

CATEGORY 1

REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)

ACCESSION NBR: 9612130053 DOC. DATE: 96/12/05 NOTARIZED: NO DOCKET #
 FACIL: 50-410 Nine Mile Point Nuclear Station, Unit 2, Niagara Moha 05000410
 AUTH. NAME AUTHOR AFFILIATION
 SMITH, R. Niagara Mohawk Power Corp.
 CONWAY, J.T. Niagara Mohawk Power Corp.
 RECIP. NAME RECIPIENT AFFILIATION

SUBJECT: LER 96-013-00: on 961105, TS violation occurred. Caused by inadequate change management. Service water sys lineups used during RF05 will be evaluated to determine if there were additional deficiencies. W/961205 ltr.

DISTRIBUTION CODE: IE22T COPIES RECEIVED: LTR 1 ENCL 1 SIZE: 7
 TITLE: 50.73/50.9 Licensee Event Report (LER), Incident Rpt, etc.

NOTES:

	RECIPIENT ID CODE/NAME	COPIES LTTR ENCL	RECIPIENT ID CODE/NAME	COPIES LTTR ENCL
	PD1-1 PD	1 1	HOOD, D	1 1
INTERNAL:	ACRS	1 1	AEOD/SPD/RAB	2 2
	AEOD/SPD/RRAB	2 2	<u>FILE CENTER</u>	1 1
	NRR/DE/ECGB	1 1	NRR/DE/EEGB	1 1
	NRR/DE/EMEB	1 1	NRR/DRCH/HHFB	1 1
	NRR/DRCH/HICB	1 1	NRR/DRCH/HOLB	1 1
	NRR/DRCH/HQMB	1 1	NRR/DRPM/PECB	1 1
	NRR/DSSA/SPLB	1 1	NRR/DSSA/SRXB	1 1
	RES/DET/EIB	1 1	RGN1 FILE 01	1 1
EXTERNAL:	L ST LOBBY WARD	1 1	LITCO BRYCE, J H	1 1
	NOAC MURPHY, G.A	1 1	NOAC POORE, W.	1 1
	NRC PDR	1 1	NUDOCS FULL TXT	1 1

NOTE TO ALL "RIDS" RECIPIENTS:
 PLEASE HELP US TO REDUCE WASTE! CONTACT THE DOCUMENT CONTROL DESK,
 ROOM OWFN 5D-5 (EXT. 415-2083) TO ELIMINATE YOUR NAME FROM
 DISTRIBUTION LISTS FOR DOCUMENTS YOU DON'T NEED!

FULL TEXT CONVERSION REQUIRED
 TOTAL NUMBER OF COPIES REQUIRED: LTR 26 ENCL 26

C
A
T
E
G
O
R
Y

1

D
O
C
U
M
E
N
T





NIAGARA MOHAWK

GENERATION
BUSINESS GROUP

NINE MILE POINT NUCLEAR STATION/LAKE ROAD, P.O. BOX 63, LYCOMING, NEW YORK 13093

December 5, 1996
NMP2L 1676

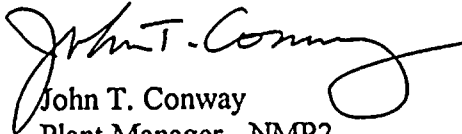
U. S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, DC 20555

RE: LER 96-13
Docket No. 50-410

Gentlemen:

In accordance with 10CFR50.73(a)(2)(i)(B), we are submitting LER 96-13, "Technical Specification Violation Caused by Inadequate Change Management (Both Trains of Service Water Inoperable)."

Very truly yours,


John T. Conway
Plant Manager - NMP2

JTC/AFZ/kap
Enclosure

xc: Mr. H. J. Miller, Regional Administrator
Mr. B. S. Norris, Senior Resident Inspector

9612130053 961205
PDR ADCK 05000410
S PDR

130016



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 2

DOCKET NUMBER (2)

5 0 0 0 4 1 0

PAGE (3)

1 OF 5

TITLE (4)

Technical Specification Violation Caused by Inadequate Change Management (Both Trains of Service Water Inoperable)

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)	
11	05	96	96	013	00	12	5	96	N/A	0 5 0 0 0	
									N/A	0 5 0 0 0	

OPERATING MODE (9)

5

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

POWER LEVEL (10) 0	<input type="checkbox"/> 20.402(b)	<input type="checkbox"/> 20.405(c)	<input 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)	<input type="checkbox"/> OTHER
	<input type="checkbox"/> 20.405(a)(1)(iii)	<input checked="" type="checkbox"/> 50.73(a)(2)(i)	<input type="checkbox"/> 50.73(a)(2)(viii)(A)	(Specify in Abstract below and in Text, NRC Form 366A)
	<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

Mr. Robert Smith, Operations Manager Unit 2

TELEPHONE NUMBER

(315) 349-2061

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)

On November 5, 1996, at 1300 hours, while Nine Mile Point Unit 2 (NMP2) was in refueling outage five (RFO5) and with the reactor shutdown, Niagara Mohawk determined that both divisions of the plant Service Water System had been made temporarily inoperable while performing maintenance activities between the hours of 2200 on October 8, 1996 and 0030 hours on October 9, 1996.

The cause of the event was determined to be inadequate change management in that the consequences associated with an outage schedule change regarding safety related valve maintenance activities was not appropriately assessed.

The corrective actions identified include closing the appropriate isolation valve to restore a Service Water Division to operable, evaluation of Service Water System lineups used during outages, and counseling and training of appropriate personnel regarding this event.



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 20535, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	
Nine Mile Point Unit 2	05000410	96	13	00	02 OF 05

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

I. DESCRIPTION OF EVENT

On November 5, 1996 at 1300 hours, while Nine Mile Point Unit 2 (NMP2) was in refueling outage five (RFO5) and with the reactor shutdown, Niagara Mohawk determined that both divisions of the plant Service Water System had been made temporarily inoperable while performing maintenance activities between the hours of 2200 on October 8, 1996 and 0030 hours on October 9, 1996. Specifically, a non-essential header of the Service Water System was unisolated while the operable service water divisional isolation valve automatic closure function logic was defeated.

At the time of the event, Service Water Division I was drained and out of service for maintenance activities. Since no pumps were running in Division I, the associated isolation valve, 2SWP*MOV93B, for non-essential service water loads in the reactor building was closed and also had an automatic closure signal. The redundant isolation valve, 2SWP*MOV93A, for this non-essential service water header is located in series with MOV93B, and had been placed in the closed position under maintenance markup control to preserve the isolation of the associated non-essential header while maintenance was performed on MOV93B.

The attached sketch shows a simplified schematic of the Service Water System immediately prior to the event. Division I is depicted on the left side of the sketch and Division II on the right side. At the time of the event the system was in the following condition: Pumps 1A, 1C, and 1E were off; valves MOV 3A, 3B, 19A, 19B, 50A, 50B, 93A and 93B were shut; manual valves V8, V17 and V32 were open; and MOV599 was open. Three Division II pumps were running to supply service water to Division II safety related components as well as the reactor and turbine building Balance of Plant (BOP) components. As a result of the evaluation of this event, the service water lineups utilized during RFO5 are being further analyzed by engineering to verify that adequate service water flow to required components was capable of being maintained for all conditions. This report will be supplemented as appropriate, should any additional deficiencies be identified as a result of this analysis.

When maintenance and post-maintenance testing were completed on MOV93B, the valve was returned to service and opened. At that point the automatic closure capability of MOV93B was defeated, since there were no Division I service water pumps operating. The control logic of MOV93B is such that, when an automatic isolation signal is present, if the valve is opened using the control switch, the automatic isolation capability is defeated. Since maintenance was completed on MOV93B, dynamic testing of MOV93A, in accordance with the Generic Letter 89-10 testing program, was started at 2200 hours on October 8, 1996. However, the personnel involved in evaluating and approving the schedule change failed to recognize the unique conditions established, and that MOV93B would not automatically close on a loss of offsite power. The resulting condition with MOV93A and MOV93B open caused both divisions of service water to be inoperable, although Division II was still functioning and providing service water to required components. In the event of a Loss of Power (LOOP), however, the non-essential reactor building service water header would not automatically isolate as required by the Technical Specifications.



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)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	
Nine Mile Point Unit 2	05000410	96	13	00	03 OF 05

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

I. DESCRIPTION OF EVENT (cont'd)

This event was terminated at 0030 hours on October 9, 1996, when an operator noticed that both valves were open and notified the Shift Supervisor. MOV93B was closed and placed under administrative markup control.

II. CAUSE OF EVENT

A root cause evaluation was performed in accordance with Nuclear Interface Procedure NIP-ECA-01, "Deviation/Event Report." The cause of the deviation was determined to be change management, in that there was an inadequate assessment of the consequences associated with an outage schedule change regarding safety related valve maintenance activities. The original outage schedule had accounted for post maintenance stroke testing and dynamic VOTES testing of the redundant divisional non-essential header isolation valves, while maintaining the operability requirements of the Technical Specifications. The outage schedule was modified to move ahead the dynamic VOTES testing of MOV93A when schedule delays were encountered with other Service Water System valves. The review of the impact of this schedule change failed to adequately consider the valve control logic interlock for the redundant loop isolation valve, MOV93B, which had been previously defeated when the valve was stroked open with no pumps operating in Division I.

III. ANALYSIS OF EVENT

This event is considered reportable under 10CFR50.73(a)(2)(i)(B), "any operating or condition prohibited by the plant's Technical Specifications."

The function of the non-essential header isolation valves, MOV93A and MOV93B, is to isolate service water flow to non safety-related loads in the reactor building during a LOOP, in order to ensure that required flow is maintained to the safety related loads. With the automatic closure logic of MOV93B defeated, the valve would not automatically close in the event of a LOOP. This valve function is verified by Technical Specification Surveillance Requirement 4.7.1.2.1.d, and, since this could not be satisfied with the automatic closure logic defeated, Service Water Division II should have been declared inoperable. Since MOV93A was opened for VOTES testing, the non-essential header would not have isolated in the event of a LOOP.

The Technical Specifications do not address a condition with both service water divisions inoperable, however, with a significantly degraded Service Water System during shutdown or refueling conditions, the Technical Specifications require restoring the system to an acceptable condition within 12 hours or suspending core alterations, handling of irradiated fuel, crane operations over the spent fuel storage pool and



LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 30.0 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 (0150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (4)				PAGE (3)
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER		
Nine Mile Point Unit 2	05000410	96	- 13	- 00	04 OF 05	

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

III. ANALYSIS OF EVENT (cont'd)

all operations that have a potential for draining the reactor vessel. At the time of this event there were no activities in progress involving fuel handling, moving of irradiated fuel, or having the potential for draining the reactor vessel. Also, the refueling cavity was filled to the level of the spent fuel pool with the refueling gates removed, and the reactor had been shutdown and cooled down for over ten days. Furthermore, decay heat was being removed by the Alternate Decay Heat Removal (ADH) System, which does not require support from service water or the onsite AC power distribution system. The ADH system receives power from a construction loop source, which is separate from the onsite AC power system provided through the Scriba Substation. Under these conditions, draining of the reactor vessel or a fuel handling event would not have been credible with the activities in progress at that time. Therefore, the only event with potential consequences under these conditions would be a LOOP event.

Because of the low decay heat loads and the operation of the ADH system, a LOOP event during this period would not have had an adverse safety impact on the plant. Furthermore, the Loss of Power Procedure, N2-SOP-03, directs the operator to verify closure of the non-essential service water header isolation valves. The expected operator action to close MOV93B is readily performed from the control room, and requires no heroic action or unusually perceptive diagnosis. The operator action to manipulate the non-essential service water header isolation valves following a LOOP or partial LOOP has been satisfactorily demonstrated numerous times both on the simulator and during actual events. Therefore, had a LOOP occurred during the time when the automatic isolation logic of MOV93B was defeated, there is a high assurance that the safety function would have been manually performed. This event had no adverse affect on any other safety system, nor the operators' ability to maintain safe reactor plant conditions.

IV. CORRECTIVE ACTIONS

The following corrective actions have been identified:

1. At 0030 hours on October 9, 1996, valve SWP*MOV93B was closed to isolate the non-essential reactor building service water loads.
2. Prior to the next refueling outage, Service Water System lineups used during RFO5 will be evaluated to determine if there were any additional deficiencies.



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)	DOCKET NUMBER (2)	LER NUMBER (6)				PAGE (3)
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER		
Nine Mile Point Unit 2	05000410	96	- 13	- 00	05 OF 05	

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

IV. CORRECTIVE ACTIONS (cont'd)

- 3. Prior to the next refueling outage, work planning personnel will receive counseling by the Operations Manager regarding schedule changes and the need to place extra attention on evaluating the impact on safety related equipment with complicated logic circuits.
- 4. Operations Department personnel will receive training on this event, including the root cause and safety impact, prior to the next refueling outage.

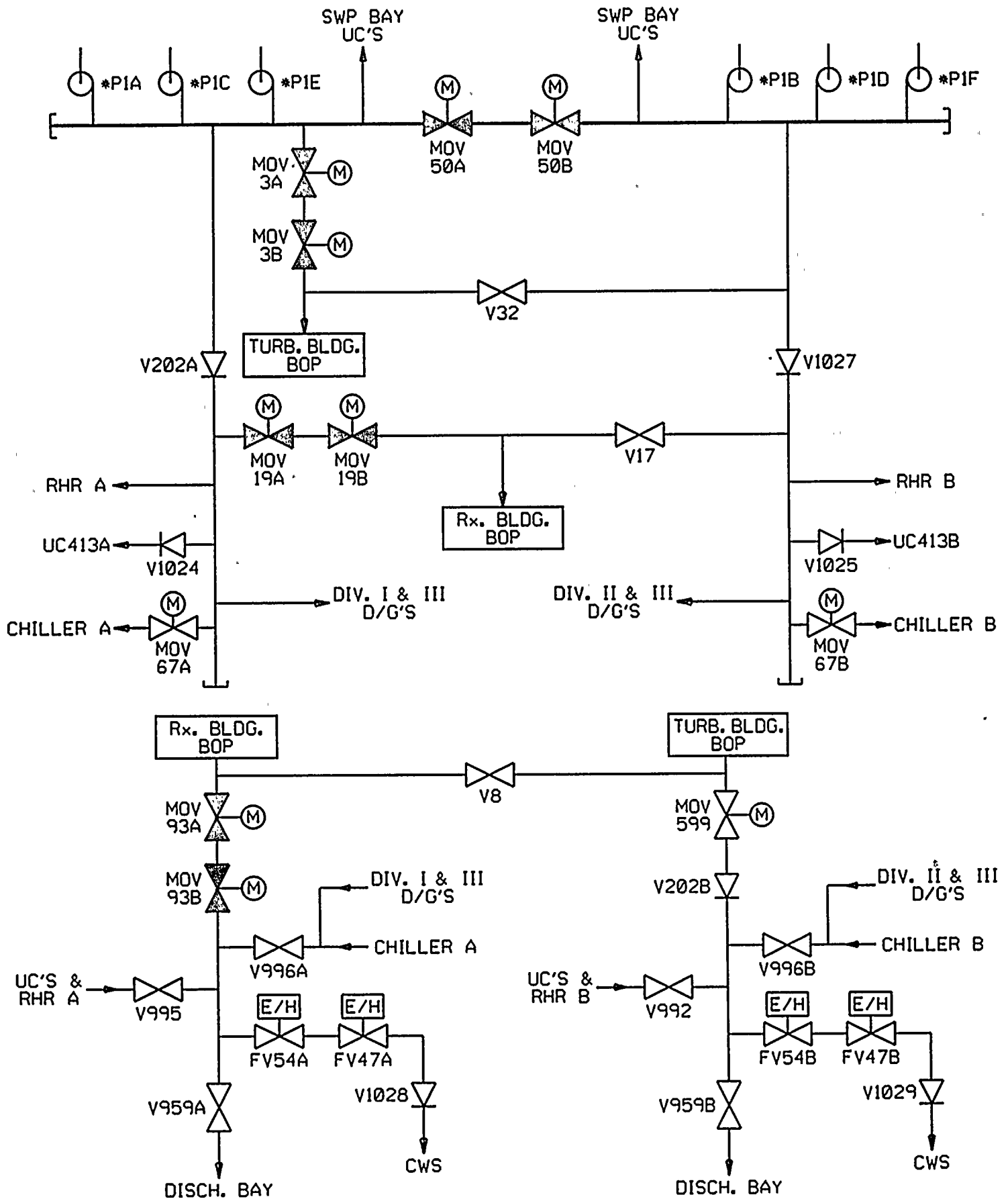
V. ADDITIONAL INFORMATION

- A. Failed components: none.
- B. Previous similar events: The event reported in LER 95-04, which occurred in May of 1995, also involved a Technical Specification violation associated with the Service Water System during a refueling outage with the system in an unusual lineup. This previous event, however, involved an inadequate procedure change for restoring the system to service, resulting in a failure to restore a discharge radiation monitor to service. The recent event did not involve procedure changes or the radiation monitors. The corrective actions for the previous event focused on radiation monitor requirements and the procedure change process, and these corrective actions would not have prevented the current event.
- C. Identification of components referred to in this LER:

COMPONENT	IEEE 803 FUNCTION	IEEE 805 SYSTEM ID
Service Water System	N/A	RG
Service Water Pumps	P	RG
Isolation Valve	V	RG



SERVICE WATER CONFIGURATION SKETCH





11
12
13
14
15