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WILLIS,J.L. Niagara Mohawk Power Corp.
RECIP.NAME RECIPIENT AFFILIATION

SUBJECT: LER 88-043-00:on 881008,inadvertent initiation of HPCS sys due to shorted contacts - personnel error.

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NRC Form 366 (9-83)

U.S. NUCLEAR REGULATORY COMMISSION
APPROVED OMB NO. 3150-0104
EXPIRES: 8/31/88

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1)	DOCKET NUMBER (2)	PAGE (3)
Nine Mile Point Unit 2	0 5 0 0 0 410	1 OF 04

TITLE (4) Inadvertent Initiation of the High Pressure Core Spray System due to Shorted Contacts - Personnel Error

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 NAMES	DOCKET NUMBER(S)
									N/A	0 5 0 0 0
10	08	88	88	043	00	11	07	88	N/A	0 5 0 0 0

OPERATING MODE (9)	4
POWER LEVEL (10)	000

THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11)

	20.402(b)		20.405(c)	X	50.73(a)(2)(iv)
	20.405(a)(1)(i)		50.36(c)(1)		50.73(a)(2)(v)
	20.405(a)(1)(ii)		50.36(c)(2)		50.73(a)(2)(vii)
	20.405(a)(1)(iii)		50.73(a)(2)(i)		50.73(a)(2)(viii)(A)
	20.405(a)(1)(iv)		50.73(a)(2)(ii)		50.73(a)(2)(viii)(B)
	20.405(a)(1)(v)		50.73(a)(2)(iii)		50.73(a)(2)(x)

	73.71(b)
	73.71(c)
	OTHER (Specify in Abstract below and in Text, NRC Form 366A)

LICENSEE CONTACT FOR THIS LER (12)

NAME	TELEPHONE NUMBER	
	AREA CODE	
Louis J. Lagoe, Superintendent Maintenance	315	349-2497

COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS		CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS	

SUPPLEMENTAL REPORT EXPECTED (14)		EXPECTED SUBMISSION DATE (15)	MONTH	DAY	YEAR
YES (If yes, complete EXPECTED SUBMISSION DATE)	X NO				

ABSTRACT (Limit to 1400 spaces, i.e., approximately fifteen single-space typewritten lines) (16)

On October 8, 1988 at 1126 hours with the reactor mode switch in "Shutdown" (Operational Condition 4) Nine Mile Point Unit 2 (NMP2) experienced a High Pressure Core Spray (HPCS) System initiation and a concurrent Division 3 Diesel Generator and Diesel Generator Room Standby Exhaust Fans start due to a low low water level signal (Level 2 trip). However, no water was injected into the vessel. At the time of this event, the reactor was at 35 pounds per square inch gauge pressure (A Leak Rate Test in progress) and the reactor coolant temperature was approximately 104 degrees Fahrenheit.

The root cause of this event was personnel error.

Initial corrective actions were for NMP2 Licensed Operators to identify the cause of the HPCS initiation and verify the plant status as normal. Operations then secured the HPCS pump and returned the Division 3 Diesel Generator and Exhaust Fans to standby.

Additional corrective actions for this event are:

1. A Lessons Learned transmittal was immediately issued to all applicable departments explaining the event and its importance.
2. The technician involved with this event has received disciplinary action.
3. Niagara Mohawk Instrument and Control Department Management is currently in the process of discussing the circumstances surrounding this event and Niagara Mohawk's policy (NDMP-9) on procedure compliance with all technicians.

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)					PAGE (3)		
		YEAR		SEQUENTIAL NUMBER		REVISION NUMBER			
Nine Mile Point Unit 2	0 5 0 0 0 410	88	—	043	—	00	02	OF	04

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

I. DESCRIPTION OF EVENT

On October 8, 1988 at 1126 hours with the reactor mode switch in "Shutdown" (Operational Condition 4) Nine Mile Point Unit 2 (NMP2) experienced a High Pressure Core Spray (HPCS) System initiation and a concurrent Division 3 Diesel Generator and Diesel Generator Room Standby Exhaust Fans start due to a low low water level signal (Level 2 trip). However, no water was injected into the vessel due to the actual high water level (which prevented the injection valve from opening) in the reactor vessel. At the time of this event, the reactor was at 35 pounds per square inch gauge pressure (A Leak Rate Test in progress) and the reactor coolant temperature was approximately 104 degrees Fahrenheit.

Niagara Mohawk Instrument and Control (I&C) technicians were in the process of performing the I&C surveillance procedure N2-ISP-CSH-R107, "Operating Cycle Channel Calibration of HPCS Initiation on Reactor Vessel Water Level Low Low, Level 2 and Isolation on High Level 8 Instrument Channels", when an automatic start signal of the Division 3 Diesel Generator and the HPCS pump occurred due to the low low level initiation logic relay being inadvertently energized. This was a direct result of the technician performing the test failing to follow the procedure. The technician measured resistance across an open contact when in fact the procedure stated to measure voltage. This effectively jumpered around an open contact in the Level 2 initiation logic and subsequently actuated the HPCS systems.

Initial corrective actions were for NMP2 Licensed Operators to identify the cause of the HPCS initiation and verify the plant status as normal. Operations then secured the HPCS pump and returned the Division 3 Diesel Generator and Exhaust Fans to standby.

There were no inoperable systems or components at the start of this event which contributed to this event.

II. CAUSE OF EVENT

A root cause analysis for this event has been completed per Site Supervisory Procedure S-SUP-1 "Root Cause Analysis Program". The root cause has been determined to be personnel error. The technician performing the surveillance test failed to follow the procedure, a violation of Niagara Mohawk Power Corporation Nuclear Division Management Policy NDMP-9 (Procedure Compliance).

III. ANALYSIS OF EVENT

An undesirable challenge to plant Engineered Safety Feature (ESF) systems occurred due to the inadvertently shorted contacts. However, the initiation of the HPCS and the HPCS Diesel Generator automatic start are conservative actions and do not pose any adverse safety consequences other than unnecessary equipment actuation.

In this event the Digital Multi-Meter (DMM) in the resistance mode acted as jumper across the Loss of Coolant Accident start contacts.

A jumper can be postulated to occur during any surveillance procedure or plant condition. This can lead to one of two situations described below:

A. A jumper can render a single safety system inoperable. In accordance with 10CFR50 Appendix A, NMP2 is designed to withstand a single component or system failure. Hence, this fault would not place the plant in an unanalyzed condition.

B. A jumper can lead to a spurious initiation of a plant safety system. In the NMP2 Final Safety Analysis Report (FSAR) Chapter 15 the events of anticipated process disturbances and postulated component failures are examined to determine their consequences and to evaluate the capability built into the plant to control or accommodate such failures and events.

FSAR Section 15.0.3.2.1 specifically addresses the consequences of single failures or operator errors.

The duration of this event from the HPCS pump initiation (HPCS pump ran for 18 seconds) to placing the Diesel Generator and Exhaust Fans back to standby was approximately one and a half hours.

IV. CORRECTIVE ACTIONS

Initial corrective actions were for Operations to identify the cause of the HPCS initiation and verify the plant status as normal. Operations then secured the HPCS pump and returned the Diesel Generator and Exhaust Fans to standby.

Additional corrective actions include the following:

1. A Lessons Learned document has been issued to Operations, Instrument and Control, Electrical Maintenance and Meter and Test personnel explaining the event and its importance.

2. The technician involved with this event has received disciplinary action.

3. I&C Department Management has scheduled a series of meetings with all technicians to discuss the circumstances surrounding this event and Niagara Mohawk's policy NDMP-9 (Procedural Compliance). This is to ensure that all technicians are aware of the problems that can arise as a result of not following procedures. These scheduled meetings will be completed by November 11, 1988.

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	
Nine Mile Point Unit 2	0 5 0 0 0 410	88	— 043	— 00	04 OF 04

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

V. ADDITIONAL INFORMATION

A. Identification of Components Referred to in this LER

Component	IEEE 803 EIIS Funct	IEEE 805 System ID
HPCS	N/A	BG
Relay	44	BG
Diesel Generator	DG	EK
Pump Motor	P	BG
Exhaust Fan	FAN	EK

B. Previous Similar Events - None

C. Failed Components - None

NIAGARA MOHAWK

NMP41639

NINE MILE POINT—UNIT 2/P.O. BOX 63, LYCOMING, NY 13093/TELEPHONE (315) 343-2110

November 7, 1988

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

RE: Docket No. 50-410
LER 88-43

Gentlemen:

In accordance with 10 CFR 50.73, we hereby submit the following Licensee Event Report:

LER 88-43 Is being submitted in accordance with 10 CFR 50.73 (a) (2) (iv), "Any event or condition that resulted in manual or automatic actuation of any Engineered Safety Feature (ESF), including the Reactor Protection System (RPS)."

A 10CFR50.72 (b)(2)(ii) report was made at 1355 hours on October 8, 1988.

This report was completed in the format designated in NUREG-1022, Supplement 2, dated September 1985.

Very truly yours,

J. L. Willis
General Superintendent
Nuclear Generation

JLW/DAC/mjd

Attachments

cc: Regional Administrator, Region 1
Sr. Resident Inspector, W. A. Cook

Cert No
P967928901

IE22
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