

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1) <b>Turkey Point Unit 3</b>	DOCKET NUMBER (2) 0 5 0 0 0 2 5 0	PAGE (3) 1 OF 03
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TITLE (4)  
**Engineered Safety Feature Actuation - Safety Injection and Reactor Trip**

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	2	1	1	8	6	8	6	0	0	6	0	0	3	1	3	8	6	N/A	0 5 0 0 0
																		N/A	0 5 0 0 0

OPERATING MODE (9) 1	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR 5. (Check one or more of the following) (11)																							
POWER LEVEL (10) 1 0 0	20.402(b)			20.405(a)(1)(i)			20.405(a)(1)(ii)			20.405(a)(1)(iii)			20.405(a)(1)(iv)			20.405(a)(1)(v)			50.73(a)(2)(iv) <input checked="" type="checkbox"/>			73.71(b)		
	20.405(a)(1)(i)			50.36(c)(1)			50.36(c)(2)			50.73(a)(2)(i)			50.73(a)(2)(ii)			50.73(a)(2)(iii)			50.73(a)(2)(iv)			73.71(c)		
	20.405(a)(1)(ii)			50.36(c)(2)			50.73(a)(2)(i)			50.73(a)(2)(ii)			50.73(a)(2)(iii)			50.73(a)(2)(iv)			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)(ii)			50.73(a)(2)(iii)			50.73(a)(2)(iv)			50.73(a)(2)(v)								
	20.405(a)(1)(iv)			50.73(a)(2)(i)			50.73(a)(2)(ii)			50.73(a)(2)(iii)			50.73(a)(2)(iv)			50.73(a)(2)(v)								
	20.405(a)(1)(v)			50.73(a)(2)(i)			50.73(a)(2)(ii)			50.73(a)(2)(iii)			50.73(a)(2)(iv)			50.73(a)(2)(v)								

LICENSEE CONTACT FOR THIS LER (12)

NAME <b>Randall D. Hart, Licensing Engineer</b>	TELEPHONE NUMBER AREA CODE: 3 0 5    2 4 5 - 2 9 1 0
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COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRPDS	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRPDS

SUPPLEMENTAL REPORT EXPECTED (14)

YES (If yes, complete EXPECTED SUBMISSION DATE)     NO

EXPECTED SUBMISSION DATE (15)	MONTH	DAY	YEAR

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

**Event:** On February 11, 1986, while Unit 3 was at 100% power, a safety injection (SI) system actuation and subsequent reactor trip occurred. An alarm was received indicating containment isolation cabinet A and B fuse failure and one channel of containment high pressure protection annunciated. The containment isolation racks, were inspected and 3QR51 was found to have abnormal status lights. ONOP 9608.1, 125V DC System - Location of Grounds, was consulted to determine which breaker feeds 3QR51 and the first breaker found was 3D23-11. The caution portion of ONOP 9608.1 allows cycling of 3D23-11 at power. The breaker was cycled which actuated the second channel of containment high pressure protection and resulted in a SI actuation, containment phase 'A' isolation and reactor trip. Although the SI pumps started, no resultant SI flow was delivered to the reactor coolant system. The unit was stabilized at hot standby conditions.

**Cause of Event:** An investigation into the cause of the event has revealed two contributing factors. The first one was that construction activities on Unit 4 resulted in opening 4D01-39 which initiated one channel of containment high pressure protection. The other factor was that procedural guidance available to the operator did not provide adequate instructions for investigating this event. This allowed the operator to cycle 3D23-11 before checking the status of the other breakers that feed 3QR51. When 3D23-11 was cycled, the second channel of containment high pressure protection was actuated which resulted in the SI actuation and reactor trip.

**Corrective Actions:**

- 1) The unit was stabilized at hot standby conditions and upon identification of the cause of the safeguards actuation, the affected equipment were returned to their normal status.
- 2) Affected procedures have been revised to help preclude recurrence of this event.
- 3) A letter has been issued to contract construction personnel designating critical work areas and designating guidelines to be followed when construction activities are progressing in these areas.
- 4) A post-trip review was completed which verified that the plant response to this event was as expected for a reactor trip of this nature. Following completion of the reviews of this event and performance of necessary testing, the unit was returned to service at 1924 on February 12, 1986.

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## LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

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		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER			
		8 6	0 0 6	0 0 0	2	OF	0 3

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

**Event:**

On February 11, 1986, while Unit 3 was at 100% power, a safety injection (SI) system actuation and subsequent reactor trip occurred. At 1324 an alarm was received indicating containment isolation cabinet A and B fuse failure. At the same time, one channel of containment high pressure protection annunciated. Off-Normal Operating Procedure (ONOP) 0208.10, Annunciator List Panel H - Safety Injection and Auxiliary, was used to investigate the problem. The containment isolation racks, 3QR50 and 3QR51 status lights were inspected. 3QR51 was found to have abnormal status lights. ONOP 9608.1, 125V DC System - Location of Grounds, was consulted to determine which breaker feeds 3QR51 and the first breaker found was 3D23-11. The caution portion of ONOP 9608.1 allows cycling of 3D23-11 at power. The breaker was cycled at 1330 which actuated the second channel of containment high pressure protection and the logic for the containment high pressure (2 out of 3 channels) SI signal was completed. This resulted in a SI actuation, containment phase 'A' isolation and reactor trip. Although the SI pumps started, no resultant SI flow was delivered to the reactor coolant system. The unit was subsequently stabilized at hot standby conditions.

**Cause of Event:**

An investigation into the cause of the event has revealed two contributing factors: 1) A protection shield had been removed from the areas of several breakers on Unit 4 to facilitate construction activities. This allowed breaker 4D01-39 to be inadvertently opened while construction activities progressed. This occurred because of the belief that work in this area had no effect on Unit 3. Breaker 4D01-39 feeds 3QR51 so when it was opened, one channel of containment high pressure protection annunciated. 2) The other factor was that the procedural guidance available to the operator did not provide adequate instructions for investigating this event. This allowed the operator to cycle breaker 3D23-11 before checking the status of the other breakers that feed 3QR51. When 3D23-11 was cycled, the second channel of containment high pressure protection was actuated which resulted in the SI actuation and reactor trip.

**Analysis of Event:**

A post-trip review was performed to assess the proper operation of safety related equipment. This review identified that breaker 4D01-39 feeds the train 'B' SI signal for the containment high pressure SI logic. Since 4D01-39 was open, the train 'B' safeguards equipment did not automatically actuate. This equipment was manually started and operated as expected. The train 'A' safeguards equipment automatically started and operated as expected. The post-trip review established that the transient behavior of pertinent plant parameters for the reactor coolant system (RCS) and SGs responded as expected for a reactor trip of this kind. Specifically, the RCS pressures and temperatures were determined to have followed an expected pattern based on the conditions leading up to the transient. Based on the above, the health and safety of the public were not affected.

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

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		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER			
		8 6	0 0 6	0 0 0	3	OF	0 3

TEXT (If more space is required, use additional NRC Form 366A (1) (17))

**Corrective Actions:**

- 1) The unit was stabilized at hot standby conditions and upon identification of the cause of the safeguards actuation, the affected equipment were returned to their normal status.
- 2) An event response team was activated on February 11, 1986, to review this event to assist in determining the root cause, equipment performance, and possible corrective actions.
- 3) An on-the-spot change (OTSC) was written for ONOP 0208.10 to remove the operator action of replacing the breaker fuses if the breaker is okay. This could have resulted in a safety injection actuation also.
- 4) Caution tags have been placed at the 125 volt DC busses instructing personnel to ensure that prior to cycling a 125 volt DC breaker, verify that the other panels associated breakers are in a normal configuration.
- 5) ONOP 9603.1 has been revised to add the caution information described in item 3 above.
- 6) The safeguards racks will have the power supply breakers identified on the racks.
- 7) A meeting was held with the Plant Manager-Nuclear, Site Project Manager, and the area/room coordinator for construction activities. This meeting developed the following criteria for construction activities in critical areas:
  - Any work in these critical areas will be coordinated with the area/room coordinators prior to commencing any work activity.
  - These areas will be restricted to personnel that only have a reason to be there.
- 8) A letter has been issued to construction personnel designating these critical work areas and the guidelines to be followed when construction activities are progressing in these areas.
- 9) A post-trip review was completed which verified that the plant response to this event was as expected for a reactor trip of this nature. Following completion of the reviews of this event and performance of necessary testing, the unit was returned to service at 1924 on February 12, 1986.

**Additional Details:**

Similar occurrences: LER 250-84-002



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L-86-107

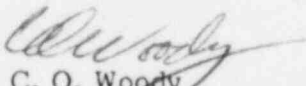
U. S. Nuclear Regulatory Commission  
Document Control Desk  
Washington, D. C. 20555

Gentlemen:

Re: **Reportable Event 86-06**  
**Turkey Point Unit 3**  
**Date of Event: February 11, 1986**  
**Engineered Safety Feature Actuation**  
**Safety Injection and Reactor Trip**

The attached Licensee Event Report is being submitted pursuant to the requirements of 10 CFR to provide notification of the subject event.

Very truly yours,

  
C. O. Woody  
Group Vice President  
Nuclear Energy

COW/PLP/eh

Attachment

cc: Dr. J. Nelson Grace, Region II, USNRC  
Harold F. Reis, Esquire  
PNS-LI-86-75 -

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