

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1) Waterford 3 Steam Electric Station	DOCKET NUMBER (2) 0 5 0 0 0 3 8 2	PAGE (3) 1 OF 4
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TITLE (4)

Inadvertent Containment Spray Actuation

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

OPERATING MODE (9) 3		THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11)									
POWER LEVEL (10) 01010	20.402(b)	20.405(e)	<input checked="" type="checkbox"/>	50.73(a)(2)(iv)	73.71(b)						
	20.405(a)(1)(i)	50.36(c)(1)	<input type="checkbox"/>	50.73(a)(2)(v)	73.71(c)						
	20.405(a)(1)(ii)	50.36(c)(2)	<input type="checkbox"/>	50.73(a)(2)(vii)	OTHER (Specify in Abstract below and in Text, NRC Form 365A)						
	20.405(a)(1)(iii)	50.73(a)(2)(i)	<input type="checkbox"/>	50.73(a)(2)(viii)(A)							
	20.405(a)(1)(iv)	50.73(a)(2)(iii)	<input type="checkbox"/>	50.73(a)(2)(viii)(B)							
20.405(a)(1)(v)	50.73(a)(2)(iii)	<input type="checkbox"/>	50.73(a)(2)(x)								

LICENSEE CONTACT FOR THIS LER (12)

NAME O.D. Hayes, Operations Superintendent	TELEPHONE NUMBER 5 0 4 4 6 4 - 3 1 1 8
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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		
X	A	B	S	E	A	L	B	5	8	0	N

SUPPLEMENTAL REPORT EXPECTED (14)

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

ABSTRACT

On February 20, 1985 Operations Personnel at Waterford 3 Steam Electric Station were performing a functional test of the Plant Protection System. At 1438 hours CST, while performing a matrix test on Channel D, Operations Personnel failed to reset the initiation relays for the Containment Spray Actuation Signal resulting in an inadvertent Containment Spray Actuation. Following verification of normal containment pressure, both Containment Spray Pumps were secured.

At approximately 1520 hours Operations Personnel observed signs of Reactor Coolant Pump Seal degradation, which necessitated a plant cooldown.

The above event was reported to the Commission pursuant to 10CFR 50.72(b)(2)(ii).

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LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

APPROVED OMB NO. 3150-0104

EXPIRES 8/31/85

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		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER			
Waterford 3 Steam Electric Station	0 5 0 0 0 3 8 2	8 5	- 0 0 6	- 0 0	0 2	OF	0 4

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

NARRATIVE

On February 20, 1985 Operations Personnel were performing a functional test of the Plant Protection System as defined in procedure OP-903-107, Plant Protection System Channel ___ A, ___ B, ___ C, ___ D Functional Test. At 1438 hours CST, while performing matrix testing (step 8.24) on Plant Protection System channel D (AD matrix), Operations Personnel failed to reset the initiation relays for the Containment Spray Actuation Signal, as defined in step 8.24.46, resulting in an inadvertent Containment Spray Actuation. Upon receiving the above signal, all automatic actuations (Containment Spray pumps A and B started and Component Cooling Water to the Reactor Coolant Pumps secured) functioned per design. Following verification of normal containment pressure, as required in procedure OP-902-008, Safety Function Recovery, Operations Personnel secured both Containment Spray pumps. Less than 1000 gallons of water was sprayed into the containment as a result of the actuation.

At 1439 hours Operations Personnel attempted to restore Component Cooling Water to the Reactor Coolant Pumps by opening containment isolation valves CC-641, -710, and -713. Cooling water could not be restored, however, because the 1A, 2A, and 2B Reactor Coolant Pump Seal Cooler isolation valves closed and could not be opened. A subsequent evaluation revealed that the Component Cooling Water discharge containment isolation valve closed about one (1) second before the inlet valve causing a pressure spike in the Component Cooling Water piping. The resulting spike increased pressure within the cooler piping above 125 psig, which resulted in the closure of the cooler isolation valves. These valves cannot be opened until the pressure in the piping decreases below the 125 psig setpoint. Since no reset was available, and the pressure in the piping remained above the 125 psig setpoint, Operations Personnel could not restore Component Cooling Water to the Reactor Coolant Pumps within the three (3) minute time limit (as defined in procedure OP-1-002, Reactor Coolant Pump Operation); therefore, Reactor Coolant Pumps 1A, 2A, and 2B were secured. (Since the cooler isolation valves for Reactor Coolant Pump 1B did not close, Component Cooling Water was restored as soon as the containment isolation valves were opened, and therefore the pump was not secured). In order to prevent thermal shocking the pump seals, the Reactor Coolant Pump Seal Cooler isolation valves for the 1A, 2A, and 2B Reactor Coolant Pumps were gagged shut.

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TEXT (If more space is required, use additional NRC Form 365A's) (17)

At approximately 1520 hours indications of seal package damage for Reactor Coolant Pump 1A was observed, a containment evacuation was initiated as a precautionary measure, and Operations Personnel initiated a cooldown per OP-10-001, General Plant Operations. A visual inspection of the containment area by shift personnel identified a Reactor Coolant leak of approximately three (3) gallons per minute from the general vicinity of Reactor Coolant Pump 1A Seal Package.

SAFETY CONSEQUENCES AND IMPLICATIONS

For the above described event, each component designed to actuate upon receiving a Containment Spray Actuation Signal functioned as described in the Final Safety Analysis Report, and the previously mentioned leakage was well within the Technical Specification limit for identified leakage. Based on past Combustion Engineering plant experience and the results of various tests, it is improbable that the pump seals, including the vapor seal, would experience a complete loss of seal function. However, as a result of this event, Combustion Engineering was asked to evaluate the maximum expected leakage through a Reactor Coolant Pump Seal with respect to the Small Break Loss of Coolant Accident Analysis described in the Final Safety Analysis Report. The results of this evaluation will be supplied to the Commission by April 30, 1985.

CORRECTIVE ACTION

Upon completion of the plant cooldown the following actions were taken:

- o All four Reactor Coolant Pump seal packages were replaced.
- o An inspection of the equipment inside the containment revealed that, with the exception of a minor ground on the polar crane, the spray down of containment had no effect on plant components.

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

o Station Modification number 760 was issued to revise the control logic for the seal cooler isolation valves. The valves will now actuate on process temperature rather than pressure. Upon sensing a high temperature condition, the thermocouples will close the cooler isolation valves. An indicating control switch for each set of isolation valves is provided in order to manually over-ride the valve position.

During the event it was noticed that the excess flow check valve, RC-409A, had closed. These valves, one for each Reactor Coolant Pump, are designed to limit the amount of controlled bleed-off from the Reactor Coolant Pumps. The valves are designed to close when flow exceeds 10 gpm, and re-opens automatically when the upstream pressure is reduced to 10 psi above the downstream pressure. These parameters will be tested during a scheduled outage.

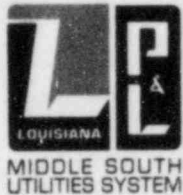
In an effort to minimize inadvertent Engineered Safety Features Actuations, the Operations Superintendent will issue a set of guidelines for Operations Personnel to follow while performing daily activities.

SIMILAR EVENTS

NONE

PLANT CONTACT

O.D. Hayes, Operations Superintendent, 504/464-3118



**LOUISIANA
POWER & LIGHT**

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March 20, 1985

W3P85-0662
3-A1.01.04
C14.03
A4.05

Director, Office of Nuclear Reactor Regulation
ATTENTION: Document Control Desk
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Subject: Waterford 3 SES
Docket No. 50-382
License No. NPF-38
Reporting of Licensee Event Report

Dear Sirs:

Attached is Licensee Event Report Number LER-85-006-00 for the Waterford 3 Steam Electric Station. This Licensee Event Report is submitted per 10CFR50.73(a)(2)(iv).

Very truly yours,

K.W. Cook
Nuclear Support & Licensing Manager

KWC:GEW:sms

Attachment

cc: R.D. Martin, G.W. Knighton, D.M. Crutchfield, NRC Resident Inspectors
Office, INPO Records Center (J.T. Wheelock), E.L. Blake,
W.M. Stevenson

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