Clinton Power Station
8401 Power Road
Clinton, IL 61727

U-604283
May 23, 2016

10CFR50.73
SRRS 5A.108

U. S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, D.C. 20555-0001

Clinton Power Station, Unit 1
Facility Operating License No. NPF-62
NRC Docket No. 50-461

Subject: Licensee Event Report 2016-003-00

Enclosed is Licensee Event Report (LER) 2016-003-00: Bypassing Both Divisions of Reactor Water Cleanup Leak Detection System is a Reportable Loss of Safety Function. This report is being submitted in accordance with the requirements of 10 CFR 50.73.

There are no regulatory commitments contained in this report.

Should you have any questions concerning this report, please contact Mr. Dale Shelton, Regulatory Assurance Manager, at (217) 937-2800.

Respectfully,

Theodore R. Stoner
Site Vice President
Clinton Power Station

KP/cac

Attachment: Licensee Event Report 2016-003-00

cc:
Regional Administrator— NRC Region III
NRC Senior Resident Inspector - Clinton Power Station
Office of Nuclear Facility Safety — Illinois Emergency Management Agency

IE22
NRR

NRC FORM 366 (11-2015) U.S. NUCLEAR REGULATORY COMMISSION

APPROVED BY OMB: NO. 3150-0104 EXPIRES: 10/31/2018

Estimated burden per response to comply with this mandatory collection request: 80 hours. Reported lessons learned are incorporated into the licensing process and fed back to industry. Send comments regarding burden estimate to the FOIA, Privacy and Information Collections Branch (T-5 F53), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by internet e-mail to Infocollects.Resource@nrc.gov, and to the Desk Officer, Office of Information and Regulatory Affairs, NEOB-10202, (3150-0104), Office of Management and Budget, Washington, DC 20503. If a means used to impose an information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.

LICENSEE EVENT REPORT (LER)

(See Page 2 for required number of digits/characters for each block)

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4. TITLE

Bypassing Both Divisions of Reactor Water Cleanup Leak Detection System is a Reportable Loss of Safety Function

5. EVENT DATE			6. LER NUMBER			7. REPORT DATE			8. OTHER FACILITIES INVOLVED	
MONTH	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REV NO.	MONTH	DAY	YEAR	FACILITY NAME	DOCKET NUMBER
03	24	2016	2016	- 003	- 00	5	23	2016		05000
									FACILITY NAME	DOCKET NUMBER
										05000

9. OPERATING MODE	11. THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: *(Check all that apply)*			
1	☐ 20.2201(b)	☐ 20.2203(a)(3)(i)	☐ 50.73(a)(2)(ii)(A)	☐ 50.73(a)(2)(viii)(A)
	☐ 20.2201(d)	☐ 20.2203(a)(3)(ii)	☐ 50.73(a)(2)(ii)(B)	☐ 50.73(a)(2)(viii)(B)
	☐ 20.2203(a)(1)	☐ 20.2203(a)(4)	☐ 50.73(a)(2)(iii)	☐ 50.73(a)(2)(ix)(A)
	☐ 20.2203(a)(2)(i)	☐ 50.36(c)(1)(i)(A)	☐ 50.73(a)(2)(iv)(A)	☐ 50.73(a)(2)(x)
10. POWER LEVEL	☐ 20.2203(a)(2)(ii)	☐ 50.36(c)(1)(ii)(A)	☐ 50.73(a)(2)(v)(A)	☐ 73.71(a)(4)
	☐ 20.2203(a)(2)(iii)	☐ 50.36(c)(2)	☐ 50.73(a)(2)(v)(B)	☐ 73.71(a)(5)
	☐ 20.2203(a)(2)(iv)	☐ 50.46(a)(3)(ii)	☒ 50.73(a)(2)(v)(C)	☐ 73.77(a)(1)
099	☐ 20.2203(a)(2)(v)	☐ 50.73(a)(2)(i)(A)	☐ 50.73(a)(2)(v)(D)	☐ 73.77(a)(2)(i)
	☐ 20.2203(a)(2)(vi)	☐ 50.73(a)(2)(i)(B)	☐ 50.73(a)(2)(vii)	☐ 73.77(a)(2)(ii)
		☐ 50.73(a)(2)(i)(C)	☐ OTHER Specify in Abstract below or in NRC Form 366A	

12. LICENSEE CONTACT FOR THIS LER

LICENSEE CONTACT	TELEPHONE NUMBER *(Include Area Code)*
Dale A. Shelton, Regulatory Assurance Manager	217-937-2800

13. COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT

CAUSE	SYSTEM	COMPONENT	MANU-FACTURER	REPORTABLE TO EPIX	CAUSE	SYSTEM	COMPONENT	MANU-FACTURER	REPORTABLE TO EPIX
D									

14. SUPPLEMENTAL REPORT EXPECTED	15. EXPECTED SUBMISSION DATE	MONTH	DAY	YEAR
☐ YES *(If yes, complete 15. EXPECTED SUBMISSION DATE)* ☒ NO				

ABSTRACT *(Limit to 1400 spaces, i.e., approximately 15 single-spaced typewritten lines)*

On March 24, 2016, it was determined that placing both Reactor Water Cleanup System (RT) Leak Detection System (LD) bypass switches in the Bypass position per plant procedure when the RT Filter/Demineralizer (F/D) was placed in service following backwash and pre-coat operations on January 25, 2016 was a reportable condition. Both divisions of the RT LD were bypassed for seven minutes. Backwashing and pre-coating a RT F/D is a normal system operation and not considered maintenance. A review of the Updated Safety Analysis Report (USAR) determined that the associated isolation functions are credited to mitigate the consequences of an RT pipe break accident described in USAR Chapter 6. Therefore, placing both divisions of RT LD in Bypass constituted a condition that could have prevented the fulfillment of the safety function of a system that is needed to mitigate the consequences of an accident. The direction for bypassing the RT LD system had been included in procedures since 1989 but did not constitute a reportable event until the issuance of NUREG-1022, Rev. 3 in 2013. The failure to report this condition was caused by not revising plant procedures when the Exelon fleet reporting requirements were revised to align with NUREG-1022, Rev. 3.

NARRATIVE

PLANT AND SYSTEM IDENTIFICATION

General Electric—Boiling Water Reactor, 3473 Megawatts Thermal Rated Core Power
Energy Industry Identification System (EIIS) codes are identified in the text as [XX]

EVENT IDENTIFICATION

Bypassing Both Divisions of Reactor Water Cleanup Leak Detection System is a Reportable Loss of Safety Function

A. Plant Operating Conditions before the Event

Unit: 1	Event Date: 03/24/16	Event Time: 1157	
Mode: 1	Mode Name: Power Operation	Reactor Power:	99 percent

B. DESCRIPTION OF EVENT

On March 24, 2016, it was determined that placing both Reactor Water Cleanup System (RT) Leak Detection System (LD) bypass switches in the Bypass position per Clinton Power Station (CPS) Procedure 3301.01, "Reactor Water Cleanup" when the RT Filter/Demineralizer (F/D) was placed in service following backwash and pre-coat operations was a reportable condition. It was determined from the Operations Log for January 25, 2016 that both divisions of the RT LD were bypassed for seven minutes.

The following Operations log entries document the actions taken on January 25, 2016:

0940: Placed 'A' RT F/D in Hold for backwash and pre-coat per procedure CPS 3303.01 section 8.1.3 and procedure CPS 3303.02, "Reactor Water Cleanup Filter Demineralizer Operating Procedure," sections 8.2 and 8.5.

1155: Placed RT F/D 'B' in Hold.

1157: When pressurizing RT F/D 'A' received RT differential flow alarm. Placed both divisions of RT LD in Bypass, this will render both RWCU differential flow instruments INOPERABLE. Verified Dose Equivalent Iodine I-131 specific activity is < 1.8 x 10e-3 µCi/gm (actual 1.84 x 10e-6 µCi/gm) per CPS 3303.01 step 6.9 and Technical Specification (TS) Limiting Condition for Operation (LCO) 3.3.6.1, "Primary Containment and Drywell Isolation Instrumentation." Entered the following action statements: - LCO 3.3.6.1, Required Action D.1 - Place channel in trip in 24 hours and LCO 3.3.6.1 Required Action E.1 - Restore RT isolation capability in 1 hour.

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1159: Placed RT F/D 'B' on Service following backwash of 'A' F/D.

1202: Placed RT F/D 'A' on Service following backwash.

1204: Placed both divisions of RT LD bypass switches in Normal. Performed channel check SAT. Exit LCO 3.3.6.1 Required Action D.1 and E.1 actions.

An evaluation determined that placing both divisions of the RT LD switches in the Bypass position represented a loss of safety function that was not part of a planned evolution for maintenance or testing. Backwashing and pre-coating a RT F/D, as indicated in the Operations Log, is a normal system operation and not considered maintenance. Therefore, placing both divisions of RT LD switches in Bypass was reportable. The Updated Safety Analysis Report (USAR), the TS Bases, and NRC reporting requirements were reviewed as part of an evaluation regarding event reportability. Based on this review, it was determined that the RT LD system is credited to mitigate a break in the RT system piping inside containment accident as described in USAR Chapter 6. As a result, it was concluded that placing both divisions of RT LD switches in Bypass as described in this LER, represented a condition that could have prevented the fulfillment of the safety function of a system that is needed to mitigate the consequences of an accident described in USAR Chapters 6 and 15. This condition is reportable under 10 CFR 50.73(a)(2)(v)(C).

A change to the RT system procedure was implemented in 1989 to allow placing RT LD bypass switches into Bypass to prevent an unwanted or unwarranted isolation of the RT system during system manipulations. The associated safety evaluation went through several levels of management concurrence. Based on the reporting guidelines in place at the time, placing both divisions of RT LD in Bypass did not constitute a reportable event. However, NUREG-1022, Rev. 3 indicates that a report is required when SSCs are inoperable in a required mode unless as part of a planned evolution for maintenance or surveillance testing when done in accordance with an approved procedure and the plant's TS.

C. CAUSE OF EVENT

The apparent cause of the failure to report this event was the failure to perform plant procedure revisions when Exelon Generating Company (EGC) fleet reporting procedure requirements changed with the implementation of NUREG-1022, Revision 3. Plant procedure revisions did not occur because the change management process applied in this instance did not require an Operations cross-functional review when the EGC fleet reporting procedure was issued.

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D. SAFETY ANALYSIS

This event had no actual nuclear safety consequences.

RT recirculates a portion of reactor coolant through a filter demineralizer to remove particulate and dissolved impurities from the reactor coolant. It also removes excess coolant from the reactor system under controlled conditions. RT is not required to function during or immediately following an accident and is isolated from post-accident fluids.

The purpose the RT LD System is to monitor RT components, activating a system isolation should a system leak of sufficient magnitude occur. Other operational controls remained available to monitor RT parameters, including temperature detection in the affected areas to allow isolation of the RT System.

E. CORRECTIVE ACTIONS

A standing order was put into place to require reporting if both divisions of RT LD bypass switches are placed in Bypass unless if it is part of a planned evolution for maintenance or testing.

CPS Procedures 3303.01 and 5000.02, "Alarm Panel 5000 Annunciators –Row 2," have been revised to indicate that placing both RT leak detection system switches in the bypass position at the same time while in modes 1, 2 or 3 for reasons other than to support maintenance or testing is a reportable event per 10CFR50.72 and 10CFR50.73. An action was also created to review other Operations procedures to determine if a safety function is bypassed for reasons other than maintenance or testing.

F. PREVIOUS SIMILAR OCCURENCES

No previous events were identified associated with the failure to report bypassing a safety function.

G. COMPONENT FAILURE DATA

There were no component failures associated with this event.