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Early C. Ewing III
Director, Nuclear Safety Assurance
Waterford 3

W3F1-99-0175
A4.05
PR

November 22, 1999

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

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

Gentlemen:

Attached is Licensee Event Report (LER) 99-017-00 for Waterford Steam Electric Station Unit 3. This report provides details of a failure to test an electrical penetration overcurrent protection device for a Containment Atmosphere Release System solenoid valve (CAR ISV 200B). This constitutes a violation of Technical Specification 4.8.4.1b since it was determined that the penetration's design rating could have been exceeded. The condition is reportable per 10CFR50.73a(2)(i)(B). The condition did not involve an actual overcurrent event.

This submittal contains four commitments, identified in Attachment 1. If you have any questions regarding the attached information, please contact Oscar Pipkins at (504) 739-6707.

Very truly yours,

 (for E.C. Ewing)

E.C. Ewing
Director,
Nuclear Safety Assurance

ECE/OPP/ssf
Attachment

JE22

PDR ADOCK 0500382 S

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cc: E.W. Merschoff (NRC Region IV)
C.P. Patel (NRC-NRR)
A.L. Garibaldi
P. Lewis - INPO Records Center
J. Smith
N.S. Reynolds
NRC Resident Inspectors Office
Louisiana DEQ/Surveillance Division

Estimated burden per response to comply with this mandatory information collection request: 50.0 hrs. Reported lessons learned are incorporated into the licensing process and fed back to industry. Forward comments regarding burden estimate to the Records Management Branch (T-6 F33), 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. If an information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1)
Waterford Steam Electric Station, Unit 3

DOCKET NUMBER (2)
05000-382

PAGE (3)
1 of 5

TITLE (4)
Failure To Perform Technical Specification Surveillance Tests On A Penetration Overcurrent Protection Device

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
08	11	99	99	017	00	11	22	99	N/A	N/A
									N/A	N/A

OPERATING MODE (9)	POWER LEVEL (10)	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR § (Check one or more) (11)								
1	100	20.2201(b)	20.2203(a)(2)(v)	X	50.73(a)(2)(i)	50.73(a)(2)(viii)				
		20.2203(a)(2)(i)	20.2203(a)(3)(i)		50.73(a)(2)(ii)	50.73(a)(2)(x)				
		20.405(a)(1)(ii)	20.2203(a)(3)(ii)		50.73(a)(2)(iii)	73.71				
		20.2203(a)(2)(ii)	20.2203(a)(4)		50.73(a)(2)(iv)	OTHER				
		20.2203(a)(2)(iii)	50.36©(1)		50.73(a)(2)(v)	Specify in Abstract below or in NRC Form 366A				
		20.2203(a)(2)(iv)	50.36©(2)		50.73(a)(2)(vii)					

LICENSEE CONTACT FOR THIS LER (12)

NAME
O.P. Pipkins / Sr. Licensing Engineer

TELEPHONE NUMBER (Include Area Code)
(504) 739-6707

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

ABSTRACT (Limit to 1400 spaces, i. e., approximately 15 single-spaced typewritten lines) (16)

On 8/11/99, with the plant in Mode 1 at 100% Reactor Power, it was determined that a Containment penetration circuit breaker had apparently not been tested per Technical Specification (TS) 4.8.4.1b. The breaker (CAR EBKR 90A -18) is associated with Containment Atmosphere Release (CAR) Valve CAR ISV 200B. Reportability was indeterminate at the time of discovery since the TS excludes testing of protective devices in circuits for which credible fault currents would not exceed the electrical penetration design rating. After further review by Engineering, it was determined, on 10/21/99 that the credible fault current could exceed the electrical penetration rating. Therefore, the breaker is required to be tested. Failure to test was a violation of TS 4.0.2. There was no actual electrical fault event; therefore, there was no resulting damage to the Containment penetration. The condition occurred due to a failure to identify the breaker in TS Table 3.8-1 in conjunction with a plant modification (SMP-1332) in 1988. A repetitive task was not established to test the breaker. The breaker had been successfully tested by an equivalent procedure on 3/22/99 (therefore operable). Currently, breakers required to be tested under TS 4.8.4.1 are identified in Technical Requirements Manual (TRM) Table 3.8-1. The TRM and test procedure will be revised. A task card will be generated. The condition did not compromise the health and safety of the general public.

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

REPORTABLE OCCURRENCE

On August 11, 1999, it was determined that an electrical penetration overcurrent protective device (molded case circuit breaker) had possibly not been surveillance tested in accordance with Technical Specification 4.8.4.1b. Reportability was initially indeterminate since the Technical Specification excludes testing of devices in circuits for which credible fault currents would not exceed the electrical penetration design rating. An immediate review determined that the breaker had been tested on March 22, 1999 by a procedure equivalent to the designated test procedure. This confirmed that the breaker was operable. It was known that the breaker is fed from a Static Uninterruptible Power Supply (SUPS) with inherent current limiting characteristics. Hence, there was some indication that the credible current for the circuit during a fault would be less than the penetration design rating. However, further review of the circuits by Engineering on October 21, 1999 determined that fault current could possibly exceed the electrical penetration design rating. Therefore, a violation of Technical Specification 4.0.2 and 3.8.4.1 was involved and the condition is reportable per 10CFR50.73a(2)(i)(B) via 30 day LER.

INITIAL CONDITIONS

At the time of initial discovery, on August 11, 1999, Waterford 3 was operating in Mode 1 at approximately 100% Reactor Power. No major systems, structures or components were out of service specific to this condition. In addition, no Technical Specification Limiting Conditions for Operation Action Statements were in effect specific to this condition.

EVENT DESCRIPTION

On August 11, 1999, as a result of reviews being conducted associated with another plant condition (CR-98-0159), plant personnel determined that circuit breaker CAR EBKR 90A (Circuit #18) [BKR], associated with Containment Atmosphere Release (CAR) System solenoid valve CAR ISV 200B [BK-

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

ISV] had not been tested via the designated procedure (Procedure ME-003-315). Procedure ME-003-315 is applied to test Containment penetration molded case circuit breakers, that are required to be tested by Technical Specification 4.8.4.1b. The breaker was not identified in Technical Requirements Manual (TRM) Table 3.8-1, "Containment Penetration Conductor Over-Current Protective Devices" which identifies the breakers to be tested in accordance with Technical Specification Requirement 4.8.4.1. Not testing the isolation device constituted a violation of Technical Specification 4.0.2 and 3.8.4.1 since further reviews determined that fault current could exceed the electrical penetration's design rating. The CAR System solenoid valve CAR ISV 200B was determined to be operable since the breaker had been successfully tested on March 22, 1999 per procedure ME-07-002. Testing requirements in Maintenance Procedures ME-007-002 and ME-003-315 are essentially equivalent.

CAUSAL FACTORS

The root cause of the condition was determined to be personnel error during performance of a design change (SMP-1322) in the 1988 time frame. The design change was implemented to add a new, vent line to connect the suction leg of CAR exhaust system Train 'B' to the RAB Normal Ventilation System. The error involved not listing the overcurrent protective device (breaker CAR EBKR 90A Circuit #18) in the Technical Specification. A repetitive task was not established to test the breaker.

CORRECTIVE ACTIONS

Immediate action was taken in the form of a review to determine if the isolation device had been tested by means other than the test omitted from the designated Technical Specification surveillance procedure. Results of that review indicated that the device had been tested by procedure ME-007-002, which has equivalent test requirements to those found in the designated procedure (ME-003-315).

Next a review was performed to assess whether the credible fault current for the circuit involved could

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exceed the electrical penetration's design rating. Results of that review indicated that it could not be ruled out that electrical current flowing during a fault could exceed the penetration rating.

The TRM will be revised to include the subject breaker CAR EBKR 90A (Circuit #18) and correctly incorporate the associated Containment isolation solenoid valve.

A surveillance task will be established for breaker CAR EBKR 90A (Circuit #18) to control scheduling of testing.

Maintenance procedure ME-003-315 will be revised to include breaker CAR EBKR 90A (Circuit #18).

TRM Table 3.8-1 will be reviewed to verify that there are no other cases of components not being identified and / or being incorrectly identified.

Significant changes have been implemented in the design change control process subsequent to the time frame (1988) that the personnel error occurred. Personnel have received training on the program changes. The current program employs an Engineering Request (ER) system which more closely tracks and controls the plant change process. An enhanced 50.59 Program (corporate procedure LI-101) more clearly identifies the Licensing Basis Documents that require changing as a result of a modification. An Engineering procedure (W4.105) provides for documenting when LBD change forms are submitted to Licensing for further processing.

SAFETY SIGNIFICANCE

No actual fault over current event occurred to damage the electrical penetration. The breaker had been successfully tested using an equivalent procedure in March of 1999. The breaker is required to be tested every five years per TS 4.8.4.1b.

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The CAR valves are energized to open for purge mode (short duration). During this time, an electrical short circuit on the class 1E feeder cable, inside Containment, for CAR ISV 200B, would require the operation of associated breaker, CAR EBKR 90A Circuit #18. A review of maintenance history of this breaker did not identify any past failures of the breaker to trip on overcurrent. The circuit has a 'back up' fuse in series with the breaker. A failure of the breaker to trip would have resulted in the fuse isolating the faulted circuit. The available fault current is also limited by the inherent current limiting properties of the SUPS that supplies power to the solenoid valve.

The above described defense-in-depth coupled with the high reliability of the 1E circuit, the successful testing (on 3/22/99) of the breaker and the fact that the circuit is normally deenergized provides assurance that the electrical penetration for valve CAR ISV 200B would not have been challenged by an electrical fault on the circuit.

SIMILAR EVENTS

No similar events have been reported.

ADDITIONAL INFORMATION

Energy Industry Identification System (EIIIS) codes are identified in the text within brackets [].

COMMITMENT IDENTIFICATION/VOLUNTARY ENHANCEMENT FORM

Attachment 1 to W3F1-99-0175

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COMMITMENT(S)	ONE-TIME ACTION*	CONTINUING COMPLIANCE*	SCHEDULED COMPLETION DATE (IF REQUIRED)	ASSOCIATED CR OR ER
Revise TRM to include breaker CAR EBKR 90A (Circuit #18).	x			CR-99-844
Generate surveillance task for breaker (CAR EBKR 90A (Circuit #18)).	x			CR-99-844
Include breaker (CAR EBKR 90A (Circuit #18)) in ME-003-315.	x			CR-99-844
Review TRM Table 3.8-1 for other cases of components not being identified that should be there	x			CR-99-844

*Check one only

VOLUNTARY ENHANCEMENT(S)	ASSOCIATED CR OR ER