



**UNITED STATES
NUCLEAR REGULATORY COMMISSION**
REGION II
245 PEACHTREE CENTER AVENUE N.E., SUITE 1200
ATLANTA, GEORGIA 30303-1200

June 13, 2022

Ms. Kim Maza
Site Vice President
Duke Energy Carolinas, LLC
5413 Shearon Harris Rd.
Mail Code HNP01
New Hill, NC 27562-9300

**SUBJECT: SHEARON HARRIS NUCLEAR POWER PLANT – DESIGN BASIS
ASSURANCE INSPECTION (PROGRAMS) INSPECTION REPORT
05000400/2022010**

Dear Ms. Maza:

On April 29, 2022, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at Shearon Harris Nuclear Power Plant and discussed the results of this inspection with you and other members of your staff. The results of this inspection are documented in the enclosed report.

Three findings of very low safety significance (Green) are documented in this report. Three of these findings involved violations of NRC requirements. We are treating these violations as non-cited violations (NCVs) consistent with Section 2.3.2 of the Enforcement Policy.

If you contest the violations or the significance or severity of the violations documented in this inspection report, you should provide a response within 30 days of the date of this inspection report, with the basis for your denial, to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, DC 20555-0001; with copies to the Regional Administrator, Region II; the Director, Office of Enforcement; and the NRC Resident Inspector at Shearon Harris Nuclear Power Plant.

This letter, its enclosure, and your response (if any) will be made available for public inspection and copying at <http://www.nrc.gov/reading-rm/adams.html>, and at the NRC Public Document Room in accordance with Title 10 of the *Code of Federal Regulations* 2.390, "Public Inspections, Exemptions, Requests for Withholding."

Sincerely,



Signed by Baptist, James
on 06/13/22

James B. Baptist, Chief
Engineering Br 1
Division of Reactor Safety

Docket No. 05000400
License No. NPF-63

Enclosure:
As stated

cc w/ encl: Distribution via LISTSERV

SUBJECT: SHEARON HARRIS NUCLEAR POWER PLANT – DESIGN BASIS ASSURANCE INSPECTION (PROGRAMS) INSPECTION REPORT 05000400/2022010 DATED JUNE 13, 2022

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OFFICE	NRR	RII/DRS/EB1	RII/DRS/EB1		
NAME	J. Zudans*	T. Fanelli	J. Baptist		
DATE	05/17/2022	06/12/2022	06/13/2022		

**U.S. NUCLEAR REGULATORY COMMISSION
Inspection Report**

Docket Number: 05000400

License Number: NPF-63

Report Number: 05000400/2022010

Enterprise Identifier: I-2022-010-0035

Licensee: Duke Energy Carolinas, LLC

Facility: Shearon Harris Nuclear Power Plant

Location: New Hill, NC.

Inspection Dates: April 03–April 29, 2022

Inspectors: T. Fanelli, Senior Reactor Inspector
M. Schwieg, Senior Reactor Inspector
J. Zudans, Contractor

Approved By: James B. Baptist, Chief
Engineering Br 1
Division of Reactor Safety

Enclosure

SUMMARY

The U.S. Nuclear Regulatory Commission (NRC) continued monitoring the licensee's performance by conducting a design basis assurance inspection (programs) inspection at Shearon Harris Nuclear Power Plant, in accordance with the Reactor Oversight Process. The Reactor Oversight Process is the NRC's program for overseeing the safe operation of commercial nuclear power reactors. Refer to <https://www.nrc.gov/reactors/operating/oversight.html> for more information.

List of Findings and Violations

Valves Anomalous Behavior Not Identified in Corrective Action Program			
Cornerstone	Significance	Cross-Cutting Aspect	Report Section
Mitigating Systems	Green NCV 05000400/2022010-01 Open/Closed	[H.8] - Procedure Adherence	71111.21N.02
The inspectors identified a GREEN finding and an associated NCV of 10 CFR 50 Appendix B Criterion XVI, Corrective Action, for the licensee's failure to identify potential degradation to a containment isolation valve in the corrective action program (CAP).			

Not Addressing Containment Isolation Valve Closure Requirements in Design Documents			
Cornerstone	Significance	Cross-Cutting Aspect	Report Section
Mitigating Systems	Green NCV 05000400/2022010-02 Open/Closed	None (NPP)	71111.21N.02
The NRC identified a GREEN finding and associated NCV of 10 CFR 50 Appendix B, Criterion III for the licensee's failure to address containment isolation valve closure requirements to prevent leakage.			

Failure to correct nonconformance's with 10 CFR 50.55a(b)(3)(ii)			
Cornerstone	Significance	Cross-Cutting Aspect	Report Section
Mitigating Systems	Green NCV 05000400/2022010-03 Open/Closed	None (NPP)	71111.21N.02
The inspectors identified a GREEN finding and an associated NCV of 10 CFR 50 Appendix B Criterion XVI, Corrective Action, for the licensee's failure to correct nonconformance with 10 CFR 50.55a(b)(3)(ii).			

Additional Tracking Items

None.

INSPECTION SCOPES

Inspections were conducted using the appropriate portions of the inspection procedures (IPs) in effect at the beginning of the inspection unless otherwise noted. Currently approved IPs with their attached revision histories are located on the public website at <http://www.nrc.gov/reading-rm/doc-collections/insp-manual/inspection-procedure/index.html>. Samples were declared complete when the IP requirements most appropriate to the inspection activity were met consistent with Inspection Manual Chapter (IMC) 2515, "Light-Water Reactor Inspection Program - Operations Phase." The inspectors reviewed selected procedures and records, observed activities, and interviewed personnel to assess licensee performance and compliance with Commission rules and regulations, license conditions, site procedures, and standards.

REACTOR SAFETY

71111.17T - Evaluations of Changes, Tests, and Experiments

Sample Selection (IP Section 02.01) (1 Sample)

The inspectors reviewed the following evaluations, screenings, and/or applicability determinations for 10 CFR 50.59 from [enter dates].

- (1) URI 05000400/2021010-01, Treatment of Class 1E interfaces and interlocks with the Turbine Trip System Design

71111.21N.02 - Design-Basis Capability of Power-Operated Valves Under 10 CFR 50.55a Requirements

POV Review (IP Section 03) (9 Samples)

The inspectors:

- a. determined whether the sampled POVs are being tested and maintained in accordance with NRC regulations along with the licensee's commitments and/or licensing bases Specific Guidance
- b. determined whether the sampled POVs are capable of performing their design-basis functions
- c. determined whether testing of the sampled POVs is adequate to demonstrate the capability of the POVs to perform their safety functions under design-basis conditions
- d. evaluate maintenance activities including a walkdown of the sampled POVs (if accessible)

- (1) 1CT-102 MOV Containment Sump to CS Pump "B" Isolation Valve (CIV)
- (2) 1MS-82 AOV Main Steam Isolation Valve (MSIV) for MS Header "B" (CIV)
- (3) 1AF-19 HOV AFWP "1A" Pressure Control Valve
- (4) 1CC-167 MOV CCW From RHR Heat Exchanger "B" Outlet Isolation Valve
- (5) 1CT-50 MOV Containment Spray Pump "A" Discharge to Nozzles Isolation Valve (CIV)
- (6) 1BD-30 AOV SG "B" Blowdown Isolation Valve (CIV)
- (7) 1SI-4 MOV Boron Injection Tank (BIT) Outlet Isolation Valve (CIV)
- (8) 1MS-62 HOV MS Line "C" PORV (CIV)
- (9) 1CS-11 AOV Letdown Isolation (CIV)

INSPECTION RESULTS

Valves Anomalous Behavior Not Identified in Corrective Action Program			
Cornerstone	Significance	Cross-Cutting Aspect	Report Section
Mitigating Systems	Green NCV 05000400/2022010-01 Open/Closed	[H.8] - Procedure Adherence	71111.21N.02
<p>The inspectors identified a GREEN finding and an associated NCV of 10 CFR 50 Appendix B Criterion XVI, Corrective Action, for the licensee's failure to identify potential degradation to a containment isolation valve in the corrective action program (CAP).</p> <p><u>Description:</u> On 5/3/2021, after a valve packing replacement, Work Order (WO) 20380548 performed a post maintenance diagnostic test for Air Operated Valve (AOV) 1BD-30, Steam Generator "B" Blowdown Containment Isolation Valve (CIV). The test showed high and uneven friction anomalies indicating an issue with the valve. In addition, the diagnostic test identified a potential binding anomaly at the beginning of the closing stroke (the CIV safety function). The binding anomaly prevented a continuous and smooth closure of the valve. A qualified AOV engineer evaluated the test on 5/13/2021 and noted that the margin had been reduced significantly due to the high friction but remained acceptable. No further investigations into these anomalies were performed. No Corrective Action or Work Request (WR) was initiated until WR 20223816 was issued 4/7/2022. Procedure TMM-134, "Post Test Evaluation of AOV Diagnostic Test Data," Rev. 3, requires initiation of WR as needed to correct anomalies.</p> <p>Corrective Actions: The licensee entered the nonconformance into the CAP and identified a second corrective action deficiency with anomalies associated with valve 1CS-231 in Action Request (AR) 02423878</p> <p>Corrective Action References: NCR 2423818 and AR 02423878</p> <p><u>Performance Assessment:</u></p> <p>Performance Deficiency: The failure to identify anomalous behavior that could degrade the safety function of containment isolation valve performance in the corrective action program was a performance deficiency.</p> <p>Screening: The inspectors determined the performance deficiency was more than minor because if left uncorrected, it would have the potential to lead to a more significant safety concern. Specifically, the anomalous behavior was on the beginning of the closure stroke and could worsen, thus degrading the valve effectiveness to perform its safety function to close and isolate containment.</p> <p>Significance: The inspectors assessed the significance of the finding using Appendix A, "The Significance Determination Process (SDP) for Findings At-Power." Using Exhibit 2, "Mitigating Systems Screening Questions," the finding was determined to be of very low safety significance GREEN because the finding is a deficiency affecting the design or qualification of a mitigating SSC, but the SSC maintains its operability or PRA functionality</p>			

Cross-Cutting Aspect: H.8 - Procedure Adherence: Individuals follow processes, procedures, and work instructions. The licensee failed to identify anomalous valve behavior completely and in a timely manner in accordance with evaluation procedure TMM-134.

Enforcement:

Violation: 10 CFR 50, Appendix B, Criterion XVI, Corrective Action, states, in part, that “Measures shall be established to assure that conditions adverse to quality, such as failures, malfunctions, deficiencies, deviations, defective material and equipment, and nonconformances are promptly identified and corrected.”

Contrary to the above, since 5/3/2021, deviant valve diagnostic anomalies were not promptly identified in CAP to be corrected.

Enforcement Action: This violation is being treated as a non-cited violation, consistent with Section 2.3.2 of the Enforcement Policy.

Not Addressing Containment Isolation Valve Closure Requirements in Design Documents

Cornerstone	Significance	Cross-Cutting Aspect	Report Section
Mitigating Systems	Green NCV 05000400/2022010-02 Open/Closed	None (NPP)	71111.21N.02

The NRC identified a GREEN finding and associated NCV of 10 CFR 50 Appendix B, Criterion III for the licensee’s failure to address containment isolation valve closure requirements to prevent leakage.

Description: FSAR, Section 6.2.4.2.3, Valve Operability, states, in part, that, “The valve types utilized for containment isolation service are designs which provide rapid closure and near zero leakage. Therefore, essentially no leakage is anticipated through the containment isolation valves when in closed position.” The licensing basis for the plant exempted approximately 36 CIV from 10 CFR 50, Appendix J, testing requirements, based on the application of a water seal for 30 days after a design basis event. However, these valves were not exempted from the rapid closure and near zero leakage requirement. The licensee program did not ensure that the valve seat stresses necessary for near zero leakage were determined and met. In addition, test control documents and subsequent corrective action documents that identified degradation on the disc and seat did not evaluate for leakage degradation. The documents specified that the valves did not need to meet any leak rate requirements because of their exemption from 10 CFR 50 Appendix J, testing requirements. The inspectors identified that the degradation could affect the valve leakage. The valves evaluated in the inspection sample included the Boron Injection Tank (BIT) output containment isolation valves 1SI-3 and 1SI-4, Containment Sump valve 1CT-102, and Blowdown isolation valve 1BD-30. A site extent of condition is being performed to determine how many CIVs were affected by this issue. The inspectors noted that not ensuring that near zero leakage requirements were addressed in the valve program allowed degradation affecting leakage requirements to go unaddressed.

Corrective Actions: The licensee entered this issue into the CAP and is performing an extent of condition.

Corrective Action References: AR 2425558

Performance Assessment:

Performance Deficiency: The failure to ensure that the near zero leakage requirements for CIVs continued to be met was a performance deficiency.

Screening: The inspectors determined the performance deficiency was more than minor because, if left uncorrected, it would have the potential to lead to a more significant safety concern. The containment isolation function of these valves was not ensured in design control and test control documents for their associated design basis events leading to the failure to address potential degradation affecting their safety functions.

Significance: The inspectors assessed the significance of the finding using Appendix A, "The Significance Determination Process (SDP) for Findings At-Power." Using Exhibit 2, "Mitigating Systems Screening Questions," the finding was determined to be of very low safety significance GREEN because the finding is a deficiency affecting the design or qualification of a mitigating SSC, but the SSC maintains its operability or PRA functionality

Cross-Cutting Aspect: Not Present Performance. No cross-cutting aspect was assigned to this finding because the inspectors determined the finding did not reflect present licensee performance.

Enforcement:

Violation: 10 CFR 50, Appendix B, Criterion III, states, in part, that "Measures shall be established to assure that applicable regulatory requirements and the design basis, as defined in § 50.2 and as specified in the license application, for those structures, systems, and components to which this appendix applies are correctly translated into specifications, drawings, procedures, and instructions."

Contrary to the above, since 4/28/2000, the site failed to assure that applicable regulatory requirements and design basis, as defined in § 50.2 and as specified in the license application, for containment isolation valves to which this appendix applies were correctly translated into specifications, drawings, procedures, and instructions. Specifically, design documents for valve capability did not address the containment isolation valve function.

Enforcement Action: This violation is being treated as a non-cited violation, consistent with Section 2.3.2 of the Enforcement Policy.

Failure to correct nonconformance's with 10 CFR 50.55a(b)(3)(ii)

Cornerstone	Significance	Cross-Cutting Aspect	Report Section
Mitigating Systems	Green NCV 05000400/2022010-03 Open/Closed	None (NPP)	71111.21N.02

The inspectors identified a GREEN finding and an associated NCV of 10 CFR 50 Appendix B Criterion XVI, Corrective Action, for the licensee's failure to correct nonconformance with 10 CFR 50.55a(b)(3)(ii).

Description: Differential pressure testing results for 1SI-3 and 1SI-4 showed signs of degradation and instability of valve factor performance, which could affect their safety injection function and their near zero leakage design requirement for CIVs. The tests demonstrated that the valves were not in conformance with 10 CFR 50.55a(b)(3)(ii) and this nonconformance was not recognized following these tests. The degradation was recognized and placed in the CAP as part of the Motor Operated Valve (MOV) testing program in 2006. It was identified that “seat lapping has not been successful in achieving low VFC [Valve Factor Close] & VFO [Valve Factor Open]. Consideration needs to be given to replacing the valve. AR# 193559 is tracking the resolution of this issue.” Instead of tracking the resolution of the issue, these valves were incorrectly classified as JOG Class A (based on these tests), not requiring further testing. This was contrary to the site MOV program given the identified degradation. The valves have not been retested under differential pressure since 2006. In this case, the licensee found MOVs that do not have a stable VF and are not consistent with the 95% approach used by the approved MOV program and Joint owners Group (JOG) data used for MOV program.

Corrective Actions: The licensee entered this into the CAP and is performing an extent of condition with other valves of the same type.

Corrective Action References: AR 2425557

Performance Assessment:

Performance Deficiency: The failure to correct nonconformance's with 10 CFR 50.55a(b)(3)(ii) was a performance deficiency.

Screening: The inspectors determined the performance deficiency was more than minor because if left uncorrected, it would have the potential to lead to a more significant safety concern. The identified degradation could lead to affect the effectiveness of the Safety Injection system to perform its safety functions as well as their CIV functions. These valves were identified to be used in approximately 39 procedures associated with the safe operation of the plant.

Significance: The inspectors assessed the significance of the finding using Appendix A, “The Significance Determination Process (SDP) for Findings At-Power.” Using Exhibit 2, “Mitigating Systems Screening Questions,” the finding was determined to be of very low safety significance GREEN because the finding is a deficiency affecting the design or qualification of a mitigating SSC, but the SSC maintains its operability or PRA functionality.

Cross-Cutting Aspect: Not Present Performance. No cross-cutting aspect was assigned to this finding because the inspectors determined the finding did not reflect present licensee performance.

Enforcement:

Violation: 10 CFR 50, Appendix B, Criterion XVI, Corrective Action, states, in part, that “Measures shall be established to assure that conditions adverse to quality, such as failures, malfunctions, deficiencies, deviations, defective material and equipment, and nonconformance's are promptly identified and corrected.”

Contrary to the above, since 5/3/2006, the site failed to correct valve factor degradation in Safety Injection Valves that prevented them from meeting 10 CFR 50.55a(b)(3)(ii).

Enforcement Action: This violation is being treated as a non-cited violation, consistent with Section 2.3.2 of the Enforcement Policy.

EXIT MEETINGS AND DEBRIEFS

The inspectors verified no proprietary information was retained or documented in this report.

- On April 29, 2022, the inspectors presented the design basis assurance inspection (programs) inspection results to Kim Maza and other members of the licensee staff.

DOCUMENTS REVIEWED

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
71111.21N.02	Calculations	14.SI-0017 DBR	Mechanical Analysis and Calculation for Gate Valve 1SI-4 Bit Outlet Isolation (CIV)	04/28/2021
		CC-0009	Mechanical Analysis and Calculation for Gate Valve 1CC-167 RHR Heat Exchanger B Isolation	12
		CC-0009	JOG MOV EVALUATION REPORT 1CC-167 (HNP-1)	12
		CT-0049	Mechanical Analysis and Calculation for Gate valve 1CT-50 Containment Spray Pump Discharge (CIV)	10
		DC-129	Weak Link and Seismic Analysis Report for Velan Valve 12 Inch Class 150 Carbon Steel Bolted Bonnet Motor Operated Gate Valve	2
		EQDP-0311	Main Steam PORV Operator	3
		HNP-15-0073	GL 89-10 MOVs 1CC-147 & 1CC-167 are Undersized	10/20/2015
		HNP-APPJ	Containment Leakage Rate Testing Program	0
		HNP-C-EQ-1196	Weak Link Analysis of Westinghouse Valves 1S1-3 and 1S1-4	12/14/2001
		HNP-C/EO-1203	Weak Link Analysis of Velan Valves 1CC-147 and 1CC-167	1
		HNP-IST-004	HNP IST Program Plan – 4th Interval	2
		HNP-M/MECH-1023	Determination of MOV Rate of Loading Factors	6
		HNP-M/MECH-1228	AOV System Level Calculations for Steam Generator Blowdown Valves (1BD-1, 1BD-11, 1BD-20,1BD-30, 1BD-39, 1BD-49)	0
		TMM-134	Analysis of Category 1(2) AOV Diagnostic Data, Sliding Stem Valve with Spring/Diaphragm Actuator Spring to Close Configuration, 1BD-30	05/03/2021
		Corrective Action Documents	AR 193559-05	1SI-2 and 1SI-4 Increase Valve Factor /Margin after Seat lap
	Drawings	1364-003059	12 IN CS 150 lb MO Gate Valve ASME CL 3 12-GM32SB	5
		1364-099223 SHT 1-2	PORV EHO Assembly Drawing	0
		1364-4383 SO1	Main Steam Power Operated Relief Valves Details	6
		1364-4384	Main Steam Power Operated Relief Valves Details	8

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
		5-S-0542	SIMPLIFIED FLOW DIAGRAM MAIN STEAM SYSTEM UNIT 1	27
		5-S-0550	SFD CONT SPRAY SYSTEM UNIT 1	18
		CAR 2166 B-401	Unit No.1 Control Wiring Diagram	7
		CAR 2166-B-060	Miscellaneous Electrical Details & Notes Sheet 42	4
		CAR-2165 G-0050	Flow Diagram Containment Spray System Unit 1	28
		CF1L-2165	Simplified Flow Diagram Component Cooling Water System, Sheet 2	7
		CPL-2165-S-1324	Simplified Flow Diagram RHR System Unit 1	12
	Engineering Changes	EC 0000298557	Wedge, Valve, Gate, 12 inch, Velan, MH/FS	0
		EC 295206	Obsolete MS PORV EHO Replacement	6
		EC 295206	Mod Test Plan, AD-EG-ALL-1155, Attachment 3	12
		ESR 99-00009	RF-09, MOV Modifications for HHSI, Cont. Spray and HHSI	12/02/1999
	Engineering Evaluations	1CS-11	AOV Setup Datasheet	02/15/2022
		1CS-11	Analysis of Category 2 & 3 AOV Diagnostic Data	04/19/2015
		1SI-4 DP Test 4-12-06	Rising Stem Dynamic Test Analysis	04/12/2006
		1SI-4 DP Test 5-4-06	Rising Stem Dynamic Test Analysis	05/04/2006
		1SI-4 PTE_2015_04_05	MOV POST-TEST DATA REVIEW WORKSHEET	04/05/2015
		1SI-4 PTE_2021_04_15	MOV POST-TEST DATA REVIEW WORKSHEET	04/25/2021
		9500335	Document Review of Pressure-Locking Scenario for Containment	04/04/1995
		9600054	Valve Press Lock/Thermal Bind Evaluations Req'd by 95-07	02/11/1996
		CT-0054	MECHANICAL ANALYSIS AND CALCULATION FOR GATE VALVE 1CT-102 CONTAINMENT SUMP TO CONTAINMENT SPRAY PUMP	12
		E5-0001	ANALYSIS OF MOTOR OUTPUT TORQUE FOR AC MOTOR OPERATED VALVES	22
		HNP-M-Mech-1021	DETERMINATION OF MOV VALVE FACTORS	R6

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
		HNP-M/MECH-1221	AOV COMPONENT LEVEL CALCULATION FOR MAIN STEAM ISOLATION VALVES (MSIVS)	1
		HNP-M/MECH-1250	DESIGN BASIS DIFFERENTIAL PRESSURE REPORT FOR MOV'S IN THE CONTAINMENT SPRAY SYSTEM	0
		HNP-M/MECH-1252	DESIGN BASIS DIFFERENTIAL PRESSURE REPORT FOR MOV'S IN THE LOW HEAD SAFETY INJECTION & RHR SYSTEM	0
		OST-1072	1CS-11 Last IST RPI	05/13/2021
		OST-1865	CVCS/SI System Operability Cold Shutdown/Refueling Interval Mode 4-5-6 Or Defueled	08/13/2021
		RH-0017	JOG MOV EVALUATION REPORT 1RH-063	7
	Miscellaneous	741918	50.59 Screening for EC 95206	0
		99-1264	50.59 Screening for ESR 99-00009	1
		AOQG OUT-TUR	Harris Nuclear Plant (HNP) Auxiliary Operator Outside and Turbine Building Qualification Guide	3
		CAR-SH-M-056	Main Steam Power Operated Relief Valve	8
		DBD-002	Piping Stress Analysis	3
		DBD-1000-V01	Harris Nuclear Plant Environmental Qualification Design Basis Document	4
		DBD-103	Chemical & Volume Control System Boron Thermal Regeneration System Boron Recycle System	25
		DBD-104	Safety Injection System	19
		DBD-106	Containment Spray System	18
		DBD-108	Containment Isolation System	5
		DBD-125	Steam Generator, Main Steam, Extraction Steam, Steam Dump and Auxiliary Steam System	14
		DBD-126	Steam Generator Blowdown System Steam Generator Blowdown System Steam Generator Chemical Addition System	10
		DBD-131	Component Cooling Water System	19
		EPRI TR-103237 – R1 – T1	EPRI MOV Performance Prediction Program	1
		MA26430	Detailed Complete Functional Acceptance Test Procedure, PORV Modulating Actuator MD26420, EC 95206	F

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
		VM-FBG	ACTUATORS, HYDRAMOTOR	30
	Procedures	AD-EG-ALL-1415	Motor Operated Valve Performance Prediction, Actuator Settings and Diagnostic Test Data	0
		AD-EG-ALL-1431	Operated Valve Scope and Characterization	2
		AD-EG-ALL-1432	Air Operated Valve Design Basis Review	1
		AD-EG-ALL-1433	Air Operated Valve Testing Requirements	2
		CM-M0186	Main Steam Power Operated Relief Valve (PORV) Operator Fill and Bleed	8
		EOP-ECA-0.0	LOSS OF ALL AC POWER	10
		ISI-801	Inservice Testing of Valves	77
		ISI-802	Inservice Testing of Pressure Relief Devices	28
		OP-126	Main Steam, Extraction Steam and Steam Dump Systems	42
		OP-137	AUXILIARY FEEDWATER SYSTEM	46
		OST-1046	Main Steam Isolation Valve with Remote Position Indication Operability Test Quarterly Interval Mode 3 to 5	20
		OST-1068	Containment Isolation Valve Remote Position Indication Test Two Year Interval Modes 5, 6	14
		OST-1077	Auxiliary Feedwater Valves Operability Test Quarterly Interval Mode 4-5-6	24
		OST-1087	MOTOR DRIVEN AUXILIARY FEEDWATER PUMPS FULL FLOW TEST QUARTERLY INTERVAL MODE 1	26
		OST-1104	Containment Isolation Inservice Inspection Valve Test Quarterly Interval Modes 1-6	57
		OST-1118	Containment Spray Operability Train A Quarterly Interval Modes 1-4	58
		OST-1129	CONTAINMENT SPRAY SYSTEM ISI VALVE TEST QUARTERLY INTERVAL MODES 5 AND 6	15
		OST-1191	Steam Generator PORV and Block Valve Operability Test Quarterly Interval Modes 1-4	32
		OST-1316	Component Cooling Water System Operability (Pump 1C-SAB In Service) Quarterly Interval Modes 1-4	37
		OST-1803	CONTAINMENT SUMP VISUAL INSPECTION 18 MONTH	17

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
			INTERVAL MODE 5	
		OST-1839	Component Cooling Water Valve Remote Position Indication Test Two Year Interval Modes 1-6	14
		PD-EG-ALL-1430	Air Operated Valve Program	2
		PLP-112	MOTOR OPERATED VALVE PROGRAM	19
		PLP-400	Post Maintenance Testing	64
		PM-I0054	Air Operated Valve Diagnostic Testing	20
		TE-EG-ALL-1413	MOV Design Database Control, Calculation and Diagnostic Test Instruction Development and Data Evaluation/Trending	1
	Work Orders	2038486-05	MOV 1CT-50 Post Test Data Review Worksheet	05/16/2012
		13321262-01	MOV 1CT-50 Post Test Data Review Worksheet	04/24/2015
		13321262-06	Perform MOV PVT and PM -M0014 for 1CT-50	04/10/2015
		13352259	M, 1AF-19:002, Hydromotor Actuator Long Term Reliability	04/03/2014
		13352259	I, PIC-I058, Replace Hydromotor Actuator 1AF-19	04/04/2014
		13366092-07	ICS-11, As Left Diagnostic Testing	04/23/2015
		13484301-03	DUKE Nuclear MOV Program MOV Post-Test Data Review Worksheet, 1CC-167	01/30/2017
		13484301-03	MNT-NGGC-00 10,1CC-167, As Left Diagnostic Test	01/30/2017
		20374172-01	1MS-62, Steam Leak Through Leakoff Line	12/31/2019
		20380548	I, FT, PM-I0054, 1BD-30:006, As-Left AOV Diagnostic Test	05/20/2021
		20394523-01	I, 1SI-4:002, MOV PVT AND PM-M0014	4/25/2021
		2197059-03	DUKE Nuclear MOV Program MOV Post-Test Data Review Worksheet, 1CC-167	06/17/2014