



Clinton Power Station
8401 Power Road
Clinton, IL 61727

U-604661

10 CFR 50.73

December 1, 2021

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 2021-002-00

Enclosed is Licensee Event Report (LER) 2021-002-00: Core Alterations With Source Range Monitor Inoperable Results in Condition Prohibited by Technical Specifications. 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,

A handwritten signature in black ink, appearing to read "T. Chalmers", with a long horizontal flourish extending to the left.

Thomas D. Chalmers
Site Vice President
Clinton Power Station

Attachment: Licensee Event Report 2021-002-00

cc:

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



LICENSEE EVENT REPORT (LER)

(See Page 3 for required number of digits/characters for each block)
(See NUREG-1022, R.3 for instruction and guidance for completing this form
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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, Library, and Information Collections Branch (T-6 A10M), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by e-mail to infocollections.Resource@nrc.gov, and the OMB reviewer at OMB Office of Information and Regulatory Affairs, (3150-0104), Attn: Desk aid: omb_submission@omb.eop.gov. The NRC may not conduct or sponsor, and a person is not required to respond to, a collection of information unless the document requesting or requiring the collection displays a currently valid OMB control number.

1. Facility Name

Clinton Power Station, Unit 1

2. Docket Number

05000461

3. Page

1 OF 3

4. Title

Core Alterations With Source Range Monitor Inoperable Results in Condition Prohibited by Technical Specifications

5. Event Date

Month	Day	Year
10	03	2021

6. LER Number

Year	Sequential Number	Revision No.
2021	- 002 -	00

7. Report Date

Month	Day	Year
12	01	2021

8. Other Facilities Involved

Facility Name	Docket Number
	05000
Facility Name	Docket Number
	05000

9. Operating Mode

5

10. Power Level

000

11. This Report is Submitted Pursuant to the Requirements of 10 CFR §: (Check all that apply)

10 CFR Part 20

☐ 20.2203(a)(2)(vi)☐ 50.36(c)(2)☐ 50.73(a)(2)(iv)(A)☐ 50.73(a)(2)(x)☐ 20.2201(b)☐ 20.2203(a)(3)(i)☐ 50.46(a)(3)(ii)☐ 50.73(a)(2)(v)(A)

10 CFR Part 73

☐ 20.2201(d)☐ 20.2203(a)(3)(ii)☐ 50.69(g)☐ 50.73(a)(2)(v)(B)☐ 73.71(a)(4)☐ 20.2203(a)(1)☐ 20.2203(a)(4)☐ 50.73(a)(2)(i)(A)☐ 50.73(a)(2)(v)(C)☐ 73.71(a)(5)☐ 20.2203(a)(2)(i)

10 CFR Part 21

☒ 50.73(a)(2)(i)(B)☐ 50.73(a)(2)(v)(D)☐ 73.77(a)(1)(i)☐ 20.2203(a)(2)(ii)☐ 21.2(c)☐ 50.73(a)(2)(i)(C)☐ 50.73(a)(2)(vii)☐ 73.77(a)(2)(i)☐ 20.2203(a)(2)(iii)

10 CFR Part 50

☐ 50.73(a)(2)(ii)(A)☐ 50.73(a)(2)(viii)(A)☐ 73.77(a)(2)(ii)☐ 20.2203(a)(2)(iv)☐ 50.36(c)(1)(i)(A)☐ 50.73(a)(2)(ii)(B)☐ 50.73(a)(2)(viii)(B)☐ 20.2203(a)(2)(v)☐ 50.36(c)(1)(ii)(A)☐ 50.73(a)(2)(iii)☐ 50.73(a)(2)(ix)(A)☐ OTHER (Specify here, in abstract, or NRC 366A).

12. Licensee Contact for this LER

Licensee Contact

Dale Shelton, Regulatory Assurance Manager

Phone Number (Include area code)

(217) 937-2800

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

Cause	System	Component	Manufacturer	Reportable to IRIS	Cause	System	Component	Manufacturer	Reportable to IRIS

14. Supplemental Report Expected

☐ No☒ Yes (If yes, complete 15. Expected Submission Date)

15. Expected Submission Date

Month

Day

Year

01

31

2022

16. Abstract (Limit to 1560 spaces, i.e., approximately 15 single-spaced typewritten lines)

On 10/3/21, with Clinton Power Station (CPS) in Mode 5 (refueling) with core alterations in progress, it was determined CPS had operated in a condition prohibited by Technical Specifications (TS). At 0950 CDT it was identified that a fuel bundle had been placed in the North-West quadrant of the core while Source Range Monitor (SRM) 'A' was inoperable, contrary to TS 3.3.1.2, Instrumentation – SRM Instrumentation. Additionally, at time of discovery, a second fuel bundle move within the quadrant was in progress with the fuel bundle seated, but not released from the fuel handling machine grapple. Operators verified the following actions were met: TS 3.3.1.2 Action E.1 - Immediately Suspend Core Alterations except control rod insertion and TS 3.3.1.2 Action E.2 - Immediately initiate Action to fully insert all insertable control rods in cells containing one or more fuel assemblies. The fuel bundle moves were determined to be part of the planned and analyzed sequence for the refuel shuffle. Therefore, there was no impact to the health and safety of the public or plant personnel from this condition. The cause of this event is under investigation. The causal factors that resulted in this condition and the associated corrective actions will be provided in a revision to this LER. The condition described in this LER is reportable under 10 CFR 50.73(a)(2)(i)(B), any operation or condition which was prohibited by the plant's TS.

**LICENSEE EVENT REPORT (LER)
CONTINUATION SHEET**

(See NUREG-1022, R.3 for instruction and guidance for completing this form
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1. FACILITY NAME	2. DOCKET NUMBER	3. LER NUMBER		
		YEAR	SEQUENTIAL NUMBER	REV NO.
Clinton Power Station, Unit 1	05000461	2021	- 002	- 00

NARRATIVE**PLANT AND SYSTEM IDENTIFICATION**

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

EVENT IDENTIFICATION

Core Alterations With Source Range Monitor Inoperable Results in Condition Prohibited by Technical Specifications

A. Plant Operating Conditions Before the Event

Unit: 1	Event Date: October 3, 2021	Event Time: 0950 CDT
Mode: 5	Mode Name: Refueling	Reactor Power: 000

B. Description of Event

Clinton Power Station (CPS) Technical Specification (TS) 3.3.1.2, Instrumentation – Source Range Monitor (SRM) Instrumentation, requires an SRM [RIT] in the reactor core quadrant and an adjacent quadrant be operable during core alterations within the quadrant. The North-West core quadrant is monitored by SRM 'A.'

On October 3, 2021, CPS was in Mode 5 with core alterations in progress. At approximately 0950 CDT it was identified that a fuel bundle had been placed at position 07-44 in the North-West quadrant of the core while SRM 'A' was inoperable, contrary to TS 3.3.1.2. Additionally, at time of discovery, a second fuel bundle move within the quadrant was in progress with the fuel bundle seated, but not released from the fuel handling machine [CF/FHM] grapple at position 21-36.

TS 3.3.1.2 Action E.1 - Immediately Suspend Core Alterations except control rod [JD] insertion was verified to be met. TS 3.3.1.2 Action E.2 - Immediately initiate Action to fully insert all insertable control rods in cells containing one or more fuel assemblies was also verified to be met.

C. Cause of the Event

The cause of this event is under investigation. The causal factors that resulted in this condition and the associated corrective actions will be provided in a revision to this Licensee Event Report (LER).

D. Safety Consequences

The condition described in this LER is reportable under 10 CFR 50.73(a)(2)(i)(B), any operation or condition which was prohibited by the plant's TS. The core alterations were evaluated for Shutdown Margin in accordance with CPS Procedure 9811.01, Shutdown Margin Determination. The fuel bundle moves were determined to be part of the planned and analyzed sequence for the



LICENSEE EVENT REPORT (LER) CONTINUATION SHEET

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		2021	- 002	- 00

NARRATIVE

refuel shuffle within the North-West core quadrant. As a result, there was no impact to the health and safety of the public or plant personnel from this condition. In addition, this event does not meet the criteria for a Safety System Functional Failure.

E. Corrective Actions

As noted above, the core alterations were evaluated for Shutdown Margin in accordance with CPS Procedure 9811.01, Shutdown Margin Determination and were determined to be part of the planned and analyzed sequence for the refuel shuffle within the North-West core quadrant. Additional corrective actions will be provided in a supplemental LER, as appropriate.

F. Previous Similar Occurrences

A review of previous LERs did not identify any events that were similar to the condition described in this LER.

G. Component Failure Data

Not applicable to this event.