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RA-20-0235
August 7, 2020

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

Oconee Nuclear Station, Unit 3
Docket No. 50-287
Renewed License No. DPR-55

Subject: Oconee Unit 3, Refuel 30 (O3R30) Inservice Inspection (ISI) Report, Fifth 10-Year ISI Interval

Pursuant to the 2007 Edition through the 2008 Addenda of the American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code, Section XI, IWA-6000, Duke Energy is providing its Inservice Inspection (ISI) summary pertaining to the 30th refueling outage (O3R30) for Oconee Nuclear Station (ONS) Unit 3.

The Enclosure contains the O3R30 ISI summary report.

This submittal contains no regulatory commitments. Please refer any questions regarding this submittal to Art Zaremba, Manager – Nuclear Fleet Licensing, at 980-373-2062.

Sincerely,

A handwritten signature in black ink, appearing to read "Steve Snider", written in a cursive style.

Steve Snider
Vice President – Nuclear Engineering

Enclosure: Inservice Inspection Summary Report Unit 3 Oconee Spring 2020 Refueling Outage

cc: (w/ Enclosure)

Ms. Laura Dudes
Administrator, Region II
U.S. Nuclear Regulatory Commission
Marquis One Tower
245 Peachtree Center Avenue NE, Suite 1200
Atlanta, GA 30303-1257

Mr. Shawn Williams
NRC Project Manager
Oconee Nuclear Station

Mr. Jared Nadel
NRC Senior Resident Inspector
Oconee Nuclear Station

Enclosure to
RA-20-0235

Enclosure

Inservice Inspection Summary Report Unit 3 Oconee Spring 2020 Refueling Outage

DUKE ENERGY

**INSERVICE INSPECTION SUMMARY REPORT UNIT 3 OCONEE SPRING 2020
REFUELING OUTAGE
O3R30 (Outage 3)**

Location: 7800 Rochester Hwy, Seneca, SC 29672

NRC Docket No. 50-287

Commercial Service Date: December 16, 1974

***Owner: Duke Energy
526 South Church St.
Charlotte, NC 28201-1006***

Revision 0

Originated By:

Austin C. Keller

Digitally signed by ACKell1
(365600)
Date: 2020.07.20 16:26:23 -04'00'

Date _____

Austin C. Keller

Checked By:

Angela Staller

Digitally signed by Angela Staller
Date: 2020.07.21 15:26:35 -04'00'

Date _____

Angela Staller

**MAP9681
(102140)**

Digitally signed by MAP9681
(102140)
Date: 2020.07.23 09:42:04 -04'00'

Date _____

Approved By:

Mark A. Pyne

FORM OAR-1 OWNER'S ACTIVITY REPORT

Report Number Owner's Activity Report for Refueling Outage O3R30

Plant Oconee Nuclear Station, 7800 Rochester Highway, Seneca, SC 29672

Unit No. 3 Commercial service date 12/16/1974 Refueling outage no. O3R30
(if applicable)

Current inspection interval Fifth Inspection Interval (ISI), Third Inspection Interval (Containment ISI)
(1st, 2nd, 3rd, 4th, other)

Current inspection period Second Inspection Period (ISI and Containment ISI)
(1st, 2nd, 3rd)

Edition and Addenda of Section XI applicable to the inspection plans ASME Section XI 2007 Edition through 2008 Addenda

Date and revision of inspection plans See Attachment A

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

Code Cases used for inspection and evaluation: The following Code Cases are permitted by the Augmented ISI, ISI, and Pressure Test Plans, 5th Interval: N-513-3, N-513-4, N-532-4, N-532-5, N-586-1, N-600, N-613-1, N-613-2, N-639, N-643-2, N-648-1, N-648-2, N-651, N-663, N-705, N-706-1, N-711-1, N-712, N-716-1, N-722-1, N-729-4, N-729-6, N-731, N-735, N-765, N-770-2, N-770-5, N-771, N-775, N-776, N-786-1, N-798, N-800, N-805, N-823, N-823-1, N-825, N-831, N-845, N-853, & N-854
(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 O3R30 conform to the requirements of Section XI.
(refueling outage number)

Signed Austin C. Keller Austin C. Keller, ISI Program Owner Date 07/20/2020

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 South Carolina and employed by OneCIS Insurance Company 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.

Mark E. Zurbuch Commissions 13048, 201, AI, IS, N, I, C, R
Inspector's Signature National Board, State, Province, and Endorsements
Date 7/31/2020

Attachment A

Oconee Unit 3 Refueling Outage 30, Inservice Inspection Report

Date and Revision of Inservice Inspection Plans:

I. Fifth Interval Inservice Inspection Plans

1. The following documents comprise the Oconee Nuclear Station 5th Interval Inservice Inspection Plan for ONS Unit 3 (Class 1, 2, and 3 Components):
 - a. ISI Plan - Fifth Interval Inservice Inspection Plan, Oconee Nuclear Station Units 1, 2, & 3 and Keowee Hydro Station Units 1 & 2, Document #OISI-0169.10-0050-ISI PLAN, Rev. 0, dated 06/30/20.
 - b. ISI Schedule – Fifth Ten-Year Interval Inservice Inspection Schedule Oconee Nuclear Station Unit 3, Document #OISI-0169.10-0050-Unit 3.
2. The following document comprises the Oconee Nuclear Station 5th Interval Inservice Inspection Pressure Test Plan for ONS Unit 3:
 - a. Oconee Nuclear Station - Fifth Inspection Interval Inservice Inspection PT (Pressure Test) Plan General Requirements Units 1, 2, and 3, Document #OISI-0169.20-0050-PTPLAN, Rev. 5, dated 06/08/2020.

II. Fifth Interval Augmented Inservice Inspection Plan

1. The following document comprises the Oconee Nuclear Station 5th Interval Augmented Inservice Inspection Plan and Schedule for Unit 3:
 - a. Oconee Nuclear Station - Augmented Inservice Inspection NDE Plan - General Requirements and Units Detail Listing, Document #OISI-0169.10-0050 - AUG-ISI, Rev. 6, dated 06/10/2020.

III. Third Interval Containment Inservice Inspection Plan

1. The following document comprises the Oconee Nuclear Station 3rd Interval Containment Inservice Inspection Plan for Unit 3 (Class MC):
 - a. Third Interval Containment Inservice Inspection Plan Oconee Nuclear Station Units 1, 2, & 3, Document #O-ISIC3-62-0001, Rev. 7, dated 06/22/2020.

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	Boric acid residue was found during ISI Pressure Test Zone, O3RCS-1	Areas identified in NCR #02329318 were evaluated by Engineering and found to be acceptable.
C-H / C7.10	Boric acid residue was found during ISI Pressure Test Zone, IZ3L-25	Areas identified in NCR #02214299 were accepted by corrective measures by WR# 02214299 per IWB-3142.3.
C-H / C7.10	Boric acid residue was found during ISI Pressure Test Zone, IZ3L-24	Areas identified in NCR #02212286 were evaluated by Engineering and found to be acceptable.
C-H / C7.10	Boric acid residue was found during ISI Pressure Test Zone, IZ3L-13	Areas identified in NCR #02212639 were evaluated by Engineering and found to be acceptable.
C-H / C7.10	Boric acid residue was found during ISI Pressure Test Zone, O3HPI-3	Areas identified in NCR #02324718 were evaluated by Engineering and found to be acceptable.
C-H / C7.10	Boric acid residue was found during ISI Pressure Test Zone, O3RCMU-1	Areas identified in NCR #02327167 were evaluated by Engineering and found to be acceptable.
C-H / C7.10	Boric acid residue was found during ISI Pressure Test Zone, O3LPI-2A	Areas identified in NCR #02328320 were evaluated by Engineering and found to be acceptable.
C-H / C7.10	Boric acid residue was found during ISI Pressure Test Zone, O3LPI-2B	Areas identified in NCR #02328321 were evaluated by Engineering and found to be acceptable.
C-H / C7.10	Boric acid residue was found during ISI Pressure Test Zone, O3LPI-2C	Areas identified in NCR #02328322 were evaluated by Engineering and found to be acceptable.
D-B / D2.10	Boric acid residue was found during ISI Pressure Test Zone, IZ3L-83	Areas identified in NCR #02212343 were evaluated by Engineering and found to be acceptable.
D-B / D2.10	Boric acid residue was found during ISI Pressure Test Zone, O3SF-1	Areas identified in NCR #02325084 were evaluated by Engineering and found to be acceptable.
F-A / F1.12	ISI Summary No. O3-04268. VT-3 examination of 3-50-0-2481A-H6 revealed a loose lock nut was identified on the U-Bolt of the dual constant support.	Indications identified in NCR #02331438 were evaluated by Engineering and found to be acceptable for continued service. WR #020172735 tightened the loose lock nut.

TABLE 1
ITEMS WITH FLAWS OR RELEVANT CONDITIONS THAT REQUIRED EVALUATION FOR
CONTINUED SERVICE

Examination Category and Item Number	Item Description	Evaluation Description
F-A / F1.40	ISI Summary No. O3-05907. VT-3 examination of 3-BWST-TANK (Borated Water Storage Tank) revealed support members exhibiting areas of degradation and corrosion with some material wastage identified.	Indications identified in NCR #02325845 were evaluated by Engineering and found to be acceptable for continued service. See NCR #02325846 for Engineering evaluation.
AUG / G19.1	ISI Summary No. O3-06115. Low UT thickness readings associated with weld 3-03-31-5A.	Low UT thickness reading associated with weld 3-03-31-5A was evaluated by Engineering and found to be acceptable per NCR #02326011.
L-A / L1.11	All Accessible Surface Areas	Accepted for continued service by Responsible Engineer per IWL-3212. Indications documented in WO #020173122-18. Reference AR #02317627.
L-B / L2.30	Tendon 23V9 found to have corrosion on the shims at end #2 and adjacent surface crack within 2 feet of bearing plate.	Accepted for continued service by Responsible Engineer per IWL-3222. Reference AR #02317627.
L-B / L2.30	Tendon 56V5 found to have protruding button head at end #1.	Accepted for continued service by Responsible Engineer per IWL-3222. Reference AR #02317627.
L-B / L2.30	Tendon 61V11 found to have mechanical damage on anchor head at end #2.	Accepted for continued service by Responsible Engineer per IWL-3222. Reference AR #02317627.
L-B / L2.30	Tendon 23V26 found to have mechanical damage/minor corrosion at end #1 and a split buttonhead at end #2. Adjacent surface cracks within 2 feet of bearing plate.	Accepted for continued service by Responsible Engineer per IWL-3222. Reference AR #02317627.
L-B / L2.30	Tendon 62H51 found to have mechanical damage/minor corrosion at ends #1 and #2. Adjacent surface cracks within 2 feet of bearing plate.	Accepted for continued service by Responsible Engineer per IWL-3222. Reference AR #02317627.
L-B / L2.30	Tendon 13H78 found to have minor corrosion at ends #1 and #2. Adjacent surface cracks within 2 feet of bearing plate.	Accepted for continued service by Responsible Engineer per IWL-3222. Reference AR #02317627.

TABLE 1
ITEMS WITH FLAWS OR RELEVANT CONDITIONS THAT REQUIRED EVALUATION FOR
CONTINUED SERVICE

Examination Category and Item Number	Item Description	Evaluation Description
L-B / L2.30	Tendon 62H70 found to have minor corrosion at ends #1 and #2. Spalled concrete and adjacent surface cracks within 2 feet of bearing plate.	Accepted for continued service by Responsible Engineer per IWL-3222. Reference AR #02317627.
L-B / L2.30	Tendon 35H59 found to have minor corrosion at ends #1 and #2. Spalled concrete and adjacent surface cracks within 2 feet of bearing plate.	Accepted for continued service by Responsible Engineer per IWL-3222. Reference AR #02317627.
L-B / L2.30	Tendon 35H50 found have degraded concrete at end #2.	Accepted for continued service by Responsible Engineer per IWL-3222. Reference AR #02317627.
L-B / L2.30	Tendon 3D09 found to have minor corrosion at ends #1 and #2. Adjacent surface cracks within 2 feet of bearing plate.	Accepted for continued service by Responsible Engineer per IWL-3222. Reference AR #02317627.
L-B / L2.30	Tendon 3D18 found to have minor corrosion at ends #1 and #2. Adjacent surface cracks within 2 feet of bearing plate. Missing buttonhead at end #1.	Accepted for continued service by Responsible Engineer per IWL-3222. Reference AR #02317627.
L-B / L2.30	Tendon 2D24 found to have minor corrosion at ends #1 and #2. Concrete cold joint within 2 feet of bearing plate.	Accepted for continued service by Responsible Engineer per IWL-3222. Reference AR #02317627.
L-B / L2.30	Tendon 3D22 found to have minor corrosion at ends #1 and #2. Adjacent surface cracks within 2 feet of bearing plate.	Accepted for continued service by Responsible Engineer per IWL-3222. Reference AR #02317627.
L-B / L2.40	Tendon 62H51 had a low reserve alkalinity value.	Accepted for continued service by Responsible Engineer per IWL-3222. Reference AR #02317627.
L-B / L2.40	Tendons 61V11, 61V1, 34V30, 13H78, 62H70, 13H43, 35H59, 35H50, 3D18, 2D24, and 3D22 had grease net duct volume changes greater than 10%.	Accepted for continued service by Responsible Engineer per IWL-3222. Reference AR #02317627.

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	3SF-FX-0014	Replace leaking flex hose	08/23/2018	20262274-01