Clinton Power Station
8401 Power Road
Clinton, IL 61727

U-604305
August 22, 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 2015-004-01

Enclosed is Licensee Event Report (LER) 2015-004-01: Trip of Emergency Reserve Auxiliary Transformer Static VAR Compensator Causes Positive Secondary Containment Pressure Following Lightning Strike on 138 kV Offsite Source. This supplemental report revises Section D, Safety Analysis, to indicate the event did not constitute a safety system functional failure. This supplemental 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 2016-009-00

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 (06-2016) 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 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)

1. FACILITY NAME	2. DOCKET NUMBER	3. PAGE
Clinton Power Station, Unit 1	05000461	1 OF 3

4. TITLE

Trip of Emergency Reserve Auxiliary Transformer Static VAR Compensator Causes Positive Secondary Containment Pressure Following Lightning Strike on 138 kV Offsite Source

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
										05000
06	25	2015	2015	- 004	01-	08	22	2016	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

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 6/25/15 at 0301 CDT, the Main Control Room received numerous annunciators that indicated a trip of the Emergency Reserve Auxiliary Transformer (ERAT) Static VAR Compensator (SVC) caused by a voltage transient on the 138 kV offsite source due to thunderstorms in the area. The Division 1 Safety Bus was manually aligned from the reserve source to its normal source. As a result of the voltage transient, the Division 1 Fuel Building Ventilation (VF) system isolation dampers closed causing a trip of VF supply and exhaust fans. With no running VF fans, secondary containment differential pressure rose to slightly greater than 0 inches water gauge which exceeded the Technical Specification (TS) requirement of greater than 0.25 inches vacuum water gauge. Secondary Containment differential pressure was restored within TS requirements at 0320 CDT by reopening the VF isolation dampers and restarting the VF supply and exhaust fans. The ERAT SVC was returned to service at 0457 CDT. ENS notification 51179 was made at 0927 ET in accordance with 10 CFR 50.72(b)(3)(v)(C). This event is being reported as a condition that could have prevented fulfillment of a safety function under 10 CFR 50.73(a)(2)(v)(C).

1. FACILITY NAME	2. DOCKET NUMBER	3. LER NUMBER		
		YEAR	SEQUENTIAL NUMBER	REV NO.
Clinton Power Station, Unit 1	05000461	2015	- 004	- 01

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

Trip of Emergency Reserve Auxiliary Transformer Static VAR Compensator Causes Positive Secondary Containment Pressure Following Lightning Strike on 138 kV Offsite Source

A. Plant Operating Conditions before the Event

Unit: 1 Event Date: 06/25/16 Event Time: 0301 Central Daylight Time
Mode: 1 Mode Name: Power Operation Reactor Power: 99 percent

B. DESCRIPTION OF EVENT

On 6/25/15 at 0301 CDT, the Main Control Room received numerous annunciators that indicated a trip of the Emergency Reserve Auxiliary Transformer (ERAT)[XFMR] Static VAR Compensator (SVC)[COMPJ caused by a voltage transient on the 138 kV offsite source due to thunderstorms in the area. The Division 1 Safety Bus [BU] was manually aligned from the reserve source to its normal source. As a result of the voltage transient, the Division 1 Fuel Building Ventilation (VF) system isolation dampers [DMPJ closed causing a trip of VF supply and exhaust fans [FAN]. With no running VF fans, secondary containment differential pressure rose to slightly greater than 0 inches water gauge which exceeded the Technical Specification (TS) requirement of greater than 0.25 inches vacuum water gauge. Secondary Containment differential pressure was restored within TS requirements at 0320 CDT by reopening the VF isolation dampers and restarting the VF supply and exhaust fans. The ERAT SVC was returned to service at 0457 CDT.

This condition required an eight-hour Event Notification under 10 CFR 50.72(b)(3)(v)(C). Event Notification #51179 was made at 0927 ET.

This issue was entered into the Clinton Power Station corrective action program under Issue Report (IR) 2519380.

C. CAUSE OF EVENT

An investigation was performed by Ameren and found that the South Bloomington substation breakers and the Clinton Route 54 breakers opened and reclosed as designed. A phase-to-ground fault was discovered and it was determined that the most apparent cause of loss of the 138kV line was due to a lightning strike.

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NARRATIVE

D. SAFETY ANALYSIS

There were no actual safety consequences related to this event. This event resulted in the loss of secondary containment pressure for about 19 minutes, from 0301 to 0320 on 6/25/15, due to the VF supply and exhaust fans tripping off. Secondary Containment differential pressure was greater than the 0.25 inches vacuum required by TS 3.6.4.1. The VF supply and exhaust fans were restarted manually during this period and the differential pressure was restored to within limits.

This event is considered to be reportable as a loss of safety function Under 10 CFR 50.72(b)(3)(v)(C) and 10 CFR 50.73(a)(2)(v)(C) as an event or condition that could have prevented the fulfillment of the safety function of structures or systems that are needed to control the release of radioactive material.

Because the Standby Gas Treatment System (SGTS) remained available to restore Secondary Containment vacuum in event of an accident, this event report does not constitute a safety system functional failure.

E. CORRECTIVE ACTIONS

No failed or malfunctioning equipment resulted from this event. All equipment functioned as designed. As a result, no corrective actions were necessary.

F. PREVIOUS SIMILAR OCCURENCES

Licensee Event Report 2012-001-00: Loss of Secondary Containment Differential Pressure Due to Transformer Trip, dated October 26, 2012

Licensee Event Report 2013-008: Failure of Division 1 Transformer Leads to Isolation of Instrument Air Supply to Containment, Lowering Scram Pilot Air Header Pressure, and Manual Scram, dated February 3, 2014

Licensee Event Report 2014-001-00: Premature Failure of Air Supply Solenoid Results in Isolation of Fuel Building Ventilation System and Loss of Secondary Containment Differential Pressure, dated March 20, 2014

G. COMPONENT FAILURE DATA

None