

REPORT OF ABNORMAL OCCURRENCE AND/OR INCIDENT

**NRC DISTRIBUTION FOR PART 50 DOCKET MATERIAL**  
(TEMPORARY FORM)

CONTROL NO: 2715

FILE: INCIDENT REPORT FILE

FROM: Wis. Public Service Corp. Green Bay, Wis. 54305 <del>E.W. James</del>			DATE OF DOC 3-7-75	DATE REC'D 3-12-75	LTR XX	TWX	RPT	OTHER
TO: Mr. E. Case			ORIG 1 signed	CC	OTHER	SENT AEC PDR <u>XX</u>		
						SENT LOCAL PDR <u>XX</u>		
CLASS	UNCLASS XXX	PROP INFO	INPUT	NO CYS REC'D 1		DOCKET NO: 50-305		

DESCRIPTION: Ltr trans the following:

ENCLOSURES: Abnormal Occurrence AO-75-5  
on 2-7-75 re 1A auxiliary feedwater pump  
failed to start....

(1 cy encl rec'd)

**ACKNOWLEDGED**  
**Do Not Remove**

PLANT NAME: Kewaunee Plant

**FOR ACTION/INFORMATION**

DHL 3-14-75

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**INTERNAL DISTRIBUTION**

<del>REG FILE</del> NRC PDR OGC, ROOM P-506A GOSSICK/STAFF CASE GIAMBUSSO BOYD MOORE (L) DEYOUNG (L) SKOVHOLT (L) GOLLER (L) (Ltr) P. COLLINS DENISE REG OPR FILE & REGION T.R. WILSON (3) STEELE	TECH REVIEW <del>SCHROEDER</del> MACCARY KNIGHT PAWLICKI SHAO **STELLO **HOUSTON **NOVAK ROSS IPPOLITO TEDESCO LONG LAINAS BENAROYA VOLLMER	DENTON **GRIMES GAMMILL KASTNER BALLARD SPANGLER  ENVIRO MULLER DICKER KNIGHTON YOUNGBLOOD REGAN PROJECT LDR HARLESS	LIC ASST R. DIGGS (L) H. GEARIN (L) E. GOULBOURNE (L) P. KREUTZER (E) J. LEE (L) M. MAIGRET (L) S. REED (E) M. SERVICE (L) S. SHEPPARD (L) M. SLATER (E) H. SMITH (L) S. TEETS (L) G. WILLIAMS (E) V. WILSON (L) R. INGRAM (L)	A/T IND. BRAITMAN SALTZMAN MELTZ  PLANS MCDONALD CHAPMAN DUBE (Ltr) E. COUPE PETERSON HARTFIELD (2) KLECKER EISENHUT WIGGINTON. F. WILLIAMS HANAUER
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**EXTERNAL DISTRIBUTION**

1 - LOCAL PDR Kewaunee, Wis.	1 - TIC (ABERNATHY) (1)(2)(10) - NATIONAL LABS	1 - PDR-SAN/LA/NY
1 - NSIC (BUCHANAN)	1 - W. PENNINGTON, Rm E-201 GT	1 - BROOKHAVEN NAT LAB
1 - ASLB	1 - CONSULTANTS	1 - G. ULRIKSON, ORNL
1 - Newton Anderson	NEWMARK/BLUME/AGBABIAN	1 - AGMED (RUTH GUSSMAN) Rm B-127 GT
5 - ACRS SENT TO LIC ASST Sheppard 3-14-75		1 - J. D. RUNKLES, Rm E-201 GT
** SEND ONLY TEN DAY REPORTS		

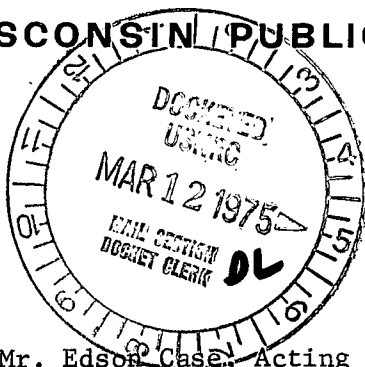
AO-75

WISCONSIN PUBLIC SERVICE CORPORATION



P.O. Box 1200, Green Bay, Wisconsin 54305

March 7, 1975



Mr. Edson Case, Acting Director  
Office of Nuclear Reactor Regulation  
U. S. Nuclear Regulatory Commission  
Washington, D. C. 20555

Dear Mr. Case:

Subject: Docket 50-305  
Operating License DPR-43  
Abnormal Occurrence Report AO 75-5

References: Abnormal Occurrence Reports AO 75-4,  
AO 75-1 and AO 74-19  
Unusual Event Report dated 9/6/74



In accordance with the requirements of Technical Specifications, proposed paragraph 6.9.1 and 1.0.a.1.d, the attached Licensee Event Report is submitted.

Subsequent investigations of the referenced subject abnormal occurrences have indicated that two distinct causes of auxiliary feedwater pump failure to start exist. Abnormal Occurrences 74-19 and 75-1, plus Unusual Event Report dated 9/6/74, were a result of one failure mode which is related to the auxiliary feedwater pump lubricating oil pressure interlock circuits. In these cases, the pump started but tripped after the breaker had closed. The Abnormal Occurrences 75-4 and 75-5 were due to the second failure mode which was a result of a defect in the spare 4160V breaker, that was installed as the corrective action noted in AO 75-1.

The detailed description of the first failure mode and corrective action is as follows:

For each of the Abnormal Occurrences related to the first mode of failure, the 1A auxiliary feedwater pump breaker opened immediately after closing. The problem appeared to be breaker associated and the manufacturer's assistance was requested in the inspection of the breaker. The inspection provided no indication of mechanical failure. The "trip free" time of the breaker was then determined and compared to the Sequence of Events Recorder records of the failures to start. The result of this comparison was a verification that the trip signal existed prior to complete latch-in of the breaker, thus indicating that the failure was not breaker related, but associated with the pump protection

March 7, 1975

instrumentation. The subsequent investigation of the protection instrumentation revealed that the contacts associated with the low oil pressure pump trip actuated prior to the pump start low oil pressure permissive contacts, thereby tripping the pump breaker immediately after a start signal. The deficiency has been corrected by installation of a time delay relay in the low oil pressure trip circuit which delays the low oil pressure trip operability for 15 seconds following a pump start.

The second mode of failure which caused abnormal occurrences 75-4 and 75-5 and the corrective action is noted below:

Corrective action for Abnormal Occurrence 75-1 installed the spare 4160V breaker in the 1A auxiliary feedwater pump breaker cubicle. Slight physical differences between normal and spare breakers resulted in a condition where the cubicle breaker guide bar slot and the interlock operating arm of the spare breaker did not properly engage each other, which resulted in an inability to clear the "breaker in operate position" interlock on every breaker closure. This failure had not been encountered during operation with the normal breaker. The guide bar slot depth has been increased approximately one-sixteenth of an inch. Operational verification, following the modification, has been conducted and no additional failures have occurred to date. The modification was performed with a vendor representative in attendance and with vendor concurrence. Written vendor concurrence has been requested and when received, it is planned to perform a similar modification of all breaker cubicles of this type. In the interim, each similar breaker shall be operationally tested following any maintenance which requires removal of the breaker from the cubicle which provides an opportunity for improper engagement. This requirement, together with normal surveillance tests, should eliminate future failures of this type until appropriate modifications are completed. To date all breakers of this type have been tested during the preoperational test program and during subsequent surveillance testing. This is the initial problem we have experienced and it is a result of a slightly different breaker tolerance. The breakers are McGraw-Edison 5KV Type PSB.

If any additional information is desired in regards to these items, please inform us.

Very truly yours,



E. W. James, Senior Vice President  
Power Generation & Engineering

EWJ:sna  
Enc.

cc - Mr. J. G. Keppler  
Mr. Dwane Boyd

## Regulatory Oversight and

A horizontal number line with arrows at both ends. It has major tick marks labeled 1, 2, 3, 4, 5, and 6. There are also minor tick marks between each major tick mark, representing half-integers.

**[PLEASE PRINT ALL REQUIRED INFORMATION]**

3.7.75

LICENSEE NAME					LICENSE NUMBER								LICENSE TYPE					EVENT TYPE					
01	W	I	K	N	P	1	0	0	-	0	0	0	0	-	0	0	4	1	1	1	1	0	1
7	8	9				14	15									25	26					31	32

CATEGORY		REPORT TYPE	REPORT SOURCE	DOCKET NUMBER					EVENT DATE					REPORT DATE											
01	CON'T	P	O	L	L	0	5	0	-	0	3	0	5	0	2	0	7	7	5	0	3	0	4	7	5
7	8	57	58	59	60	81							68	69						75					80

02 1A auxiliary feedwater pump failed to start on a Lo-Lo SG level signal following  
7 8 9 80

03 a manual turbine trip. 1B pump started normally. A spare 4160V breaker had been  
7 8 9 80

04 installed in 1A cubicle as corrective action for A0 75-1. The pump had failed to  
7 8 9 80

05 start previously as report in A0 75-4. This occurrence identification is A0 75-5.  
7 8 9 80

06  
7 8 9 80

PRIME 60

SYSTEM CODE		CAUSE CODE	COMPONENT CODE					PRIME COMPONENT SUPPLIER	COMPONENT MANUFACTURER				VIOLATION			
0	7	C	H	B	C	K	T	B	R	K	A	M	1	7	5	N
7	6	9	10	11	12					17	43	44			47	48

08 The "operate" position notch in the breaker guide bar was not deep enough to allow  
7 8 9 80  
09 the interlock switch to actuate properly with the spare breaker in the operating  
7 8 9 80  
10 position. See letter to Mr. Edson Case dated 3/7/75 from Mr. E. W. James  
7 8 9 80

11	F	073	NA	2	Operator observation								
7	8	9	10	11	12	13	44	45	46	47	48	49	50
12	Z	Z	NA	NA				LOCATION OF RELEASE					
7	8	9	10	11	12	13	44	45	46	47	48	49	50

NUMBER				TYPE	DESCRIPTION
13	0	0	0	2	NA

NUMBER			DESCRIPTION
14	000		NA

15 | No danger to health and safety of the public

TYPE		DESCRIPTION
16	Z	NA

17	NA
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18	Cause Description (con't) - Slight differences between the normal and spare
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19 breakers prevented proper operation.

PHONE: 414/432-3311