



UNITED STATES  
NUCLEAR REGULATORY COMMISSION

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

September 5, 2018

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

SUBJECT: CLINTON POWER STATION—NRC TRIENNIAL INSPECTION OF  
EVALUATION OF CHANGES, TESTS AND EXPERIMENTS BASELINE  
INSPECTION REPORT 05000461/2018010

Dear Mr. Hanson:

On August 21, 2018, the U.S. Nuclear Regulatory Commission (NRC) completed an Evaluation of Changes, Tests and Experiments inspection at your Clinton Power Station. The NRC inspectors discussed the results of this inspection with Mr. T. Stoner and other members of your staff. The results of this inspection are documented in the enclosed report.

Based on the results of this inspection, NRC inspectors did not identify any findings or violations of more-than-minor significance.

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 10 CFR 2.390, "Public Inspections, Exemptions, and Requests for Withholding."

Sincerely,

*/RA/*

Robert C. Daley, Chief  
Engineering Branch 1  
Division of Reactor Safety

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

Enclosure:  
Inspection Report 05000461/2018010

cc: Distribution via LISTSERV®

Letter to Bryan C. Hanson from Robert C. Daley dated September 5, 2018.

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EVALUATION OF CHANGES, TESTS AND EXPERIMENTS BASELINE  
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U.S. NUCLEAR REGULATORY COMMISSION

REGION III

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

Report No: 05000461/2018010

Enterprise Identifier: I-2018-010-0070

Licensee: Exelon Generation Company, LLC

Facility: Clinton Power Station

Location: Clinton, IL

Dates: July 30, 2018, through August 21, 2018

Inspectors: A. Shaikh, Senior Reactor Inspector  
I. Hafeez, Reactor Inspector  
E. Fernandez, Reactor Inspector

Approved by: R. Daley, Chief  
Engineering Branch 3  
Division of Reactor Safety

Enclosure

## **SUMMARY**

The U.S. Nuclear Regulatory Commission (NRC) continued monitoring licensee's performance by conducting an Evaluations of Changes, Tests and Experiments inspection 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. NRC and self-revealed findings, violations, and additional items are summarized in the table below. Licensee-identified non-cited violations are documented in report sections.

### **List of Findings and Violations**

No findings or violations were identified.

### **Additional Tracking Items**

None

## INSPECTION SCOPES

Inspections were conducted using the appropriate portions of the inspection procedures 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 inspection procedures requirements most appropriate to the inspection activity were met consistent with Inspection Manual Chapter 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."

## REACTOR SAFETY

### 71111.17T—Evaluations of Changes, Tests and Experiments

The inspectors evaluated the following from July 30, 2018, to August 21, 2018:

#### 10 CFR 50.59 Evaluations—71111.17T

- (1) CL-2015-E-007; Reactor Water Cleanup(RT)
- (2) CL-2015-E-059; OpEval and Procedurally Controlled-Temporary configuration change (PC-TCC) for opening doors and installation of VX Temporary fans
- (3) CL-2017-E007; Revise Dose Analysis Due to Impact of Single Failure of Main Control Room Outside Air Intake Dampers
- (4) CL-2015-E-022; Impact of Weld Repairs on Steam Dryer Structural Integrity
- (5) CL-2015-E-056; On-Line Noble Metal Chemical Injection
- (6) CL-2016-E-010; Allowance of Synthetic Roundslings for NUREG-0612 Heavy Load Lifts

#### 10 CFR 50.59 Screening/Applicability Determinations—71111.17T

- (1) CL-2015-S-063; Seismic Qualification of Switchgears with Various Breaker Configurations
- (2) CL-2015-S-007; Reactor Water Cleanup(RT)
- (3) CL-2016-S-011; Change Frequency of Logic System Functional Test ORM TR 4.2.12.4
- (4) CL-2016-S-017; Time Delay Addition to High Level Isolation Logic for Heater Drains
- (5) CL-2016-S-043; USAR Section 10.4.4.4 Refer to TS Program 5.5.16 Surveillance Frequency Control Program
- (6) CL-2015-S-016; Revise Polar Crane Circuit Breaker Test Frequency
- (7) CL-2015-S-055; Issue Calculation 87-802 and Revise 9071.04 Acceptance Criteria
- (8) CL-2016-S-016; Removal of Wall Section RS-D-14, 712 FB
- (9) CL-2017-S-006; Issue FC Surge Tank Vortex Calculation
- (10) CL-2017-S-008; Issue FC Surge Tank Vortex Calculation
- (11) CL-2017-S-020; Surveillance Requirement 3.3.4.1.5 Bases Change
- (12) CL-2017-S-021; Issue Calculation 01FC32
- (13) CL-2015-S-010; Fukushima Install Fire Protection in Support of Flex DG Installation and NEI 12-06 in Unit 2 DIV 2 762 Room
- (14) CL-2015-S-014; Reactor Cavity Lift
- (15) CL-2015-S-024; Remove Air Actuators and Add Manual Operators to the High and Low Load Valves (Abandon Instrument Loops)

- (16) CL-2015- S-044; Emergency Operating Procedure Revision 30 Change #15;
- (17) CL-2016-S-012; Remove Snubbers 1RB24565S, 1RB24566S; 1RB24568S, 1RB24569S, 1RB24575S, and 1RB24576S
- (18) CL-2016-S-021; Holtec Procedures Issuance for ISFSI Operations
- (19) CL-2016-S-025; Install Protective Plate in the Fuel Building Cask Storage Pool
- (20) CL-2016-S-038; Division 1 DG Replacement Generator
- (21) CL-2017-S-004; Revise Emergency Operating Procedure CPS 4411.08, Alternate Control Rod Insertion
- (22) CL-2017-S-014; Division 3 SX Pump Shaft Sleeve and Suction Bell Design Change

## **INSPECTION RESULTS**

No findings or violations were identified

## **EXIT MEETINGS AND DEBRIEFS**

The inspectors confirmed that proprietary information was controlled to protect from public disclosure. The inspectors verified no proprietary information was retained or documented in this report.

- On August 21, 2018, the inspector presented the Evaluations of Changes, Tests and Experiments inspection results to Mr. T. Stoner and other members of the licensee staff.

## **DOCUMENTS REVIEWED**

- CL-2015-E-007; Reactor Water Cleanup(RT); Revision 0
- CL-2015-E-059; OpEval and Procedurally Controlled-Temporary configuration change (PC-TCC) for opening doors and installation of VX Temporary fans; Revision 0
- CL-2017-E007; Revise Dose Analysis Due to Impact of Single Failure of Main Control Room Outside Air Intake Dampers; Revision 0
- CL-2015-S-063; Seismic Qualification of Switchgears with Various Breaker Configurations; Revision 0
- CL-2015-S-007; Reactor Water Cleanup(RT); Revision 0
- CL-2016-S-011; Change Frequency of Logic System Functional Test ORM TR 4.2.12.4; Revision 0
- CL-2016-S-017; Time Delay Addition to High Level Isolation Logic for Heater Drains; Revision 0
- CL-2016-S-043; USAR Section 10.4.4.4 Refer to TS Program 5.5.16 Surveillance Frequency Control Program; Revision 0
- CL-2015-S-016; Revise Polar Crane Circuit Breaker Test Frequency; Revision 5
- CL-2015-S-055; Issue Calculation 87-802 and Revise 9071.04 Acceptance Criteria; Revision 0
- CL-2016-S-016; Removal of Wall Section RS-D-14, 712 FB; Revision 0
- CL-2017-S-006; Issue FC Surge Tank Vortex Calculation; Revision 0
- CL-2017-S-008; Issue FC Surge Tank Vortex Calculation; Revision 0
- CL-2017-S-020; Surveillance Requirement 3.3.4.1.5 Bases Change; Revision 12
- CL-2017-S-021; Issue Calculation 01FC32; Revision 0
- AR 04161349; NRC Identified Inadequate Review During 50.59 Screening; 08/22/2018
- AR 04161320; Insufficient Documented Basis for 50.59; 08/02/2018
- AR 04160488; NRC MOD 50.59 INSP: Incorrect Figure in 3412.01C002; 07/31/2018
- 02449013; Division 1 and Division 2 RT Diff Flow INOP; 02/07/2015
- 02450993; Trend IR: RT Delta Flow Issues; 02/11/2015

- 02471583; NRC Mod/50.59 Inspection: Safety Evaluation 97-060 For CPS 1014.11; 03/12/2015
- 02505685; NCV 2015008.01 Inadequate 50.59 Evaluation SWGR Seismic Conditions; 05/26/2015
- AR 04159385; Inadequate 50.59 Screening and Evaluation; 07/27/2018
- AR 04159387; Inadequate 50.59 Review and USAR Change; 07/27/2018
- AE-CLT6-1HD105; Heater Drain-L.P. HTR. 3A Emergency Level Control; Revision 7
- E02-1ES99; Extraction Steam SYS(ES) LP Heaters 3A & 3B ES Shut-Off Valves 1ES007A,B and Check Valves 1ES008A,B; Revision L
- E02-1HD99; FW Heater Drains-Turbine Cycle SYS.(HD) High & Low Pressure HTRS A & B Level Aux Relays; Revision N
- M05-1003; P&ID Extraction Steam (ES); Revision K
- 00705818; Test (LSF Trip Test) Polar Crane CO-8 Protective Relays; Revision 1
- 00809305; Test (Bench Cal) Polar Crane CO-8 Protective Relays 1AP11E; Revision 1
- 00406723; SWAP Breaker For 1AP11E-7B (1HC01G); Revision 1
- 04670680-01; EM-Electrical Inspection of Polar Crane 1HC01G; 07/11/18
- CPS 8410.27; ABB K600S Mechanically Operated Power Circuit Breaker Maintenance; 04/20/2018
- CPS 3412.01C002; Temporary Exhaust Fan Use with Switchgear HVAC out of Service(DIV2) 09/15/2015
- AR 04159383; 50.59 Review Enhancements; 07/27/2018
- Calculation 87-802; Hydraulic Calculations for Fire Protection Water Supply System Fire Flow Testing; Revision 003
- CPS 9071.04; Fire Protection Water System Flow Test; Revision 33d
- Drawing K2801-0131; Reactor Protection System Turbine Control Valve and Turbine Stop Valve Logic Diagram;
- AR 04056394; 2017PIR 4410.00C001 Needs 50.59 Screening; 09/27/2017
- AR 02676103; Alternate Source Term 50.59 Review Needed for Cycle 17; 05/31/2016
- AR 02702493; Review of 50.59 Screens Identified Recommended Enhancements; 08/09/2016
- AR 04160741; NRC MOD 50.59 Inspection, Inadequate 50.59 Description; 08/01/2018
- GE Hitachi Nuclear Energy, 002N5536 Revision 0. "Clinton Power Station Evaluation of the H3 Weld Crack Repair."; 03/2015
- GE Hitachi Nuclear Energy, 002N5536 Revision 1. "Clinton Power Station Evaluation of the H3 Weld Crack Repair."; 08/2018
- Calculation No. C-024; Re-Analysis of Control Rod Drop Accident (CRDA) Using Alternative Source Terms; 12/12/2017
- Procedure HPP-2226-300, Rev 8 MPC Sealing at Clinton; 10/25/2016
- Procedure HPP-2226-100, Rev 1 MPC Pre-Operation Inspection; 09/23/2016
- Procedure HPP-2226-200, Rev 6 MPC Loading at Clinton; 10/26/2016
- Procedure HPP-2226-400, Rev 5 MPC Transfer at Clinton; 10/31/2016
- Procedure HPP-2226-500, Rev 5 MPC High Storm Movements; 09/28/2016