



**UNITED STATES
NUCLEAR REGULATORY COMMISSION**

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

December 23, 2019

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

SUBJECT: CLINTON POWER STATION – MATERIAL CONTROL AND ACCOUNTING
PROGRAM INSPECTION REPORT 05000461/2019413

Dear Mr. Hanson:

On November 8, 2019, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at Clinton Power Station and discussed the results of this inspection with Mr. J. Kowalski, Plant Manager, 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/

Kenneth R. Riemer, Chief
Branch 1
Division of Reactor Projects

Docket No. 05000461
License No. NPF-62

Enclosure:
As stated

cc w/ encl: Distribution via LISTSERV®

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PROGRAM INSPECTION REPORT 05000461/2019413

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U.S. NUCLEAR REGULATORY COMMISSION
Inspection Report

Docket Number: 05000461

License Number: NPF-62

Report Number: 05000461/2019413

Enterprise Identifier: I-2019-413-0005

Licensee: Exelon Generation Company, LLC

Facility: Clinton Power Station

Location: Clinton, Illinois

Inspection Dates: November 04, 2019 to November 08, 2019

Inspectors: J. Beavers, Senior Resident Inspector
D. Sargis, Resident Inspector

Approved By: Kenneth R. Riemer, Chief
Branch 1
Division of Reactor Projects

Enclosure

SUMMARY

The U.S. Nuclear Regulatory Commission (NRC) continued monitoring the licensee's performance by conducting a material control and accounting program 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

Unless otherwise noted, baseline security inspections were conducted in accordance with the appropriate portions of the inspection procedures (IPs) in effect at the beginning of the inspection. Samples were declared complete when the IP requirements most appropriate to the inspection activity were met consistent with Inspection Manual Chapter 2201, "Security Inspection Program for Commercial Nuclear Power Reactors." 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. Publicly available IPs are located at: <http://www.nrc.gov/reading-rm/doc-collections/insp-manual/inspection-procedure/index.html>.

SAFEGUARDS

71130.11 - Material Control and Accounting (MC&A)

This inspection was performed to: (1) verify that the licensee has implemented, and is maintaining an adequate and effective program to control and account for the special nuclear material (SNM) in its possession; and (2) ensure that the licensee can detect loss, theft, or diversion of SNM in a timely manner. The inspectors conducted the following as appropriate:

Material Control and Accounting (MC&A) (15 Samples)

- (1) Determined whether material control and accounting (MC&A) related activities involving both fuel and non-fuel SNM were documented;
- (2) Reviewed a representative sample of 10 SNM transfer forms that the licensee required to be used to document internal transfers of SNM and physical inventory records for completeness;
- (3) Verified that all fuel failures and reconstitutions that occurred since the last inspection, if any, included documentation of changes to SNM content and location of the affected items;
- (4) Verified that changes made to MC&A related procedures since the last inspection were reviewed and approved by licensee management and that those changes did not decrease the effectiveness of the MC&A program;
- (5) Verified that SNM responsibilities were clearly identified, and personnel were trained on the new procedures;
- (6) Verified that the licensee conducted physical inventories at least every 12 months;
- (7) Reviewed the most recent annual physical inventory list for completeness;
- (8) Verified that the licensee's physical inventory procedures and practices included physical observation of each item inventoried;
- (9) Determined whether the licensee included non-fuel SNM in the physical inventory listing;
- (10) Determined whether the results of the last two physical inventories were reconciled with the book inventory and whether discrepancies, if any, were entered in the licensee's corrective action program (CAP) for investigation and resolution;
- (11) Verified by physical observation that a sample of 10 assemblies, selected randomly from the pool map, were in their assigned locations in the pool;
- (12) Verified by physical observation that a sampling of containers with rods, rod fragments, pellets, or any other pieces of fuel, were in their assigned locations and that the contents had not been accessed or removed;

- (13) Verified that all baskets and other containers of SNM hanging from the side of the pool, if any, were clearly identified;
- (14) Verified that the licensee had made the required reports (DOE/NRC Forms 741 and 742) to the national Nuclear Materials Management and Safeguards System; and
- (15) Verified that the licensee identified issues related to MC&A and entered them in the CAP and that the licensee has appropriately resolved a sample of MC&A issues, if any.

INSPECTION RESULTS

No findings were identified.

EXIT MEETINGS AND DEBRIEFS

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

- On November 8, 2019, the inspectors presented the material control and accounting program inspection results to Mr. J. Kowalski, Plant Manager, and other members of the licensee staff.

DOCUMENTS REVIEWED

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
71130.11	Corrective Action Documents	AR 4011150	Fuel Bundle Selected for NSF Does Not Match Fuel Move Spec	05/15/2017
	Miscellaneous	CLP Clinton 1	Core Loading Plan	11
		SRRS 3B.101	2019 Annual SMM Inventory	07/29/2019
	Procedures	NF-AA-300	Special Nuclear Material Control and Accountability	22
		NF-AA-330	Special Nuclear Material Physical Inventories	15
	Self-Assessments	PI-AA-126-1001-F-01	Pre-NRC Material Control & Accounting Inspection Self-Assessment	2
	Shipping Records	NF183631	Clinton Unit 1 Cycle 19 New Fuel Transaction 166 YLJXQW166, acknowledging receipt of 26 New Fuel Assemblies on March 5, 2018 in Shipment 1	03/05/2018
		NF183642	Clinton Unit 1 Cycle 19 New Fuel Transaction YLJXQW167, acknowledging receipt of 26 New Fuel Assemblies on March 7, 2018 in Shipment 2	03/07/2018
		NF183663	Clinton Unit 1 Cycle 19 New Fuel Transaction YLJXQW168, acknowledging receipt of 26 New Fuel Assemblies on March 12, 2018 in Shipment 3	03/12/2018
		NF194954	Transmittal of DOE NRC Form 742, Material Balance Report for Clinton 2019 Annual NMMSS Transmittal from August 1, 2018 through July 31, 2019/IR 04292000	09/06/2019