



**UNITED STATES  
NUCLEAR REGULATORY COMMISSION**

REGION III  
2443 WARRENVILLE RD. SUITE 210  
LISLE, IL 60532-4352

September 1, 2015

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

SUBJECT: MID-CYCLE ASSESSMENT LETTER FOR CLINTON POWER STATION, UNIT 1  
(REPORT 05000461/2015005)

Dear Mr. Hanson:

On August 13, 2015, the U.S. Nuclear Regulatory Commission (NRC) staff completed its mid-cycle performance review of Clinton Power Station, Unit 1. The NRC reviewed the most recent quarterly performance indicators in addition to inspection results and enforcement actions from July 1, 2014 through June 30, 2015. This letter informs you of the NRC's assessment of your facility during this period and the plans for future inspections at your facility.

The NRC determined that the performance of the Clinton Power Station, Unit 1, during July 1, 2014 through March 31, 2015 was in the Regulatory Response Column of the NRC's Reactor Oversight Process (ROP) Action Matrix due to one or more greater-than-green Security cornerstone inputs as described in our letter to you dated October 23, 2014 (ADAMS Accession Number ML14302A082). The NRC completed a supplemental inspection per Inspection Procedure 95001 for the greater-than-green finding on February 27, 2015, as documented in our letter to you dated March 27, 2015 (ADAMS Accession Number ML15089A120). This greater-than-green security finding was closed as of the start of the second quarter of 2015 in accordance with Inspection Manual Chapter 0305.

In addition, the NRC determined the performance at Clinton Power Station, Unit 1, for the most recent quarter was within the Regulatory Response Column of the NRC's ROP Action Matrix because of one inspection finding in the Mitigating Systems Cornerstone having low to moderate safety significance (i.e., White), and all performance indicators indicating that your performance was within the nominal, expected range (i.e., Green). This White finding was related to your failure to review the suitability of application of the design for the replacement Division 3 shutdown service water pump and to ensure the pump internals would not degrade under expected operating conditions in a way that impacted the safety function. This pump failed on September 16, 2014, during routine surveillance testing. As described in our Final Significance Determination of a White Finding with Assessment Follow-up and Notice of Violation letter issued on August 11, 2015 (ADAMS Accession Number ML15223B382), this White finding is considered an Action Matrix input at the start of the first quarter of 2015. In accordance with the guidance in Inspection Manual Chapter 0305, Clinton Power Station, Unit 1, remained in the Regulatory Response Column of the ROP Action Matrix for the entire assessment period.

Therefore, in addition to ROP baseline inspections, the NRC will conduct a supplemental inspection in accordance with Inspection Procedure (IP) 95001, "Supplemental Inspection for One or Two White Inputs in a Strategic Performance Area" when your staff has notified us of your readiness for this inspection. This inspection procedure is conducted to provide assurance that the root cause and contributing cause of risk significant performance issues related to the Division 3 shutdown service water pump failure are understood, the extent of condition and the extent of cause are identified, and the corrective actions are sufficient to prevent recurrence.

The enclosed inspection plan lists the inspections scheduled through December 31, 2017. Routine inspections performed by resident inspectors are not included in the inspection plan. The inspections listed during half of the inspection plan are tentative and may be revised at the end-of-cycle performance review. The NRC provides the inspection plan to allow for the resolution of any scheduling conflicts and personnel availability issues. The NRC will contact you as soon as possible to discuss changes to the inspection plan should circumstances warrant any changes. This inspection plan does not include security-related inspections, which will be sent via separate, non-publicly available correspondence.

The NRC plans to conduct infrequently performed inspection activities related to the operation of the Independent Spent Fuel Storage Installation (ISFSI) using IP 60855.1, "Operation of an ISFSI Independent Spent Fuel Storage Installation at Operating Plants."

In response to the accident at Fukushima, the Commission issued Order EA-12-049, "Order Modifying Licenses with Regard to Requirements for Mitigation Strategies for Beyond-Design-Basis External Events," which requires licensees to develop, implement, and maintain guidance and strategies to maintain or restore core cooling, containment, and spent fuel pool cooling capabilities following a beyond-design-basis external event. Additionally, the Commission issued Order EA-12-051, "Order Modifying Licenses with Regard to Reliable Spent Fuel Pool Instrumentation," which requires licensees to have a reliable means of remotely monitoring wide-range Spent Fuel Pool levels to support effective prioritization of event mitigation and recovery actions in the event of a beyond-design-basis external event. The NRC is conducting audits of licensee efforts towards compliance with these Orders. The audit has been completed at Clinton Power Station, and the information gathered will aid staff in development of the ultimate Safety Evaluation for the site. After the NRC staff receives the Final Compliance letter for the site, the Final Safety Evaluation will be issued. Then, the NRC staff will confirm through inspections the full implementation of the orders mentioned above performing Temporary Instruction 191, "Inspection of the Implementation of Mitigation Strategies and Spent Fuel Pool Instrumentation Orders and Emergency Preparedness Communication/Staffing/Multi-Unit Dose Assessment Plans".

In accordance with Title 10 of the *Code of Federal Regulations* (10 CFR) 2.390, "Public Inspections, Exemptions, Requests for Withholding," of the NRC's "Rules of Practice," a copy of this letter, its enclosure, and your response (if any) will be available electronically for public inspection in the NRC's Public Document Room or from the Publicly Available Records (PARS) component of the NRC's Agencywide Documents Access and Management System (ADAMS). ADAMS is accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html> (the Public Electronic Reading Room).

Please contact Karla Stoedter at 630-829-9731 with any questions you may have regarding this letter or the inspection plan.

Sincerely,

**/RA/**

Patrick L. Loudon, Director  
Division of Reactor Projects

Docket No. 50-461  
License No. NPF-62

Enclosure:  
Clinton Power Station  
Inspection/Activity Plan

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**ADAMS Accession Number:** ML15239B319

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OFFICE	RIII		RIII		RIII		
NAME	RNg:tr		KStoedter		PLoudon		
DATE	8/21/2015		8/21/2015		8/27/2015		

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**Clinton**  
**Inspection / Activity Plan**  
**09/01/2015 - 12/31/2017**

Unit Number	Planned Dates		Inspection Activity	Title	No. of Staff on Site
Start	End				
			<b>PI&amp;R - BIENNIAL PI&amp;R INSPECTION</b>		<b>2</b>
1	09/28/2015	10/09/2015	IP 71152B	Problem Identification and Resolution	
			<b>ISFSI - 72.212 AND CALC REVIEWS</b>		<b>1</b>
1	07/01/2015	09/28/2015	IP 60856.1	Review of 10 CFR 72.212(b) Evaluations at Operating Plants	
			<b>ISFSI - PAD CONSTRUCTION</b>		<b>1</b>
1	07/01/2015	10/30/2015	IP 60853	On-Site Fabrication Of Components And Construction On An ISFSI	
			<b>BI OLRQ - BIENNIAL REQUALPROGRAM INSPECTION</b>		<b>2</b>
1	10/19/2015	10/23/2015	IP 7111111B	Licensed Operator Requalification Program	
			<b>BI RP - RADIATION PROTECTION BASELINE INSPECTION</b>		<b>1</b>
1	10/26/2015	10/30/2015	IP 71124.02	Occupational ALARA Planning and Controls	
			<b>BI EPEX - EP EXERCISE / PI VERIFICATION</b>		<b>2</b>
1	11/16/2015	11/20/2015	IP 7111407	Exercise Evaluation - Hostile Action (HA) Event	
1	11/16/2015	11/20/2015	IP 7111408	Exercise Evaluation – Scenario Review	
1	11/16/2015	11/20/2015	IP 71151	Performance Indicator Verification	
			<b>BI RP - RADIATION PROTECTION BASELINE INSPECTION</b>		<b>1</b>
1	11/30/2015	12/04/2015	IP 71124.06	Radioactive Gaseous and Liquid Effluent Treatment	
1	11/30/2015	12/04/2015	IP 71151	Performance Indicator Verification	
			<b>BI RP - RADIATION PROTECTION BASELINE INSPECTION</b>		<b>2</b>
1	03/14/2016	03/18/2016	IP 71124.01	Radiological Hazard Assessment and Exposure Controls	
1	03/14/2016	03/18/2016	IP 71124.02	Occupational ALARA Planning and Controls	
1	03/14/2016	03/18/2016	IP 71124.03	In-Plant Airborne Radioactivity Control and Mitigation	
1	03/14/2016	03/18/2016	IP 71124.04	Occupational Dose Assessment	
			<b>TI191 - FLEX/MITIGATING STRATEGIES/SFPI</b>		<b>4</b>
1	03/28/2016	04/01/2016	IP 2515/191	Inspection of Licensee's Responses to Order EA-12-049, EA-12-051 & EP Info Request March 12, 2012	
			<b>ISFSI - ISFSI 72.212 REVIEW</b>		<b>2</b>
1	04/01/2016	04/30/2016	IP 60856	Review of 10 CFR 72.212(b) Evaluations	
			<b>CDBI - COMPONENT DESIGN BASES INSPECTION</b>		<b>6</b>
1	06/27/2016	07/29/2016	IP 7111121	Component Design Bases Inspection	
			<b>ENG BI - INSERVICE INSPECTION</b>		<b>2</b>
1	05/09/2016	05/29/2016	IP 7111108G	Inservice Inspection Activities - BWR	
			<b>ISFSI - ISFSI PREOP TESTING AND PLANS</b>		<b>2</b>
1	07/01/2016	08/31/2016	IP 60854.1	Preoperational Testing of Independent Spent Fuel Storage Facility Installation at Operating Plants	

This report does not include INPO and OUTAGE activities.  
This report shows only on-site and announced inspection procedures.

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Start	End				
			<b>BI EP - EP BASELINE INSPECTION / PI VERIFICATION</b>		<b>1</b>
1	07/11/2016	07/15/2016	IP 7111402	Alert and Notification System Testing	
1	07/11/2016	07/15/2016	IP 7111403	Emergency Preparedness Organization Staffing and Augmentation System	
1	07/11/2016	07/15/2016	IP 7111405	Correction of Emergency Preparedness Weaknesses and Deficiencies	
1	07/11/2016	07/15/2016	IP 71151	Performance Indicator Verification	
			<b>ISFSI - INITIAL LOADING INSPECTION</b>		<b>2</b>
1	09/01/2016	12/31/2016	IP 60855.1	Operation of an Independent Spent Fuel Storage Installation at Operating Plants	
			<b>BI RP - RADIATION PROTECTION BASELINE INSPECTION</b>		<b>1</b>
1	09/26/2016	09/30/2016	IP 71124.07	Radiological Environmental Monitoring Program	
1	09/26/2016	09/30/2016	IP 71151	Performance Indicator Verification	
			<b>BI RP - RADIATION PROTECTION BASELINE INSPECTION</b>		<b>1</b>
1	11/28/2016	12/02/2016	IP 71124.05	Radiation Monitoring Instrumentation	
			<b>OL PREP - INIT PREP/CLINTON 2017</b>		<b>3</b>
1	01/20/2017	01/24/2017	W90343	OL - INITIAL EXAM - 2016 OCT-DEC - CLINTON	
			<b>OL EXAM - INIT EXAM/JAN FEB 2017</b>		<b>3</b>
1	01/30/2017	02/10/2017	W90343	OL - INITIAL EXAM - 2016 OCT-DEC - CLINTON	
			<b>BI FIRE - TRIENNIAL FIRE PROTECTION AND BAG TRIP</b>		<b>1</b>
1	03/20/2017	04/21/2017	IP 7111105T	Fire Protection [Triennial]	
			<b>BI RP - RADIATION PROTECTION BASELINE INSPECTION</b>		<b>1</b>
1	05/08/2017	05/12/2017	IP 71124.01	Radiological Hazard Assessment and Exposure Controls	
			<b>BI RP - RADIATION PROTECTION BASELINE INSPECTION</b>		<b>1</b>
1	05/15/2017	05/19/2017	IP 71124.06	Radioactive Gaseous and Liquid Effluent Treatment	
			<b>ISI - INSERVICE INSPECTION</b>		<b>1</b>
1	05/08/2017	05/29/2017	IP 7111108G	Inservice Inspection Activities - BWR	
			<b>BI RP - RADIATION PROTECTION BASELINE INSPECTION</b>		<b>1</b>
1	06/19/2017	06/23/2017	IP 71124.08	Radioactive Solid Waste Processing and Radioactive Material Handling, Storage, and Transportation	
			<b>BI HS - TRIENNIAL HEAT SINK INSPECTION</b>		<b>2</b>
1	07/17/2017	07/21/2017	IP 7111107T	Heat Sink Performance	
			<b>BI PI&amp;R - BIENNIAL PI&amp;R IINSPECTION</b>		<b>1</b>
1	09/11/2017	09/29/2017	IP 71152B	Problem Identification and Resolution	
			<b>OL-RQ - BIENNIAL REQUAL PROGRAM INSPECTION</b>		<b>2</b>
1	10/16/2017	10/20/2017	IP 7111111B	Licensed Operator Requalification Program	

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	Start	End			
BI EP - EP EXERCISE INSPECTION / PI VERIFICATION					5
1	10/30/2017	11/03/2017	IP 7111401	Exercise Evaluation	
1	10/30/2017	11/03/2017	IP 7111406	Drill Evaluation	
1	10/30/2017	11/03/2017	IP 7111408	Exercise Evaluation – Scenario Review	
1	10/30/2017	11/03/2017	IP 71151	Performance Indicator Verification	

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