

Indiana Michigan
Power Company
500 Circle Drive
Buchanan, MI 49107 1373



September 14, 2001

United States Nuclear Regulatory Commission
Document Control Desk
Washington, DC 20555

Operating Licenses DPR-58 and DPR-74
Docket Nos. 50-315 and 50-316

Document Control Manager:

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

LER 315/2001-003-00: "Emergency Diesel Generator Inoperable Due to Degraded Ventilation System"

The following commitment is identified in this submittal:

- Provide specific training on the topic of ventilation operability issues to all operations shift personnel as part of continuing training. This training is scheduled to be completed by October 26, 2001.

Should you have any questions regarding this correspondence, please contact Mr. Ronald W. Gaston, Manager, Regulatory Affairs, at 616/697-5020.

Sincerely,

A handwritten signature in black ink that reads "Joseph E. Pollock". The signature is written in a cursive style with a large initial "J".

Joseph E. Pollock
Plant Manager

/pae

Attachment

c: J. E. Dyer, Region III
A. C. Bakken
L. Brandon
T. P. Noonan
R. P. Powers
M. W. Rencheck
R. Whale
NRC Resident Inspector
Records Center, INPO

IE22

NRC Form 366 (6-1998)	U.S. NUCLEAR REGULATORY COMMISSION	APPROVED BY OMB NO. 3150-0104 EXPIRES 06/30/2001
LICENSEE EVENT REPORT (LER)		ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS MANDATORY INFORMATION COLLECTION REQUEST: 50.0 HRS. REPORTED LESSONS LEARNED ARE INCORPORATED INTO THE LICENSING PROCESS AND FED BACK TO INDUSTRY. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE INFORMATION AND RECORDS MANAGEMENT BRANCH (T-6 F33) U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555-0001, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503
(See reverse for required number of digits/characters for each block)		

FACILITY NAME (1) <p style="text-align:center;">Donald C. Cook Nuclear Plant Unit 1</p>	DOCKET NUMBER (2) <p style="text-align:center;">05000-315</p>	PAGE (3) <p style="text-align:center;">1 of 3</p>
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TITLE (4)

Emergency Diesel Generator Inoperable Due to Degraded Ventilation System

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 NAME	DOCKET NUMBER																																			
07	18	2001	2001	-- 003	-- 00	09	14	2001	FACILITY NAME	DOCKET NUMBER																																			
OPERATING MODE (9) 1 THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more) (11)																																													
<table style="width:100%; border:none;"> <tr> <td style="width:20%;"></td> <td style="width:20%; border:1px solid black;">20.2201 (b)</td> <td style="width:20%; border:1px solid black;">20.2203(a)(2)(v)</td> <td style="width:10%; text-align:center;"><input checked="" type="checkbox"/></td> <td style="width:20%; border:1px solid black;">50.73(a)(2)(i)</td> <td style="width:20%; border:1px solid black;">50.73(a)(2)(viii)</td> </tr> <tr> <td>POWER LEVEL (10)</td> <td>100</td> <td>20.2203(a)(1)</td> <td></td> <td>50.73(a)(2)(ii)</td> <td>50.73(a)(2)(x)</td> </tr> <tr> <td></td> <td></td> <td>20.2203(a)(2)(i)</td> <td></td> <td>50.73(a)(2)(iii)</td> <td>73.71</td> </tr> <tr> <td></td> <td></td> <td>20.2203(a)(2)(ii)</td> <td></td> <td>50.73(a)(2)(iv)</td> <td>OTHER</td> </tr> <tr> <td></td> <td></td> <td>20.2203(a)(2)(iii)</td> <td></td> <td>50.73(a)(2)(v)</td> <td rowspan="2" style="font-size: x-small;">Specify in Abstract below or in NRC Form 366A</td> </tr> <tr> <td></td> <td></td> <td>20.2203(a)(2)(iv)</td> <td></td> <td>50.73(a)(2)(vii)</td> </tr> </table>												20.2201 (b)	20.2203(a)(2)(v)	<input checked="" type="checkbox"/>	50.73(a)(2)(i)	50.73(a)(2)(viii)	POWER LEVEL (10)	100	20.2203(a)(1)		50.73(a)(2)(ii)	50.73(a)(2)(x)			20.2203(a)(2)(i)		50.73(a)(2)(iii)	73.71			20.2203(a)(2)(ii)		50.73(a)(2)(iv)	OTHER			20.2203(a)(2)(iii)		50.73(a)(2)(v)	Specify in Abstract below or in NRC Form 366A			20.2203(a)(2)(iv)		50.73(a)(2)(vii)
	20.2201 (b)	20.2203(a)(2)(v)	<input checked="" type="checkbox"/>	50.73(a)(2)(i)	50.73(a)(2)(viii)																																								
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		20.2203(a)(2)(iv)		50.73(a)(2)(vii)																																									

LICENSEE CONTACT FOR THIS LER (12)

NAME <p style="text-align:center;">I.N. Jackiw, Regulatory Affairs</p>	TELEPHONE NUMBER (Include Area Code) <p style="text-align:center;">(616) 465-5901, x1602</p>
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COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO EPIX	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO EPIX
A	EK	DAMP		N					

SUPPLEMENTAL REPORT EXPECTED (14)				EXPECTED SUBMISSION DATE (15)		
	YES (If Yes, complete EXPECTED SUBMISSION DATE).	<input checked="" type="checkbox"/>	NO			

Abstract (Limit to 1400 spaces, i.e., approximately 15 single-spaced typewritten lines) (16)

On July 10, 2001, D.C.Cook personnel identified that the Unit 1 CD Emergency Diesel Generator (EDG) Ventilation System supply fan tempering damper was open about 30 percent instead of being fully closed as required. This condition was reevaluated on July 18, 2001, and determined to be an abnormal configuration. With this damper in the partially open position, the minimum room supply airflow requirements may not have been met on July 10, 2001, thus rendering the CD EDG inoperable to perform its intended safety function. This condition was considered to be a violation of Technical Specification (TS) TS 3.8.1.1, which requires that two independent diesel generators be operable in Modes 1, 2, 3 and 4. The TS also states that if one diesel generator becomes inoperable, the inoperable diesel generator must be restored to operable status within 72 hours. As such, this event is being reported in accordance with 10CFR50.73(a)(2)(i)(B) for an operation or condition that was prohibited by the plant's TS since the condition existed for a period of time greater than 72 hours.

The cause of the event was failure to recognize the operability condition of the tempering damper and take action within 72 hours as required by TS.

Troubleshooting revealed that the EDG supply fan tempering damper drive linkage was out of adjustment. The safety significance of this event was considered to be low. With the EDG supply fan damper partially open, the airflow in the room may only be slightly below the minimum required. For the peak temperature recorded during this event, it was concluded that the EDG room temperature would increase a few degrees over the 130 degree F room design temperature. The short duration of this increase would not significantly affect the electrical components in the room.

Corrective actions initiated include: issuance of an immediate lessons learned memorandum and providing specific training on the topic of ventilation operability issues. The tempering damper linkage was properly adjusted and the CD EDG was declared operable.

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

Conditions Prior to Event

Unit 1 was in Mode 1 at 100% power.

Description of Event

On July 10, 2001, D.C.Cook personnel identified that the Unit 1 CD Emergency Diesel Generator (EDG) (EIS:EK) Ventilation System (EIS:VJ) supply fan tempering damper was open about 30 percent instead of being fully closed as required. At that time, plant personnel determined that the identified configuration did not affect the operability of the EDGs. This condition was reevaluated on July 18, 2001, and determined to be an abnormal configuration. With this damper in the partially open position, the minimum room supply airflow requirements may not have been met, thus rendering the CD EDG inoperable to perform its intended safety function.

This condition was considered to be a violation of Technical Specification (TS) TS 3.8.1.1 which requires that two independent diesel generators be operable in Modes 1, 2, 3 and 4. The TS also states that if one diesel generator becomes inoperable, the inoperable diesel generator must be restored to operable status within 72 hours. As such, this event is being reported in accordance with 10CFR50.73(a)(2)(i)(B) for an operation or condition that was prohibited by the TSs since the condition existed for a period of time greater than 72 hours.

Cause of Event

The cause of the event was failure to recognize the operability condition of the tempering damper and take action within 72 hours as required by TS. Troubleshooting revealed that the EDG supply fan tempering damper drive linkage was out of adjustment. The probable cause for this condition was due to slippage of the adjustment linkage which could have been caused by a loose adjustment screw. However, a cause of the linkage misadjustment could not conclusively be determined. A review of condition reports did not identify any similar damper linkage failures; therefore, this failure is considered an isolated case.

Analysis of Event

The Diesel Generator Room Ventilation System, maintains the EDG room temperature in a nominal range of 70-130 degrees Fahrenheit (F) to ensure operability of the related EDG support equipment and instrumentation. This ensures that the related equipment will function reliably under accident conditions as required by the safety analysis. When the outside air temperature is below 45 degrees F, supply and exhaust tempering dampers open to recirculate some of the EDG room air thereby ensuring the room temperature remains above 70 degrees F. When the outside air temperature is above 45 degrees F, the tempering dampers in the EDG room close and the supply air to the EDG room is completely provided from the outside.

With the supply side tempering damper in the partially open position, room supply airflow is reduced. The minimum required EDG room outside airflow to ensure EDG operability is 30,808 standard cubic feet per minute (scfm). The amount by which the actual room airflow was reduced by the partially open tempering damper has not been quantified. However, due to the small margin between the actual airflow of 32,429 scfm, with the tempering dampers closed, and the minimum required airflow of 30,808 scfm, it was concluded that with the tempering damper partially open, minimum room airflow requirements may not be met. As a result, the CD EDG was declared inoperable.

The safety significance of this event was considered to be low. With the supply fan tempering damper partially open, there would be a slight negative pressure created in the room by the exhaust fan until the room reached equilibrium and the needed ventilation air was obtained through the supply air system. Engineering judgment determined that at this equilibrium point, the airflow could be slightly below the 30,808 scfm airflow that is required. It was also noted that this minimum airflow condition is a concern primarily when the outside air temperature is 91 degrees F. A review of meteorological data for the time period of concern found the highest recorded outside temperature to be 83.4 degrees F. At this temperature, it was concluded that the EDG room temperature would increase a few degrees over the

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130 degree F room design temperature. The short duration of this increase would not significantly affect the electrical components in the room.

Corrective Actions

The immediate corrective action taken was to reinforce, to all Licensed Senior Reactor Operators, CNP's expectations regarding the quality of the analysis associated with prompt operability determinations. This was reinforced by the issuance of a lessons learned memorandum. Additionally, training on the topic of ventilation operability issues will be provided to all operations shift personnel as part of continuing training. This training is scheduled to be completed by October 26, 2001. The supply fan tempering damper linkage was adjusted on July 20, 2001, and the system was placed back to normal operation. Once the linkage was properly adjusted and the adjustment screw tightened, the damper was successfully tested.

The operation of the supply and exhaust tempering dampers was checked for the other three EDG room ventilation systems and were found to be adjusted properly and working correctly. Therefore, this condition was limited to the Unit 1 CD emergency diesel generator.

Previous Similar Events

None