



**Brent Bare**  
**Plant Manager**  
McGuire Nuclear Station

**Duke Energy**  
MG01OP | 12700 Hagers Ferry Road  
Huntersville, NC 28078  
o: 980.875.4111  
Brent.Bare@duke-energy.com

Serial: RA-22-0178  
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10 CFR 50.55a

United States Nuclear Regulatory Commission  
ATTN: Document Control Desk  
Washington, DC 20555-0001

MCGUIRE NUCLEAR STATION, UNIT NO.1  
DOCKET NO. 50-369 / RENEWED LICENSE NUMBER NPF-9

**SUBJECT: McGuire Nuclear Station Unit 1, End of Cycle 28 (M1R28) Inservice  
Inspection Summary Report**

Pursuant to the reporting requirements of American Society of Mechanical Engineers (ASME) Section XI, as amended by ASME Code Case N-532-5, Duke Energy Carolinas, LLC (Duke Energy) hereby submits the Inservice Inspection Summary Report for the McGuire Unit 1 outage M1R28.

This submittal contains no regulatory commitments.

Should you have any questions concerning this letter, or require additional information, please contact Ryan Treadway – Director, Fleet Licensing, at (980) 373-5873.

Sincerely,

Brent Bare  
Plant Manager  
McGuire Nuclear Station

Enclosure:

1. Inservice Inspection Summary Report Unit 1 McGuire Spring 2022 Refueling Outage M1R28

cc: (with enclosure)

J. Klos, NRC Project Manager, NRR  
L. Dudes, NRC Regional Administrator, Region II  
A. Hutto, NRC Senior Resident Inspector

U.S. Nuclear Regulatory Commission  
Serial: RA-22-0178

**RA-22-0178**

**Enclosure 1**  
**Inservice Inspection Summary Report Unit 1 McGuire**  
**Spring 2022 Refueling Outage M1R28**

(5 pages including cover)



ATTACHMENT

McGuire Unit 1 End of Cycle 28 Inservice Inspection Report

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The McGuire Nuclear Station Unit 1 Fifth 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.

Per RIS 2004-12, Letter RA-21-0152, NRC Accession Number ML21182A028 and approval NRC Accession Number ML21306A159, the NRC staff concluded that the use of paragraphs IWA-2318, IWA-4340, IWA-4540(b), IWA-5120, IWA-5213, IWA-5241, IWA-5242, and IWA-5250 of the 2017 Edition of the ASME B&PV Code, Section XI, is acceptable for McGuire Unit 1.

This summary report is being submitted pursuant to the reporting requirements of ASME Section XI, IWA-6000 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 Unit 1 during cycle 28 and Refueling Outage 28 (M1R28). M1R28 is the first refueling outage of the first ISI period in the fifth inspection interval. M1R28 is the first refueling outage of the third Containment period in the third inspection interval. This report includes all ISI activities from October 20, 2020 through May 9, 2022, cycle 28.

During M1R28, Visual Examinations VT-1 and VT-3 were successfully conducted on valve 1NI-175 to fulfill the scope expansion requirements in ASME Section XI, IWB-2430 for the fourth 10-year interval. Reference NCR 2275082.

Date and Revision of Inservice Inspection Plans used during M1R28:

Fourth Interval Inservice Inspection Plan

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

- "Fourth Interval Inservice Inspection Plan - McGuire Nuclear Station Units 1 and Unit 2", Document MISI-1462.10-0040-ISIPLAN, Rev 2, dated 03/10/2022.
- "Fourth Ten-Year Interval Inservice Inspection Schedule McGuire Nuclear Station Unit 1", Document MISI-1462.10-0040-Unit 1 Schedule, Rev. 2, dated 03/10/2022.

Fifth Interval Inservice Inspection Plan

The following document comprises the McGuire Nuclear Station 5<sup>th</sup> Interval Inservice Inspection Plan for Unit 1 (Class 1, 2, and 3 Components):

- "Fifth Interval Inservice Inspection Plan - McGuire Nuclear Station Unit 1", Document MISI-1462.10-0050-ISIPLAN, Rev 1, approval date of 11/8/2021.
- "Fifth Ten-Year Interval Inservice Inspection Schedule McGuire Nuclear Station Unit 1", Document MISI-1462.10-0050-Unit 1 Schedule, Rev. 0, dated 09/03/2021.

#### Fifth Interval Pressure Test Plan

The following document comprises the McGuire Nuclear Station 5th Interval Pressure Test Plan for Unit 1:

- “McGuire Nuclear Station Fifth Inspection Interval Inservice Inspection Pressure Test Plan”, Document MISI-1462.20-0050-PTPLAN, Rev 0, dated 09/14/2021.

#### Containment Inservice Inspection Plan

The following document comprises the McGuire Nuclear Station 3rd Interval Containment Inservice Inspection Plan for Unit 1 (Class MC):

- “McGuire Nuclear Station - Third Interval Containment Inservice Inspection Plan - Containment - Units 1 & 2”, Document #MC-ISIC3-1042-0001, Rev. 9, dated 10/19/2021.

#### Augmented ISI Plan

The following document comprises the McGuire Nuclear Station 5th Interval Augmented Inservice Inspection Plan and Schedule for Unit 1:

- “McGuire Nuclear Station – Fifth Interval Augmented Inservice Inspection Plan and Schedule”, Document MISI-1462.10-0050-AUGISI, Rev. 0, dated 10/12/2021.

McGuire Nuclear Unit 1  
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
C-H / C7.10	Relevant Conditions discovered on valves 1ND-99, 1ND-102, and 1FW-27A	Relevant Condition evaluated for Corrective Action per IWA-5251 and Accepted by IWB-3142.3, Corrective Measures. NCR 2422405
E-G / E8.10	Missing washers on 1-PENE-E252 (M1-00607) and 1-PENE-E310 (M1-00631)	Relevant Condition evaluated and Accepted by Engineering per IWE-3122.3 - NCR 2423911
F-A / F1.10	Bent rod on spring can support 1MCR-NV-1292 (Sum # M1-05710)	Relevant Condition evaluated and Accepted by Engineering per IWF-3122.3 - NCR 2423256

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

Code Class	Item Description	Description of Work	Date Completed	Repair / Replacement Plan Number
1	1NCSG0006 – 1B Steam Generator	Plugged (2) tubes via rolled plug and full-length wire rope stabilizer	4/18/2022	Work Order # 20476905-15