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 FACIL: 50-388 Susquehanna Steam Electric Station, Unit 2, Pennsylv 05000388
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 RECIP. NAME RECIPIENT AFFILIATION

SUBJECT: LER 93-001-00: on 930603, 4.16KV bus undervoltage relays not channel checked due to procedural inadequacy. W/930701 ltr.

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 TITLE: 50.73/50.9 Licensee Event Report (LER), Incident Rpt, etc.

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July 1, 1993

U.S. Nuclear Regulatory Commission
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Washington, DC 20555

SUSQUEHANNA STEAM ELECTRIC STATION
LICENSEE EVENT REPORT 93-003-00
FILE R41-2
PLAS - 569

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

Attached is Licensee Event Report 93-003-00. 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 required surveillance channel checks were not performed on 4.16kv bus undervoltage relays per Technical Specifications 4.3.3.1-1. The condition existed when Unit 1 was defueled for its 2nd through 6th refueling outages. This condition has been corrected.

H.G. Stanley
VP - Nuclear Operations

JJM/mkf

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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 3
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TITLE (4)
4.16KV Bus Undervoltage Relays Not Channel Checked

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 6	0 3	9 3	9 3	0 0 3	0 0	0 7	0 1	9 3			0 5 0 0 0
THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11)											

OPERATING MODE (9) 1	POWER LEVEL (10) 1 0 0	<input type="checkbox"/> 20.402(b)	<input type="checkbox"/> 20.405(a)(1)(i)	<input type="checkbox"/> 20.405(a)(1)(ii)	<input type="checkbox"/> 20.405(a)(1)(iii)	<input type="checkbox"/> 20.405(a)(1)(iv)	<input type="checkbox"/> 20.405(a)(1)(v)	<input type="checkbox"/> 20.405(c)	<input type="checkbox"/> 50.38(c)(1)	<input type="checkbox"/> 50.38(c)(2)	<input checked="" type="checkbox"/> 50.73(a)(2)(i)	<input type="checkbox"/> 50.73(a)(2)(ii)	<input type="checkbox"/> 50.73(a)(2)(iii)	<input type="checkbox"/> 50.73(a)(2)(iv)	<input type="checkbox"/> 50.73(a)(2)(v)	<input type="checkbox"/> 50.73(a)(2)(vii)	<input type="checkbox"/> 50.73(a)(2)(viii)(A)	<input type="checkbox"/> 50.73(a)(2)(viii)(B)	<input type="checkbox"/> 50.73(a)(2)(x)	<input type="checkbox"/> 73.71(b)	<input type="checkbox"/> 73.71(c)	<input type="checkbox"/> OTHER (Specify in Abstract below and in Text, NRC Form 356A)
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LICENSEE CONTACT FOR THIS LER (12)

NAME J. J. Meter - Power Production Engineer	TELEPHONE NUMBER 7 1 7 5 4 2 - 1 8 7 3
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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)

<input type="checkbox"/> YES (If yes, complete EXPECTED SUBMISSION DATE)	<input checked="" type="checkbox"/> NO	EXPECTED SUBMISSION DATE (15)	MONTH	DAY	YEAR
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ABSTRACT (Limit to 1400 spaces, i.e., approximately fifteen single-space typewritten lines) (18)

On June 3, 1993, with both Units at 100% power, it was discovered that the Unit 1 4.16kv bus undervoltage relays were not channel checked while Unit 1 was in the defueled condition. Since the Unit 1 4.16kv buses supply Engineered Safety Feature (ESF) equipment common to both Units, Technical Specification Surveillance requirements 4.3.3.1-1, 5.b and 5.c were not being met for Unit 2 during those times when Unit 1 was defueled (2nd through 6th refueling outages) and Unit 2 was in conditions 1, 2, 3, 4 and 5. This condition is reportable per 10CFR50.73(a)(2)(i)(B) as a condition prohibited by the plant's Technical Specifications. The cause of the condition was attributed to a procedural inadequacy with the Unit 1 Shiftly Surveillance Operating Log. The procedure did not recognize that the Unit 1 4.16kv bus undervoltage relays were required to be channel checked in the defueled condition for the common ESF equipment powered by those buses. This condition did not create a degradation in the Station's ability to protect the health and safety of the public. If the Unit 1 4.16kv buses would have experienced an undervoltage condition while Unit 1 was in the defueled condition, the Unit 1 relays would have functioned properly or Operations personnel would have become aware of the condition through other means. The Shiftly Surveillance Operating Log was revised to correct the condition. A review of Operations Unit specific surveillances that check common equipment will be conducted to ensure no other reportable conditions.

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) SUSQUEHANNA STEAM ELECTRIC STATION - UNIT 2	DOCKET NUMBER (2) 0 5 0 0 0 3 8 8	LER NUMBER (6)			PAGE (3)		
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER			
		9 3	- 0 0 3	- 0 0	0 2	OF	0 3

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

DESCRIPTION OF EVENT

On June 3, 1993, with both Units in Condition 1 at 100% power, it was discovered that the Unit 1 4.16kv bus undervoltage relays (EIIS Code: EB) were not channel checked during performance of the "Shiftly Surveillance Operating Log" while Unit 1 was in the defueled condition. Since the Unit 1 4.16kv buses supply Engineered Safety Feature (ESF, EIIS Code: B) equipment common to both Units, Technical Specifications Surveillance requirements 4.3.3.1-1, 5.b and 5.c were not being met for Unit 2 during those times when Unit 1 was defueled and Unit 2 was in Conditions 1, 2, 3, 4, and 5. The condition was discovered during a required periodic review of the Unit 1 Shiftly Surveillance Operation Log by an Operator (licensed, utility). Upon discovery of this condition, the Unit 1 Shiftly Surveillance Operating Log was revised to require a channel check of the 4.16kv undervoltage relays while Unit 1 is in the defueled condition.

CAUSE OF EVENT

The cause of the event was attributed to a procedural inadequacy with the Unit 1 Shiftly Surveillance Operating Log (SO-100-006) which occurred when a separate listing (Attachment C) was developed for the surveillance requirements with the reactor in a defueled condition. The change was made in May of 1985. Prior to this, the surveillances required for defueled were included in Attachment B which covered conditions 4, 5 and defueled. Since many requirements are not applicable during the defueled condition, Attachment C was developed. It was not recognized that the Unit 1 4.16kv bus undervoltage relays were required to be channel checked in the defueled condition for the common ESF equipment powered by those buses.

REPORTABILITY/ANALYSIS

This condition was determined to be reportable per 10CFR50.73(a)(2)(i)(B), as a condition prohibited by the plant's Technical Specifications in that channel checks were not performed on 4.16kv undervoltage relays as required by Technical Specification Surveillance requirements 4.3.3.1-1, 5.b and 5.c. This condition existed when Unit 1 was defueled for its 2nd through 6th refueling outages. The usual time span for the Unit to be defueled is between two and three weeks.

At the time of discovery, all relays had been successfully channel checked since the previous Unit 1 Refueling and Inspection Outage (May 1992). All other required surveillances for the relays were also current. Therefore, the relays were Operable when the condition was discovered.

This condition did not create a degradation in the Station's ability to protect the health and safety of the public and/or plant personnel while Unit 1 was defueled. The undervoltage relays are not required to be Operable for Unit 1 while in this condition. The channel checks are required for common ESF equipment while Unit 1 is

LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION

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		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER			
		9 3	- 0 0 3	- 0 0	0 3	OF	0 3

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

defueled and Unit 2 is in Conditions 1, 2, 3, 4 and 5. However, if the Unit 1 4.16kv buses would have experienced an undervoltage condition while Unit 1 was in the defueled condition, the Unit 1 4.16kv relays would have functioned properly or Operations personnel would have become aware of the condition through other means and corrected the condition. Although the shiftly channel checks were not performed, monthly functional testing was being completed as required which indicates that the relays would have performed properly if called upon to do so. Additionally, the electrical interconnection of the Unit 1 and Unit 2 4.16kv buses is such that the corresponding surveilled 4.16kv undervoltage relays on Unit 2 would be expected to respond (trip and alarm) to the degraded voltage condition experienced by the Unit 1 bus.

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 07/06/93.

CORRECTIVE ACTION

Upon discovery of this condition, the Shiftly Surveillance Operating Log (SO-100-006) was revised to require a channel check of the 4.16kv undervoltage relays while Unit 1 is in the defueled condition. SO-100-006 has been thoroughly reviewed with no additional reportable conditions found. Additionally, the Daily and Weekly Surveillance Operating Logs for both Units have been thoroughly reviewed as part of their required periodic review. No other reportable conditions were found.

Actions to prevent recurrence include training Operations staff and licensed personnel on this event. Although the reason for the surveillance oversight is believed to be due to the unique design of the 4.16kv system, a review of Operations controlled Unit specific surveillances that check common equipment will be conducted to ensure that required surveillances for both Units are performed.

ADDITIONAL INFORMATION

Failed Component Identification: Not applicable.

Previous Similar Events:

Docket No. 50-387, LER 89-013-00 Surveillance Requirements Not Performed Within Allowed Intervals.

Docket No. 50-387, LER 90-008-00 Required Instrumentation Surveillances Not Performed.

Docket No. 50-387, LER 91-012-00 Valves Not Surveillance Tested - Operation Prohibited by Technical Specifications.

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