

## LICENSEE EVENT REPORT (LER)

FACILITY NAME (1) Davis-Besse Unit 1										DOCKET NUMBER (2) 0 5 0 0 0 3 4 6										PAGE (3) 1 OF 0 6																																							
TITLE (4) Fire Protection Deviations, License Condition 2.C(4).																																																											
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 7			0 9			8 6			8 6			0 3			0			0 1			0 3			2 3			8 8			0 5 0 0 0										0 5 0 0 0																			
OPERATING MODE (9) 5										THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR 5: (Check one or more of the following): (11)										20.402(b)										20.405(c)										50.73(a)(2)(iv)										73.71(b)									
POWER LEVEL (10) 0 1 0 0										20.405(a)(1)(i)										50.38(a)(1)										50.73(a)(2)(v)										73.71(c)																			
										20.405(a)(1)(ii)										50.38(a)(2)										50.73(a)(2)(vi)										Y OTHER (Specify in Abstract below and in Text, NRC Form 366A)																			
										20.405(a)(1)(iii)										50.73(a)(2)(i)										50.73(a)(2)(vii)(A)										Special Report																			
										20.405(a)(1)(iv)										50.73(a)(2)(ii)										50.73(a)(2)(vii)(B)																													
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LICENSEE CONTACT FOR THIS LER (12)																																																											
NAME J. C. Stotz, Associate Nuclear Engineer																				TELEPHONE NUMBER 4 1 1 9 2 4 9 1 - 1 5 1 0 1 0																																							
COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)																																																											
CAUSE			SYSTEM			COMPONENT			MANUFACTURER			REPORTABLE TO NPDOS			CAUSE			SYSTEM			COMPONENT			MANUFACTURER			REPORTABLE TO NPDOS																																
SUPPLEMENTAL REPORT EXPECTED (14)																				EXPECTED SUBMISSION DATE (15)										MONTH			DAY			YEAR																							
YES / If yes, complete EXPECTED SUBMISSION DATE																				X NO																																							
ABSTRACT (Limits to 1400 spaces, i.e., approximately fifteen single-space typewritten lines) (16)																																																											
<p>On July 9, 1986, as a result of on-going design document reviews, discrepancies were found between commitments made in License Amendment 18 (July 26, 1979) and actual plant conditions in the areas of Kaowool wraps, emergency lighting and fire detection.</p> <p>This results in a violation of the Operating License. Compensatory measures have been put in place to address specific Kaowool wrap deficiencies and modification packages are under development to address the hardware deficiencies to achieve compliance with the Operating License. The schedule for implementing these modifications has been accepted by the NRC.</p> <p>On July 12, 1986, as a result of an inspection performed to ensure that the recurrence of Kaowool wrap degradation was eliminated, more deficiencies were found. The fragile nature of Kaowool and amount of work in these areas has continued to lead to degradation. Increased inspection and eventual replacement with a more durable material will resolve this concern.</p> <p>On December 28, 1987, Toledo Edison completed a compliance review of Amendment 18, License Condition 2.c(4). Two additional discrepancies were noted involving not installing additional hand-held fire extinguishers and not installing structural steel fire proofing on supports to four horizontal cable trays. These were evaluated as not being significant due to other compensatory measures or existing fire protection features.</p> <p>This special report is being submitted in compliance with Technical Specification 3.7.10</p>																																																											
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TEXT (if more space is required, use additional NRC Form 366A 3) (17)

Description of Occurrence:

Design document reviews beginning July 9, 1986 while the plant was at cold shutdown (Mode 5) resulted in findings of conditions not in agreement with Amendment 18 (7/26/79) to the Operating License. Three areas of deficiency were found regarding Kaowool wraps, emergency lighting and fire detection commitments.

Amendment 18 identified that conduit wraps for power and control circuits in the Service Water Pump Room were required. Contrary to this, circuits for service water discharge valves had the Kaowool removed and instructions were given not to reinstall since administrative controls are now used negating the need to wrap the service water discharge valve circuits. Both the Service Water System - system procedure and Appendix R Compliance Assessment Report (Rev. 1) take credit for tagging open one service water discharge valve. Even though these documents technically justify the current plant condition a license amendment should have been requested to allow removal of the Kaowool.

Additionally, during a July 12, 1986 QC inspection of Kaowool wraps in the Component Cooling Water Pump Room (Room 238) and the Service Water Valve Room (Room 53), deficiencies in wrap integrity were found. Engineering had requested a review of these areas since previous periodic inspections indicated an on-going degradation due to various work activities around the Kaowool wraps. 37 of 63 circuits requiring fire wraps inspected were considered unsatisfactory (nonfunctional) due to missing Kaowool, damaged Kaowool or missing bands (retainers). Those circuits are listed as follows:

Missing KaowoolDamaged KaowoolMissing Band

37074E  
37449A  
37450A  
37450B  
37493D  
37495E  
37498C  
37591A  
37591B  
37601B  
37601D  
46088D  
CC5095  
CC5096  
JB3722/37493B

37073A  
37073B  
37073E  
37074A  
37074D  
37448A  
36010C  
37452A  
37480A  
37498B  
37499C  
37591A \*  
37591B \*  
37444A  
JB3715  
JB3716  
JT3718

37073D  
37073E +  
37469C  
37499B  
36004E  
36005D  
36201D

\* On Missing Kaowool List Too  
+ On Damaged Kaowool List Too

Other rooms listed in License Amendment 18 that were originally required to have Kaowool wraps are no longer required to as justified by the evaluations provided in the Appendix R

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

Compliance Assessment Report (CAR) (Rev. 1) and Fire Hazards Analysis Report (FHAR) (Rev. 7). Rather than maintain or repair these areas, a change to the License Amendment will be requested.

Amendment 18 also identified areas where emergency lighting is required. A plant review located one area in Room 241 - passage where no 8-hour emergency battery pack light was installed. An adjoining room (Room 230) open to the passage has an 8-hour battery pack light aimed into the passage. However, a cable tray shields the passage from receiving adequate coverage. A recent emergency light survey has already identified additional lighting for the passage and is scheduled for installation prior to the 6th refueling outage.

Amendment 18 identified areas where area type fire detection that was required was not present. A plant review identified two areas (Room 233 and 300) where inadequate or no detection was found. Room 233 - Demineralizer Room is inaccessible except for shield plugs from the room above and contains minimal fire loading (400 BTU/square foot) with all circuits routed in conduit. A review of the CAR (Rev. 1) and FHAR (Rev. 7) indicated no detection is needed due to the unique nature of the room and no reasoning is given in documents leading to License Amendment 18 that justify the need. Therefore, a License Amendment is needed to delete this item. Room 300 - Fuel Handling Area has local equipment detection but no area detection. A review of this area indicates there is a need for area detection and this will be incorporated with other area detection upgrades scheduled prior to startup from the sixth refueling outage. Originally, the local detection may have been considered adequate but current reviews can no longer support this condition.

On December 28, 1987, Toledo Edison completed a compliance review of Amendment 18, License Condition 2.c(4). Two additional discrepancies were noted involving not installing additional hand-held fire extinguishers in Rooms 303 and 320 and not installing structural steel fire proofing on supports to four horizontal cable trays penetrating the 3-hour fire barrier at column 9-F on Elevation 603' - 0".

This information is being submitted as a Special Report per the Action Statement "a" of Technical Specification 3.7.10 due to the nonfunctional barrier condition lasting more than 7 days. Additionally, the License Amendment 18 noncompliances are being reported to document resolution since no other reporting requirement could be identified and the subject is related to the Kaowool deficiencies.

Designation of Apparent Cause of Occurrence:

The pertinent Kaowool deficiencies that still need correction resulted from a management/quality assurance deficiency that allowed unrelated work in an area to degrade Kaowool wraps without appropriate instructions to notify management. Also, procedure AD 1835.00 concerning inspection of Kaowool has not been effective. The fragile nature of

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Davis-Besse Unit 1	0500034686	86	030	01	05	OF 06

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

The engineering analyses of the hand-held fire extinguishers in Rooms 303 and 320 determined that, in order to satisfy NFPA 10 and the FHAR, the existing hand-held dry chemical extinguisher in Room 303 is adequate and that the hand-held CO2 fire extinguisher in Room 320 should be replaced with a hand-held dry chemical extinguisher. The CO2 extinguisher in Room 320 has been replaced. The discrepancy in the license condition will be resolved as part of the Generic Letter 86-10 process.

The existing detection in Rooms 303 and 320 and the existing fire hose stations in surrounding areas provide adequate assurance that a fire in these areas would be promptly detected and extinguished.

The engineering analyses also determined that the cable tray supports at column line 9-F on Elevation 603' - 0" require 3-hour fire proofing consistent with the Toledo Edison and NRC correspondence regarding Rev. 2 of the FHAR. By restart from the current fifth refueling outage, these cable tray supports will be protected with a durable 3-hour fire proofing material. In the interim, hourly fire patrols are located in the area as a compensatory measure.

The Turbine Building area containing the cable tray supports (Fire Area II) has a combustible loading significantly below a 3-hour duration. The specific area containing the cable tray supports is a walkway and, as such, significant transient combustibles would not have been placed near the cable tray supports. Also, the area near these cable tray supports is heavily traveled such that early detection of a fire and quick response by the on-site Fire Brigade would have been possible.

Therefore, the failure to install the additional fire extinguishers and to install the fire proofing on the cable tray supports had no actual or potential safety significance.

Corrective Action:

Pertinent Kaowool wrap deficiencies were repaired under MWO 1-86-2595-00. To prevent recurrence a new procedure (PT 5116.17, Fire Protection System Wrap Periodic Test) was developed to inspect the wraps. Finally, replacement of Kaowool with a more durable material is scheduled prior startup from the 6th Refueling Outage (FCR 85-0266).

The hand-held CO2 fire extinguisher in Room 320 has been replaced with a hand-held dry chemical extinguisher. By restart from the current Fifth Refueling Outage, the cable tray supports at column line 9-F on Elevation 603' - 0" will be protected with durable 3-hour fire proofing material.

As part of the Generic Letter 86-10 process, a license amendment will be requested to delete License Condition 2.C.(4) so that certain Kaowool fire wraps, fire detection in Room 233 and additional hand-held extinguishers in Rooms 303 and 320 will no longer be required.

## LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

U.S. NUCLEAR REGULATORY COMMISSION

APPROVED OMB NO. 3150-0104

EXPIRES 8/31/85

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		86	030	01	06	OF	01

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

1 The remaining License Amendment 18 deficiencies are addressed in the interim by compensatory measures. Actual plant modifications for the cable tray support fire proofing will be implemented during the current fifth refueling outage with the remaining modifications for fire detection to be completed by restart from the sixth refueling outage. The emergency lighting modification has been completed.

Failure Data:

In 1986 the following Licensee Event Reports have been issued on fire protection items: 86-0005 (boot seals), 86-0010 (fire dampers), 86-0017 (inadequate fire barrier), 86-0018 (breaching a fire barrier), 86-0025 (fire detection), and 86-0027 (fire doors).

1 REPORT NO: NP-45-86-04PCAO NO(s): 86-0144 & 87-0561



EDISON PLAZA  
300 MADISON AVENUE  
TOLEDO, OHIO 43652-0001

March 23, 1988

Log No: KA88-0265  
NP-45-86-04 Revision 1

Docket No. 50-346  
License No. NPF-3

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

Gentlemen:

Enclosed is Revision 1 to Special Report 86-030. The revisions to the report are indicated by a "1" in the left margin of each page.

Please destroy or mark superseded your previous copy of this report and replace with the attached revision.

Yours truly,

Louis F. Storz  
Plant Manager  
Davis-Besse Nuclear Power Station

LFS/ed

Enclosure

cc: Mr. A. Bert Davis  
Regional Administrator,  
USNRC Region III

Mr. Paul Byron  
DB-1 NRC Resident Inspector

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