John R. Dills
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10 CFR 50.73

August 23, 2021
Serial: RA-21-0210

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

Shearon Harris Nuclear Power Plant, Unit 1
Docket No. 50-400/Renewed License No. NPF-63

Subject: Licensee Event Report 2021-005-00

Ladies and Gentlemen:

Duke Energy Progress, LLC, submits the enclosed Licensee Event Report 2021-005-00 in accordance with 10 CFR 50.73 for Shearon Harris Nuclear Power Plant, Unit 1 (HNP). This report describes a condition where the past inoperability of an effluent accident monitor exceeded the time allowed by Technical Specifications. This event had no significance with respect to the health and safety of the public.

There are no regulatory commitments contained within this report.

Please refer any questions regarding this submittal to Sarah McDaniel at (984) 229-2002.

Sincerely,

John R. Dills

Enclosure: Licensee Event Report 2021-005-00

cc: J. Zeiler, NRC Senior Resident Inspector, HNP
M. Mahoney, NRC Project Manager, HNP
NRC Regional Administrator, Region II

NRC FORM 366 (08-2020) U.S. NUCLEAR REGULATORY COMMISSION

LICENSEE EVENT REPORT (LER)

(See Page 3 for required number of digits/characters for each block)
(See NUREG-1022, R.3 for instruction and guidance for completing this form http://www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr1022/r3/)

APPROVED BY OMB: NO. 3150-0104 EXPIRES: 08/31/2023

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1. Facility Name	2. Docket Number	3. Page
Shearon Harris Nuclear Power Plant, Unit 1	05000 400	1 OF 3

4. Title
Past Inoperability of Effluent Accident Monitor Exceeded Time Allowed by Technical Specifications

5. Event Date			6. LER Number			7. Report Date			8. Other Facilities Involved	
Month	Day	Year	Year	Sequential Number	Revision No.	Month	Day	Year	Facility Name	Docket Number
6	22	2021	2021	- 005 -	00	8	23	2021		05000
									Facility Name	Docket Number
										05000

9. Operating Mode	10. Power Level
1	100

11. This Report is Submitted Pursuant to the Requirements of 10 CFR §: *(Check all that apply)*

10 CFR Part 20	☐ 20.2203(a)(2)(vi)	☐ 50.36(c)(2)	☐ 50.73(a)(2)(iv)(A)	☐ 50.73(a)(2)(x)
☐ 20.2201(b)	☐ 20.2203(a)(3)(i)	☐ 50.46(a)(3)(ii)	☐ 50.73(a)(2)(v)(A)	**10 CFR Part 73**
☐ 20.2201(d)	☐ 20.2203(a)(3)(ii)	☐ 50.69(g)	☐ 50.73(a)(2)(v)(B)	☐ 73.71(a)(4)
☐ 20.2203(a)(1)	☐ 20.2203(a)(4)	☐ 50.73(a)(2)(i)(A)	☐ 50.73(a)(2)(v)(C)	☐ 73.71(a)(5)
☐ 20.2203(a)(2)(i)	**10 CFR Part 21**	☑ 50.73(a)(2)(i)(B)	☐ 50.73(a)(2)(v)(D)	☐ 73.77(a)(1)(i)
☐ 20.2203(a)(2)(ii)	☐ 21.2(c)	☐ 50.73(a)(2)(i)(C)	☐ 50.73(a)(2)(vii)	☐ 73.77(a)(2)(i)
☐ 20.2203(a)(2)(iii)	**10 CFR Part 50**	☐ 50.73(a)(2)(ii)(A)	☐ 50.73(a)(2)(viii)(A)	☐ 73.77(a)(2)(ii)
☐ 20.2203(a)(2)(iv)	☐ 50.36(c)(1)(i)(A)	☐ 50.73(a)(2)(ii)(B)	☐ 50.73(a)(2)(viii)(B)	
☐ 20.2203(a)(2)(v)	☐ 50.36(c)(1)(ii)(A)	☐ 50.73(a)(2)(iii)	☐ 50.73(a)(2)(ix)(A)	

☐ **OTHER** (Specify here, in abstract, or NRC 366A).

12. Licensee Contact for this LER

Licensee Contact	Phone Number (Include area code)
Sarah McDaniel, Regulatory Affairs Engineer	(984) 229-2002

13. Complete One Line for each Component Failure Described in this Report

Cause	System	Component	Manufacturer	Reportable to IRIS		Cause	System	Component	Manufacturer	Reportable to IRIS
A	IL	MON	S637	Y						

14. Supplemental Report Expected		15. Expected Submission Date	Month	Day	Year
☑ No	☐ Yes (If yes, complete 15. Expected Submission Date)				

16. Abstract (Limit to 1560 spaces, i.e., approximately 15 single-spaced typewritten lines)

On June 22, 2021, the Waste Processing Building (WPB) Vent Stack 5A High Range Noble Gas Radiation Monitor was found to have incorrect database values used for flow rate measurement, which rendered this monitor inoperable. The database values for this radiation monitor were immediately corrected upon discovery of this condition and operability was restored on June 22, 2021. Following investigation, it was determined that this radiation monitor was inoperable since October 6, 2020. During completion of a surveillance test on this radiation monitor on October 6th, the database values were restored incorrectly. Maintenance personnel did not recognize a note in the Radiation Monitor Data Sheet Library that requires substitute values to be entered when the flow transmitter for this radiation monitor is inoperable. Since this radiation monitor was not known to be inoperable from October 6, 2020, through June 22, 2021, no alternate method for monitoring was implemented and no special report was completed as required by Technical Specifications (TS). The WPB Vent Stack 5A High Range Noble Gas Radiation Monitor is credited as one of two WPB exhaust effluent monitors in TS Table 3.3-10, Accident Monitoring Instrumentation. This event had no significance with respect to the health and safety of the public. Actions to ensure tracking of the flow rate monitor status have been completed.

LICENSEE EVENT REPORT (LER) CONTINUATION SHEET

(See NUREG-1022, R.3 for instruction and guidance for completing this form http://www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr1022/r3/)

1. FACILITY NAME	2. DOCKET NUMBER	3. LER NUMBER		
		YEAR	SEQUENTIAL NUMBER	REV NO.
Shearon Harris Nuclear Power Plant, Unit 1	05000- 400	2021	- 005	- 00

NARRATIVE

Note: Energy Industry Identification System (EIIS) codes are identified in the text within brackets [].

A. Background

Shearon Harris Nuclear Power Plant, Unit 1 (HNP), was in Mode 1 at 100% reactor [RCT] power when the Waste Processing Building (WPB) [NE] Vent Stack 5A High Range Noble Gas Radiation [IL] Monitor [MON] was declared inoperable. No other systems, structures or components were inoperable at the time that contributed to the event.

The WPB Vent Stack 5A High Range Noble Gas Radiation Monitor is credited as one of two WPB exhaust effluent monitors in Technical Specification (TS) Table 3.3-10, Accident Monitoring Instrumentation, that are required to be operable in Modes 1, 2, and 3, in accordance with TS 3.3.3.6. The WPB exhaust effluent monitors provide an indication to operations personnel of the overall airborne activity in the WPB effluent at release points 5 and 5A. During the time period that the WPB Vent Stack 5A High Range Noble Gas Radiation Monitor was inoperable, either the WPB Vent Stack 5 High Range Noble Gas Radiation Monitor was operable or its alternate preplanned monitoring method was implemented.

This event is reportable in accordance with 10 CFR 50.73(a)(2)(i)(B) as “any operation or condition which was prohibited the plant’s Technical Specifications,” because there is evidence the WPB Vent Stack 5A High Range Noble Gas Radiation Monitor was inoperable for greater than the time allowed by HNP TS prior to discovery.

Additionally, TS Limiting Condition for Operation (LCO) 3.0.4 requires all LCOs to be met for the plant condition to be entered, prior to entry. There has been an unplanned forced outage, a planned refueling outage, and a planned forced outage at HNP since October 6, 2020. On these occasions, HNP was returned to Mode 3 without personnel being aware of this condition and the LCO for TS 3.3.3.6 was not met, which is prohibited by TS LCO 3.0.4.

B. Event Description

On June 22, 2021, the WPB Vent Stack 5A High Range Noble Gas Radiation Monitor was found to have incorrect database values used for flow rate measurement, which rendered this monitor inoperable. The flow transmitter [FT] used for this radiation monitor has been inoperable since July 7, 2020, which requires use of pre-established substitute values in the database to maintain operability of this radiation monitor. On June 22, 2021, a Radiation Protection (RP) technician identified that the database values used for monitoring flow that supports this radiation monitor’s monitoring function were not appropriate, as the values being used were for the flow transmitter being in an operable status. From investigation, the incorrect database values were present since October 6, 2020, when personnel conducting a surveillance test activity on this radiation monitor inadvertently entered incorrect database values. Maintenance personnel did not recognize a note in the Radiation Monitor Data Sheet Library that requires substitute values to be entered when the flow transmitter for this radiation monitor is inoperable. The error was not identified until June 22, 2021.

The database values for this radiation monitor were immediately corrected upon discovery of this condition and operability was restored on June 22, 2021. For an inoperable WPB Vent Stack High Range Noble Gas Radiation Monitor, TS 3.3.3.6.c requires the preplanned alternate method of monitoring be implemented within 72 hours and that the inoperable channel(s) [CHA] be restored to operable status within 7 days or that a Special Report be submitted to the Commission, pursuant to TS 6.9.2, within the next 14 days. The radiation monitor was found to be inoperable since October 6, 2020, with none of the TS-prescribed actions occurring.

LICENSEE EVENT REPORT (LER) CONTINUATION SHEET

1. FACILITY NAME	2. DOCKET NUMBER		3. LER NUMBER		
			YEAR	SEQUENTIAL NUMBER	REV NO.
Shearon Harris Nuclear Power Plant, Unit 1	05000-	400	2021	- 005	- 00

NARRATIVE

C. Causal Factors

During completion of a surveillance test on this radiation monitor on October 6, 2020, maintenance personnel did not recognize a note in the Radiation Monitor Data Sheet Library that requires substitute values to be entered when the flow transmitter for this radiation monitor is inoperable. From investigation, it was identified that the radiation monitoring surveillance test procedure did not have guidance to compare the as-left database values to the as-found values. It was also determined that the process for tracking equipment that impacts radiation monitor operability is inadequate. Radiation Monitoring System (RMS) technicians did not identify this issue until June 22, 2021.

D. Corrective Actions

The database values for this radiation monitor were immediately corrected upon discovery of this condition and operability was restored on June 22, 2021. Personnel involved with radiation monitor testing and surveillance activities have been counseled on the expectations and process for verifying equipment status. A shift order instructing RMS technicians to verify radiation monitor and supporting equipment status with the Main Control Room personnel prior to radiation monitor database reviews has been issued. A standing order instructing maintenance technicians to compare as-found radiation monitor database values to as-left values for flow monitors prior to radiation monitor restoration activities has also been issued. The surveillance test procedure will be revised to incorporate guidance to compare the as-left database values to the as-found values. An improved process for tracking equipment that impacts radiation monitor operability will be implemented. The shift order and standing order will remain in effect until the improved process is implemented.

E. Safety Analysis

There were no actual consequences due to this condition prohibited by TS. The WPB Vent Stack 5A High Range Noble Gas Radiation Monitor provides a monitoring function only and does not initiate any specific control actions or provide an actuation signal for other components. This monitor does not perform a specific function in mitigating the consequences of an accident. Alternate means of monitoring conditions in the WPB were available and implemented by the operators for the duration of this condition. This condition had no impact on the health and safety of the public.

F. Additional Information

There have been no events similar to the event documented in this LER in the past three years.