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FACIL: 50-315 Donald C. Cook Nuclear Power Plant, Unit 1, Indiana & 05000315
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RECIP. NAME RECIPIENT AFFILIATION

SUBJECT: LER 85-023-01: on 850502, auxiliary bldg crane traveled over spent fuel pool w/heavy load, contrary to Tech Spec 3.9.7. Caused by misinterpretation of NUREG-0612 definition of "heavy load." Tech Spec 3.9.7 revised. W/870502 ltr.

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TITLE: 50.73 Licensee Event Report (LER), Incident Rpt, etc.

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NRC Form 366
(9-83)

U.S. NUCLEAR REGULATORY COMMISSION
APPROVED OMB NO. 3150-0104
EXPIRES: 8/31/88

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1)	DOCKET NUMBER (2)	PAGE (3)
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TITLE (4)
Travel of Heavy Load over Spent Fuel due to NUREG 0612 misinterpretation

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)
0 5	0 2	8 5	8 5	— 0 2 3	— 0 1	0 7	1 4	8 7	D. C. Cook - Unit 1	0 5 0 0 0 3 1 6
										0 5 0 0 0

OPERATING MODE (9)	6	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11)			
POWER LEVEL (10)	0 0 0	20.402(b)	20.405(c)	50.73(a)(2)(iv)	73.71(b)
		20.405(a)(1)(i)	50.36(c)(1)	50.73(a)(2)(v)	73.71(c)
		20.405(a)(1)(ii)	50.36(c)(2)	50.73(a)(2)(vii)	OTHER (Specify in Abstract below and in Text, NRC Form 366A)
		20.405(a)(1)(iii)	X 50.73(a)(2)(i)	50.73(a)(2)(viii)(A)	
		20.405(a)(1)(iv)	50.73(a)(2)(ii)	50.73(a)(2)(viii)(B)	
		20.405(a)(1)(v)	50.73(a)(2)(iii)	50.73(a)(2)(x)	

LICENSEE CONTACT FOR THIS LER (12)

NAME	TELEPHONE NUMBER
	AREA CODE
J. D. Allard, Maintenance Superintendent	6 1 6 — 4 6 5 - 5 9 0 1

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

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS		CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS	

SUPPLEMENTAL REPORT EXPECTED (14)		EXPECTED SUBMISSION DATE (15)	MONTH	DAY	YEAR
YES (If yes, complete EXPECTED SUBMISSION DATE)	X NO				

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

On May 2, 1985 with the Unit 1 Reactor in Mode 6 (Refueling) and Unit 2 Reactor in Mode 1 (Power Operation) at 100 percent thermal power, the Auxiliary Building Crane traveled, unloaded, over the Spent Fuel Pool. This condition was contrary to Technical Specification 3.9.7 in that the crane's load block was at that time defined as a heavy load.

The cause of this event has been determined to be the failure of Plant Personnel to recognize that the main load block on the Auxiliary Building Crane constituted a heavy load. It was believed that heavy loads were applicable to items being transported by the crane and not components of the crane.

The corrective action taken was to change Technical Specification 3.9.7 by adding a footnote which defines the conditions necessary in order to place the main load block over the Spent Fuel Pool. The preventive actions were to impose restrictions on the crane and provide training to the operators.

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TEXT (If more space is required, use additional NRC Form 366A's) (17)

Conditions Prior to Occurrence

Unit One - Mode 6 (refueling) at 0 Percent Reactor Thermal Power

Unit Two - Mode 1 (power operation) at 100 Percent Reactor Thermal Power

Description of Event

On May 2, 1985 during a review of NUREG 0612 requirements, it was determined that on occasion, between June 1982 and April 1985, the Auxiliary Building Crane's interlocks (EIIS/33) were defeated, allowing the Auxiliary Building Crane's main load block (EIIS/CRN) to travel over spent fuel assemblies in the Spent Fuel Pit (EIIS/RK). This condition was contrary to Technical Specification (T.S.) 3.9.7. The interlocks had been bypassed by the key-operated bypass switch (EIIS/HS) in order to allow the Auxiliary Building Crane to be used for normal maintenance activities such as retrieval of refueling tools (EIIS/FHM) from storage and maintenance of lighting fixtures over the Spent Fuel Pit.

At no time was any load carried over the Spent Fuel Pit on the main hook. During operations which resulted in traversing of the main hook over the pit area, virtually the same conditions subsequently required by the footnotes to T.S. 3.9.7 were in effect. Although the main hoist breaker (EIIS/BKR) was not open, the hoist mechanism was never operated, therefore, it remained de-energized.

There were no other inoperable structures, components or systems that contributed to this event.

Cause of Event

The cause of this event has been determined to be the failure of Plant Personnel to recognize that the main load block on the Auxiliary Building Crane constituted a heavy load. It was believed that heavy loads were applicable to items being transported by the crane and not components of the crane.

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TEXT *(If more space is required, use additional NRC Form 366A's)* (17)

Analysis of Event

It is concluded that this event is reportable per 10CFR50.73(a)(2)(i)(B).

Technical Specification 3.9.7 prohibited loads in excess of 2500 pounds to travel over fuel assemblies stored in the Spent Fuel Pit. The Auxiliary Building Crane's load block weighs 4.25 tons. The immediate preventive actions taken were to place additional administrative controls on the movement of the crane. The main hoist breaker was de-energized and a clearance permit taken to prevent operation of the hoist or the key operated bypass switch. Training sessions were held for all crane operators to reinforce the requirements of NUREG 0612 and T.S. 3.9.7.

Exxon Nuclear performed an analysis of a load block drop over the spent fuel assemblies and concluded that the damage to assemblies due to the drop of the load block would not cause a release of radiation exceeding the limitations imposed by 10CFR100. This load drop analysis was submitted to the NRC for review on January 9, 1987.

Based on the results of the load drop analysis, Technical Specification 3.9.7 was changed by Amendments 79 and 93, adding a footnote which states; "This does not include the main load block, which weighs approximately 4.25 tons. Whenever the load block is moved over the pool, the main hoist must be de-energized and be carrying no load." The changes made to Technical Specification 3.9.7 constitute permanent corrective measures.

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TEXT (If more space is required, use additional NRC Form 366A's) (17)

Corrective Actions

The appropriate Plant Procedures have been modified to clearly indicate that the load block of the Auxiliary Building Crane is to be considered as a heavy load. Administrative controls regarding movement of the Auxiliary Building Crane over the Spent Fuel Pit have been strengthened. Technical Specification 3.9.7 has been changed defining conditions required whenever the load block is moved over the Spent Fuel Pool, i.e. the main hoist must be de-energized and be carrying no load, Amendments No. 79 and 93.

Failed Component Identification

None

Previous Similar Events

None identified at this time.

American Electric Power System
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July 14, 1987

United States Nuclear Regulatory Commission
Document Control Desk
Washington, D.C. 20555

Operating License DPR-58
Docket No. 50-315

Document Control Manager:

In accordance with the criteria established by 10 CFR 50.73 entitled Licensee Event Reporting System, the following report is being submitted:

85-023-01

Sincerely,

W. G. Smith, Jr.
Plant Manager

WGS:afh

Attachments

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