



**UNITED STATES  
NUCLEAR REGULATORY COMMISSION**

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

March 11, 2021

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

SUBJECT: CLINTON POWER STATION – TRIENNIAL FIRE PROTECTION INSPECTION  
REPORT 05000461/2020010

Dear Mr. Rhoades:

On February 11, 2021, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at Clinton Power Station and discussed the results of this inspection with Mr. G. Olson, Maintenance Director 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,

**/RA/**

Richard A. Skokowski, Chief  
Engineering Branch 3  
Division of Reactor Safety

Docket No. 05000461  
License No. NPF-62

Enclosure:  
As stated

cc w/ encl: Distribution via LISTSERV®

Letter to David Rhoades from Richard A. Skokowski dated March 11, 2021.

SUBJECT: CLINTON POWER STATION – TRIENNIAL FIRE PROTECTION INSPECTION  
REPORT 05000461/2020010

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

Docket Number: 05000461

License Number: NPF-62

Report Number: 05000461/2020010

Enterprise Identifier: I-2020-010-0058

Licensee: Exelon Generation Company, LLC

Facility: Clinton Power Station

Location: Clinton, IL

Inspection Dates: September 21, 2020 to February 11, 2021

Inspectors: K. Barclay, Reactor Inspector  
J. Beavers, Senior Resident Inspector  
A. Dahbur, Senior Reactor Inspector (Lead)  
B. Daley, Senior Reactor Inspector  
D. Sargis, Resident Inspector  
D. Szwarc, Senior Reactor Analyst

Approved By: Richard A. Skokowski, Chief  
Engineering Branch 3  
Division of Reactor Safety

Enclosure

## **SUMMARY**

The U.S. Nuclear Regulatory Commission (NRC) continued monitoring the licensee's performance by conducting a triennial fire protection inspection at Clinton 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**

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, 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 Disease (COVID-19), regional inspectors were directed to begin telework. During this time regional baseline inspections were evaluated to determine if all or portions of the objectives and requirements stated in the IP could be performed remotely. In some cases, portions of an IP were completed remotely and on-site. The inspection documented below was determined that the objectives and requirements stated in the IP could be completed remotely.

## REACTOR SAFETY

### 71111.21N.05 - Fire Protection Team Inspection (FPTI)

#### Structures, Systems, and Components (SSCs) Credited for Fire Prevention, Detection, Suppression, or Post-Fire Safe Shutdown Review (IP Section 03.01) (3 Samples)

The inspectors verified that the following systems credited in the approved fire protection program could perform their licensing basis function:

- (1) Safe Shutdown Method 2 which credited Automatic Depressurization System (ADS), Low Pressure Core Injection (LPCI) and Residual Heat Removal (RHR) "B" Pump for suppression pool cooling
- (2) Suppression System in Emergency Diesel Generator (EDG) Room (CO2)
- (3) Suppression System in Auxiliary Building (Sprinklers System)

#### Fire Protection Program Administrative Controls (IP Section 03.02) (1 Sample)

The inspectors verified that the following fire protection program administrative controls were implemented in accordance with the current licensing basis:

- (1) Control of Transient Combustible Material

#### Fire Protection Program Changes/Modifications (IP Section 03.03) (2 Samples)

The inspectors reviewed the following changes to ensure that they did not constitute an adverse effect on the ability to safely shutdown post-fire and to verify that fire protection program documents and procedures affected by the changes were updated.

- (1) Generic Letter 86-10 Evaluation for MSO Scenario 2-NEW-6 RCIC [Reactor Core Isolation Cooling], HPCS [High Pressure Core Spray] or RHR Operating with No Flowpath (EC-389773)
- (2) Generic Letter 86-10 Evaluation for Loss of Breaker Control (EC-383787)

## **INSPECTION RESULTS**

No findings were identified.

## **EXIT MEETINGS AND DEBRIEFS**

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

- On February 11, 2021, the inspectors presented the triennial fire protection inspection results to Mr. G. Olson, Maintenance Director and other members of the licensee staff.
- On October 9, 2020, the inspectors presented the Interim Exit Meeting inspection results to Mr. T. Chalmers, Site Vice President and other members of the licensee staff.

## DOCUMENTS REVIEWED

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
71111.21N.05	Calculations	19-AI-78	Evaluate Circuits Routed Through Various Fire Areas to Determine If an Appendix R Fire in That Area Could Cause Loss of Offsite Power	0
		19-AI-81	CPS Appendix R Safe Shutdown Component Circuit Analysis	4
		87-802	Hydraulic Calculations for Fire Protection Water Supply System Fire Flow Testing	3
	Corrective Action Documents	04162045	EOID: 0FP01PA, Fire Pump A, Failed to Start for Operability	08/06/2018
		1668436	9071.04C002 Failed Acceptance Criteria	06/05/2014
		4171931	Leak on A Fire Pump 1FP013	09/11/2018
		4353266	Analyze Data Per 9071.02, Section 8.5 for 0FP01PB8.5 Analyzing Recorded Data 8.5.1	07/15/2020
	Corrective Action Documents Resulting from Inspection	AR 4373987	Revise and Correct UFSAR Appendix E Cable Tray Drawings	10/02/2020
		AR 4375388	Revise and Correct Drawing E28-1001-05A-EI	10/08/2020
	Drawings	CE-CLT6-51.0 Sheet 001	One-Line Single Line Diagram	A
		E02-1RH99	Residual Heat Removal Sys (RH) Shutdown Clg. Suction Valves 1E12-F006A & 1E12-F006B	N
		E02-1RH99	Residual Heat Removal Sys (RH) RHR B to Feedwater Keep Fill Valve 1E12-F496	M
		E02-1RH99	Schematic Diagram Residual Heat Removal System (RH) Residual Heat Removal Pump 1B	H
		E02-1RH99, Sheet 503	RHR Suction Valve 1E12-F006B	N
		E03-1RH00	Internal - External Wiring Diagram Residual Heat Removal System (RH) Motor Operated Valves Limit Switches	S
		E29-1001-01A-EI	Diesel Generator and HVAC Building Ground Floor Plan El. 737'-0" Area 1	AH
		E29-1001-04A-EI	Electrical Installation Diesel Generator and HVAC Building	Y

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
			Ground Floor Plan El. 737'-0" Area 4	
		M05-1075 Sheet 1	P&ID Residual Heat Removal (RH)	AZ
		M05-1075 Sheet 2	P&ID Residual Heat Removal (RH)	AO
		M05-1075 Sheet 3	P&ID Residual Heat Removal (RH)	AI
		M05-1075 Sheet 4	P&ID Residual Heat Removal (RH)	AG
	Engineering Changes	EC 380723	GL86-10 Evaluation in Support of Revision to CPS 1893.06, for Min Acceptable Voltage for the Fire Protection Diesel Engine	0
		EC 383787	MSO Scenario 7D - Loss of Breaker Control / Initiating Loss of Bus Coordination and GL 86-10-2011-09001 Fire Protection Evaluation / Qualitative Fire Modeling for Fire Zone F-1A	0
		EC 383788	MSO Scenario 2I - Spurious RHR Min Flow Closure with Spurious Pump Start	0
		EC 389773	MSO Scenario 2-new-6 - RCIC, HPCS, or RHR Operating with No Flowpath Historical GL-86-10-2012-10-001	1
	Engineering Evaluations	EPU-T0611	Extended Power Uprate Task T0611 Appendix R Fire Protection	0
	Miscellaneous		SSD Cables Routing for a Component: 1E12-C002B RHR Pump 1-B A-3A	10/06/2020
			SSD Cables Routing for a Component: 1E12-C002C RHR Pump 1-C A-3B	10/06/2020
		XTP-FP/CO-14	Diesel Generator Carbon Dioxide Fire Protection System Test	03/08/1986
	Procedures	4401.01 EOP-1	RPV Control	30
		CPS 1893.06	Fire Protection Maintenance and Testing Program	13
		CPS 3312.01	Residual Heat Removal (RHR)	47d
		CPS 3312.01H001	LPCI Initiation and Shutdown Hard Card	0
		CPS 3312.02	Alternate Shutdown Cooling (A-SDC) Methods	9e



Inspection Procedure	Type	Designation	Description or Title	Revision or Date
		CPS 3312.03	RHR - Shutdown Cooling (SDC) & Fuel Pool Cooling and Assist (FPC&A)	11f
		CPS 4003.01C006	RSP - DIV 1 LPCI Operation	0
		CPS 4003.01C007	RSP - DIV 1 Suppression Pool Cooling Operation	0a
		CPS 4003.01C008	RSP - DIV 1 Shutdown Cooling Operation	1c
		CPS 4003.01H001	MCR - "A" CRO Hard Card	0
		CPS 4003.01H002	MCR - "B" CRO Hard Card	0a
		CPS 4003.01H003	RSP - Hard Card 'A'	0c
		CPS 4411.03	Injection/Flooding Sources	10d
		CPS 4411.04	Throttling ECCS Flow	5d
		OP-AA-201-009	Control of Transient Combustible Material	25
	Work Orders	1821410	9601.10A20 Visual Inspection Spray/Sprinkler System (C00I)	08/21/2018
		1858700	9071.09, FP CO2 System Auto Actuation (DIV I DG) Detector Functional	03/19/2020
		4987766	9071.19A20 OP Fire Protection Valve Lineup (Safety-Related C00I)	07/03/2020