



Commonwealth Edison
 Braidwood Nuclear Power Station
 Route #1, Box 84
 Braceville, Illinois 60407
 Telephone 815/458-2801

DCD

January 4, 1991
 BW/91-0010

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

Dear Sir:

The enclosed Licensee Event Report from Braidwood Generating Station is being transmitted to you in accordance with the requirements of 10CFR50.73(a)(2)(i)(B) which require a 30-day written report.

This report is number 90-022-00; Docket No. 50-456.

Very truly yours,

K. L. Kofron
 Station Manager
 Braidwood Nuclear Station

KLK/JDW/clf
 (226/ZD85G)

Enclosure: Licensee Event Report No. 90-022-00

cc: NRC Region III Administrator
 NRC Resident Inspector
 INPO Record Center
 CECO Distribution List

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LICENSEE EVENT REPORT (LER)

Form Rev 2.0

Facility Name (1) Braidwood 1 Docket Number (2) 0 5 0 0 0 4 5 6 Page (3) 1 of 0 3

Title (4) Inadequate Fuel Handling Building Crane Interlocks due to an Apparent Preservice Design Deficiency

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	Docket Number(s)
11	2	07	90	022	00	10	5	91		05000

OPERATING MODE (9) 1

POWER LEVEL (10) 0 9 4

THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10CFR (Check one or more of the following) (11)

<input type="checkbox"/> 20.402(b)	<input type="checkbox"/> 20.405(c)	<input type="checkbox"/> 50.73(a)(2)(iv)	<input type="checkbox"/> 73.71(b)
<input type="checkbox"/> 20.405(a)(1)(i)	<input type="checkbox"/> 50.36(c)(1)	<input type="checkbox"/> 50.73(a)(2)(v)	<input type="checkbox"/> 73.71(c)
<input type="checkbox"/> 20.405(a)(1)(ii)	<input type="checkbox"/> 50.36(c)(2)	<input type="checkbox"/> 50.73(a)(2)(vii)	<input type="checkbox"/> Other (Specify in Abstract below and in Text)
<input type="checkbox"/> 20.405(a)(1)(iii)	<input checked="" type="checkbox"/> 50.73(a)(2)(i)	<input type="checkbox"/> 50.73(a)(2)(viii)(A)	
<input type="checkbox"/> 20.405(a)(1)(iv)	<input type="checkbox"/> 50.73(a)(2)(ii)	<input type="checkbox"/> 50.73(a)(2)(viii)(B)	
<input type="checkbox"/> 20.405(a)(1)(v)	<input type="checkbox"/> 50.73(a)(2)(iii)	<input type="checkbox"/> 50.73(a)(2)(x)	

LICENSEE CONTACT FOR THIS LER (12)

Name Jerald D. Wagner, Reg. Assurance Ext. 2497 TELEPHONE NUMBER 8 1 5 4 5 8 - 2 8 0 1

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

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRPDS	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRPDS

SUPPLEMENTAL REPORT EXPECTED (14)

Expected Submission Date (15) X YES NO

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

On November 21, 1990 the Fuel Handling Supervisor (FHS) was reviewing the Fuel Handling Building Crane (FHBC) surveillance with several Fuel Handling Operators (FHO). The purpose of the procedure was to verify that the interlocks and stops prevented crane travel with loads in excess of 2000 pounds, over fuel assemblies in the Spent Fuel Pit (SFP). The FHS was alerted to a potential concern with the the FHBC interlocks. Although the crane successfully passed the requirements of the procedure, the interlocks, as they existed may not have prevented FHBC movement over a small portion of the south east corner of the SFP. Performance of the surveillance had been suspended in October of 1990 when the FHBC was removed from service for maintenance. On December 7, 1990 it was discovered that the interlocks did not prevent movement of the crane over a small portion of the SFP. The cause of the FHBC interlocks being inadequate was a Preservice Design Deficiency. The original interlock scheme was to provide for removal of a spent fuel cask from its storage location in the north east section of the pool. It appears that the interlock scheme was designed & installed incorrectly. The cause of the procedural deficiency was inadequate technical review. The FHBC will be modified. The procedures will be revised. There have been no previous occurrences.

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

Form Rev 2.0

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		Year	Sequential Number	Revision Number			
Braidwood 1	0 5 0 0 0 4 5 6	9 0	- 0 2 2	- 0 0	0 2	OF	0 3

TEXT Energy Industry Identification System (EIS) codes are identified in the text as [XX]

A. Plant Conditions Prior to Event:

Unit: Braidwood 1; Event Date: December 7, 1990; Event Time: 1412;
 Mode: 1 - Power Operation; Rx Power: 94%;
 RCS [AB] Temperature / Pressure: NOT/NOP;

B. Description of Event:

There were no systems or components inoperable at the beginning of the event which contributed to the severity of the event.

On November 21, 1990 the Fuel Handling Supervisor (FHS) (Licensed Senior Reactor Operator) was reviewing the Unit 0 Braidwood Operating Surveillance (OBWOS) 9.7.1, "Crane Travel - Spent Fuel Storage Pool Surveillance" with several Fuel Handling Operators (FHO) (non-Licensed Operating Personnel). The purpose of the procedure was to verify that the interlocks and stops of the Fuel Handling Building Crane (FHBC) [DB] prevented crane travel with loads in excess of 2000 pounds, over fuel assemblies in the Spent Fuel Pit (SFP) [DA]. During FHS's discussions with the FHO's, the FHS was alerted to a potential concern with the FHBC interlocks. Although the crane successfully passed the requirements of the procedure, the interlocks, as they existed, may not have prevented FHBC movement over a small portion of the south east corner of the SFP. Performance of the surveillance had been suspended in October of 1990 when the FHBC was removed from service for maintenance.

On December 7, 1990 as part of the maintenance testing, OBWOS 9.7.1 was performed at the direction of the FHS. It was discovered that the interlocks did not prevent movement of the crane over a small portion of the SFP.

This event is being reported pursuant to 10CFR50.73(a)(2)(i)(B) - any operation or condition prohibited by the plant's Technical Specifications.

C. Cause of Event:

The root cause of the FHBC interlocks being inadequate to prevent movement over a small portion of the south east corner of the SFP was a Preservice Design Deficiency. The interlock scheme was originally designed to allow removal of a spent fuel cask from the fuel cask storage area which is located in the north east corner of the SFP. It appears that the interlock scheme was designed or installed incorrectly. The investigation to determine the cause of this is in progress and will be tracked to completion by action item 456-200-90-0590). A supplemental report will be issued if any significant information regarding the cause of the event is identified.

The cause of procedure OBWOS 9.7.1 not adequately verifying the surveillance requirements has been attributed to inadequate technical review. The procedures associated with FHBC operation had been approved for use in 1986.

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

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TEXT Energy Industry Identification System (EIIS) codes are identified in the text as [XX]

D. Safety Analysis:

This event had no effect on the safety of the plant or the public. In addition to the interlocks, FHBC operation is controlled by administrative requirements. These requirements prohibit operation of the FHBC over the SFP with loads in excess of 2000 pounds.

Only recently, February 1990, have irradiated fuel assemblies been stored in this portion of the SFP. These assemblies have been initial core load, single cycle-low enrichment assemblies, significantly below the limits of "Hot Fuel" as defined in NUREG 0612, "Control of Heavy Loads At Nuclear Power Plants". In the unlikely event that a load in excess of 2000 pounds had dropped in this area of the SFP the worst credible damage would neither create a critical geometry nor exceed the release rates, as defined in the basis for the Technical Specification or the limits established per Figure 2.1-1 of NUREG 0612.

E. Corrective Actions:

The FHBC was removed from service upon discovery that the interlocks were inadequate.

The FHBC interlocks will be modified to preclude movement above fuel assemblies in the SFP with loads in excess of 2000 pounds. This action will be tracked to completion by action item 456-200-90-05902.

The associated FHBC procedures will be revised to incorporate the modification and ensure that the procedures adequately test FHBC requirements. This action will be tracked to completion by action item 456-200-90-05903.

F. Previous Occurrences:

There have been no previous similar occurrences.

G. Component Failure Data:

This event was not the result of component failure, nor did any components fail as a result of this event.