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REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)

ACCESSION NBR: 9005160153 DOC. DATE: 90/05/07 NOTARIZED: NO DOCKET #
 FACIL: 50-220 Nine Mile Point Nuclear Station, Unit 1, Niagara Powe 05000220
 AUTH. NAME AUTHOR AFFILIATION
 MOREY, R. Niagara Mohawk Power Corp.
 WILLIS, J. L. Niagara Mohawk Power Corp.
 RECIP. NAME RECIPIENT AFFILIATION

SUBJECT: LER 90-005-00: on 900407, ESF initiation due to equipment design problem in conjunction w/restricted work conditions.
w/9 ltr.

DISTRIBUTION CODE: IE22T COPIES RECEIVED: LTR 1 ENCL 1 SIZE: 6
 TITLE: 50.73/50.9 Licensee Event Report (LER), Incident Rpt, etc.

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	MARTIN, R.	1		1				
INTERNAL:	ACNW	2		2	ACRS	2		2
	AEOD/DOA	1		1	AEOD/DSP/TPAB	1		1
	AEOD/ROAB/DSP	2		2	DEDRO	1		1
	NRR/DET/ECMB 9H	1		1	NRR/DET/EMEB9H3	1		1
	NRR/DLPQ/LHFB11	1		1	NRR/DLPQ/LPEB10	1		1
	NRR/DOEA/OEAB11	1		1	NRR/DREP/PRPB11	2		2
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	NRR/DST/SPLB8D1	1		1	NRR/DST/SRXB 8E	1		1
	REG FILE 02	1		1	RES/DSIR/EIB	1		1
	RGN1 FILE 01	1		1				
EXTERNAL:	EG&G STUART, V.A.	4		4	L ST LOBBY WARD	1		1
	LPDR	1		1	NRC PDR	1		1
	NSIC MAYS, G	1		1	NSIC MURPHY, G.A	1		1
	NUDOCS FULL TXT	1		1				

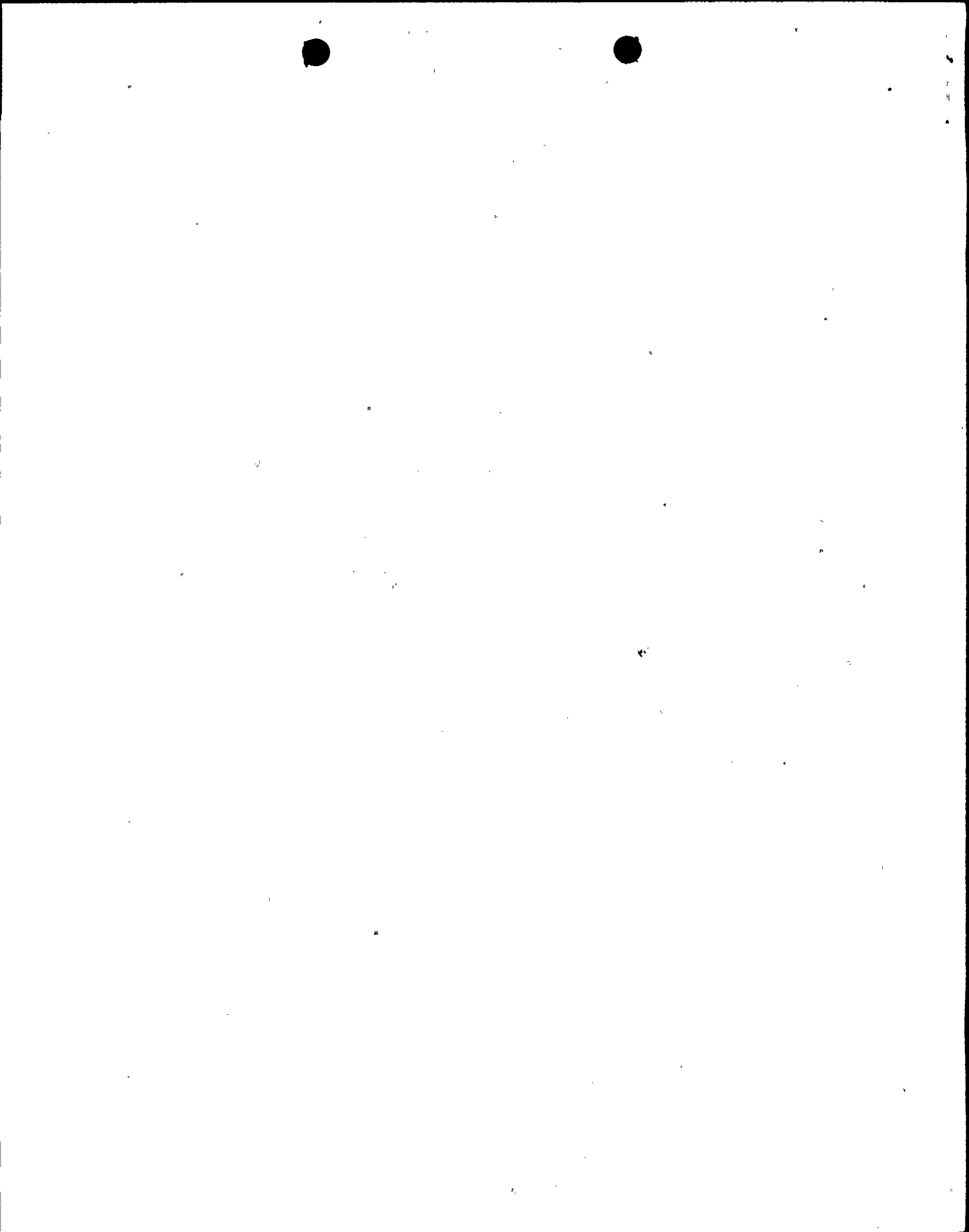
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**NY NIAGARA
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NINE MILE POINT NUCLEAR STATION/P.O. BOX 32, LYCOMING, N.Y. 13093/TELEPHONE (315) 343-2110

NMP 62592

May 7 , 1990

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

RE: Docket No. 50-220
LER 90-05

Gentlemen:

In accordance with 10CFR50.73, we hereby submit the following Licensee Event Report.

LER 90-05 Which is being submitted in accordance with 10CFR50.73 (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). However, actuation of an ESF, including the RPS, that resulted from and was part of the pre-planned sequence during testing or reactor operation need not be reported".

The 10CFR50.72 report was made at 1831 hours on April 7, 1990.

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/AC/lmc

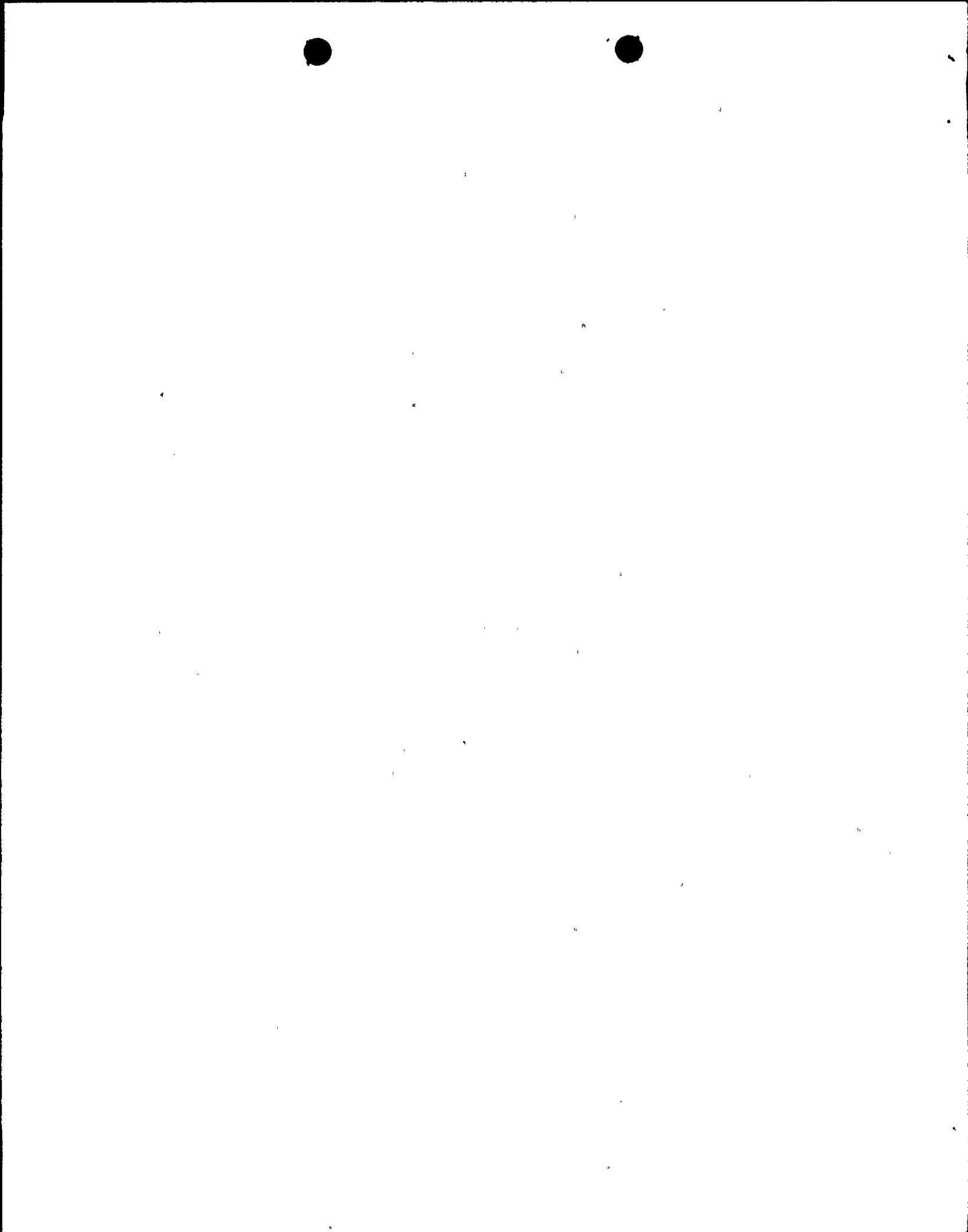
ATTACHMENT

xc: Timothy Martin, Regional Administrator
William A. Cook, Sr. Resident Inspector

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PDR ADUCK 05000220
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306177527



LICENSEE EVENT REPORT (LER)

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 50.0 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE RECORDS AND REPORTS MANAGEMENT BRANCH (P-530), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

FACILITY NAME (1) Nine Mile Point Unit 1	DOCKET NUMBER (2) 0 5 0 0 0 2 2 0	PAGE (3) 1 OF 05
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TITLE (4) Engineered Safety Feature Initiation Due to Equipment Design Problem in Conjunction with Restricted Work Conditions

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)
04	07	90	90	005	00	05	07	90	N/A		0 5 0 0 0
									N/A		0 5 0 0 0

OPERATING MODE (9) N	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11)									
POWER LEVEL (10) 0 0 0	<input type="checkbox"/> 20.402(b)	<input type="checkbox"/> 20.405(c)	<input checked="" type="checkbox"/> 50.73(a)(2)(iv)	<input type="checkbox"/> 73.71(b)						
	<input type="checkbox"/> 20.405(a)(1)(i)	<input type="checkbox"/> 50.36(c)(1)	<input type="checkbox"/> 50.73(a)(2)(v)	<input type="checkbox"/> 73.71(c)						
	<input type="checkbox"/> 20.405(a)(1)(ii)	<input type="checkbox"/> 50.36(c)(2)	<input type="checkbox"/> 50.73(a)(2)(vii)	OTHER (Specify in Abstract below and in Text, NRC Form 366A)						
	<input type="checkbox"/> 20.405(a)(1)(iii)	<input type="checkbox"/> 50.73(a)(2)(i)	<input type="checkbox"/> 50.73(a)(2)(viii)(A)							
	<input type="checkbox"/> 20.405(a)(1)(iv)	<input type="checkbox"/> 50.73(a)(2)(ii)	<input type="checkbox"/> 50.73(a)(2)(viii)(B)							
	<input type="checkbox"/> 20.405(a)(1)(v)	<input type="checkbox"/> 50.73(a)(2)(iii)	<input type="checkbox"/> 50.73(a)(2)(x)							

LICENSEE CONTACT FOR THIS LER (12)

NAME Ray Morey, Supervisor, Instrument and Control	TELEPHONE NUMBER AREA CODE 3 1 5 3 4 9 - 2 4 3 7
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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)

YES (If yes, complete EXPECTED SUBMISSION DATE) NO

EXPECTED SUBMISSION DATE (15)	MONTH	DAY	YEAR

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

ABSTRACT

On April 7, 1990, at 1513 hours Nine Mile Point Unit 1 (NMP1), with the plant in Cold Shutdown and the mode switch in "SHUTDOWN", experienced an actuation of an Engineered Safety Feature (ESF). Specifically, an initiation of the Reactor Building Emergency Ventilation (RBEVS) system. While performing a surveillance procedure, a fuse was blown which resulted in a loss of power to associated radiation monitors and initiation of the RBEV.

The immediate cause of the event was personnel error. The root cause was determined to be an equipment design problem in conjunction with restricted work conditions.

A modification to improve working conditions and procedures has been reissued. A Lessons Learned Transmittal will be issued.



LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 50.0 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE RECORDS AND REPORTS MANAGEMENT BRANCH (P-530), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

FACILITY NAME (1) Nine Mile Point Unit 1	DOCKET NUMBER (2) 0 5 0 0 0 2 2 0 9 0	LER NUMBER (6)			PAGE (3)	
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER		
		9 0	0 0 5	0 0	0 2	OF 0 5

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

DESCRIPTION OF EVENT

On April 7, 1990, at 1513 hours Nine Mile Point Unit 1 (NMP1), with the plant in Cold Shutdown and the mode switch in "SHUTDOWN", experienced an actuation of an Engineered Safety Feature (ESF). Specifically, an initiation of the Reactor Building Emergency Ventilation (RBEV) system logic.

At the time of the event, channel 12 of the RBEV system was marked up and out of service for maintenance and channel 11 of the RBEV system was locked out of service for performance of the procedure.

The RBEV system is initiated by an upscale trip or a loss of power signal from reactor building ventilation or reactor refuel floor radiation monitors. An initiation signal for RBEV results in an isolation of the reactor building normal ventilation system and initiation of emergency ventilation system.

At the time of the event an Instrument and Control (I&C) Technician was assisting Radiation Protection (RP) personnel in the performance of procedure N1-RSP-10C (The Use And Routine Calibration Of The General Atomic High Range Radiation Monitoring System). The I&C Technicians procedural responsibilities were to lift and restore the energized leads to the radiation monitors being calibrated by Radiation Protection. This must be done energized to prevent de-energizing other loads which are supplied by the same fuse. This activity takes place in an area that is restrictive for the work required by the procedure. Also, the present terminations are degraded from industry standards in that some of the #11 side ring lugs were exhibiting previous burn marks. The terminal strips on the back of this unit are too small. The #12 side wire end lugs don't fit. Additionally, the terminal barriers are broken.

While restoring wire L04C to Drywell Radiation Monitor 201.7-36 in panel 1J2 it came in contact with wire C040 which caused a direct short to ground for fuse F15 in panel 1J11. This resulted in blowing fuse F15.

With fuse F15 open, Radiation Monitors RN07A4, RN07A3, RN40A2, RN40A1, RN07A5, RN12A lost power. This loss of power caused an initiation on the RBEV system. The automatic initiation was negated by the markups on #12 system and #11 system being in the locked out condition.



LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 60.0 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE RECORDS AND REPORTS MANAGEMENT BRANCH (P-530), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

FACILITY NAME (1) Nine Mile Point Unit 1	DOCKET NUMBER (2) 0 5 0 0 0 2 2 0	LER NUMBER (8)			PAGE (3)	
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER		
		9 0	- 0 0 5	- 0 0	0 3	OF 0 5

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

The immediate actions taken by the Operations personnel were to acknowledge the annunciators and establish channel 11 RBEV by disengaging the "pull to lock". The surveillance procedure was halted. Work Request 182311 was written for the troubleshooting and repair of the problem. Fuse 15 was found to be blown and replaced. The RBEV was secured and the normal ventilation systems were returned to service at 2359 hours.

CAUSE OF EVENT

A root cause analysis was performed per Site Supervisory Procedure S-SUP-1, "Root Cause Evaluation Program". This analysis utilizes the Human Performance Evaluation System (HPES), published by the Institute of Nuclear Power Operations (INPO).

The immediate cause of the event was personnel error. The root cause was determined to be an equipment design problem in conjunction with restricted work conditions.

ANALYSIS OF EVENT

This event is considered reportable in accordance with 10CFR50.73 (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). However, actuation of an ESF, including the RPS, that resulted from and was part of the pre-planned sequence during testing or reactor operation need not be reported".

There were no significant safety consequences as a result of this event. The plant was in a cold shutdown and the RBEV system was not required to be operable. The initiation of the RBEV is the protective mode of operation and, thus, it would have performed its intended safety function had the system not been properly removed from service for maintenance. The fact that the exhaust fans were not in service was of no significance because RBEVS is not required to be operable in the plant conditions that existed during this event. The action taken by the operator to manually initiate the RBEV system, though not required, causes this event to be reportable. The health and safety of plant personnel and the general public was not compromised.



LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 50.0 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE RECORDS AND REPORTS MANAGEMENT BRANCH (P-530), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

FACILITY NAME (1) Nine Mile Point Unit 1	DOCKET NUMBER (2) 0 5 0 0 0 2 2 0 9 0	LER NUMBER (6)			PAGE (3)	
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TEXT (If more space is required, use additional NRC Form 366A's) (17)

Had this event occurred with the plant at full power, the exhaust fans would have been in service and RBEV would have initiated automatically. The initiation of RBEV at full power would still be a conservative action and would not pose a challenge to the safety or operation of the plant. The operational response to this event would be the same at full power; directed towards restoring power to the radiation monitoring system, resetting RBEV and restoring reactor building ventilation. Therefore, the health and safety of plant personnel and the general public was never compromised as a result of this event.

The duration of this event was approximately 9 hours, starting with ESF initiation to the restoration of normal ventilation systems.

There were no inoperable systems or components that contributed to this event.

CORRECTIVE ACTIONS

Control Room operators carried out the immediate corrective actions by responding to the annunciator alarm and establishing RBEV by placing channel 11 in service.

Additional corrective action:

1. Issued Work Request (182311) for troubleshooting. The cause of the loss of power was identified and the fuse was replaced, restoring power. Normal reactor building ventilation was restored and #11 RBEVS secured.
2. Issued a TCN to the procedure being performed to remove power from the remaining unterminated leads at a location that was less restrictive to work in. The procedure was then completed.
3. Reissued Mod Request N1-90-078 to install "in line" connectors for all external wiring in rear of monitor. This will improve both the working conditions and procedure activity.
4. A Lessons Learned Transmittal will be issued.



LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 500 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE RECORDS AND REPORTS MANAGEMENT BRANCH (P-530), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

FACILITY NAME (1) Nine Mile Point Unit 1	DOCKET NUMBER (2) 0 5 0 0 0 2 2 0	LER NUMBER (6)			PAGE (3)		
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		9 0	- 0 0 5	- 0 0	0 5	OF	0 5

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

ADDITIONAL INFORMATION

- A. Failed components: none.
- B. Previous similar events:

A similar event was discussed in NMP1 LER 87-023. During the investigation to determine why previous corrective actions did not prevent this event, it was determined that the space wherein the individual is required to work is very congested which makes the task difficult to perform and increases the probability of error. The previous corrective actions did not adequately address the root cause.

There have been other related events as discussed in LER 85-07, 86-08, 86-10, 86-13, 89-02 and 89-11. The corrective actions associated with those events would not have prevented this event.

- C. Identification of components referred to in this LER:

COMPONENT	IEEE-803 FUNCTION	IEEE-805 SYSTEM ID
RBEVS Radiation Monitors	MON	VA IL

