UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION III
2443 WARRENVILLE ROAD, SUITE 210
LISLE, ILLINOIS 60532-4352

November 9, 2020

Mr. Bryan C. Hanson
Senior VP, Exelon Generation Company, LLC
President and CNO, Exelon Nuclear
4300 Winfield Road
Warrenville, IL 60555

SUBJECT: QUAD CITIES NUCLEAR POWER STATION – DESIGN BASIS ASSURANCE INSPECTION (TEAMS) INSPECTION REPORT 05000254/2020011 AND 05000265/2020011

Dear Mr. Hanson:

On September 28, 2020, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at Quad Cities Nuclear Power Station and discussed the results of this inspection with Mr. K. Ohr, Site Vice President and other members of your staff. The results of this inspection are documented in the enclosed report.

One finding of very low safety significance (Green) is documented in this report. This finding involved a violation of NRC requirements. We are treating this violation as a non-cited violation (NCV) consistent with Section 2.3.2 of the Enforcement Policy.

If you contest the violation or the significance or severity of the violation 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 III; the Director, Office of Enforcement; and the NRC Resident Inspector at Quad Cities Nuclear Power Station.

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,

/RA/

Karla K. Stoedter, Chief
Engineering Branch 2
Division of Reactor Safety

Docket Nos. 05000254 and 05000265
License Nos. DPR-29 and DPR-30

Enclosure:
As stated

cc w/ encl: Distribution via LISTSERV®

Letter to Bryan C. Hanson from Karla K. Stoedter dated November 9, 2020.

SUBJECT: QUAD CITIES NUCLEAR POWER STATION – DESIGN BASIS ASSURANCE INSPECTION (TEAMS) INSPECTION REPORT 05000254/2020011 AND 05000265/2020011

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U.S. NUCLEAR REGULATORY COMMISSION
Inspection Report

Docket Numbers:	05000254 and 05000265
License Numbers:	DPR-29 and DPR-30
Report Numbers:	05000254/2020011 and 05000265/2020011
Enterprise Identifier:	I-2020-011-0028
Licensee:	Exelon Generation Company, LLC
Facility:	Quad Cities Nuclear Power Station
Location:	Cordova, IL
Inspection Dates:	August 31, 2020 to September 28, 2020
Inspectors:	J. Benjamin, Senior Reactor Inspector M. Domke, Reactor Inspector W. Hopf, Contractor B. Jose, Senior Reactor Inspector J. Neurauter, Senior Reactor Inspector V. Petrella, Reactor Inspector
Approved By:	Karla K. Stoedter, Chief Engineering Branch 2 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 (teams) inspection at Quad Cities Nuclear Power Station, 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

Calculation of Surveillance Test Acceptance Criteria Non-conservative			
Cornerstone	Significance	Cross-Cutting Aspect	Report Section
Mitigating Systems	Green NCV 05000265,05000254/2020011-01 Open/Closed	None (NPP)	71111.21M
The inspectors identified a Green finding and associated Non-cited Violation (NCV) of 10 CFR Part 50, Appendix B, Criterion III when the licensee failed to correctly translate the applicable regulatory requirements and design basis into procedures or instructions. Specifically, the licensee failed to consider the effects of bounding differential pressure test conditions and torque wrench instrument uncertainty in engineering evaluation EC 361212, "Document the Conclusions of Letters RJW-91-24 and RJW-92-014 - Torque Testing Requirements for Reactor Building to Torus, and Torus to Drywell Vacuum Breakers," Revision 0, which calculated the acceptance criteria for Procedure QCOS 1600-10, "Torus Vacuum Breaker Manual Operability Test." As a result, the acceptance criteria were not appropriate to demonstrate vacuum breaker valves 1(2)-1601-31A/B would perform their safety function.			

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.

Starting on March 20, 2020, in response to the National Emergency declared by the President of the United States on the public health risks of the coronavirus (COVID-19), regional inspectors were directed to begin telework. Regional based inspections were evaluated to determine if all or a portion of the objectives and requirements stated in the IP could be performed remotely. For the inspection documented below portions of the IP were completed remotely and all the objectives and requirements for completion of the IP were met.

REACTOR SAFETY

71111.21M - Design Bases Assurance Inspection (Teams)

The inspectors evaluated the following components and listed applicable attributes, permanent modifications, and operating experience:

Design Review - Risk-Significant/Low Design Margin Components (IP Section 02.02) (4 Samples)

(1) Residual Heat Removal Heat Exchanger 1B, Residual Heat Removal Service Water Outlet Flow Control Motor Operated Valve 1-1001-5B

- Normal, Abnormal, and Emergency Operating Procedures
- Minimum Voltage Available at the Motor Operated Valve Terminals Corresponding to the Degraded Voltage Setpoint and Available Torque/Thrust Margin
- Vendor Manual
- Maximum Short Circuit Current at the Load Side of the Supply Breaker and Its Interrupting Rating
- Breaker Coordination and Thermal Overload Setpoints
- Seismic Qualification
- Maintenance Procedures
- Preventative Maintenance
- Weak Link Analysis Calculation
- Required Thrust Calculation
- Maximum Differential Pressure Calculation
- Inservice Testing Surveillance
- Test Procedure Review
- Inservice Testing Results

(2) Motor Control Center 19-1
- Electrical Ratings and Testing Procedures
- Configuration Control
- Surveillance and Testing Procedures
- Maintenance History and Effectiveness
- Short Circuit Calculation
- Voltage Drop Calculation
- Cable Protection Calculations
- Protective Devices Coordination

(3) Service Water Pump, 1-3901-B
- Service Water Design Basis Flow Rate Calculation
- Aging Management Commitments
- Corrective Action History
- Permanent Modifications
- Predictive Maintenance Trending for Pump Vibrations & Oil Analyses
- Vendor Manual
- Electrical Supply and Protection

(4) Service Water Pump 1A Discharge Check Valve, 3999-4
- Maintenance History and Effectiveness
- Aging Management Commitments

Design Review - Large Early Release Frequency (LERFs) (IP Section 02.02) (2 Samples)

(1) 1-6706-14-1; 4kV Essential Bus 14-1
- Normal, Abnormal, and Emergency Operating Procedures
- Load Flow, Short Circuit and Voltage Drop Calculations
- Breaker Coordination
- Maximum Fault Current and Breaker Interrupting Ratings
- Protective Relay Settings
- 125 Vdc Breaker Control Scheme and Available 125 Vdc Capacity Margin

(2) 1-1601-31A; Torus/Reactor Building Outboard Vacuum Breaker Check Valve
- Licensing Basis Requirements
- Maintenance Procedures
- Preventative Maintenance
- Appendix J Tests
- Test Procedure Review
- Inservice Testing Results
- Technical Specification Surveillance Requirements

Modification Review - Permanent Mods (IP Section 02.03) (6 Samples)

(1) EC 404539; Unit 1 Replacement of Merlin Gerin Breakers in Bus 14
(2) EC 399289; Install Different Motor Contactor in Different Motor Control Center (MCC) Cubicle for Isolated Phase Bus Duct Blower 1A
(3) EC 624474; Automate the Flow of Service Water to the 0-5792-A and 0-5792-B Chillers for A Train Control Room Heating, Ventilation, and Air Conditioning

(4) EC 402298; Unit 1 Core Spray Pipe Repairs In-Vessel
(5) EC 381968; Replacement of Reach Rod with Single Cable Drive Design for Remote Operation of Valve 1-1279-22B and 2-1279-17B
(6) EC 397007; Modify Support M-994D-22 to Increase Clearance Between Snubbers and Line 1-1025-20

Review of Operating Experience Issues (IP Section 02.06) (1 Sample)

(1) IN 2019-02; Emergency Diesel Generator Excitation System Diode Failures

INSPECTION RESULTS

Calculation of Surveillance Test Acceptance Criteria Non-conservative			
Cornerstone	Significance	Cross-Cutting Aspect	Report Section
Mitigating Systems	Green NCV 05000265,05000254/2020011-01 Open/Closed	None (NPP)	71111.21M

The inspectors identified a Green finding and associated Non-cited Violation (NCV) of 10 CFR Part 50, Appendix B, Criterion III when the licensee failed to correctly translate the applicable regulatory requirements and design basis into procedures or instructions. Specifically, the licensee failed to consider the effects of bounding differential pressure test conditions and torque wrench instrument uncertainty in engineering evaluation EC 361212, "Document the Conclusions of Letters RJW-91-24 and RJW-92-014 - Torque Testing Requirements for Reactor Building to Torus, and Torus to Drywell Vacuum Breakers," Revision 0, which calculated the acceptance criteria for Procedure QCOS 1600-10, "Torus Vacuum Breaker Manual Operability Test." As a result, the acceptance criteria were not appropriate to demonstrate vacuum breaker valves 1(2)-1601-31A/B would perform their safety function.

Description:

The design function of the reactor building to suppression chamber vacuum breaker system is to limit the suppression chamber, also known as the torus, vacuum pressure relative to the reactor building pressure. When the torus pressure is below reactor building pressure, the negative differential pressure is limited by air flow through the reactor building to torus vacuum breaker system. The vacuum breaker system design includes two trains with two valves in series, a mechanical vacuum breaker, similar to a check valve, and an air operated valve (AOV).

The mechanical vacuum breaker is self-actuating and counter-balanced and designed to open at a pressure difference no greater than 0.5 psid. In addition, the mechanical vacuum breaker valve has a design feature that allows the valve to be locally opened manually during the performance of surveillance testing. The licensee performs Procedure QCOS 1600-10, "Torus Vacuum Breaker Manual Operability Test," to verify the ability to locally open the valve manually, verify the mechanical vacuum breakers will open at a pressure difference no greater than 0.5 psid and to demonstrate compliance with Technical Specification Surveillance Requirements 3.6.1.7.2 and 3.6.1.7.3.

To demonstrate that the mechanical vacuum breaker will open at a pressure difference no greater than 0.5 psid, the licensee performed an engineering evaluation, Engineering Change

(EC) 361212. The EC calculated the required locally applied torque to fully open the valve that equated to a pressure difference of 0.5 psid across the valve. To demonstrate Surveillance Requirement 3.6.1.7.3, the licensee specified the locally applied torque calculated in EC 361212 as the acceptance limit in Procedure QCOS 1600-10. Using a calibrated torque wrench, the licensee measured the locally applied torque required to fully open the valve and compared the applied torque to the acceptance limit, i.e., a measured applied torque no greater than the acceptance limit would demonstrate the mechanical vacuum breaker will open at a pressure difference no greater than 0.5 psid.

During the review of EC 361212, the inspectors found the licensee had not considered the potential for an existing differential pressure to be present across the mechanical vacuum breaker valve prior to performing the test. Specifically, the inspectors identified that if QCOS 1600-10 was performed at a time when the reactor building was at a higher pressure than the torus, the existing differential pressure could assist in opening the corresponding mechanical vacuum breaker. The inspectors also identified that the acceptance criteria calculated in EC 361212 failed to consider torque wrench instrument uncertainty. As a result, the measured torque needed to open the valve may be less than the actual torque required and could cause the licensee to incorrectly conclude the mechanical vacuum breaker remained operable and functional.

Corrective Actions: The licensee recommended that Procedure QCOS 1600-10 be revised to open the corresponding pressure tap between the 1601-31A/B check valve and 1601-20A/B AOV prior to performing the valve opening torque check.

In addition, the licensee will revise EC 361212 and Procedure QCOS 1600-10 to address torque wrench instrument uncertainty.

Corrective Action References:

AR 04369739, “NRC DBAI: Possible Non-Conservatism in QCOS 1600-10,” dated September 16, 2020

AR 04370343, “DBAI 2020 Instrument Uncertainties for EC 361212,” dated September 18, 2020

Performance Assessment:

Performance Deficiency: The inspectors determined that the failure to correctly translate the applicable regulatory requirements and design basis into procedures or instructions was a violation of 10 CFR Part 50, Appendix B, Criterion III and was a performance deficiency. Specifically, when calculating test acceptance criteria for Procedure QCOS 1600-10, the licensee failed to consider the potential for an existing differential pressure across the mechanical vacuum breaker valve to be present and also failed to consider the effect of torque wrench instrument uncertainty in EC 361212. As a result, the design requirement for the opening setpoint of valves 1(2)-1601-31A/B to not exceed 0.5 psid, as required by Technical Specification Surveillance Requirement 3.6.1.7.3 was not assured.

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, if left uncorrected, the failure to consider the effect of surveillance test initial differential pressure conditions and torque wrench instrument uncertainty could allow

the opening setpoint of the reactor building-to-suppression chamber mechanical vacuum breaker valve 1(2)-1601-31A/B to exceed 0.5 psid.

Significance: The inspectors assessed the significance of the finding using Appendix A, "The Significance Determination Process (SDP) for Findings At-Power." Specifically, the inspectors determined the finding was of very low safety significance (Green) because the inspectors answered "YES" to question A.1 in Exhibit 2.

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: Title 10 CFR Part 50, Appendix B, Criterion III, "Design Control", requires in part, 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 are correctly translated into procedures and instructions.

Contrary to the above, on June 5, 2006, the licensee failed to correctly translate the applicable regulatory requirements and design basis into procedures or instructions. Specifically, in EC 361212, Revision 0, the licensee failed to consider the effects of the surveillance test initial differential pressure conditions and torque wrench instrument uncertainty into the calculated test acceptance criteria for Procedure QCOS 1600-10. As a result, the design requirement for the opening setpoint of valves 1(2)-1601-31A/B to not exceed 0.5 psid, as specified by Technical Specification Surveillance Requirement 3.6.1.7.3 and verified by Procedure 1600-10 was not assured.

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 September 28, 2020, the inspectors presented the design basis assurance inspection (teams) inspection results to Mr. K. Ohr, Site Vice President and other members of the licensee staff.

DOCUMENTS REVIEWED

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
71111.21M	Calculations	QDC-4100-M-0691	Combustible Loading Calculation for the Power Block, Station Blackout Building and Crib House	08
		004-E-003-1402	Motor Operated Valve Terminal Voltage Calculation	5
		004-E-003-2399	Motor Operated Valve Terminal Voltage Calculation	2
		7923-60-19-1	Sizing and Setting of General Electric Type TEC Breaker	0
		8913-69-19-1	Quad Cities I/II Safety Related Continuous Running/Starting Voltages	2
		NED-E-EIC-0055	Thermal Overload Heater Sizing for MOVs 1(2)-1001-5A/5B at Quad Cities	0
		QDC-0000-E-0206	MOV Terminal Voltage Calculation	5
		QDC-0000-E-206	Motor Operated Valve Terminal Voltage Calculation	05
		QDC-1000-M-1318	Residual Heat Removal System Combined DBD and DP Calculation	0E
		QDC-1000-S-1827	Review of Flowserve Seismic and Maximum Thrust Analysis Report RAL-20588 for Flowserve 12" Class 300 Carbon Steel Globe Valve with SMB-0-25	0
		QDC-3900-M-0891	Service Water Design Basis Flow Rate Requirements	1
		QDC-6700-E-1503	Analysis of Load Flow, Short Circuit and Motor Starting Using ETAP Power Station Part 8 of 8	12
		QDC-6700-E-1503	Analysis of Load Flow, Short Circuit and Motor Starting Using ETAP	12
		QDC-6700-E-2116	Protective Relay Setting Calculation for 4kV Switchgear 13, 14, 13-1 and 14-1	3
		QDC-6700-E-2116	Protective Relay Setting Calculation	0
		QUA-1-1402-25B	Alternating Current Motor Operated GL96-05 Gate Valve	7
		QUA-1-1402-3B	Alternating Current Motor Operated GL96-05 Gate Valve	9
		QUA-1-1402-4B	Alternating Current Motor Operated GL96-05 Globe Valve	5
		QUA-1-2301-4	Alternating Current Motor Operated GL96-05 Gate Valve	12
		QUA-1-2399-40	Alternating Current Motor Operated GL96-05 Gate Valve	5

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
	Corrective Action Documents	1334048	Results of Q1R21 Snubber Failure Analysis	02/29/2012
		1607447	FUK: Seismic, Bolt Loose in Back of MCC 19-1 Cub. G	02/12/2014
		2423377	Replace CR120A Control Relay with GE CR 2810A	12/10/2014
		2466706	New Molded Case Circuit Breaker from Stores Failed Bench Test	04/10/2015
		2640839	MCC 19-1 D1 Door Mounted Overload Relay Reset Arm Too Short	02/17/2017
		2716107	Need Summer Contingency Work Order to Adjust/Replace Service Water Pump Packing	09/15/2016
		4233539	Two MCC Thermal Overload Relays Did Not Meet Test Criteria	04/26/2019
		4256117	TOLR Failed During Bucket Inspection	07/11/2019
		4323263	Need FIN Work Order to Replace 1B Service Water Pump Guard	03/03/2020
	Corrective Action Documents Resulting from Inspection	4366474	NRC DBAI: ESS UPS Panel 901(2)-63 Documentation Discrepancies	08/31/2020
		4367494	NRC DBAI: EQ-24D/Q Administrative Typos	09/04/2020
		4368108	NRC DBAI Inspection: SLICE Database Cable Inconsistencies	09/09/2020
		4368256	NRC DBAI: 2 Typographical Errors Identified in OP-QC-102-106	09/09/2020
		4368796	NRC DBAI: MIDA Calculation Voltage for MOV 1-2399-40	09/11/2020
		4369739	NRC DBAI: Possible Non-Conservatism in QCOS 1600-10	09/16/2020
		4369740	NRC DBAI: Possible Non-Conservatism in QCOS 1600-10	09/16/2020
		4369831	NRC DBAI: QDC-4100-M-0691 Rev. 8 EDMS Record Missing	09/16/2020
		4370343	DBAI 2020: Instrument Uncertainties for EC 361212	09/18/2020
		4371507	NRC DBAI: Torus to Reactor Building Vacuum Breaker Design Bases	09/23/2020
	Drawings	20741-H	20 IN. 50# Vacuum Breaker Valve W/Outside Lever & Weights	A
		4E-1311	Key Diagram Reactor Building 480V Motor Control Centers 18-1A, 18-3 and 19-1	CN
		4E-1438L	Schematic Diagram RHR System MOVs, Division II	AE

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
		M-34	Diagram of Pressure Suppression Pipping	BI
	Engineering Changes	18515	Reactor Building to Torus Vacuum Breaker Counter Weight Arm	
		18600	Reactor Building to Torus Vacuum Breaker Counter Weight Arm	
		361212	Document the Conclusions of Letters RJW-91-24 and RJW-92-014 - Torque Testing Requirements for Reactor Building to Torus, and Torus to Drywell Vacuum Breakers	000
		381968	Replacement of Reach Rod with Single Cable Drive Design for Remote Operation of Valve 1-1279-22B and 2-1279-17B	002
		381968	Replacement of Reach Rod with Single Cable Drive Design for Remote Operation of Valve 1-1279-22B and 2-1279-17B	001
		381968	Replacement of Reach Rod with Single Cable Drive Design for Remote Operation of Valve 1-1279-22B & 2-1279-17B	000
		397007	Modify Support M-994D-22 to Increase Clearance Between Snubbers and Line 1-1025-20	001
		397007	Modify Support M-994D-22 to Increase Clearance Between Snubbers and Line 1-1025-20	000
		402298	U1 Core Spray Pipe Repairs In-Vessel	2
		404539	Unit 1 Replacement of Merlin Gerin Breakers in Bus 14	0
		624474	Automate the Flow of Service Water to the 0-5792-A and 0-5792-B Chillers for A Train of Control Room HVAC	2
		632577	Operability Evaluation, Components 1(2)-1501-31A/B, Torus Vacuum Breaker Check Valve	000
	Miscellaneous		MOV PVT Interval Performance Review Data Collection and MOV-Post-Test Engineering Review Trend Evaluation Summary Report	07/19/2011
			MOV PVT Interval Performance Review Data Collection and MOV-Post-Test Engineering Review Trend Evaluation Summary Report	06/04/2018
			MOV PVT Interval Performance Review Data Collection and MOV-Post-Test Engineering Review Trend Evaluation Summary Report	06/05/2017
		AQR-67368	ASCO Solenoid Qualification Test Report	2

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
	Procedures	ER-AA-330-011	Snubber Service Life Monitoring	9
		OP-QC-102-106	Operator Response Time Program at Quad Cities	9
		QCEMS 0250-11	480/208 VAC Motor Control Center Cubicle Maintenance and Surveillance	73
		QCOA 3900-01	Service Water System Failure	17
		QCOA 4700-06	Loss of Instrument Air	29
		QCOA 6100-03	Loss of Offsite Power	42
		QCOA 6100-04	Station Blackout	25
		QCOA 6500-03	4kV Bus 12(23) Failure	0
		QCOP 3900-01	Service Water System Operation	17
		QCOP 6620-13	Energizing Bus 13-1 from SBO DG 1	22
		QCOP 6700-09	De-Energizing MCC 19-1 For Maintenance	24
		QCOS 1600-10	Torus Vacuum Breaker Manual Operability Test	16
		QCOS 6600-37	Unit One Emergency Diesel Generator Largest Load Reject Test	39
		QEMS-250-20	480/208 VAC Motor Control Maintenance and Surveillance	7
		WC-QC-8003-1008	Quad Cities Station Units 1 and 2 Nuclear Plant Interface Requirements (NPIRs) Interface Procedure	6
	Work Orders	00836395	Disassemble, Inspect & Refurbish as Needed (CVP)	05/16/2007
		008856568	00022053-01, PMSR, Replace Check Valve, E: 1-3999-4, CHVA, V25	10/19/2009
		01255761	MO 1-1001-5B Replace Valve	05/22/2011
		01625116	Q1R22 PSU - A01-1601-31A LLRT Exceeded Admin Alert Limit	03/24/2013
		01635231	DW Purge Supply (LLRT) (IST)	03/12/2015
		01671279	00036279-01, PMSR, GE Model L7700 MCC Insp, E: 1-7800-19-1, MCCA	04/29/2019
		01671279-01	EM MCC 19-1 Inspection	03/15/2019
		01781674	Contingency For 1-1601-31A as a Potential LLRT Failure	03/18/2019
		017935518	Unwire CR120A Relay with CR2810A	11/18/2015
		01819428	DW Purge Supply (LLRT) (IST)	04/02/2017
		01882145-01	MOV Post-Test Data Review Worksheet	05/17/2017
		01918315-01	00022053-01, PMNS, Replace Check Valve,	03/08/2018

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
			E: 1-3999-4, CHVA, V25	
		04601577	RHR System Valve Timing Test (IST)	05/17/2017
		04626312-01	Install 1A IPBD Motor Contactor in Diff MCC Per EC 399289	04/24/2019
		04626312-05	EM PRE Outage Bench Test New MCC 19-1 Cub E5 EC 399289	02/18/2019
		04631705	DW Purge Supply (LLRT) (IST)	03/29/2019
		04641068	Pressure Suppression Vacuum BKR Operability (IST)	08/16/2017
		04649380	MM Perform Stem Nut Inspection on MOV 1-1001-5B	05/16/2018
		04649380-01	MM Perform Stem Nut Inspection on MOV 1-1001-5B	05/18/2018
		04649380-04	MOV Post-Test Data Review Worksheet	05/16/2018
		04675828	Pressure Suppression Vacuum BKR Operability (IST)	11/15/2017
		04678194	C RHR Service Water Pump Comprehensive Test (IST)	02/13/2019
		04713474	Pressure Suppression Vacuum BKR Operability (IST)	02/14/2018
		04747183	Pressure Suppression Vacuum BKR Operability (IST)	05/16/2018
		04786189	Pressure Suppression Vacuum BKR Operability (IST)	08/15/2018
		04819488	Pressure Suppression Vacuum BKR Operability (IST)	11/14/2018
		04854622	Pressure Suppression Vacuum BKR Operability (IST)	02/13/2019
		04887981-01	MM Automate the Flow of SW to the 0-5792-B EC 624474	11/08/2019
		04889599	Pressure Suppression Vacuum BKR Operability (IST)	03/29/2019
		04904880	Pressure Suppression Vacuum BKR Operability (IST)	06/26/2019
		04913065	C RHR Service Water Pump Comprehensive Test (IST)	04/15/2019
		04935780	Pressure Suppression Vacuum BKR Operability (IST)	09/25/2019
		04964084	Pressure Suppression Vacuum BKR Operability (IST)	12/26/2019
		04993678	Pressure Suppression Vacuum BKR Operability (IST)	03/23/2020
		04996109-01	ES Unit 1/2 Service Water System Walkdown by System Engineer	04/29/2020
		05023450	Pressure Suppression Vacuum BKR Operability (IST)	06/24/2020
		1210394-01	MOV Post-Test Data Review Worksheet	05/26/2011