•	AEC DIS IBO	JTION FOR PART		ST MATE	RTAL				
• · · · ·		(TEMPORARY F	ORM)			CON	TROL NO	:	
•						FIL	s:	C	
FROM:		DATE OF DOC	DATE RI	EC'D	LTR	MEMO	RPT	OTHER	
Visconsin Public	Service Corp								
Green Bay, WI	-					Ň			
E. W. James		6-6-74	6-10-	74	·x				
TO:		ORIG	CC (DTHER	1	SENT A	AEC PDR	XXX	
T T OLT	, ·					SENT 1	LOCAL PI		
J. F. O'Leary		1 signed		DECLE					
CLASS UNCLASS	PROP INFO	INPUT	NO CYS	REC'D		DOCKE	C NO:		
DESCRIPTION:			ENCLOSI	IRES .	ļ	50-305			
· · ·			1102000						
tr furn info re a				5		m m m			
3 of 3-13-74 (pre			7	D) NU	T RE	MOVI	EL CONTRACTOR OF	
e loss of inverte				- -	-				
ndividual rod po	sition indicator:	5-5			NTOTT	TIT	UTD		
· · ·				ACK	NUW	Lin	JUD		
PLANT NAME: KEWAN	JNEE .								
		EOD AOTTON/TN				<u> </u>			
		FOR ACTION/IN		<u>6-</u>	11-74	GMC	· ·		
BUTLER(L)	SCHWENCER(L)	ZIEMANN(L)		REGAN					
	W/ Copies	W/ Copies		W/ Co	pies				
CLARK(L)	STOLZ(L)	DICKER(E)						•	
	W/ Copies	W/ Copies		W/ Co	opies				
	VASSALLO(L)	KNIGHTON (E)		• • • •					
W/ Copico	N/ Copico	W/ Copico		· 11/ Co	pico				
KNIEL(L)	PURPLE (L)	YOUNGBLOOD	(E)		-				
	W/ Copies	W/ Copies		W/ Co	opies				
	······	INTERNAL DIST	RIBUTION						
REG FILE	TECH REVIEW	DENTON				A/	T IND		
AEC PDR	HENDRIE	GRIMES	LIC	ASST			AITMAN		
OGC, ROOM P-506A	· · · · · · · · · · · · · · · · · · ·		220				SALTZMAN		
	SCHROEDER	GAMMILL		DIGGS (L)			B. HURT		
	SCHROEDER MACCARY	GAMMILL KAS TNER					HURT		
MUNTZING/STAFF		KAS TNER	GEA	RIN (L)		Β.			
MUNTZING/STAFF CASE	✓ MACCARY ✓ KNIGHT	KAS TNER BALLARD	GEA GOU	RIN (L) LBOURNE		B. PL	ANS		
MUNTZING/STAFF CASE GIAMBUSSO	✓MACCARY	KAS TNER	GEA GOU LEE	RIN (L) LBOURNE (L)	(L)	B. <u>PL</u> MC	<u>ANS</u> DONALD		
MUNTZING/STAFF CASE GIAMBUSSO BOYD	✓ MACCARY ✓ KNIGHT ✓ PAWLICKI ✓ SHAO	KAS TNER BALLARD SPANGLER	GEA GOU LEE MAI	RIN (L) LBOURNE (L) GRET (L	(L)	B. <u>PL</u> MC	ANS	put	
MUNTZING/STAFF CASE GIAMBUSSO BOYD MOORE (L)(BWR)	MACCARY KNIGHT PAWLICKI SHAO STELLO	KAS TNER BALLARD SPANGLER <u>ENVIRO</u>	GEA GOU LEE MAI REE	RIN (L) LBOURNE (L) GRET (L D (E)	(L)	B. PL MC DU	ANS DONALD BE w/In	put	
AUNTZING/STAFF CASE GIAMBUSSO BOYD AOORE (L)(BWR) DEYOUNG(L)(PWR)	/MACCARY /KNIGHT /PAWLICKI /SHAO /STELLO /HOUSTON	KASTNER BALLARD SPANGLER <u>ENVIRO</u> MULLER	GEA GOU LEE MAI REE SER	RIN (L) LBOURNE (L) GRET (L D (E) VICE (L	(L))	B. <u>PL</u> MC DU IN	ANS DONALD BE w/In FO	put	
MUNTZING/STAFF CASE GIAMBUSSO BOYD MOORE (L)(BWR) DEYOUNG(L)(PWR) SKOVHOLT (L)	MACCARY KNIGHT PAWLICKI SHAO STELLO HOUSTON NOVAK	KASTNER BALLARD SPANGLER <u>ENVIRO</u> MULLER DICKER	GEA GOU LEE MAI REE SER SHE	RIN (L) LBOURNE (L) GRET (L D (E) VICE (L PPARD ((L))) L)	B. <u>PL</u> MC DU <u>IN</u> C.	ANS DONALD BE w/In FO MILES	put	
MUNTZING/STAFF CASE GIAMBUSSO BOYD MOORE (L)(BWR) DEYOUNG(L)(PWR) SKOVHOLT (L) GOLLER(L)	MACCARY KNIGHT PAWLICKI SHAO STELLO HOUSTON NOVAK BOSS	KASTNER BALLARD SPANGLER <u>ENVIRO</u> MULLER DICKER KNIGHTON	GEA GOU LEE MAI REE SER SHE SLA	RIN (L) LBOURNE (L) GRET (L D (E) VICE (L PPARD (TER (E)	(L))) L)	B. PL MC DU IN C. KL	AN S DONALD BE w/In FO MILES ECKER	put	
MUNTZING/STAFF CASE GIAMBUSSO BOYD MOORE (L)(BWR) DEYOUNG(L)(PWR) SKOVHOLT (L) GOLLER(L) P. COLLINS	MACCARY KNIGHT PAWLICKI SHAO STELLO HOUSTON NOVAK ROSS IPPOLITO	KASTNER BALLARD SPANGLER <u>ENVIRO</u> MULLER DICKER KNIGHTON YOUNGBLOOD	GEA GOU LEE MAI REE SER SHE SLA SMI	RIN (L) LBOURNE (L) GRET (L D (E) VICE (L PPARD (TER (E) TH (L)	(L))) L)	B. PL MC DU IN C. KL	ANS DONALD BE w/In FO MILES	put	
MUNTZING/STAFF CASE GIAMBUSSO BOYD MOORE (L)(BWR) DEYOUNG(L)(PWR) SKOVHOLT (L) GOLLER(L) P. COLLINS DENISE	MACCARY KNIGHT PAWLICKI SHAO STELLO HOUSTON NOVAK ROSS IPPOLITO TEDESCO	KASTNER BALLARD SPANGLER <u>ENVIRO</u> MULLER DICKER KNIGHTON YOUNGBLOOD REGAN	GEA GOU LEE MAI REE SER SHE SLA SMI TEE	RIN (L) LBOURNE (L) GRET (L D (E) VICE (L PPARD (TER (E) TH (L) TS (L)	(L))) L)	B. PL MC DU IN C. KL EI	ANS DONALD BE w/In FO MILES ECKER SENHUT	put	
MUNTZING/STAFF CASE GIAMBUSSO BOYD MOORE (L)(BWR) DEYOUNG(L)(PWR) SKOVHOLT (L) GOLLER(L) P. COLLINS DENISE REG OPR	MACCARY KNIGHT PAWLICKI SHAO STELLO HOUSTON NOVAK ROSS IPPOLITO TEDESCO LONG	KASTNER BALLARD SPANGLER <u>ENVIRO</u> MULLER DICKER KNIGHTON YOUNGBLOOD	GEA GOU LEE MAI REE SER SHE SLA SMI TEE WAD	RIN (L) LBOURNE (L) GRET (L D (E) VICE (L PPARD (TER (E) TH (L) TS (L) E (E)	(L))) L)		ANS DONALD BE w/In FO MILES ECKER SENHUT R FILE		
MUNTZING/STAFF CASE GIAMBUSSO BOYD MOORE (L)(BWR) DEYOUNG(L)(PWR) SKOVHOLT (L) GOLLER(L) P. COLLINS DENISE REG OPR FILE & REGION(3)	MACCARY KNIGHT PAWLICKI SHAO STELLO HOUSTON NOVAK BOSS IPPOLITO TEDESCO LONG LAINAS	KASTNER BALLARD SPANGLER <u>ENVIRO</u> MULLER DICKER KNIGHTON YOUNGBLOOD REGAN PROJECT LDH	GEA GOU LEE MAI REE SER SHE SLA SMI TEE WAD WIL	RIN (L) LBOURNE (L) GRET (L D (E) VICE (L PPARD (TER (E) TH (L) TS (L) E (E) LIAMS ((L))) L)		ANS DONALD BE w/In FO MILES ECKER SENHUT		
MUNTZING/STAFF CASE GIAMBUSSO BOYD MOORE (L)(BWR) DEYOUNG(L)(PWR) SKOVHOLT (L) GOLLER(L) P. COLLINS DENISE REG OPR FILE & REGION(3) MORRIS	MACCARY KNIGHT PAWLICKI SHAO STELLO HOUSTON NOVAK BOSS IPPOLITO TEDESCO LONG LAINAS SENAROYA	KASTNER BALLARD SPANGLER <u>ENVIRO</u> MULLER DICKER KNIGHTON YOUNGBLOOD REGAN	GEA GOU LEE MAI REE SER SHE SLA SMI TEE WAD WIL	RIN (L) LBOURNE (L) GRET (L D (E) VICE (L PPARD (TER (E) TH (L) TS (L) E (E)	(L))) L)		ANS DONALD BE w/In FO MILES ECKER SENHUT R FILE		
MUNTZING/STAFF CASE GIAMBUSSO BOYD MOORE (L)(BWR) DEYOUNG(L)(PWR) SKOVHOLT (L) GOLLER(L) P. COLLINS DENISE REG OPR	MACCARY KNIGHT PAWLICKI SHAO STELLO HOUSTON NOVAK BOSS IPPOLITO TEDESCO LONG LAINAS	KASTNER BALLARD SPANGLER ENVIRO MULLER DICKER KNIGHTON YOUNGBLOOD REGAN PROJECT LDH HARLESS	GEA GOU LEE MAI REE SER SHE SLA SMI TEE WAD WIL WIL	RIN (L) LBOURNE (L) GRET (L D (E) VICE (L PPARD (TER (E) TH (L) TS (L) E (E) LIAMS (SON (L)	(L))) L)		ANS DONALD BE w/In FO MILES ECKER SENHUT R FILE	ON (2)	
MUNTZING/STAFF CASE GIAMBUSSO BOYD MOORE (L)(BWR) DEYOUNG(L)(PWR) SKOVHOLT (L) GOLLER(L) P. COLLINS DENISE REG OPR FILE & REGION(3) MORRIS	MACCARY KNIGHT PAWLICKI SHAO STELLO HOUSTON NOVAK ROSS IPPOLITO TEDESCO LONG LAINAS EENAROYA VOLLMER	KASTNER BALLARD SPANGLER <u>ENVIRO</u> MULLER DICKER KNIGHTON YOUNGBLOOD REGAN PROJECT LDH	GEA GOU LEE MAI REE SER SHE SLA SMI TEE WAD WIL WIL	RIN (L) LBOURNE (L) GRET (L D (E) VICE (L PPARD (TER (E) TH (L) TS (L) E (E) LIAMS (SON (L)	(L))) L)		ANS DONALD BE w/In FO MILES ECKER SENHUT R FILE		
MUNTZING/STAFF CASE GIAMBUSSO BOYD MOORE (L)(BWR) DEYOUNG(L)(PWR) SKOVHOLT (L) GOLLER(L) P. COLLINS DENISE REG OPR FILE & REGION(3) MORRIS TEELE	MACCARY KNIGHT PAWLICKI SHAO STELLO HOUSTON NOVAK ROSS IPPOLITO TEDESCO LONG LAINAS BENAROYA VOLLMER	KASTNER BALLARD SPANGLER <u>ENVIRO</u> MULLER DICKER KNIGHTON YOUNGBLOOD REGAN PROJECT LDH HARLESS EXTERNAL DISTH	GEA GOU LEE MAI REE SER SHE SLA SMI TEE WIL WIL RIBUTION	RIN (L) LBOURNE (L) GRET (L D (E) VICE (L PPARD (TER (E) TH (L) TS (L) E (E) LIAMS (SON (L)	(L))) L)	B. PL MC DU IN C. KL EI /AO D.	ANS DONALD BE w/In FO MILES ECKER SENHUT R FILE THOMPS	ON (2)	
MUNTZING/STAFF CASE GIAMBUSSO BOYD MOORE (L)(BWR) DEYOUNG(L)(PWR) SKOVHOLT (L) GOLLER(L) P. COLLINS DENISE REG OPR FILE & REGION(3) MORRIS TEELE - LOCAL PDR KEV 1 - TIC (ABERNATH	MACCARY KNIGHT PAWLICKI SHAO STELLO HOUSTON NOVAK ROSS IPPOLITO TEDESCO LONG LAINAS BENAROYA VOLLMER WAUNEE, WI HY)	KASTNER BALLARD SPANGLER <u>ENVIRO</u> MULLER DICKER KNIGHTON YOUNGBLOOD REGAN PROJECT LDH HARLESS EXTERNAL DISTI	GEA GOU LEE MAI REE SER SHE SLA SMI TEE WAD WIL WIL RIBUTION	RIN (L) LBOURNE (L) GRET (L D (E) VICE (L PPARD (TER (E) TH (L) TS (L) E (E) LIAMS (SON (L) 'S	(L))) L) E)	B. PL MC DU IN C. KL VEI AO D. 1-P	ANS DONALD BE w/In FO MILES ECKER SENHUT R FILE THOMPS DR-SAN/	ON (2)	
MUNTZING/STAFF CASE GIAMBUSSO BOYD MOORE (L)(BWR) DEYOUNG(L)(PWR) SKOVHOLT (L) GOLLER(L) P. COLLINS DENISE REG OPR FILE & REGION(3) MORRIS TEELE - LOCAL PDR KEW 1 - TIC (ABERNATH 1 - NSIC(BUCHANAN	MACCARY KNIGHT PAWLICKI SHAO STELLO HOUSTON NOVAK ROSS IPPOLITO TEDESCO LONG LAINAS BENAROYA VOLLMER WAUNEE, WI HY)	KASTNER BALLARD SPANGLER ENVIRO MULLER DICKER KNIGHTON YOUNGBLOOD REGAN PROJECT LDH HARLESS EXTERNAL DISTH (1)(2)(10)-NATIO 1-ASLEH	GEA GOU LEE MAI REE SER SHE SLA SMI TEE WAD WIL WIL WIL WIL WIL WIL	RIN (L) LBOURNE (L) GRET (L D (E) VICE (L PPARD (TER (E) TH (L) TS (L) E (E) LIAMS (SON (L) 'S dg,Rm 5	(L))) L) E) 	B. PL MC DU IN C. KL EI AO D. 1-P 1-G	ANS DONALD BE w/In FO MILES ECKER SENHUT R FILE THOMPS DR-SAN/ ERALD L	ON (2)	
MUNTZING/STAFF CASE GIAMBUSSO BOYD MOORE (L)(BWR) DEYOUNG(L)(PWR) SKOVHOLT (L) GOLLER(L) P. COLLINS DENISE REG OPR FILE & REGION(3) MORRIS STEELE - LOCAL PDR KEW 1 - TIC (ABERNATH 1 - NSIC(BUCHANAN 1 - ASLB	MACCARY KNIGHT PAWLICKI SHAO STELLO HOUSTON NOVAK ROSS IPPOLITO TEDESCO LONG LAINAS SENAROYA VOLLMER WAUNEE, WI IY)	KASTNER BALLARD SPANGLER ENVIRO MULLER DICKER KNIGHTON YOUNGBLOOD REGAN PROJECT LDH HARLESS EXTERNAL DISTH (1)(2)(10)-NATIO 1-ASLEH 1-W, PI	GEA GOU LEE MAI REE SER SHE SLA SMI TEE WAD WIL WIL RIBUTION MAL LAB C(E/W B1 ENNINGTO	RIN (L) LBOURNE (L) GRET (L D (E) VICE (L PPARD (TER (E) TH (L) TS (L) E (E) LIAMS (SON (L) 'S dg,Rm 5 PN, Rm E	(L))) L) E) 	B. PL MC DU IN C. KL EI AO D. 1-P 1-G T BRO	ANS DONALD BE w/In FO MILES ECKER SENHUT R FILE THOMPS DR-SAN/ ERALD L OKHAVEN	ON (2) LA/NY ELLOUCHE NAT. LAB	
MUNTZING/STAFF CASE GIAMBUSSO BOYD MOORE (L)(BWR) DEYOUNG(L)(PWR) SKOVHOLT (L) GOLLER(L) P. COLLINS DENISE REG OPR FILE & REGION(3) MORRIS TEELE - LOCAL PDR KEW 1 - TIC (ABERNATH 1 - NSIC(BUCHANAN 1 - ASLB 1 - F. R. DAVIS (MACCARY KNIGHT PAWLICKI SHAO STELLO HOUSTON NOVAK ROSS IPPOLITO TEDESCO LONG LAINAS SENAROYA VOLLMER MAUNEE, WI IY) AEROJET NUCLEAR)	KASTNER BALLARD SPANGLER ENVIRO MULLER DICKER KNIGHTON YOUNGBLOOD REGAN PROJECT LDH HARLESS EXTERNAL DISTR (1)(2)(10)-NATIO 1-ASLER 1-W. PI 1-CONSU	GEA GOU LEE MAI REE SER SHE SLA SMI TEE WAD WIL RIBUTION ONAL LAB C(E/W B1 ENNINGTO JLTANT'S	RIN (L) LBOURNE (L) GRET (L D (E) VICE (L PPARD (TER (E) TH (L) TS (L) E (E) LIAMS (SON (L) 'S dg,Rm 5 N, Rm E	(L))) L) E) 	B. PL MC DU IN C. VIL EI AO D. I-P I-G T BRO I-A	ANS DONALD BE w/In FO MILES ECKER SENHUT R FILE THOMPS DR-SAN/ ERALD L OKHAVEN GMED (Ru	ON (2)	
MUNTZING/STAFF CASE GIAMBUSSO BOYD MOORE (L)(BWR) DEYOUNG(L)(PWR) SKOVHOLT (L) GOLLER(L) P. COLLINS DENISE REG OPR FILE & REGION(3) MORRIS TEELE 1 - LOCAL PDR KEN 1 - TIC (ABERNATH 1 - NSIC(BUCHANAN 1 - ASLB 1 - F. R. DAVIS (6 - CYS ACRS HOLE	MACCARY KNIGHT PAWLICKI SHAO STELLO HOUSTON NOVAK ROSS IPPOLITO TEDESCO LONG LAINAS SENAROYA VOLLMER MAUNEE, WI IY) AEROJET NUCLEAR)	KASTNER BALLARD SPANGLER ENVIRO MULLER DICKER KNIGHTON YOUNGBLOOD REGAN PROJECT LDH HARLESS EXTERNAL DISTI (1)(2)(10)-NATIO 1-ASLEH 1-W. PI 1-CONSU	GEA GOU LEE MAI REE SER SHE SLA SMI TEE WAD WIL WIL RIBUTION MAL LAB C(E/W B1 ENNINGTO	RIN (L) LBOURNE (L) GRET (L D (E) VICE (L PPARD (TER (E) TH (L) TS (L) E (E) LIAMS (SON (L) 'S dg,Rm 5 N, Rm E E/AGB&E	(L))) L) E) 29) 2-201 G BIAN	B. PL MC DU IN C. VI EI AO D. I-P I-G T BRO I-A R	ANS DONALD BE w/In FO MILES ECKER SENHUT R FILE THOMPS DR-SAN/ ERALD L OKHAVEN GMED (Ru M-B-127	ON (2)	

WISCONSIN PUBLIC SERVICE CORPORATION



5191

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

June 6, 1974



Mr. J. F. O'Leary, DirectorDirectorate of LicensingOffice of RegulationU. S. Atomic Energy CommissionWashington, D. C. 20545

Dear Mr. O'Leary:

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

In accordance with the requirements of Technical Specifications, Paragraph 6.6.2.a and Regulatory Guide 1.16, we submit the following:

Report Number:	50-305/74-3
Report Date:	March 21, 1974 (Preliminary) June 6, 1974 (Final Report)
Occurrence Date:	March 13, 1974
Facility:	Kewaunee Nuclear Power Plant Kewaunee, Wisconsin
Identification of Occurrence:	Loss of inverter BRB-110, power source to individual rod position indicators.
Condition Prior to Occurrence:	Reactor critical, normal operating temperature - 547°F, normal operating pressure - 2200 psig, Rod Group D at 200 steps. Conducting reactor startup and shutdown for training.
Description of	
Occurrence:	The condition of the reactor was as noted above, training of operators was in progress when a loss of voltage alarm was received on the individual rod position indication cabinets. All individual rod position indicator indications dropped to 25 steps. Operators checked the power level and verified that

REGULATORY DOCKET FILE COPY

Mr. J. F. O'Leary

the rods did not move and rod control was maintained. Upon investigation, it was found that inverter BRB-110 had no output. BRB-118, which receives power from BRB-110, was shifted to another source, power was restored to the individual rod position indicators and plant operation was back to normal within 11 minutes.

Designation of Apparent Cause of Occurrence:

Component Failure

Analysis of Occurrence:

Inverter BRB-110 is normally supplied from MCC1-62C, which in turn feeds circuit breaker BRB-118, providing power to the rod position indication racks. BRB-118 is alternately supplied power from cabinet BRB-105 which can be supplied from either MCC1-62C or MCC1-62E. Upon loss of inverter BRB-110, although all individual rod position indication is lost momentarily, the digital rod step counters remain operable and power can be restored to BRB-118 through the alternate source. The operator has immediate indication, as he did in this case, when power is lost to the individual rod position indicators, by the annunciation of the loss of voltage alarm.

There is no public safety hazard associated with this occurrence since the loss of power to the indicators is momentary and does not affect the actual position of the rods themselves.

Corrective Action:

As reported in the preliminary report, the loss of the inverter was suspected to be excessive heat. Corrective action was taken to reduce the ambient temperature. It was further stated that the vendor would be contacted and have him evaluate the problem and recommend a course of action. The vendor was on site and it was determined that the two inverters that experienced failure of the transformer were both out of adjustment with respect to frequency. The instruction book states that the inverters should be set at 60 Hertz, but it does not caution the user that the setting is critical and important for proper operation. Since readjustment of the inverters, we have not experienced any further problems. We have further implemented our maintenance procedure to check the inverters periodically to determine whether any drift in frequency setting has occurred.

Mr. J. F. O'Leary

Page 3

June 6, 1974

Failure Data:

The failed transformer was of the following type:

Sola Constant Voltage Transformer Harmonic Neutralized Type CVS Cat. No. 23.25.250-9C Input Voltage: 95-130 x 175-235 x 190-260 Output Voltage: 118-236 Frequency: 60 Hz - VA 5000

On a previous occasion prior to the issuance of our license a 5 KVA and a 3 KVA transformer failed, which we now believe was due to the inverters not being properly adjusted.

Very truly yours,

Carlund

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

EWJ:sna

cc - Mr. James G. Keppler