NRC Form 366
(9-83)

U.S. NUCLEAR REGULATORY COMMISSION
APPROVED OMB NO. 3150-0104
EXPIRES: 8/31/85

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1)	DOCKET NUMBER (2)	PAGE (3)
North Power Station, Unit 1	0 5 0 0 0 3 3 8	1 OF 0 4

TITLE (4) MOV Torque Switch Setting Not Within The Limits Specified By The North Anna Setpoint Document

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)
0 7	2 2	8 4	8 4	0 1 0	0 1	0 1	1 7	8 5	North Anna, Unit 2	0 5 0 0 0 3 3 9
										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 0 0	20.402(b)	20.405(c)	50.73(a)(2)(iv)	73.71(b)
		20.405(a)(1)(i)	50.36(c)(1)	50.73(a)(2)(v)	73.71(c)
		20.405(a)(1)(ii)	50.36(c)(2)	50.73(a)(2)(vii)	X OTHER (Specify in Abstract below and in Text, NRC Form 366A)
		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)	Voluntary Report
		20.405(a)(1)(v)	50.73(a)(2)(iii)	50.73(a)(2)(x)	

LICENSEE CONTACT FOR THIS LER (12)

NAME	TELEPHONE NUMBER
	AREA CODE
E. Wayne Harrell	7 0 3 8 9 4 - 5 1 5 1

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)

Based on a concern raised with torque switch settings at Surry Power Station and a request from the North Anna resident NRC inspector, an inspection of the torque switch settings of five Unit 1 motor operated valves was conducted. Unit 1 was in a refueling outage and Unit 2 was at 75% power. The inspection revealed three of these valves had torque switch settings which differed from those specified by the North Anna Setpoint Document. It was then decided to check the torque switch settings of the Unit 1 and Unit 2 safety related motor operated valves.

These inspections revealed approximately half the valves inspected had torque switch settings that were not within the limits specified by the North Anna Setpoint Document.

This event was caused in part by using superseded torque switch settings when developing the North Anna Setpoint Document and confusion when adjusting torque switch settings because of torque switch design. Corrective actions taken include revising the Setpoint Document based on an engineering review of setpoints and revising procedures to include labeled torque switch diagrams.

All Technical Specifications and ASME Section XI, Subsection IWV operability requirements for the affected valves had been met. This LER is being submitted as a voluntary special report.

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

Based on a concern raised with torque switch settings at Surry Power Station and a request from the North Anna resident NRC inspector, an inspection of the torque switch settings of five Unit 1 motor operated valves was conducted with Unit 1 in a refueling outage and Unit 2 at 75% power. The inspection revealed three of these valves had torque switch settings which differed from those specified by the North Anna Setpoint Document. Based on the results of this initial inspection it was decided to check the torque switch settings on the Unit 1 safety related motor operated valves during the Unit 1 1984 refueling outage and check the torque switch settings of the Unit 2 safety related motor operated valves during the Unit 2 1984 refueling outage.

The results of these inspections revealed 67 of the 134 valves inspected on Unit 1 and 62 of the 138 valves inspected on Unit 2 had torque switch settings that were not within the limits specified by the North Anna Setpoint Document. All Tech. Spec. and ASME Section XI, Subsection IWV operability requirements for the affected valves had been met. This LER is being submitted as a voluntary special report.

This event was caused by using superseded torque switch setting, in some cases, when developing the North Anna Setpoint Document and confusion when adjusting torque switch settings because of torque switch design. The North Anna Setpoint Document (approved in July, 1982) contained torque switch settings that were based on anticipated plant conditions. Preoperational tests were conducted to verify acceptable torque switch settings under actual dynamic flow conditions. Torque switch settings were changed based on the results of these tests. It has been necessary to change torque switch settings since the preoperational tests were conducted to ensure acceptable valve operation. These revised torque switch settings were not completely incorporated in the North Anna Setpoint Document.

Engineering personnel evaluated existing Setpoint Document torque switch settings. MOVATS personnel were contracted to assist engineering personnel to evaluate valve operations. The Setpoint Document has now been revised based on an engineering review of setpoints. Torque switches have either been adjusted or left as is, based on an engineering evaluation of each setpoint. In several cases the engineering evaluation indicated that for conservatism the valve's torque switch settings should be left as is to ensure they would perform their safety function even though the setting disagreed with available documentation. These setpoints are still under review and appropriate setpoint document changes and/or valve torque switch setting changes will be made when this review is complete.

Confusion when adjusting torque switch settings for Limitorque type SMB-000 and SMB-00 MOV actuators was caused by the design of torque switch. The open and close torque switch settings are adjusted by moving screws located on a plate which is attached to the torque switch. Confusion in adjusting torque switch settings is caused by the fact the "open" electrical contacts are located near the screw used to adjust the close setting of the torque switch and the "close" electrical contacts are located near the screw used to adjust the open setting of the torque switch (See Attachment A).

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

New maintenance procedures approved on July 26, 1984 and August 31, 1984 contained misleading torque switch diagrams which also contributed to this event (See Attachment A). An electrician using these procedures would transpose the desired open and close torque switch settings. These procedures have been revised to include a clearly labeled diagram of a torque switch. The procedure used to adjust torque switch settings prior to July 26, 1984 contained a clearly labeled correct torque switch diagram. The North Anna Nuclear Training Department has instructed electricians of the potential for confusion when adjusting torque switch settings and informed electricians that applicable procedures have been revised to include a clearly labeled diagram of a torque switch.

The misleading torque switch diagrams were based on a diagram contained in INPO report 83-037, assessment of Motor Operated Valve Failure. This problem has been brought to the attention of INPO. INPO has drafted an Operations and Maintenance Reminder to inform its members of this problem.

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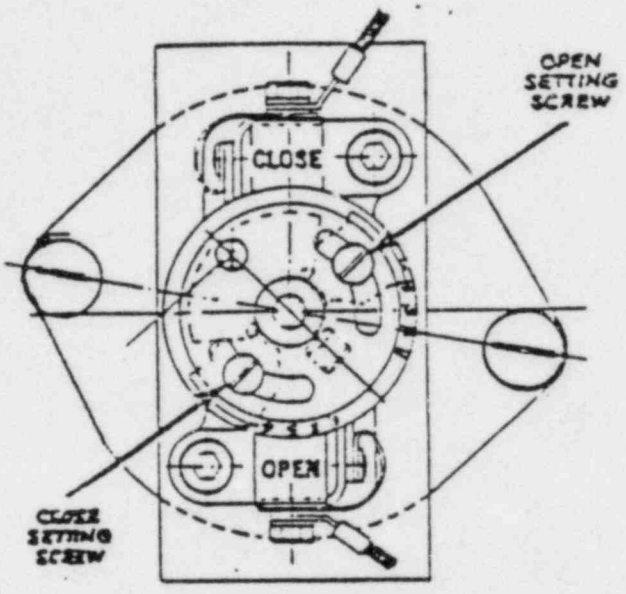
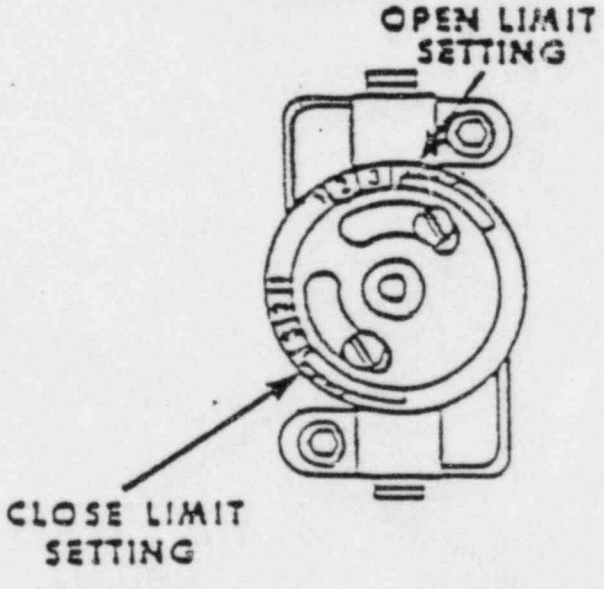
TEXT (If more space is required, use additional NRC Form 366A's) (17)

ATTACHMENT A
Diagram of Torque Switch
(correctly labeled)



Note: The open and close setting screws and electrical contacts are clearly labeled. The close torque switch setting reads increasing numbers clockwise and the open torque switch setting reads increasing numbers counterclockwise.

MISLEADING DIAGRAM OF TORQUE SWITCH
(incorrectly labeled)



Note: The open and close electrical contacts are not labeled and the open and close torque switch settings are mislabeled. The close torque switch setting should read increasing numbers clockwise and the open torque switch setting should read increasing numbers counterclockwise.

Vepco

VIRGINIA ELECTRIC AND POWER COMPANY
NORTH ANNA POWER STATION
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MINERAL, VIRGINIA 23117

January 17, 1985

U. S. Nuclear Regulatory Commission
Document Control Desk
016 Phillips Building
Washington, D.C. 20555

Serial No. N-34-024A
NO/JJM: 11
Docket No. 50-338
50-339

License No. NPF-4
NPF-7

Dear Sirs:

The Virginia Power Company hereby submits the following License Event Report update applicable to North Anna Units No. 1 and 2. This License Event Report update includes information in code block 8 which was inadvertantly omitted in the initial License Event Report.

Report No. LER 84-010-01

This report has been reviewed by the Station Nuclear Safety and Operating Committee and will be forwarded to Safety Evaluation and Control for their review.

Very Truly Yours,

E. Wayne Harrell
Station Manager

Enclosures (3 copies)

cc: Mr. James P. O'Reilly, Regional Administrator
U. S. Nuclear Regulatory Commission
Region II
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Atlanta, Georgia 30303

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