VERMONT YANKEE
NUCLEAR POWER CORPORATION

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November 9, 1994
BVY 94-113

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

REFERENCE: Operating License DPR-28
Docket No. 50-271
Reportable Occurrence No. LER 94-06, Supplement 1

Dear Sirs:

As defined by 10 CFR 50.73, we are reporting the attached Reportable Occurrence as LER 94-06, Supplement 1.

Very truly yours,

VERMONT YANKEE NUCLEAR POWER CORPORATION

Robert J. Wanczyk

Robert J. Wanczyk
Plant Manager

cc: Regional Administrator
USNRC
Region I
475 Allendale Road
King of Prussia, PA 19406

IE22-1

NRC Form 366 U.S. NUCLEAR REGULATORY COMMISSION
(6-89)

APPROVED OMS NO. 3150-0104
EXPIRES 4/30/92
ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 50.0 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE RECORDS AND REPORTS MANAGEMENT BRANCH (P-350), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON DC 20555, AND TO THE PAPERWORK REDUCTION PROJECT (3160-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20603.

FACILITY NAME (1)	DOCKET NO. (2)	PAGE (3)
VERMONT YANKEE NUCLEAR POWER STATION	0 5 0 0 0 2 7 1	0 1 OF 0 4

TITLE (4) Missed Reactor Coolant Conductivity Samples due to a Misinterpretation of the Test Method Used to Meet Technical Specifications

EVENT DATE (5)			LER NUMBER (6)			REPORT DATE (7)			OTHER FACILITIES INVOLVED (8)	
MONTH	DAY	YEAR	YEAR	SEQ #	REV #	MONTH	DAY	YEAR	FACILITY NAMES	DOCKET NO. (S)
0 4	1 2	9 4	9 4	- 0 0 6	- 0 1	1 1	0 9	9 4		0 5 0 0 0
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OPERATING MODE (9)	N	THIS REPORT IS SUBMITTED PURSUANT TO REQ'MTS OF 10 CFR §: CHECK ONE OR MORE (11)							
POWER LEVEL (10)	3 8		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)		
.....			20.405(a)(1)(iv)		50.73(a)(2)(ii)		50.73(a)(2)(viii)(B)		
.....			20.405(a)(1)(v)		50.73(a)(2)(iii)		50.73(a)(2)(x)		

LICENSEE CONTACT FOR THIS LER (12)

NAME	TELEPHONE NO.
ROBERT J. WANCZYK, PLANT MANAGER	AREA CODE 8 0 2 2 5 7 - 7 7 1 1

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

CAUSE	SYST	COMPONENT	MFR	REPORTABLE TO NPRDS		CAUSE	SYST	COMPONENT	MFR	REPORTABLE TO NPRDS	
NA											
NA											

SUPPLEMENTAL REPORT EXPECTED (14)		EXPECTED SUBMISSION DATE (15)	MO	DAY	YR
YES (If yes, complete EXPECTED SUBMISSION DATE)	X NO				

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

On 4/12/94, during a chemistry training class, it was discovered that, contrary to Technical Specifications (T.S.) 4.6.B.3.a, a reactor coolant conductivity sample had not been taken on a "once every 96 hour" basis since 6/19/92. A new highly accurate laboratory quality conductivity monitor had been installed that continuously measures conductivity and this was assumed to exceed the intent of the T.S. due to the increased accuracy, the continuous monitoring mode of the monitor, and by recording the conductivity on a daily basis. This replaced the once every 96 hour sampling that was accomplished with a portable conductivity meter used to verify the accuracy of the old installed conductivity monitor.

The root cause of this event is a misinterpretation of a test method used to meet the T.S. requirement. A contributing cause is a lack of consistent application of the requirements in the T.S. Bases for Chemistry.

The immediate corrective actions were to revise the sampling procedure to require the resumption of the 96 hour conductivity sample; training of the Chemistry Supervisory Staff on the importance of the T.S. Bases in determining surveillance requirements; and a review of Chemistry T.S. Surveillances to determine if any other frequency or performance discrepancies existed. Long term corrective actions include a Chemistry Department six month self-assessment of the effectiveness of the review of T.S. related procedure changes.

DESCRIPTION

On 4/12/94, with the plant at 38% power during power ascension, it was discovered during a review of T.S. 3.6/4.6 at a chemistry training class, that while reactor coolant has been continuously monitored for conductivity, the 96 hour conductivity sample analysis required by T.S. 4.6.B.3.a. was not performed since 6/19/92. The procedure was revised at that time and decreased the conductivity sample analysis from daily (more frequent than the 96 hour requirement) to once per week.

This procedure change came about as a result of the replacement of the original reactor coolant conductivity monitor (EIIS=MON) in May, 1991, with a state-of-the-art, temperature-compensated conductivity monitor which had previously received extensive testing by the Chemistry staff in actual Vermont Yankee plant conditions as a portable instrument. The revised procedure required the conductivity of the reactor coolant to be recorded daily, as indicated by the newly installed conductivity monitor, plus a weekly sample evaluation (comparison) using an identical portable conductivity monitor. The procedure also required ion chromatographic analysis of a reactor coolant sample for significant cation and anion species that are detrimental contributors to the conductivity of the coolant. The Chemistry Manager believed, based on the fact that the sampling and analyses were much more comprehensive than required by T.S., that these activities satisfied the T.S. requirements.

After evaluation, based on the fact that a sample was not being taken on at least a 96 hour frequency, it was determined the T.S. requirement was not being met.

CAUSE OF EVENT

The root cause of this event is a misinterpretation of the test method used to meet T.S. 4.6.B.3.a. The misinterpretation was subsequently translated into a procedure change during the procedure revision.

A contributing cause of this event was a lack of consistent application of the Chemistry requirements in the T.S. Bases.

ANALYSIS OF EVENT

This event had no significant consequences for the following reasons.

The basis for the "once every 96 hours" sample is to provide a reference for calibration to ensure accurate reading of the monitors. The newly installed monitors have proven to be extremely accurate and stable. This accuracy along with the weekly crosscheck sample ensured the vessel conductivity readings were accurate during the period when strict T.S. compliance was not maintained.

Daily analyses for detrimental anions (such as chlorides, sulfates, nitrates, and phosphates) as

well as analysis for cation species (such as chromates, sodium, ammonia and lithium) 3 times per week were required by the new procedure. Since conductivity is only a general measure of these ionic impurities in the reactor coolant, ion chromatography provides a clearer, specific understanding of the cause of any observed increasing conductivity and is therefore a test of much greater specificity. The procedure revision of 6/19/92 was seen as a significant improvement in reactor coolant monitoring when evaluated against the T.S. requirement.

There were no significant abnormal indications of reactor coolant conductivity during this period. In actuality, the reactor coolant conductivity has been consistently maintained below the T.S. limit by a factor of over 50.

CORRECTIVE ACTIONS

IMMEDIATE CORRECTIVE ACTIONS

1) The chemistry department procedure that addresses conductivity sampling has been revised to require that a sample be acquired every 96 hours in addition to the continuous conductivity monitoring.

2) Chemistry supervisory staff has been trained on the importance of the T.S. Bases in assessing T.S. surveillance requirements.

3) A review of the Chemistry T.S. surveillances was completed to determine if any other discrepancies existed. No additional issues were discovered.

LONG TERM CORRECTIVE ACTIONS

1) A Corrective Action Report has been written to determine the root cause and corrective actions. This was completed on 8/14/94.

2) A detailed self-assessment of the Chemistry Department T.S. related procedures will be completed by 1/26/95.

3) T.S. were evaluated to determine if changes should be made to revise T.S. 4.6.B.3.a and the T.S. 4.6.B.3.a Bases to reflect current instrumentation practices. It was determined that no changes were required.

4) The procedure that governs the content of plant procedures will be revised to require references to T.S. Bases as well as the T.S., where applicable, and an evaluation of T.S. Bases requirements. This will be completed by 12/31/94.

ADDITIONAL INFORMATION

A similar event was reported to the Commission as LER 89-23. This event is similar in that it involved a procedure that did not adequately satisfy a T.S testing requirement.