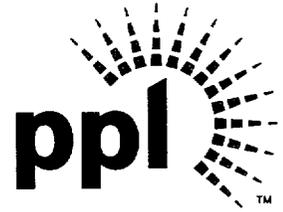


Bryce L. Shriver
Vice President – Nuclear Site Operations

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APR 23 2002

U.S. Nuclear Regulatory Commission
Attn: Document Control Desk
Mail Station P1-137
Washington, DC 20555

SUSQUEHANNA STEAM ELECTRIC STATION
LICENSEE EVENT REPORT 50-387/2002-001-00
PLA - 5469 FILE R41-2

Docket No. 50-387
License No. NPF-14

Attached is Licensee Event Report 50-387/2002-001-00, which discusses the temporary loss of both Control Structure Chillers. This event is reportable as an event or condition that could have prevented fulfillment of a safety function. This event was of low safety significance and resulted in no adverse consequences to the health and safety of the public.

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

Estimated burden per response to comply with this mandatory information collection request: 50 hours. Reported lessons learned are incorporated into the licensing process and fed back to industry. Send comments regarding burden estimate to the Records Management Branch (T-6 E6), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by internet e-mail to bjs1@nrc.gov, and to the Desk Officer, Office of Information and Regulatory Affairs, NEOB-10202 (3150-0104), Office of Management and Budget, Washington, DC 20503. If a means used to impose information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.

LICENSEE EVENT REPORT (LER)

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

1. FACILITY NAME Susquehanna Steam Electric Station - Unit 1	2. DOCKET NUMBER 05000387	3. PAGE 1 OF 3
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4. TITLE
Temporary Loss Of Control Structure Chillers

5. EVENT DATE			6. LER NUMBER			7. REPORT DATE			8. OTHER FACILITIES INVOLVED	
MO	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REV NO	MO	DAY	YEAR	FACILITY NAME	DOCKET NUMBER
02	22	2002	2002	001	00	04	23	2002	Susq. SES - Unit 2	05000388
									FACILITY NAME	DOCKET NUMBER
										05000

9. OPERATING MODE 1	10. POWER LEVEL 81	11. THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check all that apply)			
		20.2201(b)	20.2203(a)(3)(ii)	50.73(a)(2)(ii)(B)	50.73(a)(2)(ix)(A)
		20.2201(d)	20.2203(a)(4)	50.73(a)(2)(iii)	50.73(a)(2)(x)
		20.2203(a)(1)	50.36(c)(1)(i)(A)	50.73(a)(2)(iv)(A)	73.71(a)(4)
		20.2203(a)(2)(i)	50.36(c)(1)(ii)(A)	50.73(a)(2)(v)(A)	73.71(a)(5)
		20.2203(a)(2)(ii)	50.36(c)(2)	50.73(a)(2)(v)(B)	OTHER Specify in Abstract below or in NRC Form 366A
		20.2203(a)(2)(iii)	50.46(a)(3)(ii)	50.73(a)(2)(v)(C)	
		20.2203(a)(2)(iv)	50.73(a)(2)(i)(A)	X 50.73(a)(2)(v)(D)	Maximum Power Level License Condition Exceeded
		20.2203(a)(2)(v)	50.73(a)(2)(i)(B)	50.73(a)(2)(vii)	
		20.2203(a)(2)(vi)	50.73(a)(2)(i)(C)	50.73(a)(2)(viii)(A)	
		20.2203(a)(3)(i)	50.73(a)(2)(ii)(A)	50.73(a)(2)(viii)(B)	

12. LICENSEE CONTACT FOR THIS LER

NAME Gerard M. Machalick - Nuclear Regulatory Affairs	TELEPHONE NUMBER (Include Area Code) 570 / 542-3861
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13. COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT

CAUSE	SYSTEM	COMPONENT	MANU-FACTURER	REPORTABLE TO EPIX	CAUSE	SYSTEM	COMPONENT	MANU-FACTURER	REPORTABLE TO EPIX

14. SUPPLEMENTAL REPORT EXPECTED				15. EXPECTED SUBMISSION DATE		MONTH	DAY	YEAR
YES (If yes, complete EXPECTED SUBMISSION DATE).				X	NO			

16. ABSTRACT (Limit to 1400 spaces, i.e., approximately 15 single-spaced typewritten lines)

On February 22, 2002 with Unit 1 at 81% power and Unit 2 at 100% power, the 'B' Control Structure (CS) Chiller (EISS: KM) tripped when an operator placed the chiller's handswitch from 'Auto' to 'Start' following an automatic start of the equipment. The 'B' chiller automatically started when the 'A' chiller tripped during post-maintenance testing. The cause of the 'B' CS Chiller trip was lack of specific procedural guidance for the operating condition. In the absence of procedural guidance for a chiller after automatically starting, operators typically place the handswitch from 'Auto' to 'Start' to bring the equipment alignment within generic operating guidance. The handswitch "break-before-make" design imposes an additional start event on the equipment for this action, and the resulting electrical transient tripped the electrical supply breaker for the associated equipment fan. The appropriate operating procedure for the CS Chillers will be revised to provide guidance following an automatic start of the equipment to avoid similar operator-induced trips. This event is reportable as an event or condition that could have prevented fulfillment of a safety function per 10CFR50.73(a)(2)(v). Based upon the simplicity of resetting the electrical supply breaker and the short amount of time that no chillers were available, this event resulted in very low safety significance. There were no actual adverse consequences to the health and safety of the public as a result of this event.

LICENSEE EVENT REPORT (LER)

1. FACILITY NAME	2. DOCKET	6. LER NUMBER			3. PAGE
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	
Susquehanna Steam Electric Station - Unit 1	05000387	2002	-- 001 --	00	2 OF 3

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

EVENT DESCRIPTION

On February 22, 2002 with Unit 1 at 81% power and Unit 2 at 100% power, the 'B' Control Structure (CS) Chiller (EIS: KM) tripped when an operator placed the chiller's handswitch from 'Auto' to 'Start' following an automatic start of the equipment. The 'B' chiller automatically started when the 'A' chiller tripped during post-maintenance testing.

Subsequent investigation revealed the following timeline of events on 2/22/2002:

- 11:50 - The 'A' CS chiller was started for post-maintenance testing. Testing was conducted throughout the afternoon.
- 18:37 - The 'A' CS Chiller tripped, and the 'B' Chiller auto-started according to plant design.
- 18:55 - A plant operator (Utility, Licensed) placed the 'B' Chiller circulating pump handswitch from 'Auto' to 'Start', per plant operating philosophy to match handswitch position to equipment status. The "break-before-make" switch contacts momentarily interrupted power to the chiller auxiliaries, and the electrical breaker for the 'B' CS Equipment Fan tripped open. The 'B' chiller tripped due to the loss of the required permissive to have its associated equipment fan running.
- 19:01 - The breaker for the 'B' Equipment Fan was reset, the equipment fan and the 'B' chiller were restarted.

CAUSE OF EVENT

The cause of the 'B' CS Chiller trip was lack of specific procedural guidance for the operating condition. Procedures for normal starting and stopping of the chillers result in the handswitch for the in-service chiller's circulating pump in the 'Start' position and the other chiller in 'Auto' for standby service or 'Stop' if removed from service. In the absence of procedural guidance after a chiller starts automatically, the operator placed the handswitch from 'Auto' to 'Start' to bring the equipment alignment within generic operating guidance. The handswitch "break-before-make" design imposed an additional start event on the equipment for this action. In this event, the high starting current did not trip the breaker on the first start, but the subsequent electrical transient during the switch alignment tripped the equipment fan supply breaker.

ANALYSIS / SAFETY SIGNIFICANCE

Based on the fact that neither of the two CS Chillers would have started if called upon for the six minutes between 18:55 - 19:01, the required cooling for Control Structure equipment would not have been present for those 6 minutes during an accident scenario. In addition, the ability to pressurize the CS envelope was lost for this same time period. This event is reportable as an event or condition that could have prevented fulfillment of a safety function per 10CFR50.73(a)(2)(v). Based upon the simplicity of resetting the electrical supply breaker, and the short amount of time that no chillers were available, this

LICENSEE EVENT REPORT (LER)

1. FACILITY NAME	2. DOCKET	6. LER NUMBER			3. PAGE
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Susquehanna Steam Electric Station - Unit 1	05000387	2002	-- 001 --	00	3 OF 3

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

event resulted in very low safety significance. There were no actual adverse consequences to the health and safety of the public as a result of this event.

In accordance with guidance in NUREG-1022, Revision 2, the due date for this report is April 23, 2002.

CORRECTIVE ACTIONS

The appropriate operating procedure for the CS Chillers will be revised to provide guidance following an automatic start of the equipment to avoid similar operator-induced trips.

ADDITIONAL INFORMATION

Past Similar Events: None

Failed Component: None