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

Subject: Duke Energy Carolinas, LLC (Duke Energy)
McGuire Nuclear Station, Unit 2
Docket Number 50-370
Renewed Facility License Number NPF-17
End of Cycle 25 In-service Inspection Summary Report

Pursuant to American Society of Mechanical Engineers (ASME) Section XI, as amended by ASME Code Case N-532-5, Duke Energy hereby submits the In-service Inspection Summary Report for the McGuire Unit 2 outage designated M2R25.

This submittal document contains no regulatory commitments.

If there are any questions or if additional information is needed, please contact Jeff Thomas of Regulatory Affairs at (980) 875-4499.

Sincerely,

for
Thomas D. Ray

Attachment 1: McGuire Unit 2 Outage M2R25 In-service Inspection Summary Report

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xc:

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Attachment 1

**McGuire Unit 2 Outage M2R25
In-service Inspection Summary Report**

CASE
N-532-5

FORM OAR-1 OWNER'S ACTIVITY REPORT

Report Number _____ Owner's Activity Report for Refueling Outage M2R25

Plant _____ McGuire Nuclear Station, 12700 Hagers Ferry Rd, Huntersville, NC 28078-9340

Unit No. 2 Commercial service date 03/01/1984 Refueling outage no. M2R25
(if applicable)

Current inspection interval ISI-4th, Containment-3rd
(1st, 2nd, 3rd, 4th, other)

Current inspection period ISI-2nd, Containment-2nd
(1st, 2nd, 3rd)

Edition and Addenda of Section XI applicable to the inspection plans 2007 with 2008 addenda

Date and revision of inspection plans See attachment

Edition and Addenda of Section XI applicable to repair/replacement activities, if different than the inspection plans Same

Code Cases used: The following Code Cases are permitted by the ISI Plans: N-513-3, N-526, N-532-5, N-586-1, N-613-1, N-639, N-643-2, N-648-1, N-663, N-706-1, N-716, N-722-1, N-729-4, N-731, N-735, N-770-2
(if applicable)

CERTIFICATE OF CONFORMANCE

I certify that (a) the statements made in this report are correct; (b) the examinations and tests meet the Inspection Plan as required by the ASME Code, Section XI; and (c) the repair/replacement activities and evaluations supporting the completion of M2R25 conform to the requirements of Section XI.
(refueling outage number)

Signed

Robert W. Weaver

Date

12/12/18

CERTIFICATE OF INSERVICE INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Province of North Carolina and employed by OneCIS Insurance Company of Lynn, MA have inspected the items described in this Owner's Activity Report, and state that, to the best of my knowledge and belief, the Owner has performed all activities represented by this report in accordance with the requirements of Section XI.

By signing this certificate neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the repair/replacement activities and evaluation described in this report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.

Date

12/12/18

Inspector's Signature

Commissions

NB11473, IN, NS, NSI, R
National Board, State, Province, and Endorsements
NC1524

ATTACHMENT

McGuire Unit 2 End of Cycle 25 Inservice Inspection Report

The McGuire Nuclear Station Unit 2 Fourth Ten Year Inservice Inspection (ISI) Plan complies with 10CFR50.55a(g), which implements, by reference, the American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code, Section XI, 2007 Edition with 2008 Addenda.

This summary report is being submitted pursuant to the reporting requirements of ASME Section XI as amended by ASME Code Case N-532-5, "Repair/Replacement Activity Documentation Requirements and Inservice Inspection Summary Report Preparation and Submission Section XI, Division 1".

Contained within this summary report are the form OAR-1 (Owner's Activity Report) and Tables 1 and 2 of Code Case N-532-5 for McGuire Nuclear Station during cycle 25 and Refueling Outage 25 (M2R25). M2R25 is the first outage of the second ISI period in the fourth inspection interval. M2R25 is the first outage of the second Containment period in the third inspection interval. This report includes all Repair/Replacement activities from April 22, 2017 through October 13, 2018, cycle 25.

Date and Revision of Inservice Inspection Plans:

Fourth Interval Inservice Inspection Plans

The following document comprises the McGuire Nuclear Station 4th Interval Inservice Inspection Plan for Unit 2 (Class 1, 2, and 3 Components):

"Fourth Interval Inservice Inspection Plan, McGuire Nuclear Station Unit 1 and Unit 2, General Requirements" – Document "MISI-1462.10-0040-GEN REQ UNIT 1 SECOND AND THIRD PERIODS AND UNIT 2", Rev 1, dated 05/28/2015.

The following document comprises the McGuire Nuclear Station 4th Interval Inservice Inspection Pressure Test Plan for Unit 2:

"McGuire Nuclear Station - Fourth Interval Inservice Inspection - Pressure Test Plan", Document MISI-1462.20-0040-PTPLAN, Rev 2, dated 07/25/2018.

Containment Inservice Inspection Plan

The following document comprises the McGuire Nuclear Station 3rd Interval Containment Inservice Inspection Plan for Unit 2 (Class MC):

"McGuire Nuclear Station - Third Interval Containment Inservice Inspection Plan - Containment - Units 1 & 2", Document #MC-ISIC3-1042-0001, Rev. 5, dated 3/19/2018.

McGuire Nuclear Unit 2
Form OAR-1 Owner's Activity Report

Table 1
Items with Flaws or Relevant Conditions that Required Evaluation for Continued Service

Examination Category and Item Number	Item Description	Evaluation Description
B-P / B15.10	Inactive boron leak found on Reactor Coolant Pump 2C and 2D seal which contains pressure retaining bolting during M2R25.	Item(s) evaluated under IWA-5251 and the BACC program by Engineering in NCR 02236874 and found to be acceptable.
C-H/C7.10	Boron leakage identified at 2KFFE5100 flange joint which contains pressure retaining bolting.	Item evaluated under IWA-5251 and the BACC program by Engineering in NCR 02122868 and found to be acceptable.
F-A/F1.10C	Relevant condition found on hanger 2MCR-NV-4779 during M2R25.	Item evaluated by Engineering in NCR 02231315 and found to be acceptable.
F-A/F1.30C	Relevant condition found on hanger 2MCA-KC-3030 prior to M2R25.	Item evaluated by Engineering in NCR 02229734 and found to be acceptable.
F-A/F1.40	Relevant condition found on hanger 2CRDM-SUPPORT during M2R25.	Item evaluated by Engineering in NCR 02231022 and found to be acceptable.

Table 2
Abstract of Repair/Replacement Activities Required for Continued Service

Code Class	Item Description	Description of Work	Date Completed	Repair / Replacement Plan Number
3	Through wall leak at piping between 2RN-286 and 2A RN strainer (NCR 02234325) identified during M2R25.	Replaced piping section.	M2R25	2190427 01, 07