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May 30, 2019

AEP-NRC-2019-24
10 CFR 50.55a

Docket No.: 50-316

U. S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, DC 20555-0001

Donald C. Cook Nuclear Plant, Unit 2
Proposed Alternative Request for Reactor Vessel Inspections
To Meet Code Requirements for Two ISI Intervals

Pursuant to 10 CFR 50.55a(z)(1), Indiana Michigan Power Company (I&M), the licensee for Donald C. Cook Nuclear Plant (CNP) Unit 2, hereby requests U. S. Nuclear Regulatory Commission (NRC) approval for an alternative to the requirements of American Society of Mechanical Engineers, Section XI, IWA-2430(d)(2) for CNP Unit 2 reactor vessel examinations that were extended by relief request previously. The proposed alternative is provided in the enclosure to this letter.

I&M would like to request NRC review and approval of the proposed alternative by September 1, 2019, to support the next CNP Unit 2 refueling outage currently scheduled to occur during fall 2019.

There are no new or revised regulatory commitments made in this letter. Should you have any questions, please contact Mr. Michael K. Scarpello, Regulatory Affairs Director, at (269) 466-2649.

Sincerely,

Q. Shane Lies
Site Vice President
Indiana Michigan Power Company

JMT/mll

A047
NRR

Enclosure: 10 CFR 50.55a Relief Request Number ISIR-4-10, Proposed Alternative Request for Unit 2 Reactor Vessel Inspections to Meet Code Requirements for Two ISI Intervals

c: R. J. Ancona, MPSC
R. F. Kuntz, NRC, Washington, DC
MDEQ – RMD/RPS
NRC Resident Inspector
D. J. Roberts – NRC, Region III
A. J. Williamson – AEP Ft. Wayne, w/o enclosures

Enclosure to AEP-NRC-2019-24

10 CFR 50.55a Relief Request Number ISIR-4-10

Proposed Alternative Request for Unit 2 Reactor Vessel Inspections to Meet Code Requirements for Two ISI Intervals

1. ASME Code Component(s) Affected

The affected components are associated with the reactor vessel (RV) at Donald C. Cook Nuclear Plant (CNP) Unit 2. The following American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel (BPV) Code, Section XI (Reference 1) examination categories and item numbers covering examinations of the RV are affected. These examination categories and item numbers are from IWB-2500 and Table IWB-2500-1 of the ASME BPV Code, Section XI.

Category B-A is defined as "Pressure Retaining Welds in Reactor Vessel".
Category B-D is defined as "Full Penetration Welded Nozzles in Vessels".
Category B-N-2 is defined as "Welded Core Support Structures and Interior Attachments to Reactor Vessels".
Category B-N-3 is defined as "Removable Core Support Structures".

Examination Category	Item No.	Description
B-A	B1.10	Shell Welds
B-A	B1.11	Circumferential Shell Welds
B-A	B1.12	Longitudinal Shell Welds
B-A	B1.20	Head Welds
B-A	B1.21	Circumferential Head Welds
B-A	B1.22	Meridional Head Welds
B-A	B1.30	Shell-to-Flange Weld
B-D	B3.90	Nozzle-to-Vessel Welds
B-D	B3.100	Nozzle Inside Radius Section
B-N-2	B13.60	Interior Attachments Beyond Beltline Region
B-N-3	B13.70	Core Support Structure

(Throughout this request, the examinations associated with the above examination categories are referred to as "the subject examinations" and the ASME BPV Code, Section XI, is referred to as "the Code").

2. Applicable Code Edition and Addenda

The applicable code edition is the American Society of Mechanical Engineers Boiler and Pressure Vessel Code Section XI (ASME Section XI), 2004 Edition, no Addenda (Reference 1).

3. Applicable Code Requirement

IWB-2412, Inspection Program B, requires volumetric examination of essentially 100% of RV pressure-retaining welds and visual examinations of RV components identified in Table IWB-2500-1 once each 10-year interval.

IWA-2430(d)(2) states:
"*Examinations may be performed to satisfy the requirements of the extended interval in conjunction with examinations performed to satisfy the requirements of the successive interval. However, an examination performed to satisfy requirements of either the extended interval or the successive interval shall not be credited to both intervals.*"

4. Reason for Request

Relief Requests ISIR-29 (Reference 2) and ISIR-30 (Reference 3) were approved to extend the CNP Unit 2 third inservice inspection interval for certain pressure retaining welds and visual examinations of the RV from 10 to 20 years. The relief resulted in the condition that third interval examinations are required at the same time as the fourth interval examinations, which is at the end of the fourth interval. A graphical representation (Reference 4) depicts these overlapping intervals and scheduled examinations. References 2 and 3 indicate that further relief to extend successive intervals would only be granted after the performance of the extended third interval examinations.

Relief was also granted for the Unit 1 subject examinations (Reference 6). The duration of the Unit 1 relief was clarified, stating that the latter half of the duration of alternative would overlap with the successive interval, and that the successive interval examinations were still required.

Applying the Unit 1 duration clarification and successive examination requirement to the Unit 2 relief indicates the subject examinations for the extended third interval and the successive fourth interval would be required at the same time, during the Fall 2019 Unit 2 refueling outage.

5. Proposed Alternative and Basis for Use

In accordance with 10 CFR 50.55a(z)(1), Indiana Michigan Power Company (I&M) the licensee for CNP, is requesting a proposed alternative to the requirement of IWA-2430(d)(2) to permit the use of an examination to satisfy the requirements of both the third extended interval and the successive fourth interval.

I&M proposes that this requested alternative, in conjunction with the previous relief granted (References 2 and 3), provides an acceptable basis for allowing the subject examinations to be credited for both the extended third and successive fourth inservice inspection intervals. The alternative requests approved in References 2 and 3 permitted the extension of the examination frequency from 10 to 20 years and presented an acceptable technical basis demonstrating an acceptable level of quality and safety. There is an expectation that no unnecessary risk is being taken on by performing the subject examinations at the approved time and crediting the examinations for both intervals.

For these reasons, I&M requests authorization to use the proposed alternative pursuant to 10 CFR 50.55a(z)(1) on the basis that the alternative provides an acceptable level of quality and safety.

6. Duration of Proposed Alternative

This alternative is requested for the remainder of the fourth 10-year Inservice Inspection interval, which is scheduled to end on February 29, 2020.

7. Precedent

No prior records for requesting this alternative were identified. Although utilities have successfully requested to extend the interval between performing the subject examinations and requested alternatives to other portions of IWA-2430 of the Code, no precedent for relief from IWA2430(d)(2) was identified. This was discussed during a teleconference between I&M and the NRC staff on April 2, 2019 (Reference 5).

8. References

1. ASME Boiler and Pressure Vessel Code, Section XI, 2004 Edition, no Addenda.

2. Letter from Lois M. James (NRC) to Joseph N. Jensen (I&M), "Donald C. Cook Nuclear Plant, Unit 2 (CNP-2) – Evaluation of Relief Request (ISIR-29) to Extend the Third 10-Year Inservice Inspection (ISI) Interval for Reactor Vessel Weld Examination (TAC No. MD9934)," dated June 8, 2009, Agencywide Document Access and Management System (ADAMS) Accession Number ML091260163.

3. Letter from Lois M. James (NRC) to Joseph N. Jensen (I&M), "Donald C. Cook Nuclear Plant, Unit 2 (CNP-2) – Evaluation of Relief Request (ISIR-30) to Extend the Third 10-Year Inservice Inspection (ISI) Interval for Visual Examination of the Reactor Pressure Vessel Interior Attachments Beyond the Beltline Region and Core Support Structure (TAC No. ME0770)," dated June 8, 2009, ADAMS Accession Number ML091320549.

4. Donald C. Cook Nuclear Plant, Units 1 and 2 – "DC Cook ISI 10 Year Interval Layout", dated April 2, 2019, ADAMS Accession Number ML19099A327.

5. NRC Posting "Summary of April 2, 2019, Meeting with Indiana Michigan Power Company Regarding Donald C. Cook Nuclear Plant, Unit Nos. 1 and 2 (EPID L-2019-LRM-0016)", dated April 16, 2019, ADAMS Accession Number ML19099A326.

6. Letter from David J. Wrona (NRC) to Joel P. Gebbie (I&M), "Donald C. Cook Nuclear Plant, Unit No. 1 – Approval of Alternative to the ASME Code Regarding Reactor Vessel Weld Examination-Relief Request ISIR-4-08 (EPID: L-2018-LLR-0106)", dated October 26, 2018, ADAMS Accession Number ML18284A310.