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DUKE POWER

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

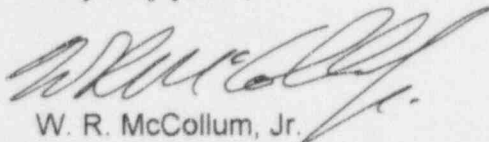
Subject: Catawba Nuclear Station
Docket No. 50-413
LER 413/96-010

Gentlemen:

Attached is Licensee Event Report **Missed Technical Specification Surveillance for VV System Containment Isolation Valves.**

This event is considered to be of no significance with respect to the health and safety of the public.

Very truly yours,



W. R. McCollum, Jr.

Attachment

cc: Mr. S.D. Ebner
Administrator, Region II
U.S. Nuclear Regulatory Commission
101 Marietta St., NW, Suite 2900
Atlanta, GA 30323

Mr. P.S. Tam
U.S. Nuclear Regulatory Commission
Office of Nuclear Reactor Regulation
Washington, D.C. 20555

INPO Records Center
700 Galleria Place
Atlanta, GA 30339-5957

Mr. John Hoffman
Marsh & McLennan Inc. (Nuclear)
301 Tresser Blvd.
Stamford, CT 06904

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Mr. R. J. Freudenberger
NRC Resident Inspector
Catawba Nuclear Station

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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 (PHBB 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.

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1)

Catawba Nuclear Station

DOCKET NUMBER (2)

05000413

PAGE (3)

1 of 4

TITLE (4)

Missed Technical Specification Surveillance for VY System Containment Isolation Valves

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 (5)
11	07	96	96	- 10	- 00	12	09	96	Unit 2	05000414
OPERATING MODE (9)		1	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR (Check one or more of the following) (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 (Specify in
			20.405(a)(1)(iii)		X	50.73(a)(2)(i)			50.73(a)(2)(viii)(A)	Abstract below and
			20.405(a)(1)(iv)			50.73(a)(2)(ii)			50.73(a)(2)(viii)(B)	in Text, NRC Form
			20.405(a)(1)(v)			50.73(a)(2)(iii)			50.73(a)(2)(x)	366A)

LICENSEE CONTACT FOR THIS LER (12)

NAME

D. P. Kimball, Safety Review Group Manager

TELEPHONE NUMBER

AREA () 03)

831-3743

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

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NFRDS	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NFRDS

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 fifteen single-space typewritten lines) (16)

Unit Status: Units 1 and 2 were in Mode 1, Power Operation, at 100 percent power.

Event Description: On November 7, 1996, Engineering identified a missed surveillance involving the containment hydrogen sample and purge (VY) system containment isolation valves. Per Technical Specification (T/S) surveillance 4.6.1.9.3, containment purge valves with resilient seat surfaces are required to be leak rate tested on a six month staggered test basis. However, the four valves, per unit, were being tested on a refueling outage basis.

Root Cause: The root cause of this event is attributed to inadequate verification of, or unfamiliarity with, pertinent information during the implementation of the periodic testing program for VY containment isolation valves prior to station commercial operation. These valves were correctly included into the leak rate testing program with respect to T/S surveillance 4.6.1.2(d). However, the fact that the VY containment isolation valves have resilient seat material was not identified. Thus, the type C leak rate testing of these valves was performed once each refueling outage rather than once per six months on a staggered test basis.

Corrective Action: Unit 2 VY containment isolation valves were successfully type C leak rate tested and declared operable. Unit 1 VY containment isolation valves were verified to be within their surveillance interval. The periodic test schedule has been revised to ensure the VY containment isolation valves are tested in accordance with T/S 4.6.1.9.3.

**LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION**

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FACILITY NAME (1) Catawba Nuclear Station, Units 1 and 2	DOCKET NUMBER (2) 05000413	YEAR 96	LER NUMBER (6)		REVISION NUMBER 00	PAGE (3) 2 (OF 4)
			SEQUENTIAL NUMBER 10			

BACKGROUND

The containment hydrogen sample and purge (VY) system is designed to maintain the containment post accident hydrogen concentration below 4.0 percent volume following a Loss of Coolant Accident (LOCA) given a failure of both of the redundant hydrogen recombiners. This function is performed through the dilution process. Hydrogen free air from the auxiliary building is forced into containment via a blower; purged air is routed to the annulus area. The VY system is not used during normal plant operations.

The VY system is non-safety related with the exception of the VY containment isolation valves [EIIS:ISV] and associated piping. Although this system may be manually actuated to reduce containment hydrogen levels, its status as the third defense-in-depth system behind the hydrogen ignition (EHM) [EIIS:BB] and hydrogen recombiner (VX) systems [EIIS:BB], enables it to be classified as not necessary to mitigate the consequences of design bases events. Therefore, the hydrogen reduction capability is a design feature and not a design basis function.

Valves 1(2)VY15B, 1(2)VY16A, 1(2)VY17A, and 1(2)VY18B are four inch containment isolation valves with resilient material seats. 1(2)VY15B and 16A are located on containment penetration [EIIS:PEN] M332 and 1(2)VY17A and 18B are located on containment penetration M346 and are maintained sealed closed.

Technical Specification (T/S) surveillance 4.6.1.9.3 states that at least once per six months on a staggered test basis, the inboard and outboard valves with resilient material seals in each sealed closed containment purge supply and exhaust penetration for the lower compartment and the upper compartment, or instrument room, or hydrogen purge system shall be demonstrated operable by verifying that the measured leakage rate is less than 0.05 L(sub)a when pressurized to P(sub)a.

T/S surveillance 4.6.1.2(d) states that type B and C tests shall be conducted in accordance with 10CFR50.54(o) and 10CFR50 Appendix J, option A, with gas at a pressure not less than P(sub)a, 14.68 psig, at intervals no greater than twenty four months except for tests involving:

- air locks [EIIS:AL],
- purge supply and exhaust isolation valves with resilient material seats, and

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		YEAR 96	SEQUENTIAL NUMBER 10 REVISION NUMBER 00	

- dual ply bellows [EIIS:BE] assemblies on containment penetrations between the containment building and the annulus.

Periodic test procedure PT/1(2)/A/4200/01C, Containment Isolation Valve Leak Rate Test, enclosures 13.21 and 13.23 are used to test containment penetrations M332 and M346 respectively.

EVENT DESCRIPTION

November 7, 1996 During a training class which included a review of T/S surveillance 4.6.1.9.3, the site Containment Integrity Engineer questioned whether the VY containment isolation valves were being leak rate tested in the required time frame.

1815 hours Unit 2 containment penetrations M332 and M346 were declared inoperable and entered into the Technical Specification Action Item Log (TSAIL). Per T/S 4.0.5, the surveillance testing must be successfully completed within twenty four hours.

Review by Engineering assured that the Unit 1 valves were successfully leak rate tested during the previous refueling outage and were within their six month surveillance interval.

2356 hours Operations Test Group personnel commenced leak rate testing Unit 2 containment penetrations M332 and M346 per PT/2/A/4200/01C.

November 8, 1996

0555 hours Unit 2 containment penetrations M332 and M346 were successfully leak rate tested, declared operable, and removed from TSAIL.

CONCLUSION

The root cause of this event is attributed to inadequate verification of, or unfamiliarity with, pertinent information during the implementation of the periodic testing program for VY containment isolation valves prior to station commercial operation. These valves were correctly included into the leak rate testing program with respect to T/S surveillance 4.6.1.2(d).

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		96	10	00	

However, the fact that the VY containment isolation valves have resilient seat material was not identified. Thus, leak rate testing of these valves was performed once each refueling outage rather than once per six months.

Corrective action included verifying the unit 1 VY containment isolation valves were currently within their surveillance interval and type C leak rate testing the unit 2 valves to verify operability. Additionally, the periodic testing schedule has been revised to provide for the testing of these valves T/S surveillance 4.6.1.9.3.

A review of the Operating Experience Database for the thirty six months preceding this event did not identify any reportable events involving exceeding technical specification surveillance intervals due to administratively establishing incorrect test intervals. This event is not considered recurring.

CORRECTIVE ACTIONSUBSEQUENT

- 1) Unit 2 VY containment penetrations M332 and M346 were declared inoperable, successfully leak rate tested, and declared operable.
- 2) The scheduling of periodic leak rate tests for containment penetrations M332 and M346 for both units has been revised to meet the requirements of T/S surveillance 4.6.1.9.3.

SAFETY ANALYSIS

The VY system is non-safety related with the exception of the VY containment isolation valves and associated piping. Although this system may be manually actuated to reduce containment hydrogen levels, its status as the third defense-in-depth system behind the hydrogen ignition and hydrogen recombiner systems, enables it to be classified as not necessary to mitigate the consequences of design bases events. Therefore, the hydrogen reduction capability is a design feature and not a design basis function.

The VY containment isolation valves involved in this event have been leak rate tested during each unit refueling outage. Review of data from the leak rate testing as well as the maintenance history of these valves and containment penetrations indicate that they have been capable of maintaining containment integrity well within the allowable limits.

The health and safety of the public were not affected by this event.