William S. Orser Senior Vice President

10 100

Detroit

Fermi 2 6400 North Dixie Highway Newport, Michigan, 48166 (213) 686-5201

16CFR50.73

July 9, 1992 NRC-92-0079

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

Reference: Fermi 2 NRC Docket No. 50-341 NRC License No. NPF-43

Subject:

Licensee Event Report (LER) No. 92-006

Please find enclosed LER No. 92-006, dated July 9, 1992, for a reportable event that occurred on June 11, 1992. A copy of this LER is also being sent to the Regional Administrator, USNRC Region III.

If you have any questions, please contact Barbara Siemasz, Compliance Engineer, at (313) 586-1683.

Sincerely, Ullare

Enclosure: NRC Forms 366, 366A

cc: T. G. Colburn

- A. B. Davis
- M. P. Phillips
- S. Stasek
- P. L. Torpey

Wayne County Emergency Management Division

140:34

9207140224 920709 PDR ADDCK 0500034 PDR

(RC Form 366 9-63)				LIC	ENSEE EVE	NT RE	теое	LER)	U.S. NL	CLEAR REQULATO APPROVED OME N EXPIRES 8/31/86	
ACILITY NAME II								D	OCKET NUMBER	(2)	PAGE (3)
TITLE (A)	Eme				ling Water	Autor	natic		0 15 10 10 m	1013411	1 OF 01
EVENT DATE	section of the second se		LER NUMBER		REPORT DATE	(1)		OTHER F	ACILITIES INVO	LVED (R)	Anne and the second second
MONTH DAY	YEAR	YEAR	SEQUENTIAL	REVERON NUMBER	MONTH DAY	YEAR	and the second	FACILITY NAM	6.5	DOCKET NUMBER	(8)
										0 15 0 0	01.1.1
0 6 111	912	912	- 01016	-010	017 019	12				0 1510 10	. 0
OPERATING	active processings	and ind	him the second second second	D PURSUANT 1	O THE REQUIREME	-	OFR & IC	Seck one or more o	the fallowing) [1	descent and second second	
MODE (8)	11	20.4	60216)		20.405(c)		X	80.73(a)(2)(ir)		75.73 (b)	
POWER LEVEL A	0.01	20.4	4061611110		90.96(e)(1)			60.73(a)(2)(v'		73.71(e)	
(10) 1 1	010		405(w)(5)(ii)		50.38(c)(2)		-	60.73(a)(2)(vii)		percent below and in	Ter NRC Form
	-		405(a)(1)((()) 405(a)(1)((v)	-	60.73(a)(2)(i) 60.73(a)(2)(ii)			80.73(s)(2)(viii)(A		366A/	
	ł		405 (s) (11(v)	1.1.0000	50.73(a)(2)(0)		Annual and	60.73(a)(2)(x)		1.1.1.1.1.1	
n antenne filmanet de san			an an in the line of the second second	L	ICENSEE CONTACT	FOR THIS	LER (12)	ne an an air an			
(AME									AREA CODE	TELEPHONE NUM	IER
	B	arbar	a Siemasz	. Compl	lance Engir	ieer			3113	5 8 61-	1.6.8.3
			of the second second	and in the state of the last sector.	EACH COMPONENT	and the second sec	DESCRIBE	D IN THIS REPOR	and a subserved and		1.1.01010
CAUSE SYSTEM	COMPO	NENT	MANUFAC TURER	REPONTABLE TO NPRDS		CAUSE	SYSTEM	COMPONENT	MANUFAC TURER	REPORTABLE TO NPRDS	
	1.1	1						1.1.1	1.I.I		
S. 1. 1			1 1 1	1312					1.1.5		
and a local			SUPPLEM	INTAL REPORT	EXPECTEL (14)	d	L	and and and an	freedored second	MONTH	LIA' AF
					the feature sector of the sect				EXPECT NUBNOST DATE	ION	and the second s
VES (If yes, co ABSTRACT (Limit to			SUBMISSION DATI		X NO				State 1		
	EESW) ut one prrect o star e-init ne sys reasur nlet w perati dentif irectl f EECW nis ew	syst ive of ive i dby, iati tem istem istem ing w fied. ly ad	em automat two Reactor maintenant Division on of Div: actuations ndition wit. Invest: ith only of However dress syst Thus, this was ineffe	tically : or Build: De. Sub: II EECW ision I I s resulten igation : one RBCCC , the dor tem inter s was not sotive co	ated Divisi initiated w ing Closed sequently, and EESW a EECW and EE ed from a s caused by indicated t w heat exch pument that rrelationsh t incorpora pumunicatio event were	hile Cooli while utoma SW. upply closi hat i anger comm ip wi ted i n bet	and r and r ng the n 1985 and t unicat th EEC nto pr ween s	ions pers er (RBCCW ring Divi y initiat eturn hea RBCCW "B ilimitati hree pump ed this i CW (i.e., ocedures. ite organ	onnel wer) heat ex sion I Ef ed follow der low d " heat ex ons invol s in serv nformatic automatic The roc izations.	ve valving changers is CCW and EES wed by a differentia changer ving vice were on did not of initiation of cause of	sW Al
T	ne sys	sten	operating	procedu	An ad hoc	revi	sed to	only all	ow operat	ion with 1	WO

(6.60)	LICENSEE EVENT REPO	EXPIRES 4/30/02 ESTIMATED BURDEN FER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST 60D HIES. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE RECORDS AND REPORTS MANAGEMENT BRANCH (F&10). U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON DC 20665, AND TP THE FAREHWORK REDUCTION PROJECT (3160-0104). DF 70b OF MANAGEMENT AND BUDGET WASHINGTON, DC 20603.	
FADILITY NAME (1)		DOCKET NUMBER (2)	LER NUMBER (6) PAGE (9)
			YEAR BEGLIEVYIAL REVOIDN NUMBER NUMBER
	Fermi 2	0 15 10 10 10 13 14	1912 - 0105 - 010 012 OF 015
TEXT (# more spece is requi	ined, use addisonal NRC Form 3864's/ (17)		

U.S. NUCLEAR REGULATORY COMMISSION

Initial Plant Conditions:

NRC FORM 366A

Operational Condition: 1 (Power Operation) Reactor Power: 100 % Reactor Pressure: 1009 psig Reactor Temperature: 535 Degrees Fahrenheit

Description of Event:

On June 11, 1992 at 0614 hours, Division I Emergency Equipment Cooling Water (EECW) [B1] system and the associated Division I Emergency Equipment Service Water (EESW) [B1] system automatically initiated while Operations personnel were valving out one of two Reactor Building Closed Cooling Water (RBCCW) [CC] heat exchangers [HX] for corrective maintenance. Subsequently, while restoring Division I EECW and EESW system components to their standby configuration, Division II EECW and EESW automatically initiated. Immediately following, Division I EECW automatically re-initiated.

The corrective maintenance to be performed on the RBCCW (shell) side of the heat exchanger was to repair drain valves [V] which were a source of in-leakage to radwaste. Prior to removing the heat exchanger from service, Operations personnel performed a review of the planned evolution. They recognized there was a potential for initiating EECW due to potential system pressure fluctuations since EECW and RBCCW share common piping. However, they believed there was adequate margin to successfully isolate the heat exchanger while carefully monitoring for system differential pressure changes. At approximately 0550 hours, Operations personnel noted initial RBCCW supply and return header pressure readings from pressure indicator P42-R802 [PI]. At approximately 0500 hours, isolation of RBCCW "B" heat exchanger commenced. The strategy was to slowly close the heat exchanger inlet valve P42-F014B [ISV] while continuing to monitor for a low differential pressure across the RBCCW supply and return header on P42-R802. When the heat exchanger was nearly isolated, a small change in the position of P42-F014B caused a larger than expected change in RBCCW return header pressure as indicated on P42-R802. This change was sensed as a low differential pressure condition by Division I EECW differential pressure switches [PS]. At this time, Division I EECW automatically initiated.

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION						EXPIRES 4/30/92 ESTIMATED BURDEN PER RESPONSE TO COMPLY WTH THIS INFORMATION COLLECTION REQUEST 500 HRS FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE RECORDS AND REPORTS MANAGEMENT BRANCH (F6.0), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20605, AND TO THE FAPERWORK R./DUCTON PROJECT (JISODIGA), OFFICE OF MANAGEMENT AND BUDGET 1/ASHINGTON, DC 20603.																			
FACILITY NAME (1)			DO	CKE	TNU	MBE	R (2)				Charlend			LE	R NU	MBER					ALC: NO.	PA	Q.E. ()	R)	
												48	AŔ		SEQ.N	JENT JMBE	R		NUM		Incolasies, V				
	Fermi 2		0	16	10	10	10	13	1	4	1	9	2		0	0	6	-	0	0	0	3	OF	0	
TEXT III mena apace is requ	uired, use edditional NRC Form 3664's) (17)	an design many discussion and		-		1.000		4.00		-		A		Ac					hires and	month	eres ander	-		erer er er er	-

U.S. NUCLE? 2 REGULATORY COMMINSE, N

APPROVED OMB NO. 3160-0104

At approximately 0615 hours, Operations personnel began restoring Division I EECW to standby. At approximately 0643 hours, while in the process of snutting down the Division I EECW pump [P] per the system operating procedure, Division II EECW automatically initiated. Immediately following, Division I EECW automatically re-initiated. The initiating signal was again a low differential pressure condition.

At approximately 0645 hours, P42-F014B was reopened. Operations personnel allowed RBCCW and Division I and II EECW to remain operating until the cause of the initial RBCCW low differential pressure condition was fully understood. With the assistance of Engineering personnel, it was determined that Division I and II EECW could be successfully returned to standby. As the system operating procedure was being performed to return EECW to standby, sufficient system pressure data was collected and used to help determine what had occurred in the system during this event. Based upon this information, it was confirmed that the closing of P42-F014B caused the low differential pressure condition.

At approximately 1400 hours, RBCCW was realigned and Division I and II EECW and EESW were placed in standby.

An accountability meeting was held to discuss this event with the personnel involved and with management.

Cause of Event:

Investigation subsequent to the event determined that in 1985 Engineering identified a limitation about operating the RBCCW system with only one heat exchanger and three pumps in service and communicated this to Nuclear Production. However, the document that communicated this information did not directly address system interrelationship with the EECW system (i.e., automatic initiation of EECW). Thus, this was not incorporated into the system operating procedure as a precaution not to operate with only one heat exchanger in service. Not withstanding this, Operations personnel did realize there was a possibility for system pressure fluctuations and performed actions to carefully monitor changes in differential pressure while slowly isolating the heat exchanger. Therefore, the root cause of this event was determined to be ineffective communication between site organizations.

NRC FORM SEGA

NRC FORM 366A (6-80)		U.S. NUCLEAR REGULATORY COMMISSION	ARMIDVED OME NO. 3150-0104 EXPIRES 4(30:2									
	LICENSEE EVENT RE TEXT CONTINUA		ESTIMATED DURDEN FER RESPONSE INFORMATION COLLECTION REDUEST COMMENTS REGARDING BURDEN ESTIM AND REPORTS MANAGEMENT BRANCH REGULATORY COMMISSION, WASHINGT THE FARERWORK REDUCTION PROJEC OF MANAGEMENT AND BUDGET, WASHI	500 HHS FORWARD MATE TO THE RECORDS (PE30) U.S. NUCLEAR ON DC 20655, AND TO (7. 13165-0104), OFFICE								
FACILITY NAME (1)		DOCKET NUMBER (2)	LER NUMBER (3)	PAGE (3)								
			YEAR SEQUENTIAL REVISION NUMBER NUMBER									
	Fermi 2	0 15 10 10 10 13 14 1 1	912-0106-010	0 4 0 0 1 5								
TEXY III more space is requi	red, use edultrynel NRC Form 3604 (s) (17)	and the second	here here also and here descendent and seader a descendent of	A country and a make so that so								

Training material, which is based in part on the system operating procedure, stated that normal operation was with one heat exchanger in service. Contributing factors to this event are procedure and training inadequacies.

Analysis of Event:

The RBCCW system is designed to provide cooling water to the RBCCW and EECW heat loads during normal operation. The EECW system is designed to provide adequate cooling water supply to essential plant equipment upon loss of offsite power, high drywell pressure or failure of the RBCCW system. The EESW system is designed to provide service water to cool the EECW heat exchangers.

This event involved an automatic initiation of an Engineered Safety Feature system. Although RBCCW continued to provide cooling water, when EECW sensed a low differential pressure condition, it actuated to ensure cooling water would not be lost to safety related equipment. Its actuation initiated EESW, as well. By actuating, these safety systems fulfilled their design basis safety function. The equipment operated according to design and there was no impact on the safe operation of the plant. Had a postulated event occurred during this time, EECW and EESW were already operating to supply cooling water to safety relate loads. Therefore, the health and safety of the public and safety of the clant were ensured.

Corrective Actions:

The system operating procedure has been revised to only allow operation with two heat exchangers in service.

Although significant changes to management, programs, policies and procedures have been successfully implemented since 1985, an ad hoc committee consisting of personnel from Operations, Engineering and Nuclear Training is conducting a review of their interfacing practices in order to reaffirm that current methods for dissemination of information are adequate.

Operating guidelines associated with heat exchanger line-up and RBCCW system differential pressure controls will be established by August 14, 1992. Based on these guidelines, appropriate system operating

NINC FORM SEA	an man consistent of relation in the second second second	U/S. 1	NUCLEAR REGULA	TORY LOUMISSION	T	APPR	VED OMB		0.4	Contraction of Picha and				
• *		EE EVENT REPORT (T CONTINUATION	LER)		EXPIRES A/30/92 EETINATED BURDEN PUR RESPONSE TO COMPLY WITH THI INFORLIATION COLLECTION REDUEST BOO HRS FORWARI COMMENTS REGARDING BURDEN ESTIMATE TO THE RECORD AND REPORTS MANAGEMENT BRANCH (F530), U.S. NUCLEA REGULATORY COMPASSION, WAEHINGTON, DC 20565, AND TI THE FAPERWORK, REDUCTION PROJECT (3)50:01041, OFFIC OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503									
FACILITY NAME (1)	nana mananana companya manana ana		DOCKET NUMBER	(2)		LER NUMBER			PAGE ()	£1				
					YEAR	NUMBE	AL NI	VIBION J. BER.						
	Fermi 2		0 0 0 0 0	10:3 4 1	9 2	- 0101	5 - 0	100	15 OF	01				
	A review of licensed and <u>Previous Sim</u> The following	g Licensee Event H tuations of EECW: Isolation of one RBCCW pumps to tr Startup of a thir	rocedures, 11, 1992. e presente rator requ Reports (L of two RB ip which	operator d in the r alificatio ER) were t CCW heat e decreased	train next t on cla the re-	ing mate raining sses. sult of gers cau	erial cycle	of						
	LER 85-042 & LER 85-058:		pressure	condition	across	s RBCCW.	No							
	LER 85-079:	An operator error to a RBCCW contro pressure conditio	involvin l valve c	g an adius	tment	mistake ferenti	nly ma al	ade						
	LER 87-038:	Closing of Divisi for post maintena tank in service a	nce testin	ng isolate	d the	EECW ma	on val keup	ve						
	Failed Compor	nent Data:												
	There were no	failed component	s involved	i in this	event.									