P.O. Box 63 Lycoming, New York 13093



Nine Mile Point Nuclear Station

October 14, 2003 NMP1L 1781

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

Subject: Nine Mile Point Unit 1 Docket No. 50-220 Facility Operating License No. DPR-63

Licensee Event Report 03-002, "Reactor Scram Due to Electric Grid Disturbance"

Gentlemen:

In accordance with 10 CFR 50.73(a)(2)(iv)(A), we are submitting Licensee Event Report (LER) 03-002, "Reactor Scram Due to Electric Grid Disturbance."

Very truly yours,

LAHoph

Lawrence A! Hopkins Plant General Manager

LAH/KLE/bjh Attachment

cc: Mr. H. J. Miller, NRC Regional Administrator, Region I Mr. G. K. Hunegs, NRC Senior Resident Inspector

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NRC FORM 366	5 U.S.	NUCLEA	R REGU	LATORY CO	ommis	SSION	APPI	ROVED B	YO	MB NO. 3150	-0104 E	XPIRES	7-31-2004	
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FACILITY NAME (	1)						DOCK		ER (2	2)			PAGE (3)	
Nine Mil	le Point,	Unit 1					0	500022	D Ì	•			1 OF	3
TITLE (4)		-						-	_			L		<u></u>
Reactor So	cram Du	ue to Ele	ectric G	rid Disturb	ance	9		-			-			
EVENT	DATE (5)		. LE	R NUMBER (6	)	REPO	DRT D	ATE (7)		- (	OTHER FA	CILITIES I	NVOLVED (8)	
MO	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REV	MO	DAY	YEAR	FAC	CILITY NAME		DOCKET	NUMBER	
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OPERATI MODE (	NG 9)			THIS REPORT	is su	BMITTED	PURSI	UANT TO T	HE F	REQUIREMENT	S OF 10 C	FR §: (Ch	eck all that app	ply) (11)
1	-,	] [	20.2	201(b)		20.2203	(a)(3)(	(ii)		50.73(a)(2)(i	i)(B)	50.7	'3(a)(2)(ix)(A)	)
POWER LEV	EL (10)		20.2	201(d)		20.2203	(a)(4)		Γ	50.73(a)(2)(i	ii)	50.7	3(a)(2)(x)	,
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		· · · ·	20.2	203(a)(2)(iv)		50.73(a)	(2)(i)(/	A)		50.73(a)(2)(v	′)(D)	NRC	Form 366A	
		•	20.2	203(a)(2)(v)		50.73(a)	(2)(i)(l	B)	<u> </u>	50.73(a)(2)(v	rii)	· · ·	· · · · ·	
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						ENSEE C	ONT	ACT FOR	THIS	S LER (12)			<u></u>	
NAME		Maria							I I EL	LEPHONE NUM	BEH (Inclu			
Mic	nael I.	Navin,	Manag	er Operatio	ons						31	5-349-2	2421	
CAUSE	• ·	COMPLI	ETE ONE	LINE FOR E				FAILURE	DE	SCRIBED IN		PORT (1:	3)	DEDODTABLE
CAU3E	SISIEM			FACTURER		TO EPIX	┤┊┝		_				FACTURER	TO EPIX
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	50	PPLEME			CIE	J (14)				SUBMIS	SION SION	MONTH	DAT	TEAR
YES (If ye	s, comple	te EXPE	CTED SU	JBMISSION	DATE	i).	XN	0						
ABSTRACT (Lin	mit to 140	0 spaces	s, i.e., apr	proximately 1	5 sinc	le-spaced	l typev	written line	s) (	(16)			I	<u> </u>
On Augus	st 14, 20	)03 at a	pproxin	nately 161	1 hou	urs, Nine	e Mile	e Point U	Jnit	1 automati	cally sci	ramme	d from 100	0% rated
thermal p turbine to The electr pumps. F condense grid instat hours on 2 0120 hour	ower wh trip. Bo ric grid o Reactor ors, and bility. A August rs on Au	nen the oth eme disturba pressur the con fter grid 14, 200 ugust 15	turbine ergency ance ulti re and v atrol rod I stabilit 3 and E 5, 2003	tripped on diesel gen mately led vater level drive injec y had beer DG 102 w	a lo nerate l to the were ction n esta vas s	ad rejec ors (EDC e loss c e mainta system. ablished ecured a	tion. Gs) a of the ined At 1 I the at 00	A large automatic reactor using th 1633 hou EDGs w 18 hours	dis call rec ie e urs rere s or	sturbance ir y started an circulation p electromatic an Unusua e secured. n August 15	n the ele nd suppl oumps a relief v I Event EDG 10 5, 2003.	ectric gr lied the ind circ alves (I (UE) w 3 was The U	id had cau emergend ulating wa ERVs), em as declare secured at E was terr	ised the cy buses. ter ergency d due to 2339 minated at
			งสุร แาย	Severe dis			uie f	Normeas	n el	ectric grid.				

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This event is reportable in accordance with 10 CFR 50.73(a)(2)(iv)(A) because of the critical reactor scram, and because of the automatic start of the EDGs.

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NF	C FORM 366A U.S. NUCLEAR REGULATORY COMMI	SSION						
(1	LICENS	EE EVENT R	EPORT	(LER)				
	FACILITY NAME (1)	DOCKET (2) NUMBER (2)	· · · · ·	LER NUMBER (6)			PAGE (3	)
	Nine Mile Point, Unit 1	05000220	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	2	OF	3
			2003	002	00			•
	DRATINE (If more speed to required use additional species		(1 /1 7)					
	RHAIIVE (II more space is required, use additional copies	5 OI NHC FORM 366/	4) (1 <i>1</i> )	•				
1.	Description of Event							
	On August 14, 2003 at approximately 1611 ho percent power. A turbine trip due to load reject the core. A large disturbance in the electric gr Ontario in Canada caused the turbine to trip o	ours, Nine Mile F ction caused the rid, affecting par in load rejection	Point Unit reactor s ts of the n	I (NMP1) auton cram with all co ortheastern Un	natically sontrol rods ited States	cramm fully in s and s	ed from serting southern	into I
	At approximately 1612 hours, the grid disturbation buses. This caused the emergency buses to a resulted in the starting and loading of both em loads initially remained powered by off-site 11 approximately 1622 hours, the voltage transie circulating water pumps. Loss of the circulating	ance resulted in automatically iso ergency diesel of 5 KV power and nts had led to th ng water pumps	degraded blate from generators experience le loss of a resulted in	voltage condition off-site 115 KV (EDGs). Post ced significant v all reactor recircon the eventual le	ons on NM electrical scram, no voltage tra culation pu oss of the	IP1 em power on-safe insients imps a conde	nergenc , which ety relate s. By nd nser.	y ed
	Immediately following the scram, both motor of injection (HPCI) mode, as designed, to restore feedwater pumps continued to operate in the I (approximately one minute after the scram) at	Iriven feedwater e reactor vessel HPCI mode unti which point the	pumps of water leve the water feedwate	perated in the h el. After recove r level reached r pumps tripped	igh pressu ry of the v the "Hi-Hi' l as design	ure coo vater le ' level ned.	olant evel, the	
	Turbine bypass valves (TBVs) and all six elect pressure after the scram. The TBVs relieve to Operators then manually operated two ERVs a reactor vessel water level.	tromatic relief va the main cond as needed to co	alves (ER) enser and ntrol react	/s) opened auto the ERVs relie or pressure and	omatically ve to the s d to assist	to relie suppres in con	eve reac ssion po trolling	tor ol.
	All main steam isolation valves were manually were used to control reactor system pressure system provided a source of makeup water to	r closed at 1623 and reactor ves aid in maintaini	hours and sel level. ng reactor	l emergency co The control rod vessel water le	ndensers I drive inje evel.	(EC) a ction (	ind ERV CRDI)	's
	Because of continued grid instability, an Unus Although there was never a complete loss of b off-site power was deemed unstable and the E EDGs continued to power the emergency buse emergency buses were paralleled to off-site p August 14, 2003 and EDG 102 was secured a hours on August 15, 2003. NMP1 reached co	ual Event (UE) worth 115 KV off- Emergency Actions es until the grid ower and the EI to 0018 hours on old shutdown at (	vas declai site lines, on Levels t was deter OGs secur August 1 0126 hour	red at 1633 hou the fluctuations for an UE were mined to be sta red. EDG 103 w 5, 2003. The U s on August 16,	in voltage deemed t ble, at wh vas secure E was ter , 2003.	ust 14, e were o be m ich tim ed at 23 minate	, 2003. such tha let. The e the 339 hour d at 012	at rs on 20
11.	Cause of Event							
	A severe disturbance in the electric grid, affec Canada caused the turbine trip on load rejection	ting parts of the on leading to the	northeast e reactor s	ern United Stat cram.	es and so	uthern	Ontario	in
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NRC FOI (1-2001)	RM 366A U.S. NUCLEAR REGULATORY	COMMISSION		
		NUMBER (2)	LEH NUMBER (b)	PAGE (3)
N	line Mile Point, Unit 1	05000220	YEAR SEQUENTIAL REVISION NUMBER NUMBER	3 OF 3
			2003 002 00	
IARRAT	ΠVE (If more space is required, use additiona	al copies of NRC Form 366/	4) (17)	<b>k</b>
ll. <u>An</u> :	alysis of Event			
This bec	s event is reportable in accordance v ause of the automatic start of the EI	vith 10 CFR 50.73(a)(/ )Gs.	2)(iv)(A) because of the critical rea	ctor scram and
No	Emergency Core Cooling Systems a	actuated or should hav	e actuated.	
All c	control rods fully inserted on the scra	am.		
Bot	h EDGs started and ran as designed	i.		
Bas	sed on the above, the event did not p	ose a threat to the he	alth and safety of the public.	
V. <u>Co</u>	rrective Actions			
Nor	ne.			
V. <u>Ad</u>	ditional Information			
1.	Failed Components: None			
2.	Previous similar events: None			
3.	Identification of components referr	ed to in this Licensee	Event Report:	
	Components	IEEE 805 System	D IEEE 803A Fur	nction
	Feedwater System	SJ	N/A	
	Main Steam System	SB	N/A	
	Main Turbine System	i A 11	. N/A	
	Condenser System	SG	N/A	
	Recirculation System	ÂD	N/A	
	Reactor Core	AC	N/A	
	Emergency Diesel Generator	EK	N/A	
	Emergency Buses	ЕВ = л		
	NON-Emergency buses	EA FK	N/A	
	Circulating Water System	KE	N/A	
	Emergency Condenser	BL	N/A	
	Control Rod Drive System	AA	N/A	
	Suppression Pool	NH	N/A	
		IA SG BI		· <b>·</b>
	Control rod		BOD	
	Motor	SJ	MO	
	Bus	EA, EB	BU	
	Pump	AD, KE, A	A P	