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REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)

ACCESSION NBR: 9403040043 DOC. DATE: 94/02/22 NOTARIZED: NO DOCKET #
 FACIL: 50-388 Susquehanna Steam Electric Station, Unit 2, Pennsylv 05000388
 AUTH. NAME AUTHOR AFFILIATION
 METER, J.J. Pennsylvania Power & Light Co.
 STANLEY, H.G. Pennsylvania Power & Light Co.
 RECIP. NAME RECIPIENT AFFILIATION

SUBJECT: LER 94-003-00: on 940122, acoustic monitor for S MSRV declared inoperable & TS 3.3.7.5 action 80b & 3.4.2 action c entered. Caused by faulty charge converter. Off normal procedure for stuck open relief valves ON-283-001 revised. W/940222 ltr.

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

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	RGN1 FILE 01		1	1					
EXTERNAL:	EG&G BRYCE, J.H		2	2		L ST LOBBY WARD		1	1
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February 22, 1994

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

SUSQUEHANNA STEAM ELECTRIC STATION
LICENSEE EVENT REPORT 94-003-00
FILE R41-2
PLAS - 590

Docket No. 50-388
License No. NPF-22

Attached is Licensee Event Report 94-003-00. This report is being made pursuant to 10CFR50.73(a)(2)(i)(B), in that Susquehanna Unit 2 was in a condition prohibited by the Technical Specifications when Unit 2 entered condition 1 while the acoustic monitor for the 'S' Main Steam Relief Valve was inoperable. Technical Specifications 3.3.7.5 and 3.4.2 require all Main Steam Relief Valve acoustic monitors to be operable in condition 1 and 2 and Technical Specification 3.0.4 prohibits entry into an operational condition or other specified condition when the conditions for the Limiting Conditions for Operation are not met. The acoustic monitor remains inoperable. Prior to entering Condition 1, a discretionary enforcement from the above Technical Specification requirements was approved. A subsequent amendment to the applicable Technical Specifications was approved by the NRC to allow operation of Unit 2 while the 'S' acoustic monitor is inoperable. The amendment will remain in effect until the next Unit 2 shutdown of sufficient duration to allow for a primary containment entry, not to exceed the sixth refueling and inspection outage.


H.G. Stanley
VP - Nuclear Operations

JJM/mjm

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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) Susquehanna Steam Electric Station - Unit 2		DOCKET NUMBER (2) 0 5 0 0 0 3 8 8	PAGE (3) 1 of 0 4
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TITLE (4)
Operation Prohibited by Technical Specification 3.0.4

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 1	2 1	9 4	9 4	0 0 3	0 0 0	2 2	2 9	9 4		0 5 0 0 0

OPERATING MODE (9) 2	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)	20.406(a)(1)(i)	20.406(a)(1)(ii)	20.406(a)(1)(iii)	20.406(a)(1)(iv)	20.406(a)(1)(v)	20.406(b)	20.406(c)	50.73(a)(2)(iv)	50.73(a)(2)(v)	50.73(a)(2)(vi)	50.73(a)(2)(vii)(A)	50.73(a)(2)(vii)(B)	50.73(a)(2)(viii)	73.71(b)	73.71(c)	OTHER (Specify in Abstract below and in Text, NRC Form 366A)

LICENSEE CONTACT FOR THIS LER (12)									
NAME Joseph J. Meter - Power Production Engineer							TELEPHONE NUMBER 7 1 7 5 4 2 - 1 8 7 3		

COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)										
CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPDOS		CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPDOS

SUPPLEMENTAL REPORT EXPECTED (14)							EXPECTED SUBMISSION DATE (15)		MONTH	DAY	YEAR
<input checked="" type="checkbox"/> YES (If yes, complete EXPECTED SUBMISSION DATE)									0 6	3 0	9 4

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

On January 21, 1994, at 0605 hours with Unit 2 starting up in Condition 2 at 0% power, the acoustic monitor for the 'S' MSRV was declared inoperable and Technical Specification 3.3.7.5 action 80b and 3.4.2 action c were entered. Repair of the monitor requires a primary containment entry and due to weather related emergency circumstances, a discretionary enforcement from the applicable Technical Specifications was granted. Startup of Unit 2 then continued. Even though NRC permission was granted, this event is reportable per 10CFR50.73(a)(2)(i)(B), in that Susquehanna Unit 2 was in a condition prohibited by the Technical Specifications when Unit 2 entered condition 1 while the acoustic monitor was inoperable. The cause of the acoustic monitor failure is believed to be a faulty charge converter. Final determination of the acoustic monitor failure will be made during the next Unit 2 outage of sufficient duration to allow for a primary containment entry. Operation of Unit 2 with the 'S' MSRV acoustic monitor inoperable does not create a significant degradation in the Station's ability to protect the health and safety of the public and/or plant personnel. The monitor provides valve position indication only. There are alternate indications and symptoms discernible by control room personnel for determining MSRV position.

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) Unit 2 Susquehanna Steam Electric Station	DOCKET NUMBER (2) 0 5 0 0 0 3 8 8	LER NUMBER (6)			PAGE (3)	
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER		
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TEXT (If more space is required, use additional NRC Form 366A's) (17)

DESCRIPTION OF EVENT

On January 21, 1994, at 0605 hours with Unit 2 starting up in Condition 2 at 0% power, the Unit 2 control room received a spurious open Main Steam Relief Valve (MSRV, EIIS Code: SB) alarm for the 'S' MSRV. The acoustic monitor for the 'S' MSRV indicated that the MSRV was open. Control room Operators (Licensed, Utility) observed that all other indications showed that the MSRV was closed. Reactor pressure was stable at approximately 165 psig, the suppression pool temperature was stable at approximately 81 degrees F, and the 'S' MSRV tailpipe temperature was 135 degrees F. The acoustic monitor for the 'S' MSRV was declared inoperable and Technical Specification 3.3.7.5 action 80b and 3.4.2 action c were entered. The Instrumentation and Controls (I&C) work group was contacted to investigate the acoustic monitor. The open indication of the MSRV was subsequently cleared.

The investigation showed that the acoustic monitor charge converter bias voltage was abnormally low at approximately 8 VDC while the vendor specified range is greater than 10 VDC. Repair of the charge converter required a Unit shutdown, containment deinerting and entry. Due to weather related emergency circumstances, continued startup of Unit 2 was desired and a discretionary enforcement from the applicable Technical Specification requirements was verbally requested and orally granted by the NRC on 1/21/94. Unit 2 then continued its startup and Condition 1 was reached at 2300 hours on 1/21/94.

Although discretionary enforcement from the applicable Technical Specifications was granted prior to continued startup, this event is reportable per 10CFR50.73(a)(2)(i)(B), in that Susquehanna Unit 2 was in a condition prohibited by the Technical Specifications when Unit 2 entered condition 1 while the acoustic monitor for the 'S' Main Steam Relief Valve was inoperable. Technical Specifications 3.3.7.5 and 3.4.2 require all Main Steam Relief Valve acoustic monitors to be operable in condition 1 and 2 and Technical Specification 3.0.4 prohibits entry into an operational condition or other specified condition when the conditions for the Limiting Conditions for Operation are not met.

CAUSE OF EVENT

As described above, the cause of the 'S' MSRV acoustic monitor failure is believed to be a faulty charge converter. The vendor of the charge converter specifies a bias voltage of greater than 10 VDC. The as found bias voltage was approximately 8 VDC on 1/21/94. The same charge converter bias voltage was measured on 5/24/93 and was approximately 17 VDC which indicates the charge converter is faulty at the present time. Final determination of the acoustic monitor will be made during the next Unit 2 outage of sufficient duration to allow for a primary containment entry.

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) Unit 2 Susquehanna Steam Electric Station	DOCKET NUMBER (2) 0 5 0 0 0 3 8 8	LER NUMBER (6)			PAGE (3)		
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TEXT (If more space is required, use additional NRC Form 368A's) (17)

The cause for the need to continue Unit startup with an inoperable MSRV acoustic monitor was that on 1/19/94 a State of Emergency in the Commonwealth of Pennsylvania was declared due to low electrical supply. As of 1/21/94, Unit 1 was completing refueling outage activities and Unit 2 was starting up from a scram that had occurred at 0150 hours on 1/20/94. Neither of the Susquehanna Units were generating power but rather were consuming power to operate plant pumps and other equipment. In light of the system power shortage coupled with the minimal safety impact the inoperable acoustic monitor posed to the station, the enforcement discretion from the applicable Technical Specifications was requested and subsequently granted.

REPORTABILITY/ANALYSIS

This event was determined to be reportable per 10CFR50.73(a)(2)(i)(B), in that Susquehanna Unit 2 was in a condition prohibited by the Technical Specifications when Unit 2 entered condition 1 while the acoustic monitor for the 'S' Main Steam Relief Valve was inoperable. Technical Specifications 3.3.7.5 and 3.4.2 require all Main Steam Relief Valve acoustic monitors to be operable in condition 1 and 2 and Technical Specification 3.0.4 prohibits entry into an operational condition or other specified condition when the conditions for the Limiting Conditions for Operation are not met. Even though enforcement discretion from the applicable Technical Specification was granted, since the 'S' MSRV acoustic monitor was discovered to be inoperable while Unit 2 was in condition 2 and the Unit entered condition 1, Technical Specification 3.0.4 was not met in this application.

Operation of Unit 2 with the 'S' MSRV acoustic monitor inoperable does not create a significant degradation in the Station's ability to protect the health and safety of the public and/or plant personnel. There are no automatic actuations initiated by the MSRV acoustic monitoring system. The monitors provide valve position indication only. Each of the MSRV tailpipes, including the 'S', are also equipped with operable temperature sensors to detect weeping, cycling, or stuck-open valves. In addition, there are alternate indications and symptoms discernible by control room personnel for determining MSRV position. These alternate indications and symptoms are listed in an operations off normal procedure ON-283-001, "Stuck Open Safety Relief Valve". One of the indicators listed is suppression pool temperature and in the case of the 'S' MSRV, two suppression pool temperature elements are located in close proximity to the discharge line and would detect an elevated temperature if the 'S' MSRV were open.

In accordance with guidance provided in NUREG 1022, Supplement 1 item 14.1 and 10CFR50.4(d), the required submission date for this report was determined to be 02/22/94.

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)

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Unit 2

Susquehanna Steam Electric Station

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YEAR	SEQUENTIAL NUMBER	REVISION NUMBER
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0 4	OF	0 4
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TEXT (If more space is required, use additional NRC Form 366A's) (17)

CORRECTIVE ACTION

Upon receipt of the spurious 'S' MSRVS open alarm, Control Room Operators observed that all other indications showed that the MSRVS was closed. Although the open indication subsequently cleared, the acoustic monitor for the 'S' MSRVS was declared inoperable and Technical Specification 3.3.7.5 action 80b and 3.4.2 action c were entered. The Instrumentation and Controls (I&C) work group was contacted to investigate the acoustic monitor. The investigation showed that the acoustic monitor charge converter bias voltage was abnormally low at approximately 8 VDC while the vendor specified range is greater than 10 VDC. Repair of the charge converter requires a primary containment entry. Completion of the investigation has been scheduled for the next Unit 2 outage of sufficient duration to allow for a primary containment entry.

Due to weather related emergency circumstances, continued startup of Unit 2 was needed and a primary containment entry was not made. Since an inoperable MSRVS acoustic monitor requires an eventual Unit shutdown, discretionary enforcement from the applicable Technical Specification requirements was verbally requested and orally granted on 1/21/94. The off normal procedure for stuck open relief valves, ON-283-001, was revised to identify the condition of the 'S' MSRVS acoustic monitor and identify the Suppression Pool temperature monitoring channels that are located most closely to its discharge line.

An amendment to Unit 2 Technical Specifications Number 100 was submitted and approved as a follow up to the discretionary enforcement granted on 1/21/94.

ADDITIONAL INFORMATION

Failed Component Identification:

This information will be provided once the final determination of the monitor failure is completed.

Past Similar Events:

A review of past Licensee Event Reports (LERs) for the station identified no previous LERs involving failure of MSRVS acoustic monitors.

