



**UNITED STATES  
NUCLEAR REGULATORY COMMISSION**  
REGION III  
2443 WARRENVILLE RD. SUITE 210  
LISLE, IL 60532-4352

March 4, 2015

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

**SUBJECT: ANNUAL ASSESSMENT LETTER FOR CLINTON POWER STATION, UNIT 1  
(Report 05000461/2014001)**

Dear Mr. Hanson:

On February 12, 2015, the U.S. Nuclear Regulatory Commission (NRC) staff completed its end-of-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 January 1, 2014 through December 31, 2014. This letter informs you of the NRC's assessment of your facility during this period and its plans for future inspections at your facility.

The NRC determined that the performance at Clinton Power Station, Unit 1, for the first quarter of 2014 was within the Regulatory Response Column of the Reactor Oversight Process Action Matrix based on all inspection findings being classified as having very low safety significance (i.e., Green) and one performance indicator (PI) requiring additional NRC oversight (i.e., White). Specifically, the Unplanned Scrams per 7000 Critical Hours PI crossed the Green-White threshold and caused Clinton Unit 1 to transition from the Licensee Response Column to the Regulatory Response Column of the Action Matrix in the fourth quarter of 2013. The NRC informed you of this transition in a letter dated February 5, 2014 (ADAMS Accession Number ML14037A328).

The NRC completed a supplemental inspection per Inspection Procedure 95001 for the White PI on July 28, 2014, as documented in our letter to you dated August 28, 2014 (ADAMS Accession Number ML14240A522). Since the PI had returned to Green in the second quarter of 2014, the PI is considered a Green Action Matrix input since the second quarter of 2014 in accordance with Inspection Manual Chapter 0305.

However, the NRC determined that, Clinton Power Station, Unit 1, during the most recent quarter was within the Regulatory Response Column of the NRC's Reactor Oversight Process (ROP) Action Matrix because of one or more greater-than-green Security cornerstone inputs as described in our letter to you dated October 23, 2014. Clinton Power Station transitioned to the Regulatory Response Column of the Reactor Oversight Process Action Matrix beginning the second quarter of 2014. The NRC informed you of this transition in a letter dated October 28, 2014 (ADAMS Accession Number ML14302A082).

Therefore, in addition to ROP baseline inspections, the NRC conducted a supplemental inspection in accordance with Inspection Procedure (IP) 95001, "Supplemental Inspection for One or Two White Inputs in a Strategic Performance Area" to review the actions taken to address the security issue.

The enclosed inspection plan lists the inspections scheduled through June 30, 2016. Routine inspections performed by resident inspectors are not included in the inspection plan. The inspections listed during the last nine months 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.

From August 11, 2014 through August 28, 2014, the International Atomic Energy Agency (IAEA) completed an independent assessment of your station's performance. This assessment team is called an Operational Safety Review Team, or OSART. The focus of the review by OSART is on the safety and reliability of the plant through a review of plant operations and performance of the licensee's management and staff. During this inspection period, licensee personnel debriefed the NRC resident inspectors about issues identified by the OSART assessment team on a daily basis. The NRC staff also reviewed both a draft and final version of the OSART report (ADAMS Accession Number ML15062A115). Based on the results of the our review and assessment of the scope of OSART activities through the daily and weekly debriefs and the review of the draft and final OSART mission report, the NRC concluded that a one-time inspection credit is appropriate in accordance with Inspection Manual Chapter 2515, Section 08.05, "Baseline Inspection Credit for Operational Safety Review Team Effort," dated October 18, 2013. The full detail of the inspection credit is provided in the enclosed crediting plan.

The NRC plans to conduct infrequently performed inspection activities related to the operation of the Independent Spent Fuel Storage Installation using IP 60853, "On-Site Fabrication of Components and Construction of an ISFSI," IP 60854.1, "Preoperational Testing of an Independent Spent Fuel Storage Facility Installations at Operating Plants," and IP 60856 and IP 60856.1, "Review of 10 CFR 72.212(b) Evaluations."

From January 1 to December 31, 2014, the NRC issued three Severity Level IV traditional enforcement violations associated with impeding the regulatory process. Therefore, the NRC plans to conduct IP 92723, "Follow Up Inspection for Three or More Severity Level IV Traditional Enforcement Violations in the Same Area in a 12-Month Period" to follow-up on these violations.

Additionally, an NRC audit of licensee efforts towards compliance with Order EA-12-049, "Order Modifying Licenses with Regard to Requirements for Mitigation Strategies for Beyond-Design-Basis External Events," and Order EA-12-051, "Order Modifying Licenses with Regard to Reliable Spent Fuel Pool Instrumentation" is ongoing. This audit includes an onsite component in order for the NRC to evaluate mitigating strategies as described in licensee submittals, and to receive and review information relative to associated open items. This onsite activity will occur

in the months prior to the first unit at each site achieving compliance with the Orders, and will

aid staff in development of a Safety Evaluation for the site. The onsite component at your site has been scheduled for the week of March 9, 2015. A site-specific audit plan for the visit has been provided in advance to allow sufficient time for preparations.

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 Gregory Roach at 630-829-9731 with any questions you may have regarding this letter or the inspection plan.

Sincerely,

*/RA/*

Anne T. Boland, Director  
Division of Reactor Projects

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

Enclosures:

1. Clinton OSART Inspection Crediting Plan
2. Clinton Power Station Inspection/Activity Plan

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B. Hanson

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## CLINTON OSART INSPECTION CREDITING PLAN

The following inspection procedure credit will be provided for Clinton Power Station, Unit 1.

Inspection Procedure	Inspection Credit	Comments
IP 71111.22 Surveillance Testing	25%	Full credit is given. Four inspection samples will not be performed in 2015.
IP 71111.05AQ Fire Protection	25%	Full credit is given. One inspection sample will not be performed per quarter for 2015.
IP 71124.01 Radiological Hazard Assessment and Exposure Controls	25%	Full credit is given in the form of reduced inspection effort.
IP 71124.02 Occupational ALARA Planning and Controls	25%	Full credit is given in the form of reduced inspection effort.
IP 71124.03 In-Plant Airborne Radioactivity Control and Mitigation	25%	This inspection module had been completed for this biennial cycle. Full credit will be given next cycle in the form of reduced inspection effort.
IP 71124.04 Occupational Dose Assessment	25%	This inspection module had been completed for this biennial cycle. Full credit will be given next cycle in the form of reduced inspection effort.
IP 71124.05 Radiation Monitoring Instrumentation	25%	This inspection module had been completed for this biennial cycle. Full credit will be given next cycle in the form of reduced inspection effort.
IP 71124.06 Radioactive Gaseous and Liquid Effluent Treatment	25%	Full credit is given in the form of reduced inspection effort.
IP 71124.07 Radiological Environmental Monitoring Program	25%	This inspection module had been completed for this biennial cycle. Full credit will be given next cycle in the form of reduced inspection effort.
IP 71124.08 Radioactive Solid Waste Processing and Radioactive Material	25%	Full credit is given in the form of reduced inspection effort.

Inspection Procedure	Inspection Credit	Comments
IP 71114.03 Emergency Response Organization Staffing and Augmentation System	50%	This inspection module had been completed for the biennial cycle. Full credit will be given next cycle in the form of reduced inspection effort.
IP 71114.05 Maintenance of Emergency Preparedness	50%	This inspection module had been completed for the biennial cycle. Full credit will be given next cycle in the form of reduced inspection effort.
IP 71152B Problem Identification and Resolution	50%	Full credit is given in the form of reduced inspection effort.

For the radiation protection areas, several inspection procedures have already been performed for the current biennial period. Therefore credit will be given for these procedures in the next biennial cycle. For the emergency preparedness areas, both inspection procedures had already been performed and completed for the current biennial cycle. Therefore credit will be given for these procedures in the next cycle.

**Clinton**  
**Inspection / Activity Plan**  
**03/01/2015 - 06/30/2016**

Unit Number	Planned Dates		Inspection Activity	Title	No. of Staff on Site
	Start	End			
			<b>BI MODS - MODIFICATIONS /50.59</b>		<b>3</b>
1	03/02/2015	03/20/2015	IP 7111117T	Evaluations of Changes, Tests, and Experiments and Permanent Plant Modifications	
			<b>ISFSI - PAD CONSTRUCTION</b>		<b>1</b>
1	03/01/2015	06/30/2015	IP 60853	On-Site Fabrication Of Components And Construction On An ISFSI	
			<b>OL PREP - INIT EXAM/MARCH 2015</b>		<b>3</b>
1	03/09/2015	03/13/2015	W90326	OL - INITIAL EXAM - 2015 MAR-APR - CLINTON	
			<b>OL EXAM - INIT EXAM/MARCH 2015</b>		<b>3</b>
1	03/16/2015	03/27/2015	W90326	OL - INITIAL EXAM - 2015 MAR-APR - CLINTON	
			<b>BI ISI - ISI INSPECTION</b>		<b>1</b>
1	04/27/2015	05/22/2015	IP 7111108G	Inservice Inspection Activities - BWR	
			<b>BI RP - RADIATION PROTECTION BASELINE INSPECTION</b>		<b>1</b>
1	05/04/2015	05/08/2015	IP 71124.01	Radiological Hazard Assessment and Exposure Controls	
			<b>PI&amp;R - BIENNIAL PI&amp;R INSPECTION</b>		<b>4</b>
1	08/10/2015	08/28/2015	IP 71152B	Problem Identification and Resolution	
			<b>BI OLRQ - BIENNIAL REQUALPROGRAM INSPECTION</b>		<b>2</b>
1	06/08/2015	06/12/2015	IP 7111111B	Licensed Operator Requalification Program	
			<b>ISFSI - ISFSI PREOP TESTING AND PLANS</b>		<b>2</b>
1	07/01/2015	08/31/2015	IP 60854.1	Preoperational Testing of Independent Spent Fuel Storage Facility Installation at Operating Plants	
			<b>ISFSI - ISFSI 72.212 REVIEW</b>		<b>2</b>
1	08/01/2015	08/31/2015	IP 60856	Review of 10 CFR 72.212(b) Evaluations	
			<b>ISFSI - INITIAL LOADING INSPECTION</b>		<b>2</b>
1	09/01/2015	12/31/2015	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	10/26/2015	10/30/2015	IP 71124.02	Occupational ALARA Planning and Controls	
			<b>BI EPEX - EP EXERCISE / PI VERIFICATION</b>		<b>1</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>TI 191 - TI 191 MITIGATING STRATEGIES</b>		<b>2</b>
1	01/01/2016	03/31/2016	IP 2515/191	Inspection of Licensee's Responses to Order EA-12-049, EA-12-051 & EP Info Request March 12, 2012	

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

**Clinton**  
**Inspection / Activity Plan**  
**03/01/2015 - 06/30/2016**

Unit Number	Planned Dates		Inspection Activity	Title	No. of Staff on Site
	Start	End			
			<b>CDBI - COMPONENT DESIGN BASES INSPECTION</b>		<b>6</b>
1	01/25/2016	02/26/2016	IP 7111121	Component Design Bases Inspection	
			<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>ENG BI - INSERVICE INSPECTION</b>		<b>1</b>
1	05/08/2016	05/29/2016	IP 7111108G	Inservice Inspection Activities - BWR	

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