

ILLINOIS POWER

CLINTON POWER STATION, P.O. BOX 678, CLINTON, ILLINOIS 61727-0678, TELEPHONE (217) 935-8881

U-601774
L45-90(12-31)-LP
2C.220

December 31, 1990

10CFR50.73

Docket No. 50-461

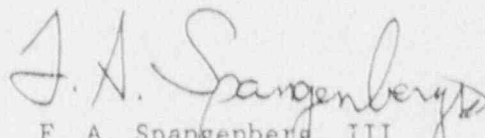
U.S. Nuclear Regulatory Commission
Document Control Desk
Washington, D.C. 20555

Subject: Clinton Power Station - Unit 1
Licensee Event Report No. 90-016-00

Dear Sir:

Please find enclosed Licensee Event Report No. 90-016-00: Breach of Secondary Containment Integrity During CORE ALTERATIONS Due to Unknown Personnel Blocking Open a Secondary Containment Access. This report is being submitted in accordance with the requirements of 10CFR50.73.

Sincerely yours,


F. A. Spangenberg, III
Manager - Licensing and Safety

STH/alh

Enclosure

cc: NRC Resident Office
NRC Region III, Regional Administrator
INPO Records Center
Illinois Department of Nuclear Safety
NRC Clinton Licensing Project Manager

9101090293 901231
PDR ADOCK 05000461
S PDR

IF22
11

LICENSEE EVENT REPORT (LER)

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|--------|---|----------------|---------------------|-----------------|------------------|-----------------|-----------|------------------------|---|---|---|------------------|--|----------------------|---|---|----------|---|---|---|---|---|---|---|
| FACILITY NAME (1) Clinton Power Station | | | | | | | | | | DOCKET NUMBER (2) 0 5 0 0 0 4 6 1 1 | | | | | PAGE (3) 1 OF 0 6 | | | | | | | | | | |
| TITLE (4) Breach of Secondary Containment Integrity During CORE ALTERATIONS Due to Unknown Personnel Blocking Open a Secondary Containment Access | | | | | | | | | | | | | | | | | | | | | | | | | |
| EVENT DATE (5) | | | LER NUMBER (6) | | | | REPORT DATE (7) | | | OTHER FACILITIES INVOLVED (8) | | | | | | | | | | | | | | | |
| MONTH | DAY | YEAR | YEAR | SEQUENTIAL NUMBER | REVISION NUMBER | MONTH | DAY | YEAR | FACILITY NAMES NONE | | | | DOCKET NUMBER(S) | | | | | | | | | | | | |
| 1 | 1 | 2 | 9 | 9 | 0 | 9 | 0 | 0 | 1 | 6 | 0 | 0 | 1 | 2 | 3 | 1 | 9 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 0 |
| OPERATING MODE (9) | | THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR § (Check one or more of the following) (11) | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | | 20.402(b) | | | | 20.405(e) | | | | 50.73(a)(2)(iv) | | | | 73.71(b) | | | | | | | | | | | |
| POWER LEVEL (10) | | 0 0 0 | | | | 20.406(a)(1)(i) | | | | 50.36(e)(1) | | | | 50.73(a)(2)(v) | | | | 73.71(c) | | | | | | | |
| | | 20.406(a)(1)(ii) | | | | 50.36(e)(2) | | | | 50.73(a)(2)(vi) | | | | OTHER (Specify in Abstract below and in Text, NRC Form 366A) | | | | | | | | | | | |
| | | 20.406(a)(1)(iii) | | | | X 50.73(a)(2)(i) | | | | 50.73(a)(2)(vii)(A) | | | | | | | | | | | | | | | |
| | | 20.406(a)(1)(iv) | | | | 50.73(a)(2)(ii) | | | | 50.73(a)(2)(viii)(B) | | | | | | | | | | | | | | | |
| | | 20.406(a)(1)(v) | | | | 50.73(a)(2)(iii) | | | | 50.73(a)(2)(ix) | | | | | | | | | | | | | | | |
| LICENSEE CONTACT FOR THIS LER (12) | | | | | | | | | | | | | | | | | | | | | | | | | |
| NAME K. S. Moore, Director - Plant Technical, extension 3210 | | | | | | | | | | TELEPHONE NUMBER 2 1 7 9 3 5 - 8 8 8 1 | | | | | | | | | | | | | | | |
| COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13) | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAUSE | SYSTEM | COMPONENT | MANUFACTURER | REPORTABLE TO NRRDS | | CAUSE | SYSTEM | COMPONENT | MANUFACTURER | REPORTABLE TO NRRDS | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | |
| SUPPLEMENTAL REPORT EXPECTED (14) | | | | | | | | | | EXPECTED SUBMISSION DATE (15) | | | MONTH | DAY | YEAR | | | | | | | | | | |
| X YES (If yes, complete EXPECTED SUBMISSION DATE) | | | | | | | | | | NO | | | 0 | 2 | 1 | 5 | 9 | 1 | | | | | | | |

ABSTRACT (Limit to 1400 spaces, i.e., approximately fifteen single space typewritten lines) (16)

At approximately 2100 hours, on November 29, 1990, with the plant in Mode 5 (REFUELING) and CORE ALTERATIONS in progress, a Radiation Protection technician discovered the secondary containment access to the Residual Heat Removal (RHR) 'A' Heat Exchanger (HX) room breached. This event is prohibited by Technical Specification 3.6.6.1, which requires secondary containment integrity be maintained during CORE ALTERATIONS. A thorough investigation could not determine the person or persons responsible for breaching secondary containment. The cause of this event cannot be determined. The most probable cause is the lack of respect or knowledge by person or persons for the requirements of secondary containment integrity and other controlled boundary doors. Corrective actions include: placed the secondary containment electrical airlock interlock for the access to RHR 'A' HX room back into operation; and informed personnel with access to the Protected Area that no door is to be taped, blocked, or otherwise impaired without permission from appropriate supervision.

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

U.S. NUCLEAR REGULATORY COMMISSION

APPROVED OMB NO. 3150-0104

EXPIRES: 8/31/88

| | | | | | | | |
|--|--|----------------|-------------------|-----------------|----------|----|-----|
| FACILITY NAME (1) Clinton Power Station | DOCKET NUMBER (2) 0 5 0 0 0 4 6 1 9 0 | LER NUMBER (6) | | | PAGE (3) | | |
| | | YEAR | SEQUENTIAL NUMBER | REVISION NUMBER | | | |
| | | 9 0 | 0 1 6 | 0 0 | 0 2 | OF | 0 6 |

TEXT (If more space is required, use additional NRC Form 306A's) (17)

DESCRIPTION OF EVENT

At approximately 2100 hours, on November 29, 1990, during the plant's second refueling outage (RF-2), with the plant in Mode 5 (REFUELING) and CORE ALTERATIONS in progress, a Radiation Protection (RP) technician observed four doors [DR] not properly secured while she was escorting contractor craftsmen into the RHR 'B' HX room on the 737-foot elevation. The Residual Heat Removal (RHR) [BO] 'B' Heat Exchanger (HX) [HX] was functioning as the operable shutdown cooling loop, maintaining reactor [RCT] coolant within a temperature band of eighty to ninety degrees Fahrenheit and at atmospheric pressure.

The RP technician found four doors in the following condition:

- ° The RHR 'A' HX room outer interlock [IEL] door, door 258, was held open with a roll of yellow tape between the door and door frame. Door 258 is a High Radiation and secondary containment integrity boundary normally locked shut (see Figure 1, on page 6). The Shift Supervisor (SS) and Radiation Protection Shift Supervisor (RPSS) maintain administrative control of the keys to unlock it.
- ° The RHR 'A' HX room inner interlock door, door 909, was held open approximately three inches by two three-eighths inch sleeved Local Leak Rate Test (LLRT) tubes [TBG] running under the door. Door 909, normally shut, latched and interlocked to door 258, is a Fire Protection and secondary containment integrity boundary (see Figure 1, page 6). The secondary containment electrical airlock interlock had been defeated.
- ° Door 256, between the RHR 'A' HX room and Main Steam [SB] Isolation Valve (MSIV) Leakage Control System (LCS) [BD] room, was found held open approximately three inches by an LLRT hose running under the door, and had had its latch taped over to prevent the door from latching (see Figure 1, on page 6). Door 256 does not perform any controlled boundary function except as a ventilation barrier during normal plant operations.
- ° Door 907, between the RHR 'B' HX room and MSIV Blower room, was found closed, but had had its latch taped over to prevent the door from latching (see Figure 1, on page 6). Door 907, normally shut and latched, is a Fire Protection boundary.

The RP technician took the following immediate action upon discovery of the above condition: 1) removed the roll of tape, and shut and locked door 258, 2) removed the LLRT tubes from under the door and shut door 909, 3) removed tape over the latch of door 256, but left the LLRT hose in place, and 4) removed the tape over the latch and shut door 907.

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

| FACILITY NAME (1) | DOCKET NUMBER (2) | LER NUMBER (6) | | | PAGE (3) | | |
|-----------------------|-------------------|----------------|-------------------|-----------------|----------|----|-----|
| | | YEAR | SEQUENTIAL NUMBER | REVISION NUMBER | | | |
| Clinton Power Station | 0 5 0 0 0 4 6 1 | 9 0 | — 0 1 6 | — 0 0 | 0 3 | OF | 0 6 |

TEXT (If more space is required, use additional NRC Form 365A's) (17)

The RP technician then exited from RHR 'A' HX room, a contamination area, and initiated Condition Report (CR) 1-90-11-101.

At approximately 2220 hours, the SS was informed of the condition identified. The SS directed that Clinton Power Station (CPS) surveillance procedure 9065.01, "Secondary Containment Access Integrity," be performed to verify no other discrepancies existed.

At 0115 hours, on November 30, 1990, CPS surveillance procedure 9065.01 was completed and satisfactorily verified secondary containment access integrity.

Investigation into this event determined secondary containment integrity was breached sometime after 1545 hours, on November 29, 1990, until the condition was discovered and corrected at approximately 2100 hours, on November 29, 1990. During this time, fifty-five fuel moves had been made and a one-quarter inch water gauge negative pressure was maintained by the Fuel Building Heating, Ventilation, and Air Conditioning System (VF) [VG]. On November 27, 1990, Plant Staff - Technical had completed an LLRT of LMC-061 penetration, and left the three-eighths inch sleeved LLRT tubing running beneath door 907 into the RHR 'A' HX room. At that time, the LLRT tubing was not preventing door 907 from being shut. The investigation could not determine how long doors 256 and 907 had been impaired with tape over their latches, preventing them from latching, or how long the secondary containment electrical airlock interlock had been defeated.

No other automatic or manually initiated safety system responses were necessary to place the plant in a safe and stable condition. No other equipment or components were operable at the start of this event such that their inoperable condition contributed to this event.

CAUSE OF EVENT

Illinois Power Company's (IP) investigation into this event included interviews of appropriate personnel with access under an approved Radiation Work Permit (RWP) into the RHR HX rooms on November 29, 1990. This investigation could not determine the cause of this event, since no person or persons can be identified who impaired the specified doors; however, the most probable cause is the lack of respect or knowledge by person or persons for the requirements of secondary containment integrity, High Radiation, and Fire Protection boundary doors.

CORRECTIVE ACTION

The secondary containment electrical airlock interlock for doors 258 and 909 was placed back into operation on December 20, 1990.

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

APPROVED OMB NO. 3150-0104

EXPIRES: 8/31/88

| FACILITY NAME (1) | DOCKET NUMBER (2) | LER NUMBER (6) | | | PAGE (3) | |
|-----------------------|-------------------|----------------|-------------------|-----------------|----------|---------|
| | | YEAR | SEQUENTIAL NUMBER | REVISION NUMBER | | |
| | | | | | | |
| Clinton Power Station | 0500046190 | 0 | 16 | 0 | 0 | 4 OF 06 |

TEXT (If more space is required, use additional NRC Form 365A's) (17)

All personnel with access to the Protected Area were informed that no door is to be taped, blocked, or otherwise impaired without permission from the appropriate supervision.

ANALYSIS OF EVENT

This event is reportable under provisions of 10CFR50.73(a)(2)(i)(B) due to an operation prohibited by Technical Specification 3.6.6.1. Technical Specification 3.6.6.1 requires secondary containment integrity be maintained in Modes 1 (POWER OPERATION), 2 (STARTUP), 3 (HOT SHUTDOWN), when irradiated fuel is being handled in secondary containment, during CORE ALTERATIONS, and during operations with a potential for draining the reactor vessel [RPV]. At least one door in each access must be closed to maintain secondary containment integrity, except during normal entry and exit.

IP is still evaluating the safety consequences and implications of this event and will provide this information in a supplement to this report by February 15, 1991.

No release of radioactive material to the outside environment occurred as a result of this event.

The impairment of Fire Protection boundary doors, doors 909 and 907, is a violation of CPS administrative procedure 2893.01, "Fire Protection Impairment Reporting." Since the fire doors were not known to be impaired by appropriate supervision, the necessary compensatory measures were not taken. Although the act of impairing Fire Protection boundary doors is significant, IP evaluated this event and determined that the impairment did not significantly degrade or compromise plant safety or maintenance of the plant in a safe shutdown condition.

Door 258, a High Radiation door, was required to remain locked except during periods of access by personnel under an approved RWP in accordance with IP Corporate Nuclear Procedure (CNP) 5.01. Subsequent to this event, CNP 5.01 has been revised to reflect the requirements of Technical Specification 6.12, "HIGH RADIATION AREA," which requires each high radiation area in which the intensity of radiation is greater than 100 millirem (mrem) per hour but less than 1000 mrem per hour be barricaded and conspicuously posted as a high radiation area, and entrance controlled by requiring issuance of an RWP. Only high radiation areas in which the intensity of radiation is greater than 1000 mrem per hour are required to remain locked to prevent unauthorized entry. The High Radiation Area within the boundary of door 258 had radiation levels less than 1000 mrem per hour, and therefore was not required by Technical Specifications to remain locked.

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

U.S. NUCLEAR REGULATORY COMMISSION

APPROVED OMB NO. 3150-0104

EXPIRES: 8/31/88

| | | | | | | | |
|--|--|----------------|----------------------|--------------------|----------|---|---|
| FACILITY NAME (1) Clinton Power Station | DOCKET NUMBER (2) 0 5 0 0 0 4 6 1 9 0 | LER NUMBER (6) | | | PAGE (3) | | |
| | | YEAR | SEQUENTIAL NUMBER | REVISION NUMBER | | | |
| | | 0 | 1 | 6 | 0 | 0 | 5 |

TEXT (If more space is required, use additional NRC Form 305A's) (17)

ADDITIONAL INFORMATION

LER 86-002-00 discussed the loss of secondary containment negative pressure due to personnel defeating the interlock switch on outer airlock doors.

For further information regarding this event, contact K. S. Moore, Director - Plant Technical at (217) 935-8881, extension 3210.

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

U.S. NUCLEAR REGULATORY COMMISSION

APPROVED OMB NO. 3150-0104

EXPIRES: 8/31/88

FACILITY NAME (1)

DOCKET NUMBER (2)

LER NUMBER (6)

PAGE (3)

Clinton Power Station

0 5 0 0 0 4 6 1 9 0 - 0 1 6 - 0 0 0 6 OF 0 6

TEXT (If more space is required, use additional NRC Form 306A's) (17)

FIGURE 1

AUXILIARY BUILDING
737 FOOT ELEVATION