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VPNPD-91-187  
NRC-91-57

10 CFR 50.73

June 10, 1991

Document Control Desk  
U. S. NUCLEAR REGULATORY COMMISSION  
Mail Station P1-137  
Washington, DC 20555

Gentlemen:

DOCKET NO. 50-266  
LICENSEE EVENT REPORT 91-004-00  
PRIMARY TEMPERATURE >200 DEGREES WITHOUT CONTAINMENT INTEGRITY  
POINT BEACH NUCLEAR PLANT UNIT 1

Enclosed is Licensee Event Report 91-004-00 for Point Beach Nuclear Plant, Unit 1. This report is being furnished in accordance with the requirement of 10 CFR 50.73(a)(2)(i)(B), "Any operation prohibited by the plant's technical specifications."

This event occurred when reactor coolant temperature exceeded 200 degrees F for a short time period without containment integrity during steam generator crevice flushing. This is in violation of Technical Specification 15.3.6.A.a which requires containment to be set unless the reactor is in cold shutdown (that is, subcritical, with reactor coolant system temperature less than 200 degrees F).

Please contact us if you have any questions of the event or our corrective actions.

Very truly yours,

A handwritten signature in cursive script, appearing to read 'C. W. Fay'.

C. W. Fay  
Vice President  
Nuclear Power

Enclosure

cc: NRC Regional Inspector  
NRC Resident Administrator

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PDR ADDY 05000266  
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## LICENSEE EVENT REPORT (LER)

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 600 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE RECORDS AND REPORTS MANAGEMENT BRANCH (P-530), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

FACILITY NAME (1) Point Beach Nuclear Plant Unit 1										DOCKET NUMBER (2) 0 5 0 0 0 2 6 6				PAGE (3) 1 OF 4		
TITLE (4) Violation of Containment Integrity																
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)			
05	10	1991	1991	004	0006	05	10	1991					0 5 0 0 0			
OPERATING MODE (9)			THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR 5. (Check one or more of the following) (11)													
POWER LEVEL (10) 0.0			20.402(b)				20.405(c)				50.73(a)(2)(iv)				73.71(b)	
			20.405(a)(1)(i)				50.36(a)(1)				50.73(a)(2)(v)				73.71(a)	
			20.405(a)(1)(ii)				50.36(c)(7)				50.73(a)(2)(vi)				OTHER (Specify in Abstract below and in Text NRC Form 366A)	
			20.405(a)(1)(iii)				X 50.73(a)(2)(i)				50.73(a)(2)(vii)(A)					
			20.405(a)(1)(iv)				50.73(a)(2)(ii)				50.73(a)(2)(vii)(B)					
			20.405(a)(1)(v)				50.73(a)(2)(iii)				50.73(a)(2)(ix)					
LICENSEE CONTACT FOR THIS LER (12)																
NAME J. C. Reisenbuechler, Superintendent-Operations										TELEPHONE NUMBER 4 1 1 4 7 5 5 - 1 2 1 3 2 1						
COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)																
CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRRDS	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRRDS							
SUPPLEMENTAL REPORT EXPECTED (14)										EXPECTED SUBMISSION DATE (15)		MONTH	DAY	YEAR		
YES (If yes, complete EXPECTED SUBMISSION DATE)										X NO						

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

## ABSTRACT

On May 10, 1991 steam generator crevice flushing was being performed on the Point Beach Nuclear Plant Unit 1 steam generators while the unit was shut down. During this evolution, primary system temperature exceeded 200 degrees F as indicated by residual heat removal (RHR) heat exchanger inlet temperature for approximately 10 minutes. During this time containment integrity was not set as required by Technical Specification 15.3.6.A.a. Immediate corrective action consisted of cooling down the primary to less than 200 degrees F using the Residual Heat Removal (RHR) system.

LICENSEE EVENT REPORT (LER)  
TEXT CONTINUATION

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 500 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE RECORDS AND REPORTS MANAGEMENT BRANCH (F-630), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

FACILITY NAME (1)  Point Beach Nuclear Plant Unit 1	DOCKET NUMBER (2)  0 5 0 0 0 2 6 6	LER NUMBER (6)			PAGE (3)	
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER		
		9 1	0 0 4	0 0	2	OF 4

NOTE: If more space is required, use additional NRC Form 366A (6-89).

BACKGROUND

Point Beach Nuclear Plant Unit 1 was shut down and near the end of its annual refueling and maintenance outage. Reactor coolant temperature was being maintained between 185 degrees F and 190 degrees F on one train of the RHR system. Reactor coolant system pressure was approximately 350 psig and being maintained by the coolant charging pumps. Reactor coolant pumps were secured to minimize system heatup. The reactor containment was open for access. Steam generator crevice flushing was being performed in accordance with RP-6A, Steam Generator Crevice Flush (Vacuum Mode).

Steam Generator crevice flushing is a process by which soluble contaminants are removed from the tubesheet crevice areas of the steam generators. These contaminants are removed to enhance steam generator performance and reliability. This evolution is performed by raising and maintaining reactor coolant system, and therefore steam generator secondary side water temperature, at approximately 190 degrees F. A vacuum is then drawn on the steam generator secondary side and the water allowed to boil for approximately one hour. This dissolves the soluble material and places it in solution which can then be drained from the steam generator and replaced with clean water. This process is repeated a number of times.

EVENT DESCRIPTION

Steam generator crevice flushing was commenced on the Unit 1 steam generators on May 9, 1991 in accordance with RP-6A, Steam Generator Crevice Flush (Vacuum Mode), and continued into the day on May 10, 1991. The sixth flush cycle was in progress with steam generator fill in progress at the time of the swing shift watch relief which occurred at approximately 1518. Reactor coolant system temperature was being maintained by controlling RHR heat exchanger inlet temperature by procedure between 185 degrees F and 190 degrees F during this evolution. The containment was open for access during this time.

At 1540, it was noted that the RHR heat exchanger inlet temperature was 200 degrees F, reaching a peak at 1550 of 201 degrees F by the plant process computer indication. This is a violation of a Technical Specification requirement. Technical Specification 15.3.6.A.a requires that containment integrity not be violated unless the reactor is in the cold shutdown condition. Cold shutdown is defined in the Technical Specifications as reactor coolant temperature less than or equal to 200 degrees F and reactor shutdown margin of at least 1% delta k/k.

LICENSEE EVENT REPORT (LER)  
TEXT CONTINUATION

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUIREMENT: EST. 500 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE RECORDS AND REPORTS MANAGEMENT BRANCH (F530), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

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

A cooldown using RHR was immediately initiated and reactor coolant temperature lowered to less than 200 degrees. Temperature remained above 200 degrees for approximately 17 minutes.

CAUSES

RP-6A requires controlling reactor coolant temperature in a narrow band near the 200 degree limit for setting containment integrity, warranting increased operator attention and allowing little room for temperature drift. Primary coolant temperature control in a narrow band under conditions of low heat input as exist near the end of a refueling shutdown is difficult. This, coupled with increased operator involvement with other ongoing outage related work affecting the unit for which the operator is responsible, may have diverted his attention from the activity of temperature control.

CORRECTIVE ACTIONS

Corrective action consisted of performing a cooldown utilizing RHR immediately following the discovery of the event to lower temperature to within Technical Specification limits.

In the long term:

1. Current procedure notes which identify temperature band limitations will be enhanced to include a caution identifying the Technical Specification limitations.
2. The Operations group will evaluate the need to temporarily augment the operating crew during the performance of the steam generator crevice flush procedure, RP-6A.

SAFETY ASSESSMENT

There are no safety consequences to this event. Reactor coolant temperature and pressure remained within the Technical Specification operating curve limits at all times. There was no loss in coolant inventory or subcooling and no radioactive effluent releases. The health and safety of the plant employees and the general public were not jeopardized.

LICENSEE EVENT REPORT (LER)  
TEXT CONTINUATION

ESTIMATE BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REGULATION: 50.0 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE RECORDS AND REPORTS MANAGEMENT BRANCH (P-530), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

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

REPORTABILITY

This event is being reported in accordance with the requirements of 10 CFR 50.73(a)(2)(i)(B), "Any operation prohibited by the plant's technical specifications."

The NRC headquarters was given courtesy notification via the ENS. The NRC resident inspector was also notified of this event.

GENERIC IMPLICATIONS

There are no generic implications to this event.

SIMILAR OCCURRENCES

Objective evidence from the completion of the past two crevice flush procedures (Unit 1 - May 1990 and Unit 2 - November 1990) was evaluated. No temperature excursions or deviations from Technical Specification limits were noted.

A review of past LERs and abnormal occurrences revealed no similar occurrences at Point Beach.