



**UNITED STATES
NUCLEAR REGULATORY COMMISSION**

REGION III
2443 WARRENVILLE ROAD, SUITE 210
LISLE, ILLINOIS 60532-4352

August 23, 2021

Mr. David Rhoades
Senior VP, Exelon Generation Company, LLC
President and CNO, Exelon Nuclear
4300 Winfield Road
Warrenville, IL 60555

SUBJECT: LASALLE COUNTY STATION – DESIGN BASIS ASSURANCE INSPECTION
(PROGRAMS) INSPECTION REPORT 05000373/2021011 AND
05000374/2021011

Dear Mr. Rhoades:

On July 15, 2021, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at LaSalle County Station and discussed the results of this inspection with Mr. J. Washko, Site Vice President, and other members of your staff. The results of this inspection are documented in the enclosed report.

No findings or violations of more than minor significance were identified during this inspection.

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,

A handwritten signature in cursive script that reads "Karla K. Stoedter".

Signed by Stoedter, Karla
on 08/23/21

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

Docket Nos. 05000373 and 05000374
License Nos. NPF-11 and NPF-18

Enclosure:
As stated

cc w/ encl: Distribution via LISTSERV®

Letter to David Rhoades from Karla K. Stoedter dated August 23, 2021.

SUBJECT: LASALLE COUNTY STATION – DESIGN BASIS ASSURANCE INSPECTION
(PROGRAMS) INSPECTION REPORT 05000373/2021011 AND
05000374/2021011

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

Docket Numbers: 05000373 and 05000374

License Numbers: NPF-11 and NPF-18

Report Numbers: 05000373/2021011 and 05000374/2021011

Enterprise Identifier: I-2021-011-0035

Licensee: Exelon Generation Company, LLC

Facility: LaSalle County Station

Location: Marseilles, IL

Inspection Dates: June 14, 2021 to July 16, 2021

Inspectors: J. Corujo-Sandin, Senior Reactor Inspector
M. Farnan, Mechanical Engineer
J. Park, Reactor Inspector

Approved By: Karla K. Stodter, 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 (programs) inspection at LaSalle County 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

No findings or violations of more than minor significance were identified.

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), inspectors were directed to begin telework. In addition, regional baseline inspections were evaluated to determine if all or a portion of the objectives and requirements stated in the IP could be performed remotely. If the inspections could be performed remotely, they were conducted per the applicable IP. In some cases, portions of an IP were completed remotely and on site. The inspections documented below met the objectives and requirements for completion of the IP.

REACTOR SAFETY

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

POV Review (IP Section 03) (10 Samples)

The inspectors:

- a. Determined whether the sampled power operated valves (POVs) are being tested and maintained in accordance with NRC regulations along with the licensee's commitments and/or licensing bases.
- 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) 1B21-F013S; 'B' Main Steam Line Safety Relief Valve with Automatic Depressurization System
- (2) 1E12-F042B; 'B' Residual Heat Removal Low Pressure Coolant Injection (LPCI) Injection Line Isolation Valve
- (3) 1E12-F068B; 'B' Residual Heat Removal Heat Exchanger Service Water Outlet Valve
- (4) 1E22-F004; High Pressure Core Spray Injection Isolation Valve
- (5) 1E51-F008; Reactor Core Isolation Cooling Steam Supply Outboard Isolation Valve
- (6) 2E12-F004B; 'B' Residual Heat Removal Pump Suppression Pool Suction Isolation Valve
- (7) 2E12-F016B; 'B' Residual Heat Removal Containment Spray Upstream Isolation Valve
- (8) 2E51-F063; Reactor Core Isolation Cooling Steam Supply Inboard Isolation Valve
- (9) 2G33-F040; Reactor Water Cleanup Return to Feedwater Stop Valve

(10) 2VQ026; Suppression Chamber Vent/Purge Inlet Upstream Isolation Valve

INSPECTION RESULTS

No findings were identified.

EXIT MEETINGS AND DEBRIEFS

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

- On July 15, 2021, the inspectors presented the design basis assurance inspection (programs) inspection results to Mr. J. Washko, Site Vice President, and other members of the licensee staff.

DOCUMENTS REVIEWED

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
71111.21N.02	Calculations	CE-LS-003	Calculation for Stem Allowable Load Limits for Motor Operated Valves	9
		L-000175	LaSalle Stations Unit 1 & 2 RCIC MOV Differential Pressure Calculations	0 and 01A
		L-002678	Design Calculations for MS Safety Relief Valves (ASME Stress Report), Crosby Report No. 3012	0
		L-002763	SRV Flexi-Disk Qualification (Anderson, Greenwood, Crosby Engineering Calculation EC-2014)	0
		L-002850	High Pressure Core Spray System Motor Operated Valve Differential Pressure Calculation	1
		L-003263	Volume Requirements for ADS Back-Up Compressed Gas System (Bottle Banks)	3, 3A, and 3B
		L-004226	Weak Link Analyses for Anchor Darling Double Disc Gate Valves	0
		LADP 002-M-046	RHR System MOV DP Calculation	03/11/1994
		LAS-1E12-F042B MIDACALC R9	Minimum Required Thrust/Torque for 1E12-F042B	9
		LAS-1E12-F068B MIDACALC R9	Minimum Required Thrust/Torque for 1E12-F068B	9
		LAS-1E22-F004	MIDACALC Results LAS-1E22-F004 (LAS-1)	9
		LAS-2E12-F004B MIDACALC	Minimum Required Thrust/Torque for 2E12-F004B	8
		LAS-2E12-F016B MIDACALC	Minimum Required Thrust/Torque for 2E12-F016B	8
		LAS-2G33-F040	MIDACALC Results LAS-2G33-F040	9
		MIDACALC LAS-1E51-F008	AC Motor Operated GL96-05 Gate Valve Calculation Results	10
		MIDACALC LAS-2E51-F063	AC Motor Operated GL96-05 Gate Valve Calculation Results	10
		Corrective Action Documents	04339836	NEB-20-05: Evaluate Risk of Wedge Spring Failures in ADDDGVs
Corrective Action	04429540	Issue with Legacy paperwork for 1E12-F042B	06/15/2021	

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
	Documents Resulting from Inspection	04432739	NRC POV DBAI ID'd Incorrect Midacalc Input for 1E22-F004	07/01/2021
		04432800	Motor Nameplate Discrepancy in MIDAS for 2E12-F004B	07/01/2021
		04432837	Valve 1E12-F068B Previously Exhibited Hammering When Closing	07/01/2021
		04432908	NRC ID - Enhancements Needed to MA-AA-723-301	07/01/2021
		04432910	NRC ID - 1E12-F042B EQ Soft Clutch Question	07/01/2021
		04433090	NRC ID - Analysis Detailing SRV Disc Impact Eval Not Found	07/02/2021
		04433141	NRC Borescope Observations (1E22-F004)	07/02/2021
	04433178	NRC ID - Stroke Time Not Documented in WO# 01814381-01	07/02/2021	
	Drawings	93-14454	Anchor Darling 20" Gate Valve with SMB-0 Actuator	G
		94-13757	Anchor Darling 12" Gate Valve with SMB-1-40 Actuator	F
		94-13775	Anchor Darling 16" Gate Valve with SMB-1 Actuator	G
		94-13780	Anchor Darling 24" Gate Valve with SMB-00 Actuator	F
		D-0805	Clow 26" Wafer Stop Valve Assembly (Butterfly Valve)	H
		M-101	P&ID Reactor Core Isolation Coolant (R.C.I.C)	BH
		M-147	P&ID Reactor Core Isolation Coolant System (R.C.I.C)	BL
		M-95	P&ID High Pressure Core Spray	AQ
		P&ID M-138 Sh 1	Primary Containment Vent and Purge System	AL
		P&ID M-142 Sh 2	Residual Heat Removal	AZ
		P&ID M-87 Sh 1	Core Standby Cooling System Equipment Cooling Water System	BS
		P&ID M-96 Sh 2	Residual Heat Removal	BB
		RI01-1401G, Sheet 1	Component Support Assembly	D
		RI01-1401G, Sheet 2	Component Support Assembly	D
		RI01-1401G, Sheet 3	Component Support Assembly	D
VPF 3173-009		12" - 900# Motor Control Valve Outline	8	
VPF-6115-001(1)	Safety Relief Valve Main Steam	8		

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
		VPF-6115-001(2)	Safety Relief Valve Main Steam	7
		VPF-6115-001(3)	Safety Relief Valve Main Steam	C
		W9223688	4"-900 Weld Ends Carbon Steel Double Disc Gate Valve for Limatorque SMB-00-25 Actuator	E
		W9223690	10"-900 Weld Ends Carbon Steel Double Disc Gate Valve for Limatorque SB-2-80 Actuator	I
	Engineering Changes	620382	Replacement Parts for Anchor Darling Double Disc Gate Valves (ADDDGVS)	1
	Engineering Evaluations	EQ-LS042	Limatorque Valve Actuators, Model SMB/SB (Inside Containment)	14A
		EQ-LS079	Exelon Nuclear LaSalle County Nuclear Station, Units 1 and 2, Environmental Qualification of Limatorque Actuators Model SMB/SB	21
		LaSalle's Review of Information Notice (IN) 92-59	Horizontally Installed Motor Operated Gate Valves	1
		LAVD Anchor Darling Valve Report	Anchor Darling (Flowserve) Seismic and Weak Link Analysis	A
	Miscellaneous	DC-SE-02-LS	Seismic Response Spectra Design Criteria for LaSalle County Station, Units 1 and 2	3
		EQ-LS079	EQ Binder Limatorque Valve Actuator Model SMB/SB	22
		Inservice Test Program	LaSalle 4th Interval IST Program Plan	07/18/2018
		IST-LAS-PLAN	LaSalle Inservice Testing Program Plan Fourth Ten-Year Interval	02/23/2020
		J-0184	Instruction Manual for Crosby Style 6xRx10 HB-65-BP Safety Relief Valve for Main Steam Service	1
		J-0687	Limatorque Vendor Manual	10
		J-2500	General Requirements for Motor Operated Valve Actuators	0
		LAS-1E22-F004_JOG	Jog Evaluation Report LAS-1E22-F004	8
		Spec J-2938-01	Gate, Globe, and Check Valves (Section III) LaSalle	07/25/1980

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
			County Station – Units 1 and 2 Commonwealth Edison Company	
		Spec T-3750	Replacement High Performance Butterfly Valves (Section III) LaSalle County Station – Units 1 and 2 Commonwealth Edison Company Project No. 6854-30	08/23/1985
		Specification 22A6441	Safety Relief Valves, Direct Acting, Spring Loaded, Dual Function (Modification of Crosby-Designed)	3
		Specification T-3794	Replacement of Motor-Operated Valves	04/15/1991
		Tech Specs and Bases	LaSalle Technical Specifications and Bases	05/27/2021
	Procedures	CC-AA-309-1011	General Station Piping Analysis	8
		ER-AA-300	Motor-Operated Valve Program Administrative Procedure	12
		ER-AA-300-1001	MOV Program Performance Indicators	14
		ER-AA-302	Motor-Operated Valve Program Engineering Procedure	7
		ER-AA-302-1001	MOV Rising Stem Motor Operated Valve Thrust and Torque Sizing and Set-Up Window Determination Methodology	11
		ER-AA-302-1003	MOV Margin Analysis and Periodic Verification Test Intervals	10
		ER-AA-302-1006	Motor-Operated Valve Maintenance and Testing Guidelines	19
		ER-AA-302-1007	MOV Limitorque Actuator Capability Determination Methodology	11
		ER-AA-302-1009	Final Jog MOV Periodic Verification Program Implementation	3
		ER-AA-321	Administrative Requirements for Inservice Testing	13
		ER-AA-321-1006	Inservice Testing of Motor Operated Valves	4
		ER-AA-410	Air Operated Valve Program Implementing Procedure	6
		ER-AA-410-1000	Air Operated Valve Categorization	4
		ER-AA-410-1001	Air Operated Valve Design Basis Review and Setpoint Control	3
	ER-AA-410-1002	Air Operated Valve Testing Requirements	3	
Work Orders	00405666-01	Perform EQ Inspection and Votes Test	02/17/2015	

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
		01235433-01	Perform EQ Inspection and Votes Test	02/28/2011
		01814283-01	Perform EQ Inspect & Diagnostic Test 2G33-F040	02/24/2017
		WO 1234233-01	MM Perform Grease Sample on Valve Actuator	08/09/2010
		WO 1235218	2E12-F004B Diagnostic Test	02/23/2011
		WO 1318009-01	EQ Inspect, Boroscope & QSS 1E22-F004	02/16/2012
		WO 1318040	1E12-F042B Diagnostic Test	02/28/2012
		WO 1427062	2E12-F016B Diagnostic Test	02/20/2013
		WO 1443897	1E12-F068B Diagnostic Test	04/07/2014
		WO 1637912-01	Check Grease in Valve Operator Gearbox	11/14/2015
		WO 1712040-01	EQ Inspect, Boroscope, Diagnostic 1E22-F004 in L1R16	02/29/2016
		WO 1712732	1E12-F042B Position Indication Verification Test	02/19/2016
		WO 1716165-01	EM EQ Inspect, Votes and Borescope 2E51-F063	02/09/2015
		WO 1716770	1E12-F042B Water Leak Test	02/25/2016
		WO 1727017	1E12-F042B Valve Inservice Exercise Test	02/19/2016
		WO 1727602-01	MM Perform Stem Lube and Minimal Stem Rotation Check	02/29/2016
		WO 1763398-01	EWP MM Perform Grease Sample of Valve Actuator	06/21/2017
		WO 1814257-01	MM Perform Stem Lube and Minimal Stem Rotation Check – OPCC 3	02/11/2017
		WO 1814258-01	MM Perform Grease Sample on Valve Actuator 2E51-F063 – OPCC3	02/11/2017
		WO 1814381	2E12-F004B Diagnostic Test	02/11/2017
		WO 1901421	1E12-F042B Position Indication Verification Test	02/22/2018
		WO 1905451	1E12-F042B Water Leak Test	02/27/2018
		WO 1906997-01	EM Perform LES-NB-101B Tech Spec. Surveillance	03/07/2018
		WO 1907982-01	EM Perform LES-NB-101A Tech Spec. Surveillance	03/07/2018
		WO 1909986-01	MM Perform Stem Lube on 1E22-F004	02/20/2018
		WO 1910010-03	EP PMT – As Left LLRT Per LTS-100-24 On 1E51-F008	03/04/2018
		WO 1910608	1E12-F042B Valve Inservice Exercise Test	02/27/2018
		WO 1910686-01	Perform EQ Inspect, Test, Support Part 21 WO #4627469	02/28/2018
		WO 1914062	2E12-F016B Diagnostic Test	02/12/2019
		WO 4568762-01	CM (CONT) Remove/Replace SRV 1B21-F013S (OPCC)	03/07/2018
		WO 4582723	1E12-F068B Diagnostic Test	10/05/2017

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
		WO 4627477-04	EP PMT – As Left LLRT Per LTS-100-24 on 2E51-F008	03/02/2019
		WO 4627478-02	As-Found/Left Diagnostic Test, D/R, Borescope/EQ Insp	03/01/2019
		WO 4697918	1E12-F068B Diagnostic Test	10/03/2019
		WO 4753598	1E12-F042B Position Indication Verification Test	02/22/2020
		WO 4758057-01	EWP MM Perform Stem Lube for 1E51-F008	02/19/2020
		WO 4758062-01	Change Valve Stem Lubricant	02/11/2020
		WO 4758372	1E12-F042B Valve Inservice Exercise Test	02/21/2020
		WO 4765564-01	EP ASME XI High Pressure Water Test - RVP Boundary	02/11/2020
		WO 4810933-01	Check Grease in Valve Operator Gearbox	10/26/2020
		WO 4827832-01	CM L1R18 Remove/Replace SRV 1B21-F013S	02/23/2020
		WO 4902695-01	MM Verify Packing Torque 2E51-F063	02/26/2021
		WO 4902696-01	Change Valve Stem Lubricant & Visual Inspection	02/25/2021
		WO 5155346-01	OP LOS-AA-W1 U1 Tech Spec Weekly Att 1A	05/30/2021
		WO 5157430-01	OP LOS-AA-W1 U1 Tech Spec Weekly Att 1A	06/06/2021
		WO 5159515-01	OP LOS-AA-W1 U1 Tech Spec Weekly Att 1A	06/13/2021
		WO 584826	2E12-F004B Diagnostic Test	02/19/2005
		WO 703532-01	EM Perform Inspection and Votes Test for 1E22-F004	02/26/2006
		WO 703585	1E12-F042B Diagnostic Test	02/28/2006