

## LICENSEE EVENT REPORT (LER)

FACILITY NAME (1) Shoreham Nuclear Power Station Unit #1										DOCKET NUMBER (2) 0 5 0 0 0 3 2 2				PAGE (3) 1 OF 03							
TITLE (4) RWCU Isolation due to Maintenance Activities																					
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	1	1	8	5	8	5	0	2	3	0	0	7	0	9	8	5	0 5 0 0 0 0 0 0			
OPERATING MODE (9)		THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR § (Check one or more of the following): (11)																			
4		20.402(b)				20.406(e)				<input checked="" type="checkbox"/> 80.73(a)(2)(iv)				73.71(b)							
POWER LEVEL (10)		20.406(a)(1)(i)				80.38(e)(1)				80.73(a)(2)(v)				73.71(e)							
0 1 0 1 0		20.406(a)(1)(ii)				80.38(e)(2)				80.73(a)(2)(vi)				OTHER (Specify in Abstract below and in Text, NRC Form 366A)							
		20.406(a)(1)(iii)				80.73(a)(2)(i)				80.73(a)(2)(vii)(A)											
		20.406(a)(1)(iv)				80.73(a)(2)(ii)				80.73(a)(2)(vii)(B)											
		20.406(a)(1)(v)				80.73(a)(2)(iii)				80.73(a)(2)(ix)											
LICENSEE CONTACT FOR THIS LER (12)																					
NAME Gary G. Rhoads, Operational Compliance Engineer										TELEPHONE NUMBER 5 1 6 9 2 9 1 8 3 0 1 0											
COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)																					
CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRC		CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRC											
SUPPLEMENTAL REPORT EXPECTED (14)												EXPECTED SUBMISSION DATE (15)		MONTH	DAY	YEAR					
<input type="checkbox"/> YES (If yes, complete EXPECTED SUBMISSION DATE)												<input checked="" type="checkbox"/> NO									

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

On June 11, 1985 at 0925 A.M., June 11, 1985 at 1120 A.M., and June 21, 1985 at 1111 A.M., High Steam Leak Detection signals caused three unplanned isolations of the Reactor Water Clean-Up (RWCU) system outboard isolation valve (G33\*MOV-034). For all three isolations the plant was in Operational Condition 4 and the Containment Isolation System was not required to be operational per Technical Specifications. At the time of all three events, one or more of the following work activities were in progress in the Control Building;

- 1) determination of rebar location utilizing an electro-magnetic rebar locator,
- 2) core drilling on the building wall with a drill bit that has an electrical potential applied to it,
- 3) welding in the area.

The probable causes of these isolations were electro-magnetic interferences resulting from one or more of the above activities. Plant Management was notified of the events and all work in the relay room was delayed until operations reviewed the events. The NRC was notified of the events per 10CFR50.72 at 1107 A.M., June 11, 1985 and 1444 P.M., June 21, 1985. To prevent recurrence and to determine the cause of the events, testing will be performed.

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## LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

APPROVED OMB NO. 3150-0104

EXPIRES 8/31/85

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)		
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER			
Shoreham Nuclear Power Station Unit #1	0500032285	0	23	00	02	OF	03

TEXT (If more space is required, use additional NRC Form 386A's) (17)

On June 11, 1985 at 0925 A.M., June 11, 1985 at 1120 A.M. and June 21, 1985 at 1111 A.M., High Steam Leak Detection signals caused three unplanned isolations of the Reactor Water Clean-Up (RWCU) outboard isolation valve (G33\*MOV-034). For all three isolations the plant was in Operational Condition 4 and the Containment Isolation system was not required to be operational per Technical Specifications. At the time of all three isolations one or more of the following work activities were in progress:

- 1) determination of rebar location utilizing an electro-magnetic rebar locator,
- 2) core drilling on the building wall with a drill bit that has an electrical potential applied to it,
- 3) welding in the area.

Upon receiving the second RWCU isolation all work in the relay room was delayed until operations reviewed the event. Further investigation concluded that, in addition to the RWCU outboard isolation valve closure, the Main Steam Line Drain valve (B21-MOV-032) had also isolated and the trip units on Panels 1H11\*PNL-635, 1H11\*PNL-636 and 1H11\*PNL-PCM, which are powered from 120vac instrument bus, indicated gross failures. The probable cause for these two isolations were magnetic field interferences resulting from one or more of the above work activities that were in progress at the time of the isolations. The magnetic field interferences caused a momentary loss of voltage on the instrument bus, or it's control circuit, and a false high temperature signal was sensed by B21\*TIS-147 A & B (Steam Leak Detection High Temperature Switches). The switches tripped, causing the RWCU outboard isolation valve (G33\*MOV-034) to close, resulting in the isolation of the RWCU system. Upon receiving the third RWCU isolation all work in the relay room was delayed until operations reviewed the event. Further investigation concluded that the cause of the third RWCU isolation was a High Energy Break Detection signal. The probable cause of the false High Energy Break Detection signal was magnetic interferences resulting from one or more of the maintenance activities that were in progress at the time of the isolation. Plant Management was notified of the events. There was no safety significance to the events. All plant systems functioned as designed. No ECCS systems were challenged or required for the events. The NRC was notified of the events per 10CFR50.72 at 1107 A.M on June 11, 1985 and at 1444 P.M. on June 21, 1985.

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		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER			
Shoreham Nuclear Power Station Unit #1	05000322	85	023	00	03	OF	03

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

In order to prevent recurrence of these events and to determine a direct cause, the following corrective actions will be taken:

- 1) Testing will be performed in the areas where work activities had taken place at the time of the three events. The tests will involve the use of, alone and in conjunction with each other, the following equipment; the rebar locator, the drill with the bit used for core drilling, and the welding machine.
- 2) Main Steam Line Area Temperature Switches Calibration and Functional test, surveillance procedure SP44.404.02, will be performed on B21\*TIS-147 A & B.
- 3) A meeting was held with applicable divisions for the purpose of determining a more positive methodology for the determination of causes for the three events. For maintenance activities involving the use of the equipment (referenced above) in the Control Building that could result in electro-magnetic interferences, the following will be implemented and continue until the testing is completed;
  - a) A log will be kept by all maintenance crews, recording pertinent information concerning this type of equipment use. (i.e. time, location, equipment used, date, etc.)
  - b) Communications between maintenance crews performing the work and the Control Room will be strengthened.



## LONG ISLAND LIGHTING COMPANY

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July 9, 1985

PM 85-119

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

Dear Sir:

In accordance with 10CFR50.73, enclosed is a copy of Shoreham Nuclear Power Station Unit 1's Licensee Event Report 85-023.

Sincerely yours,

William E. Steiger, Jr.  
Plant Manager

WES/gr

Enclosure

cc: Dr. Thomas E. Murley, Regional Administrator  
John Berry, Senior Resident Inspector  
Institute of Nuclear Power Operations, Records Center  
American Nuclear Insurers

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