

LICENSEE EVENT REPORT (LER)

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

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH
THIS INFORMATION COLLECTION REQUEST: 50.0 HRS.
FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO
THE INFORMATION AND RECORDS MANAGEMENT BRANCH
(MNB 7714), 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.FACILITY NAME (1)
Seabrook StationDOCKET NUMBER (2)
05000443PAGE (3)
1 OF 3TITLE (4)
Service Water Pump Discharge Check Valve 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
09	14	93	93	-- 017 --	00	10	18	93	FACILITY NAME	DOCKET NUMBER 05000
OPERATING MODE (9)		1	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more) (11)							
POWER LEVEL (10)		100	20.402(b)			20.405(c)			50.73(a)(2)(iv)	73.71(b)
			20.405(a)(1)(i)			50.36(c)(1)			50.73(a)(2)(v)	73.71(c)
			20.405(a)(1)(ii)			50.36(c)(2)			50.73(a)(2)(vii)	OTHER
			20.405(a)(1)(iii)		X	50.73(a)(2)(i)			50.73(a)(2)(viii)(A)	(Specify in
			20.405(a)(1)(iv)			50.73(a)(2)(ii)			50.73(a)(2)(viii)(B)	Abstract below
			20.405(a)(1)(v)			50.73(a)(2)(iii)			50.73(a)(2)(x)	and in Text, NRC Form 366A)

LICENSEE CONTACT FOR THIS LER (12)

NAME
James M. PeschelTELEPHONE NUMBER (Include Area Code)
(603) 474-9521 ext. 3772

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

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS

SUPPLEMENTAL REPORT EXPECTED (14)

YES (If yes, complete EXPECTED SUBMISSION DATE).	X	NO	EXPECTED SUBMISSION DATE (15)	MONTH	DAY	YEAR
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ABSTRACT (Limit to 1400 spaces, i.e., approximately 15 single-spaced typewritten lines) (16)

North Atlantic procedure OX1416.04 "Service Water Quarterly Pump and Valve Test, and 18 Month Valve Stroke Verification" tests the two ocean service water pumps in each train, their associated discharge isolation motor operated valves (MOV) and their associated discharge check valves. Following performance of OX1416.04 on August 24, 1993, North Atlantic recognized that the Service Water System (SW) configuration entered during the performance of check valve testing pursuant to this procedure would not result in an automatic restart of a service water pump following a loss of offsite power. North Atlantic determined on September 14, 1993, that this configuration represented a condition or operation prohibited by Technical Specifications and is therefore reportable pursuant to 10CFR50.73(a)(2)(i)(B).

There were no adverse safety consequences associated with this event. The root cause of this event has been determined to be a procedural inadequacy. North Atlantic will revise the frequency of SW pump discharge check valve testing from quarterly to COLD SHUTDOWN.

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TEXT CONTINUATION

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Seabrook Station		05000443	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	2 OF 3
			93	-- 017 --	00	

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

Description of Event

North Atlantic procedure OX1416.04 "Service Water Quarterly Pump and Valve Test, and 18 Month Valve Stroke Verification" tests the two ocean service water pumps in each train, their associated discharge isolation motor operated valves (MOV) and their associated discharge check valves. Testing of the discharge check valves is performed with both ocean service water pumps in a train initially operating. One of the discharge isolation MOV's breakers is opened to prevent the valve from closing when its related pump is stopped and checked for reverse pump shaft rotation.

Following performance of OX1416.04 on August 24, 1993, North Atlantic recognized that the Service Water System (SW) configuration entered during the performance of check valve testing pursuant to this procedure would not result in an automatic restart of a service water pump following a loss of offsite power. North Atlantic determined on September 14, 1993, that the test configuration resulted in the two ocean and one cooling tower service water pumps in a train being inoperable which is a condition or operation prohibited by Technical Specifications and is therefore reportable pursuant to 10CFR50.73(a)(2)(i)(B).

Conducting this check valve testing results in both ocean service water pumps and the cooling tower pump in the tested train being inoperable under the following conditions:

During SW train A testing, for the period during which the train A pump SW-P-41C discharge MOV (SW-V22) is de-energized in the open position with both pumps in the train operating.

During SW train B testing, for the period during which the train B pump SW-P-41D discharge MOV (SW-V31) is de-energized in the open position with both pumps in the train operating.

Following restoration of power by the emergency diesel generators, none of the three pumps in the affected train will automatically start and manual action would be required to restore service water flow in the affected train.

A review was conducted using the WORK CONTROL database to identify the previous occurrences of performance of this procedure on the A train and on the B train. The procedure has been performed a total of 40 times, 20 times on the A train and 20 times on the B train.

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

Safety Consequences

There were no adverse safety consequences associated with this event. As stated above, manual action would be required to restore service water flow in the tested train after a loss of offsite power. With the diesel generator operating, a limited amount of time would be available to establish service water flow to the diesel generator jacket water cooler. North Atlantic believes that SW flow to the diesel generator jacket water cooler would be restored in a timely manner. Procedural steps within procedure E-0 "Reactor Trip or Safety Injection" direct the operators to verify ocean SW flow and to initiate a Cooling Tower actuation in the absence of ocean SW flow. If a loss of offsite power event were to occur during the short duration of time (approximately 10 minutes) during which a SW train were being tested and operators were unable to expeditiously restore SW flow in the affected train, the opposite SW train would be available to supply station shutdown heat loads. If a single failure of the unaffected train Emergency Diesel Generator were to be assumed, in addition to the above assumptions, the station could experience a loss of all AC power condition.

Root Cause

The root cause of this event has been determined to be a procedural inadequacy in that procedure OX1416.04 failed to identify that de-energizing the pump discharge valve in the open position with both pumps running would result in the loss of automatic system operation following a loss of offsite power.

Corrective Actions

North Atlantic initially revised procedure OX1416.04 to include the appropriate steps for the manual restoration of service water flow following a loss of offsite power during testing.

North Atlantic will revise the UFSAR and appropriate procedures to revise the frequency for performance of SW pump discharge check valve testing from quarterly to COLD SHUTDOWN.

Plant Conditions

At the time of this event, the plant was in MODE 1 at 100% power.

Previous Occurrences

Licensee Event Report 93-006 documents an event which had similar effects on the service water system operation. However, LER 93-006 concerned maintenance performed on the service water cooling tower pump discharge valve with the valve de-energized in the open position. LER 93-006 does not involve corrective maintenance, but rather results from the performance of normal surveillance activities in accordance with approved procedures.