UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of	)	Docket Nos. 50-237-SP
COMMONWEALTH EDISON COMPANY	)	50-249-SP
(Dresden Station,	)	(Spent Fuel Pool
Units 2 & 3)	)	Modification)

Dear Administrative Judges:

Enclosed are two letters relating to Commonwealth Edison's use of the 9 ton auxiliary hook of the main overhead crane system during the 1981 installation of 5 high density spent fuel racks at Dresden Station. This use was not contemplated by Edison's testimony in this proceeding, and was the subject of my telephone calls to Chief Judge Wolf and the other parties on August 26, 1982.

The first enclosure dated August 30, 1982 is a letter from Doug Scott, Station Superintendent at Dresden. It explains what happened and why, the safety significance of the use of the crane and the corrective action taken. In addition, this letter indicates that the side of the pool should have been marked with tape to indicate the safe load path but was not. However, I am informed that the correct load path was taken despite the absence of the marking tape.

The second letter, dated August 26, 1982, from Tom Rausch to Darrell Eisenhut reflects Edison's reporting and discussion of this incident with the NRC Staff.

Commonwealth Edison believes that the incident described herein is a matter for NRC Region III, and does not require reopening the record in this proceeding. We sincerely regret the occurrence of this incident.

Respectfully submitted,

Philip P. Steptoe (by RGF)

RGF:es

Enc.

cc: Service List

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August 30, 1982

DJS LTR: 82-922

TO: D. L. DelGeorge
Director of Nuclear Licensing

SUBJECT: Failure to Meet Commitments Contained in Testimony for Hearings on the Installation of High Density Spent Fuel Storage Racks at Dresden

I. Description of Event

On August 24, 1982, Commonwealth Edison Quality Assurance personnel at Dresden Station observed that the 9-ton auxiliary hoist on the 125-ton reactor building overhead crane was being used to move high density spent fuel racks still in shipping skids, and made an inquiry to determine if the weight of a high density rack in a shipping skid might not exceed the rated capacity of the auxiliary hoist. The cognizant engineer for the reracking operation investigated the matter in response to the Q.A. request. The loads and crane capacity are tabulated below:

9 x 11 High density rack	11,770 lbs., or 17,470 lbs. with skid
9 x 13 High density rack	13,825 lbs., or 19,525 lbs. with skid
Shipping skid	5,700 lbs.
Old spent fuel rack	1,800 lbs.
9-Ton auxiliary hoist capacity	18,000 lbs.

While reviewing various affadavits and testimony to obtain the requested information, the cognizant engineer also discovered that a commitment by the Station to use the redundant 125-ton main hoist for moving the high density racks was not being met. The reracking was halted and an investigation into the matter was made.

The investigation revealed that following verbal approval of the NRC on September 11, 1981, for partial installation of 5 high density racks, the 9-ton auxiliary hoist was used to install 5 racks in the Unit 3 spent fuel pool on October 8 and 9, 1981. Also, the side of the pool was not marked with tape to indicate to the crane operator the safe load path to bring the new racks over the pool side. All other commitments were met (and continue to be met) including mandrel testing, neutron attenuation testing, corrosion surveillance program, etc.

The commitments to use the redundant 125-ton main hoist and to mark safe load paths are contained in the written affadavit of Scott C. Pedigo of Commonwealth Edison Company, submitted to the Atomic Safety and Licensing Board on May 5, 1981.

The reason for the aforementioned commitments was the need, during the hearing process, to address the unresolved safety issue of heavy load handling with respect to the reracking operation. The basis of the

commitments is NUREG-0612. The Station agreed in the hearings to meet NUREG-0612 guidelines for the reracking operation, although application of the guidelines for Station operations as a whole is being negotiated with the NRC.

NUREG-0612 guidelines call for either use of a redundant lifting system when handling heavy loads (anything more than the weight of a single fuel assembly) in certain areas of a nuclear power plant, such as over a fuel pool or reactor cavity, or else providing analyses for all possible load drops. The single failure proof criteria (redundancy) may be achieved by use of dual load carrying equipment, each with a safety factor of 5, or single equipment, with a safety factor of 10. The 125-ton main hoist meets this criteria[1], but the 9-ton auxiliary hoist on the Reactor Building overhead crane does not.

II. Safety Significance

The possible impact on public health and safety of using the 9-ton hoist was minimal since no loads were handled over spent fuel and the worst result of dropping a high density rack in the pool would be moderate damage to the pool liner.[2] Dropping a high density rack on the refueling floor would not cause significant damage to any safety related equipment since the entire refueling floor has been designated as a safe load path.

III. Cause

The direct cause of the event was inadequate written procedures for the reracking operation. Use of the 125-ton main hoist was not specified in the procedures. Failure to include the appropriate commitments in the procedures can be attributed to the following factors:

1. The Station cognizant engineer on the project, who coincidentally prepared the testimony on the heavy load handling issue, was changed in May, 1981 as part of a normal career rotation of assigned duties. This change occurred after completion of the first and second hearings (in Morris and Chicago O'Hare Hilton), but before the procedures were written and implemented. The new cognizant engineer who was involved in the preparation of procedures, and the procedure reviewers, did not have the benefit of first-hand involvement in the hearing process.

2. The amount of correspondence, affadavits, transcripts of oral testimony, findings of fact, partial and final decisions of the ASLB, and orders of the ASLB which had to be reviewed by the assigned SNED and Station cognizant engineers to extract any commitments was extremely large, increasing the probability that something could be missed.

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[1] Dresden Special Report #41

[2] Testimony of Terry A. Pickens, paragraph 41, page 26.

IV. Corrective Action

The redundant 125-ton hoist will be used for all future moving of the high density racks near the spent fuel pool, except that the 9-ton hoist may be used in uprighting the skids holding the racks. The hook on the 125-ton hoist is so large that it interferes with the skid when trying to tip the skid from horizontal to vertical, creating a potential safety hazard. The 9-ton hoist may also be used to move several high density racks away from the side of the Reactor Building where they are stored so that they can be lifted later with the 125-ton hoist. The uprighting operation and the repositioning are performed well away from the spent fuel storage pool.

All affadavits, transcripts, board decisions and orders, etc. are being reviewed to check that no other commitments have been missed. Procedures are also being reviewed against the commitments. This will ensure that all commitments will be met by the Station and that the reracking operation will be carried out as described during the hearing.

Prepared by Scott C Pedigo
S. C. Pedigo
Technical Staff

Approved by J. W. Ragan Jr
D. J. Scott
Superintendent
Dresden Nuclear Power Station

DJS:SCP:hjb

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August 26, 1982

Mr. Darrell G. Eisenhut, Director
Division of Licensing
U.S. Nuclear Regulatory Commission
Washington, DC 20555

Subject: Dresden Station Units 2 and 3
Proposed License Amendment
Concerning High Density Spent
Fuel Racks
NRC Docket Nos. 50-237/249

Reference (a): Cordell Reed letter to E. G.
Case dated May 11, 1978.

Dear Mr. Eisenhut:

On August 26, 1982, Commonwealth Edison made initial notification to NRC Region III, Office of Executive Legal Director, Chief Judge Wolf, the State of Illinois, and the Dresden 2 NRR back-up Project Manager that the 1981 initial installation of five (5) high density spent fuel racks into the Dresden 3 spent fuel pool was made utilizing the auxiliary overhead crane. Testimony before the ASLB concerning this proposed amendment had stated that the redundant overhead crane would be used.

To preclude the possibility of a similar occurrence during the future installation and use of the high density fuel storage racks, Commonwealth Edison is taking measures as reflected in the following proposed license condition to DPR-19 and 25:

> Prior to the installation of high density fuel storage racks, the licensee shall review the testimony before the ASLB to ensure that commitments made by Commonwealth Edison regarding the installation and use of these racks will be complied with.
>
> The redundant overhead crane will be utilized to install the high density fuel storage racks.

Please address any questions you may have concerning this matter to this office.

One (1) signed original and thirty-nine (39) copies of this transmittal are provided for your use.

Very truly yours,

Thomas J. Rausch
Nuclear Licensing Administrator

lm

cc: Region III Inspector Dresden
and Service List

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