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

January 22, 2018

Mr. Samuel L. Belcher
Senior Vice President and Chief Nuclear Officer
FirstEnergy Nuclear Operating Company
341 White Pine Drive
Akron, OH 44320

SUBJECT: FENOC FLEET-BEAVER VALLEY POWER STATION, UNIT NOS. 1 AND 2; DAVIS-BESSE NUCLEAR POWER STATION, UNIT NO. 1; AND PERRY NUCLEAR POWER PLANT, UNIT NO. 1 – PROPOSED ALTERNATIVE FOR THE USE OF ASME CODE CASE N-513-4 (CAC NOS. MG0120 (EPID 000976/05000334/L-2017-LLR-0088), MG0121 (EPID 000976/05000412/L-2017-LLR-0088), MG0122 (EPID 000976/05000346/L-2017-LLR-0088), AND MG0123 (EPID 000976/05000440/L-2017-LLR-0088)

Dear Mr. Belcher:

By letter dated August 11, 2017 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML17227A324), as supplemented by letter dated December 23, 2017 (ADAMS Accession No. ML17357A013), FirstEnergy Nuclear Operating Company (FENOC, the licensee), submitted a request in accordance with Paragraph 50.55a(z)(2) of Title 10 of the *Code of Federal Regulations* (10 CFR) for a proposed alternative to the requirements of Section XI, "Rules for Inservice Inspection of Nuclear Power Plant Components," of the American Society of Mechanical Engineers Boiler and Pressure Vessel Code (ASME Code) at Beaver Valley Power Station, Unit Nos. 1 and 2; Davis-Besse Nuclear Power Station, Unit No. 1; and Perry Nuclear Power Plant, Unit No. 1. The proposed alternative would allow the licensee to use ASME Code Case N-513-4, "Evaluation Criteria for Temporary Acceptance of Flaws in Moderate Energy Class 2 or 3 Piping Section XI, Division 1," for the evaluation and temporary acceptance of flaws in moderate energy Class 2 and 3 piping in lieu of specified ASME Code requirements.

Specifically, pursuant to 10 CFR 50.55a(z)(2), the licensee requested to use the alternative on the basis that complying with the specified requirement would result in hardship or unusual difficulty without a compensating increase in the level of quality and safety.

As set forth in the enclosed safety evaluation (SE), the U.S. Nuclear Regulatory Commission (NRC) staff determined that the proposed alternative provides reasonable assurance of structural integrity of the subject piping segments, and complying with the specified requirement would result in hardship or unusual difficulty without a compensating increase in the 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(z)(2).

Therefore, the NRC staff authorizes the use of the licensee's proposed alternative described in the licensee's application, for the each plant's 10-year inservice inspection (ISI) intervals, as

specified in the licensee's August 11, 2017 letter (Section 3.1.2 of the attached SE), or until such time as the NRC approves Code Case N-513-4 for general use through revision of Regulatory Guide 1.147 or other NRC document. If the proposed alternative is applied to a flaw near the end of the authorized 10-year ISI interval, and the next refueling outage is in the subsequent interval, the licensee is authorized to continue to apply the proposed alternative to the flaw until the next refueling outage.

All other requirements of the ASME Code, Section XI, for which relief has not been specifically requested and authorized by NRC staff remain applicable, including a third-party review by the Authorized Nuclear In-service Inspector. The staff notes that approval of this alternative does not imply or infer NRC approval of ASME Code Case N-513-4 for generic use.

If you have any questions, please contact the Project Manager Bhalchandra Vaidya at 301-415-3308.

Sincerely,

David J. Wrona, Chief
Plant Licensing Branch III
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket Nos. 50-334, 50-412, 50-346,
and 50-440

Enclosure:
Safety Evaluation

cc w/encl: Listserv

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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

PROPOSED ALTERNATIVE TO UTILIZE ASME CODE CASE N-513-4

BEAVER VALLEY POWER STATION UNITS 1 AND 2;

DAVIS-BESSE NUCLEAR POWER STATION, UNIT NO. 1;

PERRY NUCLEAR POWER PLANT, UNIT NO. 1;

FIRSTENERGY NUCLEAR OPERATING COMPANY

DOCKET NOS. 50-334, 50-412, 50-346, AND 50-440

1.0 INTRODUCTION

By letter dated August 11, 2017 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML17227A324), as supplemented by letter dated December 23, 2017 (ADAMS Accession No. ML17357A013), FirstEnergy Nuclear Operating Company (FENOC, the licensee), submitted a request in accordance with Paragraph 50.55a(z)(2) of Title 10 of the *Code of Federal Regulations* (10 CFR) for a proposed alternative to the requirements of Section XI, "Rules for Inservice Inspection of Nuclear Power Plant Components" of the American Society of Mechanical Engineers Boiler and Pressure Vessel Code (ASME Code) at Beaver Valley Power Station, Unit Nos. 1 and 2; Davis-Besse Nuclear Power Station, Unit No. 1; and Perry Nuclear Power Plant, Unit No. 1. The proposed alternative would allow the licensee to use ASME Code Case N-513-4, "Evaluation Criteria for Temporary Acceptance of Flaws in Moderate Energy Class 2 or 3 Piping Section XI, Division 1," for the evaluation and temporary acceptance of flaws in moderate energy Class 2 and 3 piping in lieu of specified ASME Code requirements.

Specifically, pursuant to 10 CFR 50.55a(z)(2), the licensee requested to use the alternative on the basis that complying with the specified requirement would result in hardship or unusual difficulty without a compensating increase in the level of quality and safety.

2.0 REGULATORY EVALUATION

The licensee proposes an alternative to the requirement of ASME Code, Section XI, Articles IWC-3000 and IWD-3000.

Adherence to Section XI of the ASME 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 Code, Section XI.

The regulation in 10 CFR 50.55a(z) states, in part, that alternatives to the requirements of paragraph (g) of 10 CFR 50.55a may be used, when authorized by the U.S. Nuclear Regulatory Commission (NRC), if the licensee demonstrates that: (1) the proposed alternative provides an acceptable level of 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 NRC staff finds that regulatory authority exists for the licensee to request the use of an alternative and the NRC to authorize the proposed alternative.

3.0 TECHNICAL EVALUATION

3.1.1 ASME Code Component(s) Affected

The affected components are ASME Code Class 2 and 3 moderate energy piping systems, as described in Code Case N-513-4, Section 1 "Scope," whose maximum operating temperature does not exceed 200 degrees Fahrenheit (°F) and whose operating pressure does not exceed 275 pounds per square inch gauge (psig).

3.1.2 Applicable Code Edition and Addenda

The licensee provided the applicable ASME Code editions and Addenda for each plant as shown in the table below. In addition, the table shows the applicable inservice inspection (ISI) 10-year intervals, including the start and end dates.

PLANT	ISI INTERVAL	ASME CODE EDITION	START	END
Beaver Valley Power Station, Unit 1	5th	2013 Edition	8/29/2018	8/28/2028
Beaver Valley Power Station, Unit 2	4th	2013 Edition	8/29/2018	8/28/2028
Davis-Besse Nuclear Power Station	4th	2007 Edition, 2008 Addenda	9/21/2012	9/20/2022
Perry Nuclear Power Plant	3rd	2001 Edition, 2003 Addenda	5/18/2009	5/17/2019
Perry Nuclear Power Plant	4th	2013 Edition	5/18/2019	5/17/2029

3.1.3 Applicable Code Requirement

For ASME Code Class 2 components, ASME Code, Section XI, IWC-3120 and IWC-3130, require that flaws exceeding the specified acceptance criteria be corrected by repair/replacement activities or determined to be acceptable by analytical evaluation. For ASME Code Class 3 components, ASME Code, Section XI, IWD-3120(b), of 2001 Edition through 2003 Addenda and 2007 Edition through 2008 Addenda requires that components exceeding the acceptance standards of IWD-3400 be subject to supplemental examination, or to a repair/replacement activity. For ASME Code Class 3 components, IWD-3120 of ASME Code, Section XI, 2013 Edition states that the requirements of IWC-3120 may be used.

3.1.4 Reason for Request

The licensee stated that ASME Code Case N-513-3 "Evaluation Criteria for Temporary Acceptance of Flaws in Moderate Energy Class 2 or 3 Piping Section XI, Division 1," currently approved for use in Regulatory Guide (RG) 1.147, "Inservice Inspection Code Case Acceptability ASME Section XI, Division 1, Revision 17," does not address the evaluation of flaws in certain locations of moderate energy piping components, such as elbows, bent pipe, reducers, expanders, and branch tees. The licensee further stated that ASME Code Case N-513-4 contains several revisions to Code Case N-513-3, including expanding the applicability beyond straight pipe to include elbows, bent pipe, reducers, expanders, and branch tees. The NRC has not approved generic use of ASME Code Case N-513-4.

The licensee's proposed alternative to use Code Case N-513-4, would allow temporary acceptance of flaws, including through-wall flaws, in components currently not addressed in Code Case N-513-3, and thereby avoid a plant shutdown. Plant shutdown activities result in additional dose and plant risk, requiring use of a system that is in standby during normal operation. The licensee stated that such a shutdown would be inappropriate when an affected ASME Code component in a degraded condition is demonstrated to retain adequate margin to fulfill the component's function. The licensee contends that compliance with the current code requirements results in a hardship without a compensating increase in the level of quality and safety.

3.1.5 Licensee's Proposed Alternative and Basis for Use

The licensees proposed alternative is to use ASME Code Case N-513-4 for the evaluation and temporary acceptance of flaws, including through-wall flaws, in moderate energy Class 2 and 3 piping in lieu of specified ASME Code, Section XI, requirements. The licensee's proposed alternative permits the temporary acceptance of flaws, meeting the requirements of the code case, until the next scheduled refueling outage or prior to exceeding the allowable flaw size, whichever comes first, at which time an ASME Code, Section XI, compliant repair or replacement will be completed. In addition, the licensee's proposed alternative includes the determination of an allowable leakage rate by dividing the critical leakage rate by a safety factor of four.

The licensee stated that certain components not addressed in Code Case N-513-3 have been included in Code Case N-513-4. The licensee provided a high-level overview of the differences between Code Case N-513-3 and Code Case N-513-4 as listed below:

1. Revised the maximum allowable time of use to be no longer than 26 months to the next refueling outage.

2. Added applicability to piping elbows, bent pipe, reducers, expanders, and branch tees where the flaw is located more than $(R_0t)^{1/2}$ from the centerline of the attaching circumferential piping weld (where R_0 is the outside pipe radius, and t is the evaluation wall thickness).

3. Expanded use to external tubing or piping attached to heat exchangers.

4. Revised to limit the use to liquid systems.

5. Revised to clarify treatment of service level load combinations.

6. Revised to address treatment of flaws in austenitic pipe flux welds.

7. Revised to require minimum wall thickness acceptance criteria to consider longitudinal stress in addition to hoop stress.

8. Other editorial changes to improve the clarity.

The licensee provided technical basis document, "Technical Basis for Proposed Fourth Revision to ASME Code Case N-513," from the *Proceedings of the ASME 2014 Pressure Vessels & Piping Conference,* July 20-24, 2014, Anaheim, California, in Enclosure C of its August 11, 2017, letter.

The licensee stated that the effects of leakage may affect the operability determination or the plant flooding analyses specified in paragraph 1 (f) of Code Case N-513-4. For a leaking flaw, the licensee stated that the allowable leakage rate would be determined by dividing the critical leakage rate by a safety factor of 4. The critical leakage rate is determined as the highest leakage rate that can be tolerated and will be based on the allowable loss of inventory or the maximum leakage that can be tolerated relative to room flooding, among others. Applying a safety factor of four to the critical leakage rate provides quantitative measurable limits, which ensure the operability of the system and early identification of issues that could erode defense-in-depth and lead to adverse consequences.

The licensee stated that Code Case N-513-4 utilizes technical evaluation approaches that are based on principles that are accepted in other ASME Code documents already acceptable to the NRC. The licensee also stated that application of this code case, in concert with safety factors on leakage limits, would maintain acceptable structural and leakage integrity while minimizing plant risk and personnel exposure by minimizing the number of plant transients that could be incurred if degradation is required to be repaired based on ASME Code, Section XI, acceptance criteria only.

3.1.6 Hardship Justification

As stated by the licensee, moderately degraded piping could require a plant shutdown within the required action statement timeframes to repair observed degradation. Plant shutdown activities result in additional dose and plant risk that would be inappropriate when a degraded condition is demonstrated to retain adequate margin to complete the component's function. The licensee contends that use of an acceptable alternative evaluation method in lieu of immediate action for a degraded condition will allow it to perform additional extent of condition examinations on the affected systems while allowing time for safe and orderly long-term repair actions if necessary. The licensee believes that compliance with the current code requirements results in a hardship without a compensating increase in the level of quality and safety.

3.1.7 Duration of Proposed Alternative

The licensee requested use of the proposed alternative for the ISI intervals for each unit as stated in Section 3.1.2 above, or until such time as the NRC approves Code Case N-513-4 in RG 1.147 or other document. For Perry Nuclear Plant, the third 10-year ISI interval ends on

May 17, 2019; thus, the licensee also requested the proposed alternative for the fourth 10-year ISI interval. The licensee stated that when using its proposed alternative, a Section XI compliant repair or replacement would be completed prior to exiting the next refueling outage or exceeding allowable flaw size, whichever comes first. The licensee stated that if a flaw is evaluated near the end of an ISI interval, and the next refueling outage is in the subsequent interval, the flaw may remain in service until the next refueling outage.

3.2 NRC Staff's Evaluation

The NRC staff evaluated the adequacy of the proposed alternative in maintaining the structural integrity of piping components identified in Code Case N-513-4. Code Case N-513-3, which is conditionally approved for use in RG 1.147, provides alternative evaluation criteria for temporary acceptance of flaws, including through-wall flaws, in moderate energy Class 2 and 3 piping. However, Code Case N-513-3 contains limitations that the licensee considers restrictive and could result in an unnecessary plant shutdown. Code Case N-513-3 is limited to straight pipe with provisions for flaws that extend for a short distance, at the pipe to fitting weld, into the fitting. Evaluation criteria for flaws in elbows, bent pipe, reducers, expanders, branch tees, and heat exchanger tubing and piping are not included within the scope of N-513-3. Code Case N-513-4 addresses these aforementioned limitations. Given that the previous revision of this code case (Code Case N-513-3) is conditionally approved for use in RG 1.147, Revision 17, the staff focused its review on the differences between Code Case N-513-3 and N-513-4. The significant changes in ASME Code N-513-4 include: (1) revised temporary acceptance period; (2) added flaw evaluation criteria for elbows, bent pipe, reducers/expanders and branch tees; (3) expanded applicability to heat exchanger tubing or piping; (4) limited use to liquid systems; (5) clarified treatment of service load combinations; (6) revised treatment of flaws in austenitic pipe flux welds; (7) revised minimum wall thickness acceptance criteria to consider longitudinal stress in addition to hoop stress; and (8) revised leakage monitoring requirements. The NRC staff also evaluated the licensee's proposed limitation on the leakage rate and its hardship justification.

The NRC staff notes that many requirements specified in Code Case N-513-4 are not discussed in this SE, but they should not be considered as less important. As part of the NRC-approved proposed alternative, all requirements in the Code Case must be followed. Any exceptions or restrictions to the Code Case that are approved in this SE also need to be followed.

3.2.1 Temporary Acceptance Period

Code Case N-513-3 specifies a temporary acceptance period of a maximum of 26 months. Code Case N-513-3 is accepted for use in RG 1.147, Revision 17, with the following condition "The repair or replacement activity temporarily deferred under the provisions of this Code Case shall be performed during the next scheduled outage." Code Case N-513-4 includes wording that limits the use of the code case to the next refueling outage. The NRC staff finds that Code Case N-513-4 appropriately addresses the NRC condition on Code Case N-513-3, and is, therefore, acceptable.

3.2.2 Flaw Evaluation Criteria for Elbows, Bent Pipe, Reducers/Expanders, and Branch Tees.

Evaluation and acceptance criteria have been added to Code Case N-513-4 for flaws in elbows, bent pipe, reducers, expanders, and branch tees using a simplified approach which is based on the Second International Piping Integrity Research Group (IPIRG-2) program reported in

NUREG/CR-6444 BMI-2192, "Fracture Behavior of Circumferentially Surface-cracked Elbows," March 1996.

The flaw evaluation methodology approach in Code Case N-513-4 for piping components is conducted as if in straight pipe by scaling hoop and axial stresses using ASME Code piping design code stress indices and stress intensification factors to account for the stress variations caused by the geometric differences. Equations used in the code case are consistent with the piping design by rule approach in ASME Code Section III, NC/ND-3600. NUREG/CR-6444 shows that this approach is conservative for calculating stresses used in flaw evaluations in piping elbows and bent pipe. The code case also applies this methodology to reducers, expanders, and branch tees.

The NRC staff finds that the flaw evaluation and acceptance criteria in Code Case N-513-4 for elbows, bent pipe, reducers, expanders, and branch tees is acceptable because the flaw evaluation methods in the code case are consistent with ASME Code Section XI and Section III design by rule approach and provides a conservative approach as confirmed by comparing the failure moments predicted using this approach to the measured failure moments from the elbow tests for through-wall circumferential flaws conducted as part of the IPIRG-2 program.

3.2.3 Flaw Evaluation in Heat Exchanger Tubing or Piping

Code Case N-513-4 has been revised to include heat exchanger external tubing or piping if the flaw is characterized in accordance with Section 2(a) of the code case and leakage is monitored. Section 2(a) requires that the flaw geometry be characterized by volumetric inspection or physical measurement.

The NRC staff determined that the flaw evaluation criteria in Code Case N-513-4 for straight or bent piping, as appropriate, can be applied to heat exchanger external tubing or piping. The staff determined the methods for evaluating flaws in straight pipe are acceptable since they are currently allowed in Code Case N-513-3. For bent pipe, the acceptability is described in Section 3.2.2 above. Therefore, the NRC staff finds inclusion of heat exchanger external tubing or piping in the code case to be acceptable because only heat exchanger tubing flaws that are accessible for characterization and leakage monitoring may be evaluated in accordance with the code case and the code case provides acceptable methods for the evaluation of flaws.

3.2.4 Limit Use to Liquid Systems

Use of Code Case N-513-4 is specifically limited to liquid systems. The NRC staff finds this change acceptable since Code Case N-513 is not intended to apply to air or other compressible fluid systems.

3.2.5 Treatment of Service Load Combinations

Modifications in Code Case N-513-4 now make clear that all service load combinations must be considered in flaw evaluations to determine the most limiting condition. Although previously implied in N-513-3, N-513-4 makes this requirement clear. Therefore, the NRC staff finds this change acceptable.

3.2.6 Treatment of flaws in austenitic pipe flux welds

Paragraph 3.1(b) of N-513-4 contains modifications, which include a reference to ASME Code, Section XI, Appendix C, C-6320, to address flaws in austenitic stainless steel pipe flux welds. The ASME Code, Section XI, Appendix C, C-6000 permits the use of elastic plastic fracture mechanics criteria in lieu of limit load criteria to analyze flaws in stainless steel pipe flux welds. Equation 1 of the code case was also revised to be consistent with ASME Code Section XI, Appendix C, C-6320, so the equation can be used for flaws in austenitic stainless steel pipe flux welds. The NRC staff finds this acceptable because the modification to the code case now includes the appropriate methods for the evaluation of stainless steel pipe flux welds in accordance with ASME Code, Section XI.

3.2.7 Minimum Wall Thickness Acceptance Criteria to Consider Longitudinal Stress

Although it is unlikely that a minimum wall thickness calculated based on the longitudinal stress would be limiting when compared to a minimum wall thickness calculated based on hoop stress, Code Case N-513-4 includes revisions that require consideration of longitudinal stress in the calculation of minimum wall thickness. Previous versions of the code case only required the use of hoop stress. The NRC staff finds this acceptable because it will ensure that the more limiting of the longitudinal or hoop stress is used to determine minimum wall thickness.

3.2.8 Leakage Monitoring for Through-Wall Flaws

Code Case N-513-3 required through-wall leakage to be observed by daily walkdowns to confirm the analysis conditions used in the evaluation remain valid. Code Case N-513-4 modifies this requirement by continuing to require that leakage be monitored daily but now allows other techniques to be used to monitor leakage such as using visual equipment or leakage detection systems to determine if leakage rates are changing. The NRC staff finds this change acceptable because the code case continues to require through-wall leaks to be monitored daily and the expanded allowable monitoring methods should have no adverse impact.

3.2.9 Leakage Rate

Code Case N-513-3, Paragraph 1(d) states: "The provisions of this Case demonstrate the integrity of the item and not the consequences of leakage. It is the responsibility of the Owner to demonstrate system operability considering effects of leakage." Code Case N-513-4 modified the last sentence, now located in paragraph (f), to state, "It is the responsibility of the Owner to consider effects of leakage in demonstrating system operability and performing plant flooding analyses."

The licensee stated that the allowable leakage rate would be determined by dividing the critical leakage rate by a safety factor of 4. The critical leakage rate is determined as the highest leakage rate that can be tolerated and will be based on the allowable loss of inventory or the maximum leakage that can be tolerated relative to room flooding, among others. The licensee contends that applying a safety factor of four to the critical leakage rate, provides quantitative measurable limits, which ensure the operability of the system and early identification of issues that could erode defense-in-depth and lead to adverse consequences. In a request for additional information (RAI), the NRC staff requested that the licensee confirm that the critical leakage rate will be based on the most limiting condition. The RAI provided an example that if the maximum allowed flooding is 50 gallons per minute (gpm) and the maximum allowed loss of

inventory is 25 gpm, 25 gpm is the critical leakage rate. The licensee responded by letter dated December 23, 2017, and stated that the critical leakage rate will be determined based on the most limiting condition, as described in the example provided by the NRC staff. The NRC finds this acceptable because the licensee will use the most limiting condition to determine the critical leakage rate.

Code Cases N-513-3 and N-513-4 do not contain leakage limits for components with through-wall flaws. The NRC staff finds that the licensee's approach of applying a safety factor of four to the critical leakage rate is acceptable because it will provide sufficient time for corrective measures to be taken before significant increases in leakage erode defense-in-depth, which could lead to adverse consequences.

3.2.10 Hardship Justification

The NRC staff finds that performing a plant shutdown to repair the subject piping would unnecessarily cycle the unit resulting in an increase in personnel exposure and plant risk. Therefore, the NRC staff determined that compliance with the specified ASME Code repair requirements would result in hardship or unusual difficulty without a compensating increase in the level of quality and safety.

3.3 Summary

The NRC staff finds that the proposed alternative will provide reasonable assurance of the structural integrity because: (1) Code Case N-513-4 addresses the NRC condition in RG 1.147 for Revision 3 of the code case; (2) flaw evaluations in component types added to Revision 4 of the code case are based on acceptable methodologies; and (3) the method for determining the allowable leakage rate is adequate to provide early identification of a significant increase in leakage. In addition, complying with ASME Code, Section XI, requirements would result in in hardship or unusual difficulty without a compensating increase in the level of quality and safety.

4.0 CONCLUSION

As set forth above, the NRC staff determines that the proposed alternative provides reasonable assurance of structural integrity of the subject piping segments, and complying with the specified requirement would result in hardship or unusual difficulty without a compensating increase in the 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(z)(2).

Therefore, the NRC staff authorizes the use of the licensee's proposed alternative described in the licensee's application, for the each plant's 10-year ISI intervals, as specified in the licensee's August 11, 2017, letter (Section 3.1.2 of this SE), or until such time as the NRC approves Code Case N-513-4 for general use through revision of NRC RG 1.147 or other NRC document. If the proposed alternative is applied to a flaw near the end of the authorized 10-year ISI interval, and the next refueling outage is in the subsequent interval, the licensee is authorized to continue to apply the proposed alternative to the flaw until the next refueling outage.

All other requirements of the ASME Code, Section XI, for which relief has not been specifically requested and authorized by NRC staff remain applicable, including a third-party review by the

Authorized Nuclear In-service Inspector. The NRC staff notes that approval of this alternative does not imply or infer NRC approval of ASME Code Case N-513-4 for generic use.

Principal Contributor: Robert Davis, NRR/DMLR/MPHB

Date of issuance: January 22, 2018

SUBJECT: FENOC FLEET-BEAVER VALLEY POWER STATION, UNIT NOS. 1 AND 2; DAVIS-BESSE NUCLEAR POWER STATION, UNIT NO. 1; AND PERRY NUCLEAR POWER PLANT, UNIT NO. 1 – PROPOSED ALTERNATIVE FOR THE USE OF ASME CODE CASE N-513-4 (CAC NOS. MG0120 (EPID 000976/05000334/L-2017-LLR-0088), MG0121 (EPID 000976/05000412/L-2017-LLR-0088), MG0122 (EPID 000976/05000346/L-2017-LLR-0088), AND MG0123 (EPID 000976/05000440/L-2017-LLR-0088) DATED JANUARY 22, 2018

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