

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1) Shoreham Nuclear Power Station Unit #1	DOCKET NUMBER (2) 05000322	PAGE (3) 1 OF 04
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TITLE (4)
Incorrect Sampling of RHR (Residual Heat Removal) Heat Exchanger Service Water

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)
06	14	88	88	010	010	09	28	88			05000
THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR § (Check one or more of the following) (11)											

OPERATING MODE (9) 4	POWER LEVEL (10) 0.00	20.402(b)	20.406(a)	90.73(a)(2)(iv)	73.71(b)
		20.406(a)(1)(i)	90.36(a)(1)	90.73(a)(2)(iv)	73.71(a)
		20.406(a)(1)(ii)	90.36(a)(2)	90.73(a)(2)(iv)	OTHER (Specify in Abstract below and in Text, NRC Form 365A)
		20.406(a)(1)(iii)	X 90.73(a)(2)(ii)	90.73(a)(2)(v)(i)(A)	
		20.406(a)(1)(iv)		90.73(a)(2)(v)(i)(B)	
		20.406(a)(1)(v)	90.73(a)(2)(iii)	90.73(a)(2)(v)	

LICENSEE CONTACT FOR THIS LER (12)

NAME Robert W. Grunseich, Operational Compliance Engineer	TELEPHONE NUMBER AREA CODE 516 929-8300
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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)

<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO YES: If yes, complete EXPECTED SUBMISSION DATE:	EXPECTED SUBMISSION DATE (15): MONTH 10 DAY 31 YEAR 88
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ABSTRACT (Limit to 1400 spaces, i.e. approximately fifteen single space typewritten lines) (16)

On 6/14/88 it was discovered that Radiochemistry technicians were taking service water samples at the inlet side of the A RHR Heat Exchanger instead of the outlet side. The plant was in Operational Condition 4 (Cold Shutdown) with the mode switch in Shutdown and all rods inserted in the core. Plant Management was notified of the event and the NRC was notified at 2137 in accordance with License Condition NPF-36, 2.F. The heat exchanger service water samples are normally taken at RMS (Radiation Monitoring System) [IL] panel 1D11-PNL-023A. However, due to the panel being out of service, the technicians were to take samples at the heat exchanger outlet service water drain line. The technicians mistakenly took the inlet service water drain line isolation valves to be the outlet service water drain line isolation valves. The cause of the event is that the inlet service water drain line isolation valves were not labeled, and the technicians failed to follow up and verify the identity of the valves. To prevent recurrence, all Radiochemistry technicians were informed of the event and of the correct sampling point. The heat exchanger service water drain line isolation valves were identified and clearly labeled as appropriate.

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		YEAR	SIGNATURE NUMBER	SECTION NUMBER		
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1. If more space is required use additional NRC Form NRC-1 (11/77)

PLANT AND SYSTEM IDENTIFICATION

General Electric - Pressurized Water Reactor

Energy Industry Identification System (EIIS) codes are identified in the text as [xx].

IDENTIFICATION OF THE EVENT

Incorrect effluent sampling of RHR (Residual Heat Removal) Heat Exchanger service water.

Event Date: 6/14/88

Report Date: 9/28/88

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CONDITIONS PRIOR TO THE EVENT

Operational Condition - 4, Cold Shutdown

Mode Switch - Shutdown

RPV Pressure = 0 psig RPV Temperature = 109 degrees F

POWER LEVEL - 0

DESCRIPTION OF THE EVENT

On 6/14/88 it was discovered that Radiochemistry technicians were taking service water samples at the inlet side of the A RHR Heat Exchanger instead of the outlet side. The normal method for obtaining the service water sample is through RMS (Radiation Monitoring System) [IL] panel 1D11-PNL-023A. However, alternate samples are being taken from a drain line off the heat exchanger (drain line to Salt Water Drain Tank 1G11-TK-190) due to panel 1D11-PNL-023A being out of service. There are drain lines coming off the inlet and the outlet service water sides of the heat exchanger. With the sample panel out of service, Station Procedure SP 74.020.10 provides instructions to open outlet service water drain line isolation valves 1P41*01V-3004A and 3005A, and obtain a sample at the drain line. However, the technicians have mistakenly been opening inlet service water drain line isolation valves 1P41*01V-3002A and 3003A, which were not labeled, and taking samples at the inlet drain line instead of the outlet drain line.

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		YEAR	SIGNIFICANCE RATING	INITIAL CAUSE			
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Use of form number 2 requires use of enclosure NRC Form 2004-2 (11)

The sampling error was discovered when one of the valves that the technicians were operating needed repair. The Watch Engineer asked the technician to describe the valve that needed repair so that the work instructions could be written. Through discussion with the technician, the Watch Engineer realized that the technicians were taking service water samples at the inlet drain line instead of the outlet drain line.

CAUSE OF THE EVENT

The root cause of the event is that the inlet service water drain line isolation valves were not labeled, and the technicians failed to follow up and verify the identity of the valves. The technicians mistakenly took the inlet service water drain line valves to be the outlet service water drain line valves. This caused them to take samples at the inlet drain line instead of the outlet drain line. The inlet and outlet service water drain lines run adjacent and parallel to each other. The outlet drain line valves are located directly behind the inlet drain line valves. The outlet drain line valves were properly tagged with their identification numbers, but the inlet drain line valves were not tagged.

ANALYSIS OF THE EVENT

This event resulted in a violation of Technical Specifications 4.11.1.1.1 and 3.3.7.10 Action b. Technical Specification 3.3.7.10 Action b states that with panel 1D11*PNL-023A inoperable, effluent releases via the associated pathway may continue for up to 30 days, provided that at least once per 12 hours, grab samples are collected and analysed. Technical Specification 4.11.1.1.1 requires a daily sample of RHR Heat Exchanger service water outlet with a weekly, monthly and quarterly composite analysis. Both these technical specifications were violated due to the erroneous sampling.

An analysis of the safety impact of the erroneous sampling was performed. A review of the heat exchanger work history verified that no leaks were present prior to and up to the last leak rate pressure test completed 4/87. Another leak rate pressure test will be performed and a supplemental report is expected to be submitted by 10/31/88 to report the results of the test and safety impact, if any. In the interim, until the upcoming heat exchanger leak test is performed, reasonable assurance can be provided that there has not been any release to the environment by considering plant operating conditions since the leak test of 4/87. Subsequent to 4/87, the plant operated at low power from 5/26/87 - 6/8/87.

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1. If more than one licensee, use appropriate NRC Form 2004-2 (11/77)

The plant was not critical at any other time subsequent to 4/87. Since then, measurable primary coolant activity was only present from 5/26/87 - 8/29/87. Panel 1D11-PNL-023A was operable from 7/27/87 - 8/11/87 and showed background reading. During this time, the RHR system was operating in the Shutdown Cooling Mode. RHR heat exchanger outlet service water was being properly sampled at panel 1D11-PNL-023A and data shows there was no identifiable activity present.

CORRECTIVE ACTIONS

The inlet RHR A Heat Exchanger service water drain line isolation valves (1P41*01V-3002A and 3003A) were tagged.

All Radiochemistry technicians were informed of the event and were informed of the correct sampling point.

All other technical specification grab sample locations required for effluent monitoring were verified to be labeled. It was verified that the correct sampling points were being used.

ADDITIONAL INFORMATION

a. Manufacturer and model number of failed component (s)

None

b. LER numbers of previous similar events

None



LONG ISLAND LIGHTING COMPANY

SHOREHAM NUCLEAR POWER STATION • P.O. BOX 628 • WADING RIVER, NEW YORK 11792

TEL. (516) 929-8300

September 23, 1988

PM-88-221

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

Dear Sir:

Enclosed is Shoreham Nuclear Power Station's Licensee Event Report LER 88-010, Revision 01.

Revision 00 of Shoreham Nuclear Power Station's Licensee Event Report LER 88-010 was submitted to the NRC July 7, 1988 in accordance with 10CFR50.73. In the Analysis section of that report, LILCO committed to submit a supplemental report on or before 9/30/88 to provide the results of the RHR (Residual Heat Removal) Heat Exchanger leak test. This letter and the enclosed revision (LER 88-010 Revision 01) is to inform you that the supplemental report providing the test results is expected to be submitted by 10/31/88 in lieu of 9/30/88 as originally committed to. The revised portions of the enclosed report are indicated by vertical lines in the right margin. The following describes the cause for the delay in performing the heat exchanger leak test.

On 8/15/88 plant personnel proceeded to prepare the heat exchanger for the leak test. An attempt was made to thoroughly drain the service water side of the heat exchanger. The inlet and outlet service water isolation valves were closed, and the heat exchanger service water drain valves were opened. After a considerable length of time had elapsed with the service water drain valves open, drainage from the heat exchanger did not completely cease. It became apparent that a complete draining of the heat exchanger was not going to be accomplished.

A possible cause for the inability to completely drain the heat exchanger is that the inlet service water isolation valve may not be seating properly and is continuing to allow a small amount of service water into the heat exchanger. Another possible cause is that there may be biofouling of the heat exchanger bottom which is impeding the drainage, causing the water to trickle out the drain line.

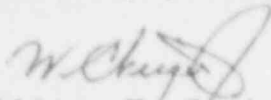
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It was decided that in order to ensure accurate test results, the bottom head of the heat exchanger should be cleaned and the inlet isolation valve inspected. This requires removal of the bottom head. Reinstallation of the bottom head requires replacement of the bottom head gasket, however a replacement gasket was not available on site. A replacement gasket was promptly ordered from General Electric. It was decided that the heat exchanger bottom head would not be removed until the replacement gasket arrived on site.

The replacement gasket arrived on site 9/19/88. Preparations are now being made to remove the heat exchanger bottom head.

Performing the leak test later than originally expected does not impact the safety significance of the event. Sampling of the RHR heat exchanger service water is being performed correctly so that any continued operation of the heat exchanger would not allow leakage to go undetected.

Sincerely yours,



William E. Steiger, Jr.
Plant Manager

JJM:jp

Enclosure

cc: William T. Russell, Regional Administrator
Frank Crescenzo, Resident Inspector
Institute of Nuclear Power Operations, Records Center
Americal Nuclear Insurers

SR.A21.0200