please contact the Project Manager, Sujata Goetz at 301-415-8004 or via e-mail at Sujata.Goetz@nrc.gov.

Sincerely,

/RA Michael D. Orenak for/

Lisa M. Regner, Acting Branch Chief
Plant Licensing Branch III
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket No.: 50-341

Enclosure:
Safety Evaluation

cc: Listserv



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

PROPOSED ALTERNATIVE RR-A39 REGARDING

THE INSERVICE EXAMINATION OF CLASS 1 COMPONENTS

DTE ELECTRIC COMPANY

FERMI 2 POWER PLANT

DOCKET NO. 50-341

1.0 INTRODUCTION

By letter dated February 28, 2019, (Agencywide Documents Access and Management System (ADAMS) Accession No. ML19059A327), as supplemented by letter dated June 11, 2019 (ADAMS Accession No. ML19162A314), DTE Energy Company (the licensee) proposed five alternatives to the requirements of the American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel (BPV) Code. One of those proposed alternatives, RR-A-39, pertains to inservice inspection (ISI) requirements for Class 1 components (i.e., vessel interior, interior attachments within beltline region, interior attachments beyond beltline region, and core support structure) for Fermi 2. Of the five requests in the letter, RR-A40 was issued on June 13, 2019 (ADAMS Accession No. ML19143A219), RR-A41 was issued on June 26, 2019 (ADAMS Accession No. ML19169A315), RR-A37 was issued on August 19, 2019 (ADAMS Accession No. ML19183A472) and RR-A36 was withdrawn by the licensee on April 16, 2019 (ADAMS Accession No. ML19169A315).

Specifically, pursuant to Title 10 of the *Code of Federal Regulations* (10 CFR), paragraph 50.55a(z)(1), the licensee requested to use certain Boiling Water Reactor Vessel and Internals Project (BWRVIP) inspection and evaluation (I&E) guidelines on the basis that the alternative provides an acceptable level of quality and safety.

2.0 REGULATORY EVALUATION

Adherence to Section XI of the ASME BPV Code is mandated by 10 CFR 50.55a(g)(4), which states, in part, that ASME Code Class 1, 2, and 3 components (including supports) will meet the requirements, except the design and access provisions and the pre-service examination requirements, set forth in the ASME BPV Code, Section XI.

The regulation in 10 CFR 50.55a(z) states that “[a]lternatives to the requirements of paragraphs (b) through (h) of section or portions thereof may be used when authorized by the Director, Office of Nuclear Reactor Regulation, or Director, Office of New Reactors, as appropriate. A proposed alternative must be submitted and authorized prior to implementation. The applicant or licensee must demonstrate that: (1) the proposed alternatives provide an acceptable level of

Enclosure

quality and safety; or (2) compliance with the specified requirements would result in hardship or unusual difficulty without a compensating increase in the level of quality and safety.”

Based on the above, and subject to the following technical evaluation, the U.S. Nuclear Regulatory Commission (NRC) staff finds that the licensee may request the use of an alternative and the NRC has the regulatory authority to authorize the proposed alternative.

3.0 TECHNICAL EVALUATION

3.1 The Licensee's Request for Alternative

3.1.1 ASME Code Components Affected

ASME BPV Code, Section XI, Class 1, Examination Category B-N-1 (Interior of Reactor Vessel), and B-N-2 (Welded Core Support Structures and Interior Attachments to Reactor Vessels), Item Nos.:

- B13.10 - Vessel Interior
- B13.20 - Interior Attachments within Beltline Region
- B13.30 - Interior Attachments beyond Beltline Region
- B13.40 - Core Support Structure

3.1.2 Applicable Code Edition and Addenda

For the fourth 10-year ISI intervals at Fermi 2, the Code of Record for the inspection of ASME Code Class 1, 2, and 3 components is the 2013 Edition of the ASME BPV Code, Section XI.

3.1.3 Applicable Code Requirement

Section XI of the ASME BPV Code requires the visual examination (VT) of certain components. These examinations are included in Table IWB-2500-1, Categories B-N-1 and B-N-2. The scope and method of examination for these items are described as follows:

- B13.10 - Examine accessible areas of the reactor vessel interior each inspection period using a technique, which meets the requirements for a VT-3 examination, as defined in paragraph IWA-2213 of the ASME BPV Code, Section XI.
- B13.20 - Examine accessible interior attachment welds within the beltline region each interval using a technique which meets the requirements for a VT-1 examination as defined in paragraph IWA-2211 of the ASME BPV Code, Section XI.
- B13.30 - Examine accessible interior attachment welds beyond the beltline region each interval using a technique which meets the requirements for a VT-3 examination, as defined in paragraph IWA-2213 of the ASME BPV Code, Section XI.
- B13.40 - Examine accessible surfaces of the core support structures each interval using a technique which meets the requirements for a VT-3 examination, as defined in paragraph IWA-2213 of the ASME BPV Code, Section XI.

3.1.4 Reason for Request

The licensee stated that the BWRVIP I&E guidelines have recommended aggressive specific inspections by boiling-water reactor (BWR) operators to completely identify material condition

issues with BWR components. A wealth of inspection data has been gathered during these inspections across the BWR industry. The BWRVIP I&E guidelines focus on specific and susceptible components, specify appropriate inspection methods capable of identifying real anticipated degradation mechanisms, and require reexamination at conservative intervals. In contrast, the ASME BPV Code, Section XI, inspection requirements were prepared before the BWRVIP initiative and have not evolved with BWR inspection experience. The scope of the BWRVIP guidelines meet or exceed that of ASME BPV Code, Section XI, and in many instances include components that are not part of the ASME BPV Code, Section XI, jurisdiction.

3.1.5 Proposed Alternative

The licensee proposed to satisfy the examination Categories B-N-1 and B-N-2 requirements using various BWRVIP guidelines, which are listed in Table 1 on Page 4 of this safety evaluation (SE). The licensee stated that Table 1 of RR-A39 shows a comparison between the existing ASME BPV Code, Section XI, and BWRVIP requirements that will be used under the proposed alternative. The licensee stated that not all the components addressed by the BWRVIP guidelines are components that require ASME BPV Code, Section XI, examinations, but the guidelines that are applicable to ASME BPV Code, Section XI, components are listed in Table 1 of this SE along with the BWRVIP-94NP, "Program Implementation Guide," (ADAMS Accession No. ML11271A058) that Fermi 2 will use to implement this alternative.

The licensee stated that any deviations from the referenced BWRVIP guidelines for the duration of the proposed alternative will be appropriately documented and communicated to the NRC, per the BWRVIP deviation disposition process. The licensee also stated that currently it has an active deviation for the core plate bolting under BWRVIP-25, dated December 1996. This deviation was resubmitted to the BWRVIP and the NRC (ADAMS Accession No. ML15356A601) specifically to extend its interval of applicability until the revised BWRVIP-25 is approved by the NRC or some other NRC approved solution is implemented.

3.1.6 Basis for Proposed Alternative

The licensee stated that the BWRVIP guidelines to be used at Fermi 2 that are listed in this request for ASME BPV Code, Section XI, components have been designated for use in accordance with the license renewal safety evaluation report (SER) (ADAMS Accession No. ML16190A241) and that revisions to the listed BWRVIP guidelines will be implemented as applicable in accordance with latest revision BWRVIP-94NP.

The licensee stated that BWRs now examine reactor internals in accordance with BWRVIP guidelines. The licensee further stated that these guidelines have been written to address the safety significant vessel internal components and to examine and evaluate the examination results for these components using appropriate methods and reexamination frequencies. The licensee stated that BWRVIP has established a reporting protocol for examination results and deviations, and that the NRC has agreed with the BWRVIP approach in principal and has issued SERs for many of these guidelines.

As shown in Table 1 of RR-A39, the licensee provided a comparison of the method, scope, and frequency of the BWRVIP examinations versus the ASME BPV Code, Section XI, examinations. As additional justification, the licensee provided Attachment 1, "Comparison of

Table 1-BWRVIP Guidelines Referenced in RR-A39	
BWRVIP-03NP	"BWR Vessel and Internals Project, Reactor Pressure Vessel and Internal Examination Guidelines"
BWRVIP-06-R1-A	"BWR Vessel and Internals Project, Safety Assessment of BWR" Internals"
BWRVIP-14-A	"BWR Vessel and Internals Project, BWR Evaluation of Crack Growth in BWR Stainless Steel RPV Internals"
BWRVIP-18-A-R2	"BWR Core Spray Internals Inspection and Flaw Evaluation Guidelines," (Licensee Renewal (LR) Safety Evaluation Report (SER) updated to Revision 2 in the annual update of May 9, 2016)
BWRVIP-25 ⁽¹⁾	"BWR Core Plate Inspection and Flaw Evaluation Guidelines"
BWRVIP-26-A	"BWR Top Guide Inspection and Flaw Evaluation Guidelines"
BWRVIP-27-A	"BWR Standby Liquid Control System/Core Plate ΔP Inspection and Flaw Evaluation Guidelines"
BWRVIP-38	"BWR Shroud Support Inspection and Flaw Evaluation Guidelines"
BWRVIP-41-R3	"BWR Jet Pump Assembly Inspection and Flaw Evaluation Guidelines"
BWRVIP-47-A	"BWR Lower Plenum Inspection and Flaw Evaluation Guidelines"
BWRVIP-48-A ⁽²⁾	"Vessel ID Attachment Weld Inspection and Flaw Evaluation Guidelines"
BWRVIP-49-A	"Instrument Penetration Inspection and Flaw Evaluation" Guidelines"
BWRVIP-74-A	"BWR Reactor Vessel Inspection and Flaw Evaluation Guidelines"
BWRVIP-76-R1-A ⁽³⁾	"BWR Core Shroud Inspection and Flaw Evaluation Guidelines" (LR) SER updated to Revision 1-A in the annual update of May 9, 2016)
BWRVIP-94NP	"BWR Vessel and Internals Project" Program Implementation Guide"
BWRVIP-100-A ⁽³⁾	"Updated Assessment of the Fracture Toughness of Irradiated Stainless Steel for BWR Core Shrouds"

Notes:

- (1) Based on the renewed license for Fermi 2 Enhancement 3 of LRA [license renewal application] Section B.1.10 and SER Section 3.0.3.2.3, BWRVIP-25 shall be met by submittal of an analysis justifying the elimination of inspections for the core plate bolting or an analysis determining acceptance criteria for continued examination per BWRVIP-25. The analysis is to be submitted to the NRC no later than 2 years prior to the period of extended operation.
- (2) Currently, there are no existing BWRVIP guidelines or ASME Code Section XI requirements regarding the feedwater spargers except for BWRVIP-48-A which governs inspection of reactor vessel internal attachment welds, namely the feedwater sparger brackets. Fermi 2 will continue to use inspections modeled after the guidance of NUREG-0619 on the feedwater spargers outside of this request.
- (3) If flaw evaluations are required for BWRVIP-76-R1-A examinations, the fracture toughness values of BWRVIP-100NP-A will be utilized.

ASME Code, Section XI, Examination Requirements to BWRVIP Examination Requirements,” which provides a detailed comparison of the inspection requirements of ASME BPV Code, Section XI, Item Nos. B13.10, B13.20, B13.30, and B13.40 in Table IWB-2500-1, to the inspection requirements in the BWRVIP documents. Attachment 1 compares the examination method, scope, and frequency for the ASME BPV Code, Section XI, items, and the corresponding BWRVIP I&E guidelines proposed as an alternative to the ASME BPV Code, Section XI, items and justifies why the BWRVIP examinations are equivalent or superior. The licensee provided results of specific BWRVIP examinations in Attachment 2, “Fermi 2 – Reactor Internals Inspection History through RF19,” and the respective outage dates and durations are provided in Attachment 3, “Past Refuel Outage Dates.”

The licensee stated that based on the safety evaluations of many of the BWRVIP guidelines and the comparisons performed demonstrating the use of these guidelines above, it concluded that this alternative request to the ASME BPV Code, Section XI, requirements will avoid unnecessary inspections, while in some cases conserving radiological dose, because the inspections will then be focused on the most recent BWR experience available. The licensee also stated that this alternative, when authorized, will provide an acceptable level of quality and safety and will not adversely impact the health and safety of the public.

3.1.7 Duration of Proposed Alternative

The licensee requested to implement the alternative during the fourth 10-year ISI interval beginning on May 2, 2019, and ending on December 31, 2029 (which will include a portion of the period of extended operation beginning March 21, 2025).

3.2 NRC Staff Evaluation

The NRC staff reviewed the BWRVIP reports referenced in the licensee’s submittal to determine if they are acceptable in lieu of the ASME BPV Code, Section XI, examination Categories B-N-1 and B-N-2 requirements. Based on its review, the NRC staff found the referenced BWRVIP reports identified in the licensee’s submittal to be acceptable for use because the I&E guidelines addressed in these reports would identify degradation in a timely manner and will ensure that the integrity of the subject components will be maintained. In addition, Fermi 2’s compliance with the I&E guidelines would provide reasonable assurance that age-related degradation in the subject components will be identified in a timely manner. The details of the NRC staff’s assessment of these BWRVIP reports for the purposes of the licensee’s proposed alternative is documented below.

Specifically, BWRVIP-06 (Revision 1-A), (ADAMS Accession No. ML110341414); BWRVIP-18 (Revision 2-A), (ADAMS Accession No. ML16011A190); BWRVIP-26-A (ADAMS Accession No. ML052490550); BWRVIP-27-A, (ADAMS Accession No. ML041700446); BWRVIP-47-A, (ADAMS Accession No. ML052490537); BWRVIP-49-A, (ADAMS Accession No. ML021510018) and BWRVIP-76 (Revision 1-A), (ADAMS Accession No. ML15307A468) have been previously reviewed and approved by the NRC staff with a corresponding SER attached to each of the “-A” reports. Although BWRVIP-25 and BWRVIP-38 do not have a corresponding “-A” report, they were reviewed and approved by the NRC staff by letters dated December 19, 1999, and July 24, 2000, respectively.

During the NRC staff’s review of these reports, as documented in the respective “-A” reports, it was determined that degradation can be identified in a timely manner and ensures that the integrity of the subject components will be maintained. In addition, BWRVIP-03-NP (ADAMS

Accession No. ML17054C666), BWRVIP-06-R1-A (ADAMS Accession No. ML101250195), and BWRVIP-94NP do not contain I&E guidelines for any specific components. Rather, BWRVIP-03-NP, in general: (1) provides an overview of the structure of the BWRVIP, and (2) includes guideline documents that establish protocols to follow in order to gain access to BWRVIP owned mockups; to perform formal demonstrations of nondestructive examinations (NDE) techniques using BWRVIP mockups; and to perform their own demonstrations of NDE techniques or inspection tooling in an acceptable manner. BWRVIP-06-R1-A provides a general safety assessment of BWR reactor vessel internal. Furthermore, BWRVIP-94NP establishes a framework for structuring and strengthening existing BWR vessel and internals programs to ensure consistent application of guidelines by BWRVIP members. These two documents are integral to the implementation of the BWRVIP and the associated I&E guidelines, including those associated with the licensee's submittal.

The NRC staff reviewed the information in Table 1 of the licensee's submittal, which compared the ASME BPV Code, Section XI, examination requirements (method and interval) to the examination method and interval specified by the various BWRVIP I&E guidelines. In general, the BWRVIP guidelines use the same examination method or a more stringent examination method, and are conducted at an equal or shorter interval, and are therefore acceptable.

The one exception for which the licensee's proposed alternative examination is not conducted at an equal or shorter interval is Category B-N-2, Item B13.20 – Riser Brace Attachment. The licensee proposes to use BWRVIP-48-A (ADAMS Accession No. ML052130284), which specifies 100 percent of the welds be examined during the first 12 years, and 25 percent of the welds be examined during each 6-year interval, rather than 100 percent of the accessible welds each 10-year interval. This will result in 50 percent of the welds being examined in 12 years as compared to 100 percent in 10 years if the ASME BPV Code, Section XI, was followed.

The BWRVIP examination used enhanced visual testing (EVT-1) rather than VT-1, which is a more stringent visual examination. As stated in Attachment 1 of the licensee's submittal, the BWRVIP EVT-1 VT method requires the same 0.044-inch resolution on the examinations as the ASME BPV Code, Section XI, and additionally the performance of a cleaning assessment and cleaning as necessary. The licensee also stated in Attachment 1 that BWRVIP-48-A identifies specific susceptible areas of the attachment welds to be examined and includes diagrams for each different configuration, so it is a more comprehensive examination. In addition, the licensee has found no indications in previous examinations of the riser brace attachments, as documented in Attachment 2 of the submittal. Since the examination is more detailed, combined with the good operating experience, the NRC staff finds the reduced sample size of the riser brace examinations to be acceptable.

The original submittal referred to both BWRVIP-48, Revision 1, and BWRVIP-48-A. BWRVIP-48, Revision 1, does not appear on Electric Power Research Institute's website, or in ADAMS. The license renewal application for Fermi 2 referenced BWRVIP-48-A. In the June 11, 2019, supplement, the licensee stated that BWRVIP-48, Revision 1, "Vessel ID Attachment Weld Inspection and Flaw Evaluation Guidelines," is currently under BWRVIP Assessment Committee and Research Integration Committee review, and the revision has not yet been made available to the NRC. The licensee, therefore, clarified that that BWRVIP-48-A will be utilized for examinations of interior attachments, and that it is not requesting NRC review and approval of RR-A39 with any dependence on any future versions of BWRVIP-48, including Revision 1. The licensee also provided a markup of RR-A39 changing the references to BWRVIP-48, Revision 1, to instead reference BWRVIP-48-A. The licensee also changed the

frequency of the examination of the core spray piping brackets reported in Enclosure 2 from each 10-year interval to every four refueling cycles, for consistency with BWRVIP-48-A.

The ASME BPV Code specifies that the Category B-N-1, Item B13.10, Reactor Vessel Interior examination be conducted each period, equal to approximately 3 years. The licensee stated that there is no specific BWRVIP guideline that addresses the scope of B-N-1, but the examinations performed by BWRVIP-18, 25, 26, 27, 41 (ADAMS Accession No. ML18130A024), 47, and 138 (ADAMS Accession No. ML13176A047) provide a general overview of the reactor interior which may be considered representative of the B-N-1 scope. As stated in Attachment 1 of the submittal, a portion of these BWRVIP examinations are performed during each refueling outage. The licensee further stated that locating and examining specific welds and components within the reactor vessel areas above, below (if accessible), and surrounding the core (annulus area) entails access by remote camera systems that essentially performs equivalent VT-3 examination of these areas or spaces as the specific weld or component examinations are performed. The NRC staff finds that this provides an equivalent method of visual examination on a more frequent basis than that required by the ASME BPV Code, Section XI.

The licensee referenced BWRVIP-41, Revision 3, as one of the guidelines that can be credited as performing the equivalent of the B-N-1 examination; however, BWRVIP-41, Revision 3, has not been generically reviewed or approved by the NRC. The NRC did approve the use of BWRVIP-41, Revision 3, as part of the BWR vessel internals aging management program in the Fermi 2 SER for license renewal. BWRVIP-41, Revision 3, is not referenced as being used as an alternative to the B-N-2 or B-N-3 examinations within the SER for license renewal. The NRC staff has reviewed and approved Revision 1 and Revision 4 (ADAMS Accession No. ML18130A024) of BWRVIP-41. For this safety evaluation, the NRC staff reviewed the record of revisions in BWRVIP-41, Revision 4, and the scope of Revision 2 and Revision 3 of the report would not have changed the conclusion that the examinations conducted under the report would result in the equivalent of a Category B-N-1 examination of the vessel interior, in conjunction with the other I&E guidelines credited by the licensee. Since the NRC staff approved its use in the SER for license renewal, and it provides essentially the equivalent examination of the vessel interior as the NRC-approved versions of this report, the NRC staff finds that use of BWRVIP-41, Revision 3, to be acceptable as an alternative to the Category B-N-1 examination.

For examinations of the core plate rim hold-down bolts (CP bolts) specified in BWRVIP-25, Note (1) to Table 1 of the licensee's submittal states that:

Based on the renewed license for Fermi 2, Enhancement 3, of the license renewal application Section B.1.10 and SER Section 3.0.3.2.3, BWRVIP-25 shall be met by submittal of an analysis justifying the elimination of inspections for the core plate bolting or an analysis determining acceptance criteria for continued examination per BWRVIP-25. The analysis is to be submitted to the NRC no later than 2 years prior to the period of extended operation).

This enhancement is captured as commitment 7c in Appendix A of the Fermi 2 SER for license renewal, and that the commitment also provides the option of installing core plate wedges prior to the period of extended operation. The licensee also stated that currently Fermi 2 has an active deviation for the core plate bolting under BWRVIP-25. This deviation was resubmitted to the BWRVIP and the NRC, specifically, to extend its interval of applicability until the revised BWRVIP-25 is approved by the NRC or some other NRC approved solution is implemented.

There is generic industry issue with inability to perform the examinations of the CP bolts specified in BWRVIP-25, due to inaccessibility and configuration issues preventing ultrasonic examination. The NRC staff finds that the inability to perform the examinations for the CP bolts has no impact on the licensee's proposed alternative because examinations of the CP bolts would not be performed under the ASME BPV Code, Section XI, since it does not require that inaccessible components be visually examined. In addition, the integrity of the CP bolts is being addressed under an existing license renewal commitment.

As part of its evaluation of this proposed alternative, the NRC staff reviewed the results of the licensee's BWRVIP inspection, which the licensee provided in Attachment 2 to the submittal for all refueling outages through refueling outage 19 in 2018. These results were referenced in the licensee's submittal as supporting information and provide information regarding inspection methods used on the subject components, inspection dates, the inspection results, and corrective actions related to the inspection findings. Based on its review of the inspection summary for Fermi 2, the NRC staff finds that the licensee has adequately demonstrated its capability in: (1) identifying the weld flaws (cracking) as well as other relevant indications; (2) taking appropriate corrective actions to ensure that the structural integrity of the component is maintained (i.e., proper repair, if necessary, or flaw evaluation with proper engineering justification); and (3) complying with scope expansion of inspections and subsequent inspections per the applicable BWRVIP reports.

Based on the above, the NRC staff finds that the implementation of the BWRVIP I&E guidelines specified in the licensee's proposed alternative will ensure that the integrity of the subject components will be maintained with an acceptable level of quality and safety.

The NRC staff acknowledges that the BWRVIP executive committee periodically revises the BWRVIP guidelines to include enhancements in inspection techniques and flaw evaluation methodologies. While the licensee may choose to implement enhancements described in a revised version of a BWRVIP I&E guideline, the licensee must continue to also meet the requirements of the version of the BWRVIP I&E guideline that forms the basis for the NRC staff's authorized alternative to the requirements of 10 CFR 50.55a. The licensee may also choose to return to complying with the inspection requirements of the ASME code of record for Fermi 2. Thus, the NRC staff authorizes the licensee's proposed alternative based only on the specific revisions of the BWRVIP I&E guidelines proposed as an alternative in its submittal.

4.0 CONCLUSION

As set forth above, the NRC staff determined that the proposed alternative provides an acceptable level of quality and safety. Accordingly, the NRC staff concludes that the licensee has adequately addressed all the regulatory requirements set forth in 10 CFR 50.55a(z)(1). Therefore, the NRC staff authorizes the use of the proposed alternative, RR A-39, at Fermi 2 for the fourth 10-year ISI Interval beginning on May 2, 2019, and ending on December 31, 2029.

All other ASME BPV Code, Section XI, requirements for which an alternative was not specifically requested and approved remain applicable, including third-party review by the Authorized Nuclear Inservice Inspector.

Principal Contributor: Jeff Poehler NRR/DMLR/MVIB

SUBJECT: FERM2 - PROPOSED ALTERNATIVE FROM THE REQUIREMENTS OF THE ASME BPV CODE REGARDING THE INSERVICE EXAMINATION OF CLASS 1 COMPONENTS (EPID L-2019-LLR-0022) DATED JULY 20, 2019

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