Clinton Power Station
8401 Power Road
Clinton, IL 61727

Exelon Generation®

U-604434
July 16, 2018

10 CFR 50.73
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 2018-002-00

Enclosed is Licensee Event Report (LER) 2018-002-00: Division 2 Diesel Generator Inoperability Due to Air Receiver Remaining Isolated Following Clearance Removal Resulting in Unplanned Shutdown Risk Change. 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/lam

Attachment: License Event Report 2018-002-00

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

IE22
NRR

U-604434

SUBJECT: Licensee Event Report 2018-002-00

bcc:

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NRC FORM 366
(04-2018)

U.S. NUCLEAR REGULATORY COMMISSION

APPROVED BY OMB: NO. 3150-0104 EXPIRES: 03/31/2020

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 Information Services Branch (T-2 F43), 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)

(See NUREG-1022, R.3 for instruction and guidance for completing this form http://www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr1022/r3/)

1. Facility Name	2. Docket Number	3. Page
Clinton Power Station, Unit 1	05000461	1 OF 4

4. Title

Division 2 Diesel Generator Inoperability Due to Air Receiver Remaining Isolated Following Clearance Removal Resulting in Unplanned Shutdown Risk Change

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
05	17	2018	2018	- 002	- 00	07	16	18	Facility Name	Docket Number 05000

9. Operating Mode	11. This Report is Submitted Pursuant to the Requirements of 10 CFR §: *(Check all that apply)*			
4	☐ 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)
000	☐ 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)
	☐ 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)
Mr. Dale Shelton, Regulatory Assurance Manager	(217) 937-2800

13. Complete One Line for each Component Failure Described in this Report

Cause	System	Component	Manufacturer	Reportable to ICES	Cause	System	Component	Manufacturer	Reportable to ICES

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 14 single-spaced typewritten lines)

On May 17, 2018, at 1503 CDT, with the plant in Mode 4 during refueling outage C1R18, a plant equipment operator discovered that the Division (Div) 2 Emergency Diesel Generator (DG) air start receiver isolation valves 1DG160 and 1DG161 were shut. At the time of discovery, the Div. 1 DG was inoperable for a 4160V 1A1 partial bus outage. With the Div. 2 air start receiver valves shut, the Div. 2 DG was declared inoperable. Operations entered Technical Specification (TS) Limiting Condition for Operation (LCO) Required Actions for TS 3.8.2, "AC Sources-Shutdown," and TS 3.5.2, "Reactor Pressure Vessel (RPV) Water Inventory Control" as a result of the inoperability of the onsite AC power sources to isolation valves being credited to limit RPV drain time. The Div. 2 DG air receivers were realigned at 1545 CDT and the auto start function was restored. At 2104 CDT, the Div. 2 DG was declared operable following completion of the return to service checklist procedure. The cause of the event is that Operations relied solely on log entries to track component configuration, contrary to Exelon governance. Corrective measures include eliminating procedures that allowed tracking equipment configuration with log entries and reinforcing approved tracking methods with Operators. This event is reportable under the provisions of 10 CFR 50.73(a)(2)(v)(D), as "any event or condition that at the time of discovery could have prevented the fulfillment of the safety function of structures or systems that are needed to mitigate the consequences of an accident" and 10 CFR 50.73(a)(2)(i)(B) as "any operation or condition prohibited by Technical Specifications."

1. FACILITY NAME	2. DOCKET NUMBER	3. LER NUMBER		
		YEAR	SEQUENTIAL NUMBER	REV NO.
Clinton Power Station, Unit 1	05000461	2018	- 002	- 00

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 text as [XX].

EVENT IDENTIFICATION

Division 2 Diesel Generator Inoperability Due to Air Receiver Remaining Isolated Following Clearance Removal Resulting in Unplanned Shutdown Risk Change

A. Plant Operating Conditions Before the Event

Unit: 1 Event Date: May 17, 2018 Event Time: 1503
Mode: 4 Mode Name: Power Operation Reactor Power: 000 percent

B. Description of Event

On May 17, 2018 at 1503 CDT with the plant in Mode 4 in refueling outage C1R18, an Equipment Operator (EO) identified that both the Division 2 Emergency Diesel Generator (EDG) [DG] air receiver outlet valves were closed while performing rounds in the Division 2 EDG room. With the valves shut, the Division 2 EDG could not have automatically started if required and, therefore, was inoperable. At the time of the discovery, Division 1 EDG was inoperable as a result of a Division 1 4160V 1A1 partial bus outage.

Following notification by the EO, Operations entered Technical Specification (TS) Limiting Condition for Operations (LCO) 3.8.2, "AC Sources-Shutdown," Actions B.1, B.2, and B.3 due to the inoperability of both Division 1 and Division 2 EDGs. In addition, LCO 3.5.2, "Reactor Pressure Vessel (RPV) Water Inventory Control," Required Actions A.1, C.1 and C.2 were entered as a result of the inoperability of onsite AC power sources to isolation valves being credited to limit RPV drain down time. At 1545 CDT, Operations completed placing the Division 2 EDG air start system in standby and restored the EDG's auto start function. At 2104 CDT, following the completion of a return to service checklist procedure and field and panel walkdowns, the Division 2 EDG was declared operable and associated LCO Actions were exited.

A non-emergency eight-hour notification was submitted in accordance with 10 CFR 50.72(b)(3)(v), as a condition that alone could have prevent fulfilment of the onsite AC power function.

1. FACILITY NAME	2. DOCKET NUMBER	3. LER NUMBER		
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NARRATIVE

An investigation determined that the air start isolation valves remained closed as directed during clearance order removal on May 9, 2018. The required procedures to restore the Division 2 EDG to standby were tracked in Operator logs. Subsequent turnover gaps resulted in the log entry being closed prior to restoring the EDG to standby. As a result, the Division 2 EDG was inappropriately declared operable at 0800 on May 12, 2018. The Division 1 EDG was made inoperable to support scheduled work at 0030 on May 14, 2018, requiring the Division 2 EDG to be operable per TS 3.8.2.
The Division 2 EDG was also being credited as the onsite power supply to isolate Residual Heat Removal isolation values to control RPV water level per TS 3.5.2.

C. Cause of the Event

The cause of this event was determined to be Operations relied on log entries to track the Division 2 EDG component configuration, contrary to Exelon governance. Inadequate procedure use and adherence by Operations personnel and inadequate turnover were identified as contributing causes.

D. Safety Consequences

This event resulted in an unplanned change in shutdown plant risk. The plant was in Mode 4 and nearing the end of its scheduled refueling outage. There were no actual safety consequences associated with the condition described in this report since offsite power remained operable during the time the condition existed. There was no impact to the health and safety of the public or plant personnel. Multiple methods existed to restore onsite power and to establish RPV makeup.

This condition is reportable under the provisions of 10 CFR 50.73(a)(2)(v)(D) as, "any event or condition that at the time of discovery could have prevented the fulfillment of the safety function of structures or systems that are needed to mitigate the consequences of an accident," and
10 CFR 50.73(a)(2)(i)(B) as, "any operation or condition prohibited by Technical Specifications."

E. Corrective Actions

The following corrective measures were established:

- Plant specific procedures were revised to eliminate the allowance to track plant configuration using log entries.
- Approved methods for tracking plant status control were reinforced with Operators.
- Training was conducted with Operators on procedure use and adherence related to partial procedure performance.
- Operator rounds points for EDGs were revised.

NARRATIVE

F. Previous Similar Occurrences

There were no previous events identified associated with components left out of the required position.

G. Component Failure Data

None.