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

SUSQUEHANNA STEAM ELECTRIC STATION
LICENSEE EVENT REPORT 50-388/00-001-00
PLA - 5202 FILE R41-2

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

Attached is Licensee Event Report 50-388/00-001-00. This report is being made pursuant to 10CFR50.73(a)(2)(i)(B), in that Susquehanna SES Unit 2 was in a condition prohibited by the plant's Technical Specifications as a result of entry into Technical Specification 3.0.3 during performance of the 24 month Emergency Diesel Generator LOCA/LOOP testing on Unit 1.

Bryce L. Shriver
Vice President – Nuclear Site Operations

Attachment

cc: Mr. H. J. Miller
Regional Administrator
U. S. Nuclear Regulatory Commission
475 Allendale Road
King of Prussia, PA 19406

cc: Mr. S. L. Hansell
Sr. Resident Inspector
U.S. Nuclear Regulatory Commission
P. O. Box 35
Berwick, PA 18603-0035

IE22

RGN-001

NRC FORM 366 (6-1998) U.S. NUCLEAR REGULATORY COMMISSION

APPROVED BY OMB NO. 3150-0104
EXPIRES 06/30/2001
ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS MANDATORY INFORMATION COLLECTION REQUEST: 50.0 HRS. REPORTED LESSONS LEARNED ARE INCORPORATED INTO THE LICENSING PROCESS AND FED BACK TO INDUSTRY. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE INFORMATION AND RECORDS MANAGEMENT BRANCH (T-6 F33), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555-0001, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

LICENSEE EVENT REPORT (LER)

(See reverse for required number of digits/characters for each block)

FACILITY NAME (1)	DOCKET NUMBER (2)	PAGE (3)
Susquehanna Steam Electric Station - Unit 2	05000388	1 OF 4

TITLE (4)
Entry Into Technical Specification 3.0.3 For LOCA/LOOP Logic Testing

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 NAME	DOCKET NUMBER
										05000
04	23	00	00	-- 001 --	00	05	22	00	FACILITY NAME	DOCKET NUMBER
										05000

OPERATING MODE (9)	1
POWER LEVEL (10)	100

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

	20.2201(b)		20.2203(a)(2)(v)	X	50.73(a)(2)(i)		50.73(a)(2)(viii)
	20.2203(a)(1)		20.2203(a)(3)(i)		50.73(a)(2)(ii)		50.73(a)(2)(x)
	20.2203(a)(2)(i)		20.2203(a)(3)(ii)		50.73(a)(2)(iii)		73.71
	20.2203(a)(2)(ii)		20.2203(a)(4)		50.73(a)(2)(iv)		OTHER
	20.2203(a)(2)(iii)		50.36(c)(1)		50.73(a)(2)(v)		Specify in Abstract below or in NRC Form 366A
	20.2203(a)(2)(iv)		50.36(c)(2)		50.73(a)(2)(vii)		

LICENSEE CONTACT FOR THIS LER (12)

NAME	TELEPHONE NUMBER (Include Area Code)
Joseph J. Meter - Senior Engineer, Licensing	570 / 542-1873

COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO EPIX		CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO EPIX

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 15 single-spaced typewritten lines) (16)

At 1731 hours on April 23, 2000, Unit 2 entered Technical Specification (TS) 3.0.3 while in Mode 1 (Power Operation) at 100% power, in order to perform 24 month surveillance test SE-124-107, "Unit 1 Division I Diesel Generator LOCA/LOOP Test " for the electrical system on Unit 1, which was in Mode 5 (Refueling) at 0% power. At 1310 hours on April 27, 2000, Unit 2 again entered TS 3.0.3 while in Mode 1 (Power Operation) at 100% power, in order to perform 24 month surveillance test SE-124-207, "Unit 1 Division II Diesel Generator LOCA/LOOP Test " on Unit 1, which was in Mode 4 (Cold Shutdown) at 0% power. Each test placed one control structure chiller in "STOP" and the 4.16 kV Engineered Safeguards System Bus supplying power to the other control structure chiller was de-energized for approximately 10 seconds. Application of the Safety Function Determination Process (SFDP) at that time rendered both control structure chillers inoperable for approximately 10 seconds during each test. TS 3.7.3 and 3.7.4 require entry into TS 3.0.3 when both control structure chillers are inoperable. Both tests were successfully completed and TS 3.0.3 was exited prior to the need to commence a unit shutdown. All safety-related systems associated with the testing responded as required. These surveillance test procedures will be evaluated for revision to prevent entry into TS 3.0.3 and similar procedures will be reviewed to ensure all TS actions are accurately identified. The safety significance of this event is low, and the health and safety of the public was not compromised.

FACILITY NAME (1)	DOCKET	LER NUMBER (6)			PAGE (3)
	05000	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	
Susquehanna Steam Electric Station - Unit 2	388	00	-- 001 --	00	2 OF 4

TEXT *(If more space is required, use additional copies of NRC Form 366A)* (17)

EVENT DESCRIPTION

At 1731 hours on April 23, 2000, Unit 2 entered Technical Specification (TS) 3.0.3 while in Mode 1 (Power Operation) at 100% power, in order to perform 24 month surveillance test SE-124-107, "Unit 1 Division I Diesel Generator LOCA/LOOP Test" for the electrical system on Unit 1, which was in Mode 5 (Refueling) at 0% power. At 1310 hours on April 27, 2000, Unit 2 again entered TS 3.0.3 while in Mode 1 (Power Operation) at 100% power, in order to perform 24 month surveillance test SE-124-207, "Unit 1 Division II Diesel Generator LOCA/LOOP Test" for the electrical system on Unit 1, which was in Mode 4 (Cold Shutdown) at 0% power.

These Unit 1 Loss of Coolant Accident (LOCA) / Loss of Offsite Power (LOOP) tests are required to be performed every 24 months by the station's Technical Specifications. Each test requires that two 4.16 kV Engineered Safeguards System Buses (ESS; EIIS Code: EB) are de-energized in conjunction with a "simulated" LOCA signal and provide confirmation of proper ESS Bus load shedding, and then proper energizing of the ESS Bus from its respective Emergency Diesel Generator (EDG; EIIS Code: EK), along with required load sequencing.

Control structure chillers (EIIS Code: VI) are common equipment, which service both units but are powered only from Unit 1. As part of the equipment alignment for each test, one control structure chiller was placed in "STOP". The 4.16 kV ESS Bus supplying power to the other control structure chiller was de-energized for approximately 10 seconds during each test while the LOOP condition was simulated, and the EDG started and re-energized the ESS Bus. Application of the Safety Function Determination Process at that time rendered both control structure chillers inoperable for approximately 10 seconds during each test. Technical Specifications 3.7.3 and 3.7.4 require entry into TS 3.0.3 when both control structure chillers are inoperable. All safety-related systems associated with the testing responded as required. SE-124-107 and SE-124-207 were successfully completed and TS 3.0.3 was exited prior to the need to commence a unit shutdown.

CAUSE OF EVENT

During performance of SE-124-107, Operations personnel (licensed; utility) made the determination via the Safety Function Determination Process (SFDP) that entry into TS 3.0.3 was required. The SFDP is required by TS 5.5.11 and use of this process determined that the tested control structure chiller was required to be declared inoperable because its support system (ESS Bus) was inoperable and the redundant chiller was inoperable. Testing proceeded because it is required by the Technical Specifications and it was believed there was no alternative to the test as written. The procedure step that placed the untested control structure chiller in "STOP" was questioned by test personnel, but was determined to be necessary for the acceptance criteria of the test in order to ensure the tested control structure chiller would load back onto the ESS Bus without interference from the opposite chiller. Entry into TS 3.0.3 was made on April 27, 2000 to perform SE-124-207 for these same reasons. Subsequent to these tests, a preliminary review of the control structure chiller logic has shown that not placing the

untested chiller to "STOP" would not interfere with the test acceptance criteria. Additionally, prior to implementing the LOCA/LOOP tests, reviews of SE-124-107 and SE-124-207 by station personnel did not recognize the requirement to enter TS 3.0.3.

REPORTABILITY/ANALYSIS

This event is reportable per 10CFR50.73(a)(2)(i)(B) as a condition prohibited by the plant's Technical Specifications. Control structure chillers are common equipment, which service both units but are powered only from Unit 1. As part of this test, one control structure chiller was placed in "STOP", and the 4.16 kV ESS Bus supplying power to the other control structure chiller was de-energized for approximately 10 seconds. Application of the Safety Function Determination Process rendered both control structure chillers inoperable. The actual time the chiller support system (ESS Bus) was inoperable was approximately 10 seconds during each test. Technical Specifications 3.7.3 and 3.7.4 require entry into TS 3.0.3 when both control structure chillers are inoperable. All safety-related systems associated with the testing responded as required.

This condition is not applicable to Unit 1 while the 24 month EDG LOCA/LOOP testing is performed on Unit 2 because the Unit 2 ESS Buses do not provide power for required Unit 1 loads. Additionally, the condition for the Unit 1 tests only existed for these April 2000 performances.

Based on the above evaluation, the safety significance of this event is low and the health and safety of the public was not compromised.

In accordance with the guidelines provided in NUREG-1022, Revision 1, Section 5.1.1, the required submission date for this report is May 23, 2000.

CORRECTIVE ACTIONS

The following corrective actions have been completed:

- SE-124-107 and SE-124-207 were successfully completed and TS 3.0.3 was exited prior to the need to commence a unit shutdown.

Corrective actions to be completed are:

- The impact to surveillance test acceptance criteria of not placing the opposite control structure chiller to "STOP" during the Unit 1 LOCA/LOOP testing will be evaluated to determine if the test procedures can be revised to preclude making two chillers inoperable and prevent the need to enter TS 3.0.3.

- All LOCA/LOOP, LOOP and ESS Bus Outage procedures that result in ESS Bus de-energizations will be reviewed to ensure all TS actions required for the test are accurately identified in the test.

FACILITY NAME (1)	DOCKET	LER NUMBER (6)			PAGE (3)
	05000	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	
Susquehanna Steam Electric Station - Unit 2	388	00	-- 001 --	00	4 OF 4

TEXT *(If more space is required, use additional copies of NRC Form 366A)* (17)

ADDITIONAL INFORMATION

Past Similar Events: Entry into TS 3.0.3 has been reported on numerous occasions. The Licensee Event Reports below are associated with those events which required entry into TS 3.0.3 due to LOCA/LOOP testing. The cause for entering TS 3.0.3 for these events is different than the event described in this LER. The cause for the following events was corrected with Amendment #148 to NPF-22:

LER 96-008-00, Docket No. 388/License No. NPF-22

LER 95-006-00, Docket No. 388/License No. NPF-22

LER 94-001-00, Docket No. 388/License No. NPF-22

Failed Component: None